



BIMBMS

Compliance

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/safety-inspections>

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.



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1 Compliance

With the compliance module in BIMkeeper, it is possible to track a complex's status of compliance with rules and regulations. BIMkeeper provides a full flow to visualize, manage, report, and escalate the status of any compliance category.

To illustrate an example, a complex can have a periodical fire safety check. One of these checks might be an inspection of the sprinklers, let's say every 8 months.

To start, the manager will need to add the main category Fire Safety, if not already present, and then the sub-category "Sprinklers". So the Sprinklers belong to the main category Fire Safety; that can hold multiple subjects like fire extinguishers, escape plans, alarms, etc. Users of BIMkeeper can define their own main- and subcategories. These categories can be used among multiple complexes. This is very flexible, so categories can be enabled/disabled on a per-complex basis (for example, a periodical elevator check is not relevant if the building has no elevator).

Next, the manager should select (or enter) the supplier that is going to perform the periodical inspection of the sprinklers. And of course, check if there is a valid contract in place with this supplier. It is possible to use a cycle in order to schedule the inspections fully automatically. In this case, we will set it to 8 months (35 weeks), and use the date of the last inspection as the cycle start date.

Optionally, a list of elements that have to be checked can be specified for each compliance category of a complex. For example, we can use an identification number of each sprinkler and also information on the specific location, like floor, room number, etc. With a BIM model, this whole process will even be easier, as this can be done by making a link to the relevant IFC elements. If the sprinklers are not visible in the 3D view, the same information can be connected to the space (room) they reside in.

Once an inspection has been scheduled, the supplier can use his BIMkeeper account and/or our mobile app to enter the results of the inspection. This can, of course, also be done by the manager of the complex.

The status of each compliance category will automatically update once an inspection has been finished. The manager can see an overview for each complex, but also for all (or just relevant for him/her) complexes in one view.

Of course, when an inspection shows a problem, it is possible to escalate this by creating a request (for repair).

2 Multiple complex overview

After login, the Compliance demo instance will automatically navigate to the “Tiles” tab of the viewer, upon log in. Alternatively clicking the “Tiles” button will direct the user to the “Tiles” tab.

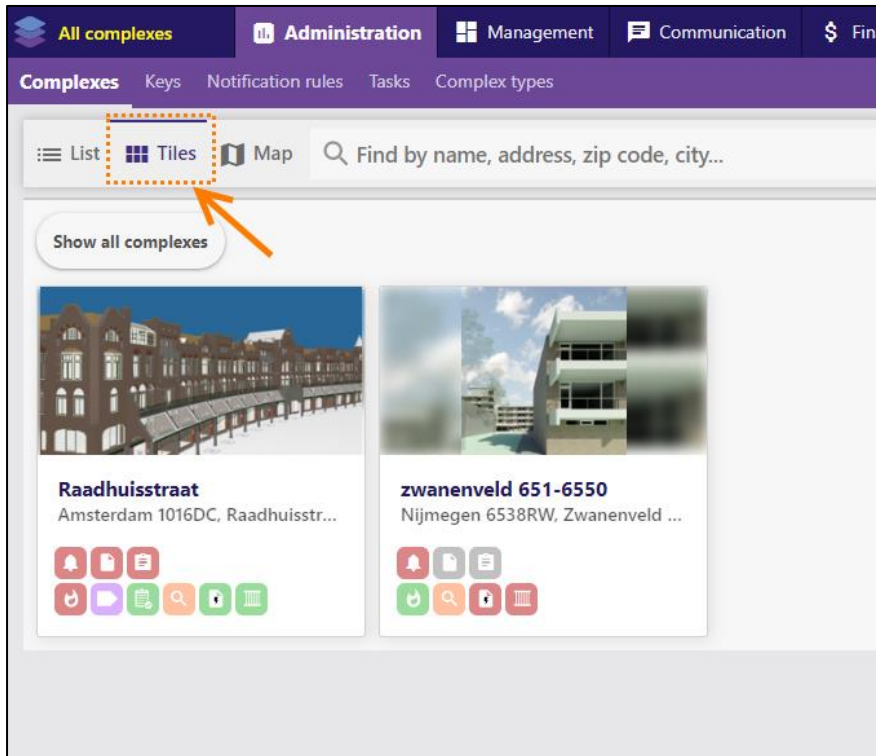


Figure 1: The tile lists displays the status of main compliance categories.

By default the tiles list only displays the complexes that are under the users management. The user can toggle between all and their own complexes by clicking the button “Show all complexes”/ “Show my complexes”.

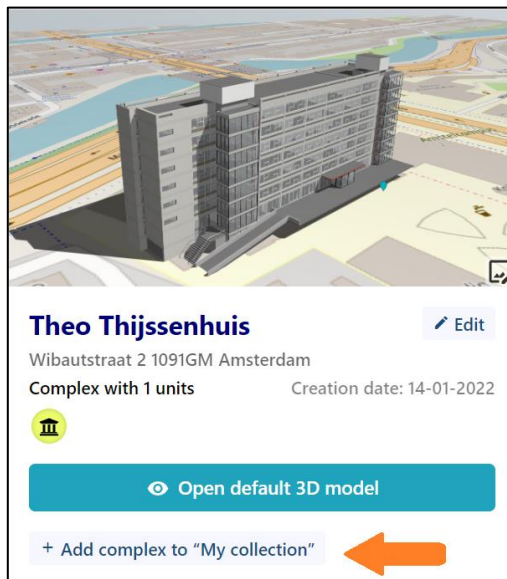


Figure 2: This button can be pressed in order to add the complex to the users collection.



On the tile list each tile displays a number of icons with a variety of colors. These icons and colors indicate the status of the main compliance categories for each complex.

