

Working Wood



TURNKEY CONTRACT

Ängby Church extends easily with CLT

NEW RESEARCH

Rooms with wood lower our stress levels

A tower in timber

Siljansnäs nature reserve attracts visitors. From the newly built wooden observation tower, everyone can once more enjoy breathtaking views of glistening Lake Siljan and a forest that stretches for miles.

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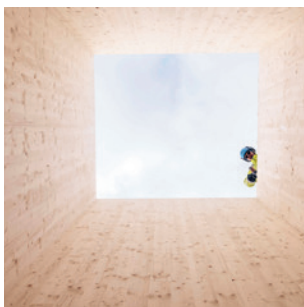


»**ÄNGBY CHURCH** With the help of a convenient turnkey contract for the structural frame, the church's new extension is in place. The wooden structure blends in well with the original listed church building. Page 16.



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EDITORIAL



Working Wood is aimed at Setra's customers and stakeholders in Sweden and abroad, with a view to increasing knowledge about wood as a building material and providing inspiration. The magazine is published twice a year in Swedish and English. **CIRCULATION:** 4,800 copies **ADDRESS:** Setra Group, Box 3027, 169 03 Solna, Sweden. **TEL:** +46 8 705 03 00. **E-MAIL:** workingwood@setragroup.com. **EDITOR:** Linn Treijs. **RESPONSIBLE**

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IMAGE: KLAS SJÖBERG

KATARINA LEVIN
President and CEO
of Setra

GRÖNSAMHET
We want to do business
where everyone
prosperes – not just
ourselves but also our
customers, nature
and society. When
a business profits
everyone, we call that
“Grönsamhet”
– Green profit. We
create green profit.

“Increased interest in sustainable forestry”

The wonders of ordinary, everyday life, never have we longed for them so much! As the pandemic loosens its grip, I think many of us want to spring into action and look to the future. But let’s also stop and rejoice in the progress that has already been made.

Like Pyrocell’s start-up production of bio-oil from sawdust – a pioneering development of the forest value chain that allows sawdust, a humble by-product, to benefit the climate. This renewable oil replaces some of the fossil raw materials in petrol and diesel, so you can drive your car a little greener. Read more about the project on page 12.

Recently, Sweden’s first FSC-labelled building was also inaugurated, an extraordinary lookout tower made using CLT and glulam from Setra. Of course, all the timber we use comes from sustainably managed forests. By choosing certified wood, you can take even greater responsibility for sustainability. We are pleased that interest in sustainable forestry is growing and that more people are becoming aware of what forest resources can contribute if we manage them properly. This bodes well as we take on the green transition in earnest.



Setra

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

CONTACT US – WE ARE HERE TO HELP
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In brief

SCIENCE CENTRE CONSTRUCTION BOOM CLIMATE GOALS

IMAGE: WINGÅRDH PORTRAIT: ANDY LEFFNER



The Universeum science centre in Gothenburg is getting a wooden extension, topped with an impressive spherical dome for the latest visualization technology. The glulam in the structure comes from Setra.

We're exploring new solutions



GERT WINGÅRDH
architect SAR/MSA

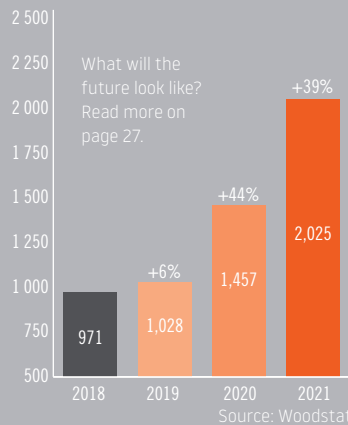
Why did you choose wood for the Universeum extension?

Wood is increasingly emerging as the climate-smart building material, and this extension uses it in new and innovative ways. The most exciting feature is the visualisation dome, a sphere 26 metres in diameter made of glulam polygons. The Universeum science centre in Gothenburg is the perfect arena to explore new solutions and take sustainability to a new level.

Across the Atlantic

A sharp rise in US imports of wood products from Europe caused timber shortages in several European markets in 2021. Driven by both American construction activity and low domestic production, this trend contributed to a decking shortage in Sweden this summer.

US softwood imports from Europe (Jan-June), 1,000^{m³}



Environmental product declaration for wood products

From January 2022, Sweden's National Board of Housing, Building and Planning (Boverket) will require developers to report the climate impact of new buildings, with a view to reducing their climate impact right from the construction phase.

As a basis for calculating the climate impact of buildings, industry body Swedish Wood has developed Environmental Product Declarations (EPD) for sawn and planed wood products. An EPD contains data describing the carbon emissions produced per amount of building material. The climate declarations are based on data from Swedish Wood's member companies and provide more specific values that can be used to calculate a building's climate impact.



IMAGE: GETTY IMAGES



SWEDISH WOOD has measured carbon emissions from the time the trees are harvested in the forest to the finished goods at the sawmill.

38%

Over a third, 38 percent, of global carbon emissions come from the construction sector, according to the UN. To stay on track towards the climate goals, the construction industry needs to halve its emissions by 2030, for example by switching to fossil-free and renewable materials.



Södra Hemlingby
in Gävle.

IMAGE: WHITE ARKITEKTER

Gävle chooses wood for new district

Södra Hemlingby is set to become a small town in its own right, just a stone's throw from Gävle town centre. Here, property company Gavlegårdarna is building new rental apartments that embrace wood.

This is our first project with a CLT frame and it feels exciting to be trying out a new material. We have been ambitious with the aesthetics of this project, explains Mattias Janson, head of the project department at Gavlegårdarna.

