



## **APPLIED Application User Guide**

**V1.16**

**6<sup>th</sup> May 2020**

**NOTE: This document describes an application that is frequently being updated and therefore it doesn't always reflect the current appearance or functionality. The purpose of this document is to describe how to use the Application and not necessarily how the Application works.**






## Contents

<b>Contents</b>	<b>2</b>
1. INTRODUCTION	3
2. General	4
3. Hardware configuration	6
4. Settings	6
5. Supervisors Dashboard	9
6. OverView	10
7. Plant view	14
8. System Overview	17
9. Technician View	21
10. Mode	22
11. Historical Graph	23
12. Service	26
13. Live	31
14. Manage Users	32
15. Subscriptions	33
16. Comms	34
17. Alerts	34
18. Periodic Health-check	34
19. Event Logs	35

## 1. INTRODUCTION

This document is the User Guide for SPLASH Applied Application Software version 1.1.12.

SPLASH Applied provides remote visibility and control of compatible products. SPLASH Applied ensures all Users' systems are adequately managed and supported through their life cycle including:






-  installation
-  commissioning
-  maintenance
-  operation and
-  replacement

SPLASH Applied allows technicians to provide "unique to the industry" remote support to site personnel including System Owners, Installers and Maintenance Contractors.

Users of SPLASH Applied log in using their personally allocated username and password.

Users of SPLASH Applied may have monitored Plants that they own and / or Plants that are being shared with them. For instance, an Owner may be a Facility Manager or Property Owner. This Owner is able to share the monitored Plant with interested parties, for instance a mechanical contractor having a contract to maintain the mechanical systems within the Owner's properties. Owners of Plants control the permission level of any invited User, for instance an invitee may only be able to view a Plant or they may be allowed to view and make setting changes to Plants.

Users are allocated a permission level these being:

-  **Owner** – this User generally owns the site and system and can allocate permission levels to the Users below
-  **Contractor** – has Read and write access to nominated systems.
-  **Facility manager** - has Read and write access to nominated systems
-  **User (non technical)** – Read / Write access
-  **User (non technical)** – Read / Write access

The system maintains a historical log of Users on SPLASH Applied, this is currently only made available to Administrators. The system records who logs in, their IP address and what changes that User makes during the session.

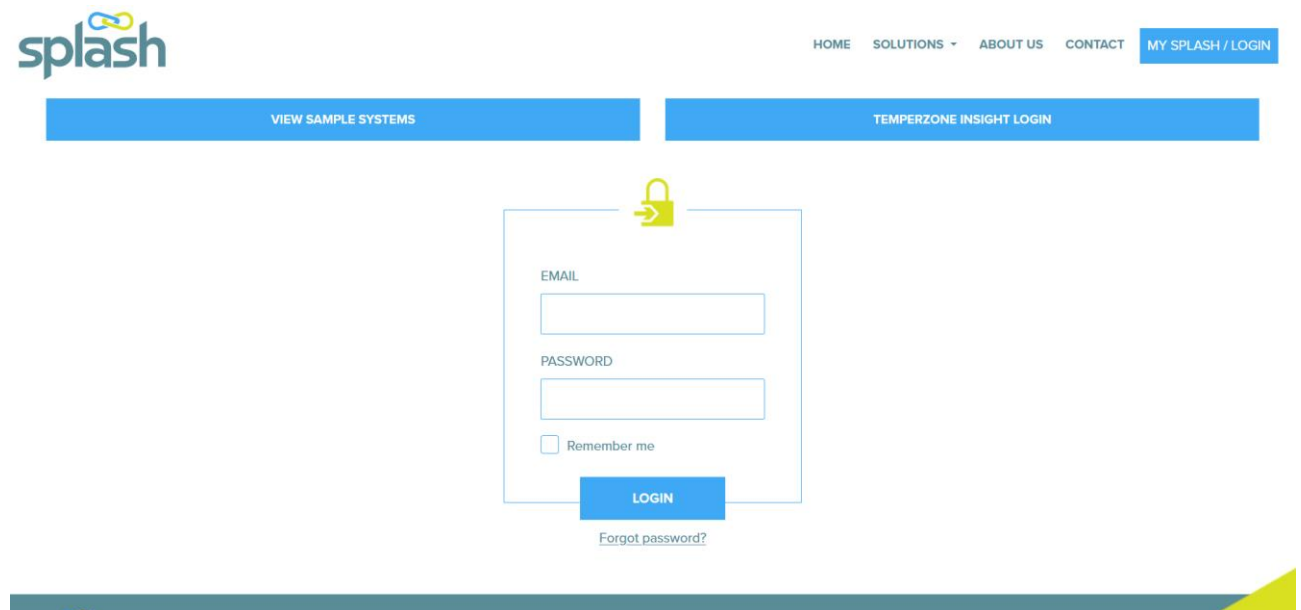
The system maintains a log of Users connecting to the Streambox, which is currently only made available to Administrators. An alert is sent when someone accesses a Streambox and the system records who logs in, their IP address, location, what the User tried to do and what changes that User makes during the session.

## 2. GENERAL

### 2.1 Login

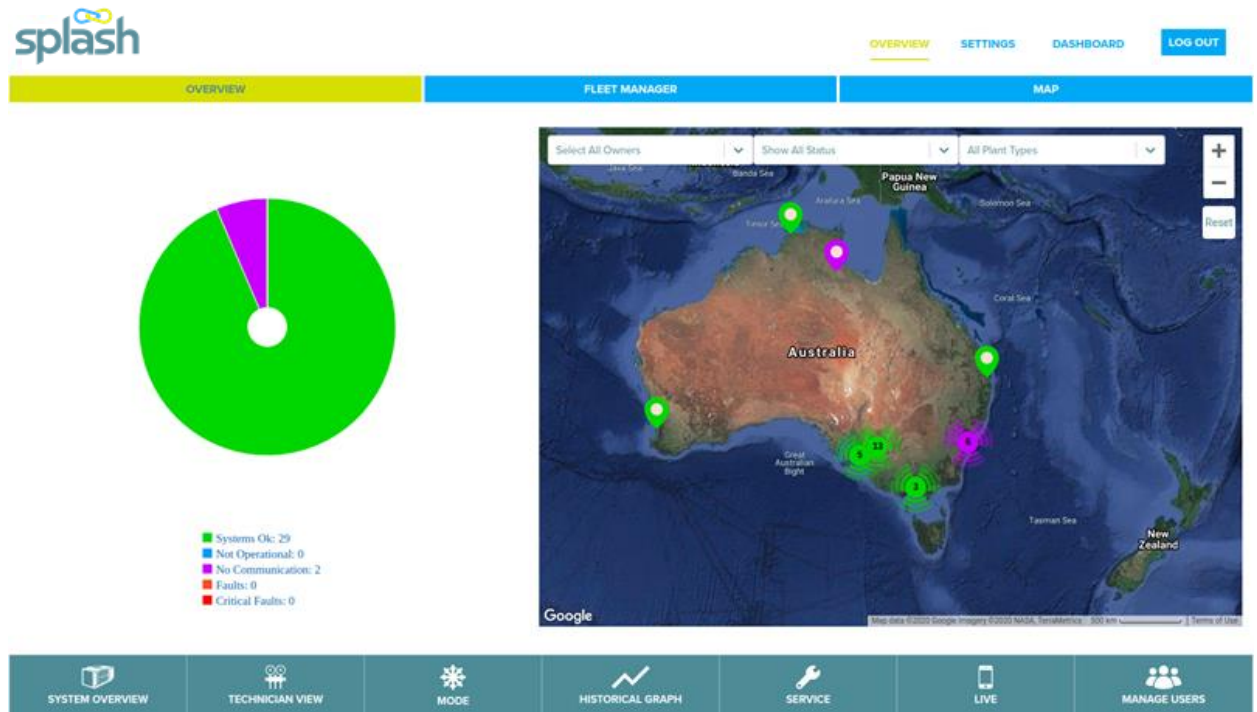
SPLASH Applied is located at the url [www.splashmonitoring.com](http://www.splashmonitoring.com)

To Login a User enters their allocated User name and password. If they do not have a login, they can Signup by clicking the 'New User' link.



