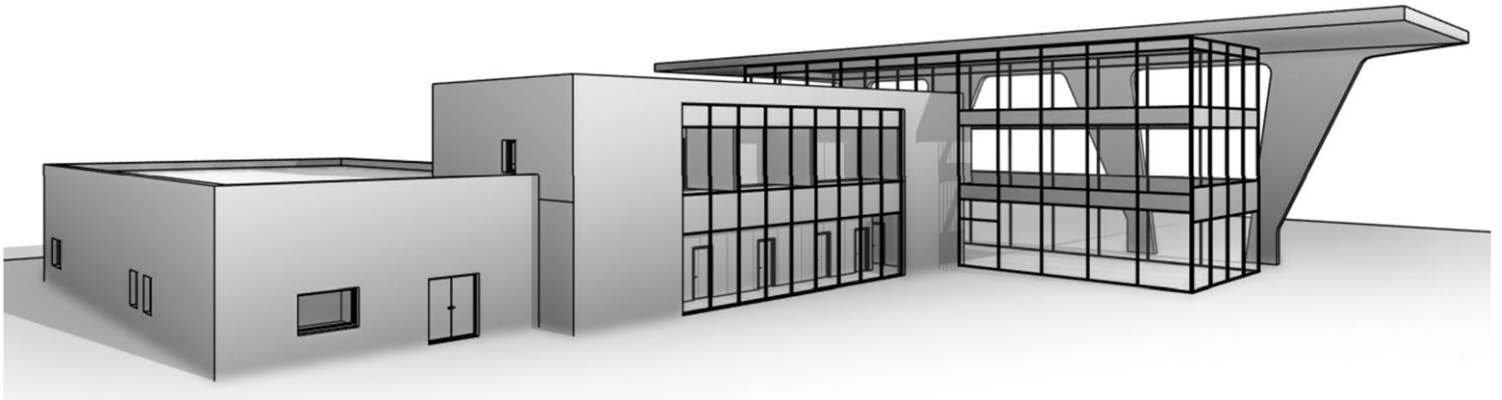




# **BIM Execution Plan**

## **Autodesk School of Design**

PRJ001-CON-XX-XX-SP-Z-0002

PRJ001

# PROJECT DOCUMENT CONTROL

## DOCUMENT DETAILS

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Project Name               | Autodesk School of Design                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Project Code               | PRJ001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Appointing Party (client)  | Autodesk                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Lead Appointed Party (LAP) | Contractor Company                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Project description        | Design and build new education asset                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Issue Date (Publish Date)  | 01/01/26                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Project Address            | TBC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Site Name                  | Autodesk Campus                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Project Description        | The Autodesk School of Design creates a transformative educational environment, fostering an enhanced student experience through state-of-the-art learning and collaboration spaces. Designed to support interdisciplinary engagement, the facility will empower students with innovative design tools and technologies to drive meaningful connections between disciplines, aligning with Autodesk's mission of enabling the next generation to imagine, design, and create a better world. The school will also cultivate industry partnerships, promoting collaboration for advancing sustainable, future-focused design education. |

## PROJECT DOCUMENT REVISIONS

| Rev. | Amendments                 | Issue Date | Author   | Checked By | Approved By | Comment             |
|------|----------------------------|------------|----------|------------|-------------|---------------------|
| P01  | First Issue                | 10/09/2025 | John Doe | Jane Doe   | Jane Doe    | Issued for comments |
| P02  | Ongoing Design Development | 12/12/2025 | John Doe | Jane Doe   | Jane Doe    |                     |
| C01  | Contractual Release        | 01/01/2026 |          |            |             |                     |

## KEY DOCUMENTS

| Document                                | Name                       |
|-----------------------------------------|----------------------------|
| Organizational Information Requirements | PRJ001-CON-XX-XX-SP-Z-0001 |
| BIM Execution plan (BEP)                | PRJ001-CON-XX-XX-SP-Z-0002 |
| Asset Information Requirements          | PRJ001-CON-XX-XX-SP-Z-0003 |
| Project Information Requirements        | PRJ001-CON-XX-XX-SP-Z-0004 |
| Exchange Information Requirements       | PRJ001-CON-XX-XX-SP-Z-0005 |

# PROJECT STAKEHOLDER AGREEMENT

The appointed stakeholder representatives listed below have reviewed and approved this BEP. These representatives hold the authority to endorse this document for the specified project and are responsible for notifying the Project Manager of any required updates.

| Company Name              | Stakeholder Representative | Orig. Code | Position                 | Date |
|---------------------------|----------------------------|------------|--------------------------|------|
| Autodesk                  | TBC                        | ADSK       | Client                   | TBC  |
| Contractor Company        | TBC                        | CON        | Project Delivery Manager | TBC  |
| Contractor Company        | TBC                        | CON        | Information Manager      | TBC  |
| Architecture Company      | TBC                        | ARC        | BIM Manager              | TBC  |
| Structure Company         | TBC                        | STR        | BIM Manager              | TBC  |
| Civil Engineering Company | TBC                        | CIV        | BIM Manager              | TBC  |
| Building Services Company | TBC                        | BSC        | BIM Manager              | TBC  |
| Landscape Design Company  | TBC                        | LAN        | BIM Manager              | TBC  |

## EXECUTIVE SUMMARY

The BIM Execution Plan (BEP) serves as the cornerstone for ensuring effective collaboration, consistency, and alignment across all project stakeholders. It outlines the strategic approach to meeting the project's information requirements, as defined by the client, and sets clear protocols for workflows, data exchange, and quality assurance. By adhering to this BEP, the project team ensures that deliverables align with the client's objectives, support compliance with industry standards, and facilitate a streamlined, efficient, and coordinated project lifecycle.

## FEDERATION STRATEGY

| Volume   | Facility Name       | Facility Type        |
|----------|---------------------|----------------------|
| Volume 1 | Workshop            | Educational entities |
| Volume 2 | Digital Design Wing | Educational entities |
| Volume 3 | Atrium              | Educational entities |

## PROJECT OBJECTIVES

A summary of the objectives and outputs are summarized below. Refer to TIDP for a full description of all tasks to be completed to realize the project.

| Stage | Strategic Objective                                                                         | Project Activity                                                                      | Responsible Party |
|-------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------|
| 1     | Establish a functional Common Data Environment (CDE) for collaboration and data management. | Set up a CDE with appropriate folder structure (WIP, Shared, Published, Archive).     | LAP               |
| 1     |                                                                                             | Invite team members with appropriate permissions.                                     | LAP               |
| 2     | Accurately model architectural elements to deliver COBie-compliant outputs.                 | Create an architectural model, embedding COBie-compliant data as per AIR.             | ARC               |
| 3     |                                                                                             | Create packages and share architectural model and outputs in the appropriate formats. | ARC               |
| 2     | Supply structural information for the project with COBie compliance.                        | Create structural model, embedding COBie-compliant data as per AIR.                   | STR               |
| 3     |                                                                                             | Create packages and share structural model and outputs in the appropriate formats.    | STR               |
| 2     | Deliver comprehensive MEP information with COBie-compliant data for facility management.    | Create an MEP model, embedding COBie-compliant data as per AIR.                       | MEP               |
| 3     |                                                                                             | Create packages and share MEP model and outputs in the appropriate formats.           | MEP               |

|   |                                                                              |                                                                                           |     |
|---|------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-----|
| 2 | Supply civil engineering details with compliance to BIM and COBie standards. | Create a civil engineering model, embedding COBie-compliant data as per AIR.              | CIV |
| 3 |                                                                              | Create packages and share civil engineering model and outputs in the appropriate formats. | CIV |
| 4 | Provide integrated project outputs ensuring interdisciplinary coordination.  | Conduct clash detection using shared models in the CDE and resolve identified issues.     | CON |
| 5 |                                                                              | Verify outputs and ensure all COBie data is complete and matches project requirements.    | CON |
| 6 | Facilitate smooth project handover with complete and accurate documentation. | Organize all finalized deliverables in the 'Published' folder of the CDE for handover.    | LAP |

