



StoraEnso

PENNY Supermarket Ždírec

Ždírec nad Doubravou, Czech Republic

Partner of Stora Enso



Welcome to PENNY Supermarket, Ždírec nad Doubravou

This calming oasis of a supermarket is in Ždírec and is the second store of its kind by the international discount store, PENNY.

The first [store of this kind opened in Skuteč](#) in 2022, and this newly opened store is even more energy-efficient, thanks to technical consultations with the renewable materials company, Stora Enso, that helped reduce the overall carbon footprint and operational emissions by a tenth.

The store was built in just nine months and only seven workers, using a cross-laminated CLT timber kit of parts: [Sylva™](#) by Stora Enso. Sylva enables strong, stable and lightweight structures without complicated surveying, the need for specialized work or expensive machinery as all of that work is carried out in the design phase and in the factory before delivery to site.

The trees used for the construction are 100% certified as sustainable. "Approximately one third of the log cross-section is used for our construction purposes, the rest is then used for planed lumber, pellets or paper production making highly efficient use of the trees used for the construction of the Ždírec store," says Tomáš Hýrek from Stora Enso. More than that total amount of harvested trees have already been replanted in sustainably managed forests.

The material used for the construction is about five times lighter than concrete. "Thanks to this, we did not have to do the deep foundation of the building, which consumes a lot of building material. In total, we reduced the deliveries by 16 compared to our conventional non wood stores," said Václav Šíma, head of the construction department at PENNY.

The Sylva CLT kit by Stora Enso, was manufactured directly in Ždírec which assisted with the ultra low carbon footprint by having extremely low transport emissions.

Exterior façade

The exterior façade was constructed with approximately 23 m³ of [Thermowood®](#) by Stora Enso. Thermowood is thermo-treated, high-quality softwood also sourced from sustainable, managed forests that are treated using completely natural methods – heat and steam. The intensive thermal treatment makes the wood more dimensionally stable and improves the wood's thermal properties, opening it up to a wide range of outdoor or indoor applications.

By using Thermowood as a façade, as it is here, it helps protect the building from the cold winters and the humidity in summer. The heat treatment also makes the wood highly resistant to rot and fungi by breaking down the hemicellulose in the wood, so it no longer contains the nutrients needed for it to develop. Unlike pressure-impregnated wood, Thermowood can be recycled as untreated wood at the end of the building's lifecycle because no harmful chemicals are added during the process.

Other contractors on the project were also local from the region – the installation of the construction was carried out by A2 Timber, a company based 40 kilometers from Ždírec.

The renewable materials company



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The landscaped surroundings of the store will be complemented by birdhouses, an apiary and an insect hotel. There will also be charging points for electric cars in the parking lot for 102 cars.

Read more

Read more about this case: [PENNY press release](#)

Learn more about the advantages of building with mass timber: [Download the whitepaper](#)

General

Delivery year

2023

Building type

Commercial

Area (m²)

830

Storeys

1

Units

1



Photo credit: ©PENNY

Products

Products and Services

GLT, Sylva™ CLT Floors and Roofs, ThermoWood®, Structural Timber (KVH®, GST, GLT)

Product quality

Sylva™ CLT Floors and Roofs
410 m³ ThermoWood® 21m³ GLT
64 m³ KVH® 8m³

Product volume (m³)

503

Product delivery duration (weeks)

2023

Number of deliveries

13



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Team

Partner of Stora Enso

A2 Timber

Architect

Yuar s.r.o.

Main contractor

Hampr a.s.

Developer

Penny Market s.r.o.

Structural Engineer

A2 Timber s.r.o.

Specialist Timber Subcontractor

A2 Timber s.r.o.

Others

**Timber superstructure
erection duration (weeks)**

4