The development, designed by White Architects, consists of six four-storey apartment buildings. In total, there will be 132 rental apartments featuring exposed wood both in the stairwells and inside the homes. The wooden structural frame is being supplied by Setra and installed by Byggpartner, starting in the autumn. The project is testing a new technique in which the end-grain wood and top faces of the beams are treated with moisture-proofing at the factory, to allow for an easier construction process in winter.



IMAGE: COLLAGE

Glulam padel courts ready to open

Setra's first indoor padel court concepts are ready to admit eager players. Fullerö Padel is opening in north Uppsala, along with Hällåsen padel centre in Söderhamn. A padel court built with a Setra glulam frame has a low climate impact and is also easy to assemble. Half a million Swedes have given the racket sport of padel a try.



DID YOU KNOW?

From January 1, 2022, developers will be required to present a climate declaration for new buildings in Sweden. Find out more at boverket.se

Everything is used

100%

The whole trunk is used after harvesting. The thicker part goes to the sawmill, while the thinner section is sent off to pulp and paper mills.

Great benefit

In the sawmill about half of each log becomes wood products in the form of planks and boards. The rest of the log ends up as chips and shavings which, like the bark, are key raw materials in paper and energy production, for example.



Planks are sawn from the middle of the log, while thinner boards are sawn from the sides. The wood products are sorted by quality and strength, and appropriately sized for the right purposes.

The sawmill uses the entire log, nothing is wasted.





SMART HARVESTING

There is a plan for the wood as it is being taken out of the forest, sorting and cutting it to match the customer's requirements. The sawmills are strategically located close to the forest, and in the case of Setra, the raw material is sourced within a radius of about 100 km.

Stunning views

The incredible view from the tower in *Siljansnäs* nature reserve has been attracting visitors since the 1930s. Six years ago, the old observation tower was forced to close, but in August this year the new wooden replacement finally opened.

TEXT: HEDVIG ANDERSSON IMAGE: KLAS SJÖBERG



The observation tower at Naturum Dalarna is built entirely out of wood for aesthetic and environmental reasons.

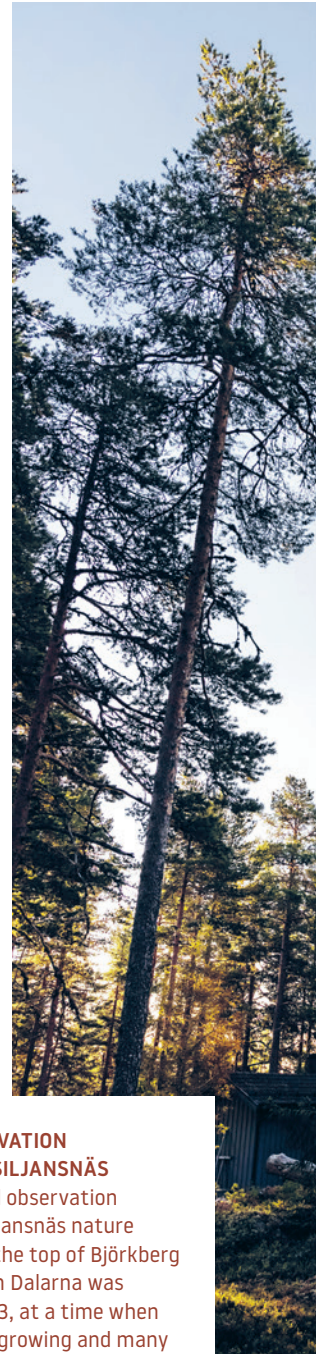
Siljansnäs nature reserve and the visitor centre Naturum Dalarna at the top of Björkberget attract tens of thousands of people every year. But since 2015, annual visitor numbers have dipped by around 5,000 due to the closure of the old red and white observation tower, which finally gave in to the ravages of time.

“Almost everyone who grew up in the area has been here on a school trip, and even more people have their own memories of the tower. Locals were very fond of it and it attracted lots of visitors. So we were faced with a choice. Should we demolish it, renovate it or build a new one?” says Per Johansson from the County Administrative Board.

The decision was made to build a new tower. A not entirely straightforward process was initiated to create a building that meets today’s accessibility requirements, has a low environmental impact and blends into the landscape. The new observation tower, a 32-metre-high structure made of glulam and cross-laminated timber from Setra, was completed in August this year. The tower is covered in black cladding, created using the Japanese Shou Sugi Ban method of burning the wood – an environmentally friendly way to make the material last longer.

“The first choice we made was that the tower would be built in wood. Together with the contractor, we looked at the life cycle analysis and found that opting for wood has a much better climate profile. The burnt Shou Sugi Ban

Wood meets wood. The wooden tower sits comfortably in the deep forests of Dalarna. Magnus Emilsson works at Limträteknik, which was responsible for the tower’s supporting structure.



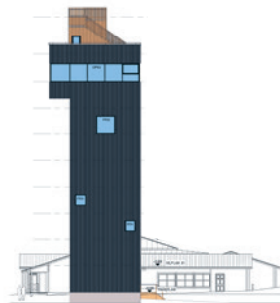
THE OBSERVATION TOWER IN SILJANSNÄS

The original observation tower in Siljansnäs nature reserve at the top of Björkberg mountain in Dalarna was built in 1933, at a time when cities were growing and many people sought out nature for recreation. It has been a popular destination ever since.

The new tower blends in nicely with the surrounding landscape, and inside visitors are greeted by a pure sense of wood, space and light.

