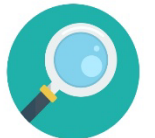


Sample Collection



Search / Edit



Analytical Water Quality Results
 Physio-Chemical, Microbiological & Sanitary Survey Results
 Download



Flagged Reports
 Personal Bookmarked Reports for ready reference



Favourite Filters
 Bookmarked Combinations of Search Results for Ready Reference



Trends & Charts
 Representation of Results in Analytical Patterns



Instruments & Reagents
 Device & Reagent Monitoring

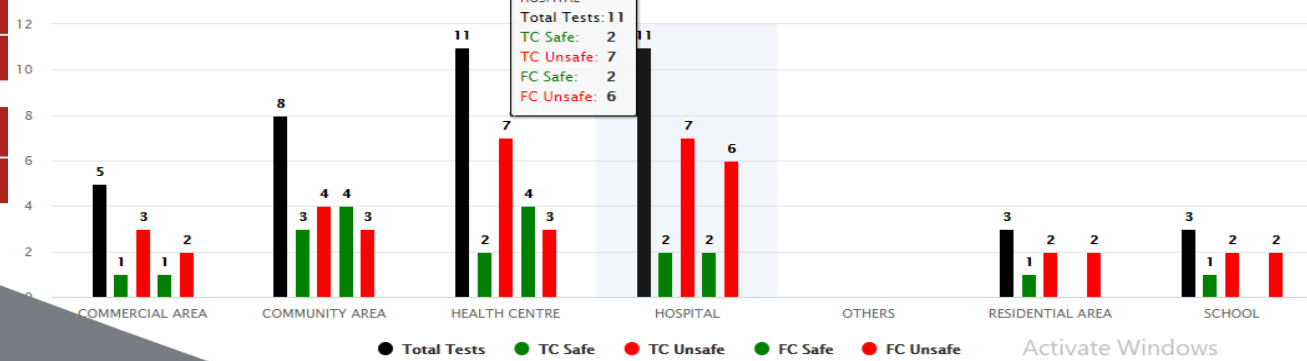


Summary Test
 Numbers at a glance



Testing Site: COMMERCIAL AREA, COMMUNITY AREA, HEALTH C
Source Type: Choose source type...
Country: Choose country...
Date From: 01-01-2020 **Date To**: 05-04-2021
Generate: [Graph](#)

Total Coliform (TC) & Fecal Coliform (FC) counts for various Testing Sites within the date range 01-01-2020 to 05-04-2021



The AquaSafe Management System (ASMS)

User Manual

Contents

- Introduction
- Login
- Navigating
- My Profile
- My Settings
- Viewing and Add New App User
- Main Menu
- Physical & Chemical Analysis Results
- Remarks and Flagged Results
- Favourite Filter
- Microbiological Analysis
- Sanitary Survey
- Trends & Charts
- Instruments & Reagents
- Stock trailing of Devices & Reagents
- Summary Reports
- Contamination Alerts



Introduction

The AquaSafe Management System (ASMS) is our customised, intelligent and structured representation of Water Quality Data distributed across multiple platforms including Tabular, Graphical & Summary Records, incorporating an automatic alert generation system.

The ever increasing global population is directly proportional to the rampant exhaustion, depletion and degradation of natural resources, of which Water perhaps being the most pertinent.

Supply and access to clean water is considered a luxury in different parts of the world thus continuous monitoring of existing supplies (of water) is the need of the hour to ensure public health in general.

Wagtech Projects & Trace2o Limited has been taking the endeavour to create streamlined solutions to the monitoring of Environmental Sustainability Aspects and the ASMS is one such prospect in the domain of Water Quality Monitoring.

The success of any monitoring falls flat without proper recording and representation of results, the ASMS is an effort to make sense and draw patterns in large volumes of Water Quality Data which may be used by governments, organisations or individuals to arrive at important decisions and conclusions.

The following Manual is a User Introduction Guide on the operation and Navigation of the ASMS – Water Quality Dashboard.



How does the App & Dashboard Work?

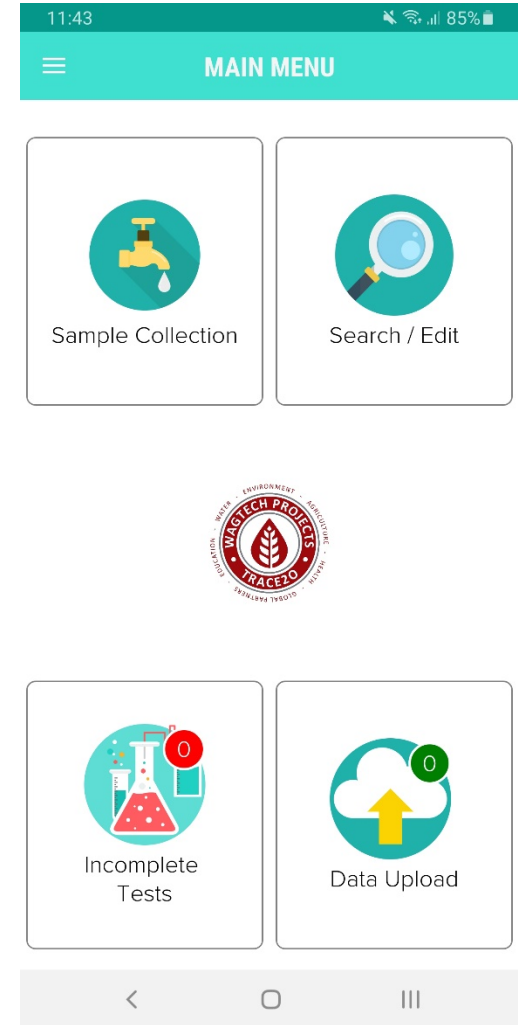
The ASMS is an exclusive added feature to the Wagtech Trace2o range for water quality monitoring. A license is the gateway to use the tailor made ASMS Android based application for recording Water Quality data on site. It should be noted that the ASMS App has an inbuilt IMEI tracker and therefore a single license cannot be used in multiple devices simultaneously. The client can either opt for the BASIC or the ADVANCED version of the Dashboard.

So how does this actually work?

Lets say that you are an organisation/individual who needs to run a Water Quality Monitoring & Surveillance program in any part of the world, and you are concerned about the contamination in your water systems such as Arsenic, Lead, Cadmium, pH & Coli formic Bacteria. The area over which you need to run the surveillance program is vast is constituted of a very large number of sources. River basins, dug wells, hand pumps & taps connected to a central distribution system.

You have a team of 5 engineers who are tasked to regularly visit the field and test the water sources for Arsenic, Lead, Cadmium, pH & Coli formic Pathogens. So this team of 5 is supposed to physically visit the sources, test the water on-site and record the observations on a note book/paper- the standard protocol. A few years down the line you have a handful amount of data, scattered all over note books and you are finding it hard to make any sense out of it let alone a pattern, trend, report or data analysis.

This is where ASMS comes into play, using ASMS you can streamline your surveillance through an application on your engineers phone, sending the data back to your headquarters so that the recorded data is stored instantly. The data can then be used to generate patterns, trends, report or general data analysis.



Logging in

The ASMS Dashboard is a secured site which can be reached going to: www.asmsonline.net

The link will take you to the login page which is depicted in the Image.

Upon reaching the login Page, you needs to type in the email and Password provided by Wagtech Projects Trace2o.


Aqua Safe Management System (ASMS)

Login


E-Mail Address

Password

Remember Me



Powered by
Wagtech Projects Ltd -Trace2o Ltd

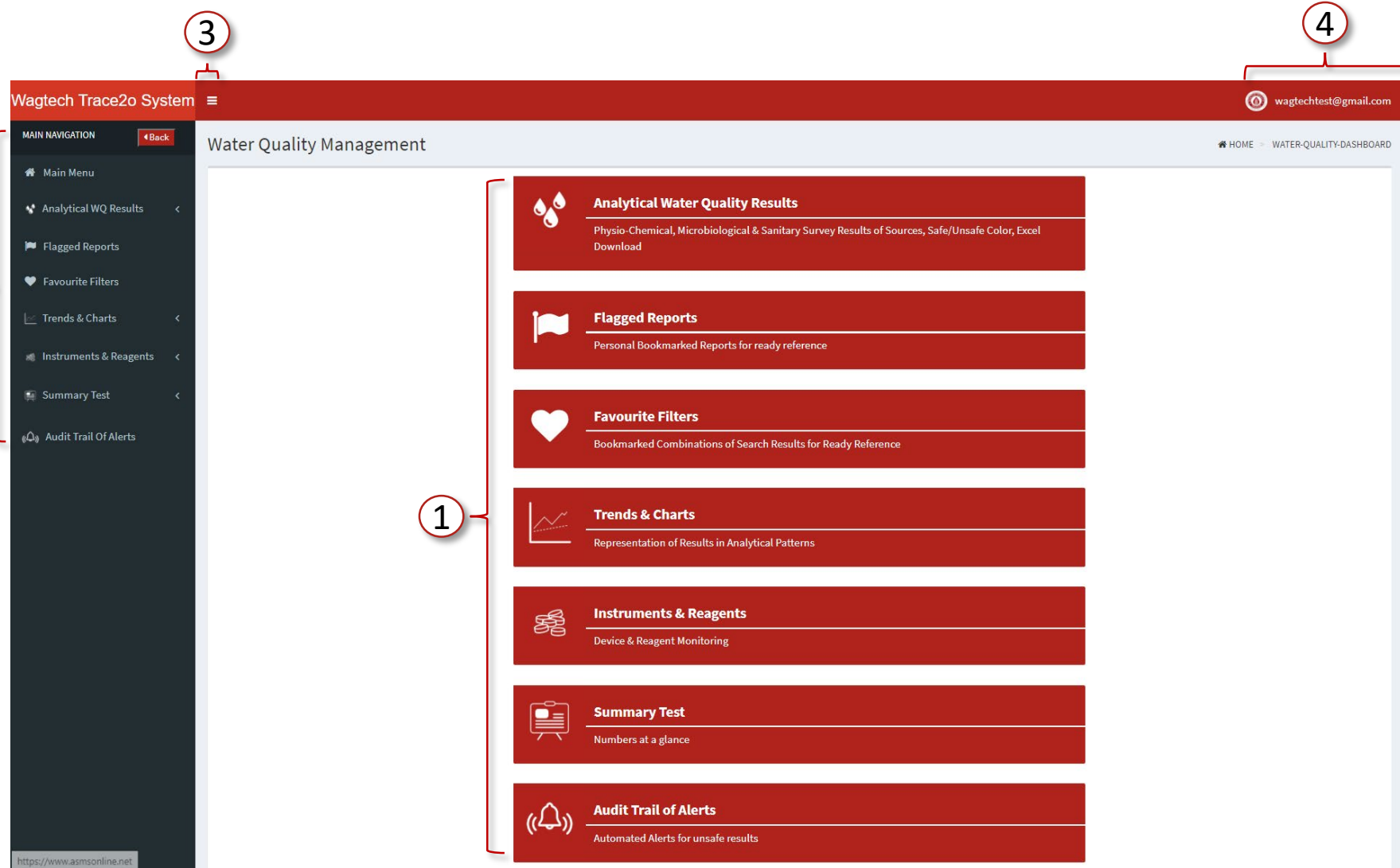


Powered by
Sunanda Enviromental International Pvt.Ltd

Navigating

The Diagram shows the page that you will be guided to once logged in:

- 1 The main menu where you find the features of the ASMS
- 2 The side menu, same as the main menu (figure 1), however this will always be present as you go into the different modules
- 3 If clicked will collapse the side menu allowing the window to widen
- 4 The profile which contains settings, activity logs and the log out button.



