

# Opturion AlertSafe Administrator Guide

Opturion

February 23, 2022

## Contents

<b>1 Overview</b>	<b>1</b>
<b>2 Supported Browsers</b>	<b>1</b>
<b>3 Login Page</b>	<b>2</b>
<b>4 Navigation Bar</b>	<b>3</b>
4.1 Page Links	3
4.2 Information ⓘ	3
4.3 Account 👤	3
<b>5 Staff View</b>	<b>4</b>
5.1 Shift Requests and Assignments	4
5.2 Staff View Menu	5
5.2.1 Left / Right Arrows < >	5
5.2.2 Star ★	5
5.2.3 Print 🖨	5
5.2.4 Filter ▼	5
5.2.5 Number of Weeks	6
5.2.6 Date Picker	6
5.2.7 Download ⬇	6
5.2.8 Time and Attendance Download ⌛	8
5.2.9 Work Exceedance Download ➕	8
5.3 Staff View Actions	9
5.3.1 Locking / Unlocking	10
5.3.2 Publishing / Unpublishing	10
5.3.3 Assign	10
5.3.4 Request	11
5.3.5 Comment	11
5.3.6 Swap Shifts	11
5.3.7 Work Exceedance	12
<b>6 Shift View</b>	<b>16</b>
<b>7 Staff</b>	<b>17</b>
7.1 Staff Menu	17
7.1.1 Add New User 👤➕	17
7.1.2 Upload ⬆	18
7.2 Edit User	19
<b>8 Shifts</b>	<b>20</b>
8.1 Shifts Menu	20
8.1.1 Add Shift ➕	20
8.2 Edit Shift	21
<b>9 Roles</b>	<b>23</b>
9.1 Roles Menu	23
9.1.1 Add Role ➕	23

9.2 Edit Role . . . . .	24
<b>10 Coverage</b>	<b>25</b>
<b>11 Safety Schemes</b>	<b>26</b>
11.1 Safety Schemes Menu . . . . .	26
11.1.1 Add Scheme + . . . . .	26
11.2 Edit Safety Scheme . . . . .	26
<b>12 Settings</b>	<b>28</b>
12.1 Settings Menu . . . . .	28
12.2 Alertness Rules Settings . . . . .	29
12.3 Business Rules Settings . . . . .	30
12.4 Fatigue Index Settings . . . . .	31
12.5 Risk Index Settings . . . . .	32
12.6 Time and Attendance Settings . . . . .	33
<b>13 Aside on Deletion</b>	<b>34</b>
<b>14 Building a Roster</b>	<b>35</b>
<b>15 Fatigue Guidelines</b>	<b>36</b>
15.1 CRC Guidelines . . . . .	36
15.1.1 Consecutive Shifts . . . . .	36
15.1.2 Consecutive Night Shifts . . . . .	37
15.1.3 Night Day Rotation . . . . .	38
15.1.4 Quick Returns . . . . .	39
15.2 Fatigue Index Guidelines . . . . .	40
15.2.1 The Karolinska Sleepiness Scale . . . . .	40
15.2.2 Recommended Limits . . . . .	40
15.2.3 Examples . . . . .	41
15.3 Risk Index Guidelines . . . . .	42
15.3.1 Recommended Limits . . . . .	42
15.3.2 Examples . . . . .	43
<b>Appendices</b>	<b>44</b>
<b>A Bulk Staff Upload</b>	<b>44</b>
A.1 Sheet: Staff . . . . .	44
A.1.1 Column: Name . . . . .	44
A.1.2 Column: DOB . . . . .	44
A.1.3 Column: Login . . . . .	44
A.1.4 Column: Password . . . . .	44
A.1.5 Column: Role . . . . .	45
A.1.6 Column: Start Date . . . . .	45
A.1.7 Column: End Date . . . . .	45
A.1.8 Column: Email . . . . .	45
A.1.9 Column: Extra Info 1 . . . . .	45
A.1.10 Column: Site . . . . .	45
A.1.11 Column: Department . . . . .	45

A.1.12 Column: Admin	45
A.1.13 Column: Locked	46
A.1.14 Column: Hidden	46

## 1 Overview

Opturion AlertSafe is a web-based rostering application with built-in fatigue checking technology. This document is an introduction to AlertSafe for administrator users. It describes the functionality available to administrators and walks you through the process of building your first roster.

## 2 Supported Browsers

The following web browsers are supported by Opturion AlertSafe:

- Chrome
- Chrome Android
- Firefox
- Safari
- Safari:iOS
- Opera

### 3 Login Page

The URL provided by Opturion takes you to the login page shown in Figure 1.

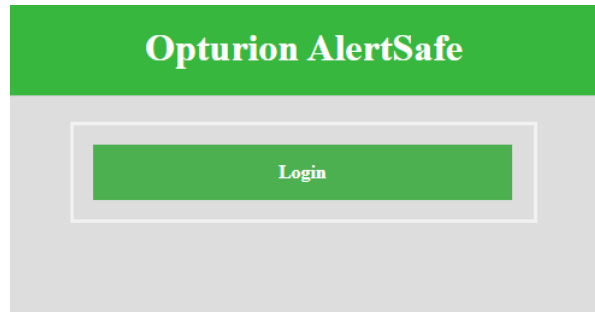


Figure 1: Login Page.

Clicking on the “Login” button opens the login form shown in Figure 2. Enter your username and password and then click “Login” to access AlertSafe.

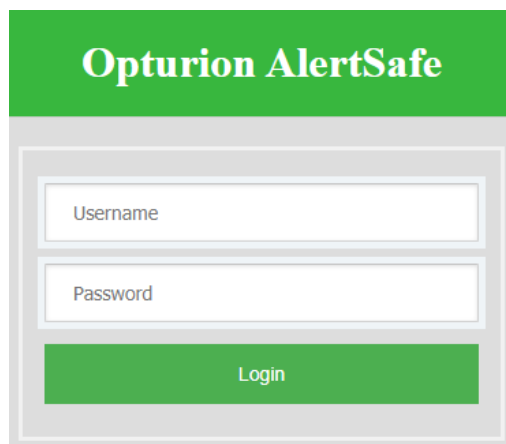
The image shows the login form for 'Opturion AlertSafe'. It has the same green header bar with 'Opturion AlertSafe' in white. Below the header, the main content area is light gray. Centered in this area is a white rectangular box with a thin gray border. Inside this box, there are two white input fields stacked vertically. The top input field is labeled 'Username' and the bottom one is labeled 'Password'. Below these input fields is a solid green rectangular button with the word 'Login' in white text.

Figure 2: Login Form.

## 4 Navigation Bar

After successfully logging into AlertSafe, you are taken to the **Staff View** page. You will see the navigation bar in Figure 3 displayed across the top of your browser window.

**Note:** If you are using a mobile browser you will be directed to the user view of AlertSafe. While you can still access the **Staff View** page via the **account** menu, it is not recommended to use this view due to the limitations of the mobile screen size. For further details please consult the “Opturion AlertSafe User Guide”.



Figure 3: Navigation Bar.

### 4.1 Page Links

The **Staff View**, **Shift View**, **Coverage**, **Staff**, **Shifts**, **Roles**, **Settings** and **Safety Schemes** pages can be accessed by clicking on the labelled links.

### 4.2 Information

The information icon takes you to the **Fatigue Guidelines** page. It provides information about the fatigue guidelines used by AlertSafe.

### 4.3 Account

The account icon opens a drop-down menu that lets you access your personal roster, change your password or log out of AlertSafe. Selecting “My Roster” will take you to the user view of AlertSafe. For further details please consult the “Opturion AlertSafe User Guide”.

5 Staff View

The staff view page contains a table of staff members and dates. Each *cell* in the table represents a staff member and date where a shift *could* be assigned. Rosters are built using the staff view table.

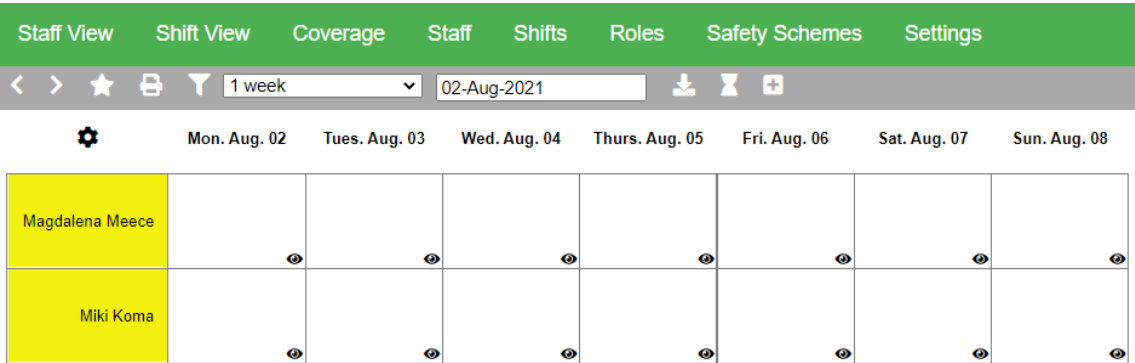


Figure 4: Staff View.

Figure 4 shows an example of the staff view table. Staff members are listed vertically, with the leftmost column giving the name of the staff member. The background color in each cell of that column is the colour associated with the staff member’s role. Dates are listed horizontally across the top of the table, with each column (except the first) giving the details, if any, for every staff member on that date.

5.1 Shift Requests and Assignments

Figure 5 shows how shift requests are distinguished from shift assignments in the staff view table. Shift requests are represented using small bars containing the shift’s name and are filled with the shift’s colour. Here, the left cell contains a request for a “D” shift. Shift assignments are represented by a cell filled with the shift’s colour. Here, the right cell contains an assignment for a “D” shift. While there may be multiple shift requests in a cell, only one assignment is allowed. When an assignment has been made, the shift requests are no longer visible. They can be viewed by hovering the mouse pointer over the cell. Doing so will bring up a box like that in Figure 5, which lists the staff member’s shift requests for that date.

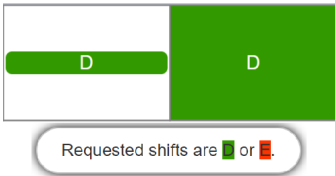


Figure 5: Shift Requests and Assignments.



## 5.2 Staff View Menu

Figure 6 shows the staff view menu. It is located directly below the **navigation bar**.



Figure 6: Staff View Menu.