“THE TOWER HAD TO BLEND IN WITH THE MOUNTAIN AND THE PINE FOREST.”

Per Johansson, County Administrative Board



ABOUT THE PROJECT

LOCATION: Siljansnäs nature reserve in Dalarna
YEAR: 2021
GROSS AREA: 1,780 m²
ARCHITECT: AgnasARK BUILDING
CONTRACTOR: ByggPartner

CONSTRUCTION MATERIALS

Glulam and CLT from Setra. Cladding in charred larch wood.

32 METRES

That's how tall the new tower is, making it about ten metres taller than its predecessor. From the tower, which has a lift and a gallery at the top, you can see almost the entire Siljan Ring, the crater formed 380 million years ago when a meteorite hit the site.

responsibility for the supporting structure.

“The load-bearing and stabilising elements consist of cross-laminated timber outer walls, held together by glulam posts. An inner shaft and the evacuation staircase also provide extra stability,” he says.

Limträteknik modelled the various components in 3D and sent them to Setra, which supplied the glulam and CLT frames.

“Cross-laminated timber enables much larger elements to be made, which simplifies construction and opens up new design possibilities. Until just a few years ago, you had to buy CLT from other countries in Europe, but now there are suppliers like Setra in Sweden. Technological advances have made it easier for more people to build in wood,” continues Magnus Emilsson.

The new observation tower in Siljansnäs is the first FSC-certified building in Sweden. FSC stands for Forest Stewardship Council, an international organisation that promotes environmentally responsible and sustainable forest management. The organisation is primarily associated with certified wood products, but now buildings constructed with a proportion of certified wood can also receive the ecolabel.

“I'm very pleased that we've got a new observation tower that is fit for purpose and used local suppliers, making it such a local project. I hope we can help to generate interest in the area and attract visitors,” says Per Johansson.*

cladding is an aesthetic choice. We wanted the tower to blend in with the mountain and the pine forest,” says Per Johansson.

Magnus Emilsson is CEO of Limträteknik in Falun, a company that has specialised in timber structures since the 1980s and is Setra's partner for the project planning and technical development of CLT. He had

FUEL FROM THE FOREST

From sawdust to bioenergy – *pyrolysis oil* is sustainable, circular and full of possibilities. Now work continues to develop the fuels of the future.

TEXT: HANNA MELLIN IMAGE: OLA HÖGBERG

Pyrocell
manufactures
bio-oil from
sawdust.



The Swedish forest is a renewable resource full of growing opportunities. By 2030, more than 60% of all diesel and petrol used in Sweden is expected to be fossil-free. Carbon emissions are to be reduced by increasing the amount of renewable fuel in the mix.

One business looking to tap into the huge potential of this transformation is Pyrocell, a company co-owned by Setra and Preem. Through its concept of producing bio-oil from sawdust, Pyrocell is linking forest residues with the motorist's tank.

Sawdust, a by-product from Setra's Kastet sawmill in Gävle, is used to produce fossil-free pyrolysis oil at a unique facility adjacent to the sawmill. The oil is then sent to Preem's refinery in Lysekil, where it is refined and mixed with diesel and petrol.

Pontus Friberg is Director of Risk Management at Setra Group and Chairman of Pyrocell.

"The new plant came on line earlier this autumn," says Pontus. "The Kastet plant is the first of its kind in Sweden, and it's also the first time the technology has been integrated with a sawmill's sawdust stream to produce finished pyrolysis oil."

Pontus Friberg believes that Pyrocell will put Gävle on the world map.

"Producing biofuels using pyrolysis oil from sawdust is circular, and Setra's aim is to make a product that reduces carbon emissions. The end product is biofuel, but there may be even more opportunities for pyrolysis oil in the future, in the chemical sector and in plastics, paints and composites. I've been involved in the project since 2015, and it has really been an amazing journey."

Katarina Persson is a chemist and development engineer at Preem. She too has joined Pyrocell's journey towards renewable fuels.

"We're interested in forest residues because they have a better climate impact than when we use a raw material that is specifically grown to produce biofuels. Pyrolysis oil has great potential. In the first year the plant will produce enough fuel to meet the annual consumption of around 17,000 cars, based on a mileage of 15,000 km per year," she says.

When the sawdust is heated to a high temperature and vaporised, it condenses into a dark brown liquid – a process called pyrolysis. The liquid is then transported by rail and road to Preem's refinery with its fluidised catalytic cracker or FCC. Cracking breaks down large molecules into usable hydrocarbons, such as petrol. The liquid is preheated and meets a hot catalyst stream at the inlet to the reactor, taking just a few seconds to convert the pyrolysis oil into petrol and diesel molecules. At the same time, the cracker is processing fossil raw material; the pyrolysis oil will make up only a few percent of the finished fuel at start-up.

"The technology to make fuel from pyrolysis oil alone doesn't exist yet, but development projects are underway and we hope to be able to use larger volumes in the future. Here in Sweden, we have all the forest resources we need," says Katarina Persson.*



"PYROLYSIS OIL HAS GREAT POTENTIAL."

Katarina Persson,
development
engineer, Preem



"THE PLANT IS THE FIRST OF ITS KIND IN SWEDEN."

Pontus Friberg,
chairman, Pyrocell



PYROLYSIS OIL The process of pyrolysis (dry distillation) transforms forest residues into oil that can be turned into renewable petrol and diesel.

Wood and recovery

Can wood indoors have as positive an impact on our well-being as spending time in the forest? This is what researcher *Tomas Nord* is investigating in a current study on how wood makes us feel.

