



Creating Water Solutions for the Future

Technical Excellence and Innovation

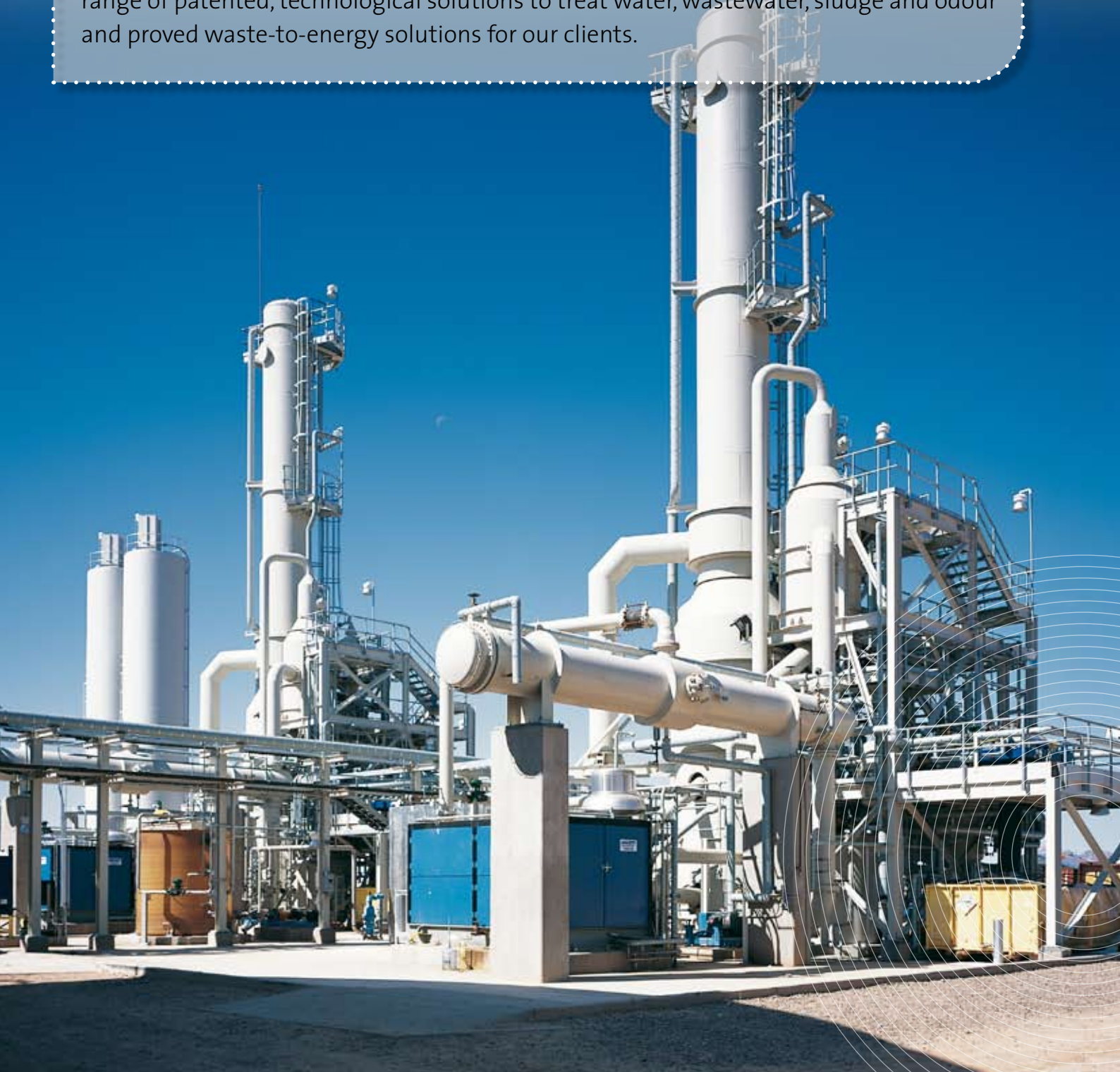


Solutions & Technologies

...Introduction to the company

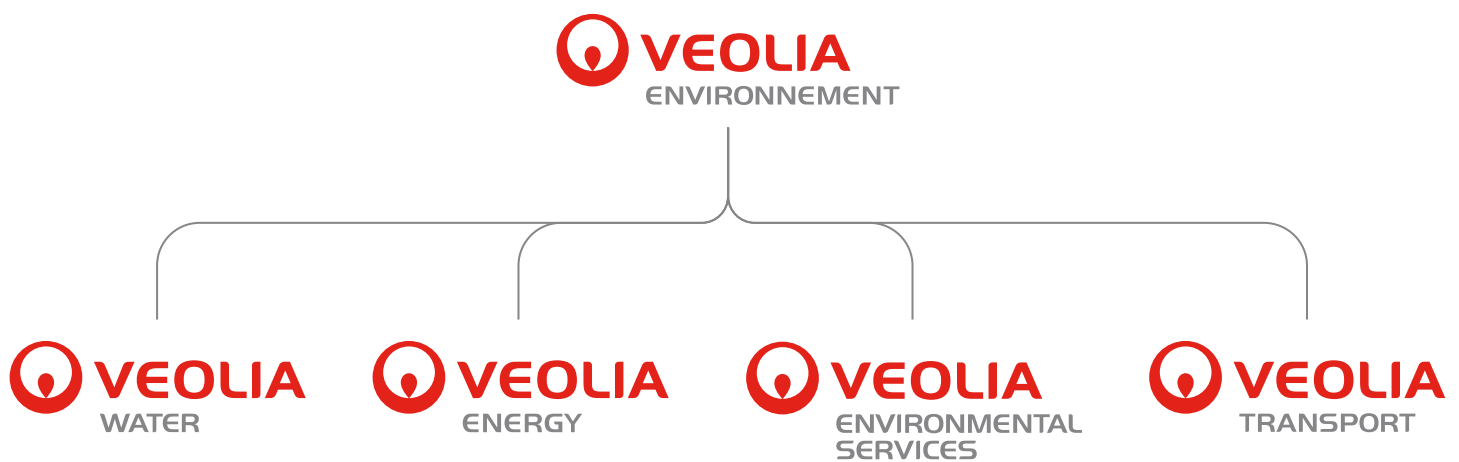
Creating water solutions for the future

Veolia Water Solutions & Technologies (VWS) is a world leader in water and wastewater treatment solutions. We provide an extensive combination of capabilities in the UK. A specialist in turnkey design and build projects, we offer water companies and industrial clients a unique portfolio of innovative and sustainable technologies, as well as a complete range of associated services to ensure the efficient and long-term maintenance of installed equipment. As well as traditional treatment processes, we have created a range of patented, technological solutions to treat water, wastewater, sludge and odour and proved waste-to-energy solutions for our clients.



• The bigger picture

We are part of Veolia Environnement (VE), a world leader in environmental services. VE provides customised solutions to meet the needs of municipal and commercial clients across the world in four complementary segments: water, environmental services, energy services and transportation. Our extensive network provides our customers with a unique opportunity not available from any other supplier. It also provides the peace of mind of partnering with a financially stable organisation.



• Proven solutions

Our performance is measured by the global satisfaction of our customers. Our technical creativity is reflected by a prestigious track record of extensive references in the UK and across the world, supported by operational experience. A partnership with VWS provides the unique benefits of technical excellence, innovation, reliability and a trusted partnership.

• Technical excellence and personal service