The following functions are available in the staff view menu:

### 5.2.1 Left / Right Arrows < >

The left and right arrow buttons shift the roster view backwards or forwards respectively by four weeks.

### 5.2.2 Star ★

The star button shifts the roster view so that it begins on the Monday of the current week.

### 5.2.3 Print 🖨

The print button opens the browser's built-in print function and lets you print the roster. The printed copy replicates the current roster view *including* any active filters.

### 5.2.4 Filter ▼

The filter button opens a dialog box that lets you control which staff members appear in the roster view. Staff members can be filtered by any combination of name, role, site or department. Filters are *not* case sensitive. Only a single name filter can be used, but multiple role, site and department filters may be given. Role, site and department filters must be separated by a comma. Click the “Apply” button to apply the filter to the roster view. Figure 7 shows a filter that selects only those staff whose name begins with N and have the role ANUM or RN.

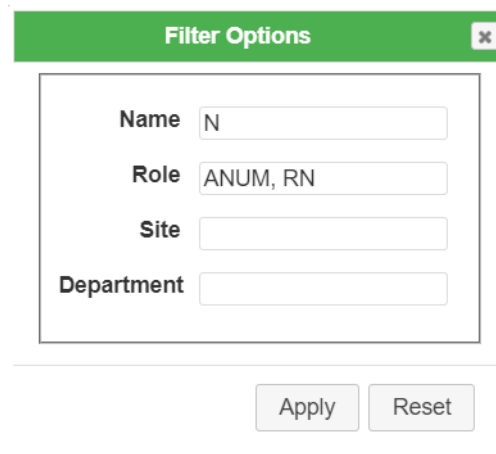


Figure 7: Filter Dialog.

The “Reset” button clears all existing filters.

### 5.2.5 Number of Weeks

The number of weeks drop-down list lets you select the number of weeks that are displayed. The options are: 1, 2, 4, 8, 12, 16 and 20 weeks. Longer roster views may not fit on your screen and you will need to scroll horizontally to view the rest of the roster.

### 5.2.6 Date Picker

The date picker lets you select the date of the starting Monday in the staff view table.

### 5.2.7 Download

The download button opens a dialog box, shown in Figure 8, that lets you download the roster. There are two different download options: “Calendar” or “Schedule”. The “Calendar” option mirrors the display in AlertSafe, while the “Schedule” shows the hour-by-hour assignment of shifts. The “Calendar” options can be downloaded in Microsoft Excel workbook (.xlsx) format or in CSV format, while the “Schedule” only supports Microsoft Excel workbook (.xlsx) format. Figures 9, 10 and 11 show examples of these downloads. Any active filters are applied to a roster that is downloaded.

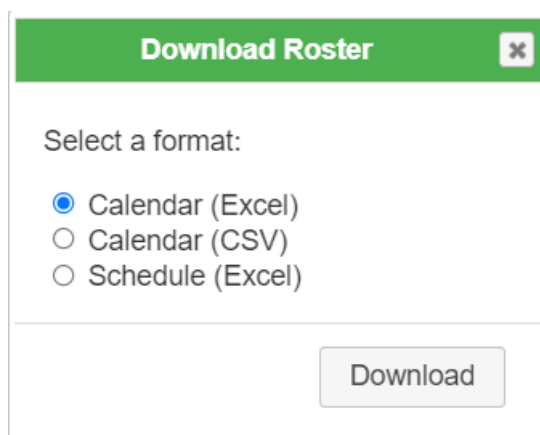


Figure 8: Download Form.

Name	Site	Department	Role	02/08/2021	03/08/2021	04/08/2021	05/08/2021	06/08/2021
Magdalena Meece	RCH	ICU	ANUM	D	D	D	D	
Marcella Buf	RCH	ICU	ANUM	E	E	E	E	
Nicolas Bernie	RCH	ICU	ANUM	E	E	E	E	
Shane Lopp	AH	ICU	ANUM	N	N	N	N	
Adela Leble	RCH	ICU	CNS	E	E	E	E	
Ayako Shield	RCH	ICU	CNS	D				
Bella Claw	RWH	ICU	CNS	D	D			

Figure 9: Calendar XLSX Download.

Staff	Site	Department	Role	2/08/2021	3/08/2021	4/08/2021	5/08/2021
Magdalena Meece	RCH	ICU	ANUM	D	D	D	D
Marcella Buf	RCH	ICU	ANUM	E	E	E	E
Nicolas Bernie	RCH	ICU	ANUM	E	E	E	E
Shane Lopp	AH	ICU	ANUM	N	N	N	N
Adela Leble	RCH	ICU	CNS	E	E	E	E
Ayako Shield	RCH	ICU	CNS	D			
Bella Claw	RWH	ICU	CNS	D	D		

Figure 10: Calendar CSV Download.

		Monday 02 August 2021																													
			00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00				
Site	Departme	Role																													
RWH	ICU	CNS							Bella Clow D: 07:00 - 15:30																						
								Bebe Tichenor D: 07:00 - 15:30										Margarete Wikoff E: 13:00 - 21:30													
		RN																									Tille Seabaugh N: 21:00 - 07:30				
RCH	ICU	CNS							Ayako Shield D: 07:00 - 15:30																						
									Miki Koma D: 07:00 - 15:30																						
									Nakesha Hande D: 07:00 - 15:30																						
									Adela Leble E: 13:00 - 21:30																						
									Morris Cordero D: 07:00 - 15:30																						
									Lisbeth Prince D: 07:00 - 15:30																						
									Charla Rudolf D: 07:00 - 15:30																						
									Thalia Kamp D: 07:00 - 15:30																						
									Columbus Bones D: 07:00 - 15:30																						
									Sacha Buttler D: 07:00 - 15:30																						

Figure 11: Schedule Download.

**5.2.8 Time and Attendance Download** ⌵

This button downloads time and attendance data into a Microsoft Excel workbook (.xlsx). Any active filters are applied to the download.

**5.2.9 Work Exceedance Download** ⬆

This button downloads work exceedance data into a Microsoft Excel workbook (.xlsx). Any active filters are applied to the download.

### 5.3 Staff View Actions

Actions that can be applied to the cells in the staff view table are selected from the context menu shown in Figure 12.

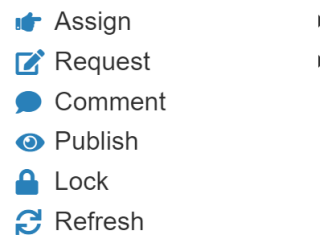


Figure 12: Staff View Context Menu.

This context menu is opened using a right-click on the selected cell or cells. This can be done in one of the following ways:

- A single cell can be selected by right-clicking on it.
- Multiple cells can be selected by either left-clicking on a cell and dragging the mouse, or by holding down the CTRL key and left-clicking on individual cells. Right-click anywhere in the resulting selection to open the context menu.
- All of the cells for a specific date can be selected by right-clicking on the column heading for that date (i.e. on the date itself).
- All of the cells in the table can be selected by right-clicking on the edit icon



in the top left corner of the table.

The options in the context menu depend on the existing contents of the selected cell or cells. They may not exactly match the ones shown in Figure 12. For example, Figure 13 shows the context menu for an assigned and published cell. It contains an extra option that lets an administrator enter Work Exceedance data for the staff member.

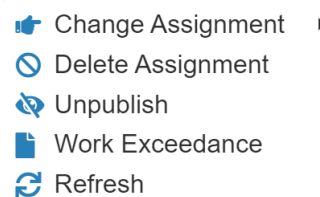


Figure 13: Staff View Context Menu.

We now describe the different kinds of action.

### 5.3.1 Locking / Unlocking

Administrators can edit the roster at any time. Non-administrators can only enter their shift preferences and comments when a cell is “unlocked”. This allows you to restrict the time period in which staff can enter shift requests. Locked cells contain a padlock icon



in their bottom right corner; unlocked cells do not contain the padlock icon.

### 5.3.2 Publishing / Unpublishing

Shift assignments are always visible to administrators. Non-administrators can only see their shift assignments after a cell is “published”. This lets you build a roster *before* making it available to staff. Published cells contain an eye icon



in their bottom right corner; unpublished cells do not contain the eye icon. Publishing a cell also has the effect of locking it, however when published the padlock icon will not also be visible in the cell.

### 5.3.3 Assign

The “Assign” action assigns a shift to a staff member on the date given by the cell. Selecting this action opens a sub-menu listing available shifts. You can select a shift to assign to the staff member using this list. If an assignment is already present for that cell, options to change or delete it also appear in the context menu.

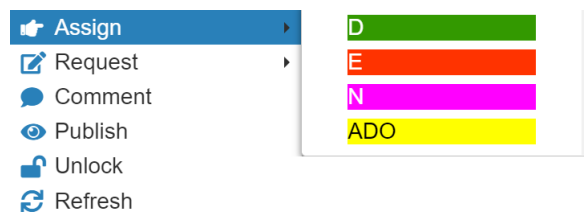


Figure 14: Assign Menu.

### 5.3.4 Request

The “Request” action adds a shift request for the staff member on the date given by the cell. Selecting this action opens a sub-menu listing available shifts. You can enter a shift request on the user’s behalf from this list. If a shift request is already present for that cell, options to add another request or delete all of the requests also appear in the context menu.

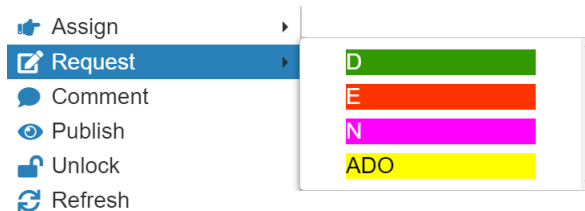


Figure 15: Request Menu.

### 5.3.5 Comment

The “Comment” action adds or edits a comment in a cell. Comments are used to provide more information about shift requests. For example, the comment in Figure 16 shows that the staff member has requested a “D” shift and that they have a family dinner that night.

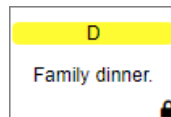


Figure 16: Comment.

You can add or edit existing comments on a user’s behalf. Selecting the “Comment” action opens the form shown in Figure 16. This form is used to enter or edit a comment. If a comment is already present, then the form will be titled “Edit Comment” instead of “Add Comment”. To delete a comment, you should delete all text in the box and click the button labelled “Ok”.

### 5.3.6 Swap Shifts

If the user selects two cells on the same and belonging to different users, the option to “Swap Shifts” will be added to the context menu.

