

AMR user guide

Summary

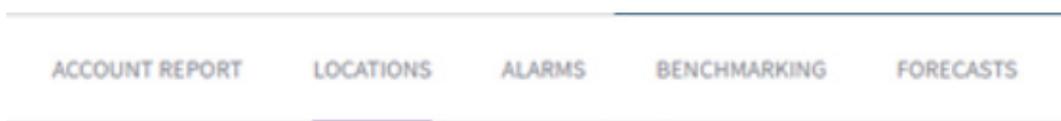
Under the Scottish Government's Water and Waste Water Billing Services Framework, Business Stream will provide organisations with free of charge AMR on sites with 30mm meters (chargeable meter size) and above. Should you wish AMR on smaller sites, these can be provided at a charge. Please contact your Account Manager for more information or email publicsector@business-stream.co.uk.

Login details

You should have been provided with a username and password to access your AMR by your Case Owner or Account Manager. To access your account and view your site(s) utility consumption visit <https://umbs.utilitiesmanager.eu/Login>. Your login details are case sensitive. If you have lost or forgotten your password, locked your account or require additional login profiles, please email publicsector@business-stream.co.uk or speak to your Account Manager.

Main Menu

The menu bar across the top of the screen gives you options to select different information. A purple bar underneath the text lets you know which part of the site you are in.



There are five different menu options:

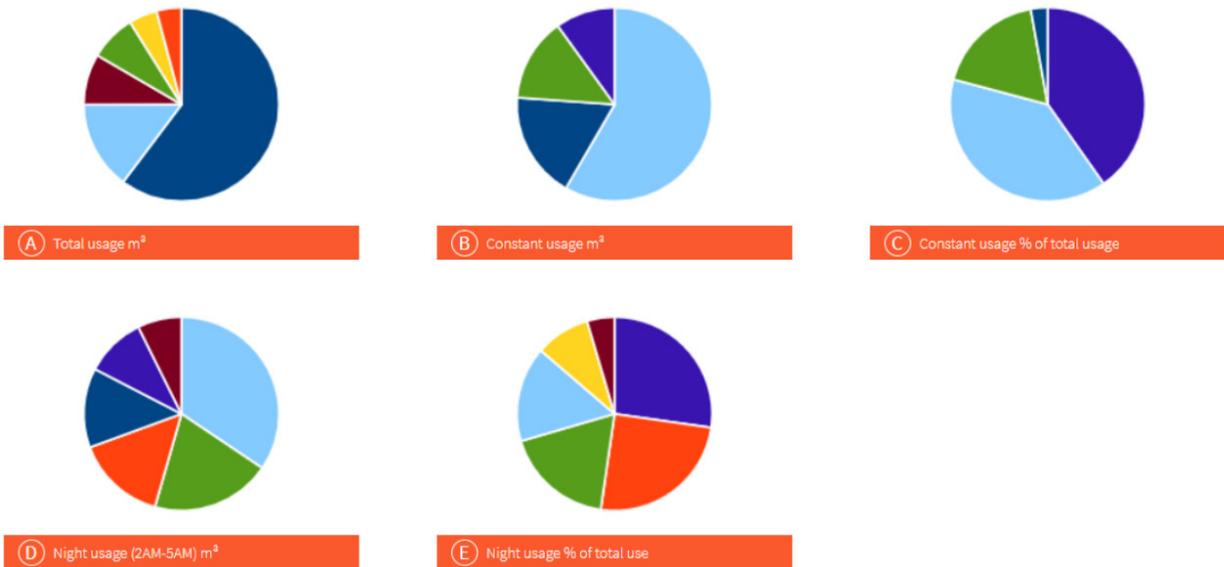
- **Account report** - summary and ranking information for all locations within the account
- **Locations** - view graphs, site reports, site alarms and service notes
- **Alarms** - view alarm settings for all sites, current status and review and switch off alarms
- **Benchmarking** - view usage at each site currently compared to the start point and also have the ability to compare against other (anonymous) sites
- **Forecasts** - track actual usage and costs against a set forecast

Account Report

The account report section of the site provides a summary across all sites within your account that have an AMR. Total water use for all sites is displayed as a bar graph for the selected periods. The bars show total usage, with the red portion displaying the sum of constant water use across the sites.



Further down on the account page there are five pie charts. These are showing the top six sites (or less if fewer sites within the account) against five different criteria. The pie charts function enables instant identification of sites in a prioritised order. To see all site click the orange text box.



Note: To see detailed information about your location, press the label under pie chart (for example: to see your fleet Total usage information - press the "Total usage m3 under the pie chart"

Locations under review:

No locations under review.

These reports are:

- A. Total usage** - report of the total water usage by location for the reporting period.
- B. Constant usage** - report of the volume of water used based on the minimum constant flow over the report period.
- C. Constant usage as a % of total usage** - report of the volume of water used based on the minimum constant flow as a percentage of total usage over the reporting period. This report can indicate sites that are using excessive amounts of water due to a constant flow of water at all times.
- D. Night usage** - report of the total water used between 1.00am and 5.00am over the reporting period. For sites except those which operate on a 24 hour/night shift basis. This can identify potentially unnecessary use.
- E. Night usage as % of total usage** - report of the volume of water used between 1.00am and 5.00am as a percentage of total usage over the reporting period. This report can indicate sites that are using excessive amounts of water due to the water usage at night.



