



# Working Wood

## DREAM HOUSING

Wood feel in a  
classic garden city

## OPEN SPACES

Flexible office  
building in the north



## Long-term solutions

Circularity is key for the CEO of Sweden's  
leading property company Vasakronan.

# Contents



## >> BROMMA GARDEN CITY

When expanding the historic residential area in Stockholm, great care was taken to ensure that the new additions would blend in with the existing buildings. Page 8.



## >> EFFECTIVE MOISTURE PROTECTION

Applying moisture protection in the factory makes construction faster. Page 22.



## >> CAMPUS ÖSTERSUND

Building a large office block using prefabricated CLT modules was easier than the client had dared to hope. Page 16.



## >> JOHANNA SKOGESTIG

Property company Vasakronan's CEO has a vision. Page 14.



WE WILL BUILD THE FUTURE TOGETHER,  
WITH AS MUCH CARE AS POSSIBLE.

## EDITORIAL



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IMAGE: KLAS SJÖBERG

#### KATARINA LEVIN

President and CEO  
of Setra

#### GRÖNSAMHET

We want to do business  
in a way that we and  
others – our clients,  
society and nature  
– can benefit from.  
This is what we call  
“Grönsamhet”. It  
comes down to creating  
green value.

## “We drive improvements wherever we operate”

**I**n times of uncertainty and economic volatility, it is even more important to make informed, long-term decisions. Building in wood means investing in a raw material that stores carbon, is renewable and benefits both the climate and people. It is also cost-effective and contributes to an excellent environment for both builders and users, as you can read on page 12. Be inspired by pioneers in the construction industry who dare to try new solutions. One such person is Johanna Skogestig, CEO of Vasakronan, who talks about the importance of working sustainably for profitability. Two others are the construction company NymanWänseth and property owner Intea, who allowed their climate impact calculations guide the construction of an office building in Östersund and got a pleasant surprise. Our contribution to the world, now and in the future, is to promote more construction in wood, with all its benefits.

I would also like to take the opportunity to say thank you and goodbye. After three and a half years at Setra, in the spring/summer I will hand over the reins to Marcus Westdahl, who will be the new CEO. Marcus joins us from the furniture industry and is passionate about the forest and wood products. It feels great to be handing over a company that is heading into the future at full speed and in a green way.



### Setra

We produce sawn and processed  
wood products, construction  
products and bio-products from  
responsibly managed forests.

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# In brief

FURNITURE DESIGN | CERTIFIED | CARBON BALANCE

**BENCH IN COMPONENT TIMBER** Konstfack University of Arts, Crafts and Design student Hanna Lidgren has created the “Fellow” bench using offcuts from Setra’s component factory. The concept explores the way we humans share stories with each other. “I was curious about how the form and function of a piece of furniture can influence a conversation,” says Hanna. The bench offers adjustable seating that can be slid sideways and is designed for public spaces.

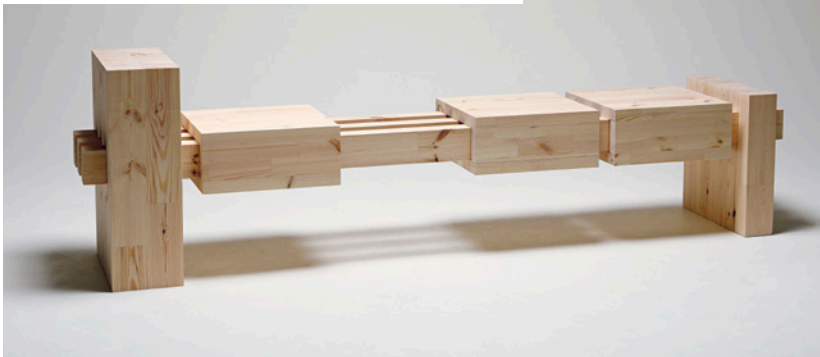


IMAGE: FREDRIK SANDIN CARLSON



## Tree growth good for the carbon balance

The growing forest is crucial for the carbon balance in actively managed boreal forests of northern Sweden. Soil carbon dioxide release, on the other hand, is fairly constant. This is the finding of a new study by Matthias Peichl, Professor of Forest Landscape Biogeochemistry at the Swedish University of Agricultural Sciences (SLU). The study has been published in the journal *Global Change Biology* and could be an important contribution to the debate on carbon sinks.

The EU has recently legislated to create more carbon sinks in forests and soils to meet the climate goals. Sweden is committed to increasing its carbon sink by 4 million by 2030 – and now there is a debate about whether the way to meet this target is to leave the forests standing as they are or to manage them.

