ALLPLAN 2020
Step by Step

Legends and Legend Templates

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Contents

Before you start ...

This step-by-step guide contains some real-life examples, showing you how to handle legends and legend templates.

In addition, you will learn about the structure of legends and find out how legends work. Based on four examples, we will show you how to modify legends: First, you will learn how to modify legend templates and add new elements to legend templates. After this, you will find out how to create a new legend template for a layout legend. Finally, you will learn how to modify a legend you have already placed.

The appendix contains a short troubleshooting section, providing you with further information about legends. This can be helpful in your daily work.

Requirements

This step-by-step guide assumes that you are familiar with and have a working knowledge of Windows and Allplan. We also assume that you are at ease with the drafting tools and architectural tools. In addition, we assume that you know how to assign attributes to components and layouts. The essentials are described in the Allplan manual and in the Allplan Help.

Legends are a complex topic; requirements vary from customer to customer, in particular when it comes to creating legends. So if you use legends in your daily work, we recommend that you attend a special seminar that addresses your own needs and requirements.

Feedback on the documentation

We are always trying to improve the overall quality of our program documentation. Your comments and suggestions are important to us, and we welcome feedback.

Please do not hesitate to contact us to express criticism or praise concerning the documentation. Feel free to contact us as follows:

Documentation

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Sources of information

Documentation

Documentation for Allplan consists of the following parts:

- The Help is the main source of information for learning about and using Allplan.
  While Allplan is running, you can get Help on the current tool by selecting F1, or activate **What's This** in the **Help** drop-down list (right side of the title bar) and click the icon on which you need Help.
- The **Manual** consists of two parts. The first part shows how to install Allplan. The second part is designed to provide an overview of basic concepts and terms in Allplan and introduce approaches for entering data in Allplan.
- The **Basics Tutorial** guides you step by step through the most important tools for designing and modifying elements in Allplan.
- The **Architecture Tutorial** guides you step by step through the process of designing a building. In addition, you will learn how to analyze the building data in reports and to print the results.
- The **Engineering Tutorial** guides you step by step through the process of creating key plans, general arrangement drawings and reinforcement drawings and shows you how to print the results.
- **New Features in Allplan 2020** provide information on what's new in the latest version.
- Each volume in the **Step-by-Step** series deals with a specific concept or series of tools or modules in Allplan in detail. The areas covered include data exchange, system administration, geodesy, presentation, 3D modeling and so on. As a Serviceplus member, you can download these guides as PDF files from the Training – Documentation area of Allplan Connect (http://connect.allplan.com).
- You can also find numerous publications on social networks.

Additional help

Tips for efficient usage

The **Help** drop-down list (right side of the title bar) provides **Tips for Efficient Usage**. This topic provides practical tips and tricks showing you how to use Allplan efficiently and how to carry out everything with ease.

User forum (for Serviceplus customers)

Allplan forum in Allplan Connect: Users exchange information, valuable tips relating to everyday work and advice on specific tasks. Register now at
connect.allplan.com

On the internet: solutions to frequently asked questions

You can find solutions to numerous questions answered by Technical Support in the comprehensive knowledge database at connect.allplan.com/faq

Feedback on the Help

If you have suggestions or questions on the Help, or if you come across an error, send an email to:
dokumentation@allplan.com

Training, coaching, and project support

The type of training you are given is a decisive factor in the amount of time you actually spend working on your own projects: A professional introduction to the programs and advanced seminars for advanced users can save you up to 35% of your editing time!

A tailor-made training strategy is essential. Our authorized seminar centers offer an extensive range of programs and are happy to work out a custom solution with you that will address your own needs and requirements:

- Our **sophisticated, comprehensive seminar program** is the quickest way for professional users to learn how to use the new system.
- **Special seminars** are designed for users who want to extend and optimize their knowledge.
- **One-on-one seminars** are best when it comes to addressing your own particular methods of working.
- One-day **crash courses**, designed for office heads, convey the essentials in a compact format.
- We are also happy to hold seminars on your premises: These include not only Allplan issues but also analyses, process optimization and project organization.

For more detailed information on the current training program, please consult our online seminar guide, which you can find on our home page (https://allplan.com/training).

Introduction

What are legends?

By means of legends, you can analyze all types of attributes, including attributes of design entities in the current drawing file, attributes of layout elements in the current layout, layout attributes, and project attributes. Unlike reports, which you create to print or export data from Allplan, legends produce results you can place directly in a drawing file or layout.

However, the great advantage of legends is that you can create associative legends: Legends remain linked with the objects to be analyzed. In other words, legends adapt automatically to reflect changes in the attributes of the objects or the objects themselves.

Therefore, you can use legends throughout Allplan: In architecture, legends are useful for analyzing components or rooms. In engineering, you can use legends to create mesh schedules or bar schedules with graphics. When it comes to layouts, legends help you create title blocks with layout attributes and project attributes that will be updated automatically.

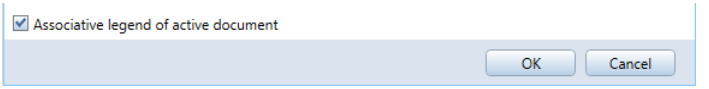
The legend template used defines which objects will be analyzed and how. In addition, the template defines how the final result of the analysis will look. In other words, the legend template defines the form, contents and layout of a legend.

You can create or edit legends and legend templates directly in Allplan. An external program is not necessary. By using the tools that come with Allplan, you can customize legend templates to suit your needs and requirements. You can also create completely new legend templates.

Static legends and dynamic (= associative) legends

Legends can not only represent the state of planning at a particular time but also react dynamically to changes, thus reflecting the current state of planning at any time.

This is not controlled by the legend template used. Instead, it is up to you to decide whether a legend is to be associative or not. If you want to create an associative legend, you must select the **associative legend of active document** option in the **Legend Selection** dialog box.



Function-specific legend templates

Some legend templates are tailored to specific analyses. In other words, these templates analyze specific design entities only. Consequently, you cannot use the general  **Legend** tool to access the templates for these legends. Instead, you can open these legend templates by selecting special, task-related tools.

So that these task-related tools can find their function-specific legend templates, these templates *must* be stored in the legend file associated with the relevant tool. Take the templates for layout legends, for example. These templates *must* be in file **7**. Otherwise, the  **Legend, Title Block** tool does *not* find the templates.

Important!
When copying legend templates or creating new legend templates, you must place the legend templates in the legend file with the right *number*.

The following table lists the task-related legend tools with their legend files.

Role	Task	Task area	Tool	Legend file
All roles	Layout editor	Layout editor	 Legend, Title Block	7 Layout legends
 Engineering	Reinforcement	Meshes	 Mesh Legend	17 Meshes
 Engineering	Reinforcement	Bar reinforcement	 Reinforcing Bar Legend	19 Engineering
 Architecture	Energy	Thermal insulation	 Legend	31 Heat requirements
 Precast elements	*Various tasks*	*Various task areas*	 Legend	42 Precast elements
 Architecture	Site plan	Plants, paths	 Landscaping Legends	51 Landscaping
 Architecture	Finish	Rooms, surfaces, stories	 Visualize Surface Elements	56 Visualization of surface elements
 Surroundings	Urban planning	Urban planning	 Drawing Symbol Legend	60 Drawing symbol regulations

Parts and hierarchies of legends

Before you start editing legends and legend templates, you must familiarize yourself with the legend structure and the fixed hierarchies between main legends and sublegends.

Parts of a legend

Main legend

A legend template always contains a main legend, which already includes all parts and definitions required for a legend. Use the main legend to define the basic parameters, contents, and the form of the legend you want to create.

Only main legends can find objects or layout elements. A main legend can contain one or more sublegends.

Sublegend

You can define parts of a legend template or legend row as a sublegend. You can then integrate this sublegend in a superordinate sublegend or directly in the main legend.

Sublegends trigger analysis of the objects found by the main legend according to specific criteria. Sublegends cannot exist on their own; they do not look for new objects.

Sublegends are required for subtotals. Layout legends *with* indexes contain sublegends with legend rows for the indexes.

Important!
Sublegends *must not contain fills*!

Legend header

The legend header appears on each page of a legend. In the case of multipage legends, you can see the header on each page. The legend header contains the static elements of a legend, such as lines or texts for column labels and headings. However, the legend header can also include dynamic cells such as the page number, the current date or time or the project name.

The footer of a page and the border of the legend template are also parts of the legend header. The border defines the size of the legend and thus the output format.

Templates for layout legends *without* indexes consist of the legend header only.

Legend row

Legend rows are the dynamic parts of a legend. You can integrate legend rows in sublegends or directly in the main legend.

A legend row contains any number of cells. After analysis, these cells display the resulting values in columns. The cell number defines the sequence of the objects in a legend. The program always sorts the cells by the contents of the cell with the smallest cell number.

A legend row can also contain texts and separator lines.

Layout legends *with* indexes contain legend rows for the indexes.

Texts and graphical elements

Legends can contain texts and graphical elements (lines, circles, fills, bitmaps and so on).

Cells

Cells are the intelligent parts of a legend. Based on the parameters defined, cells analyze the objects in the drawing files.

Associative legends retain the cell properties, whereas static legends replace the cells with the resulting value of analysis.

Subtotals and totals

Formula-based cells can be defined as totals or subtotals.

You can use subtotals to check the contents of up to three columns during analysis. The legend calculates the subtotal when the column contents change. For example, the legend calculates the room areas when the area type changes.

A total (= final total) is always at the end of a legend or sublegend. The final total calculates the final result of a column.

Subtotal and final total can consist of several formula cells. For example, you can combine the total of the **Area** column and the total of the **Volume** column to form the final total.

Sublegends and the Allplan hierarchies

You must consider the internal object categories in Allplan and their hierarchical levels when you create legend templates from sublegends and nested legend rows.

Take the **rooms** and **components** categories, for example. You cannot combine these two hierarchies: A room area is subordinate to the room, which you can assign to the superordinate room group. However, you can never assign a door or window to a room, as these two objects come from the **components** category and objects from this category cannot be assigned to the **rooms** category.

Tools for legends

The following section lists the most important tools for legends, showing you where to find these tools (role -> task -> task area -> flyout menu).

Creating legends

Define Cell

Architecture / Engineering / Draft -> User-Defined Objects -> Reports, Legends

You can use this tool to define cells for a main legend or sublegend. All cells together make up a legend template.

Define Legend

Architecture / Engineering / Draft -> User-Defined Objects -> Reports, Legends

You can use this tool to define a new legend template.

Legend

All roles -> *all tasks* -> Annotations -> Reports flyout menu

You can use this tool to create legends for architectural components and other objects, placing the legends in a drawing file or layout.

The legends analyze the current drawing file and all drawing files open in edit mode, including all objects on modifiable layers.

Legend, Title Block

All roles -> Layout Editor -> Layout Editor -> Label flyout menu

You can use this tool to create layout legends with the current layout attributes and project attributes.

The program always creates the legends as associative legends, making sure the legends adapt automatically to changes you make to the attributes. Legends placed can be ungrouped, that is to say, resolved into their design entities.

Changing legends

Modify Legends

Architecture / Engineering / Draft -> User-Defined Objects -> Reports, Legends

You can use this tool to edit legend templates. The default templates for legends *cannot* be modified. You must copy the default templates before you can modify them.

Manage Label Styles, Legends

Architecture / Engineering / Draft -> User-Defined Objects -> Reports, Legends

You can use this tool to rename, copy or delete legend templates one by one or file by file.

Shortcut menu

Update Labels

Right-click a legend placed -> shortcut menu

You can use this tool to update the contents of the legends placed in a drawing file, layout, or document.

Page break

Right-click a legend placed -> shortcut menu

You can use this tool to redefine the page break of a legend placed in a drawing file or document.

Resize

Right-click a legend placed -> shortcut menu

You can use this tool to resize a legend by clicking in the workspace or entering a factor in the dialog line.

Ungroup

Right-click a legend placed -> shortcut menu

You can use this tool to resolve an associative legend into its design entities. As a result, the legend is no longer associative; it consists only of text elements and design entities. Automatic updates are no longer possible.

Overview of modification options

The following table lists the options for modifying legends placed and legend templates.

Sometimes, different modification options produce the same result. In these cases, an **X** indicates the approach we recommend. Alternatives are indicated by (**X**).

The following rule of thumb applies: Use the **Modify Legends** tool for legend-specific modifications (see exercises 1 and 2). If you want to modify the layout of a legend, we recommend that you place parts of a legend template in a drawing file, modify these parts and define a new legend template (see exercise 3 and "Taking parts from other legend templates" on page 81 in the appendix).

	Modify Legends or Manage Label Styles, Legends	Parts of legend template placed in drawing file -> define new legend template	Legend placed in drawing file -> right-click -> shortcut menu
Legend templates - admin			
Rename	X	–	–
Copy	X	–	–
Delete	X	–	–
Import, export	X	–	–
Legend templates - as a whole			
Legend parts (header, row)	–	X	–
Spacing between lines, line feed (whole legend)	X	(X)	–
Spacing between lines, line feed (sublegend)	X	(X)	–
Add or remove cell	X	(X)	–
Change sort criterion (by using cell numbering)	X	(X)	–
Legend templates - graphical elements			
Pen	X	X	–
Line	X	X	–
Color	X	X	–
Stretch entities	X	X	–
Delete	X	X	–
Insert	–	X	–
Modify graphic cell (for example, change graphic)	X	X	–
Insert or change bitmap	X "Symbol" cell type	X	–

	Modify Legends or Manage Label Styles, Legends	Parts of legend template placed in drawing file -> define new legend template	Legend placed in drawing file -> right-click -> shortcut menu
Legend templates - cells			
Cell format, output format	X	X	–
Cell numbering	X	(X) Define cell Mod No	–
Check function and properties of a cell	X	X Right-click -> Properties -> Info -> Attribute selection	–
Modify function of a cell	X	X	–
Text parameters	X	X	–
Text	X	X	–
Unit	X	X	–
Border around cell	–	X	–
Alignment (left, centered, right)	X	X	–
Legend placed			
Page break	–	–	X Page break
Resize	–	–	X Resize
Ungroup	–	–	X Ungroup

Managing legend templates

You can use the **Manage Label Styles, Legends** tool to manage legend templates centrally. You can use this tool to copy, rename, or delete legend templates.

You can find this tool in the **Reports, Legends** task area of the **User-Defined Objects** task (**Architecture**, **Engineering**, or **Draft** role).

Copying legend templates

The legend templates that come with Allplan are in the **default** folder. You *cannot* modify these default templates.

However, you can use the default templates as the basis for creating your own legend templates. To do this, copy a legend template from the **default** folder into the **office**, **private**, or **project** folder. You can then modify this copy to suit your specific needs.

ATTENTION!
Legend templates that you want to integrate as sublegends in other legend templates *must* be in the **office** folder! When defining legends, you can select sublegends from this folder only.

Important!
Regardless of the folder (**office**, **private**, or **project**), task-related tools find their function-specific legends only if these legends are in the associated legend file (see table in "Function-specific legend templates" on page 9). When copying legend templates or creating new legend templates, you must place the legend templates in the legend file with the right number.

To copy individual legend templates or a whole legend file

➲ Allplan is running.

➲ **Actionbar**: The **Architecture**, **Engineering**, or **Draft** role is selected.

1 Go to the **Actionbar** and click **Manage Label Styles, Legends** (**User-Defined Objects** task – **Reports, Legends** task area).

2 The **Manage Label Styles, Legends** dialog box opens. Click **Legends**.

The **Legends** dialog box opens.

3 Specify what you want to copy.

If you want to copy whole legend files with all legend templates, click **File** in the upper part of the dialog box.

