Silvair Commissioning

Quick start guide

8 February 2023	**SN-204 rev. 4.0**

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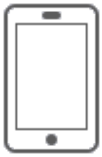
1. Introduction

Silvair Commissioning is a set of tools used to commission and manage commercial lighting installations based on qualified Bluetooth mesh technology. The commissioning consists of three stages: planning (with the Silvair web app before anything is built on site), implementation on site (with the Silvair mobile app), and verification.

This guide shows you how to commission a lighting system.

Planning	**Silvair web app**
	1. Design a lighting control plan based on the expected light behavior in each part of your lighting installation. 2. Create a project. 3. Add collaborators who will be helping you with the commissioning. 4. Create areas and upload floor or site plan images. 5. Create zones and set up light control profiles. The configuration will be stored in the cloud.
Implementation	**Silvair mobile app**
	6. Go on site, add luminaires and occupancy sensors to the zones, and test the lighting control. The configuration previously created in the Silvair web app is automatically sent to these devices. 7. Assign switches to the zones. 8. Calibrate any ambient light sensors.
Verification	**Silvair mobile app**, **Silvair web app**
 	9. Make sure that there are no errors in the areas. 10. Test the quality of the mesh network. 11. Analyze the commissioning report.

To use more advanced features not included in this guide, see these documents:

- Zone linking: *SN-200 Silvair Commissioning user manual*.
- Scheduling: *SN-201 Silvair Scheduling*.
- Emergency lighting testing: *SN-214 Silvair Emergency Lighting Testing*.
- Occupancy monitoring: *SN-218 Silvair Occupancy Monitoring*.
- Energy monitoring: *SN-222 Silvair Energy Monitoring*.

To troubleshoot issues that may have occurred during commissioning, see the *SN-223 Silvair Commissioning troubleshooting guide*.

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2. Planning

2.1 Preparing

1. Design a lighting control plan based on the required light behavior in each part of your lighting installation.

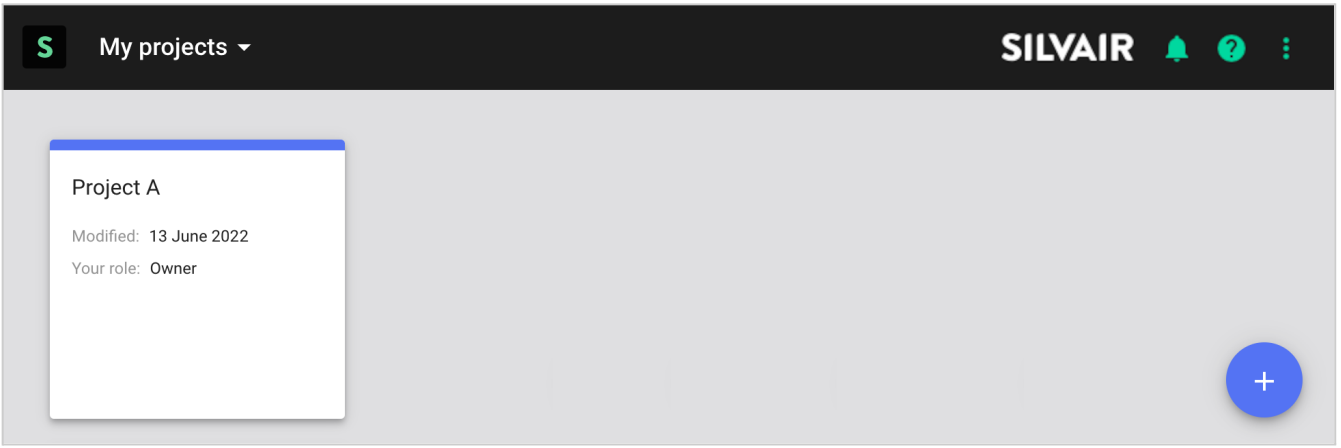
   Take into account the properties of radio communication. Think about how you will group your luminaires, sensors, and switches into areas and zones.

