

Water Hygiene services Case studies



From the biggest picture to the smallest detail, no-one understands and embraces Water Hygiene and compliance quite like WCS Group

WCS Group is the leading water treatment and hygiene specialist and leads the water treatment division of Marlowe Critical Services. We operate through local service delivery teams covering every UK postcode and the Republic of Ireland. We have multiple accreditations which can be viewed at www.wcs-group.co.uk/accreditations-respository. We work extensively across NHS and Care Home sites, Leisure & Hospitality, MoJ and HM Prison sites, schools and universities, national retailers, manufacturing and industrial sites. We are the UK No.1 for FM service delivery.

We provide water systems and process management, life cycle management, Legionella control, ACoP L8 compliance and training which helps customers maintain clean, safe water, ambient temperature conditions and fresh air. We manage water distribution systems and primary and secondary disinfection including but not limited to chlorine dioxide generators and production, solid chemicals Ultralox40 and GENOX for water purification.

We conduct Legionella Risk Assessments, Air Hygiene Risk Assessments, Reviews, regular sampling and analysis, tank inspections, system flushes, cleaning and disinfections to ensure that HTHW, MTHW and LTHW systems are adequately maintained, free of corrosion, scale, bacteria and fouling.

We ensure tip-top hygiene standards are maintained and operating systems are optimised for maximum efficiency. We help manage critical assets (including water cooling towers and steam boilers) by extending service life and ensure that our customers remain wholly compliant.



At a glance

We have catalogued case studies by relevance in the following categories; Risk Assessment, Training, Hygiene (Water / Air), Sampling, Cost saving, Legionella, Remedial engineering.

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Major University (Wales)	• • • • • •
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Pub and national retailer	



Case study Major university (Wales)



Overview

This university handles over 12,000 students drawn from 120+ countries. It has an outstanding reputation for academic excellence, social responsibility, environmental efficiency, health and wellbeing (students, staff, facilities and community).

Seeking highest water and air hygiene standards, shared knowledge, uncompromising safety and continuous improvement, they required an outsourced specialist that would help meet strict operating, social and financial commitments and maintain university reputation.

Our approach

We created fit-for-purpose schematics, a photographic asset register and we assessed operating performance against 'best in class' benchmarks. Across all academia and accommodation buildings we;

- Perform risk and Legionellaassessments
- · Inspect water storage tanks
- Oversee monthly water temperature monitoring and systems control
- Flush, clean, de-scale and manage critical assets (heating, cooling, air systems)
- · De-scale and disinfect showers and sentinels
- Test, sample and report on bacteria and Legionella risk

Outcome

For over eight years, we have helped the university to meet its desired operating, social responsibility and financial objectives in respect of hygiene, cleanliness, operating efficiency, system control and safety.

Over 12,000 students enjoy clean, safe water and reliable air quality.

We oversee all Log Books, ensuring absolute and uncompromising safety and compliance. Currently, we are assessing how new state-of-the-art Remote Temperature Monitoring could be self-funding and drive new levels of operating performance.



Case study Leading NHS Trust Hospital (South)



Overview

This large NHS Hospital Trust put out a 5+2 year hygiene and Legionella control contract and were looking for new thinking and 'highest standards' hygiene risk management, operating efficiency, water safety and hygiene – across the entire estate, including hydrotherapy pools and high-risk critical care wards.

Our approach

We have a full-time team on site (Project Manager, Technicians and Water Engineers). They are supported by hygienists (water and air), Risk Assessors and a WCS Group Manager who sits on the Water Safety Group as a Principal Hygiene Advisor. We have ultimate responsibility for ensuring the entire estate maintains outstanding water safety and related hygiene and sets new standards for other NHS Trusts to replicate. We;

- Conduct risk assessments, reviews and Legionella risk assessments
- Sample and test for Legionella, Pseudomonas Aeruginosa, TVC, E-coli, Coliforms, Endotoxins
- Inspect, cleaning and disinfect water storage tanks
- Identify root cause of Legionella risk and remove equipment, dead-legs etc
- Provide comprehensive and refresher Legionella training
- · Manage all Log Books
- Introduced a new electronic asset management system
- Inspect, clean and manage all showers and TMVs

Outcome

The quality of water has been improved significantly.