The screenshot displays the SPLASH website's login interface. At the top left is the 'splash' logo. The top right navigation bar includes links for 'HOME', 'SOLUTIONS', 'ABOUT US', 'CONTACT', and a blue button labeled 'MY SPLASH / LOGIN'. Below the navigation bar are two blue buttons: 'VIEW SAMPLE SYSTEMS' and 'TEMPERZONE INSIGHT LOGIN'. The central focus is a login form enclosed in a light blue border, topped with a yellow padlock icon. The form contains two input fields labeled 'EMAIL' and 'PASSWORD'. Below these fields is a checkbox labeled 'Remember me'. A blue 'LOGIN' button is positioned at the bottom of the form. Directly beneath the 'LOGIN' button is a link that reads 'Forgot password?'. The page features a dark blue footer bar with a yellow triangle on the right side.

Once a User has signed I,n the Overview page will be displayed. If a User has been allocated an adequate permission level the screen will include links to 'Settings' and the 'Dashboard'.



### 3. HARDWARE CONFIGURATION

SPLASH Applied is installed as standard in some Temperzone products and is available as an option in others. Please refer to the separate documentation covering hardware configuration.

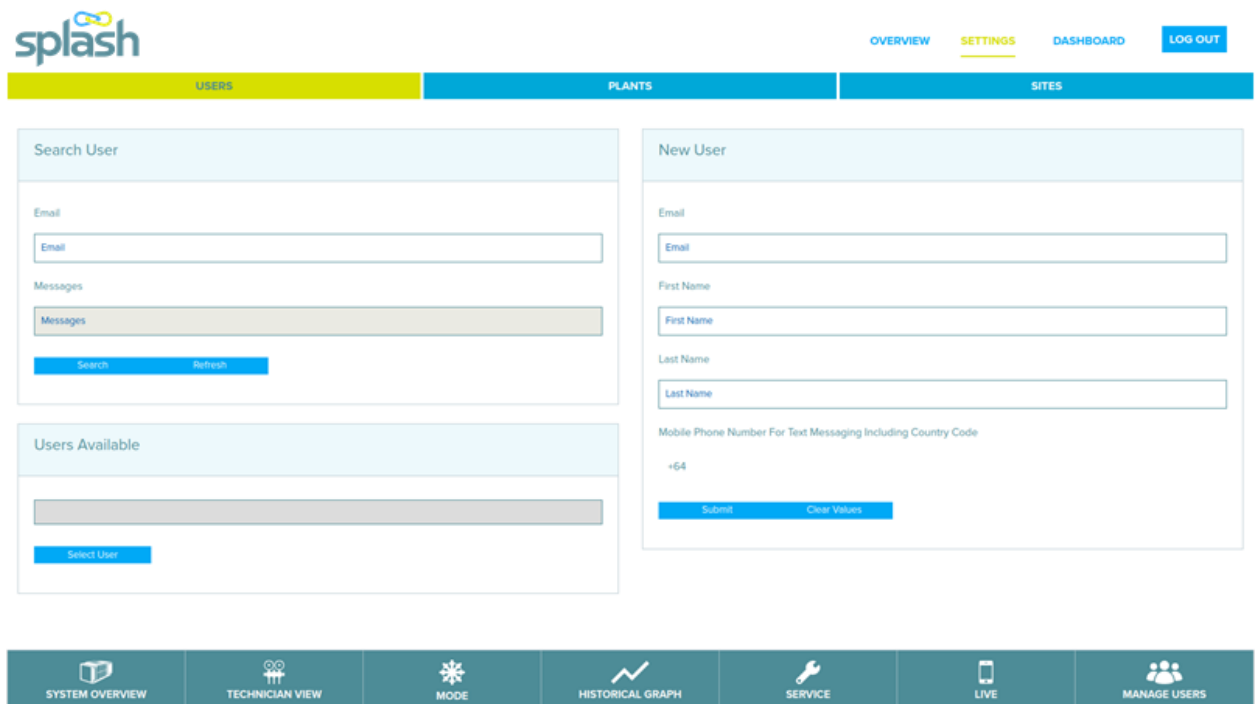
### 4. SETTINGS

Only Users allocated Owner level permission have access to 'Settings' which provides a User with three tabs:

-  Users
-  Plants
-  Sites

#### 4.1 Users

Supervisors can search for a User and edit and view the User's contact details.



The screenshot displays the 'Users' management interface within the SPLASH application. At the top, the 'splash' logo is on the left, and navigation links for 'OVERVIEW', 'SETTINGS' (highlighted), 'DASHBOARD', and 'LOG OUT' are on the right. Below this is a horizontal tab bar with 'USERS' (highlighted), 'PLANTS', and 'SITES'. The main content area is divided into two columns. The left column contains a 'Search User' section with input fields for 'Email' and 'Messages', and 'Search' and 'Refresh' buttons. Below this is a 'Users Available' section with a list box and a 'Select User' button. The right column contains a 'New User' section with input fields for 'Email', 'First Name', 'Last Name', and 'Mobile Phone Number For Text Messaging Including Country Code' (with a '+64' prefix), and 'Submit' and 'Clear Values' buttons. At the bottom, a dark teal navigation bar contains icons and labels for 'SYSTEM OVERVIEW', 'TECHNICIAN VIEW', 'MODE', 'HISTORICAL GRAPH', 'SERVICE', 'LIVE', and 'MANAGE USERS'.

## 4.2 Plants

Plants are monitored HVAC units. This page allows a User to search for monitored Plants or create a new Plant on an existing or a new Site. The page also displays the Plant information which can be edited.

A Plant or monitored HVAC unit may have one or more monitored devices such as multiple internal UC or Schneider controllers. Each monitored device is listed on this page. This page allows new devices to be added to the Plant.

The screenshot displays the 'PLANTS' section of the SPLASH Monitoring interface. The top navigation bar includes 'OVERVIEW', 'SETTINGS', 'DASHBOARD', and 'LOG OUT'. The secondary navigation bar highlights 'PLANTS' between 'USERS' and 'SITES'. The main content area is split into two panels. The left panel, titled 'Search Plants', contains input fields for 'Plant Names' and 'Messages', along with 'Search' and 'Refresh' buttons. Below this is a 'Plants Available' section with a 'New Plant' input field and a 'Select Plant' button. The right panel, titled 'New Plant', contains input fields for 'Plant Name', 'Address', 'Plant's Owner', 'Site', 'Plant Type', and 'Current Device', with an 'Add New Device' button at the bottom. The footer bar features icons and labels for 'SYSTEM OVERVIEW', 'TECHNICIAN VIEW', 'MODE', 'HISTORICAL GRAPH', 'SERVICE', 'LIVE', and 'MANAGE USERS'.

### 4.3 Sites







Sites are the locations where one or more monitored Plants are located. The Sites page allows a User to search for monitored Sites, create new Sites or edit existing Site information.

The screenshot displays the 'SITES' page in the SPLASH Monitoring Limited interface. The top navigation bar includes 'OVERVIEW', 'SETTINGS', 'DASHBOARD', and 'LOG OUT'. The secondary navigation bar shows 'USERS', 'PLANTS', and 'SITES' (the active page). The main content area is split into two panels. The left panel, titled 'Search Sites', features input fields for 'Site Names' and 'Messages', along with 'Search' and 'Refresh' buttons. Below this is a 'Sites Available' section with a 'New Site' input field and a 'Select Site' button. The right panel, titled 'New Site', contains a form with input fields for 'Site Name', 'Address', 'Latitude', 'Longitude', 'Timezone', and 'Site's Owner'. The bottom of the page features a dark teal footer bar with icons and labels for 'SYSTEM OVERVIEW', 'TECHNICIAN VIEW', 'MODE', 'HISTORICAL GRAPH', 'SERVICE', 'LIVE', and 'MANAGE USERS'.



