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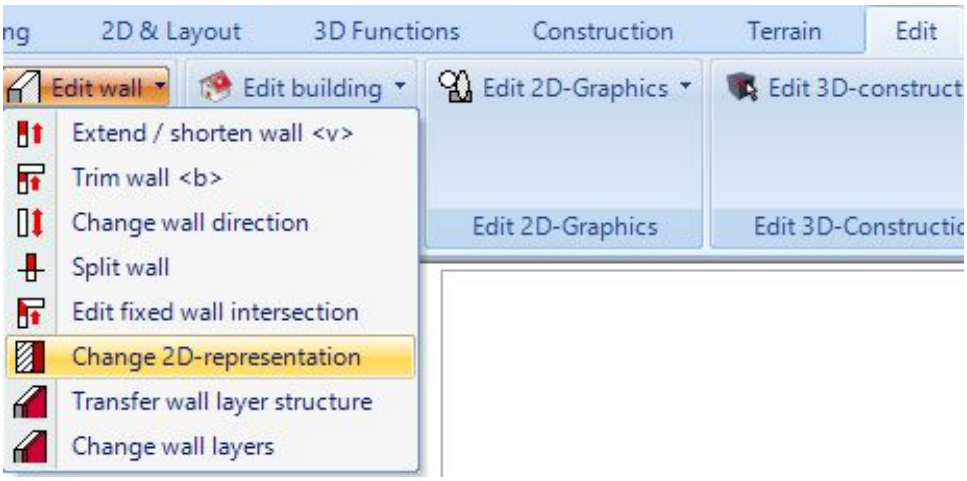
1 WHAT'S NEW IN VERSION 12

1.1 WIZARDS FOR EDITING AND MODIFYING WALLS

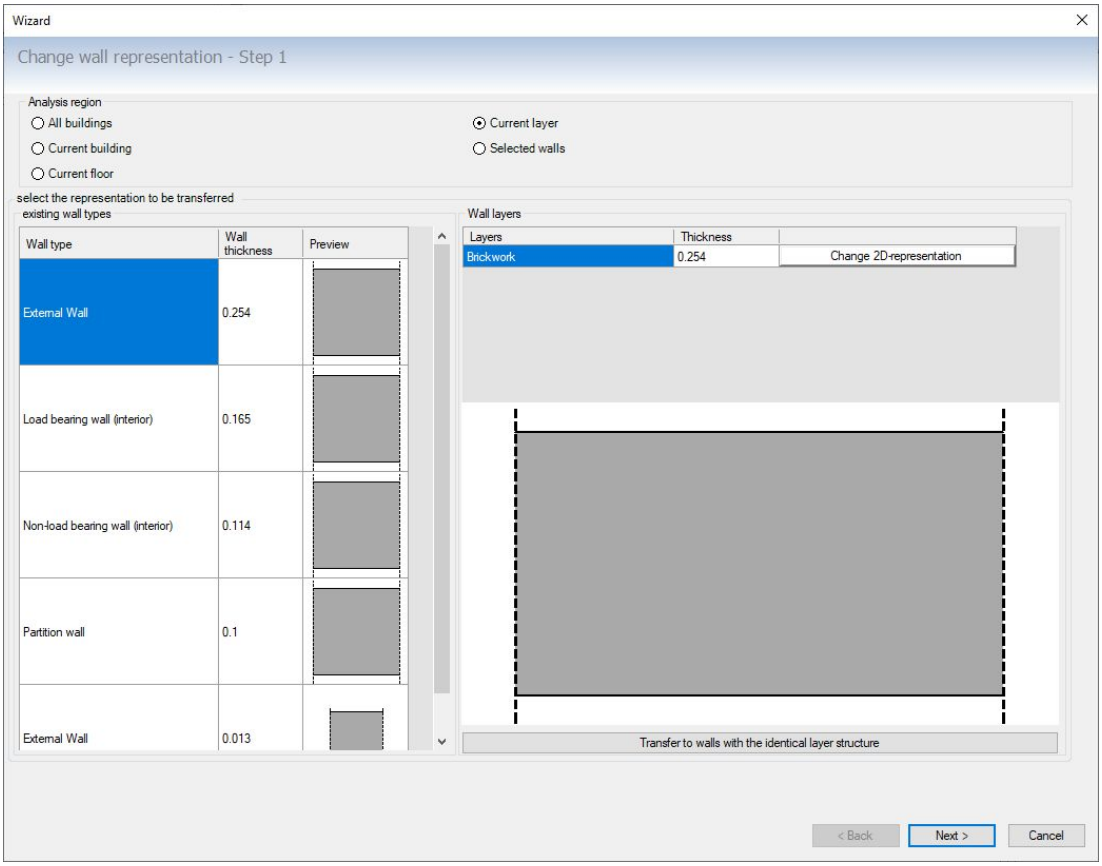
In our editing tools for walls we added wizards for the following tasks:

- Changing 2D representation of walls. This function only changes the 2D fill properties of existing walls, not the layer structure itself
- Transferring wall layers: transfers the layer structure of one wall to others
- Changing wall layers: changes the layer structure of multiple walls

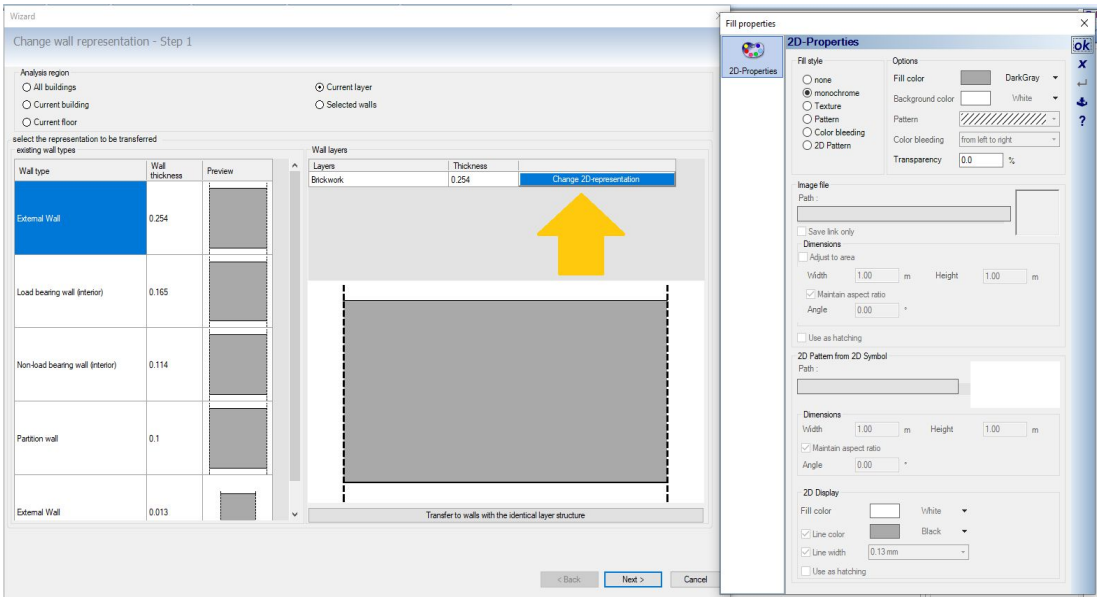


1.1.1 Changing 2D representation of walls

When you start the function, the following dialog appears in step 1. With the analysis region you determine the evaluation area. This refers both to the list of walls on the left side of the dialog and to the region to which the changed wall properties are transferred.
In our example, the "Current layer" option is active. All walls located on the active layer are listed.
The software compares all walls based on their properties in terms of thickness, layer structure and the currently set 2D properties and lists the walls with different properties separately. Two exterior walls with the same layer construction and colour, but one 25 cm thick and one 24 cm, are shown as two different walls.

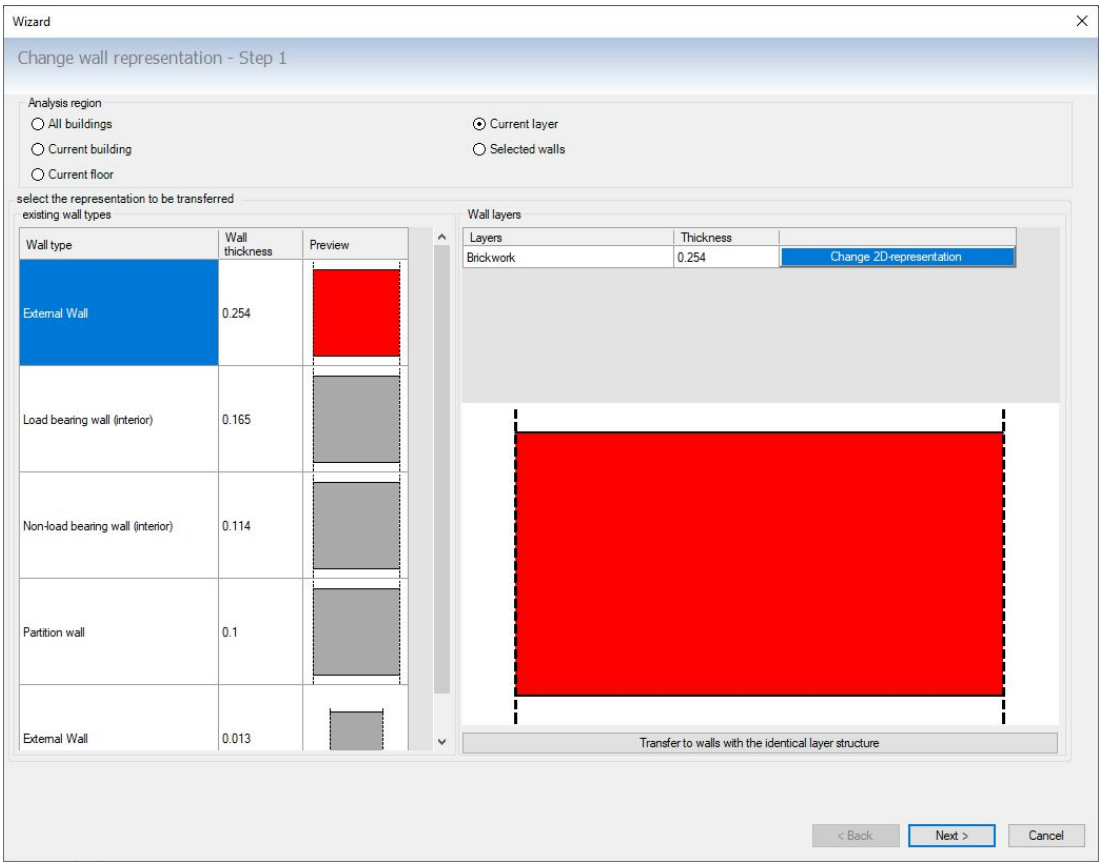


On the right side you find a larger preview of the selected wall type and the wall layers listed above. Next of each layer is a "Change 2D representation" button. This button opens our standard dialog for editing 2D fill properties.

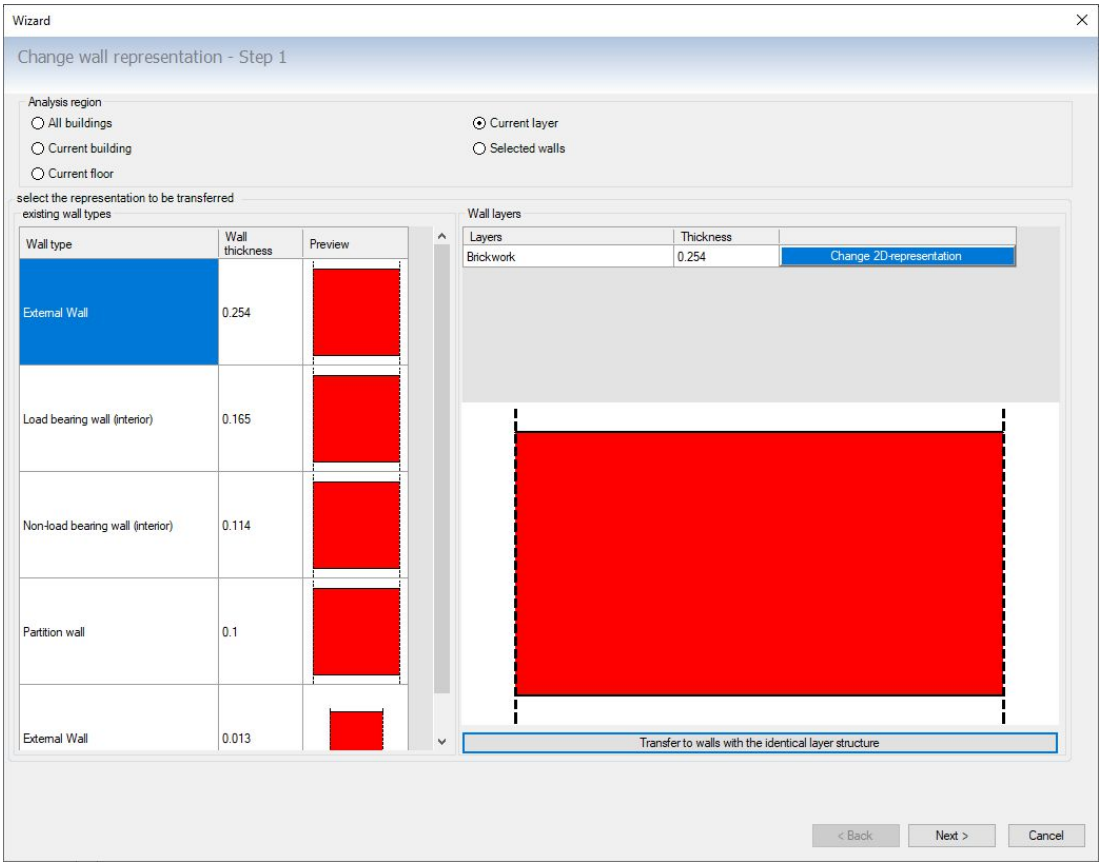


Note: depending on the functionality of your version, fewer options may be offered here.

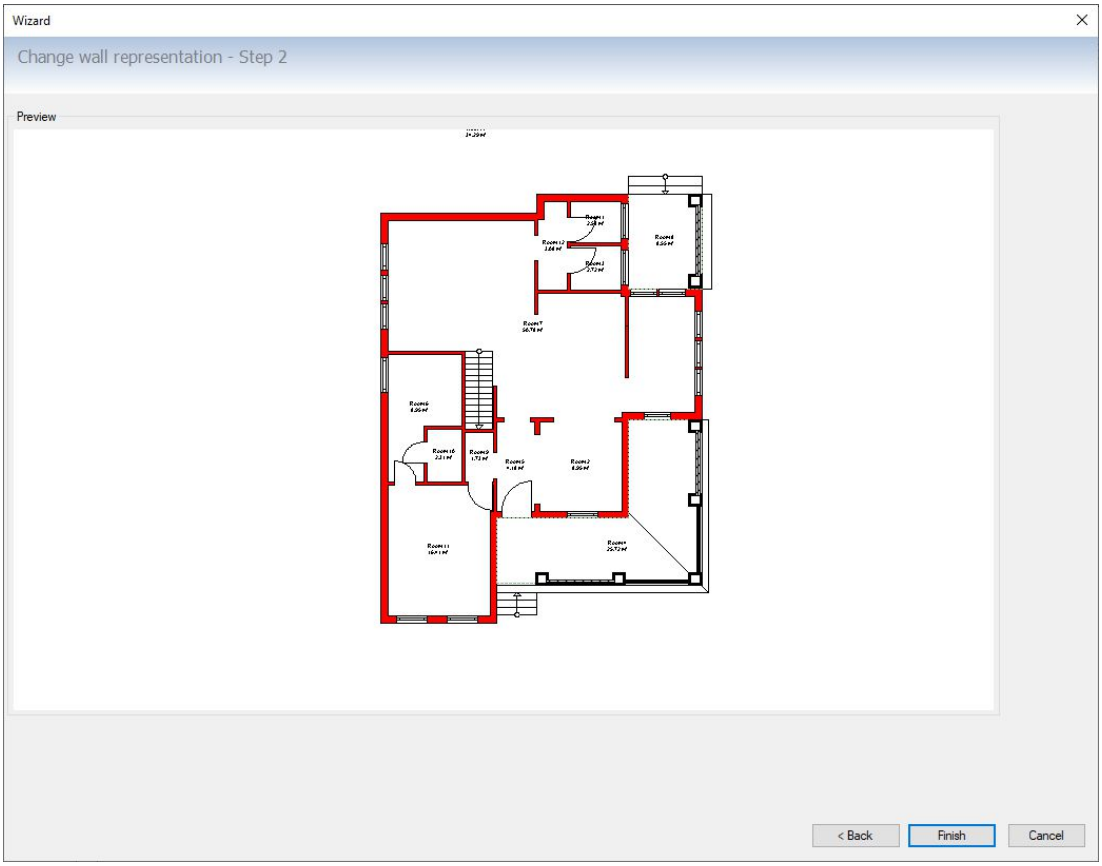
Change the 2D representation as desired and close the Fill Properties dialog. The appearance of the wall is immediately updated in our preview and the wall list, correctly only for the previously selected wall type.



