

SetraNews

////////////////////// OCTOBER 2017

PRE-PAINTED CLADDING
– EASY, COST-EFFECTIVE
AND EFFICIENT

WOOD SHAPES UP AS THE
MATERIAL OF THE FUTURE

AUSTRALIA AIMS HIGH

Seriously amazing

Niklas Gilmark makes underwear from the Swedish forest

*What is
sustainable
forestry?*

SETRA'S
WOOD SCHOOL

“SO FAR, WE’VE ONLY SCRATCHED THE SURFACE OF WHAT CAN BE ACHIEVED USING THE FOREST AS A RESOURCE”



Welcome to the future

DID YOU KNOW that wood can replace cotton and plastic? That you will soon be able to fill up your car with renewable fuel from the forest? The new wood-based materials of the future are already here and so far we’ve only scratched the surface of what can be achieved using the forest as a resource.

At Setra we are challenged and inspired by the transition to a sustainable society. We know wood has an important role to play as a renewable resource in the future. That’s why we want to spread the word about all the research and development going on into new areas of use for wood.

IN SWEDEN, LOTS OF US have a personal relationship with the forest. We walk in the forest, pick berries and mushrooms, go hunting, and find a sense of peace and tranquillity there among the trees. A lot of us also feel responsible for making sure that the forest is used in the right way. As new wood-based products come onto the market and wood replaces steel and concrete in more and more of our buildings, sustainable forest management is becoming increasingly important. You can learn more about how the forest is managed to maintain balance between production and the environment in this issue’s wood school.

Enjoy the read!

Hannele Arvonen
CEO



“The forest and marshes of Jämtland are totally magical. You can walk for miles and miles without seeing a single house. It’s a place where I can be myself. No-one recognises me in the forest.”

Footballer Zlatan Ibrahimovic declares his love for the Swedish forest in an interview with Café magazine. In the fragrance Myth Wood he is attempting to recreate the sense of being in the Swedish countryside with scent molecules from pine shoots and driftwood.

Wood is good for us

What many people in the construction industry already know has now been scientifically proven – wood in buildings, furniture and on walls is good for our health and well-being.

The three-year research project Wood2New that ended earlier this year has demonstrated genuine health benefits from wood in indoor environments. For example, patients who spent time in hospital in rooms clad in wood panelling were able to be discharged earlier than other patients.

SETRANEWS is Setra's customer magazine. It is published in Swedish and English for customers, employees and other stakeholders in Sweden and abroad. The purpose of the magazine is to spread information about the company and tell readers the latest news.

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Vallastaden shows the way

The urban living expo Vallastaden 2017 was held in Linköping on 2–24 September. Over three packed weeks, exhibitions and guided tours were held in the streets and parks of this part of the town, interwoven with inspirational talks. The idea behind Vallastaden was to create an urban district in which social sustainability is a lifestyle.

Dense building with natural meeting places in the form of squares, greenhouses and community spaces, will inspire residents to interact and together create a sense of community and activities. Over a quarter of the residential buildings are made of wood and have been built to test new solutions and concepts. One building is so flexible that residents can change the location of windows, doors and balconies.

Did you know...

... the climate of northern Sweden makes wood particularly sustainable and attractive?

... when the growth rings are close together, it makes the planks extra strong, with a beautiful grain. This can be seen in Setra's new interior collection, which is made in Malå in Sweden.

... over the summer 19 new employees were taken on in Malå and this autumn production has been increased by 20%, so more people will be able to enjoy the feel of a genuine wood floor under their feet.

NEW FACES



Sales Manager

MARLENE BERGSTRÖM has been given greater responsibility as Scandinavian Sales Manager for sawn and processed wood products. She was previously Sales Manager for sawn wood products in pine and spruce.



Production Director

ANNA RASMUSON is Setra's new Production Director. Anna has a background in the manufacturing industry and joins Setra from a post as CEO at Liko AB, part of the US medical technology group Hill-Rom.



Biomass fuel manager

JOHAN SVENSSON has taken on a new responsibility for biomass fuel and will be working to develop relationships with Setra's biofuel customers. He will also continue his previous duties as Raw Materials Coordinator.



Product Specialist

PETER ÖHMAN has taken up a new post as Team Leader and Product Specialist for processed products. His role is to coordinate sales to builders' merchants and lead development of the processed range, such as cladding, flooring and decking.