“The study shows that the growth of the trees, not the release of carbon dioxide from the soil, is what determines the carbon uptake of the forest in the landscapes studied. Soil carbon dioxide release after a harvest is fairly constant. In fact, ground vegetation, such as grasses and herbs, helps capture carbon in the first years after harvest, with the growing trees taking over after 8–9 years,” says Matthias Peichl in a press release.

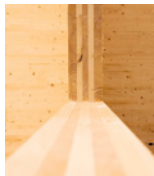
Linda Eriksson, Head of Forest Policy at the Swedish Forest Industries Federation, comments:

“The study confirms that active forest management is the key to maintaining forest carbon uptake. Leaving forests standing has a diminishing effect on the carbon balance because old trees capture less carbon than young, growing trees.”

## All CLT is certified

In 2023, Setra has switched to using only certified raw material in its cross-laminated timber, due to increasing demand for compliance with specific environmental standards in construction projects.

“Our customers need to be able to certify their projects according to various environmental labels, and this requires a certain percentage of certified raw materials. In doing this, we’re helping our customers to meet these requirements,” says Jonas Berglund, Product Manager for the Building Solutions and Components business area at Setra.



**ECOLABELLED** The Nordic Swan Ecolabel is one of the ecolabels that requires certified raw materials, but development is also driven by other sustainability requirements in society.



**LENA HÖK**, in charge of sustainability and innovation at the Skanska Group

**“Wood from sustainable forestry is a solution to ensure sustainable construction and can act as a carbon sink.”**



# 7%

Biofuels, including residual products from the wood industry, account for about 7% of Sweden's total electricity production. Bio-heating, i.e. district heating produced using biofuels, heats 90% of Sweden's apartment blocks.

Source: Svebio



IMAGE: ARCUS

Construction of the approx. 8,000 m<sup>2</sup> school is the largest ongoing construction project in Hälsingland.

## Flexible newbuild in CLT

Bollnäs Municipality in central Sweden has outgrown its school premises. A new school, Renshammarskolan, will be completed in 2024.

**T**he children in nursery–year 6 can look forward to sustainable and flexible new premises, perfectly designed for school activities. The school building can easily be expanded or divided up, making it capable of adapting to changes in student numbers over time.

The frame is made entirely of wood, much of which remains exposed inside. The facade is clad in heat-treated timber, which increases its durability compared to regular wood and provides better fire protection.

“Setra is supplying large quantities of cross-laminated timber for the walls and floor system. It’s actually Setra’s biggest CLT delivery for a single building so far,” says Theres Jansson, sales representative for Building Solutions at Setra. “The whole project is good from a climate point of view, including fossil-free transport from the factory in Långshyttan.”



IMAGE: KLAS SJÖBERG

## Offcuts become studwork timber

Now, DIYers can go circular by buying studwork timber made from recycled CLT. The initiative is backed by Byggmax Green Ventures and More-Wood with partners including Setra, which is contributing timber offcuts.

“What gets left over from our CLT production is prime raw material for studs, for example,” says Jonas Berglund, acting VP Building Solutions and Components at Setra in Långshyttan.



### DID YOU KNOW...

*Industry body Swedish Wood is working to establish a standardised digital language for wood products. The data lexicon includes digital product data with information on technical, climatic and environmental properties.*



!

## Who owns the forest?

311,000

Almost half, 48%, of Sweden's forests are owned by some 311,000 individual private forest owners. Around 30% is owned by private forestry companies. The remaining 22% is owned by the State, municipalities and the Church.

## Sweden unique

Having so many private small-scale forest owners is unique to Sweden, compared with other countries where forests are usually owned by the State or other large-scale players.



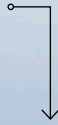
Nearly 40% of the forest owners in Sweden are women. Women tend to own smaller properties than men. The average holding is 25 hectares for women and 40 hectares for men.

### DIVERSIFIED FORESTRY

The fact that forest ownership in Sweden is spread across many different owners promotes diversified forestry, as does the common goal of Swedish forestry for silviculture measures to be site-specific, i.e. forest management and the choice of tree species are adapted to the conditions in each location.



Around 70% of Sweden's  
land area is forest – 24  
million hectares in total.







Bromma Garden City marks a continuation of Veidecke's investment in wood construction and, after Cederhusen, is the company's second large-scale timber housing project in Stockholm.





# Timeless in the garden city

Developing new buildings in venerable Bromma Garden City requires careful consideration and thought. In a successful wood construction project, four new apartment buildings have been created, carefully balancing past and present.

TEXT: MARIE KARLSSON IMAGE: ERIK THOR



There has been great interest in the new properties in Bromma and almost all the apartments have been sold.

O

ver the years, many residential dreams have come true in Bromma Garden City. Built more than 100 years ago, the neighbourhood is highly sought-after – as friendly and idyllic as its name suggests.