2. Create a Silvair account in the Silvair web app.
3. Prepare a floor or site plan image as a JPEG, PNG, or PDF file.
4. See the *SN-211 Silvair Lighting Control application note*.
5. If your project meets at least one of the following criteria, see *SN-213 Recommendations for complex lighting installations*:
   - has more than approximately 200 devices,
   - at least some devices are placed along a straight line,
   - distances between devices are large,
   - uses a *daylight harvesting* scenario.

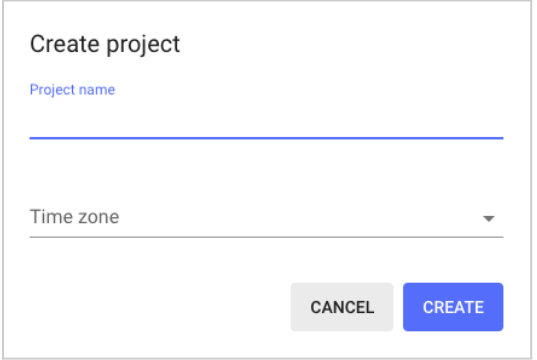
2.2 Creating a project

A project is a separate lighting installation created in the Silvair Commissioning tool. It can be as large as a whole building or site, or as small as a single room. Each project is a single Bluetooth mesh network that is separated from other such networks. A project can consist of multiple areas.

1. Log in to the Silvair web app.
2. Click **+** to create a project.



3. Enter a name for the project, select the correct time zone, and click **Create**.



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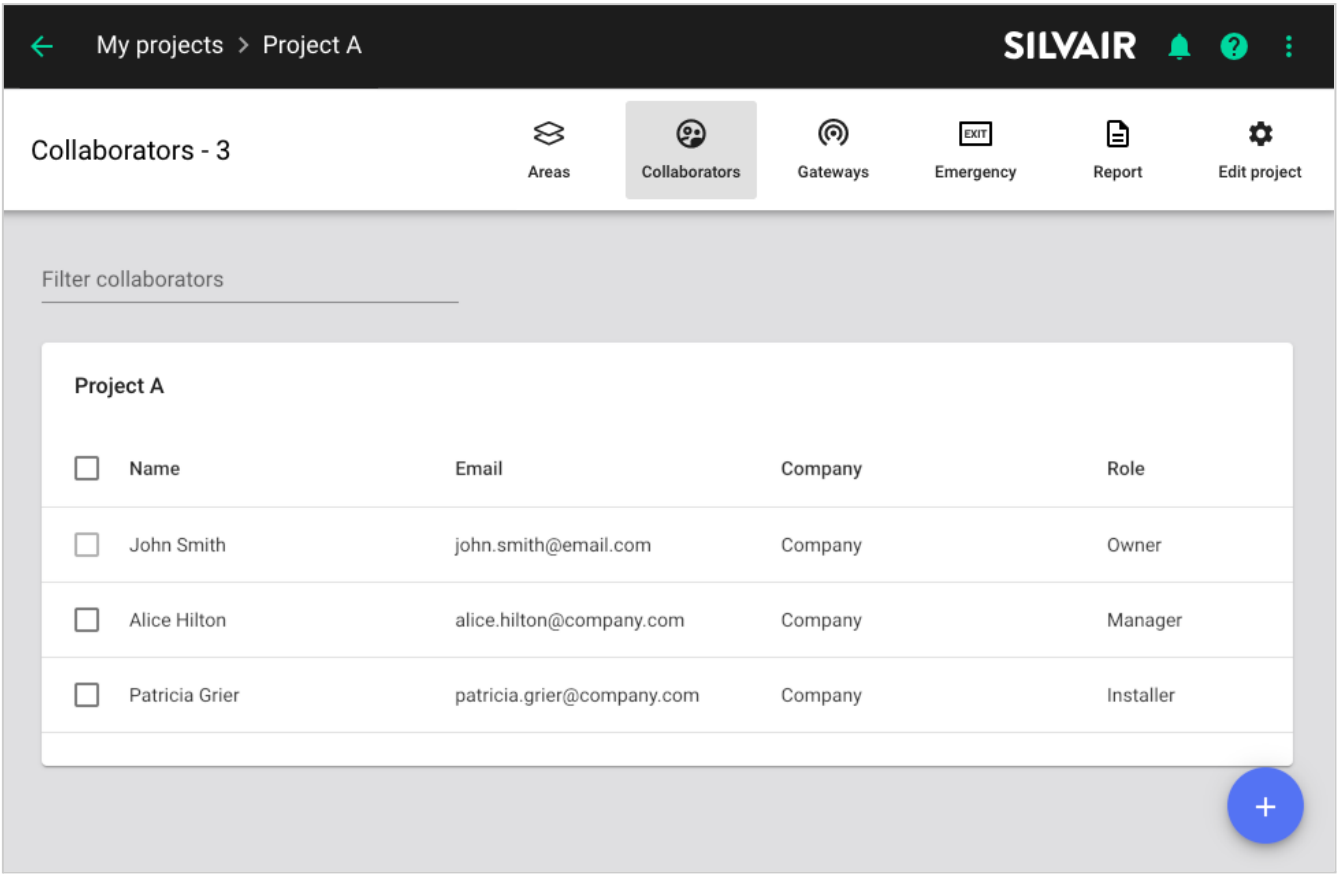
2.3 Adding collaborators