The status of the categories is distinguished by the following states and colours:

- **OK** – The building passed the related inspection. It is in compliance with the laws and regulations related to this category.
- **Warning** – An action must be taken, the compliance with the laws and regulations might become compromised in the future.
- **Not OK** – A related inspection did not pass. An action must be taken to comply with the laws and regulations.
- **Missing** – The status is currently unknown. Either no inspection has been conducted yet, or the report has not been entered yet.

If a main category has subcategories, it will get the status of the subcategory that has the lowest value. So, if all subcategories are OK, the color of the main category will be green. Or if a “Fire alarm” check under a “Fire safety” category has a problem, the color of the main category icon will be red.

When the user clicks on an icon within the tiles view, they will be directed to the specific Compliance-tab and category within the complex. Clicking the “Back” arrow or “Categories” in the toolbar, will direct the user back to the full overview.

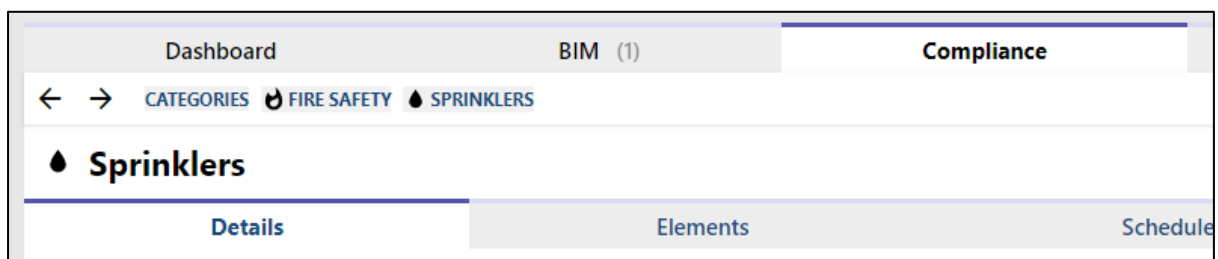


Figure 3: Navigating the “Compliance” tab



3 Single complex overview

The status of Compliance is shown under the “Compliance” tab.

Here, each main- and subcategory is displayed. The colour in front of the icon indicates the status of the main- or subcategory. If the state was influenced by a status update (inspection), its description is shown underneath it.

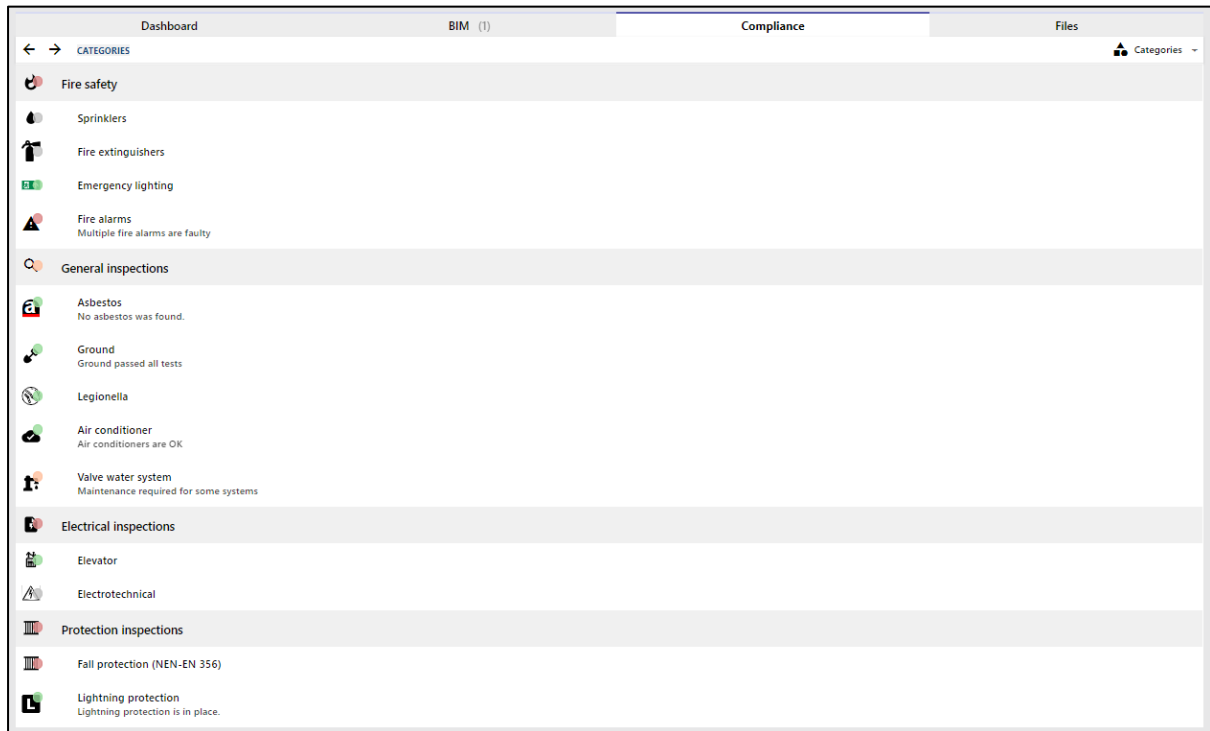


Figure 4: The "Compliance" tab

Here a user can click on either a main- or subcategory. Clicking on a main category (that has no subcategories) shows a concise overview of the latest status and inspection results.