## SOFTWARE PLATFORMS

| Discipline                | Software                                                  |
|---------------------------|-----------------------------------------------------------|
| Architecture Company      | Revit 2027                                                |
| Structure Company         | Revit 2027                                                |
| Building Services Company | Revit 2027                                                |
| Landscape Company         | Revit 2027                                                |
| Civil Engineering Company | Revit 2027                                                |
| Clash Detection           | Autodesk Forma: Design Collaboration / Model Coordination |
| Contractor                | Navisworks Manage 2027 for 4D construction sequencing     |

## SCOPE

This BEP outlines the procedures and standards that will guide the successful delivery of the project. It is aligned with the principles and requirements of ISO 19650-1 and ISO 19650-2. The BEP establishes the BIM uses for the project, such as design authoring, cost estimation, and design coordination, while detailing the processes for implementing BIM across the project lifecycle. It further defines roles, responsibilities, the scope of information sharing, business workflows, and the supporting software required for collaboration.

At the start of the project, the BIM strategy is documented and overseen by the BIM Coordinator/Manager. All project teams, including consultants involved in BIM collaboration, are expected to review and apply the defined standards and processes to ensure consistency and efficiency throughout the project.

## 1.0 PROJECT INFORMATION

### 1.1 PROJECT RESPONSIBILITIES

| Task Team                | Responsibility                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Architecture             | <ul style="list-style-type: none"><li>• Design and produce Architectural model(s)</li><li>• Ensure spatial coordination with other discipline models</li><li>• Prepare, validate and issue all data at required gateways (graphical and non-graphical)</li><li>• Ensure information models, drawings and data is to required Level of Information Need and compliant with BEP</li><li>• Prepare documentation for information drops/gateways</li></ul>             |
| Structure                | <ul style="list-style-type: none"><li>• Design and produce Structural model(s)</li><li>• Ensure spatial coordination with other discipline models</li><li>• Prepare, validate and issue all data at required gateways (graphical and non-graphical)</li><li>• Ensure information models, drawings and data is to required Level of Information Need and compliant with BEP</li><li>• Prepare documentation for information drops/gateways</li></ul>                |
| MEP                      | <ul style="list-style-type: none"><li>• Design and produce MEP model(s)</li><li>• Ensure spatial coordination with other discipline models</li><li>• Prepare, validate and issue all data at required gateways (graphical and non-graphical)</li><li>• Ensure information models, drawings and data is to required Level of Information Need and compliant with BEP</li></ul>                                                                                      |
| Project Delivery Manager | <ul style="list-style-type: none"><li>• Ensure all BIM stakeholders are compliant with the agreed goals</li></ul>                                                                                                                                                                                                                                                                                                                                                  |
| Information Manager      | <ul style="list-style-type: none"><li>• Run clash detection at regular intervals and produce clash report</li><li>• Issue read only clash reports onto CDE (ACC) Shared area</li><li>• Support Lead Designer on spatial coordination</li><li>• Negotiate actions to resolve identified clashes</li><li>• Chair BIM coordination meetings</li><li>• Review COBie data from all disciplines and report on content to Task Teams</li><li>• Maintain the BEP</li></ul> |

## 1.2 PROJECT SCHEDULE/PHASES/MILESTONES

All deliverables for this project, must be strictly adhered to.

| Inception        |                                                                                                 |                |               |
|------------------|-------------------------------------------------------------------------------------------------|----------------|---------------|
| Ref              | Task                                                                                            | Responsible    | Timescale     |
|                  | Development of information requirements (OIR, AIR, PIR, EIR, BEP)                               | IM             |               |
|                  | Work with IM to develop TIDP                                                                    | All Task Teams |               |
|                  | Development of MIDP                                                                             | IM             |               |
|                  | Establish CDE                                                                                   | IM             | 3 Days        |
|                  | Define Information Exchange                                                                     | LAP            |               |
|                  | Task Team Collaborate Blank Revit Project to Work In Progress (WIP) Area For Authorization (S0) | All Task Teams |               |
|                  | Task Team Upload Blank Drawing to Shared Area For Authorization (S4)                            | All Task Teams | 1 day         |
|                  | Authorize Containers and Access                                                                 | LAP            | 1 day         |
| Design           |                                                                                                 |                |               |
| Ref              | Task                                                                                            | Responsible    | Timescale     |
|                  | Design Information Model Package Shared                                                         | All Task Teams | See TIDP      |
|                  | Reduce design conflicts in WIP models                                                           | All Task Teams |               |
| Pre-construction |                                                                                                 |                |               |
| Ref              | Task                                                                                            | Responsible    | Timescale     |
|                  | Clash Analysis                                                                                  | CON            | See TIDP      |
|                  | Coordination Meetings - Assign and resolve clashes within Model Coordination tools              | All Task Teams | Every 14 days |
|                  | Track and manage identified design issues                                                       | All Task Teams |               |
|                  | Share updated PIM                                                                               | All Task Teams |               |
|                  | Clash-Free Federated Model Shared                                                               | CON            |               |
|                  | COBie Data for stage completion                                                                 | All Task Teams |               |

|                     |                                                             |                    |                  |
|---------------------|-------------------------------------------------------------|--------------------|------------------|
|                     | Produce 4D Sequencing Model                                 | CON                |                  |
| <b>Construction</b> |                                                             |                    |                  |
| <b>Ref</b>          | <b>Task</b>                                                 | <b>Responsible</b> | <b>Timescale</b> |
|                     | Construction Information Model / Documentation and Drawings | All Task Teams     |                  |
|                     | Clash Analysis                                              | CON                | See TIDP         |
|                     | Coordination Meetings                                       | All Task Teams     | Every 14 days    |
|                     | Response to Coordination Meetings                           | All Task Teams     |                  |
|                     | Produce 4D Sequencing Model                                 | CON                |                  |
|                     | Laser Scan As Built                                         | CON                |                  |
|                     | Checks Against Design / As Built                            | All Task Teams     |                  |
|                     | Response to As Built Information                            | All Task Teams     |                  |

### 1.3 TIDP

A Task Information Delivery Plan (TIDP) shall be prepared by each Task Team.

### 1.4 MIDP

The Master Information Delivery Plan (MIDP) is developed by consolidating the Task Information Delivery Plans (TIDPs) created by each task team involved in the project. Each TIDP outlines the specific information deliverables for its respective discipline or team. The MIDP brings these individual plans together, providing a comprehensive schedule of all model files, deliverables, and Information Exchange files for the entire project. Once complete, the MIDP should be appended to this document and uploaded to the Common Data Environment (CDE) 'Shared' area.