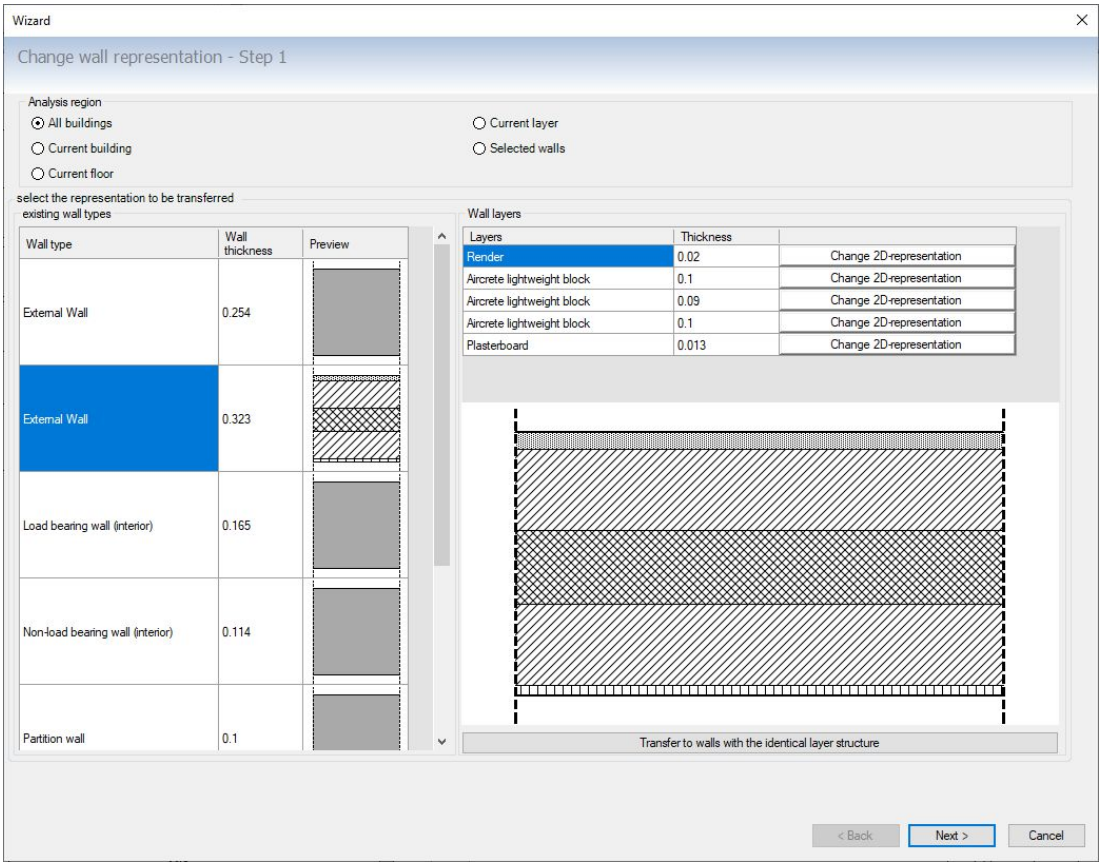
At the bottom you find a button "Transfer to walls with identical layer structure". With this function you could transfer the representation to all other walls, but only if they have a single wall layer and no matter what thickness and 2D representation they are currently using. So you don't need to click through all walls individually if you want all walls to look the same.
The list of walls would then look like this in our example. All walls with only one layer would be red.



In a second step, you get a preview before the changes are transferred to the project. As in 2D views, you can also zoom and scroll within the preview if a more detailed view on the floor plan is required.



For walls with multiple layers you get a list of the layers and the option to change the 2D representation for each.



Note: changes made in the wizard cannot be undone once they have been transferred to the project, at least not via Undo. If you do not like the new wall representation, you would have to go through the wizard again if necessary.

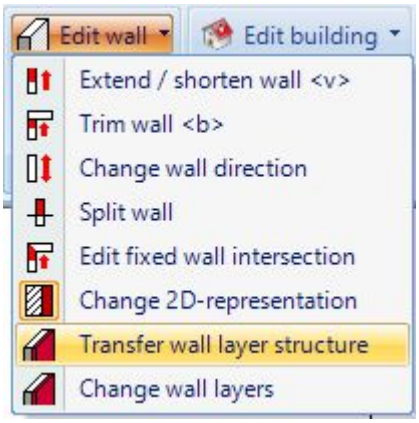
1.1.2 Transferring the layer structure of a wall to other walls

There are two variants of this function, which differ only in the process. With the variant via our Edit menu, the process uses a wizard with two dialog pages, when calling up the function from the context menu of a selected wall in just one dialog. The reason is that the source wall is already known when it is called up via the context menu and the source wall must first be determined in the dialog via the menu.

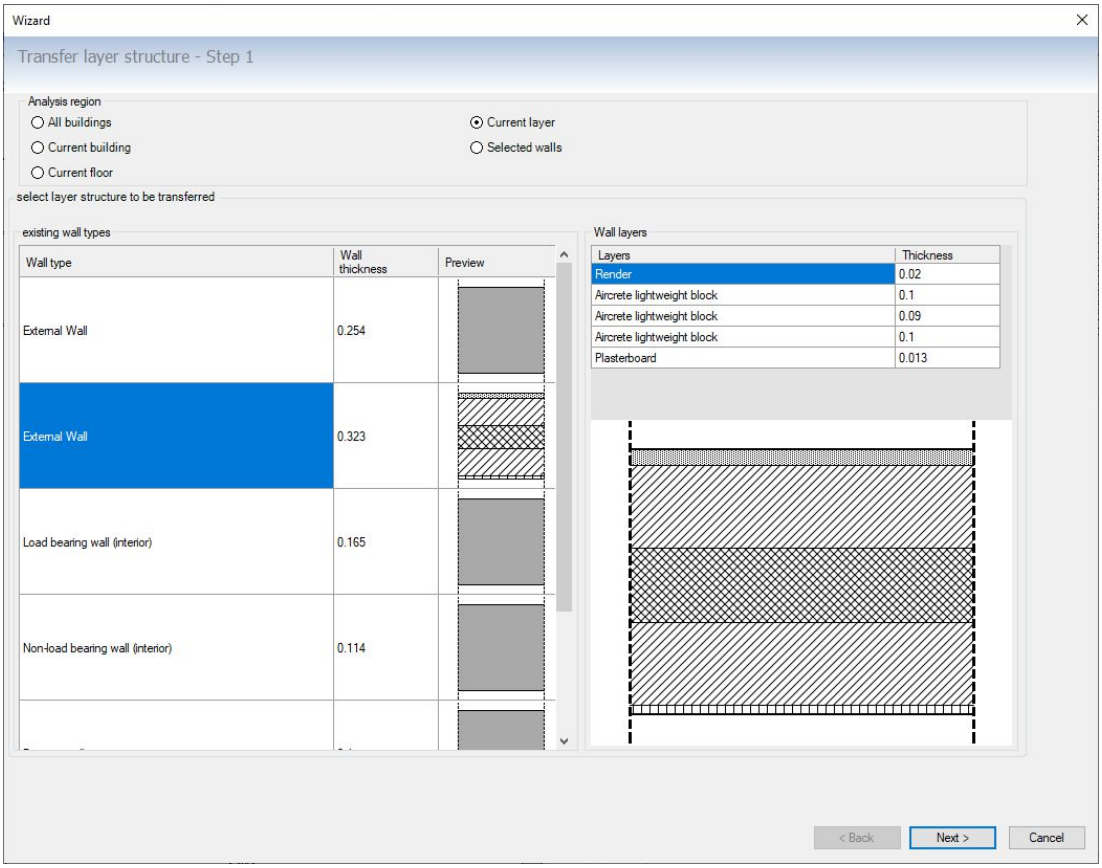
Note: the layer structure also determines the thickness of the wall and changes of the thickness affects, among other things, the positions of the walls in relation to others and the automatic wall intersection and room formation. It can therefore happen that in the event of deviations, existing rooms are not recreated and the situation of the walls may have to be reworked. See also the Floor Plan Analysis feature. Either way, it makes sense to save the project before making such changes in order to be able to return to the initial situation if necessary. Once the wall layers have been transferred, it is not possible to undo the changes, e.g. via Undo.

1.1.2.1 Transferring the layer structure via the Edit menu

Start the function via "Edit walls" on the EDIT ribbon.

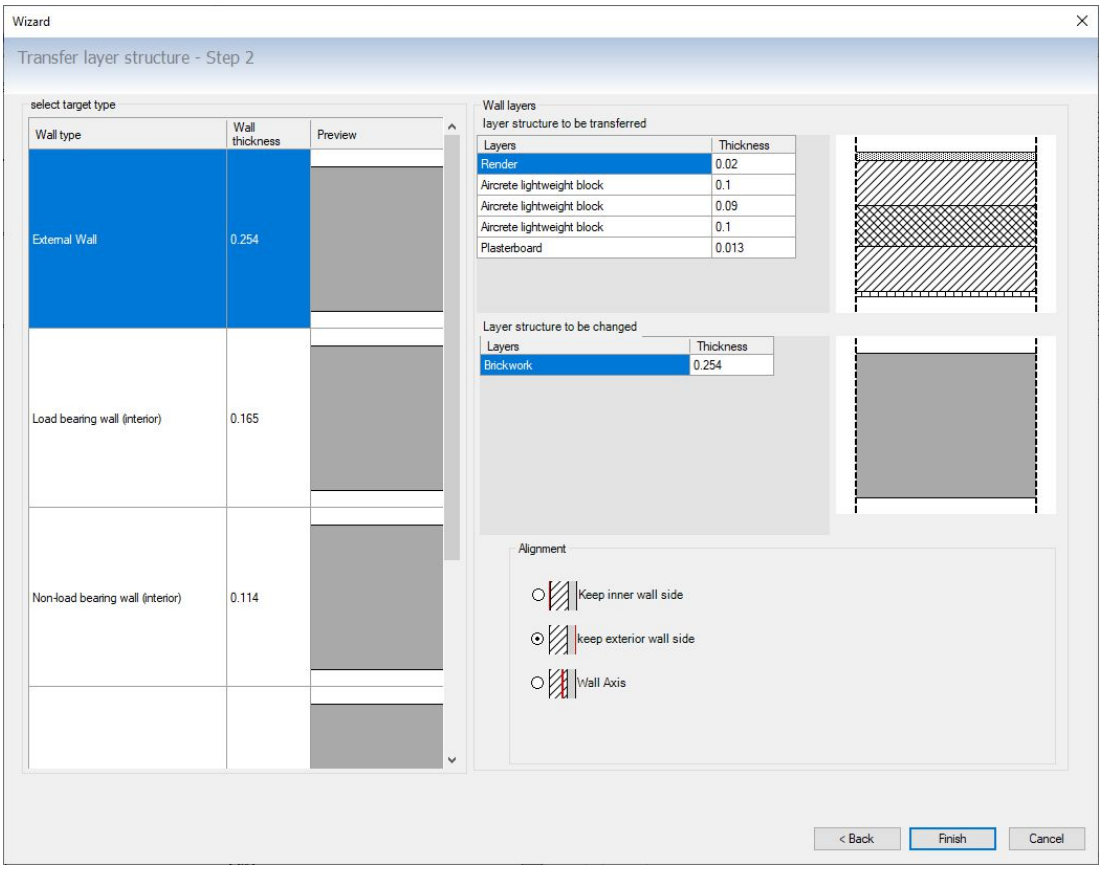


It follows step 1 in which you can define the analysis area if required, and select the starting wall from the list of existing wall types, the layer structure which will then be transferred.



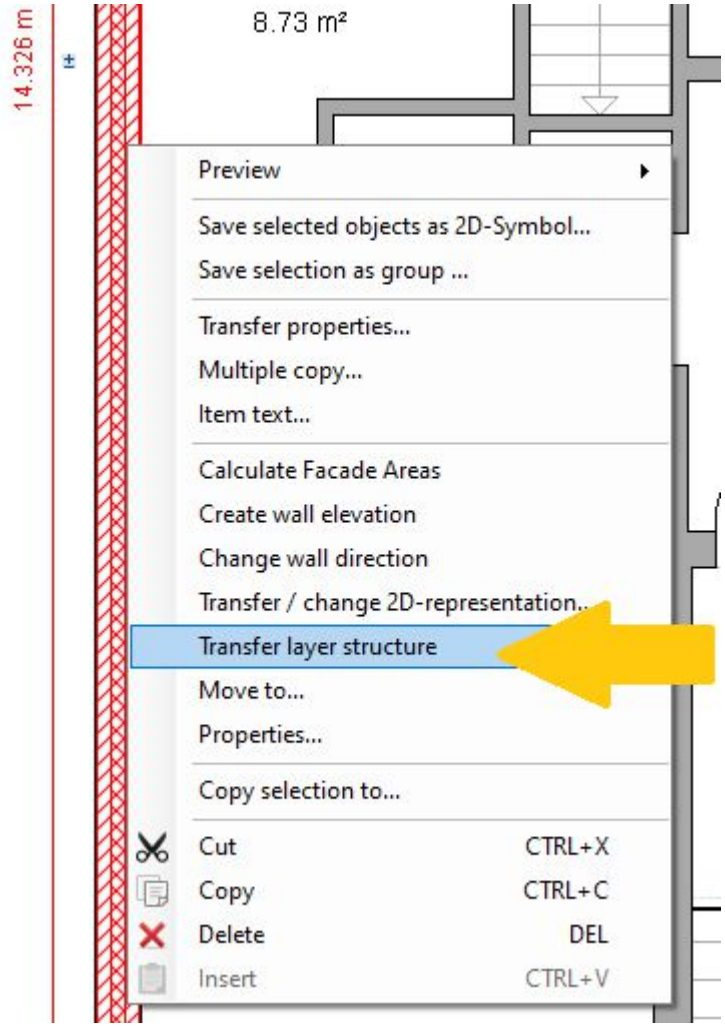
In step 2 you select the type of target wall, i.e. the walls to which the new layer structure is to be transferred. On the right you can see the list of layers and a preview.
In the Alignment area, you specify which side of the wall the changes should be applied to. If the thickness of the starting wall and the target wall are identical, on axis should be selected here.
If there is a deviation in the thickness, you can define for exterior walls whether the exterior or interior wall side should be retained.

The definition of outside or inside does not apply to interior walls. The software analyses the wall sides and determines whether a side belongs to a room or not. So no room would be the identifier for an exterior wall. Since interior walls usually only have wall sides that belong to rooms, this distinction does not apply. So the best option for alignment would be on axis, i.e. the inner wall would be thicker or thinner in either direction. The distances between the inner walls would then have to be adjusted using the standard wall editing tools

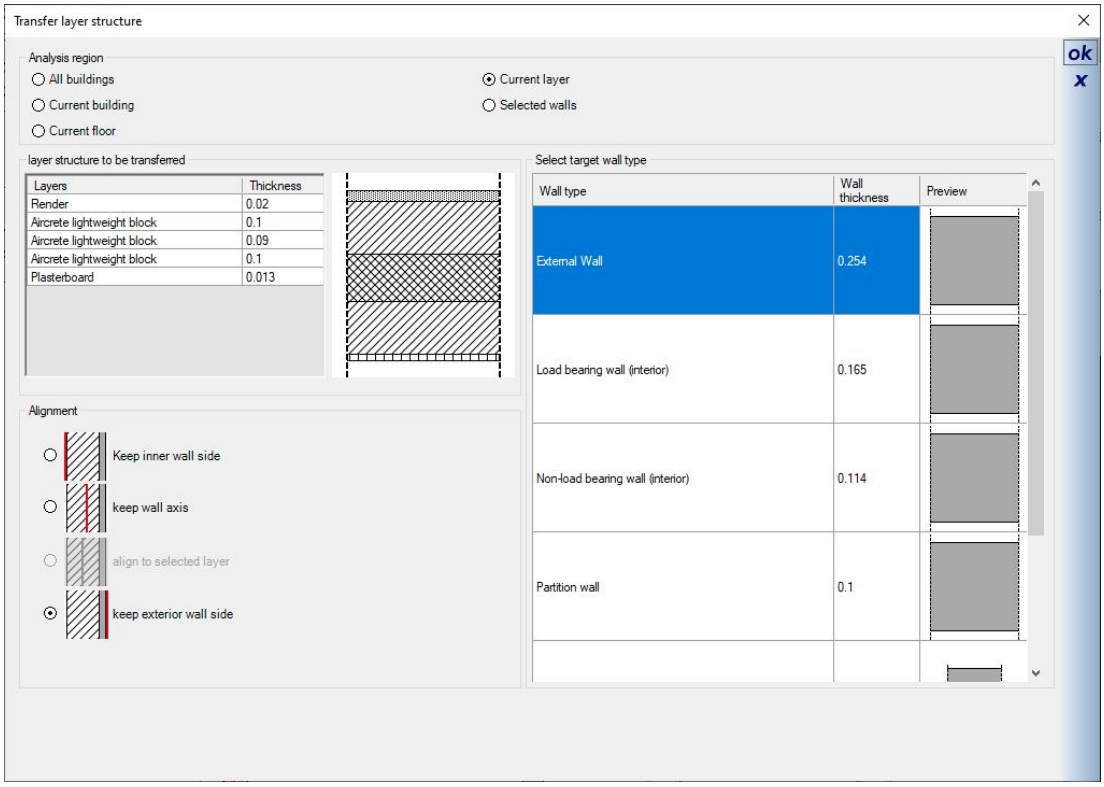


1.1.2.2 Transferring a layer structure via the context menu

If you have already selected the initial wall in your floor plan, you can start the function from your context menu.

