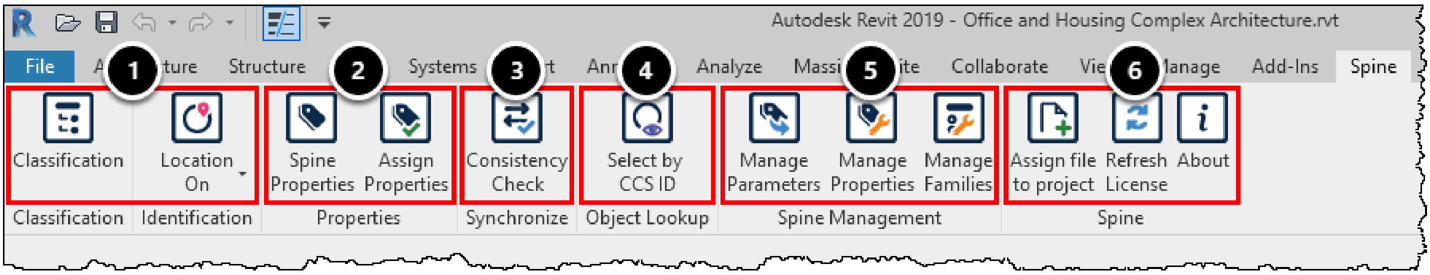
SPINE PLUGIN FOR REVIT

Projectspine A/S

Table of Contents

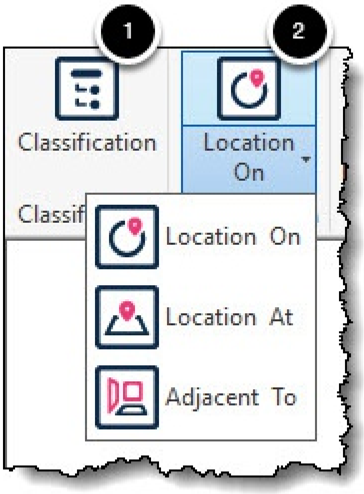
spine Plugin

spine plugin for Revit



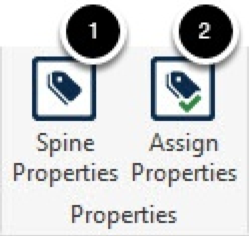
1. Add classification and identification
2. Manage properties
3. Check data between Revit files and spine projects
4. Lookup objects by CCS ID in the Revit file
5. Manage parameters , properties and Revit families
6. Assign a Revit file to a spine project and refresh license

1. Classification and identification



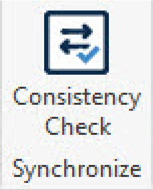
1. Classification
   Add classes , assign types and assign Single Level ID .
   Add additional classification standards .
2. Locate building elements in relation to each other + Location ID .
   Location On locate building elements On each other.
   Location At locate building elements At each other.
   Adjacent To locate walls in relation to rooms.

2. Properties



1. spine properties display information about selected objects. Fill in information and synchronize properties with a spine project .
2. Assign properties add properties set to 'required in Revit' in the spine project .

3. Consistency Check

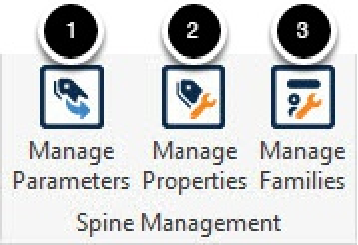


Consistency Check
Select Revit Categories and check for missing or inconsistent data.

4. Object Lookup

Type in a CCS ID which will be located in the model.

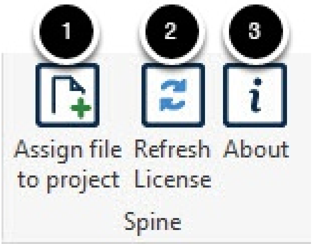
5. Spine Management



1. Manage Parameters, manage, map and control parameters.

2. Manage Properties display a list of properties. Tick on/off to add and remove properties.
3. Manage Families diaplay a list of Revit Family types . Assign existing CCS Types and create new.

6. Spine

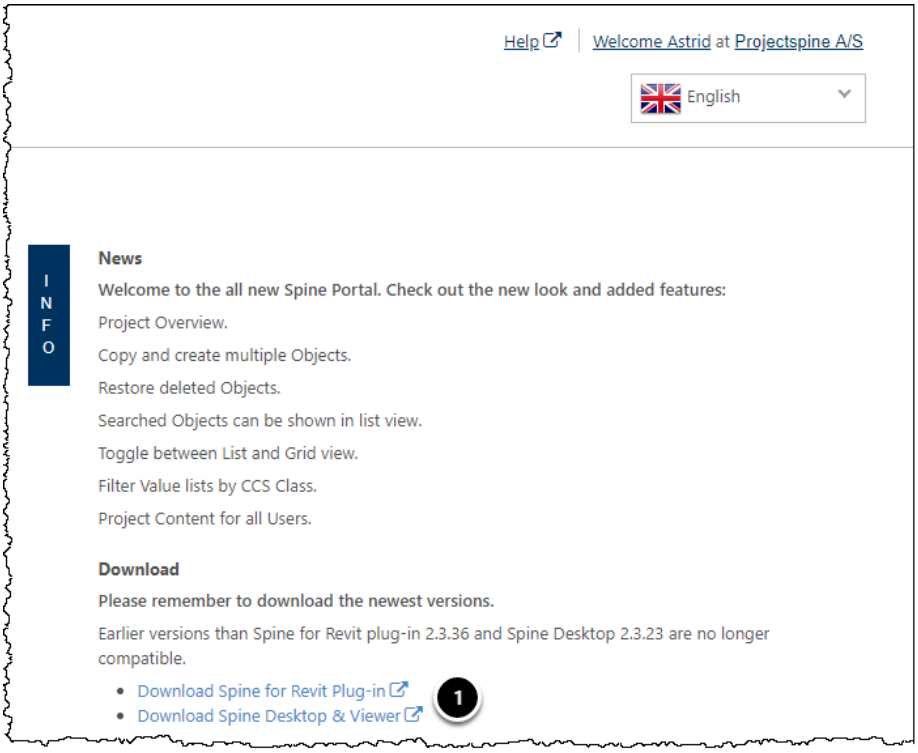


1. Assign file to project. Connect a Revit file to a spine project .
2. Refresh License.
3. About, display information about the plugin version and links to this help sites

Download and install spine plugin for Revit and spine Desktop & Viewer

Download and install the spine plugin for Revit and spine Desktop & Viewer.
NOTE: You have to be logged into the spine Desktop & Viewer, for the Revit plugin to work.

1. Log into the spine Portal



News

Welcome to the all new Spine Portal. Check out the new look and added features:

Project Overview.

Copy and create multiple Objects.

Restore deleted Objects.

Searched Objects can be shown in list view.

Toggle between List and Grid view.

Filter Value lists by CCS Class.

Project Content for all Users.

Download

Please remember to download the newest versions.

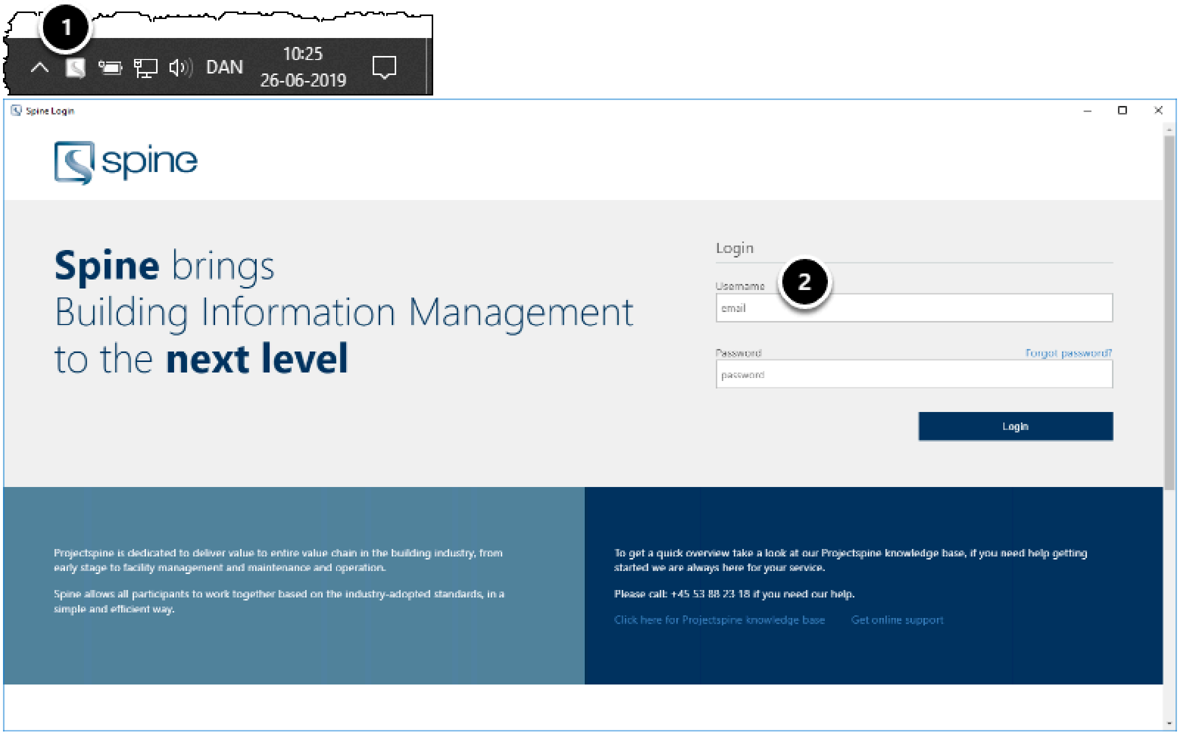
Earlier versions than Spine for Revit plug-in 2.3.36 and Spine Desktop 2.3.23 are no longer compatible.

- Download Spine for Revit Plug-in
- Download Spine Desktop & Viewer

Go to http://portal.projectspine.com/ and login

1. Download newest version of spine plugin for Revit and spine Desktop & Viewer

2. Use spine Desktop & Viewer and spine plugin for Revit



Spine brings
Building Information Management
to the **next level**

Projectspine is dedicated to deliver value to entire value chain in the building industry, from early stage to facility management and maintenance and operation.

Spine allows all participants to work together based on the industry-adopted standards, in a simple and efficient way.

To get a quick overview take a look at our Projectspine knowledge base, if you need help getting started we are always here for your service.

Please call: +45 53 88 23 18 if you need our help.

After installing the spine Desktop & Viewer will automatically start and run in the background.

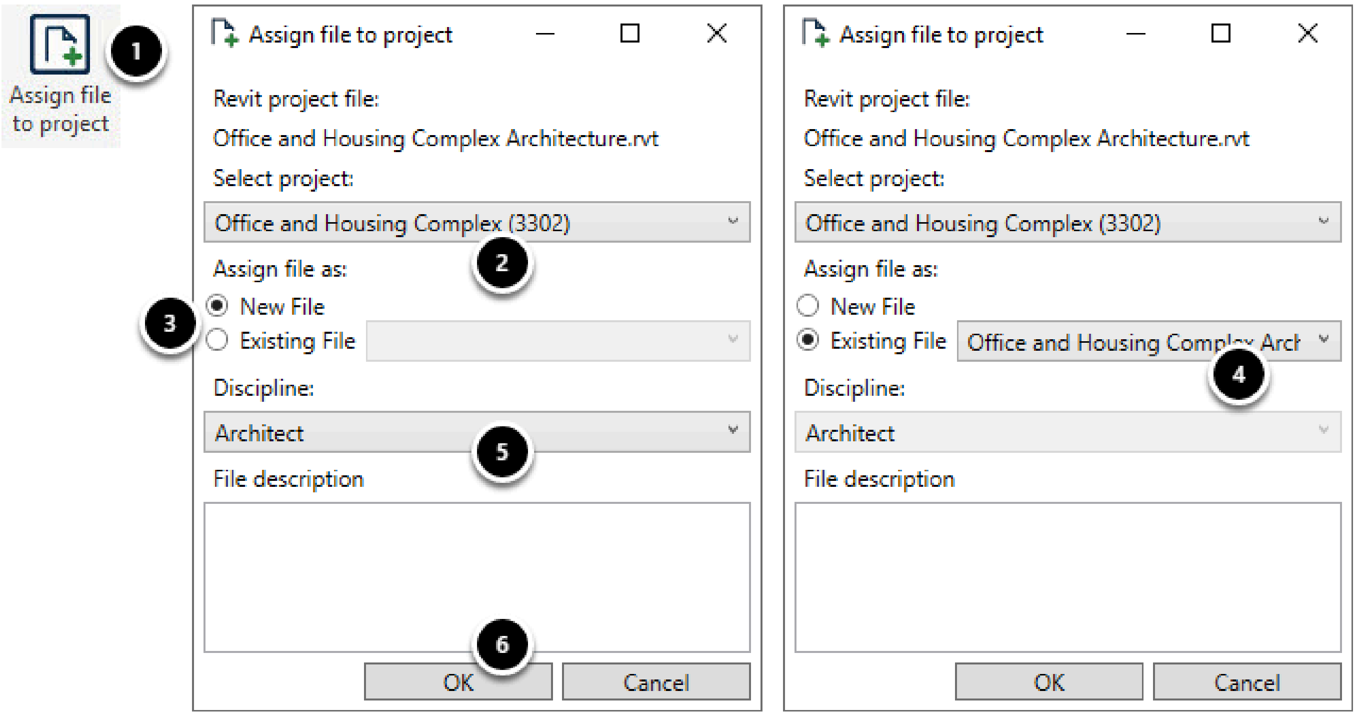
1. Open the spine Desktop & Viewer from the system tray
2. Log into the spine Desktop & Viewer

If you experience trouble starting spine Desktop & Viewer or spine plugin for Revit, check your firewall and VPN connections. Otherwise contact our support.

Getting started

Assign a Revit file to a project

1. File settings



Assign file to project

Revit project file:
Office and Housing Complex Architecture.rvt

Select project:
Office and Housing Complex (3302)

Assign file as:
● New File
○ Existing File

Discipline:
Architect

File description

OK Cancel

Assign file to project

Revit project file:
Office and Housing Complex Architecture.rvt

Select project:
Office and Housing Complex (3302)

Assign file as:
○ New File
● Existing File Office and Housing Compl x Arch

Discipline:
Architect

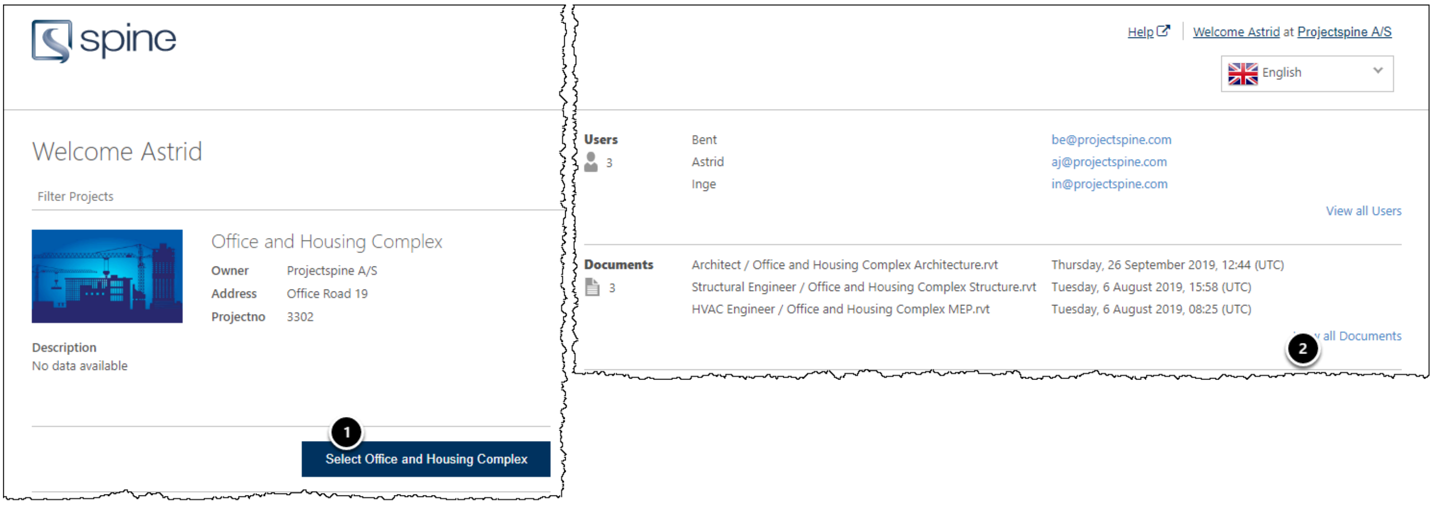
File description

OK Cancel

1. Open 'Assign file to project'
2. Select spine project
3. Select whether the file is new or existing
4. If it is a new version of en existing file, select the existing file
5. Select a discipline
6. Click OK

Note: If the Revit file is already assigned a project, a message will display which spine project it's assigned too, and ask for continuation. If you press Yes and assign the file to another project, the file will henceforth correspond with the new project.

2. View assigned files in spine Portal


Help
Welcome Astrid at Projectspine A/S
English
Filter Projects
Select Office and Housing Complex
View all Users
all Documents
1
2

Welcome Astrid

Office and Housing Complex

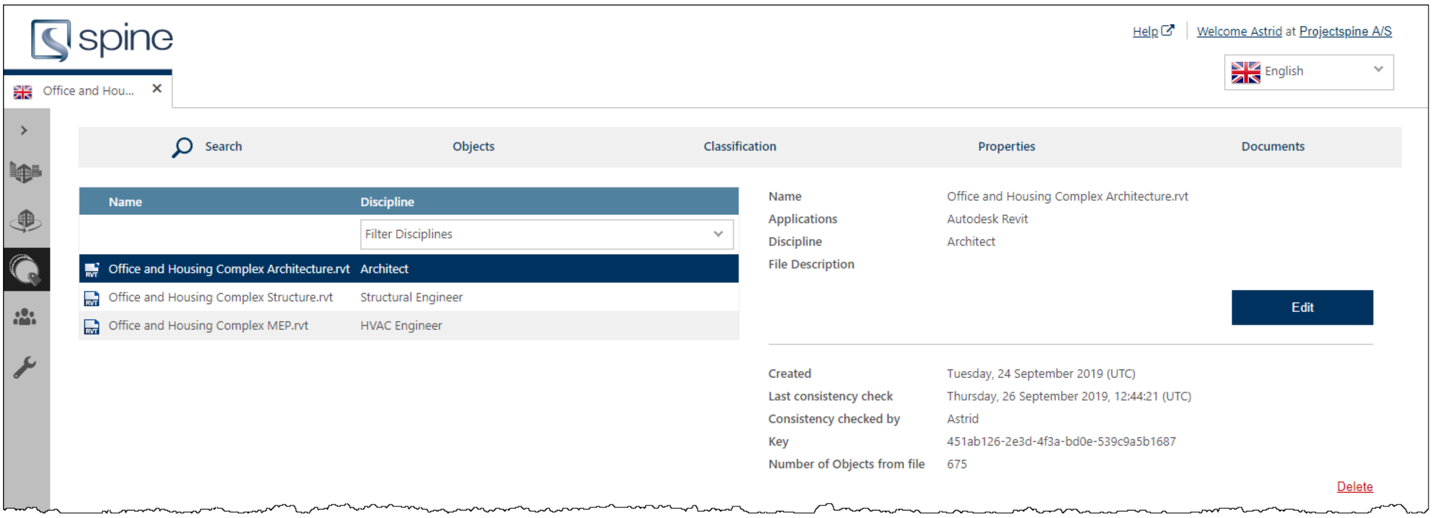
Owner	Projectspine A/S
Address	Office Road 19
Projectno	3302

Description
No data available

Users 3	Bent	be@projectspine.com
	Astrid	aj@projectspine.com
	Inge	in@projectspine.com

Documents 3	Architect / Office and Housing Complex Architecture.rvt	Thursday, 26 September 2019, 12:44 (UTC)
	Structural Engineer / Office and Housing Complex Structure.rvt	Tuesday, 6 August 2019, 15:58 (UTC)
	HVAC Engineer / Office and Housing Complex MEP.rvt	Tuesday, 6 August 2019, 08:25 (UTC)

1. Select spine project
2. Go to Documents



Name	Discipline
Office and Housing Complex Architecture.rvt	Architect
Office and Housing Complex Structure.rvt	Structural Engineer
Office and Housing Complex MEP.rvt	HVAC Engineer

Name	Office and Housing Complex Architecture.rvt
Applications	Autodesk Revit
Discipline	Architect
File Description	
Created	Tuesday, 24 September 2019 (UTC)
Last consistency check	Thursday, 26 September 2019, 12:44:21 (UTC)
Consistency checked by	Astrid
Key	451ab126-2e3d-4f3a-bd0e-539c9a5b1687
Number of Objects from file	675

Classification and Identification

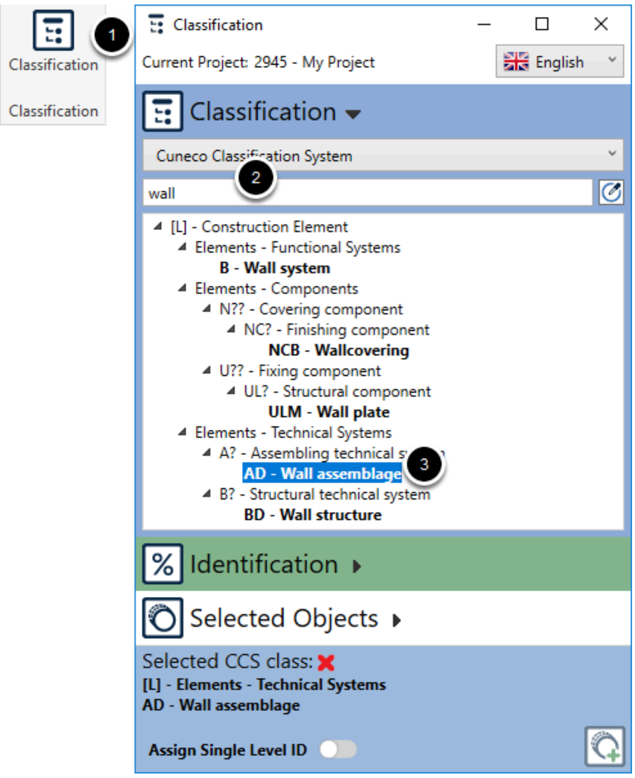
Add Classification

Add classes to objects in Revit.

- You can add pre-classification to a Revit template or a Loadable Family .
- You can add additional classification. See Classification systems supported by Spine .

- Add Classification (Video English)

1. Select class



Current Project: 2945 - My Project

Cuneco Classification System

wall

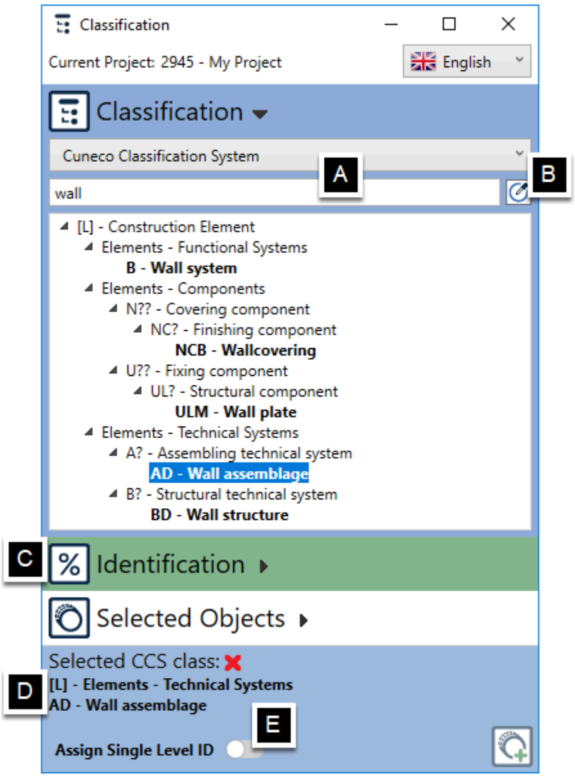
- [L] - Construction Element
  - Elements - Functional Systems
    - **B - Wall system**
  - Elements - Components
    - N?? - Covering component
      - NC? - Finishing component
        - **NCB - Wallcovering**
    - U?? - Fixing component
      - UL? - Structural component
        - **ULM - Wall plate**
  - Elements - Technical Systems
    - A? - Assembling technical s
      - **AD - Wall assemblage**
    - B? - Structural technical system
      - **BD - Wall structure**

Selected CCS class: ✗
[L] - Elements - Technical Systems
AD - Wall assemblage

Assign Single Level ID ○

1. Open 'Classification'
2. Type in a synonym for the class
3. Select a class

Tips and additional settings



wall

- [L] - Construction Element
  - Elements - Functional Systems
    - **B - Wall system**
  - Elements - Components
    - N?? - Covering component
      - NC? - Finishing component
        - **NCB - Wallcovering**
    - U?? - Fixing component
      - UL? - Structural component
        - **ULM - Wall plate**
  - Elements - Technical Systems
    - A? - Assembling technical system
      - **AD - Wall assemblage**
    - B? - Structural technical system
      - **BD - Wall structure**

Selected CCS class: ✖
[L] - Elements - Technical Systems
AD - Wall assemblage

Assign Single Level ID ○

A: Use a topnode as filter, e.g. 'L door' will only show results in [L] Construction Element

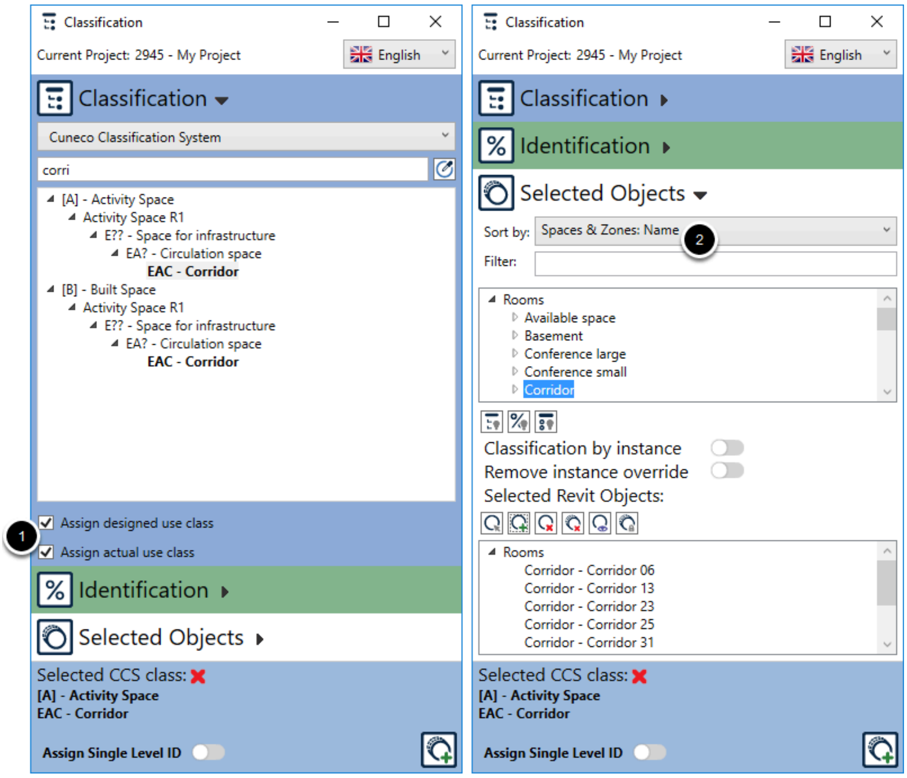
B: Instead of searching for a class, you can 'Read Class from Revit object'

C: Assign a CCS type with the class

D: The chosen class can be seen at the bottom

E: Assign Single Level ID with the class

Add Classification to rooms



Current Project: 2945 - My Project

Cuneco Classification System

corri

- [A] - Activity Space
  - Activity Space R1
    - E?? - Space for infrastructure
      - EA? - Circulation space
        - **EAC - Corridor**
- [B] - Built Space
  - Activity Space R1
    - E?? - Space for infrastructure
      - EA? - Circulation space
        - **EAC - Corridor**

☑ Assign designed use class

☑ Assign actual use class

Sort by: Spaces & Zones: Name

Selected CCS class: ✗

[A] - Activity Space

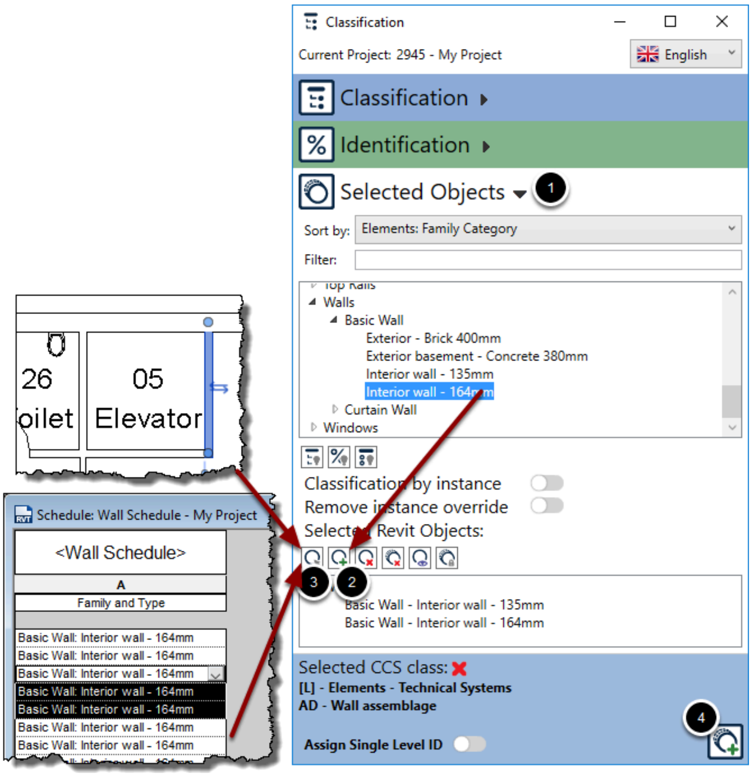
EAC - Corridor

Assign Single Level ID

There are two class properties for rooms, a Designed Use Class and an Actual Use Class .

