

CASE STUDY

ENVIROGEN GROUP'S PURIFIED WATER SOLUTIONS POWER MOBILE UNITS TO SLASH HOSPITAL WAITING TIMES



Hospitals are under increased pressure to meet the needs of a growing and ageing population. This trend is seen in endoscopy as preventative medicine spearheads a non-invasive approach, but it is a trend seen across departments. Increased numbers and types of operations are putting more pressure on Central Sterile Services Departments (CSSDs) and Endoscopy Decontamination Units (EDUs). To add to this burden, many of these departments are struggling with limited space and equipment that is coming to the end of its natural life.



In the battle to keep waiting lists under control, many hospitals are turning to temporary, modular, and mobile units, both to continue services during refurbishment and to run alongside existing departments to reduce waiting lists. Vanguard Healthcare Solutions is pioneering this technology, providing complete mobile CSSDs and EDUs powered by Envirogen Group's purified water solutions.

A NEW APPROACH TO STERILE SERVICES AND ENDOSCOPY REPROCESSING

Vanguard's mobile and modular CSSDs and EDUs are used in hospitals across the UK and Europe, providing reliable, temporary solutions to meet the exacting regulatory standards. "Hospitals rent our units to meet a range of requirements," explains Steven Peak, Chief Operating Officer, Vanguard Healthcare Solutions. "Many internal EDUs and CSSDs are reaching the end of their natural life and need upgrading. For a large hospital, this can take upwards of six months.

But the demand for operations and clinical investigation doesn't stop while the refurbishment or construction takes place. Rather than place strain on other departments or temporarily relocate complex equipment, hospitals are choosing to invest in our temporary mobile units. These units are also running alongside in-house departments to reduce long waiting times. This is particularly important now as hospitals deal with the backlog of suspended services due to Covid-19."

NHS England data shows 52.6% of patients waited six weeks or more for their endoscopy procedures in October 2020 versus 9.3% in October 2019*. Many endoscopy departments were temporarily closed to reallocate ventilators, other vital equipment and staff, leaving a backlog of procedures. Increased reprocessing capacity is now needed in many healthcare settings to cope with the greater demand for endoscopy as the waiting lists are cleared.

COMPACT WATER PURIFICATION, DESIGNED FOR HEALTHCARE SETTINGS

Purified water streams are essential for both CSSDs and ERUs. The UK has the highest water quality standards in the world when it comes to supplying surgical cleaning facilities. Expensive endoscopes need delicate treatment and since automated endoscope reprocessors (AERs) need to operate at low temperatures, high purity water is needed to achieve sterile standards. Envirogen works with Vanguard to provide complete water purification solutions for its mobile CSSDs and EDUs.

Bill Denyer, the UK and European CEO at Envirogen, explains: "We've worked in the healthcare sector for decades, providing high-quality water streams for AERs but also for wider sterile services departments and laboratories. We install main hospital, permanent installations, as well as mobile and temporary units, designed by the hospital or using third party suppliers such as Vanguard. The systems installed for Vanguard include a combination of carbon filters, high-efficiency reverse osmosis membranes, inline endotoxin retention ultra-filters and ultraviolet sterilisation, along with automated thermal sanitisation cycles. This ensures that our EndoTherm units provide high-quality water that meets the Government's requirements, including HTM01-06, HTM01-01 and ISO15883, as well as the Australian equivalent AS/NZ 4187."

"Our systems are recommended by AER, washer and autoclave manufacturers, thanks to their compatibility, straightforward operation and slim design. Although we size each EndoTherm to the requirements at each site, the EndoTherm Mini is a very popular solution for Vanguard mobile units due to its slim profile. At only 550mm wide and 600mm deep, ours is the most compact purification system on the market. The straightforward touchscreen operation makes it one of the simplest to use too."

Envirogen also provides an extensive range of pre-treatment water solutions, such as water softeners, to protect EndoTherm systems, as well as the installation of ring main connections. Each EndoTherm is installed and commissioned in a matter of days, thanks to the skid-mounted design, ensuring new endoscopy reprocessing/sterile services capacity is delivered as quickly as possible.

"EndoTherm systems are installed in mobile units across England, Scotland and Wales," continues Denyer.

"Some have been in place for several years and include largescale systems that provide up to 1,000 litres per hour of purified water. In some hospitals, the mobile units become more permanent fixtures with enclosed walkways connecting the main hospital to the mobile facility."



Duplex EndoTherm 500 Mini reverse osmosis system and ancillary pre-treatment equipment (water softener) inside a Vanguard modular mobile facility.

SERVICING FLEXIBILITY BY DESIGN



STEVEN PEAK,
Chief Operating Officer, Vanguard Healthcare, said:

"Our mobile CSSDs and EDUs are centred on flexibility. That's one of the reasons we chose Envirogen. The EndoTherm has been tried and tested in hospitals across the world, and each one is tailored to the exact requirements of that mobile solution. Envirogen's technical expertise and consultative approach mean that we ensure high-quality solutions and the Envirogen team are always available with advice when we need them."

"Envirogen engineers carry out regular preventative maintenance to ensure a continuous supply of purified water that meets the most exacting standards. We have 24/7 emergency technical support and engineers are guaranteed to be on-site in eight hours, should our clients have any issues. This nationwide network of expert engineers means that our clients have a rapid response to breakdown calls so that critical applications can be restored as a matter of urgency. Envirogen supplies these services on our behalf so we can provide a single point of contact to our clients."



FROM A TEMPORARY FIX TO A PERMANENT SOLUTIONS

"Our temporary solutions often turn into permanent relationships," states Denyer. "Many units become part of the fabric of the hospital and facilities managers often go on to purchase more permanent water purification solutions in-house. We provide a wide range of water treatment systems across many different industries, and our problem-solving approach ensures the most effective and efficient solutions. Our systems are available to rent or buy, giving additional flexibility."

KEY OUTCOMES

- EndoTherm systems are currently installed in multiple mobile units across the UK, delivering reliable solutions during construction or refurbishment and helping to reduce waiting lists.
- Multiple Vanguard CSSD and EDU units are powered by EndoTherm systems, with several more in construction for use in the UK and Australia.
- High purity water ensures bacteria levels of less than 10cfu/100ml, endotoxins less than 0.25 EU/ml, and conductivity consistently less than 30 µS/cm.
- Simple to navigate touchscreen control for straightforward operation with remote monitoring services.
- HTM01-06, HTM01-01, ISO15883 and AS/NZ 4187 compliance.

**Source: NHS Diagnostic Waiting Times and Activity Data, NHS England and NHS Improvement, October 2020 monthly report.*



ABOUT THE CLIENT

Vanguard Healthcare Solutions is a clinical infrastructure provider that specialises in delivering fast, flexible mobile and modular solutions to hospitals and healthcare systems across the globe. Vanguard provides high-quality, temporary clinical environments that can assist in reducing procedure waiting times, as well as increasing clinical capacity in both planned and emergency situations.



ABOUT ENVIROGEN

Envirogen is a leading international provider of water and wastewater treatment solutions. We solve complex challenges relating to water availability and quality, and help our customers to increase productivity, reduce costs and meet environmental and sustainability targets.

We do this through offering:

- Best in class water and wastewater treatment and process filtration technology
- Expertise in design, project management and engineering
- World class manufacturing and servicing capability



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