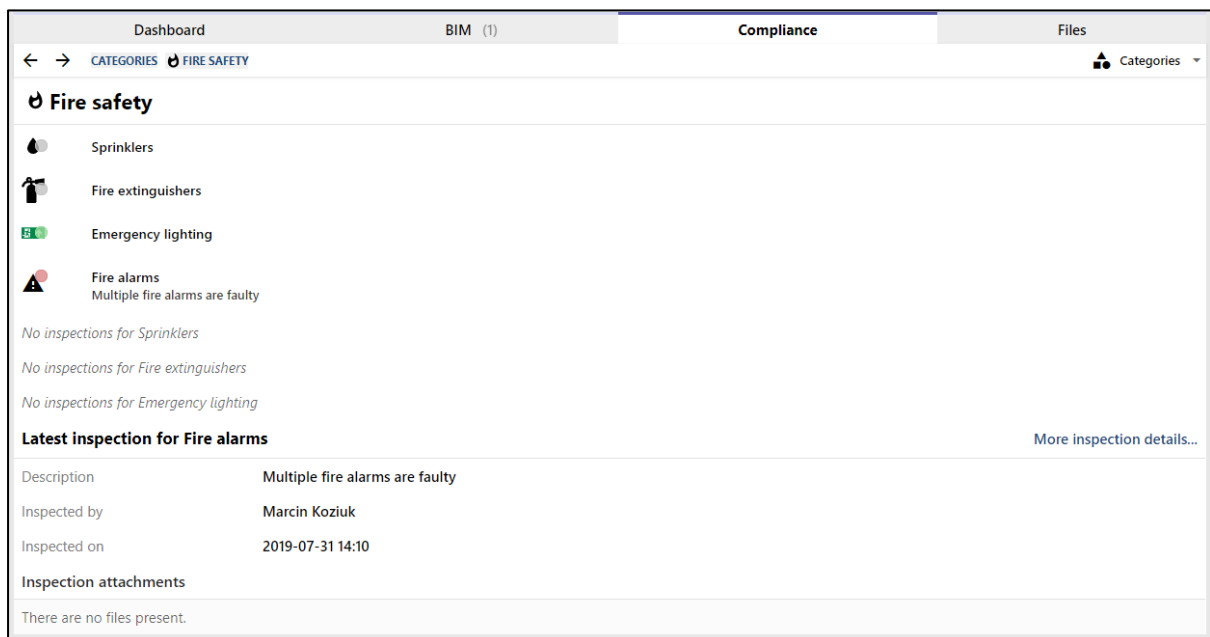


Figure 5: A main category being viewed



Clicking on a subcategory (or a main category without subcategories), opens up much more information and functionalities.

3.1. Details

Contract and schedule		Edit...
Name	Fire alarms	
Cycle start	2018-10-05	
Cycle weeks	10	
Supplier	Johnston building contractors	

Latest inspection for fire alarms		More inspection details...
Description	Multiple fire alarms are faulty	
Inspected by	Marcin Koziuk	
Inspected on	2019-07-31 14:10	

Inspection attachments
There are no files present.

Figure 6: The details for a subcategory

The first tab, “Details” shows the general status of the compliance subject. At the top, the information about the supplier, and the cycle for a schedule (if present). Below, the most important information about the latest inspection is shown if present.

By clicking edit, the inspection cycle and supplier/contract can be entered or changed.

Use cycle	<input checked="" type="checkbox"/>
Cycle start	<input type="text" value="05/10/2018"/>
Cycle weeks	<input type="text" value="10"/>
Contract	<input type="text" value="Fire safety"/>
Supplier	<input type="text" value="Johnston building contractors"/>

Cancel Save

Figure 7: Editing the inspection cycle and supplier/contract

Either a supplier or contract can be selected (when selecting a contract, the supplier is automatically selected and cannot be changed).

The start date sets the date when the first inspection should take place, or had taken place before. The number of weeks sets the periods between inspections. For scheduling the next inspection, BIMkeeper keeps in mind when the last inspection was conducted (if there was one). Of course, the schedules can be modified later.

To save all changes, click “Save”.



3.2. Elements

#	LABEL	LOCATION	IFC ELEMENT	
:: 1	51_cv_ketel:Nefit_Trendline_HRC_25:1857882	00_begane grond	Show in viewer	
:: 2	51_cv_ketel:Nefit_Trendline_HRC_25:1857886	00_begane grond	Show in viewer	
:: 3	51_cv_ketel:Nefit_Trendline_HRC_25:1857890	00_begane grond	Show in viewer	
:: 4	51_cv_ketel:Nefit_Trendline_HRC_25:1857892	00_begane grond	Show in viewer	
:: 5	51_cv_ketel:Nefit_Trendline_HRC_25:1857894	00_begane grond	Show in viewer	
:: 6	51_cv_ketel:Nefit_Trendline_HRC_25:1857968	01_eerste verdieping	Show in viewer	
:: 7	51_cv_ketel:Nefit_Trendline_HRC_25:1857970	01_eerste verdieping	Show in viewer	
:: 8	51_cv_ketel:Nefit_Trendline_HRC_25:1857972	02_tweede verdieping	Show in viewer	
:: 9	51_cv_ketel:Nefit_Trendline_HRC_25:1857974	02_tweede verdieping	Show in viewer	
:: 10	51_cv_ketel:Nefit_Trendline_HRC_25:1857976	03_derde verdieping	Show in viewer	
:: 11	51_cv_ketel:Nefit_Trendline_HRC_25:1857978	03_derde verdieping	Show in viewer	

Figure 8: The "Elements" tab lists all the relevant objects

The "Elements" tab describes a list of relevant objects related to the compliance subject. So for "Fire alarms", all fire alarms here that need to be checked can be entered. This is possible in two ways;

- Entering a list of elements manually
- Adding elements from a BIM model in the viewer

A new element can be added by clicking "+ Add new element", and describing its name (for example, a specific identification code) and location (e.g. floor, area).