Locations

This page provides access to details for each site, along with three key summary reports. The traffic light alarm button enables you to prioritise and check sites where an alarm threshold has been breached.

Locations	UTILITY	FORECASTS	REPORTS	GRAPHS	ALARMS	SERVICE NOTES
Central Works Depot - hwm		Forecasts	Report	Graph	● ○ ○	Service notes
Cheshire Grange		Forecasts	Report	Graph	● ○ ○	Service notes
County Hall		Forecasts	Report	Graph	○ ● ○	Service notes
Demeter Office TS21 2AZ		Forecasts	Report	Graph	● ○ ○	Service notes Add reading
Devonshire Building		Forecasts	Report	Graph	● ○ ○	Service notes
Grange Primary		Forecasts	Report	Graph	● ○ ○	Service notes

Reports

This site specific report is generated each week and provides summary information on consumption and costs; it also calculates the cost of potential losses due to there being any constant use of water through the week. Reports can be viewed in weekly or monthly periods by clicking on the button at the top right of the screen.

A table at the bottom provides details for each day, and it states the lowest rate of flow through the meter at any time (Minimum Flow Rate) from which calculations of potential losses are made.

The report is designed to be saved as a PDF to one page, making it easy to circulate.

demeter report for County Hall

County Hall

CHOOSE DATE:

WEEKS

MONTHS

week 45 of 2019

All historical reports available from date pick

Week commencing: **04/11/2019**

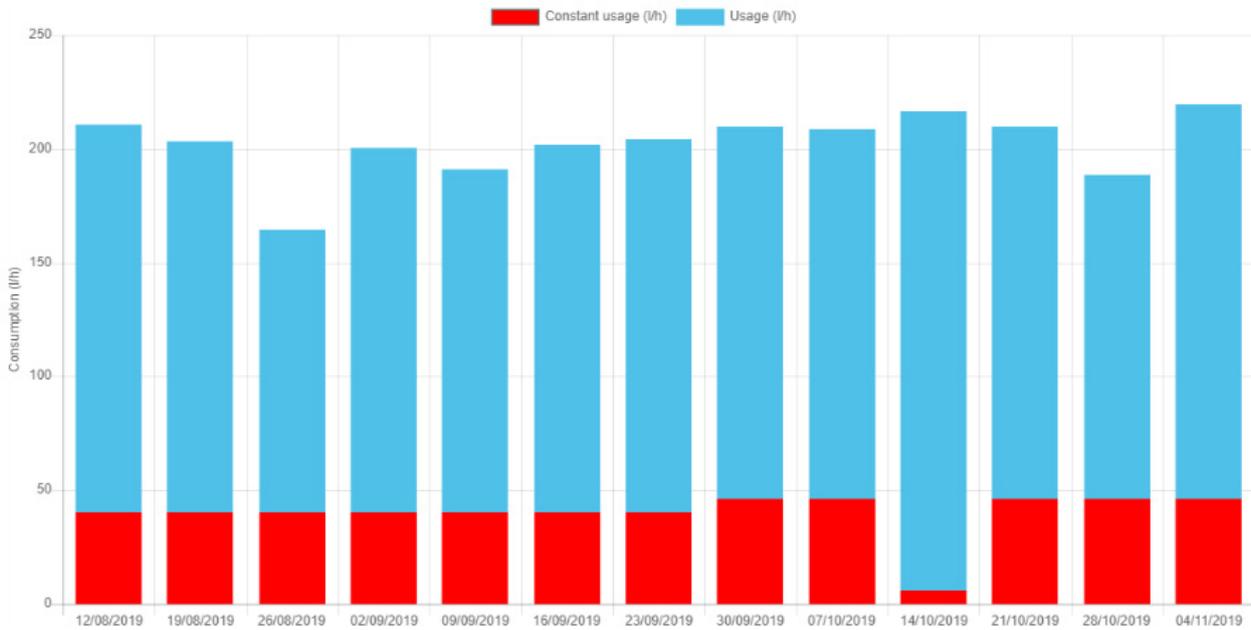
Automatically produced each week / month
- by on last complete report period by default

	Current week 04/11/2019	Previous week 28/10/2019	% Change
Water consumption (l/h)	220	189	16%
Variable cost of water consumption (m ³)	£594	£510	
Water loss for the week (m ³)	54	54	0%
Cost of weekly water loss	£145	£145	
Water loss as % of total consumption	24%	28%	

Annual equivalent - based on current week		m ³	Cost *
Water consumption	Report period figures annualised	11,440	£30,888
Water loss		2,795	£7,547

The bar graph provides a quick means of tracking trends. The red portion shows the usage due to constant flows based on the minimum flow.

Water consumption for previous 13 weeks



Graphs

The default display shows the last seven days and indicates consumption in litres per hour. If you hover your mouse over the graph, you can view flow rate at a specific time. You can also use your mouse to navigate the graph and change the scale (shift button and scroll up). You can use the navigation tools to change the display, the R button stands for reset and will revert the graph to the standard seven-day format.



There are many variations in how the data can be displayed. These are selected in the 'Display Options' box.

