



Bio-Bubble SBR Approved 88.5% Nitrate Reduction

The Challenge

The adverse effects of excess nutrients entering protected waters has resulted in obstacles being placed in the way of housing developments.

Local Authorities, The Environment Agency and Natural England have developed nitrate mitigation strategies in order to facilitate planning applications for both small and large planning developments.

Advanced Aeration's Bio-Bubble process IS the solution, offering unrivalled opportunities to achieve Nitrate results of <math><0.7\text{mg/l}</math> to reduce mitigation in an environmentally responsible and cost-effective way.

The process has been approved by Natural England with a conservative reduction figure of 88.5%. The approval consisted of submitting 2 years real life certified lab results.

The Bio-Bubble NBR

Bio-Bubble is a unique, compact and efficient Biological Nutrient Removal process which has been developed over the past 30 years to treat waste for sites off of mains drainage. The process provides industry-leading levels of Nitrate and Total Phosphorus (TP) removals with the added ability to remove Total Nitrogen (TN) in the same tanks, so avoiding significant cost.

A Completely Biological System

Bio-Bubble offer a reliable and robust solution to nutrient removal using purely biological treatment, with no requirement for additional chemical dosing. Bio-Bubble use natural bacteria and other microbes to consume or absorb harmful nutrients present in sewage. Some systems use additional chemicals to reduce the nutrients which can be as damaging to the environment as the nutrients themselves, not to mention the associated costs. As a completely biological solution Bio-Bubble offers superior results in a much more environmentally sustainable way.



Bio-Bubble system is approved by Natural England to reduce Nitrates by a minimum of 88.5%

A number of cost benefits include modular construction that is highly resistant to shock loads, a smaller footprint and consumes less energy than many other systems.

Bio-Bubble is effective all year round, with lower capital expenditure and lower operating costs. It uses time instead of physical space to separate the process steps, and also includes unique advanced engineering and control to enable it to guarantee biological nutrient removal in conditions where more traditional plants may struggle.



Bio-Bubble Key Benefits

- Industry-leading levels of Total Nitrate removal – approved by Natural England to a minimum of 88.5% reduction
- Ability to reduce Total Nitrogen (in the same tanks so avoiding significant cost (<10 mg/l))
- Pure biological treatment with no chemicals
- Effective all year round, capable of feast or famine situations
- Lower capital expenditure
- Lower operating costs
- Smaller footprint – cost saving
- Modular & scalable – above or below ground options
- High quality effluent capable of re-use without tertiary treatment
- Virtually odourless
- No corrosive by-products requiring further treatment
- Fully automated
- Remote monitoring & alarm notification system

Leading Specialists in Waste Water Treatment



Treated effluent sample

Activated sludge –
virtually odourless –
an excellent fertiliser

=

Significant reduction
in tanker costs



FOR FURTHER INFORMATION
PLEASE CONTACT US

A decorative graphic consisting of several overlapping, semi-transparent blue triangles and trapezoids, creating a dynamic, abstract shape on the left side of the page.

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ADVANCED
AERATION The logo for Advanced Aeration, featuring the word "AERATION" in a bold, serif font. The letter "O" is replaced by a stylized circular graphic composed of two concentric rings, one blue and one green, with a white center.