But if there is a related IFC element, it is a better idea to add them from the viewer, so the information is connected to 3D and the supplier and manager always have the location at hand. Below the steps are described in order to do this:

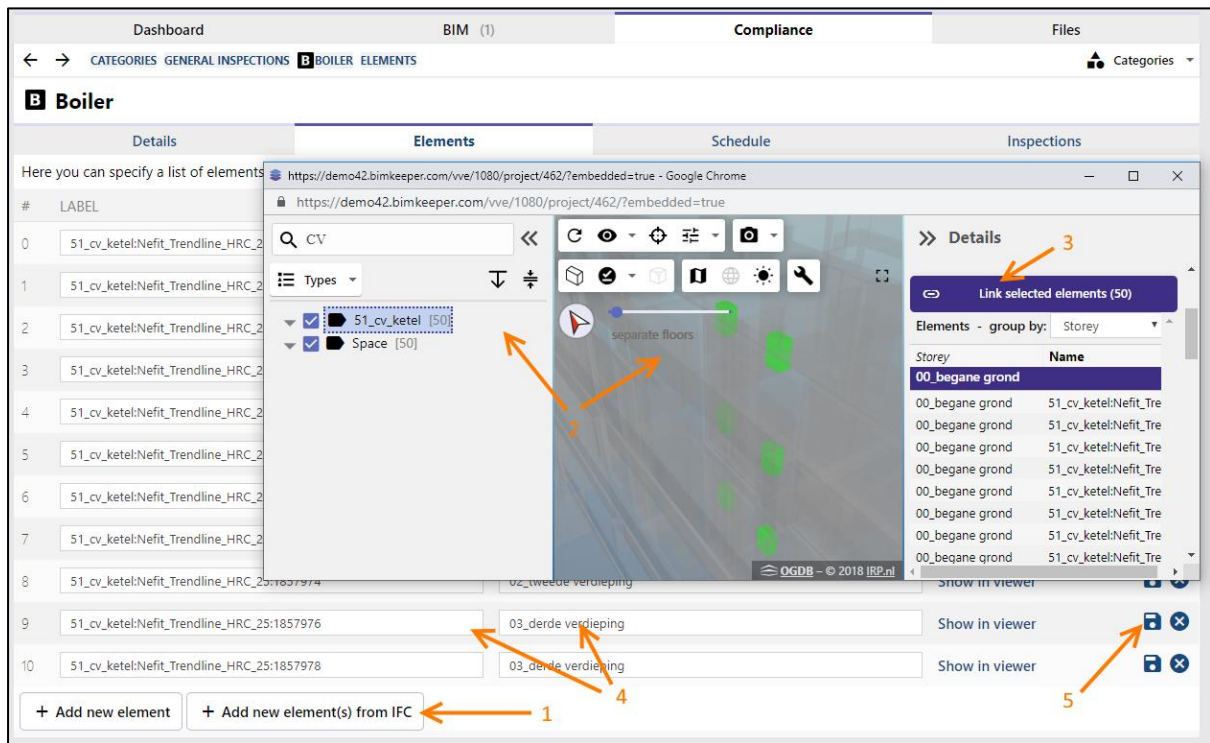


Figure 9: Adding a new element from the viewer

1. First, click on “+ Add new element(s) from IFC”. This will open the default 3D model inside a new window.
2. Select all relevant elements. The search function or the “Types” tree can be used to find elements belonging to a specific type/family.
3. Click on the button “Link selected elements”. This will close the viewer window, and go back to compliance.
4. By clicking the pen (edit) icon . The label and location of the element can be adjusted if desired. By default, the name of the IFC element and the name of the IfcBuildingStorey is used.
5. Click on the Save icon to permanently save the element.



3.3. Schedule

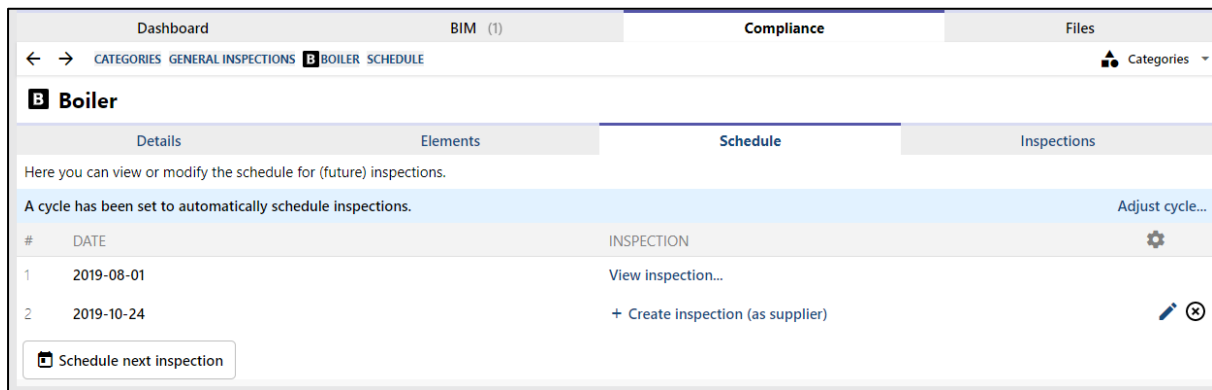


Figure 10: The "Schedule" tab

In the schedule tab, inspections can be scheduled to be conducted by the supplier. If a cycle has been set to automatically create the next schedule(s), they can be rescheduled here as well.

When a schedule is set, a task for the supplier in the app will be available in order to report the inspection.

Alternatively, a manager can manually create one, by clicking "+ Create inspection" and filling in the necessary information.

If an inspection for a scheduled date has already been made, the date will no longer be changeable. In that case, the related inspection can be accessed by clicking on "View inspection...".



