



ELHT Green Newsletter

July 2026

Highlights

Welcome to the 11th edition of ELHT Green Newsletter.

- ❖ Top tips to reduce our food waste at ELHT
- ❖ We take a deep dive into medicine sustainability and explore the stages across the medicines chain where all healthcare staff can make a meaningful impact
- ❖ Exciting building works are taking place at LWNC to place a vast array of solar cells on the roof
- ❖ E-learning resources are now available on the Education Hub for all staff (especially Green Champions) who are looking to improve their understanding of healthcare sustainability
- ❖ Some of our theatre Green Champions have been coming up with original ideas to reduce single-use plastic bag use in theatres
- ❖ The emergency department has joined the national MAPA project in order to help detail the effects of idling ambulances on the health of emergency department staff
- ❖ Updates from ongoing QI Projects – Green breast surgery tray, same day elective surgery cancellations, Surgical Metronidazole
- ❖ Latest reports from our annual hazardous gas monitoring across both sites

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Reduce

Waste not, want not - The secret ingredient in patient care

Mandy Davies

Food plays a huge role in healthcare. In fact, the NHS spends around **£630 million every year** on food. Over the last decade, around **190 standards and guidelines** have been published to help us get it right. The latest *National Standards for Healthcare Food and Drink* build on this work, bringing everything together.

So, with a significant investment and clear guidance in place, you might expect we've cracked it. But the reality tells a different story.

Around **35% of the food we serve ends up as plate waste**; that's approximately **£230 million** literally going in the bin. At the same time, data from BAPEN shows that **70% of patients lose weight during their hospital stay**, and the wider cost of malnutrition is estimated at **£19.6 billion**. Clearly, something isn't quite working. The reasons are complex, but this is where we can all make a difference.

Food and drink are not just nice to have; they are **basic physiological needs**. For our patients, whether recovering from surgery, managing illness, or healing from injury, their bodies are in repair mode and need the right fuel at the right time.

At ELHT, we serve over **3,000 meals a day**, offering **five menu choices**, all nutritionally analysed to meet the standards set out in *The Nutrition and Hydration Digest*. The food is designed to support recovery.

But getting food to the bedside is only half the story; what happens next really matters.

Top tips to less waste and more taste!

