

Thornhill Primary School

Central Bedfordshire Council

Services: Project Management, Cost Consultants, Principal Designer, Architecture, Structural Engineering, M&E Engineering

Contract Dates: March 2019 - September 2022

Contract Value: £6,500,000

Project Overview

We were appointed by Central Bedfordshire Council for the expansion of Thornhill Primary School to provide a multidisciplinary consultancy service alongside our sister company, ECD Architects who act as lead designers. The project was expanding a 1 form entry school into a 3 form entry school.

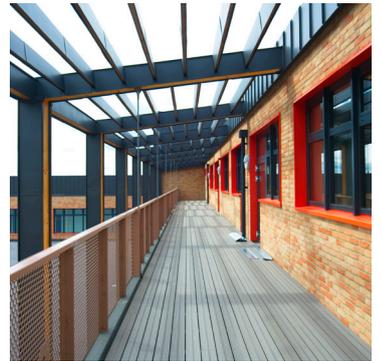
Thornhill Primary School is located on the northern periphery of an existing residential area and is the focal hub of the rapidly developing new residential lead masterplan. Our proposals separate the nursery to Year 1 and Year 2 to Year 6, with the existing school catering for the early years, and the new build school hosting the later years. Our plans present the school as a single facility through a carefully designed external landscape and strategically planned external connections between the two buildings. These internal and external teaching spaces have then been designed to enable alternative methods of learning and offer a platform for evening/ summer events for the school community.

The new school building is arranged around a central playground, overlooked by circulation spaces and a new access deck. This deck wraps the entire two storey section of the building, providing valuable breakout space for smaller group learning, connecting teaching with the outside and the surrounding context. At the heart of the school is a double height entrance atrium and split-level library, adjacent to the new sports/ dining hall, centralising the facilities, promoting active learning within a centralised hub.

Through joint efforts between our Project Managers, Architectural and Cost Consultant teams, and working collaboratively with Central Bedfordshire Council, we have successfully guided them and implemented Passivhaus principles and sustainable construction materials within the scheme.

Passivhaus was selected as this would ensure the new facility's quality of construction, provide significant benefits to the whole life cycle cost, reduce its financial running costs and improve thermal comfort and indoor air quality.

Materials (specifically CLT (Cross-Laminated Timber) were selected for their low embodied carbon, and both materials and buildings were considered for their possible future uses and recyclability.



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This successful integration of sustainability as part of a high-quality design has not only influenced the direct client team, it has influenced the way that Central Bedfordshire as a whole are thinking about sustainability, influencing their new sustainable policy.

Acting as Project Managers, Keegans led the procurement process for the project which was tendered under a traditional JCT Intermediate Contract 2016 to selected contractors following initial Expressions of Interest. Post tender Value Engineering exercises led by Keegans were required to bring the project within the client desired budget and to secure compliance with a tight post contract construction period.

In March 2022, the school underwent and successfully passed airtightness test with excellent results. An Air Change rate of 0.42 Ac/hr means the school will be a superbly performing school creating an ideal learning environment. With the help of ECD Architects and Ashe Group, Thornhill Primary School will provide exceptional air quality and thermal comfort for all its users. As of July 2022, the school has been certified to the Passivhaus Classic building standard by the Passive House Institute.

Awards:

- Winner: Pagabo Awards - *Best Project delivering sustainable outcomes*



AIRTIGHTNESS TEST RESULT

0.42 Ac/hr



THORNHILL PRIMARY SCHOOL:

FACTS & FIGURES:

Thermal Envelope Area:	5,484m ²
Door / Window Areas:	662m ²
Air Permeability:	q ₁₀ 0.69m ³ / (hr.m ²)
Air Change Rate:	n ₅₀ 0.42Ac/hr
Equivalent Leakage Area:	0.19m ²