

UK Biocentre Carbon Reduction Plan (CRP)

(Aligned to PPN 06/21 Requirements)

1. Commitment to Achieving Net Zero

UK Biocentre (UKBC) is committed to reducing greenhouse gas emissions and supporting the UK Government's target of achieving Net Zero by 1st January 2050.

UKBC recognises the environmental impact associated with high-throughput laboratory operations, including energy-intensive equipment, supply chain dependencies, and logistics. The organisation is committed to continuous improvement in environmental performance through structured carbon management, operational efficiency, and supply chain engagement.

This Carbon Reduction Plan is aligned to UKBC's broader environmental management approach, which follows the principles of ISO 14001 and is currently being formalised through an environmental management system scoping exercise.

2. Baseline Emissions Footprint

UKBC is in the process of establishing a formal organisational carbon baseline, aligned to ISO 14064 and PPN 06/21 reporting requirements.

Baseline development includes:

- 🔗 Quantification of Scope 1 emissions (e.g. fuel usage, backup generators)
- 🔗 Quantification of Scope 2 emissions (purchased electricity)
- 🔗 Identification and prioritisation of relevant Scope 3 emissions, including:
 - Laboratory consumables and reagents
 - Logistics and courier services
 - Waste disposal
 - Business travel

Baseline data collection is underway and is being integrated with UKBC's ISO 14001 environmental management scoping exercise.

A fully quantified baseline will be established and published within 6 months, forming the basis for ongoing carbon reduction tracking and reporting.



3. Current Emissions Reduction Measures

UKBC has already implemented a number of operational and infrastructure measures that contribute to reduced carbon intensity:

Energy Efficiency in Laboratory Operations

- ⚙️ Ongoing investment in energy-efficient laboratory equipment, including ultra-low temperature (-80°C) storage systems
- ⚙️ Replacement programme for older, high-energy assets with more efficient alternatives
- ⚙️ Use of automated systems to reduce repeat processing and unnecessary energy consumption

Automation & Workflow Optimisation

- ⚙️ Automation-led workflows minimise manual intervention and rework
- ⚙️ Continuous flow processing reduces idle equipment time and energy waste
- ⚙️ High-throughput design enables lower energy consumption per test

Infrastructure & Monitoring

- ⚙️ Monitoring of energy consumption across laboratory operations
- ⚙️ Integration of energy efficiency considerations into facility design and operational planning

Waste & Resource Management

- ⚙️ Waste segregation and reduction practices
- ⚙️ Initial engagement with suppliers to reduce packaging and consumable waste

4. Carbon Reduction Initiatives (Planned & In Progress)

UKBC is implementing a structured programme of carbon reduction initiatives aligned to its operational model and supply chain.

Energy & Operational Efficiency

- ⚙️ Target ≥15% reduction in energy consumption per test over the contract period
- ⚙️ Expansion of real-time energy monitoring across critical laboratory systems
- ⚙️ Continued transition to energy-efficient equipment across high-load infrastructure



Carbon Measurement & Reporting

- Establishment of a formal carbon baseline (Scope 1, 2 and relevant Scope 3)
- Annual carbon reporting aligned to recognised standards
- Integration of carbon metrics into operational performance dashboards

Supply Chain Engagement (Tier 1 Focus)

- Active engagement with Tier 1 suppliers to:
 - Reduce packaging waste
 - Improve sustainability of consumables
 - Increase visibility of embedded carbon
- Incorporation of environmental considerations into supplier selection and review processes

Waste Reduction & Materials Optimisation

- Reduction of single-use plastics through:
 - Evaluation of alternative materials
 - Supplier collaboration
- Improved waste tracking and reduction targets

5. Carbon Reduction Targets

UKBC is committed to measurable and achievable carbon reduction targets, including:

- Establishment of a verified carbon baseline within 6 months
- ≥15% reduction in energy consumption per test over the contract term
- Year-on-year reduction in total emissions intensity (normalised to throughput)
- Annual reporting of Scope 1, Scope 2 and relevant Scope 3 emissions

Targets will be refined following completion of baseline assessment and integrated into UKBC's environmental management system.

6. Governance & Accountability

Carbon reduction and environmental performance are overseen through UKBC's senior leadership and operational governance structures.

- Executive accountability: Chief Operating Officer
- Operational delivery: Facilities, Operations, and Informatics teams
- Oversight and assurance: Quality Management System (QMS) and environmental management framework



Performance is monitored through:

- 🔗 Internal audits
- 🔗 Management review processes
- 🔗 Continuous improvement cycles aligned to ISO 14001 principles

7. Reporting & Transparency

UKBC is committed to transparent and auditable reporting of environmental performance.

- 🔗 Annual publication of carbon emissions and progress against targets
- 🔗 Integration of environmental metrics into operational reporting
- 🔗 Alignment with contractual and regulatory reporting requirements

This Carbon Reduction Plan will be reviewed and updated at least annually, or sooner in response to significant operational or regulatory changes.

8. Declaration and Sign-Off

This Carbon Reduction Plan has been prepared in accordance with PPN 06/21 and reflects UK Biocentre's current and planned approach to managing and reducing carbon emissions.

The information contained within this plan is accurate to the best of UKBC's knowledge and will be subject to ongoing refinement as baseline data is finalised.