Our people include experts in engineering, research & development and project management. From the initial feasibility studies through to project completion, experienced teams ensure that your requirements are satisfied. Quality Management and Operational Procedures are continually monitored, reviewed and improved to ensure our clients receive a reliable, professional and quality service. The Quality Management System of VWS has been approved by Lloyd's Register Quality Assurance to a standard of ISO 9001:2000.

● Corporate values

► **Health & Safety**

Health & Safety is of paramount importance to our business. We are committed to actively ensuring the safety of our people, through prevention and training measures. Our vision is to be recognised by all stakeholders as a top performer in our Health & Safety records and approach. Our commitment is to maintain our priority on the management of Health & Safety, with zero tolerance for accidents and to meet and exceed Health & Safety legislation, codes of practice and guidelines.


► **Sustainable thinking - Innovating for the future**

Commercial and environmental obligations do not have to conflict. They can be complementary. Veolia Water Solutions & Technologies (VWS) has been achieving this balance through the delivery of safe, sustainable and cost-effective solutions for over 150 years. Veolia Environnement invests €150m every year into Research & Development, focusing on developing the most innovative solutions for our municipal and industrial clients, while considering the environmental challenges which we all face. Our goal is to develop sustainable and technologically superior solutions that balance the demand for efficient and cost effective technology whilst protecting the environment by looking at chemical and energy consumption, carbon emissions, odour pollution and safe guarding water quality. We operate an Environmental Management System (EMS) accredited to ISO 14001:2004.

