

User Manual

iSTEMS – Integrated SCADA and Telemetry Monitoring System

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For

Syarikat Air Negeri Sembilan (SAINS)

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DOCUMENT CONTROL

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ACRONYM AND DEFINITION

SCADA	Supervisory control and data acquisition
iSTEMS	Integrated SCADA and Telemetry Monitoring System
RDP	Raw Data Processor

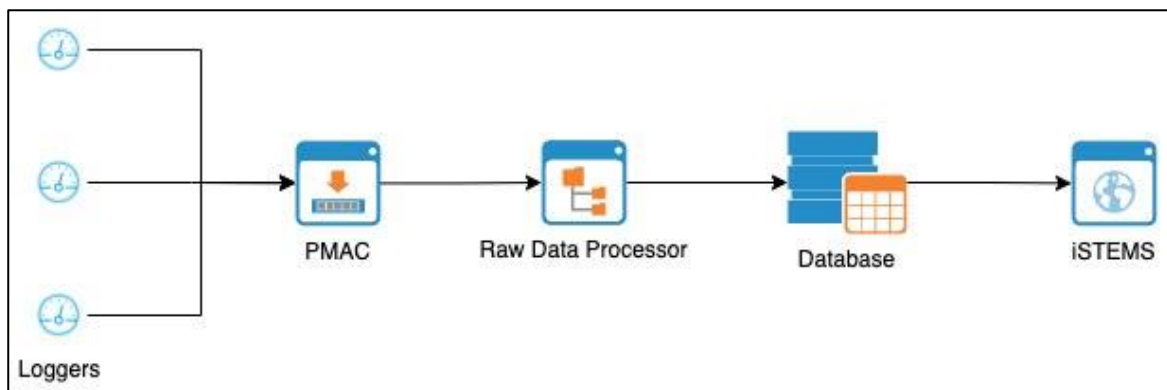
1 Introduction

This user manual is designed to provide user the information and guidance in using Integrated SCADA and Telemetry Monitoring System (iSTEMS). The main purpose of iSTEMS is to enable users to view flow meter and level telemetry data from meter loggers installed at sites with user-friendly interface and enhanced capabilities which is in line with Malaysian government's policy towards the data digitization.

This manual is intended for Syarikat Air Negeri Sembilan (SAINS) employees who want to utilize the data for their day-to-day operation.

2 System Overview

Below is the diagram of the data flow of iSTEMS from start to end output.



As stated in the diagram above, the source of the telemetry data is from the installed loggers at site. PMAC software received the incoming data and generate raw text files containing those data. A custom raw data processor (RDP) then will process the text files and store the processed data into database. iSTEMS then will fetch the data from database to be displayed on user's browser.

2.1 System Purpose

The purpose of the development of iSTEMS are:

1. To enable users to view telemetry data and to assist users to make a critical decision regarding their day-to-day operation based on the given data.
2. To give better 'look and feel' user experience as it is designed to be responsive and able to adjust its layout based on the screen size and resolution of the device being used.

2.2 System Requirement

To access iSTEMS, user can navigate to

<https://wdms.sainswater.com/istems>

using latest version of commercial browser like Google Chrome or Mozilla Firefox

2.3 User Types

iSTEMS has 2 types of users which are:

1. **Admin** – System administrator which has access to configure sites information and user management.
2. **User** – System user which has limited access compared to system administrator which mostly to view and export data only.

2.4 Modules

Main Module	Sub Module	User Type	Description
Dashboard		Admin & User	Display summary of daily readings and site locations
Telemetry	Flow & Pressure Readings	Admin & User	<ul style="list-style-type: none"> • Display flow and pressure readings. • Export data to excel. • Quick view on flow and depth trends visualised in graph.
	Depth Readings	Admin & User	<ul style="list-style-type: none"> • Display flow and pressure readings. • Export data to excel. • Quick view on flow and depth trends visualised in graph.
	Graph - Viewer	Admin & User	Display readings trends in graph visualisation
	Graph - Site Compare	Admin & User	To compare reading trends of different sites in graph visualisation.
	Graph - Date Compare	Admin & User	To compare readings trends of the same site at different dates in graph visualisation
Administration	Sites	Admin	Access to add and edit site information.
	Districts	Admin	Access to enable or disable a district selection in iSTEMS
	Users	Admin	Access to manage user

3 Login

The screenshot shows the iSTEMS login interface. At the top, the Sains logo is displayed above the text 'iSTEMS SCADA Telemetry Monitoring System'. Below this, the heading 'Log in' is centered. There are three main components highlighted with red circles and numbers: 1. A text input field labeled 'Username' with a red border and a red circle containing the number '1'. Below it, the text 'Username is required' is displayed in red. 2. A text input field labeled 'Password' with a red border and a red circle containing the number '2'. Below it, the text 'Password is required' is displayed in red. 3. An orange button labeled 'Log In' with a red circle containing the number '3' on its right side.

