



INDUSTRY BRIEF

Clean Water Treatment & Supply

Control systems that keep water
safe, compliant and flowing,
around the clock.



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

Clean water sites run day and night, many of them unmanned, under close regulatory scrutiny. Their control systems have to hold every treatment stage within limits, keep the network in supply, prove what happened and stand up to cyber threats, often on assets that have grown up over decades.

Water quality you can prove

Turbidity, disinfection and pH have to stay within limits at every stage, with alarms that act early and records the Drinking Water Inspectorate will accept.

Continuity of supply

Abstraction, treatment, storage and pumping must ride through faults, maintenance and power loss without interrupting customers.

Remote, unmanned sites

Works spread across a region rely on dependable telemetry, clear alarms and control rooms that see a problem before customers do.

Cyber security

As an operator of an essential service you must show NIS compliance, and control systems and remote access sit at the heart of that.

WHAT WE WORK ON

Systems we engineer

- Raw water abstraction and intake pumping
- Clarification, filtration and disinfection
- Chemical dosing and pH control
- Treated water storage and booster pumping
- Telemetry and regional SCADA
- Maintenance reporting and asset data

PROJECT EXPERIENCE

Water treatment and supply

Matrix delivered the software, electrical and SCADA system for a water treatment and supply scheme: storage reservoirs with sand filtration, pumps, valves, dosing and pressure systems, pH control, clarification, filtration and disinfection, with maintenance reporting built in.

What this means on your project

On a live works, supply comes first. We plan changes around it with phased cut-overs 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 and maintain 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
Water Supply (Water Quality) Regulations 2016	Drinking water standards, sampling and monitoring in England, enforced by the DWI (Wales has equivalent regulations).	Treatment control, alarms and data logging designed around the limits and records your compliance depends on.
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.
NIS Regulations 2018 and NCSC CAF	Cyber security duties for operators of essential services, assessed against the Cyber Assessment Framework.	Segmented networks, controlled remote access and documentation that support your CAF evidence.
IEC 62443	Security for industrial automation and control systems.	Its zone-and-conduit model and security levels shape how we design control networks.
SEMD 2022	The Security and Emergency Measures Direction for water undertakers.	Resilient control design and clear recovery procedures that support your emergency planning.
IEC 62682 / ISA-18.2	Management of alarm systems for the process industries.	Rationalised, prioritised alarms so remote operators see what matters.

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.

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

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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