The NHS Trust is progressively meeting its objective to be pioneers of new standards of water, hygiene and safety.

We are uncovering historic plumbing and assets which represent risk or potential risk and can be isolated and safely removed to increase system efficiency, lower operating costs and improve hygiene.

The Estate is on course to be outstanding in respect of its approach to water quality, hygiene and air quality.



Case study Hotel chain (500+ sites)

Overview

This hotel Group has 500+ UK sites, is building new sites and renovating many in a major refurbishment and upgrade programme. They wanted risk assessments and Legionella risk assessments to get full visibility of risk and a prioritised schedule of remedial works (major plumbing / engineering works) to pursue new, consistent and higher standards in water quality, hygiene and effluent management.

They also wanted to enhance the guest experience and cut unnecessary system operating expenditure (2006 to present).

Our approach

We conducted risk assessments for 270 prioritised sites within the first 180 days. We provided the business with full visibility of risk and flagged / prioritised remedial works to improve water quality, enhance water and air hygiene, reduce heating and cooling system inefficiency and more proactive management of boreholes. We also removed associated operating costs in conjunction with local councils. We now;

- Manage all water and air hygiene standards and compliance
- Clean and disinfect 27,000+ showers
- Monitor and manage 18,000 TMVs
- Handle tank inspections, re-lining cleaning and disinfection
- Identify, report, eliminate sources of bacteria and Legionella risk
- Provide due diligence on new-build heating / cooling and hygiene issues
- Train all staff in respect of Legionella risk



Outcome

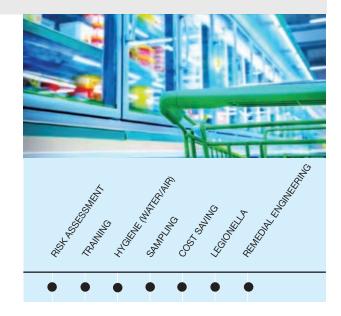
This hotel Group now operates an intelligent planned maintenance strategy (instead of a reactive response). It is safer, more efficient and cost effective. Water quality has been enhanced. Water Hygiene is tightly managed. Associated plant and equipment is audited and performs to pre-agreed KPIs recorded via an electronic Log Book system.

Significant savings have also been realised for effluent. WCS Group has taken advantage of new legislation effective October 2016 which makes some private pumping stations the responsibility of Local Authorities. This has saved the hotel in excess of £100,000 per annum on one site alone – with WCS Group researching and coordinating the transfers.

We assist the Group manage old assets, build and operate new hotels and maintain exacting hygiene in accordance with guidelines and business KPIs.



Case study National fashion and food retailer



Overview

This well-known retailer has 900+ UK stores and cafes and is known for quality, own brand food, choice and value. They required Legionella risk assessments, management and control across their entire UK portfolio of retail stores, cafes, offices and distribution centres.

Our approach

For over 6-years we have provided;

- Monthly visits
- Temperature checks
- · Water sampling, testing and analysis
- Legionella risk assessments, management and control support
- Tank inspections, cleaning and disinfection

Outcome

This UK retailer enjoys a long heritage and reputation for quality and a consistent customer experience. Water quality and hygiene is no exception and we have helped to ensure strict adherence to HSG 274 and ACOP L8.

As a leading UK supply-chain partner, we exceeded the KPIs mutually agreed with the customer awarding us a 98% approval rating.



Case study Large UK University (North)



Overview

This university has over 30,000 full time students, almost 8,000 staff, eight faculties and is ranked top UK university for environmental impact. It is a top-ranking student experience institution (Times Higher Education Research).

Requiring exemplary water hygiene and exacting Legionella risk management and control, a large team of in-house managers handle academia buildings, a £510m investment programme, but all residential buildings are managed by an outsourced hygiene specialist.