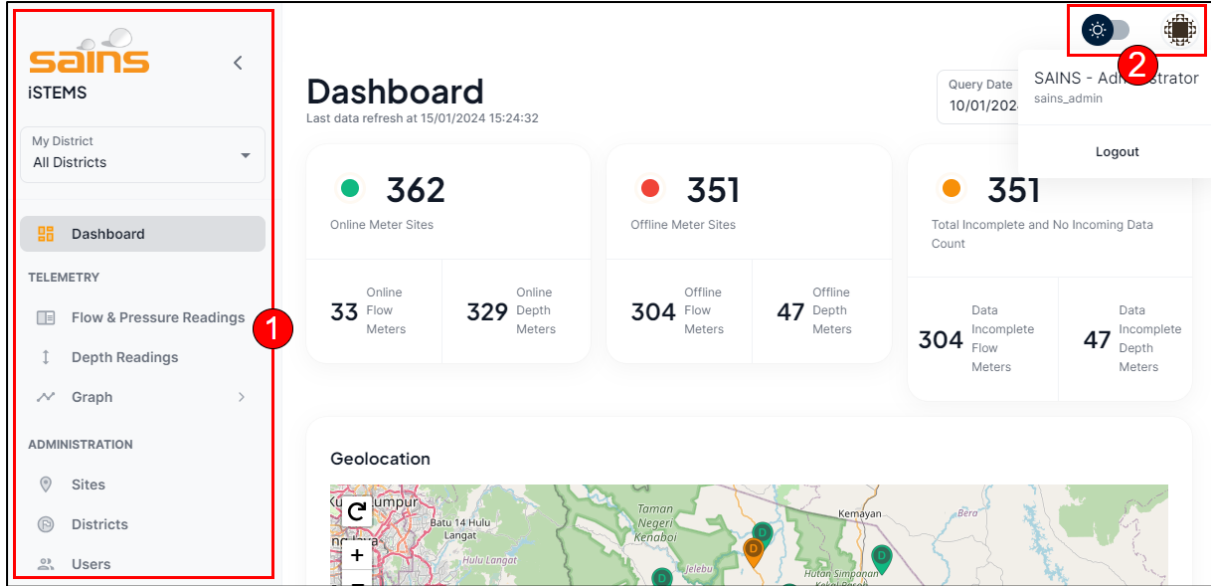
1. Username field
2. Password field
3. Login button

3.1 Login into iSTEMS

Follow these steps to login into iSTEMS:

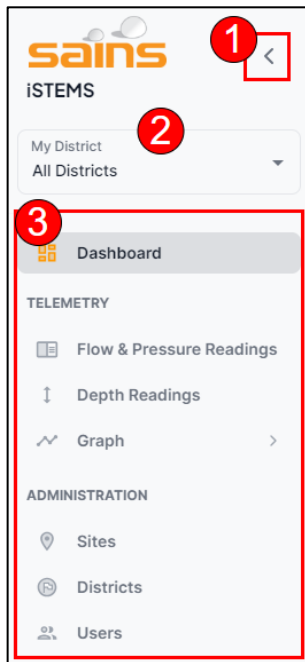
1. From a web browser, insert <https://wdms.sainswater.com/istems> into browser address bar and press Enter. User will be redirected to iSTEMS login page as shown above.
Note: If user already logged in and the session is still valid, user will be redirected to dashboard page.
2. Insert correct username and password.
3. Press Login to authenticate and login into iSTEMS.
Note: if successful, user will be redirected to dashboard page.

4 Sidebar Navigation and Top Toolbar



1. Side navigation
2. Top toolbar

4.1 Sidebar Navigation



1. Close sidebar navigation button
2. District selection

Admin menus consist of:

1. Dashboard
2. Flow & Pressure Readings
3. Depth Readings
4. Graph
 - 4.1. Viewer
 - 4.2. Site Compare
 - 4.3. Date Compare
5. Sites
6. Districts
7. Users

User menus consist of:

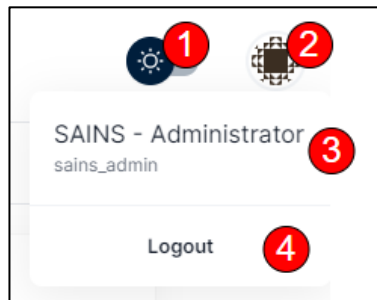
1. Dashboard
2. Flow & Pressure Readings
3. Depth Readings
4. Graph
 - 4.1. Viewer
 - 4.2. Site Compare

3. Menu list

4.3. Date Compare

Note: If a user chooses a district from the district selection, the module's data will automatically filter to display information relevant only to the selected district.

