

WOOD WITH LONGER SPANS, OPEN SPACES AND SLIM FLOORS? YES, WITH THE DELTABEAM® HYBRID FRAME AND MASSIVE TIMBER

Hopealaakso kindergarten is currently being built in Helsinki, Finland. The frame is made of solid wood elements and DELTABEAM® Composite Beams.



The developer of the kindergarten, the City of Helsinki, organized a “design and build” competition. The frame solution was not specified in the call for tenders, so each participant suggested a frame of their choice. The winner was decided on price, architecture and environmental issues.

“It became clear that we were the only one of the four finalists to offer a timber-structured option. We assume that a timber-framed option was not more expensive to build than concrete, even though weather protection was included in the tender,” recalls Project manager **Janne Manninen**.

ENTER THE DELTABEAM®

As the aim of the frame solution was to achieve long spans, open spaces, and slim floors, the DELTABEAM® was a conscious choice.

“We used DELTABEAM® to make full-height cross-laminated timber elements work as floor-height walls. This kept



the number of elements and joints much smaller,” says Manninen.

According to Puurakentajat Rakennus Oy – the sub-contractor for the frame – the hybrid frame solution works well, as it does not present any special needs for the construction.

“When erecting the frame, the composite beams were mounted on the walls and screwed on. Using wood beams would have left much less room for technical installations,” explains **Jyrki Huttunen**, CEO of Puurakentajat Rakennus Oy.

Another bonus, the wood-concrete intermediate floor provides sound insulation especially suitable for kindergartens.

THE FIRST IS BOUND TO GET SEQUELS

Puurakentajat used DELTABEAM® for the first time at the Hopealaakso site. The designs had been done so well that there were no problems during the installation.

“They are certainly easy to install at the site, since the requirements of building technology have been taken into consideration as regards perforations, for example,” says Jyrki Huttunen.

According to Manninen, there are weighty reasons – interior air quality and CO₂ emissions – why the choice of the building material is increasingly directed at wood in Finland.

It is possible that reducing carbon footprint will gain in importance in future. This would favor the choice of DELTABEAM® Green, an even more environmentally friendly composite beam.

Huttunen and Manninen’s future construction sites in Helsinki are Pakilanpuisto school and Verkkosaari kindergarten. Both buildings will be constructed with the same concept, a wood frame with DELTABEAM® composite beams. ●



PROJECT FACTS

- ARCHITECT: AFKS ARCHITECT
- DEVELOPER: CITY OF HELSINKI KYMP/RYA
- MAIN CONTRACTOR: OY RAKENNUSPARTIO
- WOOD FRAME CONTRACTOR: PUURAKENTAJAT RAKENNUS OY
- GROSS AREA: 2,150 GROSS m² (2,570 sq yd)