

REFURBISHING FOR THE FUTURE

A lower-carbon MEP transformation in a live, business-critical workplace

Evidence-led reuse | Targeted upgrades | Intelligent controls | Transparent reporting



54
MEP assets retained

100%
Project-wide landfill diversion

16.86 tCO_2e
Quantified lifecycle reuse benefit

8.75 kW
Technical demand rationalised

THE PROJECT-WAVE APPROACH

MCS challenged the default position of wholesale replacement. Detailed surveys, condition checks, calculations, testing and commissioning created the confidence to retain useful assets and focus investment only where it added clear value.

1

VALIDATE

Compare records with installed conditions.

2

RETAIN

Keep safe, serviceable assets in use.

3

UPGRADE

Target efficient systems where needed.

4

VERIFY

Test, commission and document outcomes.

THE CARBON VALUE OF REUSE

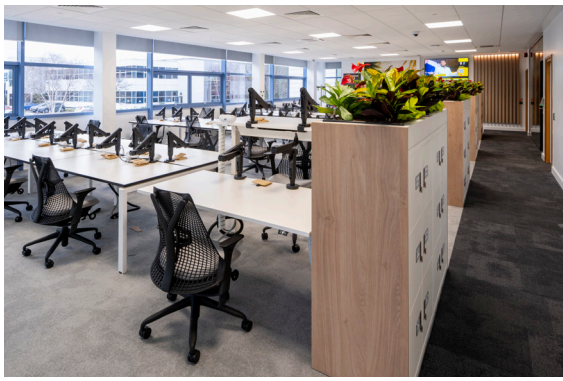
13.35 tCO_2e
Quantified upfront reuse benefit

5 FCUs • 47 grilles • 2 AHUs retained

The quantified total is deliberately conservative and excludes unquantified benefits from retained grilles, refurbished AHUs and floor panels.

DELIVERED IN PRACTICE

MEP SUSTAINABILITY



Six coordinated interventions show how MCS can reduce impact while protecting resilience, comfort, and operational continuity.

CIRCULAR MEP SELECTION

Retained, relocated, or refurbished 54 MEP assets, preserving embedded value and avoiding unnecessary replacement.

EFFICIENT SYSTEMS

Targeted heat-recovery ventilation, VRF heat pumps, LED lighting, and improved system efficiency.

POWER RESILIENCE

Demand rationalisation limited the net UPS increase to approximately 7.5 kW and avoided wholesale central replacement.

SMART CONTROLS

Occupancy detection, DALI capability, Casambi wireless controls, and updated BMS scheduling improved controllability.

WATER & RISK

Point-of-use hot water, leak detection and occupancy-linked controls reduced infrastructure and water-risk requirements.

WASTE & PACKAGING

MCS supported 100% project-wide landfill diversion, 240 effective pallet returns, and reduced single-use plastic.

A TRACEABLE EVIDENCE BASE

1.92 tCO_2e
Estimated pallet-return saving

99.54%
Project waste recycled

39.5 kg
Calculated single-use-plastic reduction

WHY THIS MATTERS TO FUTURE CLIENTS

MCS combines engineering assurance with practical sustainability delivery.

Validate first | Reuse where safe | Right-size new systems | Protect live operations | Retain credible evidence

A repeatable model for lower-carbon refurbishment, tender innovation & responsible MEP delivery.