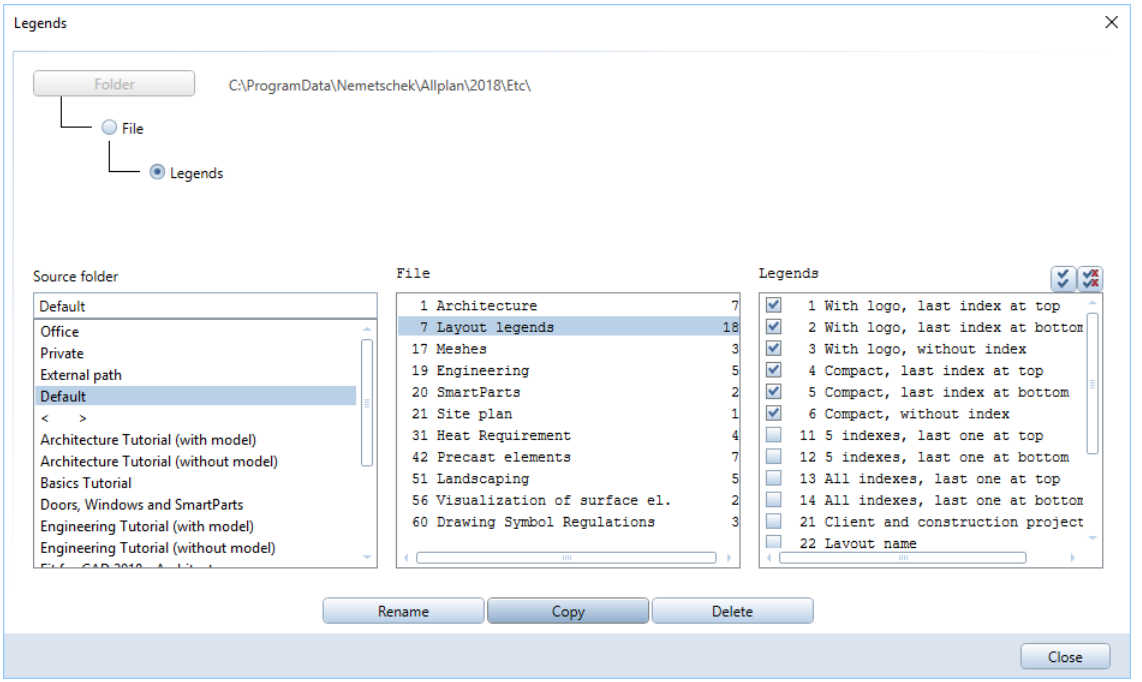
Or:

If you want to copy individual legend templates, click **Legends** in the upper part of the dialog box.

4 Select the **Source folder**, that is to say, the folder that contains the legend templates or legend files that you want to copy.

5 Select the check boxes of the entries that you want to copy in the **File** or **Legends** area.

6 Click **Copy**.



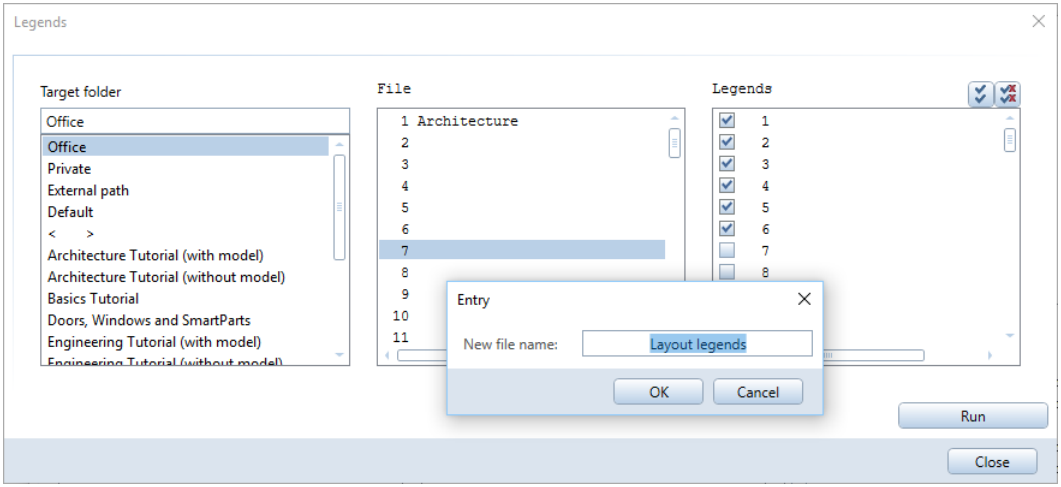
7 Specify the **Destination folder** (**office**, **private**, **external path**, or **project**) in the **Legends** dialog box.

8 Click the destination file and click the numbers of the destination entries:

- If you want to keep the structure of the files or entries in the destination folder, click **Run** first and then enter the first destination number.
- If you want to copy the files or entries to consecutive numbers, select the first destination number in the dialog box and then click **Run**.
- If you want to copy the files or entries to any destination numbers, select the required destination numbers in the dialog box and click **Run**.

Important!
When copying templates for *layout legends*, you *must* select **File 7** for the *destination file*!

9 *Only if the destination file does not exist:*
Enter a name for the legend file and click **OK** to confirm.



10 **Close** the **Legends** dialog box.

Renaming legend templates

The default templates that come with Allplan (**default** folder) *cannot* be renamed. You can rename only legend templates that are in the **office**, **private**, **external path**, or **project** folder.

To rename a legend template or legend file

➲ Allplan is running.

➲ **Actionbar**: The **Architecture**, **Engineering**, or **Draft** role is selected.

1 Go to the **Actionbar** and click **Manage Label Styles, Legends** (**User-Defined Objects** task – **Reports, Legends** task area).

2 The **Manage Label Styles, Legends** dialog box opens. Click **Legends**.

The **Legends** dialog box opens.

3 Specify what you want to rename.

If you want to rename a legend file, click **File** in the upper part of the dialog box.

Or:

If you want to rename a legend template, click **Legends** in the upper part of the dialog box.

4 Select the **Source folder**, that is to say, the folder that contains the legend template or legend file that you want to rename.

5 If you selected **File** (step 3), select the check box of the legend file that you want to rename in the **File** area.

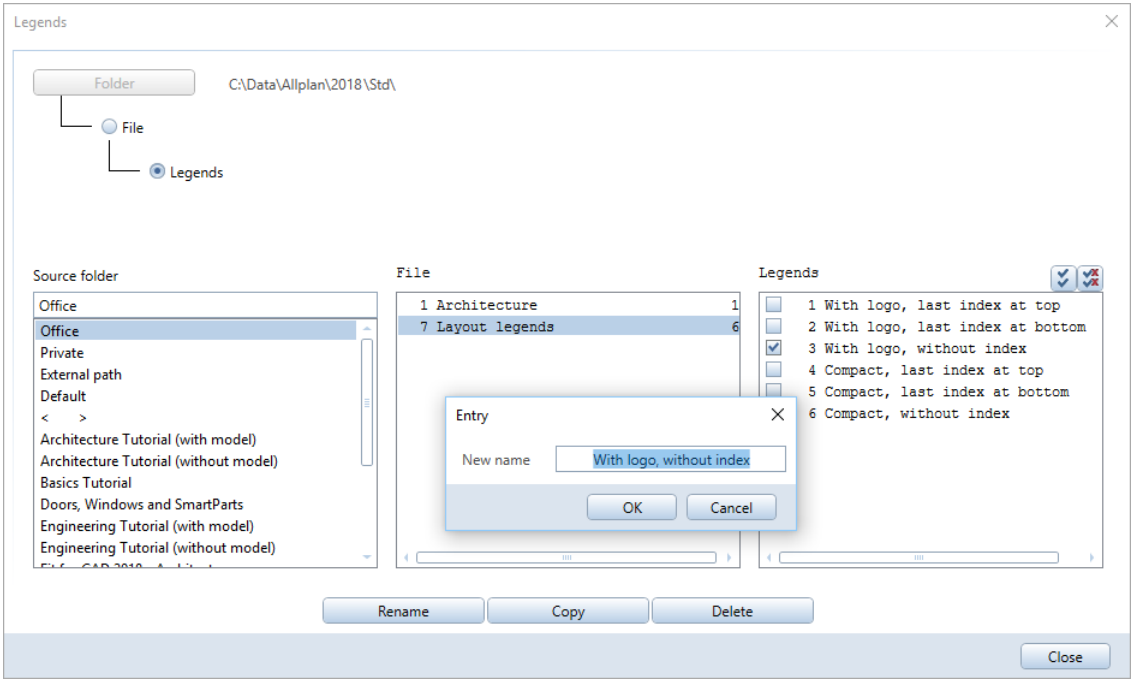
Or:

If you selected **Legends** (step 3), select the legend file with the legend template that you want to rename in the **File** area and select the check box of the legend template in the **Legends** area.

6 Click **Rename**.

7 Enter the new name in the **Entry** dialog box.

You can enter up to 32 characters for names of legend templates or legend files.



8 Click **OK** to confirm.

9 **Close** the **Legends** dialog box.

Deleting legend templates

The default templates that come with Allplan (**default** folder) *cannot* be deleted. You can delete only legend templates that are in the **office**, **private**, **external path**, or **project** folder.

To delete individual legend templates or a whole legend file

➲ Allplan is running.

➲ **Actionbar**: The **Architecture**, **Engineering**, or **Draft** role is selected.

1 Go to the **Actionbar** and click **Manage Label Styles, Legends** (**User-Defined Objects** task – **Reports, Legends** task area).

2 The **Manage Label Styles, Legends** dialog box opens. Click **Legends**.

The **Legends** dialog box opens.

3 Specify what you want to delete.

If you want to delete whole legend files with all legend templates, click **File** in the upper part of the dialog box.

Or:

If you want to delete individual legend templates, click **Legends** in the upper part of the dialog box.

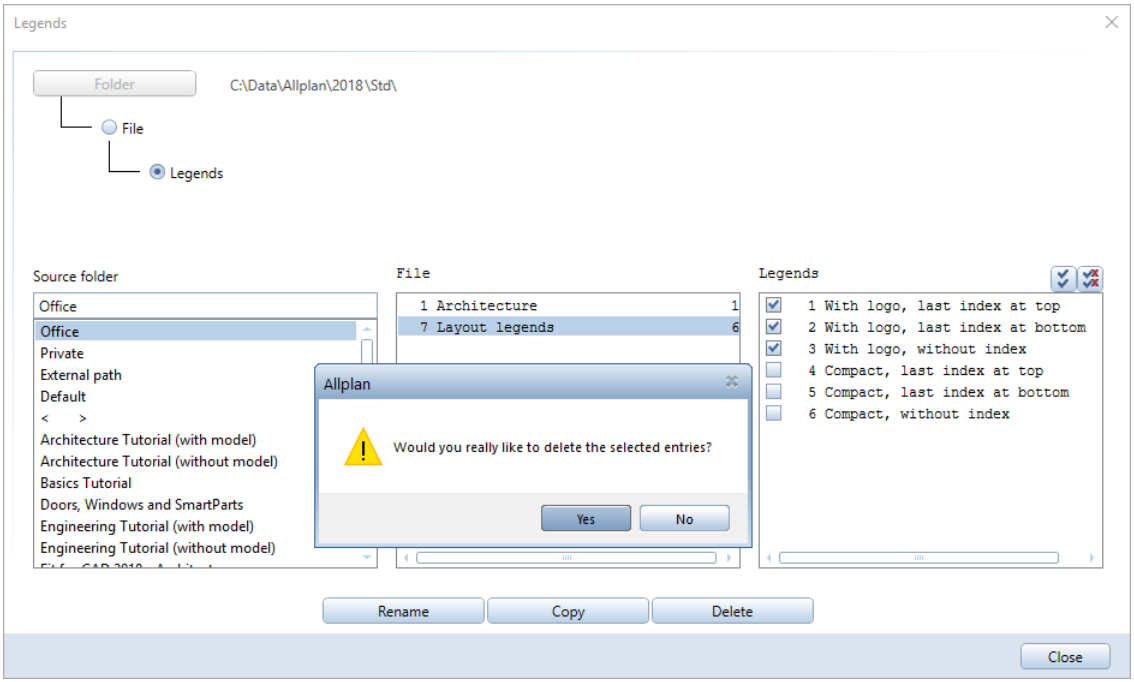
4 Select the **Source folder**, that is to say, the folder that contains the legend templates or legend files that you want to delete.

5 If you selected **File** (step 3), select the check boxes of the legend files that you want to delete in the **File** area.

Or:

If you selected **Legends** (step 3), select the legend file with the legend templates that you want to delete in the **File** area and select the check boxes of the legend templates in the **Legends** area.

6 Click **Delete**.



7 Click **Yes** to confirm the prompt.

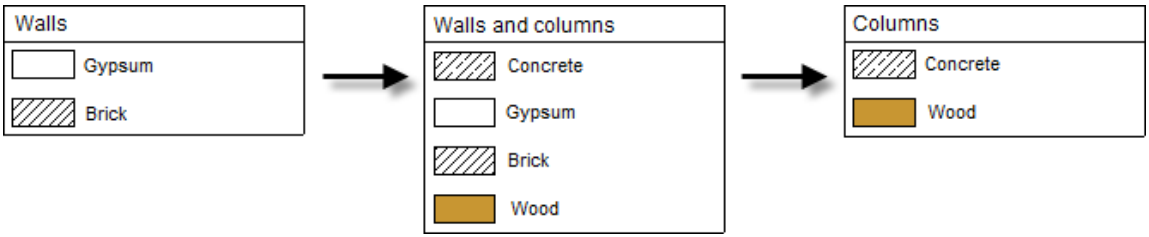
8 **Close** the **Legends** dialog box.

Exercise 1: changing the selection criterion of a legend

The selection criterion in the legend template (that is, in the main legend) defines which objects will be analyzed by a legend.

In the following exercise, you will modify the selection criterion of a legend template so that the legend analyzes not only walls but also columns. After this, you will change the selection criterion again so that the legend analyzes columns only.

This exercise is based on the default template for the **wall display** legend.



Important!
While modifying the legend template, you can use *only* the buttons on the **Modify Legends** Context toolbar. You *cannot* apply the general tools. Consequently, the **Undo** tool is *not* available either.

Expanding the selection criterion

To expand the selection criterion for the "wall display" legend template

➲ Plan view is selected in the active viewport.

➲ **Actionbar**: The **Architecture**, **Engineering**, or **Draft** role is selected.

1 Copy the **wall display** legend template (**1 Architecture** legend file) from the **default** folder into another folder, for example, **office**.

To do this, use the **Manage Label Styles, Legends** tool (see "Copying legend templates" on page 18).

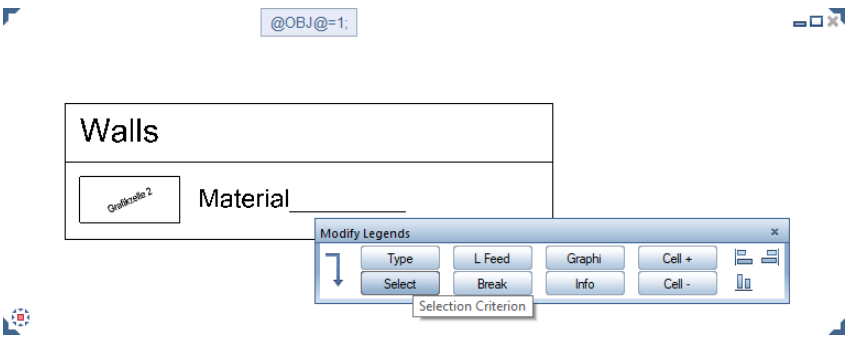
2 Go to the **Actionbar** and click **Modify Legends** (**User-Defined Objects** task – **Reports, Legends** task area).

3 The **Set Path** dialog box opens. Select the folder into which you copied the legend template, for example, **office**. Then click **OK**.

4 The **Save Data** dialog box opens. Go to the **Subfolder** area and select the legend file with the legend template. Then, go to the **Entry** area and select the copied **wall display** legend template. Finally, click **OK**.