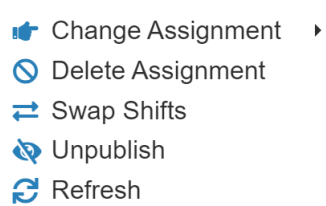


Figure 17: Swap Shift Example.

Selecting this option will swap the shift allocations between the users.

### 5.3.7 Work Exceedance

The “Work Exceedance” action lets an administrator enter work exceedance details for a published shift.

There are five forms that need to be completed. The first form contains the details of the staff member and administrator.

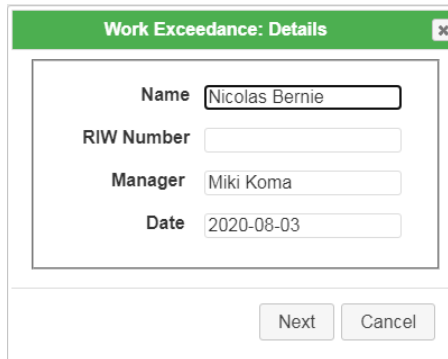


Figure 18: Work Exceedance: Details.

The second form contains the reason(s) for work exceedance.

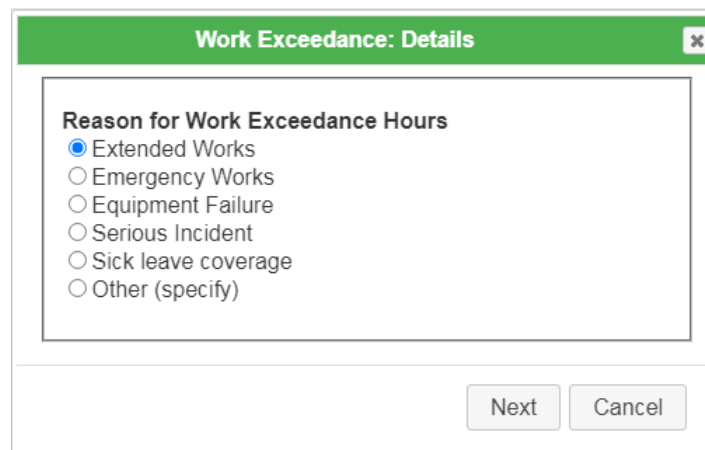


Figure 19: Work Exceedance: Reasons.



The third form describe the details of the hours-of-work principles being exceeded.

### Work Exceedance: Details

#### Hours of Work Principles being exceeded

- ☐ **Planned** Shift > 12 hours
- ☐ **Actual** Shift > 12 hours
- ☐ **Average** daytime working week > 50 hours across rolling 4-week period
- ☐ **Planned** average hours of work for project delivery across rolling 4-week period > 60 hours
- ☐ **Actual** average hours of work for project delivery across rolling 4-week period > 60 hours
- ☐ Consecutive shifts > 6
- ☐ Consecutive night shifts > 3
- ☐ < 12-hour break between consecutive shifts
- ☐ < 48 hours rest break per rolling 8-day period
- ☐ Backwards rotation of shifts times
- ☐ Other (specify)

[Next](#)[Cancel](#)

Figure 20: Work Exceedance: Work Principles.

The fourth form contains questions about workload, work environment, commute times and other factors. Comments can be entered for each question in the category.

Work Exceedance: Questions		
Questions	Response	Comment
<b>Workload</b> – Will the work require long periods of mentally demanding work or high concentration work?	<input type="radio"/> Yes <input checked="" type="radio"/> No	<input type="text"/>
<b>Workload</b> – Will the work require long periods of physically demanding work?	<input type="radio"/> Yes <input checked="" type="radio"/> No	<input type="text"/>
<b>Workload</b> – Will the work require long periods of monotonous tasks?	<input type="radio"/> Yes <input checked="" type="radio"/> No	<input type="text"/>
<b>Work Environment</b> – Will the work be undertaken in harsh environmental conditions (extreme heat, cold, noise, vibration)?	<input type="radio"/> Yes <input checked="" type="radio"/> No	<input type="text"/>
<b>Commuting</b> – Will the worker(s) be driving more than 45 minutes one-way to/from work?	<input type="radio"/> Yes <input checked="" type="radio"/> No	<input type="text"/>
<b>Individual factors</b> – Are there any individual factors that could contribute to an increased risk of fatigue (e.g. inadequate sleep, health issues, medication)?	<input type="radio"/> Yes <input checked="" type="radio"/> No	<input type="text"/>
Are there any other factors that could contribute to an increased risk of fatigue in this situation (if yes, please specify)	<input type="radio"/> Yes <input checked="" type="radio"/> No	<input type="text"/>

Figure 21: Work Exceedance: Questions.

The fifth form contains required control measures.

**Work Exceedance: Required Control Measures**

- ☐ Additional communications regarding fatigue
- ☐ Fatigue self-assessment at start and end of shift
- ☐ Increased supervision and checking in
- ☐ Task rotation, if possible
- ☐ Double-checking of important tasks
- ☐ Assign another worker for support
- ☐ More frequent breaks during shift
- ☐ No safety critical tasks, including driving
- ☐ Support 10-20-minute powernaps, allowing at least 15 minutes to recover from sleep inertia before undertaking safety critical tasks
- ☐ Commuting Plan(s)
- ☐ Arrange alternate transport home
- ☐ Arrange nearby accommodation
- ☐ Assign additional rest day
- ☐ Other (specify)

Save

Cancel

Figure 22: Work Exceedance: Required Control Measures.

## 6 Shift View

This page contains a table showing the staff assigned to each shift over the selected range of dates. Staff are coloured according to their role. They are sorted first by role, and then by name (in alphabetical order). The shift view menu has the same features as the [staff view menu](#) with the exception that filtering and downloading are not available.

Staff View Shift View Coverage Staff Shifts Roles Safety Schemes Settings							
<div> <span>&lt;</span> <span>&gt;</span> <span>★</span> <span>🖨</span> <span>🔍</span> <span>1 week</span> <span>02-Aug-2021</span> </div>							
	Mon. Aug. 02	Tues. Aug. 03	Wed. Aug. 04	Thurs. Aug. 05	Fri. Aug. 06	Sat. Aug. 07	Sun. Aug. 08
D	Magdalena Meece Marcella Buf Nicolas Bernie Columbus Bones Henriette Bechtel Lisbeth Prince Miki Koma Sacha Buttler Sirena Dockery Thalia Kamp Sterling Maiz Bebe Tichenor Cheree Jaso Gloria Conde Verla Coffin	Magdalena Meece Marcella Buf Nicolas Bernie Columbus Bones Henriette Bechtel Lisbeth Prince Miki Koma Sacha Buttler Sirena Dockery Thalia Kamp Sterling Maiz Bebe Tichenor Cheree Jaso Gloria Conde Verla Coffin	Nicolas Bernie Shane Lopp Adela Leble Ayako Shield Sirena Dockery Thalia Kamp Zenaïda Chilcott Elvira Platz Krista Milewsk	Nicolas Bernie Shane Lopp Adela Leble Ayako Shield Sirena Dockery Thalia Kamp Zenaïda Chilcott Elvira Platz Krista Milewsk	Ayako Shield Bella Claw Charla Rudolf Columbus Bones Krista Milewsk Odette Gately Sheilah Behren Sterling Maiz Bebe Tichenor Cheree Jaso Corrina Chalker Margaret Wikoff Tillie Seabaugh Connie Drakes Gloria Conde Verla Coffin	Ayako Shield Bella Claw Charla Rudolf Columbus Bones Krista Milewsk Odette Gately Sheilah Behren Sterling Maiz Bebe Tichenor Cheree Jaso Corrina Chalker Margaret Wikoff Tillie Seabaugh Connie Drakes Gloria Conde Verla Coffin	Magdalena Meece Marcella Buf Nicolas Bernie Shane Lopp Adela Leble
E	Shane Lopp Adela Leble Ayako Shield Bella Claw Charla Rudolf Morris Cordero Nakesha Hande Olive Rose Orville Caywood Corrina Chalker Margaret Wikoff Tillie Seabaugh Connie Drakes	Shane Lopp Adela Leble Ayako Shield Bella Claw Charla Rudolf Morris Cordero Nakesha Hande Olive Rose Orville Caywood Corrina Chalker Margaret Wikoff Tillie Seabaugh Connie Drakes	Magdalena Meece Marcella Buf Bella Claw Charla Rudolf Columbus Bones Henriette Bechtel Lisbeth Prince Miki Koma Morris Cordero Nakesha Hande Olive Rose Orville Caywood Sacha Buttler Odette Gately Sheilah Behren Sterling Maiz Connie Drakes Gloria Conde Verla Coffin	Magdalena Meece Marcella Buf Bella Claw Charla Rudolf Columbus Bones Henriette Bechtel Lisbeth Prince Miki Koma Morris Cordero Nakesha Hande Olive Rose Orville Caywood Sacha Buttler Odette Gately Sheilah Behren Sterling Maiz Connie Drakes Gloria Conde Verla Coffin	Henriette Bechtel Lisbeth Prince Miki Koma Morris Cordero Nakesha Hande	Henriette Bechtel Lisbeth Prince Miki Koma Morris Cordero Nakesha Hande	Henriette Bechtel Lisbeth Prince Miki Koma Morris Cordero Nakesha Hande
N	Zenaïda Chilcott Elvira Platz Krista Milewsk Odette Gately Sheilah Behren	Zenaïda Chilcott Elvira Platz Krista Milewsk Odette Gately Sheilah Behren	Bebe Tichenor Cheree Jaso Corrina Chalker Margaret Wikoff Tillie Seabaugh	Bebe Tichenor Cheree Jaso Corrina Chalker Margaret Wikoff Tillie Seabaugh	Magdalena Meece Marcella Buf Nicolas Bernie Shane Lopp Adela Leble Olive Rose Orville Caywood Sacha Buttler Sirena Dockery Thalia Kamp Zenaïda Chilcott Elvira Platz	Magdalena Meece Marcella Buf Nicolas Bernie Shane Lopp Adela Leble Olive Rose Orville Caywood Sacha Buttler Sirena Dockery Thalia Kamp Zenaïda Chilcott Elvira Platz	

Figure 23: Shift View.

## 7 Staff

The staff page displays a table of the staff. It lets you to add new staff or edit the details of existing staff.