## 5. SUPERVISORS DASHBOARD

The Supervisors dashboard allows Supervisors to manage devices and to change software and settings. This is accessible only to Supervisors and allows them to:

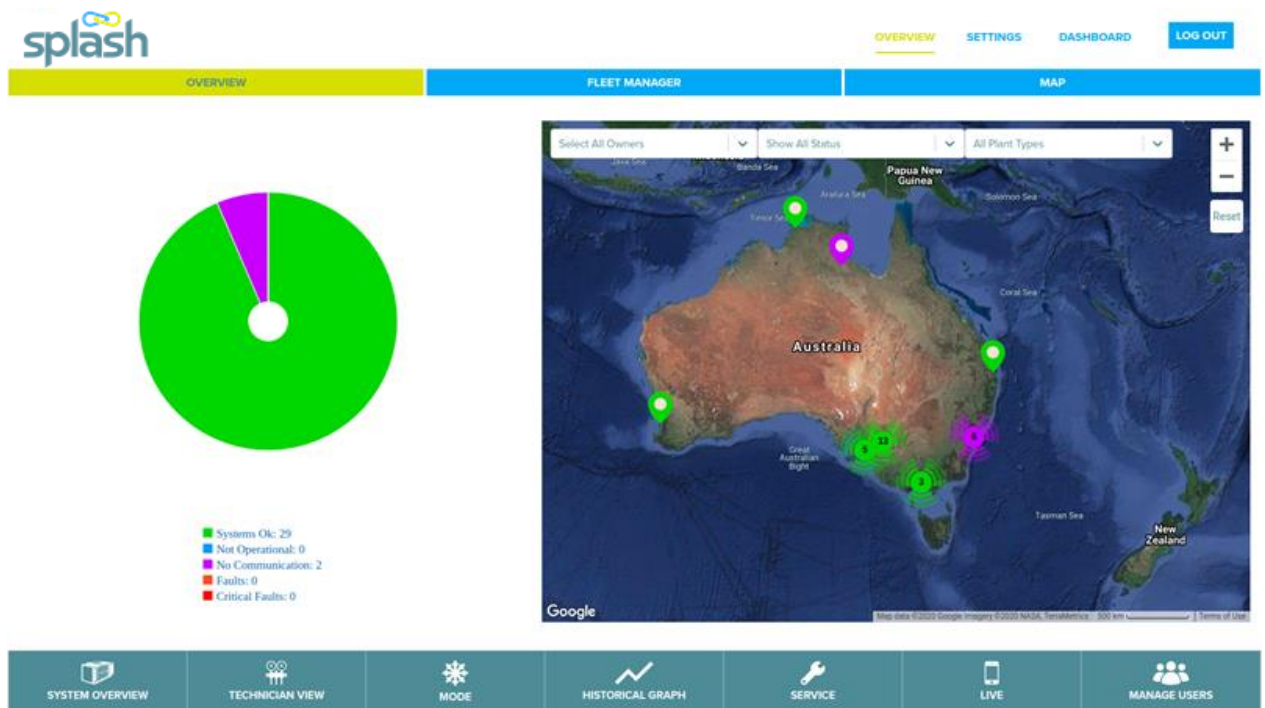
-  Upload firmware and software to UC, Carel and Schneider controllers
-  Upload Register Maps
-  Change settings on controllers
-  Generate new Alerts or modify criteria in existing Alerts
-  Generate new or modify existing Graphs
-  Change data descriptions, names and units

The Supervisors dashboard is described in more detail in the "Supervisor's Dashboard User Guide."

## 6. OVERVIEW

### 6.1 Overview

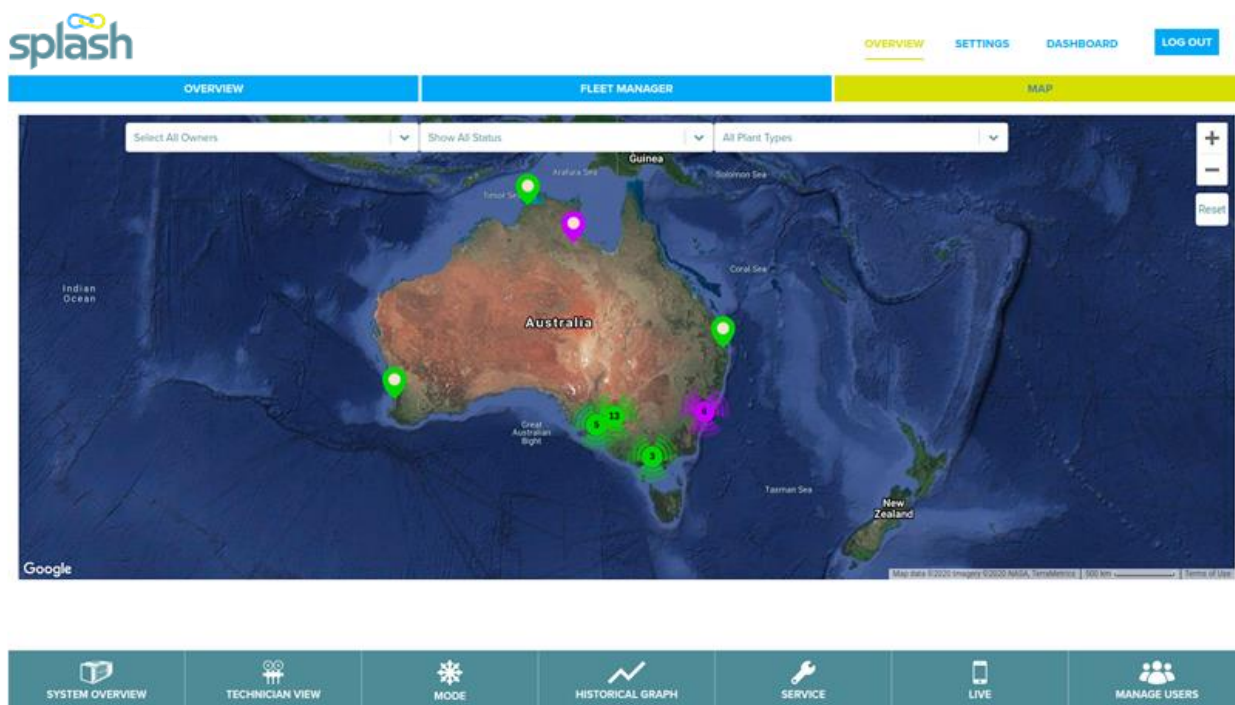
The initial page shown, once a User has logged in, is the Overview page which shows the current status of all Plants summarized in a pie chart and shown on a map. The pie chart and map are refreshed when this Overview page is reloaded. The map view can also be seen as a larger map in the Map tab. Refer to the Map tab below for more information.



## 6.2 Map View

When initially loaded the Map view shows all User's Plants and Plants shared with them that are currently being monitored by SPLASH Applied.

Plants displayed can be refined based on the Plant Owner, Status or Plant Type.



This icon signifies that there are a cluster of multiple Plants being monitored in this location. The number of monitored Plants is shown within the icon, in this case 14. Click on the Cluster icon to zoom in to the individual Plants in this location. The colour of the icon signifies the highest priority status of any Plant in this location. See the table below for the colour definitions.



This icon signifies a single Plant. Click the Plant's icon to view a summary of the Plant information. The colour of the icon signifies the status of the Plant:

Priority	Colour of icon and definition
Priority 1	<span style="color: red;">■</span> Critical Faults:
Priority 2	<span style="color: orange;">■</span> Faults:
Priority 3	<span style="color: purple;">■</span> No Communication:
Priority 4	<span style="color: blue;">■</span> Not Operational:
Priority 5	<span style="color: green;">■</span> Systems Ok:



This Pop-up is displayed when a User clicks on the Plant icon. Click on 'Plant View' to show detailed information for this Plant.

### 6.3 Fleet Manager

The Fleet Manager is a list of the User's Plants with summary information and indicators showing each Plant's status.

The screenshot displays the SPLASH Fleet Manager interface. At the top, there's a navigation bar with 'OVERVIEW', 'FLEET MANAGER' (highlighted), and 'MAP'. Below this, the interface is divided into two sections, each for a different plant: OPA1370-J and OPA2100-J.

**OPA1370-J Section:**

- Buttons: 'Export CSV' and 'Search...'.
- Table with 14 columns: Name, Serial No, Room Temp, Room RH, Supply Temp, Supply RH, Outside RH, Outside Temp, Unit Capacity, Comfort Mode, Comps On, Req Cap, System, and Comm.
- Rows include: Burnings Raynolds AC3, Burnings Raynolds AC2, Burnings Raynolds AC1, Burnings Raynolds AC4, Burnings Raynolds AC5, and OPA1370-J.
- At the bottom left: '10' with a plus icon.
- At the bottom right: '1' with a minus icon.