Display options

GRAPH TIMESCALE: CONSUMPTION UNITS: TOOLTIP READINGS TREND LINE SHOW ALARMS LINE GRAPH

CHOOSE DATES: Date / Time start: Date / Time end:

Options include displaying the graph in different usage units (cubic metres, litres, and carbon). Different timescales can be selected, or specific dates and times can be chosen by using the 'Choose Dates' function. At the bottom of the screen is a table with the meter read and the consumption for each day.

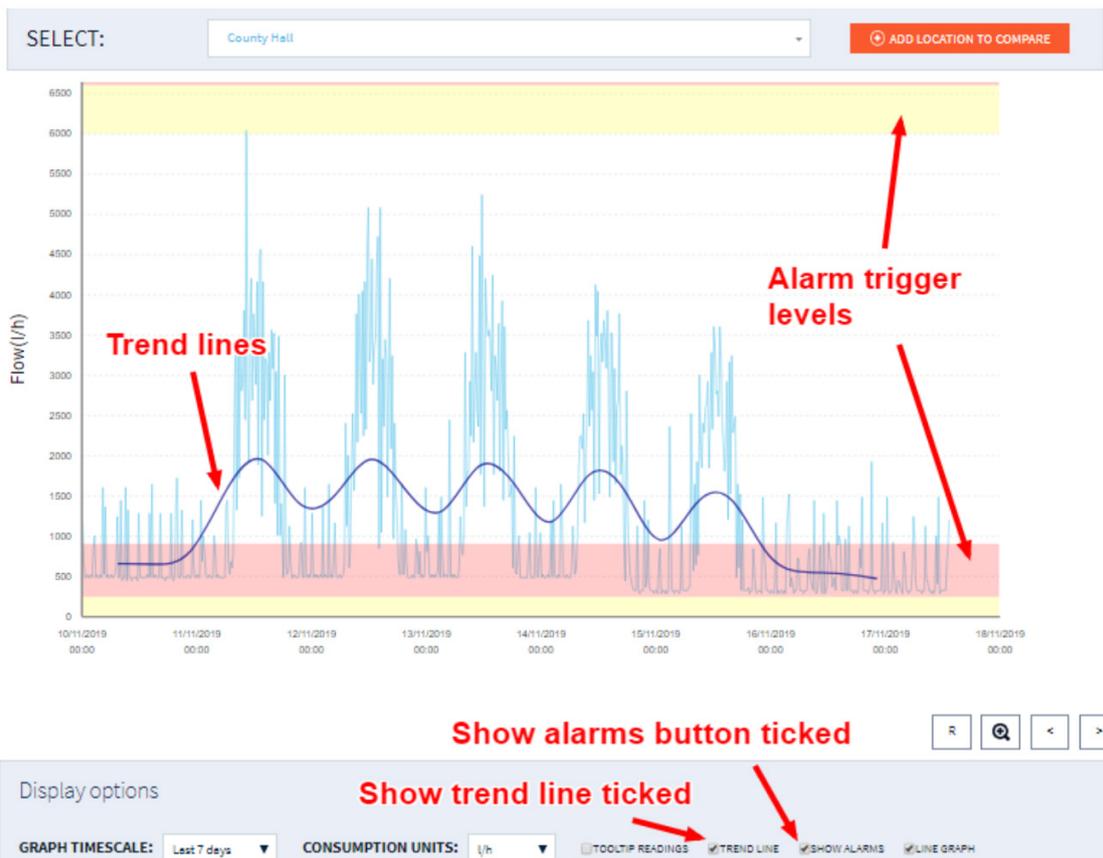
Meter readings:

County Hall

DATE	METER READING	24 HR TOTAL (M ³)
10/11/2019	165,202	15
11/11/2019	165,218	39
12/11/2019	165,257	39
13/11/2019	165,295	38
14/11/2019	165,334	35
15/11/2019	165,369	30
16/11/2019	165,398	12
17/11/2019 (today)	165,411	

Trend line / Alarm levels display

To track the overall trend for a site, tick the 'Show Trend Line' button. Once 'Update Graph' is selected, the trend line appears as a continuous black line to show the moving average flow rate.

