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# This Year's Model – The CIC BIM Protocol Revised

By David King

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The BIM Protocol was first published by the Construction Industry Council (CIC) in February 2013. It was one of a number of documents prepared to support the Government BIM Strategy (May 2011), with its mandate for publically funded construction projects to be undertaken using BIM Level 2. To this end the BIM Protocol sought to provide a legal framework to facilitate and promote the use and exchange of electronic data; which by its nature is less immediately visible.

The first edition set out specific obligations, liabilities and limitations on the use of building information models – typically based on a 3D design model. Clearly defining permitted use was seen as particularly important, insofar as the model may have been developed only to the extent necessary for design coordination; not necessarily for any other purposes – quantities take-off, sequencing, fabrication, etc.

Another key aspect addressed the risk that electronic data might be altered (inadvertently or otherwise) in the process of transmission, leading to inconsistencies, anomalies and errors – particularly when converting from the system and format used by originator to an alternative system or format.

However, it did generate some comments. The general principle that the protocol, as a contractual document, should take precedence over the existing agreements was questioned widely; as was clause 6 covering Intellectual Property Rights, which stated that “any rights ... shall remain vested in the Project Team Member”. While this was understandable from the perspective of designers who had spent much time and money developing “content” for their models, it did not provide for flexibility and often required amending – not least for government projects!

As standards developed it became clear that a greater degree of consistency in terminology would help create better understanding of the roles and processes involved.

The highly anticipated and long awaited second edition of the BIM Protocol, originally scheduled for release last year, was eventually published on 10 April 2018. This is now closely aligned with PAS 1192-2 (and so applies to all information – not just models) but also reflects updates and additions across the framework – most recently PAS 1192-5:2015 (Security), and PAS 1192-6:2018 (Health & Safety). An update of PAS 1192-2:2013 is currently in the pipeline, and a new PAS 1192-7:2018 (Structured digital product information) is scheduled for release later this year.

So what else has changed? It is certainly a more flexible and user-friendly document, which can be used in conjunction with a range of different contracts – the introduction to the new edition highlights that the “Protocol was drafted for use with all common construction contracts”; and the NEC/ICE have already issued a practice note on how to use the CIC BIM Protocol with NEC4: [http://www.neccontract.com/getmedia/1f73e289-2948-49cc-a031-e94583c9554e/NEC4ECC\\_Practice-Note-2\\_BIM-and-CIC-Protocol.aspx](http://www.neccontract.com/getmedia/1f73e289-2948-49cc-a031-e94583c9554e/NEC4ECC_Practice-Note-2_BIM-and-CIC-Protocol.aspx)

The twelve principal changes from the first edition (refer to clause 2 for details) are summarised as:

1. **Responsibility Matrix** – The Protocol now includes a Responsibility Matrix, instead of a Model Production and Delivery Table.
2. **Information Particulars** – Appendix 2 now refers to the Employer's Information Requirements for the Project and the BIM Execution Plan; both required by PAS 1192.
3. **Permitted Purpose** – determines how information can be used; now refers to: (i) level of definition (rather than level of detail), consistent with PAS 1192-2; (ii) status code of information, which indicates approved ‘suitability’ for use of information at stage of issue; (iii) functional state of the Project Information (work in progress, shared, published, etc.); and (iv) the purpose for which the information was prepared.
4. **Protocol and Agreement** – the Protocol now ‘piggy backs’ on the prime Agreement, and takes precedence only if, and to the extent that, there is a conflict in respect of key provisions (clause 3, 4 and Appendix 1 or 2 of the Protocol) – creating a minimum set of consistent obligations without

- overriding the agreed contractual position any more than necessary.
5. **Co-ordination** – a new process is included for coordinating information and resolving inconsistencies (clause 2.1-2.2), and the statement that Models takes precedence has been removed as this is not always appropriate.
  6. **Standards, Methods and Procedures** – processes in PAS 1192-2 are typically followed for BIM to clarify the basis on which information is produced and exchanged, and the Employer here commits to performing its obligations under the Standards, Methods and Procedures set out in the Information Particulars (clause 3.1.2).
  7. **Common Data Environment (CDE)** – Project Team Members here commit to sharing and publishing information using the CDE Process; the Employer ensuring that Project Team Members can use the CDE Process to the extent necessary to perform their obligations.
  8. **Programme** – Specified Information must be shared and/or published during the stage and at times stated in the Responsibility Matrix, the Information Particulars or the Agreement – i.e. not subject to 'reasonable endeavours'.
  9. **Interoperability** – a key issue on any BIM project; Project Team Members now give no warranty that their software is compatible with that of any other Team Member/Employer. This is more balanced than the first edition, in which team members gave "... no warranty as to the integrity of electronic data" per se (first edition, clause 3.5).
  10. **Copyright** – the copyright provisions are now more flexible. Clauses 6.2–6.4 (stating that team members retain copyright and grant a licence) only apply if the Agreement contains no provisions regarding intellectual property; if the Agreement contains such provisions they apply to the Material (Specified Information, etc.) 'back-to-back'. So the Protocol can be used unamended even if the team member will not retain ownership of its intellectual property (e.g. because it will be transferred to the Employer).
  11. **Security** – a key factor on any project using BIM, as outlined in PAS 1192-5:2015. The new edition therefore refers to: (i) the Built Asset Security Manager; (ii) Security Requirements; (iii) Sensitive Information; and (iv) Employer Remedies if security obligations are breached.
  12. **Appendices** – the 'pro forma' Appendices have been updated to align with the updated Protocol; and are now available in an editable electronic format.

