

 LOGOSOL



Do you have any storm-felled trees?
**Small-scale advice in the
wake of the storm**

HAVE YOU BEEN AFFECTED BY THE STORM?

In recent years, many parts of the world have been hit by a number of storms. For individual forest owners, storms cause major problems with large amounts of storm-damaged forest. For the vast majority, however, the damage is limited to a few broken trees. For them, the financial setback is both limited and manageable

The volumes are so small that it would cost more to hire a forestry contractor than the income that would be generated from timber sales. A better alternative from a financial perspective might be to process the damaged forest yourself. If you need wood, take the opportunity to invest in your own sawmill from Logosol and save money.

Over the years, we have been in contact with many customers who, using one of our Logosol sawmills or band sawmills, have seen the benefits of cutting up what the storm has felled, or who have suffered pest infestations after the storm.

In Sweden, the storm Gudrun brought down 12 million cubic metres of forest, far more than can be cut up in a reasonable amount of time using Logosol sawmills. In conversations with customers, we have realised that the sawn volume was not the point of them having their own sawmill. It was having the ability to do something themselves, to take the initiative rather than passively waiting for forest contractors and authorities. The important thing was the feeling of taking charge of the situation that had arisen.

These are ancient insights, which have given rise to a number of sayings, including: "It is better to light a candle than curse the darkness" and "When the storm comes, some build windbreaks, others build windmills". Logosol's customers are the kind who build windmills. Our phones ring, e-mails flood in and we receive more and more questions and orders via the Internet. The ability to achieve lives!

In our small-scale advice in the wake of the storm, we will provide you with tips on how best to deal with your forest after the storm.

Feel free to contact us if you would like to know more about our products or if you have any other questions.

Good luck!

/WE AT LOGOSOL



TAKE CARE WHEN WORKING IN STORM-FELLED FOREST

Use the correct protective equipment

Remember to have the right protective clothing and good equipment. If you feel unsure, hire a professional felling contractor instead. Your local forest agency, the forest owners' association or your timber buyer can help you with the right contacts.

The Swedish Forest Agency recommends that the storm-damaged timber should be processed using a machine and trained staff.

If you choose to process storm-damaged forest yourself with a chainsaw, it is important for you to be aware of the risks and to possess good knowledge of work techniques.

Storm-felled forest is a hazardous environment, so take care when working out there and never work alone. Many dangers can be difficult to detect,

even if you have extensive experience of working in the forest.

It is also important to have an overview of the area, to ensure it is a safe workplace. Hanging trees and tops should be dealt with first. Always make sure you have a clear escape route if you need to jump away. Bear in mind that some trees can contain considerable tensions, so always saw from the safe side.

Avoid dangerous windthrows

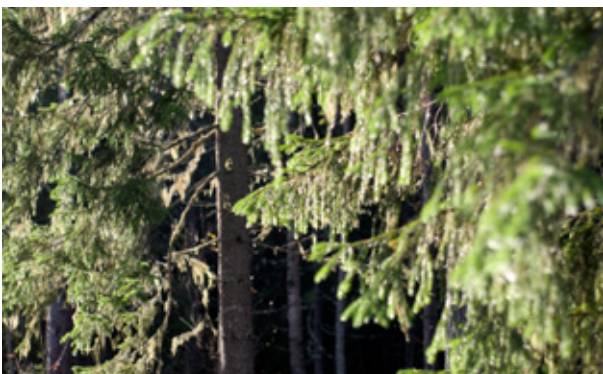
Storm-felled forests are dangerous workplaces. Machines have to take care of much of the work. Unfortunately, far too many accidents have already occurred, some with fatal consequences. Start off with trees that are in the open and do not have any dangerous, windthrown exposed root masses.

WHAT SHOULD I DO AFTER THE STORM?

If you have large areas of storm-felled forest, you might want to sell your trees and contract out the felling work. Remember that even if you have a large number of trees, you yourself can still take care of the trees that can provide the finest and most useful wood.

If you have a small number of trees, the most profitable approach is to saw the trees into planks and boards. You can often recoup the investment in your sawmill by selling the sawn timber, or perhaps realise your construction projects using the storm-felled wood.

Check out your entire property to get an idea of the extent of the damage.