**OPA2100-J Section:**

- Buttons: 'Export CSV' and 'Search...'.
- Table with 14 columns: Name, Serial No, Room Temp, Room RH, Supply Temp, Supply RH, Outside Temp, Outside RH, Unit Capacity, Comfort Mode, Comps On, Req Cap, System, and Comm.
- Rows include: MRM OPA2100-J, Woodworths Mansburn, Slack Fields, Bankstown Airport OPA2100-J, and ISA OPA2100-J.

**Bottom Navigation Bar:**

- Icons and labels: SYSTEM OVERVIEW, TECHNICIAN VIEW, MODE, HISTORICAL GRAPH, SERVICE, LIVE, and MANAGE USERS.










Users can sort Plants based on column information by clicking the column title.

Users can enter the system by clicking the name of the system (Available July 2020)




Beneath the initial table are display options for the number of Plants to be shown in the table and to go to the next page.

## 7. PLANT VIEW

The Plant View displays information on individual Plants. From the Plant View a User can visit other pages using the navigation menu at the bottom of the page. These pages include:




-  [System Overview](#) – displays an image of the Plant being monitored with live summary information. Users can also view active alarms and change set points
-  [Technician View](#) – displays technical information for the refrigeration circuits
-  [Mode](#) – displays the current and historical operation of the Plant
-  [Historical graphs](#) – select to view current or historical information
-  [Service](#) – provides a maintenance assistant, maintenance log, fault log and links to technical information for the Plant
-  [Live](#) – This tab displays live data from the site updated every 30 seconds. The data shown depends upon the permission level of the User
-  [Alarms](#) – The header is normally blue but flashes red in the event of an alert. This provides a list of the active alarms. Click to view the “Fault Log” or go to the “Fault log” in the Service tab to view active and historical faults, potential reasons for the fault as well as being able to resolve a fault and enter site observations, the site works completed as well as further required works. Faults and alarms have a permission level assigned to be able to view and resolve them
-  [Service](#) – The header is normally blue but flashes red in the event a system requires maintenance. It provides a list of the required maintenance works
-  [Setpoints](#) – Provides a list of the available setpoints. Each setpoint has a permission level and will show up in the list if the User is permitted to see it

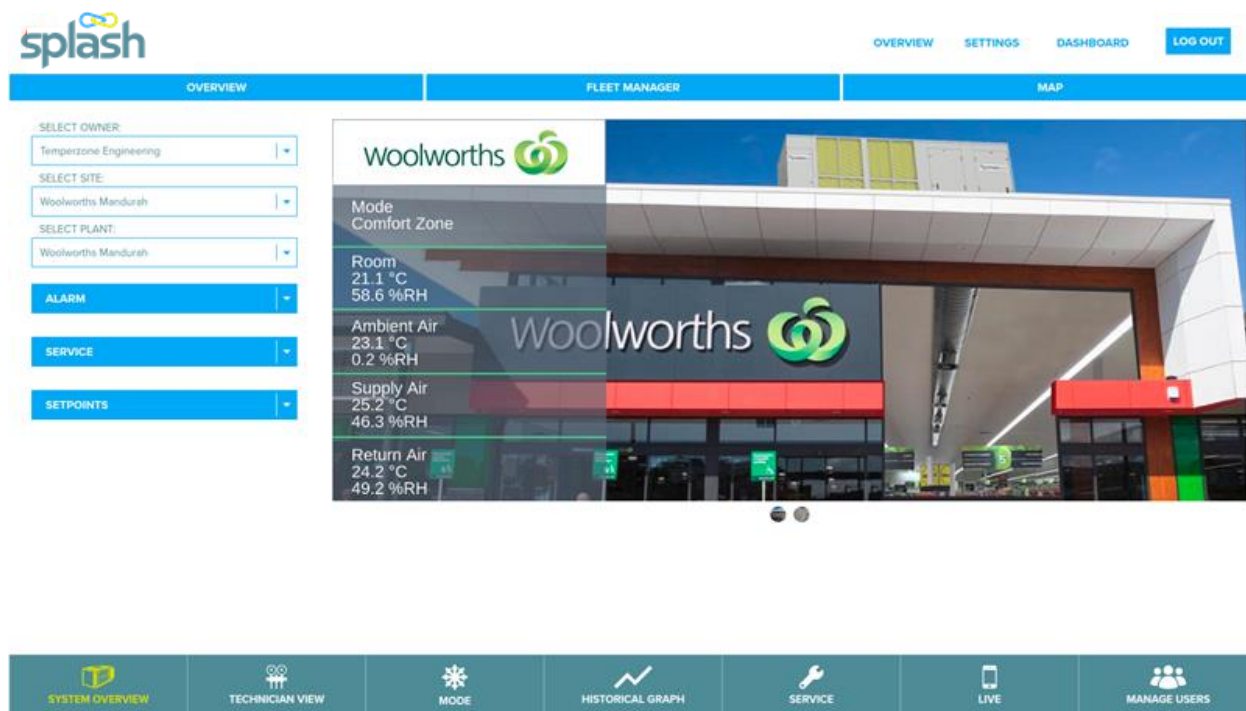
Other pages accessible via the navigation menu at the bottom of the screen include:

-  [Manage Users](#) – System Owners can invite and manage the permission level of Shared Users for their Plants. Supervisors can also manage the permission levels of all Users
-  [Subscriptions](#) – The proposed location for Users to upgrade or update their SPLASH Applied subscriptions. This is currently only available within the Supervisors / Owners Dashboard only
-  [Comms](#) – A fleet manager for all the Users 4G communications, provides a summary of information for each system. This is currently for Admin use only

Each type of Plant has its own SPLASH Applied Template. This template controls the information throughout the Application and the permission level required for each piece of information. Users must have the required permission level for these to be shown on their screen.




There are multiple ways of displaying the Plant information:

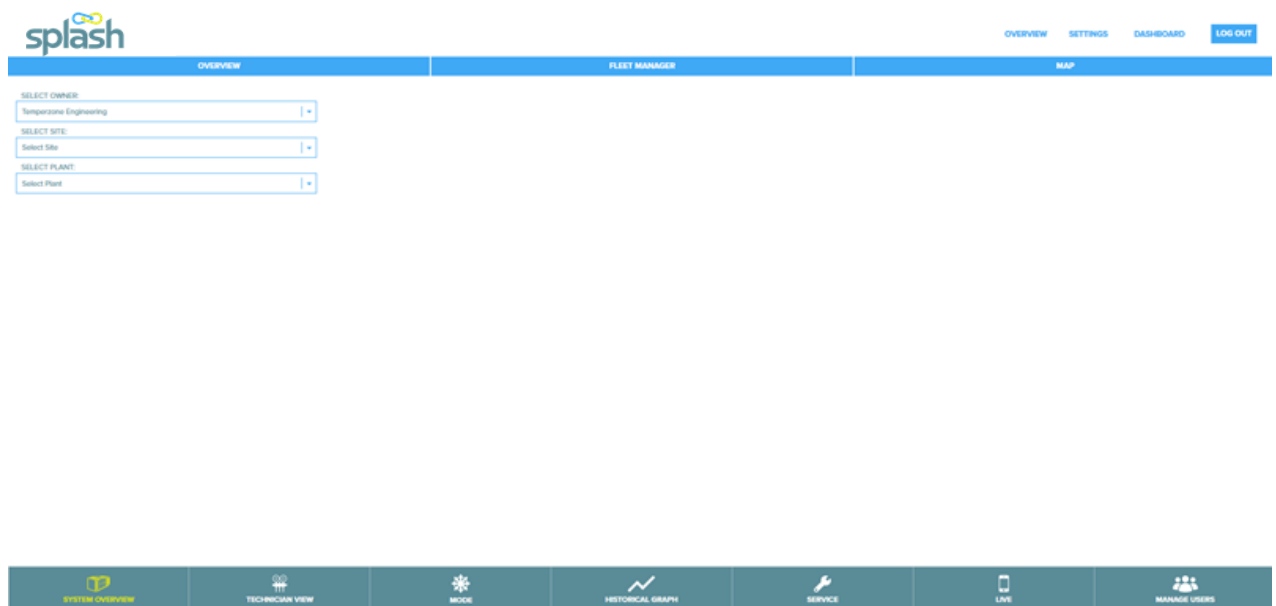
-  Clicking the link within the summary information pop-up in the Map view
-  Double clicking the Plant name within the Fleet Manager (Available July 2020)
-  Clicking the Plant View tab and then selecting the Plant from drop-down menus within the Plant Overview page