## 1.5 AUTHORIZATION

| Inception |                           |                    |                                                 |
|-----------|---------------------------|--------------------|-------------------------------------------------|
| Ref       | Company                   | Authorized Manager | Authority                                       |
|           | Contractor company        | TBC                | Upload, download, change<br>Access/distribution |
|           | Architecture company      | TBC                | Upload, download                                |
|           | Structure company         | TBC                | Upload, download                                |
|           | Civil engineering company | TBC                | Upload, download                                |
|           | Building services company | TBC                | Upload, download                                |
|           | Landscape design company  | TBC                | Upload, download                                |
|           | Client                    | TBC                | Download                                        |

## 2.0 PROJECT REQUIREMENTS

This section describes how the BIM Model and Facility Data are leveraged to maximize project value (e.g. design alternatives, life-cycle analysis, scheduling, estimating, material selection, pre-fabrication opportunities, site placement, etc).

### 2.1 INFORMATION EXCHANGE FORMATS

The dates for information exchange are referred to in **Section 1.2**. At each delivery stage, each Student will be required to upload information in the following formats to the CDE.

Agreed formats for model and drawing file exchange are noted below.

| Format(s)                    | IFC | Excel | PDF | Native Format | Other (Add Format) |
|------------------------------|-----|-------|-----|---------------|--------------------|
| 3D Model File(s)             | X   |       |     | X             |                    |
| Drawing File(s)              |     |       | X   |               |                    |
| Clash Rendition              |     |       |     |               | HTML<br>Tabular    |
| COBie/Asset Data File(s)     |     | X     |     |               |                    |
| Reports/Specifications       |     |       | X   |               |                    |
| 4D Schedule Simulation Files |     |       |     | X             | MP4                |
| Point cloud model            |     |       |     |               | RCP                |
| Visualization                |     |       |     |               | JPG / MP4          |

## 3.0 DATA REQUIREMENTS

### 3.1 AIR (ASSET INFORMATION REQUIREMENTS)

The AIR outlines all the assets that require data and specifically what data is required to be input and when.

COBie schemas shall be issued from each discipline at handover in line with the TIDP and agreed schedules.

### 3.2 CONSTRUCTION OPERATIONS BUILDING INFORMATION EXCHANGE (COBIE)

This project will produce an output of COBie compliant information deliverables for facilities management use at the agreed Information Exchange stages throughout the life of the project.

It is the responsibility of each Student to ensure the integrity of COBie references (worksheet, column naming and positioning, cell and pick list referencing) prior to upload to the Shared area of the CDE.

### 3.3 COBIE PARAMETERS

It is the responsibility of each task team to ensure the required COBie fields are populated before issue to the CDE.

### 3.4 DATA DROP REVIEW & DELIVERY PROCEDURE

#### 3.4.1 PROJECT INFORMATION MODEL SHARING PROCESS

Before issuing / sharing any files with other parties, please follow the process below:

1. Ensure the WIP project is **complete** / ready to be shared
2. Save a local copy of the file to your local computer
3. Open the local copy of the project on your computer
4. Collaborate this project to the **Task Team Shared** directory in CDE
  - **CDE>Architecture company>Shared**
5. Use the Model Issue Validation Checklist provided to **validate** the PIM directly in CDE  
> task team > Shared directory
6. Once validated, **package all validated model files, information exports and documentation** in the format required to the **CDE > Shared** directory for use by other task teams
7. Issue **completed validation checklists** in the format required to the **Task Team > Admin**

## 4.0 STANDARD METHOD & PROCEDURE

### 4.1 APPLICABLE STANDARDS

The use of a common language and standards are necessary to achieve a fully collaborative BIM process. To support consistency of graphical and non-graphical information, models shall be authored to an agreed industry standard. Where this document conflicts with the standards below the BEP will take precedence:

| M=Mandatory<br>R=Recommended |          | Application   |             |               |         |                |     |          |                  |           |
|------------------------------|----------|---------------|-------------|---------------|---------|----------------|-----|----------|------------------|-----------|
| Standards                    | Guidance | Collaboration | File naming | Object naming | Drawing | Classification | CDE | Security | Asset Management | Contracts |
| ISO 19650-1                  | M        | M             | M           | M             | M       | M              | M   | M        | R                | M         |
| ISO 19650-2                  | M        | M             | M           | M             | M       | M              | M   | M        | R                | M         |
| ISO 19650-3                  | M        | M             | R           | R             | R       | R              | M   | M        | M                | M         |
| ISO 19650-4                  | M        | R             | R           | R             | R       | R              | R   | M        | R                | M         |
| ISO 19650-5                  | M        | R             | R           | R             | R       | R              | R   | M        | R                | M         |
| ISO 22014:2024               | R        | M             | M           | M             | R       | R              | R   | R        | M                | R         |
| ISO 16739-1:2024             | R        | M             | M           | M             | R       | R              | R   | R        | M                | R         |
| The NBS BIM Toolkit          | R        | R             | R           | R             | R       | R              | R   | R        | R                | R         |
| ISO 7817-1:2024              | R        | M             | R           | R             | M       | R              | R   | R        | R                | R         |

## 4.2 FILE NAMING CONVENTION

Naming shall be based on ISO 19650 container naming. For full compliance, recommended character restrictions must be adopted as per appendix A. Delimiter should be hyphen (-) except between fields 7 and 8 where underscore (\_) should be used.

| 1       | 2          | 3                    | 4                 | 5    | 6          | 7      | 8                      |
|---------|------------|----------------------|-------------------|------|------------|--------|------------------------|
| Project | Originator | Functional Breakdown | Spatial Breakdown | Form | Discipline | Number | (Optional) Description |

|                                      |                                                                                                                                                                                                                                                                                 |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Field 1: Project Code</b>         | An abbreviated code or number identifying the project.                                                                                                                                                                                                                          |
| <b>Field 2: Originator Code</b>      | An abbreviated code identifying the originator.                                                                                                                                                                                                                                 |
| <b>Field 3: Functional Breakdown</b> | Identifier of which building, area, phase, volume or work package of the project the model file relates to if the project is sub-divided by zones/volumes.                                                                                                                      |
| <b>Field 4: Spatial Breakdown</b>    | Identifier of which spatial aspect of the project does the information container relate to. eg. group of levels, region, location, floor etc.                                                                                                                                   |
| <b>Field 5: Form</b>                 | Nature of the information container, document type. This will be M3 for 3D model files, as per ISO 19650                                                                                                                                                                        |
| <b>Field 6: Discipline</b>           | 1 character discipline identifier code, as per ISO19650                                                                                                                                                                                                                         |
| <b>Field 7: Number</b>               | Sequential numbering should be used with a 4 digit numerical identifier. Leading zeros should be used. It should be noted that as the Name is made up by concatenating all fields, the Number part is only unique where other fields are the same.                              |
| <b>Field 8: Description</b>          | Descriptive field to define the type of data portrayed in the file. Avoid repeating information codified in other fields. Can be used to further clarify any other aspect of the contained data. It is preferred that this description does not change between issues. Optional |

When naming any project models such as the native Revit model or an exported IFC etc, Appendix A gives detailed information as to field contents. Only use information listed in the Appendix. An example of naming is detailed below:

Example: Architectural Project

Functional Breakdown: 01 (volume 1) Project number: PRJ001

Originator: Architectural Company

Native Architectural Revit Project Information Model would be named: PRJ001-ARC-01-ZZ-M3-A-0001

Exported IFC Architectural Revit Project Information Model would be named: RJ001-ARC-01-ZZ-MR-A-0001

### 4.3 DOCUMENT NAMING CONVENTION

When naming any documentation such as a validation checklist or COBie Schema etc, the model that is being validated or data extracted from, will be used to supply the **Functional Breakdown** and **Spatial Breakdown** fields as well as the **Discipline** for the document.