Our approach

We've handled Water Hygiene, Legionella risk and control, training and continuous system improvement for this university since the 1990's. We monitor and audit the in-house maintenance team's management of all academia buildings and lead residential building hygiene through;

- · Regular risk and Legionella assessments
- · Inspection of water storage tanks
- · Monthly water temperature monitoring
- · Flush, clean, de-scale of critical assets
- · De-scale and disinfection of showers
- Weekly flushing of sentinels not used every week
- Test, sample and report on bacteria and Legionella risk

Outcome

For almost 30 years, we've assisted the in-house team plan, take temperature and other audited readings and intelligently manage hygiene. There has never been a safe water or Legionella incident on the campus.

Our eLog Book system is used to store ALL data including non-related fire, security, asbestos, lift etc records.

Students enjoy safe, reliable water hygiene and we step in over Christmas when the in-house staff are on holiday and flush academia building sentinels according to L8 guidelines.



Case study Residential and Care Home Group (71 sites)

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Overview

This is a fast-growing residential care, nursing care, dementia care, palliative care, respite and resident-for-a-day Group. The new Head of Property Services (former Hotel Property Services Head) wanted to change the bundled FM arrangements and have direct access to a new outsourced hygiene specialist.

We were brought in having handled hygiene for the Hotel Group to provide transparency over risk management and compliance.

Our approach

Our 100-day plan enabled us to perform risk assessments and Legionella control reviews across the portfolio and identify sites with the greatest risk. We flagged remedial work by priority and laid the foundations for optimised Legionella risk and hygiene control standards across the Group incorporating;

- · Regular risk reviews
- · Inspection of water storage tanks
- Monthly water temperature and mixer tap monitoring
- · Flush, clean, de-scale of critical assets
- · Disinfection of showers
- Test, sample and report on bacteria and Legionella risk

Outcome

The customer now has full visibility of risk across the portfolio.

The customer has a prioritised and justified list of remedial major plumbing works (which we carried out) and a plan to bring the Group up to 'best in class' sector benchmarks.

As part of this, we have trained 250+ site managers and maintenance staff with Legionella Control for Everyone (WCS Group courses across the UK).



Case study **Leading serviced office provider**



Overview

This serviced office, business meeting room and virtual office provider is known for stunning offices, breath-taking architecture, flawless service and superb interior ambience. They employ a discerning FM but required additional independent checks and specialist hygiene advice to ensure that systems and water hygiene match the reputation and exemplary operating KPIs.

Our approach

For 28 sites in London, we conducted risk assessments and have put in place a management programme to ensure safe water, fresh air and Legionella risk management.

We make monthly visits to sample and test water.

We update and manage Water Hygiene and Closed Systems to ensure constant, reliable ambient heating and cooling.

Outcome

The customer has no problems or concerns with the quality of water, water hygiene, air hygiene or reliable heating and cooling.

They know that operating systems are optimised and well-managed and conform well above expected (mandatory) KPIs and in line with their business objectives.

We review new build and refurbished office plumbing works and carry out remedial engineering work to ensure all systems maintain exemplary hygiene and standards of control.



Case study Top-10 UK University (South)



Overview

This university has over 15,000 students and a reputation for excellent facilities, teaching, accommodation and leisure on campus with continually improving current spaces and investment in new buildings.

Water Hygiene is managed by a large in-house team of estate managers, maintenance and engineers. The university required a rapid response tank cleaning service to keep them compliant.

Our approach

We mobilised a rapid response tank inspection and cleaning team to ensure continued compliance with HSG 274. In addition, over successive years, we've supported the internal team with:

- Risk assessments, reviews and independent Legionella risk assessments
- Shower cleaning and disinfection for residential buildings
- Audits to validate internally-taken record keeping and essential hygiene maintenance
- Legionella (refresher) training (mandatory under ACoP L8)
- Remedial engineering works (tank re-lining etc)

Outcome

The university is virtually autonomous in managing hygiene but maintains exacting compliance with timely independent cleaning, audits, reviews and assessments.

The large in-house team draw on shared knowledge and best practice and rely on independent response from a hygiene specialist they trust and have got to know.

