The Sythwood Primary School

McAvoy BIM Project

**Project Overview**

McAvoy was awarded the contract to design, build and install a stand-alone two storey permanent modular extension at Sythwood Primary School in Surrey. The new building comprised 6 no. classrooms, WC facilities, stores, Group rooms, circulation areas, cloakrooms and a plant room.

McAvoy completed the detailed design by working in partnership with Surrey County Council to ensure that the project was completed within the allocated programme duration. McAvoy was also responsible for obtaining building control approval.

Building models from each discipline were uploaded having been converted to IFC format, which is the generally accepted format for model sharing and data exchange. So, although each discipline created its model in a different authoring software: REVIT for architectural; Tekla for structure and Revit MEP for M&E, the IFC versions were uploaded to the CDE. The IFC models were then federated and checked via an IFC viewer, Solibri Model Checker. The federated model was then checked for clashes, errors or omissions and was annotated with comments and points for review and revision by all members of the team. As McAvoy progressed the project they worked with a steel stair manufacturer who was able to supply an IFC model for federation with the others, which allowed amendments to be carried out with consideration of all relevant physical parameters before fabrication. In addition to these, the architectural IFC model was shared with their own timber wall engineers on which to base their off-line production drawings and schedules.

BIM proved a valuable tool in helping stick to the tight construction programme, and to also allow the different disciplines to collaborate together.

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**BIM Services**

- **Provision of the Common Data Environment (CDE)**  
  Achieved through the use of Viewpoint For Projects
- **BIM & Project co-ordination**  
  Achieved through interrogation of the BIM models from the various disciplines
- **Co-ordination of the design between disciplines**  
  Achieved through federation of the BIM models
- **Clash detection**  
  Solibri Model Checker
- **File Share Format**  
  IFC
- **COBie**  
  No requirement
- **EIR / BEP / MIDP or TIDP**  
  McAvoy generated a BEP for BIM services

**Team**

- **Lead BIM Consultant**  
  McAvoy Group
- **Architectural BIM model**  
  Ostick & Williams Architects (REVIT)
- **Structural Steel BIM model**  
  McAvoy specialist steel frame designer (Tekla)
- **Modular Walls BIM model**  
  McAvoy specialist production engineers (Woodengine)
- **Mechanical, Electrical & Plumbing model**  
  Semple McKillop (Revit)
- **Secondary Steel (Stair) model**  
  Pedlow Engineering (Tekla) TBC