A FEW TIPS

- If you have forest insurance, it is important for you to contact your insurance company before you start processing work.
- Prioritise spruce ahead of pine and pine ahead of deciduous trees. In this way, the risk of pest infestation is reduced.
- Deal with fallen, broken and clearly inclined trees.
- Always try to roll back the root system using a machine after felling, if you have the opportunity, to reduce the risk of accidents.

If you are interested in a sawmill and other equipment for your forest, feel free to contact us at Logosol on tel. +46 611 182 85.

SAVE STORM-FELLED FOREST WITH A CHAIN SAWMILL

Easy to get started

You don't need any special training to get started sawing with our chain sawmills. The log is placed on the log lifters using the included log ladder. The log is raised to the correct position with winches, after which you start the saw and move it forwards through the log. The log is quickly sliced up into planks and boards.

The sawmill with the most benefits

You can use the chain sawmill both as a stationary sawmill, for example in a saw house, or as a portable sawmill out in the forest. The sawmill offers lifetime durability and is able to handle large-diameter timber without any problem. Because it is made from extremely strong, stainless anodised aluminium, you can saw all year round, whatever the weather, year after year. The chain sawmill retains its high level of quality and high value.

More than 35,000 satisfied chain sawmill owners

We have sold more than 35,000 chain sawmills worldwide. We know that the sawmill works. Every function and every detail have been refined over the years to ensure optimal function and the very

best quality. As a customer, you are extremely important to us. Our goal is for all our customers to be completely satisfied with their chain sawmill. That's why we always offer a 2-month right of return (you genuinely get to try the sawmill before you decide) and a 2-year warranty on your machine. We are also available by phone if you have any questions.

The sawmill for everyone!

Regardless of what you are intending to use your chain sawmill for, we can promise that you will get a great deal of pleasure from it and that it is a safe investment. Most chain sawmill owners think that the best thing about the sawmill is the satisfaction they get from sawing their own timber. You will get this feeling when your first batch of sawn material is stacked for drying.

Your safety is important to us

We attach great importance to safety around our machines. If you are carrying out manual labour, sawing for an extended period and handling logs and boards, it is easy for accidents to happen. Take care of yourself and use the prescribed protective equipment.



Slice up your storm-felled logs

The work goes quickly and you retain all the qualities of the wood. The method of slicing logs in thick, wane-edged boards has several advantages.

“This has always been done with the most valuable timber. Sawn timber can last a lifetime without sustaining damage,” says Bengt-Olov Byström.

Increase capacity

This method dramatically increases the capacity of your sawmill. The most efficient approach is to saw the logs into 2-3 inch thick, wane-edged boards, which you place on spacers under cover to dry.

“In this way, you are able to saw between 10-20 cubic metres of forest per day, depending on the type of saw unit,” says Bengt-Olov. In addition, sliced wood does not warp nearly as much as planks and boards during drying.

Sawn, wane-edged boards are used as raw material by furniture manufacturers and joinery workshops. The advantage of these is that there is minimal cracking. You cut the dimensions you need afterwards.

The chain sawmill – part of the solution

The chain sawmill cannot solve the problem of storm-felling, of course, although the sawmill can be part of the solution.

“For many forest owners, there is also a psychological aspect. It feels good to be doing something sensible while you are waiting for the forest machines to arrive,” says Bengt-Olov Byström.

Just like many who have contacted Logosol, he believes that there is far too little talk about the fact that there are other options, rather than selling the forest at below-market price as pulpwood or saw logs.

If you have your own sawmill and require timber, it is more profitable to deal with at least some of the trees yourself.



Advantages of a chain sawmill from Logosol

- The world's most popular chain sawmill, +35,000 sold.
- 2-month right of return and 2-year warranty.
- Hard-wearing, dirt-repellent surface. Never rusts.
- Rapid adjustment with fixed saw dimensions.
- Adapted for use all year round in the Nordic climate.
- Easy to extend.
- Optimal for stationary setup.
- Portable for sawing in the forest or various sawing areas.
- Optimal design that can cope with large-diameter logs.
- Easy and fun to use.
- Unbeatably reliable and minimal maintenance.
- Stable construction.
- Very high dimensional accuracy.
- Available for chainsaws, electric saws and log moulders.
- Minimal adjustment and assembly, you get started quickly.
- Separate setting of log beds for optimum saw yield.
- Maintains a high value, even second-hand.
- Easy to store and to move.
- The sawmill has been refined continually since 1989, with every component being optimised in terms of quality, function and choice of material.
- Logosol is a secure, stable company that was established in 1989. We care a great deal about you as a customer and always do our utmost to ensure that we exceed your expectations.