Staff View Shift View Coverage Staff Shifts Roles Safety Schemes Settings						
Add User  Upload						
Show 10 entries				Search: <input type="text"/>		
Name	Login	Role	Site	Department	Email	
Adela Leble	aleble	CNS	RCH	ICU	aleble@opturion.com	
Ayako Shield	ashield	CNS	RCH	ICU	ashield@opturion.com	
Bebe Tichenor	btichenor	RN	RWH	ICU	btichenor@opturion.com	
Bella Claw	bclaw	CNS	RWH	ICU	bclaw@opturion.com	
Charla Rudolf	crudolf	CNS	RCH	ICU	crudolf@opturion.com	
Cheree Jaso	cjaso	RN	RCH	ICU	cjaso@opturion.com	
Columbus Bones	cbones	CNS	RCH	ICU	cbones@opturion.com	
Connie Drakes	cdrakes	StudentICU	AH	ICU	cdrakes@opturion.com	
Corrina Chalker	cchalker	RN	AH	ICU	cchalker@opturion.com	
Elvira Platz	eplatz	CNC	AH	ICU	eplatz@opturion.com	

Showing 1 to 10 of 33 entries

Previous 1 2 3 4 Next

Figure 24: Staff.

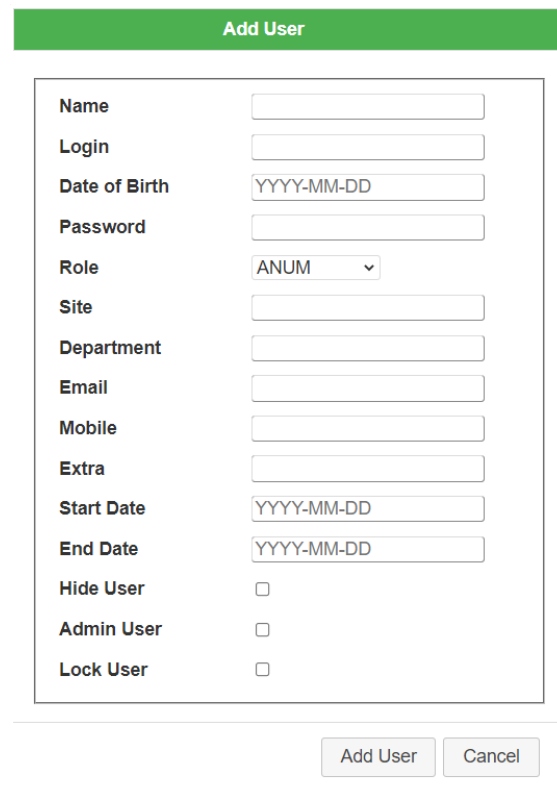
### 7.1 Staff Menu

#### 7.1.1 Add New User

Clicking the add new user icon opens a form that lets you enter the details of a new staff member. These details are:

- **Name:** The name of the staff member.
- **Login:** The login (i.e. username) the staff member will use to log into AlertSafe.
- **Password:** The initial password for the staff member's account.
- **Role:** The staff member's role.
- **Date of Birth:** The staff member's date of birth. This may be empty.
- **Site:** The site the staff member belongs to. This may be empty.
- **Department:** The department the staff member belongs to. This may be empty.
- **Email:** The staff member's email address. This may be empty.
- **Mobile:** The staff member's mobile number. This may be empty.
- **Start Date:** The date from which the staff member is active in the roster.
- **End Date:** The date from which the staff member will become inactive in the roster. This may be empty.

- **Hidden:** If checked, the staff member will not be visible in the roster.
- **Admin. User:** If checked, the staff member is an administrator.
- **Locked:** If checked, this staff member will be prevented from logging into AlertSafe.



The 'Add User' form is a web-based interface for creating a new user. It features a green header bar with the title 'Add User'. Below the header, the form is organized into a table-like structure with labels on the left and input fields on the right. The input fields include text boxes for Name, Login, Password, Site, Department, Email, Mobile, Extra, Start Date, and End Date. The Date of Birth field uses a date picker with a 'YYYY-MM-DD' format. The Role field is a dropdown menu currently set to 'ANUM'. At the bottom of the form, there are three checkboxes: 'Hide User', 'Admin User', and 'Lock User'. Below the form, there are two buttons: 'Add User' and 'Cancel'.

Name	<input type="text"/>
Login	<input type="text"/>
Date of Birth	<input type="text" value="YYYY-MM-DD"/>
Password	<input type="password"/>
Role	<input type="text" value="ANUM"/>
Site	<input type="text"/>
Department	<input type="text"/>
Email	<input type="text"/>
Mobile	<input type="text"/>
Extra	<input type="text"/>
Start Date	<input type="text" value="YYYY-MM-DD"/>
End Date	<input type="text" value="YYYY-MM-DD"/>
Hide User	<input type="checkbox"/>
Admin User	<input type="checkbox"/>
Lock User	<input type="checkbox"/>

Figure 25: Add User Form.

### 7.1.2 Upload

Clicking the upload icon opens a form that lets select an Excel file from which to perform a bulk upload of staff data. The format of this file is described in [Bulk Staff Upload](#).

## 7.2 Edit User

Left-clicking on a row in the staff table will open the “Edit User” form for that staff member. The form lets you edit staff details, reset passwords or delete staff entirely.

Edit User	
Name	Magdalena Meece
Login	mmeece
Date of Birth	2000-01-01
Role	ANUM
Site	RCH
Department	ICU
Email	mmeece@opturion.com
Mobile	
Extra	
Start Date	2018-10-01
End Date	YYYY-MM-DD
Hide User	<input type="checkbox"/>
Admin User	<input type="checkbox"/>
Lock User	<input type="checkbox"/>

Ok Change Password Delete User Cancel

Figure 26: Edit User Form.

## 8 Shifts

This page displays a table of the shifts that have been defined. It lets you add a new shift or edit the details of an existing shift.

Staff View Shift View Coverage Staff Shifts Roles Safety Schemes Settings												
Add shift +												
Show 10 entries										Search:		
Shifts	Start Time	End Time	Night Shift	Early Shift	Non Working	Coverage	On Call	Attendance	Break Frequency	Break Duration	Time Before Meal	Meal Duration
—					✓				00:00	00:00	00:00	00:00
ADO					✓				00:00	00:00	00:00	00:00
SDL					✓				00:00	00:00	00:00	00:00
D	07:00	15:30				✓		✓	03:00	00:15	05:00	00:30
D310	08:00	16:30							03:00	00:15	05:00	00:30
D33	09:00	17:30							03:00	00:15	05:00	00:30
D38	10:00	18:30							03:00	00:15	05:00	00:30
E	13:00	21:30				✓		✓	03:00	00:15	05:00	00:30
N	21:00	07:30	✓			✓		✓	03:00	00:15	05:00	00:30

Showing 1 to 9 of 9 entries

Previous 1 Next

Figure 27: Shifts.

### 8.1 Shifts Menu

#### 8.1.1 Add Shift +

Clicking the add shift icon opens a form that lets you define a new shift. The fields of this form are:

- **Shift Name:** The name of the shift.
- **Start Date:** The date from which the shift becomes active in the roster.
- **End Date:** The date from which the shift becomes inactive in the roster. This may be empty.
- **Start Time:** The time at which the shift begins. This may be empty for non-working shifts.
- **End Time:** The time which the shift finishes. This may be empty for non-working shifts.
- **Night Shift:** If checked, this shift is considered a night shift by the fatigue checks.
- **Early Shift:** If checked, this shift is considered an early shift by the fatigue checks.
- **Non Working:** If checked, this shift is considered a day off by the fatigue checks.
- **Coverage:** If checked, this shift will be included in the counts in the **Coverage** table.
- **Attendance:** If checked, this shift will be included for attendance tracking.
- **Time Before Meal:** The time before the meal break is taken.
- **Meal Duration:** The duration of the meal break.
- **Break Frequency:** The time between breaks.
- **Break Duration:** The duration of the breaks.
- **Shift Color:** The colour for the shift.



**Add Shift**

Shift Name	<input type="text"/>
Start Date	<input type="text" value="YYYY-MM-DD"/>
End Date	<input type="text" value="YYYY-MM-DD"/>
Start Time	<input type="text" value="HH:MM"/>
End Time	<input type="text" value="HH:MM"/>
Night Shift	<input type="checkbox"/>
Early Shift	<input type="checkbox"/>
Non Working	<input type="checkbox"/>
Coverage	<input type="checkbox"/>
On Call	<input type="checkbox"/>
Attendance	<input type="checkbox"/>
Break Frequency	<input type="text" value="00:00"/>
Break Duration	<input type="text" value="00:00"/>
Time Before Meal	<input type="text" value="00:00"/>
Meal Duration	<input type="text" value="00:00"/>
Shift Color	<input type="text"/>

Figure 28: Add Shift Form.

## 8.2 Edit Shift

Left-clicking on an existing shift opens the “Edit Shift” form for that shift. You can use this form to edit the shift’s details or delete it entirely.

**Edit Shift**

Shift Name	<input type="text" value="D"/>
Start Date	<input type="text" value="2018-01-01"/>
End Date	<input type="text" value="YYYY-MM-DD"/>
Start Time	<input type="text" value="7:00"/>
End Time	<input type="text" value="15:30"/>
Night Shift	<input type="checkbox"/>
Early Shift	<input type="checkbox"/>
Non Working	<input type="checkbox"/>
Coverage	<input checked="" type="checkbox"/>
On Call	<input type="checkbox"/>
Attendance	<input type="checkbox"/>
Time Before Meal	<input type="text" value="05:00"/>
Meal Duration	<input type="text" value="00:30"/>
Break Frequency	<input type="text" value="03:00"/>
Break Duration	<input type="text" value="00:15"/>
Shift Color	<input type="color" value="#008000"/>

Figure 29: Edit Shift Form.

## 9 Roles

This page displays a table of the roles that have been defined. It lets you add a new role or edit the details of an existing role.

