



# BIMBMS

## Long Term Maintenance Planning

To access the demo, an account *must* be requested at: <https://demo.bimkeeper.com>

The demo can be accessed at: <https://demo.bimkeeper.com/demos/long-term-maintenance>

This demo-instance is only intended for use with this particular demo. The focus of the demo is on this subject only. This means the navigation shows only what the user might need. Some features might not work for this reason. The first demo (basics) can be checked for a broader perspective of all the features BIMBMS offers. For more detailed information, the BIMBMS manual can be referenced, or IRP can be contacted at: [contact@bimkeeper.com](mailto:contact@bimkeeper.com).





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## 1 Long term maintenance Overview

To view the long term maintenance plan overview, select “All complexes” mode and navigate to the “Planning” page under the “Technical” tab.

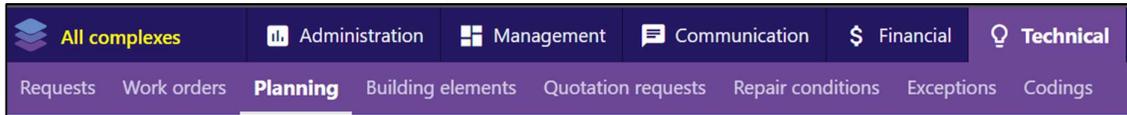


Figure 1: Navigating to the “Planning” page’

First the complexes that should be displayed in the overview need to be selected. By selecting the complexes and moving them to the right column with the arrow buttons they can be added to the overview. The single arrows can be used to move a single complex to the selection, while the double arrows move all of the complexes to the selection.

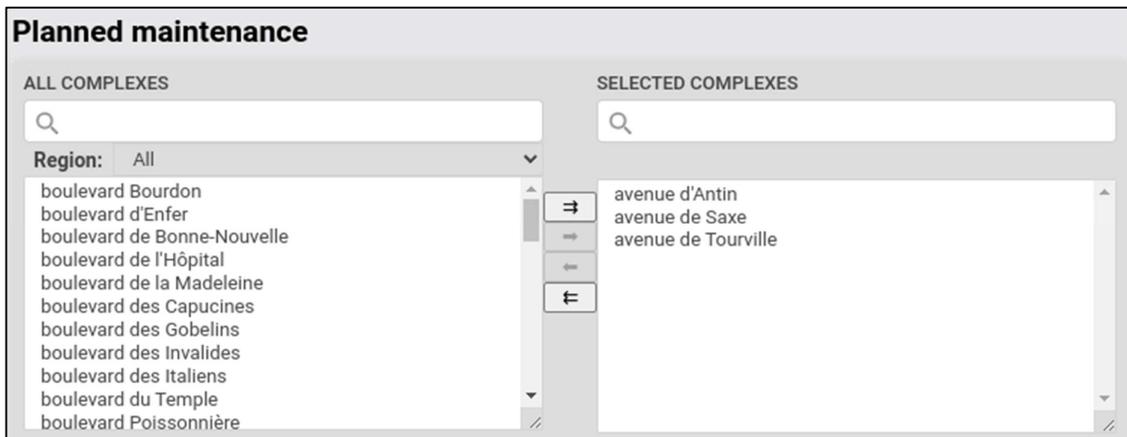


Figure 2: Selecting the complexes displayed in the overview



The table at the bottom displays the maintenance items grouped by element code, complex, and region. This can be changed by changing the group mode above the table.

Clicking on a row in the overview will expand a level down. This will allow users to start at the top level, for example 'climate control'. Here the total expenses in this category over all complexes can be seen. Then users can navigate all the way down to a specific maintenance item in a single complex.

Code	Name	Benefit	Financing
75	Climate Control (HVAC)		
10	Transformation and Conversion of Energy		
11	Central Heat Generators		
14	Hot Water Heat Generators		
14	Condensing Boilers		
<input type="checkbox"/>	46_... impasse Baudin		
<input type="checkbox"/>	Replacement of collective boiler	15 years	 
<input type="checkbox"/>	Replacement collective distributi...	30 years	 
<input type="checkbox"/>	De-silting the collective circuit	1 years	 
	02_... passage des Chartreux		
	01_... place des Vosges		

Figure 3: Navigating down to a maintenance item in the overview

On the top right of the screen a graph can be viewed that displays the amount of money that is reserved on the LTMPs each financial year. This overview is based on the complexes that have been selected before.

By clicking on a vertical bar the table view moves to the year that was clicked on.