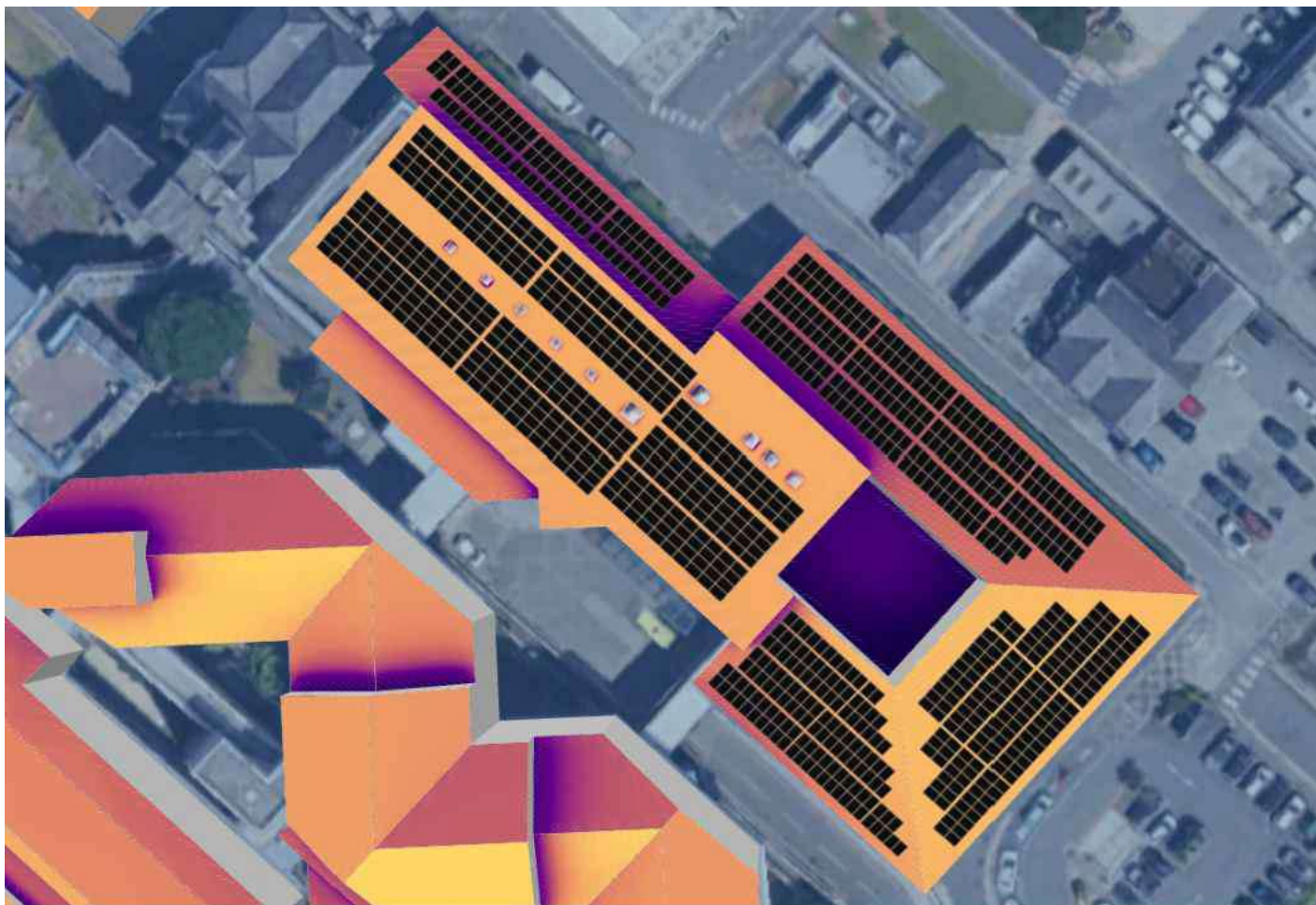
- ✔ **Get the order right.** Take a moment to check preferences and appetite. Ask, don't assume.
- 👤 **Protect mealtimes.** Reduce interruptions so patients can focus on eating and enjoy their meal. Give them time.
- 👏 **Offer help early.** Opening packets, cutting up food, or sitting patients up properly can make all the difference
- 🔍 **Check and correct.** Make sure it's the right meal at the right time. Fix issues straight away to avoid waste.
- 💬 **Learn from leftovers.** If food comes back, ask **why** and use that insight to improve future meals or feedback to The Foodie Group.

When we get food right, we're not just feeding patients; we're boosting morale, supporting recovery, and brightening someone's day.

Bites That Heal, choices That Matter. #GetNourished

Solar PV cells are being installed on LWNC roof

Since January 2026, work has begun for the installation of solar photovoltaic (PV) cells on the roof of the Lancashire Women and Newborn Centre on our Burnley Teaching Hospital site. The project is funded by NHS England and GB energy. The picture below shows the substantial number of panels that will be installed over the coming months.



Emergency Department joins the national MAPA project

Measuring Air Pollution from Ambulance's Pilot (MAPA) Project was produced by the East of England Ambulance service. The pilot showed delays in handing over patients at Emergency Departments (EDs) mean ambulance crews often wait for long periods in ambulance bays with engines idling to power heating, cooling and medical equipment. Concerns were raised by ambulance staff at East of England Ambulance Service NHS Trust who reported smelling exhaust fumes and experiencing symptoms such as headaches, sore throats and fatigue. In response, the MAPA Pilot project was launched to test methods for measuring air pollution outside EDs and inside ambulances, as a precursor to a larger study.

The pilot used three approaches at Cambridge University Hospital: fixed air quality sensors in the ambulance bay, portable monitors inside ambulances, and physiological testing of carbon monoxide exposure in staff. Results confirmed that air pollution is present in ED ambulance bays and highlighted the need for further investigation into staff exposure and health impacts. The study recommends longer-term, multi-site research across different seasons and hospital designs, alongside practical short-term actions such as reducing engine idling, improving infrastructure and developing system-wide solutions to improve air quality for staff and patients.