## 7.1 Select Owner / Site / Plant

These dropdowns are for Supervisors and system owners

-  **Select Owner** – this provides a list of the available sites in the next drop down box
-  **Select Site** - a Site can contain multiple Plants so Users select the Site to allow the available Plants to be shown in the next drop down. The Plant dropdown lists all the monitored Plants available for the selected Site
-  **Select the Plant** – select the plant to view



The screenshot displays the SPlASH Monitoring web application interface. At the top left is the 'splash' logo. To the right of the logo are navigation links: 'OVERVIEW', 'SETTINGS', 'DASHBOARD', and a 'LOG OUT' button. Below these links is a horizontal bar with three tabs: 'OVERVIEW', 'FLEET MANAGER', and 'MAP'. The 'OVERVIEW' tab is currently selected. Under the 'OVERVIEW' tab, there are three stacked dropdown menus. The first is labeled 'SELECT OWNER:' and has 'Temperance Engineering' selected. The second is labeled 'SELECT SITE:' and has 'Select Site' selected. The third is labeled 'SELECT PLANT:' and has 'Select Plant' selected. At the bottom of the page is a dark teal navigation bar with seven icons and labels: 'SYSTEM OVERVIEW' (highlighted), 'TECHNICIAN VIEW', 'MODE', 'HISTORICAL GRAPH', 'SERVICE', 'LIVE', and 'MANAGE USERS'.



## 8. SYSTEM OVERVIEW

Once the Plant has been selected, the System Overview displays an image of the Plant being monitored together with summary information. This information is live and updated every 30 seconds or so. The Overview image may include a branded image:

**splash** OVERVIEW SETTINGS DASHBOARD LOG OUT

OVERVIEW FLEET MANAGER MAP

SELECT OWNER: Temperzone Engineering  
SELECT SITE: Bunnings Fairfield  
SELECT PLANT: Bunnings Fairfield

ALARM  
SERVICE  
SETPOINTS

BUNNINGS warehouse	
Mode	Heating
Room	19.5 °C 42.8 %RH
Ambient Air	14.1 °C 50.6 %RH
Supply Air	28.7 °C 25.5 %RH
Return Air	19.5 °C 42.7 %RH

SYSTEM OVERVIEW TECHNICIAN VIEW MODE HISTORICAL GRAPH SERVICE LIVE MANAGE USERS

Or a standard Plant Type image:

**splash** OVERVIEW SETTINGS DASHBOARD LOG OUT

OVERVIEW FLEET MANAGER MAP

SELECT OWNER: Temperzone Engineering  
SELECT SITE: Accolade Wines  
SELECT PLANT: AC-23 (AW-P43)

ALARM  
SERVICE  
SETPOINTS

Model OPA2100	
Mode	Comfort Zone (Fan Only)
Room	18.4 °C 49.5 %RH
Ambient Air	4.1 °C 78.5 %RH
Supply Air	18.6 °C 50.0 %RH
Return Air	18.5 °C 49.5 %RH

SYSTEM OVERVIEW TECHNICIAN VIEW MODE HISTORICAL GRAPH SERVICE LIVE MANAGE USERS

Users select the icon under the image to choose which image to show.

**On the left hand side of the page there are three drop down menus:**

## 8.1 Alarms

These are active fault alarms on the system, these alarms will be removed from this drop down list once they are no longer active and are acknowledged. The alarm header shows blue when there are no active alarms and flashes red when there are active alarms. Alarms have a permission level assigned to be able to view and resolve them.

The screenshot displays the SPLASH monitoring interface. The top navigation bar includes the SPLASH logo and links for OVERVIEW, SETTINGS, DASHBOARD, and LOG OUT. The main interface is divided into three sections: OVERVIEW, FLEET MANAGER, and MAP. The OVERVIEW section is active and contains a sidebar with filters for SELECT OWNER (Temperzone Engineering), SELECT SITE (Accolade Wines), and SELECT PLANT (AC-23 (NW-P43)). Below these filters are three buttons: ALARM, SERVICE, and SETPOINTS. The main area shows a 3D model of an HVAC unit on a rooftop. To the right of the model is a data panel with the following information:

Model OPA2100	
Mode Comfort Zone (Fan Only)	
Room	18.4 °C
	49.4 %RH
Ambient Air	4.0 °C
	78.8 %RH
Supply Air	18.6 °C
	49.9 %RH
Return Air	18.4 °C
	49.4 %RH

The bottom navigation bar includes icons for SYSTEM OVERVIEW, TECHNICIAN VIEW, MODE, HISTORICAL GRAPH, SERVICE, LIVE, and MANAGE USERS.

## 8.2 Service

These are active service alarms on the system, these alarms will be removed from this drop down list once they are no longer active. Alarm header shows blue when there are no active alarms and flashes red when there are active alarms.

Click to view the 'Fault Log' or go to the 'Fault log' in the Service tab to view active and historical faults and potential reasons for the fault. The User is also able to resolve a fault and enter site observations, the site works completed and any further required works. Faults / Alarms have a permission level assigned to be able to view and resolve them

The screenshot displays the SPLASH monitoring system interface. The top navigation bar includes the 'splash' logo, 'OVERVIEW', 'SETTINGS', 'DASHBOARD', and 'LOG OUT' buttons. Below this, a secondary navigation bar shows 'OVERVIEW', 'FLEET MANAGER', and 'MAP'. The main content area is divided into three sections: a left sidebar, a central 3D model, and a right data panel.

**Left Sidebar:**

- SELECT OWNER:** Temperzone Engineering
- SELECT SITE:** Accolade Wines
- SELECT PLANT:** AC-23 (JAW P43)
- ALARM** (blue button)
- SERVICE** (blue button, currently active)
- Service** (text) **Date** (text)
- All system maintenance is up to date
- SETPPOINTS** (blue button)

**Central 3D Model:** A detailed 3D rendering of an air conditioning unit (Model OPA2100) installed on a rooftop. The unit is shown in a cutaway view, revealing internal components like coils and fans. It is mounted on a metal frame with blue support brackets.

**Right Data Panel:**

- Model:** OPA2100
- Mode:** Comfort Zone (Fan Only)
- Room:** 18.4 °C, 49.4 %RH
- Ambient Air:** 4.0 °C, 78.8 %RH
- Supply Air:** 18.6 °C, 49.9 %RH
- Return Air:** 18.4 °C, 49.4 %RH

**Bottom Navigation Bar:**

- SYSTEM OVERVIEW** (yellow icon)
- TECHNICIAN VIEW** (person icon)
- MODE** (snowflake icon)
- HISTORICAL GRAPH** (line graph icon)
- SERVICE** (wrench icon)
- LIVE** (phone icon)
- MANAGE USERS** (group of people icon)

### 8.3 Set Points

All set points have an allocated permission level to be able to view and edit them. Users with the appropriate editing permission level will be presented with up and down arrows to change the setting, otherwise the arrows are not displayed. Set points can be edited in two ways, either by selecting the value and typing over it or clicking the up or down arrows. The up and down arrows for each of the set points have their own designated step change. This step change is set within the Template for each of the Plant types. Once a User has changed one or more set points they need to click 'Save Setpoints' for the changes to take effect.

All fault alarms, service alarms and set points have a permission level allocated to them. Users must have the required level of permission for these to be displayed.

The screenshot displays the SPLASH Monitoring web interface. The top navigation bar includes 'OVERVIEW', 'SETTINGS', 'DASHBOARD', and 'LOG OUT'. Below this, a secondary bar shows 'OVERVIEW', 'FLEET MANAGER', and 'MAP'. The main content area is divided into a left sidebar and a central panel. The sidebar contains filters for 'SELECT OWNER' (Temperzone Engineering), 'SELECT SITE' (Accolade Wines), and 'SELECT PLANT' (AC-23 (RW-P43)). It also has buttons for 'ALARM', 'SERVICE', and 'SETPOINTS'. The 'SETPOINTS' section is active, showing a table with columns 'Label', 'Actual', 'Adj', and 'Msg'. The table lists three setpoints: 'Cooling SP' with an actual value of 23, 'Heating SP' with an actual value of 17, and 'Unoccupied Cooling SP' with an actual value of 35. Each row has up and down arrows for adjustment. A 'Save Setpoints' button is located above the table. The central panel features a 3D rendering of an air conditioning unit on a rooftop. To the right of the rendering, a panel displays system details: 'Model OPA2100', 'Mode Comfort Zone (Fan Only)', and a list of temperatures and humidities for Room, Ambient Air, Supply Air, and Return Air. The bottom navigation bar includes icons for 'SYSTEM OVERVIEW', 'TECHNICIAN VIEW', 'MODE', 'HISTORICAL GRAPH', 'SERVICE', 'LIVE', and 'MANAGE USERS'.