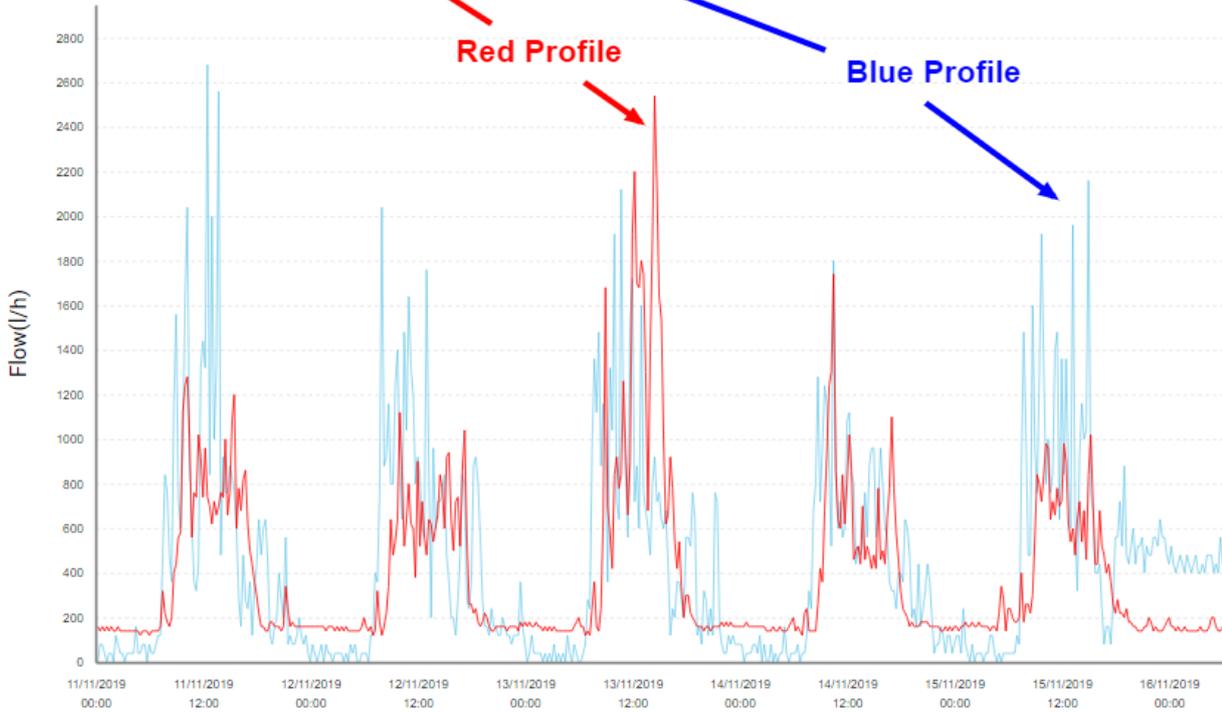


Compare with function

The graph page has a useful function to compare different sites (up to three sites) on the same graph or the same location over different periods. This function is helpful when comparing sites with the meter read usage table below, or to analyse the usage of a single site over different periods and quickly identify increases and decreases.

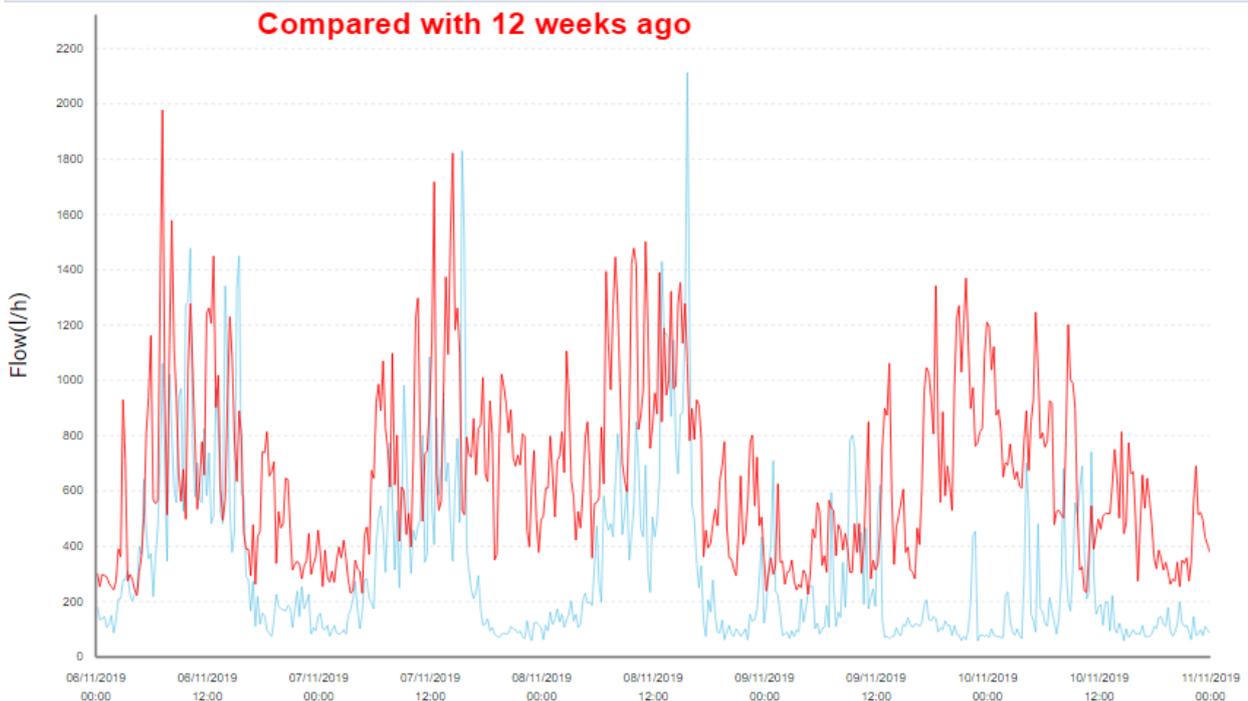
SELECT: ➕ ADD LOCATION TO COMPARE

COMPARE WITH:



SELECT: **Current profile** ➕ ADD LOCATION TO COMPARE

COMPARE WITH:



Meter readings:

Compare daily usage on equivalent days

OPEN EXCEL

DOWNLOAD CSV

Central Works Depot - hwm

DATE	METER READING	24 HR TOTAL (M ³)
06/11/2019	105,926	10
07/11/2019	105,937	8
08/11/2019	105,945	9
09/11/2019	105,954	5
10/11/2019	105,959	4
11/11/2019	105,963	8

Central Works Depot - hwm

DATE	METER READING	24 HR TOTAL (M ³)
14/08/2019	104,980	15
15/08/2019	104,995	17
16/08/2019	105,011	19
17/08/2019	105,030	14
18/08/2019	105,044	14
19/08/2019	105,058	20

Excel / CSV Downloads

Data can be downloaded in Excel or CSV format for further analysis and reporting within your organisation. It is usually best to convert the graph to litres rather than litres per hour as this will provide data on actual consumption.