BRIGHT PROSPECTS FOR THE WOOD INDUSTRY



Photo: White Arkitekter

Wood is in. The City of Stockholm was keen to develop wooden buildings for a new residential area at Årstafältet. The winning design from architectural firm White aims to showcase the rapid developments in wood construction.

The outlook for the Swedish wood industry is better than it has been in a long time, and the future looks bright on almost every horizon. But how long will this state of affairs last? Setra's Market Director Olle Berg looks even further ahead than usual to foresee the challenges and opportunities in the slightly more distant future.

WE'RE APPROACHING THE END OF 2017, a year that looks set to be a really good one for the wood industry. Basically, it's the best we've seen since the financial crisis. Global consumption of wood products is good and production and consumption are in balance. While wood production has increased in some countries, local markets have kept pace.

We are enjoying a situation in which all the main European markets are going relatively well. Brexit has not had any impact yet, and the German sawmills have stepped up production. In Scandinavia and our domestic market of Sweden, builders' merchants and newbuilds are both looking good. Wood construction has become the latest big thing, particularly when it comes to high-rise housing, and every municipality wants its own wood construction strategy.

Wood consumption is also good in China and the rest of Asia, and the export industry has now caught up following the dent in deliveries earlier this year. It looks as though Swedish wood exports to China will break a new record by the end of the year.

A NEW FACTOR THIS YEAR IS THAT the US market has finally recovered and is back on form with high consumption – and good prices. Exports across the Atlantic have increased, helping to maintain the balance in the European wood products market, even for those who didn't jump on the American bandwagon.

All in all, we find ourselves in quite an unusual situation. We're not used to having all our major markets, with the exception of the Middle East,

running so smoothly. Historically, an upswing in the economic cycle has never lasted much longer than this, and statistically we should be seeing a downturn by next year. But what makes the future harder to predict is that new, hard-hitting players have entered the arena. The most prominent of these is China, which has become one of the most important markets for Swedish wood exports since the previous economic downturn.

With the market looking brighter than it has in a long time, and wood exports spanning almost the entire world, we are in a different starting position than before and it will be exciting to see how the future pans out. In the meantime, here are some questions to consider:

How will reduced dependency on oil affect trends in the Middle East and North Africa? These markets account for more than 50% of Swedish redwood exports and are currently completely tied in with the oil price.

How big a boost will wood get as a material now that the construction industry is having to cut its environmental impact? It is true that wood is a demonstrably more eco-friendly alternative to steel and concrete, but that alone is not enough unless the industry can manage to expand its capacity quickly and efficiently enough.

Can the sawmills find new markets for their bio-products? Alternative fuels and new wood-based materials may be a way of becoming less dependent on fluctuations in the construction industry, making this a more interesting industry for investors.



OUTLOOK WITH OLLE BERG
Olle Berg is Market Director at Setra. Have you missed any of his outlooks from previous issues? Visit www.setragroup.com/setranews to read more.



When wood fibres are separated into their tiniest components and then put back together again, you get new materials with superpowers.

The future grows on trees

Transparent Wood, intelligent paper, packaging that can communicate and skyscrapers completely built out of wood. The list of new, high-tech materials, products and applications using forest raw materials as a base is a long one. Developments are driven by market demand, together with research and development. The result is new products and new functions in paper, packaging, sawn wood products and fuel. »

WHITE COATS ARE flapping around the legs of researchers in the laboratory at Stockholm's Royal Institute of Technology, KTH. This is the home of part of Treesearch, Sweden's biggest investment so far in basic research, knowledge and skills development in the field of new materials and specialist chemicals from forest raw materials. The idea behind the new, national research platform is for companies and universities to be able to work in an open research environment to facilitate future innovation, partly by making research infrastructure available.

The first phase of the project got off the starting blocks in June when a number of major actors in forestry and the wood industry came on board as partners. Treesearch receives government funding via BioInnovation, a strategic innovation programme, and funding from the Knut and Alice Wallenberg Foundation.

A focus on the industrial and academic research leaders of the future, in other words postgraduate students and young researchers, is an important element in Treesearch's work.

Increased demand for bio-based material

At KTH, researchers at the Department of Fibre and Polymer Technology have developed new processes for manufactur-

ing nanocellulose, a material extracted from wood fibres. The technology is based on separating the wood fibres into their smallest components before putting them back together again to create new materials with properties that are ideal for many areas of use. Jonatan Henschen is a Ph.D. student working with different types of nanocellulose. Together with his research colleagues, he has set up the company FineCell Sweden to launch the material commercially.

