



Image source: Murphy's on Main Street

**Our team was tasked with installing a complete new dosing system for orthophosphoric acid on a local water treatment site.**

The scope of works included a dosing skid with a duty/standby pump arrangement, storage tank, dual-contained hose, and replacement dosing lance, with full control and automation.

We were responsible for the full mechanical and electrical design, off-site fabrication, and on-site installation of the new orthophosphoric acid dosing skid. The dosing skid was designed and fabricated in-house and arrived to site complete and ready for installation.

We also supplied and installed a new bespoke local control panel within the plantroom.



## COMPLETION DATE

August 2025



## PROJECT TIMEFRAME

Onsite January 2025

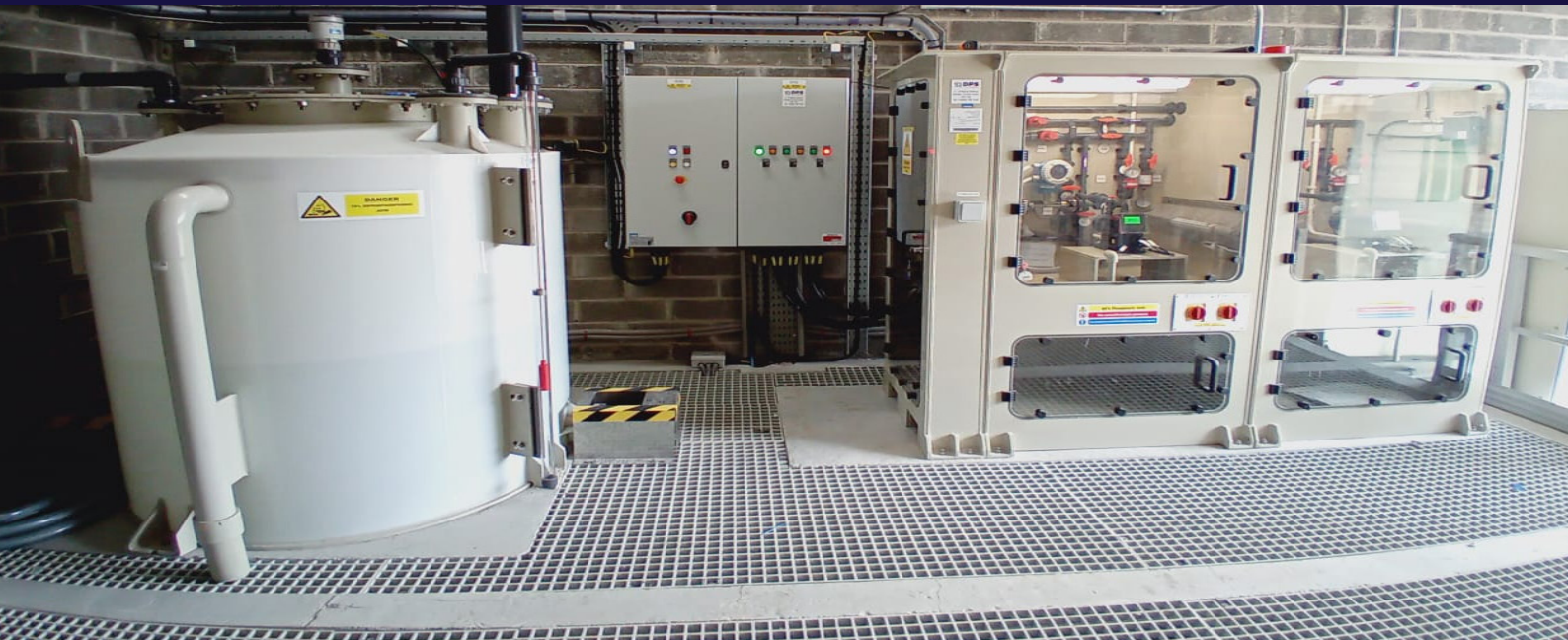


## DELIVERY MODEL

Design, Build & Installation

## TECHNOLOGIES/PARTNERS

- EPS
- IPS
- Silotank
- Grundfos
- R&R Engineering



## Project Scope

To facilitate the installation, our engineers removed the redundant ammonium sulphate dosing skid and, following the successful proving period of the new orthophosphoric acid dosing system, we also removed the now obsolete previous orthophosphoric acid dosing skid.

A new 1500 litre MDPE tank was installed within the plantroom and incorporated level probes & ultrasonic level sensors.

## Solving the Problem

The existing dosing system onsite had become obsolete, with multiple parts unavailable for replacement. The client therefore decided to upgrade to a new dosing system.

We designed the new system to operate without the previous dilution system, with all new components suitable for higher chemical concentration. The system was also designed to align with dosing systems installed across other NI Water sites, ensuring consistency and standardisation.

## Technical Specifications

- 1,500 litre storage tank (Silotank)
- Dosing skid including 2 No. Grundfos DDA Pumps, pipework and ancillary items
- Dual Contained Hose (IPS)
- Replacing Dosing Lance (Prochem)
- Bespoke Control Panel (R&R Engineering)





## Solving the Problem

The existing dosing system onsite had become obsolete, with multiple parts unavailable for replacement. The client therefore decided to upgrade to a new dosing system.

We designed the new system to operate without the previous dilution system, with all new components suitable for higher chemical concentration. The system was also designed to align with dosing systems installed across other NI Water sites, ensuring consistency and standardisation.

## Outcomes & Benefits

- A future-proofed orthophosphoric acid dosing system
- Fully integrated into site SCADA system
- Visual tank level display at external fill point
- Includes vacuum generator to enable straightforward priming of pumps/pipelines

We used our extensive knowledge and experience of installing specialised chemical dosing systems, liaising with all stakeholders to ensure the installation met the operational requirements of the site.