4.2 Top Toolbar



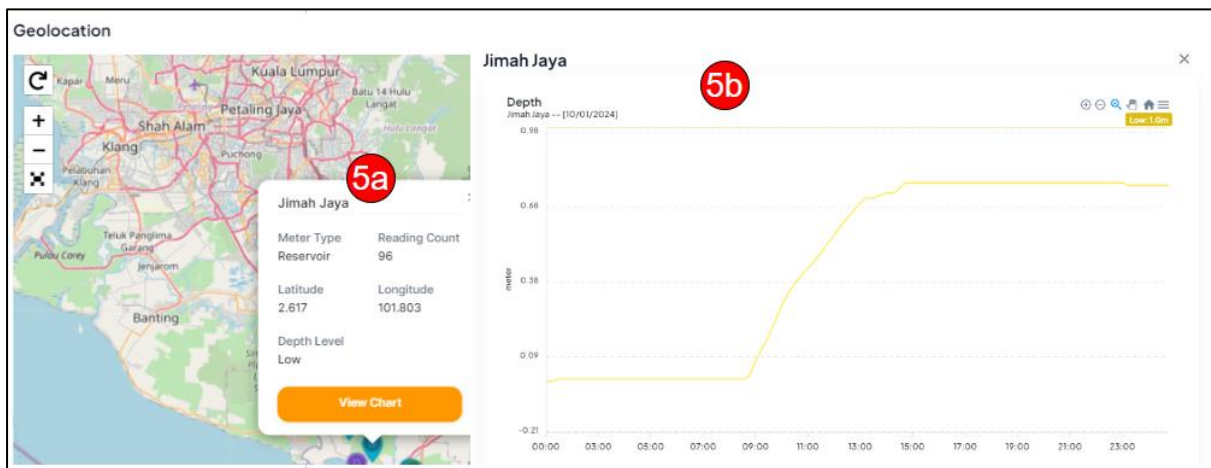
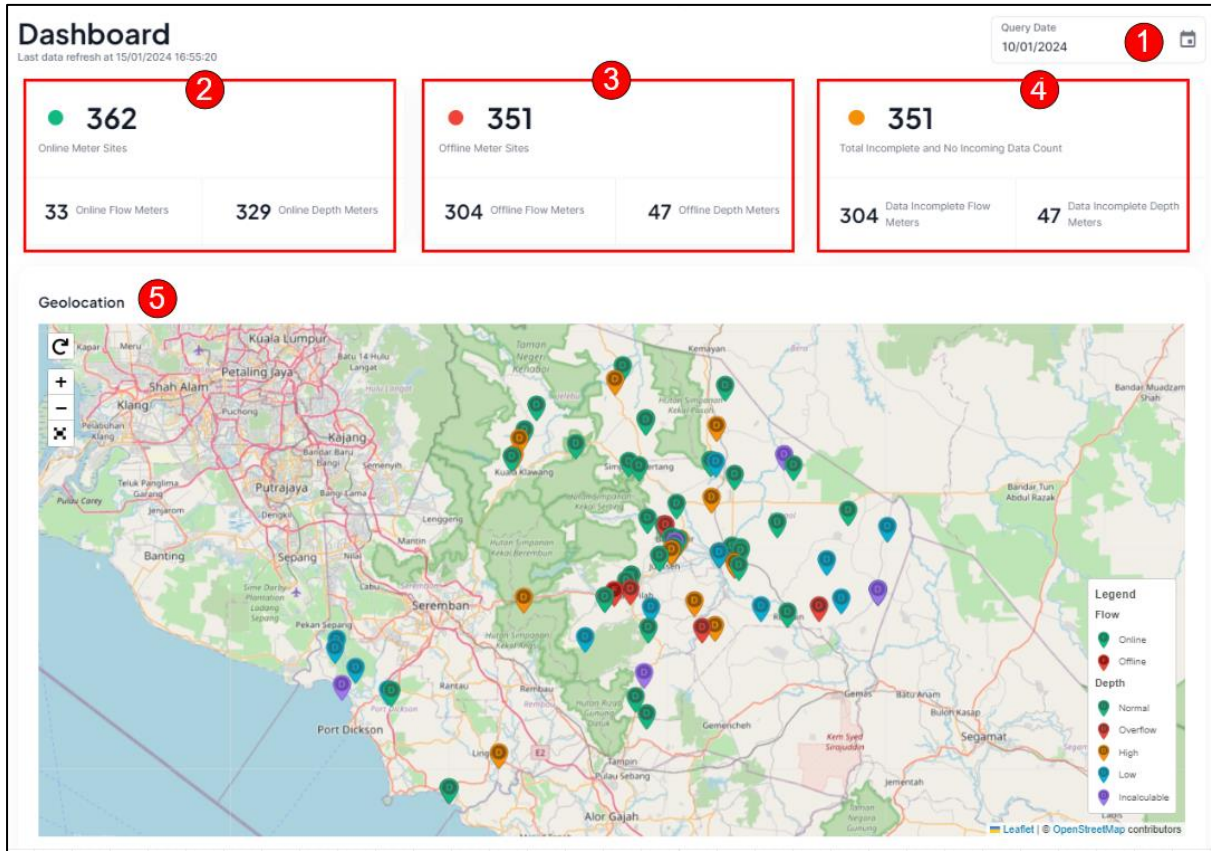
1. Light-dark mode toggle
2. User avatar
3. User profile
4. Logout button

User can logout from iSTEMS by following these steps:

1. Click user avatar and this will open user profile control.
2. Click logout button.

Note: User will be redirected to login page after logout.

5 Dashboard

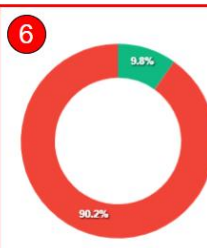


No	Control	Description
1	Query date	Change query date to generate a dashboard that provides a summary of data corresponding to the selected date
2	Total online meter sites	Indicates the number of meters online for the queried date, with a detailed breakdown below showing the count of online flow meters and depth meters.

3	Total offline meter sites	Indicates the number of meters offline for the queried date, with a detailed breakdown below showing the count of offline flow meters and depth meters.
4	Total meter with incomplete or no incoming data	Indicates the number of meters with incomplete or no incoming data for the queried date, with a detailed breakdown below showing the count of flow meters and depth meters.
5	Geolocation	Visualizing meter locations on the map, where markers distinguish between online and offline flow meters, as well as indicating the status of depth meters—normal, overflow, high, low, and incalculable. Marker only available if latitude and longitude of the site are set.
5a	Marker info panel	By clicking the marker on the map, an info panel will open, providing concise details about the respective site.
5b	Graph viewer	Clicking the 'View Chart' button in 5a will open a graph, visually representing flow/pressure/depth data for the selected site corresponding to the queried date. Refer to the 'Graph Viewer' section for details on using the graph interface.

Flow Count Summary

Flow count summary for 10/01/2024



6

TOTAL SITES **337** **7**

SUMMARY **8**

- Complete Data **33**
- Incomplete Data **0**
- No Incoming Data **304**

Sites with Complete Data **10**

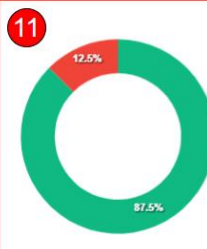
Click the summary count to display that category data

SITE NAME	DISTRICT	METER ID	FLOW COUNT	PRESSURE COUNT
Pam Air Baring	Jelebu	1548	0	96
New Rompin CP	Jempol	2445	0	96
Bukit Palong CP	Port Dickson	1659	0	96
Inlet Springhill	Port Dickson	2444	0	96
Kg Site A Bukit Pelandok	Port Dickson	1554	0	96