To speed up the work, you can share your project with others so they can participate in the commissioning.

1. Open the project and click **Collaborators**.
2. Click **+** and enter the email addresses to invite to commissioning.

Collaborators can be given the role of Owner, Manager, Installer, or End User. For more information about user roles, see the *SN-200 Silvair Commissioning user manual*.



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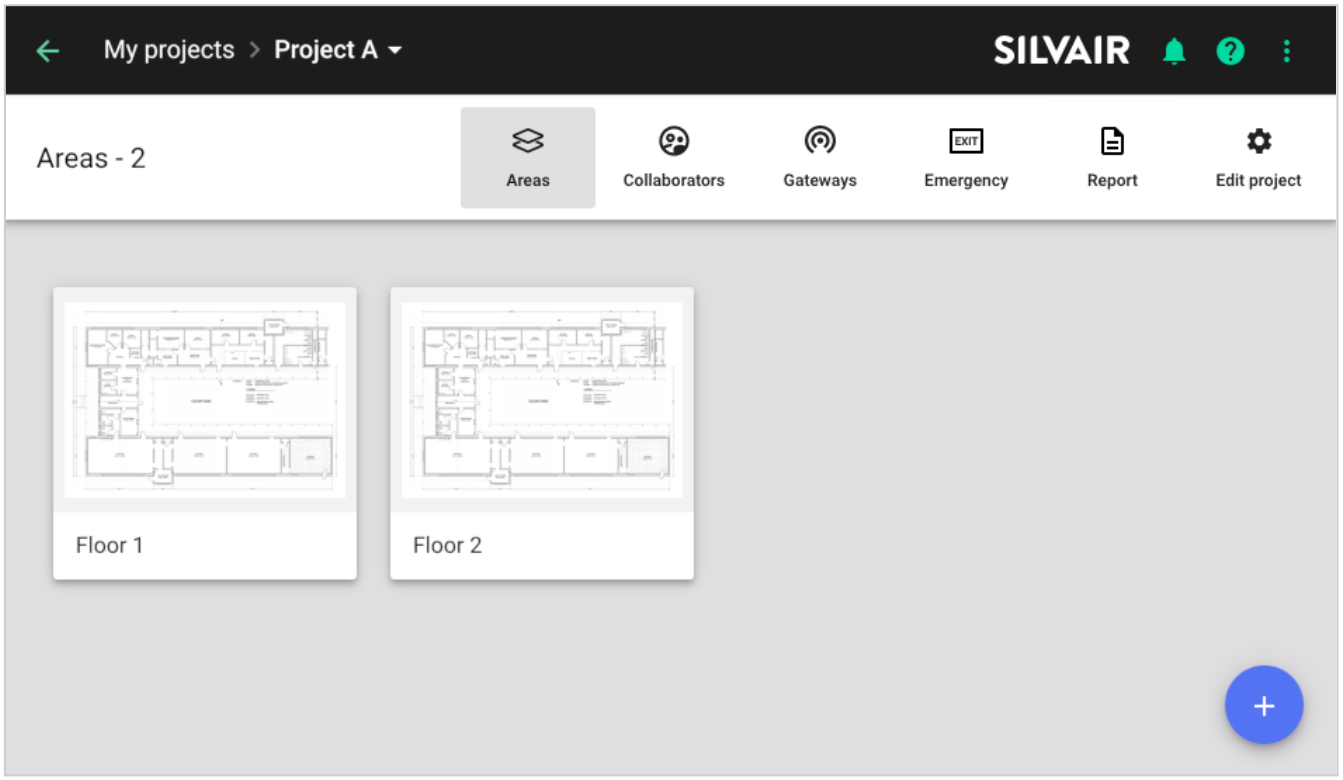
2.4 Creating areas and uploading floor or site plan images

