

# International BIM Object Standard

## Part B - UK Requirements

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# Foreword

At NBS we recognised that the lack of an industry-wide standard for BIM objects was a barrier to the successful adoption of BIM. Therefore, by defining what constitutes a high quality BIM object and providing consistency in the content and structure of these objects, the NBS BIM object standard published in September 2014 played a major role in assisting UK-based organisations take BIM to the next level.

The construction industry needs access to BIM objects that can be used freely, safe in the knowledge that they contain the right levels of information with the appropriate geometry, all wrapped up in a consistent, yet structured and easy to use format. The BIM landscape is rapidly evolving, and the market needs good quality BIM objects. The introduction of an International BIM object standard means that designers creating their own objects for practice and project-specific purposes can now do so to a common standard, enabling greater collaboration, efficiency and more meaningful information exchange not just in the UK, but in the global construction market. Client groups, as well as project managers will also feel the benefit as they can be confident in the quality of the BIM objects used within their project models.

## Introduction

Working in partnership with NATSPEC and Masterspec, and using the NBS BIM Object Standard as the basis of a new core standard, this International BIM Object Standard has been developed for use by all construction professionals – from specifiers to manufacturers and BIM content developers to assist in the creation of BIM objects. This is an important step, not just for NBS, but for all those who author BIM objects as we can now build objects using a common data environment to a commonly understand International standard. BIM objects that meet the requirements of the International BIM Object Standard will help to realise the true benefits of digital construction resulting in better value across the whole life of the built asset.

Local/regional requirements were to be included in a localised/regional Part B to the core International BIM Object Standard. This approach allows for other countries to come on board over time, each having their own localised/regional Part B, if necessary, with the core International BIM Object Standard remaining unchanged.

This Part B is to be read in conjunction with the requirements of the core International BIM Object Standard, for BIM objects being created for use in the UK.

# Scope

The purpose of this Part B document is not to contradict any of the requirements within the core International BIM Object Standard but to describe additional requirements and further clarification of requirements.

The scope of this Part B includes further information requirements and clarification of metadata requirements.

## Presentational Conventions

Words in bold are explained in the Terms and Definitions section of this document.

The word 'shall' is used to express requirements of this standard. The word 'should' is used to express recommendations. The word 'may' is used in the text to express permissibility, e.g. as an alternative to the primary recommendation of the clause. The word 'can' is used to express possibility, e.g. a consequence of an action or an event.

# Part B: UK Requirements

This section describes additional requirements and further clarification of requirements from the core International BIM Object Standard, for BIM objects being created for use in UK. The scope of this section includes further information requirements and clarification of metadata requirements.

## 6.1 General Requirements

### 6.1.1 Graphical detail

The BIM object shall have a minimum a 'Schematic Level of detail' for generic objects as defined by BS 8541-3'. Manufacturer objects shall have a minimum a 'Schematic Level of detail' for Mechanical, Electrical, Plumbing, Civil Engineering Infrastructures or a Coordinating Level of detail' for manufacturer objects in other domains as defined by BS 8541-3.

## 6.2 Information Requirements

### 6.2.1 Facilities management properties

The BIM object shall include properties derived from COBie Version 2 Release 4, (see 2.6 COBie Properties) or properties derived from buildingSMART Ifc2x3 FM Basic Handover Model View Definition (ISO/PAS 16739). Properties shall be consistently selected from the chosen source.

Where the BIM object includes properties derived from COBie, they shall include the type properties defined in Table 4 Part A and the component properties defined in Table 5 Part A. (see clause 2.6)

## 6.3 Metadata requirements

### 6.3.1 File and material naming

File names and material names shall be structured as follows and composed using the **fields** defined in Part A – Table 10:

<Source<sup>1</sup>>\_<Type>\_<Subtype>\_<ProductCode<sup>1</sup>>\_<Differentiator>

### 6.3.2 Additional fields

File names and material names may include the additional property of Originator, defined in Part A – Table 11, structured as follows:

<Originator<sup>2</sup>>\_<Source<sup>1</sup>>\_<Type>\_<SubtypeProductCode<sup>1</sup>>\_<Differentiator>\_

Note 1: Source and ProductCode do not apply for Generic Objects.

Note 2: For objects being created for inclusion in an **object library**, it is recommended to include the Originator field.