Navigating

By clicking on the profile drop down menu you will see the following options:

- 1 Your organisation logo, name and when you joined ASMS.
- 2 The activity log tracks all the changes that you make on the dashboard.
- 3 Your settings where you view and add app users to your dashboard
- 4 Your profile settings where you can change alert email, change your password.

The screenshot displays the Wagtech Trace2o System interface. At the top, the header includes the system name 'Wagtech Trace2o System' and the user email 'wagtechtest@gmail.com'. A main navigation sidebar on the left lists: Main Menu, Analytical WQ Results, Flagged Reports, Favourite Filters, Trends & Charts, Instruments & Reagents, Summary Test, and Audit Trail Of Alerts. The main content area is titled 'Water Quality Management' and features several red-tinted cards: 'Analytical Water Quality Results' (with a water drop icon), 'Flagged Reports' (with a flag icon), 'Favourite Filters' (with a heart icon), 'Trends & Charts' (with a line graph icon), 'Instruments & Reagents' (with a stack of pills icon), and 'Summary Test' (with a presentation board icon). On the right, a user profile section is visible, containing the Wagtech Trace2o logo, the user's name 'Wagtech Trace2o System Testing Account', and the join date 'Member since Nov. 2020'. Below this are buttons for 'My Activity Logs', 'My Settings', 'My Profile', and 'Log Out'. A hand cursor icon points to the profile drop-down menu, and numbered callouts (1-4) link the list items to their corresponding elements in the interface.

My Profile

Below is the 'My Profile' page where you can change these settings to how you want it.

- 1 Name of your organisation which will be displayed on your ASMS site.
- 2 Contact telephone
- 3 Email address for where the email alerts will be sent (see Contamination Alerts)
- 4 Upload a logo of your organization.
- 5 Password change if you need a password change to login to the dashboard.

My Profile :: Edit My Profile :: HOME > MY-PROFILE

<p>Name</p> <p>1 Wagtech Projects Trace2o System</p> <p>Contact No.</p> <p>2 08584025954</p> <p>Primary Alert Email Address</p> <p>amas@wagtechprojects.com</p> <p>3 Secondary Alternate Alert Email Address</p> <p>director@wagtechprojects.com</p> <p>Upload Profile Picture For Best View Please Upload 200 x 200 Dimension Image. For Edit Image Online Click Here.</p> <p>4 Choose file No file chosen</p> <p>Update</p>	<p>5</p> <p>Old Password</p> <p>New Password</p> <p>Confirm New Password</p> <p>Change Password</p>
--	---



My Settings

Each ASMS Dashboard is either using the ADVANCE or the BASIC version of the dashboard, here you are able to delegate these licenses to the field engineers – the image below explains the same (Note- Please Revise ‘Section TWO’ again)

This User has 10 Licenses in Total – Out of which 5 have been exhausted & 5 are still in stock- We can ‘VIEW’ the details of all EXISTING App USERS from here & New App USERS can be assigned from here (Continued in the following Pages)

The screenshot shows a dashboard with a top orange bar for 'Total License 10'. Below it are two columns of cards. The left column has three red cards: 'TOTAL USED LICENSE 5 (50% Used)', 'View WQ Result', and 'Add New App User'. The right column has three green cards: 'TOTAL AVAILAIBLE LICENSE 5 (50% Avalaible)', 'View My Profile', and 'View All App User'. Brackets on the left and right link these cards to descriptive text.

Section	Item	Description
License Management	Total License 10	The total number of licenses available.
	TOTAL USED LICENSE 5 (50% Used)	The amount of license you have currently active.
License Management	TOTAL AVAILAIBLE LICENSE 5 (50% Avalaible)	The amount of license you have available to allocate.
	View WQ Result	View current water quality results.
User Management	Add New App User	To add a new app user to your team.
	View My Profile	Takes you to your profile settings page as seen before.
User Management	View All App User	To view your current App users and their individual settings.

Add New App User

Adding an App USER is as simple! Filling in the details as you see here you are able to create a login for the App that will allow you to start gathering data.

- 1 User Name – This will be their username to login.
- 2 Email address – An email address for that engineer/
- 3 Password – The password that will be used to log the engineer into the app.

App User Management ::Add New App User::

LICENSE 5 Used 50% Used

LICENSE 5 Remaining 50% Remaining

View All App User Account

User Name: user.wagtechprojects

E-Mail Address: user@wagtechprojects.com

Password: [masked]

Confirm Password: [masked]

Register User

NOTE

Once a user name & password has been created it can only be used on one particular/specific device at the same time.

Duplication is not possible.

The dashboard manager can, at any point of time, de-register any user and the assign the same license/user name & password to any other device.

The App User view:

LOGIN - ASMS TRACE20

1 USER NAME

3 PASSWORD


LOGIN


View All App User

Viewing all the current app users you will see their username, password, email address, device id, the status of the app license and the actions you can take. As you can see ASMS will capture the device id known as the IMEI (International Mobile Equipment Identity) and bind it to that user.


The ASMS Smartphone Application is an OFF-LINE app which means it does not require internet connection for most functionalities. However the internet is required while uploading data to the dashboard.

In the event that app user's device is lost/damaged you are able to unbind that license from the device by clicking the cross next to the device id. Unfortunately any unsent data from the lost/damaged device will be lost permanently. Once done the same login details can be used on any other device, immediately the device id will be registered by the dashboard.





















 LICENSE
5 Used
50% Used

 LICENSE
5 Remaining
50% Remaining

Create New App User Account



Show entries Search:

L. No.	User Name	Password	Email	Device ID	Status	Actions
1	Engineer1.Wagtech	123456789	Engineer1@wagtechprojects.com	1e255138f63e579b 	Active	  
2	Engineer2.Wagtech	123456789	Engineer2@wagtechprojects.com	d5439e6c75851f3 	Active	  
3	Engineer3.Wagtech	123456789	Engineer3@wagtechprojects.com	6b5712cbcc3b1903 	Active	  
4	Engineer4.Wagtech	123456789	Engineer4@wagtechprojects.com	49c3d32afaca0b9e 	Active	  
5	Engineer5.Wagtech	123456789	Engineer5@wagtechprojects.com	357285105446211 	Active	  

Showing 1 to 5 of 5 entries Previous Next



When the red cross is visible the dashboard operator can use it to inactivate an active user. when the green tick is visible the dashboard manager/operator can click it to activate an inactivated user.



The notebook icon is used to update the e-mail id



The key icon will allow you to change the password of the users' login



Main Menu

The 'Main Menu' is what you will see once logged in, this is where the Water Quality Data is stored and viewed in this section we will discuss about the first three sections of the Analytical Water Quality Results:

- 1 Physio-Chemical - Results of the physical testing collected such as pH, iron and Electrical conductivity.
- 2 Microbiological – Results of the microbiological testing that's been collected such as Faecal coliforms and total coliforms.
- 3 Sanitary Survey - Results of the Environmental study of the surrounding area at a Water Source to ascertain its vulnerability to contamination.

The screenshot shows the 'Water Quality Management' dashboard. The sidebar on the left includes: MAIN NAVIGATION, Main Menu, Analytical WQ Results, Flagged Reports, Favourite Filters, Trends & Charts, Instruments & Reagents, Summary Test, and Audit Trail Of Alerts. The main content area contains several cards: Analytical Water Quality Results (with subtext: Physio-Chemical, Microbiological & Sanitary Survey Results of Sources, Safe/Unsafe Color, Excel Download), Physio Chemical Analysis (marked with a circled 1), Microbiological Analysis (marked with a circled 2), Sanitary Survey (marked with a circled 3), Flagged Reports (Personal Bookmarked Reports for ready reference), Favourite Filters (Bookmarked Combinations of Search Results for Ready Reference), Trends & Charts (Representation of Results in Analytical Patterns), Instruments & Reagents (Device & Reagent Monitoring), Summary Test (Numbers at a glance), and Audit Trail of Alerts (Automated Alerts for unsafe results).

Physical & Chemical Analysis Results

Opening the results will display your data in a tabulated form.

- 1 The tabs at the top will allow you to change to the different sections of results as seen previously
- 2 Filters that allows you to easily view records from the set of data based on criteria you provide. Making it easier to find your specific results.
- 3 Results in the tabulated form, starting with the information about the source. All the Columns that follow are the magnitudes of Water Quality Parameters one after the other in Alphabetical order, with the UNITS of expression on the top header of each column.
- 4 By clicking on the Parameters along the right you are able to pull out the parameter filters.