"We're working with several industrial actors looking at how the material can be incorporated in their products and improve them. It can be used to make stronger or transparent paper, for example. We have noticed that consumer demand for bio-based material is growing and we are putting all our efforts into finding suitable matches for our material. There are many different types of nanocellulose, so the question is where our material best fits and can have the greatest benefit," Jonatan explains.

Huge interest in transparent wood

Lars Berglund is a professor at KTH and director of the Wallenberg Wood Science Center, WWSC, which since it was founded in 2008 has made a major impression in international research. The work at KTH is carried out in partnership with

"We have noticed that consumer demand for bio-based material is growing and we are putting all our efforts into finding suitable matches for our material"



Manufacturing nanocellulose demands new processes.

Jonatan Henschen (below) is a Ph.D. student working with different types of nanocellulose.





Lars Berglund is a professor at KTH and Director of the Wallenberg Wood Science Center. Lars and his research colleagues have received most attention for their work on transparent wood.

“The vision from our side is to see the forest as a source of raw materials for a number of different products”



“We have a lot of actors in Sweden with a vast amount of expertise between us,” says Josefin Illergård, Communication Manager at Treesearch.

Chalmers University of Technology and is funded by the Knut and Alice Wallenberg Foundation. The research focuses on how new materials can be developed from the Swedish forest, to complement traditional use in which trees are turned into timber and paper. Lars and his research colleagues have received most attention for their work on transparent wood.

“People from all four corners of the world have shown an interest, and architects, in particular, have been very interested because this is a material that opens up new opportunities for building homes. In the future, the wood could be used for solar panels and cladding. Transparent wood can also be fitted with built-in LED lighting and also act as a load-bearing structure in buildings. The vision from our side is to see the forest as a source of raw materials for a number of different products. When we started nine years ago, this view wasn't very common.”

The forest is the way ahead for the sustainable society

At the Swedish Forest Industries Federation, we meet Torgny Persson, who has held the role of Research and Innovation Director for the past two years. One important goal in his work is to put in place a number of research and innovation programmes that support development. The Swedish Forest Industries Federation therefore works with several companies and research funding bodies, such as

Sweden's innovation agency Vinnova, the Swedish Energy Agency, the Mistra Foundation and the Swedish Research Council, Formas.

“Forest raw material is exciting because we can do so much more with it than we do at the moment, creating materials that perform better than fossil-based raw materials and have completely different properties. This means that in many ways the forest is the way ahead for the sustainable society,” says Torgny.

Internationally, Torgny also works with the EU Framework Programme for Research and Innovation, Horizon 2020, and the European Forest Sector Technology Platform, FTP. While he is enthusiastic about new materials and products, he also highlights the importance of developing existing production methods and facilities.

“One of the most important aims of the forest industry's research agenda is to increase industrial wood construction in which modern glulam products and pre-fabricated functional solutions become the cornerstone of modern construction,” Torgny explains.

Swedish expertise

At KTH, Josefin Illergård, Communication Manager at Treesearch, lists various examples of nanocellulose. A slow-flowing gel, puffs that look like popcorn, microscopic transparent balls and a piece of transparent paper.

“We have a lot of actors in Sweden with a vast amount of expertise between us. Successful partnerships will enable us to attain a bio-based future, in which the forest plays a major and important role,” Josefin points out.

And who knows, in the not too distant future, we might possibly be able to admire the view through a window pane made of wood, listen to our milk packaging tell us it's almost past its best before date and take the lift up to the 18th floor in a building made of wood.



Torgny Persson is Research and Innovation Director at the Swedish Forest Industries Federation, which supports the development of new functions for forest raw materials.



A renewable raw material from the coniferous forests of Norrland

Allvar makes underwear from fibres from Swedish pine and spruce forests. Founder Niklas Gilmark got the idea from a company that makes viscose out of bamboo. Today Allvar is Sweden's first brand to take Swedish forest raw materials to commercial textile production. TEXT: KATARINA BRANDT PHOTO: MAGNUS LAUPA

NIKLAS HAS A close relationship with the forest and has worked in planting and clearing. He was attracted by the idea of using forest raw materials in a new and different way and wondered whether it would be possible to do the same thing with forest from Sweden as with bamboo.

