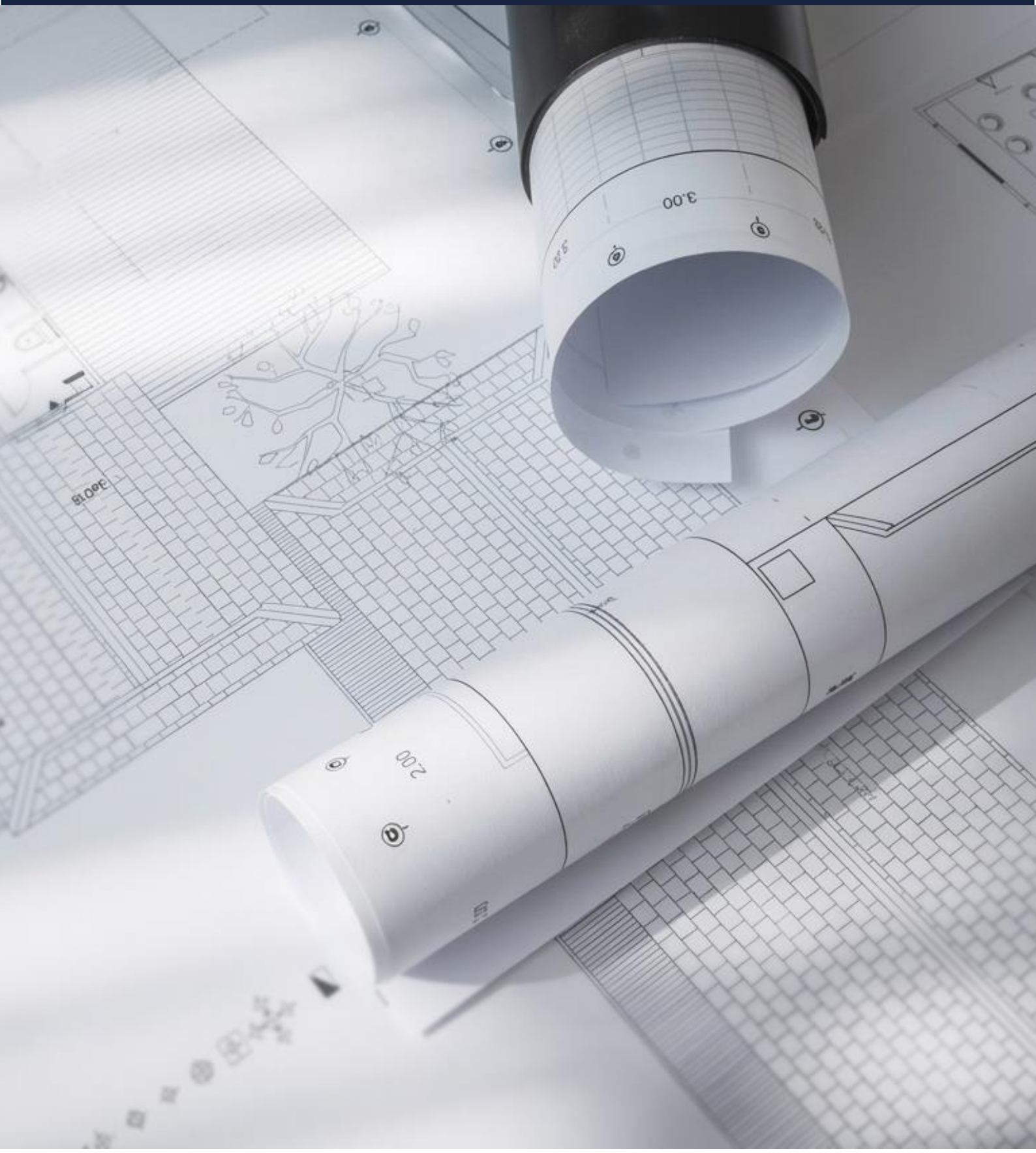
THE UNIVERSITY of EDINBURGH
Estates Department



Estates CAD Standards

V1 – November 2026

Important Comment on Estates Design Guidelines, Assets & Standards

These Design Guidelines, Assets and Standards and the associated suite of documents have been produced in order to furnish external design consultants and contractors with guidance on required University standards for inclusion within their proposed project design. These guidelines are to be used as supplementary information during project de-sign stage, and as such, detail the minimum standards expected from the University Estates Department. Please note, these guidelines do not absolve the project design team including, sub-consultants and sub-contractors of their legal and contractual obligations under, design liability, statutory regulations and health and safety legislation.