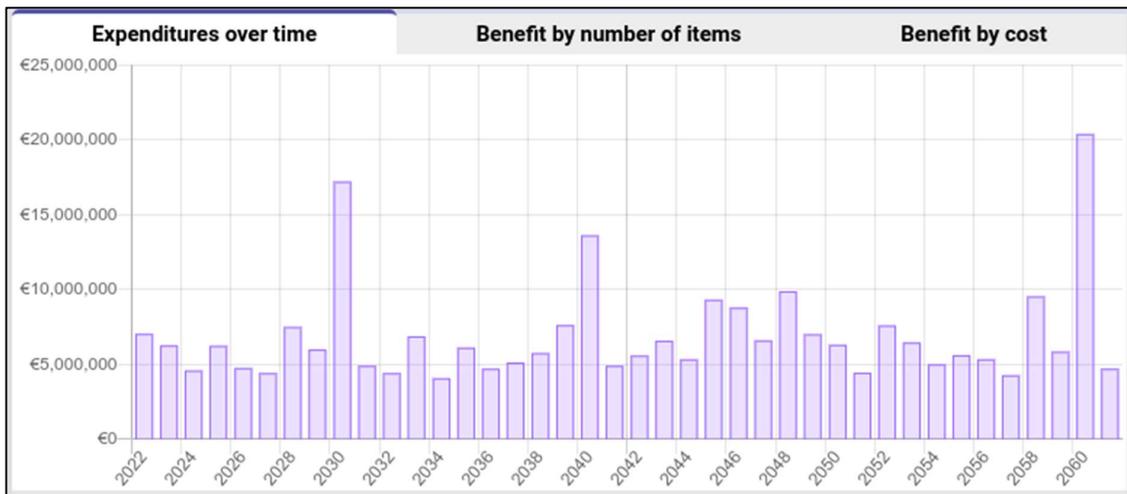


Figure 4: The LTMP graph



If a planned expenditure happens to be larger than the amount of money that has been budgeted for maintenance that year, the planned maintenance can be postponed. This can also be done if maintenance is not necessary because the elements are in a better condition than was planned for.

Planned maintenance can be postponed or expedited by clicking on the arrow buttons next to the amount of money in the year that the maintenance is currently planned. This will move the planned maintenance forward or backward in time. All following planned maintenance will also move, because the cycle in which the maintenance is planned will stay the same.

11	Power Supply Devices		▼	▼	▼
17	Distribution Boards and Control Panels		▼	▼	▼
01_01	impasse du Bouquet-des-Champs		▼	▼	▼
	Replacement of the electrical panel o... 30 years	0	←	€1,600	→
	Complete electrical refurbishment of ... 30 years	0	←	€10,000	→

Figure 5: The arrow buttons can be used to either postpone or expedite a maintenance item



## 2 Creating a long term maintenance plan

To create a LTMP Maintenance item, the user must select a specific complex and navigate to the “Planning” page under the “Technical” tab.

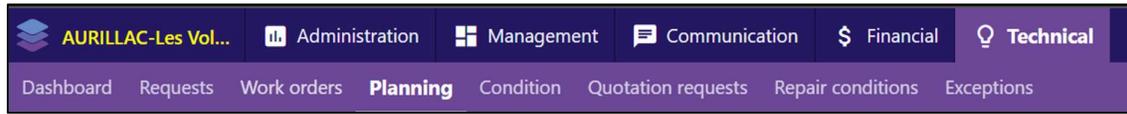


Figure 6: Navigating to the “Planning” page for a specific complex

On the “Planning” page all the LTMP’s are displayed. The user must press the “pen” icon on the right of the page and open the “Edit LTMP” page.