"My relationship to the forest was shaped in Bergslagen. My family owns forest there and I used to help manage it. It feels good to be able to make use of nature's bounty," says Niklas.

A stone's throw from the High Coast World Heritage Site, NIKLAS found what he

A declaration of love for the Swedish forest

Niklas runs Allvar with clothing designer Stefan Söderberg, one of the founders of the Swedish fashion brand Hope. Last summer they presented the company and launched their first womenswear collection at an event at Stockholm Central Station, where Setra was one of several partners.

Niklas thinks that the biggest challenge along the way was dealing with all the uncertainty that is part and parcel of starting something completely new from scratch. Worries about how what you are doing will be received and what might happen if everything goes pear-shaped.

"It feels good that we've had such great feedback, good publicity and support from our partners. Our aim isn't just to manufacture high-quality underwear. We have a bigger story to tell and can present a traceable origin inspired by the darkness and the gravitas of the Swedish forests," Niklas says.

GREENER CLOTHES

- More than 60% of the world's clothes are made from oil, including polyester.
- Cotton accounts for approximately 25% of global textile production, but it is a crop that demands large amounts of pesticides and vast amounts of water in areas suffering from drought.
- Allvar's underwear is made from cellulose chips derived from raw chips from the outer part of the log. This is a by-product from sawmills and a renewable raw material that in Allvar's case can be traced to the coniferous forests of northern Sweden.
- Read more and see Allvar's underwear: allvarunderwear.com

"It feels good to be able to make use of nature's bounty"

was looking for in the form of the bio-refinery Domsjö Fabriker. One of the bio-refinery's products is cellulose that can be turned into viscose.

The cellulose that eventually becomes underwear is shipped from Örnsköldsvik to India, where it is turned into sewing thread. The actual viscose fabric is made in Lithuania, which is where Allvar's underpants, knickers and vests are also sewn.

Fill up with bio-oil from the forest

It might sound far-fetched, but with modern technology it might only be a couple of years before you'll be filling up your car with sawdust. Setra is one of the first companies turning the concept into commercial technology. TEXT: LINN TREIJS PHOTO: BJÖRN LOFTERUD

THE LIQUID IS DARK BROWN and the smell of the tar inspires thoughts of smokeries and fishing huts. This is the first sample of the pyrolysis oil that will be able to start being manufactured at Setra's Kastet sawmill in Gävle in just a few years' time.

"As far as we know, it will be the first pyrolysis oil plant on an industrial scale in Sweden," says Pontus Friberg, Enterprise Risk Manager at Setra.

Sawdust is a byproduct from sawmills, currently burned to produce heat energy. Turning it into bio-oil instead is a major leap forwards in terms of sustainability. The process has been made possible thanks to a number of technological advances. When the sawdust is heated to high temperatures without oxygen, it undergoes a transformation from solid to liquid form. One of the products created is liquid tar, pyrolysis oil, which is then refined further.

Major environmental benefit

The bio-oil can replace fossil oil and, for example, be used in heating boilers in the

energy sector and in industry in general. It can also be used to produce biofuel, which will be a significant contribution in the transition to a fossil-free transport sector. However the oil is used, the potential environmental benefits are huge, and even

"There are many more as yet undiscovered areas in the value chain where we can find benefits"

the Swedish Environmental Protection Agency is on board. The agency has allocated the project SEK 117 million from the government's major Klimatklivet initiative to cut carbon emissions.

"Looking at the other wood industries in Sweden, more pyrolysis oil plants

would be feasible. We must also remember that bio-oil is only one of all the new products we can develop in the forest industry. There are many more as yet undiscovered areas in the value chain where we can find benefits," says Pontus

THE NEW GREEN GOLD

- The Gävle plant will be capable of producing around 26,000 tonnes of bio-oil a year.
- Sweden has an estimated 4,000,000 tonnes of sawdust available that could be transformed into pyrolysis oil.
- In energy terms, this is equivalent to the annual fuel consumption of 575,000 cars.
- There would be enough sawdust for 1–2 billion litres of renewable petrol and diesel that can be mixed with fossil fuels to reduce carbon emissions.

