



StoraEnso

The Plus / Vestre Magnor, Norway

Partner of Stora
Enso

WOODCON

Welcome to the furniture factory with the world's smallest carbon footprint and the first industrial building to achieve BREEAM Outstanding ever.

Larger than the White House, this 7,000 m² wood frame construction was assembled in just 15 weeks and is now a global showcase for low-carbon design and efficient, sustainable construction.

It was all done during pandemic lockdowns with more than 100 partners, including architects, landscape architects, designers, engineers, building physicists, biologists, ecologists and technologists from more than 15 countries and three continents in up to minus 25°C Nordic winter months.

Designed in the shape of a plus sign, each of the four 55 m wings consists of production areas – a colour factory, wood factory, assembly hall, and warehouse.

In the heart is a courtyard and visitor centre, which is universally accessible and open to school groups, students, companies, organisations, are invited to their forest camp for art installations, educational and historical exhibitions, playgrounds, picnic areas, a viewing tower and a bridge over the Vrangselva River.

It was made possible in large part to 1,702 m³ of [Sylva™ CLT Floors, Roofs and Walls](#) by Stora Enso. Sylva is a mass-customised modern wood product that made efficient use of the locally felled pine forest. All Flat-packed in 37 lightweight, low-emission deliveries just 1.5 hours away from one of our mills in perfect just-in-time assembly order. Many of the Sylva building components were also [preinstalled with lifting devices](#), contributing to the rapid build time and safe installation.

The high loadbearing Sylva CLT Walls enabled wide open 24 m spans for flexible space when paired with the 650m³ of glued laminated timber beams and columns.

One of the developer's goal, was to build the world's most open and transparent factory, thereby creating greater interest in industry, technology, and sustainable production.

This was achieved in part by using 2,000 square meters of glass facades up to 14 meters high so everyone can see what it is going on.

You can book an indoor factory guided tour, and learn about furniture manufacturing, energy production, energy recovery, water purification, and the life cycles of the materials used in the production.

And the use of such large windows also reduces the need for energy by 90% and means workers have a constant connection to the outdoors and natural daylight.

There are so many great things to say about this project. You can get to know the [Plus much more here](#).

What is BREEAM?

– an international tool for environmental certification of buildings used in 70 countries

– A building can be certified at five levels: Pass, Good, Very good, Excellent and Outstanding. The Plus is **Outstanding**.



StoraEnso



Scandinavian Design Awards 2023



DOGA Award for Design and Architecture 2023



ICONIC AWARDS 2023 named Architect Client of the Year



Photo credit: Vestre/ Einar Aslasken

General

Delivery year

2022

Building type

Industrial

Area (m²)

7,000

Products

Products and Services

Sylva™ CLT Floors and Roofs,
Sylva™ CLT Walls

Product quality

INV

Product volume (m³)

1,702

Product delivery duration (weeks)

74

Number of deliveries

37



StoraEnso

Team

Partner of Stora Enso

Woodcon AS

Architect

Bjarke Ingels Group (BIG)

Main contractor

Ø. M. Fjeld

Developer

Vestre

Structural Engineer

Bollinger + Grohmann

Timber Engineer

Woodcon AS

Others

Total construction development cost (€)

25,400,000

Total construction development duration (months)

18

Timber superstructure erection duration (weeks)

15