

THE ROAD TO BIM COMPLIANCE



WHAT'S THE STORY?

The UK government's construction strategy requires that all publicly-funded construction work must be undertaken by using Building Information Modelling (BIM) to level 2, by 4th of April 2016.



DID YOU KNOW?

The first building regulations were enforced after the Great Fire of London in 1666, since this time buildings have been "modelled" and designed in some form.



WHAT'S THE PURPOSE?

Taking BIM to level 2 is a measure to help fulfill the government's target of reducing waste in construction, through the lowering of both the capital and operational costs, by 20%. It is considered that abortive work discrepancies, mistakes and inefficiencies in the information supply chain, are major contributors to this waste and that collaborative working can assist in their reduction.



THE RIPPLE EFFECT

BIM is integral to other core concerns like:

- Procurement/Lean Client
- Facilities Management
- Performance Management
- Infrastructure Industry
- Standards/ Lean Supply
- Data & Benchmarking
- Infrastructure Data
- Infrastructure Procurement

BIM FAQs

1. What is BIM?

Building Information Modelling (BIM) is an intelligent 3D model based process that equips architectural, engineering and construction professionals with the software to create a model of a building that reacts to change in the way that the real building would. Fundamentally, the pure and simple form of BIM provides a single source of information for all project members.

2. What are the key deliverables of BIM?

Through careful consideration of project requirements BIM delivers improvements to the planning, design, process, technology, procurement, delivery and facility management stages of a project. Every 3D building representation holds information, thus creating an easy to understand interface for every party involved in the project. Hosting data within this environment allows anyone to select an item in the model and instantly view its properties. Therefore, 3D modelling helps with coordination and is able to feed into fabrication tools.

5. What are the benefits of BIM?

- Estate visibility helps you gain better information management, better decisions and performance reporting
- Assists with scoping during bidding and purchasing
- Coordinates construction sequencing
- Demonstrates project approaches during marketing presentations
- Clash detection (e.g., identifying ductwork running into structural members)
- The ability to visualise what is to be built in a simulated environment

3. How do you use BIM?

You can use it as a digital tool but other than that, BIM is a way of working, it's what you do: information modelling and information management in a team environment. The rich 3D experience, digital simulations, rehearsals of all stages of the design, building and operating process and the information within the models facilitate well informed decision making. This results in better business outcomes, clarity, improved communication, de-risking and ultimately better efficiency.

4. What is BIM's purpose?

Fundamentally the purpose of BIM is to provide information in a comparable format, and the supply of this data should always be a priority over the 3D objects. The intention of this is to allow those designing a building, to analyse the whole life cycle of a build, to compare products and solutions, to specify not only material cost but also based on efficiencies – these are the abilities that help fulfill BIM's goal.

- Fewer errors and corrections in the field supported by a higher reliability of expected field conditions
 - This allows the opportunity to do more prefabrication of materials offsite, which is usually a higher quality at a lower cost
- The ability for non-technical stakeholders (clients, users, etc.) to visualise the end product
- Fewer callbacks and thus, lower warranty costs

6. What are the government requirements by April 2016?

The government had stipulated that they require all centrally procured government construction projects, (no matter what size) to be delivered using BIM level 2 by April 2016. This applies to the associated supply chain of these construction projects.

Level 2 BIM defines the scope of building information modelling and is focused on collaborative working i.e. key stakeholders might use their own CAD models, but they don't need to work from a single, shared model. The use of a common file format allows information to be shared between parties and then easily combined with other information or data.

7. Is BIM only required on projects over £50k?

During initial pilots with the Ministry of Justice, BIM was only stipulated to be mandatory on projects over £50k but this minimum project value was removed on rollout.

8. Why do I need BIM documentation?

You may be involved either directly through engaging with a government department or indirectly with a supply chain partner who is, and needs data as part of their contractual requirements. So no matter what your role in the built environment it is highly likely that your business will be involved in the BIM process either supplying or managing data [1].

[1] www.bimtaskgroup.org/bim-faqs/



BIM GLOSSARY

ASSET INFORMATION MODEL (AIM)	A model that compiles the data and information necessary to support asset management
BUILDING INFORMATION MODELING (BIM)	The process of creating a digital model of a building or other asset (such as a bridge, highway, tunnel and so on) using object-oriented information
EMPLOYER'S INFORMATION REQUIREMENTS (EIR)	A document used by a client in order to clearly list required information and its format from their suppliers
BIM MATURITY LEVELS	The levels of complexity and collaboration that building information modeling can take
LEVEL 0 BIM	Unmanaged CAD including 2D drawings, and text with paper-based or electronic exchange of information but without common standards, processes and no collaboration.
LEVEL 1 BIM	Typically comprises a mixture of 3D CAD for concept work, and 2D for drafting of statutory approval documentation and production information [1]
LEVEL 2 BIM	Level 2 is focused on collaborative working i.e. key stakeholders might use their own CAD models, but they don't need to work from a single, shared model. The use of a common file format allows information to be shared between parties and then easily combined with other information or data.
LEVEL 3 BIM	A single, shared, collaborative, online, project model with construction sequencing (4D), cost (5D) and project lifecycle information (6D), held in a central repository. Sometimes referred to as 'iBIM' (integrated BIM) or 'Open BIM', this represents the pinnacle of BIM collaboration.
PDT	Product Data Template
SAT FILES	File format for data exchange. These files can be loaded into any BIM software to give the required visual and geospatial data.
CONSTRUCTION OPERATIONS BUILDING INFORMATION EXCHANGE (COBIE)	A non-proprietary multi-page, spreadsheet data format for the publication of a subset of building information models focused on delivering asset data rather than geometric information.
CHARTED INSTITUTION OF BUILDING SERVICES ENGINEERS (CIBSE)	The prime source of expertise in the Building Services Industry, CIBSE delivers singular, industry derived templates for the Manufacturing and Engineering (M&E) sector that provide all the required COBie data at handover. All information is available at www.cibse.org
CAD	Computer-Aided Design

[1] <https://www.thenbs.com/knowledge/bim-levels-explained>

Get your BIM files on our brand websites.



Honeywell Environmental & Energy Solutions

Honeywell House
Skipped Hill Lane
Bracknell, Berkshire
RG12 1EB

Honeywell



TREND