Dynamic Modelling of Wastewater Treatment Plants

STOAT is a PC based computer modelling tool designed to dynamically simulate the performance of a wastewater treatment works. The software can be used to simulate individual treatment processes or the whole treatment works, including sludge treatment processes, septic tank imports and recycles. The model enables the user to optimise the response of the works to changes in the influent loads, works capacity or process operating conditions.

Using STOAT can help you to:

- Improve effluent quality, reducing risk of consent failures
- Reduce capital and operational costs
- Design treatment plants more efficiently
- Optimise treatment plant operation
- Troubleshoot operational problems
- Carry out integrated catchment simulation
- Train staff in best practices

STOAT contains a range of features which makes it the most comprehensive modelling package available, including:

- Models all common treatment processes
- Offers both BOD and COD models
- New models continually being added
- Integrates with leading sewerage and river quality models
- Easy to use, with user friendly interface
- Includes quick build wizard
- Support for batch simulations
- Allows simplified sewer modelling (SIMPOL)
- Easy data transfer to other packages

For enquiries about STOAT services please contact Jeremy Dudley
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For further details and information on WRc and its services visit our website www.wrcllc.co.uk.
STOAT - The first choice for wastewater modelling

STOAT includes models for:

- Storm tanks
- Primary tanks
- Wet wells
- Equalisation tanks
- Activated sludge - including oxidation ditch and – and P-removal systems
- Sequencing batch reactors
- Compartmented SBRs
- Tower activated sludge systems, e.g. Deep shaft
- Activated sludge settling tanks
- Trickling filters
- Trickling filter settling tanks
- BAFs
- Biological fluidised beds
- RBC’s
- Submerged biological contactors
- Disinfection
- Chemically assisted sedimentation
- Dissolved air flotation
- Chemical phosphorus removal
- Mesophilic anaerobic sludge digestion
- Thermophilic aerobic sludge digestion
- Sludge incineration
- Direct and indirect sludge drying
- Heat exchangers
- Sludge dewatering
- PID controllers
- Ladder logic controllers
- Instrumentation
- Detention tanks
- Combined sewer overflow
- “Black box” correlation based models
- Sensitivity analysis
- Calibration routines
- Optimisation routines
- Support for user-written models