However, chances of moving there have been limited, as the supply of housing has not matched demand. In a unique project, developer Nordr built 42 new apartments in the early 2020s, ranging in size from one to four bedrooms.

“Interest in living in this new development has been enormous. Of course the area is attractive, but people also seem keen to live in wooden homes. We’ve focused on high quality in the apartments, which come in different sizes and layouts,” says Ronnie Edberg, project manager at Nordr.



With colours in three different shades of green, the four new blocks blend gently into the small woodland situated behind the development. In total, the project consists of four buildings, one long and three slightly shorter – all with timber frames, cladding and facades. Wood was a natural choice of material for several reasons, says architect Stefan Forslund of Forslunds Arkitekter.

“We wanted to create architecture with a clear connection to the area, harmonising with the surroundings in both scale and form. Wood enhances the feeling of nature and many existing houses in the area are built of wood. The choice of wood gave us the opportunity to create a contemporary



The blocks have been designed to blend in with the other buildings in the area and the natural setting.



#### SMART DELIVERIES

All deliveries were made by trucks running exclusively on bio- and HVO-diesel, reducing the project’s carbon footprint. In addition, all materials were consolidated and delivered specifically for the assembly of each building.



# “THE CHOICE OF WOOD GAVE THE OPPORTUNITY TO CREATE A CONTEMPORARY DESIGN.”

Stefan Forslund, architect, Forslunds Arkitekter



## ABOUT THE PROJECT

PROJECT: Bromma Garden City

COMPRISES: 42 apartments

LOCATION: Äppelviken, Bromma

BUILT IN: 2022

GROSS AREA: 4,667 m<sup>2</sup>

DEVELOPER: Nordr

ARCHITECT: Forslunds Arkitekter, Stefan Forslund lead architect, Anna Grundmark managing architect

STRUCTURAL ENGINEER: Limträteknik i Falun AB

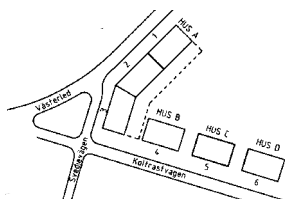
FRAME: CLT

BUILDING CONTRACTOR: Veidekke

BUILDING MATERIAL: Wood

## TIMBER FRAMES

In total, Setra has delivered 1,400 cubic metres of CLT to Bromma Garden City. In addition to the CLT, 60 cubic metres of glulam were delivered for the balconies and external stairs. Setra was also commissioned to produce internal staircases, which were sawn from 300-millimetre-thick CLT panels.



design in harmony with the environment,” explains Stefan.

Once the decision to build in wood was made, various options were explored. It soon became clear that cross-laminated timber was the best solution, partly because of the buildings’ rather specific angles, free forms and attic apartments. The blocks were also built on site, facilitated by the prefabricated, bespoke elements that were quickly and easily assembled.

Ronnie Edberg reports a positive response to the homes, and he and his colleagues

at Nordr are more than happy with the finished result. However, he urges reflection on the challenges of acoustics in wooden buildings, such as tolerance of creaking or soundproofing issues.

“It’s clear that many people enjoy wooden housing and the more we build in wood, the better we get at it. Over time, however, high standards have evolved for our living environments and we prefer things to be dead quiet, even in multi-occupancy dwellings. It’s an equation that doesn’t add up – wood is a living material and stairs built in wood must be allowed to creak. What is called charm in an old building has to also be acceptable in newly built houses,” says Ronnie.

**Occupants began** moving in during the autumn and winter of 2022. The residential buildings are similar to the existing buildings, but with a more modern design to meet today’s expectations and demands. Balconies and patios are more taken for granted than they once were, and the apartments also have much larger windows to bring in the desired amount of light. The primary task of the project was to find the balance between past and present, according to Stefan Forslund.

“It’s a century since the area first took shape and the aim was to create a sense of continuity in this urban space. Äppelviken has a special character. It’s a much-loved, beautiful and historic place with a feeling that we wanted to preserve. This was our starting point and we feel we’ve succeeded,” smiles Stefan.\*





Up in Båtsfjord in northernmost Norway, a school is being built in solid wood. Thanks to prefabricated walls and framing, construction is quick, which makes things easier in such an inaccessible place.

# WOOD ADDS VALUE

The current economic downturn is causing difficulties for the construction sector. Building fast, light and smart is increasingly important. Wood is often a cost-effective alternative, in terms of both climate and cost.

TEXT: MARIE KARLSSON IMAGE: KLAS SJÖBERG



**D**espite high inflation and rising interest rates in a world that seems increasingly unpredictable, Sweden's need for new construction is not going away. The housing shortage, in particular, continues to make itself felt around the country. The solution to these problems is not to stop building altogether, but to manage resources and build as efficiently as possible.