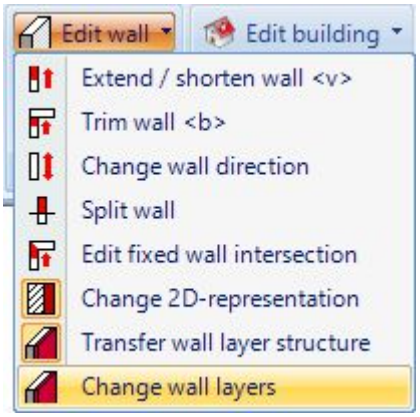


As already mentioned, there is no need to specify the starting wall and you will see the following dialog for selecting the target wall and orientation. Please note the information from the previous chapters.

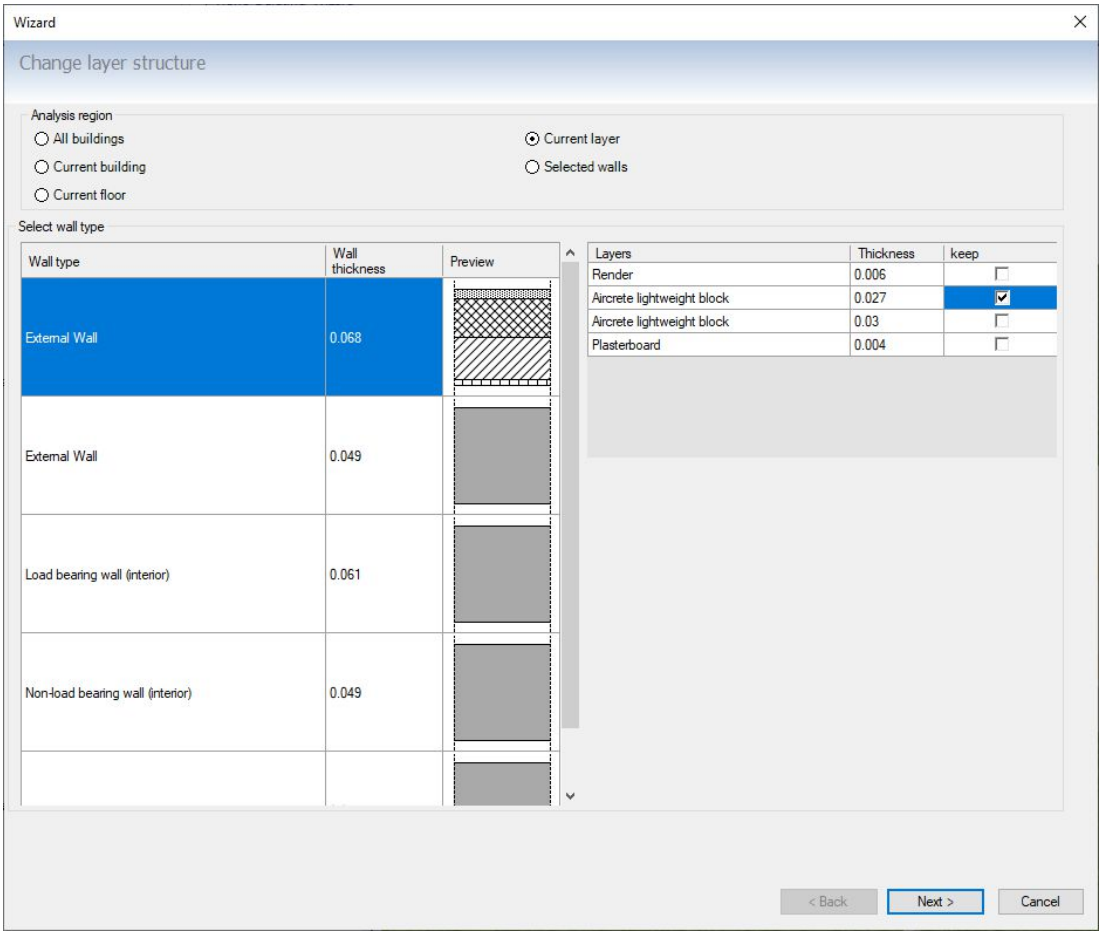


1.1.3 Changing the layer structure of walls, e.g. adding insulation

If you want to change the layer structure of multiple walls, the Change Wall Layers wizard, started from the Edit Walls menu on the EDIT ribbon, is an option with certain benefits.



Once started, you first get dialog for selecting the walls whose layer structure is to be changed.
On the right side you have the possibility to determine one of these layers as fixed in their position with the checkbox fix / keep.

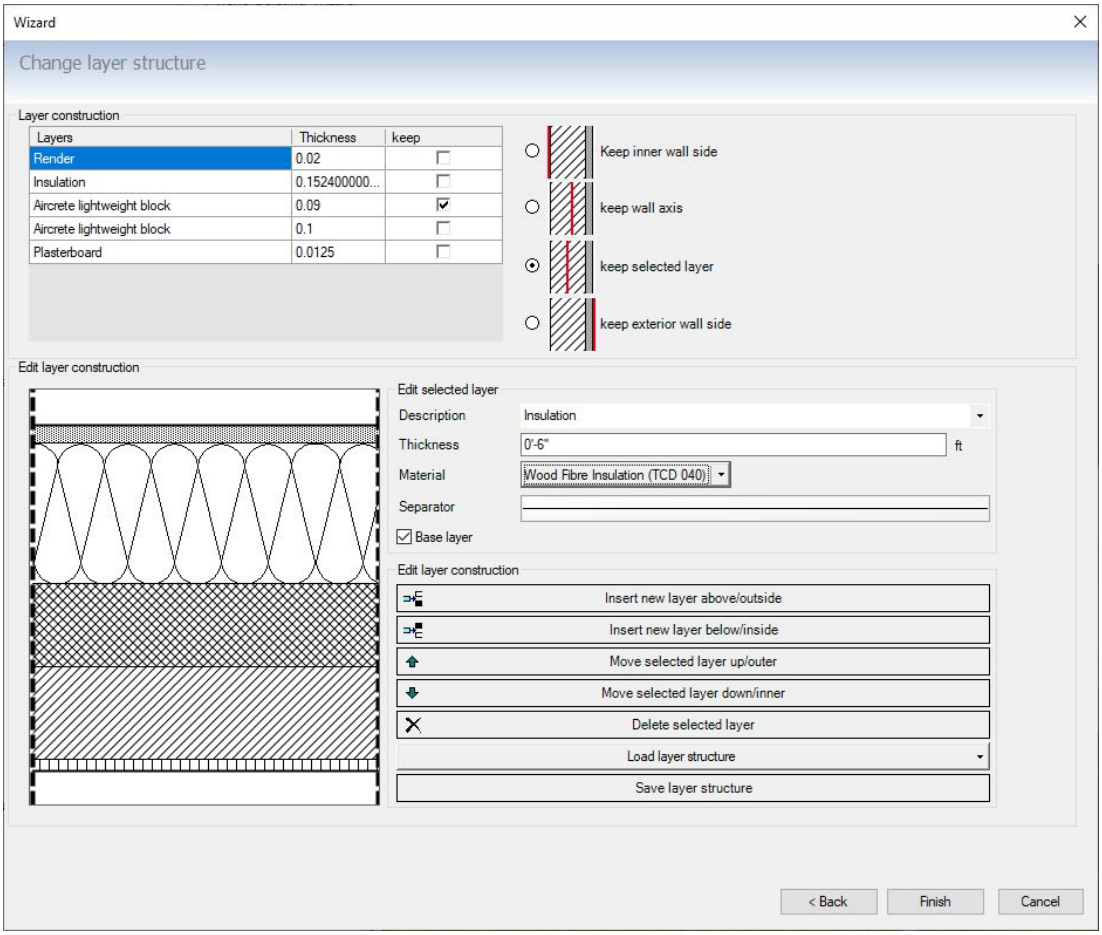


In the second step, as in our standard wall dialog, you can change the layer structure by adding layers, changing the display by clicking on the material button, etc. You also have the option of loading an existing layer structure. But that only makes sense in this example if it also contains the fixed wall layer with the same properties.

In addition to the other methods for transferring layer structures, the wizard offers a significant advantage.

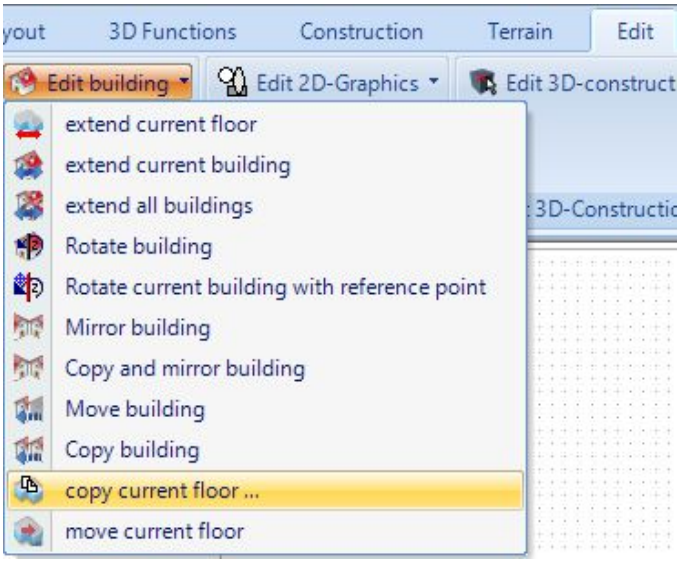
An example:

- As you can see in the dialogs, you may have recorded the current status of your building and its walls in your project.
- In a second step, e.g. in a copy for your renovation project, you want to apply one or more layers to the outer wall, in the example a layer with insulation 16 cm thick, the former insulating plaster is omitted and an additional plaster layer of 2 cm can also be applied outside
- What is and must remain unchanged is the original lightweight block of 2,7 cm. You don't want to rebuild or move walls in reality
- In our other methods, you could only make the changes related to the inside or outside or to the axis
- However, the lightweight layer should serve as a starting point and the other layers should be added to the outside and inside
- You can achieve this by fixing the masonry layer and using the Keep selected layer option



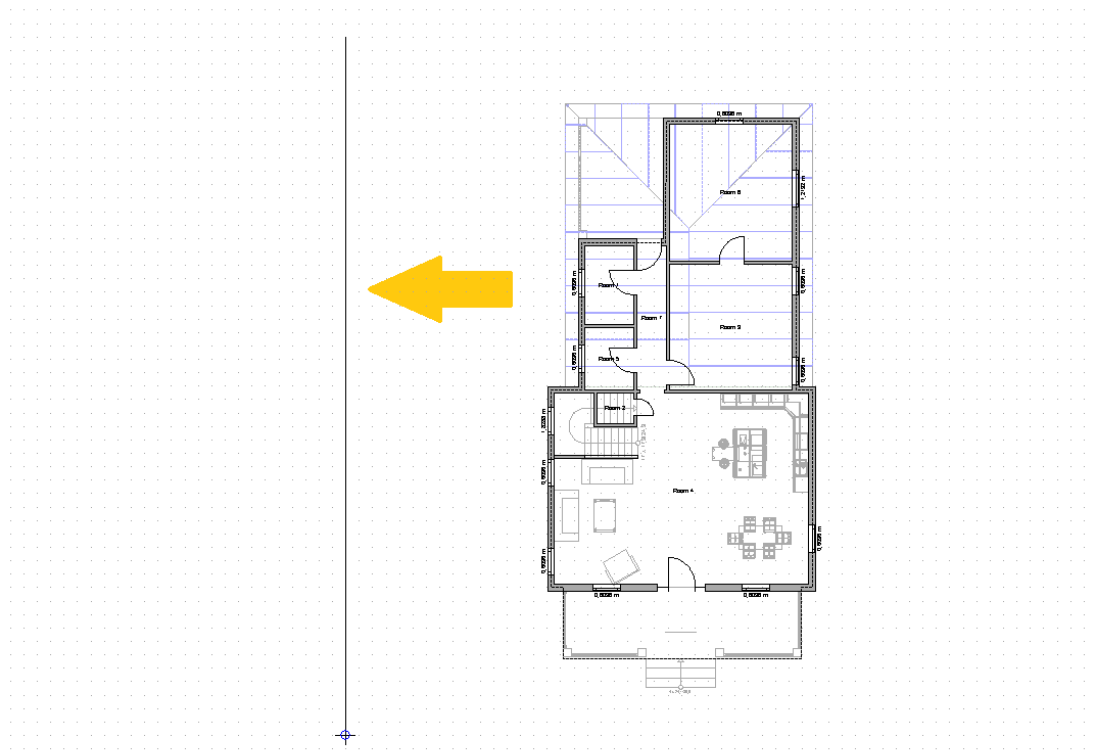
1.2 COPYING BUILDINGS AND FLOORS, MIRROR WITH COPY,…

The Edit Building menu on the EDIT ribbon has been enhanced with some features. In this context, we have also revised the mirroring of buildings.

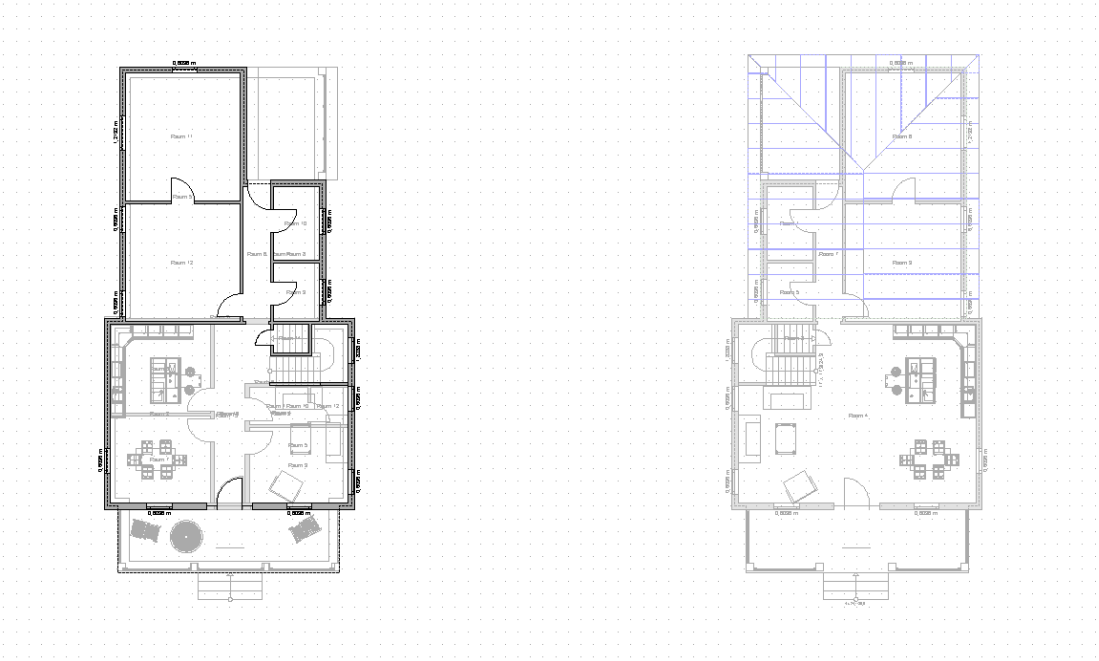


1.2.1 Copying and mirroring a building

Copying a mirrored version of a building starts immediately after you call the function and insert the mirror axis. When inserting the mirror axis with two mouse clicks, we recommend holding down the CTRL key to ensure an exact vertical or horizontal course of the axis with the internal angle grid.
The mirror axis is marked with the arrow in the screenshot below.