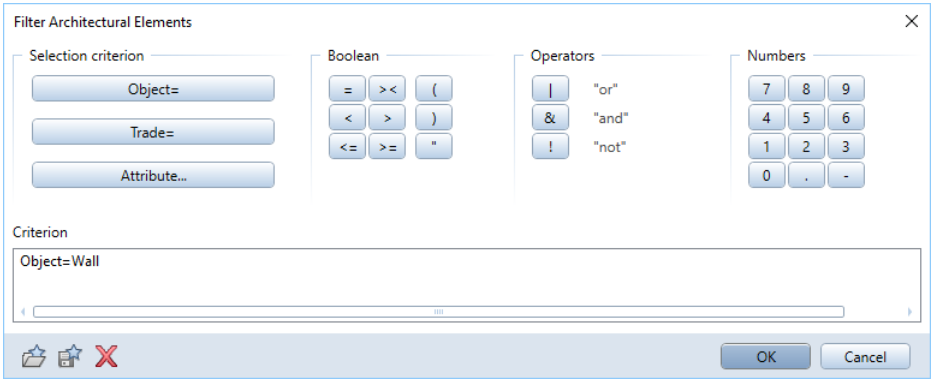
A separate viewport opens, displaying the parts of the legend template.

Tip: You can find more information on the **Modify Legends** tool in the Allplan Help. Just select the F1 KEY.



5 Go to the **Modify Legends** Context toolbar and click **select** to open the selection criterion for analyzing objects.

The **Filter Architectural Elements** dialog box opens, displaying the current selection criterion in the **Criterion** area.

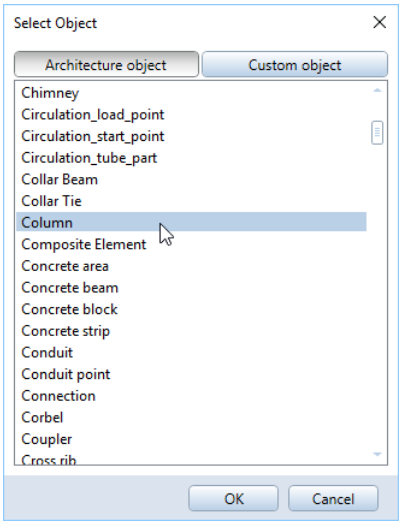


Tip: You can find more examples of selection criteria in the Allplan Help. See "Selection criterion, examples".

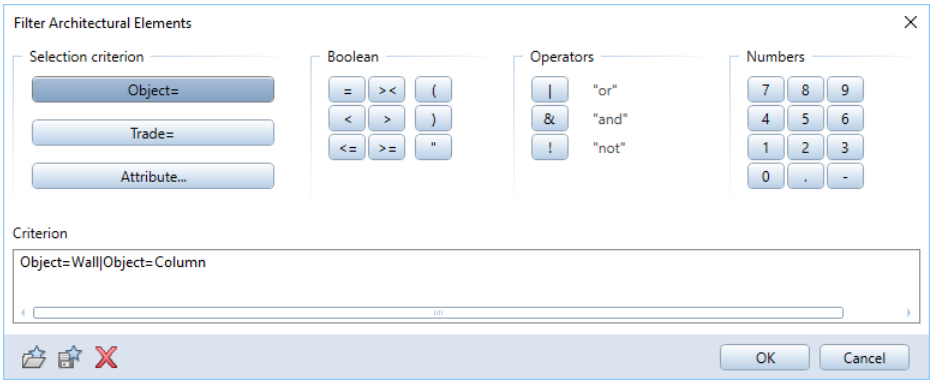
This criterion looks for the **wall** object type. To include objects of the **column** type in the analysis, you must expand this criterion accordingly.

6 Use the buttons in the dialog box to expand the criterion:

- Go to the **Operators** area and click **|** "**or**".
- Go to the **Selection criterion** area and click the **Object=** button.
- The **Select Object** dialog box opens. Select the **Column** entry on the **Architecture object** tab and click **OK** to confirm.



This adds the **column** object type to the selection criterion.

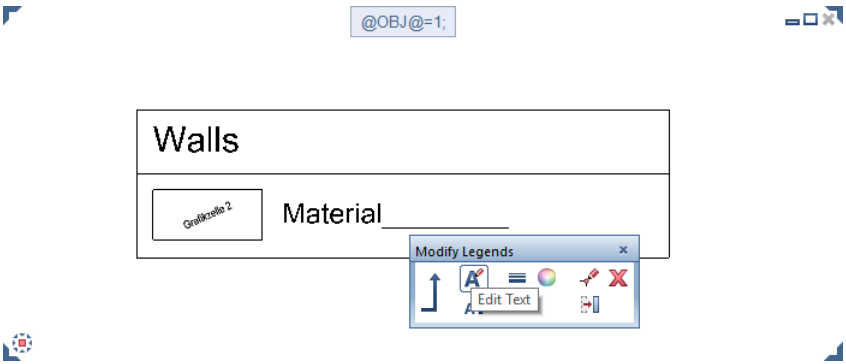


7 Click **OK** to confirm the **Filter Architectural Elements** dialog box.

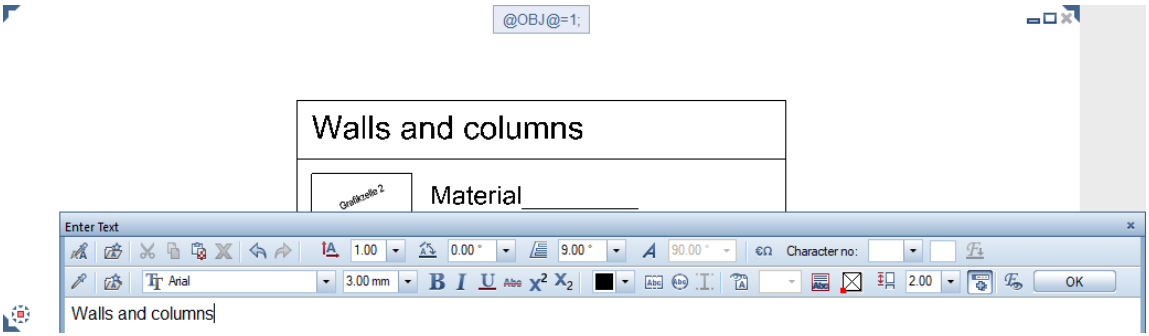
8 The next step is to adjust the label of the legend.

To do this, click  on the **Modify Legends** Context toolbar. You can now see the general modification tools.

9 Click **Edit Text** and click the text **Walls**.



10 The **Edit Text** dialog box opens. Add **and columns** to the text and click **OK** to confirm the change.



11 Select ESC to close the **Edit Text** tool.

12 Save the legend template.

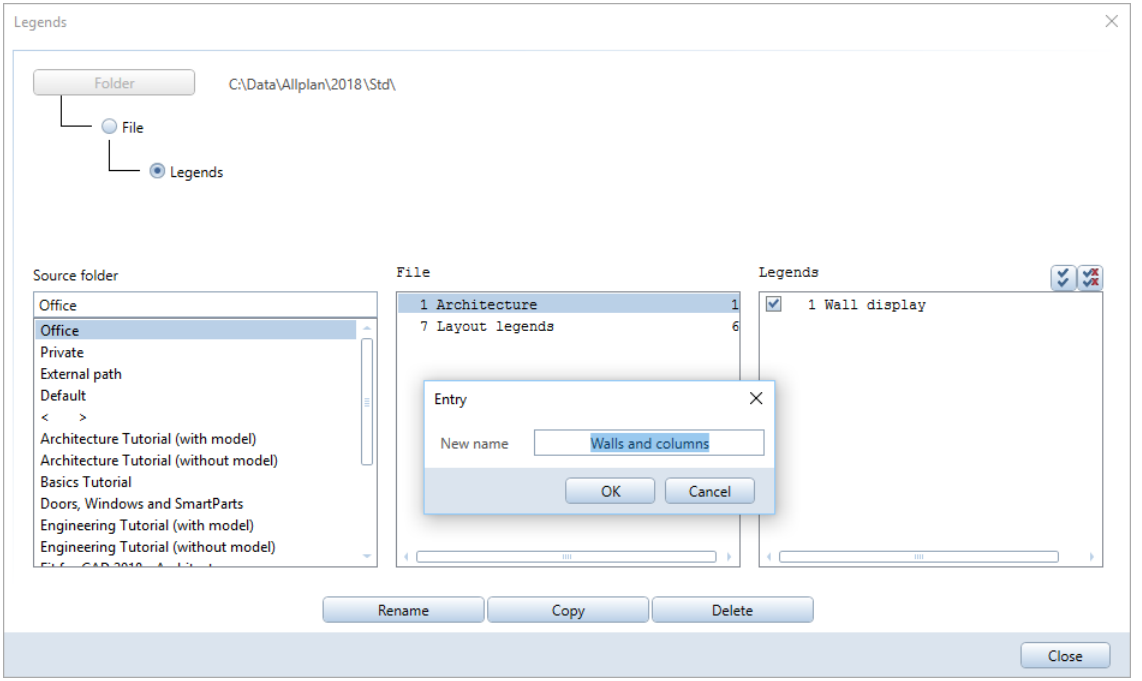
To do this, select ESC again. Select **Save** in the dialog box and click **OK** to confirm.

13 Finally, rename the legend template.

To do this, select the **Manage Label Styles, Legends** tool again (**User-Defined Objects** task -> **Reports, Legends** task area). The **Manage Label Styles, Legends** dialog box opens. Click **Legends**.

14 The **Legends** dialog box opens. Select the source folder, the legend file, and the **wall display** legend template you just modified. Then click **Rename**.

15 Enter **walls and columns** for the new name of the legend template in the **Entry** dialog box and click **OK** to confirm.

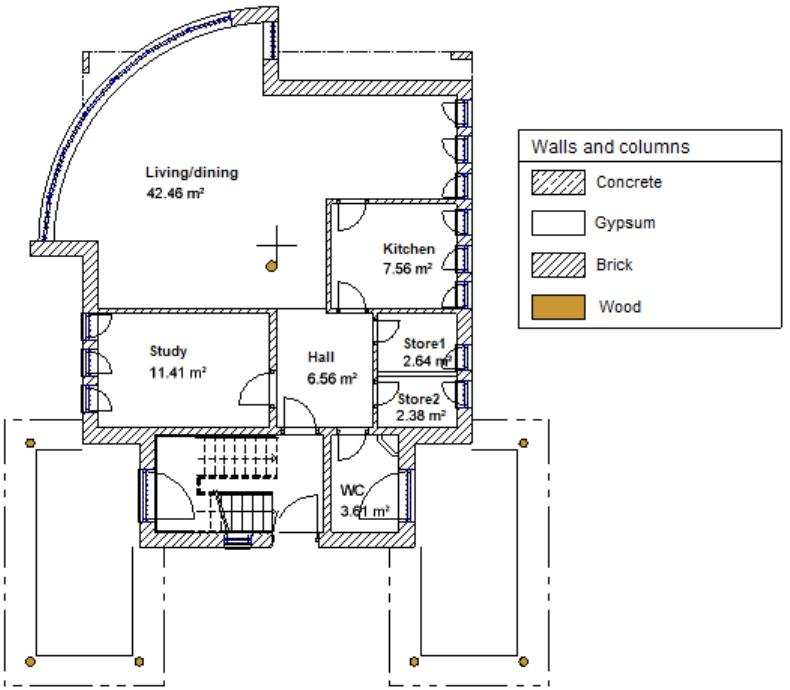


16 **Close** the **Legends** dialog box.

Testing the "walls and columns" legend template

Test the **walls and columns** legend template before you use it in your daily work. To do this, create or select a drawing file with different wall types and column types and place the legend in this drawing file.

Tip: This example uses the sample project from the Architecture Tutorial. You can download this project from Allplan Connect (**Training** -> **Documentation**).



To place the legend in a drawing file

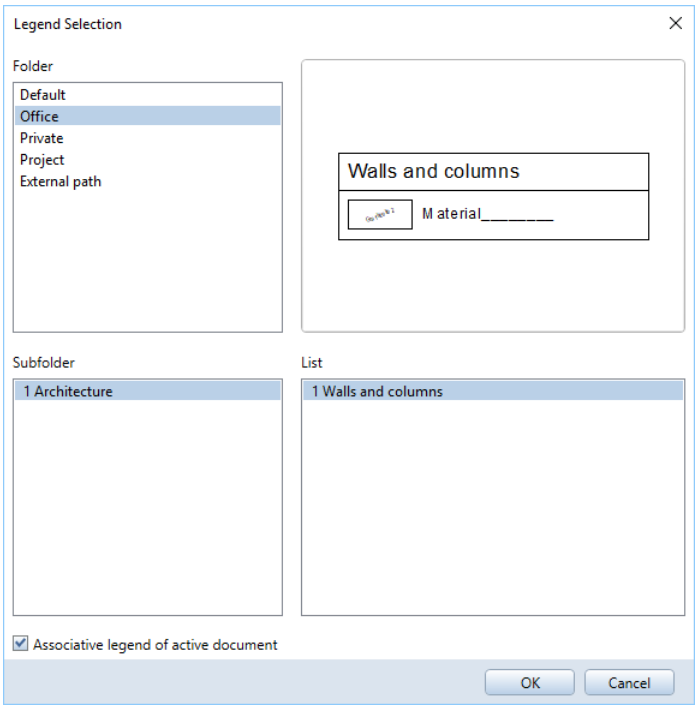
➲ A drawing file with different wall types and column types is open.

1 Go to the **Actionbar** and click **Legend** (**Annotations** task area -> **Reports** flyout menu).

The **Legend Selection** dialog box opens.

2 Go to the **Folder** area of the **Legend Selection** dialog box and select the relevant folder, for example, **office**. Then, go to the **Subfolder** area and select the legend file with the legend template.

3 Go to the **List** area and select the **walls and columns** legend template. In addition, select the **associative legend of active document** option.



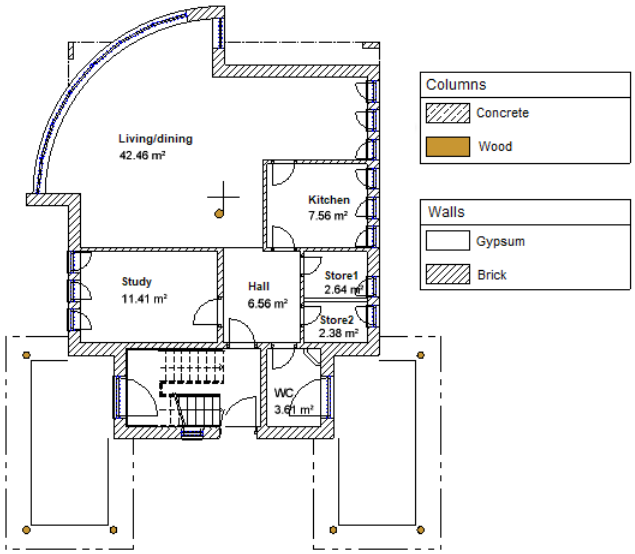
4 Click **OK** to confirm and place the legend in the current drawing file.

Deriving the "columns" legend template

Creating a legend template for columns is very simple. Just follow the steps in "Expanding the selection criterion" on page 28:

- Copy the **wall display** legend template (**1 Architecture** legend file) from the **default** folder into another folder, for example, **office**.
- Replace the selection criterion **Object=Wall** with **Object=Column**.

- Change the text in the legend template.



- Save the new legend template with a meaningful name.

Exercise 2: modifying a legend template

Here, too, you will define a new legend template by modifying an existing legend template. This exercise is based on the default template for the **with logo, last index at top** layout legend.

You will add a project attribute to the legend template. At first, however, you must make space for the new cell of the project attribute. To do this, you will move and modify the cells, texts and lines in the lower area of the legend template.

In addition, you will replace the dynamic field, which integrates the bitmap currently defined as the office logo in the legend, with a separate graphic in this legend template. (Thus, you can insert a graphic that differs from the office standard in legends.) For this purpose, you must save the required bitmap as a symbol to the symbol library in advance (see "Saving symbols to the Library palette" in the Allplan Help).

Tip: To find out how to replace the Allplan logo with your office logo, see "Changing the office logo in default layout legends" on page 76 in the appendix.

Finally, you will change the layout index from five entries to ten entries. In addition, you will modify the sort criterion of the layout index so that sorting is by date in ascending order. As a result, the "last" index is not the index created most recently but the index with the newest date.