As a **building** material, wood has many technical and environmental advantages that can support profitable business. Annika Knaust, board member of modular house manufacturer Nock, says that industrial production in solid wood can be a way to reduce the overall cost of a project.

"Nock produces apartment buildings using rationalised volumetric construction techniques. Optimised production, and the fact that the modules are built in our factory and delivered fully finished, allows us to keep both lead times and costs down. With more and more people reigning in new projects and time being seen as critical, it's crucial to be able to complete a project as quickly as possible," says Annika.

**Wood is the** only material that can be prefabricated in modules. Other materials are too heavy to transport and too difficult to lift on site. The fact that wood is a lightweight building material also makes it possible to extend out, and

perhaps most importantly up, to add more storeys to existing buildings.

Tomas Alsmarker, Director of Innovation and Research at Swedish Wood, believes that we need to become better at refitting and using what we already have. There is a large market for wood and CLT in this area.

"Wood is perhaps seen as being expensive, but I would say that it's actually highly cost-effective. You can work with smart structures, avoid over-dimensioning the load-bearing capacity and, not least, take advantage of the fact that CLT can take loads horizontally and vertically at the same time. This means, for example, great flexibility in combining old and new, something we'll see more of in the future," says Tomas.

**Annika and Tomas** share the view that wood contributes to efficient construction in many ways. However, they point out in unison that the most important factor from a savings point of view is that wood is the only renewable building material.

"While acknowledging the tough economic times, a strong emphasis on the climate perspective is needed when choosing materials. Alongside the economic downturn and housing shortage, we also have a huge climate challenge to tackle. And wood, with all its climate benefits, has a vital role to play in this respect," say Annika and Tomas.\*



CLT is well suited to rationalised production of housing and public environments.



"FROM A CLIMATE PERSPECTIVE, WOOD, WITH ALL ITS BENEFITS, HAS A VITAL ROLE TO PLAY."

**Tomas Alsmarker,**  
Director of Innovation and  
Research at Swedish Wood



"IT'S CRUCIAL TO COMPLETE A PROJECT QUICKLY."

**Annika Knaust,**  
Board member Nock

**JOHANNA  
SKOGESTIG**

CURRENT ROLE: CEO  
of the real estate  
company Vasakronan.

CAREER: Many years  
of experience in real  
estate transactions  
and investment  
strategy. Analyst and  
Investment Manager  
AP-Fastigheter,  
Investment Manager  
Svea Fastigheter,  
CIO Areim, Head  
of Analysis and  
Transaction Operations.

# Sustainability in the long run

With almost 170 properties, Vasakronan is Sweden's leading real estate company. Ultimate responsibility lies with **Johanna Skogestig**, who is resolutely challenging the industry to think along new lines of climate-smart profitability.

TEXT: MARIE KARLSSON IMAGE: KLAS SJÖBERG



Interior of Magasin X in Uppsala, the first of Vasakronan's projects in wood. In the ongoing Lumi project (exterior), also in Uppsala, a concrete building is being transformed into new sustainable office space. Here Setra has been hired to supply CLT and glulam.



IMAGE: VASAKRONAN WALK THE ROOM



**W**ith more than 300 employees and a total portfolio of 2.4 million square metres, Vasakronan wants to be the first choice for office and retail space, not least from a sustainability point of view. Vasakronan's investment strategy is actually quite simple, says CEO Johanna Skogestig. To have a presence in cities that are growing, in places where people want to be and with a constant focus on sustainable, long-term returns.

"We must work sustainably to be profitable, and this includes looking at reuse, material selection and circular thinking. So we may not always opt to build new, instead preserving existing buildings and extending or refitting them," she says.

Johanna assumed her current role as CEO in 2019, but she actually returned "home" to Vasakronan in 2015, in the role of Head of Real Estate Investments. Her career at Vasakronan, then AP-Fastigheter, started back in 1998, when she joined as an analyst fresh from obtaining a Master's degree in engineering at KTH Royal Institute of Technology.

**"I want the places we're developing today to be around for a long time."**

"This is where I belong. I made a detour into the fund management industry for eight years, which was educational and exciting, but I like the long-term nature of the work here. My job as CEO is to set the course for our onward journey. I don't have all the answers, but I like to set markers to guide the focus of our people and our expertise," Johanna explains.

Vasakronan's plan for future property ownership includes finding more flexible solutions for the use of space and creating adaptable premises, where needs can change over time. Instead of demolishing a building, its use can change. The focus is also on new climate-smart material choices, such as wood.

"Renewable wood resources from sustainable forestry will increasingly be used in the future. Wood is a good option in so many ways, not least because it lends itself well to upward extensions. The whole industry is evolving rapidly and we need to work in an insight-driven way and learn from each other. We will build the future together, with as much care as possible."\*



# New on campus





*Östersund's* university campus boasts Storsjön lake and ski-worthy mountains on its doorstep. Now an impressive multi-storey building is being built in this superb location. It is the first time that either the client or the contractor have built a timber-framed wooden building.