9

Depth Count Summary

Depth count summary for 10/01/2024



11

TOTAL SITES **376** **12**

SUMMARY **13**

- Complete Data **329**
- Incomplete Data **0**
- No Incoming Data **47**

Sites with Complete Data **15**

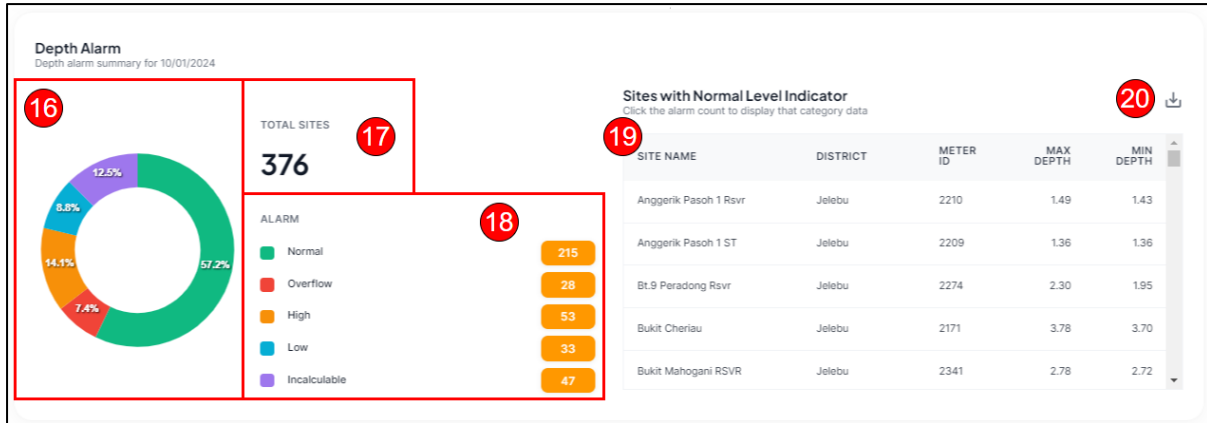
Click the summary count to display that category data

SITE NAME	DISTRICT	METER ID	DEPTH COUNT
Anggerik Pasoh 1 Rsvr	Jelebu	2210	96
Anggerik Pasoh 1 ST	Jelebu	2209	96
Bt.9 Peradong Rsvr	Jelebu	2274	96
Bukit Cheriau	Jelebu	2171	96
Bukit Juntai Rsvr	Jelebu	2000	96

14

No	Control	Description
6	Flow count summary doughnut chart	Visualizing flow count summary in doughnut chart for the queried date

7	Flow count summary total sites	Indicates flow count summary total sites
8	Flow count summary	Provide a breakdown of the total meters, categorizing them based on the status of incoming data into complete, incomplete, and no incoming data.
9	Flow count summary table	By clicking on the number displayed in the flow count summary (No. 8), detailed information for the selected category will be presented in the table.
10	Flow count summary export button	By clicking the export button, the list of meters presented in the table will be exported into excel file.
11	Depth count summary doughnut chart	Visualizing depth count summary in doughnut chart for the queried date
12	Depth count summary total sites	Indicates depth count summary total sites
13	Depth count summary	Provide a breakdown of the total meters, categorizing them based on the status of incoming data into complete, incomplete, and no incoming data.
14	Depth count summary table	By clicking on the number displayed in the depth count summary (No. 13), detailed information for the selected category will be presented in the table.
15	Depth count summary export button	By clicking the export button, the list of meters presented in the table will be exported into excel file.



No	Control	Description
16	Depth alarm doughnut chart	Visualizing depth alarm in doughnut chart for the queried date
17	Depth alarm total sites	Indicates depth alarm total sites
18	Depth alarm summary	Provide a breakdown of the total meters, categorizing them based on the status of depth alarm into normal, overflow, high, low, and incalculable.
19	Depth alarm table	By clicking on the number displayed in the depth alarm summary (No. 18), detailed information for the selected category will be presented in the table.

No	Control	Description
1	Readings indicators	Indicate incoming data categories. Green – Complete data (Reading count = 96) Yellow – Incomplete data (Reading count > 0 and Reading count < 96) Red – No incoming data (Reading count = 0)
2	Filters button	Toggle the opening and closing of the filter panel.
3	Keyword	Insert a keyword such as site name or meter id and press enter to filter the readings count list.
4	Date From	Specify the start of date range to filter the readings count.
5	Date To	Specify the end of date range to filter the readings count.
6	Meter Type	Specify meter type to filter the readings count.
7	Meter Brand	Specify meter brand to filter the readings count.
8	Display Options	Specify display options to filter the readings count. Available options are: <ul style="list-style-type: none"> • Both (Flow and pressure) • Flow • Pressure
9	Districts	Specify district to filter the readings count. Note: If a user selects a district from the sidebar navigation, it will automatically be pre-selected in this filter.
10	Site Name	Clicking the down arrow button beside the site name will open more statistical information regarding the site readings. The statistical information are: <ul style="list-style-type: none"> • Max flow rate • Min flow rate • Min Night Flow (MNF) Difference • Max pressure • Min pressure
11	Display Option indicator	This label will dynamically adjust based on the selected display option. Note: For both flow and pressure, the reading count is presented as Flow/Pressure, e.g., 96/96.
12	More button	Clicking the button, will open tool panel. In the panel, there are shortcuts to <ul style="list-style-type: none"> • Graph viewer – Displaying the flow and pressure trends of the site. • Edit site – Only available for admin. Redirect admin to site information form where admin can do updating. • Export to Excel – export readings data to excel.
13	Reading Count	Clicking on the reading count will open a graph displaying the flow and pressure trends. Additionally, it will reveal site details and a list of reading values on the right side of the screen.
13a	Graph Viewer	Display the trends of flow or pressure or both in graph. Refer to the 'Graph Viewer' section for details on using the graph interface.
13b	Site Details	Contains site details information such as Meter ID, brand, and instrument no.
13c	Readings	Contains readings of selected date presented in tabular.

7 Depth Readings

In the 'Depth Readings' menu, users can view the reading count for the depth of all sites. The menu also provides filter capabilities to assist users in searching readings for a specific site or preferred criteria.