As a result of this project, our emergency department has also signed up to a national MAPA project to assess the effects of ambulance pollution on staff exposure and health.

Oral Paracetamol and Ibuprofen SOP for Adults undergoing Elective Surgery Update

Ujoodha, El-Sherbeny & Lie

In June 2025, the Trust introduced a new procedure so that all eligible adults having elective surgery at ELHT receive oral paracetamol and ibuprofen before their operation. This helps ensure consistent pain relief and reduces the need for more expensive IV medicines, which also have a higher carbon footprint.

Oral paracetamol works just as well as IV paracetamol. This change also means anaesthetic and surgical teams no longer need to prescribe these medicines on the day of surgery, helping more patients receive them on time. The Trust could save over £60,000 a year on paracetamol alone.

We hope with further additional training, we can continue to improve our uptake on this project. Audit is currently under way.

Surgical Metronidazole QI Project

Utulu, Hijazi, Yardley, Pharmacist Morgan & Lie

Metronidazole is one of many medications with almost 100% bioavailability, i.e. oral absorption is the same as the intravenous route. It is commonly prescribed for intra-abdominal sepsis post-operatively. Currently all patients are prescribed the intravenous form whether they could absorb anything orally or not.

We hope this study will demonstrate that more patients can be prescribed its oral form if the oral absorption route is not compromised, as recommended by the NHSGGC Guideline Update from 2021.

Observational Study of Same Day Elective Surgery Cancellations at ELHT - QI project

Symon, Bampton, Lewis, Gayle, Sawicka, Stowe & Lie 2026

Aims:
To identify factors associated with same-day elective general surgery cancellations

Methods:
The Trust Intranet (OLI) was used to generate a report showing all elective, non-emergency general surgeries that were cancelled on the day between 01/06/24 and 01/06/25. This generated 228 at BGH, and 113 at RBH (341 total). 100 patients were randomly selected and anonymised. Reasons for cancellation were categorised and compared between OLI and Cerner for each patient. Data captured included: RXR number; date of surgery; reason for cancellation of surgery; patient demographics; surgery details; pre-op assessment info; anaesthetic details and plan; and organisational factors.

Results:
The three most common reasons for cancellation on Cerner were theatre factors (32%), nil documented (14%), with medical optimisation/fitness for surgery and patient factors being equally common (12%). The three most common reasons on OLI were theatre factors (25%), patient factors (15%), and operation not required or inappropriate listing (14%). Documented reasons did not match between OLI and Cerner in 45% of cases.

Conclusions:
Theatre overrun is a major contributor to cancellations. Investigation into time management and effective utilisation of theatre staff as well as giving advanced notice to pre-op areas to prepare patients ahead of time may help address this. Patient non-attendance (DNA) is also a key contributor to cancellations. A new pre-op questionnaire to be brought in as of 02/02/26 aims to reduce inappropriate booking and referrals of patients. We also suggest utilising questionnaires in the week prior to surgery to confirm attendance and clarify changes to symptoms since referral. AI could assist with this and target communications towards patients at higher risk of DNA. Also, including information about the cost of cancelled surgeries to the NHS may help educate patients about the importance of attending or cancelling with adequate notice.

These findings have so far been shared with the ELHT general surgery audit meeting in February 2026 and an abstract has been submitted to the British Conference of Undergraduate Research 2026.

ELHT joins the European Carbon Management Mentoring Programme

ELHT has taken an important step in its sustainability journey by joining HCWH Europe's Carbon Management Mentoring Programme. This international initiative connects hospitals with expert mentors and a community of peers who are all working to reduce the climate impact of healthcare.

Over 120 hospitals have already taken part, gaining the confidence, tools, and practical knowledge needed to understand and lower their greenhouse gas emissions. Now, ELHT

will benefit from the same structured mentoring, specialist workshops, online learning, and peer support.

Joining the programme strengthens our commitment to sustainability and equips us to take meaningful, measurable action on our carbon footprint.



E-learning Resources for Green Champions are now available

Resources for Sustainable Healthcare are now live on our Education Hub.