TEXT: MARIE KARLSSON IMAGE: KLAS SJÖBERG

An ecological survey preceded the start of construction, since the outdoor environment of the site is protected, in part due to its conservation value and biodiversity.



December 2022. The new office building from above.



## OFFICE BUILDING IN ÖSTERSUND

PROJECT: New multi-storey building  
COMPRISES: Two blocks, six storeys and basement plus a glazed central atrium.

LOCATION: Östersund

BUILT IN: 2022–2023

GROSS AREA: 10,900 m<sup>2</sup> (walls + floors)

QUANTITY OF WOOD: 2,100 m<sup>3</sup>

DEVELOPER: Intea

ARCHITECT: Krook & Tjäder in Östersund

STRUCTURAL ENGINEER: Sweco

FRAME: CLT

BUILDING CONTRACTOR: NymanWänseth Byggmästare AB

BUILDING MATERIAL: CLT, glulam, glass and climate-improved concrete

## BUILDING MATERIALS

CLT frame with a facade of horizontal and vertical cladding in silvered wood. The basement level, including the garage, parking and recycling station, is made of climate-improved concrete. The timber frame is exposed in parts of the interior, including the glazed atrium. Limestone is a recurring feature in the floors and window sills.



## MOISTURE-PROOFED

»Although the structure was exposed to rain and snow during construction, precise moisture measurements show good results. The timber frame was covered with Wetguard moisture protection during transport, assembly and construction.

“The results of the moisture measurements provide further positive reinforcement about the choice of material,” says Jerker Häggström from Intea.

Good experiences on the project have given everyone involved a taste for more. “We didn’t really know what to expect, but we were all surprised at how easy it was. At times it felt almost like building with Lego,” says Nils Nyman, CEO of the construction company NymanWänseth. Nils is referring to the assembly of the prefabricated, bespoke structural elements that Setra is delivering to Östersund, where a brand new wooden office building is taking shape.

Property owner Intea has long been interested in developing the campus further, and when the Swedish Tax Agency needed new premises, the time seemed right to act. The new office building will consist of two blocks standing on either side of a glass-clad central atrium, in a challenging and complicated project that also had to be built in wood.





Using prefabricated wall units, in this case almost 11 metres long, made assembly much easier. Working with just a few large elements and minimising the number of joints made progress fast and relatively smooth.



West-facing facade.



“Intea has high sustainability standards and strives for as low a carbon footprint as possible on any project. Early on in this process, we analysed different materials, compared technical options and looked for climate-smart solutions. Guided by the climate impact calculations, our eventual choice was to go with a cross-laminated timber frame system. From an overall environmental perspective, wood was undoubtedly the best option,” says Jerker Häggström, CEO of Intea in Östersund.

The office building on the campus is Intea’s first wood project and they didn’t choose a small building for their debut. Six floors and a basement make a total area of almost 6,800 m<sup>2</sup>. The office spaces are open and flexible, with plenty of scope for adaptation



**“We were guided by the climate impact calculations.”**

Jerker Häggström,  
CEO of Intea, Östersund

to the activities and wishes of different tenants. The first tenant to move in is the Swedish Tax Agency, which will occupy 4,600 m<sup>2</sup> under a six-year lease with Intea, representing approximately 70% of the space.

Once the design was completed and all the documents were in place, it was agreed that contractor NymanWänseth would be entrusted with the construction work. To optimise the results of such a large-scale build in wood, the decision was taken to hire experienced installation workers.

“We were keen to learn more about building in wood, but we wanted to hire professionals, just in case. However, that proved easier said than done. Setra convinced us that we could do it on our own, and so we did. With the promise that assembling CLT elements was as easy as building with Lego, we began our journey towards becoming full-fledged timber-frame builders,” says Nils.

According to Jerker and Nils, one of the reasons Setra was chosen as a supplier was



## BUILDING PROJECT

Eric Dicander, Setra sales representative, and Asalah Kamal, Setra constructor, are pleased that the project has gone smoothly.



### REUSABLE BUILDING

»The project has high sustainability ambitions and the building is environmentally certified to the BREEAM Excellent standard. The certification includes assessments of energy use, indoor climate, water management and choice of building materials. Thanks to an adaptive design, the building can be dismantled for reuse and recycling in the future.

their unique ability to manufacture and deliver unusually large timber elements. With a floor height of 3.5 metres, using prefabricated wall units, in this case almost 11 metres long, made assembly much easier. Working with just a few large elements and minimising the number of joints made progress fast and relatively smooth.

