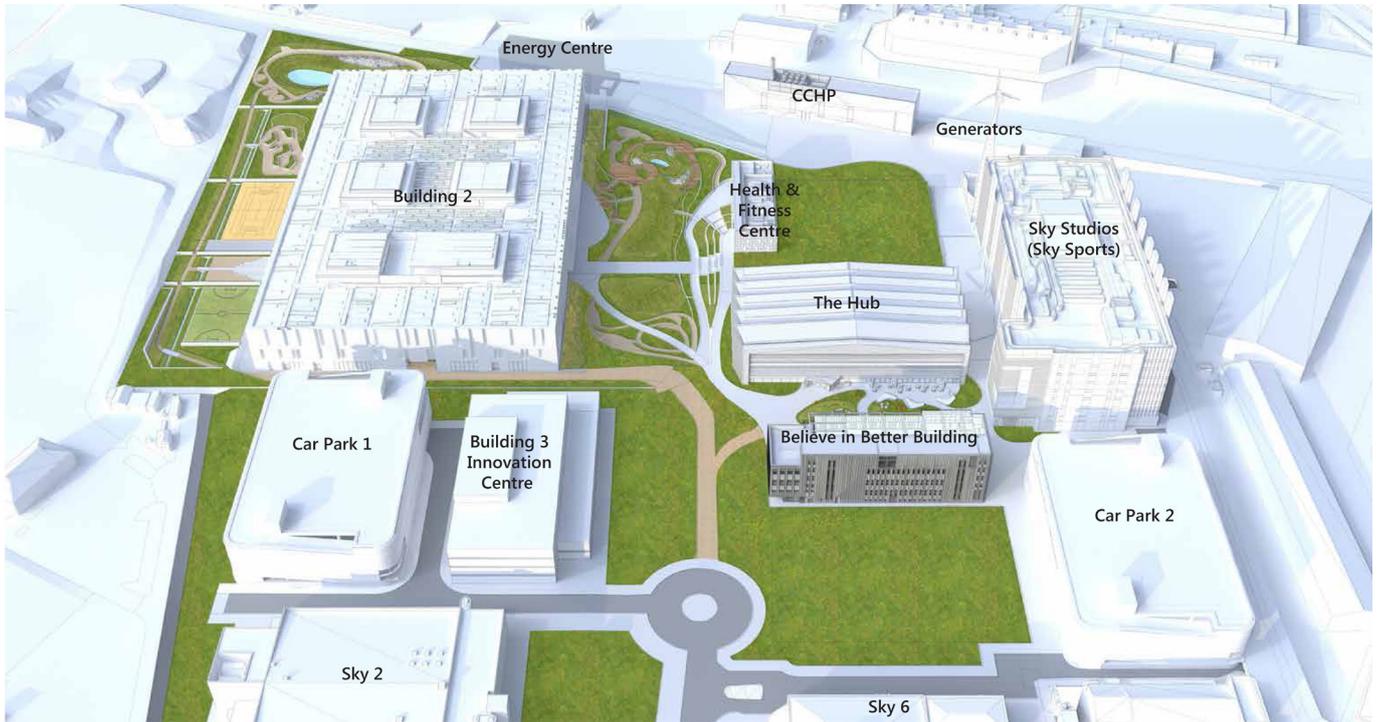


OPERATIONAL ENERGY PREDICTIONS ON A CAMPUS SCALE



BSKYB CAMPUS ENERGY PERFORMANCE ASSESSMENT OSTERLEY, WEST LONDON

The BSKyB campus in Osterley, West London was undergoing a major redevelopment involving the phased demolition of multiple existing buildings, the introduction of a new biomass fuelled CCHP plant, and the addition of six new mixed-use buildings over a 10 to 15 year period. This upgrade had the potential to house in excess of 12,000 staff, doubling the previous campus capacity.

Informing this major regeneration, BuroHappold Engineering was commissioned to develop a carbon appraisal tool bringing together the energy modelling outputs from a number of consultants into one reporting platform. The overall aim of the study was to understand the campus's phased performance leading up to 2020 in relation to BSKyB corporate targets. The company aimed to halve CO2 emissions relative to revenue against a 2005/06 baseline, increase energy efficiency by an average of 20% across all buildings, and provide 30% of energy requirements from Sky owned or controlled renewables.

Our team developed a tool that brings together the energy use and CO2 emissions of all existing buildings informed by walkthrough audits, the retained building energy efficiency through updated utility data, and new development emissions via Part L predictions. The actual energy use from the Sky Studios site was also included, and the tool has the capability to feed in future operational data as the new buildings come online.

In order to identify and overcome the 'energy performance gap' associated with using Part L predictions, the estimated unregulated energy use for each building was considered. The client was also recommended to request more detailed operational energy modelling be conducted to further close the gap.

Full-build out and phased emissions as well as the overall percentage contribution from renewable energy supplied has been calculated and presented to the BSKyB team. These figures have since been used in campus sustainability reporting process for the Osterley site.

CLIENT
BSkyB and KLH Sustainability

DURATION
2013 - present

SERVICES PROVIDED BY
BUROHAPPOLD
Sustainability