- Net Zero NHS - is a generic one which will become part of mandatory training from now on.
- Carbon Literacy for Healthcare - is highly encouraged for all Green Champions to complete.

Take a Deep Dive into Medicines Sustainability

Simpson

There are three main areas to focus on sustainable practice within medicine use; clinical practice, dispensing and procurement, waste streams.

Clinical practice

Services such as the Discharge Medicines Service and use of patients' own medicines help prevent unnecessary dispensing and support continuity of care. Clinicians increasingly prioritise early IV-to-oral switching for antibiotics and analgesia, alongside greater use of solid oral dosage forms where appropriate, reducing reliance on higher-impact formulations. Digital tools such as Powerplans in EPR and Touchdose support standardised, evidence-based prescribing and minimise variation. Pharmacy teams contribute through regular clinical medication reviews, assessment of the need for medicines compliance aids, and targeted inhaler counselling and adherence support to

improve outcomes and reduce avoidable waste. Care closer to home, including OPAT and community prescription-collection stations, further reduces hospital-based resource use. At a system level, environmentally harmful agents such as desflurane have been removed through desflurane decommissioning.

Dispensing and procurement

Approaches such as one-stop dispensing streamline the supply process and prevent unnecessary duplication of medicines at discharge. Pharmacy teams increasingly work to minimise packaging, including avoiding secondary dispensing packaging wherever safe and appropriate, while robust date checking and stock rotation reduce expired stock and prevent avoidable waste. Removing single-use transport bags—particularly plastic—further cuts the environmental footprint of medicines movement within the hospital. Clinically appropriate low-carbon inhaler choices are increasingly prioritised at the point of prescribing and dispensing, supporting both sustainability and patient outcomes.

Waste streams

Sustainable waste-stream management in medicines use relies on reducing unnecessary materials, optimising storage, and ensuring safe, environmentally responsible disposal. Integrating electronic systems such as EPR-ASCRIBE linkage reduces paper use and streamlines documentation, while initiatives like medicines recycling schemes help return unopened, safely reusable items back into circulation rather than waste. Clear pathways for the return of medicines for safe disposal ensure that pharmaceuticals do not enter general waste or wastewater systems. Specific waste streams—such as propofol disposal—require targeted handling to minimise environmental contamination. Effective medicines-fridge monitoring and optimisation of storage space reduce spoilage and prevent avoidable waste. Finally, clear dispensing procedures help ensure that single-use plastics such as spoons and oral syringes are used only when clinically required, supporting both patient safety and environmental stewardship.

Green Breast Surgical Tray QI Project

Dr Asad Jafferbhoy, Miss Christina Yip

Operating theatres are one of the most resource intensive parts of the NHS, and even small changes can deliver big sustainability wins. In Breast Surgery at ELHT, we currently use a standard Minor Surgery Tray with 51 instruments for every procedure—despite many being rarely or never used. Each unused instrument still undergoes full sterilisation, packaging and processing, adding avoidable cost, waste and carbon emissions.

To tackle this, we launched a sustainability Quality Improvement Project to design a specialty specific ELHT Green Breast Surgical Tray. Using LEAN methodology, theatre staff recorded instrument use across 36 procedures. Any instrument used in fewer than 20% of cases was flagged for removal.

What we found:

Instrument count: 51 → 30 (41% reduction)

Sterilisation cost: £62.73 → £36.90 per tray

Carbon footprint: 2.65 kg CO₂e → 1.56 kg CO₂e per tray

Scaled across the department, this means:

£20,664 saved per year

873 kg CO₂e avoided annually

Next steps:

We are now in active discussions with the theatre team about adopting the optimised tray. Although formal approval is still pending, we hope the clear benefits demonstrated in this pilot will support our shared vision for a streamlined, specialty specific Breast Surgical Tray.

The next phase will focus on collaborative refinement with surgeons and scrub teams to ensure the tray is safe, practical and ready for routine use.

Report from Annual Hazardous Gas Monitoring

Royal Blackburn Teaching Hospital

Theatres:

Monitoring to determine staff exposure to nitrous oxide and anaesthetic agents has been carried out in 9 Theatres, 9 Anaesthetic Rooms, and the Recovery Area at Royal Blackburn Teaching Hospital.

