Birmingham Dental Hospital & School of Dentistry

The Brief

One has used Building Information Modelling (BIM) - the future of intelligent building design - to create the new pioneering Birmingham Dental Hospital and School of Dentistry for Birmingham Community Healthcare NHS Trust, the University of Birmingham and Local Improvement Finance Trust, Birmingham and Solihull LIFT.

Project name:
Birmingham Dental Hospital & School of Dentistry

Location:
Pebble Mill, Birmingham

Value:
£33m new build project

Services:
Architecture
Interior Design
Structural & Civil Engineering
Landscape Architecture
Town Planning
CDMC
Arts Co-ordination
BREEAM
Project Overview

This will be the first integrated, stand-alone dental hospital and school of dentistry built in the UK for almost 40 years.

Benefitting from a fully integrated multi-disciplinary team has ensured a fully integrated BIM workflow, where legal issues such as interdisciplinary design ownership are no longer a potential conflict. The result is a unified and collaborative approach to building design, with the project as the common focus.

The Benefits

• **Early detailed design results in accurate designs and reduced costs** – Taking advantage of intelligence and automation within the model environment to check design integrity, ensures co-ordination between all project documents. By reducing human error and the opportunity for conflicts between documents, this offers a greater degree of confidence in both the design and cost, with a higher quality of design output.

• **More accurate and detailed information leads to better understanding** – Contractors were given access to the models to assist their quantity take off process, their understanding of the project and how it was to be constructed. This helps minimise site risk by allowing the contractor to review complex construction procedures before undertaking them on site.

• **Users and consultees were able see a virtual building at an early stage allowing them to ‘buy into the design’** – The scheme could be visualised at an early stage, giving owners, operators and users a clear idea of the design and the opportunity to feed into it to achieve the clinical outcomes required. This was of particular benefit to non-technical clinical users, giving them the opportunity to interact more enthusiastically with the design process, particularly as the brief evolved.

“\The design of the building is innovative and will provide a great opportunity to integrate dental treatment, learning and research in a modern, state-of-the-art environment.\”

Barry Cockcroft, Chief Dental Officer for England