CONSTRUCTION

WOOD CONSTRUCTION TAKES OFF DOWN UNDER

Interest in wood construction is growing in Australia and several spectacular projects have been completed in different parts of the country in the past year alone. One of them is International House in Sydney, Australia's first large-scale office block built entirely in cross-laminated timber (CLT) and glulam. TEXT: KATARINA BRANDT PHOTO: BEN GUTHRIE



THE OFFICE BLOCK International House in Sydney is six storeys high, almost 8,000 m² in size and is made from approximately 950 m³ of glulam and 2,000 m³ of cross-laminated timber. The material was produced in Germany and Austria and was shipped in containers to the construction site for assembly. Despite its large land area, Australia is not self-sufficient in wood and depends on imports. In the longer term, it presents an interesting market for Setra, which sent its first sample deliveries to the continent this year.



"We chose wood, mainly because it's a renewable resource but also because of the material's tactile characteristics," says Alec Tzannes, one of the architects behind the project. "It's soft and warm to touch, it smells good and it's completely non-toxic. It becomes more beautiful over the years and increases the sense of well-being in everyone who spends time close to it."



THE LIGHT FLOODS IN THROUGH THE floor-to-ceiling glass facade, highlighting the exposed wooden structure. Wood is also used in the double-height colonnade facing the street, which is made from recycled eucalyptus sourced from railway bridges in Queensland and New South Wales that are over a century old.



The first phase of Brf Hemlångtan is already complete and residents have moved in. Construction work on phases two and three is now storming ahead.

Clever choices every step of the way

A new little residential area is sprouting up along the edge of the forest in Rimbo north of Stockholm. Brf Hemlångtan's 27 terraced houses for tenant-ownership are built in line with a smart concept in which Setra Cladding is one of the solutions that helps to keep costs down. TEXT: KATARINA BRANDT PHOTO: EMIL NORDIN

RIMBO IS A SMALL TOWN in the municipality of Norrtälje and in the space of just a few years it has developed into an attractive part of Sweden's strongest growth region. The municipality gained its 60,000th resident during the summer and its goal is to create quality of life for at least 77,000 inhabitants by 2040. Achieving this aim will require new homes, in towns, in rural areas and in the archipelago, which is good news for local construction company Roslagens ByggnadsEntreprenad, RBE.

Today RBE works with turnkey contracts for external customers and as a housing developer itself. One of its

developments is the Hemlångtan tenant-ownership association in Rimbo, marketed under the company's own Hemrik brand.

"The idea behind Hemrik is to create a concept similar to BoKlok, which was developed by IKEA and Skanska. The aim is smart and sustainable building to create functional, high-quality housing at a price that enables everyone to buy their own home," says Claudio Cifuentes, site manager in Rimbo.

Efficient construction process keeps costs down

Its proximity to Stockholm, Uppsala →

"We like working with wood cladding because we want our residential areas to have a warm feel"

→ and Norrtälje has seen Rimbo steadily increase in popularity as a place to live. “There’s an exciting housing market in Norrtälje municipality in general, and in Rimbo in particular,” Claudio says. “Our sales figures clearly show that more people are moving here. The majority of the terraced homes have been sold to people moving into the municipality for the first time.”

The new residential area enjoys a beautiful location on the edge of the forest. The first phase is already complete and residents have moved in. Construction work on phases two and three is now storming ahead.

“We’ve reworked the construction processes a bit to keep the price down. We’ve made a lot of the elements more efficient and the work is well structured with schedules that we keep to without the slightest deviation. All the tradespeople involved know what they have to do from the start so once we start building, there’s no leeway for any additional costs,” Claudio points out.

Wood cladding offers many advantages

One of the efficiency improvements was using Setra’s pre-painted exterior cladding. It is fitted directly to the surfaced units that are pre-fabricated in the Beijer factory in Grisslehamn, north of Norrtälje, and delivered to the construction site by lorry in special racks. This means that RBE also saves on storage costs.

“We like working with wood cladding because we want our residential areas to have a warm feel, which is hard to achieve with concrete and plaster. And wood has



“Clever choices every step of the way are a must for keeping down costs,” says Claudio Cifuentes, site manager in Rimbo.

practical advantages too. If anything goes wrong, it’s much easier to fix if you’re dealing with wood,” Claudio explains as he shows us round the construction site.

One of RBE’s nine employed carpenters, Petter Larson, is sitting high up on scaffolding, busy with various finishing touches.

“Although the cladding is pre-assembled in the factory, there is a bit of work that still needs to be done to give the facade the perfect finish. This includes hiding the timber work underneath with individual pre-painted boards,” Petter explains.