Important!
While modifying the legend template, you can use *only* the buttons on the **Modify Legends** Context toolbar. You *cannot* apply the general tools. Consequently, the **Undo** tool is *not* available either.

Copying and opening the default template

Like all default templates that come with Allplan, the template for the **with logo, last index at top** layout legend *cannot* be modified either.

Before you can modify the **with logo, last index at top** layout legend, you must copy it into the **office**, **private**, or **project** folder.

To modify a legend template

➲ Plan view is selected in the active viewport.

➲ **Actionbar**: The **Architecture**, **Engineering**, or **Draft** role is selected.

1 Copy the **with logo, last index at top** legend file (**7 Layout legends** legend file) from the **default** folder into the **office** folder.

To do this, use the **Manage Label Styles, Legends** tool (see "Copying legend templates" on page 18).

2 Go to the **Actionbar** and click **Modify Legends** (**User-Defined Objects** task – **Reports, Legends** task area).

3 The **Set Path** dialog box opens. Select the **office** folder and click **OK**.

4 The **Save Data** dialog box opens. Select the legend file and the **with logo, last index at top** legend template you copied. Then click **OK**.

Two discrete viewports open, displaying the parts of the legend template. One viewport contains the sublegend with the parts of the index; the other viewport contains the parts of the main legend.

You will learn how to modify and save the legend template in the following sections.

Moving elements in a legend template

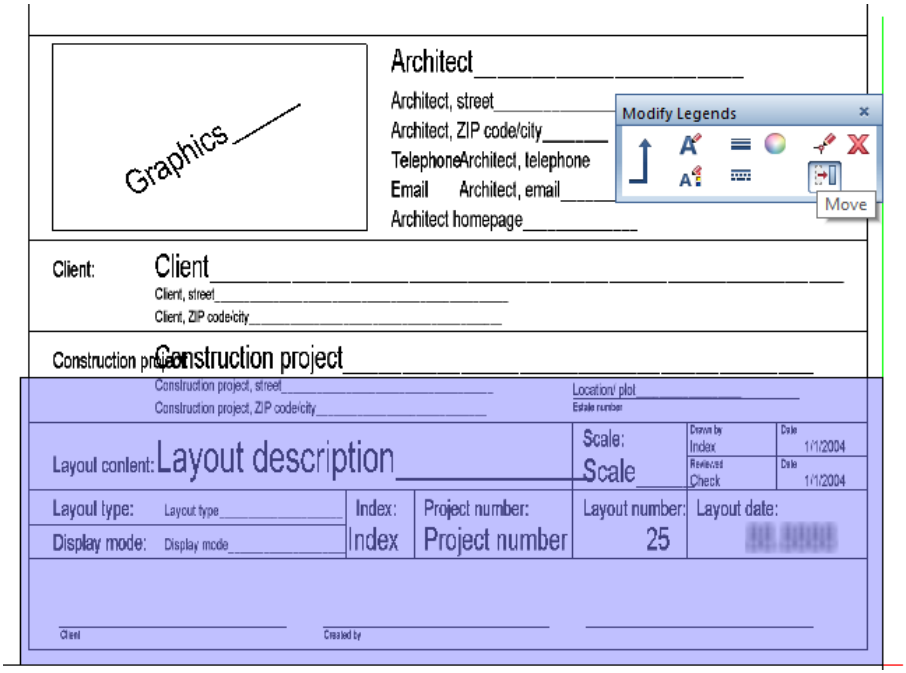
Start by moving some elements of the main legend down so that you can insert a new cell above these elements. In this example, you must move all elements below "Construction project".

To move elements in a legend template

➲ The copy of the **with logo, last index at top** legend template is open (see "Copying and opening the default template" on page 38).

1 Click  on the **Modify Legends** Context toolbar. You can now see the general modification tools.

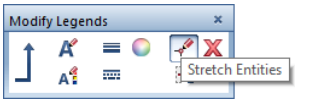
2 Click  **Move** and open a selection rectangle around the elements you want to move.



3 Confirm **dx** = **0.000** and enter **dy** = **-1.000**.

4 Select ESC to close the **Move** tool.

5 Select **Stretch Entities** and close the gaps in the two border lines. Then, select ESC to close this tool.



Now there is enough space for the new cell.

Inserting a new cell

The next step is to insert a new cell for the project attribute in the legend template.

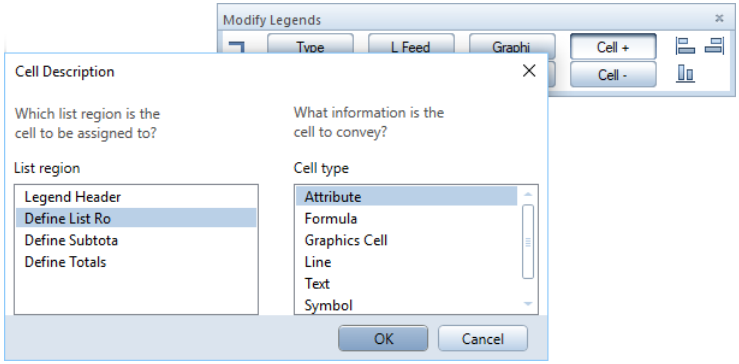
To insert a new cell in a legend template

➲ The copy of the **with logo, last index at top** legend template is open (see "Copying and opening the default template" on page 38).

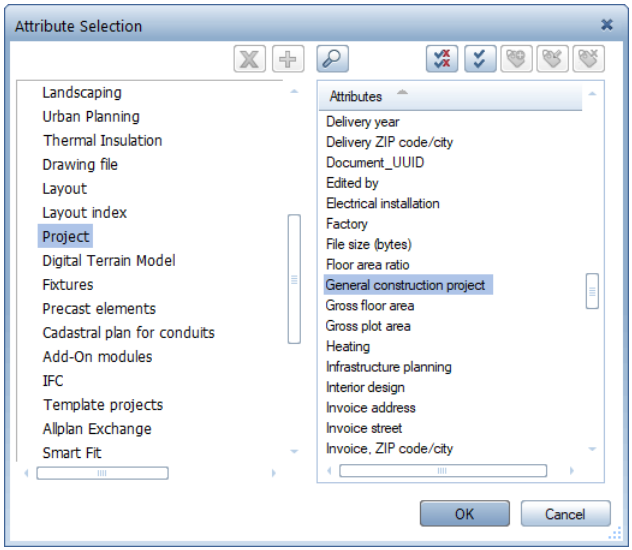
1 To return to the legend tools, click on the **Modify Legends** Context toolbar.

2 Click **Cell +**.

3 The **Cell Description** dialog box opens. Select **list row** for the list region and **attribute** for the cell type. Then click **OK** to confirm.



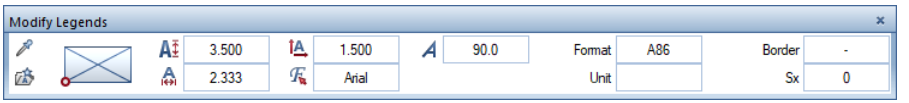
4 The **Attribute Selection** dialog box opens. Select the **project** attribute group and the **general construction project** attribute and click **OK** to confirm.



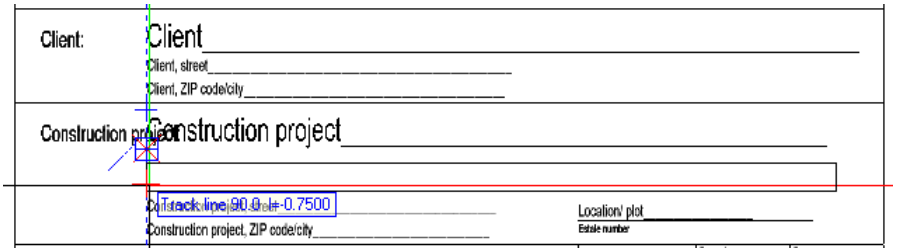
5 Define the text parameters and the cell parameters on the **Modify Legends** Context toolbar

For example, use **Match parameters by clicking** to take the text parameters from an existing cell.

Adjust the output format of the cell. Due to its fixed column width, the legend template can output only the first 86 alphanumeric characters of the attribute assigned.



6 Place the cell in the legend template as shown.



Note: The "general construction project" attribute can output up to 128 characters. If you want to output all 128 characters of this attribute, you must add a second line of text for characters 87 to 128.
To find out how to output text attributes with multiple lines, see "Outputting multiline text attributes" on page 77 in the appendix.

The legend template now contains an additional cell analyzing the "general construction project" attribute. This cell outputs characters 1 to 86 of the attribute assigned, producing a single-line paragraph.

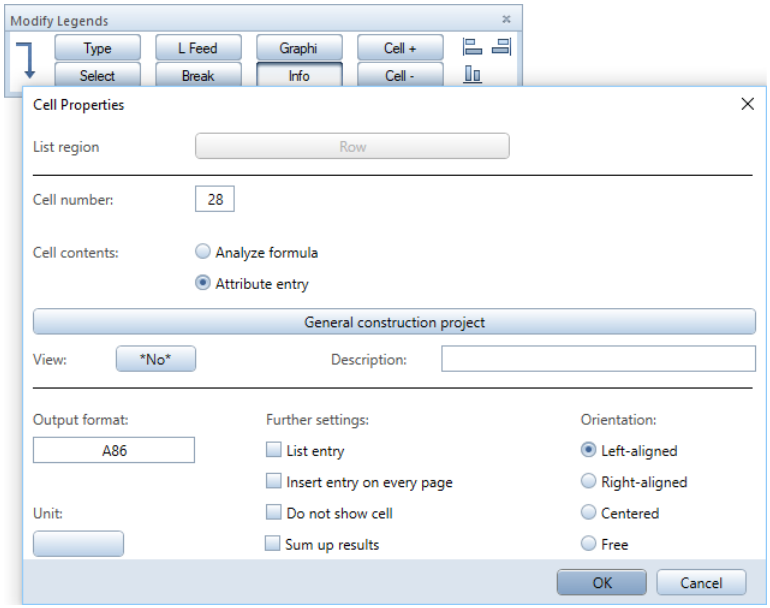
7 Legends only work correctly if their cells are numbered consecutively. Therefore, check the number of the new cell.

In this example, the greatest number (cell number 27) is that of the graphic cell (**graphic cell 27**). Consequently, the number of the new cell must be 28.

Click **Info** on the **Modify Legends** Context toolbar.

8 Click the new cell.

The **Cell Properties** dialog box opens, displaying the properties of the cell. The **cell number** is **28**, which is correct.



9 Click **OK** to close the **Cell Properties** dialog box and select ESC to close the **Info** tool.

Inserting the office logo from the symbol library

Next, you will replace the dynamic field, which integrates the bitmap currently defined as the office logo in the legend, with a separate graphic in this legend template.

To insert a symbol from the library in a legend template

➲ The bitmap is available as a symbol in the symbol library.

➲ The copy of the **with logo, last index at top** legend template is open (see "Copying and opening the default template" on page 38).

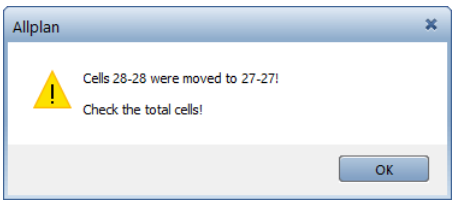
1 Delete the graphic cell.

To do this, click **Cell –** on the **Modify Legends** Context toolbar.

Important!
To delete cells, you *must* use the **Cell –** tool. Only this tool adjusts the cell numbers automatically. *Never* use the **Delete** tool to delete cells. But you can use this tool to delete graphical elements and texts, that is to say, elements *without* cell numbers.

2 Click the **graphic cell 27**.

The cell numbers adapt automatically. The new cell gets the number 27.

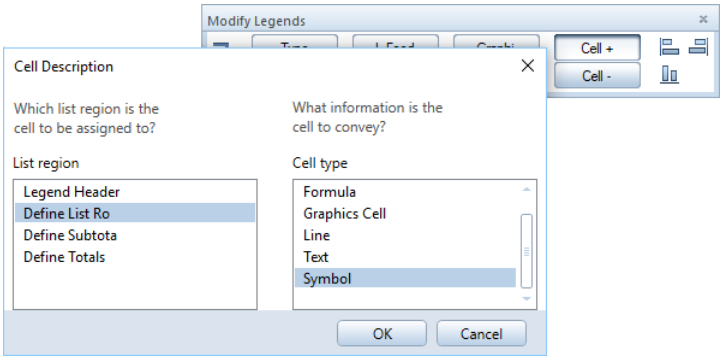


3 Click **OK** to confirm the message.

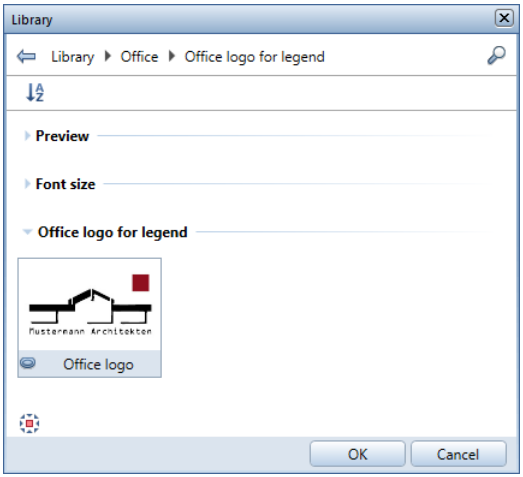
4 Insert the bitmap saved as a symbol in place of the graphic cell you deleted.

To do this, click **Cell +** on the **Modify Legends** Context toolbar.

5 The **Cell Description** dialog box opens. Select **list row** for the list region and **symbol** for the cell type. Then click **OK** to confirm.

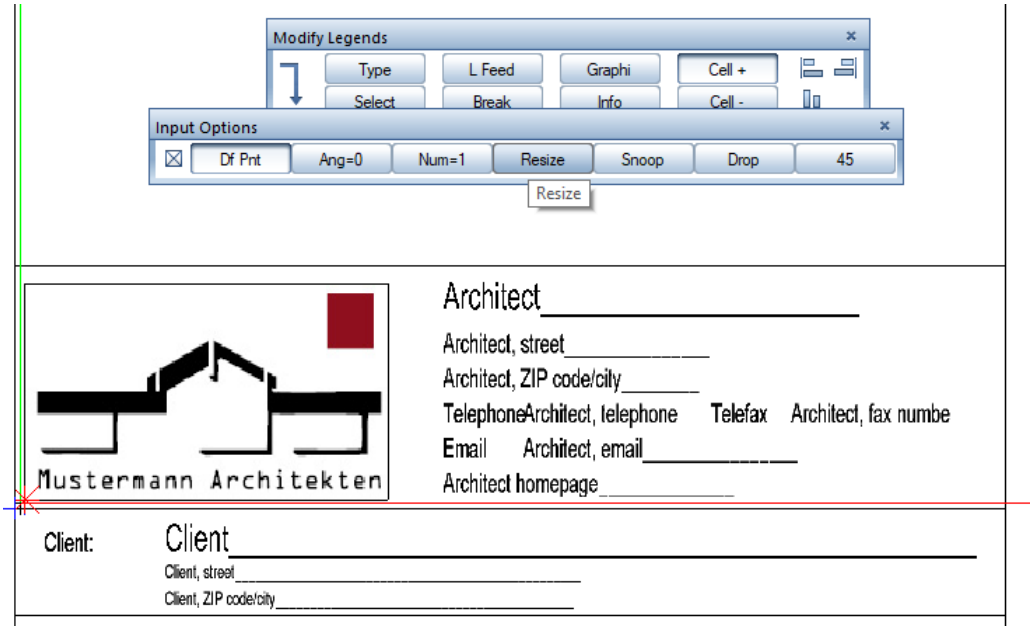


6 The **Library** palette opens. Select the folder and the symbol group with the bitmap. Double-click the bitmap.



7 Place the bitmap in the legend template as shown.

You can adjust the size of the bitmap by clicking **Resize** in the **Input Options**.



Expanding the layout index

Next, you will change the layout index from five entries to ten entries.