3.4. Inspections

#	SCHEDULED DATE	ELEMENTS	INSPECTED ON	RESULT	View
1	2019-10-24		2019-07-31 17:01	Warning	View
2	2019-08-01		2019-07-31 15:58	OK	View

Figure 11: The "Inspections" tab

The "Inspections" tab shows the list of reported inspections. Click on a row, to navigate to it.

ELEMENT	LOCATION	REMARKS	RESULT
(IFC) 51_cv_ketel:Nefit_Trendline_HRC_25:1857...	00_begane grond	fine	OK
(IFC) 51_cv_ketel:Nefit_Trendline_HRC_25:1857...	00_begane grond	fine	OK
(IFC) 51_cv_ketel:Nefit_Trendline_HRC_25:1857...	00_begane grond	fine	OK
(IFC) 51_cv_ketel:Nefit_Trendline_HRC_25:1857...	00_begane grond	needs maintenance, risk of gas leak	Warning
(IFC) 51_cv_ketel:Nefit_Trendline_HRC_25:1857...	01_eerste verdieping		OK
(IFC) 51_cv_ketel:Nefit_Trendline_HRC_25:1857...	01_eerste verdieping		Unknown

Related information

Requests

#	STATUS	DATE	View
219	NIEUW	2019-07-31 15:09	View

Work orders

#	DATE
There are no related work orders.	

Figure 12: Viewing the details of an inspection.

The page specific to an inspection shows many details.

First, the findings of the inspection are described along with the information about the inspector, and any attachments.

If a list of elements has been specified and filled by the inspector, their specific state and remarks are shown here. If they are linked to a BIM model, click on the name of the element to view the related element in the viewer.

Below, any requests and work orders that have been made for this inspection can be seen.



To edit the inspection, click on edit in the toolbar on top. Currently there are two different buttons available, “edit” allows the user to directly edit the inspection as a manager and “edit as supplier (app)” redirects the user to the app and allows them to edit the inspection as the supplier assigned to the inspection.

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INSPECTIE

B Boiler

Complex: zwanenveld 651-6550
Zwanenveld 6550, 6538RW Nijmegen

Status: **Waarschuwing**

Afbeeldingen: [Foto maken / uploaden](#)

 [cv-ketel-op-maat.jpg](#)
[Hernoemen](#) [Verwijderen](#)

Statusbeschrijving:
Possible issue found in one boiler

Status per element:

Label	Locatie	Status	Omschrijving
51_cv_ketel:Nefit_Trendline_HRC_25:1857882	00_begane grond	In orde	fine
51_cv_ketel:Nefit_Trendline_HRC_25:1857886	00_begane grond	In orde	fine
51_cv_ketel:Nefit_Trendline_HRC_25:1857890	00_begane grond	In orde	fine
51_cv_ketel:Nefit_Trendline_HRC_25:1857892	00_begane grond	In orde	fine
51_cv_ketel:Nefit_Trendline_HRC_25:1857894	00_begane grond	Waarschuwing	needs maintenance, risk of gas leak

Figure 13: Editing an inspection as a supplier in the app

3.5. Managing compliance categories

To modify or add categories, click on “Manage categories...” under “Categories” in the top toolbar.

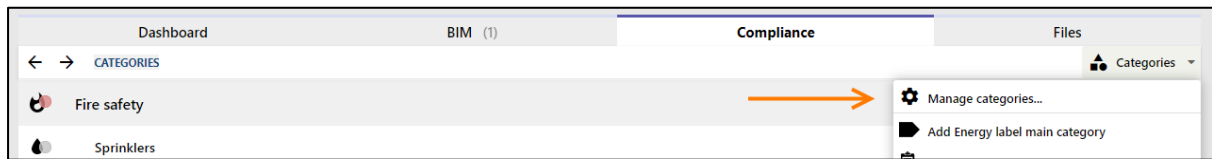


Figure 14: The "Manage categories..." button

This opens the following page in a new tab:



Figure 15: On this page compliance categories can be managed

From this page all the different compliance categories that were just shown, can be managed. New main categories and sub categories can be created and existing categories can be edited

1. To edit the name or icon of an existing category, click on the Edit icon next to its name. Click on Save to make the changes permanent.
2. To add a new subcategory under a specific main category, click the + icon under a main category
3. To add a new main category, click the “New compliance category” button in the top right corner.

Newly added categories are not automatically placed into complexes. In order to activate a category within a complex, first open the Compliance tab.



3.5.1. Activating a main category

Under the “Categories” toolbar item, it should show a list of main categories that are available, but not activated within the complex. Click on one of the presented categories in order to add them to the Compliance tab of the complex. A corresponding icon will of course be added to the tiles overview as well.

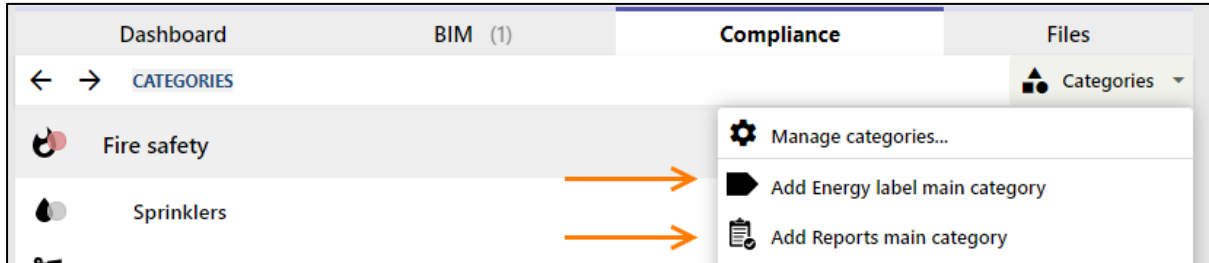


Figure 16: Activating a main category

3.5.2. Activating a subcategory

To add a subcategory, first make sure that the corresponding main category has been activated. Then navigate to the main category. The available subcategories should now be activatable under “Categories” (1).

