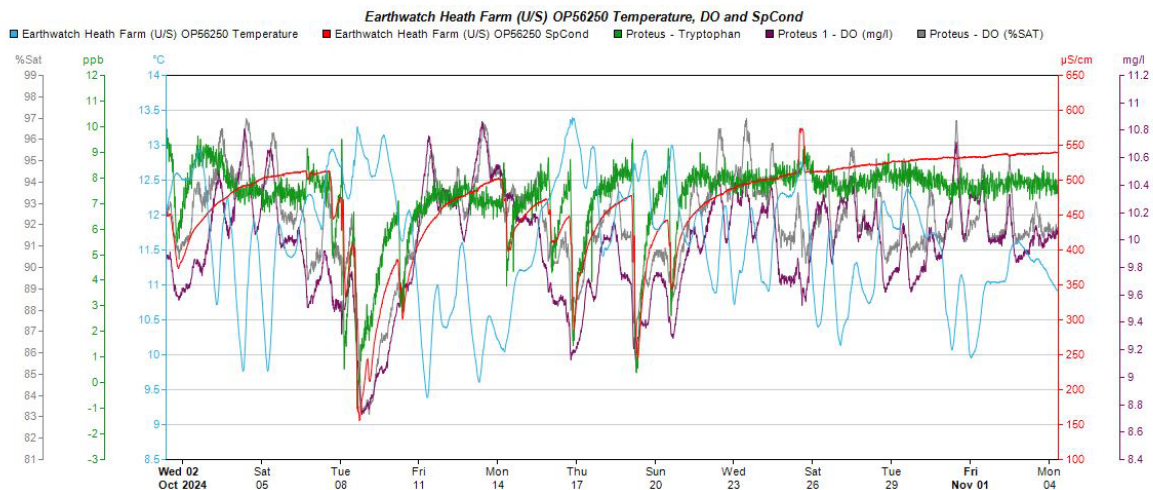


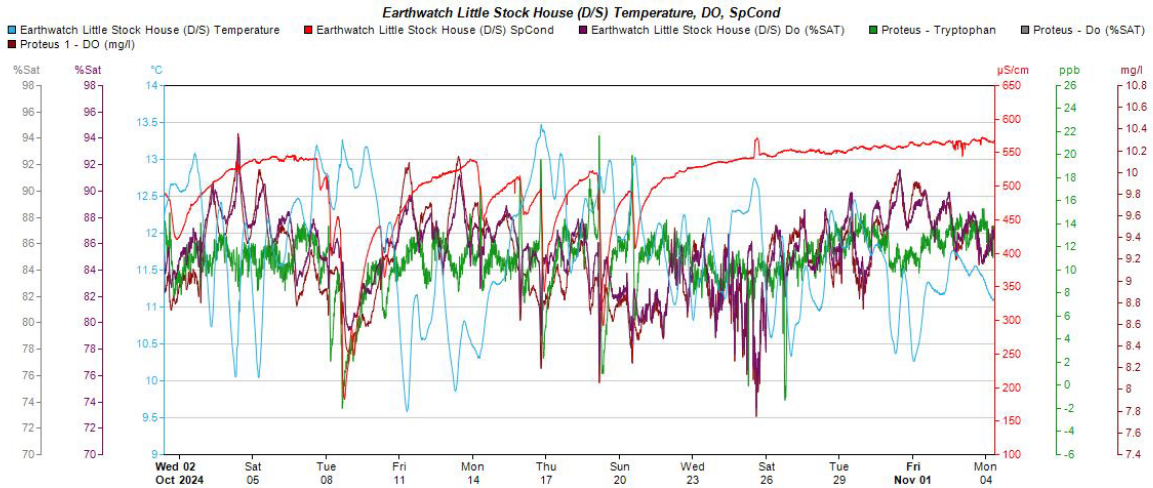
Sondes analysis October 2024

The Met Office report that “Ten English counties experienced their wettest September on record and for Bedfordshire and Oxfordshire, September 2024 was the wettest calendar month the counties have experienced, in a series dating back to 1836.” Although October has been drier and milder than average, storm Ashley blew through on the 21st October bringing more rain. The consequence has been that the Sondes have taken a bit of a battering from high flows, debris and sediment being washed down. There were even two occasions where the sondes couldn't be accessed for maintenance, due to high flows.

- 1) **Cornwell farm** directly below Chipping Norton STW. Unfortunately developed a fault on the 16th October, which initially showed as a flat battery. Despite the battery being removed, charged and replaced, the fault is still present. Discussions with RS Hydro and investigations are continuing to identify and fix the fault.
- 2) At **Heath Farm** (upstream of Milton under Wychwood STW), you can see temperatures are still mild for this time of year. If you follow the red-trace for specific conductivity, you can see that it drops following rain (rain has a lower specific conductivity, having had less exposure to minerals and soils), you can also see this dilution effect in the tryptophan trace and, more surprisingly, in the dissolved oxygen levels.



- 3) **Littlestock House** (downstream of MuW STW) followed a similar pattern, but with the added complication of MuW Storm Overflow Discharge being triggered by the rainfall on the 22nd September. Although the discharge has now stopped, the overflow ran from the 22nd September until a brief stop from the 3rd to the 8th October, and then ran continuously again until the 23rd October. One of the impacts being suppressing the Dissolved Oxygen levels at this point.



- 4) The impacts of the rainfall and sewage discharges are more acute downstream of **Moreton in Marsh STW** (called 'The Old Piggery' on the chart) a large proportion of the flow at this point is made up of the treated sewage effluent. Where the red trace drops to zero, the water levels have dropped overnight, as the STW discharge flow drops. Apart from the rainfall and low-flow events, you can see the specific conductivity rising as a greater proportion of the flow comes from land drainage.

As well as the sonde results, phosphate and nitrate samples taken at this point are consistently off the scale (phosphate >1mg/l and nitrate >10mg/l). The environment agency samples for this point are also consistently high.