Depth Readings

02/01/2021 >> 01/02/2021 2 Filters

■ Complete Data (Reading Count = 96)
 ■ Incomplete Data (Reading Count < 96)
 ■ No Incoming Data (Reading Count = 0)

1

SITE NAME	READING COUNT														
	01/02	31/01	30/01	29/01	28/01	27/01	26/01	25/01	24/01	23/01	22/01	21/01	20/01	19/01	18/01
Anggerik Pasoh 1 Rsvr 2210 - Reservoir	92	96	92	92	92	96	88	92	94	94	92	92	92	92	63
Anggerik Pasoh 1 ST 2209 - Reservoir	92	96	92	92	92	96	88	92	92	92	92	92	92	92	63
Bt.9 Peradong Rsvr 2274 - Reservoir	92	96	92	92	92	96	88	92	92	92	92	92	92	92	63
Bukit Cheriau 2171 - Reservoir 9	92	96	92	92	96	96	90	92	88	92	92	92	92	92	63
Max Depth Rate (m)	3.98	3.95	3.95	3.95	3.95	3.96	3.94	3.96	3.96	3.97	3.96	3.96	3.96	3.96	3.96
Min Depth Rate (m)	3.93	3.89	3.5	1.98	3.44	1.22	3.44	2.1	3.93	2.76	3.74	3.47	3.94	3.42	0
Bukit Juntai Rsvr 2000 - Reservoir	92	96	92	92	92	96	88	92	92	92	92	92	92	92	63
Bukit Mahogani RSVR 2341 - Reservoir	92	96	92	92	92	96	88	92	92	92	92	92	92	92	63
Bukit Mahogani ST 1551 - Reservoir	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Naga Mas Rsvr 2275 - Reservoir	92	96	92	92	92	96	88	92	92	92	92	92	92	92	63
Pasoh 1 RSVR 2182 - Reservoir	92	96	92	92	92	96	88	92	92	92	92	92	92	92	59
Pasoh 2 RSVR 2340 - Reservoir	96	96	92	92	92	96	88	92	96	94	92	92	92	93	63
Pasoh 3 RSVR	92	96	92	92	92	96	88	92	92	92	92	92	92	92	63

10

10

Filters

Keyword: site name, 3 et

Date From: 02/01/2021 4

Date To: 01/02/2021 5

Meter Type: -- All meter types -- 6

Meter Brand: -- All meter brands -- 7

Districts

- Jelebu 8
- Jempol
- Kuala Pilah
- Port Dickson
- Rembau
- Seremban - Ampangan
- Seremban - Bandar
- Seremban - Nilai
- Tampin

^

Bukit Cheriau
2171 - Reservoir

92

96

92

92

96

Bukit Cheriau

Depth
Bukit Cheriau -- [28/01/2021]

Bukit Cheriau 10b

Site Details

Meter ID: 2171

Brand: CELLO

Instrument No: 0828

SIM No: +601140838781

Bore Size:

Install Date: 18 May 2017

Commission Date: 18 May 2017

Meter SN: kabur

Converter SN:

Level Overflow: 4.2 m

Level High: 4.0 m

Level Low: 2.0 m

Level Offset: 0.0 m

Total Inflow Time: 00:00

Bukit Cheriau 10c

Site Details

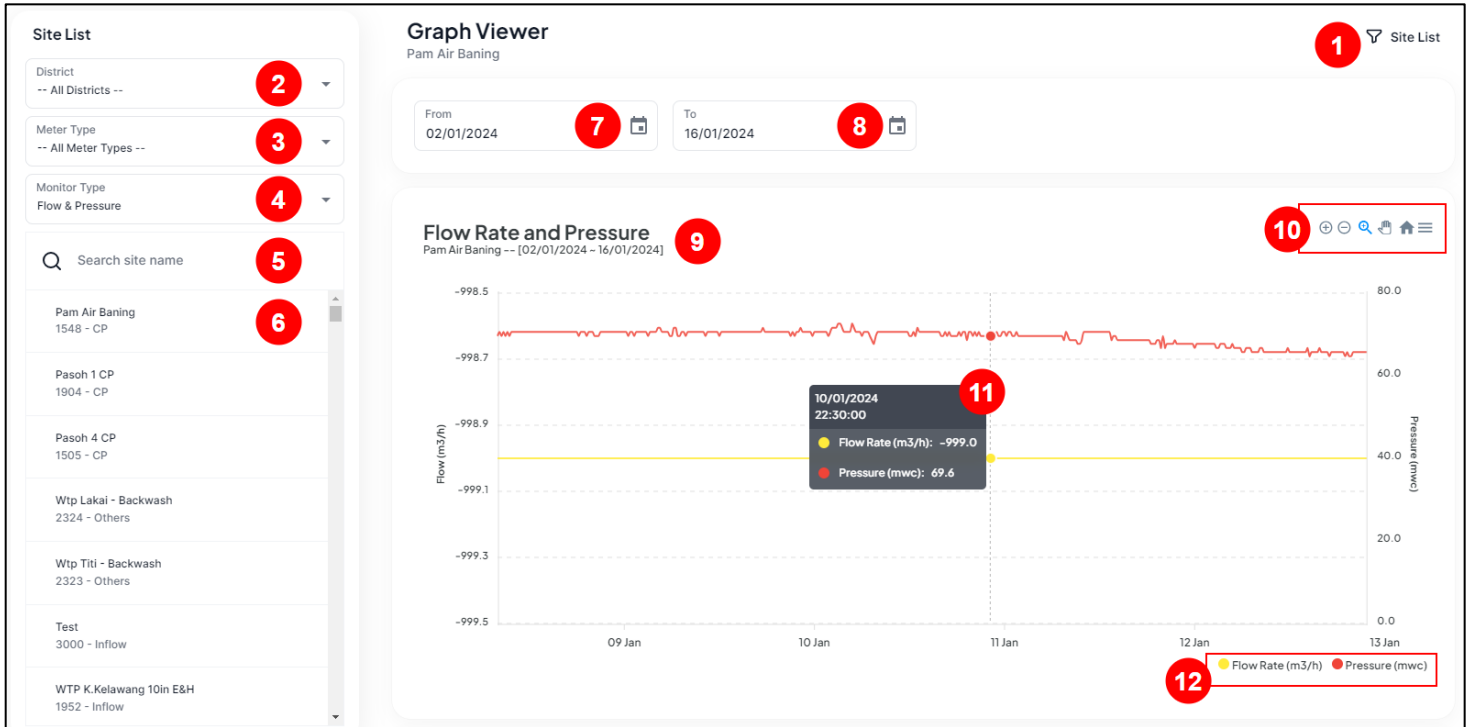
Readings: 2021-01-28

Time	Depth (m)
00:00	3.9
00:15	3.8
00:30	3.8
00:45	3.8
01:00	3.8
01:15	3.7
01:30	3.6
01:45	3.5
02:00	3.5
02:15	3.4
02:30	3.5
02:45	3.5
03:00	3.5
03:15	3.5



