TEXT: HEDVIG ANDERSSON IMAGE: KLAS SJÖBERG



TOMAS NORD

OCCUPATION:
Researcher
WORKS AT: RISE
Research Institutes of
Sweden and Linköping
University.

CURRENT PROJECT:
A study into the impact
of wood on physical and
mental well-being.

It is well known that spending time in nature makes us feel good. Now studies indicate that patients' well-being is positively affected by wood in a healthcare setting. The psychiatric department in Borås is fully on board (right).

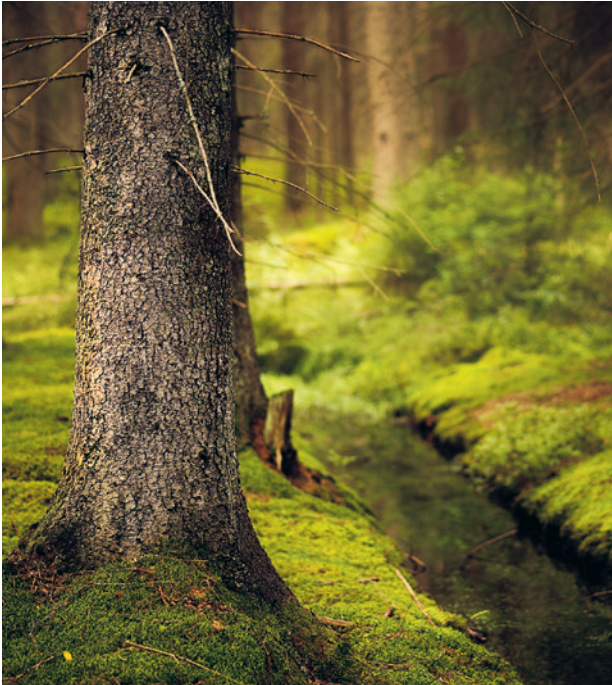


IMAGE: GETTY IMAGES



IMAGE: WHITE ARKITEKTER

Tomas Nord grew up in the great outdoors and was active in the Scouts. He is a qualified forester, and although his current role as a researcher in strategy and business development focuses on marketing issues, the forest is close to his heart.

“I became interested in the forest at an early age and one day I realised that there was an opportunity to work in this field. Going from playing in the forest to working with the forest has been a wonderful experience for me.”

It is well known that spending time in nature makes us feel good. It has positive effects on our physical and mental well-being, and it has been shown, for example, that stress levels are reduced when we spend time in the forest on a regular basis. This led Tomas Nord and his colleagues to wonder whether the same effect could be achieved by spending time in indoor environments and buildings made of wood.

“We have an inherited connection to the forest as a safe environment that we recognise. Is it possible to get the same feeling from interior wood? In the autumn, we’re starting a research project where we hope to find out more.”

“Is it possible to get the same feeling from wood as you get from the forest?”

There are already indications that this may well be the case.


Studies have compared the amount of wood in a room with stress levels by exposing people to stress, in this case difficult mathematical challenges, and either putting them in a room with bare walls or in a room with wooden walls. Those who were in the wood-lined room saw their stress level decrease faster.

Another study from a hospital in Norway has given indications that wood in the room has an effect on patients’ recovery.

“We therefore want to conduct a similar study under Swedish conditions. We will put up custom wooden cladding in patient rooms and look at how wood affects the indoor environment and the stress and pain levels of patients. The hypothesis is, of course, that wood in the room will have a positive impact on patient well-being.”*

The study into the positive impact of wood on health is a collaborative project by Luleå University of Technology, Umeå University, Linköping University, RISE, Swedish Wood, Skellefteå Snickericentral, TM Arkitekter and Region Västerbotten. The results will be presented in spring 2022.

Sacred architecture in wood

The image shows the interior of a church with a prominent wooden roof structure. The roof is made of light-colored wood, with beams and rafters exposed, forming a cross shape. The walls are a light, neutral color. In the foreground, there is a wooden floor and a large, dark, rectangular stone or concrete block. A man in a grey suit is standing near a large window, looking out. The window shows a view of trees and a landscape. The overall atmosphere is calm and modern.

When *Ängby Church* needed to expand its premises, wood was the material of choice – but the extension would prove to be a complex project. In a unique collaboration, Setra and the building contractor were able to offer the Church of Swedish a turnkey contract for the frame, which simplified the build.

TEXT: HEDVIG ANDERSSON IMAGE: WITTE SUNDELL, KLAS SJÖBERG

Sketch of the new entrance to *Ängby Church*. The exposed structural frame rises up to the roof, forming a cross.



THE ÅNGBY CHURCH renovation and extension is due to be completed in spring 2022.



Ångby Church is a short walk from Islandstorget in Bromma in the north of Stockholm. The brick building with its grey-white render was designed by the architect Björn Hedvall in 1959 and is listed by the

City Museum as a building of exceptional cultural and historical value. In order to bring all the church's employees into one building, instead of the two separate workplaces used today, and at the same time create space for decentralised activities, the decision was taken to add a further building. The commission went to the architectural firm Witte Sundell.

"We try to work with wood on as many projects as we can. Partly because of the sustainability perspective – it's a natural material with a smaller carbon footprint – and partly because it creates a completely different feel and very pleasant environments," says architect Ludvig Witte.

