

WASTE WATER

Struvite Scale Control in Centrate Lines Case Study Luton, UK

*Hydro*FLOW® unit prevented further struvite scale formation in centrate lines, improving centrifuge efficiency and reducing maintenance at a wastewater treatment facility.

No	6m	↓	↑
New Scale Formation	Trial Duration	Maintenance Required	Centrifuge Efficiency

⇄ BEFORE & AFTER

BEFORE

- ✗ Severe struvite scale in centrate lines
- ✗ Frequent maintenance and pipe bypassing
- ✗ Scaling reappeared within weeks

AFTER

- ✓ No additional scale during trial period
- ✓ Reduced need for maintenance intervention
- ✓ Improved centrifuge performance



BEFORE

Heavy struvite scale in centrate pipe



AFTER

Centrate discharge after HydroFLOW®

OVERVIEW

Thames Water operates East Hyde Sewage Works in Luton, serving a large regional population. The site experienced severe struvite scaling in centrate lines from the primary centrifuge, requiring bypass systems and frequent maintenance of the centrifuge.

CHALLENGE

Severe struvite scaling in centrifuge centrate lines caused operational issues and frequent maintenance.

- Heavy struvite scale buildup in centrate line
- Frequent redirection using bypass pipe
- Scaling reappeared within weeks
- Limited access for internal inspection

SOLUTION

*Hydro*FLOW® unit installed on sludge feed pipe within adjacent building ceiling, selected for accessibility and power supply.

UNIT INSTALLED **1x *Hydro*FLOW® unit**	INSTALLATION POINT **Sludge feed pipe in ceiling**
APPLICATION **Centrifuge and centrate line**	TRIAL DURATION **6 months**



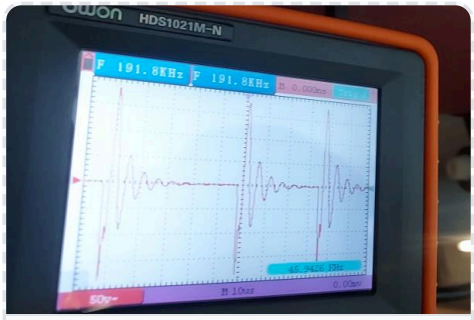
INSTALLATION

Unit on ceiling pipe



SITE

Centrifuge pipe system



MONITORING

Signal measurement

RESULTS

No New Scale Formation
Centrate line showed no additional scale during six-month trial.

Reduced Maintenance
Lower maintenance due to stable scale conditions.

Improved Efficiency
Centrifuge operated more efficiently after installation.

Extended Intervals
Longer service intervals achieved during operation.

System Stability
Stable scaling conditions maintained throughout trial.

Maintenance Savings
Purchase decision based on reduced maintenance costs.

KEY TAKEAWAY

Summary

*Hydro*FLOW® unit controlled struvite scaling in centrate lines over a six-month trial, preventing further buildup, reducing maintenance and improving centrifuge efficiency.

No	6m	↓
NEW SCALE	TRIAL PERIOD	MAINTENANCE

ADDITIONAL PHOTO EVIDENCE



BEFORE

Centrate discharge pipe showing scale and deposits



AFTER

Centrate discharge flowing after HydroFLOW® treatment



SITE

Centrifuge unit and centrate discharge system at site

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