A project can be divided into areas for better clarity and easier navigation. For example, an area can be a room, a floor, or a whole site, or a part of a floor, site, or building. All devices in an area must be in range of the Bluetooth mesh network and each area must be connected to other areas. Areas can include a floor or site plan to help the user navigate the project.

If an area is separated from other areas in the project and cannot communicate with them, it should be set up as a separate project.

1. Open the project.
2. Click **+** to create an area.



3. Enter a name for the area.
4. Click ⬆ and open a JPEG, PNG, or PDF file with a floor or site plan image.

   The image will help you put the zones in the correct place during commissioning.

5. Click **Create**.
6. Repeat steps 2–5 to create other areas and upload a floor or site plan image to each of them.

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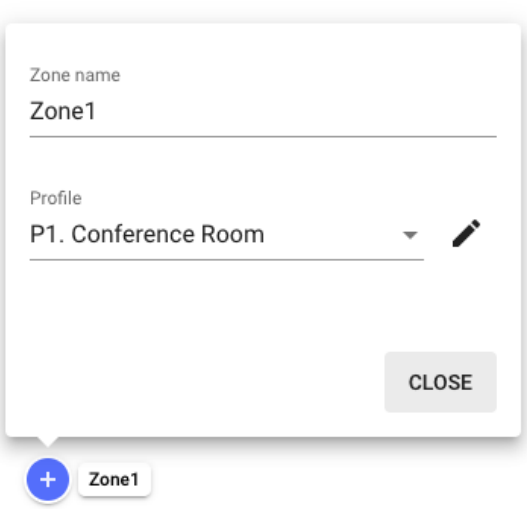
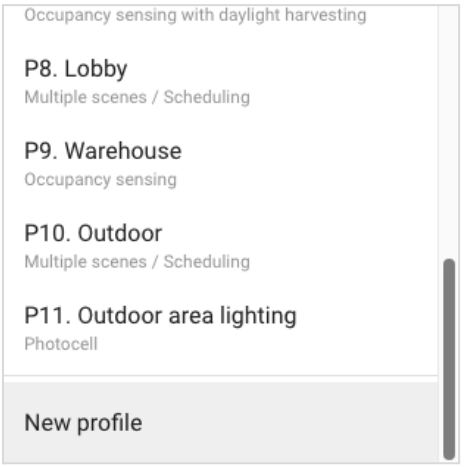
2.5 Creating zones and setting up control profiles

An area consists of zones that contain devices (luminaires, sensors, and switches) that have been commissioned using the Silvair mobile app. A zone can be a whole room or a part of it, or a separate space. All luminaires in the zone operate according to the control profile set up for the zone.

1. Open an area.
2. Click on the floor or site plan to add a zone. To move the zone, drag it to where you want it.
3. Enter a name for the zone. Each change is saved automatically.





4. Select a control profile from the list of default profiles, or create a new profile.

   A control profile is a scenario with settings used to control a zone. A scenario defines how the light behaves in the zone. If you set a different scenario for a profile, different settings may be available.

5. Click ✎ to edit the parameters of the profile.
6. Repeat steps 2–5 to create other zones in this area and assign a control profile to each of them.