Example:

Validation checklist when validating the above project would be named: PRJ001-ARC -01-ZZ-TSP-A-0001

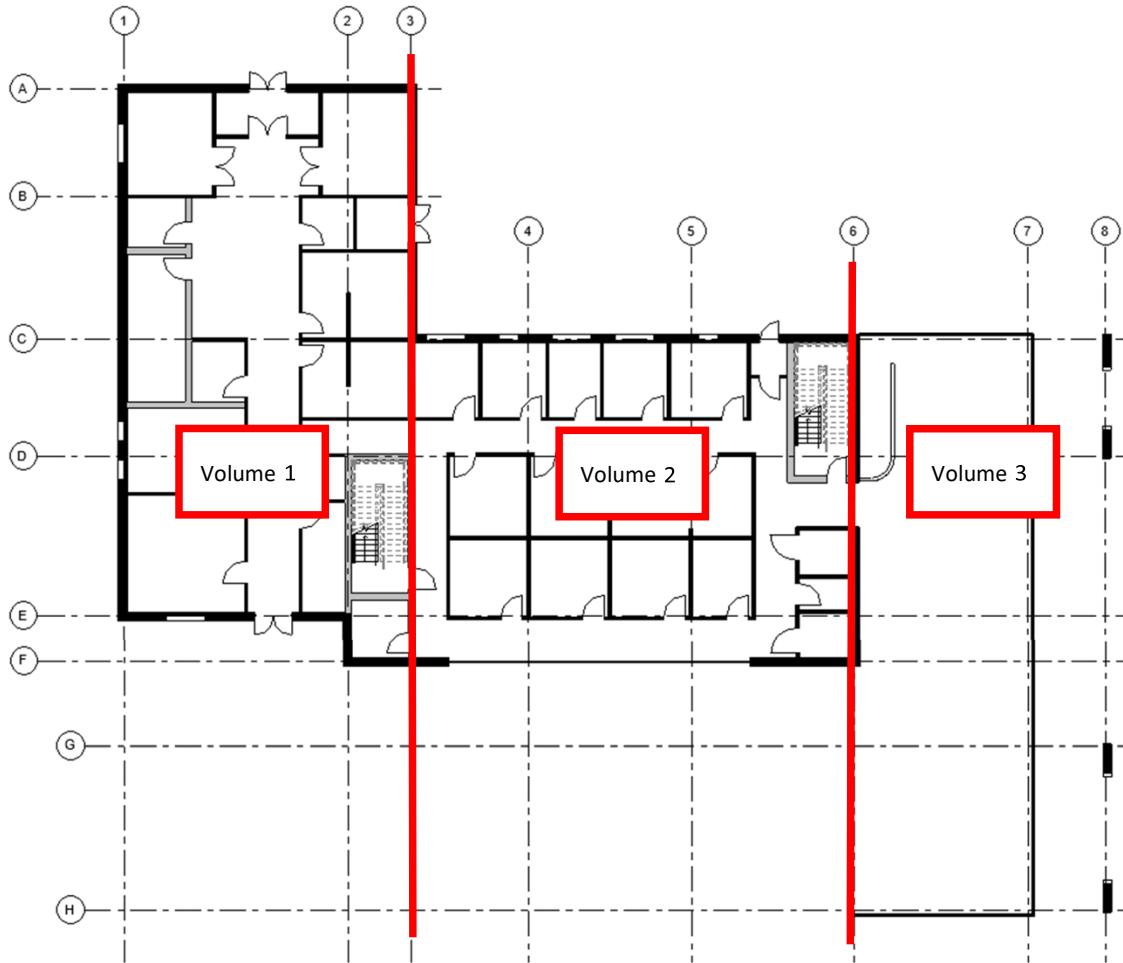
COBie schema for the above project would be named: PRJ001-ARC -01-ZZ-LIE-A-0001

### 4.4 FEDERATION STRATEGY

This project is to be split into volumes or zones to facilitate efficient manipulation in the virtual environment. Each discipline will be saved and federated separately such as architecture, structure etc. For use, upload and download when working in a collaborative manner. This process must be managed by the Lead Designer. Volume plans and naming conventions to be shared via the CDE.

The volume strategy needs to be defined at project outset, as volume codes are included in the file naming example in **Appendix A**.

All teams must use the Volume Strategy as a foundation for coordination.



#### 4.5 BIM OBJECT/ASSET NAMING

Naming shall be based on ISO 22014:2024. For full compliance, recommended character restrictions should be adopted. Names shall be composed of only alphanumeric characters. The naming fields shall use the underscore character ( ) as a delimiter between fields. Information within each field is to be CamelCase (capitalized first letters to words). No spaces or punctuation shall be used before the description.

All newly authored OR EDITED BIM objects will be produced and shared by project team members, therefore it is critical to follow the standard object naming identified below.

| 1                 | 2                                                        | 3                 | 4          |
|-------------------|----------------------------------------------------------|-------------------|------------|
| Source            | Type                                                     | Subtype / Product | Descriptor |
| Source            | Used to convey the object Author company                 |                   |            |
| Type              | IFC Type                                                 |                   |            |
| Subtype / Product | Additional specialist information such as product number |                   |            |
| Descriptor        | Plain English description of the element                 |                   |            |

Example:

Author : Architecture Company

IFC Type : Door

Product Number : GRP123X

Plain English Description : Single flush GRP Composite Exterior Door

ARC\_Door\_GRP123X\_Single flush GRP Composite Exterior Door

## 4.6 CLASSIFICATION

The Uniclass 2015 classification system must be used to support COBie and Asset Management requirements. Classification for **all files uploaded to the CDE** should be in accordance with Uniclass 2015, using the PM table where possible.

### Examples

|             |                                     |
|-------------|-------------------------------------|
| PM_40_35_04 | Architects Models                   |
| PM_40_40_27 | Elevation drawings                  |
| PM_10_20_27 | Environmental reporting information |
| PM_40_60_39 | Information validation              |
| PM_40_35_83 | Structural engineering models       |
| PM_60_10_60 | Site grid reference                 |

**\*\*A dedicated metadata area named 'Classification' has been created in the CDE for this purpose. Classification information should be attached as metadata and not used in the container name.**

## 4.7 PROJECT SPECIFIC NAMING CONVENTIONS

Project naming conventions must be agreed and observed by all suppliers in order to align with the CAFM system. The following naming conventions are required in this project. Refer to Appendix A for a detailed breakdown of project naming specifics.