No	Control	Description
1	Readings indicators	Indicate incoming data categories. Green – Complete data (Reading count = 96) Yellow – Incomplete data (Reading count > 0 and Reading count < 96) Red – No incoming data (Reading count = 0)
2	Filters button	Toggle the opening and closing of the filter panel.
3	Keyword	Insert a keyword such as site name or meter id and press enter to filter the readings count list.
4	Date From	Specify the start of date range to filter the readings count.
5	Date To	Specify the end of date range to filter the readings count.
6	Meter Type	Specify meter type to filter the readings count.
7	Meter Brand	Specify meter brand to filter the readings count.
9	Districts	Specify district to filter the readings count. Note: If a user selects a district from the sidebar navigation, it will automatically be pre-selected in this filter.
10	Site Name	Clicking the down arrow button beside the site name will open more statistical information regarding the site readings. The statistical information are: <ul style="list-style-type: none"> • Max depth rate • Min depth rate
12	More button	Clicking the button, will open tool panel. In the panel, there are shortcuts to <ul style="list-style-type: none"> • Graph viewer – Displaying the depth/level trends of the site. • Edit site – Only available for admin. Redirect admin to site information form where admin can do updating. • Export to Excel – export readings data to excel.
13	Reading Count	Clicking on the reading count will open a graph displaying depth trend. Additionally, it will reveal site details and a list of reading values on the right side of the screen.
13a	Graph Viewer	Display the trends of flow or pressure or both in graph. Refer to the 'Graph Viewer' section for details on using the graph interface.
13b	Site Details	Contains site details information such as Meter ID, brand, and instrument no.
13c	Readings	Contains readings of selected date presented in tabular.

8 Graph Viewer

In `Graph Viewer` menu, user can view the readings trends in graph. User also can export the graph into image or into CSV file.



No	Control	Description
1	Site List button	Toggle the opening and closing of the site list.
2	District	Specify district to filter the site list. Note: If a user selects a district from the sidebar navigation, it will automatically be pre-selected in this filter.
3	Meter Type	Specify meter type to filter the site list.
4	Monitor Type	Specify display options to filter the site list. Available options are: <ul style="list-style-type: none"> Flow & Pressure Depth If `Flow and pressure` monitor type is selected, there are two graphs will be shown which are: <ol style="list-style-type: none"> Flow Rate and Pressure Min Night Flow and Average Flow For `Depth` monitor type, Depth graph will be shown.
5	Keyword	Insert a keyword such as site name or meter id and press enter to filter the site list.
6	Site List	List of sites.



















7	Date From	Specify the start of date range of graph x-axis.																												
8	Date To	Specify the end of date range of graph x-axis.																												
9	Graph Title	Title will dynamically adjust based on the selected site and date range.																												
10	Graph toolbar	<p>Graph toolbar consists of:</p> <table border="1"> <thead> <tr> <th>Tool</th> <th>Description</th> <th>Available in Desktop</th> <th>Available in Mobile</th> </tr> </thead> <tbody> <tr> <td></td> <td>Zoom in</td> <td>✓</td> <td>✓</td> </tr> <tr> <td></td> <td>Zoom out</td> <td>✓</td> <td>✓</td> </tr> <tr> <td></td> <td>Initiate selection zoom by clicking on the tool icon. Subsequently, users can utilize the mouse to choose a date range within the graph for zooming in</td> <td>✓</td> <td>✗</td> </tr> <tr> <td></td> <td>Panning. Click this tool to pan the graph left and right</td> <td>✓</td> <td>✗</td> </tr> <tr> <td></td> <td>Reset zoom. Clicking this tool will reset the graph back to its initial date range.</td> <td>✓</td> <td>✓</td> </tr> <tr> <td></td> <td>Open download graph menu. User can download the graph into SVG, PNG, and CSV format.</td> <td>✓</td> <td>✓</td> </tr> </tbody> </table>	Tool	Description	Available in Desktop	Available in Mobile		Zoom in	✓	✓		Zoom out	✓	✓		Initiate selection zoom by clicking on the tool icon. Subsequently, users can utilize the mouse to choose a date range within the graph for zooming in	✓	✗		Panning. Click this tool to pan the graph left and right	✓	✗		Reset zoom. Clicking this tool will reset the graph back to its initial date range.	✓	✓		Open download graph menu. User can download the graph into SVG, PNG, and CSV format.	✓	✓
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	Panning. Click this tool to pan the graph left and right	✓	✗																											
	Reset zoom. Clicking this tool will reset the graph back to its initial date range.	✓	✓																											
	Open download graph menu. User can download the graph into SVG, PNG, and CSV format.	✓	✓																											
11	Graph tooltip	Visible if user hover the mouse on the graph point. It shows x and y axis value.																												
12	Graph legend	Visible if the graph has more than 1 series of data.																												

9 Graph - Site Compare

In the `Site Compare` menu, users can compare reading trends for up to five different sites in same range of date.



No	Control	Description
1	Site List button	Toggle the opening and closing of the site list.
2	District	Specify district to filter the site list. Note: If a user selects a district from the sidebar navigation, it will automatically be pre-selected in this filter.
3	Meter Type	Specify meter type to filter the site list.
4	Monitor Type	Specify display options to filter the site list. Available options are: <ul style="list-style-type: none"> Flow & Pressure Depth If `Flow and pressure` monitor type is selected, there are two graphs will be shown which are: <ol style="list-style-type: none"> Flow Rate and Pressure Min Night Flow and Average Flow For `Depth` monitor type, Depth graph will be shown.
5	Keyword	Insert a keyword such as site name or meter id and press enter to filter the site list.