► **Corporate social responsibility - Vision & Values**

As part of a large environmental group, we are always aware of our responsibilities and our influence upon natural resources. Therefore, we appreciate that the aim of treating wastewater is to lighten the impact of human and industrial activities on our environment. VWS is committed to the statutes and policies of our parent company, Veolia Environnement. Ethical values and sustainable development are embedded into the culture of each VE employee.

Our vision is to provide our customers with appropriate solutions to meet their needs and we succeed in this goal by following our values, which include customer focus, technical excellence, innovation and responsibility.



As a market leader in
water treatment our
policy is to always
focus on the future



...Municipal clients

• Understanding our customers

Our municipal clients are the regulated water and sewerage companies across the UK and their framework delivery partners. They all share the same objectives: to gain increased operational efficiency, reduce long term costs and partner with responsible suppliers for a sustainable future. We also understand the operational constraints that are placed upon water companies by regulatory authorities. We offer solutions to meet and exceed your requirements.

• Tailored solutions

Providing a bridge between traditional expertise and innovative new technology, Veolia Water Solutions & Technologies (VWS) provides a wealth of water treatment solutions and technologies. We are able to tailor our offering, depending on the project, from the installation of individual engineered solutions or packaged plants to complex design and build projects utilising VWS proprietary technologies.

• Project delivery

We offer our clients comprehensive and reliable project delivery which includes risk management, programme management, design, commissioning and operational support where required. Our proven experience, partnered with tested project management procedures, ensure the client receives successful contract delivery.

• Experience you can trust

VWS has a wealth of experience with numerous references in the municipal sector. Specialist knowledge is shared throughout the company and relevant solutions are delivered to our clients. Our experience in the design, construction and operation of treatment systems enables us to integrate environmental, technical and economic perspectives into our choice of technology.

• Dedicated support

Our experienced engineers and project managers are on hand to provide support from the initial stages of the design process through to project completion and our dedicated after sales service team provides the necessary support to ensure the technology is operating to optimum performance.



Meeting the diverse needs of our clients through innovative and sustainable technologies, as well as proven design & build capabilities

● Widest range of capabilities in the UK

We offer our customers a unique benefit. Our technology capabilities are unrivalled in the UK market. We provide an extensive portfolio of technologies and solutions to treat Water, Wastewater, Odour and Sludge. Below you will see a selection of our leading technologies.

► Sludge treatment

Thickening	Gravi-Tek®, Rotary Drum Thickener and Actidyn®
Dewatering	Belt Press (Dri-Belt®) and Fil-Tek
Digestion	Biotherm®
Thermal Hydrolysis	Biothelys®
Drying	INOS® and Biocon™
Incineration	Pyrofluid® and Biocon™
Hydrothermal Oxidation	Athos®

► Water treatment

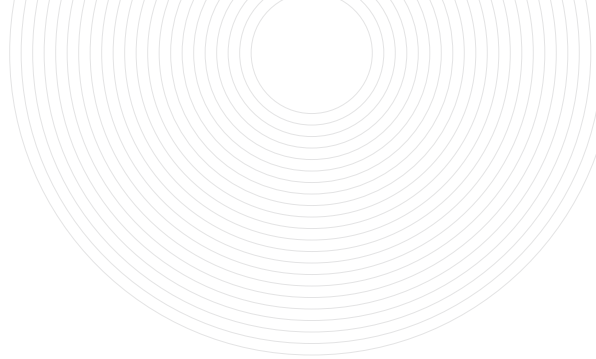
Fine Screening	Hydrotech Drumfilters, Hydrotech Discfilters™
Clarification	Multiflo® and Actiflo®
Media filtration	Filtraflo®, Opacarb®, Opafer®, Opafo®
Membrane filtration	Ultrafiltration/Microfiltration/Nanofiltration and Reverse Osmosis
Softening	Actina®
Arsenic Removal	Mangaflo®
Heavy Metal Removal	MetClean®
Chemical treatment	Hydrex®
Disinfection	Chlorination, UVaster®, Ozone disinfection
Desalination	MED (Multiple Effect Distillation) and Reverse Osmosis

► Wastewater treatment

Fine Screening	Hydrotech Discfilter™, Hydrotech Drumfilter and Idrascreen®
Settlement	Actiflo®
Flotation	Idraflot®
Grease Treatment	Biolix®
Aerobic: Activated Sludge	Ecobatch®, Azenit®, Biodenipho®, Biodenitro® and IFAS
Aerobic: Fixed Biofilm	Ecodisk®, SAF, AnoxKaldnes™ MBBR
Aerobic: MBR	Biosepe®
Aerobic Bio filtration	Biostyr®
Drum/Discfilter	Hydrotech Drumfilter and Discfilter™
Polishing	Actiflo®
Evaporation	Evaporator solutions
Filtration	Filtraflo®
Anaerobic	Biothane®