Staff View	Shift View	Coverage	Staff	Shifts	Roles	Settings	Safety Schemes
Add role +							
Show 10 entries					Search: <input type="text"/>		
Roles	Scheme	Attention	Intensity	Coverage			
ANUM	SCS 1	Medium	Medium	✓			
CNC		High	Medium	✓			
CNS		Medium	Medium	✓			
RN		Medium	Medium	✓			
StudentHCU		Medium	Medium	✓			
StudentHCU		Medium	Medium	✓			
StudentHCU		Medium	Medium	✓			
StudentHCU		Medium	Medium	✓			
StudentHCU		Medium	Medium	✓			
StudentHCU		Medium	Medium	✓			

Showing 1 to 7 of 7 entries

Previous 1 Next

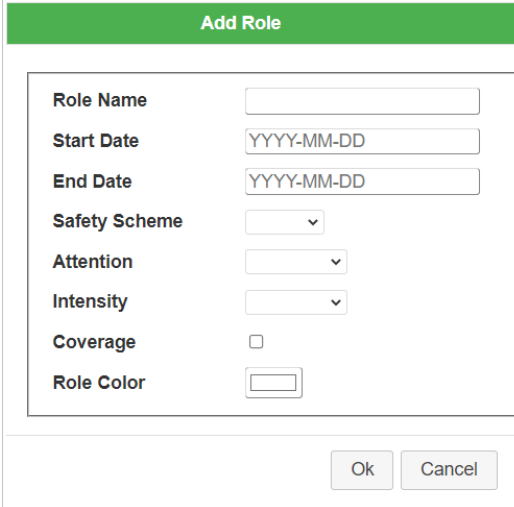
Figure 30: Roles.

### 9.1 Roles Menu

#### 9.1.1 Add Role +

Clicking on the add role icon opens a form that lets you define a new role. The fields of that form are:

- **Role:** The name of the role.
- **Start Date:** The date from which the role is active.
- **End Date:** The date from which the role is no longer active. If empty, this means that the role is treated as ongoing.
- **Safety Scheme:** The name of the **safety scheme** associated with this role. If a role lacks a safety scheme, then its fatigue limits are taken from the **Settings** page.
- **Attention:** The attention level for this role.
- **Intensity:** The intensity level for this role.
- **Coverage:** If checked, the role will included in the **Coverage** table.
- **Role Color:** The colour for this role.

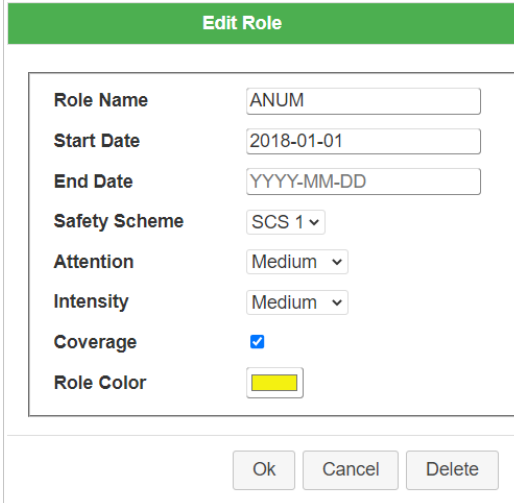


The "Add Role" form is a modal window with a green header. It contains a white box with the following fields: "Role Name" (text input), "Start Date" (text input with placeholder "YYYY-MM-DD"), "End Date" (text input with placeholder "YYYY-MM-DD"), "Safety Scheme" (dropdown menu), "Attention" (dropdown menu), "Intensity" (dropdown menu), "Coverage" (checkbox), and "Role Color" (color picker). At the bottom right are "Ok" and "Cancel" buttons.

Figure 31: Add Role Form.

## 9.2 Edit Role

Left-clicking on an existing role opens the “Edit Role” form for that role. You can use this form to edit the role’s details or delete it entirely.



The "Edit Role" form is a modal window with a green header. It contains a white box with the following fields: "Role Name" (text input with value "ANUM"), "Start Date" (text input with value "2018-01-01"), "End Date" (text input with placeholder "YYYY-MM-DD"), "Safety Scheme" (dropdown menu with value "SCS 1"), "Attention" (dropdown menu with value "Medium"), "Intensity" (dropdown menu with value "Medium"), "Coverage" (checkbox with value checked), and "Role Color" (color picker with value yellow). At the bottom right are "Ok", "Cancel", and "Delete" buttons.

Figure 32: Edit Role Form.

## 10 Coverage

This page displays a table that shows the assignment counts for each shift by role over the selected time period. Both published *and* unpublished assignments are included in the table. Only shifts and roles that have their coverage flag set are included in the table.










	Mon. Jun. 10			Tues. Jun. 11			Wed. Jun. 12			Thurs. Jun. 13			Fri. Jun. 14			Sat. Jun. 15			Sun. Jun. 16		
	D	E	N	D	E	N	D	E	N	D	E	N	D	E	N	D	E	N	D	E	N
ANUM	2	0	0	2	0	1	2	1	1	1	1	1	2	1	1	2	1	0	1	0	1
CNS	5	3	3	7	6	3	7	6	3	4	6	3	2	6	3	2	0	5	5	0	5
CNC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
StudentICU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
StudentHCU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
StudentHCU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
StudentHCU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	7	3	3	9	6	4	9	7	4	5	7	4	4	7	4	4	1	5	6	0	6

Figure 33: Coverage View.

## 11 Safety Schemes

This page displays a table of the safety schemes that have been defined. It lets you add a new safety scheme or edit the details of an existing safety scheme.

A safety scheme is a set of **fatigue settings** that can then be applied to individual **roles**. If a role lacks a safety scheme, then its fatigue limits are taken from the **Settings** page.

Staff View	Shift View	Coverage	Staff	Shifts	Roles	Safety Schemes	Settings	
Add scheme 								
Show <div><div>10</div><div></div></div> entries								
Scheme 	Fatigue Moderate 	Fatigue Maximum 	Risk Moderate 	Risk Maximum 	Fatigue Moderate Night 	Fatigue Maximum Night 	Risk Moderate Night 	Risk Maximum Night
SCS 1	30	35	1.4	1.6	40	45	1.4	1.6
SCS 2	35	40	1.4	1.6	45	50	1.4	1.7

Showing 1 to 2 of 2 entries

Figure 34: Safety Schemes.

### 11.1 Safety Schemes Menu

#### 11.1.1 Add Scheme +

Clicking on the add icon opens a form that lets you define a new safety scheme. The fields of that form are:

- **Scheme Name:** The name of the safety scheme.
- **Fatigue Moderate:** Specifies the moderate fatigue index limit.
- **Fatigue Maximum:** Specifies the maximum fatigue index limit.
- **Risk Moderate:** Specifies the moderate risk index limit.
- **Risk Maximum:** Specifies the maximum risk index limit.
- **Fatigue Moderate Night:** Specifies the moderate fatigue index for night shifts.
- **Fatigue Maximum Night:** Specifies the maximum fatigue index for night shifts.
- **Risk Moderate Night:** Specifies the moderate risk index for night shifts.
- **Risk Maximum Night:** Specifies the maximum risk index for night shifts.
- **Scheme Color:** The colour for this safety scheme.

The form is pre-filled with the **best practice** values for the fatigue limits.

### 11.2 Edit Safety Scheme

Left-clicking on an existing safety scheme opens the “Edit Safety Scheme” form. You can use this form to edit the safety scheme’s details or delete it entirely.

**Add Safety Scheme**

Scheme Name	<input type="text"/>
Fatigue Mod	<input type="text" value="30"/>
Fatigue Max	<input type="text" value="35"/>
Risk Mod	<input type="text" value="1.20"/>
Risk Max	<input type="text" value="1.80"/>
Fatigue Mod Night	<input type="text" value="40"/>
Fatigue Max Night	<input type="text" value="45"/>
Risk Mod Night	<input type="text" value="1.80"/>
Risk Max Night	<input type="text" value="2.00"/>
Scheme Color	<input type="text"/>

Figure 35: Add Safety Scheme Form.

**Edit Safety Scheme**

Scheme Name	<input type="text" value="SCS 1"/>
Fatigue Mod	<input type="text" value="30"/>
Fatigue Max	<input type="text" value="35"/>
Risk Mod	<input type="text" value="1.2"/>
Risk Max	<input type="text" value="1.8"/>
Fatigue Mod Night	<input type="text" value="40"/>
Fatigue Max Night	<input type="text" value="45"/>
Risk Mod Night	<input type="text" value="1.8"/>
Risk Max Night	<input type="text" value="2"/>
Scheme Color	<input type="text" value="yellow"/>

Figure 36: Edit Safety Scheme Form.

## 12 Settings

This page displays a form that controls the configuration settings for the **Fatigue Guidelines** and attendance tracking.

Staff ViewShift ViewCoverageStaffShiftsRolesSafety SchemesSettings

Alertness RulesBusiness RulesFatigue IndexRisk IndexAttendance

Alertness Rules

Admin Enabled

☒

Maximum Shifts

6

User Enabled

☒

Maximum Night Shifts

4

Night Day Rotation

2

Quick Return

10:30

Apply Settings

Figure 37: Settings Page.

### 12.1 Settings Menu

Figure 38 shows the settings menu. It is located directly below the **navigation bar**.

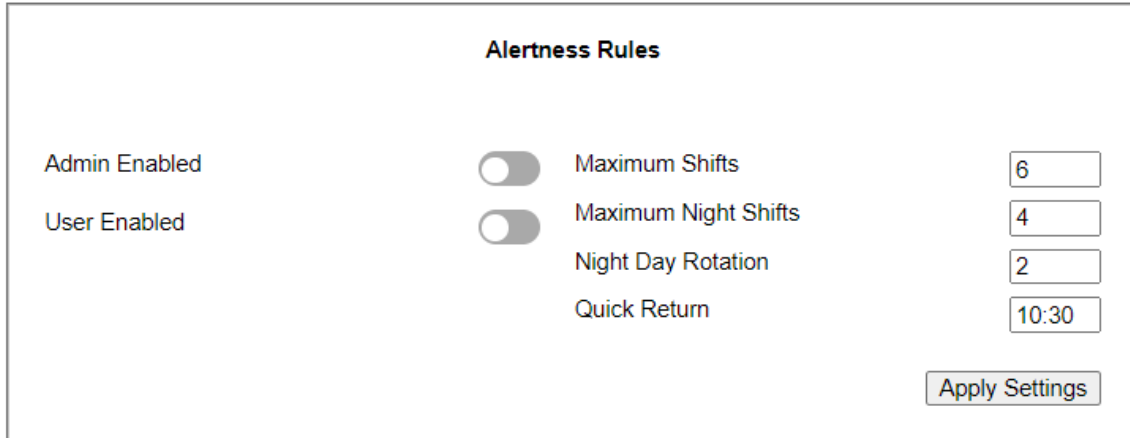
Alertness RulesBusiness RulesFatigue IndexRisk IndexAttendance

Figure 38: Settings Menu.