Water Quality Management :: Physical & Chemical Result :: HOME > PHYSICAL-CHEMICAL-RESULT

Physical & Chemical Analysis Microbiological Analysis Sanitary Survey of Sources

Testing Site: Choose testing site... Source Type: Choose source type... Country: United Kingdom

Location Description: Location Description Sample Reference Number: Sample Reference Number Date From: 07-02-2018 Date To: 07-05-2021

Refresh Export as Excel Set as Favourite Filter

Date of Collection	Country	Source Type	Testing Site	Location Description	Sample Reference Number	Latitude / Longitude	Source Image	Temperature [°C]	Alkalinity - M [mg/L]	Alkalinity - P [mg/L]	Aluminium [mg/L]	Ammonia [mg/L]	Ammonia [mg/L]	Ant
15th Dec. 2020	United Kingdom	WATER TOWER	COMMERCIAL AREA	Thatcham	WPL	51.4016515,-1.2570017 View on Map		8	-	-	-	-	-	
14th Dec. 2020	United Kingdom	WATER TOWER	COMMERCIAL AREA	Thatcham	WPL	51.4016191,-1.2570435 View on Map		14	-	-	-	-	-	
12th Dec. 2020	United Kingdom	WATER TOWER	COMMERCIAL AREA	Thatcham	WPL3	51.4016871,-1.2569648 View on Map		12	-	-	-	-	-	
11th Dec. 2020	United Kingdom	RIVER	HOSPITAL	Thatcham	TL1	51.4016871,-1.2569839 View on Map		22	-	-	-	-	-	

PARAMETER

Physical & Chemical Analysis Results

To Filtering results you results, use the drop down menus to select/de-select the different source types, location information and the date range. All these filters are set by the engineer when out in the field. The app will ask you to set these and this is where they are displayed.

Testing site, Source Type and Country are all pre-set dropdowns. This is to help better categorise your results.

Water Quality Management :: Physical & Chemical Result :: HOME > PHYSICAL-CHEMICAL-RESULT

Physical & Chemical Analysis Microbiological Analysis Sanitary Survey of Sources

Testing Site: Choose testing site...
Source Type: Choose source type...
Country: United Kingdom

Reference Number: Reference Number Date From: 07-02-2018 Date To: 07-05-2021

[Export as Excel](#) [Set as Favourite Filter](#)

Sample Reference Number	Latitude / Longitude	Source Image	Temperature [°C]	Alkalinity - M [mg/L]	Alkalinity - P [mg/L]	Aluminium [mg/L]	Ammonia [mg/L]	Ammonia [mg/L]	Ant
WPL	51.4016515,-1.2570017 View on Map		8	-	-	-	-	-	
WPL	51.4016191,-1.2570435 View on Map		14	-	-	-	-	-	
WPL3	51.4016871,-1.2569648 View on Map		12	-	-	-	-	-	
TL1	51.4016871,-1.2569839 View on Map		22	-	-	-	-	-	

PARAMETER

Physical & Chemical Analysis Results

Location Description – When ever an USER uses the ASMS App to capture the data of a specific water source the ‘Location Description’ is a mandatory input which is used to specifically describe a source, its like the name of a person, typical ‘Location Description’ inputs look like ‘South side of school X’ , ‘3rd Bank of the Danube’ etc.

‘Sample Reference Number’ - the number noted down on the Sampling Bottle by the engineer while collecting the sample on site.

Note: Both ‘Location description’ and ‘Sample Reference number’ are manual Entry Inputs , no dropdowns are provided, you needs to type in, although a simple AI algorithm guides you with ‘Probable Options’ based on the typing inputs of you (Refer Image), in this case you simply types ‘That’ & the probable suggestions are displayed.

Date Range - you needs to customise a ‘Date Search Range’.

Once all the selections are done you needs to click ‘Refresh’ and the Filter will work its way out to customise the table.

Water Quality Management :: Physical & Chemical Result ::

Physical & Chemical Analysis | Microbiological Analysis | Sanitary Survey of Sources

Testing Site: Choose testing site... | Source Type: Choose source type... | Country: United Kingdom

Location Description: That | Sample Reference Number: Sample Reference Number | Date From: 07-02-2018 | Date To: 07-05-2021

Refresh | Export as Excel | Set as Favourite Filter

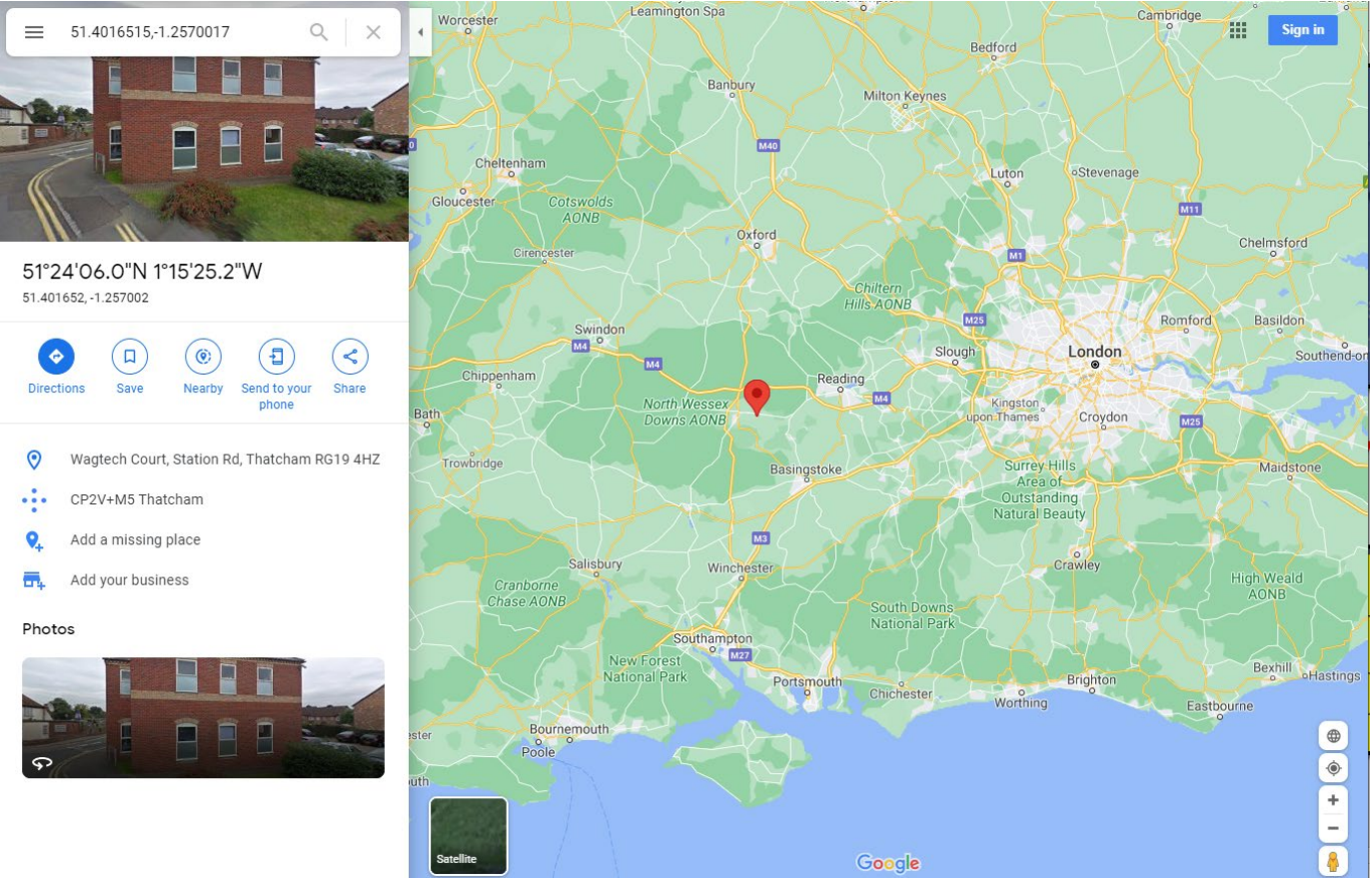
Date of Collection	Country	Source Type	Testing Site	Location Description	Sample Reference Number	Latitude / Longitude	Source Image	Temperature [°C]	Alkalinity - M [mg/L]	Alkalinity - P [mg/L]	Aluminium [mg/L]	Ammonia [mg/L]	Ammonia [mg/L]	Ant...
15th Dec. 2020	United Kingdom	WATER TOWER	COMMERCIAL AREA	Thatcham	WPL	51.4016515,-1.2570017 View on Map		8	-	-	-	-	-	
14th Dec. 2020	United Kingdom	WATER TOWER	COMMERCIAL AREA	Thatcham	WPL	51.4016191,-1.2570435 View on Map		14	-	-	-	-	-	
12th Dec. 2020	United Kingdom	WATER TOWER	COMMERCIAL AREA	Thatcham	WPL3	51.4016871,-1.2569648 View on Map		12	-	-	-	-	-	
11th Dec. 2020	United Kingdom	RIVER	HOSPITAL	Thatcham	TL1	51.4016871,-1.2569839 View on Map		22	-	-	-	-	-	

View on Map



All views should be Column, the Latitude/Longitude column of the specific Water Source captured by the ASMS App on-site, there is provision to view the specific source on Google Maps simply by clicking the green link "View on Map".

Country	Source Type	Testing Site	Location Description	Sample Reference Number	Latitude / Longitude
United Kingdom	WATER TOWER	COMMERCIAL AREA	Thatcham	WPL	51.4016515,-1.2570017 View on Map



Remarks

So What is a Remark?

A Remark cannot be entered from the Dashboard, like most other info, it can only be entered from the ASMS App and checked from the Dashboard by clicking the icon (as shown in the previous page). A 'Remark' is a short note which an engineer may or may not enter while entering the results of testing. As is evident from the Image in the previous page, no remarks was entered.



Water Quality Management :: Physical & Chemical Result ::

HOME > PHYSICAL-CHEMICAL-RESULT

Physical & Chemical Analysis Microbiological Analysis Sanitary Survey of Sources

PARAMETER

Testing Site: Choose testing site... Source Type: Choose source type... Country: United Kingdom

Location Description: Location Description Sample Reference Number: Sample Reference Number Date From: 07-02-2018 Date To: 07-05-2021

Refresh Export as Excel Set as Favourite Filter

Date of Collection	Country	Source Type	Testing Site	Location Description	Sample Reference Number	Latitude / Longitude	Source Image	Temperature [°C]	Alkalinity - M [mg/L]	Alkalinity - P [mg/L]	Aluminium [mg/L]	Ammonia [mg/L]	Ammonia [mg/L]	Ant [p
15th Dec. 2020	United Kingdom	WATER TOWER	COMMERCIAL AREA	Thatcham	WPL	51.4016515,-1.2570017 View on Map		8	-	-	-	-	-	-
12th Dec. 2020	United Kingdom	WATER TOWER	COMMERCIAL AREA	Thatcham	WPL	51.4016191,-1.2570435 View on Map		14	-	-	-	-	-	-
12th Dec. 2020	United Kingdom	WATER TOWER	COMMERCIAL AREA	Thatcham	WPL3	51.4016871,-1.2569648 View on Map		12	-	-	-	-	-	-
11th Dec. 2020	United Kingdom	RIVER	HOSPITAL	Thatcham	TL1	51.4016871,-1.2569839 View on Map		22	-	-	-	-	-	-

Flagged Results

What is Result Flagging ?

