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Partner of Stora Enso

B&K STRUCTURES

Stowe School Design Technology & Engineering Building Buckingham, UK

Stowe School is a prestigious, private boarding school for pupils aged 13–18, located in England's countryside of upscale Buckinghamshire.

Founded in 1923, the school is set within the historic Stowe House estate, a Grade I listed site with a 'Capability Brown' landscape, complete with the classic sweeping lawns, expansive, serpentine lake, and idyllically placed trees. In 2024, Stowe enhanced their campus with a new £6.5 million (EUR 7.74) Design Technology & Engineering (DTE) building. The two-storey facility is strategically situated within woodland to minimise visual impact and ensure logical adjacencies with other campus facilities.

A Creative Hub for STEM Education

The DTE building is a creative hub, introducing students to modern design and manufacturing skills while supporting STEM subjects like science and mathematics.

The architects, Design Engine, created distinct 'designing spaces' and 'making spaces', and a dedicated area for teaching and learning resources, adequate storage for materials and large-scale projects. There is also an exhibition space to showcase the student's work.

Collaborative Design and Planning

(Following an invited design competition, Design Engine Architects were commissioned to develop the new facility. Their scheme included the application of prefabricated cross-laminated timber (CLT) Sylva™ CLT Walls and Floors) and glued laminated timber (GLT) delivered by our partners, B&K Structures.

Collaborating with engineers from Buro Happold, and mass timber specialists the architects explored how the facility could function as an educational tool, demonstrating the use of various materials in both structure and fabric.

The substructure incorporates precast concrete planks on ground beams and driven piles.

This design was optimized to reduce material usage, allowing for future repurposing or restoration of the site to its natural state.

Carbon Footprint of the CLT used

Manufacturing: 21 tonnes of greenhouse gases (COe_2)

Transporting: 12 tonnes COe_2

CO_2 removed from the air and stored in the DTE Building: 300.23 tonnes CO_2

Emissions avoided by using wood instead of non-renewable construction materials: 450.34 tonnes CO_2e

Source: Stora Enso Carbon Calculator

Origin of the Wood

The Sylva™ elements were made with wood sourced from PEFC-certified forests. PEFC is one of the trusted and widely recognised certifications for sustainable forest management.

Streamlined installation

The application of the 3,107 bespokeSylva™ CLT elements significantly streamlined the construction process.

This project leveraged the use of Stora Enso's Services by preinstalling lifting slings and applying temporary membranes in factory-controlled conditions so when the elements arrive on-site, they are ready to install immediately.

Learn more about the advantages of mass timber: Download the whitepaper

Education Project of the Year 2025 Shortlist Structural Timber Award



Photo credit: B&K Hybrid Solutions

General

Delivery year

2024

Building type

Education

Area (m²)

1,000

Storeys

2

Units

1

StoraEnso

Products

Products and Services

Sylva™ CLT Floors and Roofs, Sylva™ CLT Walls, Temporary Membrane, Preinserted lifting devices

Product quality

PEFC certified Visual and Non-Visual grades

Product volume (m³)

379

Team

Partner of Stora Enso

B&K Structures

Developer

The Stowe Group

Architect

Design Engine

Structural Engineer

Buro Happold

Main contractor

Beard Construction

Others

Total construction development cost (€)

7,740,000