



StoraEnso

Wood City Apartments

Helsinki, Finland

With almost three-quarters of its land covered by forest, Finland's long tradition of building with timber dates back to the 16th century. While this was largely limited to housing in the past, advances in prefabrication, innovation in wood manufacturing and digital technology enabled regulations for multi-storey wooden structures to become possible.

Wood City Apartments was one of the first examples of this and became a trendsetter for developers and urban planners worldwide to build even higher with wood. As part of the redeveloped Jätkäsaari quarter, these apartments are now home to 17,000 residents.

The twin affordable apartments for the Helsinki Housing Production Department, (ATT) were inhabited almost a decade ago now in 2017. Within the complex are the offices for the gaming company [Supercell](#), a hotel and a mixed-use public space. Each main building has eight floors, with frames and facades made from solid wood. Concrete is only used up to the first floors of the apartment blocks. Developed by Finnish construction company SRV in cooperation with Stora Enso, one of the world's largest suppliers of wooden construction material, the apartments are built using "massive wood products" - mainly [laminated veneer lumber](#), (LVL). LVL is one of the strongest wood-based materials relative to its weight and is engineered to be relatively stronger than steel and lighter than concrete while remaining workable and durable.

At Wood City, LVL forms the load-bearing structural systems. Helsinki's history with timber hasn't been an entirely happy one. Major fires destroyed large areas of the city around once a century in the 400 years up to 1900. But developments have come a long way. LVL offers higher fire resistance than traditional beams due to the structure of the material, which is less porous, with the veneer arranged in multiple layers. Faced with designing a major new district - with all of its timber elements prefabricated under factory conditions away from the site, before being transported to Wood City for installation - Anttinen Oiva Architects (AOA) used digital technologies.

Accuracy was key, and the project team worked in an information modelling environment - effectively building the city virtually before construction. Timber arriving at the site cut to the wrong size or shape could seriously slow down construction costing time and money to sort out. To avoid this, the team de-risked the project by checking their virtual models. Since this project, Stora Enso has advanced their own [digital tools](#) and [Building Concepts](#) making similar such projects even easier for first-time-right results.

The digital platform allowed the team to combine and co-ordinate their virtual designs, closing out any errors before timber cutting began. The modelling gave designers the ability to overlay and compare their models - discuss issues, and maintain the flow of construction information to the mill. Any party working on the project could access the data they needed wherever they were, be it on-site or in the office or mill.

Learn more

[Videos about the project](#) and [Why Finland is a building a Wood City](#)

[Press release about the project at the time](#) | [First elements installed](#)

[Other projects by Anttinen Oiva Architects \(AOA\) and Stora Enso: Wood City Office Supercell and Katajanokan Laituri](#) | [Stora Enso Head Office](#)

Residential Multi-storey Building Concept by Stora Enso Multi-storey buildings in massive wood are high-performing, renewable structures that can help to meet the growing demand for new urban buildings and more efficient, sustainable construction. [Click here to learn more about our residential multi-storey building concept.](#)



General

Delivery year

2017

Building type

Multi Residential

Storeys

8

Units

98



Photo credit: Stora Enso

Products

Products and Services

Sylva™ LVL Beams and Columns, Sylva™ LVL Rib Floors, LVL, CLT

Product volume (m³)

2,400

Product delivery duration (weeks)

25

Number of deliveries

200

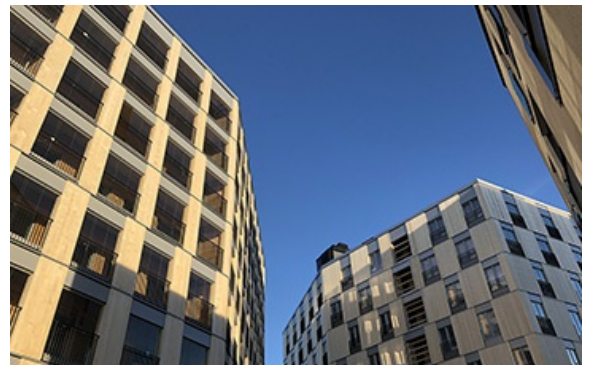


Photo credit: Stora Enso

Team

Developer

Helsingin ATT

Architect

Anttinen Oiva Arkkitehdit Oy

Structural Engineer

Sweco Rakennetekniikka Oy

MEP Designer

ClimaConsult Oy



Photo credit: Stora Enso



StoraEnso

Main contractor

SRV Rakennus Oy

**Specialist Timber
Subcontractor**

Puurakentajat Oy / Woodcon

Others

**Timber superstructure
erection duration (weeks)**

26

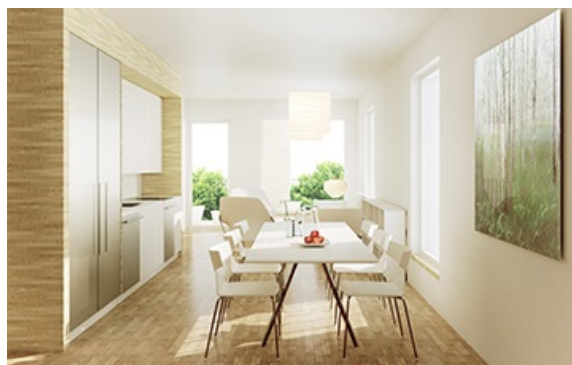


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