   At any time, you can change the zone position, name, or profile, add or delete zones, or change the floor or site plan image.

   For more information about control profiles and scenarios, see the *SN-200 Silvair Commissioning user manual* and *SN-211 Silvair Lighting Control*.

7. Go to the remaining areas and repeat steps 2–6 to create zones and assign a control profile to each of them.

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3. Implementation

3.1 Preparing

1. Make sure that all devices are correctly installed and powered on in your building or site, and that they support qualified Bluetooth mesh technology.
2. Install the Silvair mobile app on your iOS mobile device.
3. Make sure that your mobile device is connected to the internet when you are on site.
4. Make sure that Bluetooth on your mobile device is turned on.
5. If any of the zones use a control profile with a *daylight harvesting* scenario, bring a light meter.
6. If you want to control a zone manually, install a Bluetooth EnOcean switch in the zone.

> Keep the QR code of the EnOcean switch in a safe place. You will need the code if you want to assign the switch to a different device.

3.2 Commissioning the project

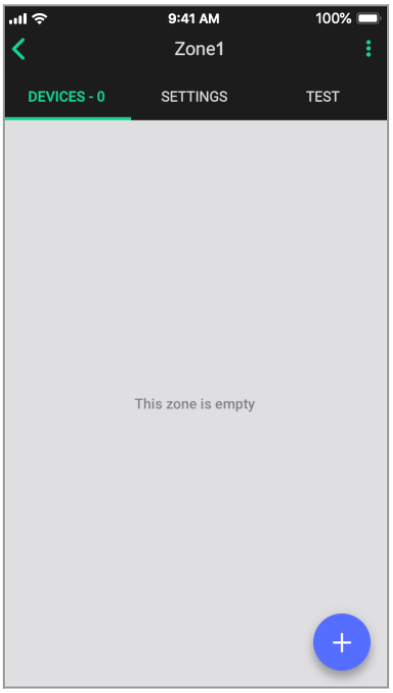
3.2.1 Adding luminaires to the zones

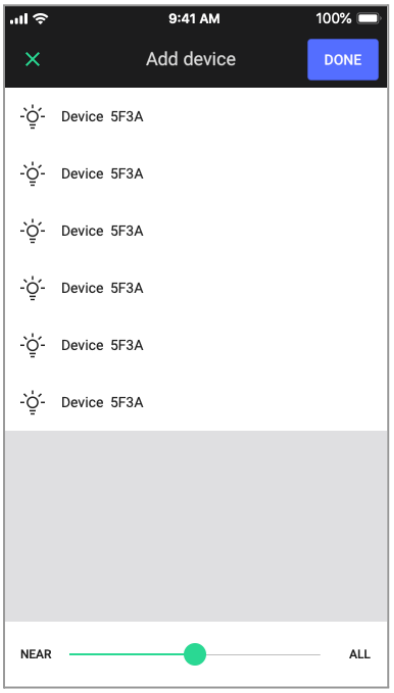
1. Go on site where the devices are installed.
2. Log in to the Silvair mobile app and go to the project and area.
3. Open the zone where you want to add devices.
4. Move as close as possible to the device and tap **+**.

> A list of devices will appear.

> If you want to see only the nearest devices, move the slider to the left.

> If the device you want to add does not appear, it means that it has already been added to a different zone or project.





