


## Catchment Monitoring

Water quality has been monitored continuously for over 18 months in the observation catchments and can be coupled with data from previous monitoring programmes to determine baseflow conditions and inform sampling strategies for targeted experiments. Monitored data provides background insight to the annual, seasonal and daily variation in-stream conditions for different sub-catchments with varying land-use, geology, soil type and human influence. Example sites from 2016 shown below.

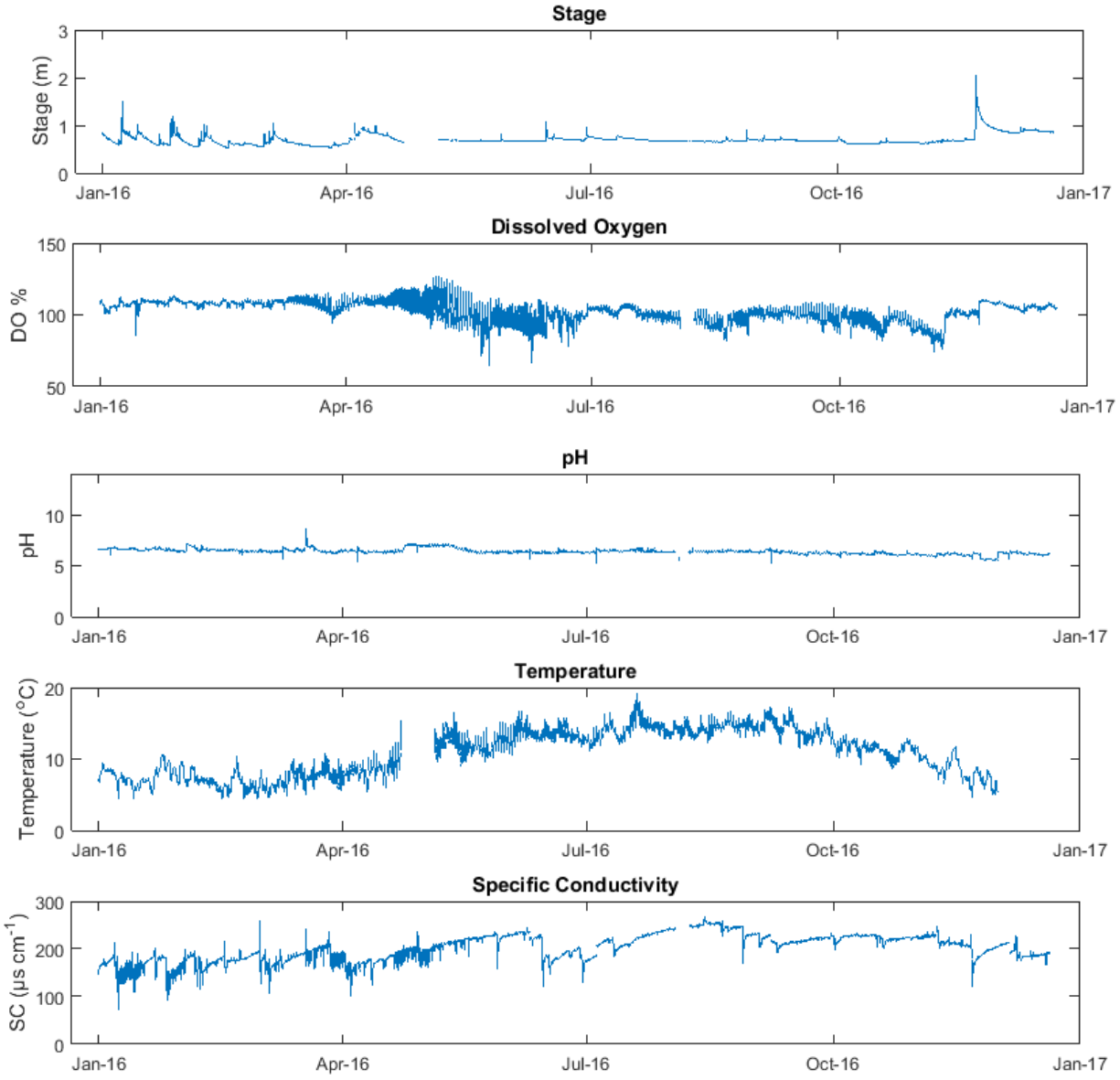


*Figure 1. In-stream monitoring at Bodnant for 2016*

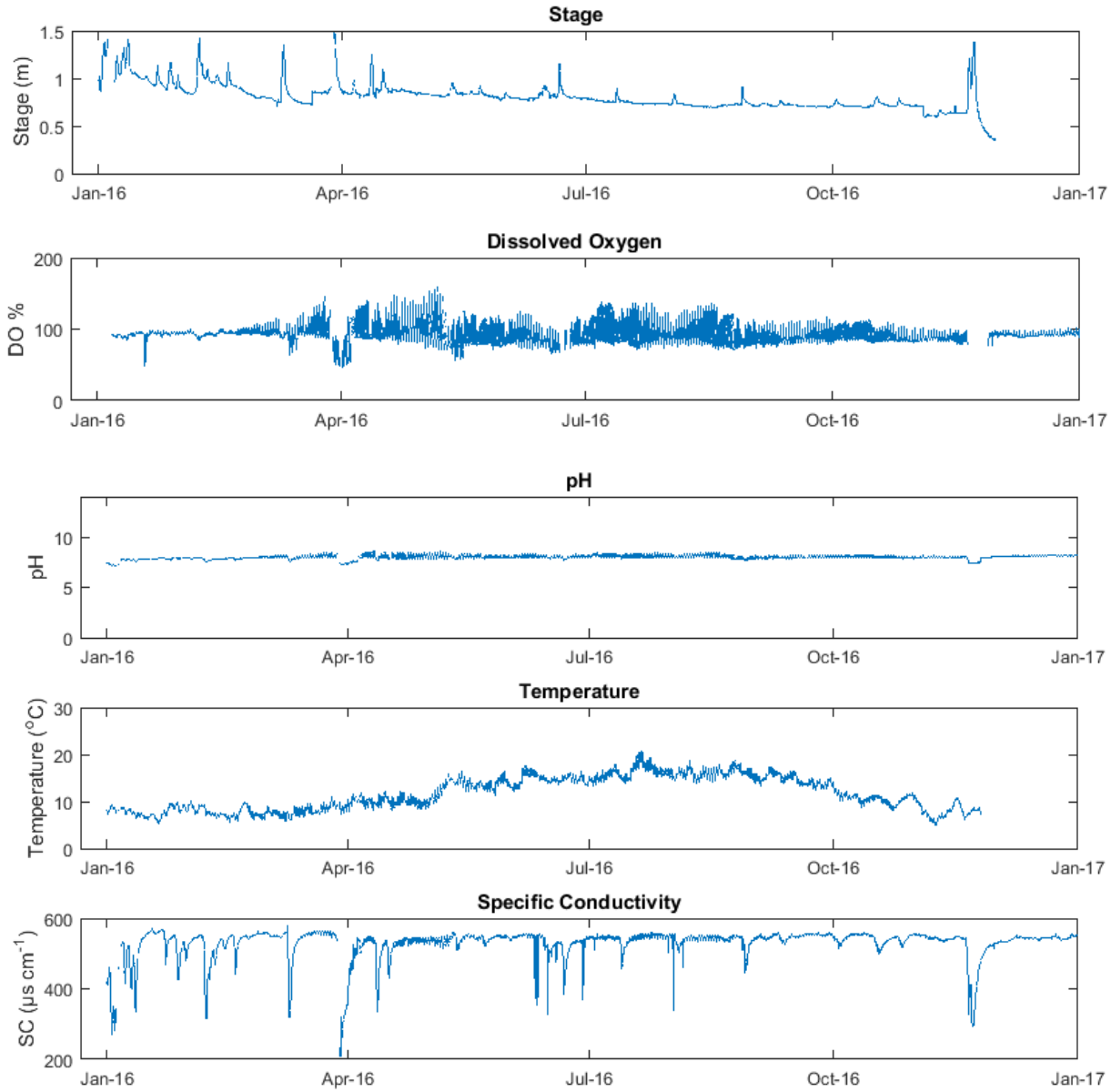


*Figure 2. In-stream monitoring Burcombe for 2016*

Seasonal variation can be observed. Stage shows the varying river level and storm events are easily seen. River level also directly affects the other parameters shown due to storm events, water flow pathways to the stream, local geology and soil type.