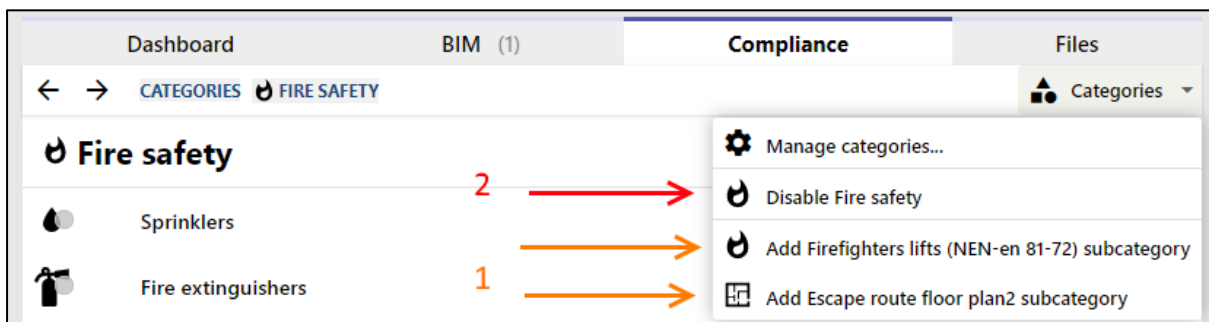


Figure 17: Activating and deactivating subcategories

3.5.3. Deactivating a category

Similarly, categories can be deactivated within a complex by clicking the corresponding “Disable ...” item under the “Categories” toolbar (2).



4 Compliance Mobile App

For the demo instance, the app is available under the following URL:

<https://demo42.bimkeeper.com/supplier-app/>

To log in, use the account of a supplier.

Example username: johnstondemo password: johnston

Upon logging in, the supplier is presented with three main tabs:

4.1. Contracts

The contracts tab shows the supplier's current contracts with the building manager, the start and end date, and whether the contract is currently active.

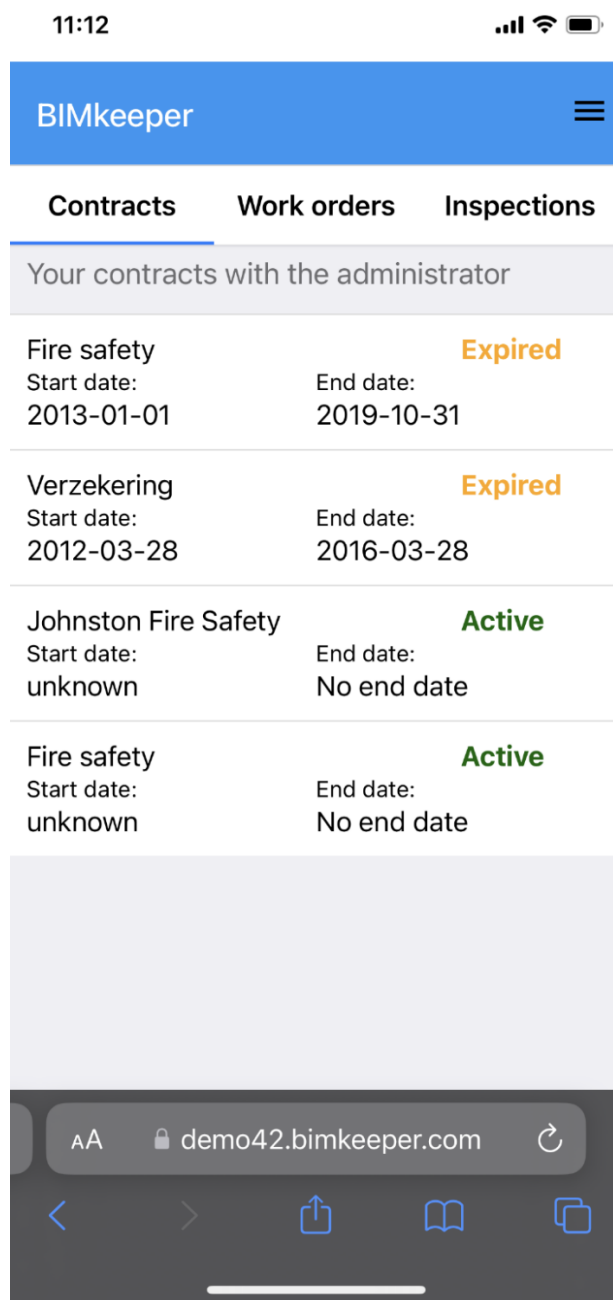


Figure 18: The "Contracts" tab in the mobile app.



4.2. Work assignments

The work assignment tab shows a list of active work assignments for the supplier, its location and relevant information.

Click a work assignment to show more details. There, the supplier can also indicate whether the work is finished.

The screenshot displays the BIMkeeper mobile application interface. On the left, the 'Work orders' tab is selected, showing a list of work assignments. The first entry is 'Eerste lamp binnenkomst derde verdieping flikkert.' with ID 1437559859000, 'High priority' status, and 'Work complete' checked. The location is 'Kalverstraat'. On the right, the details of this work order are shown. The title is 'BIMkeeper' with a back arrow. The description is 'Eerste lamp binnenkomst derde verdieping flikkert.' The address is 'Kalverstraat 110, 1012PJ Amsterdam'. The priority is 'High priority'. The indication amount is 0. The last update by the supplier is '13-10-2020 17:12' and 'Work complete' is checked. A button 'Report the status of the work' is visible, with a dropdown menu showing 'Status' set to 'Work complete'. Below this is a button 'Report work order status as 'work complete''. At the bottom, a 'Related tasks' section states 'There are no related tasks.'

