

# Case Study

## Chemical Batching and Dosing Plant - Potassium Permanganate

### Background

Browns Aqua Systems were approached to design a batching and dosing system to be installed on an existing bunded area. The batching plant was designed to handle powdered potassium permanganate to be mixed and batched so that final dosing could be accurately dosed.

### Solution

A HDPE design of round tanks on a HDPE base was adopted to keep costs down for the client. Each tank was fitted with level transducers and floats for back up. A mixer controlled by a variable speed drive mixed the bagged powder into a known quantity of water. A chemical pump also plumbed in to circulate the solution

in the mixing tank. The chemical pump was then used to fill the day use tank at the rear and circulated in the day use tank to stop settling out of potassium permanganate. A dosing panel was fitted to the skid with duty standby pump for accurate dose rate to a lamella clarifier. The system controls were integrated into the existing site control system. The dose pump and lines were fitted with fresh water flush bypass to stop the blockages in the system when offline.

### Outcome

Operators found the plant easy to use with no blockages presented over the commissioning and handover period.