The results show that staff working in the Theatres and the Recovery Areas are not exposed to excessive levels of nitrous oxide or the anaesthetic agents under normal working conditions and provided that correct working procedures are followed.

The levels of nitrous oxide detected inside all Theatres and Anaesthetic Rooms tested were entirely consistent with well-ventilated Theatres with active scavenging operating. Nitrous oxide and sevoflurane exposures were also low and not a cause for concern.

Staff exposure to nitrous oxide and anaesthetic agents in the Recovery Areas was low or undetectable and also not a cause for concern.

Endoscopy:

Staff exposure to nitrous oxide was below the Work Exposure Limits (WEL) for nitrous oxide, but this is likely to be due to low usage of Entonox.

It is recommended that ventilation in the Procedure Rooms is checked to ensure that the systems are functioning optimally and providing a minimum of 10 air changes per hour, supply and extract, as required by HTM 03-01 (2021).

Further sampling in Endoscopy Rooms 1 and 2 should be considered on a busier day for Entonox use so that sampling can be considered representative of normal working conditions.

Burnley General Teaching Hospital

Theatres:

Monitoring to determine staff exposure to nitrous oxide and the anaesthetic agents has been carried out in various Theatre Departments at Burnley General Teaching Hospital.

The results show that staff exposure to nitrous oxide and anaesthetic agents was low, indicating that good practice was being followed by the staff and the control measures in place to limit staff exposure were functioning effectively.

The levels of nitrous oxide detected inside the Theatres and Anaesthetic Rooms were entirely consistent with well-ventilated Theatres with active scavenging operating. Levels of sevoflurane were also low and not a cause for concern in any area.

Staff exposure to these agents was also low in all areas. Staff exposure to nitrous oxide and anaesthetic agents in all the Recovery Areas was undetectable and not a cause for concern.

Central Birth Suite:

The periods of monitoring carried out on 25th and 26th February 2026 are not considered representative of normal Entonox usage as the average usage per shift was only 2 h and 35 minutes in rooms where Entonox was used.

Based on these results, it is reasonable to assert that staff exposure to nitrous oxide in the Burnley Birth Suite was below the WEL for nitrous oxide, although this could be due to low Entonox usage during testing.

Birth Centre:

The periods of monitoring carried out between 23rd and 26th February 2026 are considered representative of normal Entonox usage in rooms where Entonox was used.

Based on these results, it is reasonable to assert that staff exposure to nitrous oxide in the Burnley Birth Centre was compliant with the COSHH Regulations 2002 (as amended).

Endoscopy:

The periods of monitoring carried out are considered representative of normal working procedures for Endoscopy A on 25th February 2026, and for Room 1 in Endoscopy B on 24th February 2026, as Entonox usage was typical in these Procedure Rooms. This study therefore satisfies the requirements of Regulation 10 of the Control of Substances Hazardous to Health (COSHH) Regulations 2002 (as amended) in these rooms only.

Further testing under more typical Entonox usage conditions is recommended in Endoscopy B Procedure Rooms 2 and 3.

Based on these results, it is reasonable to assert that staff exposure to nitrous oxide in Endoscopy A and Endoscopy B Room 1 was compliant with the COSHH Regulations 2002 (as amended).

Additionally, in Endoscopy B Rooms 2 and 3, staff exposure to nitrous oxide was below the WEL for nitrous oxide, but this could be due to lower usage of Entonox.

Green ED teaching module for medical students

Robertson

Green ED is an RCEM initiative to measure and reduce the environmental impact of Emergency Departments in the UK, thus driving environmentally sustainable practices within the specialty of Emergency Medicine (EM). The emergency department team at RBH are proposing to start a Green ED teaching module for medical students.

The proposed "Green ED" module introduces medical students to sustainability practices within emergency departments. It explores the environmental impact of acute care settings and equips students with strategies to reduce waste, energy use, and carbon emissions. Students will learn how sustainable healthcare can enhance patient outcomes and operational efficiency. The module emphasizes leadership in eco-conscious practice, encouraging future clinicians to champion green innovations.