Figure 19: The overview of "Work orders" (left image), and details of a specific work order (right image)

4.3. Inspections

The inspections tab shows the following:

- A list of inspections that have been reported by this supplier
- A list of inspections that the supplier has been requested to do, but have not been reported yet (Tasks)
- A list of inspections that are currently being edited (drafted)

Each item shows:

- The compliance category and reported state (the latter only if the inspection has been made)
- The complex and its address
- The date the inspection has been reported, or is scheduled to be reported (if it's a task)

By clicking on one of the items, the user will be directed to the edit or creation page of the inspection.

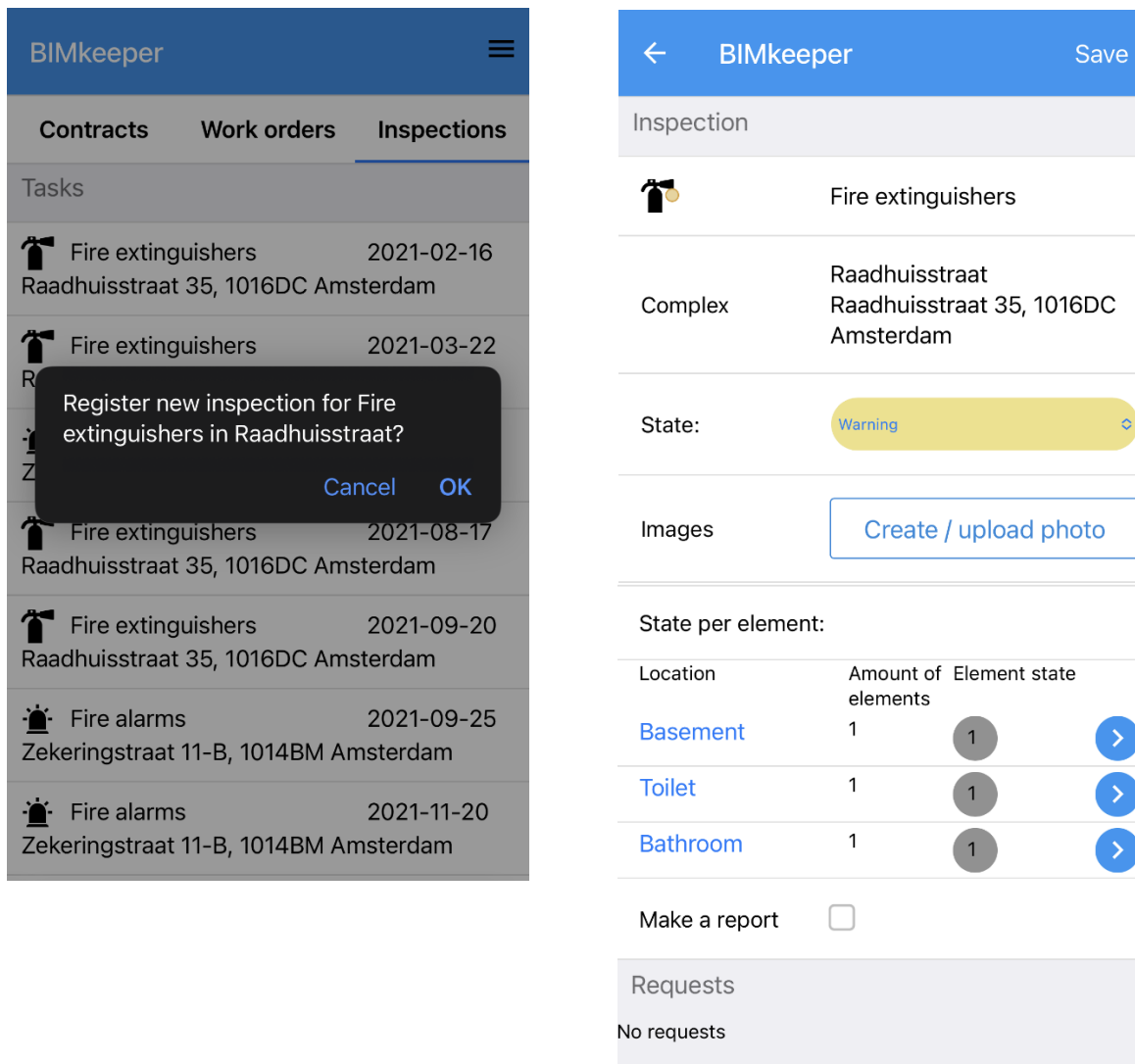


Figure 20: Pop-up for creating a new inspection (left image), details of an inspection (right image)



4.4. Creating or editing an inspection

The following information can be filled for each inspection;

- The state/result of the inspection (this is the same, and influences the status of the compliance categories). For example, for this inspection we set a **Warning**. One fire extinguisher needs to be replaced, but there is still another one nearby so it does not directly compromise fire safety.

The screenshot shows a form with the following elements:

- State:** A dropdown menu currently showing "Warning". The menu is open, displaying the following options: "Great", "Warning" (with a checkmark), "Bad", and "Not specified".
- Images:** A field for adding images, currently empty.
- State description:** A text input field with the placeholder text "Enter your finding(s) here."

Figure 21: Changing the status of an inspection

- The description of the state, for example “One fire extinguisher needs to be replaced”
- Pictures relevant to the findings can be created or attached
- It is possible to specify a state and description for each specific element. For example, if one extinguisher on the third floor has been used, we set its state field to **Not OK** and description to “Has been used”. We can set the state of the remaining extinguishers to **OK**.
- Finally, if an action has to be taken, it is possible to directly create a request. The resulting request will be directly linked to the inspection, so it can be seen that an action has taken place for the reported inspection. And person handling the request will always have the information at hand.