To expand the layout index

➲ The copy of the **with logo, last index at top** legend template is open (see "Copying and opening the default template" on page 38).

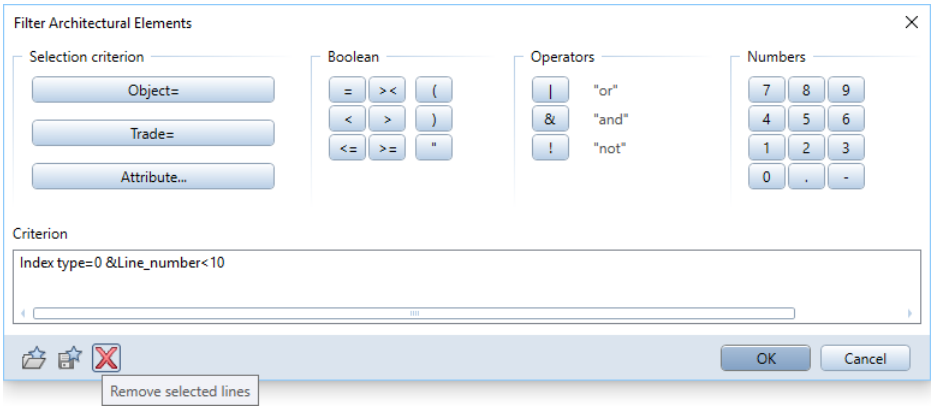
1 Click **Select** on the **Modify Legends** Context toolbar.

2 Click within the viewport that contains the parts of the index.

The **Filter Architectural Elements** dialog box opens, displaying the current selection criterion of the index in the **Criterion** area.

3 Change "Line_number<5" to "Line_number<10".

To do this, click **Remove selected lines** once (!). Add <10 to the criterion by clicking the buttons in the **Boolean** and **Numbers** areas.



4 Click **OK** to confirm.

The index now outputs up to ten index entries.

Changing the sequence of the index entries

The program always sorts the dynamic part of a legend by the contents of the cell with the smallest cell number. All default legend templates with indexes contain a special cell by which the program sorts the index entries. This special cell is *not visible* in the legend placed.

Note: The program assigns ascending numbers to the "Index ID" attribute for each new index entry. This cannot be controlled directly by the user.

The program uses the "Index ID" attribute as the selection criterion, thus sorting the index entries chronologically by date of creation. You will change this selection criterion so that the program sorts the index entries by date (entry in **Index date** column of the index table). As a result, the "last" index is not the index created most recently but the index with the newest date.

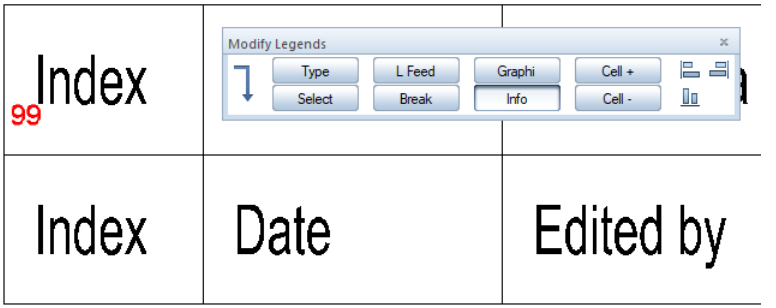
In addition, you will change the sort sequence so that the "last" entry in the layout index is no longer at the top but at the bottom.

To re-sort the entries in the layout index

➲ The copy of the **with logo, last index at top** legend template is open (see "Copying and opening the default template" on page 38).

1 Click **Info** on the **Modify Legends** Context toolbar.

2 Go to the viewport that contains the parts of the index and click the cell in the upper-left field of the table, that is to say, the cell with number **99**.

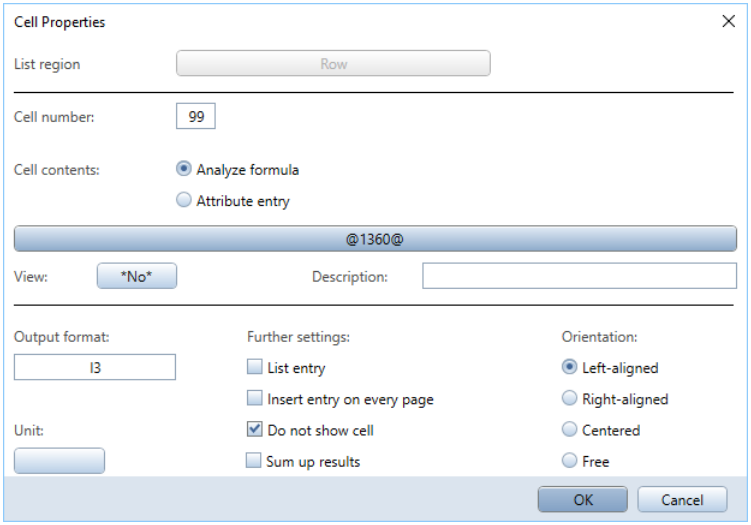


The **Cell Properties** dialog box opens. As you can see, the **cell number** is 99. This is the smallest number of all cells in the index. Consequently, the program sorts the index entries by this cell.

Take a look at the **Further settings** area. The **Do not show cell** option is selected. As a result, the cell is *not visible* in legends placed.

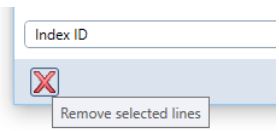
3 Change the selection criterion of the cell.

To do this, click the long button in the **Cell contents** area.



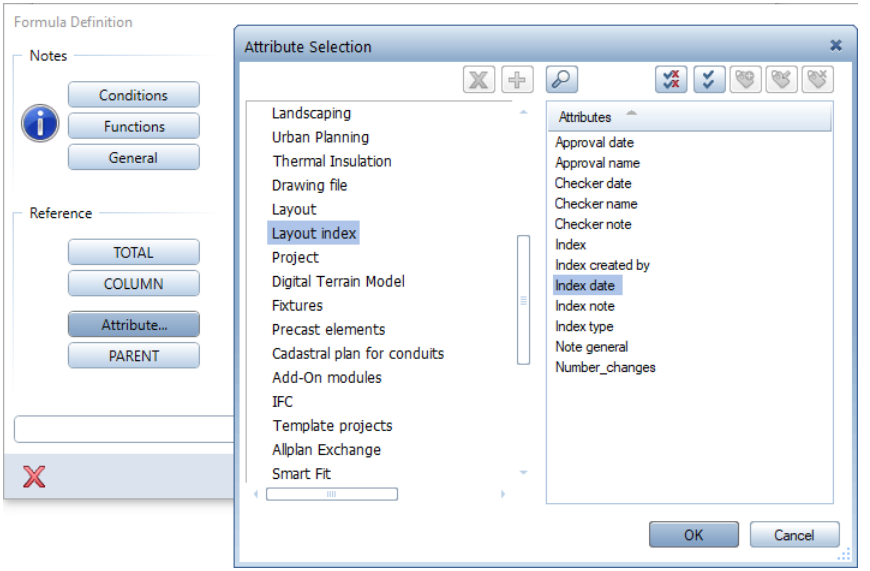
The **Formula Definition** dialog box opens, displaying the current selection criterion.

4 Delete the selection criterion by clicking **Remove selected lines**.



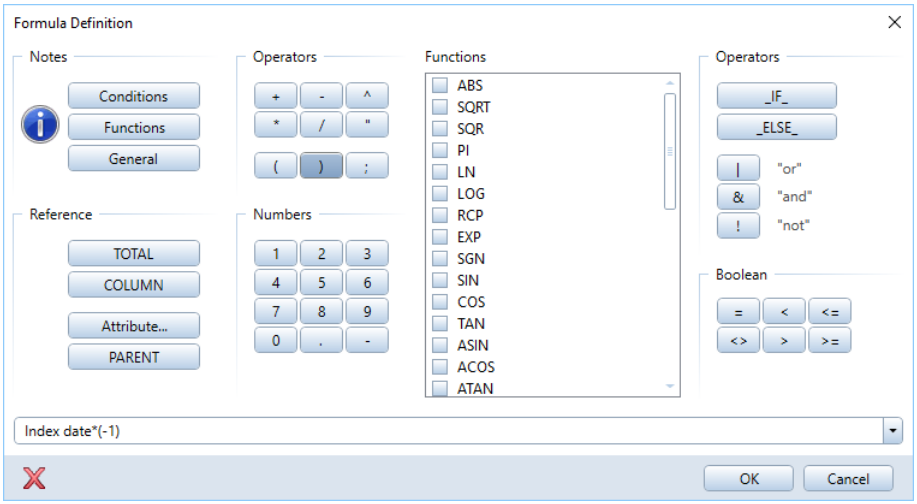
5 Define the new selection criterion.

To do this, go to the **Reference** area and click **Attribute...**. The **Attribute Selection** dialog box opens. Select the **layout index** attribute group and the **index date** attribute. Then click **OK** to confirm.



6 Change the sort sequence by multiplying the "index date" selection criterion by the factor -1.

To do this, use the buttons in the **Operators** and **Numbers** areas.



7 Click **OK** to confirm the **Formula Definition** and **Cell Properties** dialog boxes.

8 Select ESC to close the **Info** tool.

Saving and renaming the legend template

Finally, you will save and rename the legend template you just modified.

To save the legend template

➲ The copy of the **with logo, last index at top** legend template is open (see "Copying and opening the default template" on page 38).

➲ *No* tool is selected on the **Modify Legends** Context toolbar.

1 Select ESC.

2 Select **Save** in the dialog box and click **OK** to confirm.

3 Finally, rename the legend template **10 indexes, current date at bottom** (see "Renaming legend templates" on page 22).

Exercise 3: defining a new legend template

As you learned in exercises 1 and 2, the Modify Legends tool is very useful for managing cells, their properties, analysis criteria, and sort criteria. However, this tool is not so suitable for designing legends graphically.

The situation is completely different when it comes to creating new legend templates from scratch. When defining new legend templates, you cannot use all the legend-specific functions as in the Modify Legends tool. However, you can use just about all 2D drafting options provided by Allplan.

The following exercise shows you how to define a new legend template from scratch. This example uses a layout legend of simple structure.

CLIENT		PROJECT	ARCHITECT
Dr. Sam Sample 42 Sample Street Anytown 123 sam.sample@anytown.com		Building with garage 123 Main Street Anycity 123 EX-123-A	ALLPLAN ALLPLAN GmbH Konrad-Zuse-Platz 1 81829 Munich Tel. 0 89 / 92 7 93 - 0 Email: info@allplan.com
Max Muster		[illegible]	Scale: 1:100
Index	**Date**	**Index created by**	**Index note**
1	[illegible]	Max Muster	Foundation detail changed
2	[illegible]	F. Muster	Window on ground floor added
2a	[illegible]	F. Muster	Sill height changed
2b	[illegible]	F. Muster	Window height changed
3	[illegible]	Max Muster	Interior walls in living area moved
4	[illegible]	Max Muster	Staircase corrected

You will start by designing the border of the title block and index. To make it easier for you to position the texts and legend cells, you will create a grid of auxiliary points as construction lines in this basic structure.

After this, you will insert the fixed labels and add an office logo as a bitmap. Up to this point, you know all steps from your daily work.

The legend-specific steps come next: You will define the cells that analyze and insert the layout attributes and project attributes in the legend. In addition, you will define a sublegend and the main legend and combine these two parts to make up the actual legend template.

When you master these steps, you can define layouts that are more sophisticated and complex not only for layout legends but also for other applications.

Tip: You can also take finished cells from existing legend templates. To find out how to do this, see "Taking parts from other legend templates" on page 81 in the appendix.

Drawing and labeling the border of the legend

To draw and label the border of the legend, you will use basic tools in the **Design** and **Label** tasks.

To draw and label the border for the layout legend

➲ Plan view is selected in the active viewport.

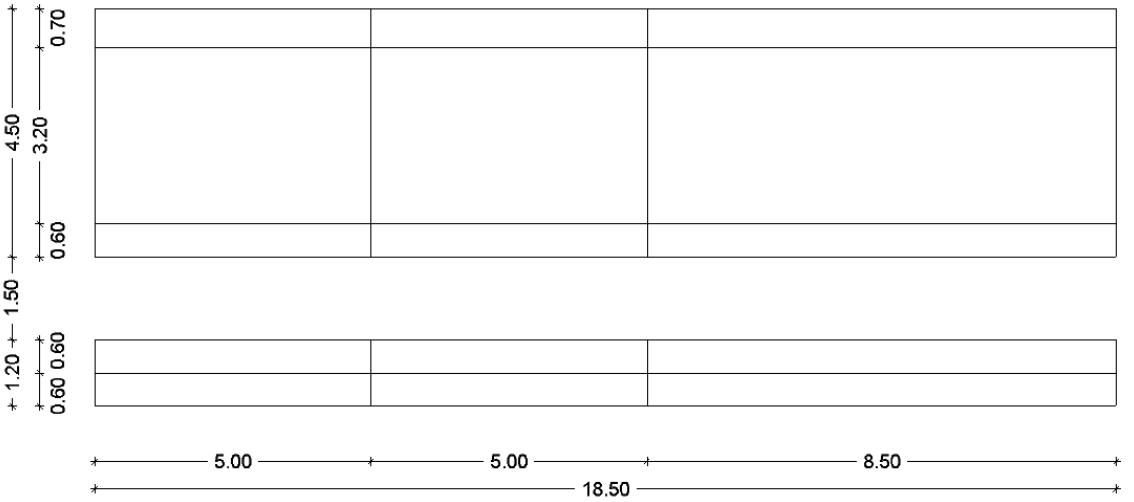
➲ **Actionbar**: The **Draft** role is selected.

1 Select the drawing file you want to use to define the legend template.

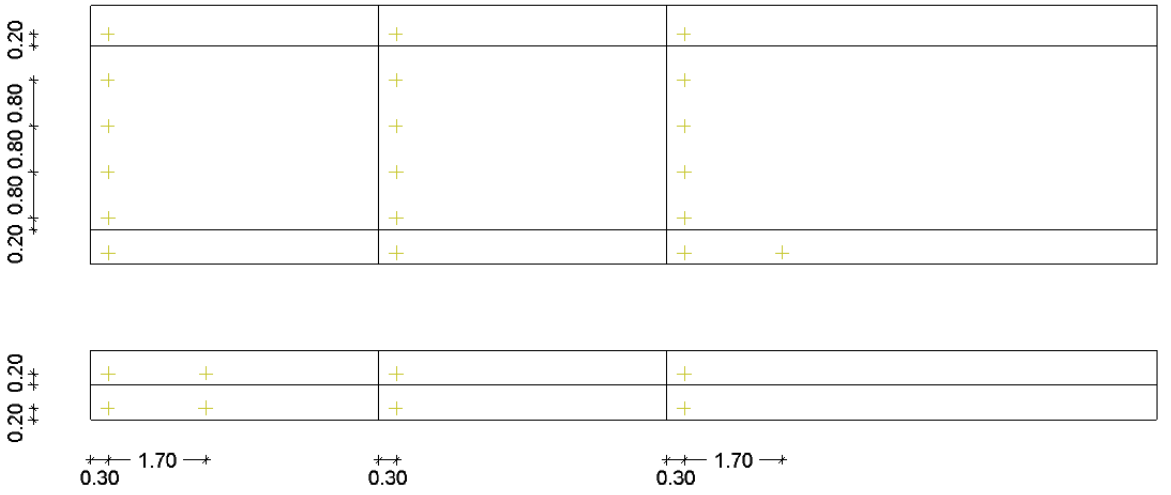
2 Check the **Reference Scale**, which *must* be 1:100. In addition, change the unit of length to m, as all dimensions are in meters.

Important!
Always create legend templates at a reference scale of 1:100. This is the only way to ensure that legends placed in a drawing file are correct, regardless of the reference scale.

3 Use **Line** to draw two separate borders: one for the title block and one for the layout index. Use the dimensions specified.



4 Use **Point Symbol** to create a grid of auxiliary points marking the places where you will position the labels later. Select the **DE_CLINE** layer and place the points at dx = 0.3 m and dy = 0.2 m from the lower-left corner of each field. Use a line spacing of 0.8 m in the area in the middle of the title block.