## Storm Sampling

Storm specific sampling has taken place to identify the movement of different chemicals through the environment. This changes over differing time periods and with consecutive storms according to the specific storm event characteristics, local environmental conditions and human influence. Investigation of the timing of chemical movement compared to a storm event helps identify the origin of such species and their pathway through the environment which in turn can be used to inform catchment management strategies.

*Figure 3: Storm event image with overbank flow*

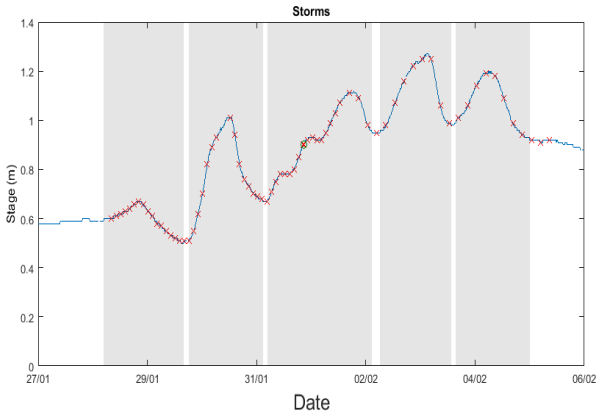


*Figure 4: Example storm event series showing river level (blue) and the red crosses representing where water samples were taken for analysis. Grey shading represents a defined storm for the purposes of analysis of subsequent storms.*

Samples are analysed for their bulk chemistry but also broken down into component parts to identify the varying substances in the environment and how these change over time. Work is still in the initial stages and results will be available in due course.