Sonde Website and Information and

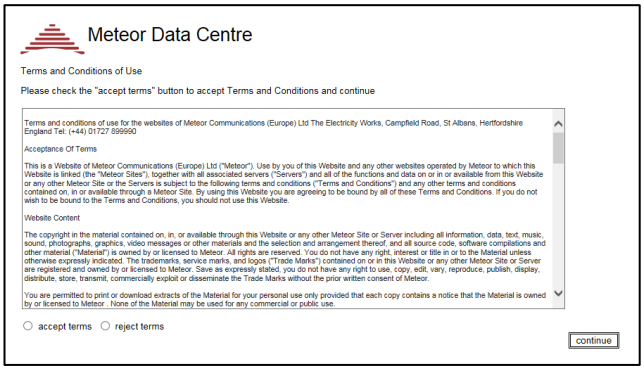
How to Interpret the Data

https://www.telemetry-data.com/open?profile=WMD_WYE

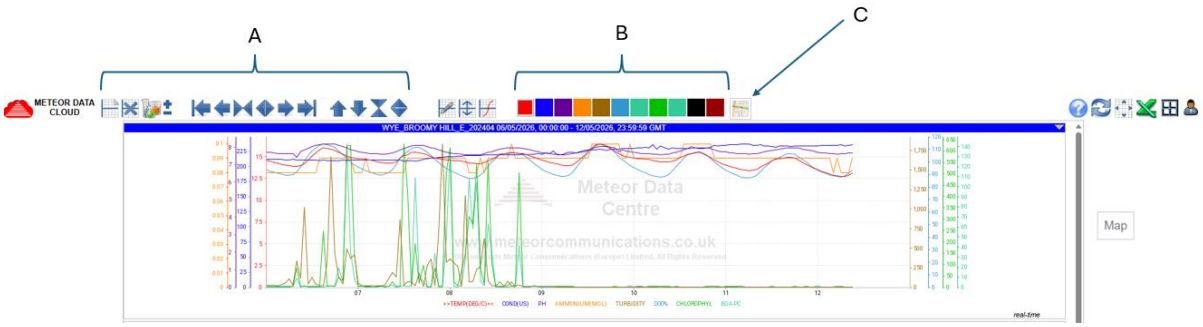
Access the webpage from the hyperlink above.

The following page will appear:

Read terms and conditions. Once you have read them select “accept terms” then select continue.



You will then see the following page appear showing the water quality information being collected in real time for the four Wye sondes. Click on the name of the sonde to make that the active graph, ribbon should turn blue as in image below

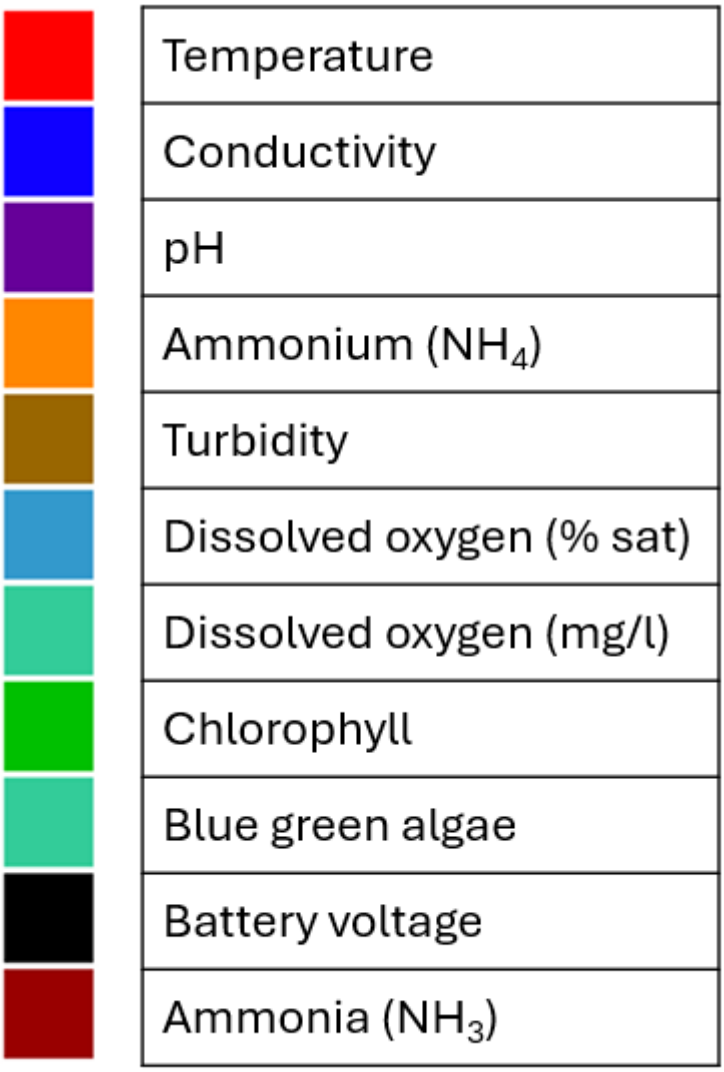


A.) These buttons help you navigate the graph (placing the mouse pointer over the icon brings up buttons function)
B.) These buttons are the different water quality parameters* (see colours below)
C.) This toggles between the graph and a map of the location

Each sensor is in a different colour. For example in graph above temperature is in red (TEMP), look at corresponding coloured axis for this sensor (in top graph goes from 0 to 15 in 2.5 increments)

To add or remove sensors from the graph click on 

B)



*Please see section below for explanation of each water quality parameter

Other important functions

This allows the user to refresh the page

This allows you to export the data to an excel file as a .CSV

In the upper most right corner on the blue ribbon is a small down arrow.