It was Beijer Byggmaterial that recommended the pre-painted cladding to RBE and it’s now being used for the first time in

Rimbo. It’s a choice Claudio doesn’t regret because it can be fitted all year round, and means less painting is required on site, which in turn cuts the amount that needs to be spent on scaffolding hire. The pre-painted cladding also gives the buildings a practically finished look. This is a benefit when the weather means you sometimes have to wait a few months before putting on the top coat.

“Sensible choices every step of the way, good project management and an open dialogue with everyone on the ground. That’s the way it has to work if we are to be able to keep costs down and offer good homes at a reasonable price,” Claudio Cifuentes concludes.



Petter Larson is one of RBE’s nine carpenters.



The timber beneath is hidden by pre-painted boards to give the facade the perfect finish.

“We’ve made a lot of the elements more efficient and the work is well structured with schedules that we keep to without the slightest deviation”

Petter Larson adds the final finishing touches to the facade, which already looks completely painted.

PRE-PAINTED CLADDING OFFERS SEVERAL ADVANTAGES

More and more people are choosing pre-painted cladding over untreated timber and the trend is also moving towards cladding that comes with a base coat and one layer of topcoat.

The result is often cheaper and quicker than painting the cladding on site. Industrially painted cladding also lasts longer because it is painted when the surface is freshly sawn, with high precision and complete control over the thickness of the paint layer.

The fact that excess paint can be recycled to minimise waste is another benefit, as is the way that the cladding is ready to install all year round – whatever the weather.

WOOD SCHOOL

A FOREST FOR FUTURE GENERATIONS

Responsible forest management and sustainably managed forests are common terms in the forest and wood industry. But what do these words actually mean? And how can profitable and effective forest management go hand in hand with high ambitions for nature? TEXT: LINN TREIJS PHOTO: LARS HÄGGLOF

SWEDEN'S FORESTS have to satisfy a wide range of needs and interests. They account for less than one per cent of the forested area of the globe, but account for five per cent of all forest products on the global market.

"Sweden and Finland are almost unique in having succeeded in creating profitable forestry. We're good at seeing the bigger picture and taking a systematic approach to the forest, which makes us stand out from the rest of the world," says Erik Sollander, forestry policy strategist at the Swedish Forest Agency.

He thinks that the concept of sustainable forest management, in which high timber production is balanced with nature conservation, biodiversity and outdoor recreation, can be summarised in one simple sentence: Meeting today's needs without destroying the future for generations to come.

"Sustainability is increasingly seen as a long-term vision, something that can't

be defined in a checklist of points to tick off. We will never reach a situation where we have solved everything, and we have to continue to try to improve as we learn more and our values change."

Lessons learned along the way

Today's Swedish forestry model is a result of a number of lessons we have learned along the way. In the mid-nineteenth century, the population exploded and agriculture suffered repeated failed harvests. The forest was sacrificed to create more farmland and the farmers let their animals graze the forest, which is disastrous for regrowth. At the same time, industrialisation had taken off and the forests were exploited on a grand scale. In 1903 the first modern forest conservation act was passed, clearly stipulating that anyone who cuts down trees must also replant. "The problem we had is similar in many ways to the challenges currently faced in developing countries. We managed to

turn things around and get our agriculture and forestry in order. Instead of losing forest resources, we have growth that is considerably higher than the amounts harvested," says Erik Sollander.

Today freedom with responsibility is the rule in Swedish forests. Forest conservation legislation sets out the minimum action required, such as ensuring that new forest grows and protecting and developing natural assets. But the ambitions of society and the political expectations of forest owners go much further than that. For example, they are expected to clear young forest to increase timber production and take the environment into consideration much more than the law requires. The system is based on everyone helping to manage the forest sustainably.

So does it work?

Yes, in lots of ways, according to the Swedish Forest Agency. Possibly the clearest example is that voluntary set-aside in forest management has increased hugely since the end of the 1990s and now covers 1.2 million hectares. Another example is the care taken in final harvesting. The forest owners have shared visions of how harvesting is to be carried out as carefully as possible. For example, this can involve leaving trees and dead wood alone to benefit biodiversity, avoiding driving heavy loads across a stream, or leaving forest standing close to houses and schools.

"Everyone, from researchers and the people who manage the forest to us at the Swedish Forest Agency are clear that our visions mark a proper step towards showing more care and consideration in the forest. Whether that means we will meet the demands of future generations, we don't yet know. It looks good now, but things can change. If so, we will have to continue our work to improve the care we take," says Erik Sollander.