“The same was true for the floor units, which are 18 metres long. With one lift, we can build 60 m<sup>2</sup>, which is pretty amazing. Setra was right about it going smoothly, but of course the ‘pieces’ have to be exactly right, and they have been. This is a really cool assembly technique that we are very grateful to have learned,” says Nils.

Before the work began, the NymanWänseth project team went on a study visit to Setra’s



**“Setra was right about it going smoothly.”**

Nils Nyman, CEO of  
NymanWänseth



The building’s large spaces have been divided by posts and beams, distributing the span in a smart way.

production site and to previous projects for which Setra has supplied CLT. Since it was the contractor’s first wood project, the plan was for the carpenters to receive guidance and help with assembly, says Erik Dicander, part of the sales team at Setra.

“We expected to be hiring out an assembly supervisor to provide support through the first week. But after just four hours, the work was progressing like a well-choreographed dance. If you’ve done the proper groundwork, it’s really as easy as that, but of course it helps to have skilled carpenters, like in this case.”

Setra has contributed proposals for various structural solutions, not least regarding fire safety, acoustics and dimensional adaptation of the timber elements,





which saved working time and reduced the number of deliveries. The fact that this is an office building with large, open spaces and an unusually long span was challenging in structural terms.

“We’ve divided the space using posts and beams to distribute the span in a smart way. Together, we’ve actually found good solutions for just about everything,” says Erik.

Following the start of frame assembly in October, one floor a week was quickly erected, so the building volumes and the glazed central atrium were completed in February. The project is not expected to be fully completed until the end of September 2023. The building is taking shape floor by floor, piece by piece – like a Lego building but with larger blocks.\*



## ANDERS PETTERSSON

OCCUPATION: Architect and studio manager WORKS: Krook & Tjäder

## KROOK & TJÄDER

Founded in 1988, Krook & Tjäder is one of Sweden’s largest architectural firms, providing services in architecture, urban planning, landscaping, interior design and product design. Krook & Tjäder has offices in nine Swedish cities and one in Oslo. The office building on campus was designed by Krook & Tjäder in Östersund.

## Architecture makes a difference

Krook & Tjäder’s vision is for good architecture in both form and implementation. In designing flexible, robust and climate-smart living environments, the architectural firm is seeking to play its part in a more sustainable world.



TEXT: MARIE KARLSSON

**T**he office building in Östersund is one of many projects reflecting Krook & Tjäder’s ambition to respond to society’s challenges. Anders Pettersson, architect and studio manager at Krook & Tjäder, believes that architecture has a leading role to play in the pursuit of greater sustainability.

### What influence does the architect have?

The construction industry needs to work on its contribution to the climate footprint. The architect is often involved at an early stage and becomes a central figure in the design of a building, and things like design and choice of materials are a key factor. Krook & Tjäder’s motto is that we don’t just build for human needs – we also have to take ecosystems and biodiversity into account.

### What are your views on wood as a material?

When talking about sustainability,

wood comes out on top, because it’s renewable and is easy to recycle. Taking down the building is not the first thing you think about when you start a project, but we need to think long-term. A wooden building can be dismantled and recycled. Wood also provides beautiful surfaces in their own right, in many cases eliminating the need for extra treatments and reducing the number of materials.

### What factors are specific to wooden office buildings?

Building big and tall can be challenging for a wooden structure. But if you solve the two big issues – acoustics and fire – it works just fine. If competent experts are included in the team from the start, good solutions can always be found. In terms of load-bearing capacity and the use of glulam and CLT, I see only advantages. Installation is smooth, the building site’s work environment is good and wood contributes to a pleasant indoor environment.\*





## Moisture protection that works

**Weather and moisture are constant issues in construction, whatever the material. Wetguard moisture protection is a smart solution that shows good results in protecting wood.**

TEXT: MARIE KARLSSON IMAGE: ANNICA KLINGSPOR

The Södra Hemlingby residential area in Gävle and Intea's sustainable office building in Östersund are two recent projects where Wetguard moisture protection has been used successfully. In both cases, construction was able to continue regardless of the weather, avoiding expensive, cumbersome weather protection such as tents.

The method has been tested by Setra, construction company Byggpartner and the manufacturer Siga on a large scale in different seasons. All measurements indicate that wood protected with Wetguard clears the moisture limits by a wide margin. The moisture protection is manufactured by Swiss company Siga Cover, where Mattias Rudin works as a product advisor.

"Wetguard is designed for cross-laminated timber floor systems, providing weather

protection during construction. It consists of an advanced membrane that lets the timber frame breathe. The membrane allows moisture to escape, while protecting against water and dirt penetration. The protection is applied when the frame elements are manufactured in the factory, and Setra offers its customers Wetguard application during production," says Mattias.

**Wetguard is easy** to use but it is important that it is applied flat, on dry wood surfaces in a dry environment, to ensure that the wood surface is protected throughout the construction period.