1. Choose which to be assigned
2. In selected objects, change the Sort by to rooms and spaces

2. Select objects and add classification



Current Project: 2945 - My Project

Sort by: Elements: Family Category

Filter:

- Top Rails
- Walls
  - Basic Wall
    - Exterior - Brick 400mm
    - Exterior basement - Concrete 380mm
    - Interior wall - 135mm
    - Interior wall - 164mm
  - Curtain Wall
- Windows

Basic Wall - Interior wall - 135mm
Basic Wall - Interior wall - 164mm

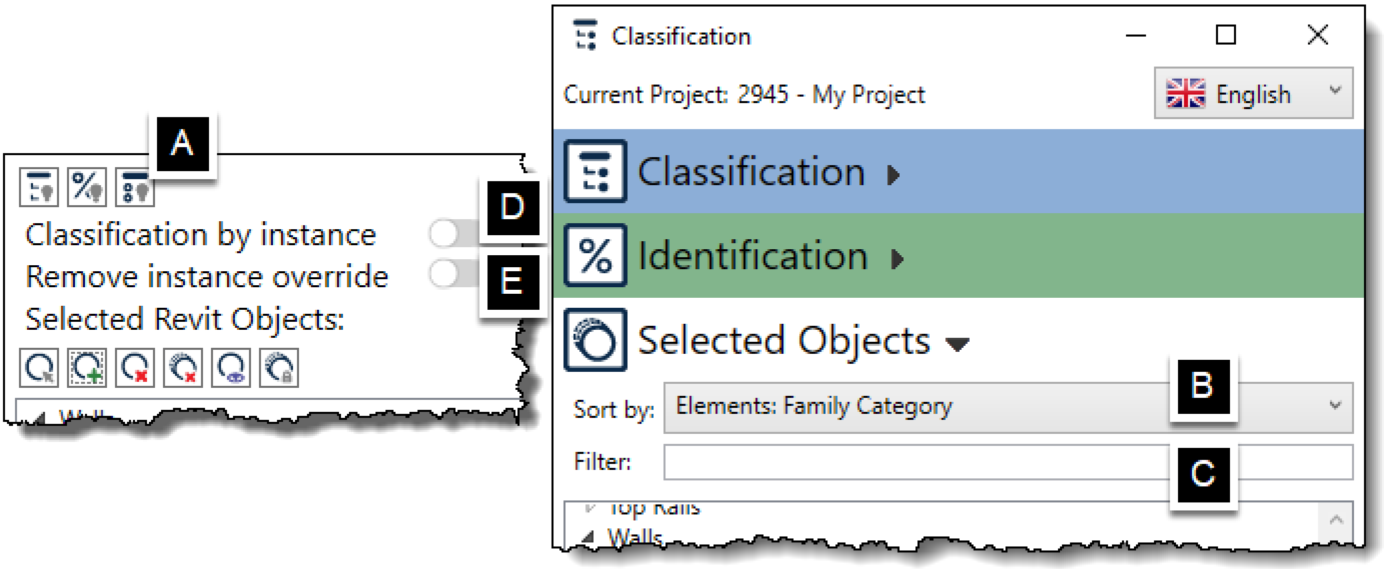
Selected CCS class: ✗
[L] - Elements - Technical Systems
AD - Wall assemblage

Basic Wall: Interior wall - 164mm
Basic Wall: Interior wall - 164mm
Basic Wall: Interior wall - 164mm
Basic Wall: Interior wall - 164mm
Basic Wall: Interior wall - 164mm
Basic Wall: Interior wall - 164mm
Basic Wall: Interior wall - 164mm

Selecting objects to be added a class, can be done in two ways, step 2 and 3.

1. Open 'Selected Obejcts'
2. Select Revit families or types from the list
3. Or select objects from a view, select from the model and from schedules
4. Click 'Listed Objects' for assigning classification

Tips and additional settings



Current Project: 2945 - My Project

Sort by: Elements: Family Category

Filter:

- Top Rails
- Walls

By default all used families and types are shown in the list, and as they get classified they will disappear.

A: To see not used and classified families and types, use the three filters:

- The first filter shows classified families and types in blue
- The next shows families and types with type-ID in green
- and the last shows all families and types including those not in use

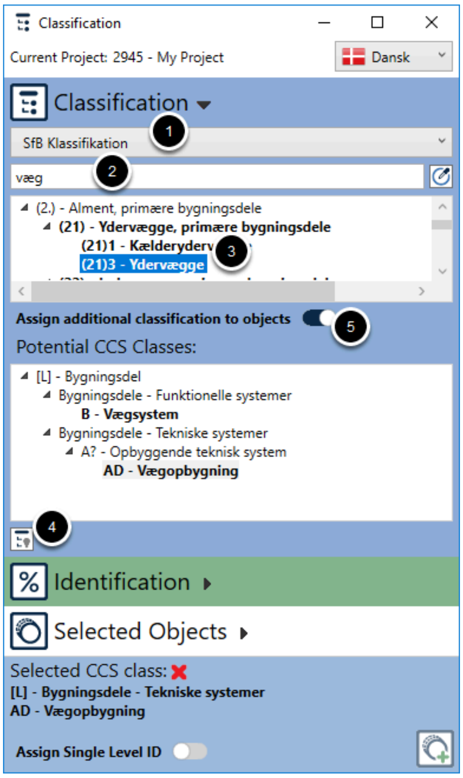
B: Choose a way to sort the list

C: Filter the list

D: Add classification by instance , toggle on Classification by instance

E: If you want to move classes from the instance parameter to the type parameter, toggle on Remove instance override

3. Add additional classification



Current Project: 2945 - My Project

SfB Klassifikation

væg

(2.) - Alment, primære bygningsdele
  (21) - Ydervægge, primære bygningsdele
    (21)1 - Kælderyderv
    (21)3 - Ydervægge

Assign additional classification to objects

Potential CCS Classes:

[L] - Bygningsdel
  Bygningsdele - Funktionelle systemer
    B - Vægsystem
  Bygningsdele - Tekniske systemer
    A? - Opbyggende teknisk system
      AD - Vægopbygning

Selected CCS class:
[L] - Bygningsdele - Tekniske systemer
AD - Vægopbygning

Assign Single Level ID

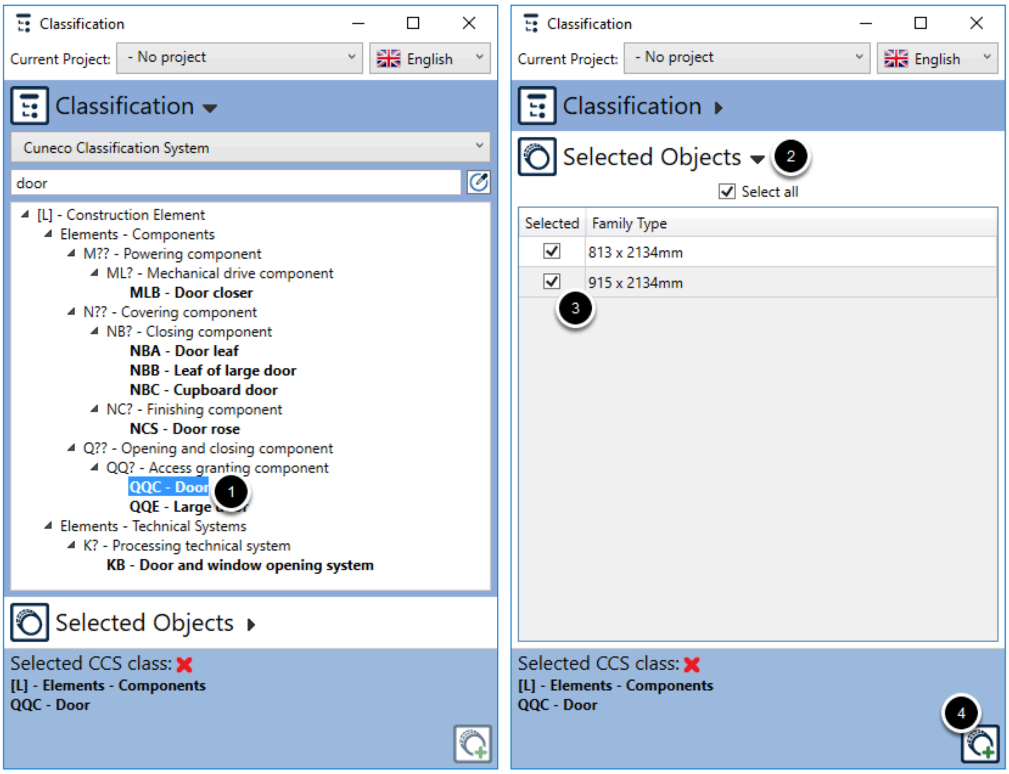
1. Select a classification system
2. Type in a synonym
3. Select a class and check if the suggested CCS class is correct
4. If not, press Show all CCS classes and select another
5. Toggle on Assign additional classification to objects

See additional standards supported by Spine.

4. Pre-classification

Pre-classifying content can be done in two ways, one for Loadable Families and one for both Loadable and System Families .
Loadable Families can be assigned a class in the family editor, and both Loadable and System Families can be assigned a class in a Revit project and template .

4.1. Pre-classifying Loadable families



Open a family in the family editor and open the classification window

1. Select a class
2. Open the Selected Objects tab
3. Select types to be assigned the class
4. Click Listed objects to assign class

Save and load the family into a project.

4.2. Pre-classifying a Revit project or template

When pre-classifying a project, use the same steps as in 1. Add Classification
In the classification window, turn on the Show all types filter , to display all families and types.
Assign a class and save the project or template.

5. Add Classification (Video English)

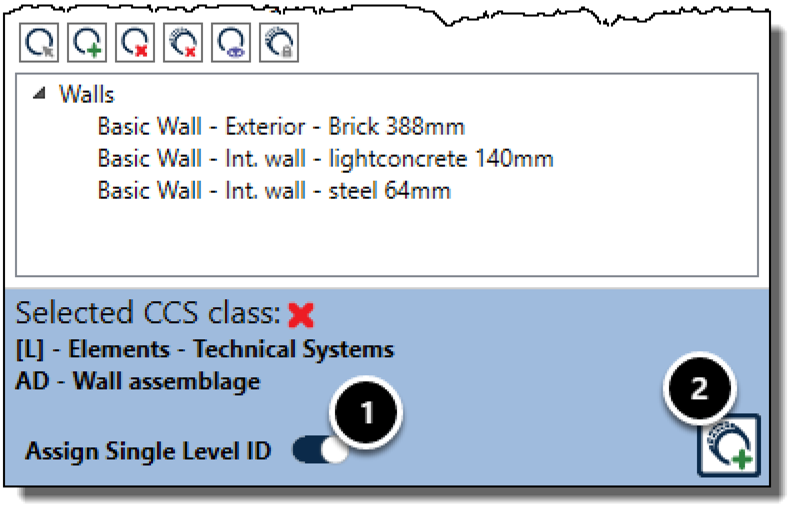
Assign Single Level ID

The Single Level ID identifies instances . Additionally, there are five other identification ID's.

The Single Level ID can be assigned in three ways:

- In Classification, together with classes
- In spine Properties
- In the Consistency Check

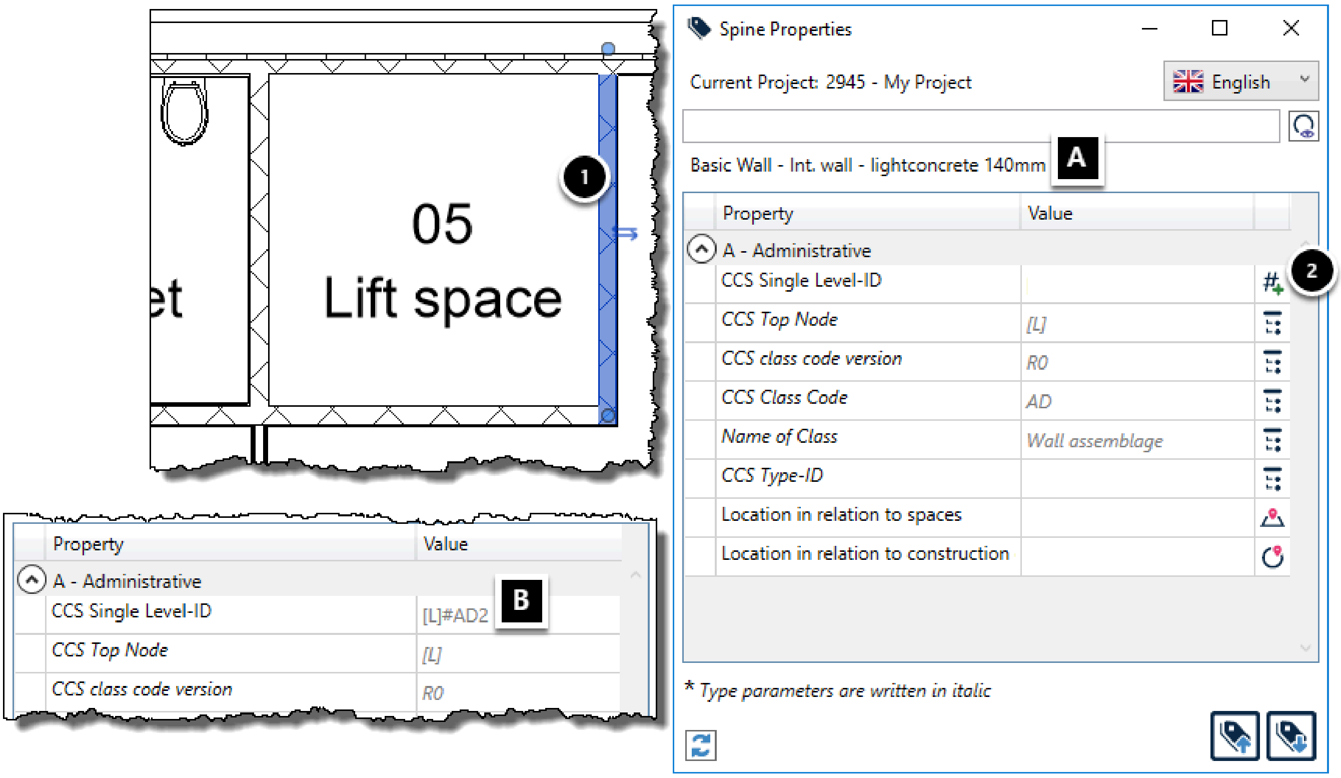
1. Assign Single Level ID in Classification


Walls
Basic Wall - Exterior - Brick 388mm
Basic Wall - Int. wall - lightconcrete 140mm
Basic Wall - Int. wall - steel 64mm

Selected CCS class:
[L] - Elements - Technical Systems
AD - Wall assemblage

1. Toggle on Assign Single Level ID
2. Before pressing 'Assign Classification'

2. Assign Single Level ID in Spine Properties



Current Project: 2945 - My Project

Basic Wall - Int. wall - lightconcrete 140mm

Property	Value
A - Administrative	
CCS Single Level-ID	
CCS Top Node	*[L]*
CCS class code version	*R0*
CCS Class Code	*AD*
Name of Class	*Wall assemblage*
CCS Type-ID	
Location in relation to spaces	
Location in relation to construction	

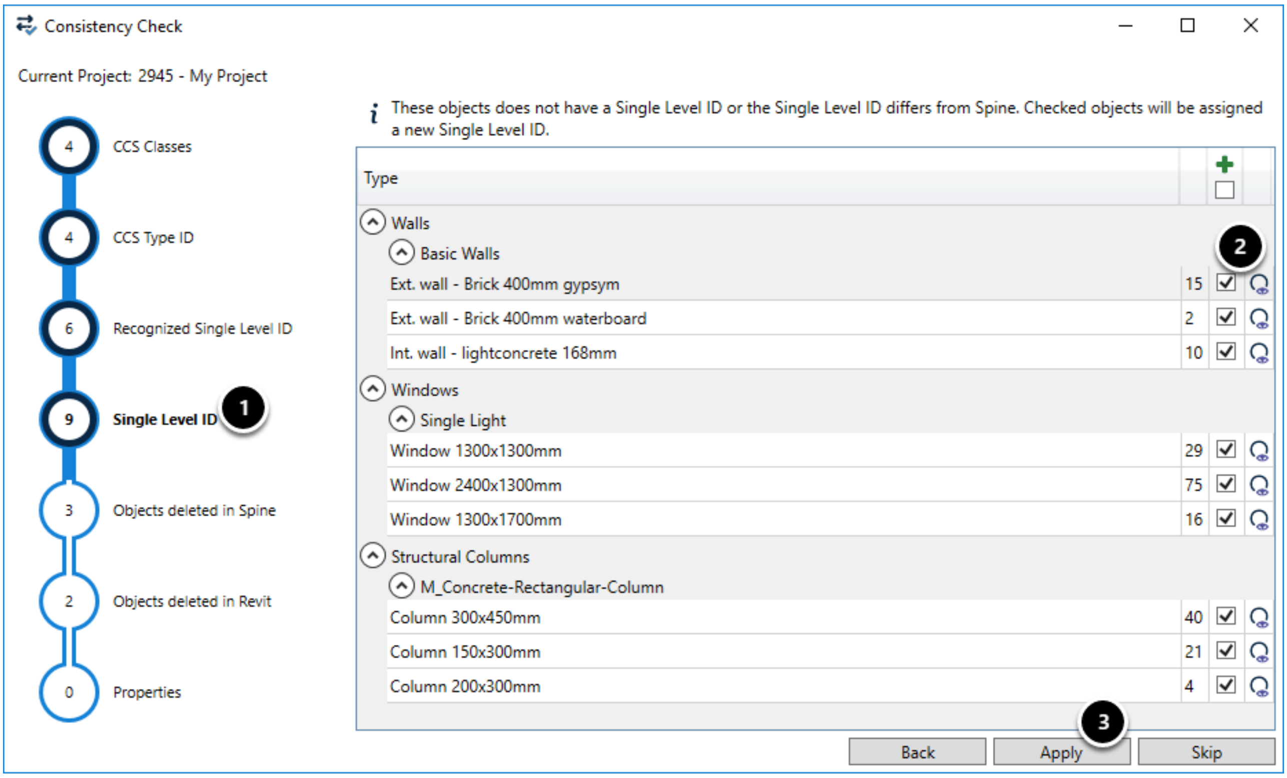
* *Type parameters are written in italic*

Property	Value
A - Administrative	
CCS Single Level-ID	[L]#AD2
CCS Top Node	*[L]*
CCS class code version	*R0*

1. Select object(s) in the model
2. Click 'Assign Single Level ID'

A: Selected object(s)
B: Assigned single level ID

3. Assign Single Level ID with the Consistency Check



Current Project: 2945 - My Project

i These objects does not have a Single Level ID or the Single Level ID differs from Spine. Checked objects will be assigned a new Single Level ID.

Type		☐
Walls		
Basic Walls		
Ext. wall - Brick 400mm gypsym	15	☑
Ext. wall - Brick 400mm waterboard	2	☑
Int. wall - lightconcrete 168mm	10	☑
Windows		
Single Light		
Window 1300x1300mm	29	☑
Window 2400x1300mm	75	☑
Window 1300x1700mm	16	☑
Structural Columns		
M_Concrete-Rectangular-Column		
Column 300x450mm	40	☑
Column 150x300mm	21	☑
Column 200x300mm	4	☑

1. Open the Consistency Check and go to the fourth tab
2. Tick objects to be assigned a Single Level ID
3. Click 'Apply'

Create and assign Types %

CCS types can be created and assigned in several ways.

This article shows how to do it in Classification in Revit.

