

HOW TO... USE ALARMS

Alarms are generated when the TMU detects readings that indicate the environment it is measuring is not operating in accordance with acceptable parameters. The purpose of alarms is to notify a user of the problem so that they can then resolve it in the physical world. Alarms cannot be resolved or ignored within the portal. Under device point configuration you can view and edit the existing alarms, which are associated with a device point type and create new alarms.

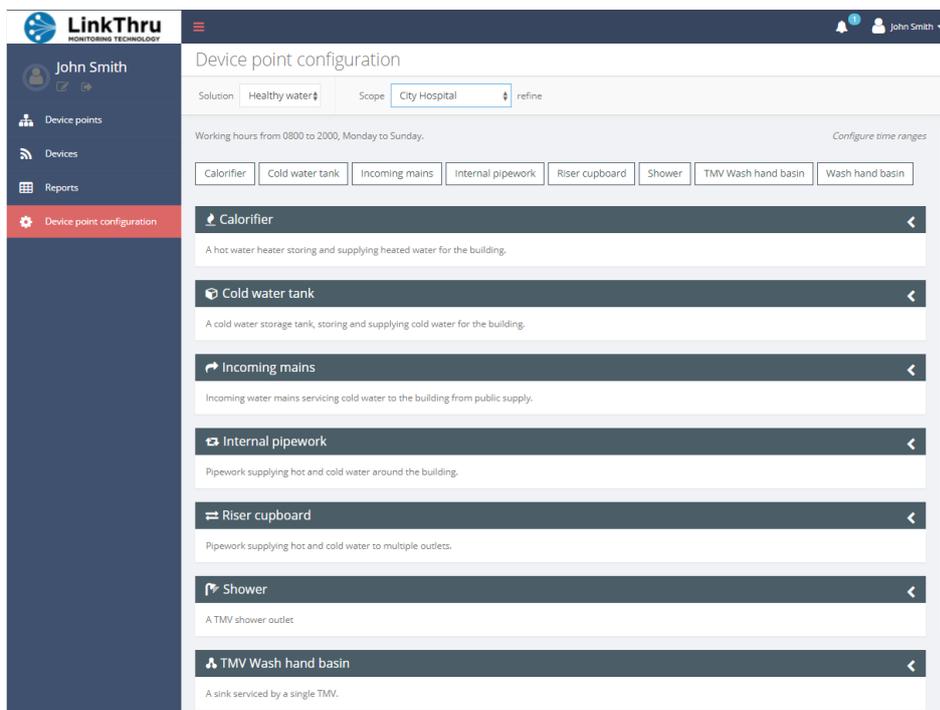
Alarms are only resolved when the system receives a reading that indicates the risk has receded.

For example, an alarm that a hot tap hasn't been used in a week will be resolved when the system detects a flow event for that tap. Once resolved you can acknowledge the alarm to confirm you are aware of it.

The temperature bands are used to show the percentage of time the temperature spends within selected ranges. This can give a better profile of the risk level for each device point, as you can identify the amount of time that bacteria have suitable conditions to reproduce. The figures are based on the 10 second temperature readings taken by the device.

Note: To configure Alarms you must have device configuration permission granted in your user profile.

From the side bar menu, select the **Device point configuration** tool:



The screenshot shows the LinkThru web application interface for 'Device point configuration'. The top navigation bar includes the LinkThru logo, user name 'John Smith', and notification icons. The left sidebar menu is expanded to show 'Device point configuration' as the active tool. The main content area displays the configuration page for 'Healthy water' at 'City Hospital'. It includes a 'Working hours' field set to '0800 to 2000, Monday to Sunday' and a 'Configure time ranges' link. Below this are several filter buttons: 'Calorifier', 'Cold water tank', 'Incoming mains', 'Internal pipework', 'Riser cupboard', 'Shower', 'TMV Wash hand basin', and 'Wash hand basin'. A list of device point types is shown, each with an icon, name, and a brief description:

- Calorifier**: A hot water heater storing and supplying heated water for the building.
- Cold water tank**: A cold water storage tank, storing and supplying cold water for the building.
- Incoming mains**: Incoming water mains servicing cold water to the building from public supply.
- Internal pipework**: Pipework supplying hot and cold water around the building.
- Riser cupboard**: Pipework supplying hot and cold water to multiple outlets.
- Shower**: A TMV shower outlet.
- TMV Wash hand basin**: A sink serviced by a single TMV.

Each device type has been pre-set with temperature parameters. Open each relevant category to confirm your acceptance of the parameters set.

This example shows the configuration for an Internal Pipework device point type:

Device point configuration

Solution Healthy water
Scope City Hospital refine

Internal pipework
▼

Pipework supplying hot and cold water around the building.