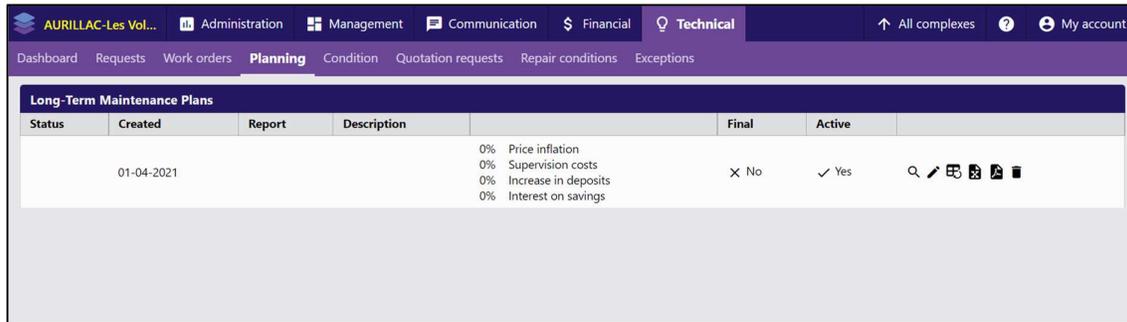


Figure 7: The “Planning” page for a specific complex

There are several actions that can be performed on the “Planning” page. From left to right, the user can view the currently selected LTMP using the magnifying symbol. The “pen” symbol can be pressed to navigate to the “Edit LTMP” page of the LTMP. The “copy” symbol can be pressed to make a copy of the LTMP on the “Planning” page. The “Excel” symbol can be pressed to download the LTMP as an excel spreadsheet. The “PDF” symbol can be pressed to download the LTMP as a PDF. The “trash can” symbol can be pressed to delete the LTMP.





Figure 8: The "Edit LTMP" page

From the "Edit LTMP" page the "Add maintenance item" button can be pressed to open the "Edit maintenance item" window.

Figure 9: The "Edit maintenance item" window

The user can create a maintenance item here. In the first field a reserve fund can be added. A reserve fund can be used if it is desired to save for a building element or a set of elements separate from the main maintenance fund. Users may leave this empty if not applicable.



If there is a BIM-model present elements can be added to the “Elements” entry by pressing the “Select in viewer” button on the right of the entry. Alternatively, when there’s already an element selected in the drop-down menu of the entry, the “Select in viewer” button will be replaced by the “Show in Viewer” button. When this button is pressed instead, the viewer will show the linked elements of the entry. The user can however deselect the elements and select new ones in the viewer to create a new group.

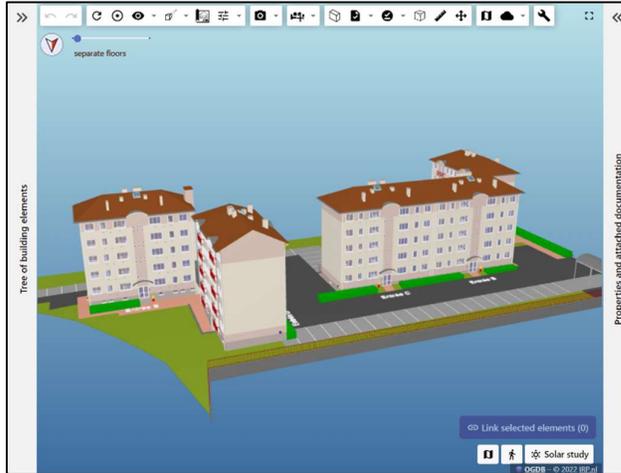


Figure 10: Opening the viewer

In the viewer, the user can select elements to add to the maintenance item. For example, all the drainage pipes of the complex. By right clicking a drainage pipe and selecting the “Select all ifcFlowSegment” option, the viewer will select all the drainage pipes. In other situations the correct parent group needs to be selected.



Figure 12: Selecting the parent group of an element



Figure 11: All drainage pipes selected



After the elements are selected the user needs to press the “Add information” button in the “Details” pane on the right of the viewer. The “Create group” option must be selected to create a new group of elements to be added to the maintenance item.

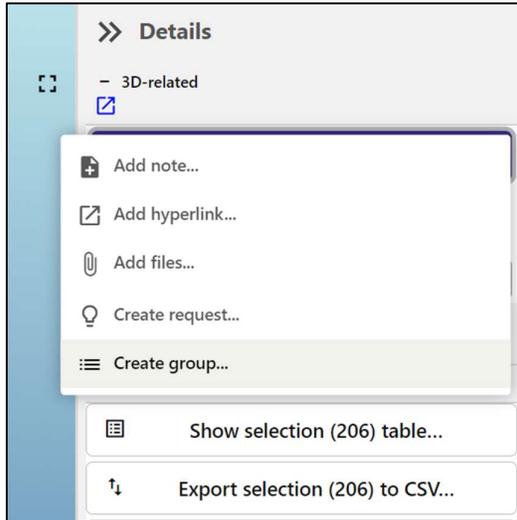


Figure 13: Creating a new group

A title needs to be specified to this group; in this case the title “Drainage” is specified. Optionally the group can be added to an existing category or in a new category under the “Category” entry.