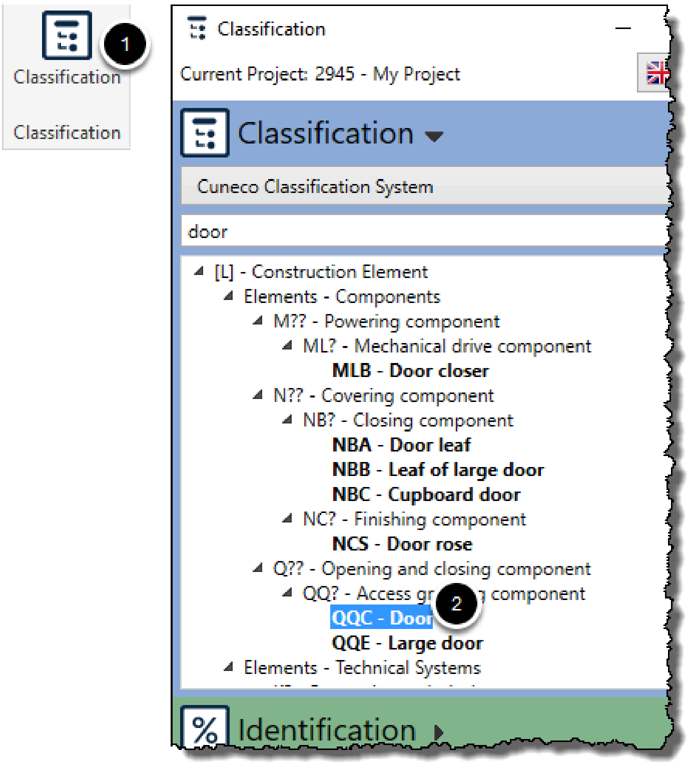
Create types:

- In Classification, shown in this article
- In spine Portal
- Based on Revit families in Manage Families

Assign types:

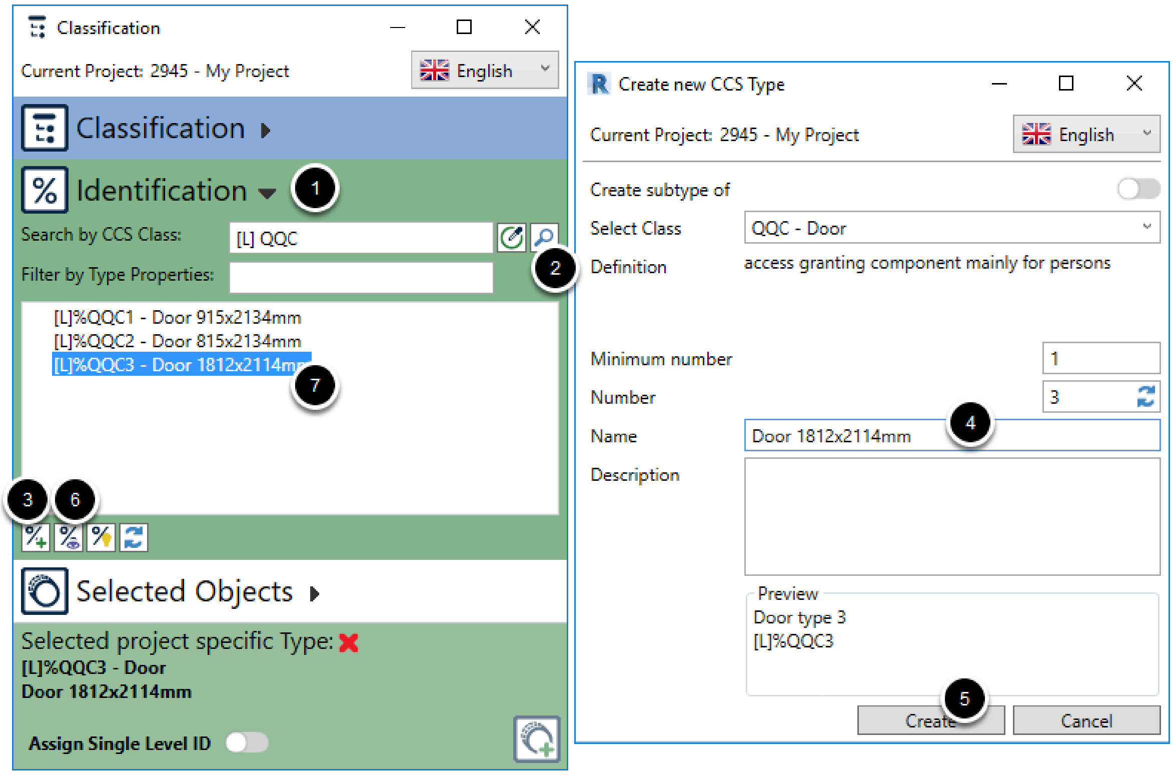
- In Classification, shown in this article
- In the Consistency Check
- In Manage Families

1. Select a class



1. Open 'Classification'
2. Select a class

2. Select an existing type or create a new



Current Project: 2945 - My Project

Search by CCS Class: [L] QQC

Filter by Type Properties:

[L]%QQC1 - Door 915x2134mm
[L]%QQC2 - Door 815x2134mm
[L]%QQC3 - Door 1812x2114mm

Selected project specific Type: ✗
[L]%QQC3 - Door
Door 1812x2114mm

Assign Single Level ID

Current Project: 2945 - My Project

Create subtype of

Select Class: QQC - Door

Definition: access granting component mainly for persons

Minimum number: 1

Number: 3

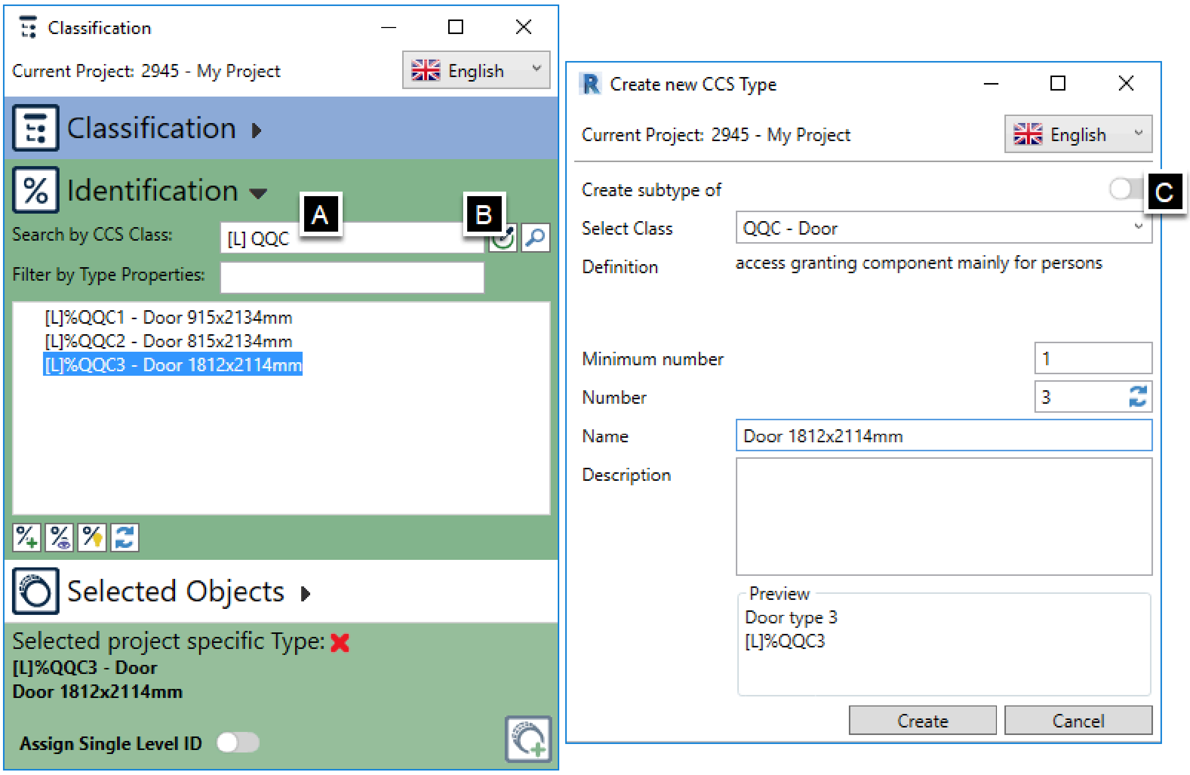
Name: Door 1812x2114mm

Description:

Preview
Door type 3
[L]%QQC3

1. Open 'Identification'
2. ***Select an existing type:*** Click 'Search for project specific types' and jump to step 7
3. ***Create new type:*** Click 'Create project specific type'
4. Type in a name
5. Click create
   If you have not searched for existing types, click **(2)** and the new type you created will appear in the list
6. ***Editing an existing type:*** click 'Edit CCS Type' and the type will be opened in the spine Desktop & Viewer
7. Select the type, the type will be shown at the bottom

Tips and additional settings



Classification

Current Project: 2945 - My Project English

Classification

Identification

Search by CCS Class: [L] QQC

Filter by Type Properties:

[L]%QQC1 - Door 915x2134mm
[L]%QQC2 - Door 815x2134mm
[L]%QQC3 - Door 1812x2114mm

Selected Objects

Selected project specific Type: ✖
[L]%QQC3 - Door
Door 1812x2114mm

Assign Single Level ID

Create new CCS Type

Current Project: 2945 - My Project English

Create subtype of	
Select Class	QQC - Door
Definition	access granting component mainly for persons
Minimum number	1
Number	3
Name	Door 1812x2114mm
Description	

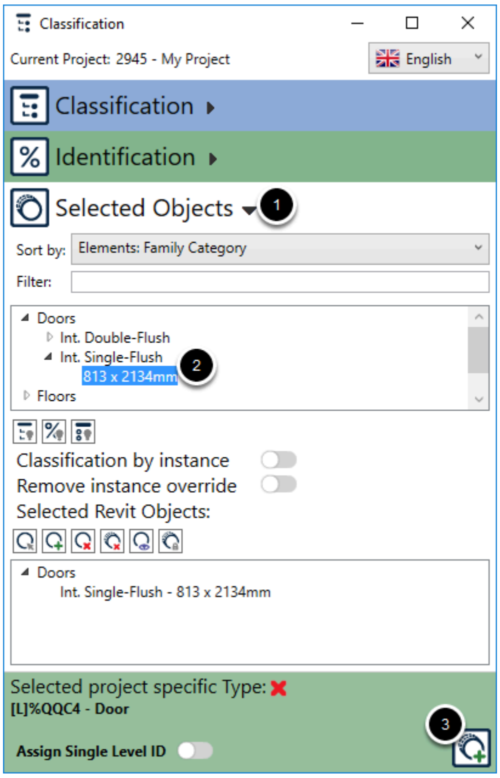
Preview
Door type 3
[L]%QQC3

A: Types are based on classes, therefore at least a Topnode must be written before searching for types

B: Type ID's can be read from an object, by clicking 'Read Type-Id from Revit object'

C: Types can also be created as SubTypes

3. Assign type to Revit families and types



Current Project: 2945 - My Project

English

Sort by: Elements: Family Category

Filter:

- Doors
  - Int. Double-Flush
  - Int. Single-Flush
    - 813 x 2134mm
- Floors

Selected Revit Objects:

- Doors
  - Int. Single-Flush - 813 x 2134mm

Selected project specific Type: ✗

[L]%QQC4 - Door

Assign Single Level ID

1. Open 'Selected Objects'
2. Select Revit families or types to be assigned the type
3. Click 'Listed Objects' to assign type

4. Video (in english) Identification with spine

Locating building elements by the Location ID +

The + Location ID is part of the CCS identification ID's and help locating building elements in relation to each other.

Location At - places a building element at another building element.
For example, furnitures located At rooms.

Location On - places a building element on another building element.
For example, windows and doors located On walls.

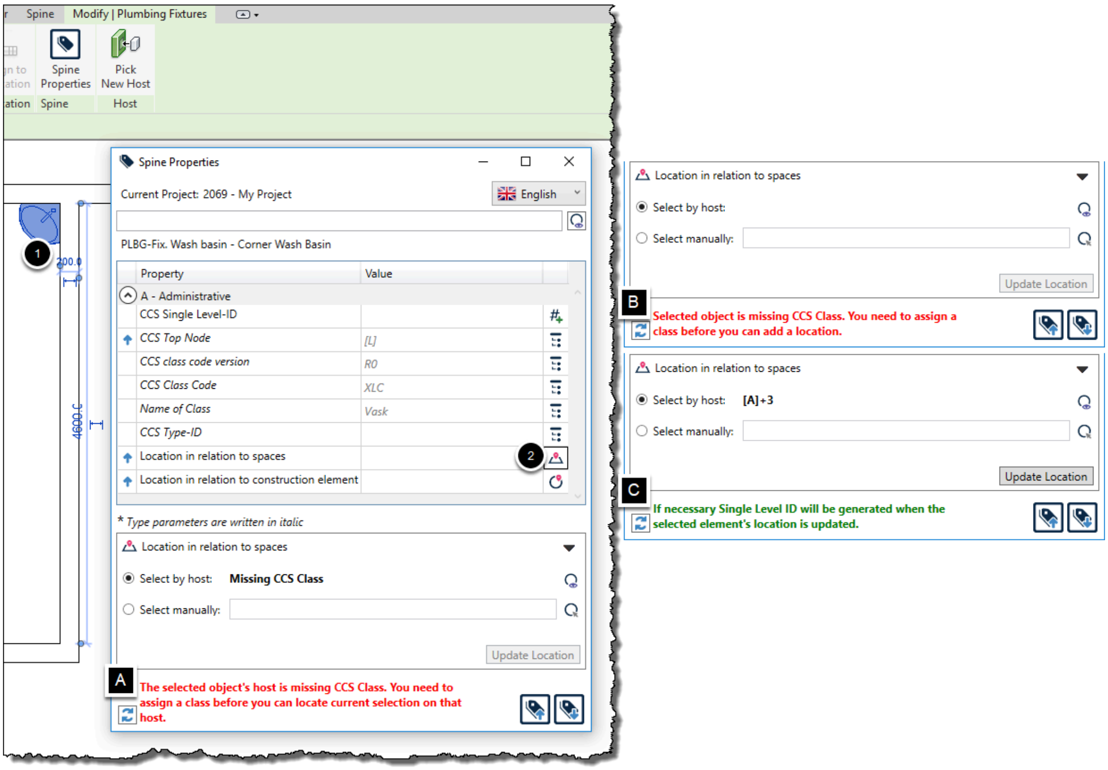
Adjacent To - places adjoining walls in relation to a space or a room.
A room gets a code for the adjacent walls.

- The Location ID is based on CCS Class and Single Level ID on both the host and the hosted object.
- If the Class is missing, the location cannot be performed.
- If the Single Level ID is missing, it will be created in the location process.

1. Location At

Location At ID's can be created individually in spine Properties or automatically in Location At.

1.1. Create Location At ID in spine Properties



Spine Properties

Current Project: 2069 - My Project

English

PLBG-Fix. Wash basin - Corner Wash Basin

Property	Value
A - Administrative	
CCS Single Level-ID	
CCS Top Node	*[L]*
CCS class code version	*R0*
CCS Class Code	*XLC*
Name of Class	*Vask*
CCS Type-ID	
Location in relation to spaces	
Location in relation to construction element	

* *Type parameters are written in italic*

Location in relation to spaces

● Select by host: **Missing CCS Class**

○ Select manually:

A: **The selected object's host is missing CCS Class. You need to assign a class before you can locate current selection on that host.**

Location in relation to spaces

● Select by host:

○ Select manually:

B: **Selected object is missing CCS Class. You need to assign a class before you can add a location.**

Location in relation to spaces

● Select by host: **[A]+3**

○ Select manually:

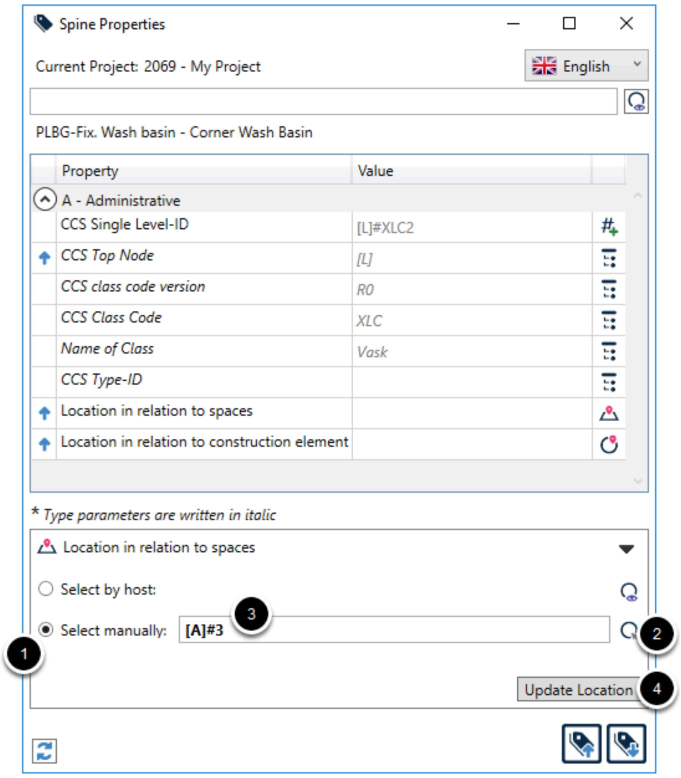
C: **If necessary Single Level ID will be generated when the selected element's location is updated.**

1. Select the object to be located At and open spine Properties
2. Click Location At and the Location At settings will display at the bottom

Depending on the selected and the host object, different messages will show.

A: *The selected object's host is missing CCS Class. You need to assign a class before you can locate current selection on that host.*
This message has two senses:
- The room/space doesn't have a class
- The selected object can't read the host. This might have something to do with the selected objects Room Calulation Point . Se article about editing Room Calculation Point.

B: *Selected object is missing CCS Class. You need to assign a class before you can add a location.*
C: *If necessary Single Level ID will be generated when selected element's location is updated.* This means if either the selected or host object is missing a Single Level ID , the ID will be created when updating the location.



Current Project: 2069 - My Project

PLBG-Fix. Wash basin - Corner Wash Basin

Property	Value
A - Administrative	
CCS Single Level-ID	[L]#XLC2
CCS Top Node	*[L]*
CCS class code version	*R0*
CCS Class Code	*XLC*
Name of Class	*Vask*
CCS Type-ID	
Location in relation to spaces	
Location in relation to construction element	

* *Type parameters are written in italic*

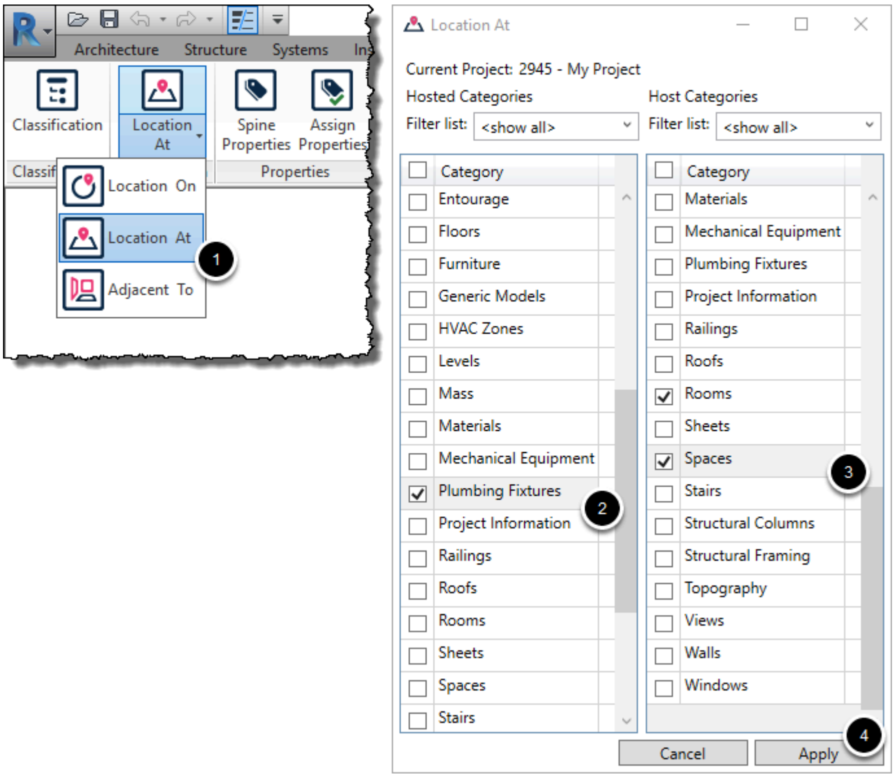
Location in relation to spaces

○ Select by host:

● Select manually: **[A]#3**

1. If the host can't be found, click 'Select manually:'
2. Click 'Select object in model'
3. Select the host object in the model, the host class and Single Level ID will be shown in the text space
4. When selected a host or if the host is found, click 'Update Location', and the location ID will be assigned the objects

1.2. Automatically create Location At IDs



Current Project: 2945 - My Project

Hosted Categories
Filter list: <show all>

☐ Category
☐ Entourage
☐ Floors
☐ Furniture
☐ Generic Models
☐ HVAC Zones
☐ Levels
☐ Mass
☐ Materials
☐ Mechanical Equipment
☑ Plumbing Fixtures
☐ Project Information
☐ Railings
☐ Roofs
☐ Rooms
☐ Sheets
☐ Spaces
☐ Stairs

Host Categories
Filter list: <show all>

☐ Category
☐ Materials
☐ Mechanical Equipment
☐ Plumbing Fixtures
☐ Project Information
☐ Railings
☐ Roofs
☑ Rooms
☐ Sheets
☑ Spaces
☐ Stairs
☐ Structural Columns
☐ Structural Framing
☐ Topography
☐ Views
☐ Walls
☐ Windows

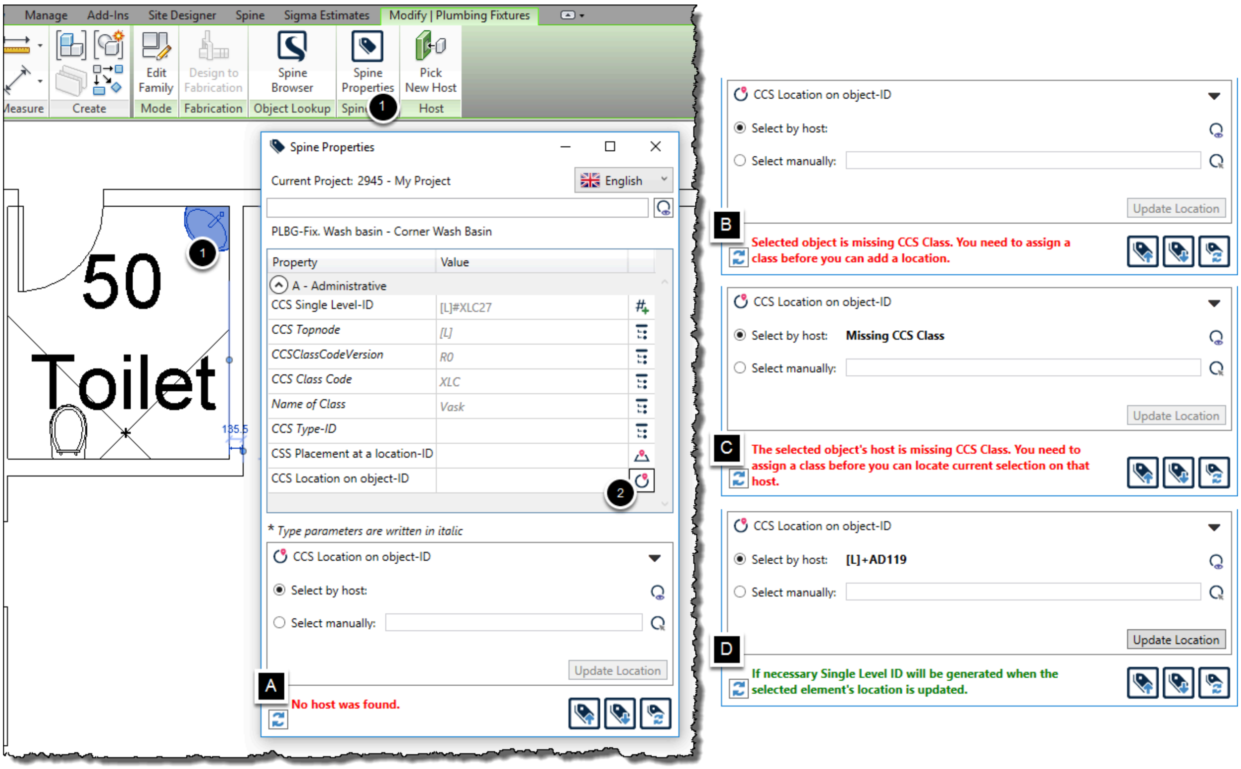
1. Open 'Location At'
2. Select categories to be hosted
3. Select categories to be host
4. Click Apply and the location At ID's will be created

If location At ID's aren't created, it might have something to do with the hosted object's Room Calculation Point or that the objects missing classes.

2. Location On

Location On ID's can likewise the Location At ID be created individually in spine Properties or automatically in Location On.

2.1. Create Location On ID individually in Spine Properties



Current Project: 2945 - My Project

PLBG-Fix. Wash basin - Corner Wash Basin

Property	Value
A - Administrative	
CCS Single Level-ID	[L]#XLC27
CCS Topnode	*[L]*
CCSClassCodeVersion	*R0*
CCS Class Code	*XLC*
Name of Class	*Vask*
CCS Type-ID	
CSS Placement at a location-ID	
CCS Location on object-ID	

* *Type parameters are written in italic*

CCS Location on object-ID

● Select by host:

○ Select manually:

A: No host was found.

B: Selected object is missing CCS Class. You need to assign a class before you can add a location.

C: Select by host: Missing CCS Class

The selected object's host is missing CCS Class. You need to assign a class before you can locate current selection on that host.

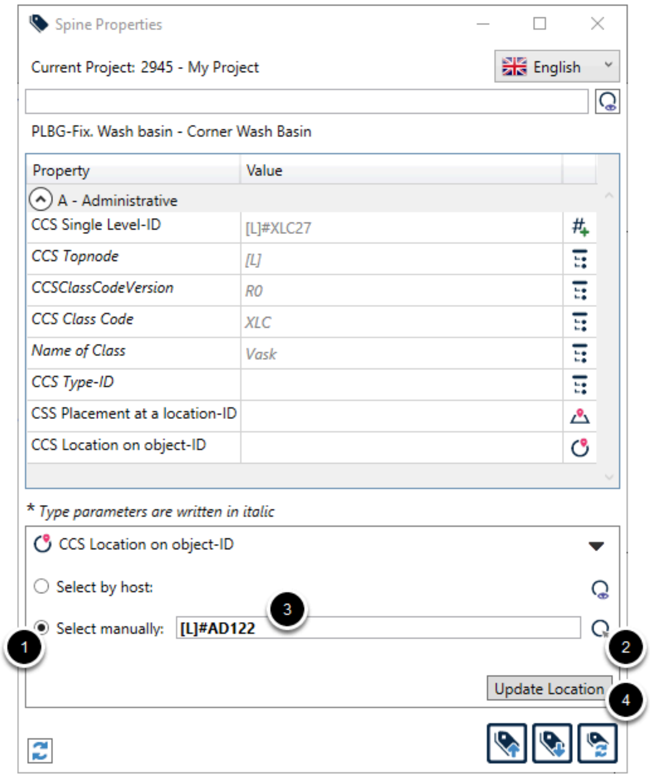
D: Select by host: [L]+AD119

If necessary Single Level ID will be generated when the selected element's location is updated.

1. Select the object to be located On and open spine Properties
2. Click Location On and the Location On settings will display at the bottom

Depending on the selected and the host object, different messages will show.

A: *No host was found.*
The selected object couldn't find the host. This might be because the family doesn't have a host and you'll have to select it manually.
You can check the host by opening the family and look into its properties.
B: *Selected object is missing CCS Class. You need to assign a class before you can add a location.*
C: *If necessary Single Level ID will be generated when selected element's location is updated.* This means if either the selected or host object is missing a Single Level ID , the ID will be created when updating the location.