The new extension is restrained and unobtrusive, with both the load-bearing

ÅNGBY CHURCH

PROJECT: Extension, Ångby Church
 COMPRISES: Offices, community hall and choir rehearsal room
 LOCATION: Bromma, Stockholm
 BUILT IN: 2016–2022
 GROSS AREA: 4,000 m²
 CLIENT: Church of Sweden
 ARCHITECT: Witte Sundell
 STRUCTURAL ENGINEERS: Sören Lundgren Byggkonsult and Limträteknik i Falun
 FRAME: Setra
 BUILDING CONTRACTOR: Byggpartner in cooperation with Setra

400 PEOPLE can fit in the new community hall, making the church an important meeting place in the area.

BUILDING MATERIALS

Glulam, cross-laminated timber, brick and concrete. The load-bearing structure, the facade and the roof are all built in wood. The material also features in the interior, including the visible cruciform frame in the lobby.



EXTENSION IN A HISTORICAL SETTING

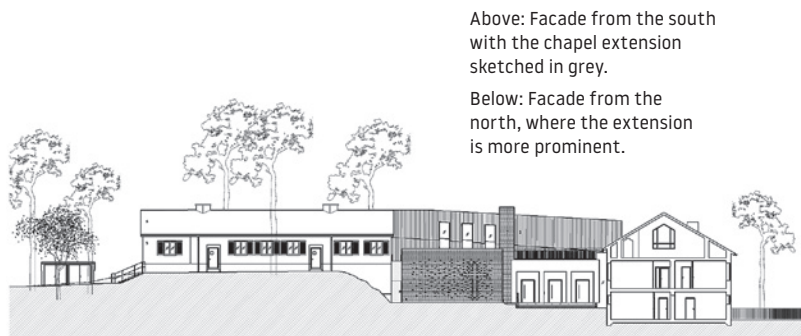
» Ångby Church was designed by the architect Björn Hedvall in 1959 and is listed by the City Museum as a building of exceptional cultural and historical value. The same architect is behind the residential buildings along Norr Mälarstrand and the Grand cinema in Stockholm.

» Witte Sundell was commissioned to design an extension that added some much-needed extra space.

» Wood is the visually dominant material both externally and internally.

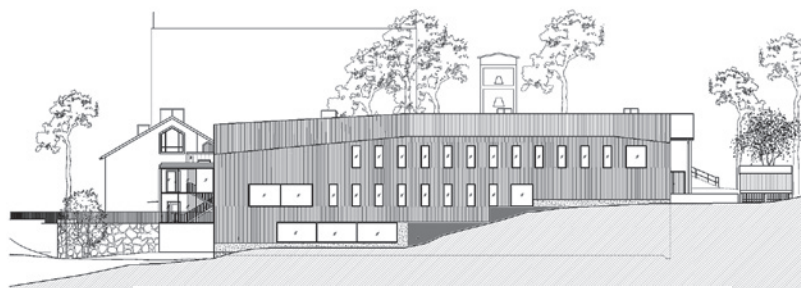


structure and the facade made of wood. The main challenge has been to adapt it to the existing buildings, which is why each of the 40 or so rafters has a unique geometry. This means, among other things, that the pitch of the roof varies and that the top beam runs not along the ridge, but alongside it, something that posed a great challenge for the structural engineers. There was also an ambition to conceal the fixings so that the wood could be the star, which is why almost all the exposed beams are double, with the fixing plates hidden between them. The beams are also wider than the usual standard to achieve the architect's vision of a building with sculptural qualities and a rustic feel. Wood makes a strong statement in the interior, with supporting pillars that are thicker than necessary for the same reason.



Above: Facade from the south with the chapel extension sketched in grey.

Below: Facade from the north, where the extension is more prominent.



“We try to work with wood on as many projects as we can.”

Ludvig Witte, architect
Witte Sundell

“Using glulam and cross-laminated timber on this project was an aesthetic, sustainable and structural decision,” says Anna-Lena Gull, Senior Business Specialist, Setra.

The Church of Sweden has hired Cowi Projektbyrå to manage the complex project. They are taking care of the project planning, production management, scheduling, finance and follow-up, allowing the client to maintain control of the process, be involved at all stages and have a better overview of the finances. The structure is being delivered on a turnkey basis in a collaboration between Setra and the contractor Byggpartner.

“For the first time, we’re able to offer a complete contract for the frame, which means that the client gets an expert supplier of the timber frame, a highly experienced structural engineer and a skilled installer in one and the same contract. You get access to a whole team that knows the material extremely well,” says Anna-Lena Gull.

This beam is an example of the sculptural elements in the wooden structure. The glulam beams have no load-bearing function. They simply form a visible termination of the timber floor structure and have therefore been given the same dimensions as the perpendicular load-bearing beams.



The load-bearing structure of the facade is being installed. The CLT floor structure is raised on glulam posts, which in turn rest on a concrete basement cut into the slope. The concrete structure will largely be clad in wood both inside and out.

The alternative would have been for the Church of Sweden to sort out the structure and the drawings themselves, by engaging their own consultants.

“This will be a simpler arrangement for them – they place an order and Byggpartner works with us at Setra to solve everything from the drawings, manufacturing and planning to deliveries and assembly of the frame,” she continues.

Cowi Projektbyrå is used to handling complex construction projects and knows the importance of good material knowledge among the parties involved.

“This is a unique project with unique solutions in terms of materials and design, which requires close cooperation between all the parties. Setra are experts in wood and wood construction and the partnership has worked very well. It’s a great project that we are proud to be involved in,” says Marlene Olson from Cowi Projektbyrå.



“This will be a simpler arrangement for them, we’ll take care of everything.”

Anna-Lena Gull,
Senior Business Specialist, Setra

In the entrance, the exposed column rises towards the roof in the form of a cross. The architect is also pleased that wood has been given such a prominent role in the design.

