

'THE VILLAGE' SCHOOL – COMMUNITY AND LEISURE CENTRE – MECHANICAL AND ELECTRICAL SERVICES



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CLIENT The London Borough of Brent

VALUE £8 million

DATE July 2009 – 2013

PROJECT

The scheme comprised a swimming pool, sports hall and Multi Use Games Court (which was to be hired out as a community group leisure facility for evening and weekend use). The sports facilities area was to be zoned off from the adjacent school building on which also shares the site. The Brief was to design a modern state of the art sports and leisure facility that could be used by the adjacent special needs school as well as the wider community. The scheme was also to be a special case co-ordination project so that the new BIM technologies could be applied and tested.

The project was modelled within our BIM modelling package and provided full co-ordination and detailed design between each of the core disciplines of Architecture, Structural and Building Services Engineering. We employed a very experienced team for the design so that the design process was rigorously tested. The team on this project utilised many of the Level 2 BIM maturity criteria within the scheme to provide a showcase medium scale project for both the client and Frankham.

With comprehensive detailed Architectural, Structural, Mechanical and Electrical co-ordination, the working drawing package for construction was checked and tested at every stage of design development to ensure that on site clashes were avoided as far as humanly possible and in order to achieve this it was essential to ensure that all disciplines were working within the same model environment. This co-ordinated,

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exhaustive, multi-discipline approach has proved to be very successful. The resultant design model was also utilised by our Architectural and Environmental team as an interrogation tool for the BREEAM assessment. In this aspect the interrogation of the building fabric, materials and insulation was utilised for the provision of the quantitative information required.

The project also included the integration of NBS specification clauses using keynote text for the detailing within the scheme. This process was intelligently linked to the specification for the project and was then manipulated when the specification changed during the design process.

The building comprised a modern design with form to relate to the school building it shares the site with. The construction comprises a low emission, highly insulated envelope which incorporated the Brief requirements for low energy, low carbon, and sustainable design. The M&E services were then applied to this 'optimum' building envelope in order to meet the design criteria.

The mechanical services installation was designed consisting of modular high efficiency condensing boilers supplying hot water services and low temperature hot water heating. Various ventilation installations and toilet and shower ventilation was provided complete with heat recovery. Local dedicated comfort cooling was provided to admin areas and studios. Above ground soil and waste systems were provided and connected to the site main drainage network. The complete mechanical services installations were comprehensively tested and commissioned with detailed as fitted drawings and O&Ms provided.

The electrical installation comprises a new incoming mains supply, mains and submains distribution, low energy high frequency with presence and solar controlled lighting installations, external dark sky compliant lighting installation, general small power installation and emergency lighting. The works also included for the provision of voice and data wiring to facilitate services for the administration environments. The building was provided with secure access control and CCTV cameras with live recording and monitoring, a category L1 analogue addressable fire detection and alarm installation, lightning protection, a network of containment wireways and earthing and bonding. The complete electrical services installations were comprehensively tested and commissioned with detailed as fitted drawings and O&Ms provided.



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