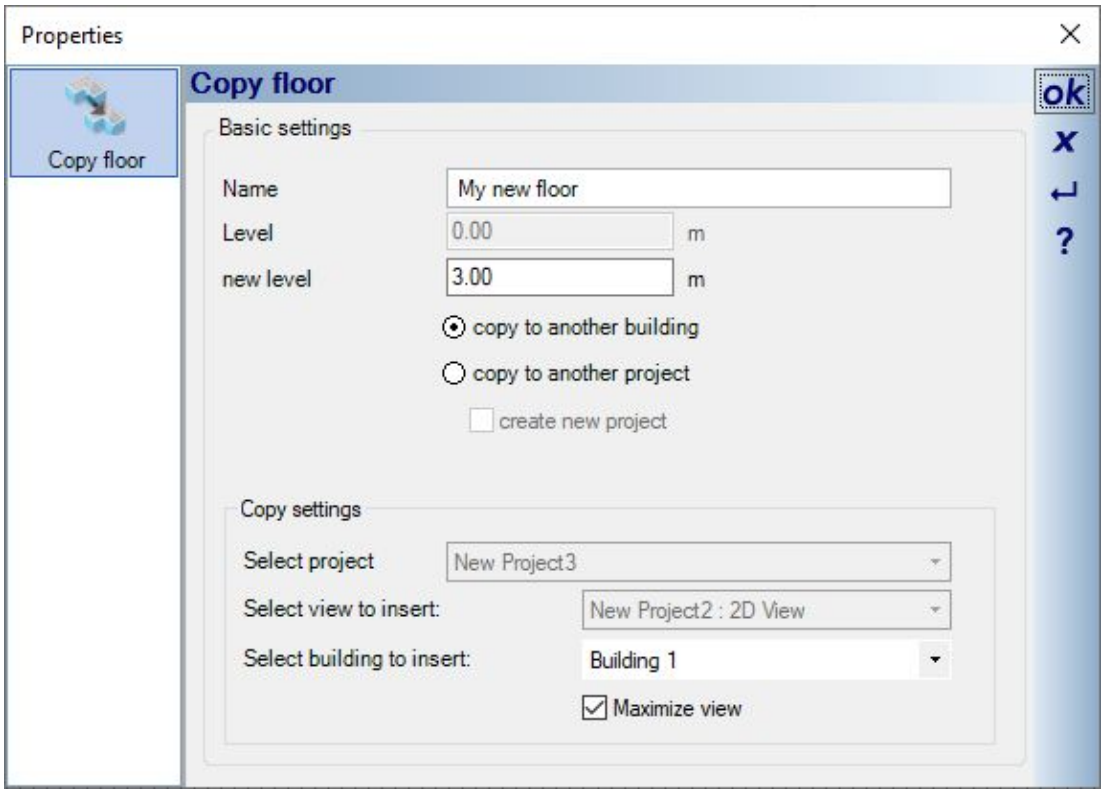
The mirrored result:



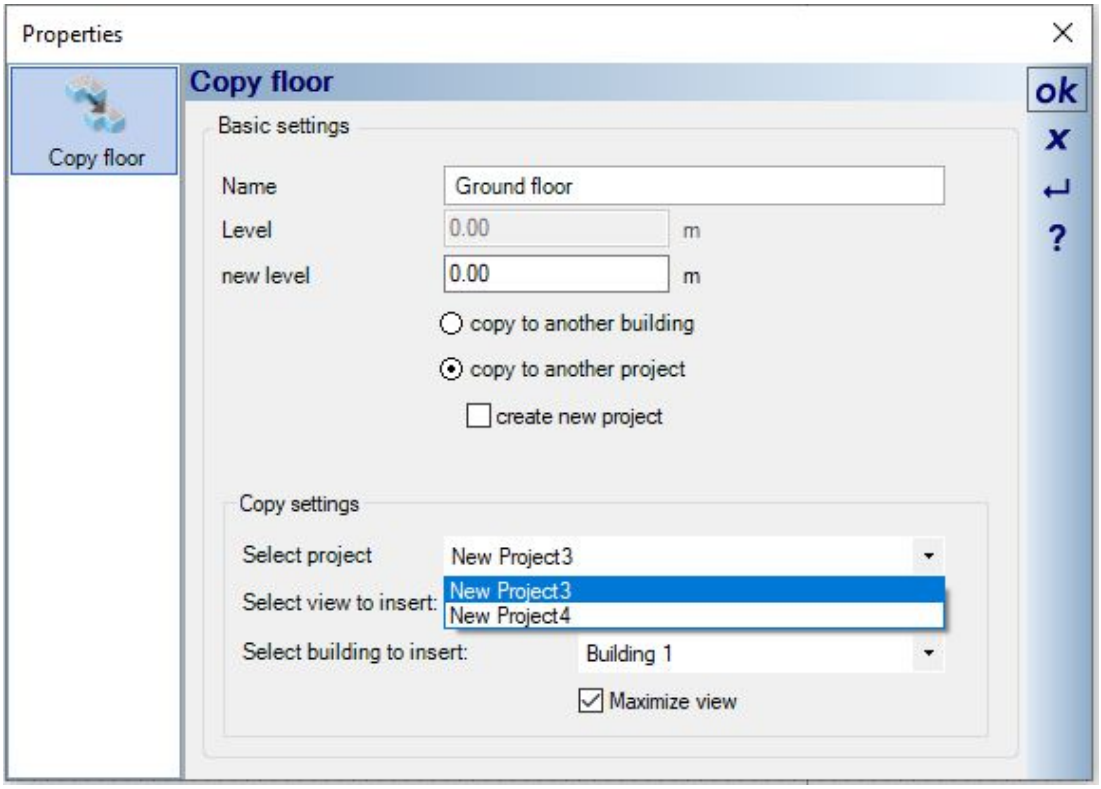
Note that not all elements are mirrored and copied. This includes roofs and dimensions. This would have to be recreated or re-entered after mirroring.

1.2.2 Copying your current floor to new building or new project

You can copy the active floor of a building to a new building or to a new building in another project. All layers that exist below the active floor are also copied.
In the copy dialog you can assign a name to the future floor. The level of the new floor after copying can also be specified if necessary.
If you copy to a new building, you will see the following options in the dialog.

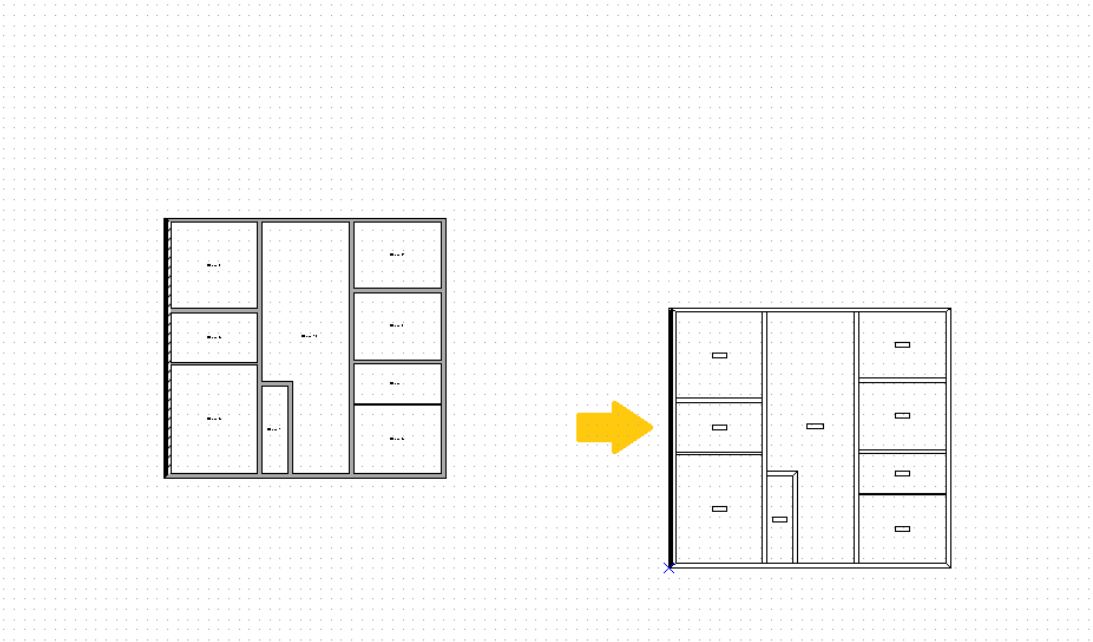


If you have already opened a second project, the dialog looks like this. You can choose the project to copy the floor to and also the view you want to use when copying.
The reason is that the floor needs to be positioned before inserting it.
And for that you need a view to place it. In most cases, you also need other parts of the building in the project for orientation in this view, so that you can, for example, position the new floor exactly on top of another.



If you leave the dialog with OK, the copied floor is "added" to your mouse cursor. At this time you only see a preview.
As long as the preview cursor is still active, you can use your CTRL + W keys to toggle through the corners of the floor plan until you have reached the correct corner for positioning.

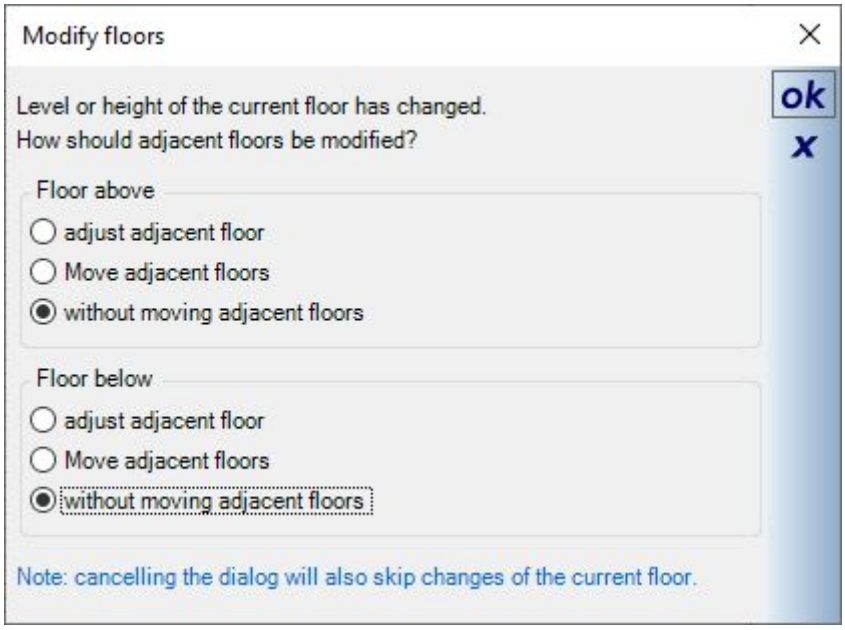
A left mouse click inserts the floor.



Note: after such a copying process, you should save the project with the newly inserted floor under a new name and reload it. When loading, all constructive elements are newly created or constructed based on their parameters.

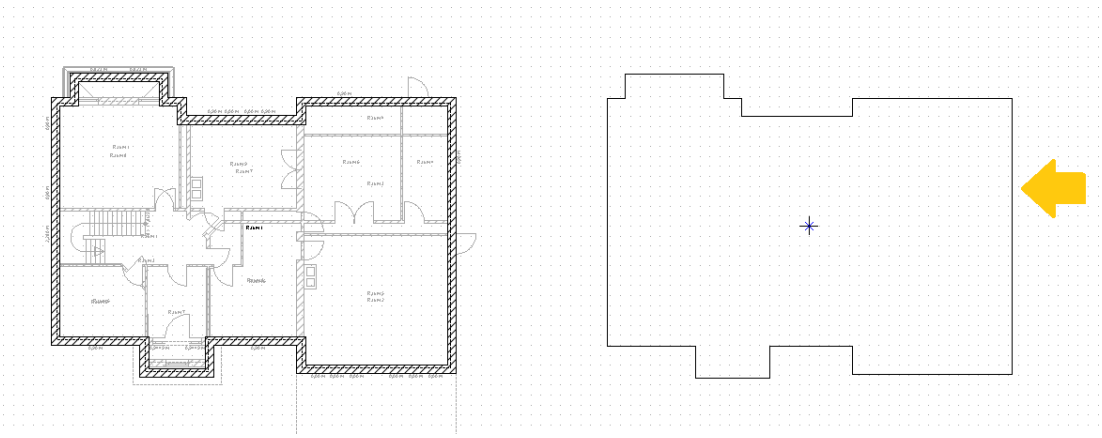
1.2.2.1 Adjusting floors in "copied" buildings.

In a normal planning, the software manages the floors of a building as a unit, in terms of their levels and heights. This is one of the reasons why the building is made by copying floors up or down.
If you "copy" a building together from several projects or individual floors, you may have to manage the levels and heights of the floors yourself and control the building individually.
If you subsequently change the height of a floor in a "normal" building, you will be asked how the other floors should react.
In this special case, you should activate the options "without moving adjacent floors". And if necessary, adjust the other floors manually afterwards, so that the building fits together.



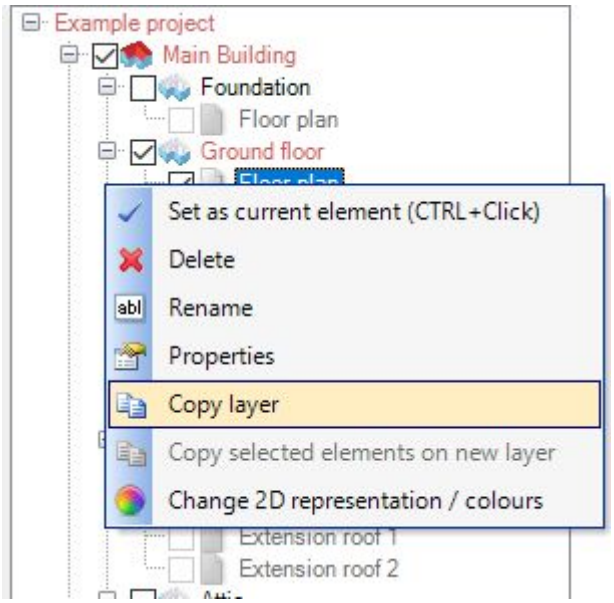
1.2.3 Moving your current floor

If you call up the "Move current floor" function from the menu, the software tries to summarize the outer contours of the walls and "add" them to your mouse cursor.
You will then see the outline of your floor plan, with the calculated center being transferred to the mouse.
However, it would be difficult if not impossible to place a specific point, usually a corner of the building, exactly on top of the other floors.
You can now use the familiar key combination CTRL + W to toggle the corners of the contour under your mouse.
If you press CTRL + W multiple times, the corner points will toggle along the mouse until you reach the correct one for placement. With a left mouse click you insert the floor at this position.
In the following figure you can see the current floor on the left and the mentioned contour as your mouse cursor on the right.



1.3 COPYING LAYERS, COPYING SELECTED ELEMENTS ONTO A NEW LAYER

Usually, when creating the building, layers are duplicated by copying them together with the floors in which they were created.
However, there may be cases where you don't want to copy the entire floor but just a layer inside of it. For example, this could be a layer with interior design objects that was created at a later time.
Copying layers can also be useful when planning new building elements or construction elements that are intended for demolition.
You find the copying functions in a right mouse button context menu when you click on a layer in our project viewer.

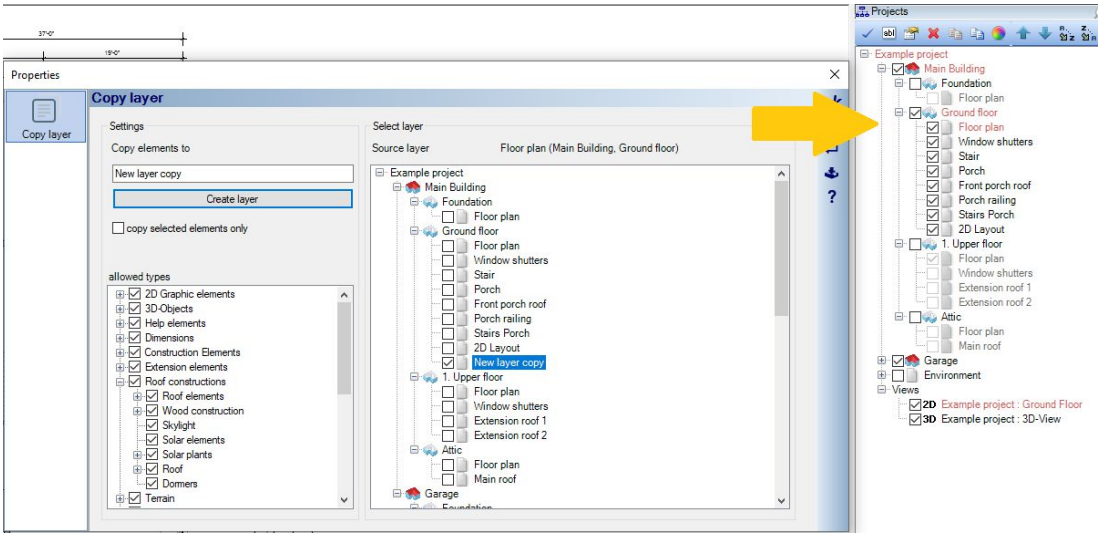


1.3.1 Copying layers

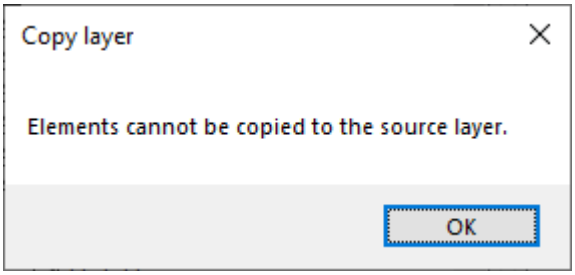
When you start the functions "Copy layer" or "Copy selected element on new layer", the following dialog appears:

The function always uses the currently active layer in our project viewer as the source layer for copying. The source layer name appears above the project tree.