## 12.2 Alertness Rules Settings

Selecting “Alertness Rules” from the settings menu opens the form shown in Figure 39. This form lets you edit the settings for the alertness fatigue guidelines.



The screenshot shows a web form titled "Alertness Rules". It contains four settings, each with a label, a toggle switch, and a value field. The settings are: "Admin Enabled" (toggle on), "User Enabled" (toggle on), "Maximum Shifts" (value 6), "Maximum Night Shifts" (value 4), "Night Day Rotation" (value 2), and "Quick Return" (value 10:30). An "Apply Settings" button is located at the bottom right of the form.

Setting	Toggle	Value
Admin Enabled	On	
User Enabled	On	
Maximum Shifts		6
Maximum Night Shifts		4
Night Day Rotation		2
Quick Return		10:30

Apply Settings

Figure 39: Alertness rules settings.

The settings are:

- **Admin Enabled:** Controls whether alertness rule warnings are shown in the administrator view.
- **User Enabled:** Controls whether alertness rule guideline warnings are shown in the staff user view.
- **Maximum Shifts:** Specifies the limit on the maximum number of shifts for use with the “Consecutive Shifts” guideline.
- **Maximum Night Shifts:** Specifies the limit on the maximum number of night shifts for use with the “Consecutive Night Shifts” guideline.
- **Night Day Rotation:** Specifies the minimum number of days off required when moving from working night shifts to day shifts. For use by the “Night Day Rotation” guideline.
- **Quick Return:** Specifies the minimum number of hours between two consecutive shifts. For use by the “Quick Return” guideline.

### 12.3 Business Rules Settings

Selecting “Business Rules” from the settings menu opens the form shown in Figure 40. This form lets you edit the settings for the business rules.

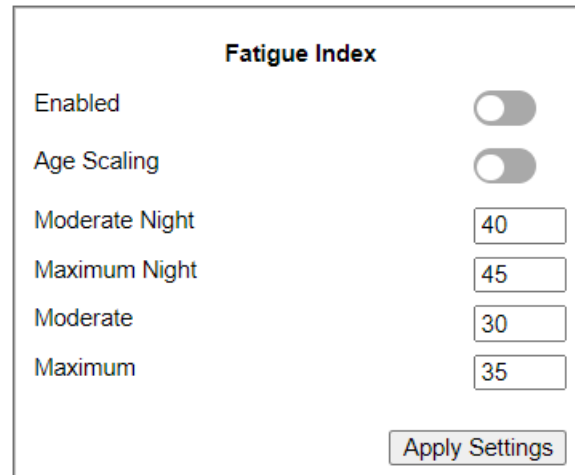
Business Rules			
Maximum Early Shifts Enabled	<input type="checkbox"/>	Maximum Early Shifts	0
Maximum Shift Duration Enabled	<input type="checkbox"/>	Maximum Shift Duration	00:00
Rolling Hours Enabled	<input type="checkbox"/>	Rolling Check 1 Maximum Hours	00:00
Forward Rotation Enabled	<input type="checkbox"/>	Rolling Check 1 Days	0
24 Hour Limit Enabled	<input type="checkbox"/>	Rolling Check 2 Maximum Hours	00:00
		Rolling Check 2 Days	0
		24 Hour Limit	00:00
<button>Apply Settings</button>			

Figure 40: Business rules settings.

- **Maximum Early Shifts Enabled:** Controls whether the check on maximum early shifts in a row is enabled.
- **Maximum Early Shifts:** The maximum number of early shifts in a row.
- **Maximum Shift Duration Enabled:** Controls whether the check on maximum shift duration is enabled.
- **Maximum Shift Duration:** The maximum shift duration.
- **Rolling Hours Enabled:** Controls whether the check on rolling hours is enabled.
- **Rolling Check 1 Maximum Hours:** Maximum work hours in *Rolling Check 1 Days*.
- **Rolling Check 1 Days:** The number of days.
- **Rolling Check 2 Maximum Hours:** Maximum work hours in *Rolling Check 2 Days*.
- **Rolling Check 2 Days:** The number of days.
- **Rolling Hours Enabled:** Controls whether the check on total work in 24 hours is enabled.
- **Rolling Check 2 Maximum Duration:** Limit on amount of work in 24 hours.

## 12.4 Fatigue Index Settings

Selecting “Fatigue Index” from the settings menu opens the form shown in Figure 41. This form lets you edit the **Fatigue Index** settings.



The screenshot shows a settings form titled "Fatigue Index". It contains the following controls:

Setting	Value
Enabled	<input type="checkbox"/>
Age Scaling	<input type="checkbox"/>
Moderate Night	40
Maximum Night	45
Moderate	30
Maximum	35

At the bottom right of the form is an "Apply Settings" button.

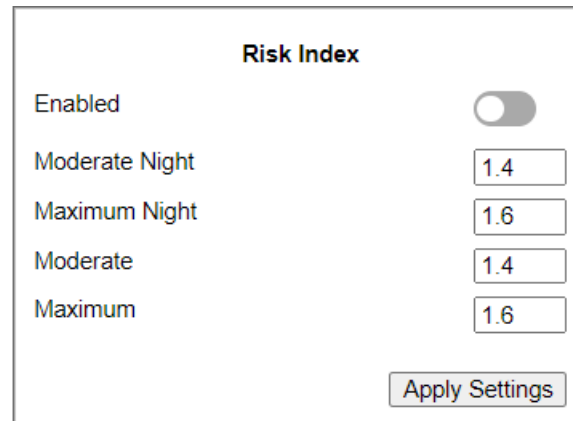
Figure 41: Fatigue Index settings.

The fatigue index settings are:

- **Enabled:** Controls whether fatigue index guideline warnings are displayed.
- **Age Scaling:** Controls whether the fatigue index calculation should consider the staff member’s age.
- **Moderate Night:** Specifies the moderate fatigue index for night shifts.
- **Maximum Night:** Specifies the maximum fatigue index for night shifts.
- **Moderate:** Specifies the moderate fatigue index limit.
- **Maximum:** Specifies the maximum fatigue index limit.

## 12.5 Risk Index Settings

Selecting “Risk Index” from the settings menu will open the form shown in Figure 42. This form lets you edit the **Risk Index** settings.



The screenshot shows a settings window titled "Risk Index". It contains five rows of settings. The first row is "Enabled" with a toggle switch that is currently turned off. The next three rows are "Moderate Night", "Maximum Night", "Moderate", and "Maximum", each followed by a text input field containing the value "1.4", "1.6", "1.4", and "1.6" respectively. At the bottom right of the window is a button labeled "Apply Settings".

Risk Index	
Enabled	<input type="checkbox"/>
Moderate Night	1.4
Maximum Night	1.6
Moderate	1.4
Maximum	1.6
<button>Apply Settings</button>	

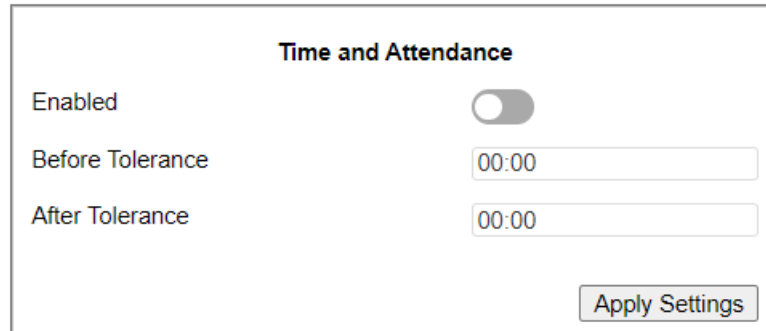
Figure 42: Risk Index settings.

The fatigue index settings are:

- **Enabled:** Controls whether risk index guideline warnings are displayed.
- **Moderate Night:** Specifies the moderate risk index for night shifts.
- **Maximum Night:** Specifies the maximum risk index for night shifts.
- **Moderate:** Specifies the moderate risk index limit.
- **Maximum:** Specifies the maximum risk index limit.

## 12.6 Time and Attendance Settings

Selecting “Attendance” from the settings menu opens the form shown in Figure 43. This form lets you edit the settings for time and attendance tracking.



**Time and Attendance**

Enabled ☐

Before Tolerance

After Tolerance

[Apply Settings](#)

Figure 43: Attendance settings.

- **Enabled:** Controls if attendance tracking is enabled.
- **Before Tolerance:** The time before a shift start that a user can start tracking the shift.
- **After Tolerance:** The time after a shift finish that a user can finish tracking the shift.

## 13 Aside on Deletion

As mentioned, staff members, shifts, roles and safety schemes may be deleted. When a staff member is deleted they disappear from AlertSafe. Deleting roles, shifts or safety schemes may have consequences for existing rosters. For instance, if a staff member has been assigned the shift “D” and that shift is deleted, then the cells in the **Staff View** page will display the text “Deleted Shift”, as shown in Figure 44.

Magdalena Meece	D	D	D	D
Marcella Buf	Deleted Shift	Deleted Shift	Deleted Shift	Deleted Shift

Figure 44: Shift Deletion.

Likewise, if a staff member has the role “ANUM” and that role is then deleted, their role entry in the **Staff** page would be empty and the background colour for their name would be set to white.

Name	Login	Role
Adela Leble	aleble	CNS
Ayako Shield	ashield	
Bebe Tichenor	btichenor	RN

Figure 45: Role Deletion.

AlertSafe will request confirmation for any deletions, as shown in Figure 46.

Delete Shift

*IMPORTANT:* deleting this shift may affect existing data.

Are you sure you want to delete the shift?

Ok

Cancel


Figure 46: Delete Confirmation.

Instead of deleting staff members, shifts or roles, we recommend that you set their end date. This will preserve historical data.


## 14 Building a Roster

This section is a walk-through of how to build your first roster. We assume that some roles and shifts have been defined, and that some staff members have been entered into AlertSafe. Building a roster is broken down into the following steps.

1. **Unlock Cells**

The first step is to unlock cells so that the staff members can enter their shift preferences. (If you do not want to allow staff to enter shift preferences themselves then you may skip this step.) Unlock the cells by selecting the start date using the date picker and then selecting the number of weeks using the drop-down list. Next, right click on the  button and select “Unlock All”. This will unlock all of the displayed cells. Staff members can now enter their shift preferences and comments.


2. **Lock Cells**


When you are ready to begin building the roster, you should lock the cells so that staff members cannot further modify their shift preferences. As in the previous step, select the start date using the date picker and select the number of weeks to view using the drop-down list. Right-click on the  button and select “Lock All” from the context menu.