This is typical bookmarking of a specific result to seek it out instantly- use the Flag Icon, the Dialogue Box will appear

Fill up the Dialogue Box by assigning a name and note to your Flagged Result and Click 'Set Flag' , once the Flag has been set the icon will appear BLUE

Flag Result? ✕

Iron High

Iron levels are over limit

Set Flag

Water Quality Management

HOME > PHYSICAL-CHEMICAL-RESULT

Physical & Chemical Analysis
Microbiological Analysis
Sanitary Survey of Sources

Testing Site

Choose testing site...

Source Type

Choose source type...

Country

United Kingdom

Location Description

Location Description

Sample Reference Number

Sample Reference Number

Date From

07-02-2018

Date To

07-05-2021

Refresh Export as Excel Set as Favourite Filter

Date of Collection	Country	Source Type	Testing Site	Location Description	Sample Reference Number	Latitude / Longitude	Source Image	Temperature [°C]	Alkalinity - M [mg/L]	Alkalinity - P [mg/L]	Aluminium [mg/L]	Ammonia [mg/L]	Ammonia [mg/L]	Ant...
15th Dec. 2020	United Kingdom	WATER TOWER	COMMERCIAL AREA	Thatcham	WPL	51.4016515,-1.2570017 View on Map		8	-	-	-	-	-	-
14th Dec. 2020	United Kingdom	WATER TOWER	COMMERCIAL AREA	Thatcham	WPL	51.4016191,-1.2570435 View on Map		14	-	-	-	-	-	-
12th Dec. 2020	United Kingdom	WATER TOWER	COMMERCIAL AREA	Thatcham	WPL3	51.4016871,-1.2569648 View on Map		12	-	-	-	-	-	-
11th Dec. 2020	United Kingdom	RIVER	HOSPITAL	Thatcham	TL1	51.4016871,-1.2569839 View on Map		22	-	-	-	-	-	-




PARAMETER



Flagged Results

- 1 There is a separate Tab on the Dashboard Main Menu list to view and access Flagged Results
- 2 Use these links to readily access the Flagged Result.
- 3 Use the 'Bin Icon' to delete the Flagged Result

The screenshot displays the 'Flagged Results' page in the ASMS interface. The left sidebar contains a 'MAIN NAVIGATION' menu with a 'Back' button and several options: 'Main Menu', 'Analytical WQ Results', 'Flagged Reports' (highlighted with a red circle '1'), 'Favourite Filters', 'Trends & Charts', 'Instruments & Reagents', 'Summary Test', and 'Audit Trail Of Alerts'. The main content area shows a table of flagged results with the following data:

Date	Favourite Name	Remarks	Link	Action
28th Apr. 2021	Abnormal Iron Value	Iron Contamination in Hospital Water	Physical & Chemical Analysis Microbiological Analysis Sanitary Survey of Sources	
28th Apr. 2021	Ammonia Contamination in the Gambia	Abnormal Ammonia	Physical & Chemical Analysis Microbiological Analysis Sanitary Survey of Sources	
27th Nov. 2020	Test Flag	Testing	Physical & Chemical Analysis Microbiological Analysis Sanitary Survey of Sources	

The table is titled 'Flagged Results' and includes a breadcrumb 'Water Quality Test'. A red circle '2' highlights the 'Link' column, and a red circle '3' highlights the 'Action' column containing bin icons. The top right of the page shows 'HOME > MY-FAVOURITES'.

Favourite Filter

What is Favourite Filter?

The Tab is Filter Combination, similar to used to Bookmark a specific the 'Flagging of Results'. Suppose you is specially interested in Piped Water Supplies in Zambia, for a specific date range looking at Lead as a parameter. Click on the 'Set as favourite' and the set filters will be saved.

Save As Your Favourite Filter ?

Save Date In Favourite Filter

Yes

Zambia - Lead

Remarks, if any

Set As Favourite Filter

Water Quality Management :: Physical & Chemical Result ::

HOME > PHYSICAL-CHEMICAL-RESULT

Physical & Chemical Analysis Microbiological Analysis Sanitary Survey of Sources

Testing Site: Choose testing site... Source Type: Choose source type... Country: United Kingdom

Location Description: Location Description Sample Reference Number: Sample Reference Number Date From: 07-02-2018 Date To: 07-05-2021

Refresh Export as Excel Set as Favourite Filter

Date of Collection	Country	Source Type	Testing Site	Location Description	Sample Reference Number	Latitude / Longitude	Source Image	Temperature [°C]	Alkalinity - M [mg/L]	Alkalinity - P [mg/L]	Aluminium [mg/L]	Ammonia [mg/L]	Ammonia [mg/L]	Ant...
15th Dec. 2020	United Kingdom	WATER TOWER	COMMERCIAL AREA	Thatcham	WPL	51.4016515,-1.2570017 View on Map		8	-	-	-	-	-	-
14th Dec. 2020	United Kingdom	WATER TOWER	COMMERCIAL AREA	Thatcham	WPL	51.4016191,-1.2570435 View on Map		14	-	-	-	-	-	-
12th Dec. 2020	United Kingdom	WATER TOWER	COMMERCIAL AREA	Thatcham	WPL3	51.4016871,-1.2569648 View on Map		12	-	-	-	-	-	-
11th Dec. 2020	United Kingdom	RIVER	HOSPITAL	Thatcham	TL1	51.4016871,-1.2569839 View on Map		22	-	-	-	-	-	-

Favourite Filter

- 1 To view your favourite filtered results, click on the 'Favourite Filter' in the main menu. This will display all of your saved filters.
- 2 Then click on your desired filter to display those results.
- 3 Use the 'Bin Icon' to delete the Flagged Result

My Favourite Filters

Created on	Updated on	Favourite Filter Name	Remarks	Link	Action
22nd Jan. 2021		Zambia - Lead		Physical & Chemical Analysis	
18th Jan. 2021		Wagtech Water Tower		Microbiological Analysis	
18th Jan. 2021	18th Jan. 2021	Dobson Lake, Thatcham		Physical & Chemical Analysis	
18th Jan. 2021	18th Jan. 2021	Lyn Park, West Lyn River		Physical & Chemical Analysis	

Favourite Filter

And as in the previous picture you can see that only the results for lead, in Zambia are showing.







Water Quality Management :: Physical & Chemical Result :: HOME > PHYSICAL-CHEMICAL-RESULT

Physical & Chemical Analysis Microbiological Analysis Sanitary Survey of Sources


Testing Site: COMMERCIAL AREA, COMMUNITY AREA, HE/ Source Type: BOREHOLE WITH HAND PUMP, BOREHOLE V Country: Zambia

Location Description: Location Description Sample Reference Number: Sample Reference Number Date From: 01-01-2018 Date To: 22-01-2021

[Refresh](#) [Export as Excel](#) [Favourite](#)

Date of Collection	Country	Source Type	Testing Site	Location Description	Sample Reference Number	Latitude / Longitude	Source Image	Temperature [°C]	Lead [ppb]
22nd Jan. 2021  	Zambia	RIVER	COMMUNITY AREA	Lake	SMP1	51.4016361,-1.2569966 View on Map		16	100
22nd Jan. 2021  	Zambia	PIPED WATER SUPPLY	COMMUNITY AREA	Munali	12	-15.3062092,28.4077254 View on Map		24	-

Showing 1 to 2 of 2 entries

PARAMETER 

Microbiological Analysis

In the 'Microbiological Analysis' segment, everything is similar to the 'Physical & Chemical Analysis' section, there is however one small dis-similarity which is illustrated.

For obvious reasons the 'Parameter Settings' are different (from the Physical & Chemical Analysis Section). You can change the difference parameter for with the 'Microbiological Settings' drop down.

Water Quality Management :: Microbiological Analysis :: HOME > MICROBIOLOGICAL-RESULT

Physical & Chemical Analysis **Microbiological Analysis** Sanitary Survey of Sources

Microbiological Settings

All

Testing Site: COMMERCIAL AREA, COMMUNITY AREA, HEALTH CEN' Source Type: BOREHOLE WITH HAND PUMP, BOREHOLE WITH MEC Country: United Kingdom

Location Description: Location Description Sample Reference Number: Sample Reference Number Date From: 01-01-2018 Date To: 22-01-2021

Refresh Export as Excel Set as Favourite Filter

Date of Collection	Country	Source Type	Testing Site	Location Description	Sample Reference Number	Latitude / Longitude	Source Image	Image of Stack Blank - Fecal Coliform	Contaminated - Yes/No	Image of Negative Manifold - Fecal Coliform	Colony count of Negative Manifold - Fecal Coliform	Image of Duplicate Plate - Fecal Coliform	Colony count of Duplicate Plate - Fecal Coliform	Image of Sample Plate - Fecal Coliform
11th Dec. 2020	United Kingdom	RIVER	HOSPITAL	Thatcham	TL1	51.4016871,-1.2569839 View on Map							2	
08th Dec. 2020	United Kingdom	WATER TOWER	COMMUNITY AREA	Wagtech Water Tower	WGH8	51.4016794,-1.2570081 View on Map								

Sanitary Survey

In the 'Sanitary Survey' segment, everything is similar to the 'Physical & Chemical Analysis' section, so we are not going to repeat the same things again, the dis-similarities are illustrated below.

Sanitary Survey has four risk categories:

- LOW
- INTERMEDIATE
- HIGH
- VERY HIGH

The Dashboard allows you to filter according to need and view a specific Risk Category or all of them together. The FIRST COLUMN from the RIGHT is the Risk Category Column – All are clickable links.