OPEN EXCEL

DOWNLOAD CSV

Data can also be downloaded and automated FTP transfers arranged to feed into your internal systems. Please contact your Account Manager if you need assistance with this.

Service Notes

This box provides a record of relevant information for the site. It will list the alarms that been activated and turned off. You can also add and save your notes to provide a useful record which can be cross-referenced to the graph profile.

ACCOUNT REPORT LOCATIONS ALARMS BENCHMARKING FORECASTS

BS Demo

Locations



7 DAY REVIEW

SUMMARY REPORT

STATUS REPORT

UTILITY

FORECASTS

REPORTS

GRAPHS

ALARMS

SERVICE NOTES

Brewery



Forecast

Report

Graph

set alarms

Service notes

City Hall



Forecast

Report

Graph

set alarms

Service notes

DATE

NOTE

11/06/2015

6 toilet cisterns found to be overflowing continuously. Repairs / adjustments carried out

EDIT

Add Note

Add meter read

Date/time of meter read

SAVE

Location information

Within 'Service Notes', you can add information specific to the location including meter and logger details, contact and access information, and upload documents.

 Location Information for **STC Main Campus** belonging to **STCollege**

Location

Post or ZIP code: NE34 6ET

Address: not given yet

Meter location description: By side of road to left of staff vehicle entrance leading to service courtyard

Access notes: not given yet

Photos

 [STC sep 13.jpg](#)
 [STC repair Sep 13.jpg](#)

Seven day review

This report provides a bureau type summary of all the updated profiles of sites within the account.

The latest seven day profiles for each of the sites are 'stacked' on top of each other; this enables every site profile to be checked extremely quickly by scrolling down with the mouse, with no need for extra clicks.

You can use the search function to go directly to a particular site. The hover box function can be used to check meter reads and flow rates at any time of interest. By clicking on the 'Graph' or 'Report' button, this will take you directly to those pages with increased functions, details and information.



Summary report

This report provides a summary of all sites within your account. By default, it will show the start and end meter reads for the last full month, together with total usage for the period and average daily usage. The data picker function can be used to select a period of your choice.

Report
Water
From: 2019-10-01 TODAY
To: 2019-10-31 TODAY
UPDATE

Usage report for all locations belonging to **demeter** period 01/10/2019 to 31/10/2019 | Days: 31

Summary report displays data for the last full month by default. Any period can be selected by date pickers

LOCATION	START METER READING	END METER READING	TOTAL USAGE	AVERAGE DAILY USAGE	UTILITY TYPE
Central Works Depot - hwm	105608	105894	286 m ³	9 m ³	
Cheshire Grange	34100	34457	357 m ³	12 m ³	
County Hall	164002	164943	941 m ³	30 m ³	
Devonshire Building	55708	55934	226 m ³	7 m ³	
Grange Primary	24552	24635	84 m ³	3 m ³	

DOWNLOAD CSV

	Type	Summary	Estate average
	Water	3873	258

There is a summary and download to CSV option at the bottom of the report.

Status Report

This report provides a summary of all sites within your account. It is designed to provide information about when data was last transmitted from the monitoring equipment and the consumption for the previous 24-hour period. The report helps identify equipment that is no longer working or if there are hardware issues that could lead to consumption data not being received.

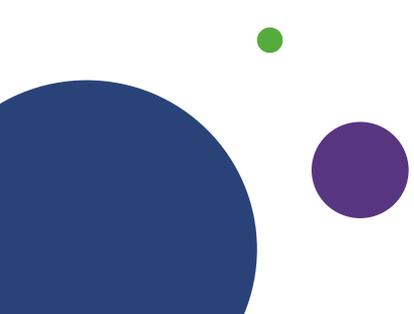
Location Status Report
Filter by data source: Halma
Order by: Location

Date / time of last data received

Reported consumption for previous day

All locations demeter

LOCATION	PROVIDER	LOGGER ID	LAST METER READ	DATA CHECK YESTERDAY
Central Works Depot - hwm	Halma	44745257950067	17/11/2019 16:15	6.94 m ³
Devonshire Building	Halma	44745257791489	17/11/2019 16:00	3.64 m ³
Grange Primary	Halma	447452462522	17/11/2019 15:00	0.46 m ³
Grindon Lane	Halma	44745257799760	17/11/2019 16:00	1.60 m ³



Alarms

System alarms can be set for each site, making them individual and appropriate. Alarms are reported on a green, amber and red basis to make it easy to identify and prioritise sites based on alarm status.

The alarm page will list all alarms set for the sites and show the thresholds that have been set. It is possible to amend alarms to reflect the changing situation at a site, whether improving or worsening. When reviewing alarms, click on the site name and the system will open up the graph so you can check the profile data.