"If you use temporary tarpaulins or similar as weather protection, it's easy for water to get in and stay there, which isn't a risk with Wetguard," says Mattias.\*



**MATTIAS RUDIN**  
PRODUCT  
ADVISOR  
SIGA COVER





#### ABOUT WETGUARD:

For safety reasons, Wetguard is designed with a transparent, reinforced and non-slip surface, under which wood and installation holes are clearly visible. The membrane can withstand normal construction wear and tear and remains in place after the building is made weathertight.



1

#### ON DELIVERY

When CLT frames arrive at the construction site, they should already be protected by Wetguard. The frames are protected from dew, moisture and possible leaks during transport and the desired moisture content of the wood is maintained. The wooden surface is protected throughout the construction period, even in harsh conditions such as snow, ice or rain.



2

#### DURING ASSEMBLY

It can be difficult to know what weather protection tents actually cost in the end. Prefabricating the building material with moisture protection already added in the factory makes it easier to calculate costs and be more accurate about the final costing of the whole construction project. Siga recommends that the end-grain wood on the top and bottom of the frame walls is protected with a supplementary flashing tape (Rissan 430 grey). A pre-applied moisture barrier, including on the end grain, helps to reduce the need for moisture management on site, which also makes it safer for construction workers, as traditional weather shelters often need to be installed at height.



3

#### APPOINT A MOISTURE MANAGER

Appoint a local moisture manager on site. This person will be responsible for finding solutions for the removal of standing rainwater and for ensuring that those parts of the CLT frame that have not been lined with Wetguard in the factory are protected as planned. For technical reasons, there are elements that need to be dealt with on site, such as certain window solutions. Siga offers advice throughout the process, from design to installation.





» Setra's markets are Sweden (30%), Europe (29%), Asia and Australia (21%), North Africa and the Middle East (12%) and the USA (8%).



IMAGE: HELGATUNLIA

## Luxury apartments

Exclusive mountain apartments with a wooden ambience have been built in the Norwegian holiday village of Helgatunlia in the heart of the snowy Myrkdalen valley. The 74 apartments are divided into six blocks, two of which have CLT frames supplied by Setra. The project started in 2020 and the sale of the last apartments is now underway. Architect Tysseland Arkitektur. Frame assembly Øystein Boge AS



IMAGE: OLA HÖGBERG

## Exports to Poland and the Baltics

Demand for Swedish timber has risen in Poland and the Baltic countries. Joanna Tasior is a Customer Account Manager for Setra in the Polish market.

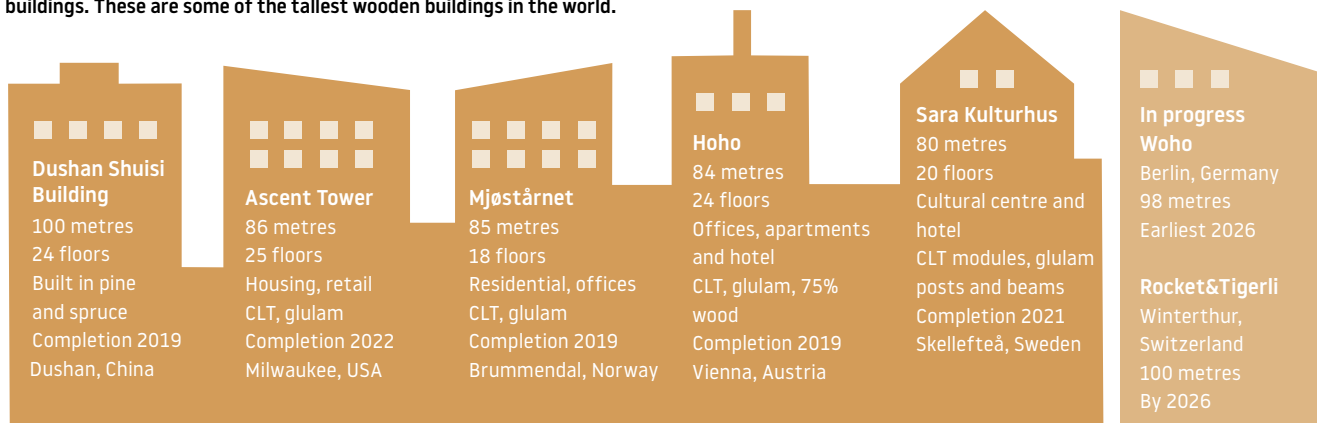


“We noticed increased demand during the pandemic and then the war in Ukraine has consolidated the situation. Due to the sanctions, timber from Russia and Belarus is not being traded. The customers who choose Setra do so, among other reasons, because we are known for our good quality and excellent service.”

