Case study - DfE

Beaver Road Primary School

New-build permanent primary school for pupils aged 9–11 (Years 5–6). Three-storey facility accommodating approximately 550 pupils including 14 classrooms, IT suites, offices, kitchen, sensory room and a double-height sports hall located in Manchester. Approximate size: 2,380 m².

Educational Outcomes: 14 purpose-built classrooms configured to support cross-curricular teaching, group instruction, and use of IT suites. Double-height sports hall and external play area promote physical education and active learning.

Wellbeing & Inclusivity: Fully fitted sensory room ensures SEND provision, supporting pupils with autism or sensory processing needs. Inclusive layouts: wide corridors, accessible circulation paths, and three-storey design incorporating first-floor external play area to enhance movement and independence.

Sustainability Goals: Achieved BREEAM 'Very Good' and EPCA credits through airtight design, natural ventilation, and high-performance envelope; Off-site modular construction reduced waste, embodied carbon, and ensured quality; specified timber-effect cladding, curtain walling to maximise daylight and energy efficiency.

Alan Wood & Partners

Location:
Manchester

Client:
Premier Modular Ltd

Architect:
Ellis Williams Architects

Value:
£7.3m

Structural Engineering

Modern Methods of Construction (MMC)

Engineer / Manage / Deliver /

Case study

Cont'd...

DfE Standards: AWP collaborated with the design team to deliver structural and civil engineering solutions in full compliance with Department for Education (DfE) standards. This process involved multiple review stages, ensuring all drawings and designs were rigorously assessed and formally approved by the DfE. The school layout (classrooms, IT suites, sports hall) met DfE area guidance; Curtain walling optimises daylighting; acoustic separation and natural ventilation systems implemented across teaching zones.

Regulatory Compliance: Designed and built as a permanent educational building compliant with UK Building Regulations and fire safety standards. Off-site volumetric MMC delivery ensured consistent quality controls, alongside site Health & Safety best practices during installation.

Design Solutions: Accelerated programme: 6 weeks design, 4 weeks manufacture, 15 weeks site installation — saving ~10 weeks against traditional methods; Three-storey configuration with rooftop play space maximised urban site and pedagogical flexibility.

Modern Methods of Construction (MMC): Full volumetric off-site modular construction using Design for Manufacture & Assembly (DfMA) principles. BIM Level 2 digital coordination and ISG's Data Capture Process generated COBie-compliant Asset Information Model — the Council's first fully integrated BIM Level 2 school model.

Consultation Process: Collaboration between AWP, Premier Modular, ISG Construction, Ellis Williams Architects, and Manchester City Council as part of the EBN programme; Early supply chain engagement ensured design consistency, quality and cost certainty.

Feedback Integration: Design refinements based on lessons from previous modular school phases optimised module sizing and reduced site disruption; Inclusive features (e.g., sensory room, external play space) incorporated in response to school and community needs.

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Post-Occupancy Evaluation: Delivered on time within the 14-month EBN programme; secured awards including North West Regional Construction Award and Off-site Construction Award 2019. Off-site delivery achieved ~10-week schedule reduction over traditional build.

Educational Benefits: Enhanced learning environment for 550 pupils, with flexible classroom spaces, IT suites, sports and sensory provision; Modular architecture supports adaptability for future curriculum changes and potential expansions.

Continuous Improvement: Repurposable modular design accelerated delivery and minimized costs on large-scale educational programmes; Early DfMA integration proved impactful for design coordination and asset handover processes for a swift programme.

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