By integrating sustainability into emergency medicine, students gain vital skills to support the NHS's net-zero goals and promote environmentally responsible healthcare delivery.

Reuse

Coolsticks update

Coolsticks were introduced in theatres at ELHT in 2022 as a reusable method for assessing neuraxial block height – also available in ICU and birth suite since 2024. The device is a metallic tool stored in the fridge, designed to provide both cold and touch sensation. It maintains its temperature for up to 15 minutes and is used by rolling it along the patient's body. After use, it is cleaned with a Clinell wipe and returned to the fridge, where it requires at least 40 minutes of cooling before reuse.

Ethyl chloride spray, used for the same purpose, is a consumable product with significant environmental and financial impacts. Each can costs £23.76, cannot be recycled, and has an environmental impact of 890 kg CO₂e (in terms of production and transport of the can and its contents).

Coolsticks offer a lower impact, sustainable alternative. They require a one-off initial cost of £1500 and generate 0.685 kg CO₂e (excluding transport and wipes). Their reusability eliminates the need for ongoing consumable purchases.

Data from ELHT shows a significant reduction in the amount of ethyl chloride purchased since Coolsticks were introduced, and as a result a reduction in cost and global warming impact:

2020–21:

- 1518 cans purchased
- £27,143 expenditure
- 1.35 million kg CO₂e

2024–25:

- 707 cans purchased
- £16,798 expenditure
- 629,052 kg CO₂e

Overall, compared with 2021, the reduction in ethyl chloride use has halved the global warming impact associated with the product and reduced departmental spending by £10,345. Despite this progress, nearly £17,000 was still spent on ethyl chloride in the past year, indicating further potential for improvement.

Continuing to adopt the use of Coolsticks offers an opportunity to further reduce our environmental impact and costs while maintaining effective assessment of neuraxial block height.

Baskets – a step to bin single-use plastic bags in theatres?

We hope all these 40 baskets (including 13 on wheels) can reduce our use of single-use disposable plastic bags in the future. They are now distributed across theatre store rooms at both sites.

Thank you to one of our Green Champions Grace Redmond for repurposing these baskets from a closing down store! A special mention to Katie Whitaker & others involved.

Their suitability is currently under review but it demonstrates that there are many new and ingenious ways to help improve our sustainability objectives!



Recycle

Update on Propofol Disposal

Lewis & Lie 2026

A recent anaesthetics department review explored the disposal of propofol following discussion in the RCoA Bulletin (1). An article suggested that propofol may be suitable for disposal via the blue-lidded pharmaceutical waste stream rather than the current purple-lid cytotoxic bins (1).

We reviewed the available evidence, national guidance, and local waste processes. While some authors and waste contractors suggest propofol does not meet cytotoxic criteria and may be appropriate for blue-stream disposal, there remains no clear national consensus and practice varies between organisations.

The overall conclusion was that, although alternative approaches are being discussed, current local practice remains a safe and established method of disposal of propofol, though this is a topic that is likely to evolve.

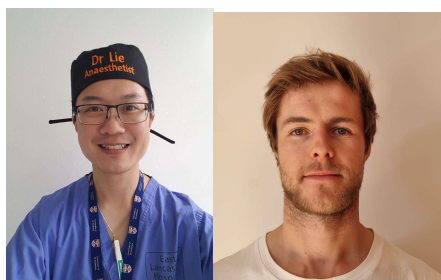
1. Royal College of Anaesthetists. Propofol, pollution and “proper” bins: how to dispose of medicines waste safely [Internet]. The Royal College of Anaesthetists. 2021 [cited 2026 May 25]. Available from: <https://rcoa.ac.uk/bulletin/winter-2026/propofol-pollution-proper-bins-how-dispose-medicines-waste-safely>
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Green Champions

We now have a network of 102 "Green Champions" – ideally one or two in each department (clinical and non-clinical) to act as a role model, point of contact and a local expert who can feed back more ideas on how we can save money and help the environment.

Email Dr Lie at jason.lie@elht.nhs.uk to find out or be the Green Champion of your working area – your support will be very gratefully received!

Feel free to approach the Green Champions in your working area to get involved!



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