Water Quality Management :: Sanitary Survey of Sources ::

HOME > SANITARY-SURVEY-RESULT

Physical & Chemical Analysis Microbiological Analysis **Sanitary Survey of Sources**

Risk Category
All

Testing Site **Source Type** **Country**
 COMMERCIAL AREA, COMMUNITY AREA, HEALTH CENT BOREHOLE WITH HAND PUMP, BOREHOLE WITH MEC United Kingdom

Location Description **Sample Reference Number** **Date From** **Date To**
 Location Description Sample Reference Number 01-01-2018 22-01-2021

Refresh Export as Excel Set as Favourite Filter

Date of Collection	Country	Source Type	Testing Site	Location Description	Sample Reference Number	Latitude / Longitude	Source Image	Risk Category
21st Sep. 2020	United Kingdom	RIVER	COMMUNITY AREA	Lyn Park, West Lyn River	CJS WLR12	51.4016875,-1.2569523 View on Map		Intermediate Risk
31st Aug. 2020	United Kingdom	RIVER	COMMUNITY AREA	Lyn Park, West Lyn River	CJS WLR22	51.4016854,-1.2569973 View on Map		Low Risk
30th Aug. 2020	United Kingdom	RIVER	COMMUNITY AREA	Lyn Park, West Lyn River	CJS WLR21	51.4016665,-1.257016 View on Map		Intermediate Risk
29th Aug. 2020	United Kingdom	RIVER	COMMUNITY AREA	Lyn Park, West Lyn River	CJS WLR20	51.4016975,-1.2569717 View on Map		Intermediate Risk
28th Aug. 2020	United Kingdom	RIVER	COMMUNITY AREA	Lyn Park, West Lyn River	CJS WLR18	51.4017,-1.2569265 View on Map		Intermediate Risk

Sanitary Survey

Upon clicking a link in the 'Risk Category' column a POP UP BOX with the detailed questionnaire & Observed response will open up. The total Sanitary Survey Score obtained by the specific source is also depicted. Higher the score greater the risk. In this case the source has scored 3.25 out of 9 which makes it an **INTERMEDIATE** risk.

Look at the sample ID on the top right, this is an alpha numeric code which is used by the backend database to locate a specific source/result from the database.

The screenshot displays the ASMS interface. A pop-up window titled "Sanitary Survey Questions | Sample ID: 1607680919577_2484bc50fea9a15a" is overlaid on a data table. The pop-up contains a table with 8 questions and their corresponding answers and points. The total score is 3.25 out of 9. The background table shows survey results for various locations, including "COMMERCIAL AREA, COMMUNITY AREA" in "United Kingdom" on "21st Sep. 2020", with a risk category of "Intermediate Risk".

Sl. No.	Question	Answer	Point
1	IS THE WATER USED FOR DRINKING PURPOSES?	Yes	0
2	DOES THE WATER LOOK LIKE ITS SAFE TO DRINK	No	1
3	HOW LONG DOES IT TAKE TO REACH THE RIVER FROM THE NEAREST HABITATION (IN MINUTES)	< 15 Minutes	0.25
4	COLLECTION OF WATER IS GENERALLY DONE BY	Adult Male	0
5	IS THE WATER TREATED BY ANY HOUSEHOLD MEASURES BEFORE CONSUMPTION	No	1
6	IS THE RIVER WATER SAFE ENOUGH SO AS TO SUPPORT RECREATIONAL ACTIVITIES	Not Applicable	0
7	DEFINE HOUSEHOLD METHOD OF TREATMENT WHICH IS GENERALLY USED BY THE COMMUNITY	No	1
8	IS THERE A SOURCE OF POLLUTION NEARBY?	No	0
Total Sanitary Survey Score			3.25

Date of Collection	Country	Risk Category
21st Sep. 2020	United Kingdom	Intermediate Risk
31st Aug. 2020	United Kingdom	Low Risk
30th Aug. 2020	United Kingdom	Intermediate Risk
29th Aug. 2020	United Kingdom	Intermediate Risk
28th Aug. 2020	United Kingdom	Intermediate Risk

Trends & Charts

The ASMS Dashboard has the ability to plot and chart illustrative graphs using the data present in the Dashboard- this is valid for all three sections of WQ results namely:

- 1 Physical & Chemical
- 2 Microbiological
- 3 Sanitary Survey

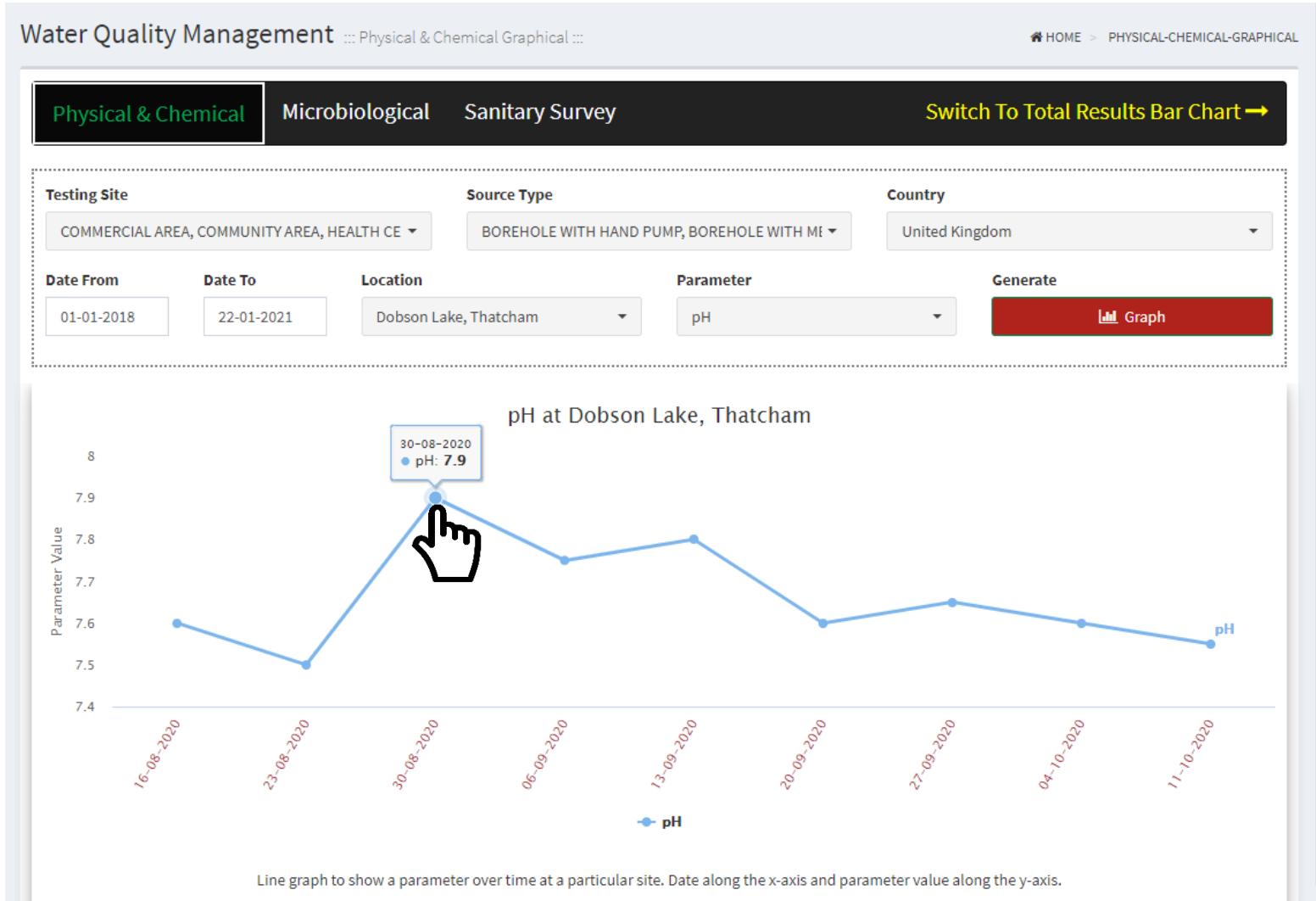
Each of the three sections have been further subdivided into two sub-sections representing two different types of charts/graphs/plots using the same set of data. The Images shown below shows how to access each section/sub section from the dashboard. In the live ASMS Dashboard you need to click the links and the subsections will appear

Trends & Charts - Physical & Chemical

In the 'Physical & Chemical' Analysis section we have two types of graphs:

- Line Graph Over Time
- Total Results Bar Chart

For Line Graph Over Time (Image right) either a single Parameter (in this case pH) is plotted against all/more than one different 'Locations' it has been tested in or All Parameters are plotted in One or More than one Locations those have been tested in – the filters/dropdowns work exactly the same way as shown before.



Trends & Charts - Physical & Chemical

Viewing one parameter at multiple locations or view multiple parameters at one location

Water Quality Management :: Physical & Chemical Graphical :: [HOME](#) > [PHYSICAL-CHEMICAL-GRAPHICAL](#)

Physical & Chemical | Microbiological | Sanitary Survey | [Switch To Total Results Bar Chart →](#)

Testing Site: COMMERCIAL AREA, COMMUNITY AREA, HEALTH CE
Source Type: BOREHOLE WITH HAND PUMP, BOREHOLE WITH MI
Country: United Kingdom

Date From: 01-01-2018 | **Date To:** 22-01-2021 | **Location:** Dobson Lake, Thatcham, Lyn Park, | **Parameter:** pH | **Generate:** [Graph](#)

pH () by Location

Date	Dobson Lake, Thatcham	Lyn Park, West Lyn River	Wagtech Water Tower
2018-01-01	7.60	7.95	7.60
2018-03-01	7.50	7.62	7.60
2018-05-01	7.90	7.72	7.60
2018-07-01	7.75	7.60	7.60
2018-09-01	7.80	7.62	7.60
2018-11-01	7.60	7.80	7.60
2019-01-01	7.65	7.70	7.60
2019-03-01	7.60	7.88	7.60
2019-05-01	7.55	7.67	7.60
2019-07-01	7.52	7.77	7.60
2019-09-01	7.50	7.68	7.60
2019-11-01	7.50	7.70	7.60
2020-01-01	7.50	7.65	7.60
2020-03-01	7.50	7.70	7.60
2020-05-01	7.50	7.80	7.60
2020-07-01	7.50	7.85	7.60
2020-09-01	7.50	7.92	7.60
2020-11-01	7.50	7.77	7.60
2021-01-01	7.50	7.91	7.60