Current Project: 2945 - My Project

PLBG-Fix. Wash basin - Corner Wash Basin

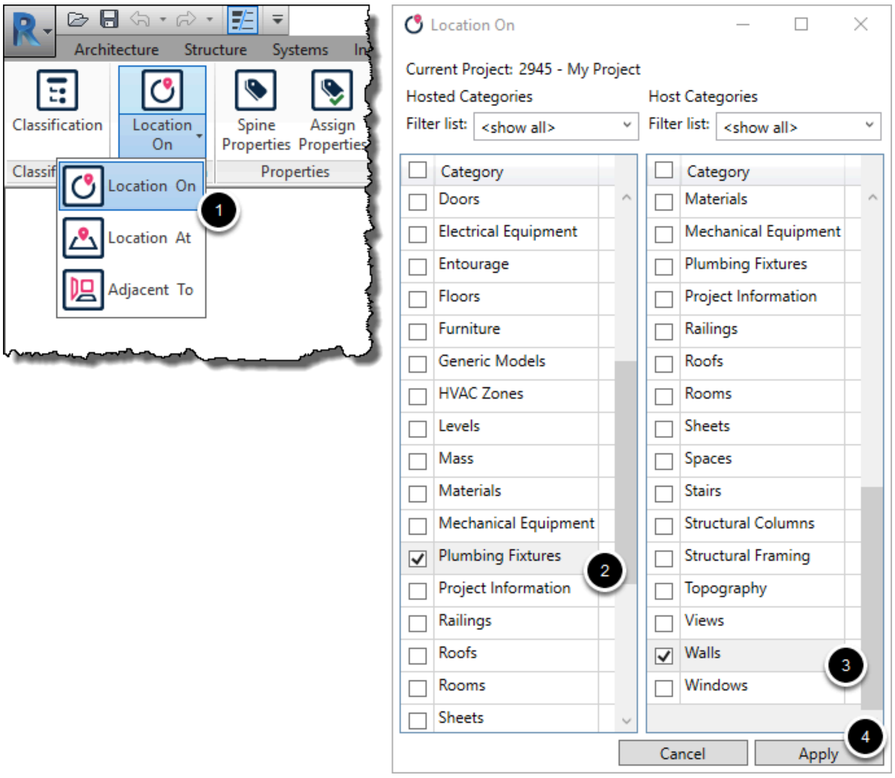
Property	Value
CCS Single Level-ID	[L]#XLC27
CCS Topnode	*[L]*
CCSClassCodeVersion	*R0*
CCS Class Code	*XLC*
Name of Class	*Vask*
CCS Type-ID	
CSS Placement at a location-ID	
CCS Location on object-ID	

Select manually: **[L]#AD122**

1. If the host is not found, click 'Select manually:'
2. Click 'Select object in model'
3. Select the host object in the model, the host class and Single Level ID will be shown in the text space
4. When selected a host or if the host is found, click 'Update Location' and the locaion ID will be assigned the object

2.2. Automatically create Location On IDs

1. Start by opening the Location On window
2. Select categories to be hosted
3. Select categories to be host
4. Click Apply and the location On IDs will be created



Location On

Current Project: 2945 - My Project

Hosted Categories

Filter list: <show all>

☐ Category
☐ Doors
☐ Electrical Equipment
☐ Entourage
☐ Floors
☐ Furniture
☐ Generic Models
☐ HVAC Zones
☐ Levels
☐ Mass
☐ Materials
☐ Mechanical Equipment
☑ Plumbing Fixtures
☐ Project Information
☐ Railings
☐ Roofs
☐ Rooms
☐ Sheets

Host Categories

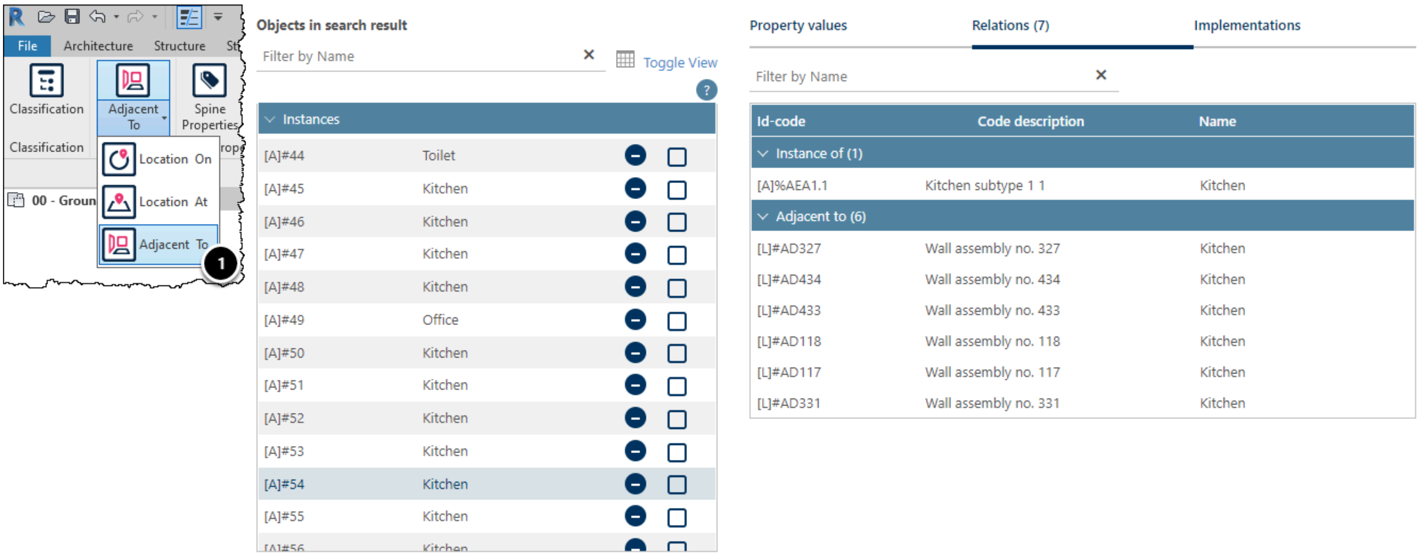
Filter list: <show all>

☐ Category
☐ Materials
☐ Mechanical Equipment
☐ Plumbing Fixtures
☐ Project Information
☐ Railings
☐ Roofs
☐ Rooms
☐ Sheets
☐ Spaces
☐ Stairs
☐ Structural Columns
☐ Structural Framing
☐ Topography
☐ Views
☑ Walls
☐ Windows

1. Open 'Location On'
2. Select categories to be hosted
3. Select categories to be host
4. Click Apply and the location On ID's will be created

If location On ID's aren't created, it might have something to do with the object's host properties or that the objects missing classes.

3. Adjacent To



Objects in search result

Filter by Name

Instances			
[A]#44	Toilet	⊖	☐
[A]#45	Kitchen	⊖	☐
[A]#46	Kitchen	⊖	☐
[A]#47	Kitchen	⊖	☐
[A]#48	Kitchen	⊖	☐
[A]#49	Office	⊖	☐
[A]#50	Kitchen	⊖	☐
[A]#51	Kitchen	⊖	☐
[A]#52	Kitchen	⊖	☐
[A]#53	Kitchen	⊖	☐
[A]#54	Kitchen	⊖	☐
[A]#55	Kitchen	⊖	☐
[A]#56	Kitchen	⊖	☐

Property values | Relations (7) | Implementations

Filter by Name

Id-code	Code description	Name
Instance of (1)		
[A]%AEA1.1	Kitchen subtype 1 1	Kitchen
Adjacent to (6)		
[L]#AD327	Wall assembly no. 327	Kitchen
[L]#AD434	Wall assembly no. 434	Kitchen
[L]#AD433	Wall assembly no. 433	Kitchen
[L]#AD118	Wall assembly no. 118	Kitchen
[L]#AD117	Wall assembly no. 117	Kitchen
[L]#AD331	Wall assembly no. 331	Kitchen

The Adjacent To ID creates a relation between rooms and their adjacent walls.

1. Click the Adjacent To

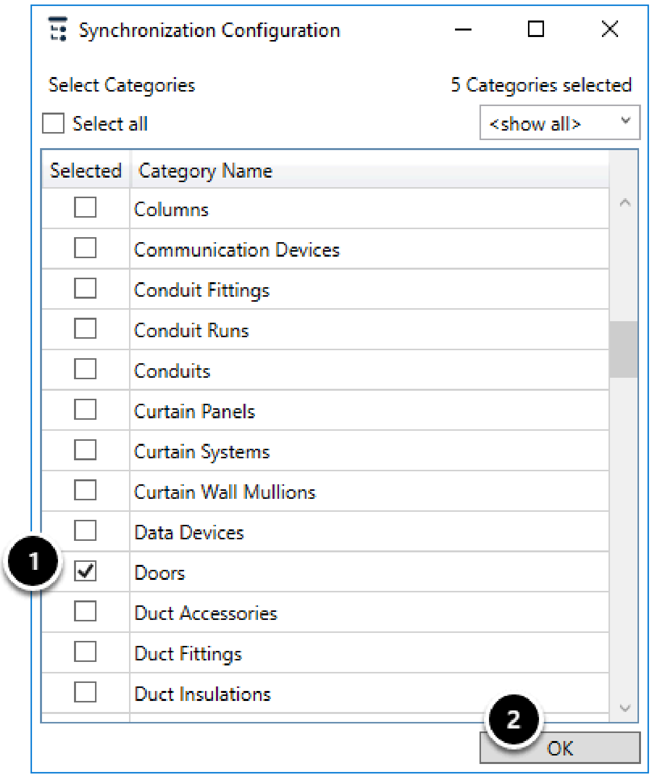
The relations can be seen in the spine Portal.

Consistency Check

Consistency Check

Check the consistency between Revit files and spine Projects . Check for missing or inconsistency data.
Consistency Check Tutorial (Video English)

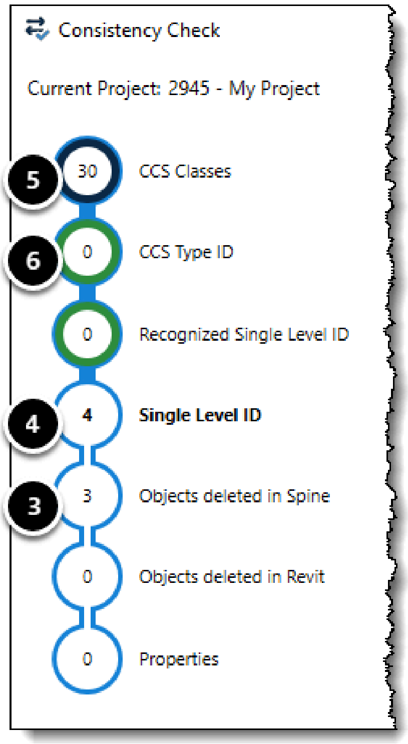
1. Synchronization Configuration and process line



Select Categories 5 Categories selected

☐ Select all <show all>

Selected	Category Name
☐	Columns
☐	Communication Devices
☐	Conduit Fittings
☐	Conduit Runs
☐	Conduits
☐	Curtain Panels
☐	Curtain Systems
☐	Curtain Wall Mullions
☐	Data Devices
☑	Doors
☐	Duct Accessories
☐	Duct Fittings
☐	Duct Insulations

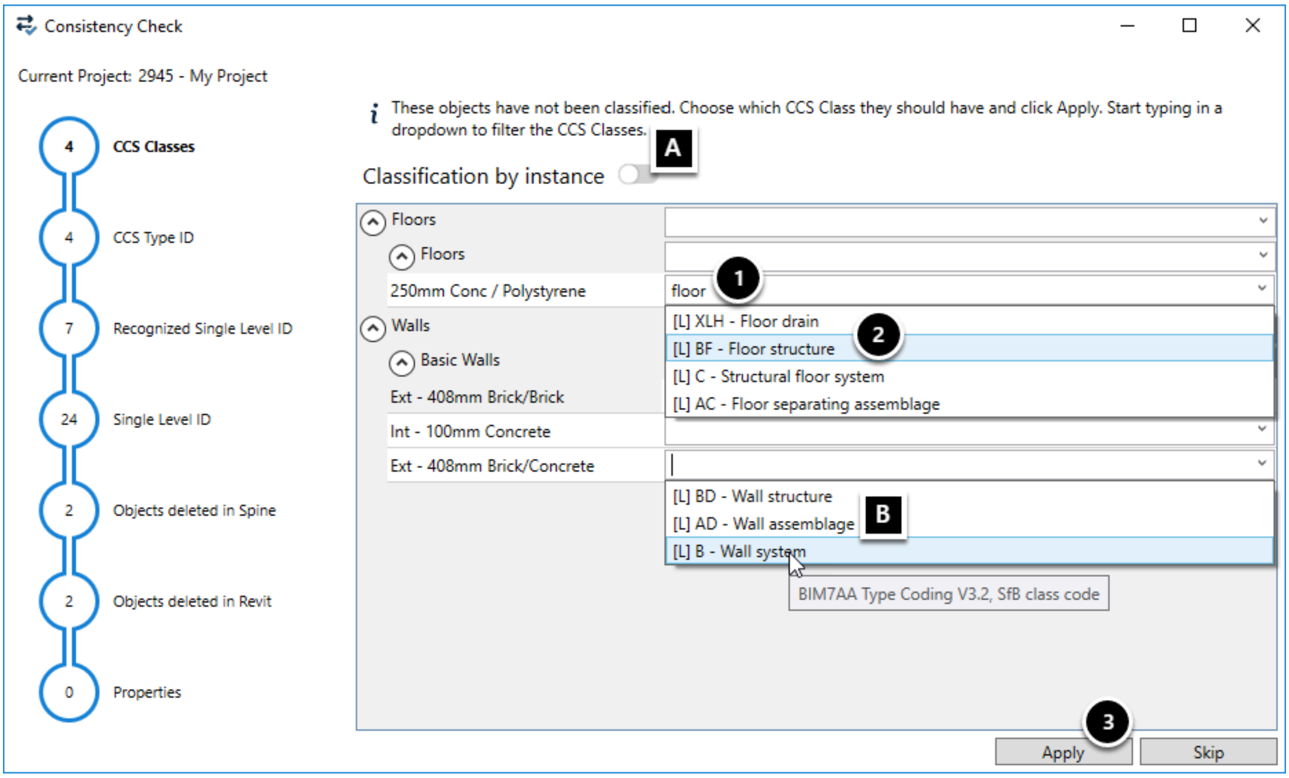


Current Project: 2945 - My Project

30	CCS Classes
0	CCS Type ID
0	Recognized Single Level ID
4	**Single Level ID**
3	Objects deleted in Spine
0	Objects deleted in Revit
0	Properties

1. Select Revit categories to be checked
2. Click OK
3. Number of issues
4. Bold text indicate the current step
5. The blue color indicate that there is still issues to be considered
6. The green color indicate that all issues has been handled

2. CCS Classes



Consistency Check

Current Project: 2945 - My Project

These objects have not been classified. Choose which CCS Class they should have and click Apply. Start typing in a dropdown to filter the CCS Classes.

Classification by instance

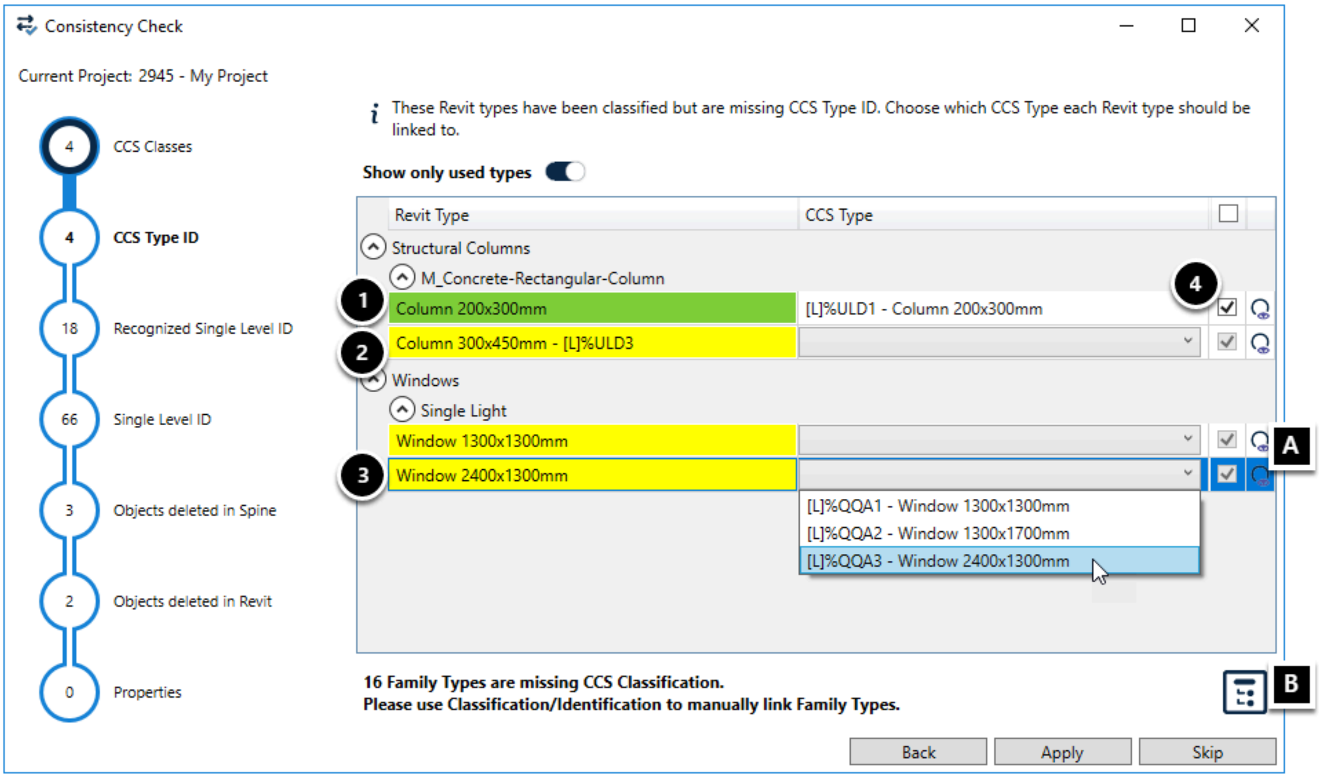
250mm Conc / Polystyrene: floor

Objects without a CCS Class

1. Type in a synonym for the class
2. Select a class
3. Click Apply

A: Toggle 'Classification by instance' to add classes as instance parameters
B: If an object have a class from another standard, the dropdown display suggested CCS classes

3. CCS Type ID



Current Project: 2945 - My Project

- 4 CCS Classes
- 4 **CCS Type ID**
- 18 Recognized Single Level ID
- 66 Single Level ID
- 3 Objects deleted in Spine
- 2 Objects deleted in Revit
- 0 Properties

These Revit types have been classified but are missing CCS Type ID. Choose which CCS Type each Revit type should be linked to.

Show only used types

Revit Type	CCS Type	☐
Structural Columns		
M_Concrete-Rectangular-Column		
Column 200x300mm	[L]%ULD1 - Column 200x300mm	☑
Column 300x450mm - [L]%ULD3		☑
Windows		
Single Light		
Window 1300x1300mm		☑
Window 2400x1300mm		☑

[L]%QQA1 - Window 1300x1300mm
[L]%QQA2 - Window 1300x1700mm
[L]%QQA3 - Window 2400x1300mm

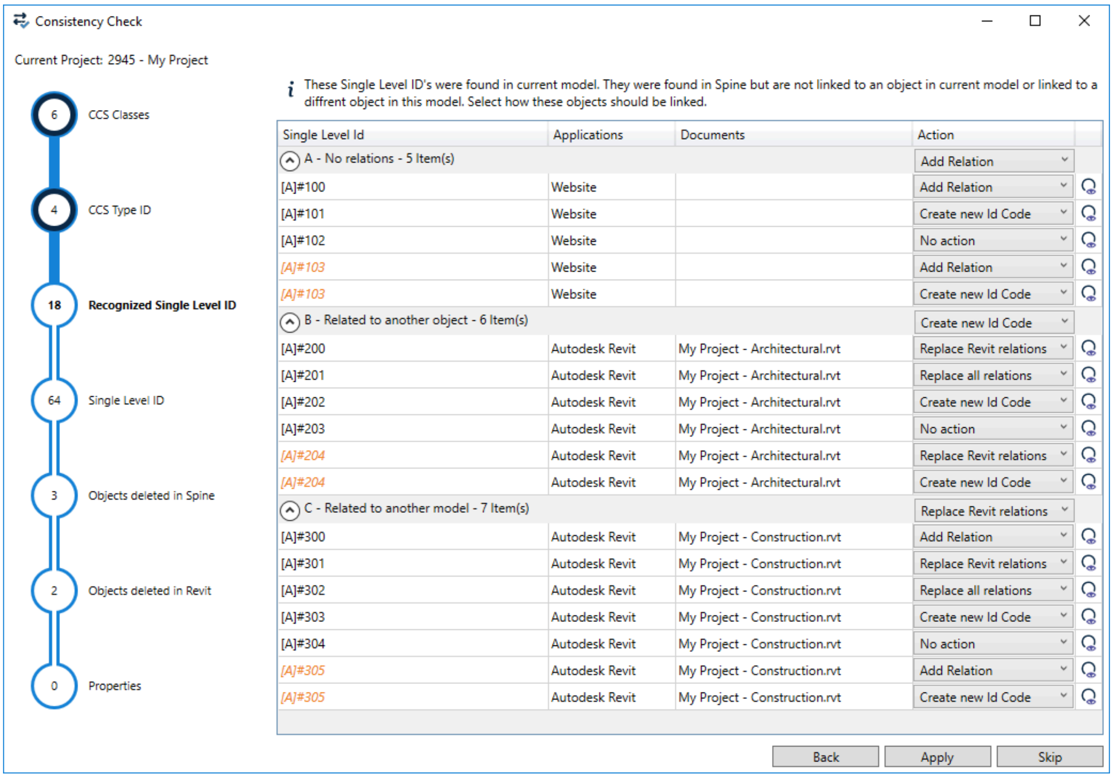
16 Family Types are missing CCS Classification.
Please use Classification/Identification to manually link Family Types.

Objects with a CCS Class , but without a CCS Type

1. The Revit Type is linked to a CCS Type in another file, and that type is suggested
2. The Revit Type has been linked to the CCS Type [L]%ULD3, which no longer exist in the spine Project . Select a new CCS Type
3. The drop-down display CCS Types within the CCS Class
4. Tick types to be linked

A: See Revit Type in the model
B: Go to classification

4. Recognized Single Level ID


Consistency Check

Current Project: 2945 - My Project

- 6 CCS Classes
- 4 CCS Type ID
- 18 **Recognized Single Level ID**
- 64 Single Level ID
- 3 Objects deleted in Spine
- 2 Objects deleted in Revit
- 0 Properties

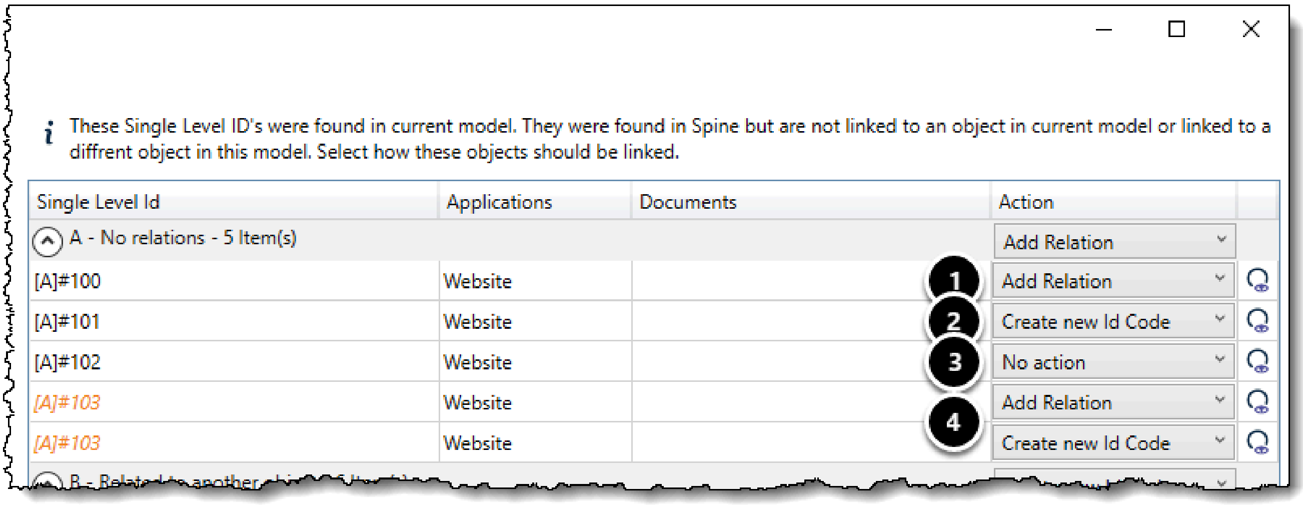
These Single Level ID's were found in current model. They were found in Spine but are not linked to an object in current model or linked to a diffrent object in this model. Select how these objects should be linked.

Single Level Id	Applications	Documents	Action
A - No relations - 5 Item(s)			Add Relation
[A]#100	Website		Add Relation
[A]#101	Website		Create new Id Code
[A]#102	Website		No action
[A]#103	Website		Add Relation
[A]#103	Website		Create new Id Code
B - Related to another object - 6 Item(s)			Create new Id Code
[A]#200	Autodesk Revit	My Project - Architectural.rvt	Replace Revit relations
[A]#201	Autodesk Revit	My Project - Architectural.rvt	Replace all relations
[A]#202	Autodesk Revit	My Project - Architectural.rvt	Create new Id Code
[A]#203	Autodesk Revit	My Project - Architectural.rvt	No action
[A]#204	Autodesk Revit	My Project - Architectural.rvt	Replace Revit relations
[A]#204	Autodesk Revit	My Project - Architectural.rvt	Create new Id Code
C - Related to another model - 7 Item(s)			Replace Revit relations
[A]#300	Autodesk Revit	My Project - Construction.rvt	Add Relation
[A]#301	Autodesk Revit	My Project - Construction.rvt	Replace Revit relations
[A]#302	Autodesk Revit	My Project - Construction.rvt	Replace all relations
[A]#303	Autodesk Revit	My Project - Construction.rvt	Create new Id Code
[A]#304	Autodesk Revit	My Project - Construction.rvt	No action
[A]#305	Autodesk Revit	My Project - Construction.rvt	Add Relation
[A]#305	Autodesk Revit	My Project - Construction.rvt	Create new Id Code

Single Level ID's in the current model with a mismatch in relations.
If an ID appears multiple times in a document , it is displayed in *cursive and orange* and the relation can only be added to one of the objects.

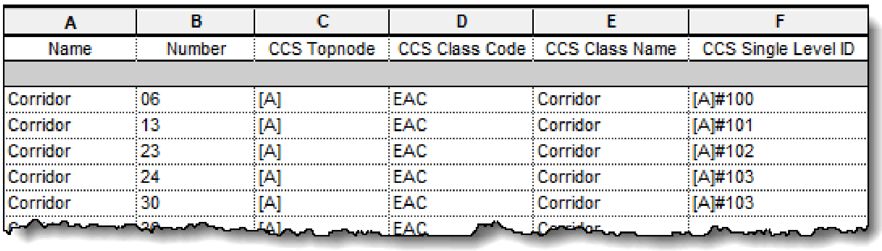
A - No relations

ID Code was found in the spine project, but has no relations to any documents .
Actions:
Add Relation: Adds a new relation between Revit object and spine object. Relations to other models or applications remains.
Create new Id Code: Creates a new Id Code with next available number. Current Id Code will be replaced with the newly created.
No action: Revit object will not be related to a spine object.



These Single Level ID's were found in current model. They were found in Spine but are not linked to an object in current model or linked to a diffrent object in this model. Select how these objects should be linked.