### 4.6.1 SPACE / ROOM NUMBERS

| Space / Room Numbers             |                                                                                                                                                                                                                |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Spaces/ Rooms to be numbered as: | <b>LEVELCODE-RM-UNIQUEID</b><br>Example <b>00-RM-001</b><br>Use the defined Floor numbers only for the Level Code<br>Use existing room numbers for the unique ID<br>Room within room example <b>00-RM-001a</b> |

### 4.6.2 LEVEL NAMES

| Level Names            |                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Levels to be named as: | <b>LEVELCODE DISCIPLINEID</b><br>Example <b>00 SSL</b><br>Use the defined Floor numbers only for the Level Code<br>Use one of the following identifiers on every level:<br><br>Structural projects:<br>TOF : Top of Foundation<br>SSL : Structural Slab<br>Level TOS : Top Of Steelwork<br><br>Architectural projects:<br>FFL : Finish Floor Level<br>Note: All other levels to use <b>LEVELCODE</b> only R1 etc |

## 4.8 STATUS CODES & REVISIONS

Status codes are required for **all files uploaded to the CDE**

See Appendix B.

## 4.9 REVISION/VERSION EXPLAINED

| Revision for Models |                                                                         |
|---------------------|-------------------------------------------------------------------------|
| Shared              |                                                                         |
| P01                 | 1 <sup>st</sup> version of the shared model                             |
| P02                 | 2 <sup>nd</sup> version of the shared model                             |
| P03                 | 3 <sup>rd</sup> version of the shared model                             |
|                     | Revisions should be numbered sequentially as the design develops        |
| Published           |                                                                         |
| C01                 | 1 <sup>st</sup> version of the constructed model                        |
| C02                 | 2 <sup>nd</sup> version of the constructed model                        |
| C03                 | 3 <sup>rd</sup> version of the constructed model                        |
|                     | Revisions should be numbered sequentially as for any changes or updates |

## 4.10 MODEL DIVISION

Each discipline should provide the Information Manager with a full list of all workset names to be used on the project. This list should be published to all members of the project team for information. Worksets are to be named in accordance with the table below. Any changes to model subdivision or workset provision must be agreed by the entire design team. Any changes are to be recorded in the table below and the Project BEP updated on the CDE. Worksets should be created in such a manner to ease substitution of geometry with sub-Contractor's models e.g. curtain walling.

| Discipline code | - (hyphen) | Classification (Uniclass 2015) | _ (underscore) | Description |
|-----------------|------------|--------------------------------|----------------|-------------|
| Architecture    |            |                                |                |             |
| A               | -          | EF_25_10                       | _              | Walls       |
| A               | -          | EF_35_10                       | _              | Stairs      |
| A               | -          | EF_30_10                       | _              | Roofs       |
| Structure       |            |                                |                |             |
| S               | -          | EF_20_10                       | _              | Columns     |
| S               | -          | EF_20_10                       | _              | Framing     |
| S               | -          | EF_30_20                       | _              | Floors      |

#### 4.11 PROJECT INFORMATION MODEL (PIM) DELIVERY STRATEGY

Specific requirements of Stakeholders must be considered to enable effective coordination. To ensure that all information is accessible to all parties please follow the guidance detailed below. Any deviation from this table must be agreed with the Information Manager.

| Item | Description                                                                                                                                                                                                                                                                                  |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | No more than one building shall be modelled in a single file and contain only data from one discipline.                                                                                                                                                                                      |
| 2    | Model files and information should not exceed 200MB. Should the file size be breached, the model shall be segregated following the Federation Strategy as defined.                                                                                                                           |
| 3    | Placeholder models for key items such as levels, ceilings, under floor voids etc. are to be defined at an early stage. Placeholder models cannot be changed without agreement from all stakeholders. Placeholder models will be subdivided and ownership passed as the design is progressed. |

#### 4.12 PROJECT COORDINATES

3D geo-location coordinates to be shown no less accurate than 1mm in all directions.

|                    | Local Intersection |          | Local Coordinates |          |           |                     |
|--------------------|--------------------|----------|-------------------|----------|-----------|---------------------|
| Coordinate         | Gridline           | Gridline | Easting           | Northing | Elevation | True North Rotation |
| Survey Point       | N/A                | N/A      | 0                 | 0        | 0         | 0                   |
| Project Base Point | H                  | 1        | 276754.0          | 65621.0  | 85600.0   | 10 degrees (East)   |

Project coordinates must be used at all stages of the project if you are uncertain as to the status of your model coordinates please check with the task team manager for guidance before sharing models.

#### 4.13 MODEL UNITS

Models shall use consistent units and will be drawn at 1:1 (actual size). Where generic models are superseded by specialist design or the specification of products Task Team Managers are to ensure dimensional accuracy is maintained.

- For building projects: millimetres
- For infrastructure projects: metres with three decimal places
- Area: m2
- Volume: m3
- Weight: Kg
- Angle: Degrees

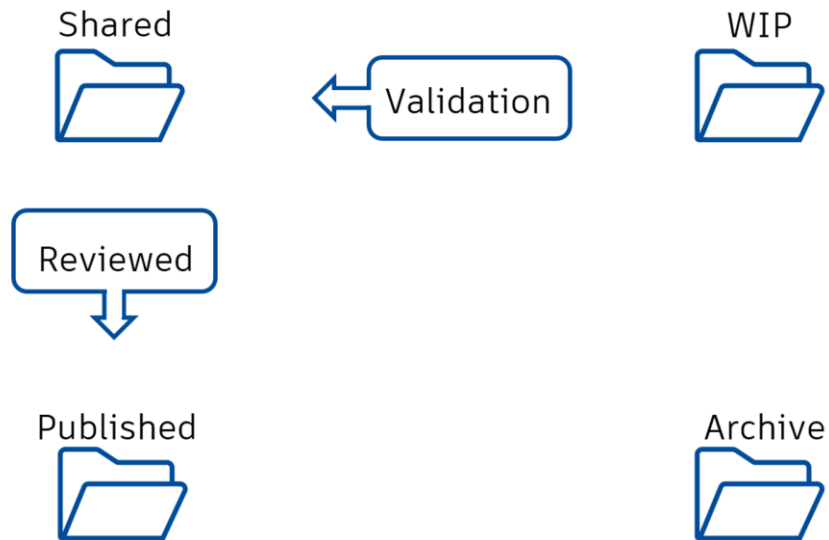
#### 4.14 CDE WORKFLOW

The principle workflow phases of the CDE will need to be aligned with ISO 19650 guidelines:

- Work in Progress – Design WIP models by individual discipline specific stakeholders
- Shared – Validated Design Models Shared (see appendix D)
- Published – Approved Models and Data verified
- Archived – This folder will maintain the project history for knowledge and regulatory and legal requirements. Access to this folder will be read only to all

Types of checks need to be undertaken before uploading to the shared area are:

- Model suitability check
- Technical content check
- COBie completeness check
- Drawings extract checks along with any additional documentation
- Approval by the Task Team Manager (e.g. BIM Manager)



## 5.0 COLLABORATION PROCEDURES

The process flow indicates the detailed information flow between disciplines and the method for approval and coordination via WIP and Shared process.