5 Use **Horizontal Text** to insert the fixed labels. For example, select the following settings: headings in the title block: Arial, 3.00 mm, bold; all other entries in the title block: Arial, 2.00 mm, normal; headings in the layout index: Arial, 2.00 mm, bold; all other entries in the layout index: Arial, 2.00 mm, normal.

CLIENT	PROJECT	ARCHITECT
		ALLPLAN GmbH Konrad-Zuse-Platz 1 81829 Munich Tel. 0 89 / 92 7 93 - 0 Email: info@allplan.com
		Scale:

Index	Date	Index created by	Index note

Inserting the office logo as a bitmap

Tip: If you want to insert a dynamic graphical field instead of the bitmap, you can take this field from an existing legend template (see "Taking parts from other legend templates" on page 81).

In this example, the office logo is a fixed bitmap saved in the legend template. Unlike dynamic fields in the "**with logo ...**" default legend templates, fixed graphical objects do *not* adapt to the settings you define for your office data (see "Changing the office logo in default layout legends" on page 76).

Create the bitmap that you want to use. For example, scan the logo on a letterhead or take a screenshot of the logo.

To insert a bitmap in a legend template

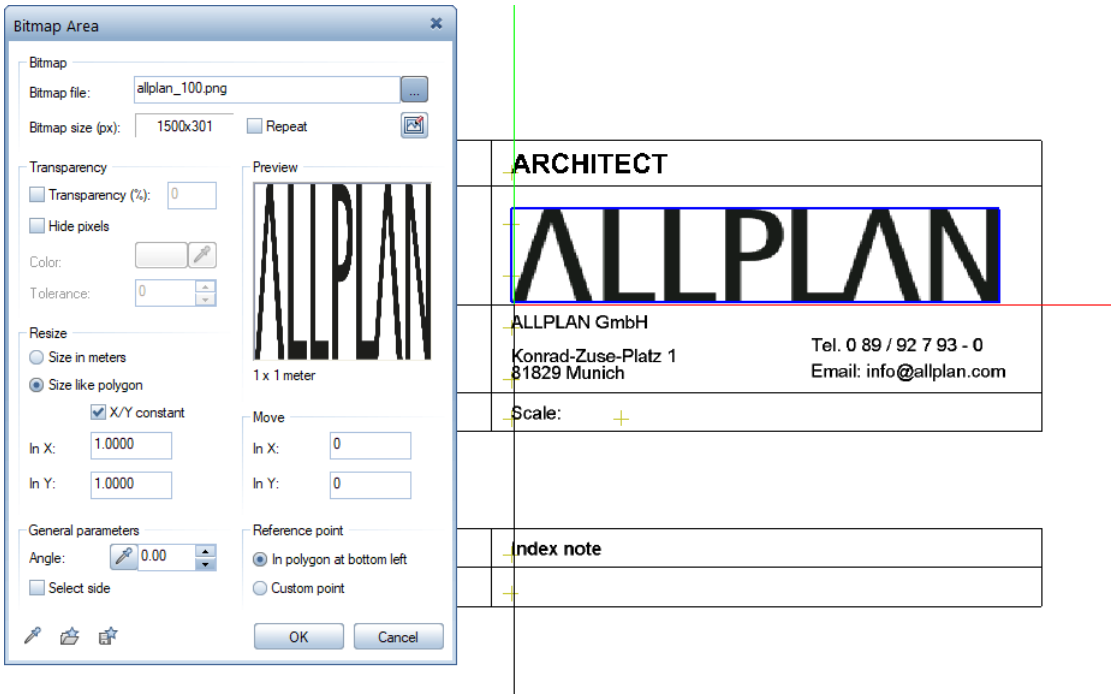
➲ Plan view is selected in the active viewport.

➲ **Actionbar**: The **Draft** role is selected.

1 Go to the **Actionbar** and click **Bitmap Area** (**Design** task – **2D Objects** task area).

2 Click **Properties** on the **Bitmap Area** Context toolbar.

3 The **Bitmap Area** dialog box opens. Select the bitmap and the required size. Close the dialog box and insert the bitmap in the legend template as shown.



Important!
As a legend template is usually used by all people in an office, the bitmap file must be available to everybody. Therefore, click **yes** to confirm the prompt asking you whether you want to add the new bitmap to the office folder (`Std\Design`).

Defining legend cells

Next, you will define the cells that analyze the layout attributes and project attributes of the current layout.

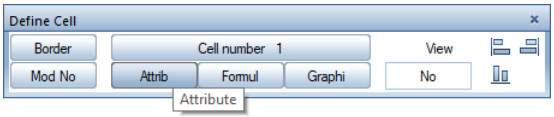
To define legend cells

➲ Plan view is selected in the active viewport.

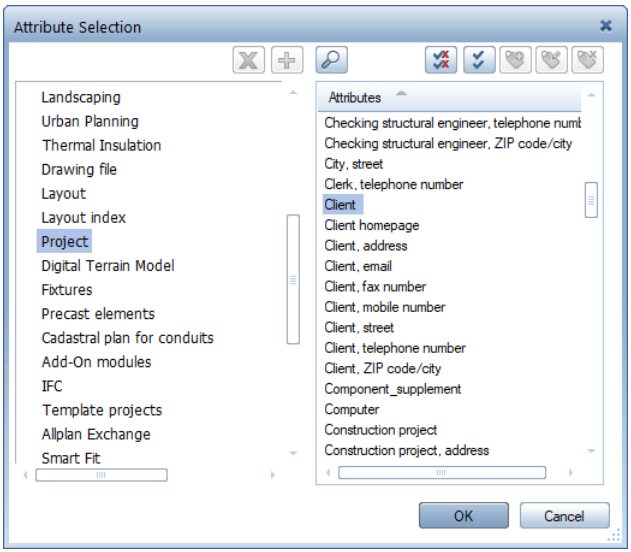
➲ **Actionbar**: The **Architecture**, **Engineering**, or **Draft** role is selected.

1 Go to the **Actionbar** and click **Define Cell** (**User-Defined Objects** task - **Reports, Legends** task area).

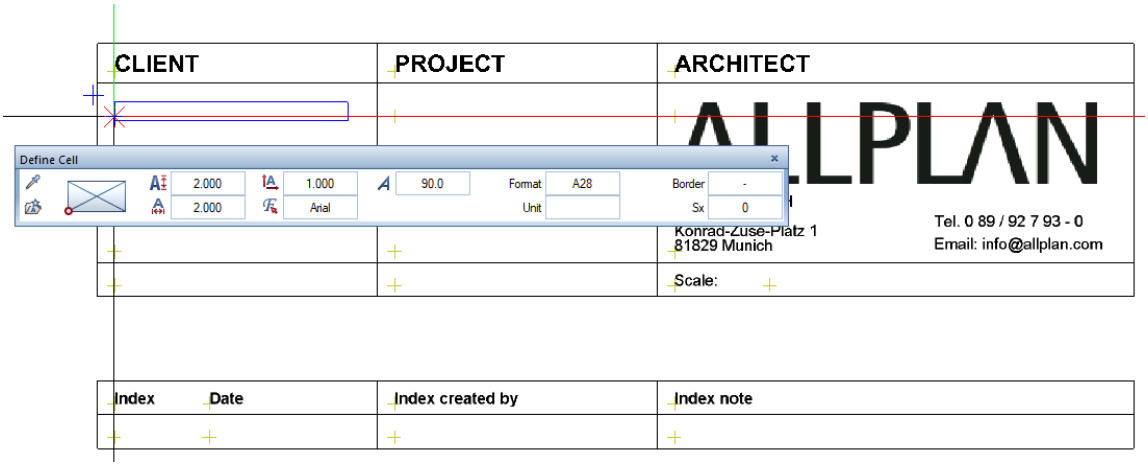
2 Click **Attrib** on the **Define Cell** Context toolbar.



3 The **Attribute Selection** dialog box opens. Select the **project** attribute group and the **client** attribute and click **OK** to confirm.



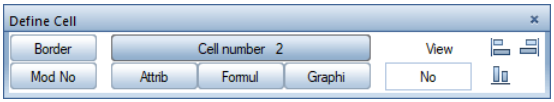
4 Define the text parameters and the cell format. For example, use Arial, 2.00 mm, normal and define an alphanumeric format with 28 characters. Finally, place the cell as shown.



Tip: To find out how to output attributes with multiple lines, see "Outputting multiline text attributes" on page 77 in the appendix.

5 Repeat steps 2 to 4 to define the other cells.

Important!
Cells in legends or sublegends *must* be numbered *consecutively*! So, the next cell must get number **2**; the last cell must get number **11**. If the number of a cell is wrong, you can correct the number by using **Mod No** on the **Define Cell** Context toolbar.



CLIENT column:

Number	Attribute group	Attribute	Format
2	Project	Client, street	A28
3	Project	Client, ZIP code/city	A28
4	Project	Client, email	A28

PROJECT column:

Number	Attribute group	Attribute	Format
5	Project	Construction project	A28
6	Project	Construction project, street	A28
7	Project	Construction project, ZIP code/city	A28
8	Project	Project number	A28

Bottom line of title block:

Number	Attribute group	Attribute	Format
9	Layout	Layout created by	A28
10	General	Current date	D11
11	Layout	Scale	A28

Layout index (= sublegend); assign cell numbers 100 to 103 to the four cells:

Number	Attribute group	Attribute	Format
100	Layout index	Index	A8
101	Layout index	Index date	D11
102	Layout index	Index created by	A28
103	Layout index	Index note	A52

The legend template should now look like this:

CLIENT	PROJECT	ARCHITECT
Client_____	Construction project_____	ALLPLAN
Client, street_____	Construction project, street	
Client, ZIP code/city_____	Construction project, ZIP co	ALLPLAN GmbH Konrad-Zuse-Platz 1 81829 Munich Tel. 0 89 / 92 7 93 - 0 Email: info@allplan.com
Client, email_____	Project number_____	
Layout created by_____	[illegible]	Scale: Scale_____

Index Date	Index created by	Index note
Index___ [illegible]	Index created by_____	Index note_____

Defining the sublegend

Defining this legend template involves two steps: First, you will define the layout index as the sublegend. After this, you will define the main legend and integrate the sublegend in the main legend.

Tip: If you have a finished sublegend, you can skip this step. Go to "Defining the main legend" on page 65.

To define a sublegend

- Plan view is selected in the active viewport.
- **Actionbar**: The **Architecture**, **Engineering**, or **Draft** role is selected.

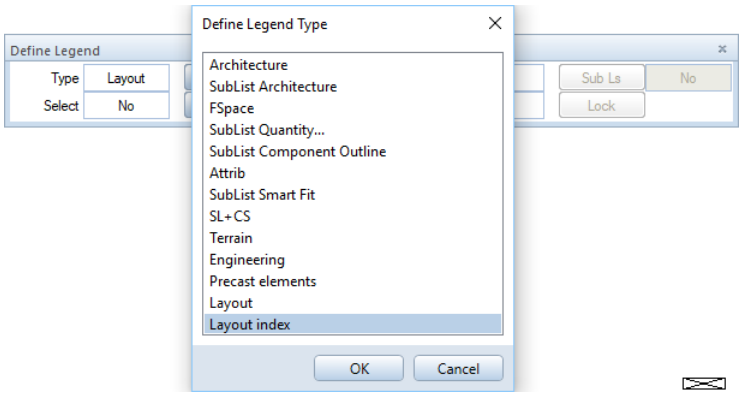
1 Hide the construction lines by switching the **DE_CLINE** layer to hidden.

2 Define the legend template.

Go to the **Actionbar** and click **Define Legend** (**User-Defined Objects** task – **Reports, Legends** task area).

3 When defining a legend template, you must always start with the lowest level in the hierarchy. Therefore, start by defining the index as the sublegend.

To do this, click the box next to **Type** on the **Define Legend** Context toolbar and select **Layout index** in the **Define Legend Type** dialog box.

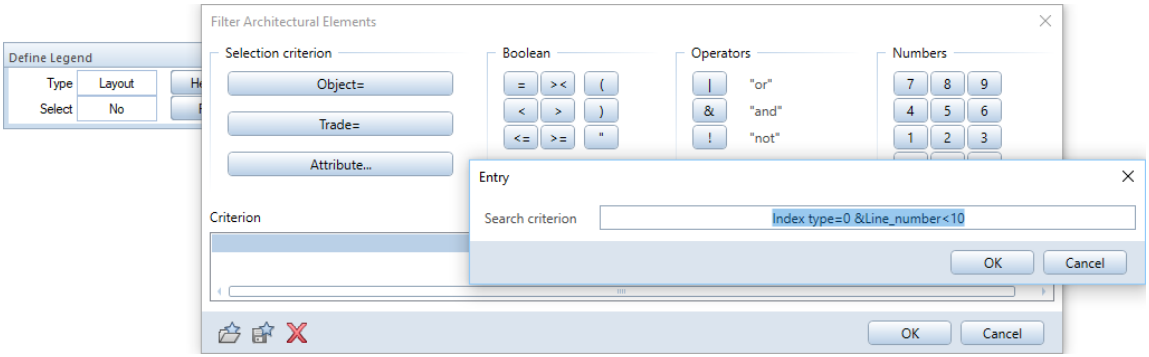


4 *Only if the index is to include specific index types or a maximum number of index entries:*
Click the box next to **Select**. The **Filter Architectural Elements** dialog box opens. Click below the **Criterion** area.

The **Entry** dialog box opens. Enter the selection criterion. To separate several selection criteria, insert a space and the **&** operator after each selection criterion. Finally, click **OK** to confirm the two dialog boxes.

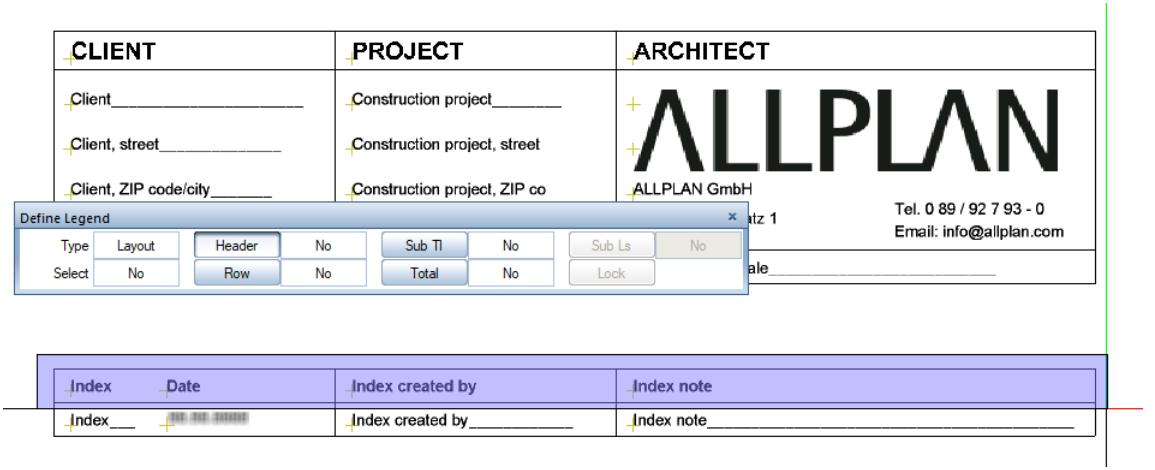
Examples of selection criteria for indexes:

- To include main indexes only: **Index type=0**
- To include up to ten indexes: **Line_number<10**



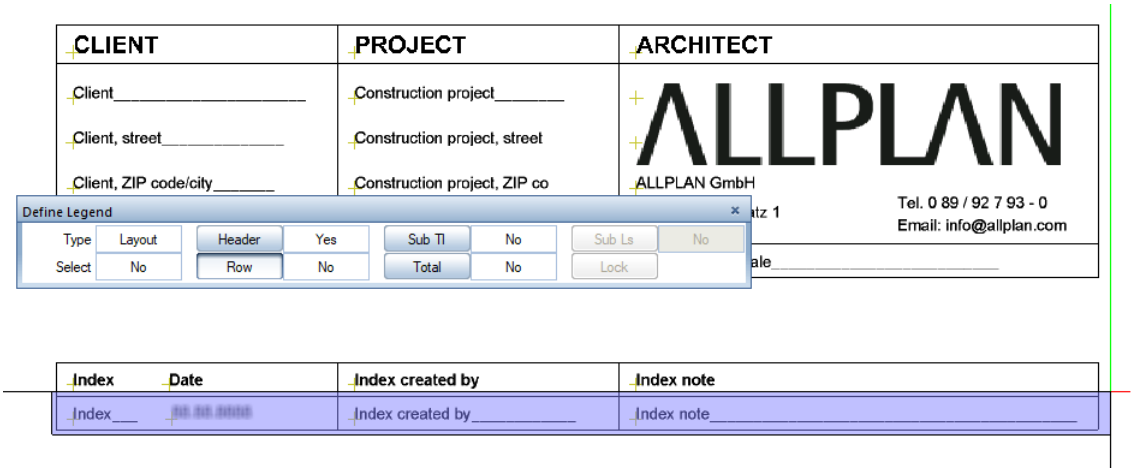
5 Define the header of the sublegend.

