

Sustainable Hospital Linen and Textile Management: Summary and Actions

A concise resource to accompany the John Herbert's presentation and the transcript, video and slides given at the GHC Innovation and Sustainability Hub Session 30 July 2026.

Summary

This presentation sets out two connected opportunities for improving the safety, sustainability and value for money of hospital linen and textile services. The first is the controlled exploration of lower-temperature laundering for healthcare textiles, with the aim of reducing energy use and carbon emissions while maintaining the same validated infection prevention standards required for patient and staff safety. The second is the case for replacing routine single-use disposable hospital curtains with reusable curtains where clinically appropriate, supported by cost, waste and carbon reduction benefits.

The central message is that sustainability changes in healthcare linen must not compromise decontamination, compliance or assurance. Any change to wash temperature, textile system or curtain model must be evidence-based, validated, risk assessed and supported by infection prevention, microbiology, estates, procurement, domestic services and linen service colleagues.

Key requirements and compliance context

Healthcare linen processing is governed by strict decontamination requirements. The presentation explains that current practice is based on thermal disinfection, typically achieving either 71°C for at least 3 minutes or 65°C for at least 10 minutes, supported by detergent action, process monitoring and independent validation. NHS England's Health Technical Memorandum 01-04 provides guidance for the management, use and decontamination of linen in health and adult social care settings, including management and provision, engineering and validation, social care and implementation of BS EN 14065.

BS EN 14065 is relevant because it describes a risk management approach for laundry-processed textiles known as Risk Analysis and Biocontamination Control. This approach is intended to help laundries continuously assure the microbiological quality of processed textiles in sectors such as healthcare.

Issue 1: Exploring low-temperature laundering

The presentation proposes a structured trial of lower-temperature laundering, potentially in the range of 40°C to 55°C, using advanced detergents and chemical sanitisation methods. The objective is to identify whether the required decontamination outcomes can be achieved at lower wash temperatures without reducing safety, compliance or assurance.

The anticipated benefits include reduced energy consumption, reduced carbon emissions, lower utility costs, longer textile life, less shrinkage and fabric degradation, improved colour retention, reduced microfibre release and potentially improved finishing efficiency. These benefits are particularly important because heating water is one of the largest energy demands in healthcare laundry operations.

The presentation also stresses that any move away from established thermal disinfection must be carefully controlled. Testing must include real-time monitoring, internal checks, independent laboratory testing, bio-indicators, destructive testing where appropriate and seasonal assessment. Seasonal pathogen variation is important because organisms such as *Clostridioides difficile*, norovirus, *Bacillus cereus* and MRSA may present different risks at different times of year.

Issue 2: Reusable curtains versus single-use curtains

The presentation uses hospital curtains as a practical example of how smarter textile choices can reduce waste and cost. The Royal Devon University Healthcare NHS Foundation Trust compared reusable curtain systems with single-use disposable curtains across financial cost, operational requirements, environmental impact and value for money.

The indicative analysis presented showed that, for 1,000 curtain cleans, reusable curtains were substantially cheaper than single-use curtains once purchase, laundering and disposal costs were considered. Based on 37,000 cleans annually at the Royal Devon eastern acute site, the presentation identified an estimated additional cost of approximately £181,000 per year for single-use curtains compared with reusable curtains, including a significant waste incineration cost.

Applied across acute trusts in England, the presenter estimated that widespread replacement of routine single-use curtains with reusable alternatives could avoid the incineration of millions of curtains and release substantial financial savings. The point is not that single-use curtains should disappear entirely, but that they should be reserved for clinical situations where they are genuinely required.

Areas for action

Area	Action required	Suggested owner or contributors
Low-temperature laundering	Develop a controlled trial protocol covering temperatures, wash chemistry, textile types, monitoring, validation and release controls.	Linen services, infection prevention, microbiology, detergent supplier, estates and governance leads.
Validation and assurance	Define the evidence needed to demonstrate equivalent decontamination performance, including independent laboratory testing and seasonal validation.	Infection prevention, microbiology, quality assurance and linen service managers.
Guidance and regulatory engagement	Engage early with NHS England, the Textile Services Association and relevant professional bodies before any operational change is adopted.	Trust leadership, linen service leads and sustainability teams.
Reusable curtains	Review current curtain use, quantify single-use consumption, test the business case for reusable curtains and identify areas where single-use remains clinically necessary.	Domestic services, procurement, infection prevention, linen services and clinical teams.
Supplier and contract management	Use contract renewals and KPIs to require compliant laundering, curtain tracking, return-to-sender systems, loss reporting and accountability for damaged or missing items.	Procurement, contract managers, suppliers and linen service leads.
Waste and carbon reporting	Track textile disposal, incineration volumes, energy use, carbon impact and cost savings so the benefits can be evidenced and shared.	Sustainability, waste management, finance and estates teams.

Key messages

- Sustainable linen management must be built around safety, validation and infection prevention compliance.
- Lower-temperature laundering may offer major energy and carbon benefits, but only if equivalent decontamination is proven.
- Reusable textiles can reduce waste and cost when supported by the right infrastructure, contracts and operational controls.
- Single-use items should be targeted where clinically necessary rather than used by default.
- Trusts should use evidence, procurement levers and supplier engagement to move towards more circular textile systems.