The replanting requirement is an important principle in the Swedish forestry model.



1%
of the forest is harvested every year. At least two new trees are planted for every tree that is felled, which means that the volume of forest is growing year on year.
Source: Swedish University of Agricultural Sciences, Swedish Forest Industries Federation

Sweden succeeded in turning the 19th-century forest crisis around and today regrowth is considerably higher than harvesting.

High proportion certified

60% of the Swedish forest is certified, compared with 10% globally. Certified forest complies with higher environmental criteria than required by Swedish law, e.g. setting aside at least five per cent of the productive forest and preserving all nature conservation trees.

Setra's shareholders and largest raw materials suppliers Sveaskog and Mellanskog are two of the companies conducting extensive work on certification. Sveaskog, Sweden's largest forest owner, has certified all its land in line with FSC®. 20% of the company's productive forest land below the mountain forest line and more than 50% of mountain forest is used for nature conservation. Mellanskog, a company owned by 26,000 private forest owners, has certified over a third of its land under PEFC.

What's left behind?

BUFFER ZONES

Curtains of trees and bushes, known as protective zones, left beside lakes, watercourses and marshland to protect water quality and aquatic plant and animal species.

GROUPS OF TREES

Mean that plant and animal species that depend on old forest can live on. Leaving individual trees can also be a nature-friendly way of creating younger stands. The trees that aren't harvested get longer to grow and produce more seeds. This is especially true of pine.

NATURE CONSERVATION TREES

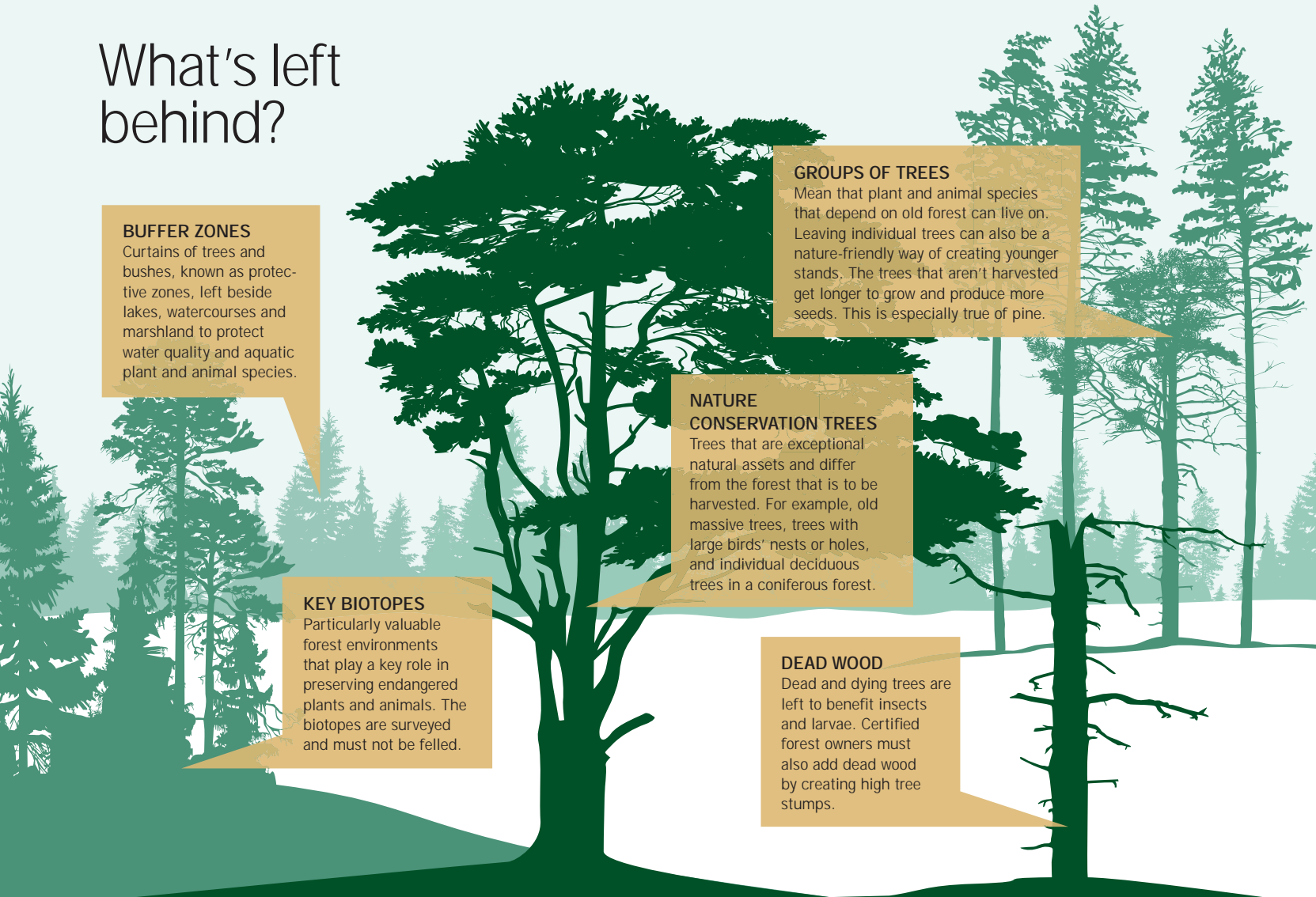
Trees that are exceptional natural assets and differ from the forest that is to be harvested. For example, old massive trees, trees with large birds' nests or holes, and individual deciduous trees in a coniferous forest.