To do this, click the **Header** button on the **Define Legend** Context toolbar and open a selection rectangle around the table header of the index.



6 Define the row of the sublegend.

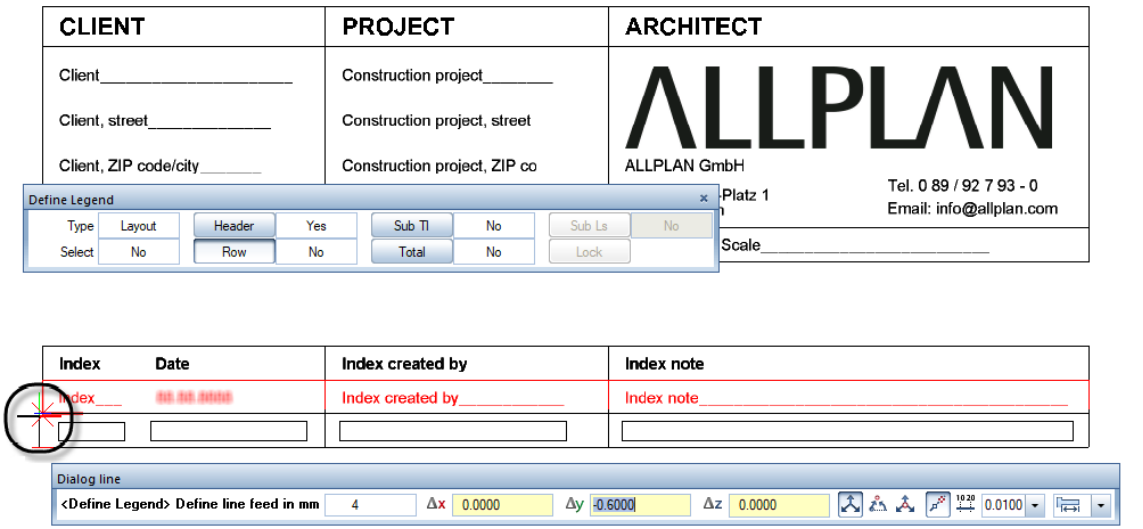
To do this, click the **Row** button on the **Define Legend** Context toolbar and open a selection rectangle around the table row of the index.



7 Define the line feed for the index entries.

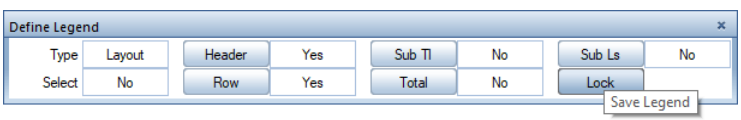
The index rows are to be filled downward. As the anchor point for the preview of the row is at the bottom of the min-max-box, it is difficult to place the row precisely.

Therefore, move the anchor point up by the height of one row (0.60 m). To do this, enter **dy** = -0.60. Do *not* select ENTER to confirm! Place the preview at the lower-left corner of the existing index row.



8 The sublegend now contains all necessary elements. **Select**, **Subtotal**, **Total**, and **Sublist** are not required.

Finish defining the sublegend by clicking **Lock** on the **Define Legend** Context toolbar.



9 Save the sublegend in the **office folder**.

Important!
Legends you want to integrate as sublegends in other legends *must* be in the **office** folder! When defining legends, you can select sublegends from this folder only.

10 Enter names for the **Subfolder** and **List** and click **OK** to confirm.

The **Define Legend** tool is still open.

Note: Once you have defined a sublegend, you can integrate it in other sublegends or main legends. However, any changes you make to an integrated sublegend apply to all legends including this sublegend.

Defining the main legend

Next, you will define the next level in the hierarchy of the legend. This is the main legend, because the layout legend consists of two levels.

To define a main legend

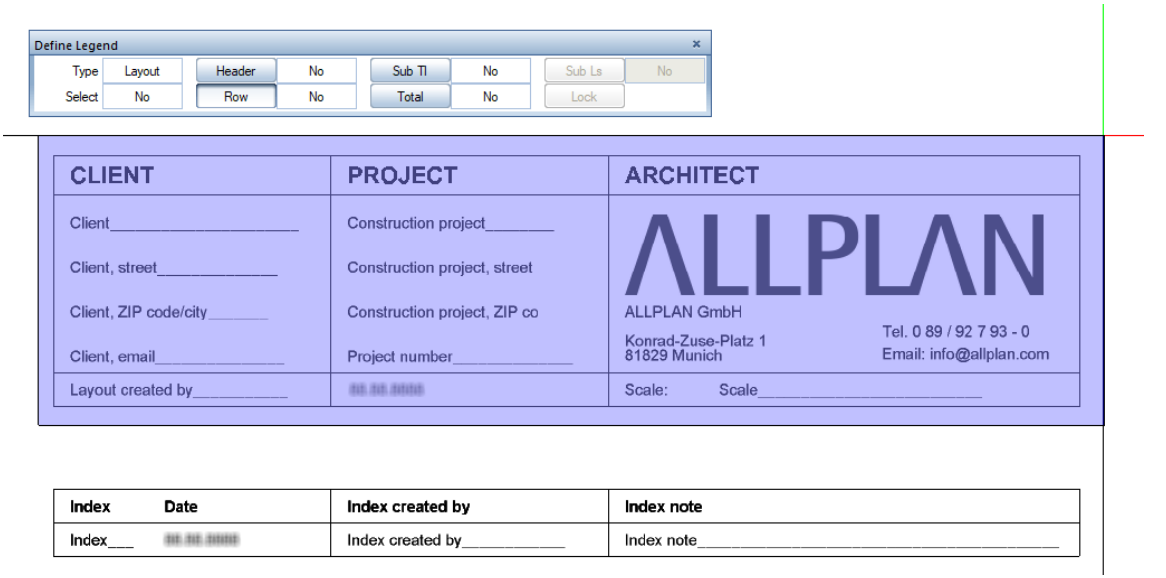
➲ Plan view is selected in the active viewport.

➲ **Actionbar**: The **Architecture**, **Engineering**, or **Draft** role is selected.

➲ The **Define Legend** tool is still open.

1 Click the box next to **Type** on the **Define Legend** Context toolbar and select **Layout**.

2 Click **Row** and select the whole title block (*without* the index!).



3 Place the preview of the row so that it is congruent with the title block (*not* with the index!).

Or:

Enter **0** for the line feed in the dialog line.

4 Click **Sub Ls**, select the sublegend you just created (= layout index) and click **OK** to confirm.

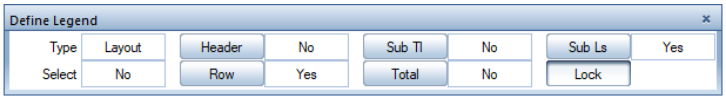
5 **Select**, **Header**, **Subtotal**, and **Total** are not required.

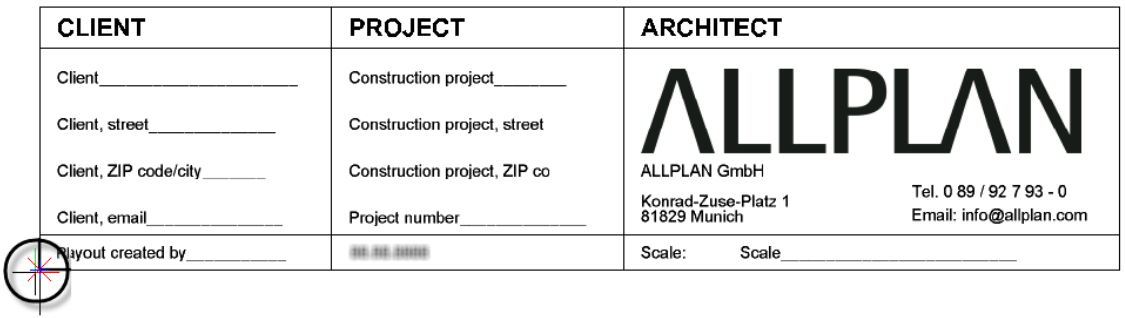
Finish defining the legend template by clicking **Lock** on the **Define Legend** Context toolbar.

6 Place the sublegend (= layout index).

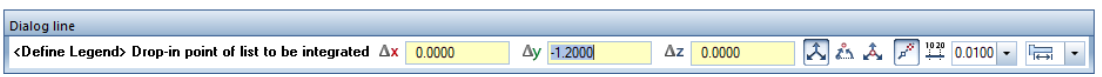
The layout index, which is to be filled downward, is to be flush with the bottom of the title block. Here, too, the anchor point for the preview of the row is at the bottom of the min-max-box.

Therefore, move the anchor point up by the height of the index (1.20 m). To do this, enter **dy** = -1.20. Do *not* select ENTER to confirm! Place the preview at the lower-left corner of the title block (*not* the index!).





Index	Date	Index created by	Index note
Index___	[redacted]	Index created by_____	Index note_____



7 Save the legend template in the **office folder** - **Subfolder 7**.

Important!
Legends you want to use in layouts *must* be in subfolder **7**! Otherwise, the **Legend, Title Block** tool cannot find the legends (see "Function-specific legend templates" on page 9).

8 Select an empty entry in the **List** area, enter a name for the legend template and click **OK** to confirm.

9 Select ESC to close the **Define Legend** tool.

Exercise 4: modifying legends placed

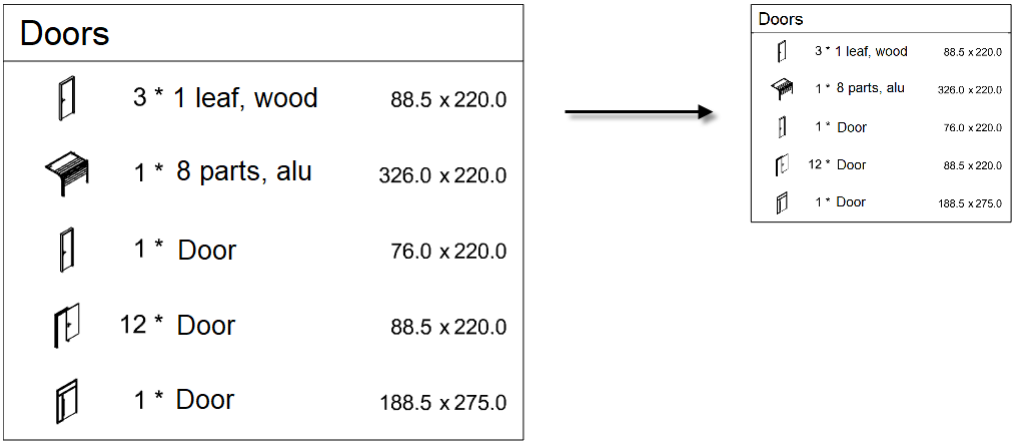
You can modify legends placed in a drawing file or layout. The options you have vary, depending on whether the legend in question is a static legend or an associative legend (see "Static legends and dynamic (= associative) legends" on page 8).

Static legends consist of 2D design entities only. To edit the parts of a static legend, you can use all common 2D modification tools.

Associative legends, however, are integrated objects, which you *cannot* edit with the common modification tools. All you can do is change the page break, position and size of an associative legend. If you want to change something else, you must modify the legend template and place the modified template in the drawing file or layout again. As an alternative, you can resolve the legend into its design entities, thus turning the associative legend into a static legend.

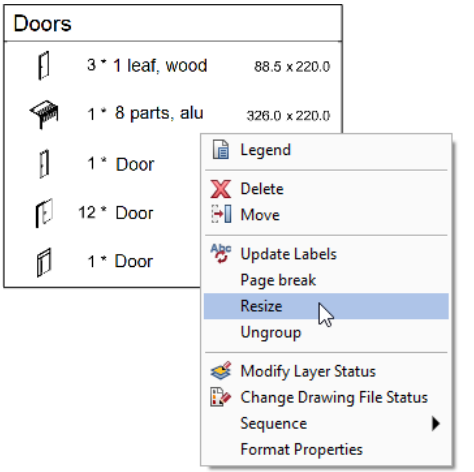
In this exercise, you will resize an associative legend placed. In addition, you will define the page break for another associative legend and resolve this legend. After this, the parts of this legend can be edited like normal design entities.

Resizing a legend



To resize a legend placed

1 Right-click the legend and select **Resize** on the shortcut menu.

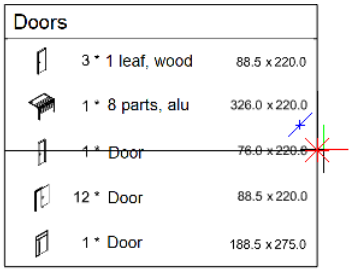


2 *Zoom factor*

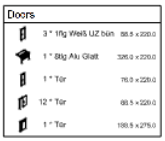
Enter the zoom factor in the dialog line. Zoom factors < 1 reduce the legend, whereas zoom factors > 1 enlarge the legend.

Or:

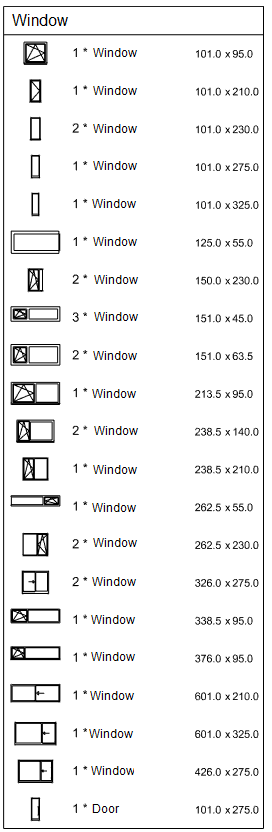
Define the bottom of the legend (or the *top* in the *Layout Editor*) by clicking the point to which you want to resize the height of the legend. The aspect ratio does not change, so the width of the resized legend will be calculated automatically by the program.

