

Over the last 15 years the UK has experienced a quiet revolution in construction. Since the modest efforts of the first small buildings in the early 2000s a blossoming array of CLT projects has emerged across a range of building types and scales. In 2017, three out of the five buildings nominated for the Stirling Prize, the UK's top architecture award, were constructed from CLT. Engineered timber buildings are now firmly part of our construction landscape.

This book presents the case for using engineered timber with one hundred studies encompassing a wide range of scales, styles and types.

Also included is a compendium outlining the benefits of CLT along with the considerations for designing and building in this revolutionary material.

100 PROJECTS UK CLT

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WAUGH THISTLETON ARCHITECTS

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2015 Education

DAVENIES BOYS PREPARATORY SCHOOL

Davenies Preparatory School

LOCATION
Beaconsfield,
Buckinghamshire

HEIGHT / STOREYS
31 ft (9.3 m) / 2 storeys

CONSTRUCTION COST
£4.6 million

ARCHITECT
DSDHA

STRUCTURAL ENGINEER
engineersHRW (formerly
Jane Wernick Associates)

TIMBER ENGINEER
KLH UK

TIMBER CONTRACTOR
KLH UK

TIMBER MANUFACTURER
KLH Massivholz

MAIN CONTRACTOR
Beard Construction

TIMBER VOLUME
13,100 ft³ (370 m³)

TIMBER ASSEMBLY
7 weeks

OVERALL CONSTRUCTION
65 weeks

STRUCTURE TYPE
Hybrid

**EMBODIED CARBON
WITHIN TIMBER***
-230 tons (-208 tonnes) CO₂e

CLT FACT
10% lower CO₂ emissions
than the notional building

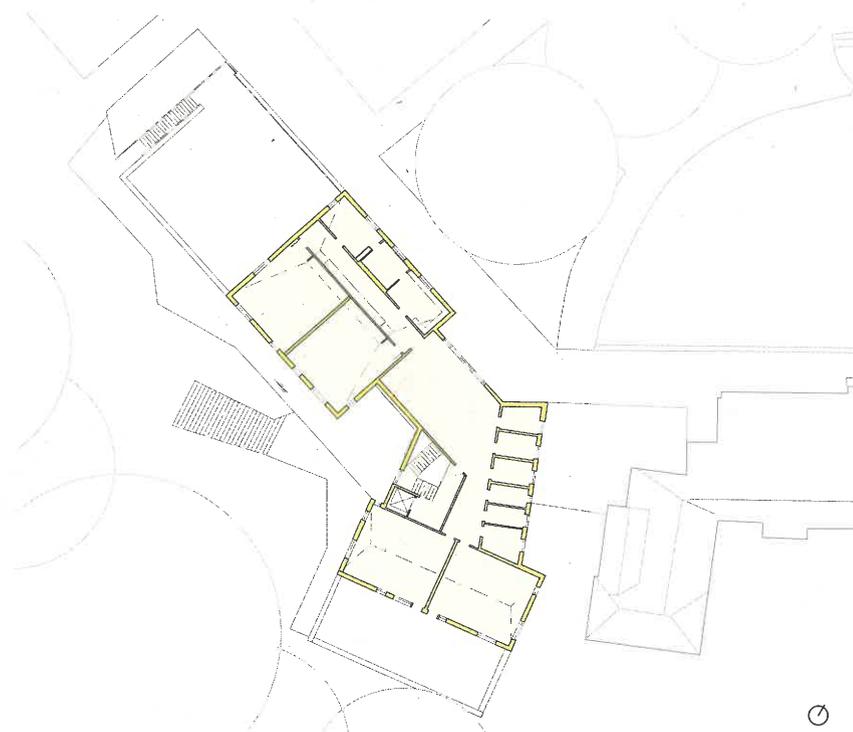
Davenies School is a collection of buildings set around historic formal gardens. This phase of the school's evolution consists of a new library, hall and 10 classrooms.

The various elements echo the school's agricultural past. The "link" provides a connection with the school's listed structures: the reception; a smaller scale environment for younger children; and the main wing, set around a verdant dell for learning and playing. These components are organized around a ground-tempered space that connects the historic garden to the new outdoor spaces.

Black 'wavey' edged timber clads the structure providing a striking contrast to the surrounding greenery. Its dark color reduces the perceived scale of the new building and harmonizes it with the historic setting.

CLT is used as the primary structure, forming the floor slabs, walls and roof structure. Left exposed internally the CLT contributes to the controlled material and color palette and provides the pupils with the opportunity to see how the building has been made.

A series of passive design measures, along with the CLT structure allowed this school to exceed the energy performance requirements of the building regulations.



First Floor Plan in Context