KEY BIOTOPES

Particularly valuable forest environments that play a key role in preserving endangered plants and animals. The biotopes are surveyed and must not be felled.

DEAD WOOD

Dead and dying trees are left to benefit insects and larvae. Certified forest owners must also add dead wood by creating high tree stumps.



TALKING ABOUT TIMBER

Despite the lower tax rebate on renovation and the new rules requiring that people pay off a higher proportion of their mortgages, there's plenty of carpentry and construction going on around Sweden. The builders' merchant sector grew by 4.6% in the first six months of the year, according to market analysis company HUI Research.

TEXT: LINN TREIJS PHOTO: VIVEKA ÖSTERMAN, ANDERS STORM

Why is business booming at builders' merchants?



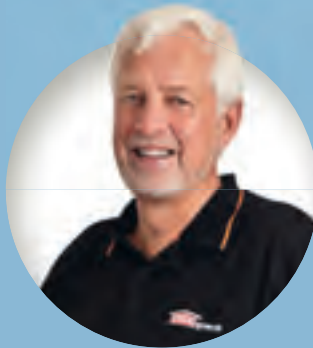
HÅKAN METTÄVAINIO, SALESMAN AND WOOD MANAGER AT BEIJER BYGGMATERIAL IN LULEÅ, NORTHERN SWEDEN

“Up here in the north people tend to do their own building work”

“It's odd that the new mortgage rules and the lower tax rebate haven't had more of an impact, but one explanation might be that many more people do their own building work up here in the north, compared to the big cities.

“For us, things are going really well for the consumer market and the construction companies, and it's been like that for several years now, although there's a huge difference between the summer and winter season.

“Things are looking good for the future too. House building is starting to take off in Luleå and we anticipate that the community relocation project in Malmberget will kick-start construction work that will affect our sales for several years to come.”



RONNIE PETTERSSON, CO-OWNER AND SALESMAN AT ARBOGA BYGGTJÄNST, PART OF BOLIST

“The need for new homes is driving the market”

“In purely general terms, most people have jobs and can still afford to renovate their homes. We thought that the lower tax rebate would cause a fairly major slump, but this hasn't happened. It feels as though the need for new homes is driving the market.

“We're in a small town in mid Sweden, between three larger cities, Örebro, Västerås and Eskilstuna. There's a huge construction rush going on there, not least with student housing, which has a knock-on effect on us.”



LEIF LINDHOLM, CEO OF FRESKS GROUP WITH 21 XL-BYGG STORES AND E-COMMERCE

“There's a backlog”

“I think that even if houses look up-to-date, there's a lot of work to do. There's a backlog that in many cases hasn't been met for years. At the same time, the man in the street has been doing quite well for several years now, with low interest rates and good wage increases in real terms, which means that they are willing to invest, even if the new mortgage rules are likely to counteract that.

The consumer market and the trade category are both going well, but the professional side has clearly seen the strongest growth this year. We are finding that heavy construction materials and wood-based products such as timber have grown particularly well. The fact that large numbers of new houses are being built also has knock-on effects for builders' merchants, because the people who move in leave their former home, which the new owners often want to renovate.”