EDG – Estates CAD Standards

Estates Design Guidelines – Estates CAD STANDARDS Approval by – Director of Estates Operations	Name: Aislinn Wood Signed Off Date: 6/11/2026
Estates Design Guidelines No Approval by	Name Signed Off Date
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Version Control for Estates Design Guidelines (Assets & Standards) No. x -

Version	Date	Nature of Revision	Author	Approved by	Signed
1.0	Nov 2026	New protocol			

Contents

1. INTRODUCTION 5

2. CURRENT BUILDING FLOOR PLANS 5

3.1 University Requirements 5

3.2 External Reference 6

4. DRAWING PRODUCTION 6

4.1 Layer naming convention 6

4.2 Pen Settings 7

4.3 Co-ordinates and Drawing Units 8

4.4 Line types 8

4.5 Text formatting, styles and heights 8

4.6 Dimensions 9

4.7 Drawing Frame SetUp: Title Blocks 9

4.8 Drawing Revisions 9

5. AREAS 9

5.1 Room Area: 10

5.2 GIA 10

6. SPACE (ROOM) & BUILDING NUMBERING 10

1. INTRODUCTION

Estates use AutoCAD software for the production and amendment of its drawings and currently operate AutoCAD LT 2024. Our 2D CAD record drawings are the golden copy dataset of our physical estate within our CAFM, Computer Aided Facilities Management System, Archibus. This supports a number of critical departmental and Institutional workstreams and reporting channels, it is therefore essential to adhere to this drawing standards document.

Prior to the final handover of any building project, The University require the CAD drawings (with space numbers and space polylines) in order to complete the following tasks:

- To ensure the drawings can be loaded successfully onto the University database.
- To enable maintenance issues to be logged to their location, which makes processes faster and more effective.
- To enable assets to be registered to their location, ensuring we are meeting our regulatory requirements and assisting reporting and planning. This is required prior to handover and occupation
- To enhance data integration with other data sources, providing critical accurate space data for a number of reporting channels including, estate and financial.

This document provides the requirements of The University (based on the guidelines of BS1192) that must be followed by all Estates CAD users, Project Managers, Architects, external Consultants or Contractors and anyone else working on drawings for University projects.

2. CURRENT BUILDING FLOOR PLANS

Current Building floor plans are the most recent set of CAD drawings available for each University building. They typically show walls, partitions, stairs, lifts and door and window openings. They also contain space information including space area polylines, space numbers and space names.

For external consultants, these drawings are available on request by contacting:

Space.Management@ed.ac.uk

For Estates colleagues, these drawings are available from the Record Drawing Datastore.

3. SUBMISSION OF RECORD/AS BUILT DRAWINGS

3.1 University Requirements

On the completion of any project or alteration, all Record drawings must be forwarded to the Space Management team for inclusion onto the Estates Datastore It is the Project Managers responsibility to ensure all Record drawings are delivered to the Space Management Team electronically.

- All drawings for any project including the Architects GA floor plans (required for inclusion onto the Estates Space datastore), sections, elevations, details, schematics and services/M&E drawings must be produced and submitted in an un-locked **AutoCAD .DWG** format electronically with a relevant index/issue sheet. The Space Management team currently use AutoCAD LT 2024. Drawings supplied on USB should be clearly labelled with the Project details, date and version of AutoCAD used.
- Drawings produced using BIM software (such as Revit) must be exported into AutoCAD DWG format 2D before issue. **The University will also require any original BIM files** (for example .RVT) for its records.

Please ensure that **all** drawings have been produced in accordance with the guidelines of , where possible.

Please ensure that ALL spaces (with the exception of voids) have Area polylines before drawings are issued (See section 5.0).

Details of any revision history must be shown on any issued drawing.