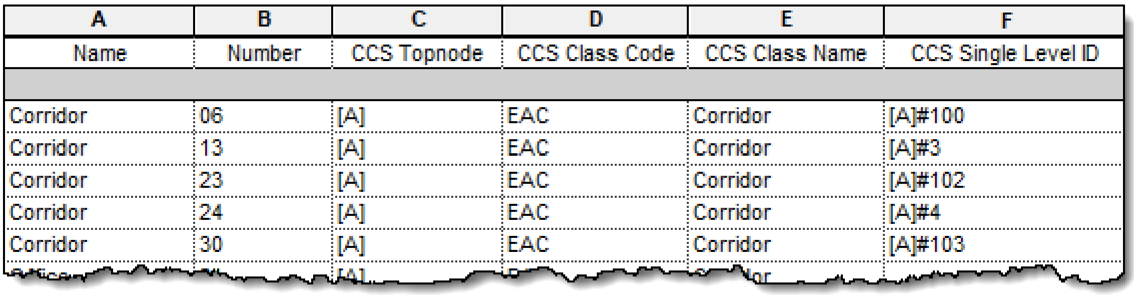
Single Level Id	Applications	Documents	Action
A - No relations - 5 Item(s)			Add Relation
[A]#100	Website		Add Relation
[A]#101	Website		Create new Id Code
[A]#102	Website		No action
[A]#103	Website		Add Relation
[A]#103	Website		Create new Id Code
B - Related to another			



A	B	C	D	E	F
Name	Number	CCS Topnode	CCS Class Code	CCS Class Name	CCS Single Level ID
Corridor	06	[A]	EAC	Corridor	[A]#100
Corridor	13	[A]	EAC	Corridor	[A]#101
Corridor	23	[A]	EAC	Corridor	[A]#102
Corridor	24	[A]	EAC	Corridor	[A]#103
Corridor	30	[A]	EAC	Corridor	[A]#103

Result:

1. **Add Relation:** *'Corridor 06'* is related to spine object *[A]#100*
2. **Create new Id Code:** *'Corridor 13'* is related to a new spine object *[A]#3*, and spine object *[A]#101* is not related to the current model
3. **No action:** Nothing happens to *'Corridor 23'*
4. *'Corridor 24'* and *'Corridor 30'* has the same CCS Single Level ID value *[A]#103*. Select one to be related to spine object *[A]#103* and one to get a new ID Code
   Create new Id Code: *'Corridor 24'* is related to new spine object *[A]#4*
   Add Relation: *'Corridor 30'* is related to spine object *[A]#103*



A	B	C	D	E	F
Name	Number	CCS Topnode	CCS Class Code	CCS Class Name	CCS Single Level ID
Corridor	06	[A]	EAC	Corridor	[A]#100
Corridor	13	[A]	EAC	Corridor	[A]#3
Corridor	23	[A]	EAC	Corridor	[A]#102
Corridor	24	[A]	EAC	Corridor	[A]#4
Corridor	30	[A]	EAC	Corridor	[A]#103

B - Related to another object

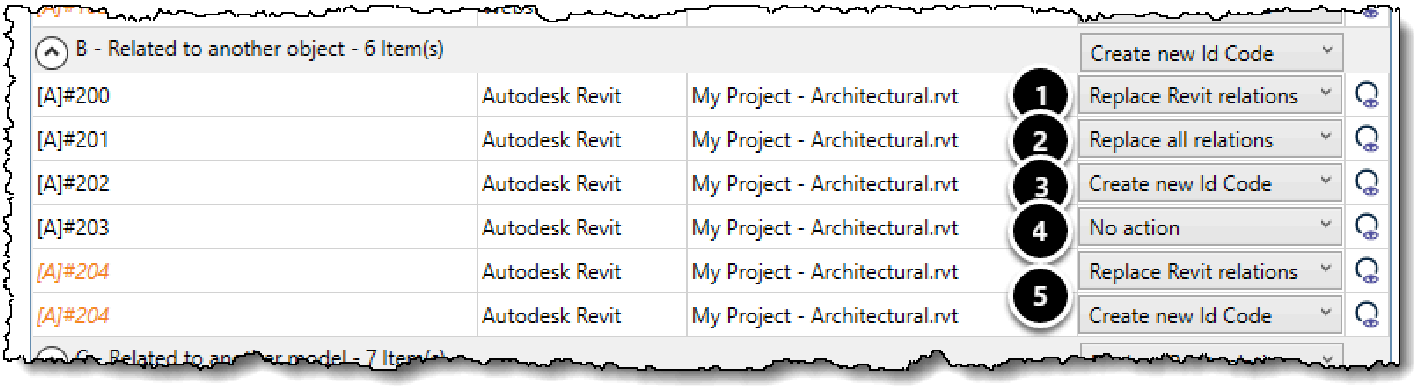
ID Code already has a relation in current model , but it differs from the object defined in the spine project .

Actions:

Replace Revit relations: Replaces all Revit relations. This deletes all other Revit model relations. Relations to other applications are not affected by this action.

Replace all relations: Replace all previous relations. This deletes all other relations regardless

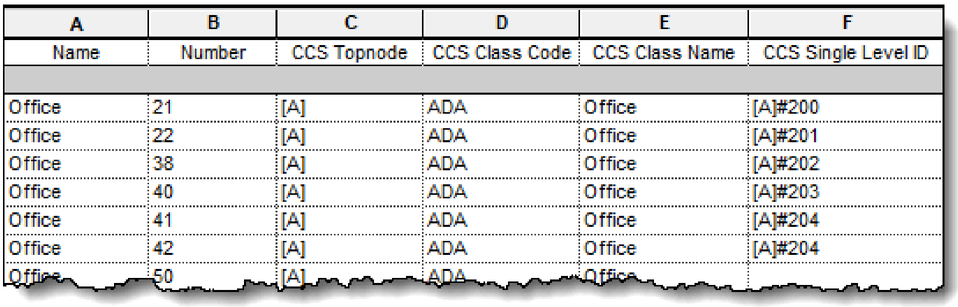
application.
Create new Id Code: Creates a new Id Code with the next available number. Current Id Code will be replaced with the newly created.
No action: Revit object will not be related to a spine object.



B - Related to another object - 6 Item(s) — Create new Id Code

[A]#200	Autodesk Revit	My Project - Architectural.rvt	1	Replace Revit relations
[A]#201	Autodesk Revit	My Project - Architectural.rvt	2	Replace all relations
[A]#202	Autodesk Revit	My Project - Architectural.rvt	3	Create new Id Code
[A]#203	Autodesk Revit	My Project - Architectural.rvt	4	No action
[A]#204	Autodesk Revit	My Project - Architectural.rvt	5	Replace Revit relations
[A]#204	Autodesk Revit	My Project - Architectural.rvt		Create new Id Code

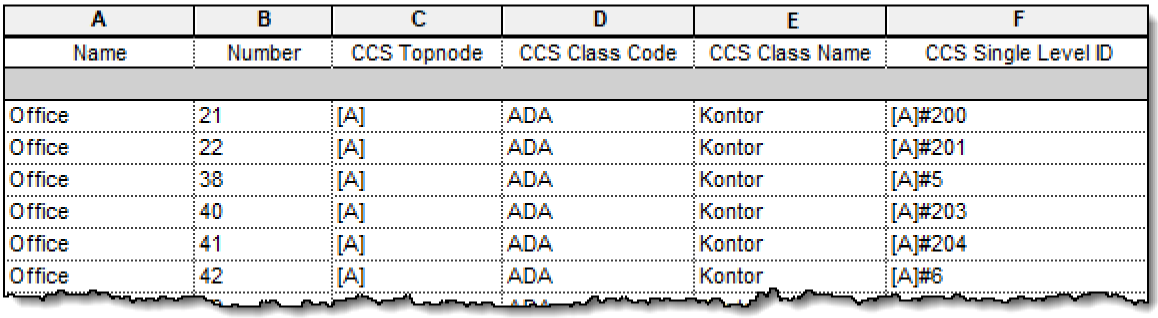
C - Related to another model - 7 Item(s)



A	B	C	D	E	F
Name	Number	CCS Topnode	CCS Class Code	CCS Class Name	CCS Single Level ID
Office	21	[A]	ADA	Office	[A]#200
Office	22	[A]	ADA	Office	[A]#201
Office	38	[A]	ADA	Office	[A]#202
Office	40	[A]	ADA	Office	[A]#203
Office	41	[A]	ADA	Office	[A]#204
Office	42	[A]	ADA	Office	[A]#204
Office	50	[A]	ADA	Office	

Result:

1. **Replace Revit relations:** 'Office 21' is related to spine object *[A]#200*. All other Revit model relations to *[A]#200* is deleted
2. **Replace all relations:** *'Office 22'* is related to spine object *[A]#201*. All other relations to *[A]#201* is deleted
3. **Create new Id Code:** *'Office 38'* is related to new spine object [A]#5 and spine object *[A]#202* will not be related to the current model
4. **No action:** *'Office 40'* still has the Single Level ID value *[A]#203*, but spine object *[A]#203* is not related to the Revit object
5. *'Office 41'* and *'Office 42'* has the same CCS Single Level ID value *[A]#204*. Select one to be related to spine object *[A]#204* and one to get a new ID Code
   Replace Revit relations: *'Office 41'* is related to *[A]#204*
   Create new Id Code: *'Office 42'* is related to new spine object *[A]#6*



A	B	C	D	E	F
Name	Number	CCS Topnode	CCS Class Code	CCS Class Name	CCS Single Level ID
Office	21	[A]	ADA	Kontor	[A]#200
Office	22	[A]	ADA	Kontor	[A]#201
Office	38	[A]	ADA	Kontor	[A]#5
Office	40	[A]	ADA	Kontor	[A]#203
Office	41	[A]	ADA	Kontor	[A]#204
Office	42	[A]	ADA	Kontor	[A]#6

C - Related to another model

ID Code is related to an object in another model.

Actions:

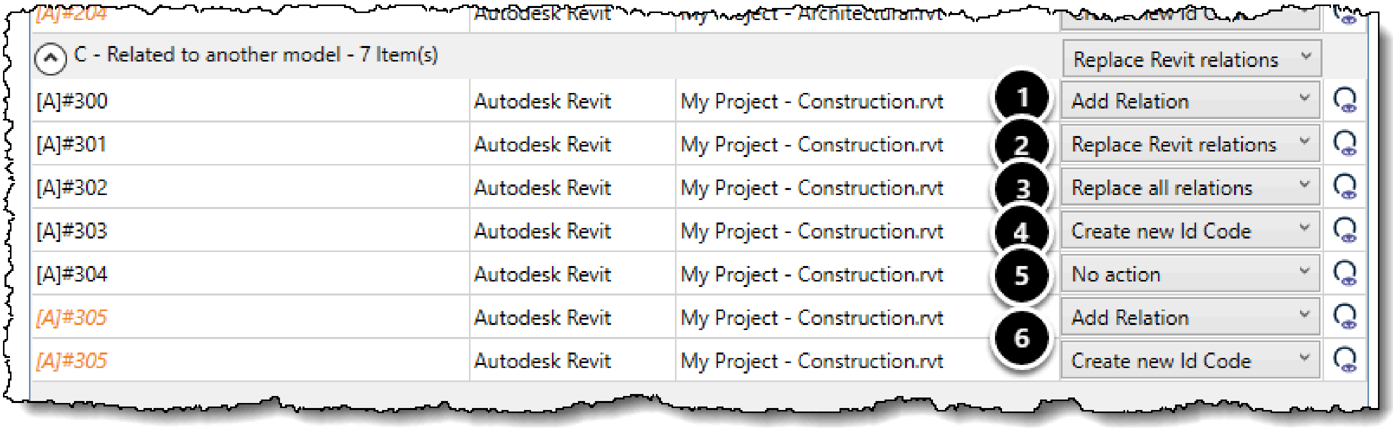
Add Relation: Adds a new relation between Revit object and spine object. Relations to other models or applications remains.

Replace Revit relations: Replaces all Revit relations. This deletes all other Revit model relations. Relations to other applications are not affected by this action.

Replace all relations: Replace all previous relations. This deletes all other relations regardless application.

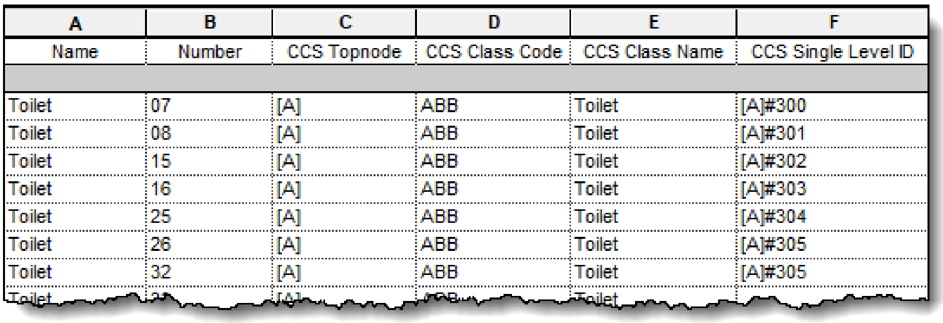
Create new Id Code: Creates a new Id Code with next available number. Current Id Code will be replaced with the newly created.

No action: Revit object will not be related to a spine object.



C - Related to another model - 7 Item(s) — Replace Revit relations

[A]#300	Autodesk Revit	My Project - Construction.rvt	1	Add Relation
[A]#301	Autodesk Revit	My Project - Construction.rvt	2	Replace Revit relations
[A]#302	Autodesk Revit	My Project - Construction.rvt	3	Replace all relations
[A]#303	Autodesk Revit	My Project - Construction.rvt	4	Create new Id Code
[A]#304	Autodesk Revit	My Project - Construction.rvt	5	No action
[A]#305	Autodesk Revit	My Project - Construction.rvt	6	Add Relation
[A]#305	Autodesk Revit	My Project - Construction.rvt		Create new Id Code

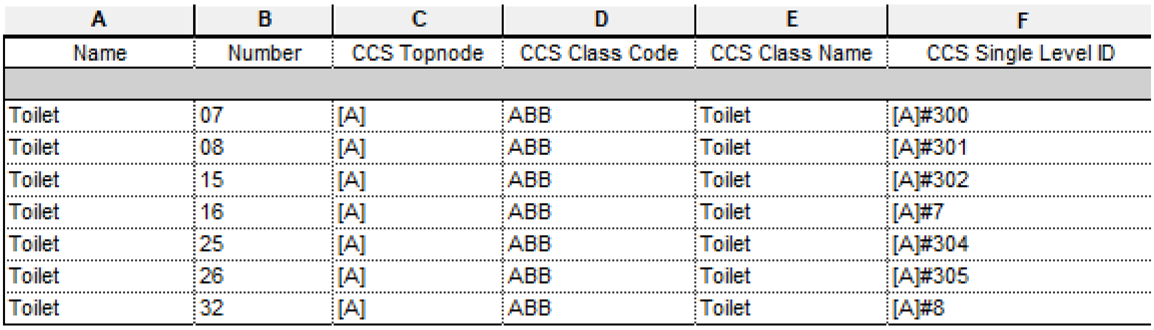


A	B	C	D	E	F
Name	Number	CCS Topnode	CCS Class Code	CCS Class Name	CCS Single Level ID
Toilet	07	[A]	ABB	Toilet	[A]#300
Toilet	08	[A]	ABB	Toilet	[A]#301
Toilet	15	[A]	ABB	Toilet	[A]#302
Toilet	16	[A]	ABB	Toilet	[A]#303
Toilet	25	[A]	ABB	Toilet	[A]#304
Toilet	26	[A]	ABB	Toilet	[A]#305
Toilet	32	[A]	ABB	Toilet	[A]#305

Result:

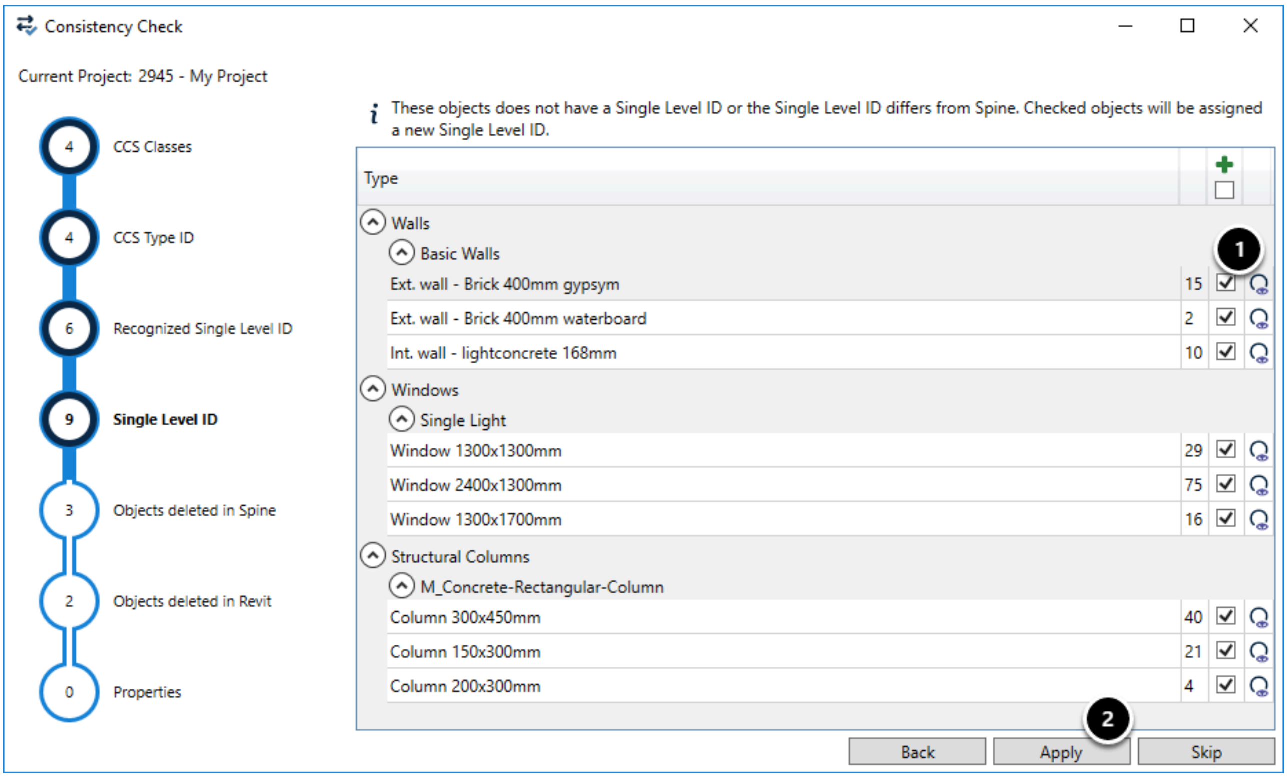
1. **Add Relation:** *'Toilet 07'* is related to spine object *[A]#300*. spine object *[A]#300* is still related to a Revit object in another model
2. **Replace Revit Relations:** *'Toilet 08'* is related to spine object *[A]#301*. spine object *[A]#301* is no longer related to a Revit objects in another model
3. **Replace all Relations:** *'Toilet 15'* is related to a spine object *[A]#302*. spine object *[A]#302* is no longer related to objects in other models
4. **Create new Id Code:** *'Toilet 16'* is related to a new spine object *[A]#7*.
5. **No Action:** Nothing happens
6. *'Toilet 26'* and *'Toilet 32'* has the same CCS Single Level ID value *[A]#305*. Select ont to be related to spine object *[A]#305* and one the get a new ID Code

Add Relation: *'Toilet 26'* is related to *[A]#305*
Create new Id Code: *'Toilet 32'* is related to new spine object *[A]#8*



A	B	C	D	E	F
Name	Number	CCS Topnode	CCS Class Code	CCS Class Name	CCS Single Level ID
Toilet	07	[A]	ABB	Toilet	[A]#300
Toilet	08	[A]	ABB	Toilet	[A]#301
Toilet	15	[A]	ABB	Toilet	[A]#302
Toilet	16	[A]	ABB	Toilet	[A]#7
Toilet	25	[A]	ABB	Toilet	[A]#304
Toilet	26	[A]	ABB	Toilet	[A]#305
Toilet	32	[A]	ABB	Toilet	[A]#8

5. Single Level ID



Consistency Check

Current Project: 2945 - My Project

4 CCS Classes
4 CCS Type ID
6 Recognized Single Level ID
9 **Single Level ID**
3 Objects deleted in Spine
2 Objects deleted in Revit
0 Properties

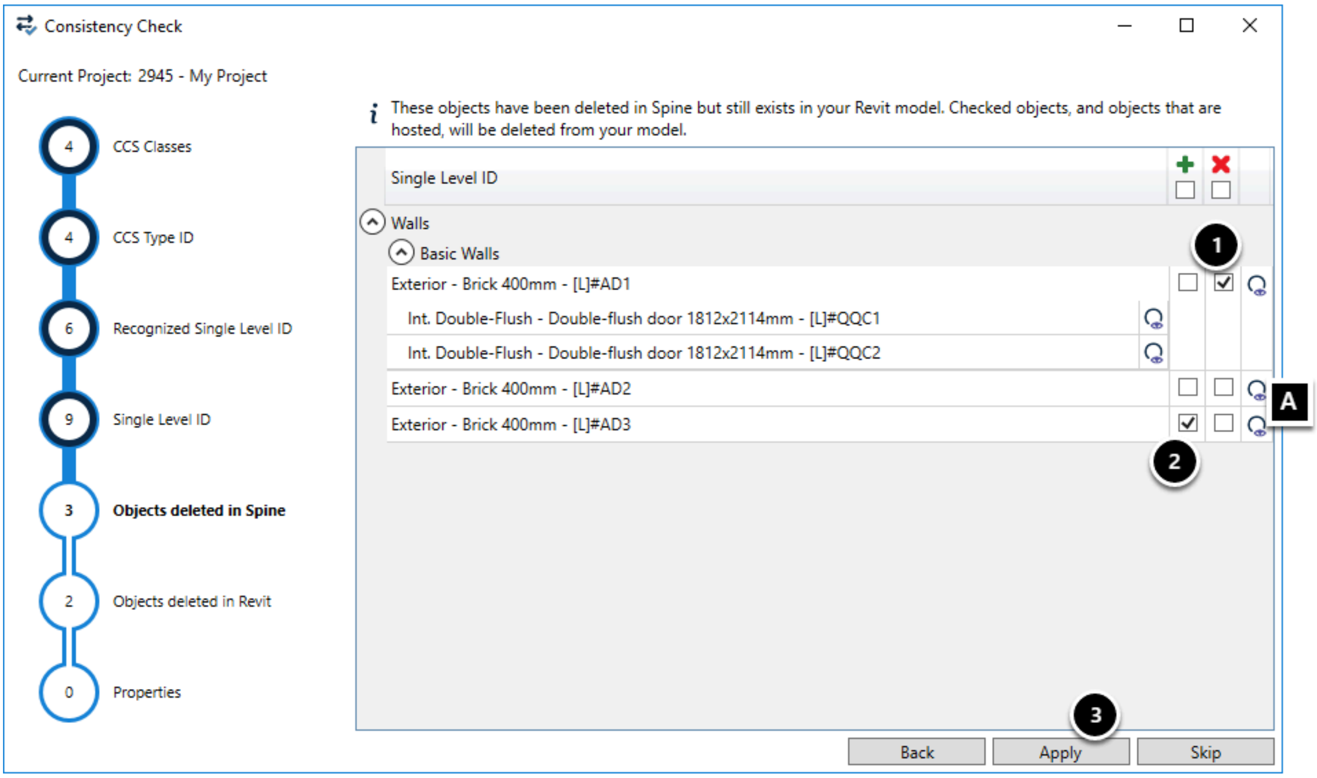
i These objects does not have a Single Level ID or the Single Level ID differs from Spine. Checked objects will be assigned a new Single Level ID.

Type		☐
Walls		
Basic Walls		
Ext. wall - Brick 400mm gypsym	15	☑
Ext. wall - Brick 400mm waterboard	2	☑
Int. wall - lightconcrete 168mm	10	☑
Windows		
Single Light		
Window 1300x1300mm	29	☑
Window 2400x1300mm	75	☑
Window 1300x1700mm	16	☑
Structural Columns		
M_Concrete-Rectangular-Column		
Column 300x450mm	40	☑
Column 150x300mm	21	☑
Column 200x300mm	4	☑

Objects with a CCS Class , but without a Single Level ID

1. Tick objects to be assigned a Single Level ID
2. Click apply

6. Objects deleted in spine



Current Project: 2945 - My Project

These objects have been deleted in Spine but still exists in your Revit model. Checked objects, and objects that are hosted, will be deleted from your model.

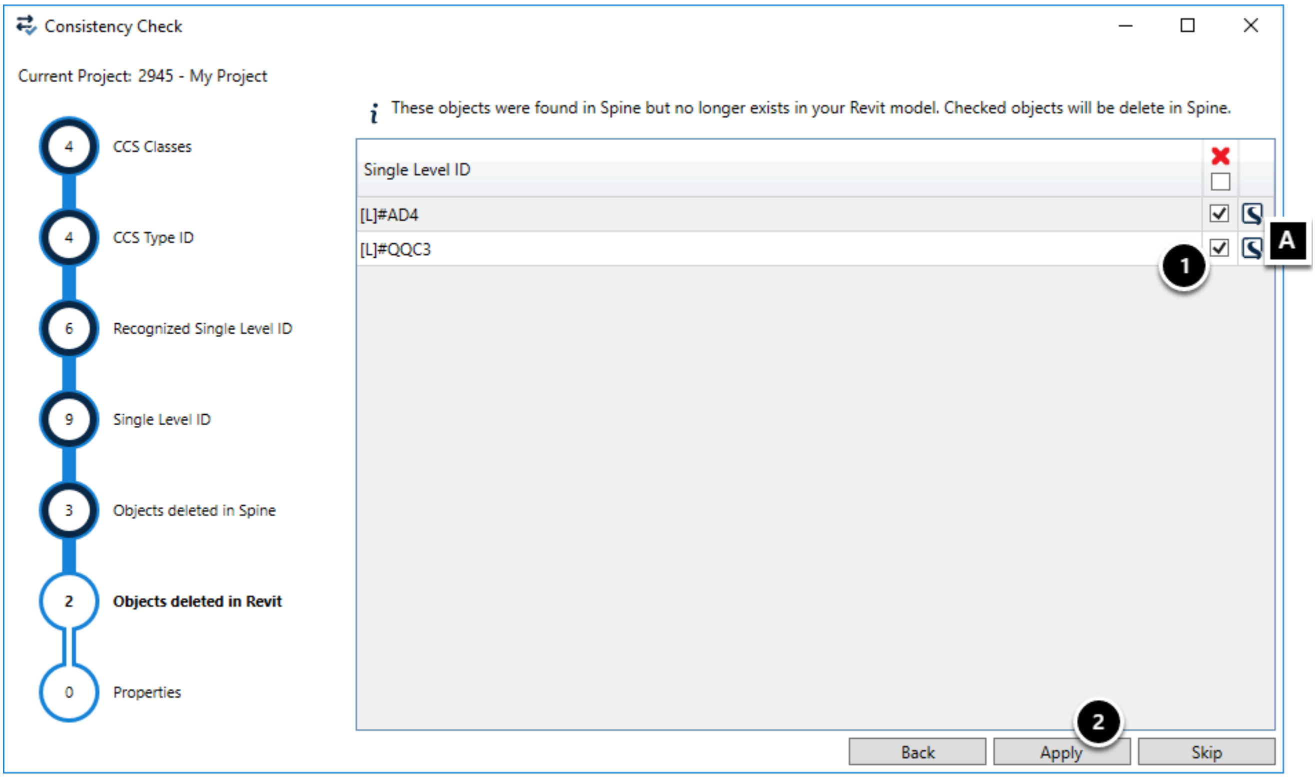
- Walls
  - Basic Walls
    - Exterior - Brick 400mm - [L]#AD1 ☐ ☑
      - Int. Double-Flush - Double-flush door 1812x2114mm - [L]#QQC1
      - Int. Double-Flush - Double-flush door 1812x2114mm - [L]#QQC2
    - Exterior - Brick 400mm - [L]#AD2 ☐ ☐
    - Exterior - Brick 400mm - [L]#AD3 ☑ ☐

Objects deleted in the spine Projects , that still exist in the current Revit file .
Reassign a Single Level ID or delete the object in the Revit file.