6	Site List	List of sites. Each site on the list accompanied by a checkbox. To visualize data in a graph and initiate comparisons, users can select a site by ticking the checkbox.																												
7	Clear all sites selection	Untick all selected sites in the list.																												
8	Date From	Specify the start of date range of graph x-axis.																												
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Tool	Description	Available in Desktop	Available in Mobile																											
	Zoom in	✓	✓																											
	Zoom out	✓	✓																											
	Initiate selection zoom by clicking on the tool icon. Subsequently, users can utilize the mouse to choose a date range within the graph for zooming in	✓	✗																											
	Panning. Click this tool to pan the graph left and right	✓	✗																											
	Reset zoom. Clicking this tool will reset the graph back to its initial date range.	✓	✓																											
	Open download graph menu. User can download the graph into SVG, PNG, and CSV format.	✓	✓																											
12	Graph tooltip	Visible if user hover the mouse on the graph point. It shows x and y axis value.																												
13	Graph legend	Visible if the graph has more than 1 series of data.																												

10 Graph – Date Compare

In the 'Date Compare' menu, users can compare reading trends for up to five different dates of the same site.

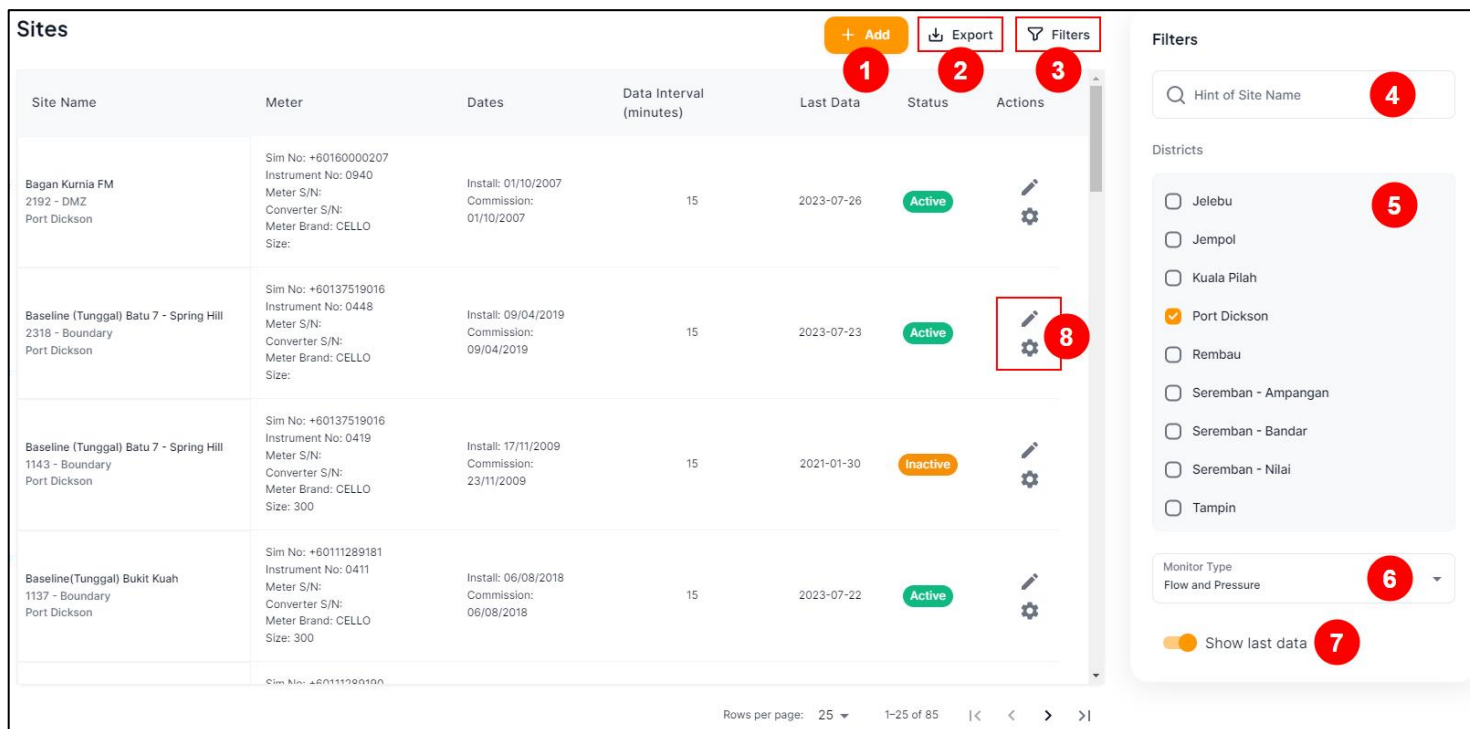
No	Control	Description
1	Site List button	Toggle the opening and closing of the site list.
2	District	Specify district to filter the site list. Note: If a user selects a district from the sidebar navigation, it will automatically be pre-selected in this filter.
3	Meter Type	Specify meter type to filter the site list.
4	Monitor Type	Specify display options to filter the site list. Available options are: <ul style="list-style-type: none"> Flow & Pressure Depth If `Flow and pressure` monitor type is selected, there are two graphs will be shown which are: <ol style="list-style-type: none"> Flow Rate and Pressure Min Night Flow and Average Flow For `Depth` monitor type, Depth graph will be shown.
5	Keyword	Insert a keyword such as site name or meter id and press enter to filter the site list.