3.2 External Reference

Please contact the Estates Space Management Team prior to issuing any drawings that contain XRef attachments. Any drawings that do contain XRef's must have the attachments bound to the drawing before being issued. Any XRef which cannot be bound must be issued electronically in a folder containing the host drawing and any other relevant information/files required to successfully open and use the drawing.

4. DRAWING PRODUCTION

4.1 Layer naming convention

A standard CAD layering system is necessary to ensure consistent drawing production between various disciplines and users and enables the layering on drawings to be easily understandable and recognisable.

The Space Management team follow the layer naming guidelines of BS 1192, part 5 wherever possible. However, the following table of layers are used specifically on all Space Management floor plans to ensure compliance with the Space Management database:

Layer Name	Colour	Linetype
Drawing Sheet	Green	Continuous
Text	Red	Continuous
Dimensions	Magenta	Continuous
Hatch	White	Continuous
Viewport	Magenta	Continuous
210_EXTWALLS	**Cyan**	**Continuous**
210N_EXTWALLS	**Cyan**	**Continuous**
220_XINTWALLS	**Cyan**	**Continuous**
220N_XINTWALLS	Cyan	Continuous
240_XSTAIRS	**Red**	**Continuous**
240N_XSTAIRS	Red	Continuous
314 Glazed Screens & Windows	Red	Continuous
314N Glazed Screens & Windows	Red	Continuous
315_XEXTDOORS	**Magenta**	**Continuous**
315N_XEXTDOORS	Magenta	Continuous
325_XINTDOORS	**Magenta**	**Continuous**
325N_XINTDOORS	Magenta	Continuous
350 Ceilings	Green	Continuous
350N Ceilings	Green	Continuous
520 Drainage	Blue	Continuous
520N Drainage	Blue	Continuous
710_XFITTINGS	**Magenta**	**Continuous**
710N_XFITTINGS	Magenta	Continuous
800 Furniture	Magenta	Continuous
800N Furniture	Magenta	Continuous
900 External Works	Red	Continuous
900N External Works	Red	Continuous

All layers should be coloured by layer, and all corresponding text, leaders and dimensions should be entered on the appropriate layer name. General text layers should only be used in the case of charts, titles, legends and notes column.

Additional layers may be created and used (e.g.: for specialist services etc) following agreement with the Estates space team.

For any drawings created by Consultants or Contractors a list of layers, their reference numbers and content must be provided with the final record drawing.

4.2 Pen Settings

The Space Management team ask that you use the following Pen settings for its drawings. This should be used wherever possible. However, if this is not possible, the .ctb plot style file that is used must be supplied with the drawing files.

The use of the colour, pen thicknesses and line types must be drawn By Layer. Estates and Facilities Standard



Name	Color 1	Color 2	Color 3	Color 4	Color 5	Color 6	Color 7	Color 8
Description								
Color	Black	Black	Black	Black	Black	Black	Black	Black
Enable dithering	On	On	On	On	On	On	On	On
Convert to grayscale	Off	Off	Off	Off	Off	Off	Off	Off
Use assigned pen #	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic
Virtual pen #	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic
Screening	100	100	100	100	100	100	100	100
Linetype	Use object linetype	Use object linetype	Use object linetype	Use object linetype	Use object linetype	Use object linetype	Use object linetype	Use object linetype
Adaptive adjustment	On	On	On	On	On	On	On	On
Lineweight	Use object lineweight	Use object lineweight	Use object lineweight	Use object lineweight	Use object lineweight	Use object lineweight	Use object lineweight	Use object lineweight
Line End Style	Use object end style	Use object end style	Use object end style	Use object end style	Use object end style	Use object end style	Use object end style	Use object end style
Line Join style	Use object join style	Use object join style	Use object join style	Use object join style	Use object join style	Use object join style	Use object join style	Use object join style
Fill Style	Use object fill style	Use object fill style	Use object fill style	Use object fill style	Use object fill style	Use object fill style	Use object fill style	Use object fill style

4.3 Co-ordinates and Drawing Units

All drawings are to be issued with the correct “world coordinates” to ensure accuracy in spatial alignment and integration with other data systems.

All drawings must be drawn in Model Space at a scale of 1:1 and in millimetres.

For drawing paper space layout, the preferred scales for use are: 1:1, 1:10, 1:20, 1:50, 1:100, 1:200, 1:250, 1:500 and 1:1250.