“The client wanted us to use wood as much as possible for environmental reasons, but now wood has become part of the whole look, and that’s great. It’s not always possible to make the material such a clear element of the design. The cladding used on the facade and roof are also part of the same approach, so there is a lot of wood,” says Ludvig Witte.

The extension is due to be completed in spring 2022 and, in addition to offices and meeting rooms, it will also include a community hall for up to 400 people and a choir rehearsal room.*



Did you know

»A church should always have the entrance oriented west and the altar east, because according to Christianity, we are born in the west and travel through life towards the east. The building represents the path through life towards death, when the coffin is placed at the altar.

»Windows should be south-facing, never north, because evil comes from the north. Avoiding windows facing north keeps out the cold and evil, according to Christian tradition.



TORBJÖRN GUSTAVSSON

OCCUPATION: Priest, Bromma Parish
WORKS AT: Ängby Church

ON WOOD

“Wood is aesthetically pleasing and good for the environment.”

The practical and the theological – it all has to come together

Torbjörn Gustavsson is the priest of Bromma parish. He hopes that the new extension to Ängby Church will be a beautiful building where the church staff can all be in one place and where decentralised activities will have a central hub.



TEXT: HEDVIG ANDERSSON IMAGE: KLAS SJÖBERG

Ängby Church is the parish of Bromma’s church for children, young people and families.

Why was an extension needed?

At the moment, the staff work across two locations, and we wanted to bring everyone together. We want a centralised organisation, but decentralised activities. The new extension will allow us to gather all our staff and much of our operations under one roof.

What functions will it house?

It will include offices and meeting rooms, but also a large community hall with views of the surrounding area. This means that we can finally welcome more people to the choir, which we hope will add to the music scene in Bromma.

What challenges have you faced?

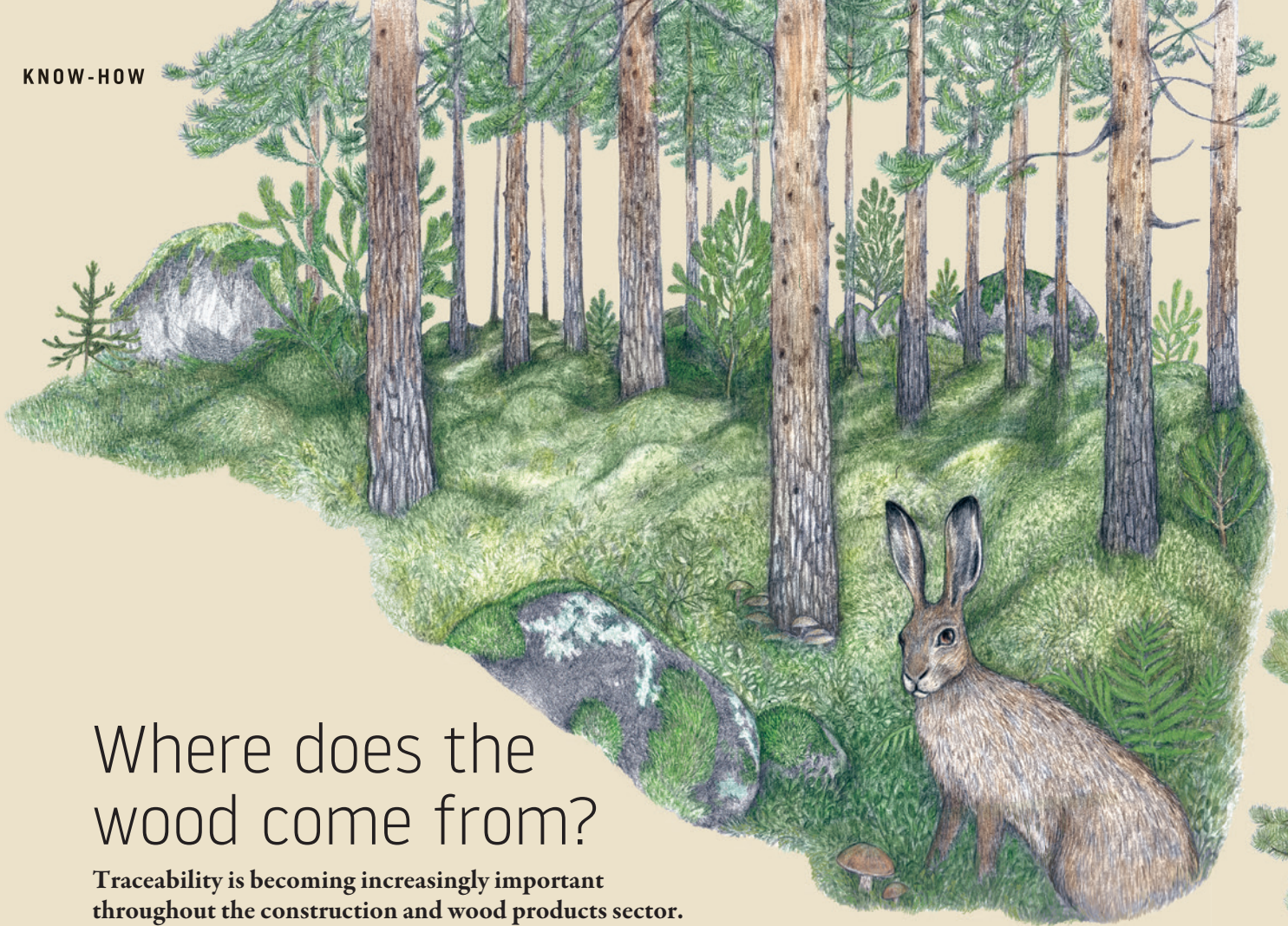
It’s a complicated site to build on and

we’ve had to do some blasting. It has also been difficult to sort out the issue of dealing with existing listed buildings. Plus, you have to be careful about the direction a church faces.