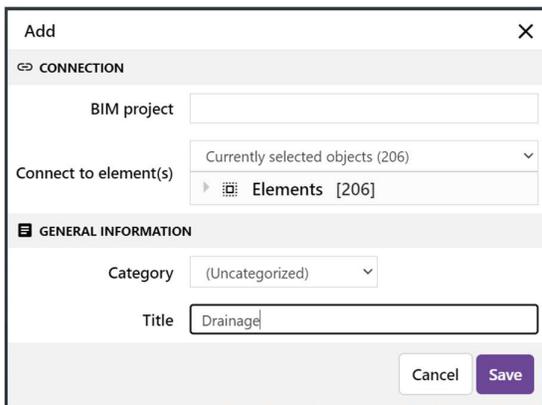


Figure 14: Naming the new group



After creating a group the viewer can be closed, and the maintenance item can be created. The previously created group can now be selected from the dropdown menu under “Element description” entry.

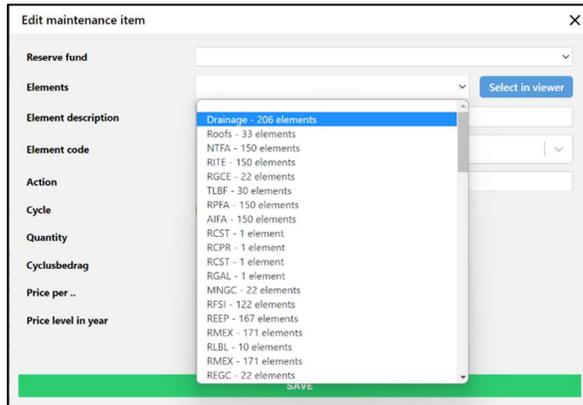


Figure 15: Selecting the new group to create a new maintenance item

After selecting the correct elements, the element codes should be filled in automatically. If no BIM-model is present for the complex these can be specified manually. The element code is used to group similar elements in overviews and to show similar maintenance items.

Next the manager can specify the maintenance action that needs to be performed on the elements and specify the cycle. In this case an inspection of the drainage pipe is scheduled for every five years.

Information such as length, area or other quantities of the elements are gathered from the BIM, if available. If there is no model available the quantity can be entered manually.

These can be used to specify the price by the chosen quantity type. For example; the price of painting is 50 per running meter (m1). And there is a total of 100 meters that need to be painted. The total will be 5.000.

A total price can also be entered for the work, if a price per item is not known.

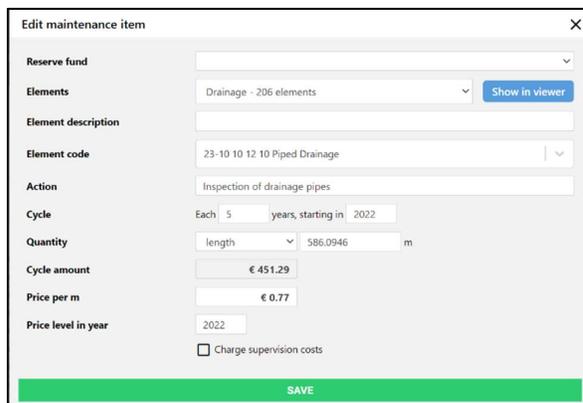


Figure 17: Specify the price per quantity type

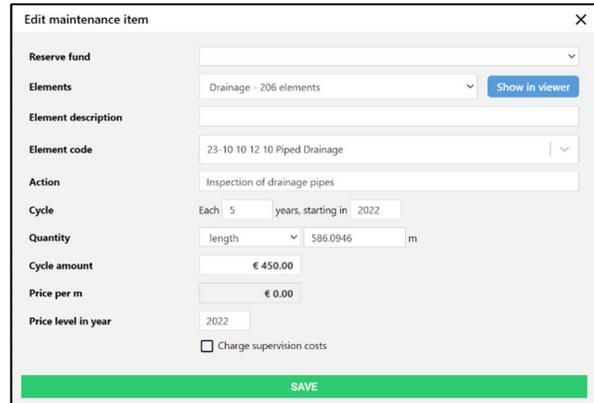


Figure 16: Specifying the total price



Finally, the maintenance item needs to be saved and the item will be added to the LTMP.

Now one maintenance item for one type of element has been added. Another maintenance item can be added for this same group of elements. This maintenance item could, for example, detail that these same drainage pipes will need to be replaced every fifteen years.



*End of manual*

For other inquiries, please contact IRP at [contact@irp.nl](mailto:contact@irp.nl)