Case study - DfE

Broomfield South School at Broom Place, Leeds

New 3-storey SEND school building at Broomfield South SILC, Leeds.

1. Project Context
Proposed extension to SEND school to provide new 3-storey main building consisting of classrooms, offices, sports/dining hall, kitchen and 'rebound' areas. Minor alterations to existing building to construct mezzanine floor infill to double height spaces to form new offices and classrooms.

2. Design Objectives
The project aims to deliver greatly improved facilities to increase staff and student wellbeing, and to be able to cater to needs of students with enhanced needs.

3. Evidence of Compliance
Working with the design team, school staff and Local Authority, Alan Wood and Partners (AWP) helped ensure the school is suitable to meet the needs of its students. This includes requirements for open spaces in the form of a central courtyard in the center of the building and several balconies, 'rebound' rooms to provide activities for students and ensuring the buildings are robust.

Alan Wood & Partners

Location:
Leeds

Client:
Tilbury Douglas Construction Ltd.

Architect:
NPS Group

Value:
£25m

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4. Innovation & Best Practice
Challenges to overcome included the open courtyard provided in the center of the building which required long spans and cantilevering structures to create an open space. The site also sloped steeply and a series of retaining elements were required to tier the car park and provide a level site for the new building which required level wheelchair access all-round.

Structure designed as a steel frame and composite reinforced concrete deck for upper floors. Composite connection formed by shear studs welded to deck and main beams. Lateral stability provided by bracing, stiff deck action in the concrete deck has been assumed to facilitate load transfer back to braced bays and provided restraint to top flange of beams.

5. Stakeholder Engagement
The design team engaged with the local council and school staff in regular meetings to ensure requirements of the staff and students were met.

6. Visual & Technical Evidence
AWP provided technical drawings, 3D revit models and design calculations for substructure, superstructure, below ground drainage and external works.

7. Outcomes & Impact
The proposed extension provides a comfortable, safe working environment and supports the wellbeing of staff and students with enhanced needs.

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