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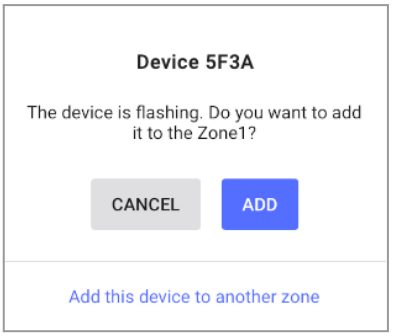
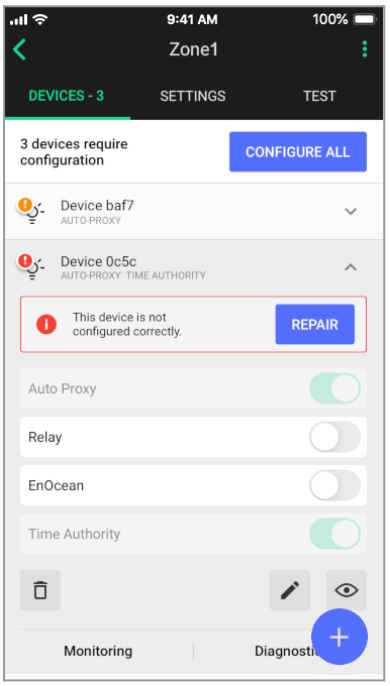
5. Tap a device to add it to the zone. The device will identify itself by flashing. If this is the correct device, tap **Add**.

> If you want to add this device to a different zone, tap **Add this device to another zone**, and then tap the correct zone on the floor or site plan.



6. Add the remaining devices to the zone.
7. Tap **Done**.
8. If a red sign appears next to a device name and refers to configuration, tap **Repair** to configure the device or tap **Configure all** to configure all devices that require configuration in the zone.



> If an orange sign appears, it means that this device does not fully support the features required by the control profile and may not work as intended.

9. Go to the **Test** tab and tap to make sure that all devices in the zone flash.

> For more information about testing the zones, see the *SN-200 Silvair Commissioning user manual*.

10. Repeat steps 3–9 to add devices to the remaining zones in this area.
11. Go to the remaining areas and repeat steps 3–10 to add devices to zones.

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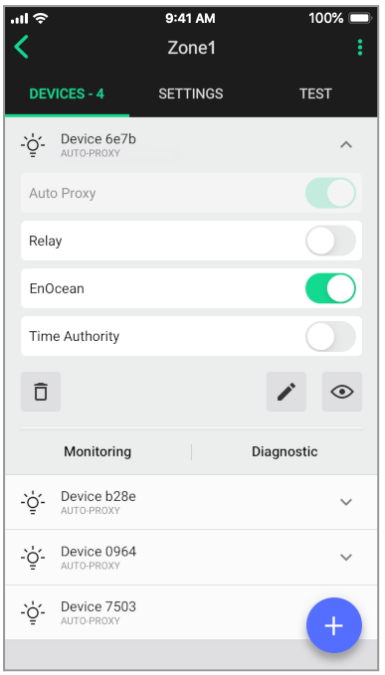
3.2.2 Assigning EnOcean switches to the zones

If you want to control the light in a zone with an EnOcean switch, perform these steps:

1. Make sure that a Bluetooth EnOcean switch is installed in the zone.
2. Select a device to act as an EnOcean adapter. This device must be close enough to the EnOcean switch.
3. Open the zone and on the **Devices** tab, tap the device you have selected.



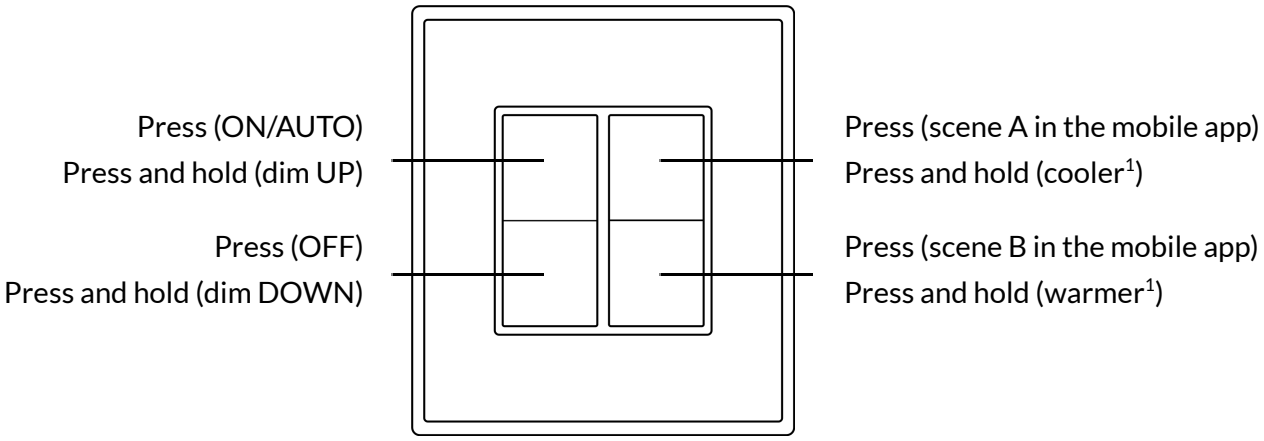
> To find the device, tap ☼ next to a device name to make sure that the correct device flashes.