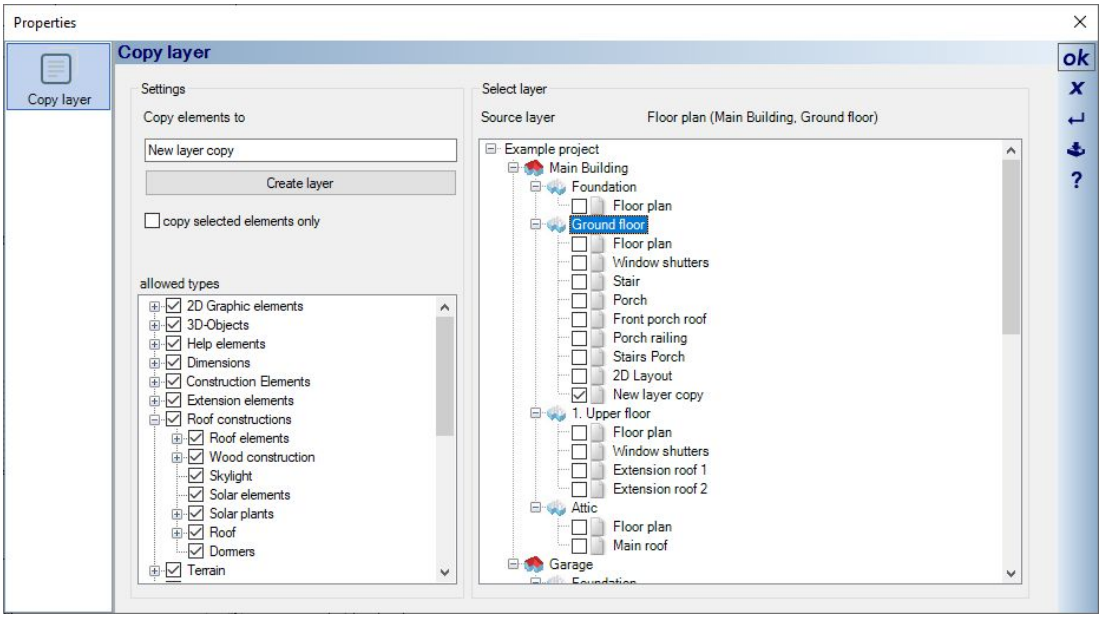
In the left pane, you can specify which elements of the source layer you want to copy.



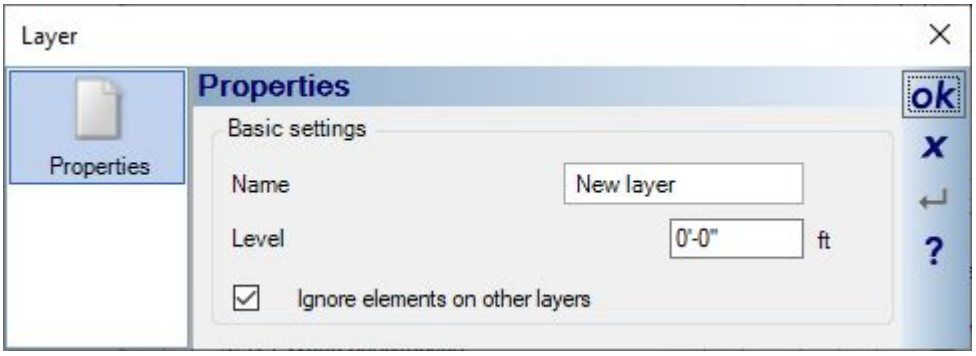
In the tree structure "Select layer", you determine the target layer for the copying process.
You could create the target layer before calling the function from our project viewer and then select it using the checkbox.
If you accidentally select the source layer as your target layer, you get the following message.



If there is no existing target layer, you can create one using the "Create layer" button.
The new layer must first be assigned to a floor. Therefore, first click on the floor in our project tree.
Otherwise, the software assumes that you want to create a copy on the same floor as the source layer.



Then click on "Create layer". The standard dialog opens, in which you can specify a name and a level for the layer. The level is always relative to the floor level and in most cases remains at zero.

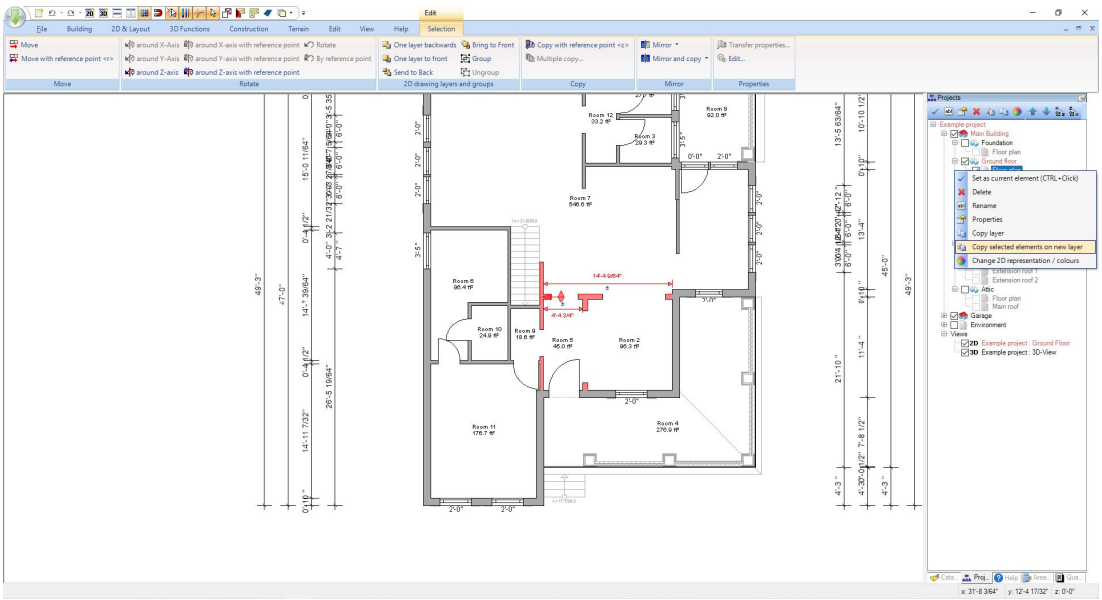


When you have made your selection for elements and target layer, close the dialog with OK and the copying process begins.
The elements are created at the same position on the new as they were on the source layer.

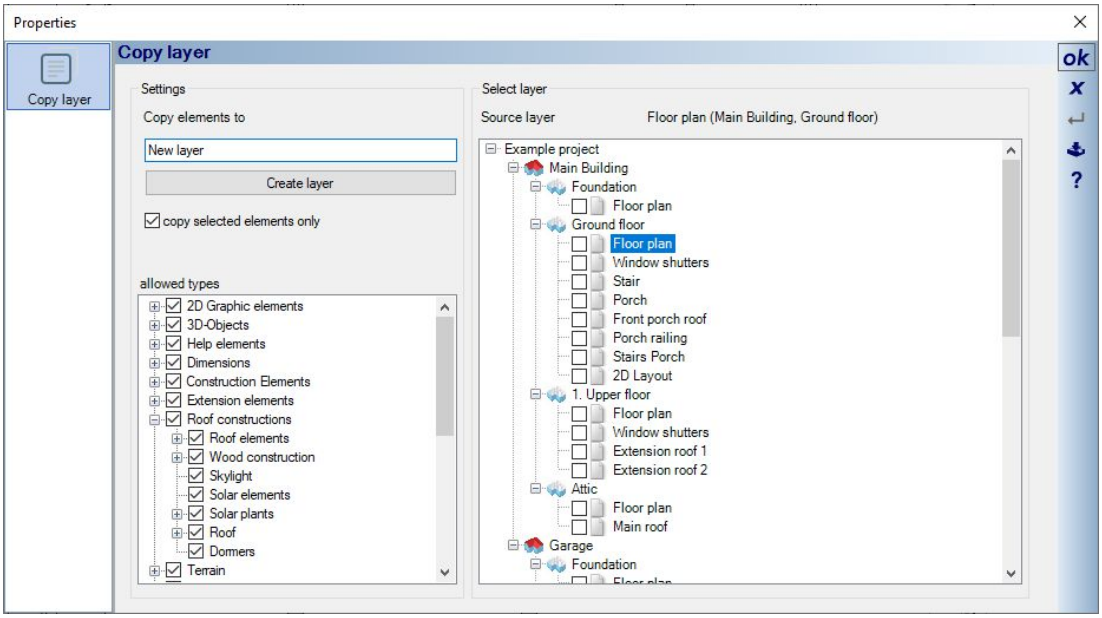
1.3.2 Copying selected elements to a new layer

A special case of copying layers is copying only elements previously selected in your planning.
A typical use case for this would be to copy just few of the walls from a floor plan layer to a "demolition layer", just to show them differently on your final plans.
In particular, if you only want to remove parts of a wall, create a copy on a new layer and change the length of the copied wall with our standard wall editing tools.
Shorten the copied wall so that only the part to be removed remains and then colour that part of the wall yellow or whatever marking is required locally.

Note: if you keep the SHIFT key pressed when selecting elements, you can select several elements one after the other with further left mouse clicks and select them for the copying process.



In our Copy layer dialog, the option "Copy selected elements only" is activated.



1.4 CONVERSION, NEW CONSTRUCTION, DEMOLITION - 2D REPRESENTATION OF LAYERS

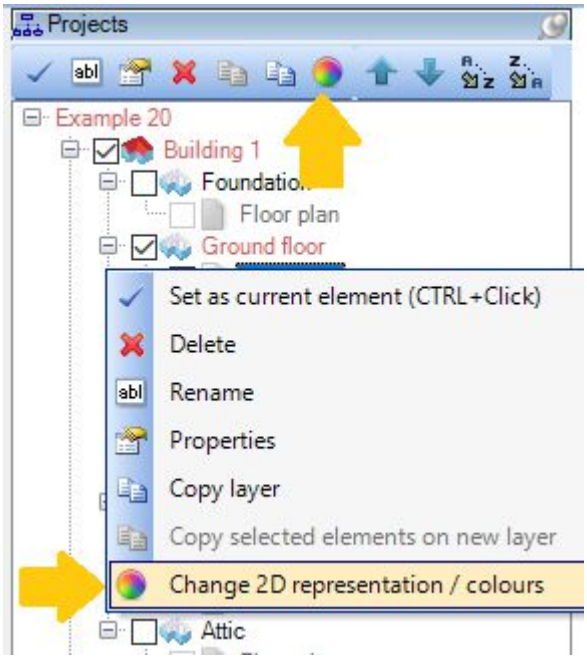
For certain elements on a layer, the 2D representation colour in 2D plan views can be easily adjusted using the "Change 2D representation colour" dialog.

The advantage here is that this function does not change the actual properties of the elements, but paints a new colour representation over them. The original properties are therefore retained. As a consequence, the changed colour or display can also be removed later using the same dialog. This allows you to create a different display at any time without great effort, e.g. even for a single printout. If you want to remove the alternative 2D representation, just open the dialog again, deactivate the checkboxes in front of the elements and you get the original display back.

Note: Walls are always completely coloured, regardless of their layer structure. If you really want to change the display of the layer structure, use the functions for walls on the EDIT ribbon, change 2D representation or change layered structure.

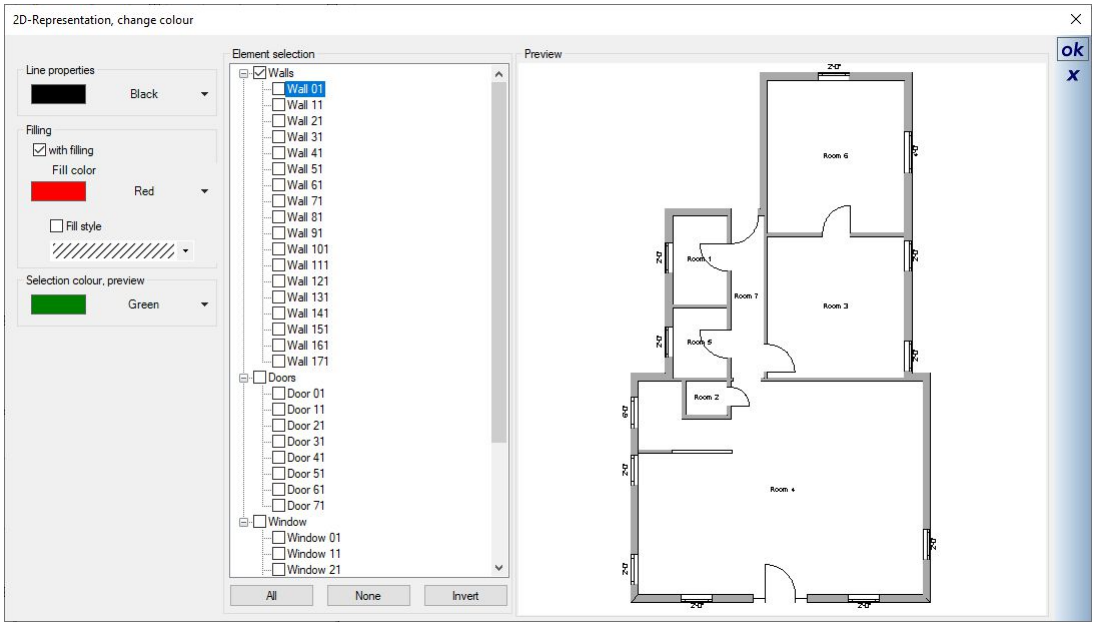
1.4.1 Changing the 2D representation of elements on a layer (demolition - new construction)

Open the dialog for changing the colour of a layer in our project viewer via the context menu or via the button in our project viewer toolbar.

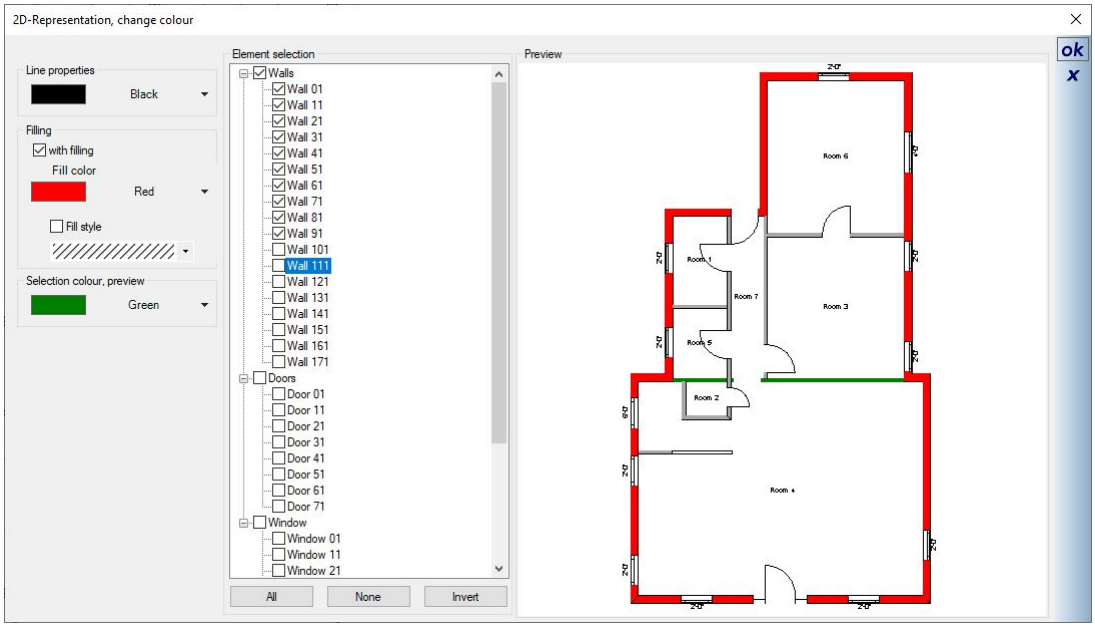


The dialog shows you a reduced preview of the layer content. Reduced in such a way that only the elements whose display can be changed are displayed, plus dimensions for a better orientation.

Note: in our preview, you can navigate like in a 2D view, i.e. zoom, scroll, etc. You can also select specific elements with left mouse clicks, to which the currently active display properties are then assigned. This avoids a search for the right element in our tree structure, especially if you only want to display some few components differently.



To change the display, first select the line and fill properties on the left of the dialog.
Then activate the elements in our tree structure to which this display is to be applied. Or you can click on the items in the preview instead, as mentioned before.
The selection colour for the preview is used to mark components when you click on an entry in the element selection without activating the checkbox. This representation is only temporary and can only be seen in the preview. See the following screenshot at wall 111.