3. **Assign Shifts**

Assign shifts to staff members using the context menu described in [5.3.3](#). Use the fatigue alerts to build a fatigue safe roster. Use the **Coverage** page to check shift coverage.

4. **Publish Roster**

After you have finished assigning shifts you must publish the roster so that staff members can view it. To do this, select the start date using the date picker and then select the number of weeks you wish to publish using the drop-down list. Right-click on the  button and select “Publish All”. Assigned shifts will now appear in the staff member’s view of the roster.

If you make a mistake, such as accidentally unlocking the cells after you have started assigning shifts or publishing prematurely, you can always undo your actions using the  button.

## 15 Fatigue Guidelines

This section describes the two types of fatigue guidelines supported by AlertSafe. The first are recommendations put forward by the *Cooperative Research Centre for Alertness* (CRC) and the second use AlertSafe’s predictive fatigue model.

### 15.1 CRC Guidelines

The *Cooperative Research Centre for Alertness* (CRC) is an Australian research group comprised of academic and industry participants dedicated to fatigue research. This group has identified four guidelines to help produce fatigue safe rosters. In AlertSafe, these are represented by the **Alertness Rules Settings**. Here we describe these guidelines and provide examples of their application.

#### 15.1.1 Consecutive Shifts

This guideline recommends that no more than *six* shifts be worked in a row without a day off. If AlertSafe finds shift assignments that do not meet this guideline it will display the message

**Maximum number of consecutive shifts exceeded**

on all of the affected shifts.

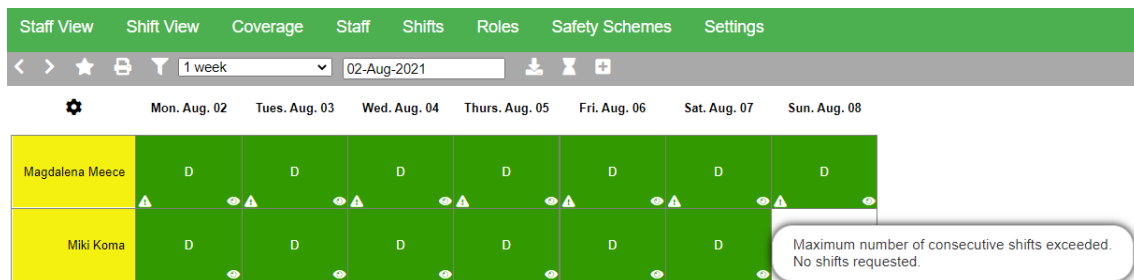


Figure 47: Consecutive Shift Warning.

In Figure 47, “Magdalena Meece” works seven shifts in a row and would *not* conform with the “Consecutive Shifts” guideline. “Marcella Buff” does conform with the guideline, working six shifts in a row and then having a day off.



15.1.2 Consecutive Night Shifts

This guideline recommends that no more than *four* night shifts be worked in a row without a day off. If AlertSafe finds shift assignments that do not meet this guideline it will display the message

**Maximum number of night shifts exceeded**

on all affected night shifts.

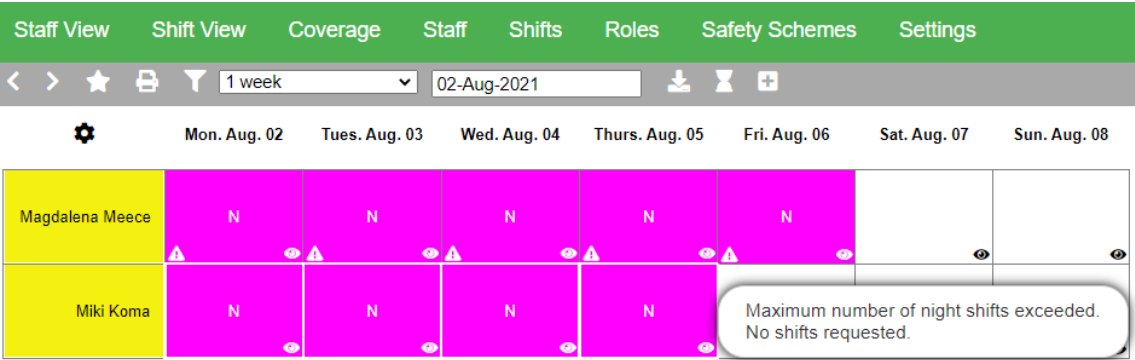


Figure 48: Consecutive Night Warning.

In Figure 48, “Magdalena Meece” works five night shifts in a row and does *not* conform with the guideline.

### 15.1.3 Night Day Rotation

This guideline recommends that a staff member must have at least *two* days off when moving from working night to day shifts. If AlertSafe finds a night shift and a day shift that do not meet this guideline, it will display the message

#### Night day rotation

on the affected day shift.

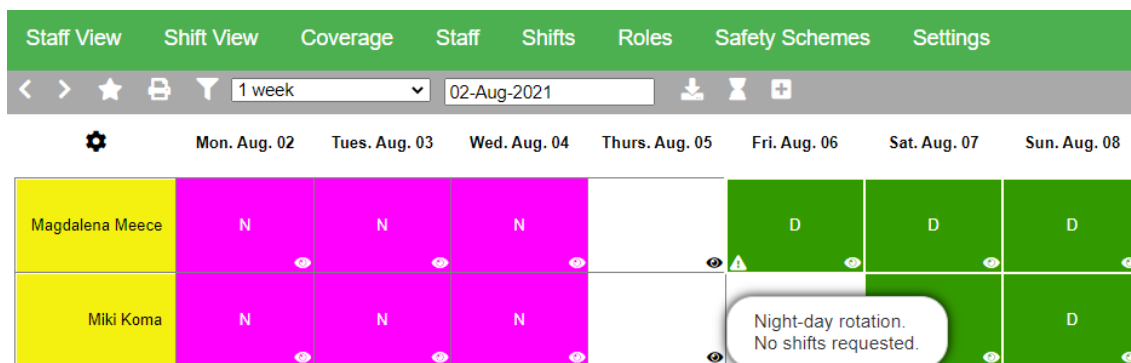


Figure 49: Night Day Rotation Warning.

In Figure 49, both nurses work their last night shift on day 3. They finish this shift on the morning of day 4. The guideline requires that they should take at least days 4 and 5 off. This is so they can adjust back to a day shift pattern before working any day shifts. “Magdalena Meece” would *not* conform with the night day rotation guideline on day 5, having had only a single day off.

15.1.4 Quick Returns

This guideline recommends that staff do not work a “late-early” rotation. A “late-early” rotation is an evening shift immediately followed by a day shift. If AlertSafe finds shift assignments that do not meet this guideline it will display the message

Quick return

on each affected shift.

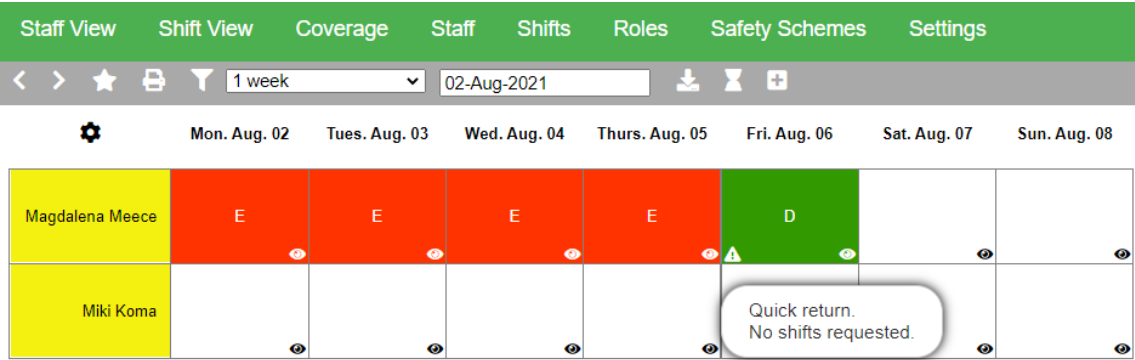


Figure 50: Quick Return Warning.

In Figure 50, “Magdalena Meece” moves from working an evening shift on Thursday to working a day shift on day Friday. This is a “quick return”; the duration between the completion of the evening shift and the beginning of the day shift is less than ten hours.

## 15.2 Fatigue Index Guidelines

AlertSafe contains a fatigue model that predicts a staff member's average fatigue during a shift. This estimate, referred to as the ***fatigue index (FI)***, is a value between 0 and 100 that gives the probability of the staff member having a high level of sleepiness. Specifically, it is the percentage likelihood of achieving a score of 8 or 9 on the Karolinska Sleepiness Scale (***KSS***).

### 15.2.1 The Karolinska Sleepiness Scale

The KSS is a nine point scale often used when conducting studies involving self-reported, subjective assessment of an individual's level of sleepiness at the time. The scores are defined as:

1. Extremely alert.
2. Very alert.
3. Alert.
4. Rather alert.
5. Neither alert nor sleepy.
6. Some signs of sleepiness.
7. Sleepy, but no difficulty remaining awake.
8. Sleepy, some difficulty remaining awake.
9. Extremely sleepy, fighting sleep.

### 15.2.2 Recommended Limits

AlertSafe lets you specify moderate and maximum limits on the fatigue index. It will display warnings if these limits are exceeded. These limits are further divided into *Day* and *Night* specific limits. This is due to the fatiguing nature of night shifts. Shifts that have their *Night Shift* flag set will use the night specific limits.

The default limits in AlertSafe are shown in Table 1.

Day		Night	
Moderate	Maximum	Moderate	Maximum
30	35	40	45

Table 1: Best practice limits.

### 15.2.3 Examples

In these examples we use the default fatigue index limits as described above.

If AlertSafe finds shift assignments that exceeds one of the fatigue limits it will display the message

**Fatigue level <Type> (<Score>)/(<Fatigue Limit>)**

on each affected shift.

Note that <Type> will either be *Warning* or *Violation* depending on the which fatigue limit was exceeded. Additionally, <Score> and <Fatigue Limit> will be replaced with their appropriate values as can be seen in Figures 51 and 52.