4. Tap the **EnOcean** toggle bar to set this device as an EnOcean adapter.

> Make sure that this device is not also set up to act as a *static proxy* or a *relay*.

5. If the app asks for permission to access the camera, tap **OK**.
6. Point the camera at the QR code on the back of the EnOcean switch or on its packaging. The app will read the code and configure the connection.
7. Use the buttons of the EnOcean switch to make sure that all devices in the zone respond as intended.

> The left button is used for manual control (ON/AUTO / OFF) and dimming (dim UP/DOWN). The right button (if available) is used to recall scenes (scene A, scene B; if configured in the mobile app) and control color temperature (cooler/warmer).



8. Repeat steps 1–7 for all zones that you want to control with an EnOcean switch.

> For more information about the EnOcean switch, see *SN-203 EnOcean switch*.

> For information about how to set up and trigger scenes with the EnOcean switch, see the *SN-200 Silvair Commissioning user manual*.

> For information about mesh network best practices, see *SN-202 Optimizing mesh network performance*.

[1] Only for zones with compatible tunable white fixtures and Silvair firmware version 2.15 or later. Otherwise, the *press and hold* action of the right button will not work.

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3.2.3 Calibrating the light sensors

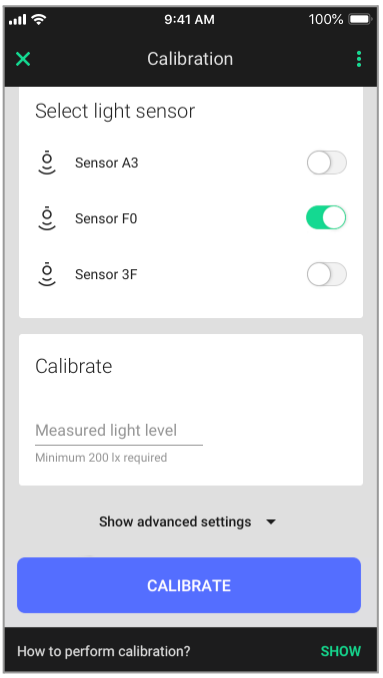
If the zone uses a *daylight harvesting* or a *photocell* scenario, perform these steps to calibrate the light sensor:

1. Open the zone and on the **Devices** or **Settings** tab, tap **Calibrate**.
2. Select the correct sensor for the zone. To find the sensor, tap next to a sensor name to make sure that the correct sensor flashes.
3. For a *daylight harvesting* scenario, put a light meter vertically below the sensor onto the surface where you want to maintain the required light level.
4. For a *daylight harvesting* scenario, read the value shown on the light meter in lux (lx) and enter it into the **Measured light level** field.

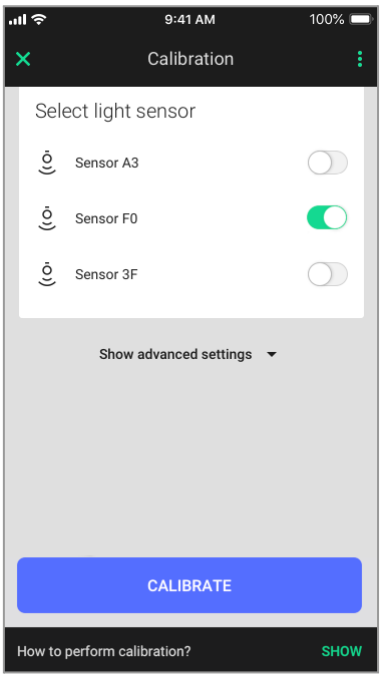
> Make sure that the measured light level is at least the minimum specified below the **Measured light level** field.