4.4 Line types

Standard AutoCAD line types should be used where possible. However, Site survey drawings indicating service supply routes may use custom line types as necessary.

4.5 Text formatting, styles and heights

Swis721 BT and Perpetua are the recommended fonts of the University of Edinburgh visual identity guidelines (Swiss Roman and Perpetua are specified in our text guidance for the Signage Protocol) and are recommended for text on all drawings and documents.

For room number tef int used is .txt

All drawings are to have a standard text height of 2.5mm, 3.5mm, 5.0mm and 7.0mm and a width no greater than 1 at a scale of 1:1. For example a drawing drawn at 1:100 would have a text height (in Model Space) of 250mm, and the height of the text in Paper Space would be 2.5mm. A text height no less than 1.8mm should be used.

Text Heights (mm)

Drawing Scale (1:)	**2.5**	**3.5**	**5**	**7**
1	2.5	3.5	5	7
5	12.5	17.5	25	35
10	25	35	50	70
20	50	70	100	140
50	125	175	250	350
100	250	350	500	700
200	500	700	1000	1400
250	625	875	1250	1750

500	1250	1750	2500	3500
1250	3125	4375	6250	8750

MText should be used when adding or amending space numbers and names to a new or revised space. The Space number, Space information (Space/ Room name) and area text must be created on the correct individual layers as follows:

3001 (on layer _SPACE NO)

Office (on layer _SPACE INFO)

25m² (on layer _AREA NET)

The insertion basepoint for the Space Number and Space Information text must be within the space polyline of the space it refers to.

4.6 Dimensions

Leaders (arrows) and dimensions must have architectural ticks. Text/dimensions must be centred above the dimension line. Dimensions and Leaders to be located on corresponding layer and are to be scaled relative to the scale of the drawing.

Angles shall be shown in decimal degrees.

4.7 Drawing Frame SetUp: Title Blocks

All drawings shall be drawn within the bounds of a Title block. Estates drawing title blocks are located on the Estates K Drive at: K:\EST\Estates\Estates Development\Small Projects and Minor Works\Templates\Drawing Sheets – Architectural (for use by UoE Space Management team and relevant Estates Staff only)

4.8 Drawing Revisions

Drawing revisions shall be given an alphabetic issue letter which appears in the title box. Revisions to drawings shall be clouded to clearly outline the changes, and this shall be placed on its own layer. Revisions shall be described in sufficient detail to enable the nature of the revision to be identified and shall be located clearly in a revision box above the drawing title block.

5. AREAS

On any projects where a new space is created or an existing space is amended, the new or revised area (GIA & Room Areas, in m²), space numbers and room/space usage are to be shown.

It is essential that the **GIA and Room areas are identified by polylines.** If the drawings is produced in Revit these are Room Area Boundaries. (The Export Setup must be modified to select Export Rooms and Areas as Polylines). These polylines are to be created on individual layers (see below).

Any Void areas within a building should not have a space polyline and must not be included in the GIA area polyline.

5.1 Room Area:

The Room Area is the usable area within a building measured to the internal face of the perimeter walls at each floor level.

It is an essential requirement of the E&F Space Database that ALL spaces (inclusive of voids) must have an area polyline.

The individual space area polylines are to be created on a unique layer _SPACE POLYLINE and the corresponding space number is to be created on layer _SPACE NO. The area text should be placed on layer _AREA NET.

5.2 GIA

Gross Internal Floor Area is the total area of a building owned, occupied or maintained by the University and is measured to the internal face of the perimeter walls at each floor level (i.e. the footprint of the building excluding the width of the outside walls). It includes areas occupied by internal areas and partitions, but must not include voids.

The GIA area polylines are to be created on layer _GIA POLYLINE and the corresponding text is to be created on layer _AREA GIA.

6. SPACE (ROOM) & BUILDING NUMBERING

All Space (Room) & Building numbering is managed by the Estates Space Management team in accordance with the University approved Standard Room Numbering Convention document. This can be viewed at:

https://estates.ed.ac.uk/about-us/design-guidelines/planning

All requests for new/revised Space or Building names/ numbers must be made to the Estate Space Management Team at:

Space.Management@ed.ac.uk