### 5.1 COLLABORATION STRATEGY

The Information Manager shall coordinate the file transfer process via a Common Data Environment at the earliest opportunity. All issued documents must comply with the document management protocols set out in the PEP.

|                     |                           |
|---------------------|---------------------------|
| CDE                 | Forma Data Management     |
| CDE Website Address | acc.autodesk.com          |
| Document Controller | Information Manager (TBC) |

## APPENDIX A – CONTAINER NAMING

| Project Code | Originator |                                            | Functional Breakdown |                        | Spatial Breakdown |                                 | Form |                                                     | Discipline |                              | Number |
|--------------|------------|--------------------------------------------|----------------------|------------------------|-------------------|---------------------------------|------|-----------------------------------------------------|------------|------------------------------|--------|
| Code         | Code       | Company                                    | Code                 | Volume                 | Code              | Level                           | Code | Document Type                                       | Code       | Role                         | Number |
| PRJ001       | ADSK       | Autodesk                                   | ZZ                   | All / multiple volumes | ZZ                | Multiple levels                 | M3   | Native 3D Model File (Revit 2026)                   | A          | Architectural                | 0001   |
|              | CON        | Contractor Company                         | XX                   | No volumes             | XX                | No level applicable             | MR   | IFC Model Rendition exported from native model      | B          | Building Control             | 0002   |
|              | ARC        | Architecture Company                       | 01                   | Volume 1               | 00                | Base floor level (ground floor) | MCR  | Model used for Clash detection purposes             | C          | Civil Engineer               | 0003   |
|              | STR        | Structure Company                          | 02                   | Volume 2               | 01                | Upper floor level               | DG   | 2D Drawing                                          | D          | Drainage, Highways Engineer  | Etc.   |
|              | BSC        | Building Services Company                  | 03                   | Volume 3               | R1                | Roof level                      | M2   | 2D Model File                                       | E          | Electrical Engineer          |        |
|              | LAN        | Landscape Company                          |                      |                        | F1                | Foundations                     | IE   | List Information Exchange (COBie data sheet)        | F          | Facilities Manager           |        |
|              | MEP        | Mechanical Electrical and Plumbing Company |                      |                        |                   |                                 | TSP  | Text Specification (Validation checklist)           | G          | Geographical & Land Surveyor |        |
|              |            |                                            |                      |                        |                   |                                 | LRP  | List based Reports (including zipped clash reports) | H          | Heating& ventilation         |        |
|              |            |                                            |                      |                        |                   |                                 | LDB  | List: Database                                      | K          | Client                       |        |
|              |            |                                            |                      |                        |                   |                                 | HS   | Health and safety                                   | L          | Landscape Architect          |        |
|              |            |                                            |                      |                        |                   |                                 | MI   | Minutes / action notes                              | M          | Mechanical Engineer          |        |
|              |            |                                            |                      |                        |                   |                                 | TPP  | Presentation                                        | P          | Public Health Engineer       |        |
|              |            |                                            |                      |                        |                   |                                 | PR   | Programme                                           | Q          | Quantity Surveyor            |        |
|              |            |                                            |                      |                        |                   |                                 | RD   | Room data sheet                                     | S          | Structural Engineer          |        |
|              |            |                                            |                      |                        |                   |                                 | RI   | Request for information                             | W          | Contractor                   |        |
|              |            |                                            |                      |                        |                   |                                 | TRP  | Textual : Report                                    | X          | Subcontractor                |        |
|              |            |                                            |                      |                        |                   |                                 | SA   | Schedule of accommodation                           | Y          | Specialist Designer          |        |
|              |            |                                            |                      |                        |                   |                                 |      |                                                     | Z          | General                      |        |

## APPENDIX B – STATUS CODES

| Graphical                             | Data conveyed using shape and arrangement in space i.e. geometrical model only.                               |                          |             |               |           |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------|--------------------------|-------------|---------------|-----------|
| Non-Graphical                         | Data conveyed using alphanumeric characters.                                                                  |                          |             |               |           |
| Documents                             | Including but not limited to correspondence, drawings, schedules, specifications, calculations, spreadsheets. |                          |             |               |           |
| Status                                | Description                                                                                                   | Revision                 | Graphical   | Non-Graphical | Documents |
| WORK IN PROGRESS                      |                                                                                                               |                          |             |               |           |
| S0                                    | Initial Stage or WIP                                                                                          | P01.01 etc to P0n.0n etc | X           | X             | X         |
| SHARED (NON-CONTRACTUAL)              |                                                                                                               |                          |             |               |           |
| S1                                    | For Coordination                                                                                              | P01 to P0n               | X           | X             | X         |
| S2                                    | For Information                                                                                               |                          | X           | X             | X         |
| S3                                    | For Review and Comment                                                                                        |                          | As Required | X             | X         |
| S4                                    | For Stage Approval                                                                                            |                          | X           | X             | X         |
| PUBLISHED DOCUMENTATION (CONTRACTUAL) |                                                                                                               |                          |             |               |           |
| A1, A2, An                            | Approved & accepted as stage complete                                                                         | C01 to C0n               | X           | X             | X         |
| B1, B2, Bn                            | Partially signed off: With minor comments from the Appointing party                                           | P01.01 etc to P0n.0n etc | X           | X             | X         |
| PUBLISHED FOR AIM ACCEPTANCE          |                                                                                                               |                          |             |               |           |
| CR                                    | As Constructed Record documentation, PDF, Model etc.                                                          | C01 to C0n               | X           | X             | X         |

## APPENDIX C - GLOSSARY

|                 |                                                                                                                                       |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------|
| AIM             | Asset information model                                                                                                               |
| AIR             | Asset information requirements                                                                                                        |
| AMS             | Asset management system                                                                                                               |
| BASIR           | Built asset security information requirements                                                                                         |
| BASMP           | Built asset security management plan                                                                                                  |
| BEP             | BIM execution plan                                                                                                                    |
| BIM             | Building information modelling                                                                                                        |
| CAFM            | Computer-aided facilities management                                                                                                  |
| CDE             | Common data environment                                                                                                               |
| COBie           | Construction Operations Building information exchange                                                                                 |
| EAMS            | Estate's asset management system                                                                                                      |
| EDMS            | Electronic document management system                                                                                                 |
| EIR             | Exchange information requirements                                                                                                     |
| FM              | Facilities management                                                                                                                 |
| GUID            | Globally unique identifier. It is automatically produced by the software and assigned to each element.                                |
| IFC             | Industry foundation classes                                                                                                           |
| MIDP            | Master information delivery plan                                                                                                      |
| OIR             | Organizational information requirements                                                                                               |
| PIM             | Project information model                                                                                                             |
| PIR             | Project information requirements                                                                                                      |
| TIDP            | Task information delivery plan                                                                                                        |
| USD             | Universal scene description                                                                                                           |
| WIP             | Work In Progress folder                                                                                                               |
| Federated model | A model containing multidiscipline models, such as architecture and struct                                                            |
| Clash detection | The process of identifying conflicts and issues between discipline models by collaborating in 3D as part of the co-ordination process |

## APPENDIX D – EXAMPLE VALIDATION

Issue model to **SHARED** directory in each task

This checklist should be used in conjunction with the project BIM Execution Plan 4.14

|                                                                  |                |
|------------------------------------------------------------------|----------------|
| Model Name                                                       | XXX            |
| Date                                                             | XXX            |
| Prepared By                                                      | Your name here |
| Approved By                                                      | (Leave Blank)  |
| Purpose for issue (Status code and reason, for Information etc.) |                |

Model Preparation provides a guide for preparing the model prior to validation / issuing at the end of each task. **Before continuing, ensure WIP model is complete / ready to be shared**