1. Tick objects to be deleted in the Revit file
2. Tick objects to be reassigned a Single Level ID
3. Click apply

A: Display objects in the model

7. Objects deleted in Revit



Consistency Check

Current Project: 2945 - My Project

These objects were found in Spine but no longer exists in your Revit model. Checked objects will be delete in Spine.

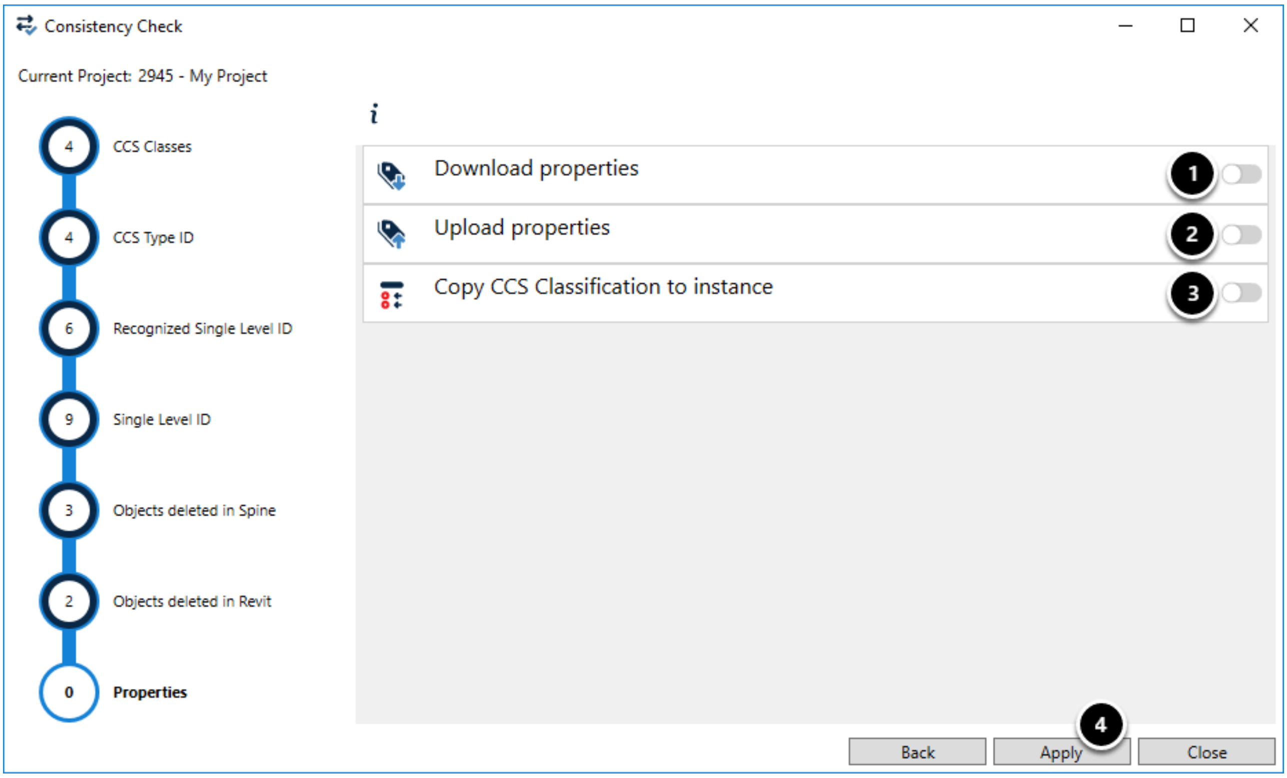
Single Level ID	☐
[L]#AD4	☑
[L]#QQC3	☑

Objects found in the [spine Project](), which no longer exist in the current [Revit file]().

1. Tick objects to be deleted in the spine Project
2. Click apply

A: Display objects in the [spine Desktop & Viewer]()

8. Properties


Consistency Check
Current Project: 2945 - My Project
4 CCS Classes
4 CCS Type ID
6 Recognized Single Level ID
9 Single Level ID
3 Objects deleted in Spine
2 Objects deleted in Revit
0 Properties
i
Download properties
Upload properties
Copy CCS Classification to instance
1
2
3
4
Back
Apply
Close

1. Download property values from the spine Project to the Revit file
2. Upload propertie values from the Revit file to the spine project
3. Copy CCS classification to instances
4. Click apply

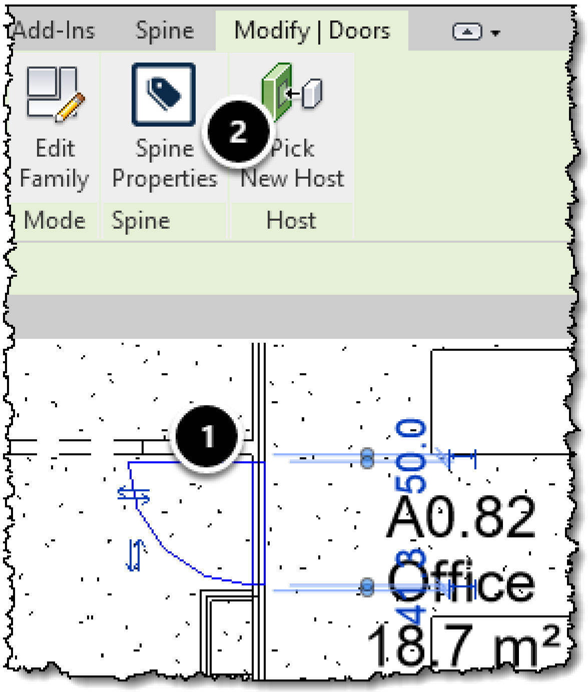
9. Consistency Check Tutorial (Video English)

Properties

spine Properties

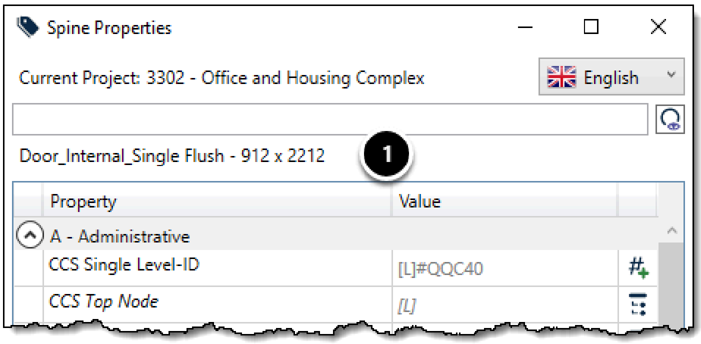
Get an overview of object properties and edit their values.

1. Select object(s)



1. Select an object
2. Click Spine Properties

1.1. Selected objects



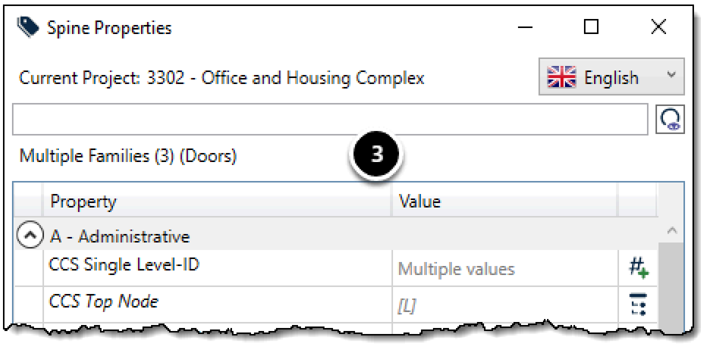
Spine Properties

Current Project: 3302 - Office and Housing Complex

English

Door_Internal_Single Flush - 912 x 2212

Property	Value
A - Administrative	
CCS Single Level-ID	[L]#QQC40
CCS Top Node	*[L]*



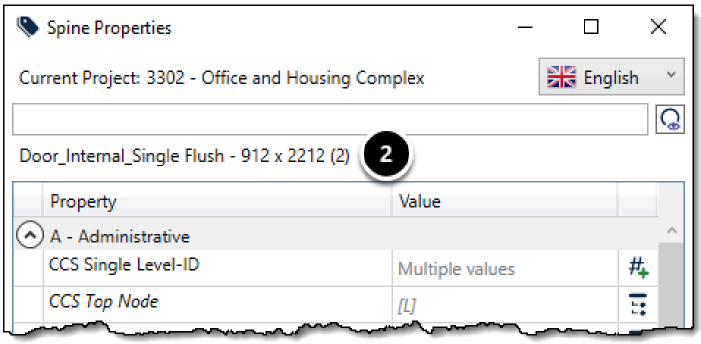
Spine Properties

Current Project: 3302 - Office and Housing Complex

English

Multiple Families (3) (Doors)

Property	Value
A - Administrative	
CCS Single Level-ID	Multiple values
CCS Top Node	*[L]*



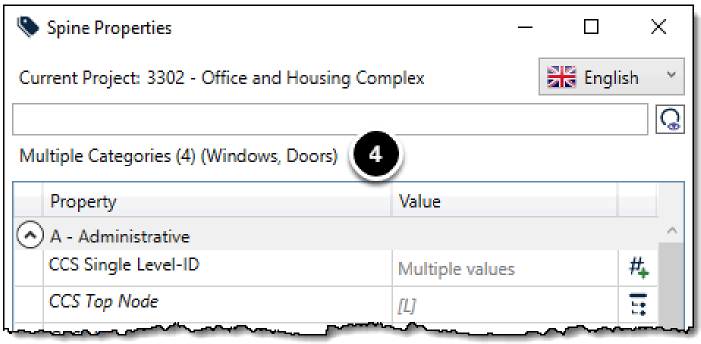
Spine Properties

Current Project: 3302 - Office and Housing Complex

English

Door_Internal_Single Flush - 912 x 2212 (2)

Property	Value
A - Administrative	
CCS Single Level-ID	Multiple values
CCS Top Node	*[L]*



Spine Properties

Current Project: 3302 - Office and Housing Complex

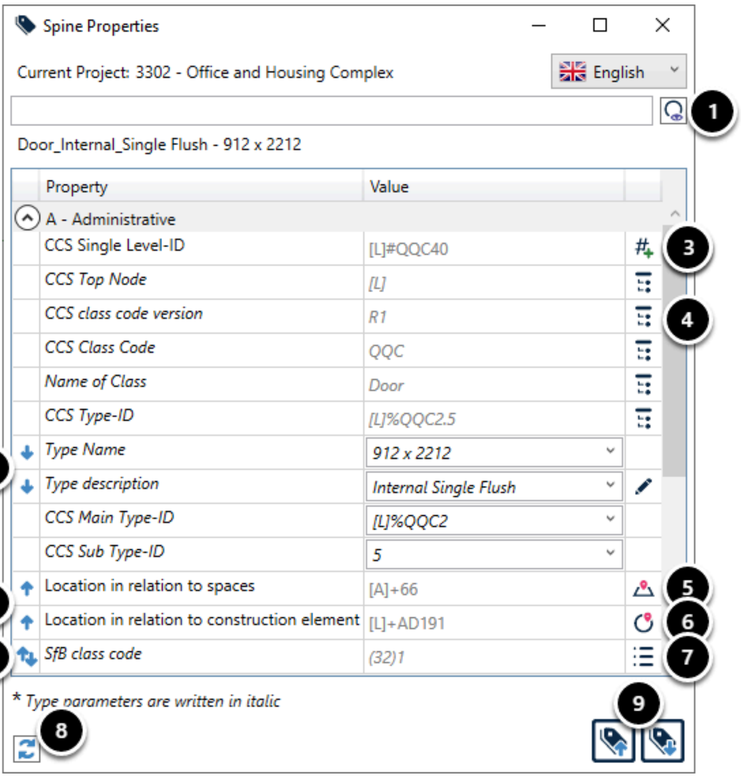
English

Multiple Categories (4) (Windows, Doors)

Property	Value
A - Administrative	
CCS Single Level-ID	Multiple values
CCS Top Node	*[L]*

1. A single object is selected
2. Multiple objects of the same Revit type are selected
3. Multiple objects of different Revit types but within the same category are selected
4. Multiple objects within different categories are selected

2. Symbols



Current Project: 3302 - Office and Housing Complex

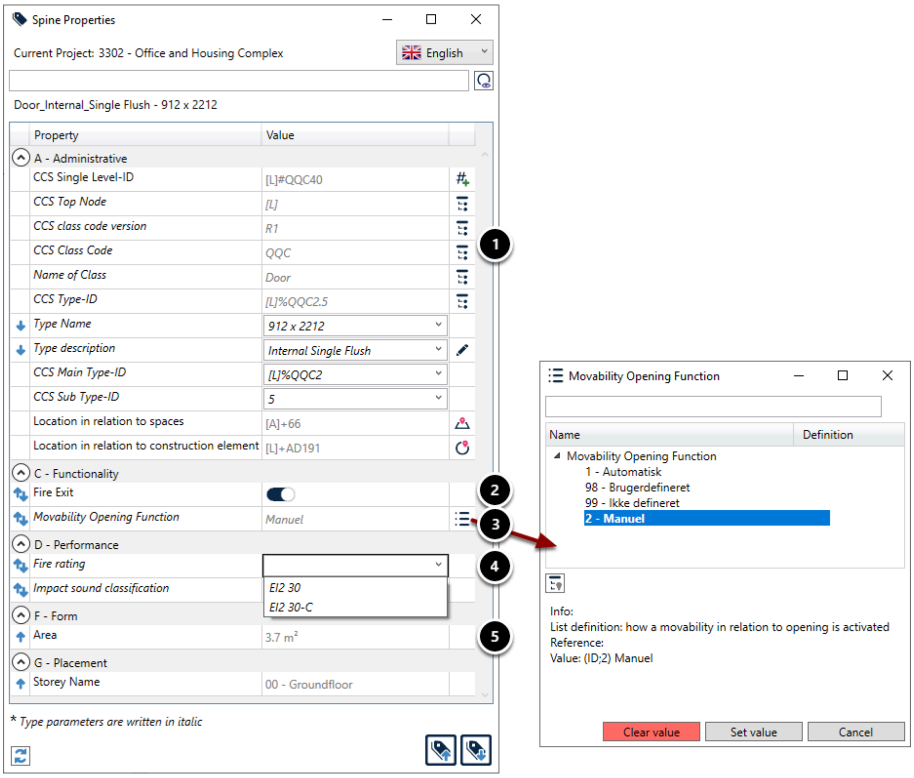
Door_Internal_Single Flush - 912 x 2212

Property	Value
A - Administrative	
CCS Single Level-ID	[L]#QQC40
CCS Top Node	*[L]*
CCS class code version	*R1*
CCS Class Code	*QQC*
Name of Class	*Door*
CCS Type-ID	*[L]%QQC2.5*
Type Name	*912 x 2212*
Type description	*Internal Single Flush*
CCS Main Type-ID	*[L]%QQC2*
CCS Sub Type-ID	*5*
Location in relation to spaces	[A]+66
Location in relation to construction element	[L]+AD191
SfB class code	*(32)1*

* *Type parameters are written in italic*

1. Select an object by it's CCS ID
2. Synchronization settings display whether the value can be:
   2.1. downloaded
   2.2. uploaded
   2.3. or both
3. Assign Single Level ID
4. Open classification
5. Assign Location At ID , opens Create location at ID
6. Assign Location On ID , opens Create location On ID
7. Open property value list
8. Reload properties , if property changes are made in Manage Properties or a new type ID with properties is assigned the object
9. Upload and download propety values between Revit object and the spine project

3. Edit values



Spine Properties

Current Project: 3302 - Office and Housing Complex

English

Door_Internal_Single Flush - 912 x 2212

Property	Value
A - Administrative	
CCS Single Level-ID	[L]#QQC40
CCS Top Node	*[L]*
CCS class code version	*R1*
CCS Class Code	*QQC*
Name of Class	*Door*
CCS Type-ID	*[L]%QQC2.5*
Type Name	*912 x 2212*
Type description	*Internal Single Flush*
CCS Main Type-ID	*[L]%QQC2*
CCS Sub Type-ID	*5*
Location in relation to spaces	[A]+66
Location in relation to construction element	[L]+AD191
C - Functionality	
Fire Exit	
Movability Opening Function	*Manuel*
D - Performance	
Fire rating	*EI2 30* *EI2 30-C*
Impact sound classification	
F - Form	
Area	3.7 m²
G - Placement	
Storey Name	00 - Groundfloor

* *Type parameters are written in italic*

Movability Opening Function

Name	Definition
Movability Opening Function	
1 - Automatisk	
98 - Brugerdefineret	
99 - Ikke defineret	
2 - Manuel	

Info:
List definition: how a movability in relation to opening is activated
Reference:
Value: (ID;2) Manuel

1. Classification properties , edit values with Classification
2. Yes/No property, toggle to change
3. List property, select values from a property value list
4. Text property, edit by typing in a value or select a previously used value
5. Built-In property, values are retrieved from the Revit model

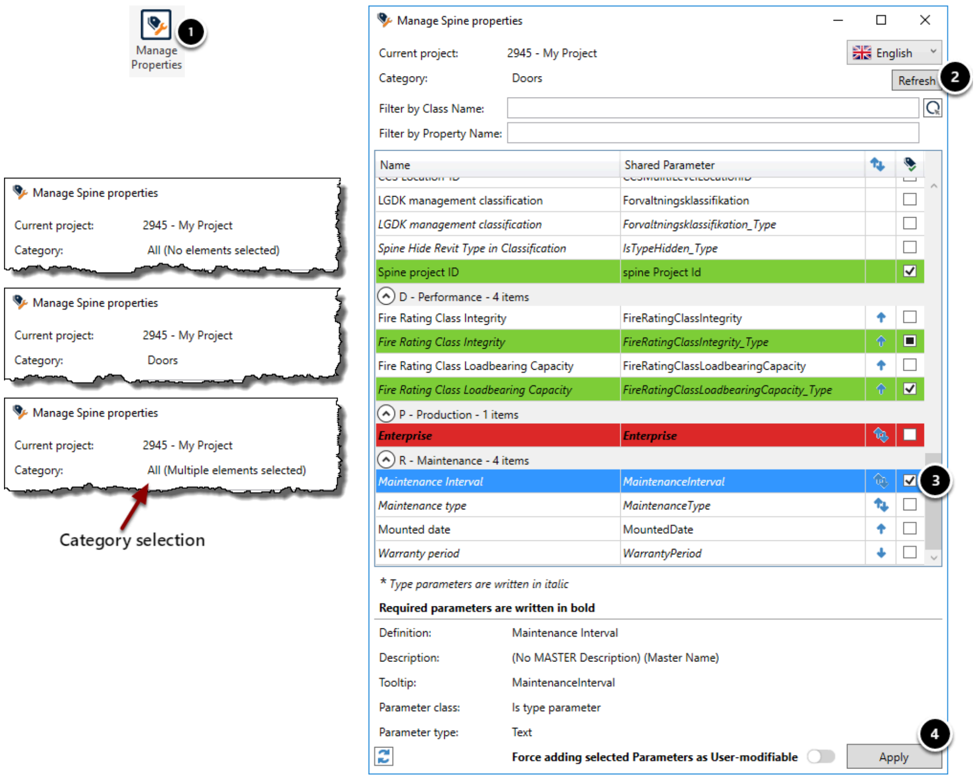
Manage Properties

In Manage Properties users can add and remove properties to Revit objects.

- ***Revit file* is not assigned a *spine project*:** All default properties are available
- ***Revit file is assigned a spine project:*** Only properties set to be used in the project are available, see Project Properties in the spine project

Properties are added to Revit categories. As default, the categories reflects the selected objects in the model.

1. Select categories and add/remove properties



Manage Spine properties
Current project: 2945 - My Project
Category: All (No elements selected)

Manage Spine properties
Current project: 2945 - My Project
Category: Doors

Manage Spine properties
Current project: 2945 - My Project
Category: All (Multiple elements selected)

Category selection

Manage Spine properties
Current project: 2945 - My Project
Category: Doors
Filter by Class Name:
Filter by Property Name:

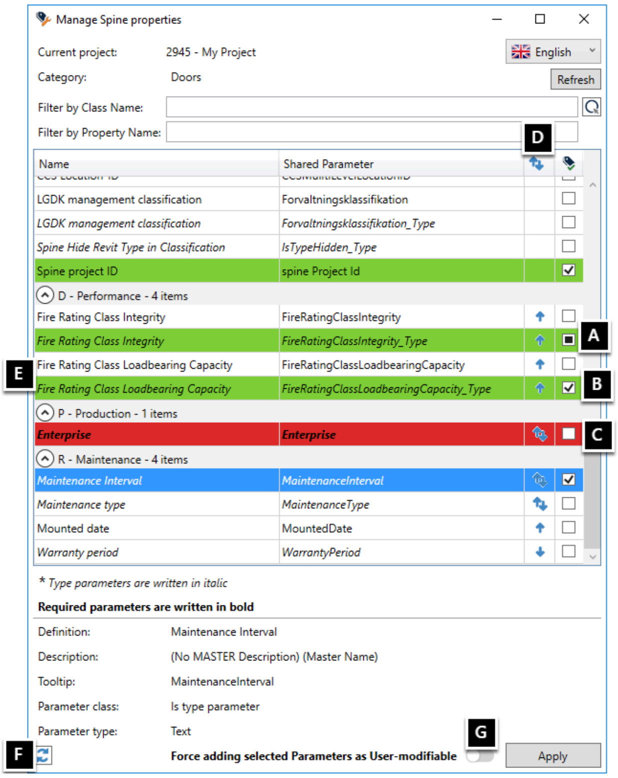
Name	Shared Parameter	⇅	
LGDK management classification	Forvaltningsklassifikation		☐
LGDK management classification	*Forvaltningsklassifikation_Type*		☐
Spine Hide Revit Type in Classification	*IsTypeHidden_Type*		☐
Spine project ID	spine Project Id		☑
D - Performance - 4 items			
Fire Rating Class Integrity	FireRatingClassIntegrity	↑	☐
Fire Rating Class Integrity	*FireRatingClassIntegrity_Type*	↑	■
Fire Rating Class Loadbearing Capacity	FireRatingClassLoadbearingCapacity	↑	☐
Fire Rating Class Loadbearing Capacity	*FireRatingClassLoadbearingCapacity_Type*	↑	☑
P - Production - 1 items			
Enterprise	***Enterprise***	⇅	☐
R - Maintenance - 4 items			
Maintenance Interval	*MaintenanceInterval*	⇅	☑
Maintenance type	*MaintenanceType*	⇅	☐
Mounted date	MountedDate	↑	☐
Warranty period	*WarrantyPeriod*	↓	☐

** Type parameters are written in italic*
Required parameters are written in bold

Definition: Maintenance Interval
Description: (No MASTER Description) (Master Name)
Tooltip: MaintenanceInterval
Parameter class: Is type parameter
Parameter type: Text
Force adding selected Parameters as User-modifiable
Apply

1. Open Manage Properties
2. Update category selection, select categories in the view and refresh selection
3. Tick or untick properties to be added or removed
4. Click apply

Additional settings



Manage Spine properties

Current project: 2945 - My Project

Category: Doors

Filter by Class Name:

Filter by Property Name:

Name	Shared Parameter		
LGDK management classification	Forvaltningsklassifikation		☐
LGDK management classification	*Forvaltningsklassifikation_Type*		☐
Spine Hide Revit Type in Classification	*IsTypeHidden_Type*		☐
Spine project ID	spine Project Id		☑
D - Performance - 4 items			
Fire Rating Class Integrity	FireRatingClassIntegrity	↑	☐
Fire Rating Class Integrity	*FireRatingClassIntegrity_Type*	↑	■
Fire Rating Class Loadbearing Capacity	FireRatingClassLoadbearingCapacity	↑	☐
Fire Rating Class Loadbearing Capacity	*FireRatingClassLoadbearingCapacity_Type*	↑	☑
P - Production - 1 items			
Enterprise	***Enterprise***	⇅	☐
R - Maintenance - 4 items			
Maintenance Interval	*MaintenanceInterval*	⇅	☑
Maintenance type	*MaintenanceType*	⇅	☐
Mounted date	MountedDate	↑	☐
Warranty period	*WarrantyPeriod*	↓	☐

* *Type parameters are written in italic*

Required parameters are written in bold

Definition: Maintenance Interval

Description: (No MASTER Description) (Master Name)

Tooltip: MaintenanceInterval

Parameter class: Is type parameter

Parameter type: Text

Force adding selected Parameters as User-modifiable

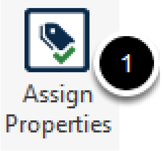
A: A square indicate that the property is applied to other categories in the model
B: A tick indicate that the property is applied to the current category
C: Red indicate that the property is required in this model, you can add all required properties with Assign Properties
D: The arrows indicate whether the property value must be uploaded from Revit to the spine project, downloaded from the project to Revit, or if it can be synchronized both ways
Note: If values are set to be both up- and downloaded, keep in mind that values can overwrite each other
E: spine properties can be mapped to both type and instance parameters , types are written in italic
F: If property changes are made in the spine project, reload changes
G: Parameters can be applied as User-modifiable, toggle to switch

Assign Properties

Assign all required properties to a Revit modelinstantly.

