

RBMP3 Phosphorus Compliance Programme

Delivering Standardised Modular Dosing Solutions for a Multi-Site Phosphorus Compliance Programme.

Problem Overview

Scottish Water's River Basin Management Plan (RBMP) has identified 30 wastewater treatment sites requiring tighter Soluble Reactive Phosphorus (SRP) discharge standards ahead of the 2027 regulatory deadline.

Many of the sites require chemical dosing to be introduced for the first time, creating the need for a standardised and repeatable solution that can be deployed efficiently across multiple locations throughout Scotland, including Fife, Aberdeenshire and West Lothian.

The programme presents several delivery challenges, including constrained timescales, limited available land for permanent and temporary equipment, existing site services, planning considerations, increased sludge production and growing supply chain pressures driven by wider DV2 investment programmes.

Key Benefits

- Standardised modular dosing solution developed for deployment across 30 sites
- Adaptable Timber Modular Build (TMB) and GRP kiosk designs suitable for a range of site requirements
- Early procurement strategy implemented to reduce supply chain risk and programme delays
- Up to 81% reduction in embodied carbon through the use of Timber Modular Build kiosks
- Supporting Scottish Water in achieving phosphorus compliance ahead of the 2027 regulatory deadline

“...the RSE team was fantastic to work with throughout. Their proactive approach, expertise, and collaborative spirit made a real difference”



Outcome

Supporting phosphorus compliance across 30 sites through a scalable, low-carbon and standardised delivery approach.

As one of Scottish Water's delivery partners, RSE is providing optioneering, design and construction services for a number of projects within a pan-Scotland programme to achieve tighter phosphorus discharge standards across 30 wastewater treatment sites.

From the outset, a collaborative delivery approach has been established between Scottish Water, RSE and other delivery partners. Through focused workshops, regular coordination meetings and early engagement activities, the project team has developed a shared delivery strategy centred on efficiency, standardisation and risk reduction.

RSE has played a key role in developing a standardised chemical dosing solution capable of being deployed consistently across multiple locations. Working closely with Scottish Water, the team has developed a suite of modular dosing kiosks using both Timber Modular Build (TMB) and Glass Reinforced Plastic (GRP) construction. The TMB kiosks are available in standard 5m³, 10m³ and 20m³ configurations, providing flexibility across a diverse range of sites while maintaining a consistent design approach.

Sustainability remains a key consideration throughout the programme. By assessing cost, carbon and programme impacts, RSE has identified significant benefits associated with Timber Modular Build construction. A standard 5m³ TMB kiosk is estimated to deliver up to an 81% reduction in embodied carbon when compared with a traditional GRP alternative, helping Scottish Water align regulatory compliance with wider sustainability objectives.

Recognising increasing pressure on supply chain capacity across DV2, RSE has also adopted a proactive risk-based procurement strategy. Early procurement of critical components, including chemical dosing kiosks, chemical tanks and local control panels, is helping to mitigate future supply chain constraints and reduce the risk of delivery delays.

The first phase of Timber Modular Build kiosks has already been manufactured and is ready for deployment, demonstrating the effectiveness of the programme's standardised approach. Through collaboration, innovation and forward planning, RSE is delivering a scalable and repeatable solution that supports Scottish Water's phosphorus compliance objectives while providing a framework for future environmental improvement programmes.