► Odour control

Chemical treatment	Aquilair®
Biological treatment	Alizair®
Analysis & Measurement	OdoWatch®



Extensive sludge treatment capability: innovative and flexible solutions to meet every requirement. Our world leading technologies are designed to achieve optimum sludge volume reduction and maximise the potential energy recovery. Our EOLIA™ software has been designed to identify the optimum combination of treatment processes and support sustainable decision making.



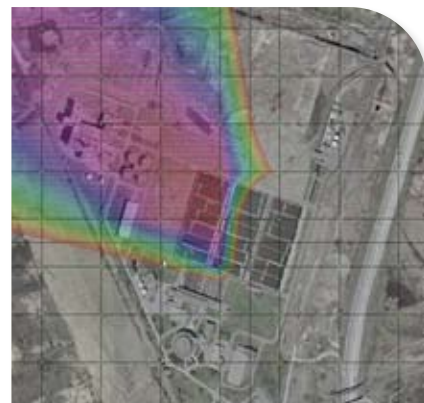
Veolia Water Solutions & Technologies (VWS) is a reliable supplier of innovative water treatment technology which meets the most demanding needs of our customers. We work with water companies to deliver reliable high quality drinking water solutions on the optimum whole life cost solution.



VWS offers proven wastewater solutions that meet the most demanding standards from our clients. With extensive references in the UK our expertise and capability in this area is unique.



VWS is an expert in the creation of odour-free treatment plants. Many years of research on the measurement and control of gaseous pollutants has enabled us to develop highly efficient air treatment methods to treat odour and minimise environmental impacts.



...Industrial clients

Understanding industrial water and effluent treatment challenges

Effective water and wastewater treatment is essential to all industrial clients. Water supply and effluent treatment have a substantial impact on the performance and cost of operations. Veolia Water Solutions & Technologies (VWS) draws upon an unsurpassed knowledge of traditional and innovative solutions to meet the operational and environmental challenges industrial clients face.

Delivering cost-effective solutions to meet environmental challenges

- ▶ Proven water and wastewater treatment solutions to ensure sustainable legislative compliance and provide attractive returns on investment
- ▶ Water recycling and reuse solutions minimising water footprint and capable of attracting financial incentives such as Enhanced Capital Allowances (ECAs)
- ▶ Renewable energy from co-products solutions minimising carbon footprint and capable of attracting financial incentives such as Renewable Obligation Certificates (ROCs)
- ▶ Zero Liquid Discharge and water recycling solutions

Our portfolio is based on a unique range of differentiating technologies supported by our Research & Development and competence centres. This is complemented by our proven delivery experience to offer our customers with environmental and health & safety legislation compliant solutions that consistently deliver to the expected performance standards in demanding industrial environments.

Selection of key technologies

▶ Actiflo®

Actiflo® is the most compact water clarification process available. This high-rate lamella clarifier utilises microsand as a seed for floc formation. The microsand provides surface area that enhances flocculation and acts as ballast, resulting in system footprints that are between 5 and 20 times smaller than conventional clarification systems of similar throughput.



► **Membrane Bio-Reactor (MBR) technology**

Membrane technology provides high quality water suitable for reuse or discharge to the natural environment, generating significant savings on disposal costs.

► **Anaerobic technology for wastewater and semi-solids**

Anaerobic systems offered by VWS have been specifically designed to treat concentrated biodegradable wastewater and co-products. Low energy consumption, small footprint and low quantities of excess sludge to dispose of are amongst the main benefits. More importantly, these systems allow the generation of energy rich biogas, which can be used to produce steam or renewable electricity and heat whilst providing further savings.

● **Innovative & sustainable solutions**

We provide customised and sustainable solutions for clients across a wide range of industry sectors including:

- Power
- Pulp and paper
- Food and beverages
- Metals
- Pharmaceutical
- Chemical
- Petrochemical

Veolia Environnement invests heavily in Research & Development programmes allowing the company to improve the performance and operation of existing systems as well as developing new solutions tailor made to industry specific applications.

● **Proven results**

VWS capabilities are backed up by more references in the UK and worldwide than any other water and wastewater treatment company. We have for example almost 200 industrial water reuse references and in excess of 500 anaerobic treatment references worldwide.



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