Poland is a large market for Setra, with the wood used mainly for furniture, roofs and garden buildings.

## AIMING HIGH IN WOOD

New techniques in wood construction have boosted the creation of tall wooden buildings. These are some of the tallest wooden buildings in the world.





## AN OFFICE FOR A WOOD CONSTRUCTION COMPANY

Japanese wood construction company Meiken is practising what it preaches in its new headquarters, where the functional and attractive wooden structure sets the tone for the space.

"We manufacture engineered wood and use it in all sorts of buildings. To give our visitors a feel for our products and services, we simply show them around our own head office, where they can see glulam, CLT and also exposed metal joints," says Yu Nakashima, Purchasing Manager at Meiken Lam-wood Corporation.

The office is split over two storeys, with a floor space of 992 m<sup>2</sup>. It took two years to get the building from the drawing board to completion, with a design that offers high energy efficiency and low energy consumption.

"The office is an expression of Meiken's desire to continue developing the company and contributing to society for the next 100 years," says Yu Nakashima.

The woods used in the structure are Japanese cedar, Japanese cypress and European pine, which has been delivered by Setra, among others.





**ÄNGBY CHURCH**

Setra has supplied glulam for Ängby Church in Bromma. Large wooden elements combine strength with beauty in a unique way that gives the space character.



IMAGE: FREDRIK HIERLING

# Wooden beams are amazing

Building with *glulam* is not a new idea. The durable material is celebrating just over 100 years of use and has enjoyed a major revival recently – thanks in part to its excellent strength properties.

TEXT: IVA STEPÁN

**Advantages of glulam**

Glulam is one of the strongest construction materials in relation to its weight. This means that, in relative terms, less material is needed to achieve the same weight-bearing structure, which is resource-efficient. The manufacture of glulam requires little energy and the raw material is renewable. Environmental product declarations show that wood has a significantly lower environmental impact than, for example, steel and concrete. In addition, the material is aesthetically pleasing.

**RANGE FOR ALL NEEDS**

Glulam is stocked in a standard range and is also produced in beams with widths up to 215 mm and lengths of over 20 metres. Be-spoke solutions are also available.



IMAGE: OLA HYBERG

**Versatile material**

Glulam is flexible and can be used for a variety of building solutions. It resists fire better than many other materials and has the ability to withstand harsh and exposed environments. This makes glulam suitable for roof structures, posts in the construction of large buildings or floor systems in combination with CLT. Glulam is a solution where ordinary planks are not enough, for example in conservatories, extensions and terraces.

**GOOD IN EVENT OF FIRE**

Glulam retains its load-bearing capacity for a long time in the event of fire and ensures slow progression. The beams can be designed to withstand 30, 60 or 90 minutes of fire.



**MELANIE SJÖGREN,**  
Sustainability  
Manager at  
Setra, gives  
her view on the  
sustainability  
challenges  
facing Setra  
and the wider  
industry.

## “WE’RE PRIORITISING PHASING OUT OUR FOSSIL FUELS”

**T**hose of us working in the wood industry have a major advantage when it comes to sustainability. The raw material and our wood products are inherently sustainable and renewable, with the materials sourced from certified suppliers and responsibly managed forests.

For Setra, it is important to ensure responsibility for the product along the entire value chain. Sustainability is part of our brand and our Grönsamhet vision entails doing business where everyone prospers – not just ourselves but also our customers, society and nature.

**Setra’s overall goal** is to be one of the leading wood products companies in Europe and the one with the strongest sustainability profile. We aim to be climate neutral by 2030, with the exception of our international transport. To achieve this, our first priority is to phase out fossil fuels in our own production. Several initiatives are underway, including looking at the potential for using alternative renewable fuels in production. Our biggest challenge by far in terms of our climate footprint is logistics and transport. Here we are

actively working to establish partnerships for green transport and technology development.

Finding more innovative partnerships to further add value to our products is another priority. We make use of all the raw material, with the residual products used as biofuel or to make new components, and so on.

Together, we in the wood industry are making a difference by offering alternatives to fossil-based building materials. Wood stores carbon dioxide throughout its lifetime, it is resource-efficient, it creates a good working environment on the construction site, and many studies show that we humans feel good when we live in houses made of wood. It is therefore encouraging to see that both national and global demand for wood as a building material continues to grow, despite the slowdown in the world economy. In Sweden, every fifth apartment building is now designed around a timber frame.

In my view, the industry’s contribution to a sustainable society can be summed up as forestry in balance with nature, fossil-free fuels in the transport sector and circular business models, as well as synergies between sectors. This is something we all need to help with.\*



## APRIL 2023 CAMPUS ÖSTERSUND

The new office building on the campus will house, among others, the Swedish Tax Agency. Prefabricated CLT frames and walls make construction quick and easy.