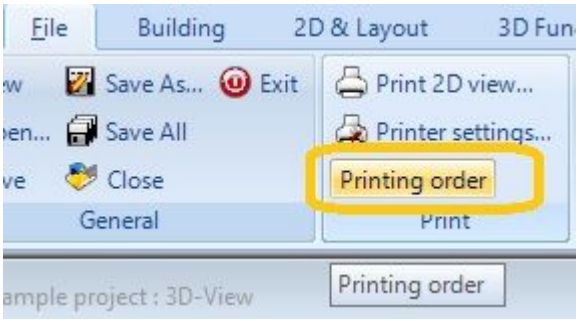
If you want to reset the display to its original state or to the actual drawing properties, open the dialog again and remove the selection in the tree structure. Then close the dialog with OK and everything looks the same as before.

Note: this function completely paints over the components. If you only want to highlight parts of a wall with a representation for new construction or demolition, copy the wall onto its own layer using the "Copy layer" or "Copy selection to new layer" functions.
Then change the length of the wall or its position and adjust the display for the new layer only.

1.5 ADJUST THE PRINTING ORDER OF LAYERS

Basically, the software manages its own, internally defined order in which elements and layers are printed.
But especially when working with several layers, on which, for example, several walls are in the same position, of which one is on a "demolition layer" and a floor plan layer showing the current status of the floor, you must be able to customize the printing order manually if necessary, so that the part of a wall highlighted in a color that is intended for demolition is printed above the other wall. Otherwise you would not be able to see the proportion of demolitions in the printed plans.

In such cases, before printing, you can assign the visible layers of a 2D view a custom order in which to print. The settings can be found on the FILE ribbon in the Print area.

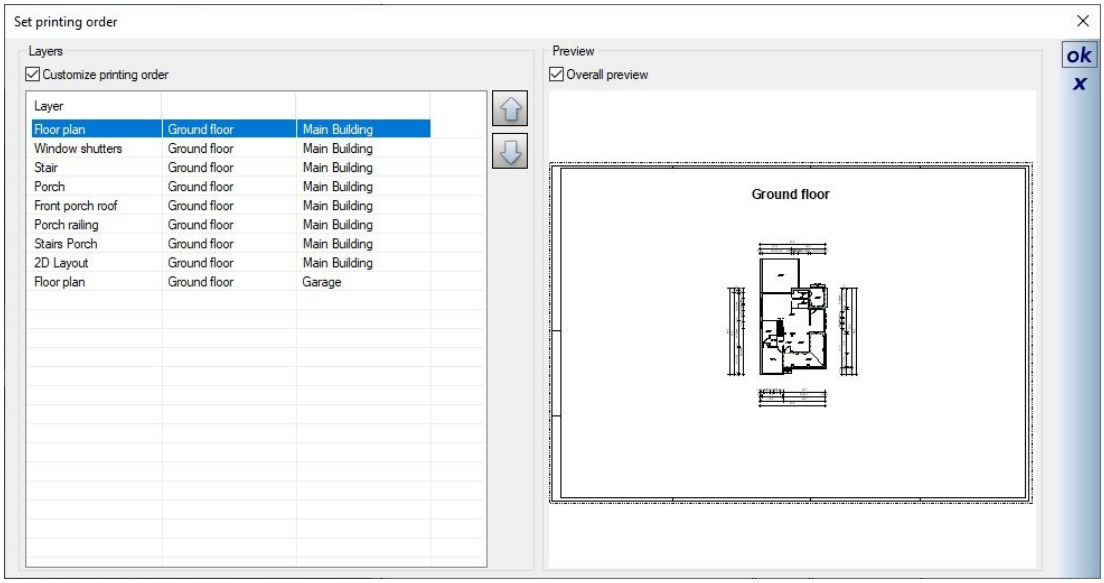


The button opens the Set printing order dialog. Since changes are saved in your active 2D view, you can also find the same function in the context menu of 2D plan views.
On the left you see a list of the visible layers of your active 2D view. On the right, a preview showing all the layers of the list with the "Overall Preview" option.
If you specifically want to see only one layer in order to see some details better, deactivate the Overall preview checkbox. Now the preview only shows the selected layer from your list on the left.

Above the list you see the "Customize printing order" checkbox. If you select the checkbox, the list is activated. The settings only apply to the active 2D view and are also permanently saved in this view. If you later want to use the standard printing process again, open the dialog and deactivate this checkbox.
This may also be necessary if you add other visible slides to the view at a later point in time. Then you may need to rearrange the order.

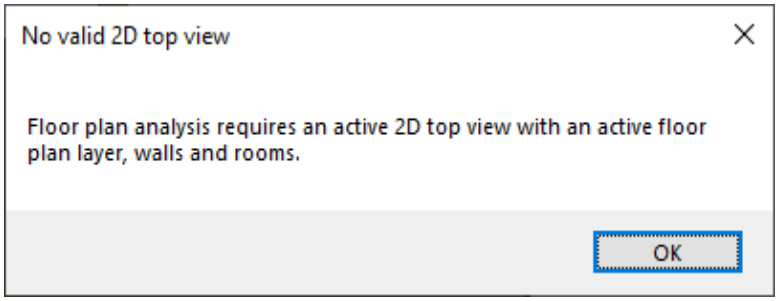
The order of layer in your list is pre-sorted by the software. First is the layer which is set as the active element in our project viewer.
Followed by all layers that are on the same floor as the active layer. In the same order they are sorted in our project viewer.

Then followed by other layers of the building in which the active layer is located and finally the other layers from other buildings.
To sort, click on the layer in the list and move it up or down using the two arrow buttons.



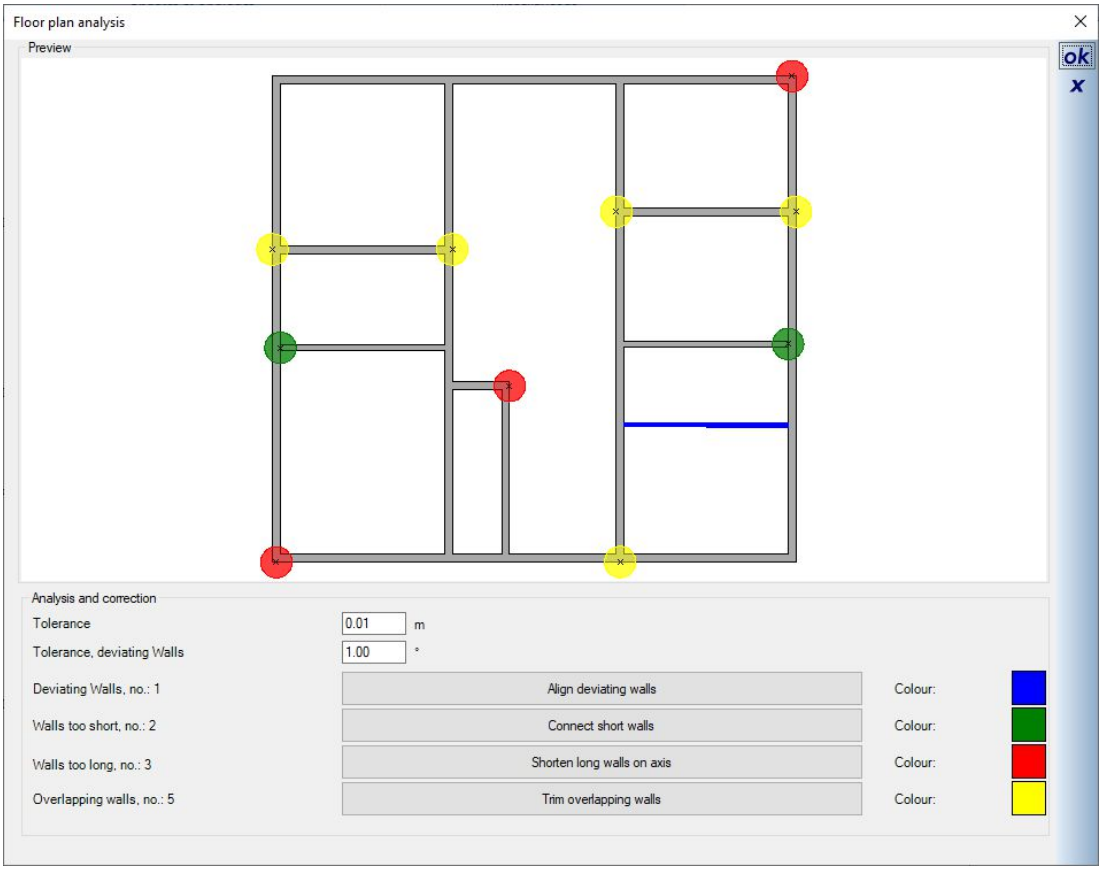
1.6 FLOOR PLAN ANALYSIS AND REPAIR FUNCTIONS

To start the floor plan analysis, the software needs an active 2D view with an active layer that contains at least walls for the preview. If this is not the case, you will receive the following message and can first activate such a view or layer.



In our floor plan analysis dialog, only the active floor and walls on it are shown and possible problems are highlighted in different colours.

Note: within the preview you can zoom and scroll with our standard 2D view functions.



The floor plan analysis tries to identify possible problems by type with different colours. You can change the colours by clicking on the coloured box if that helps.

By clicking on the assigned buttons the program attempts to correct the respective problem. The deviating walls are at the top and if there are any, you should start with them. Aligning deviating walls could create subsequent problems, such as gaps at wall intersections.

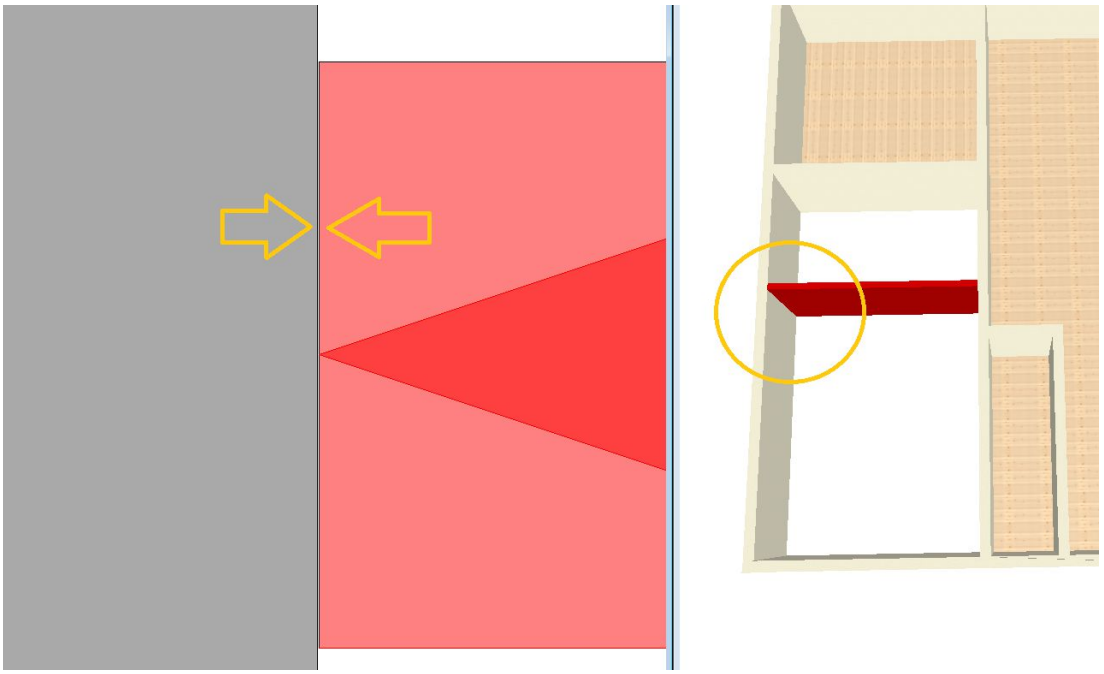
With each action, the floor plan analysis not only changes the preview, but also the walls in the project itself. The analysis is then automatically repeated and the preview updated. Ideally, the marked problems will gradually disappear.

Note: the changes to the project itself cannot be reversed, even if you exit the dialog with Cancel.

1.6.1 Some examples for highlighted wall problems

Below are some examples of wall situations that should be identified and fixed in our floor plan analysis dialog.

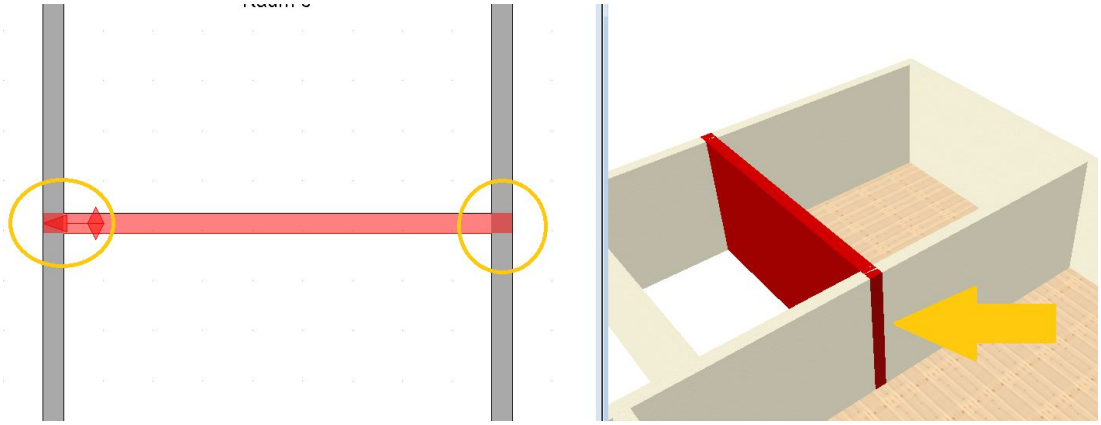
1.6.1.1 Walls too short



As you can see in the screenshot there is a small gap between the inner and the exterior wall.
This means that the walls are not intersected and no room is created. In order to see this in a 2D floor plan, you have to zoom in very closely and sometimes also switch off the line widths using the button in our top toolbar.

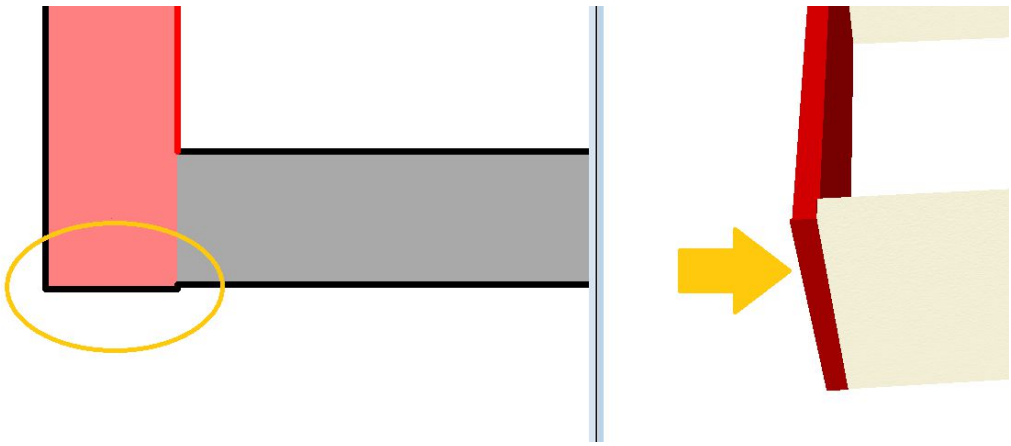
1.6.1.2 Walls too long

When inserting walls, you don't have to hit the edge of another wall directly to trigger the automatic wall intersection. If you put the second point anywhere on the wall, that's fine.
However, it is unfavorable if you pull a wall over a crossing one and place the end of the wall on the opposite side of the wall.
In such a case additional wall segments are created from the front of the crossing wall and these unwanted segments may be taken into account when creating the room and, depending on the room contour, lead to problems.
You can best see such situations when you select a wall and the wall in a 3D view completely penetrates another and the end becomes visible on the opposite side. As shown in the figure below.



1.6.1.3 Overlapping walls

Here you see a corner situation in which one wall protrudes slightly over the other. Even such situations, if not deliberately created, are unfavorable and can lead to various effects, e.g. when calculating the automatic ceilings or when determining the building contour in order to create an opening in our terrain.



