



INDUSTRY BRIEF

Wastewater Treatment

Control systems that keep effluent within permit, whatever the weather.



Control system engineering, integration and analytics since 1997
ISO 9001 certified • Cyber Essentials • CHAS • Constructionline • SafeContractor

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YOUR PRIORITIES

What matters most

Wastewater works and sewer networks never stop receiving flow. They have to treat it to permit limits in dry weather and in storms, run pumping stations and storm tanks across a region, handle sludge and biogas safely, and show regulators and the public what was discharged, when and why.

Staying within permit

Final effluent has to meet permit limits every day, whatever arrives at the inlet, with monitoring and records that stand up to Environment Agency scrutiny.

Storm overflows under scrutiny

Pumping stations, storm tanks and overflow monitoring have to work together, keep spills to a minimum and report every event accurately to regulators and the public.

Energy and digestion

Aeration and pumping are the biggest energy users on a works, while digestion turns sludge into biogas. Good control cuts running costs and keeps gas areas safe.

Remote, unmanned assets

Networks of unattended pumping stations and small works rely on dependable telemetry, clear alarms and secure remote access to keep running safely around the clock.

WHAT WE WORK ON

Systems we engineer

- Inlet works, screening and grit removal
- Aeration and activated sludge control
- Storm tanks and overflow monitoring
- Sewage pumping stations and telemetry
- Sludge treatment and anaerobic digestion
- Biogas handling and energy monitoring

PLATFORMS WE WORK WITH

Siemens TIA Portal, S7 and PCS 7 • Rockwell • ABB
• Schneider • Mitsubishi • Beckhoff • Emerson
DeltaV • Honeywell • GE • WinCC, Ignition, AVEVA
(Wonderware), FactoryTalk, iFIX and Citect SCADA

What this means on your project

A works cannot stop taking flow. We plan changes around it with phased cut-overs, temporary control where needed and agreed fall-back positions, and prove new logic against a simulation of the process before it touches the plant. You get the design, code and method statements to run, maintain and report on the system yourselves.

STANDARDS

The standards that shape your project

Customers ask us first about standards. These are the ones we meet most often in this sector, and what they mean in practice.

Standard	What it covers	How we work with it
Urban Waste Water Treatment Regulations 1994	Collection and treatment of urban waste water in England and Wales, and the treatment standards works must achieve.	Process control and monitoring designed around the treatment levels and sampling your works must meet.
Environmental Permitting Regulations 2016	Permits for water discharge activities in England and Wales, including final effluent and storm overflow conditions.	Control, alarms and data capture that help you stay within permit conditions and report against them.
MCERTS	The Environment Agency's Monitoring Certification Scheme, including its requirements for self-monitoring of effluent flow.	Flow measurement, logging and data handling designed to fit the MCERTS arrangements at your site.
WIMES	Water Industry Mechanical and Electrical Specifications, used across UK water companies.	We work to the WIMES documents and company appendices your project calls up.
DSEAR 2002	Fire and explosion risks from dangerous substances, including biogas in digestion and gas handling areas.	Your hazardous area classification drives where panels sit and which ATEX equipment we specify.
IEC 62443	Security of industrial automation and control systems across their lifecycle, for asset owners, integrators and suppliers.	Its zone-and-conduit model and security levels shape how we design control networks and remote access.

The standards listed are those most often relevant to control-system work in this sector. Which apply to your project, and how, is agreed with you at specification stage.

The evidence you receive at handover

✓ Functional design specification	✓ I/O list and cause-and-effect	✓ Alarm list and HMI interface
✓ FAT and SAT records	✓ As-built drawings and source code	✓ Method statements for common faults

ABOUT MATRIX

Standards-led, fully documented control systems that you own and can support.

Matrix International (UK) Ltd has designed, built and supported industrial control systems since 1997. We take projects from specification and electrical design, through PLC, DCS and SCADA software, to installation, commissioning and long-term support, and we build the analysis software that shows how a plant is really performing. We are ISO 9001 certified and hold Cyber Essentials, CHAS, Constructionline and SafeContractor accreditation.

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HOW WE DELIVER

From specification to long-term support

01 Specify

Requirements, applicable standards and risks agreed with you up front, itemised into a clear plan.

02 Design

Electrical and control design, PLC/DCS and SCADA software, to your standards and ours.

03 Test

Logic proven against a simulated plant, then factory acceptance testing before anything reaches site.

04 Commission

Installation, commissioning and site acceptance testing, planned around your operation.

05 Hand over

Full documentation, method statements for common faults, and training for your team.

06 Support

Maintenance, upgrades and analysis for the life of the system, with 24/7 cover under a support agreement.

WHY MATRIX

Why customers choose us

Standards first

An ISO 9001 certified quality system, designing to the standards your sector demands, plus any you specify.

You own the system

Clear structure, open interfaces and complete documentation, so you can support it yourself or with any vendor.

Tested before site

Control code is version-controlled and tested against a simulated plant before factory and site acceptance.

Multi-vendor

Siemens, Rockwell, ABB, Schneider, Mitsubishi, Beckhoff, Emerson, Honeywell and GE platforms.

In it for the long term

For us a project is not finished until the control system is decommissioned. 24/7 support is available under a support agreement.

OUR PROMISE

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Talk to us about your project

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