> If the required minimum light level cannot be achieved, because for example you must calibrate at night, see *SN-207 Silvair Daylight Harvesting*.

Daylight harvesting



Photocell



5. Tap **Calibrate**.
6. Repeat steps 1–5 for all zones with a *daylight harvesting* scenario and steps 1, 2, and 5 for all zones with a *photocell* scenario.

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4. Verification

4.1 Making sure that there are no errors in the areas

Silvair mobile app

1. In the **Silvair mobile app**, go to an area and make sure that a blue checkmark appears for each zone.

   All devices in the zone have been commissioned.

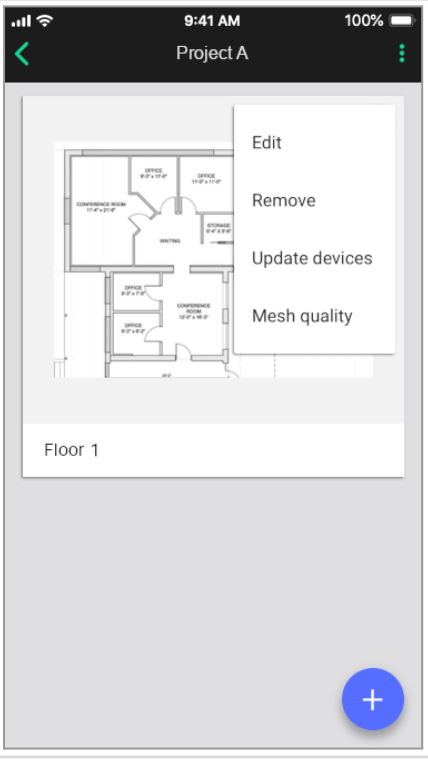
   There are some issues in the zone.

2. If there are issues related to configuration, tap **Configure** to configure all devices that require configuration in the area.
3. If the issues are not related to configuration, go to each zone with the exclamation mark, read the alerts, and refer to the *SN-200 Silvair Commissioning user manual* to resolve the issues.
4. Repeat steps 1–3 for the remaining areas.

4.2 Testing the quality of the mesh network

Silvair mobile app

1. Go on site to an area.
2. In the **Silvair mobile app**, go to the project.
3. In the area field, tap ⋮ > **Mesh quality** > **Start test**.
4. If some zones are marked red after the test has been completed, see *SN-202 Optimizing mesh network performance*.
5. Repeat steps 1–4 for the remaining areas.



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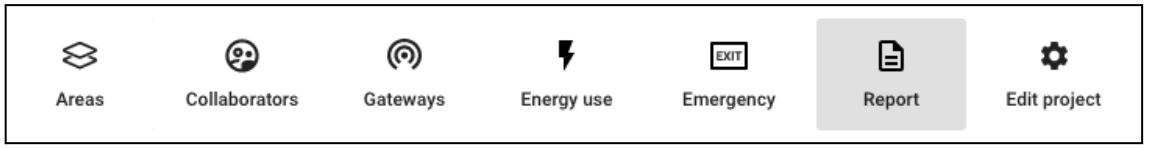
4.3 Analyzing the commissioning report

The commissioning report includes details about the project, areas, zones, devices, control profiles, zone linking, scheduling, energy monitoring, gateways, mesh quality, and collaborators.

Silvair web app

1. In the Silvair web app, open the project and click **Report > Download**.



2. Analyze the report to make sure that everything is set up correctly.

For more information about the commissioning report, see the *SN-200 Silvair Commissioning user manual*.

The commissioning of your lighting system is now complete. The luminaires in all zones will behave as configured in the Silvair web app.

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5. Document revisions

Revision	Date	Editor	Changes
4.0	8 February 2023	GM	Redrafted the document. Updated the screenshots and added some new. Corrected the procedures and added details.
3.3	27 May 2021	LR, ZZ	Added the Document revisions section and updated document references.

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