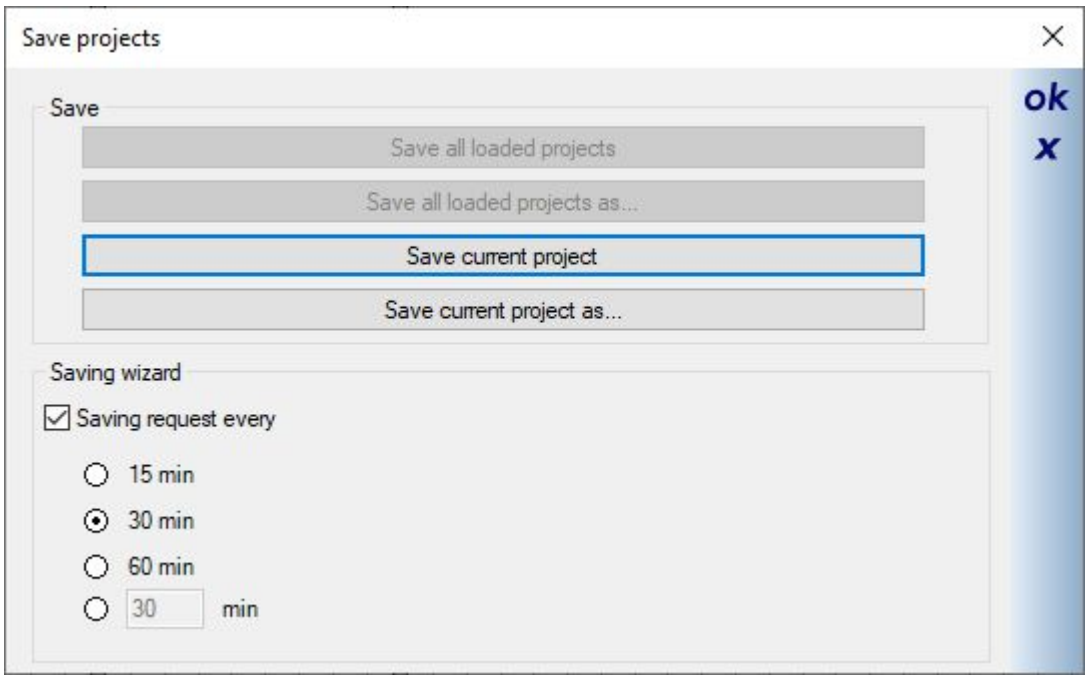
1.7 AUTOMATICALLY SAVING PROJECTS, SAVING REMINDER

Automatic saving is not always advantageous, especially not with very large plans and short periods of time.
Instead, we added a reminder function which displays the following dialog with buttons for saving at the desired time.
You can decide for yourself whether you want to save now or whether you close the dialog. The function checks whether another dialog is open at the defined time or whether an input tool is being used right now. This prevents you, for example, from carrying out extensive work in the roof dialog or having a complex polygonal input in progress and suddenly the save dialog appears in between. If one of the two conditions prevents the opening of

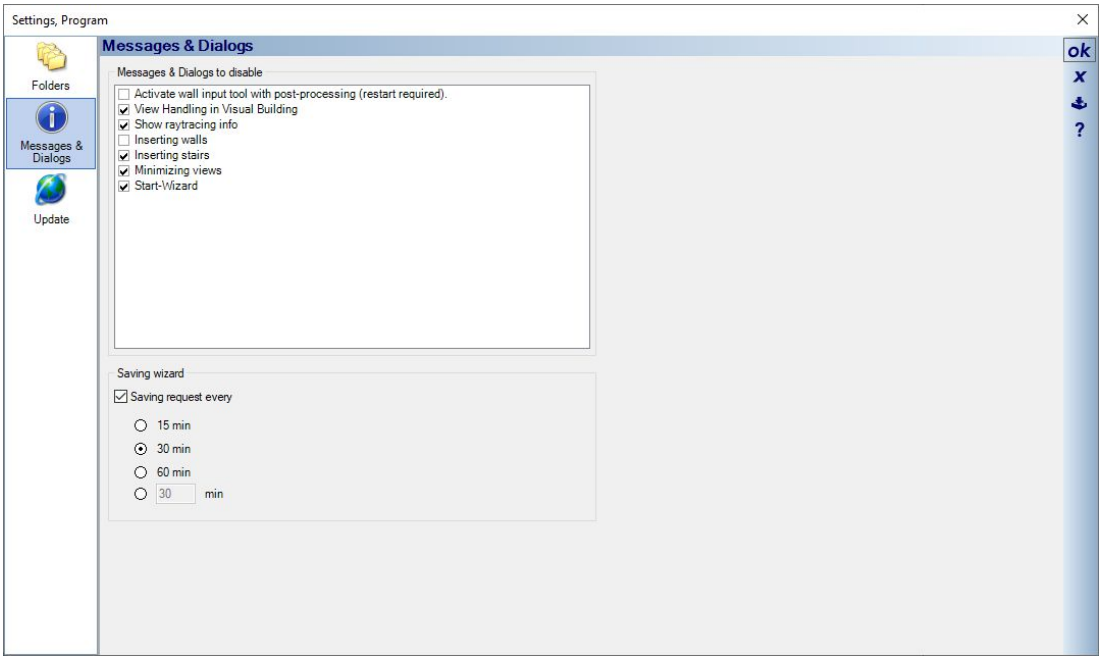
the saving reminder dialog at the preset time, the dialog will appear immediately afterwards instead. The timer for the period of time is then also reset.

Buttons are shown with the following variants:
- Save current project: saves the project with the same file name
- Save current project as: opens the Save as... dialog so that you can give the project a new name, i.e. basically create a copy of the project, which is highly recommended.

If several projects are loaded at the same time, the two additional buttons become active, but offer the same functions as previously described.

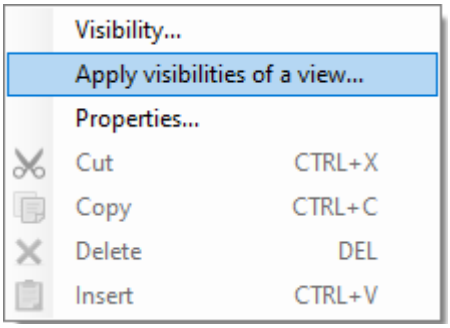


The settings for the reminder dialog can also be found in the SETTINGS – PROGRAM menu on the Messages & dialogs page. (in a ribbon version via the menu behind the button with the green arrow at the top left)

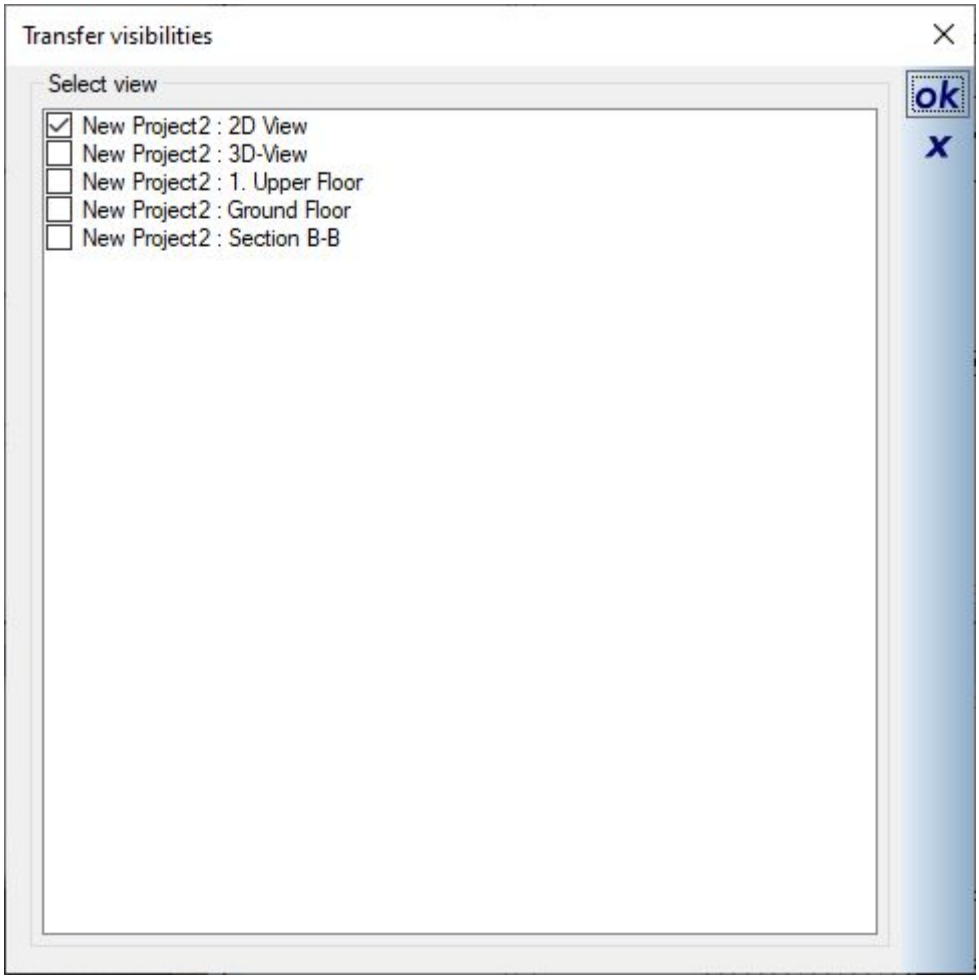


1.8 APPLYING VISIBILITIES OF AN EXISTING VIEW

From time to time it can be useful to apply the visibility settings and also the current visibility of floors and layers from an existing view.
You could also edit the settings individually, but it can be a bit time consuming especially for large projects with an intensive structure of layers.
The context menu of views now shows an entry "Apply visibilities of a view..." with which you can manage this comfortably.

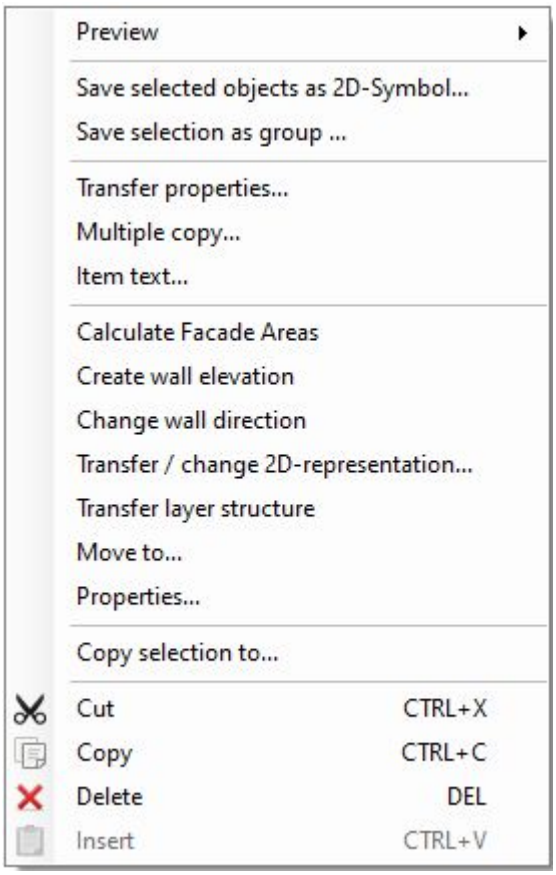


Via the menu item, the "Transfer visibilities" dialog opens with a list of existing views in your project.
Select the desired view using the checkbox and close the dialog with OK. As mentioned, the current view not only adopts the visibility settings of the individual elements, but also makes the buildings, floors and layers visible or invisible in our project viewer.



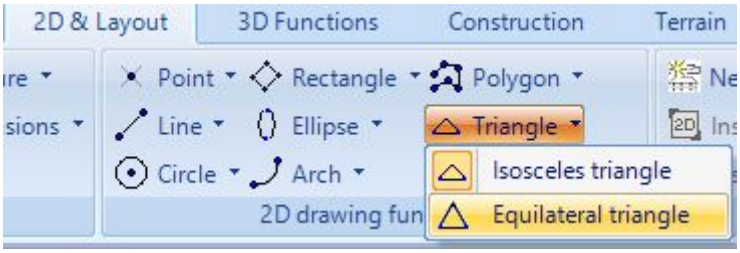
1.9 CUT, COPY, PASTE …. IN OUR CONTEXT MENUS

The context menus of selected elements now contain entries for the typical cut, copy, paste and delete functions. Since the context menu for each item is different, here is just an example..



1.10 2D GRAPHIC ELEMENTS, TRIANGLES

The basic types of the 2D drawing functions have been extended to include isosceles and equilateral triangles. Triangles are more commonly used as part of engineering symbols, and drawing over a polygon is often uncomfortable.



For an isosceles triangle, first draw the base, later called width in the dialog. Then determine the height / peak with another mouse click. After that the triangle is inserted.

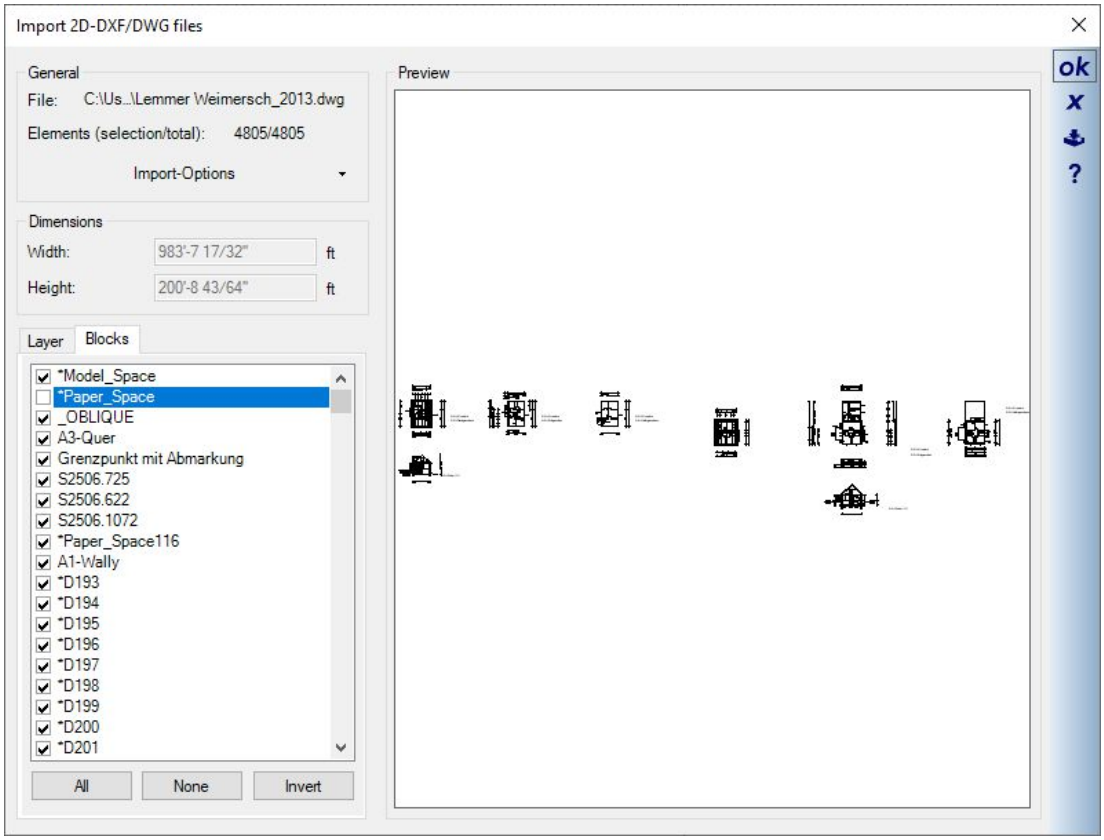
For equilateral triangles, the height is already known after you entered the base, so the input tool expects you to drag the cursor in one direction, away from the base, and then click once.

Triangles cannot be changed afterwards via the polygon points that appear during the selection, but only via the dialog.

Tip: hold down the CTRL key while drawing the base to activate the internal angle grid if, for example, you want the base to run exactly vertically or horizontally.