Hot flow

Hot return

Cold flow

Ambient

Cancel
Save

Create alarm +

Alarms	Settings	Scope	
Cold pipework running warm <small>The cold water down services pipework is running warm and there is a danger serviced outlets will not achieve required temperatures.</small>	<small>A high risk alarm triggered when the cold flow temperature is above 20 °C at any time.</small>	All	Override Disable
Freezing Risk <small>The water temperature is close to freezing, there is a risk the pipes might burst.</small>	<small>A medium risk alarm triggered when the cold flow temperature is below 4 °C at any time.</small>	All	Override Disable
Hot pipework running cool <small>The hot flow pipework is running cool and there is a danger serviced outlets will not achieve required temperatures.</small>	<small>A medium risk alarm triggered when the hot flow temperature is below 50 °C at any time.</small>	All	Override Disable

This screen shows the temperature flags and the alarms and messages that will be generated if the readings are outside these set parameters. These can be edited or deleted as required.

When you change the temperature bands all future data will be accessed according to the updated bands, although there may be a slight delay of up to 24 hours across the different devices due to the timing and frequency of the messages they send.

If you wish to change any of the settings, simply slide the amber, blue or green dots to the required temperature, then click “Save”.

Creating an Alarm:

When creating an alarm there are a number of options available depending on the device point type:

Create healthy water alarm (1/2) ×

Name *

Description

Alarm scope

Alarm type *
 Date and time
 Sensor data

Name - Enter an alarm name and an optional description to provide more information to the person who will be responding to the alarm.

Alarm Scope - Select the scope of the hierarchy where the alarm will apply. This scope is taken from the top of the device point configuration page, although you can refine it as required.

Alarm Type: Select the type of alarm you wish to create:

- **Date and time** - This raises alarms at a scheduled time.
- **Sensor data** - This raises alarms based on data received from devices attached to a device point location.

Date and time alarms:

Create healthy water alarm (2/2) ×

New Alarm

Date and Time

The alarm is triggered weekly, every week(s)

for cleaning targeted for :

on *

Create a alarm for Internal pipework minutes 00:00

escalate to high

Note: In this guide example, we are creating a healthy water alarm.

Select the re-occurrence parameters for the alarm:

- Input the required weekly frequency for the alarm.
- Enter the time of day you wish cleaning to be completed by.
- Select the days of the week you wish the alarm to be raised.
- Select the alarm severity level. If “medium risk” you can add escalation values which will change the alarm to “high risk” when triggered.
- Select when the alarm will be raised in relation to the time of day when cleaning is required.

Sensor data alarms:

Create healthy water alarm (2/2) ×

New Alarm

Create an alarm for Internal pipework using readings

A risk alarm is triggered

where the temperature is °C

for days

at any time

Select the alarm severity level. If “medium risk” you can add escalation values which will change the alarm to “high risk” when triggered.

Select any conditions you wish the alarm to be triggered against. These are AND conditions so both conditions must be met for the alarm to be raised.

There is the option to add time duration conditions, where the alarm conditions must persist for a specified period of time in order for the alarm to be triggered.

Disabling an alarm:

You can disable an alarm at any level of the hierarchy in order to correctly configure device points across different locations.

For example, you might want to disable alarms while maintenance activities are ongoing.

Select the corresponding disable button from the table on the device point configuration page:

Disable healthy water alarm

Name
Cold pipework running warm

The cold water down services pipework is running warm and there is a danger serviced outlets will not achieve required temperatures.

Existing alarm settings
A high risk alarm triggered when the cold flow temperature is above 20 °C at any time.

Alarm applies to the following device points located under **All**

Disable

Disable scope
All

Cancel Save

You can review the alarm settings you are disabling at any time.

You must select the scope at which the alarm will no longer apply. This disable condition will apply to all device points of that type within the selected branch of the hierarchy.

Overriding an alarm:

You can override alarms at any level of the hierarchy in order to correctly configure device points across different locations.

For example, you may wish for washrooms at the building entrance level to be cleaned more frequently due to the relatively high number of visitors entering at regular intervals.

Select the corresponding override button from the table on the device point configuration page.

You can alter the alarm description, but not the alarm name.

You must select the scope at which the alarm override settings will apply:

Override healthy water alarm (1/2)×

Name
Cold pipework running warm

Description

The cold water down services pipework is running warm and there is a danger serviced outlets will not achieve required temperatures.

Existing alarm settings
A high risk alarm triggered when the cold flow temperature is above 20 °C at any time.

Alarm scope

All▾

Alarm type *

Date and time

Sensor data

CancelNext

You can review the existing settings which are being overridden at any time:

Override healthy water alarm (2/2)×

Cold pipework running warm
The cold water down services pipework is running warm and there is a danger serviced outlets will not achieve required temperatures.

