

Paviljoen Pannenhoeof Leemerhoeof

Eindhoven, NL



Case Study



Property Owner

Ekoflin, BMV



Main Contractor

Schelp Bouw & Interieur



Architect

FAAM Architects



Acoustic Consultant

Level Acoustics & Vibration

OVERVIEW

In July 2021, the Dutch town of Eikenburg inaugurated its first cross-laminated timber (CLT) building. 'Paviljoen Pannenhoeof–Leemerhoeof' was built in only three weeks time and consists of 28 residential units and 3 multifunctional spaces. The design focuses strongly on the collective character of the place, and seeks to enhance it socially, spatially and ecologically.

CLT is gaining popularity as a more sustainable building material. Cross-laminated timber is strong and its inherent fire resistance makes it a much-liked alternative to steel and concrete.

Straviwood WallBreak-S

- Resilient strip for acoustic decoupling of CLT walls
- Designed to minimize the flanking sound transmissions via CLT walls when continuous load transfer on the slab is required

Straviwood WallBracket

- Angle bracket for structural joints with acoustical decoupling features thanks to an excellent behaviour of resilient pads in the bracket giving a significant reduction of flanking sound transmissions



SOLUTION

In three weeks, the shell of 28 houses and three studios was erected in CLT. Solid timber elements of up to 19 m long, 3 m wide and 22 cm thick were used. On a concrete foundation and partly on steel columns, the entire building structure was made of cross-layer timber, constructed, delivered on site, and assembled by Ekoflin.

The façade elements were acoustically decoupled by our local partner Delta-L, using a polyurethane foam strip called [Straviwood WallBreak-S](#) to address the flanking transmission through the façade. By means of an acoustically decoupled screw connection type [Stravibase Fix](#), the façade elements are connected to the floors. In addition, the acoustically decoupled L-profile [Straviwood WallBracket](#) was used to absorb any horizontal loads. Straviwood WallBracket was also used to decouple the pre-walls from the rest of the structure.

Since the quality of the solution also depends on the execution, Delta-L not only designed and supplied these systems, but also supervised the installation and carried out inspections of the positioning of the systems.

AT A GLANCE

CHALLENGES

- Because of the stringent acoustic regulation, a thick strip was used
- A decoupled screw was also provided

480 pcs
Stravibase
Fix

480 pcs
Straviwood
WallBracket

280 rm
Straviwood
WallBreak-S

