DIRECTORATE OF ESTATES & FACILITIES

GUIDANCE ON THE APPLICATION OF BIM AT THE UNIVERSITY OF MANCHESTER

EPM PM29

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Document Purpose

This document provides guidance on the appropriate application of Building Information Modelling outputs for the University of Manchester's building projects including new builds, refurbishments, extensions and alterations.

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1.   What is Building Information Modelling (BIM)?

Building Information Modelling is a process that enables information to be collected in a consistent way which can then be shared and utilised throughout the lifecycle of a building project from conception to demolition.

BIM is now widely used in the design and construction phases but these elements are outside the scope of this paper. This paper concentrates on the extraction and use of information after completion in connection with the ongoing management of the asset.

The benefits of BIM are well known, such as improved coordination, reduction of risk and the delivery of digital information. However, the level of application must be appropriate to the complexity of the project and the capability of the supply chain.

In order for UoM to apply BIM without increasing the project cost, whilst ensuring value, we have determined 3 levels of application called:

- Traditional Information Management
- BIM Lite
- BIM Level 2

These are described in more detail in Levels of Application.

The default position is Traditional Information Management (even if the information is obtained from a BIM model). The exception will be large new builds / extensions where we have decided that an Architectural model is required. This will either involve BIM Lite or BIM Level 2, both of which are a custom level of application defined by UoM.

The information required, for either of these approaches, is defined at the start of a project through a set of Employers Information Requirements. This allows the Client to specify the information required and the format it should be provided in.
The University of Manchester has developed its Employers Information Requirements (EPM PM25) in accordance with BIM Level 2 and requirements for asset data (EPM PM24), to ensure that the information can be imported into UoM's space management system Archibus and asset management system Oracle.

Note that projects should always be assessed for security risk. A triage should be carried out by the CR and the Estate & Space Management Unit (ESMU) as part of each project.

Levels of Application

Traditional Information Management

Where projects do not have significant space alterations they should be delivered traditionally with CAD provided in accordance with EPM GM5 and all other relevant EPMs. **EPM PM24 and PM25 should not be implemented**.

Outcome	Provided	Comment
Security Triage	Y	In accordance with PAS1192:5
2D CAD	Y	In accordance with EPM GM5
3D Model	N/A	
Updated Archibus	Y	In accordance with EPM GM5 – manual work required by Estate & Space Management Unit
Updated Oracle	N/A	
Information Management	N/A	

BIM Lite

BIM Lite is not an industry standard; it is a custom level of application defined by the University of Manchester.
CAD and an updated asset excel spreadsheet is required to be delivered in accordance with EPM GM5, EPM PM24 and all other relevant EPM's. **EPM PM25 (EIR) should not be implemented.**
3D modelling is not required at this level of application (however if available it should be provided).

Outcome	Provided	Comment
Security Triage	Y	In accordance with PAS1192:5
2D CAD	Y	In accordance with EPM GM5
3D Model	Optional	
Updated Archibus	Y	In accordance with EPM GM5 – manual work required by Estate & Space Management Unit
Updated Oracle	Y	In accordance with EPM PM24 – excel asset register only (no COBie)
Information Management	Y	In accordance with the CONJECT Protocol (if applicable)

BIM Level 2

This is a custom level of application defined in EPM PM25 (EIR).
This level of application requires the supply chain to be assessed for BIM capability, by the Client Representative and ESMU, and on a project by project basis in advance of the project starting.

In order to implement EPM PM25 the Client Project Manager must complete Appendix A and B.

Outcome	Provided	Comment
Security Triage	Y	In accordance with PAS1192:5
2D CAD	Y	In accordance with EPM PM25 and EPM GM5
3D Model	Y	In accordance with EPM PM25 and EPM GM5
Updated Archibus	Y	In accordance with EPM PM25 and EPM GM5 – data supplied can be automatically imported into the Archibus system
Updated Oracle	Y	In accordance with EPM PM25 and EPM PM24 – COBie and excel asset register
Information Management	Y	In accordance with the CONJECT Protocol