An eLog Book helps us monitor and audit assets and data to ensure optimal asset performance, total safety and reliable compliance.



Case study NHS Hospital Trust (South)



Overview

This south of London NHS Foundation Trust provides acute hospital services for one major site and numerous health services locally. They required help developing a formalised Legionella risk and control policy and on-site engineering expertise to deal with assets showing signs of heightened Legionella risk.

Our approach

We assisted by supplying a 'best in practice' Legionella framework to fully conform to CQC, HTM, HSG 274 and ACoP L8 compliance guidelines and match top benchmarks we have seen in other NHS Trust environments.

We supplied a water treatment and hygiene engineer to work on-site for an extended period and helped identify and eradicate high-risk assets which would have caused the Trust to miss its KPIs. We also help through;

- Risk assessments, reviews and independent Legionella risk assessments
- Sampling for Legionella, Pseudomonas Aeruginosa, TVC, E-coli, Coliforms, Endotoxins
- · Tank inspections, cleaning and disinfection
- Removal of dead-legs, isolation and decommissioning of surplus assets that represent potential health risk
- · Legionella (refresher) training
- Remedial engineering and water treatment support to improve water safety

Outcome

This NHS Foundation Trust fully conforms to CQC, HTM, HSG 274 and ACoP L8 and is transparent and seen to fully comply.

Site, Maintenance, H&S and Duty Holders are all up to date on Legionella awareness, risk management and safety.

Sources of Legionella and under-utilised assets have been document, isolated and removed to reduce risk, lower operating costs and proactively manage Legionella risk.



Case study Celebrity chef restaurant group



Overview

A group of restaurants and pubs owned by a well-known celebrity required a strategic review of all hygiene and Legionella control practices and a re-set. Ranked 'best restaurant in the UK', the owner wanted hygiene standards and practices elevated to match the standards of the food and overall dining experience.

Our approach

We carried out risk assessments across the estate and Legionella risk assessments.

We sampled and tested water for quality, Legionella, Pseudomonas Aeruginosa and E-coli and identified equipment and sources that represented the greatest potential risk for bacteria growth.

We reported, justified and prioritised remedial works.

We recommended system cleaning, some steam (extract) cleaning and a disinfectant works programme required to fulfil and maintain the business objectives.

Outcome

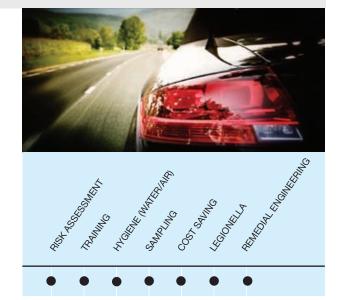
All work was undertaken within a few weeks. The owner and site managers now have a detailed appreciation of hygiene and operating risk against assets and specific sites.

Business managers knew how best to maintain uncompromising hygiene, health and safety and have embedded this knowledge within daily and weekly operating practices.

The business now has a comprehensive Legionella control policy. It has reduced the risk of fire and fully conforms with TR19.



Case study Car manufacturer UK dealers



Overview

This car manufacturer decided to move their hygiene management for UK dealerships and offices away from a general contractor and appoint a hygiene specialist. They wanted an exceptional service, full sight of individual site risks and bespoke reporting through UK Cluster Managers to satisfy H&S managers.

Our approach

We reviewed Log Books and discovered that pre-existing sampling had been too onerous and unnecessary. We migrated the Log Books to an eLog Book system to pool intelligence and enable personalised reporting in line with the customer's requirements. We;

- Carried out annual risk assessments and Legionella assessments
- · Maintained temperature checks
- Optimised sampling and testing
- Introduced and worked alongside a new FM on related works
- Reviewed, managed and improved Closed Systems
- Trained staff and Duty Holders with refresher Legionella training

Outcome

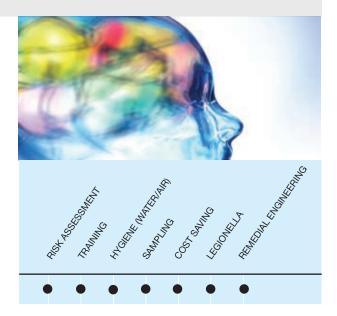
The customer was able to get full, bespoke visibility of risk and Legionella control in accordance with its objectives.