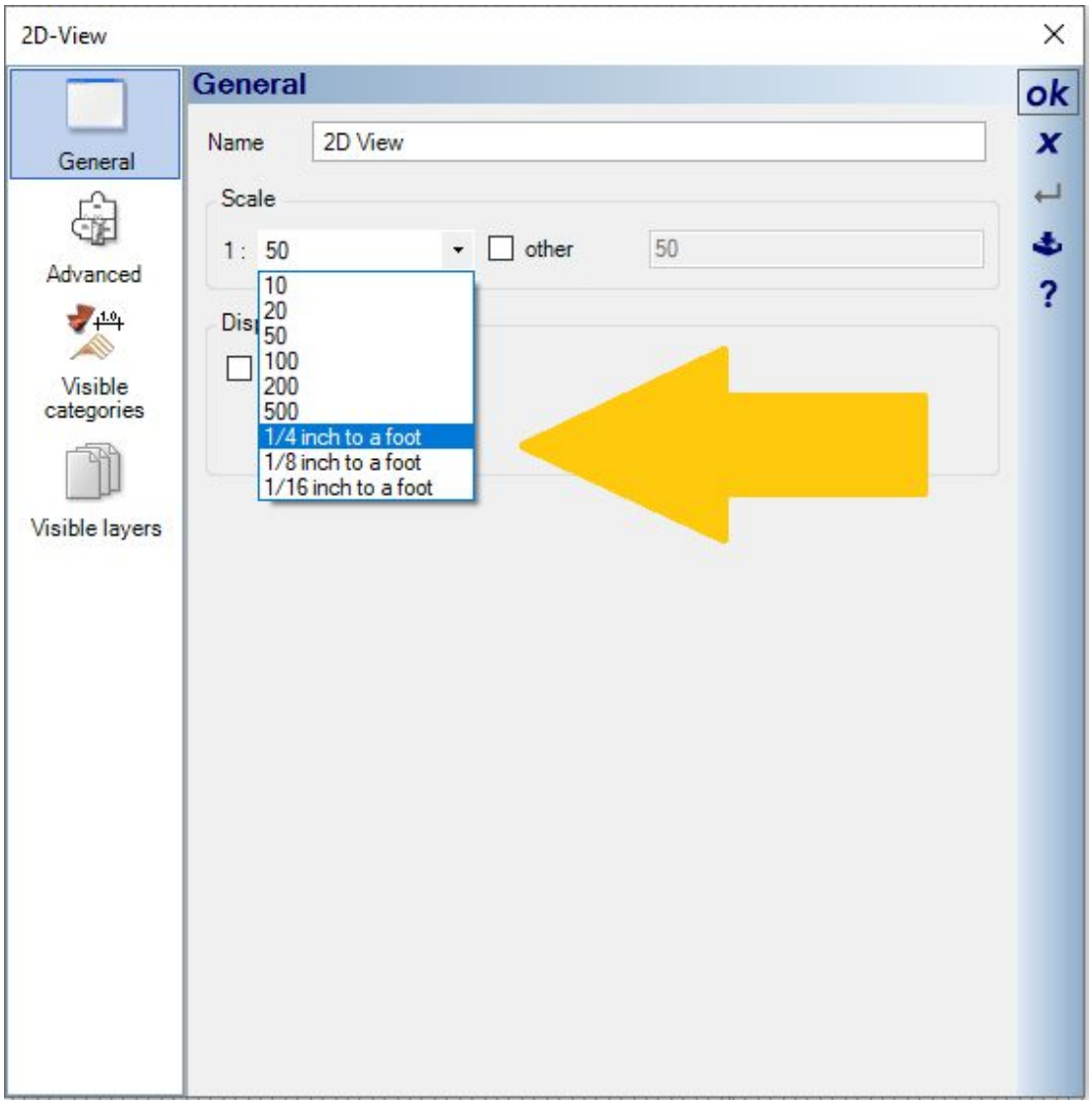
1.11 2D PREVIEW FOR DXF / DWG IMPORT REVISED

The drawing of the 2D DXF / DWG files to be imported in the preview dialog has been completely changed and is therefore significantly faster. Until now, the preview was constantly updated when drawing individual elements and this took a lot of time, especially with large files. Now the preview behaves like in the other dialogs with 2D preview and draws the entirety of the content, which is significantly faster.



1.12 PREDEFINED SCALES FOR US STANDARDS

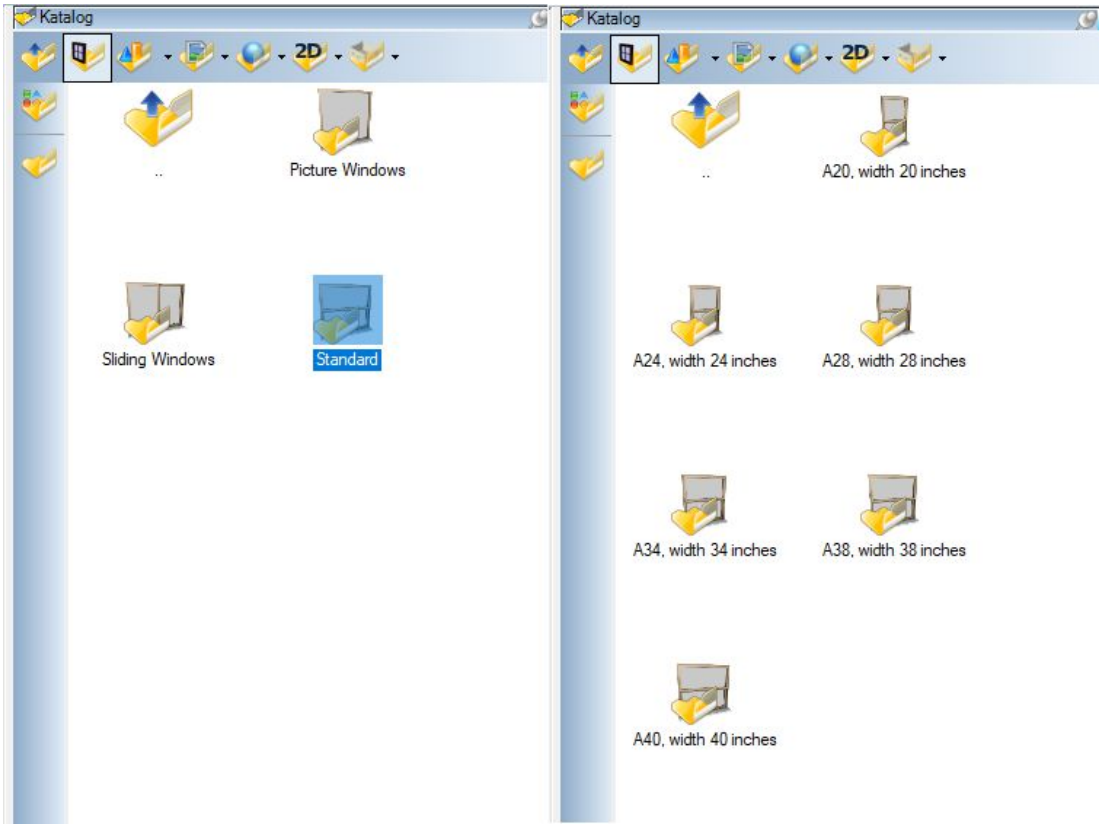
In our view properties, the list of predefined scales has been expanded to include entries according to US standards.



1.13 ADDITIONAL WINDOW CONSTRUCTIONS FOR US STANDARDS

In our catalog for Window Constructions, we have added a list of windows that are at least partially typical of US buildings. And certainly also in other regions.

All of these windows were created from the "normal" window constructions with different parameters and are only intended to make them easier to use. A total of 148 window constructions in various standard dimensions..

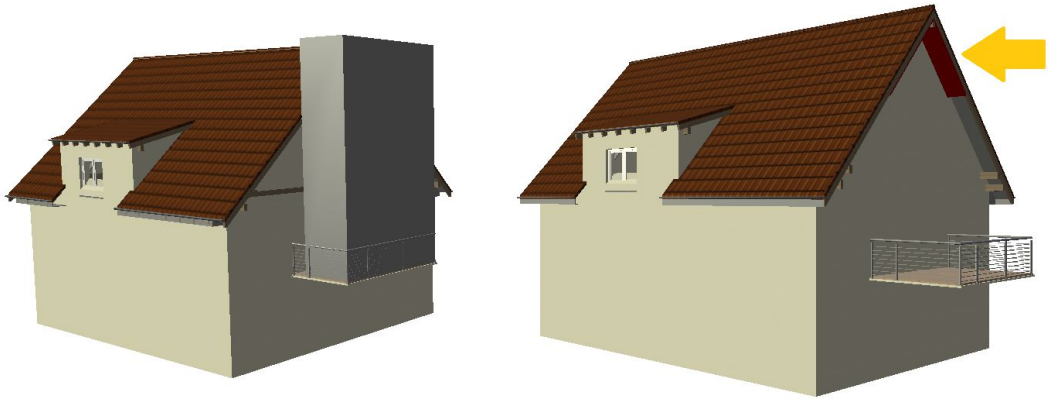


1.14 ROOF PANELLING FOR ONLY PARTIALLY COVERED ROOMS (BALCONIES, TERRACES,...)

Roof panellings are always created automatically by the rooms themselves and then form a surface below the roof or its wooden structure.

In the case of rooms that are only partially covered by a roof, e.g. balconies that were created as a room to determine the eligible living space, this meant that the intended roof panelling formed an unwanted volume on the area that was not covered by the roof.

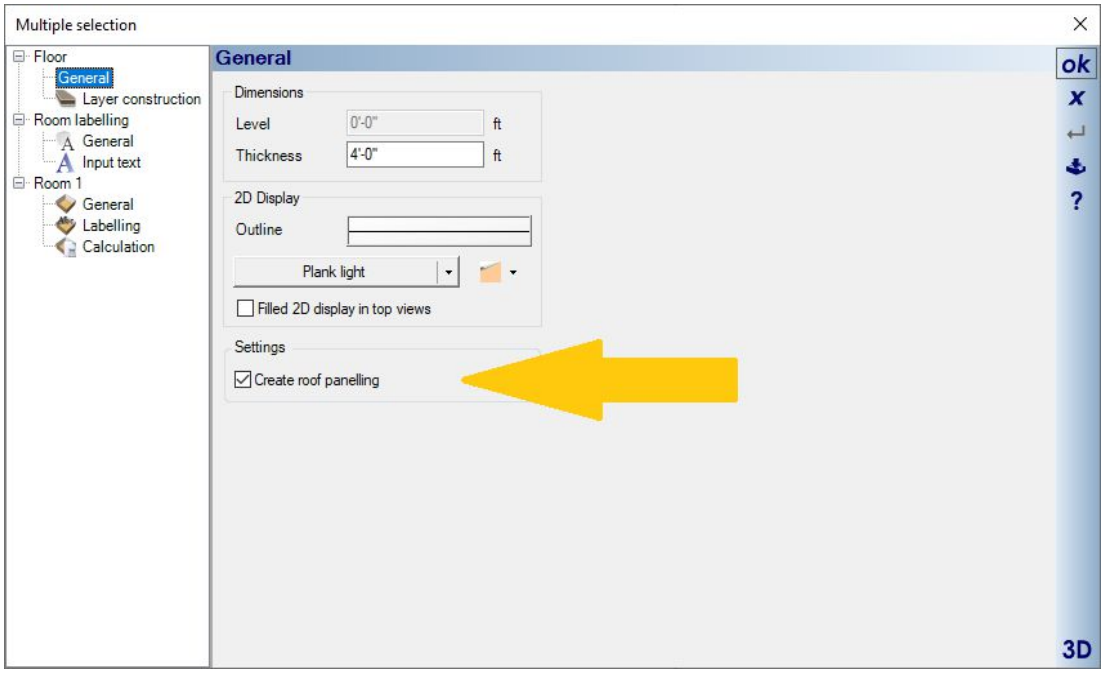
Shown in the figure below on the left.



This procedure has been modified so that the roof panellings are only formed for the area under the roof and the rest of the volume or its surface is omitted.
Shown in the figure on the right. The yellow arrow points to the roof panelling selected here, marked in red.
There are cases where this is not desirable either. Therefore, you can specifically prevent the creation of a roof panelling for a room.

1.15 DISABLING ROOF PANELLINGS OF A ROOM

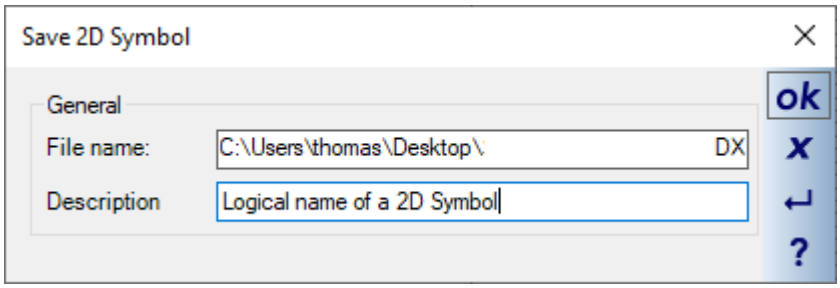
As already mentioned, the roof panellings are created by the room itself or by its floor. In the room properties dialog - floors you find an option on the GENERAL properties page with which you can deactivate the creation of the roof panelling for each room if required.



1.16 SAVING 2D SYMBOLS WITH LOGICAL NAMES

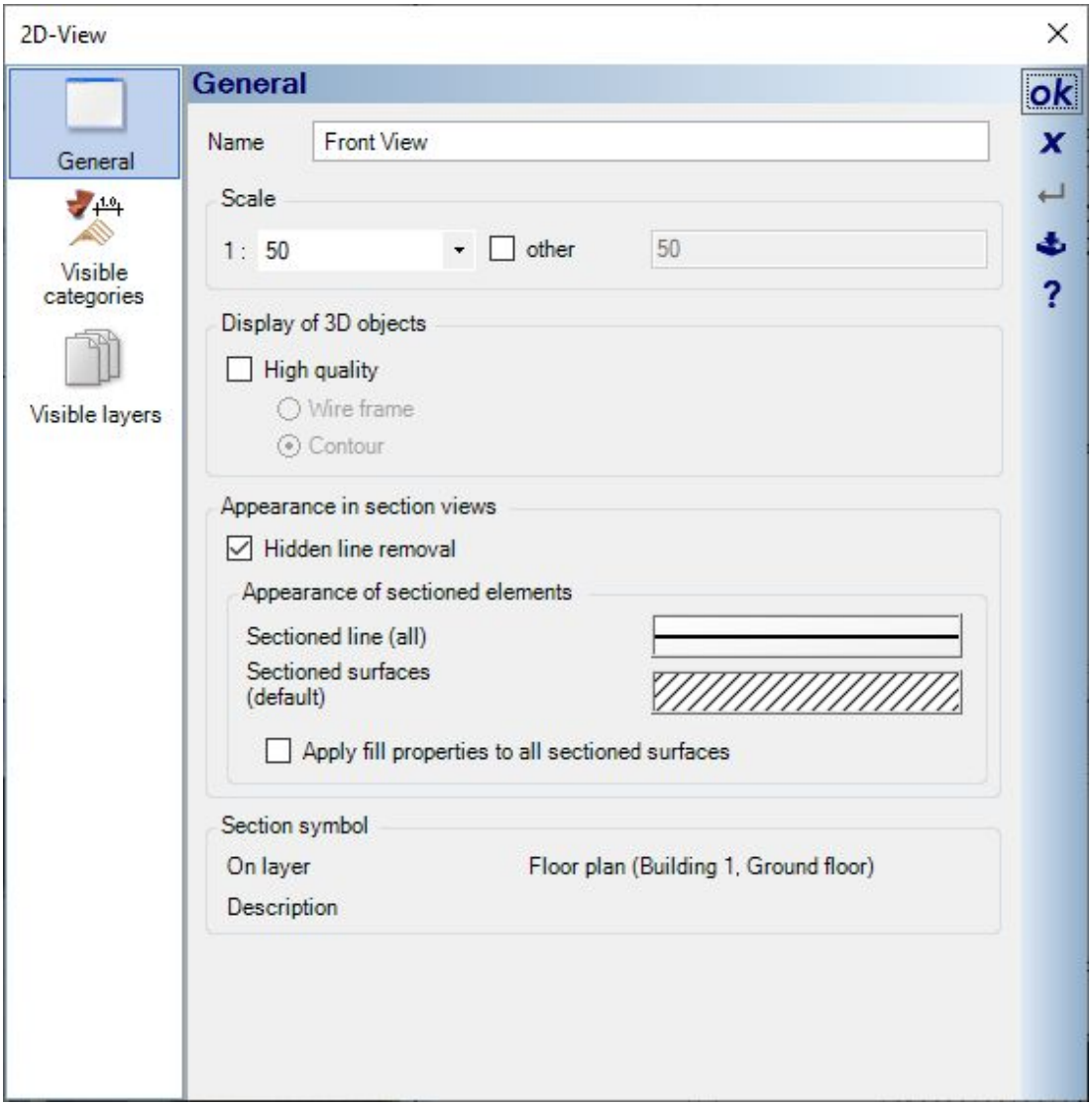
So far, 2D symbols were always created directly via the "Save as..." dialog and only the file name could be specified. In the absence of an alternative, this file name was then also used for the preview in our catalogue.

Now, as with other elements, you can also specify the file name and what is known as a logical name for display in the catalogue. The logical name can therefore also contain characters that are better avoided in file names.



1.17 PROPERTIES OF SECTION VIEWS, LAYER AND NAMES OF UNDERLYING SECTION SYMBOLS

Especially in large projects, it can sometimes happen that you no longer know on which layer the section symbol on which a certain section view is based was inserted.
We have therefore added these two specifications to the section view properties dialog. If you no longer need a section view, you must delete the section symbol. Only then is the view removed from the project. In such cases, open the view, look in the dialog to see which layer the symbol is on and what its name is, and then you can activate this layer in a 2D top view and delete the symbol.


2D-View
General
Visible categories
Visible layers
General
Name
Front View
Scale
1 :
50
other
50
Display of 3D objects
High quality
Wire frame
Contour
Appearance in section views
Hidden line removal
Appearance of sectioned elements
Sectioned line (all)
Sectioned surfaces (default)
Apply fill properties to all sectioned surfaces
Section symbol
On layer
Floor plan (Building 1, Ground floor)
Description
ok