6	Site List	List of sites.
7	Date From	Specify the start of date range of graph x-axis.
8	Date To	Specify the end of date range of graph x-axis.
9	Add Compare Date button	<p>Open a window dialog for the user to select date to compare.</p> <div data-bbox="644 439 1232 797" data-label="Image"> </div> <ol style="list-style-type: none"> 1. Date selection. 2. Close window button. 3. Close window button. 4. Add Compare Date button. <p>To add compare date, follow these steps:</p> <ol style="list-style-type: none"> 1. Select a date from the date selection. 2. Click `Add Compare Date` button to add the selected date.
10	Remove Compare Date button	<p>Open a window dialog for the user to remove date to compare.</p> <div data-bbox="647 1247 1225 1704" data-label="Image"> </div> <ol style="list-style-type: none"> 1. Compare Dates list. 2. Remove date button. 3. Close window button. <p>To remove compare date, follow these steps:</p> <ol style="list-style-type: none"> 1. In the `Compare Dates` list, user choose which date to be removed and click the remove date button

11	Graph Title	Title will dynamically adjust based on the selected site and date range.			
12	Graph toolbar	Graph toolbar consists of:			
		Tool	Description	Available in Desktop	Available in Mobile
			Zoom in	✓	✓
			Zoom out	✓	✓
			Initiate selection zoom by clicking on the tool icon. Subsequently, users can utilize the mouse to choose a date range within the graph for zooming in	✓	✗
			Panning. Click this tool to pan the graph left and right	✓	✗
			Reset zoom. Clicking this tool will reset the graph back to its initial date range.	✓	✓
			Open download graph menu. User can download the graph into SVG, PNG, and CSV format.	✓	✓
13	Graph tooltip	Visible if user hover the mouse on the graph point. It shows x and y axis value.			
14	Graph legend	Visible if the graph has more than 1 series of data.			

11 Sites

The 'Sites' menu comprises a list of sites and their details. Additionally, the admin can navigate to the site information page to create new sites or edit existing site details. Furthermore, the admin has the capability to manage meter IDs, allowing for the creation of new IDs and the swapping of existing IDs between sites.



No	Control	Description
1	Add button	Redirect admin to create new site information form.
2	Export button	Export sites list to excel file.
3	Filters button	Toggle the opening and closing of the filter panel.
4	Keyword	Insert a keyword such as site name or meter id and press enter to filter the site list.
5	Districts	Specify district to filter the readings count. Note: If a user selects a district from the sidebar navigation, it will automatically be pre-selected in this filter.
6	Monitor Type	Specify display options to filter the site list. Available options are: <ul style="list-style-type: none"> Flow & Pressure Depth
7	Show last data switch	Toggle to include or remove last data column in site list.
8	Actions	Edit Site – Redirect admin to site information edit form. Manage Meter Id – Redirect admin to edit or swap meter id form.

11.1 Create/Edit Site Form

← Back
1

1107 - Ayer Hitam 500 Sampo Gekko

Site Details

Display Name * Ayer Hitam 500 Sampo Gekko	Location Sg Sampo
District * Jempol	Brand * ISOIL
Type * DMZ	Bore Size (mm) 200
Data Interval 5	Flow Yes
Pressure Yes	Meter ID * 1107
Latitude	Longitude
Instrument No 39735	Serial No 04L1819
Total Inflow Time (Hour) 00	Total Inflow Time (Minute) 00
Commission Date 10/08/2009	Install Date 06/08/2009
Active? <input checked="" type="checkbox"/>	

Level Monitoring Only
If value = '-999' means no specific value have set to those fields.
 High Alarm - if this field leave blank, the alarm will be set -2 from overflow level.

Level Monitoring? No	Overflow (m) -999.0
High Alarm (m) -999.0	Low Alarm (m) -999.0
Water Offset (m) -999.0	

2
Update

3
Back

No	Control	Description
1	Back button	Go back to previous page.
2	Create/Update button	After completing the form, click this button to submit the site information and store it in the database.
3	Back button	Go back to previous page.

11.2 Manage Meter ID

No	Control	Description
1	Back button	Go back to previous page.
2	Check button	<p>After inserting the meter ID, click this button to check whether the ID is new or already associated with another site.</p> <p>If the ID is new, a panel will be displayed, notifying the admin to proceed with associating the site with the new meter ID or cancel the process.</p> <div data-bbox="703 1267 1187 1489" data-label="Image"> </div> <p>If the ID is already associated with another site, a panel will be shown, notifying the admin to proceed with swapping the meter ID between those sites or cancel the process.</p> <div data-bbox="703 1688 1187 1924" data-label="Image"> </div>

12 Districts

The admin can set which district to be visible in district selection in `Districts` menu. Only enable district will be visible in the district selection.

Districts	
Only active district will be display on district selection.	
District	Status
Jelevu	<input checked="" type="checkbox"/>
Jempol	<input checked="" type="checkbox"/>
Kuala Pilah	<input checked="" type="checkbox"/>
Port Dickson	<input checked="" type="checkbox"/>
Rembau	<input checked="" type="checkbox"/>
Rembau - Level	<input type="checkbox"/>
Salcon	<input type="checkbox"/>
Seremban - Ampangan	<input checked="" type="checkbox"/>
Seremban - Bandar	<input checked="" type="checkbox"/>
Seremban - Nilai	<input checked="" type="checkbox"/>
Tampin	<input checked="" type="checkbox"/>

No	Control	Description
1	Enable switch	Toggle to enable or disable district.

13 Users

The admin can create and edit user information in the 'Users' menu. Password changes for users can also be performed in this section.

No	Control	Description
1	Add button	Redirect admin to create new user form.
2	Filters button	Toggle the opening and closing of the filter panel.
3	Keyword	Insert a keyword such as username of full name and press enter to filter the user list.
4	Actions	Edit User – Redirect admin to user information form. Change Password – Redirect admin to change password form.

13.1 Create/Edit User

No	Control	Description
1	Back button	Go back to previous page.
2	Create/Update button	After completing the form, click this button to submit the site information and store it in the database.
3	Back button	Go back to previous page.

13.2 Change Password

The screenshot shows a mobile application interface for 'sains'. At the top left, there is a back arrow and the text 'Back' with a red circle containing the number '1' next to it. Below this is the 'sains' logo. The main content area is titled 'User Details' and contains two input fields: 'Password' and 'Confirm Password'. At the bottom of the form, there are two buttons: an orange 'Update' button with a red circle containing the number '2' above it, and a white 'Back' button with a red border and a red circle containing the number '3' above it.

No	Control	Description
1	Back button	Go back to previous page.
2	Update button	After completing the form, click this button to submit the site information and store it in the database. Note: Confirm password must be the same as the new password to proceed.
3	Back button	Go back to previous page.