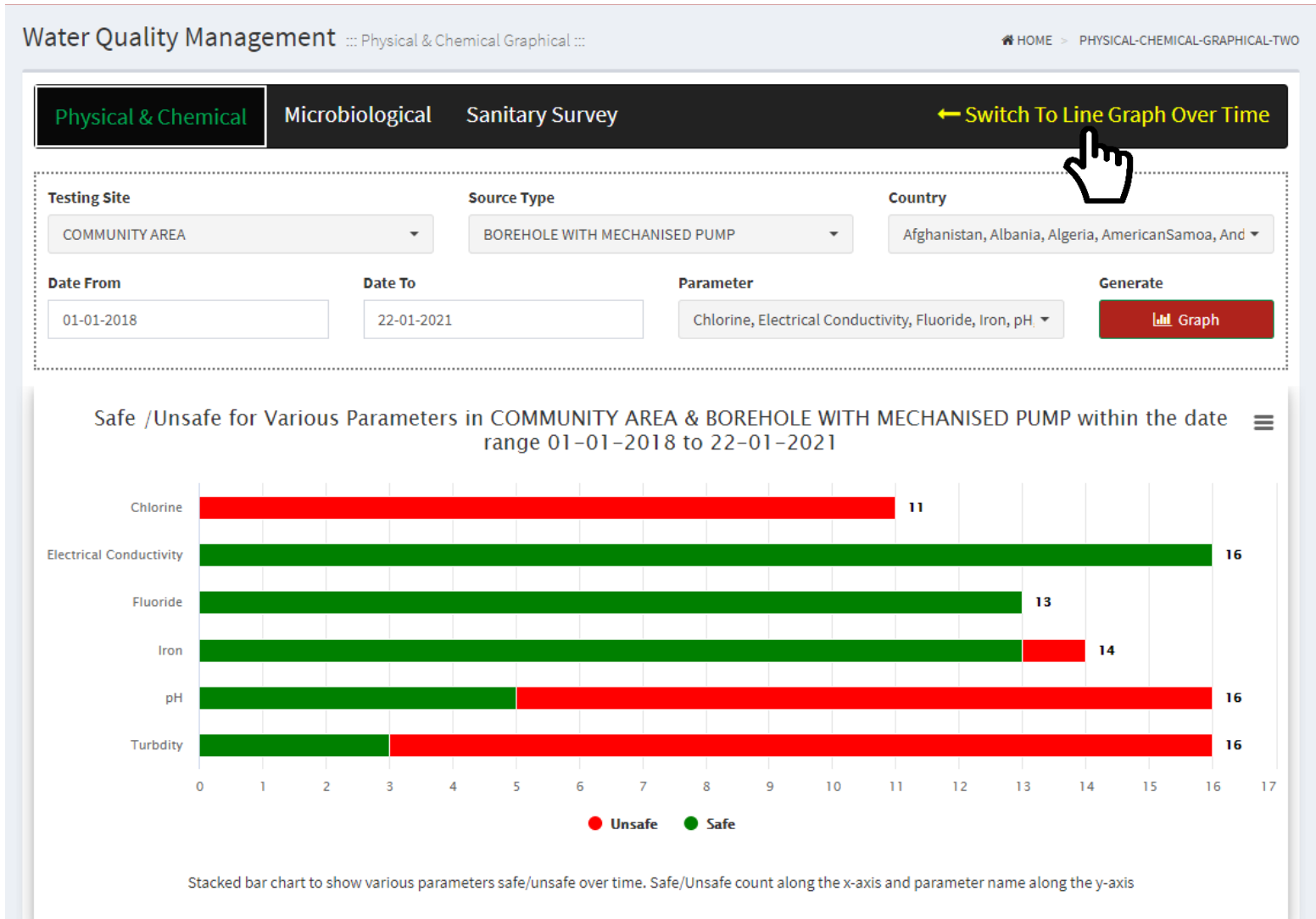
Line graph to Comparing the same parameter across different locations.



Trends & Charts - Physical & Chemical

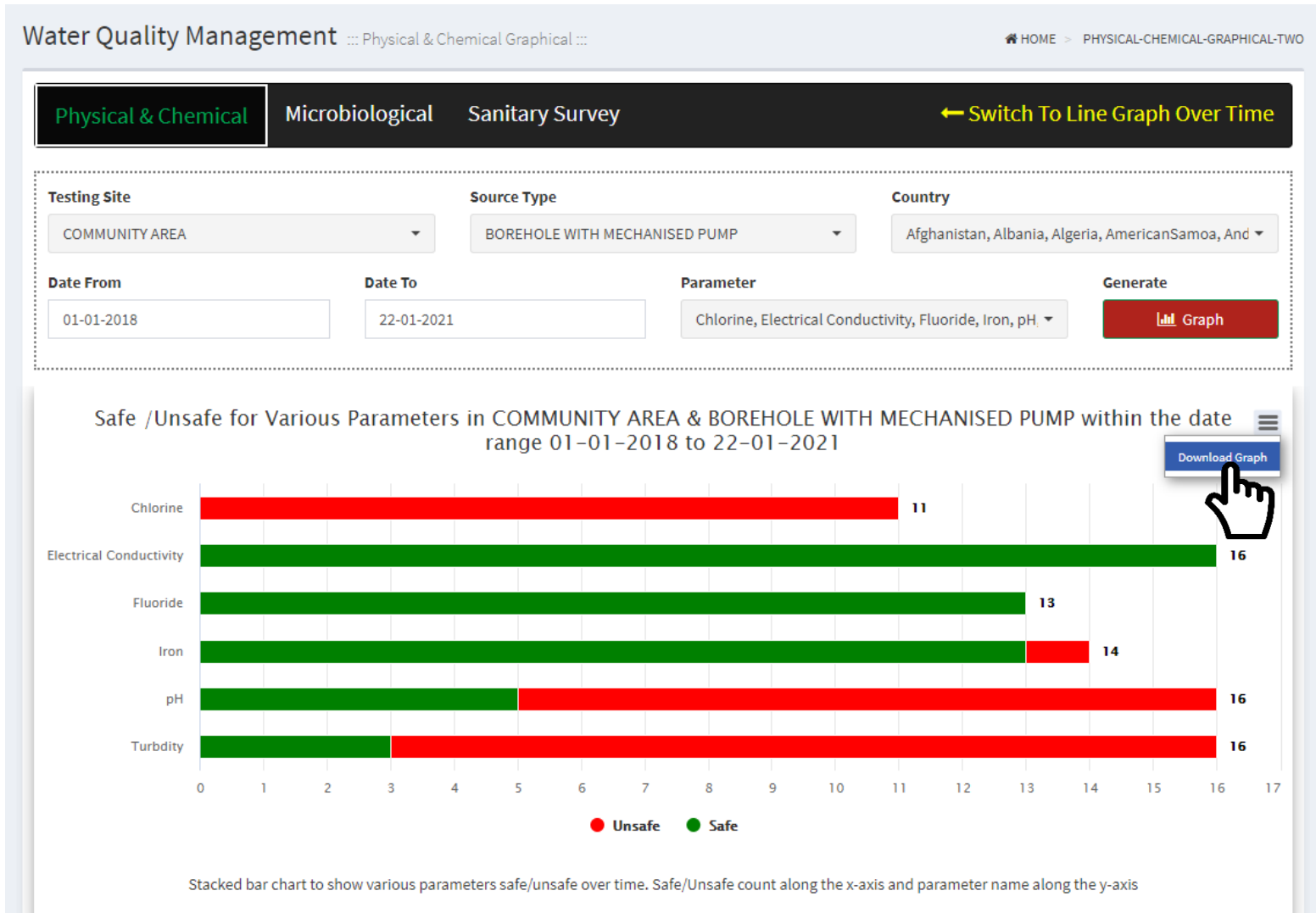
For the second type of chart, Total Results Bar Chart will display the total amount of **Safe** and **Unsafe** results that has been recorded to your Dashboard. Currently we are using the W.H.O (World Health Organization) standard levels of which a parameter is deemed safe or unsafe.

From the example currently 16 results for pH has been collected. From the graph we can see that 5 results are at a level of **Safe** and 11 results are at a level of **Unsafe**.



Trends & Charts - Physical & Chemical

Clicking the 'Menu button' ≡ to the top right of a graph will allow you to download that graph as a .png file. Giving you freedom take graphical data from the ASMS.



Trends & Charts - Physical & Chemical

Moving on to Microbiological Charts in Charts Of Location, the only two filters to work with are 'Parameter' & 'Location Description' but both are single selection which means you cannot select multiple values from either dropdown. The Pie Chart on the left shows how many times the source with Location 'Wagtech Water Tower' has been tested for Total Coliform and the results are **Safe** or **Unsafe**, in this case it has only been tested once within the mentioned Date Range, the Bar Chart on the right shows the value of contamination for each time the source has been tested.

Water Quality Management :: Microbiological Graphical ::

HOME > MICROBIOLOGICAL-ANALYSIS-GRAPHICAL

Physical & Chemical **Microbiological** Sanitary Survey [Switch To Total Results Bar Chart →](#)

Testing Site: COMMERCIAL AREA, COMMUNITY AREA, HEALTH CENTRE, HOSE
Source Type: BOREHOLE WITH HAND PUMP, BOREHOLE WITH MECHANISED
Country: Afghanistan, Albania, Algeria, American Samoa, Andorra, Angc

Date From: 01-01-2018 Date To: 22-01-2021 Location: Wagtech Water Tower Parameter: Total Coliform [Generate Graph](#)