Existing alarm settings
A high risk alarm triggered when the cold flow temperature is above 20 °C at any time.

Overridden alarm applies to device point located under **City Hospital**

Create an alarm for Internal pipework using Cold flow ▾ readings ▾

A high ▾ risk alarm is triggered

where the temperature is above ▾ 20 °C

for days ▾

at any time

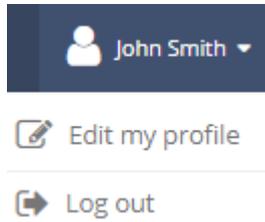
PreviousCancelSave

You must update the condition settings in order for the override to be valid.

Alarm notifications:

To be notified of an alarm by email or SMS, a notification must be created in each user's profile.

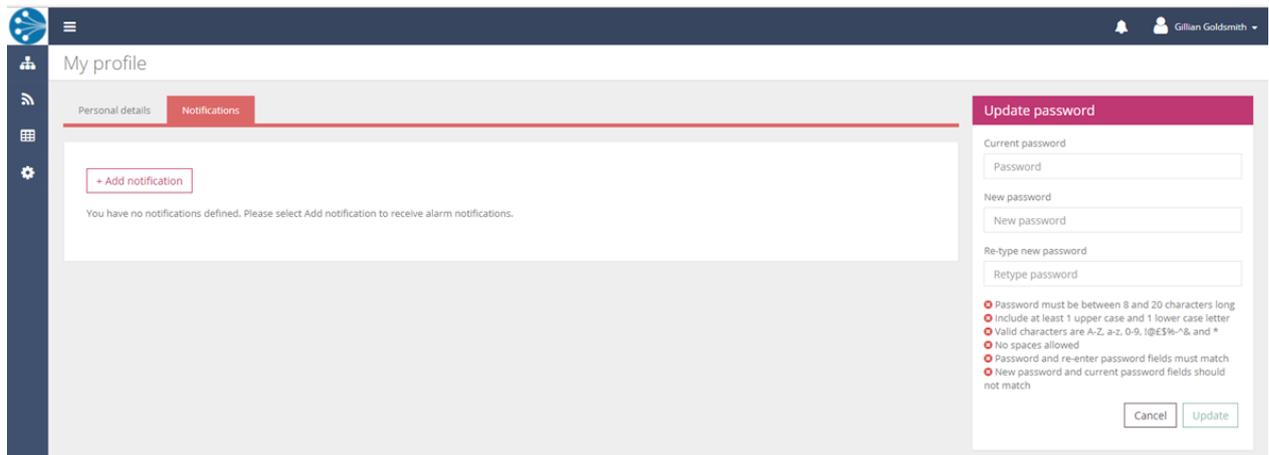
In the top right corner of the dashboard, click on the user name and then Edit my profile:



Here you will be able to click on a **Notifications** tab.

All currently configured notifications will be displayed at the top of the panel. You can delete these as needed.

To add a notification, click on the **+Add Notification** box:



This menu will appear:

A dialog box titled 'Add Notification' with a close button (X) in the top right corner. It contains the following fields:

- Scope *: City Hospital (dropdown)
- Solution *: Healthy water (dropdown)
- Device point type *: All (dropdown)
- Severity *: All (radio button selected), High (radio button), Medium (radio button)
- Type *: Email (radio button selected), immediate (dropdown)

At the bottom right, there are 'Cancel' and 'Add' buttons.

- **Scope** – You will receive notifications for any alarms generated against device points within the selected part of the hierarchy. Use the refine option to filter through the hierarchy.
- **Solution** – Select the category Healthy water.
- **Device point type** – Select the type of water system device, as appropriate (e.g. calorifier, cold water tank, incoming mains, internal pipework, riser cupboard, shower, TMV wash hand basin or wash hand basin).
- **Severity** – Assign the severity status of the alarm, as appropriate (All, High or Medium)
- **Type** – You can choose the timeframe after which you will receive notification via Email (Immediate, 15 minutes, 60 minutes, 3 hours or 24 hours). You can add multiple notification settings, if required.

Regardless of your own notification settings, any generated alarms will be visible in LinkThru for you to review and manage.

Viewing alarms:

Click on the alarm icon in the top right of the screen to see the alarm name and the date it was raised.

Selecting an alarm will take you to the alarms tab view within the analysis page for the device point the alarm was raised for.

The alarms tab provides more information about the alarm. If LinkThru detects that the alarm has been resolved, then you will have the option to accept it and add comments.

When accepting an alarm a log will be created with the user's name, date and time. A complete audit history of all alarms is maintained.

Alarms can be viewed at any point in the hierarchy.

A summary is given on the left of the page as you navigate through the hierarchy and by clicking on the dashboard button more details will be shown.