All properties set to 'Required in Revit' in the spine projectsynchronization settings will be assigned the Revit file.

Manage properties in the spine project.



1. Click Assign Properties

Families

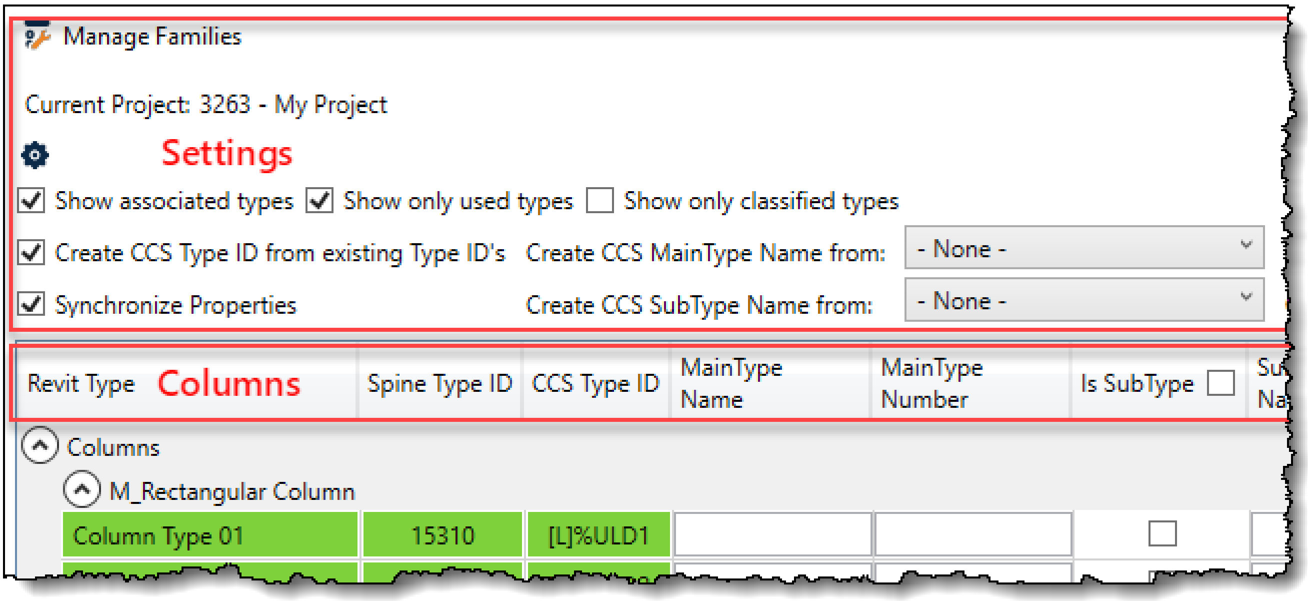
Manage Families

In Manage families you can:

- Create CCS Types for Revit Family Types
- Associate existing CCS Types with Revit Family Types
- And update mismatching Revit Family Types and spine Types

- Manage Families Tutorial (Video English)
- Relation between Revit, Spine and CCS Types (Video English)

1. Settings and Columns



Manage Families

Current Project: 3263 - My Project

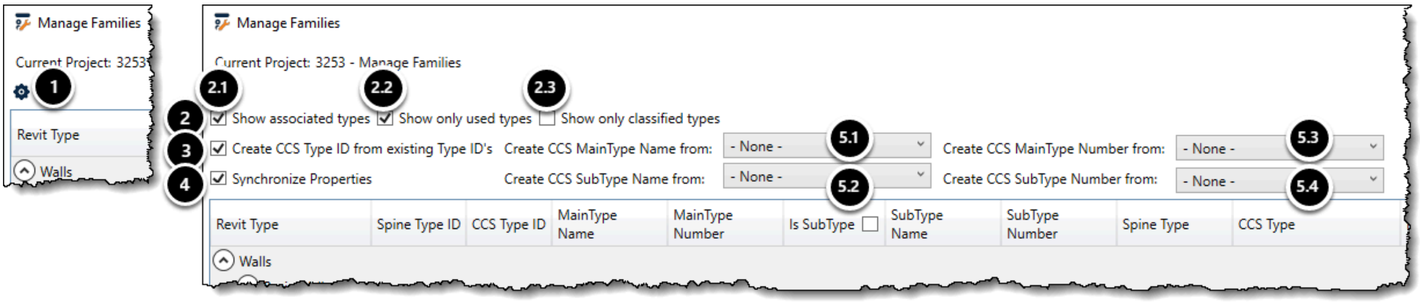
☑ Show associated types ☑ Show only used types ☐ Show only classified types

☑ Create CCS Type ID from existing Type ID's Create CCS MainType Name from: - None -

☑ Synchronize Properties Create CCS SubType Name from: - None -

Revit Type	Spine Type ID	CCS Type ID	MainType Name	MainType Number	Is SubType ☐
Columns					
M_Rectangular Column					
Column Type 01	15310	[L]%ULD1			☐

1.1. Settings



Manage Families

Current Project: 3253 - Manage Families

☑ Show associated types ☑ Show only used types ☐ Show only classified types

☑ Create CCS Type ID from existing Type ID's Create CCS MainType Name from: - None - Create CCS MainType Number from: - None -

☑ Synchronize Properties Create CCS SubType Name from: - None - Create CCS SubType Number from: - None -

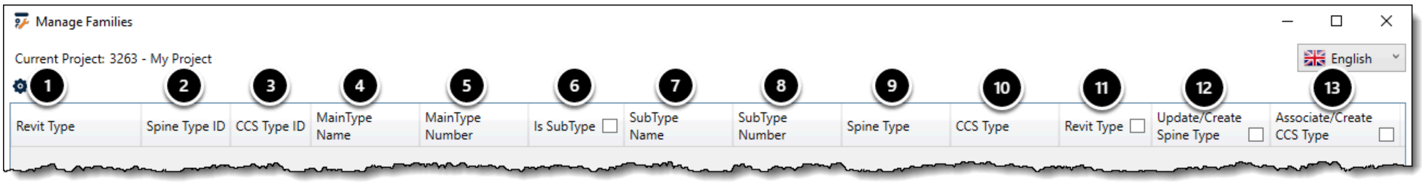
Revit Type	Spine Type ID	CCS Type ID	MainType Name	MainType Number	Is SubType ☐	SubType Name	SubType Number	Spine Type	CCS Type
Walls									

1. **Show or hide settings**
2. Filter what is displayed

  2.1. **Show associated types:** Show Family Types that are up to date and linked to a CCS Type
  2.2. **Show only used types:** Show only Family Types that are used in the model
  2.3. **Show only classified types:** Show only Family Types that are classified or has a predefined CCS Type ID

3. **Create CCS Type ID from existing Type ID's:** If checked, CCS Types are created based on existing CCS Type ID parameter on Family Type
4. **Synchronize Properties:** If checked, Type properties are uploaded to the CCS Type in spine. If associated to an existing CCS Type, Type properties are downloaded from the CCS Type in spine
5. Create CCS Type name and number from Revit Properties. Property values will be filled in in column 4. MainType Name, 5. MainType Number, 7. SubType Name og 8. SubType Number
  5.1. **Create CCS MainType Name from:** Select property CCS MainType Name must be based on
  5.2. **Create CCS SubType Name from:** Select property CCS SubType Name must be based on
  5.3. **Create CCS MainType Number from:** Select property CCS MainType Number must be based on
  5.4. **Create CCS SubType Number from:** Select property CCS SubType Number must be based on

1.2. Columns



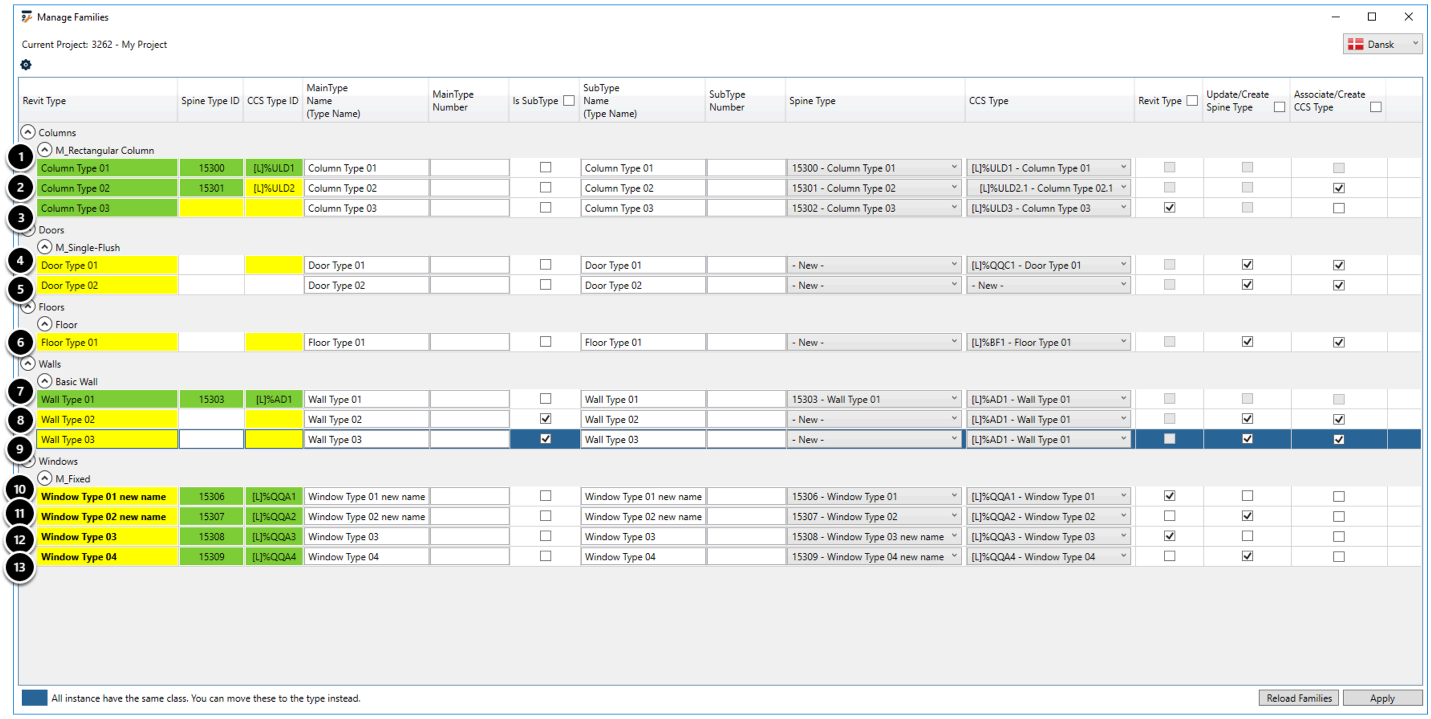
1. **Revit Type** - Revit Family Type
   Revit Family Type Name in the Revit file. Manage which Types to display, using the 2. filters in settings.
2. **spine Type ID** - spine Type
   The spine Type ID is the unique ID Revit Types are assigned in spine, so that the Revit Type can be tracked across multiple Revit files in a spine project. The ID is stored on the Revit Type in a hidden Parameter SpineTypeID.
3. **CCS Type ID** - CCS Type ID
   The CCS Type ID is the unique Code which unambiguously seperates a group of objects from other groups of objects according to the standard. The ID is stored on the Revit Type in the Parameter CCSTypeID_Type *or* CCSTypeID.
4. **MainType Name**
   The name read from the parameter selected in "Create CCS MainType Name from". This field is editable and will be used when creating new CCS Types. Changing the name will not affect the parameter on the Revit Type in the file.
5. **MainType Number**
   The number read from the parameter selected in "Create CCS MainType Number from". This field

is editable and will be used when creating new CCS Types. If left blank, a number will be assigned automatically. Changing the number will not affect the parameter on the Revit Type in the file.

6. **Is SubType** - SubType
   If checked, the type will be created as a SubType.
7. **SubType Name**
   The name read from the parameter selected in "Create CCS SubType Name from". This field is editable and will be used when creating new CCS Types. Changing the name will not affect the parameter on the Revit Type in the file.
8. **SubType Number**
   The number read from the parameter selected in "Create CCS SubType Numbers from". This field is editable and will be used when creating new CCS Types. If left blank, a number will be assigned automatically. Changing the number will not affect the parameter on the Revit Type in the file.
9. **spine Type** - spine Type
   If a matching spine Type is found based on the "Family Name", "Revit Type Name" or "Spine Type ID" the match is shown.
   If a partial matching Spine Type is found, the matching parameter is highlighted in green, either "Revit Type Name" or "Spine Type ID"
   If no matching spine Type is found. A new spine Type will be created.
   The dropdown list shows all spine Types under the same Family Name if Family Name is matching.
10. **CCS Type** - CCS Type ID
    If a matching CCS Type is found based on "CCS Type ID" or if a matching Spine Type is associated to a CCS Type, the match is shown. If the Revit Type is Classified or "CCS Type ID" contains Topnode and Class, -New- is suggested as default and the dropdown list shows all CCS Types in Spine that match the class of the Revit Type. If the Revit Type is missing information of its Class, -Missing CCS Class- is shown by default, but the dropdown list will show all CCS Types in Spine. If an existing CCS Type is selected, the Class will be added to the Revit Type.
11. **Revit Type**
    If checked, the Revit Type will be associated with the selected Spine Type and updated with "Type Name" and "Spine Type ID" according to the associated Spine Type.
12. **Update/Create spine Type**
    If checked, the Revit Type will be associated with the selected Spine Type and the Spine Type will be updated with "Type Name" according to the associated Revit Type.
    If Spine Type is -New-, a new Spine Type will be created.
13. **Associate/Create CCS Type**
    If checked, the Spine Type will be associated with the selected CCS Type.
    If CCS Type is -New-, a new CCS Type will be created based on the Revit Type.

2. Examples

The first column display the Revit Family Type and the next two display its properties.
The colors indicate a match or mismatch between the Revit Type properties spine Type ID and CCS Type ID and the selection in spine Type and CCS Type.



Manage Families

Current Project: 3262 - My Project

	Revit Type	Spine Type ID	CCS Type ID	MainType Name (Type Name)	MainType Number	Is SubType ☐	SubType Name (Type Name)	SubType Number	Spine Type	CCS Type	Revit Type ☐	Update/Create Spine Type ☐	Associate/Create CCS Type ☐
	Columns												
	M_Rectangular Column												
①	Column Type 01	15300	[L]%ULD1	Column Type 01		☐	Column Type 01		15300 - Column Type 01	[L]%ULD1 - Column Type 01	☐	☐	☐
②	Column Type 02	15301	[L]%ULD2	Column Type 02		☐	Column Type 02		15301 - Column Type 02	[L]%ULD2.1 - Column Type 02.1	☐	☐	☑
③	Column Type 03			Column Type 03		☐	Column Type 03		15302 - Column Type 03	[L]%ULD3 - Column Type 03	☑	☐	☐
	Doors												
	M_Single-Flush												
④	Door Type 01			Door Type 01		☐	Door Type 01		- New -	[L]%QQC1 - Door Type 01	☐	☑	☑
⑤	Door Type 02			Door Type 02		☐	Door Type 02		- New -	- New -	☐	☑	☑
	Floors												
	Floor												
⑥	Floor Type 01			Floor Type 01		☐	Floor Type 01		- New -	[L]%BF1 - Floor Type 01	☐	☑	☑
	Walls												
	Basic Wall												
⑦	Wall Type 01	15303	[L]%AD1	Wall Type 01		☐	Wall Type 01		15303 - Wall Type 01	[L]%AD1 - Wall Type 01	☐	☐	☐
⑧	Wall Type 02			Wall Type 02		☑	Wall Type 02		- New -	[L]%AD1 - Wall Type 01	☐	☑	☑
⑨	Wall Type 03			Wall Type 03		☑	Wall Type 03		- New -	[L]%AD1 - Wall Type 01	☐	☑	☑
	Windows												
	M_Fixed												
⑩	**Window Type 01 new name**	15306	[L]%QQA1	Window Type 01 new name		☐	Window Type 01 new name		15306 - Window Type 01	[L]%QQA1 - Window Type 01	☑	☐	☐
⑪	**Window Type 02 new name**	15307	[L]%QQA2	Window Type 02 new name		☐	Window Type 02 new name		15307 - Window Type 02	[L]%QQA2 - Window Type 02	☐	☑	☐
⑫	**Window Type 03**	15308	[L]%QQA3	Window Type 03		☐	Window Type 03		15308 - Window Type 03 new name	[L]%QQA3 - Window Type 03	☑	☐	☐
⑬	**Window Type 04**	15309	[L]%QQA4	Window Type 04		☐	Window Type 04		15309 - Window Type 04 new name	[L]%QQA4 - Window Type 04	☐	☑	☐

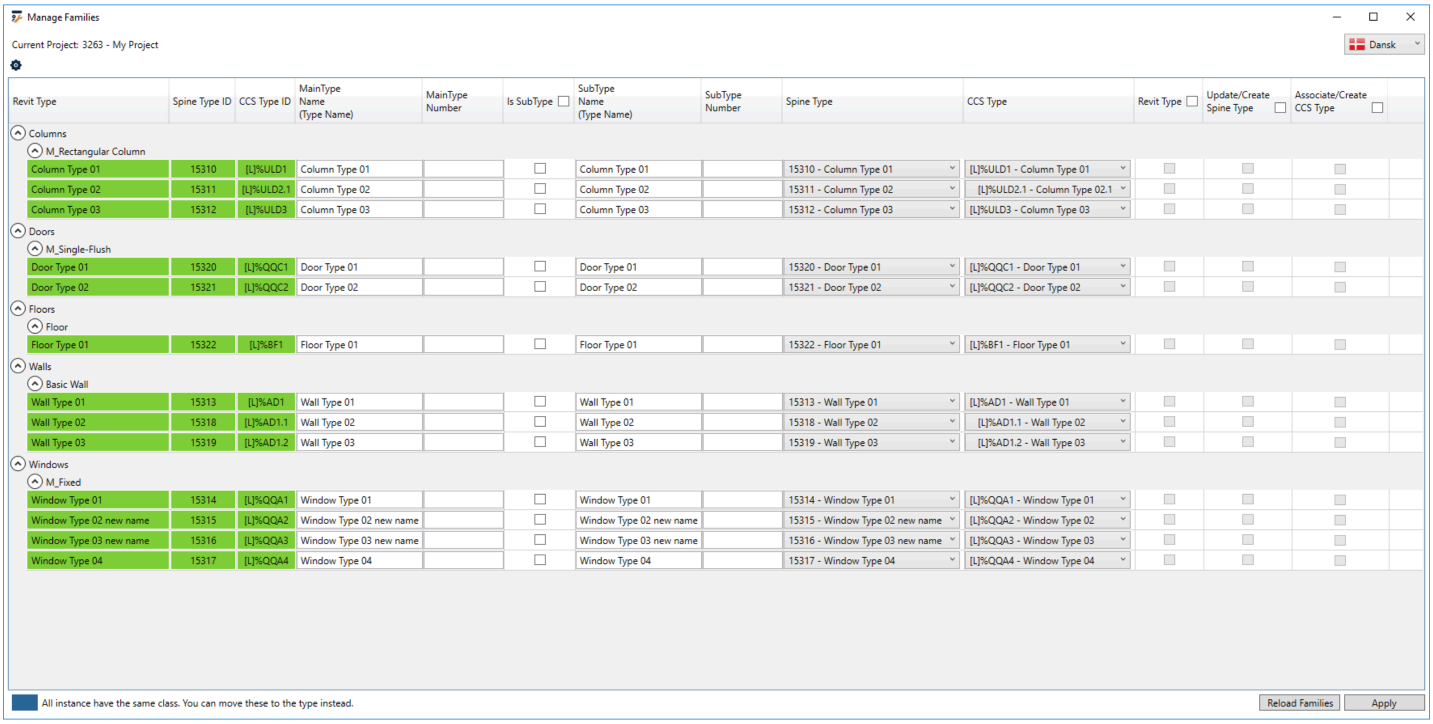
All instance have the same class. You can move these to the type instead.

1. **Column Type 01**
   Has a spine Type ID and a CCS Type ID. The green color indicates that the Revit Type is associated with the CCS Type. <u>Action/Result:</u> No action
2. **Column Type 02**
   Has a spine Type ID and a CCS Type ID. The CCS Type ID is yellow and indicates that a non-matching CCS Type is selected. <u>Action/Result:</u> Associate the selected CCS Type with the spine Type.
3. **Column Type 03**
   Has no spine Type ID or CCS Type ID. The Revit Type name matches a spine Type name, and the spine Type and the associated CCS Type is suggested. <u>Action/Result:</u> Associate the spine Type with the Revit Type
4. **Door Type 01**
   Has a Class, but no spine Type ID or CCS Type ID. The CCS Type ID is yellow and indicates that a non-matching CCS Type is selected. <u>Action/Result:</u> Create spine Type and associate it with the Revit Type. Associate CCS Type with the Spine Type.
5. **Door Type 02**
   Has a Class, but no spine Type ID or CCS Type ID. '- New -' is selected in spine Type and CCS Type. <u>Action/Result:</u> Create spine Type and associate it with the Revit Type. Create CCS Type and associate it with the spine Type.
6. **Floor Type 01**
   Has no Class, spine Type ID or CCS Type ID. An existing CCS Type is selected and the yellow color indicates a mismatch between CCS Type ID and CCS Type. <u>Action/Result:</u> Create spine Type and associate it with the Revit Type. Associate the CCS Type with the spine Type.
7. **Wall Type 01**
   Has a spine Type ID and a CCS Type ID. The green color indicates that the Revit Type is associated with the CCS Type. <u>Action/Result:</u> No action
8. **Wall Type 02**
   Has no spine Type ID or CCS Type ID. The CCS Type ID is yellow and indicate that a non-

matching CCS Type is selected. Action/Result: Select SubType, create a spine Type and associate it with the Revit Type. Create CCS SubType and associate it with the spine Type.

9. **Wall Type 03**
   Has no spine Type ID or CCS Type ID. The CCS Type ID is yellow and indicate that a non-matching CCS Type is selected. The row is highlighted in blue, because the class is added as an instance parameter, and the color indicate that all instances within the Revit Type has the same CCS Class. If some instances of a Revit Type have different classes, the Revit Type will be displayed like it is missing the class. Action/Result: Select SubType, create a spine Type and associate it with the Revit Type. Create CCS SubType and associate it with the spine Type.
10. **Window Type 01 new name**
    Has a spine and a CCS Type ID. The Revit Type name has been changed in the current model, and the yellow color indicate a mismatch between the Revit Type and the spine Type name. Action/Result: Update Revit Type name according to the spine Type name.
11. **Window Type 02 new name**
    Has a spine and a CCS Type ID. The Revit Type name has been changed in the current model, and the yellow color indicate a mismatch between the Revit Type and the spine Type name. Action/Result: Update spine Type name according to Revit Type name.
12. **Window Type 03**
    Has a spine and a CCS Type ID. The spine Type name has been changed in another model, and the yellow color indicate a mismatch between the Revit Type name and the spine Type name. Action/Result: Update Revit Type name according to the spine Type name.
13. **Window Type 04**
    Has a spine and a CCS Type ID. The spine Type name has been changed in another model, and the yellow color indicate a mismatch between the Revit Type name and the spine Type name. Action/Result: Update spine Type name according to Revit Type name.

Results



Current Project: 3263 - My Project

Revit Type	Spine Type ID	CCS Type ID	MainType Name (Type Name)	MainType Number	Is SubType ☐	SubType Name (Type Name)	SubType Number	Spine Type	CCS Type	Revit Type ☐	Update/Create Spine Type ☐	Associate/Create CCS Type ☐
Columns												
M_Rectangular Column												
Column Type 01	15310	[L]%ULD1	Column Type 01		☐	Column Type 01		15310 - Column Type 01	[L]%ULD1 - Column Type 01	☐	☐	☐
Column Type 02	15311	[L]%ULD2.1	Column Type 02		☐	Column Type 02		15311 - Column Type 02	[L]%ULD2.1 - Column Type 02.1	☐	☐	☐
Column Type 03	15312	[L]%ULD3	Column Type 03		☐	Column Type 03		15312 - Column Type 03	[L]%ULD3 - Column Type 03	☐	☐	☐
Doors												
M_Single-Flush												
Door Type 01	15320	[L]%QQC1	Door Type 01		☐	Door Type 01		15320 - Door Type 01	[L]%QQC1 - Door Type 01	☐	☐	☐
Door Type 02	15321	[L]%QQC2	Door Type 02		☐	Door Type 02		15321 - Door Type 02	[L]%QQC2 - Door Type 02	☐	☐	☐
Floors												
Floor												
Floor Type 01	15322	[L]%BF1	Floor Type 01		☐	Floor Type 01		15322 - Floor Type 01	[L]%BF1 - Floor Type 01	☐	☐	☐
Walls												
Basic Wall												
Wall Type 01	15313	[L]%AD1	Wall Type 01		☐	Wall Type 01		15313 - Wall Type 01	[L]%AD1 - Wall Type 01	☐	☐	☐
Wall Type 02	15318	[L]%AD1.1	Wall Type 02		☐	Wall Type 02		15318 - Wall Type 02	[L]%AD1.1 - Wall Type 02	☐	☐	☐
Wall Type 03	15319	[L]%AD1.2	Wall Type 03		☐	Wall Type 03		15319 - Wall Type 03	[L]%AD1.2 - Wall Type 03	☐	☐	☐
Windows												
M_Fixed												
Window Type 01	15314	[L]%QQA1	Window Type 01		☐	Window Type 01		15314 - Window Type 01	[L]%QQA1 - Window Type 01	☐	☐	☐
Window Type 02 new name	15315	[L]%QQA2	Window Type 02 new name		☐	Window Type 02 new name		15315 - Window Type 02 new name	[L]%QQA2 - Window Type 02	☐	☐	☐
Window Type 03 new name	15316	[L]%QQA3	Window Type 03 new name		☐	Window Type 03 new name		15316 - Window Type 03 new name	[L]%QQA3 - Window Type 03	☐	☐	☐
Window Type 04	15317	[L]%QQA4	Window Type 04		☐	Window Type 04		15317 - Window Type 04	[L]%QQA4 - Window Type 04	☐	☐	☐

All instance have the same class. You can move these to the type instead.