The practical and the theological – it all has to come together.

Building in wood was one of your wishes. Why?

Wood is aesthetically pleasing and good for the environment. Facing the forest, the entire facade will be wood, illuminated on the pavement side. The lobby will be like an ancient Greek square with different routes to take and an exposed wooden frame in the shape of a cross. We’ll also have an atrium with a glass roof and a wooden facade facing the courtyard. It will be great when it’s finished. It’s going to be a beautiful building where we can carry out our mission as a congregation. We can’t wait to move in.*



Where does the wood come from?

Traceability is becoming increasingly important throughout the construction and wood products sector. More and more people want to be sure that the products they buy come from responsibly managed forests.

TEXT: LENA LIDBERG IMAGES: ASTRID LINNÉA ANDERSSON

Traceability allows every step in a process to be tracked and verifiable. For a sawmill, this means that the raw material used must be traceable to the point of harvest.

Interest in traceability and certified products is growing steadily throughout the construction and wood products industry. One example is that several chains of builders' merchants have decided to sell only certified timber.

"Customer demand is constantly growing. Today, about half of the timber we sell is certified. Five years ago, that figure was 36%," says Setra's Bioproducts and Raw material Director, Klas Flygare.

In Sweden, 66% of all productive forest land is now certified, according to the Swedish Forest Agency's annual statistics (2020). This is an increase of 2% since 2019. In addition, there are certain voluntary set-asides, where non-certified forest owners undertake to be particularly

protective of natural, cultural or social assets.

"All the wood purchased by Setra comes from certified suppliers and is either certified or controlled according to FSC® and PEFC™. We're the link between the certified forestry and the certified end product. Each year, our part of the value chain is also audited and reviewed by an independent third party. This involves random checks of our raw material purchases, among other things," says Klas Flygare.

Within a few years, traceability methods in the forest industry are expected to be further refined, as increased digitalisation of information flows helps to make the details of a log's origin even more precise.



KLAS FLYGARE
BIOPRODUCTS
AND RAW
MATERIAL
DIRECTOR
SETRA

MORE INFORMATION Read about Setra's raw materials policy at setragroup.com/en/sustainability

“CUSTOMER DEMAND FOR CERTIFIED TIMBER IS CONSTANTLY GROWING.”



1

CERTIFICATION
There are two forest certification systems in Sweden: FSC® (Forest Stewardship Council) and PEFC™ (Programme for the Endorsement of Forest Certification). Founded in the United States, FSC promotes environmentally aware, socially responsible and economically viable management of the world's forests. It is a members' organisation that includes the World Wide Fund for Nature (WWF). PEFC is a non-profit organisation, based in Switzerland, that operates the world's largest certification scheme for sustainable forest management. PEFC's forestry standard aims to promote economically viable and valuable forest production, while also protecting biodiversity, cultural environments, and social and aesthetic values.

2

TOUGHER REQUIREMENTS
The nature conservation requirements of the Swedish Forest Management Act set the base level for all forest owners, covering preservation of high stumps, buffer zones near watercourses and dead wood in all logging activities. Certification schemes go further, requiring more extensive consideration and completely excluding areas of high conservation value from harvesting. Choosing products with FSC and PEFC certification confirms that the forestry meets these expanded requirements.



3

TRACEABLE LOGS
All the logs purchased by Setra are Swedish, controlled and traceable. Usually the logs originate locally or regionally near the sawmill. The logs arrive at the sawmill with a delivery note stating the exact geographical coordinates of the harvesting site.





Around the world

» Setra's markets are Sweden (34%), Europe (28%), Asia and Australia (21%), North Africa and the Middle East (17%) and, from 2021, the USA.



IMAGE: GETTY IMAGES

China adds to wood

Interest in building with CLT is growing in China. A clarifying addition is set to be introduced to the standard for timber structures in January, facilitating and encouraging more construction in wood.

"As the pandemic subsides, we're going to see many large-scale timber projects come on stream in China, although the trend is still in its infancy," says Flora Chen, Managing Director for Setra in China.

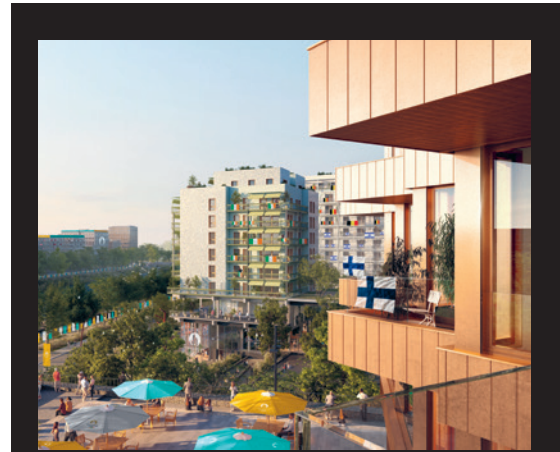


IMAGE: SOLIDEO, ANTONIN ZIEGLER, DOMINIQUE PERRAULT

Wave of green building on the way

France is tightening climate requirements for new buildings starting next year, prompting many architects to opt for wood.

This spring saw the inauguration of the country's highest wooden building, the Hyperion in Bordeaux, named after the world's tallest tree. At the moment, it is an exotic feature of the French urban landscape with its 55-metre-high frame in CLT. But maybe not for long. From 2022, all public buildings financed by the state must be made of at least 50% wood, including all the new buildings being created for the 2024 Paris Olympics.