### Model Preparation

| #  | Task                                                                                           | y/n |
|----|------------------------------------------------------------------------------------------------|-----|
| 1  | Check model file name conforms BEP                                                             |     |
| 2  | Review all warning messages within project information model                                   |     |
| 3  | Check model data is located to the grid, origin & orientation / elevation within project model |     |
| 4  | Remove all linked models from the project                                                      |     |
| 5  | Check that all content is in the correct Workset and conforms to project requirements          |     |
| 6  | Assign a StartUp View : set to 'Project Information' Sheet                                     |     |
| 7  | Update the Status code on the project information sheet to reflect issue status etc            |     |
| 8  | Update the Project coordinate information on the project information sheet                     |     |
| 9  | Check that all content follows the agreed Federation Strategy                                  |     |
| 10 | Remove all concept / mass models and design intent                                             |     |
| 11 | Check Classification information is applied to the required elements in the model              |     |
| 12 | If requested, check clashes have been resolved within Task Team Models                         |     |
| 13 | Check / assign status codes to all files uploaded                                              |     |
| 14 | Check uniclass 2015 info are correctly applied to all files in space provided in CDE           |     |

|    |                                                                                |  |
|----|--------------------------------------------------------------------------------|--|
| 15 | Fully purge the project model                                                  |  |
| 16 | Save the validation checklist to the admin directory named as per requirements |  |

# APPENDIX E – CLASH AVOIDANCE

| Structural Model (all volumes) vs MEP Model (all volumes)           |           |
|---------------------------------------------------------------------|-----------|
| Structural vs MEP                                                   |           |
| Level 02 Structural Framing vs Level 1 Cable Trays                  | Hard 10mm |
| Level Roof Structural Framing vs Level Roof Ducts                   | Hard 50mm |
| Level 02 Floors vs Level 1 Ducts                                    | Hard 50mm |
| Architectural Model (all volumes) vs Structural Model (all volumes) |           |

# APPENDIX F – COBie PROJECT SETTINGS

Autodesk Interoperability Tools | COBie Extension

AUTODESK COBie EXTENSION FOR REVIT

?

>

Setup ▶ General

These settings affect all elements across multiple COBie worksheets

Locality

☐ United States (US)

☒ United Kingdom (UK)

Identification

☐ Revit Element ID

☒ Global Unique Identifier (GUID)

☐ Mapped parameter

Units

Linear

Millimeter

Area

Square meter

Volume

Cubic meter

Currency

Area Measurement Standard

Revit default area calculation method

✕ Cancel

Save

✓ Save and Close



## Setup ► Spaces

Choose whether or not Revit elements are located by Rooms or Spaces



Choose whether Revit elements are located by Room or Space

|                       |      |       |
|-----------------------|------|-------|
| Air Terminals         | Room | Space |
| Assemblies            | Room | Space |
| Audio Visual Devices  | Room | Space |
| Cable Tray Fittings   | Room | Space |
| Cable Trays           | Room | Space |
| Casework              | Room | Space |
| Ceilings              | Room | Space |
| Columns               | Room | Space |
| Communication Devices | Room | Space |
| Conduit Fittings      | Room | Space |
| Conduits              | Room | Space |
| Curtain Panels        | Room | Space |
| Curtain Wall Mullions | Room | Space |
| Data Devices          | Room | Space |
| Doors                 | Room | Space |
| Duct Accessories      | Room | Space |
| Duct Fittings         | Room | Space |
| Duct Insulations      | Room | Space |
| Duct Linings          | Room | Space |



Room for all



Space for all



Space for MEP elements



Space for MEP runs: Duct, Pipe, Conduit



Reset defaults

## Space Name Builder

☒ Field separator

## Spaces in Zones

☒ Each space listed in its own row☐ All spaces in one row, with a separator

Cancel



Save

Save and Close

Autodesk Interoperability Tools | COBie Extension

AUTODESK COBIE EXTENSION FOR REVIT

Types

Setup ▸ Types

Specify properties for the COBie type spreadsheet

Types

Name Builder

☒ Field separator

Fields

Add Field...

Revit Category

Family

Type Mark

×

×

×

Preview

MyCategory\_MyFamily\_123

Category

First Priority

Classification Manager 'Uniclass Pr' parameter v

Second Priority

Revit 'Assembly Code' parameter value from the

Third Priority

Revit 'Keynote' parameter value from the type d

Fourth Priority

Use 'n/a'

Description

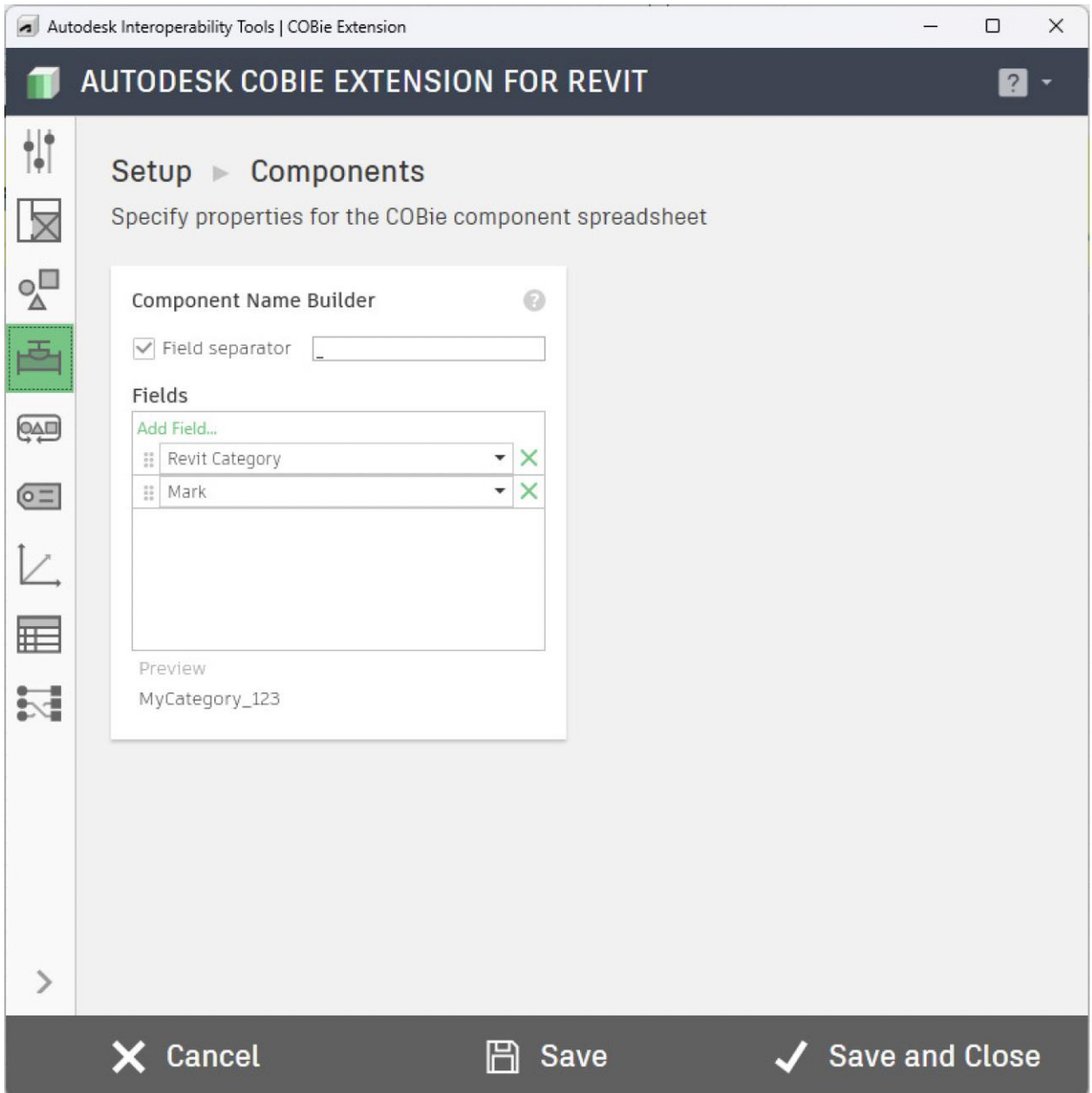
☐ Family : Type

☒ Description parameter from Type Properties

✕ Cancel

Save

✓ Save and Close





## Setup ► Systems



Specify properties for the COBie system spreadsheet



### System Name Builder



☒ Field separator

#### Fields

Add Field...

