

Modern thinking in wastewater treatment

Phosphorus Removal

How effective is your current effluent treatment?



Are you discharging outside of consent?

Kolina's electrocoagulation technology reduces a wide range of contaminants from wastewater, including Phosphorus, Nutrients, COD, TSS and metal ions.



Do you want to reduce your operating costs?

Kolina's fully automated effluent treatment plant requires minimal operation intervention with average consumption of 0.4 kWh /m³.

3

Do you want to eliminate the use of expensive chemicals?

Kolina's patented 'Electrocoagulation' technology is a chemical free solution designed to deliver a robust and efficient treatment alternative for wastewater treatment.



Is your site limited for space?

Housed in a modified 10', 20' or 40' ISO container, Kolina's small footprint reduces the physical impact on standard treatment plant / solutions.



Would you like to join our growing band of happy customers?

Do you need a solution to phosphorus in AMP7? Get in touch for more information.

#gobluebegreen



Our unique containerised systems offer patented Electrocoagulation technology. They provide a viable, chemicalfree alternative to treat a wide range of contaminants including nutrients (Phosphorus and Nitrogen), COD, SS and metal ions.

From forward-thinking standalone companies to global blue-chip groups, Kolina's team can deliver a comprehensive service including full project management, installation, training and maintenance.





Ready to go and modular, our solution allows for rapid delivery, installation and commissioning. A small footprint, enables greater utilisation of valuable operational space.



Cost effective and sustainable phosphorus removal system to allow utilities to meet AMP 7 targets.



Full automation and remote monitoring improves operational efficiency. Requires less energy and resources to manage the plant (versus other technologies).



KOLINA

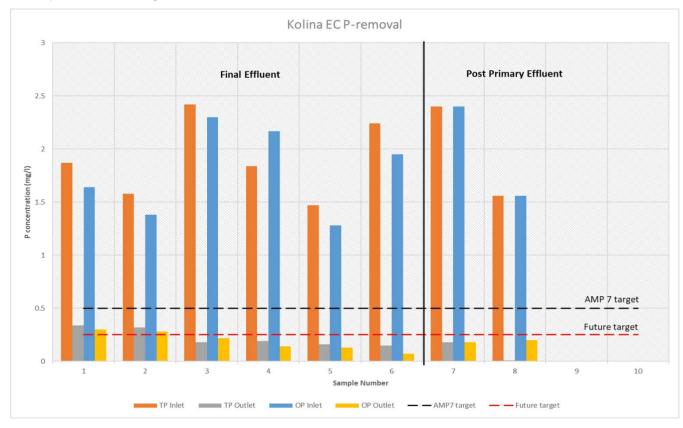
A chemical free solution that is environmentally considerate versus alternative treatment methods. Zero noise and odour pollution.

Phosphorus Removal Performance

Kolina's Phosphorus Removal plant was deployed at a UK Utilities Wastewater site to treat the final effluent stream and also the post primary effluent. It conclusively removed both Total Phosphorus and Ortho P to below the current (AMP7). Snapshot of data shown in figure below.

Key Parameters acheived:

- Kolina's EC removes Total Phosphorus and Ortho Phosphate from the final effluent post primary samples to <0.25mg/L. and achieved Ortho P as low as 0.01mg/L
- The treatment does not affect alkalinity (depletion) post-treatment.
- No release of Zinc and Chromium in the treated effluent.
- COD polished to <15 mg/L.





Install & Commission

Nominated project manager Formal sign-off and handover of plant Certificate of conformity Training of your operational team Daily progress report

Full Deployment & Support

Dedicated Sector Relationship Manager Planned & preventative maintenance 24 hr call out Performance monitoring Remote system access Monthly planning & review meeting

	Our Responsibility	Your Responsibility	Our Responsibility	Your Responsibility
Infrastructure/Civil Works		v		
Power		\checkmark		✓
Fresh Water		\checkmark		✓
Installation	\checkmark			
Commissioning	\checkmark			
Training	\checkmark		\checkmark	
WiFi Connection	\checkmark			✓
Change Plates	\checkmark			✓
Sampling	\checkmark			✓
Sludge Disposal		\checkmark		✓
Material changes*				✓

*Material changes in volume, process and ingredients to be advised by the client at the earliest opportunity.



How quickly can we install?

Our EC unit is manufactured to order with lead times normally being 6-10 weeks. This can be reduced subject to pre-planning and early commitment from the client.

Installation [1week]

Delivery, siting and connection of services to Plant, subject to readiness of client's site and infrastructure.

Commissioning [1week]

Testing of Plant and training of client's nominated employees.





How do we go about it?

Enquiry

Customer first shares situation, issues and challenges with the Kolina team.

Feasibility

Kolina meets customer team on site to conduct feasibility survey and reports on project timeframe and responsibilities.

Framework

Jpon agreement of Feasibility ssessment, Kolina completes Framework document ncorporating detailed project plan, ancillary infrastructure osts and terms & conditions.

Engagement

Subject to acceptance of Framework Plan - completion of Kolina's Supply, Support and Maintenance Agreement

Commissioning

Upon contract completion - manufacture, delivery, installation and commissioning of Plant in readiness for training.

Contact Us



John Ball Managing Director Tel: 07805 983358 johnball@kolina.co.uk





Dr Kwame Nkrumah

Technology Director Tel: 07572 536327 kwamenkrumah@kolina.co.uk



KOLINA



Kolina

Windsor House, Cornwall Road, Harrogate, HG1 2PW **t:** 0845 130 1939 **w:** www.kolina.co.uk

"Playing our part in reducing the impact on the worlds most carce resource"

KOLINI

LINA

177

Ο

KOLINA