MARKET UK

LARGE IMPORTS

The UK's imports of wood products from Sweden over the past year have been the highest since 2009.

40%

Setra's sales to the UK are up 40% compared with 2020, adjusted for pandemic effects.



» GROWTH

The UK construction sector has recovered from the pandemic with a vengeance. One month this summer saw the strongest growth in 24 years.





FOREST REPRODUCED IN DUBAI

The start of October marked the opening of Expo 2020 in Dubai, with 190 countries participating under the theme “Connecting Minds – Creating the Future”. The Swedish pavilion at the world’s fair is named after its inspiration, “The Forest”, with open spaces surrounded by tree trunks and meeting rooms in tree houses. The Forest is made entirely of wood, using materials from Swedish wood product manufacturers. For example, Setra provided the glulam for the bottom of the structure.

The pavilion was designed by Swedish practice Alessandro Ripellino Arkitekter, together with Paris and New York-based Studio Adrien Gardère and the Italian firm Luigi Pardo Architetti. Organisers expect around 25 million visitors during the six-month exhibition. Find out more at expo2020.se

WINDOWS AND DOORS

Wood components from Setra are used by Inwido, Europe's leading window group.



A robust framework

Take a closer look at the frame next time you gaze out the window. It will often reveal some really good raw materials. Finger-jointed *wood components* from Setra are used to make long-lasting windows and doors.

TEXT: LINN TREIJS IMAGE: ELITFÖNSTER

Right wood

The raw material is extremely important in doors and windows because the smallest knot will be visible and the products need to last for many years. Setra's wood components are made from pine with a fine grain and a high proportion of heartwood, the inner part of the log that is naturally resistant to rot. The high quality of the wood makes it excellent for further processing such as planing and profiling. The components are adapted to international certification requirements and are sold worldwide, with Scandinavia as the main market.

FINGER-JOINTING Components are finger-jointed at Setra's facility in Långshyttan.



IMAGE: OLA HÖGBERG

IMAGE: KLAS SJÖBERG

Discreet joints

The wood components consist of a homogeneous material that is created by cutting off unwanted parts such as knots and gluing the raw material back together with finger-jointing. At Setra, the parts are joined in the same fibre direction, resulting in a strong material with discreet joints. The process releases much of the tension in the wood, making it stiffer and better at holding its shape. The removed sections are used in jointed battens.

CUSTOMISED The dimensions and quality of the components are optimised for further processing by the customer.

IMAGE: KLAS SJÖBERG



OLLE BERG,
EVP Market
and Business
Development at
Setra, comments on
the current market
situation for wood
products.

“THE EXTREME PRICE SITUATION IS CORRECTING ITSELF”

A most spectacular year for timber prices is coming to a close as we approach the end of 2021. With a record increase of 115% on average from summer 2020 to July 2021, prices reached their highest levels ever in the post-war period (source: Danske Bank).

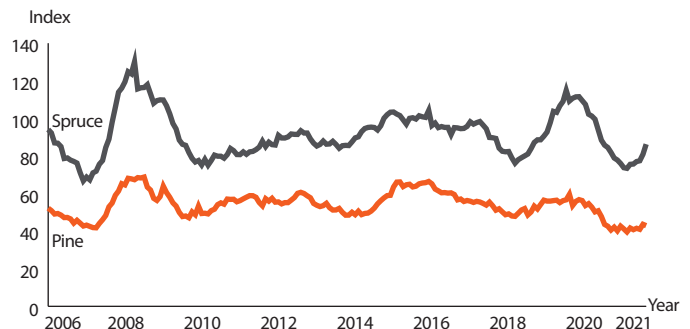
The early autumn saw a slowdown in the home refurbishment sector in the US, as the pandemic slowly eased its grip on the country and people started to spend money on things other than renovation and construction projects. This led to sharp price falls in the US and created uncertainty in the wider world market in early autumn. However, the US market has a tendency to overreact and we saw timber prices bottom out in the autumn and then turn upwards in the US. Prices are still high, although not at the extreme levels we saw before the summer holiday period. This autumn’s fall in prices is a correction of the extreme price situation in the spring and summer.

China’s response to high world market prices has been to reduce its imports of sawn timber during the year, while increasing imports of lower-quality timber from Central Europe and New Zealand. The reason for this is to supply their own industry with cheaper raw materials.

Although the home refurbishment sector has slowed down in some markets, new construction is going full steam ahead and demand for wood products is stable at a high level. This is contributing to relatively low stock levels in the US, China, North Africa, the Middle East and Europe. The global market is set to be in better balance in terms of supply and demand than we saw earlier in 2021, a year marked by a severe undersupply of wood products globally.

Looking ahead to 2022, we can see wood continuing to take market share from other building materials both in Sweden and globally. Couple this with persistent strength in the newbuild market, and we believe that demand will continue into the future.*

Stock volumes of sawn timber in Sweden, spruce and pine, seasonally adjusted.



Source: Swedish Forest Industries Federation

The image shows the interior of a modern wooden observation tower. The walls and ceiling are made of light-colored wood panels. A wooden staircase with a matching handrail is visible in the lower left. A window on the left side offers a view of green trees outside. The lighting is warm and natural, highlighting the wood grain.

OCTOBER 2021 NATURUM DALARNA SILJANSNÄS

With a glulam and CLT structural frame, the observation tower reaches 32 metres into the air. A locally implemented construction project with low environmental impact.