|                |   |
|----------------|---|
| Revit Category | ✕ |
| System Name    | ✕ |

Preview

MyCategory\_MySystemName

### Category



Classification Manager 'Uniclass Table Ss' param ▼

### Components in Systems

- ☒ Each component listed in its own row
- ☐ All components in one row, comma separated

### Include Components

- Export each system's associated
- ☐ Components and Types to the appropriate spreadsheet



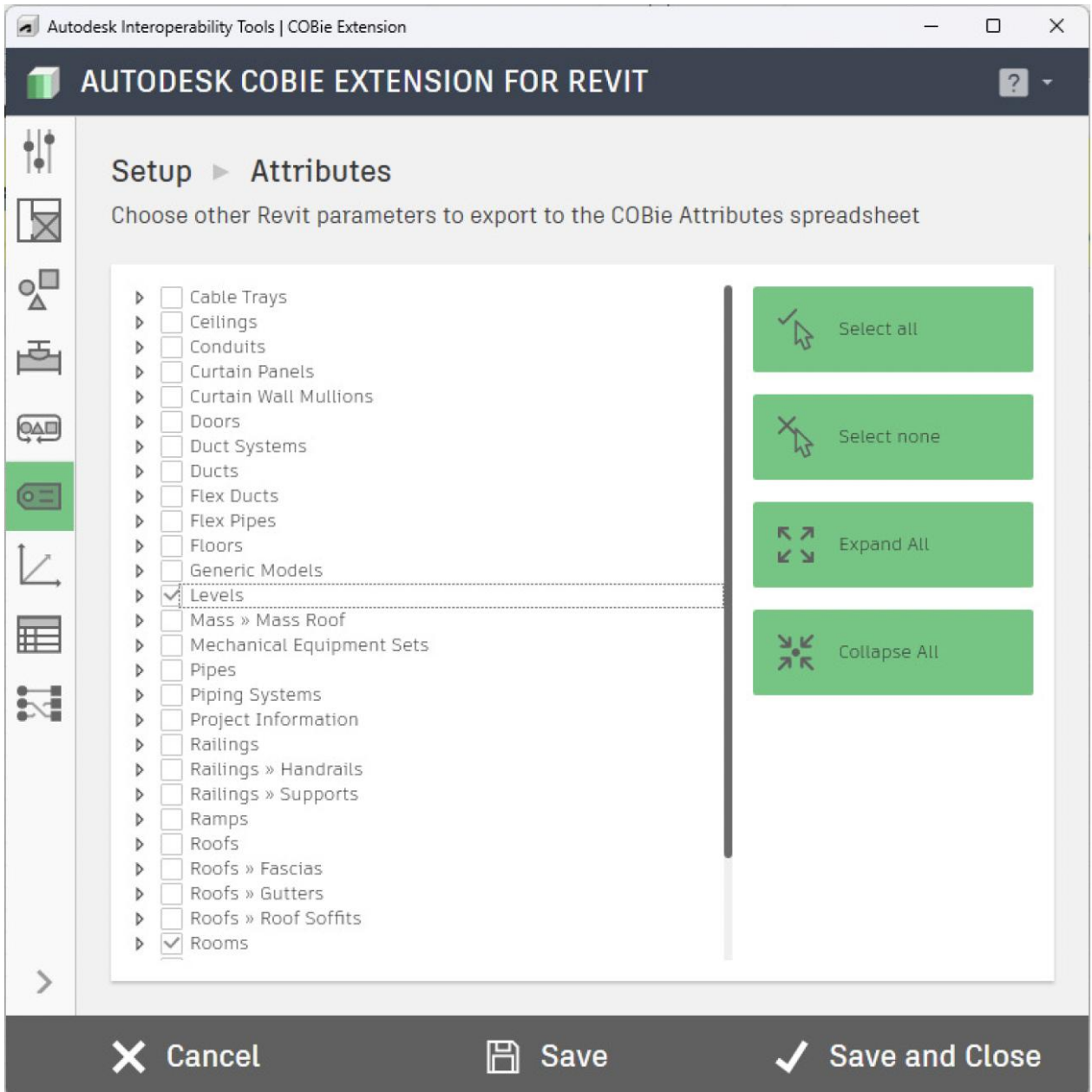
Cancel



Save



Save and Close



?



☒ Bounding box

✓ Save and Close



Select none



✓ Save and Close

?



?

&gt;

 Save

✓ Save and Close

## APPENDIX G – IFC EXPORT SETTINGS

Modify Setup

<In-Session Setup>  
<IFC 2x3 Coordination View 2.0 Setup>  
<IFC 2x3 Coordination View Setup>  
<IFC 2x3 GSA Concept Design BIM 2010 Setup>  
<IFC 2x3 Basic FM Handover View Setup>  
<IFC 2x2 Coordination View Setup>  
<IFC2x3 COBie 2.4 Design Deliverable View Setup>  
<IFC4 Reference View [Architecture] Setup>  
<IFC4 Reference View [Structural] Setup>  
<IFC4 Reference View [BuildingService] Setup>  
<IFC4 Design Transfer View [Unofficial] Setup>  
<IFC4x3 Setup>  
<IFC-SG Regulatory Requirements View Setup>

General | Additional Content | Property Sets | Level of Detail | Advanced | Geographic Reference

IFC version: IFC 2x3 Coordination View 2.0  
Exchange Requirement:   
Category Mapping: <In-Session Setup> ...  
File type: IFC  
Phase to export: Default phase to export  
Space boundaries: None

☐ Split Walls, Columns, Ducts by Level

File Header Information...  
Project Address...

Reset OK Cancel

Modify Setup

<In-Session Setup>  
<IFC 2x3 Coordination View 2.0 Setup>  
<IFC 2x3 Coordination View Setup>  
<IFC 2x3 GSA Concept Design BIM 2010 Setup>  
<IFC 2x3 Basic FM Handover View Setup>  
<IFC 2x2 Coordination View Setup>  
<IFC2x3 COBie 2.4 Design Deliverable View Setup>  
<IFC4 Reference View [Architecture] Setup>  
<IFC4 Reference View [Structural] Setup>  
<IFC4 Reference View [BuildingService] Setup>  
<IFC4 Design Transfer View [Unofficial] Setup>  
<IFC4x3 Setup>  
<IFC-SG Regulatory Requirements View Setup>

General | Additional Content | Property Sets | Level of Detail | Advanced | Geographic Reference

Linked files: Do not export

☐ Export only elements visible in view  
☐ Export rooms, areas and spaces in 3D views  
☒ Include Steel Elements  
☐ Export 2D plan view elements

Reset OK Cancel