Alarms can be reviewed and turned off. When an alarm is switched off, the system will tell you it is adding an entry to the 'Service Notes' so that a permanent alarm history is generated.

Alarms  Show alarms for:

Alarms for: **all locations** belonging to **demeter**

LOCATION	ALARM TYPE	AMBER VALUE	RED VALUE	DAYS SINCE ALARM	CURRENT STATUS		
 County Hall	reading never below	240 (l/h)	900 (l/h)	9 days	● ● ●	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
 SouthmoorAcademy	reading never below	180 (l/h)	600 (l/h)	0 days	● ● ●	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
 Central Works Depot - hwm	reading above	3200 (l/h)	6400 (l/h)	0 days	● ● ●	<input checked="" type="checkbox"/>	<input type="checkbox"/>
 Central Works Depot - hwm	reading never below	120 (l/h)	600 (l/h)	0 days	● ● ●	<input checked="" type="checkbox"/>	<input type="checkbox"/>
 Cheshire Grange	reading never below	120 (l/h)	600 (l/h)	0 days	● ● ●	<input checked="" type="checkbox"/>	<input type="checkbox"/>
 Cheshire Grange	reading above	2700 (l/h)	3000 (l/h)	0 days	● ● ●	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Clear alarm button (points to 'x' icon)

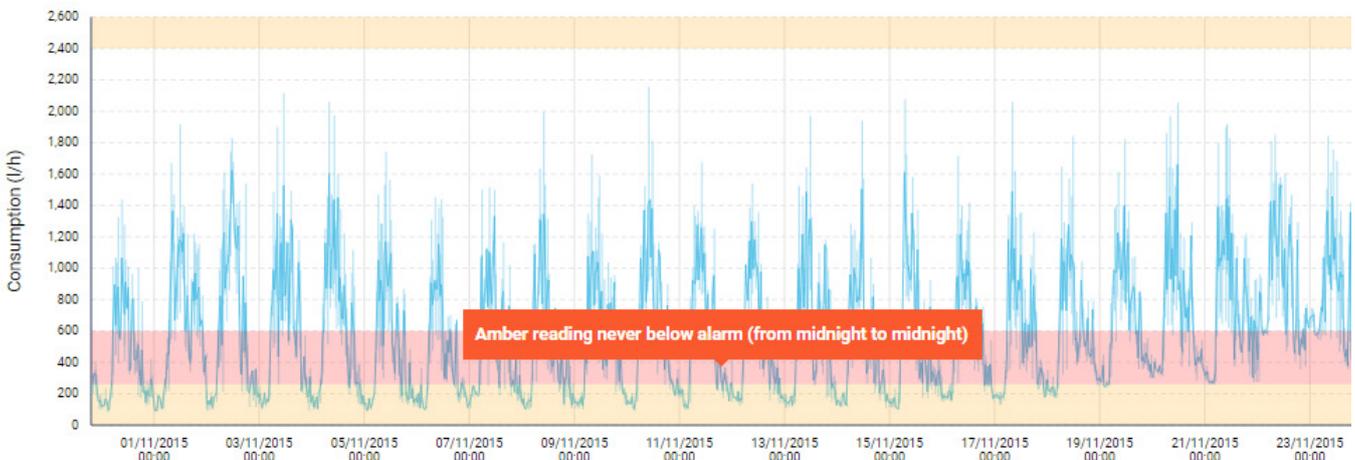
Edit alarm button (points to checkmark icon)

Alarm levels can be viewed on the profile graph by selecting 'Show Alarms', as shown in the example below.

Display options

GRAPH TIMESCALE: CONSUMPTION UNITS: SHOW GRID SHOW ALARMS SHOW TREND LINE

CHOOSE DATES: Date / Time start: Date / Time end:



Alarm email alerts

Contact and email details can be added in the 'Location Information' page. When the 'Receive emails' box is ticked, this will result in the named contact receiving email alerts when they are triggered.

Emergency contact

✕

Forename:

Family name:

Phone number:

E-mail:

Receive emails:

Tick to receive email alarms

Emergency contact (alternate)

✕

Forename:

Family name:

Phone number:

E-mail:

Receive emails:

Benchmarking

Sites are categorised when added to the system and where possible benchmarking criteria added (e.g. hotel rooms, school pupils, office employees). Benchmark reports can be easily generated, providing excellent information comparing current usage with initial usage when monitoring started. Same category sites within an account can be ranked in terms of efficiency making it easy to identify the best and worst-performing. Also, by selecting the tick box for anonymous sites, other same category sites can be included, but are not named to protect confidentiality.

The reports are shown in table and bar graph form.