Total Coliforms at Wagtech Water Tower cumulative count of Tests Conducted

Result	Count
Safe	2
Unsafe	6

Pie charts to show safe and unsafe for total coliforms

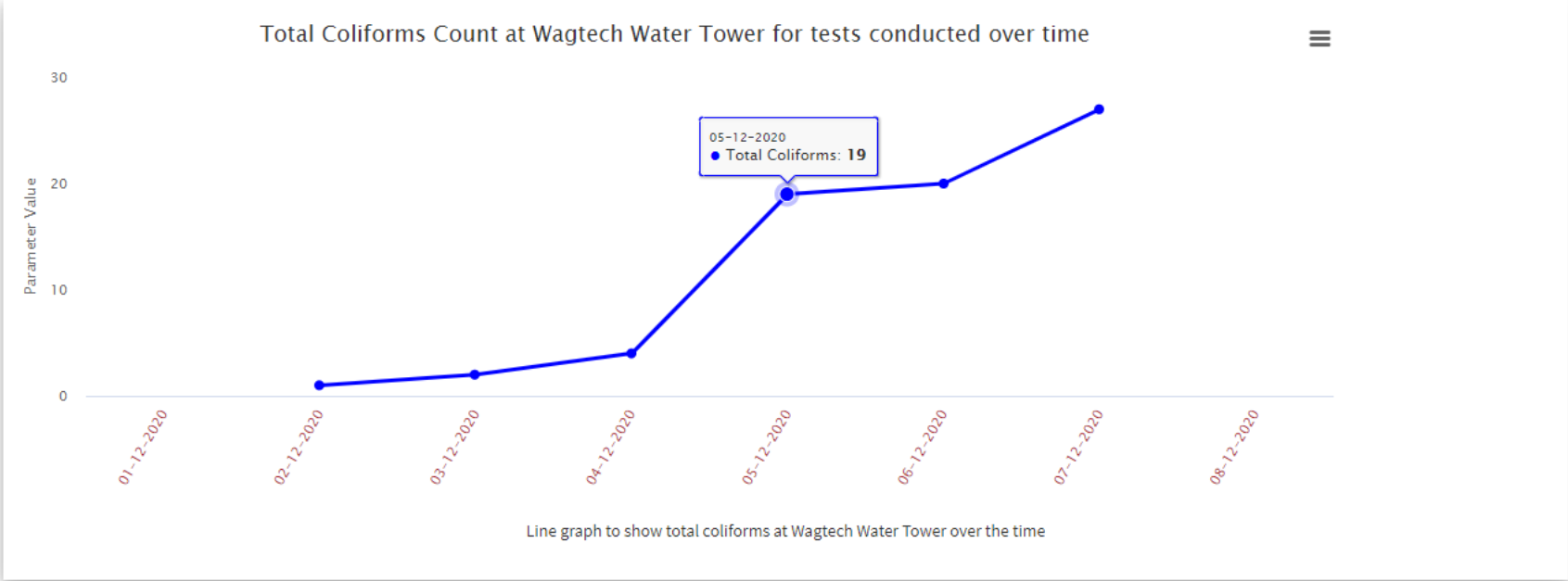
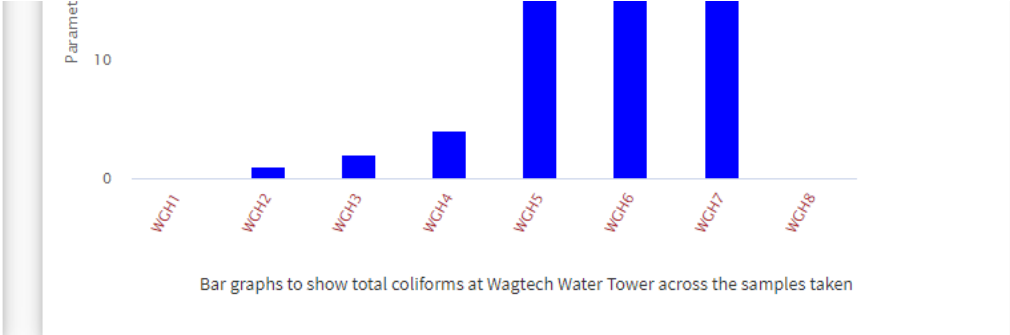
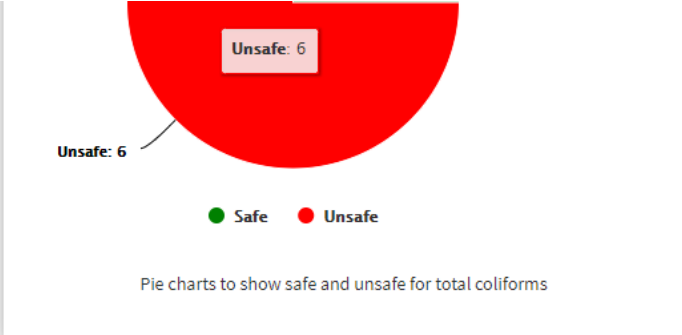
Total Coliforms Colony Count Values at Wagtech Water Tower for each individual tests

Test ID	Parameter Value
WCH1	0
WCH2	1
WCH3	2
WCH4	4
WCH5	19
WCH6	20
WCH7	27
WCH8	0

Bar graphs to show total coliforms at Wagtech Water Tower across the samples taken

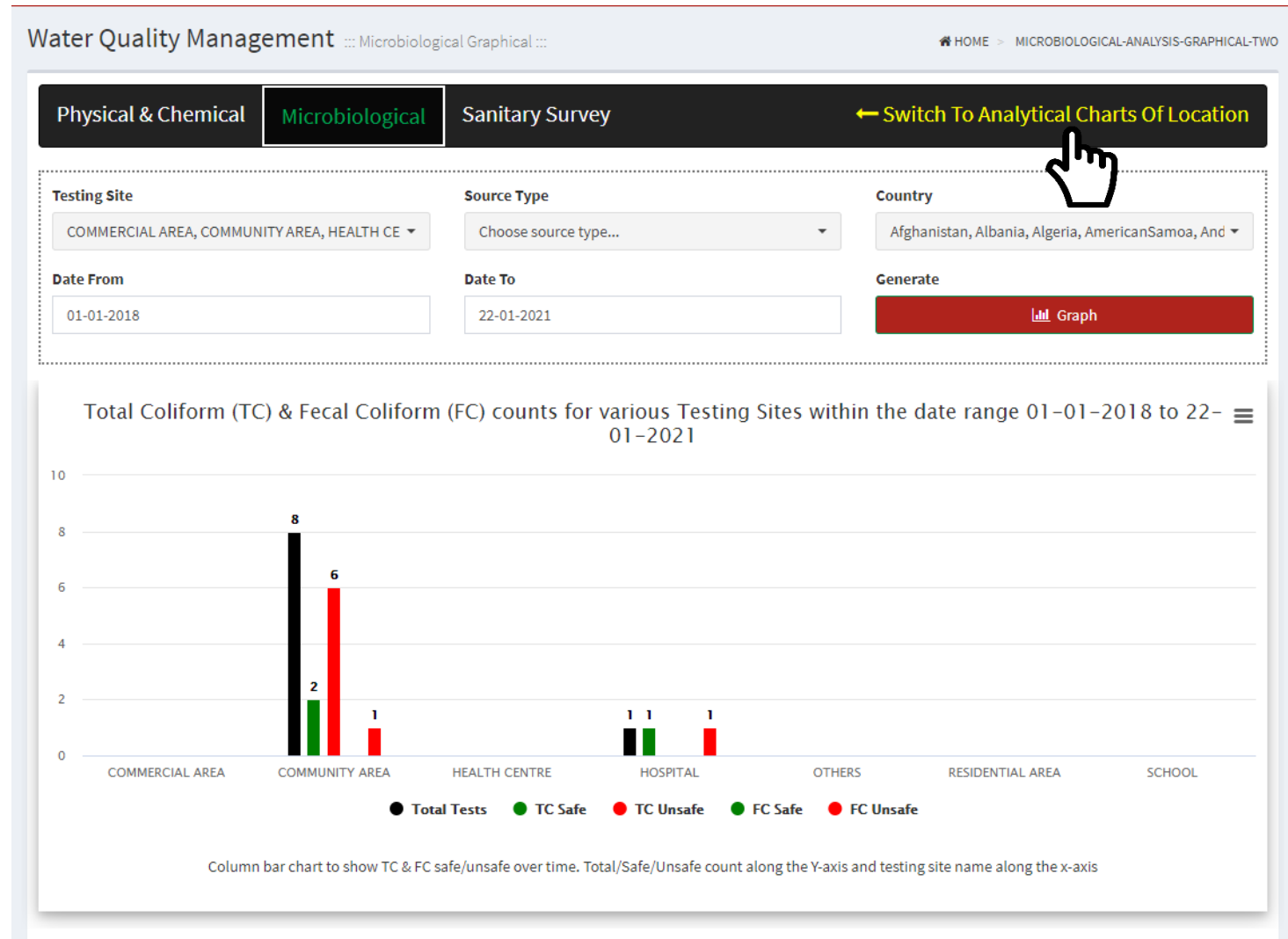
Trends & Charts - Microbiological

Scowling down you'll see another graph which displays the coliform count over the time period in a line graph format.



Trends & Charts - Microbiological

Moving on to Microbiological Charts in Total Results Bar Chart you can select either one or more 'Testing Site' OR one or more 'Source Type' in the filters/dropdowns but not both simultaneously, the date range can be customised and the chart generated will depict Total Number of tests against contamination by Total & Faecal Coli formic entities



Trends & Charts - Sanitary Survey

In Sanitary Survey, Total Risk Pie Chart will generate a Pie Chart based on the total number of risk levels. You may select as many Testing Sites, Source Types and Location Descriptions from the filter dropdowns as required and that too simultaneously, this chart maps the number of sources in each risk category over the pre selected date range.

Water Quality Management :: Sanitary Survey Graphical ::

HOME > SANITARY-SURVEY-GRAPHICAL

Physical & Chemical Microbiological **Sanitary Survey** Switch To Risk In Areas Bar Chart →

Testing Site: COMMERCIAL AREA, COMMUNITY AREA, HEALTH CE
Source: BOREHOLE WITH HAND PUMP, BOREHOLE WITH ME
Country: United Kingdom

Date From: 01-01-2018 Date To: 22-01-2021 Location: All Generate Graph

Sanitary Survey Risk Category for Testing Sites- COMMERCIAL AREA, COMMUNITY AREA, HEALTH CENTRE, HOSPITAL, OTHERS, RESIDENTIAL AREA & SCHOOL for Source Types- BOREHOLE WITH HAND PUMP, BOREHOLE WITH MECHANISED PUMP, DUGWELL WITH HAND PUMP, HYDRANTS & TANKER TRUCKS, LAKE OR SURFACE RESERVOIR, PIPED WATER SUPPLY, PROTECTED SPRING, PWS WITH RESERVOIR, PWS-GRAVITY FED, RAIN WATER HARVESTING, RIVER, TUBE WELL & WATER TOWER for All Locations within the date range 01-01-2018 to 22-01-2021

Risk Category	Count
Low Risk	1
Intermediate Risk	21
High Risk	0
Very High Risk	0

This pie chart shows all risk categories from all locations

Trends & Charts - Sanitary Survey

Moving on to Sanitary Survey Charts, Risk In Areas Bar Chart, generates a bar graph you either has to select one or more 'Testing Site' OR one or more 'Source Type' but not both simultaneously – the chart shows number of sources in specific risk categories in all types of 'Testing Sites' within a date range

Water Quality Management :: Sanitary Survey Graphical ::

HOME > SANITARY-SURVEY-GRAPHICAL-TWO

Physical & Chemical Microbiological **Sanitary Survey** [← Switch To Total Risk Pie Chart](#)

Testing Site: COMMERCIAL AREA, COMMUNITY AREA, HEALTH CE
Source Type: Choose source type...
Country: Afghanistan, Albania, Algeria, AmericanSamoa, And

Date From: 01-01-2018 Date To: 22-01-2021
Generate: [Graph](#)

Sanitary Survey Risk Category Depiction Chart for various Testing Sites with in the date range 01-01-2018 to 22-01-2021

