StoraEnso

Suomalais-venäläinen koulu (SVK) School | Finnish Russian School Helsinki, Finland

Suomalais-venäläinen koulu in Helsinki is an excellent example of a school built from a prefabricated kit of parts using cross-laminated timber (CLT) and laminated veneer lumber (LVL). This remarkable building, designed by AFKS Architects, has garnered significant acclaim, including the audience award at the Finnish People's Choice Award 2021.

Design

Designed to support a new curriculum, the building moves away from traditional corridors and separate classrooms. Some partition walls are made of glass, creating a sense of openness and spaciousness. The school also offers various facilities for group work, including sofa groupings and two “houses within the house.” Traditional classrooms are available for subjects that require more conventional setups.

The school encourages playfulness and physical activity, providing numerous opportunities for students to spend time together and stay active.

The L-shaped structure features openings on all sides, creating flexible spaces bathed in natural light. The large mass timber stairs connect the upper floor with a central court, providing a communal space where pupils gather for lunch. The extensive use of exposed wooden surfaces throughout the interior adds a sense of warmth and comfort, which has been highly appreciated by the students.

The main entrance, located on the schoolyard side, leads to a high stage and hall space at the heart of the building. This area features an open, stairwell-like auditorium filled with natural light. From here, you can see the impressive structures, including large-scale pillars, beams, and glulam-laminated timber wall surfaces.

Architectural competition

The design group for the urban school project was chosen via an architectural competition. The proposals were assessed for their sustainability including creating a healthy indoor climate optimised for working and learning and for environmental impact, (air quality can have a developmental impact on young lungs and health with children spend on seven hours a day on average indoors).

Costs were also a key consideration as they are for most schools. The winning design had both an in-depth understanding of how students will use the building and demonstrated a thorough grasp of greenhouse gas emissions across all building phases, from material production to construction to the eventual deconstruction, which were fully considered and calculated during the planning and design of the school. The early steering of the emissions helped achieve a very low carbon frame solution and ultimately led to 10% emissions reduction for the entire life cycle than the already optimised competing designs.

When compared with the RTS (Finland’s environmental classification body) reference building, the whole-life emissions are 21% lower than their average (Source RTS Environmental Classification). The timber frame solution chosen for the school was the determining factor in making the difference.

Emissions from the construction materials of the school (life cycle modules A1-A3) are also 20% lower than any other educational building in Finland on average. (Source One Click LCA Ltd.)

Location

The school is located in Kaarela, a vibrant district in Helsinki. Kaarela has seen significant growth and transformation in recent years, with a focus on creating low carbon, liveable spaces that promote community well-being.

Construction

Existing concrete and brick from the preexisting school building were crushed and reused in the earthworks for the yard areas. Crushing and utilising demolition concrete reduced transport costs and emissions.

The project utilised 1,435 cubic metres of Sylva™ Walls, CLT Stairs, and GLT Beams and Columns, all delivered in a kit form. This innovative approach not only streamlined the construction process but also ensured precision and quality in the assembly of the building.

The construction was carried out by SRV, a leading Finnish construction company renowned for its expertise in complex and sustainable projects. SRV's involvement ensured that the project adhered to the highest standards of quality and sustainability.

Awards

20214 People's choice award, Finland (Puuinfo Oy)

Puupalkinto 2021 is an annual award given by Puuinfo Oy to recognize excellence in Finnish wood architecture. The award celebrates buildings, interiors, or structures that showcase high-quality Finnish wood architecture or innovative use of wood. Since its inception in 1994, Puupalkinto has highlighted projects that push the boundaries of wood construction and design. The 2021 edition included a public vote, allowing the community to select their favourite project, with the winners announced at the Puupäivä event.

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Building key facts

- 700 pupils, housing all grades from preschool to upper secondary school
- 85 staff and educators
- Bilingual school Finnish and Russian
- Approximately 6,400 m² (gross) two-storey school building residential area
- Building life expectancy: 100 years
- Life cycle consultant: Granlund Consulting
- Budget: 27 900 000 EUR
- From demolition to completion July - August 2021

StoraEnso

General

Delivery year

2021

Building type

Education

Area (m²)

6,500

Storeys

2

Photo credit: AFKS

Products

Products and Services

Sylva™ CLT Floors and Roofs, Sylva™ LVL Beams and Columns, Sylva™ CLT Stairs

Product quality

Sylva™ CLT Walls and Sylva LVL beams

Product volume (m³)

1,000

Photo credit: Puurakentajat Group Oy

Team

Developer

Senaatti Kiinteistöt

Architect

Arkkitehtitoimisto Frondelius + Keppo + Salmenperä Oy (AFKS)

Structural Engineer

MEP Designer

Photo credit: Puurakentajat Group Oy

A-Insinöörit

Main contractor

SRV Rakennus Oy

Jaakko Keppo AFKS ARK

Specialist Timber Subcontractor

Puurakentajat Group Oy

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