The principal objective "to provide a legal framework to facilitate and promote the use and exchange of electronic data" is unchanged; supporting the move towards a collaborative digital future. Also, the CIC BIM Protocol remains the only model legal document of its kind in the UK, so this updated, more flexible and easier to use edition is likely to see greater uptake in the years ahead; meaning less reliance on separate 'ad hoc' Electronic Data Exchange Agreements.

A free download of the new BIM Protocol is available on the CIC website: <http://cic.org.uk/news/article.php?s=2018-04-10-second-edition-bim-protocol-published>

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## Making Best Use of Experts in Complex Disputes

By John Gouldsmith

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### Facilitated Multi Discipline Expert Meeting Process for Multi-party Disputes and ADR

For a complex dispute which is likely to turn on technical issues, how can parties make best use of multiple experts across different disciplines?

Probyn Miers has recently concluded a Facilitated Multi-disciplinary Expert ADR process for a

multi-party dispute. This involved a series of 16 multi-disciplinary Without Prejudice (WP) expert meetings over a period of about 4 months, facilitated by an independent neutral chair, in order to address the complex technical issues of a dispute, narrow issues, and deliver a combined 'open' joint statement to assist the parties in settlement negotiations.

Litigation was already advanced, and with four parties and 12 technical experts an efficient method of analysing complex technical issues was needed in order to: understand alleged defects more clearly; establish and agree on material facts; undertake further site investigations; share data and the results of forensic studies; evaluate remedial strategy options; and understand the range of expert agreement and disagreement.

WP expert meetings were scheduled for every two weeks or so with dates agreed at the outset. This allowed attendance and planned absence to be managed. These meetings were led by a distinguished independent facilitator jointly appointed by the parties under a 'facilitation agreement'. Each party bore its own costs of the process which were agreed to be irrecoverable.

In this dispute, 12 individual experts (supported by assistants) brought expertise in facade engineering, façade structural engineering, cladding design, materials and architecture.

As the series of meetings progressed, documents were uploaded to a shared website, and discrete Joint Reports were prepared for different topics.

Innovatively, some WP expert meetings were also attended by technical and design representatives of some of the parties (Technical Advisors), where this was agreed by the experts. For example, Technical Advisors provided input and feedback on current state of the art computer modelling and analysis, and also made presentations on developing remedial options. Some Technical Advisors provided general input to a number of meetings, others were invited to give one off, or a short series, of presentations. Remedial options, mock-ups and samples were also presented and considered at the WP expert meetings. This proved very useful and essential to maintaining momentum when considering certain issues. However, it also required constant attention by the facilitator and experts, to ensure that the 'rules of engagement' were respected and followed.

Certain discussions or parts of the process were conducted between expert and facilitator only. Others were conducted in a number of breakout meetings of focused technical expert discussion (with technical advisors where appropriate), which then reported back to the main meeting.

The provision of forensic analysis and technical design inputs and presentations by the Technical Advisors, greatly informed the expert discussions, and moved some issues on further than would be possible by expert meeting only.

The Facilitated Multi-disciplinary Expert ADR process led to the compilation of a comprehensive Joint Report on the issues in dispute, signed by all experts. This was then used to inform negotiations and, ultimately, to achieve settlement via mediation without further expert input.

Following the successful conclusion of the process, there was much positive feedback regarding the approach taken, and to recommend it as a suitable way forward for certain disputes involving multiple parties, complex design, varied workmanship issues, numerous alleged defects and multiple interfacing construction contracts.

There are some watch points that are worth bearing in mind, however; these include the need for:

- A robust and independent facilitator.
- Clarity in the terms of reference.
- Clearly described output goals.
- Clear deadlines for deliverables.
- Maintaining awareness of different areas of expertise and avoiding experts straying outside of those areas.
- Providing shared access to record information for all the experts.

- Allocating (and curtailing) time to ensure that all relevant topics are addressed appropriately.

The process enabled the experts to apply their knowledge most effectively to a complex technical dispute in the interest of all parties and the Court.