Sampling routines were changed saving time and money.

WCS Group online Log Book provided pooled intelligence, better data and more transparency.



Case study Mental healthcare provider



Overview

A Health and Safety Manager at a national Group of mental healthcare centres wanted to independently audit and sense-check their in-house maintenance team's outputs and Log Books. They also wanted to support their outsourced HVAC supplier with expert hygiene assistance and Legionella risk assessments.

Our approach

We reviewed all Log Books and audited temperature data recorded by in-house maintenance staff to provide peace of mind. We provided Risk Assessments Reviews and Legionella Control Assessments to corroborate and confirm sound hygiene compliance. We also supported the in-house team through;

- · Inspection of water storage tanks
- Flush, clean and de-scaling of critical assets
- · Disinfection of showers
- Test, sample and reporting on bacteria and Legionella risk
- · Review and signing of Log Books

Outcome

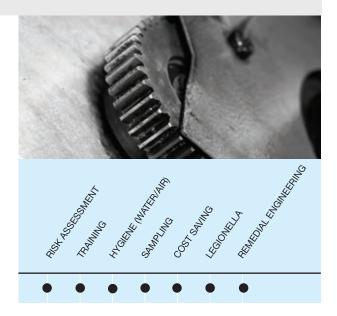
The customer now has full sight of hygiene risk and Legionella risk across the portfolio.

We assist in new-build risk management and due diligence before acquisitions are made. We've incorporated Secondary Disinfection on one newly acquired site to deal with Legionella risk.

We assist in 6-weekly review meetings to ensure the customer has full sight of risk, Legionella control and hygiene issues they care about. We also support the in-house team with major plumbing engineering services that are BSRIA and HSG 274 compliant and may impact CQC rating.



Case study Gear engineering company



Overview

This industrial gear engineering firm services customers across marine, defence, power, industrial and automotive markets. Their UK site has undergone significant modernisation and no-longer requires shower and domestic water services on the scale needed previously. They require water hygiene support and compliance.

Our approach

Water Hygiene needs are modest. Legionella risk management and Water Hygiene is outsourced to WCS Group. We;

- Attend site taking monthly temperature readings
- · Keep Log Books updated and audited
- · Service TMVs and clean and disinfect showers
- Monitor and report any potential Legionella risk (water tanks have been removed in favour of plumbing direct to mains water)
- Monitor the HTW system
- Ensure Legionella awareness and mandatory refresher training is up to date

Outcome

Whilst the UK site has far fewer employees and contractors than in previous times, water quality and safety is tightly managed. We ensure that all employees benefit from clean, safe water, reliable temperature and report on air quality.

We ensure that the site remains fully compliant for ACoP L8 and operates to pre-agreed business KPIs.

WCS Group also handles rather more demanding water treatment on the site including management and control of water cooling towers and steam boilers.



Case study **HM Prison facility**



Overview

A prison facility in the south of England with an antiquated Victorian water distribution system and multiple plumbing add-ons, posed a control challenge. The incumbent facility service provider required a water hygiene risk assessment and tailored advice for temperature control, water system management and on-going Legionella support. Water testing had revealed elevated counts of bacteria and biofilm formation and it was clear that existing water hygiene wasn't particularly adequate.

Our approach

We conducted a thorough Water Hygiene risk assessment and identified new asset and water distribution system risks and water testing sampling points to properly gauge water chemistry and microbiological activity. We demonstrated the heightened risk to health owing to poor flow and confirmed the need for secondary water disinfection to:

- Meet identified water distribution system condition risks
- · Purify water
- Destroy biofilm and guard against reformation
- · Reduce bacterial counts
- Protect against scale and corrosion
- Restore potable water to acceptable standards

Outcome

Incoming mains water is now dosed with a chlorine dioxide system which cleans and disinfects water throughout the distribution system. This reduced the requirement on temperature control to manage Legionella while lowering energy usage and related operating costs.

