



Royal Botanical Gardens Jodrell Laboratory Building Ventilation Plant Upgrade

PROJECT DETAILS

Client

Royal Botanical Gardens, Kew
Gardens

Consulting Engineer

Eta Projects Ltd

Quantity Surveyor

Eta Projects Ltd

CDMC

EC Harris

Value

£600,000.00

Timescale

6 months

DESCRIPTION

The Jodrell Laboratory Building is located at Kew Gardens. The project related to the mechanical and associated electrical services associated with the replacement of existing laboratory ventilation air handling equipment, BMS and associated power.

OBJECTIVES

To develop a strategy to replace the existing ventilation 11No air handling units with 2No units. These units incorporated a duty/standby fan arrangement to ensure security of supply in the event of a fan failure. The temperature control of the ventilation to the various areas was by terminal Variable Air Volume dampers that operate on the dictates of the fume cupboard extract units.

In addition space planning was critical as the existing installation did not allow suitable space for servicing and maintenance.

DESIGN

The project included for the provision of new more efficient replacement air handling equipment to provide fresh air to the existing laboratory building. New terminal VAV dampers within weatherproof enclosures were provided at roof level to provide supply air make-up ventilation throughout the building. New Low Temperature Hot Water (LTHW) heating distribution was provided to serve air handling equipment frost coils and the terminal re-heater batteries. New heat reclaim circuits were also provided.

A reduction in the number of air handling plant has resulted in a more efficient ventilation system with improved service and maintenance accessibility.

SPECIFIC DESIGN REQUIREMENTS

Due to the phasing (the existing plant was to remain operational until change-over to the new plant) an extension of the existing ventilation louvered plant screen was required. This enabled the new plant to be installed whilst the old plant was still operational and maintaining space conditions within the laboratories.