BGO Waalwijk
Waalwijk, NL

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Case Study

Property Owner
BGO Expat Housing, De Wit Drunen

Main Contractor
EKOFLIN BV / Van de Laar

Structural Engineer
JV2 Bouwadvies

Architect
Goedehuizen architectenbureau

OVERVIEW

On the Valkenvoortweg in Waalwijk, on the former site of café "het Snoekske", a campus for 270 expats is currently under construction. Commissioned by Brabants Glorie Ontwikkeling (BGO), this temporary housing complex, consisting of six residential blocks, is being built by Ekoflin, from the foundations up entirely of solid CLT (Cross Laminated Timber).

By using CLT, the construction will be relatively light and in addition, CLT is a very sustainable material. The timber will retain heat and absorb CO_2. The wood used for this project will store over 7.5 tonnes of CO_2.

Straviwood ModuLink

- Bracket for structural joints with acoustic isolation features thanks to the resilient pads in the bracket
- Significant reduction in flanking sound transmission

Straviwood WallBreak-S
Straviwood WallBracket

- Resilient strip for acoustic decoupling of CLT walls (Straviwood WallBreak-S)
- Acoustic angle bracket for structural joints in CLT construction. Ideal for CLT constructions where shear and vertical load distribution between structural elements is intended. (Straviwood WallBracket)

AT A GLANCE

CHALLENGES

- 100 mm CLT panels to keep visible from inside
- Need to comply with acoustic regulation
- Need to guarantee structural integrity

BENEFITS

- Inter-appartments section is 100mm CLT – 50mm Mineral Wool – 100mm CLT, with use of brackets for structural joints with acoustic isolation features between the appartments for stability reasons (wind loads)
- Use of acoustic angle bracket for structural joints between walls and floor slabs, to guarantee structural integrity
- To comply with acoustic regulation, need to decouple the walls from the slab to limit flanking transmission by using 12.5 mm (fres ca. 20Hz) resilient strips decoupling CLT walls

SOLUTION

Working closely with Ekoflin, we used our expertise to address the acoustic challenge and proposed various decouplers for optimal sound insulation. Starting from the first floor, all CLT walls were decoupled using high-quality elastic strips, type Straviwood WallBreak-S, which effectively isolate impact sounds and vibrations. Three types of polyurethane foam strips 12.5mm thick were used for this project.

Using the Straviwood WallBracket, the walls were anchored to the floor acoustically decoupled.

For additional structural rigidity, two variants of the Straviwood ModuLink were placed between the houses, which also ensure that wind loads can be transferred.

A steel structure will be built between two residential blocks, which will be linked to the CLT residential blocks. To prevent vibrations being transmitted from the steel structure to the residential blocks, the Stravibase Fix system has been deployed.

1440 lm	1260 un	170 un
Straviwood WallBreak-S	Straviwood WallBracket	Straviwood ModuLink

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