



## ENHANCING ENVIRONMENTAL COMPLIANCE THROUGH INNOVATIVE WATER MEASUREMENT SOLUTIONS

### BACKGROUND

Our client, a prominent water treatment facility, approached us seeking assistance in addressing challenges related to phosphate measurement in water. Operating in an environment where water contamination poses significant risks, they were under immense pressure to comply with strict regulations set by environmental agencies. With a commitment to environmental regulations, the client aimed to enhance their monitoring capabilities to ensure the safety and quality of water resources.

### CHALLENGE

The primary challenge arose from the need to engineer a mounting platform for the filtrax filtering system in a guarded area. To achieve this, we had to re-engineer the guarding to ensure both safety and accessibility. Additionally, modifications were necessary for the filtering lance and probe, including fitting additional clamps and enhancing structural integrity for routine maintenance purposes.

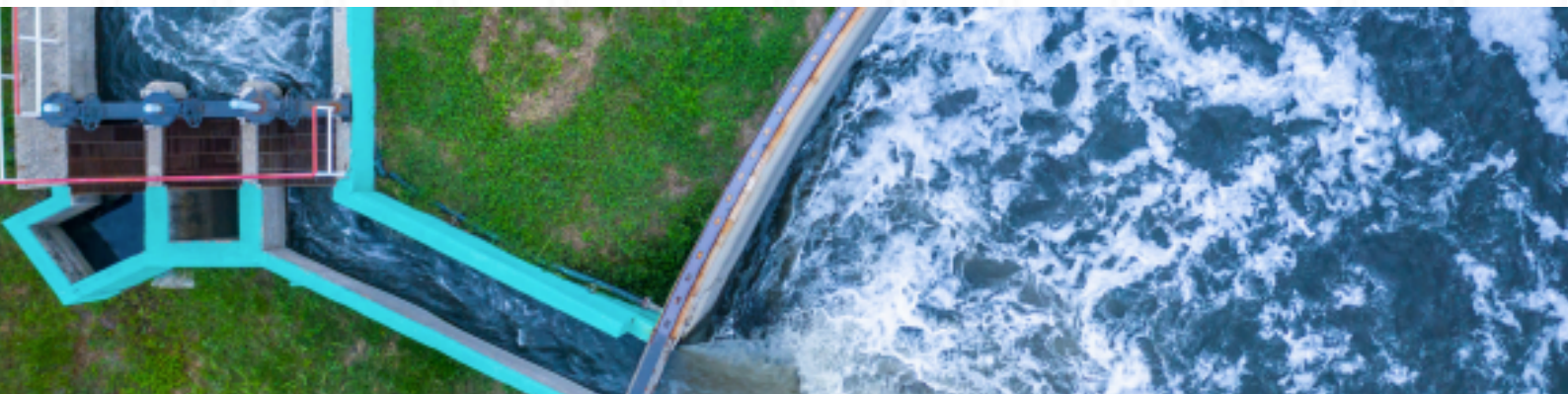
### SOLUTION

To meet the client's requirements, we proposed replacing the existing HACH Phosphax and sc1000 controller with a new filtrax system. Our solution included not only installing the new equipment but also modifying it to suit the specific site conditions. After implementation, rigorous testing and commissioning were conducted to ensure optimal functionality.

### RESULT

The successful installation and commissioning of the new water monitoring equipment enabled the client to obtain accurate and detailed measurements of water parameters. This data will allow them to verify compliance with consent limits mandated by environmental regulations. With the newly installed equipment, the client can safely discharge water within the prescribed limits, thus ensuring environmental responsibility and regulatory adherence.





## ENHANCING ENVIRONMENTAL COMPLIANCE THROUGH INNOVATIVE WATER MEASUREMENT SOLUTIONS

### CONCLUSION

Phosphorus in the form of phosphate ( $\text{PO}_4\text{-3}$ ) is an essential plant nutrient and is a major component of most fertilisers. Erosion and runoff can result in large amounts in bodies of water and lead to eutrophication, the depletion of oxygen from excessive aquatic growth. Animal die-off, toxins and foul water can also result. The Phosphax Sc when installed in combination with a Fitrax Sc sample filtration system and SC1000 Controller will produce accurate and reliable Phosphate analysis. This analysis plays a key part in the sites management of water quality discharging into receiving watercourses. This case study demonstrates our commitment to providing tailored solutions to meet our clients' unique challenges. By overcoming engineering obstacles and implementing advanced water monitoring technology, we have enabled our client to enhance their environmental compliance efforts. Moving forward, we remain dedicated to supporting organisations in achieving their sustainability goals while meeting regulatory requirements.

### EQUIPMENT SUPPLIED

#### Hach Phosphax SC Phosphate Analyser

Hach's digital on-site analyser Phosphax sc with weather proof housing is ideal for the high precision determination of orthophosphate concentration directly at the tank. The instrument offers a wide measurement range for a variety of wastewater and drinking water applications with detection limits as low as 0.05 mg/L and response time of less than five minutes including sample preparation. The Phosphate Analyser also features minimum reagent consumption and easy handling with analysis accessible at all times.



**Aaron Tebbutt**  
C & I Engineer