Label	Actual	Adj	Msg
Cooling SP	23	↑ ↓	
Heating SP	17	↑ ↓	
Unoccupied Cooling SP	35	↑ ↓	

Parameter	Value
Room	18.4 °C
Room	49.4 %RH
Ambient Air	4.0 °C
Ambient Air	78.8 %RH
Supply Air	18.6 °C
Supply Air	49.9 %RH
Return Air	18.4 °C
Return Air	49.4 %RH

## 9 TECHNICIAN VIEW

The Technician View displays technical information about the selected refrigeration circuit, and on the left hand presents drop-downs for Plant selection, Alarms and Setpoints. The selected refrigeration circuit is shown at the top of the window. Alternative refrigeration circuits can be selected by clicking one of the other blue circles showing the current duty of each refrigeration circuit.



## 10 MODE

The operating mode and associated relevant information is displayed as a historical graph. The mode is indicated by the vertical colours and these are over-laid with relevant information shown as horizontal line graphs.

Some types of Plant, such as a Temperzone OPA2100, have many modes so it is important for these to be able to be viewed simplistically. The relevant information displayed in the line graphs can be removed by clicking the associated label in the key.

Initially information is displayed for the previous and current day. An alternative date range can be selected under the Plant selection in the left hand pane.








## 11 HISTORICAL GRAPH

This tab allows Users to generate graphs of historical information. Users can select from a list of preset graphs in the left hand pane. A date range can be selected using the drop down menu above the list of preset graphs. If no date range is selected a graph is shown for the current day. Individual lines can be removed from the graph by clicking the relevant label in the key below the graph. All data points can be deleted or added using the global buttons.

Multiple preset graphs can be laid over each other by selecting the first preset graph

Setpoints  and then selecting a second preset graph Circuit 1 . Preset graphs can then be deleted by clicking the clicking the relevant subtract graph button

Circuit 1 

Information available to be shown in a graph are indicated by a (+) in the button ie  and information that is currently being displayed is indicated by a ( - ) in the button ie

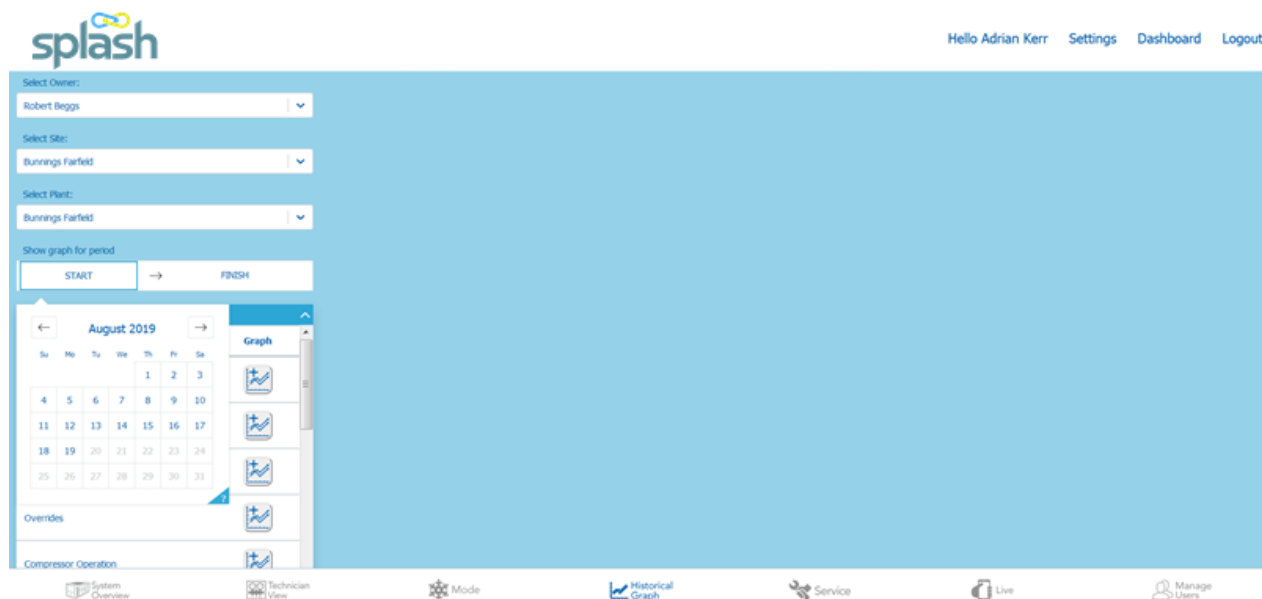


Preset graphs are configured within the Plant Type template. Users with access to the Supervisor dashboard are able to set up additional graphs from any of the available data however these graphs will only be available on the Supervisors Dashboard.

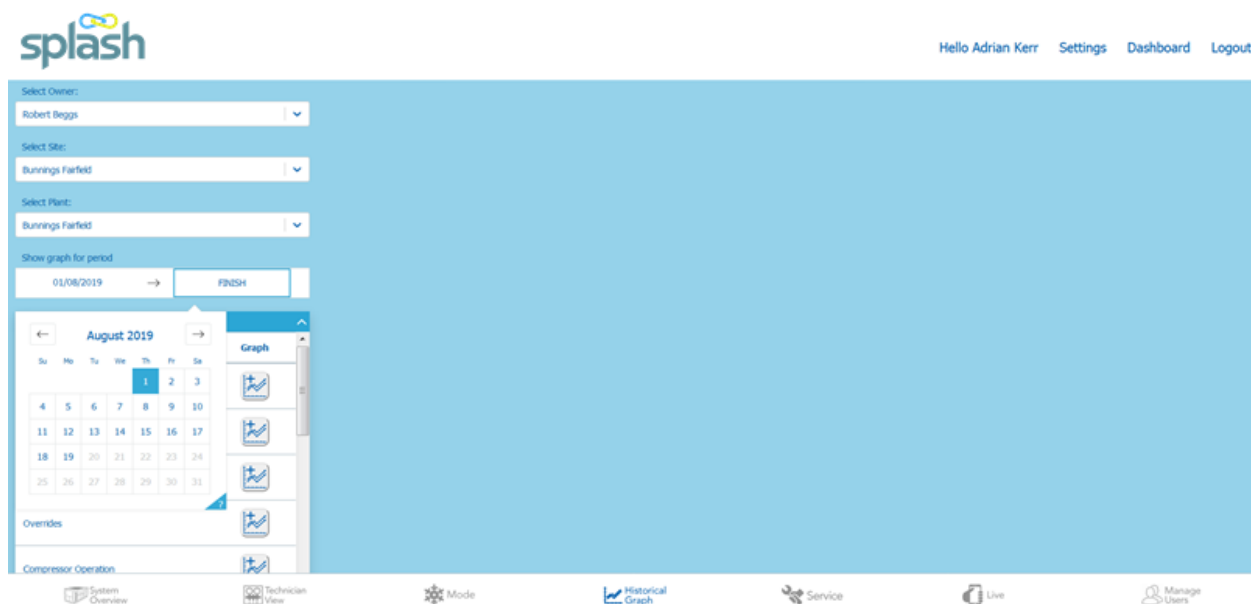


Historical graph – before selecting date range

Select Start date



Select finish date









Select information to show



Users can select to zoom into a section of the graph by clicking on and dragging the mouse across the graph. The hamburger menu also allows users to view the graph as a full screen, print the graph or save the graph in several formats

## 12 SERVICE

The Service tab has four sections, these being:

