

Towards Net Zero: Sustainable Practices in Our Animal Facility

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Introduction

The University of Oxford has set a target to reach net-zero carbon emissions by 2035. The University's Environmental Sustainability Strategy has identified 10 priority areas to act in. These include Research, Curriculum, and Sustainable food. As part of that goal, our laboratory animal facility is improving sustainable resources, focusing on carbon emissions, waste management and sustainable purchasing whilst using the Laboratory Efficiency Assessment Framework (LEAF), to achieve these. LEAF is a standard in sustainable laboratory operations, and in 2025, we achieved the Bronze award.

Maintaining animal facilities, however, historically creates issues around sustainable practices. To provide constant environments, there is a high energy cost, as well as a reliance on single-use plastics to help maintain health status barriers. We have begun addressing these issues, figuring out a solution and implementing.



Waste Stations Initiative



Problem:

- Recycling rates were low due to contamination of recycling bins
- Presence of more than 40 personal waste bins, which discouraged proper recycling habits



Solution:

- Remove personal waste bins and introduce centralised waste and recycling stations with clear signage
- Add a food waste collection and a pen recycling scheme so that used pens can be recycled instead of going to landfill
- The personal waste bins that were removed were reused either within the department as storage in the workshop or by staff to grow vegetables on an allotment

Communal Clogs Initiative

Problem:

- Researchers used single-use plastic overshoes when entering the barrier
- Resulted in significant plastic waste sent to landfill
- Overshoes could tear during use, potentially compromising the barrier

Solution:

- Introduced reusable clogs in a range of sizes
- Socks are provided and required when wearing clogs
- Eliminates the need for single-use overshoes and prevents associated landfill waste



LED Lighting Upgrade

Problem:

- Ageing fluorescent tube lighting caused frequent failures due to ballast issues
- The maintenance team spent a significant amount of time replacing tubes
- Fluorescent tubes are energy-inefficient, wasting energy as heat



Solution:

- Replaced all fluorescent lighting with energy-efficient LED units
- Installed motion sensors in corridors, stairwells, and other low-traffic areas
- Automatic switch-off and reminder stickers help reduce energy use even when lights are accidentally left on or not switch-controlled



Switch off stickers

Problem:

- Avoidable energy waste, increasing the building's overall consumption
- Higher operational costs
- No clear reminders = forget to turn off lights or unplug devices
- Challenges in encouraging consistent behavioural change

Solution:

- Provide clear visual prompts that encourage users to turn off equipment
- Support mindful decision-making, helping individuals reflect on their energy use
- Foster a culture of sustainability and shared responsibility, embedding energy-saving behaviours into daily routines



Water stations

Problem:

- High volumes of plastic waste, with empty bottles entering waste streams
- Regular deliveries of heavy water bottles, contributing to transportation emissions and unnecessary carbon output
- A larger overall carbon footprint



Solution:

- Installing eight strategically placed plumbed-in water stations to ensure convenient access for all occupants
- Eliminating the use of bottled water, removing the need for disposable containers entirely
- Cutting transportation-related emissions

Washable fabric mob caps

Problem:

- Heavy use of disposable single-use plastic mob caps contributes significantly to PPE-related waste
- Lack of sustainable alternatives, meaning waste levels continued to rise with daily operations

Solution:

- A substantial reduction in plastic waste, replacing disposable caps with durable, washable versions
- A more environmentally responsible PPE system, supporting waste reduction
- A long-term, cost-effective solution whilst maintaining hygiene standards



Looking Forward

To further strengthen our sustainability practices, we are exploring the transition to **at-cage humidification**. This change will significantly reduce CO₂ emissions by eliminating the need to humidify entire holding rooms, supporting the University's commitment to achieving **net-zero carbon**.

We are also focused on reducing **single-use plastics** within the facility. Current initiatives include trials of an **eco-friendly mash pot** as an alternative to the plastic weigh boats currently in use. In addition, we are testing the replacement of **plastic carcass bags** with **paper-based alternatives**.

Finally, we are working towards achieving **LEAF Silver and Gold awards in 2026**, further demonstrating our dedication to sustainable laboratory practices.

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