When you click on this it gives you a few options.

1. It allows you to view the data in a table
2. It will show you on a map where the sonde is located

The most important button in this drop down menu is the square box next to the "x".

Pressing this box expands the graph to full view and makes it easier to see the graph.

Water Quality Parameters Explained

It is important to read the *scale* for each of the parameters as the graph automatically resets the axis depending on the scale of the data. What looks like a large peak may just be a factor of the scale used.

Battery Voltage: As there is no power on site the device is run from a battery. This allows us to monitor the voltage so that we can ensure that the equipment does not run out of power.

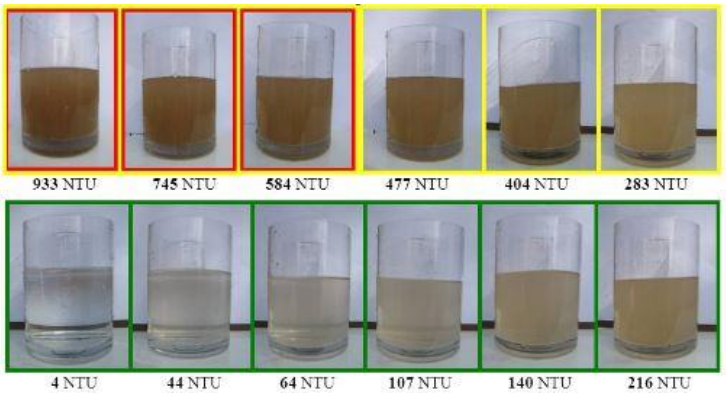
Dissolved Oxygen: Dissolved oxygen is necessary for all forms of life including fish, invertebrates, bacteria and plants. The sonde measures dissolved oxygen and displays it in two measures % and mg/l. Above 75% would be expected at this site.

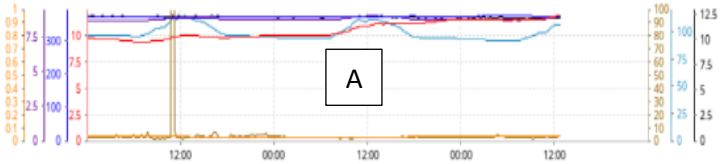
Turbidity: This is a measure of the level of "cloudiness" in the water and is measured in Nephelometric Turbidity Units (NTU). The measure of cloudiness helps with determining how much suspended silt is in the water course at any time. Clean water has an NTU reading of 5 NTU's and heavily silted water can have readings as high as 933 NTU's.

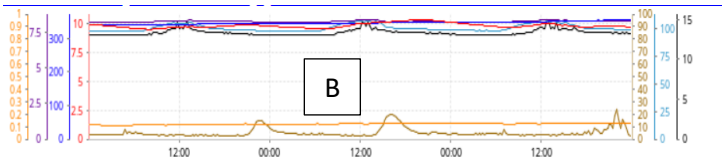
CAUTION: **Turbidity readings can be subject to interference** from items lodged between the sensors – such as shrimps, bullhead fish and leaves (especially in autumn).

These show up on the graph as vertical lines indicating a sudden and total obstruction of the sensor light-beam [A].

A real change in turbidity tends to have a more gradual increase and decrease in readings [B].



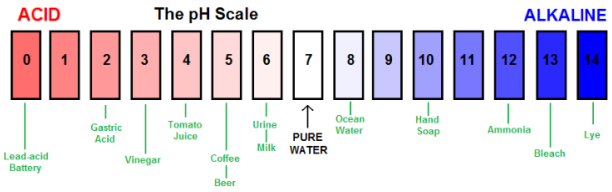




Ammonium (NH_4): Ammonium ions by themselves are not toxic to aquatic life. Ammonium is required to determine the amount of "ammonia" in a watercourse which is toxic to aquatic life. We would expect ammonium of less than 1mg/l at this site. We can get false ammonium spikes due to probe coming out of the water or from interference from certain 'salts' e.g. run-off from road salt. A real increase in ammonium would usually cause a decrease in dissolved oxygen

Ammonia (NH_3): Ammonia is toxic to aquatic organisms. Levels higher than 0.500 are highly toxic to fish.

pH: The pH of water is not a physical parameter but measured in a concentration or quantity. The pH scale is between 0 to 14, where the lower number means the water is more acidic and the higher number means the water is more basic. A pH of 7 is considered neutral. If the pH of water is too high or too low aquatic organisms will not be able to live and would die. Most aquatic life prefer a pH range between 6.5 and 9.0



Conductivity: Is the ability of water to pass an electrical current, measured in micro Siemens (µS/cm), and refers to the concentration of ions in the water. Ions come in the form of dissolved salts (ammonium, potassium, sodium) and the more ions (salts) that are present, the higher the conductivity.

Conductivity usually decreases with a rainfall event as the rainwater dilutes any salts in the watercourse.

Temperature: This expresses how hot or cold the water is. Knowing the temperature is important as temperature influences several other water quality parameters and can alter the physical and chemical properties of water. Temperature also determines what species live and thrive in a body of water.

Chlorophyll: Chlorophyll is a green pigment found in plants and algae and is an important part of the process of photosynthesis. Generally the amount of chlorophyll measured by the sonde equates to the concentration of suspended algae in the water column.