StoraEnso

Maatulli School and Kindergarten Helsinki, Finland

Maatulli School and Kindergarten is an award-winning mass timber educational facility centered around nature in Helsinki's Tapulikaupunki district. This school concept is based on research indicating that educational institutions built from wood and closely connected to nature have a positive impact on children's mental and physical health. The overall project spans approximately 10,000 m² and is a mass timber school, constructed from a solid wood kit of parts. The school serves 700 pupils and 238 kindergartners. The design is intended to create a village feel with five wooden buildings arranged around a circular green courtyard known as "The Forest Glade".

Learning Environment

Designed from a learner's perspective, the school provides a unique learning environment that fosters well-being and holistic development. Organized into five distinct wooden buildings connected by central common areas, the layout creates a human-scale environment where learners and teachers can easily navigate and collaborate. This thoughtful layout ensures that all functions are conveniently located within close proximity to the central space and entrances. Each building has its own unique character, housing specialized learning spaces, a canteen, a sports hall, and kindergarten facilities.

In the evenings and on weekends, the school transforms into a community centre for local residents. Many learning spaces are adaptable, equipped with movable partitions that allow for reconfiguration to suit various activities and needs. Wood and other natural materials are used throughout the school, creating a warm and inviting atmosphere that connects students with nature and makes them feel at home.

The green courtyard and the bright, wooden lobby are central hubs for social gatherings and circulation within the school, enhancing the school's community atmosphere. Outdoor learning spaces, featuring local Finnish plants, plays a vital role in the school's educational philosophy by encouraging children to engage with nature and strengthening their understanding and care for the environment. The school, its outdoors spaces and nearby parks, creates one large unified learning environment that fosters community and social interaction among learners and residents.

Application of Sylva™ Kit

The application of Sylva LVL (Laminated Veneer Lumber) Beams and Columns provided structural strength and stability to the design. Their high strength-to-weight ratio allowed for large, open spaces without the need for excessive additional supports, creating a more flexible and adaptable learning environment. The level of prefabrication also contributed to the speed of construction as the elements were manufactured off-site and then quickly assembled on-site, reducing construction time and minimizing disruption to the surrounding area.

The application of Sylva CLT Walls, Floors, and Roofs aided the structural integrity of the building, and will also help lower the school's energy bills long term. The thermal performance of Sylva CLT panels provides excellent insulation, helping to maintain a comfortable indoor climate and reduce energy consumption for heating and cooling. They also contribute to a beautiful natural wood finish for that essential biophilic connection to nature within the school, creating an inviting and calming atmosphere for students and staff.

This project utilized Stora Enso's Sylva Protect Service applying End Grain Sealer to the mill in factory-controlled conditions. This preparation ensured that the elements were ready for immediate installation upon arrival on-site.

Architect

The project was led by Fors Arkitekter, with Arkkitehtuuri- ja muotoilutoimisto Talli serving as the executive architect. The design was selected through a public two-phase competition in early 2021, with Fors Arkitekter and Blomqvist Arkitektur providing the winning proposal. The construction, which began in May 2021, was completed in August 2024.

Sustainability

The Sylva kit generated 136 tonnes of greenhouse gases (CO_2e) to manufacture and 23 tonnes of CO_2e to transport. Compared to the 1,846 tonnes of carbon dioxide that the trees removed while growing and will store in the school, this is a small fraction. Choosing Sylva CLT elements instead of non-renewables avoided 2,770 tonnes of greenhouse gases. Source: Stora Enso Carbon Calculator.

Awards and Recognition

Maatulli School and Kindergarten has been nominated for the 2024 Wood Award, which celebrates high-quality wood architecture in Finland. The jury's statement about the project was:

"Wood enhances the well-being of the building's users in many ways. Even when indoors, the children and staff feel the nature present in the inner courtyard and the surrounding park. The school's rational construction method and the uncomplicated use of wood throughout the interior epitomise wood construction that is simultaneously sensible and progressive. Leading by example, Maatulli School and Kindergarten points the way towards even richer and more experiential designs for wooden schools."

2024 People’s Choice Award, Finland

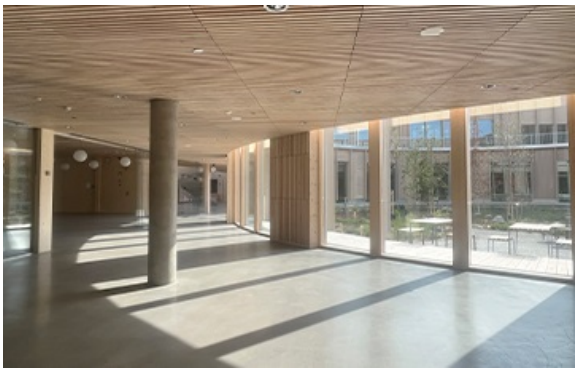

Photo credit: Fors Arkitekter

General

Delivery year

2023

Building type

Education

Area (m²)

10,000

Storeys

1

Units

700

StoraEnso

Products

Products and Services	Product volume (m³)
Sylva™ CLT Floors and Roofs, Sylva™ CLT Walls, Sylva™ LVL Beams and Columns	2,414

Team

Developer

City of Helsinki

Architect

Fors Arkitekter

Structural Engineer

A-Insinöörit Oy

Main contractor

Jatke Oy