Testing Site	Total Surveys	Low Risk	Intermediate Risk	High Risk	Very High Risk
COMMERCIAL AREA	0	0	0	0	0
COMMUNITY AREA	24	1	23	0	0
HEALTH CENTRE	0	0	0	0	0
HOSPITAL	0	0	0	0	0
OTHERS	0	0	0	0	0
RESIDENTIAL AREA	0	0	0	0	0
SCHOOL	0	0	0	0	0

Column bar chart to show Sanitary Survey Risk Category over time. Risk Category count along the Y-axis and testing site name along the x-axis



Instruments & Reagents

Wagtech deals in a range of Water Quality Instruments & Reagents and a client may end up purchasing a few or a lot of such Devices and Reagents/Consumables, over time the client may need to monitor the use of these and may need to see how many tests each Device or Reagent has been used in. The ASMS dashboard covers this too. On the Main Navigation Panel/Page you will find a link as shown below

The screenshot displays the Wagtech Trace2o System dashboard. At the top, the header includes the system name 'Wagtech Trace2o System' and the user email 'wagtechtest@gmail.com'. The main navigation menu on the left lists: Main Menu, Analytical WQ Results, Flagged Reports, Favourite Filters, Trends & Charts, Instruments & Reagents (highlighted), Instruments, Reagents, Summary Test, and Audit Trail Of Alerts. The main content area is titled 'Water Quality Management' and features five red dashboard cards: 'Analytical Water Quality Results' (with a water drop icon), 'Flagged Reports' (with a flag icon), 'Favourite Filters' (with a heart icon), 'Trends & Charts' (with a line graph icon), and 'Instruments & Reagents' (with a stack of reagent bottles icon). At the bottom, there are two white boxes: 'Instruments Device Monitoring' and 'Reagents Reagent Monitoring', both featuring the reagent bottles icon.



Stock trailing of Devices & Reagents

Reagents :: Reagent Monitoring :: HOME > REAGENT-DATA-LOGGER

Reagent **1** Arsenic (Total) Batch No. **2** Batch No. Date From 01-01-2020 Date To 29-04-2021 Refresh Result Refresh

Reagent Name	Batch No.	Total No. of Tests	Date Range
Arsenic (Total)		14	01-01-2020 to 29-04-2021

- 1** Filter Dropdown of the total range of tests that uses any form of Reagent or Consumable, you will have to select the item of interest, the Reference
- 2** Batch Code of the Specific Reagent/Consumable, once the date range is selected the Dashboard will show the number of tests performed. In the case (above) Arsenic Total has been tested 14 times inn between 1st of Jan, 2020 till the 29th of April, 2021.

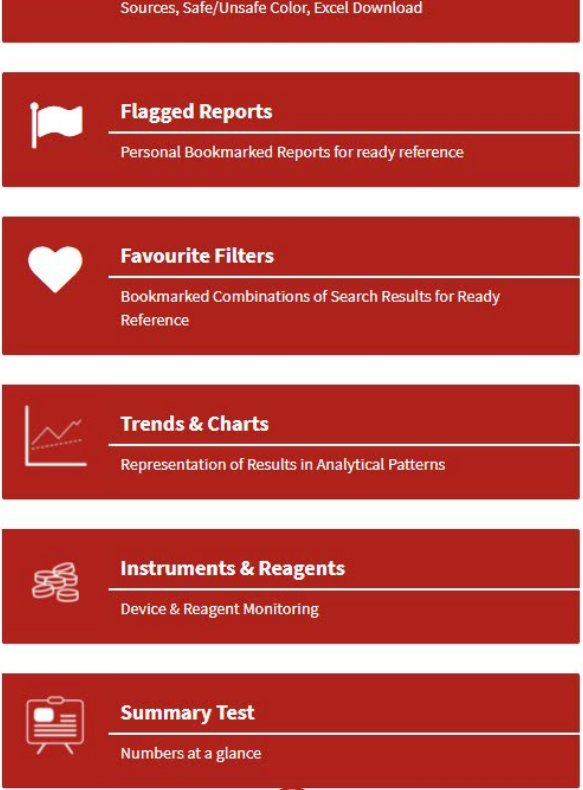
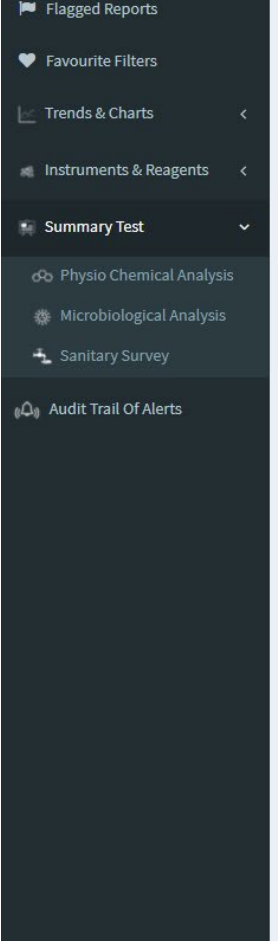
The Batch code is not a mandatory input (in the ASMS App) and so sometimes the dashboard may not give any result because if the App user does not enter the Batch Code while performing the test the Dashboard will obviously have no corresponding data. In case of Device/Instrument Monitoring the Batch code is replaced by 'Serial Number'



Summary Reports

The 2nd item from the bottom of the Main Menu links the 'Summary Reports' segment of the Dashboard. This is further divided into the:

- 1 Physical & Chemical
- 2 Microbiological Analysis
- 3 Sanitary Survey Summary



Generating Summary Reports from the Dashboard

Let us start with the Physical & Chemical Analysis Summary, see the image below- you can select ONE or MORE 'Testing Sites', 'Source Types' & 'Parameters' over a date range, the results will be displayed in a tabular manner and can also be downloaded in the form of MS Excel sheets

Water Quality Management :: Physical & Chemical Summary :: [HOME](#) > [PHYSICAL-CHEMICAL-SUMMARY](#)

Physical & Chemical Summary | Microbiological Summary | Sanitary Survey Summary

Testing Site: COMMERCIAL AREA, COMMUNITY AREA, HEALTH CE ▾

Source Type: BOREHOLE WITH HAND PUMP, BOREHOLE WITH MI ▾

Country: Afghanistan, Albania, Algeria, AmericanSamoa, And ▾

Date From: 01-01-2018 | Date To: 22-01-2021 | Parameter: All ▾

Refresh: [Result](#) | Export: [Excel](#)

Sl. No.	Parameter	Number of Safe Results	Number of Unsafe Results	Total Number of Results
1	Alkalinity - M [mg/L]	0	0	0
2	Alkalinity - P [mg/L]	0	0	0
3	Aluminium [mg/L]	0	0	0
4	Ammonia [mg/L]	0	0	0
5	Ammonia [mg/L]	0	0	0
6	Antimony [ppb]	0	0	0
7	Arsenic (Total) [ppb]	0	0	0
8	Arsenic III [ppb]	0	0	0
9	Bismuth [ppb]	0	0	0
10	Boron [mg/L]	0	0	0
11	Bromine [mg/L]	0	0	0
12	Cadmium [ppb]	0	0	0
13	Chemical Oxygen Demand [mg/L]	0	0	0
14	Chloride [mg/L]	0	0	0
15	Chlorine [mg/L]	1	49	50
16	Chlorine Dioxide [mg/L]	0	0	0
17	Chromium [mg/L]	0	0	0



Contamination Alerts!

When the dashboard receives a result that is out of range (based on W.H.O standards) and email alert is sent to the dashboard managers for review. The email details the Source Identification as well as the three areas of which its out of range. Physical & Chemical, Microbiological, and Sanitary Survey. Audit Trail will list all email alerts that have been successfully sent.

You can set up to 2 email addresses for the alert email to be sent back in the 'My Profile' page.

My Profile [Edit My Profile](#)

Name

Wagtech Projects Trace2o System

Contact No.

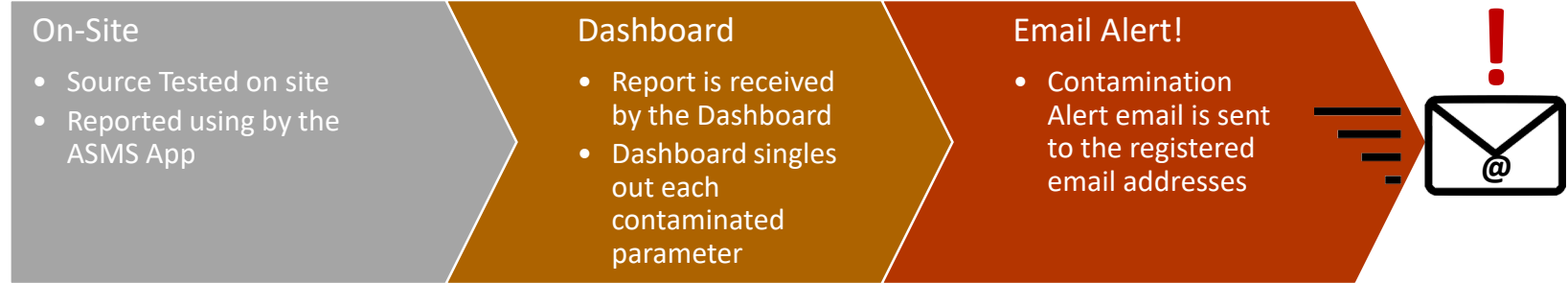
08584025954

Primary Alert Email Address

amas@wagtechprojects.com

Secondary Alternate Alert Email Address

director@wagtechprojects.com



Audit Trail [Alert](#) HOME > AUDIT-TRAIL-ALERT

Sl.No.	Date of Sending	eMail Receiver
1	17th Feb. 2021	asms@wagtechprojects.com
2	12th Feb. 2021	asms@wagtechprojects.com
3	03rd Feb. 2021	asms@wagtechprojects.com
4	03rd Feb. 2021	asms@wagtechprojects.com
5	03rd Feb. 2021	asms@wagtechprojects.com
6	03rd Feb. 2021	asms@wagtechprojects.com
7	03rd Feb. 2021	asms@wagtechprojects.com
8	03rd Feb. 2021	asms@wagtechprojects.com
9	03rd Feb. 2021	asms@wagtechprojects.com
10	03rd Feb. 2021	asms@wagtechprojects.com

Showing 1 to 10 of 51 alerts

< 1 2 3 4 5 6 >



Any questions or if you need support please contact:

asms_helpline@wagtechprojects.com

+44 1635 872929

www.wagtechprojects.com | www.trace2o.com



The AquaSafe Management System (ASMS)

User Manual

