



# Construction and the Built Environment – Unit 2

## 2.5 Using the language of drafting (1 of 2)

### BRITISH STANDARDS AND BUILDING INFORMATION MODELLING

**British Standards (BS)** are the standards produced by the British Standards Institute (BSI), which is the national standards body of the UK. Construction drawing practice BS 1192, which was last updated in 2016, is a code of practice for the production, format and standards of architectural, engineering and construction information.

It ensures that all parties produce and interpret drawings using the same standards, such as line weight, annotations and symbols.

**Building Information Modelling (BIM)** is a management and communication tool in which every member of the construction and design team inputs information that will exist for the entire life of the building or structure.

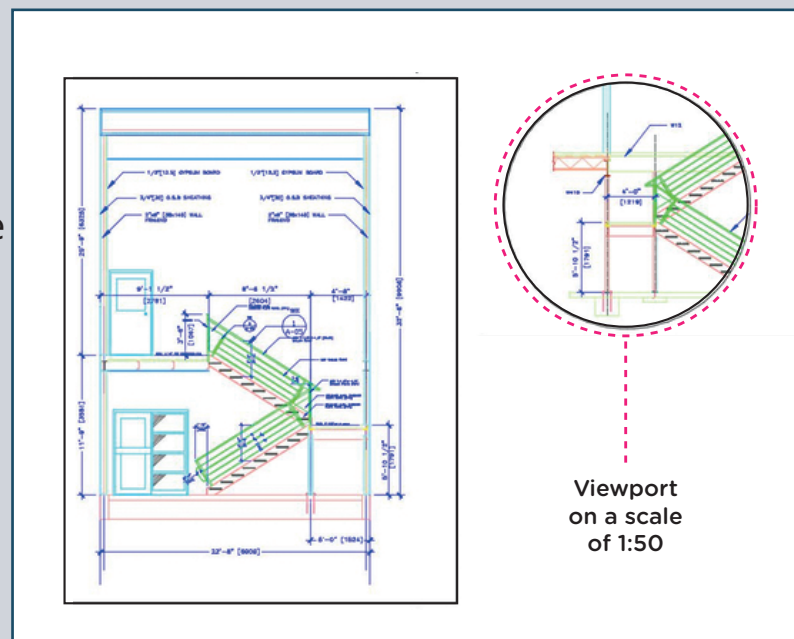
All information is stored centrally in one place in the form of electronic models, drawings, schedules and manufacturers' details.

It is a digital, cloud-based platform that enables construction teams to collaborate on projects in 'real time'.

### VIEWPORT

A **viewport** is a means of focusing on a particular aspect of the design.

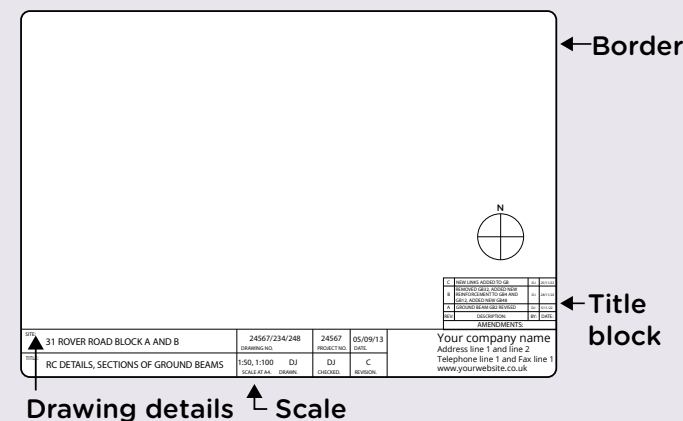
It is as if the viewer is using a microscope to enlarge and concentrate on a specific part of the drawing.



### DRAWING LAYOUT AND TITLE BLOCKS

A well-designed **drawing layout** is a fundamental part of any type of visual communication and makes the information it contains easy to understand.

All construction design drawing templates should follow a set layout, which includes a border and title block, along with standardised font styles, sizes and scales.



**Title blocks** are used on construction drawings to provide information to the user. They are usually placed at the bottom of the drawing or to the side.

### CONVENTIONS AND ANNOTATIONS

**Conventions** (or rules) about annotation, lines, hatching and the use of symbols are standardised throughout the construction industry. This is essential to reduce drawing time and minimise the space needed to communicate information.

Common conventions for annotation, line types and thicknesses, hatching and symbols are specified in British Standard 1192 and must be understood and followed by all practitioners involved in the design and construction process.

**Annotations** are notes or other types of explanatory objects (or symbols) commonly used to add information to a drawing. Examples of annotations include notes and labels, dimensions, hatching, tables, blocks and callouts.



### LINES

Different types of lines and graduated line thicknesses are used to show different information on construction drawings.

The most common lines are shown here:

<b>Visible</b>		To show the visible edges of an object.
<b>Hidden</b>		To indicate concealed edges.
<b>Section</b>		To indicate a cross-section drawing.
<b>Centre</b>		To show the location of centres.
<b>Dimension</b>		To indicate the distance measured.

### HATCHING

In construction drawings, hatching styles or shading are patterns used to represent different types of commonly used materials, objects and spaces.

Examples of common hatching conventions are shown here:

<b>Brickwork</b>		<b>Hardwood</b>	
<b>Blockwork</b>		<b>Plywood</b>	
<b>Sawn timber</b>		<b>Concrete</b>	

### SYMBOLS

The use of standardised symbols for common construction fixtures and fittings greatly reduces drawing time.

Examples of common symbols are shown here:

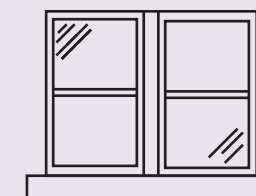
#### Window and door symbols

Type

Plan

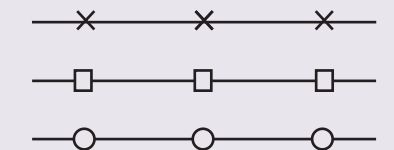
Elevation

Double hung windows



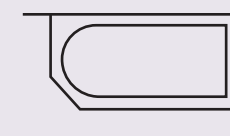
#### Landscape

Fence

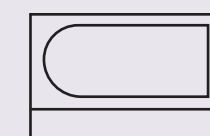


#### Plumbing

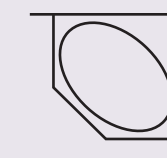
Baths



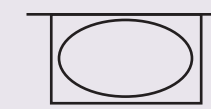
Corner



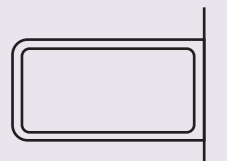
Recessed



Angle



Whirlpool



Institutional or island

### CONSOLIDATION AND PRESENTATION

Two-dimensional sketches or draft drawings can be a valuable part of the construction design process.

In the example shown here, basic drawing equipment has been used, including graph paper to aid the scaling of dimensions.

