StoraEnso

Høyt Under Taket Climbing Centre Skien, Norway

Welcome to Høyt Under Taket Climbing Centre. Learn how Snøhetta, the globally acclaimed design firm, created a unique climbing gym from a mass timber kit of parts.

The interior design features angular CNC cut-outs, mimicking rock formations for a cave-like climbing experience. Spanning 1,500 square metres and 15 metres in height, the inspiring design allows climbers of all ages to experience the sensation of climbing trees indoors.

The building's exterior is clad in vertical timber strips with a large angular window resembling a natural cave opening. The cross-laminated timber's lightness contributes to an airy, outdoor feel, providing a sense of calm and connection to nature.

The developers, talking to Byggeindustrien commented on the practical benefits of working with the Sylva kit of parts, noting that 'traditional climbing walls typically require a metre of expansion for a steel frame before wall construction.' By using prefabricated Sylva CLT Walls and Rib Panels, they could build directly onto the structure, saving both space and material, and enhancing the overall structural integrity. (Source).

Horizontal spans that can withstand high pressure and snow loads require careful engineering. The project explored assembling discs indoors to capture these forces within the installation, allowing for the creation of multi-level trails. They found that Sylva CLT Rib panels were the perfect solution and could replace the use of steel.

As precision and adherence to tight tolerances were crucial for this project, production drawings were prepared and sent to Stora Enso's mill. The execution went smoothly, with all elements fitting precisely as per the BIM model. Rigorous quality assurance before production ensured a seamless installation. The structure was erected in six weeks, with the roof continuously covered, leading to a complete building in seven weeks!

According to the architects, Snøhetta, using timber reduced the building's carbon footprint by an estimated 30% compared to non-renewable materials. The load-bearing structure's prefabrication off-site resulted in a low-emission, rapid construction process, with only four deliveries.

The outer walls are insulated with 150mm Paroc insulation and clad with maintenance-free, vertical single-seam cladding. Large glass facades at each end of the building ensure natural light throughout the centre, enhancing the visitor experience.

Publications

Dezeen Magazine

ARCHITEKTUR-aktuell

Bygg Construction News

Whitepaper: advantages with mass timber

Learn more about the advantages with mass timber: Download the whitepaper

General

Delivery year

2022

Building type

Health

Area (m²)

1,450

Storeys

2

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Products

Products and Services

Sylva™ CLT Walls, Sylva™ CLT Floors and Roofs, Sylva CLT Rib Floors, Sylva CLT Rib Roofs, Preinserted lifting devices

Product quality

PEFC certified wood | Surface grades: IBI, INV, NVI | 350 m² Sylva CLT Rib

Product volume (m³)

704

Number of deliveries

4

Team

Developer

Bratsberg Gruppen

Architect

Snøhetta

Structural Engineer

Degree of Freedom

Main contractor

Betonmast

Specialist Timber Subcontractor

Woodcon AS
Veste Entreprenør

StoraEnso

Others

Total construction development cost (€)

37,300,000