



## PRIORITISING CIRCULARITY IN FAN COIL REFURBISHMENT

A historic London building has reduced its environmental impact through the circular refurbishment of 145 CIAT fan coil units, extending the equipment's lifespan, reducing waste, and lowering carbon emissions.

### Project Description

CIAT recently undertook a refurbishment project that embraced the principles of the circular economy for a grand neo-classical building in the heart of Bloomsbury, London. The building's HVAC system, consisting of 145 CIAT COADIS LINE fan coil units (FCUs), became a focal point of this initiative. The goal was to retain and reuse as many units as possible, reducing the environmental footprint and cutting costs. CIAT collaborated with sub-contractors to perform detailed inspections on each FCU, generating individual validation reports that assessed their condition. Out of 145 units, 99 required some form of service and maintenance refurbishment, ranging from cleaning or replacing filters, refurbishing fan coils, upgrading fan motors, providing new fascia, and pump replacements.

"This project was a significant undertaking involving detailed assessments and repairs to nearly a hundred fan coil units. It's incredibly rewarding to be part of a circular initiative that not only extends the life of existing equipment but also significantly reduces the carbon footprint."

Chris Ekins, CIAT Airside Sales Engineer, London North-West.

### Challenges and Solutions

- One of the key challenges was ensuring the functional efficiency of the existing 145 FCUs while avoiding unnecessary waste. To meet this goal, CIAT UK implemented a comprehensive validation process. Each FCU underwent a rigorous inspection, covering fan motor functionality, pressure testing of coils, assessment of filters, and exterior condition checks.
- Individual reports were generated for every unit, highlighting necessary repairs or replacements. The outcome: 99 units required maintenance, while the rest remained in working order. Components needing replacement were responsibly recycled or repurposed, and where feasible, energy-efficient upgrades were introduced to enhance overall system performance and sustainability.
- These solutions led to waste reduction, lower carbon emissions from avoiding new FCU production, and considerable financial savings through equipment reuse.

### Product Focus

The CIAT COADIS LINE FCUs play a pivotal role in this project. By focusing on refurbishing instead of replacing the units, the client was able to significantly reduce the environmental impact associated with the production and disposal of HVAC systems. Key upgrades, including replacing fan motors and integrating more energy-efficient components, ensured continued optimal performance. This focus on product longevity supported the circular economy principles and delivered long-term cost and energy savings for the building.