ACCOUNT REPORT
LOCATIONS
ALARMS
BENCHMARKING
FORECASTS
BS Demo

Classification: Residential Care Home

PRINT **INITIAL CONSUMPTION REF WEEK:** First Week **ORDER:** Alphabetical Show anonymous sites

Location	Initial Consumption(m ³)		Current Consumption(m ³)		Change		Classification	Initial	Current
	Ref week	Total for week (m ³)	Ref week	Total for week (m ³)	m ³	% change			
Cheshire Grange	wk35/2017	118	wk46/2019	70	48	40%	60	102	61
Grindon Lane	wk25/2018	43	wk46/2019	9	35	79%	18	127	27
Totals		161		79	82	60%			

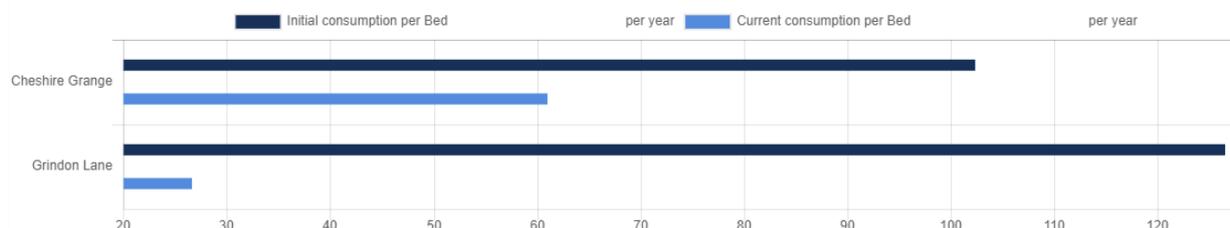
Account performance

Water use per benchmark unit per year

Compares initial and current consumption

SAVE

Consumption (m³) per Bed per year



Carbon reporting

This is a recently added report that details the amount of carbon being consumed per tonne for the site portfolio. The report outputs are based on the actual AMR data collected and the current carbon calculations.

Control Panel
⏻

ACCOUNT REPORT
LOCATIONS
ALARMS
BENCHMARKING
FORECASTS
CARBON REPORT
👤 BS Demo

🔴

CO2e emissions
 (tonnes summary)

💧

Year end Jan 2024
 44 tonnes

Month	CO2e (tonnes)	% Change
Jan 2024	3.20 tonnes	-13%
Dec 2023	3.41 tonnes	-12%
Nov 2023	3.25 tonnes	-12%
Oct 2023	3.27 tonnes	-26%
Sep 2023	3.18 tonnes	-25%
Aug 2023	3.72 tonnes	-10%
Jul 2023	4.29 tonnes	+1%
Jun 2023	4.31 tonnes	+15%
May 2023	4.11 tonnes	+14%
Apr 2023	3.88 tonnes	+8%
Mar 2023	3.77 tonnes	+11%
Feb 2023	3.53 tonnes	+13%

CO2e emissions tonnes

Month	CO2e (tonnes)	% Change
Jan 2024	3.20 tonnes	-13%
Dec 2023	3.41 tonnes	-12%
Nov 2023	3.25 tonnes	-12%
Oct 2023	3.27 tonnes	-26%
Sep 2023	3.18 tonnes	-25%
Aug 2023	3.72 tonnes	-10%
Jul 2023	4.29 tonnes	+1%
Jun 2023	4.31 tonnes	+15%
May 2023	4.11 tonnes	+14%
Apr 2023	3.88 tonnes	+8%
Mar 2023	3.77 tonnes	+11%
Feb 2023	3.53 tonnes	+13%

Annual CO2e emissions for: Water ▼

Location	Utility	CO2e (tonnes) / Annual usage	Forecast	7 day graph
DEMO HOTEL	💧	42 tonnes / 105114 m ³	Annual change: 0%	
DEMO HALL	💧	2 tonnes / 4295 m ³	Annual change: 0%	
DEMO FARM	💧	<1 tonnes / 337 m ³	Annual change: 0%	
DEMO PRODUCTION	💧	<1 tonnes / 0 m ³	Annual change: 0%	

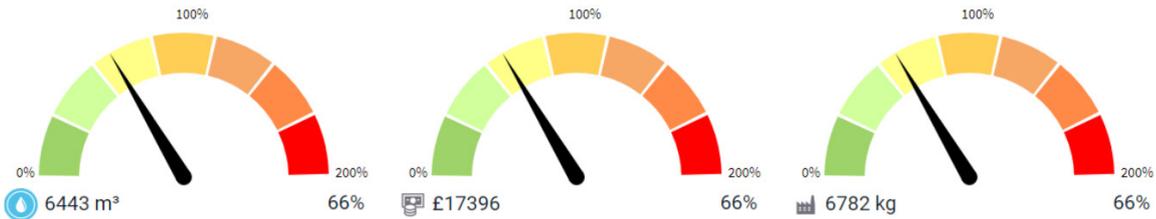
Forecasts

A forecast can be easily set for each site, which then produces a handy report to help track consumption and costs against projections. Each completed forecast within an account, contributes to the account summary, meaning you can track utility costs and consumption for your whole organisation.

ACCOUNT REPORT LOCATIONS ALARMS BENCHMARKING FORECASTS

BS Demo

Predicted annual usage



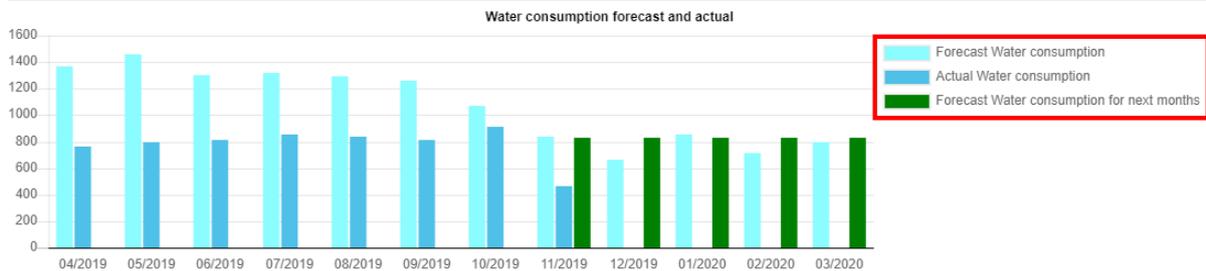
Location	12 month forecast commencing	Current projection				% Used	
		Consumption	Variable cost	Carbon footprint			
Central Works Depot - hwm	[-]	[-]	[-]	[-]	[-]	Add forecast	
Cheshire Grange	[-]	[-]	[-]	[-]	[-]	Add forecast	
County Hall	01 Apr 2019	6,443.02 m ³	£17,396.15	6,782 (CO2 kg)	66%	Details	