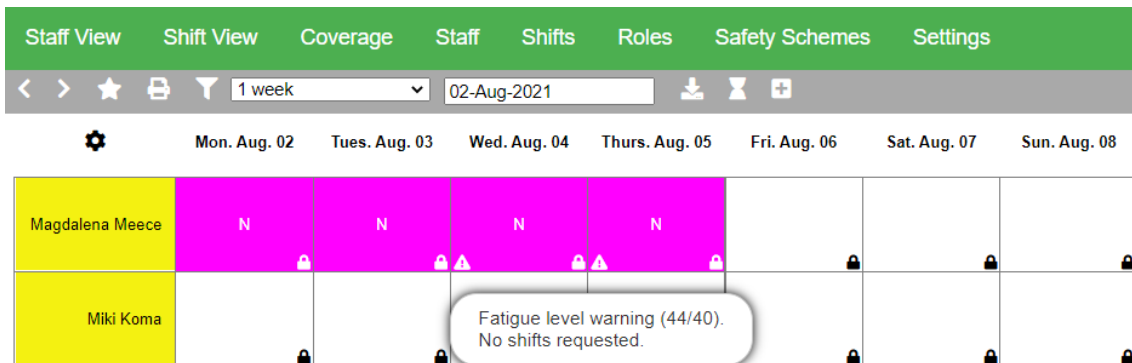


Figure 51: Moderate Fatigue Index Warning.

In Figure 51, “Magdalena Meece” has a fatigue index of 44 on Wednesday. This exceeds the moderate fatigue level of 40 but not the maximum fatigue level of 45.

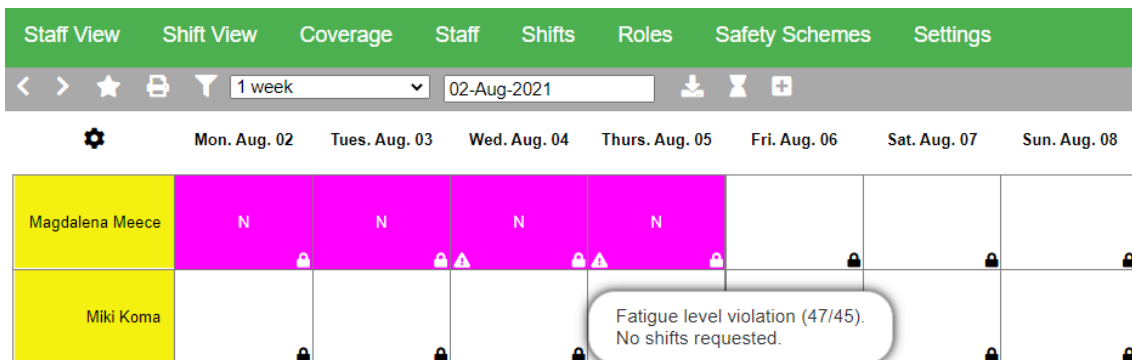


Figure 52: Maximum Fatigue Index Warning.

In Figure 52, “Magdalena Meece” has a fatigue index of 47 on Thursday. This exceeds the maximum fatigue level of 45.

### 15.3 Risk Index Guidelines

AlertSafe contains a risk model that predicts a staff member's average risk during a shift. This estimate, referred to as the **risk index** (*RI*), is a comparison of the riskiness of the shift compared to a standard shift pattern.

The index has been normalised with respect to a “typical” two-day, two-night, four-off schedule, where the following conditions apply:

1. Shift changes at 07:00 and 19:00.
2. A commute time of 40 minutes.
3. Medium **intensity** and low **attention** levels.
4. A break of 15 minutes is taken every 2 hours.
5. A meal break of 30 minutes occurs after 4 hours.

This normalization ensures that, if this schedule is repeated over 21 consecutive cycles, covering a period of 24 weeks, the average value of the index is 1.00.

#### 15.3.1 Recommended Limits

AlertSafe lets you specify moderate and maximum limits on the risk index and will display warnings if these limits are exceeded. These limits are further divided into *Day* and *Night* specific limits, although best practice does not distinguish between the two. Shifts that have their *Night Shift* flag set will use the night specific limits.

The default limits in AlertSafe are shown in Table 2.

Day		Night	
Moderate	Maximum	Moderate	Maximum
1.40	1.60	1.40	1.60

Table 2: Best practice limits.

### 15.3.2 Examples

In these examples we use the default risk index limits as described above.

If AlertSafe finds shift assignments that exceed one of the risk limits it will display the message

**Fatigue level <Type> (<Score>/<Risk Limit>)**

on each affected shift.

Note that <Type> will either be *Warning* or *Violation* depending on the which risk limit was exceeded. Additionally, <Score> and <Risk Limit> will be replaced with their appropriate values as can be seen in Figures 53 and 54.

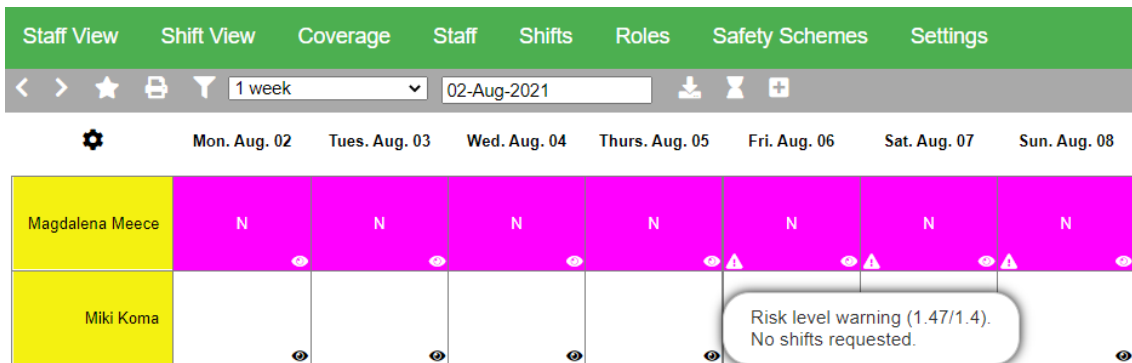


Figure 53: Moderate Risk Index Warning.

In Figure 51, “Magdalena Meece” has a risk index of 1.47 on Friday which exceeds the moderate fatigue level of 1.40 but not the maximum fatigue level of 1.60.

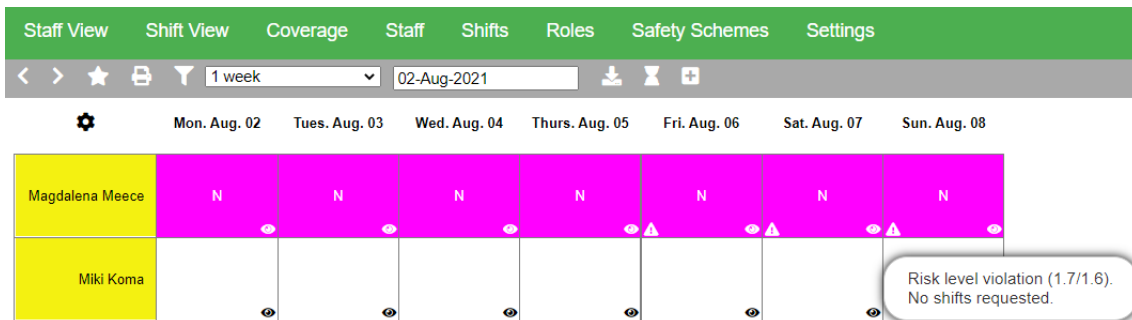


Figure 54: Maximum Risk Index Warning.

In Figure 52, “Magdalena Meece” has a risk index of 1.72 on Sunday which exceeds the maximum fatigue level of 1.60.

# Appendices

## A Bulk Staff Upload

This section describes the format of the Excel workbooks used to perform a bulk upload of staff.

The Excel upload must be an Office Open XML workbook (.xlsx) or macro-enabled workbook (.xlsm). Office Open XML binary workbooks (.xlsb) are *not* currently supported. Workbooks in the old Excel binary file format (.xls) are *not* supported.

The workbook should contain the sheets described in the following sections. Those sheets that are specified as “required” must be present in the workbook. Any additional sheets will be ignored.

Unless otherwise noted, sheets may contain columns other than those defined here, and such extra columns are ignored.

Columns recognised may appear in any order.

All sheets must have a non-empty first row.

Any formulas used in the workbook will be evaluated when it is loaded. Formulas must *not* refer to sheets in other workbooks.

### A.1 Sheet: Staff

This sheet describes the list of staff to be uploaded to the system and is required.

#### A.1.1 Column: Name

**Required:** Yes.

**Type:** Text.

**Description:** The name of the staff member.

#### A.1.2 Column: DOB

**Required:** No.

**Type:** Excel date.

**Description:** The date of birth of the staff member.

#### A.1.3 Column: Login

**Required:** Yes.

**Type:** Text.

**Description:** The login (i.e. username) the staff member will use to log into AlertSafe.

**Note:** If this login already exists in the system an error will occur during upload. If this occurs the user will have to select a different login.

#### A.1.4 Column: Password

**Required:** Yes.

**Type:** Text.

**Description:** The initial password for the staff member’s account.



#### A.1.5 Column: Role

**Required:** Yes.

**Type:** Text.

**Description:** The staff member's role.

**Note:** If this role is not already defined in the **Roles** page then an error will occur during upload.

#### A.1.6 Column: Start Date

**Required:** Yes.

**Type:** Excel date.

**Description:** The date from which the staff member is active in the roster.

#### A.1.7 Column: End Date

**Required:** No.

**Type:** Excel date.

**Default:** None.

**Description:** The date from which the staff member will become inactive in the roster.

#### A.1.8 Column: Email

**Required:** No.

**Type:** Text.

**Default:** None.

**Description:** The staff member's email address.

#### A.1.9 Column: Extra Info 1

**Required:** No.

**Type:** Text.

**Description:** Any additional information to be stored against the staff. For example, to store a license number.

#### A.1.10 Column: Site

**Required:** No.

**Type:** Text.

**Description:** The site the staff member belongs to.

#### A.1.11 Column: Department

**Required:** No.

**Type:** Text.

**Description:** The department the staff member belongs to.

#### A.1.12 Column: Admin

**Required:** No.

**Value Type:** Text (Boolean).

**Default:** FALSE.

**Description:** If TRUE, the staff member is an administrator.

**A.1.13 Column: Locked**

**Required:** No.

**Value Type:** Text (Boolean).

**Default:** FALSE.

**Description:** If TRUE, this staff member will be prevented from logging into AlertSafe.

**A.1.14 Column: Hidden**

**Required:** No.

**Value Type:** Text (Boolean).

**Default:** FALSE.

**Description:** If TRUE, the staff member will not be visible in the roster.