-  **Service log** – The Service log contains the completed commissioning and maintenance checklists. These documents are stored online, documents are retrievable and copies can be downloaded or emailed
-  **Service** – A User can select the forms they want to complete, ie Commissioning, Service, Maintenance, Site works etc
-  **Fault log** – The Fault log is a list of the faults that have occurred on the Plant. Users can double click on a fault to view additional information including resolving the fault and any additional works required
-  **Equipment details** – This contains links to information specific to the equipment being monitored

### 12.1 Service Log

The Service log contains the completed commissioning and maintenance checklists. These documents are stored online, documents are retrievable and copies can be downloaded, printed or emailed. Click to View the completed form, then select to download or email the form as a pdf



The screenshot displays the SPLASH monitoring system interface. At the top, the 'splash' logo is on the left, and navigation links for 'OVERVIEW', 'SETTINGS', 'DASHBOARD', and 'LOG OUT' are on the right. Below this is a main navigation bar with 'OVERVIEW', 'FLEET MANAGER', and 'MAP'. The 'FLEET MANAGER' section is active, showing a 'SERVICE LOG' tab. On the left, there are filters for 'SELECT OWNER' (Temperzone Engineering), 'SELECT SITE' (Bunnings Fairfield), 'SELECT PLANT' (Bunnings Fairfield), and buttons for 'ALARM', 'SERVICE', and 'SETPOINTS'. The main area shows a table with columns: Created, Created By, Plant Name, Service Type, Service Company, and Service Record. The table is currently empty. At the bottom of the table, there are pagination controls: 'Previous', 'Page 1 of 1', '5 rows', and 'Next'. At the very bottom, there is a row of icons for 'SYSTEM OVERVIEW', 'TECHNICIAN VIEW', 'MODE', 'HISTORICAL GRAPH', 'SERVICE' (highlighted), 'LIVE', and 'MANAGE USERS'.

Download PDF

Email PDF

Commissioning Checklist

Customer	<input type="text" value="test"/>	Work Order	<input type="text"/>
Address	<input type="text"/>	Equipment # / Designation	<input type="text"/>
Installation Company	<input type="text"/>	Unit Location	<input type="text"/>
Technician Name	<input type="text"/>	Service Company	<input type="text"/>
Date	<input type="text"/>	Technician Phone	<input type="text"/>
Unit Model	<input type="text"/>	Unit Serial No	<input type="text"/>
Manufacturer Assistance By	<input type="text"/>	Unit Age	<input type="text"/>

Unit / Structure / Duct Work Condition OK	<input type="radio"/> Yes <input checked="" type="radio"/> No	All elec.terminals tight	<input type="radio"/> Yes <input checked="" type="radio"/> No	Air filter clean	<input type="radio"/> Yes <input checked="" type="radio"/> No
Adequate safe clear access	<input type="radio"/> Yes <input checked="" type="radio"/> No	External elec.isolator fitted	<input type="radio"/> Yes <input checked="" type="radio"/> No	Air filter condition	<input type="radio"/> Yes <input checked="" type="radio"/> No
Door hardware condition	<input type="radio"/> Yes <input checked="" type="radio"/> No	Control function correct / demonstrated to client	<input type="radio"/> Yes <input checked="" type="radio"/> No	Indoor return air filter fitted	<input type="radio"/> Yes <input checked="" type="radio"/> No
Condensate drains tested OK	<input type="radio"/> Yes <input checked="" type="radio"/> No	Are control parameters set	<input type="radio"/> Yes <input checked="" type="radio"/> No	Is airflow set and balanced	<input type="radio"/> Yes <input checked="" type="radio"/> No
Condensate drains clean	<input type="radio"/> Yes <input checked="" type="radio"/> No	Check control settings	<input type="radio"/> Yes <input checked="" type="radio"/> No	Coupling / belts alignment OK	<input type="radio"/> Yes <input checked="" type="radio"/> No
Drain trays clean	<input type="radio"/> Yes <input checked="" type="radio"/> No	Thermostats checked	<input type="radio"/> Yes <input checked="" type="radio"/> No	Indoor fan operation OK	<input type="radio"/> Yes <input checked="" type="radio"/> No
Approved TZ drain trap fitted	<input type="radio"/> Yes <input checked="" type="radio"/> No	Indoor cooling coil condition	<input type="radio"/> Yes <input checked="" type="radio"/> No	Indoor fan bearings OK	<input type="radio"/> Yes <input checked="" type="radio"/> No

## 12.2 Service

Each type of Plant has its own specific service check list. This check list is managed within the plant type template. The check list is semi automated, the User selects the type of form, for example Commissioning, Service, or maintenance, and monthly, 3 monthly, 6 monthly or annual, then the template lists the recommended maintenance tasks. Each task has a tick box and a comment box.

The template automatically enters the technician's name as well as date, location, and other key required and known metrics such as operating hours, refrigeration pressures, electrical current, settings etc. The Technician fills out the observation sections form including recommended actions. At the end the technician can select to conduct an Auto Health-check in both Cooling and Heating modes, during each health-check the data is automatically populated. The completed maintenance form is saved in the maintenance log and a copy can be automatically downloaded, printed and emailed to designated SPLASH Applied users.

Users can add photos to the form by either using their phone or tablet to take a photo or selecting images from a library and then add observation notes with each image.

It is also envisaged that the manufacturer / supplier could offer assisted commissioning whereby technicians in the office could view the commissioning currently being undertaken and assist the site personnel as required to ensure the unit is commissioned satisfactorily.





It is expected that a feature to be released late 2020 will allow users to purchase spare parts directly from within the APP

The screenshot displays the 'Service Checklist' form within the SPLASH Monitoring Limited application. The interface includes a top navigation bar with 'OVERVIEW', 'SETTINGS', 'DASHBOARD', and 'LOG OUT' buttons. Below this, a secondary bar shows 'OVERVIEW', 'FLEET MANAGER', and 'MAP'. The main content area is divided into sections for 'SELECT OWNER', 'SELECT SITE', 'SELECT PLANT', and 'ALARM', 'SERVICE', and 'SETPOINTS' buttons. The 'SERVICE' section is active, showing a 'Service Checklist' form. This form contains fields for 'Customer', 'Address', 'Installation Company', 'Technician Name', 'Date', 'Unit Model', 'Manufacturer Assistance By', 'Work Order', 'Equipment # / Designation', 'Unit Location', 'Service Company', 'Technician Phone', 'Unit Serial No', and 'Unit Age'. Below these fields are three columns of checklist items, each with a 'Yes' radio button and a 'No' radio button. The items include: 'Unit / Structure / Duct Work Condition OK', 'Adequate safe clear access', 'Door hardware condition', 'Condensate drains tested OK', 'Condensate drains clean', 'All elec.terminals tight', 'External elec.isolator fitted', 'Control function correct / demonstrated to client', 'Check control settings', 'Are control parameters set', 'Air filter clean', 'Air filter condition', 'Indoor return air filter fitted', 'Is airflow set and balanced', and 'Coupling / belts alignment'. The bottom navigation bar includes icons for 'SYSTEM OVERVIEW', 'TECHNICIAN VIEW', 'MODE', 'HISTORICAL GRAPH', 'SERVICE' (highlighted), 'LIVE', and 'MANAGE USERS'.

### 12.3 Fault Log

The Fault log is a list of the faults that have occurred on the Plant. Users can double click on a fault to view additional information including resolving the fault and any additional works required.

The fault log:

-  allows a User to view the fault
-  displays potential reasons for the fault
-  allows a User to resolve a fault and enter site observations
-  allows a User to enter the site works completed as well as any additional works still to be completed.

The criteria for the faults can be edited by Users with the required permission level for that particular fault. Preset templated alarms have a permission level assigned to be able to view and resolve them.



The screenshot displays the SPLASH Monitoring interface. The top navigation bar includes 'OVERVIEW', 'SETTINGS', 'DASHBOARD', and 'LOG OUT'. The main content area is divided into three sections: 'OVERVIEW', 'FLEET MANAGER', and 'MAP'. The 'FLEET MANAGER' section is active, showing a table with columns for 'SERVICE LOG', 'SERVICE', 'FAULT LOG', and 'EQUIPMENT DETAILS'. The 'FAULT LOG' column is highlighted in yellow. The table contains two entries for 'No Communication' faults, both resolved on 05/05/2020. The sidebar on the left includes filters for 'SELECT OWNER', 'SELECT SITE', and 'SELECT PLANT', along with buttons for 'ALARM', 'SERVICE', and 'SETPOINTS'. The bottom navigation bar includes icons for 'SYSTEM OVERVIEW', 'TECHNICIAN VIEW', 'MODE', 'HISTORICAL GRAPH', 'SERVICE', 'LIVE', and 'MANAGE USERS'.