- Chlorine dioxide is produced safely and stably on demand on site
- The water system was purged of biofilm and microbiology
- Full system sterilisation was completed within 10 weeks
- · Total Viable Count (TVC) of bacteria is clear
- The site complies to BSRIA guidelines
- The site has a demonstrable Legionella control programme
- Water heating and related energy costs are down 35%+
- · Water sampling costs are down 50%
- · Potable water is safe.



Case study Pub and national retailer



Overview

One of the hotels in a national pub / hotel chain based in South England had a Health and Safety inspection which identified a possible Legionella threat. We mobilised a specialist Water Hygiene risk assessment SafeCare team member to work with the hotel and Health and Safety team to address the issue. The incident prompted the organisation to review their policies and procedures on Legionella risk and control and develop a national programme to manage compliance.

Our approach

SafeCare is our risk assessment (Water, Air, Noise) specialist resource that works nationally across every postcode providing robust, independent risk audits, management and control advice to ensure safety and compliance. We drew up a water hygiene programme incorporating shower head cleaning, tank inspections, Legionella risk assessments and remedial works designed to ensure compliance and peace of mind.

In a number of the hotels (including the South of England site), we identified the need for secondary disinfection and installed Chlorine Dioxide (ClO2) dosing units as a secondary legionella control method. We also installed "Scale-watcher" across a number of sites to prevent scale deposition in calorifiers.

We also rolled out monthly temperature checks to all locations and took on additional pump servicing work in the pub areas of the chain in accordance with customer KPIs and priorities.

Outcome

The national pub retailer now has a robust Legionella programme in place with consistent standards extending across all the sites in the group. There have been no further Legionella incidents or concerns in the ten-year period since a WCS Group company has managed the contract. The customer's General (site) Managers can focus on their core business – serving guests, safe in the belief that water hygiene is the hands of reliable industry experts and both demonstrably safe and compliant.



A Marlowe Critical Services company

WCS Group is the 'Water Treatment and Hygiene' division of the Marlowe Critical Services Group owned by parent Marlowe plc.

Marlowe plc provides one access point for specialist 'highest standards' across;

All nine divisions can be accessed singularly or in combination.

The Group shares many common customers and collectively employs 2,200+ specialists, servicing around 30,000 customers.

Compliance. Assured.

WCS Group core services		
WATER TREATMENT	WATER HYGIENE	WATER ENGINEERING
Cooling Tower Systems	Legionella Risk Assessment and	Design and specification for
Evaporative Condensers	Water Hygiene Surveys	water treatment
Steam Boilers	Monitoring / Inspection Contracts with	Installation
Low and Medium Pressure Heating Systems	Log Book Management	Reverse Osmosis plant
Chilled Water Systems	Remote temperature monitoring	Cooling Tower maintenance
Pre-commission Cleaning	Cleaning and Disinfectant Works	Plumbing and remedial works
Pre-Treatment Plant, Dosage, Chemical	Remedial Works	Installation of water softeners
Cycle and Control	Asbestos Risk Assessment	Pre-treatment plant
Remote data logging		Closed system chemical cleaning
Web-based electronic log book	AIR HYGIENE	Waste water management
Swimming pools and Spas	Air Hygiene Risk Assessment Survey	Re-purposing and harvesting of water
	Indoor Air Quality Monitoring	***************************************
WASTEWATER	Cleaning and Treatment of Air Handling	a ASBESTOS
Water Recycling	Equipment	Asbestos Surveys
Water and Wastewater equipment		Air Monitoring and 4 Stage Clearance
supply and service	TRAINING SERVICES	Asbestos Bulk Sampling and Analysis
Wastewater Treatment plant design /	eLearning	Fire Risk Assessment
supply / install	Legionella Control Training	CDM
Wastewater equipment hire	WCS Group / IOSH / City & Guilds /	Principle Designer
Industrial Effluent monitoring and	COSHH training	Construction Site Safety Audits
optimisation	On-site training for bespoke needs	Contractor Assessment

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For a full list of our accreditations please visit: www.wcs-group.co.uk/accreditations-respository