Water consumption review for County Hall

FINANCIAL YEAR COMMENCING: 01/04/2019

6,443.02 m³ 6,781.92kg 66%

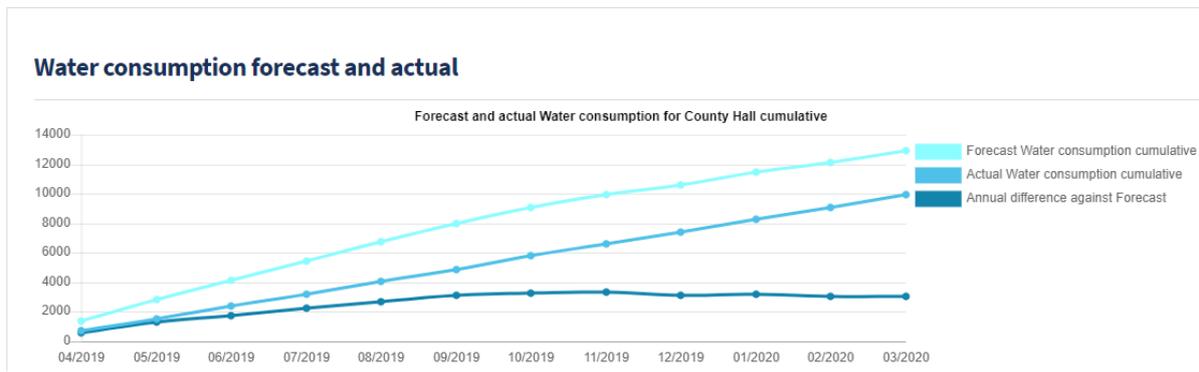
Water consumption forecast and actual Bars show monthly forecast (light blue), actual (darker blue) which updates every day, and then prediction (green) to end of year based on average use to date



Forecast and Reported Water consumption **County Hall** for year commencing 01/04/2019

[EDIT](#)

Forecast date:	04/2019	05/2019	06/2019	07/2019	08/2019	09/2019	10/2019	11/2019	12/2019	01/2020	02/2020	03/2020
Forecast Water consumption:	1,370	1,461	1,305	1,319	1,291	1,257	1,068	841	665	853	714	794
Actual Water consumption:	759	798	814	853	840	810	908	826	826	826	826	826
Monthly difference:	610.64	662.62	491.01	465.82	451.31	447.27	159.58	14.90	-161.10	26.90	-112.10	-32.10
Annual Difference against Forecast:	610.64	1,273.26	1,764.28	2,230.10	2,681.41	3,128.68	3,288.27	3,303.16	3,142.06	3,168.95	3,056.85	3,024.74



To add a forecast simply select the start date (matching your financial year) and input your forecast for consumption each month. The forecast function allows you to cater for monthly changes.

The system auto-populates a forecast based on equivalent consumption for the same month the previous year. All, some, or no months can be amended to suit before clicking the 'Add' button to create the forecast for the coming year.

Once completed, click on details to open up the report which is automatically updated each month and provides information in tables and graphs so you can easily track performance.

Forecasts for **Grange Primary** belonging to **demeter**

FORECAST NAME	START DATE	END DATE	EDIT	DETAILS
Grange Primary Forecast Sep 2014	01/09/2014	31/08/2015		Details
Grange Primary Forecast Sep 2015	01/09/2015	31/08/2016		Details
Grange Primary Forecast Sep 2017	01/09/2017	31/08/2018		Details

Add new **forecast:** Set a date to match the financial year for the location → Choose date:

Sep 2019	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020
<input type="text" value="74"/>	<input type="text" value="73"/>	<input type="text" value="89"/>	<input type="text" value="73"/>	<input type="text" value="109"/>	<input type="text" value="64"/>	<input type="text" value="91"/>	<input type="text" value="57"/>	<input type="text" value="85"/>	<input type="text" value="94"/>	<input type="text" value="71"/>	<input type="text" value="8"/>
Add(%): <input type="text" value="0"/>											

ADD The forecast will auto-populate using the usage data from the same month the previous year. Each month figure can be changed either by setting a new figure or setting a percentage adjustment in the lower box

The summary at the top of the report is a projection of where your forecast is expected to be at the end of the year. It is based on current actual performance to date and matches against your forecast at year-end.

Support

If you have questions about AMR or the portal, get in touch with your Account Manager or email publicsector@business-stream.co.uk.

You can find more details on the Scottish Government's Water and Waste Water Billing Services framework by visiting business-stream.co.uk/publicsectorscotland.