3. Manage Families Tutorial (Video English)

4. Relation between Revit, Spine and CCS Types (Video English)

BuildingSmart IFC

Adding CCS to IFC export

1. Download IFC exporter

Start by downloading the alternative IFC plugin from the Autodesk App Store, by using the links below:
If you use Revit 2019, you do not have to download an exporter.

- Revit 2016
- Revit 2017
- Revit 2018
- Revit 2019

! The Autodesk IFC plugin is needed for this functionality, please ensure you are using the newest version.

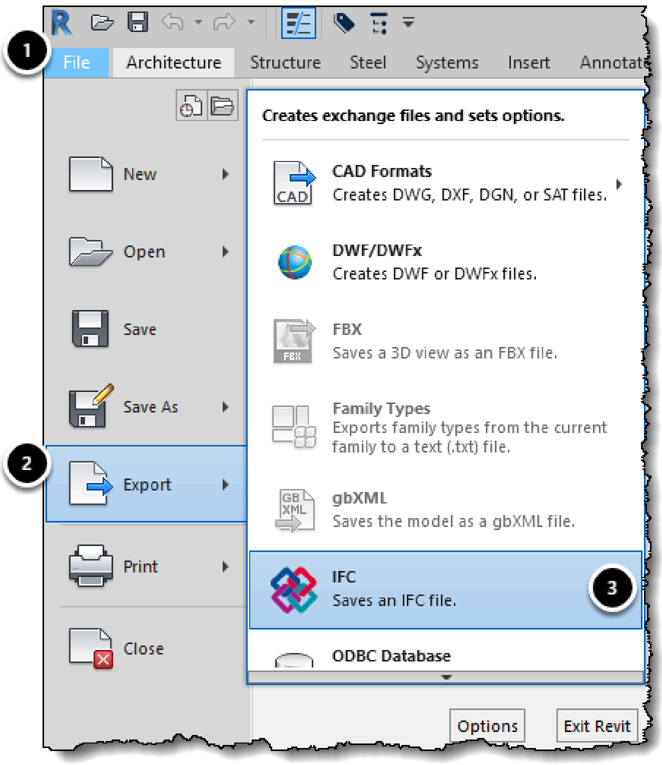
2. Download 'User defined property set' file

Right click on the link below, and select "save link as"
http://download.projectspine.com/revit/CCS_in_Revit_to_IFC.txt

3. Add custom Property Set file in Revit

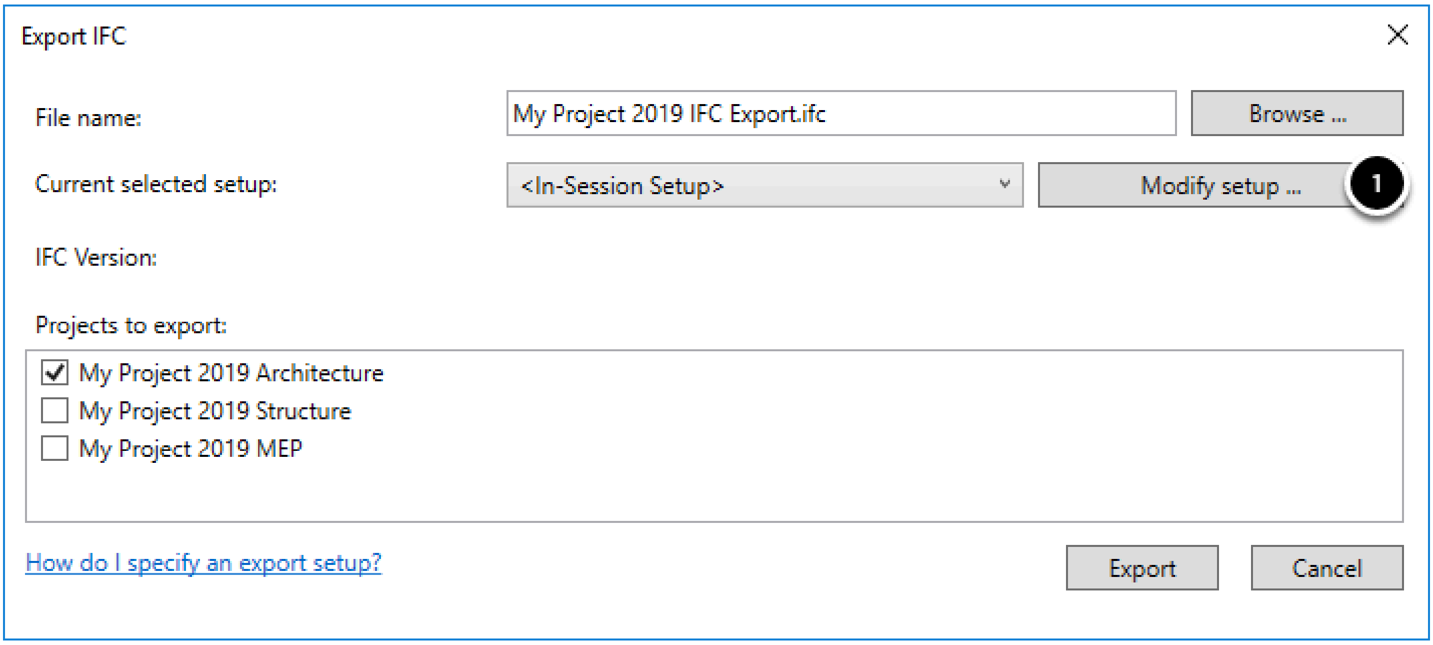
Configure the export.

1. Go to File
2. Click Export
3. Click IFC


1
File
Architecture
Structure
Steel
Systems
Insert
Annotat
Creates exchange files and sets options.
New
Open
Save
Save As
2
Export
Print
Close
CAD Formats
Creates DWG, DXF, DGN, or SAT files.
DWF/DWFx
Creates DWF or DWFx files.
FBX
Saves a 3D view as an FBX file.
Family Types
Exports family types from the current family to a text (.txt) file.
gbXML
Saves the model as a gbXML file.
IFC
Saves an IFC file.
3
ODBC Database
Options
Exit Revit

4. Modify the setup

1. Click Modify setup



File name: My Project 2019 IFC Export.ifc

Current selected setup: <In-Session Setup>

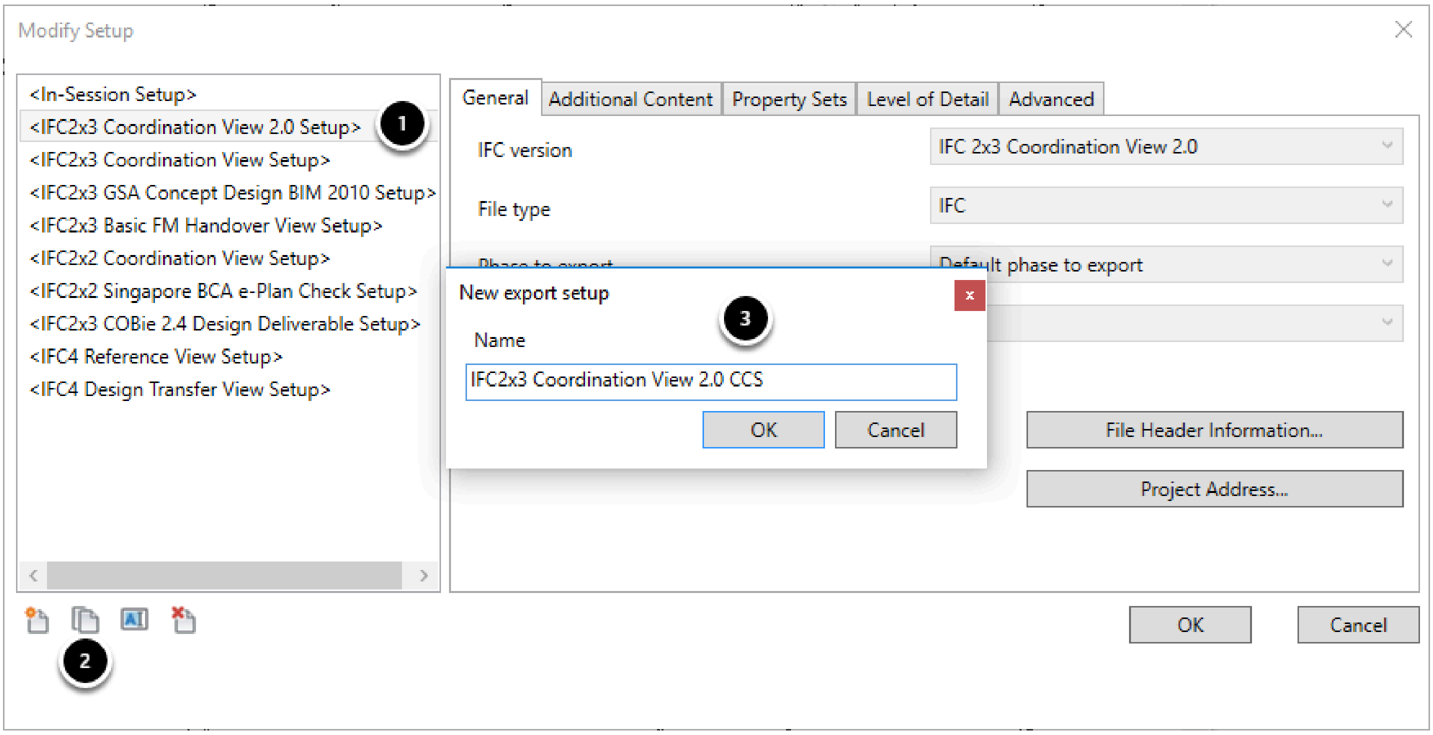
IFC Version:

Projects to export:

☑ My Project 2019 Architecture
☐ My Project 2019 Structure
☐ My Project 2019 MEP

4.1. Copy an existing Export setup

1. Select "IFC 2x3 Coordination View 2.0 Setup" or another appropriate setup
2. Dublicate the setup
3. Rename your setup and save it


Modify Setup
<In-Session Setup>
<IFC2x3 Coordination View 2.0 Setup>
<IFC2x3 Coordination View Setup>
<IFC2x3 GSA Concept Design BIM 2010 Setup>
<IFC2x3 Basic FM Handover View Setup>
<IFC2x2 Coordination View Setup>
<IFC2x2 Singapore BCA e-Plan Check Setup>
<IFC2x3 COBie 2.4 Design Deliverable Setup>
<IFC4 Reference View Setup>
<IFC4 Design Transfer View Setup>
General
Additional Content
Property Sets
Level of Detail
Advanced
File Header Information...
Project Address...
OK
Cancel
1
2
3

IFC version: IFC 2x3 Coordination View 2.0

File type: IFC

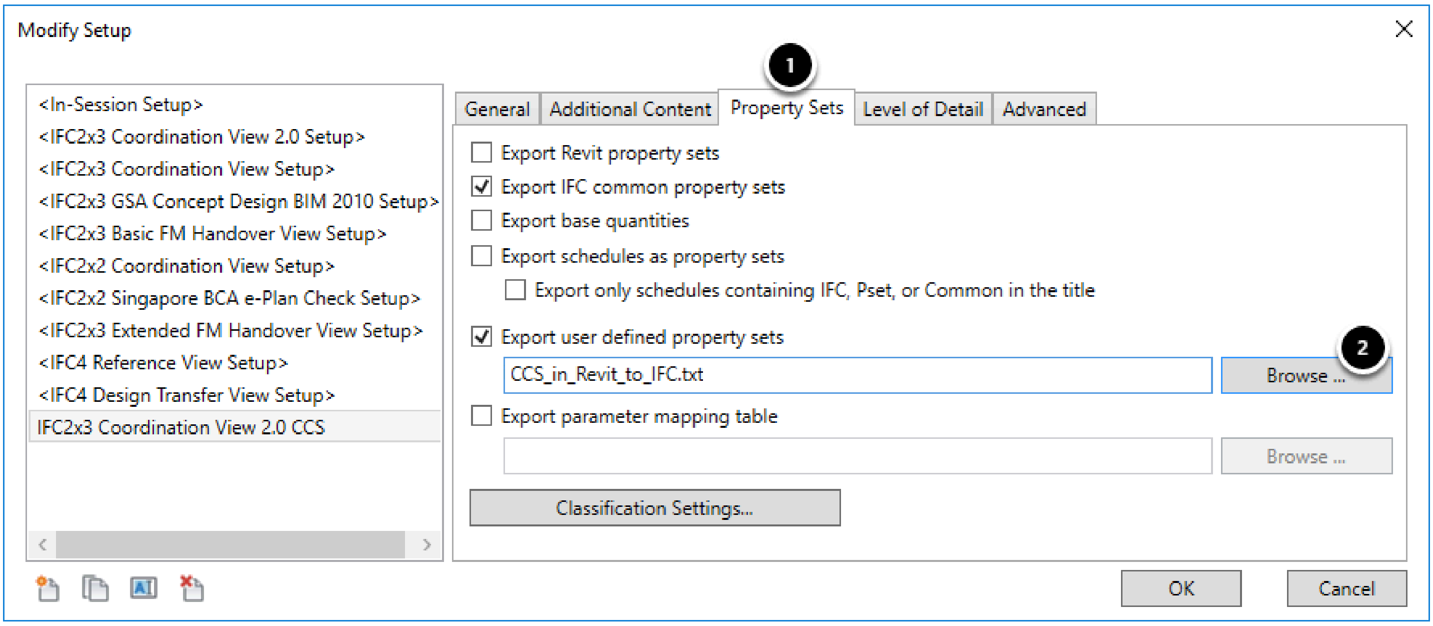
Phase to export: Default phase to export

New export setup

Name: IFC2x3 Coordination View 2.0 CCS

4.2. Add 'User defined property set' file

1. Go to 'Property Sets'.
2. Click browse and locate the file you downloaded in step 2. (If not ticked, tick 'Export user defined property sets').

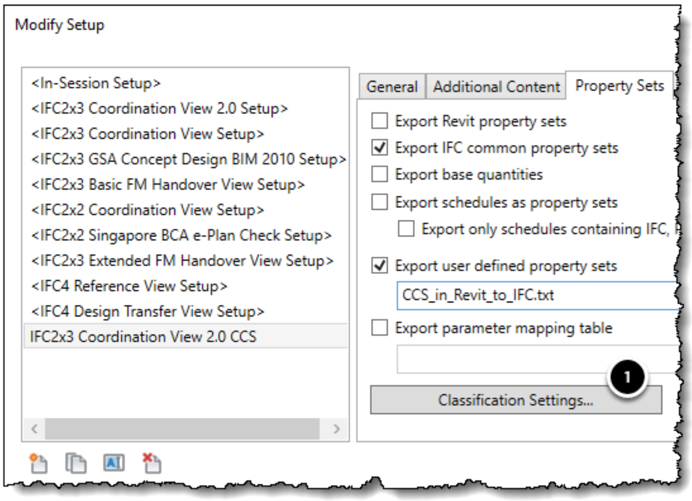

Modify Setup
<In-Session Setup>
<IFC2x3 Coordination View 2.0 Setup>
<IFC2x3 Coordination View Setup>
<IFC2x3 GSA Concept Design BIM 2010 Setup>
<IFC2x3 Basic FM Handover View Setup>
<IFC2x2 Coordination View Setup>
<IFC2x2 Singapore BCA e-Plan Check Setup>
<IFC2x3 Extended FM Handover View Setup>
<IFC4 Reference View Setup>
<IFC4 Design Transfer View Setup>
IFC2x3 Coordination View 2.0 CCS
General
Additional Content
Property Sets
Level of Detail
Advanced
1
2
Browse ...
Browse ...
Classification Settings...
OK
Cancel

☐ Export Revit property sets
☑ Export IFC common property sets
☐ Export base quantities
☐ Export schedules as property sets
  ☐ Export only schedules containing IFC, Pset, or Common in the title
☑ Export user defined property sets
  CCS_in_Revit_to_IFC.txt
☐ Export parameter mapping table

4.3. Add Classification information

1. Go to 'Classification Settings'
2. Fill in the informations from the table

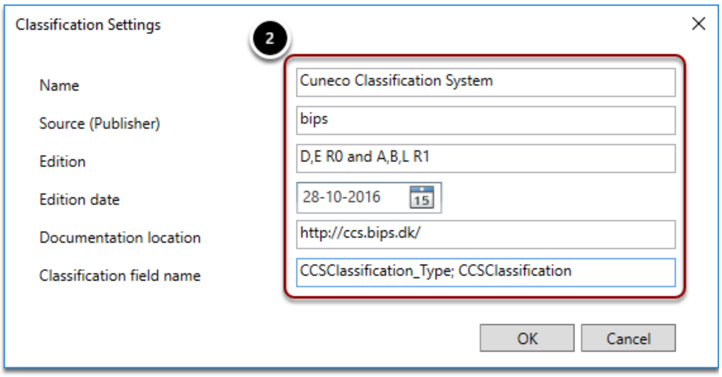
Be sure to use correct Editions (CCS Table Versions)
The Editions for the different CCS Tables are listet by Topnode followed by the Edition.



Modify Setup

- <In-Session Setup>
- <IFC2x3 Coordination View 2.0 Setup>
- <IFC2x3 Coordination View Setup>
- <IFC2x3 GSA Concept Design BIM 2010 Setup>
- <IFC2x3 Basic FM Handover View Setup>
- <IFC2x2 Coordination View Setup>
- <IFC2x2 Singapore BCA e-Plan Check Setup>
- <IFC2x3 Extended FM Handover View Setup>
- <IFC4 Reference View Setup>
- <IFC4 Design Transfer View Setup>
- IFC2x3 Coordination View 2.0 CCS

☐ Export Revit property sets
☑ Export IFC common property sets
☐ Export base quantities
☐ Export schedules as property sets
  ☐ Export only schedules containing IFC,
☑ Export user defined property sets
CCS_in_Revit_to_IFC.txt
☐ Export parameter mapping table



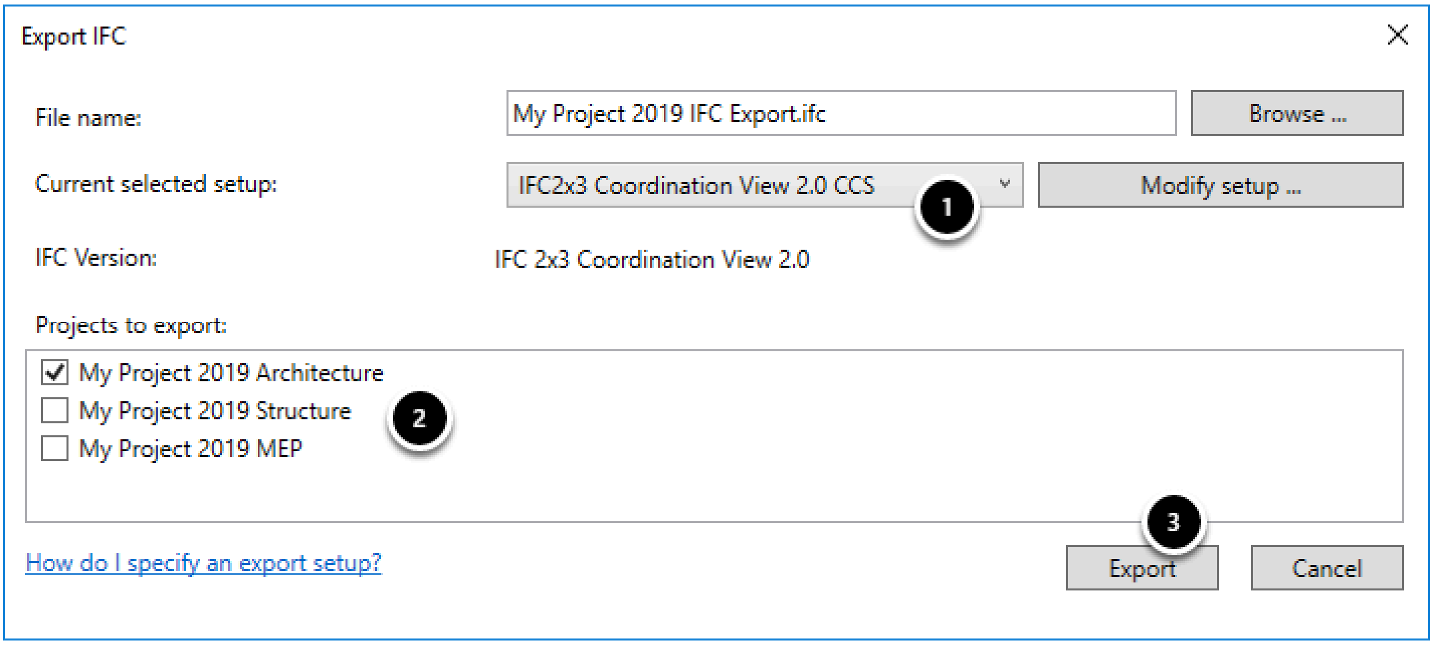
Classification Settings

Name: Cuneco Classification System
Source (Publisher): bips
Edition: D,E R0 and A,B,L R1
Edition date: 28-10-2016
Documentation location: http://ccs.bips.dk/
Classification field name: CCSClassification_Type; CCSClassification

Classification Settings	
Name	Cuneco Classification System
Source (Publisher)	bips
Edition	D,E R0 and A,B,L R1
Edition Date	28-10-2016
Documentation location	http://ccs.bips.dk/
Classification field name	CCSClassification_Type; CCSClassification

5. Export the model to IFC

1. Make sure the "IFC 2x3 Coordination View 2.0 CCS" setup is selected
2. Select the model(s) for Export
3. Click 'Export'



Export IFC

File name: My Project 2019 IFC Export.ifc

Current selected setup: IFC2x3 Coordination View 2.0 CCS

IFC Version: IFC 2x3 Coordination View 2.0

Projects to export:

- ☑ My Project 2019 Architecture
- ☐ My Project 2019 Structure
- ☐ My Project 2019 MEP

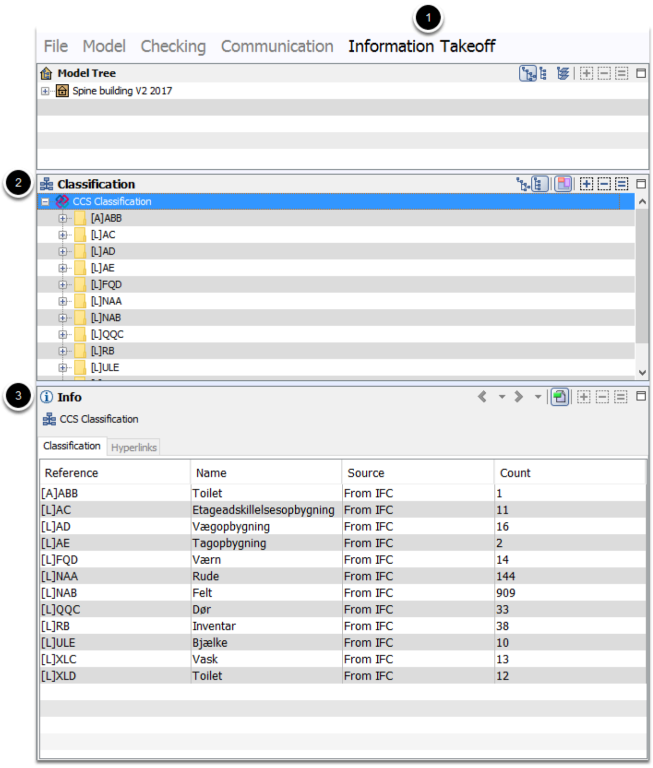
6. View the result in an IFC viewer

To view the information in the IFC file, open the file in a IFC Viewer.

> In this example, the free version of Solibri Model Viewer v9.6 is used.

6.1. Classification

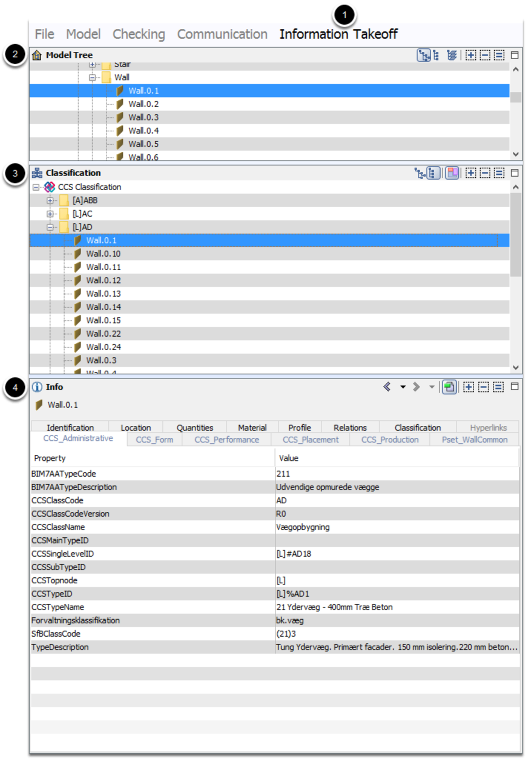
1. Select 'Information Takeoff'
2. Select and expand "CCS Classification" in the 'Classification View'
3. The 'Info View' shows a table of all the objects with CCS Classification in the model.



Reference	Name	Source	Count
[A]ABB	Toilet	From IFC	1
[L]AC	Etageadskillelsesopbygning	From IFC	11
[L]AD	Vægopbygning	From IFC	16
[L]AE	Tagopbygning	From IFC	2
[L]FQD	Værn	From IFC	14
[L]NAA	Rude	From IFC	144
[L]NAB	Felt	From IFC	909
[L]QQC	Dør	From IFC	33
[L]RB	Inventar	From IFC	38
[L]ULE	Bjælke	From IFC	10
[L]XLC	Vask	From IFC	13
[L]XLD	Toilet	From IFC	12

6.2. Properties

1. Select 'Information Takeoff'
2. Select an Object in the 'Model Tree View', the '3D View' or
3. Select an Object in the 'Classification View'
4. The 'Info View' shows a table of all the Properties grouped by the user defined property sets. The "CCS_Administrative" property set contains all the CCS related information regarding Classification and Identification.



Property	Value
BIM7AATypeCode	211
BIM7AATypeDescription	Udvendige opmurede vægge
CCSClassCode	AD
CCSClassCodeVersion	R0
CCSClassName	Vægopbygning
CCSMainTypeID	
CCSSingleLevelID	[L]#AD18
CCSSubTypeID	
CCSTopnode	[L]
CCSTypeID	[L]%AD1
CCSTypeName	21 Ydervæg - 400mm Træ Beton
Forvaltningsklassifikation	bk.væg
SfBClassCode	(21)3
TypeDescription	Tung Ydervæg. Primært facader. 150 mm isolering.220 mm beton...