**John Gouldsmith** is a Chartered Architect with over twenty years' experience in the construction industry in UK and internationally. He has extensive experience working within leading multi-disciplinary design teams including in the preparation of stakeholder requirements and design control documentation as well as on several significant major airport projects. Within our team at Probyn Miers John undertakes detailed technical forensic analysis of design and workmanship and has carried out detailed document reviews and extensive technical research on construction materials of all levels of complexity.

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## One size fits all or made to measure? Is the professional standard of care about to be reassessed?

By Bart Kavanagh

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For the half a century since **Bolam** [1957], the standard by which competent professionals have been judged in performing their duties has been one of "reasonable skill and care". During this time what constitutes reasonable and care has been considered to be what is; "accepted as proper by a responsible body of professional opinion." [1]

**Sidaway** [2] [1985] considered the professional duty of care with respect to warning about risks. In this medical case Lord Scarman considered the characteristics and interests of the particular patient in assessing the appropriate test and expressed the view, obiter, that the law; "...recognises a right of a patient of sound understanding to be warned of material risks save in the exceptional circumstances to which I have referred." Lord Diplock, however, was of the firm opinion that; "The Bolam test should be applied."

The judgment in **Bolitho** [1998], confirmed Bolam as the appropriate test but stipulated that the body of professional opinion should be such that it; "could not be rejected as incapable of standing up to rational analysis." [3]

Nevertheless, throughout this string of cases, the profession remained the arbiter of the standard.

In 2015, however, the case of **Montgomery** [4] signalled a change for the medical profession that may also have implications for architects.

In outline Mrs Montgomery, who suffered from diabetes, became pregnant. Diabetes increases the likelihood that a foetus will have broad shoulders and consequently increases the risk of a condition known as shoulder dystocia, where the shoulders are too wide to pass through the birth canal and caesarean delivery is required. The risk of serious complications is small and the Doctor decided that Mrs Montgomery did not need to be warned of that risk. The rationale for this decision, which was supported by a considerable body of medical opinion, was that almost every woman, if warned of this risk, would elect to have a caesarean delivery, which carries risks of its own.

In the event the risk materialised, the baby was born with severe disabilities and Mrs Montgomery took action against her doctor for professional negligence.

In upholding Mrs Montgomery's claim, the Supreme Court considered the Australian case of **Rogers**. In this case the court adopted the approach suggested by Lord Scarman in Sidaway and reconsidered the test in the light of the actual circumstances and expectations of the particular patient rather than those of a hypothetical reasonable patient. The Australian court said:

*"a risk is material if, in the circumstances of the particular case, a reasonable person in the patient's position, if warned of the risk, would be likely to attach significance to it or if the*

medical practitioner is or should reasonably be aware that the particular patient, if warned of the risk, would be likely to attach significance to it." [5]

Lord Kerr and Lord Reed agreed, saying:

"That is undoubtedly right: the doctor's duty of care takes its precise content from the needs, concerns and circumstances of the individual patient, to the extent that they are or ought to be known to the doctor." [6]

They also considered that:

"... patients are now widely regarded as persons holding rights, rather than as the passive recipients of the care of the medical profession. They are also widely treated as consumers exercising choices". [7]

This is a view that could well be applied to an architect in relation to personal clients where the passage from Rogers may be recast as:

"a risk is material if, in the circumstances of the particular case, a reasonable person in the **Employer's** position, if warned of the risk, would be likely to attach significance to it or if the **Architect** is or should reasonably be aware that the particular **Employer**, if warned of the risk, would be likely to attach significance to it."

It is not difficult to see the application of the reformulated test with respect to an architect's private residential clients, and possibly others who are embarking on a construction project for the first time, who have little or no prior experience of the industry and its complexities. Might an Architect be expected to recognise a greater need for care and advice for such clients when compared to a corporate or institutional client with experience of procurement and its risks?

This is potentially a significant shift of emphasis. No longer would the test rely upon what a responsible body of professional opinion considers to be reasonable, and which a competent architect could reasonably assess. Instead it would require an architect to consider the likely reaction not of a hypothetical reasonable client, but of the particular client, if warned of the particular risk, where the architect knows, or ought to know, the needs, concerns and circumstances of that particular client.

[1] *Bolam v Friern Hospital Management Committee* [1957] 1 WLR 582, para. 587

[2] *Sidaway v Bethlem Royal Hospital and the Maudsley Hospital Health Authority & Ors* [1985] AC871

[3] *Bolitho v City and Hackney Health Authority* [1998] AC 232, paras 241 – 243

[4] *Montgomery v Lanarkshire Health Board* [2015] UKSC 11, on appeal from [2013] CSIH 3 and [2010] CSIH 104

[5] *Rogers v Whitaker* (1992) 175 CLR 479 (pp489 – 490)

[6] *Montgomery* paragraph 73

[7] *Montgomery* paragraph 75

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