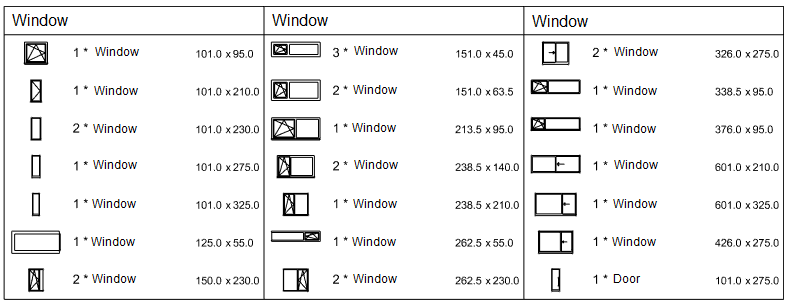


The resized legend looks like this:



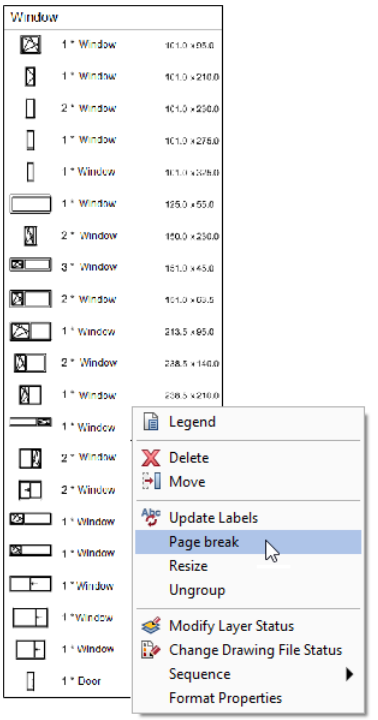
Defining the page break





To define the page break for a legend placed

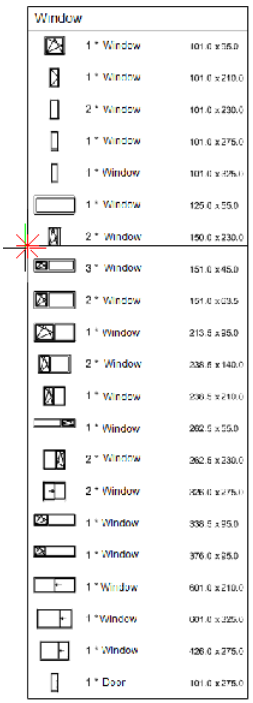
1 Right-click the legend and select **Page break** on the shortcut menu.



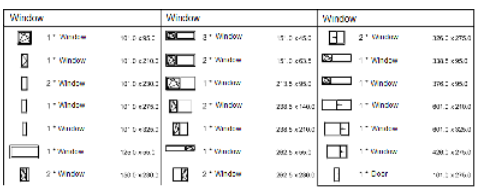
2 *Define new page break*
Enter the number of cells after which you want to insert page breaks.

Or:

Click where you want to insert the first page break in the legend.



The result looks like this:



3 Use **Line** to close the border line at the bottom of the legend.

Resolving an associative legend

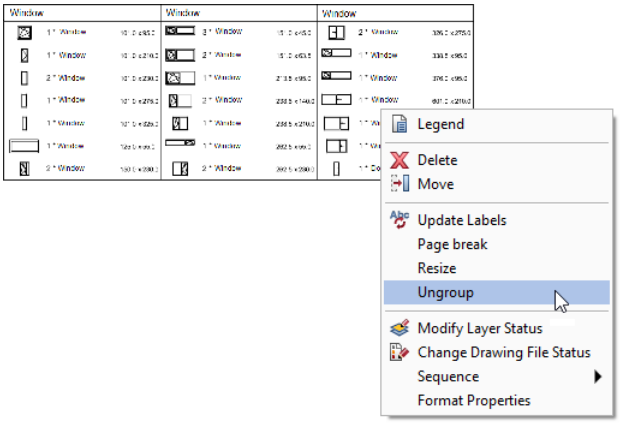
Each associative legend can be resolved into its design entities. In doing so, the program converts all cells and fields to simple texts, thus turning the associative legend into a static legend. As the legend is no longer linked with the drawing file or layout, the legend no longer adapts to reflect changes in planning either.

After having resolved a legend, you can edit its design entities with the common 2D tools.

ATTENTION!
Once you have resolved a legend, you *cannot* restore its associativity to elements in the drawing file or layout anymore.

To resolve an associative legend placed

1 Right-click the legend and select **Ungroup** on the shortcut menu.



The program resolves the legend without prompting you to confirm.

2 You can now edit the legend with the 2D drafting tools and 2D modification tools.

Appendix

The appendix contains a short troubleshooting section, providing you with further information about legends. This information can be helpful in your daily work. You can find references to the appendix in the exercises and vice versa.

Changing the office logo in default layout legends

The "**with logo ...**" and "**architect in detail**" default legend templates contain graphic cells that integrate the bitmap currently defined as the office logo in legends. You cannot change these graphic cells directly.

If you want to use your own office logo instead of the Allplan logo in legends, you must change this centrally by defining your office data.

Context:
Exercise 2 shows you how to replace the dynamic field with a separate graphic.

Note: This change also applies to reports including the office logo. If you want to change the logo in one of the layout legends only, you must replace the graphic cell with a fixed graphic in the legend template.

To change the definition of the office logo

1 Open the **Default Settings** drop-down list on the **Quick Access Toolbar** and click **Defaults**.

The **Defaults** dialog box opens.

2 Click **Office Name and Address**.

3 Click **OK** to confirm the **Entry** dialog boxes prompting you to enter the **Office name**, **Office address**, **Telephone number, office** and **Email, office**.

4 The **Select LOGO** dialog box opens. Select the bitmap you want to use and click **Open**.

Important!
The logo must be in PNG format, JPG format, or BMP format. In addition, it must be the correct size, that is to say, the size you want to use in the legend.

Outputting multiline text attributes

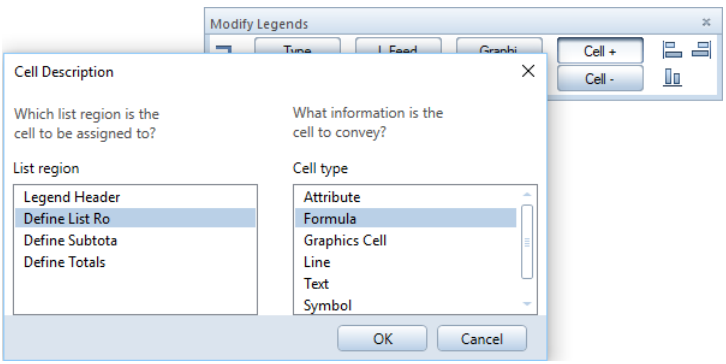
Context:
Exercise 2 mentions outputting all characters of the "general construction project" attribute. To do this, you must add a second line of text.

You cannot define a line break in a cell. So if you want to output a multiline text attribute, you must define a formula separating the contents of the text attribute into several cells.

To define a multiline text attribute

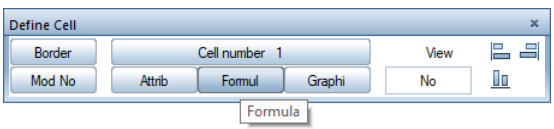
1 Define a cell for the first line of the attribute.

If you modify an existing legend (see exercise 2):
Click **Cell +** on the **Modify Legends** Context toolbar. The **Cell Description** dialog box opens. Select **list row** for the list region and **formula** for the cell type. Then click **OK** to confirm



Or:

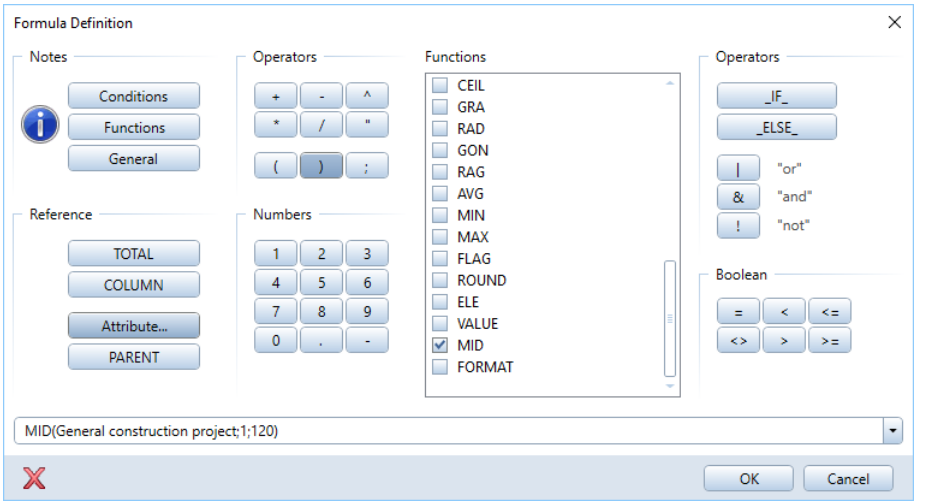
If you define a new legend (see exercise 3):
Go to the **Actionbar** and click **Define Cell** (**User-Defined Objects** task -> **Reports, Legends** task area). Then, click **formula** on the **Define Cell** Context toolbar.



2 Define the formula in the **Formula Definition** dialog box. In this example, the first line is to output the first 120 characters of the "general construction project" attribute:

MID(General construction project;1;120)

- Go to the **Functions** area and select **MID**.
- Go to the **Reference** area, click **Attribute** and select the required attribute.
- Go to the **Operators** area on the left side and click the semicolon **;**. Then enter the first character of the attribute you want to output in this line.
- Click the semicolon **;** again and enter the total number of characters of the attribute you want to output in this line.
- Go to the **Operators** area again and complete the definition by closing the parenthesis **)**. Finally, click **OK** to confirm.



3 Define the other parameters for the cell on the **Modify Legends** or **Define Cell** Context toolbar.

Adjust the **Format** to the number of characters you want to output (for example, **Format** = **A120**).

4 Place the cell.

5 Define another cell for the second line of the attribute in the same way.

Unlike the formula for the first line, the formula for the second line starts with character 121. In this example, the second line is to output characters 121 to 240 of the "general construction project" attribute:

MID(General construction project;121;120)

6 Define the other parameters for this cell. For example, you can use **Match parameters** to take the parameters from the first cell. After this, place the second cell below the first cell.

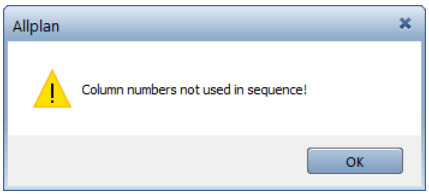
7 Repeat these steps if you want to define more lines.

Checking or changing cell numbers

Legends only work correctly if their cells are numbered consecutively. When you edit an existing legend by using the **Modify Legends** tool, the cell numbers will adapt automatically (see "exercise 2: inserting the office logo from the symbol library" on page 44).

Context:
You might see this message when you define the rows for the sublegend or main legend in exercise 3.

The situation is different when you create a new legend from cells you placed in a drawing file. If the cells are not numbered consecutively, you will see a message when you try to define a legend row.



If this is so, you must check and correct the numbers of the cells.

To check or correct the number of a cell

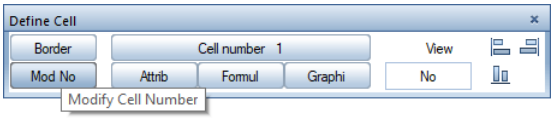
➲ The drawing file contains several cells belonging to a legend.

➲ The **Define Legend** tool is open; it is not possible to define a **row**.

1 Select ESC to close the **Define Legend** tool.

2 Go to the **Actionbar** and click **Define Cell** (**User-Defined Objects** task - **Reports, Legends** task area).

3 Click **Mod No** on the **Define Cell** Context toolbar.



4 Click the cell whose number you want to check or change.

You can see the current cell number in the dialog line.

5 Double-click the next cell whose number you want to check.

Or:

Change the cell number and select ENTER to confirm.

6 Select ESC to close the **Define Cell** tool.

Taking parts from other legend templates

Context:
Thus, you could use cells from existing legend templates in exercise 3, such as the dynamic field for the office logo.

When creating a new legend template from scratch, you can take parts from other legend templates.

To do this, place all the parts of the legend templates in the drawing file you use to define the new legend template. Add the required parts to the new legend template and delete all the other parts.

To place parts of an existing legend template in a drawing file

1 *Only if you want to use parts of a default legend template:*
Copy the legend template from the **default** folder into another folder, for example, **office**.

To do this, use the **Manage Label Styles, Legends** tool (see "Copying legend templates" on page 18).

2 Open the drawing file in which you want to define the legend template. Select plan view.

3 Check the **Reference Scale**; it *must* be 1:100.

Important!
Always create legend templates at a reference scale of 1:100. This is the only way to ensure that legends placed in a drawing file are correct, regardless of the reference scale.

4 Go to the **Actionbar** and click **Modify Legends** (**User-Defined Objects** task – **Reports, Legends** task area).

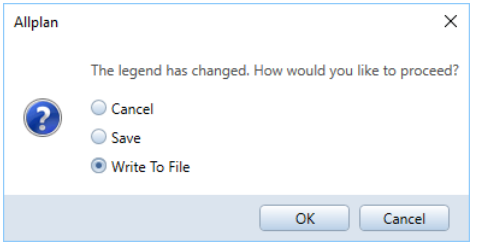
5 The **Set Path** dialog box opens. Select the folder with the legend template whose parts you want to use, for example, **office**.

6 The **Save Data** dialog box opens. Select the legend file and the legend template and click **OK** to confirm.

One or more viewports open, displaying the parts of the legend template.

7 Transfer the parts to the drawing file.

To do this, select ESC, select **Write to file** in the dialog box and click **OK** to confirm.



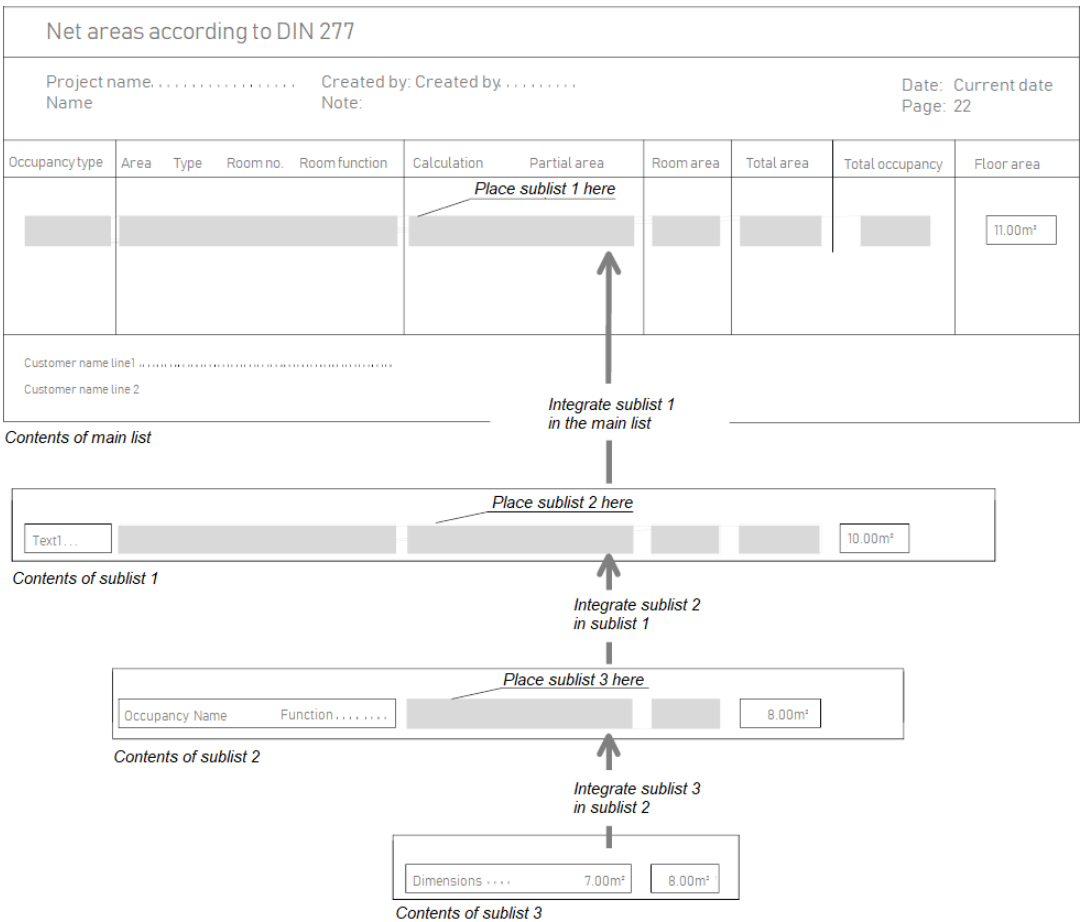
8 Place the parts in the drawing file.

9 Add the required parts to the new legend template. Adjust the parameters and cell numbers.

10 Delete the parts you do not need.

Calculating several subtotals in a row

If you want to calculate several subtotals in a row, you must nest the legend row by means of several sublegends.



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