Alert Start Time	Alarm Type	Resolution Time	Resolution Notes	Resolution Type
05/05/2020 02:15:02	No Communication	05/05/2020 06:00:01	System communication is self-resolved	Communication-Resolved
15/05/2020 03:30:02	No Communication	15/05/2020 04:15:02	System communication is self-resolved	Communication-Resolved

## 12.4 Equipment Details

This page provides a list of the devices and their associated technical information including; manuals, instructions, drawings and parts lists. It is proposed that in the future this will link to the supplier management system to allow automated ordering of spare parts.

The screenshot displays the 'Equipment Details' page within the SPLASH Monitoring system. The interface features a top navigation bar with the 'splash' logo and links for OVERVIEW, SETTINGS, DASHBOARD, and LOG OUT. Below this is a secondary navigation bar with tabs for OVERVIEW, FLEET MANAGER, and MAP. The FLEET MANAGER tab is active, showing sub-tabs for SERVICE LOG, SERVICE, FAULT LOG, and EQUIPMENT DETAILS, with the latter being highlighted in yellow.

On the left side, there are three dropdown menus for filtering: 'SELECT OWNER' (set to 'Temperzone Engineering'), 'SELECT SITE' (set to 'Bunnings Fairfield'), and 'SELECT PLANT' (set to 'Bunnings Fairfield'). Below these are three buttons: 'ALARM', 'SERVICE', and 'SETPOINTS', each with a dropdown arrow.

The main content area is a table with the following structure:

Model	Documentation	Link
OPA2100	Technical Data	<a href="#">Download File</a>
OPA2100	General Information	<a href="#">Download File</a>
OPA2100	Specifications	<a href="#">Download File</a>
OPA2100	Spare Parts List	<a href="#">Download File</a>

At the bottom of the table, there is a pagination bar with 'Previous' and 'Next' buttons, a page indicator 'Page 1 of 1', and a '5 rows' dropdown menu.

The footer of the page contains a row of icons and labels: 'MODE', 'HISTORICAL GRAPH', 'SERVICE' (highlighted in yellow), 'LIVE', and 'MANAGE USERS'. A URL is visible in the bottom left corner: 'tzc.splashmonitoring.com/tzapp/systemOverview/service/equipment'.

## 13 LIVE

The Live view displays a list of the current data points from the monitored Plant. The data is live and is updated every 30 seconds or so.

The screenshot shows the 'LIVE' view of the SPLASH Monitoring system. The interface includes a top navigation bar with 'OVERVIEW', 'FLEET MANAGER', 'MAP', and 'LOG OUT'. Below this, a left sidebar contains filters for 'SELECT OWNER' (Temperzone Engineering), 'SELECT SITE' (Bunnings Fairfield), 'SELECT PLANT' (Bunnings Fairfield), and buttons for 'ALARM', 'SERVICE', and 'SETPOINTS'. The main content area displays 'Bunnings Fairfield' with local and sample times, and a table of 10 data points. A bottom navigation bar shows icons for 'SYSTEM OVERVIEW', 'TECHNICIAN VIEW', 'MODE', 'HISTORICAL GRAPH', 'SERVICE', 'LIVE' (highlighted), and 'MANAGE USERS'.

**splash** OVERVIEW SETTINGS DASHBOARD LOG OUT

OVERVIEW FLEET MANAGER MAP

SELECT OWNER:  
Temperzone Engineering

SELECT SITE:  
Bunnings Fairfield

SELECT PLANT:  
Bunnings Fairfield

ALARM

SERVICE

SETPOINTS

**Bunnings Fairfield**

Local Time: 2020-05-15 15:34:00  
Sample Time: 2020-05-15 15:32:40  
Zone: Australia/Melbourne

Export CSV Search

ID	Label	Value	Unit	Timestamp
1	Room Temp	19.9	C	2020-05-15 15:32:10
2	LL Mode	no data		no data
3	Room RH	41.7	%	2020-05-15 15:32:40
4	Info_Unit_IDF_U3	52.8		2020-05-15 15:32:40
5	RA Temp	19.9	C	2020-05-15 15:32:40
6	RA RH	41.6	%	2020-05-15 15:32:40
7	SA Temp	28.6	C	2020-05-15 15:31:40
8	SA RH	25.7	%	2020-05-15 15:31:10
9	LL Unit Capacity	01		2020-05-15 11:16:08
10	OA RH	51.8	%	2020-05-15 15:32:40

10 1 2 3 4 5 > >>

SYSTEM OVERVIEW TECHNICIAN VIEW MODE HISTORICAL GRAPH SERVICE LIVE MANAGE USERS

## 14 MANAGE USERS





System Owners can invite other Users to view and or edit their monitored systems. Once invited the new User receives an email inviting them to join SPLASH Applied, once they have accepted, the new User is allocated permission levels on the designated Plants.

Supervisors can search for a User and edit their contact details, phone number and email address

### 14.1 User permissions

Each User is allocated a permission level either by the Owner of a monitored system or by Supervisors. Supervisors are able to allocate permission levels up to Supervisor level. System owners are able to allocate permission levels up to their own permission level.

Each function within SPLASH Applied has Read / Write and Read Only permission levels. SPLASH Applied currently has the ability to have 40 permission levels between -20 and +20. A minus permission level has read and write privileges and a positive permission level only has read privileges. The lower the number the greater the level of access, such that:

-  -1 is the highest read / write permission level
-  -20 is the lowest read/write permission level
-  +1 is the highest read / write permission level
-  +20 is the lowest read/write permission level



SPLASH have allocated default permission levels to certain types of User, as follows:

- Other preset permission levels can be added as required.

## 15 SUBSCRIPTIONS

33

## 16 COMMS

This page is a version of the SPLASH Fleet Manager for displaying a summary of the communication status for the Users systems with data extracted from the Vodafone dashboard via API's and the EC1100s. The page provides summary information from the EC1100 where a 4G Streambox has been installed. (Available October 2020)

Name	Serial Number	EC number	Last comm time	Uptime	Cell ID	TX	Dsk vol used %	Dsk - us %	Ref. Sig. Rec. Pwr	Ref. Sig. Rec. quality	Rec. Sig. strength
TZ Warehouse test system	123456789ABCD	032	Current	4.1 day	45108	LTE	1	3	-9	-69	18
TZ Warehouse test system	123456789ABCD	033	Current	6.3 days	45108	LTE	2	5	-10	-70	18
TZ Warehouse test system	123456789ABCD	034	Current	16.5 days	45108	LTE	4	6	-10	-69	18
TZ Warehouse test system	123456789ABCD	035	Current	11.2 days	45108	LTE	4	5	-8	-70	18
TZ Warehouse test system	123456789ABCD	036	Current	89.4 days	45108	LTE	3	6	-10	-69	18
TZ Warehouse test system	123456789ABCD	037	Current	56.1 days	45108	LTE	5	8	-11	-69	18

## 17 ALERTS

There are three types of alert:

- Alerts generated as part of the original template - These alerts are not editable unless they are changed within the Template itself.
- Alerts generated by Supervisors within the Dashboard – these alerts are able to be generated and edited using “And / Or” statements in the SPLASH Monitoring alerting system. Each alert is given a read/write permission level by the Supervisor which makes the alerts visible or hidden to other users
- Alerts generated by Plant Owners within the APP – these alerts are able to be generated and edited using “And / Or” statements in the SPLASH Monitoring alerting system. Each alert is given a read/write permission level by the Plant Owner which makes the alerts visible or hidden to other users. (Available July 2020)

## 18 PERIODIC HEALTH-CHECK

Users can elect to receive periodic health-check reports either daily, weekly, monthly or annually by email. Reports are also stored online for future access. Reports summarise information on KPI's particular to the device being monitored. Reports can also be run for multiple previous periods. (Available end 2020)

## **19 EVENT LOGS**

SPLASH can generate several different reports that detail who viewed which systems, when and what changes were made. These include views through or changes being made on the Supervisors Dashboard or SPLASH Applied Application. It is intended that some of these reports will be made available to some permission levels.

END OF DOCUMENT