To save the inspection, click on “Save” in the top right corner.

< Back BIMkeeper Save

Status per element:

Label: **Fire Extinguisher named Peter** Location: **Basement**
State: **Great**
Description: ...

Label: **Fire Extinguisher named Jack** Location: **Toilet**
State: **Great**
Description: ...

Label: **Fire Extinguisher named Frank** Location: **Basement**
Status: **Bad**
Description: **Used** **Make a report**

Make a report

Please replace extinguisher Frank

Figure 22: Making a report/request based on an inspection



4.5. Using the app as an admin

Users with the admin role can also create and modify inspections in the mobile app. Upon logging in as an admin, the following page will be shown.

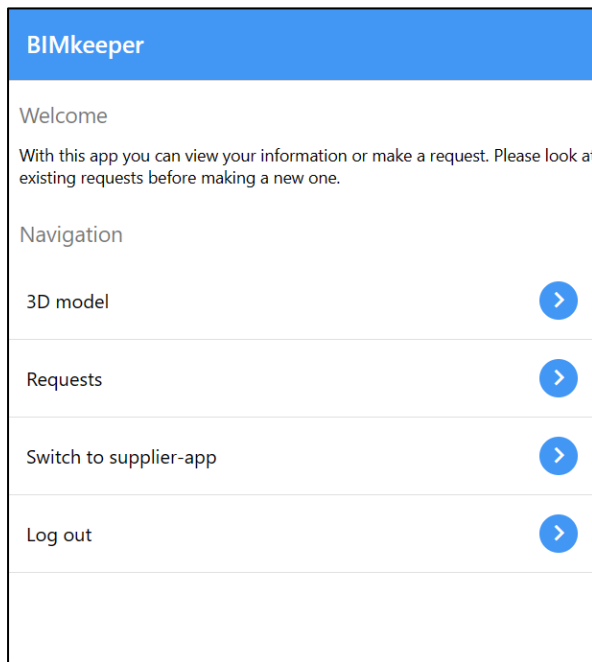


Figure 23: The main menu in the mobile app (as an admin)

In order to access the list of inspections, the “Switch to supplier-app” button should be pressed. Doing so opens the supplier version of the mobile app, where the inspections can be viewed, as well as contracts and work orders. Pressing on the “Inspections” tab will display the entire list of drafts (under “Editing”), planned inspections (under “All tasks”), and completed inspections (under “All performed inspections”).

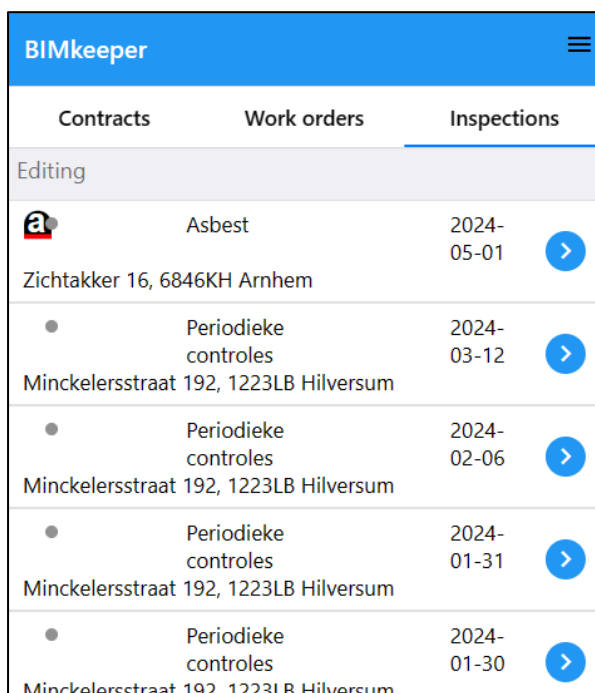


Figure 24: The overview of inspections



To return to the regular admin menu, from where the 3D viewer and the complete request list can be viewed, the “Switch to request-app” should be pressed. This button can be found in the right sidebar, which can be opened by pressing the “hamburger”/triple bar button in the top right.

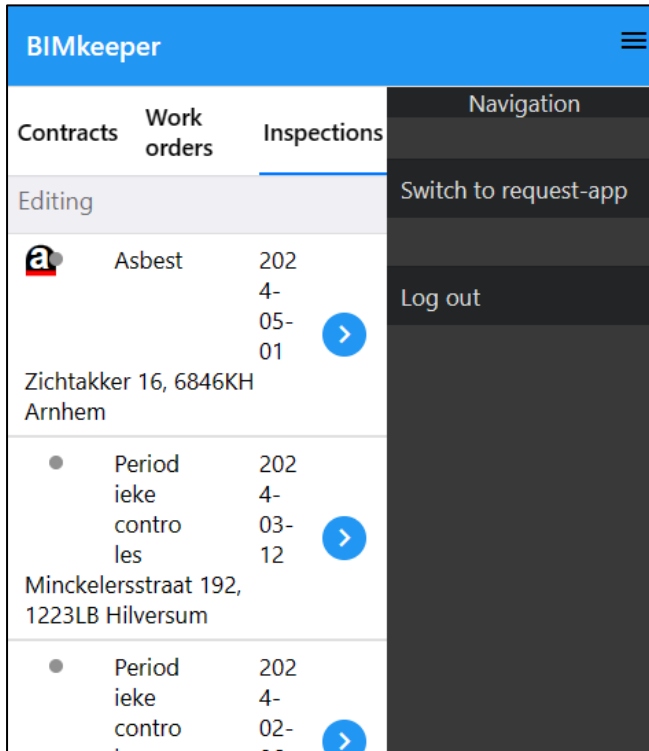


Figure 25: The navigation side bar



End of manual

For other inquiries, please contact IRP at contact@irp.nl