Tip:

See product files and live broadcasts about our chain sawmills and band sawmills at **www.logosol.com**. There you can also read more and download inspirational material about our sawmills!

F2 chain sawmill

The Logosol F2 is a portable sawmill that saws really large logs with ease. At the same time, it is so light that you can lift and move the sawmill by hand. The sawmill is incredibly versatile and fun to use. Even if you have never sawn before, you will be up and running quickly, producing planks and boards from day one. You will make each cut with impressive precision, thanks to the unique, self-locking height setting. The Logosol F2 is made of aluminium, a material that has fantastic properties. You get a maintenance-free sawmill that will never rust, is easy to move and, at the same time, can hold logs weighing up to a tonne.



F2+ chain sawmill

The F2+ is an F2 on steroids! The sawmill is more powerful and meets the wishes of those customers who want an even more robust machine for sawing really large logs. All the essential parts of the sawmill are oversized to cope with the strain of large logs. For example, to create the space needed, the log bed has been extended by an impressive 20 cm. Even though the F2+ is larger and a little heavier than the F2, it has become even easier to handle thanks to a completely new function that makes it possible to disconnect the log lifters from the guide rail, which is kept intact and adjusted.



INCREASE CAPACITY WITH A BAND SAWMILL

If you want to increase your capacity, Logosol also has band sawmills. Logosol's band sawmills have a robust design and impressive precision, well-thought-out features and a stable construction. They are easy to set up wherever the logs are.



Advantages of Logosol's band sawmills

- 2-month right of return and 2-year warranty.
- Easy to use. Easy to secure the log and set the board thickness
- How do you want to set up the sawmill? Our bandsaws have a flexible format and can fit in your yard!
- Reliable. Extremely stable despite the smaller format. You saw with precision and without vibrations.
- Perfect working position. The controls can be adjusted to your height so you can work comfortably.
- Upgrade according to your operation. Extensions, chip management systems, etc., are available as accessories.
- Covered by security packages. You receive generous warranties, 60-day right of return and unlimited technical support.
- Optimal for stationary setup.
- Log moulder is available as an accessory.

BANDSAW FOR MAXIMUM CAPACITY

For those who require high capacity and professional performance. Our robust band sawmills offer impressive precision. Well-thought-out features deliver a stable construction that enables you to work smoothly when you are producing your own wood.

B701 Band sawmill

Built in Sweden, with 35 years of experience designing incredibly stable and smart sawmills, the Logosol B701 is a fantastic band sawmill that no competitor in its price range can match. Unlike simpler band sawmills that are often imported and built primarily to cut costs, the B701 is designed for long life, high precision, and dependable ownership. You get a sawmill that's easy to handle, robust, and precise, with components made of anodized aluminum and Swedish steel.



B751 band sawmill

In its standard version, the Logosol B751 saws 4.8 metres. The sawmill can handle really large logs, up to a diameter of 75 cm. With fixed adjustment steps, you can easily produce the board dimensions you want, just as quickly and accurately every time. You get a stable and extremely functional timber saw that is best in class. Logosol's own band sawmill is made in Sweden. It is robust and has several well-thought-out features that simplify your work. The design is revolutionary and offers the best system on the market for manual adjustment between saw cuts.





B751 PRO Band sawmill

The extremely stable log bed and the saw head's wheel bogie, which were launched together with our large B1001 band sawmill, are now available on our new bandsaw model, the B751 Pro. This means that many accessories that previously only fitted the B1001 can now also be mounted on the B751 Pro. These accessories include a trailer kit, a log handling system and a log moulder. The B751 Pro can also be equipped with Logosol's advanced digital sawmill control, Pro Set and Pro Feed.



B1001 Band sawmill

Logosol B1001 is an extremely stable band sawmill that gives you professional capacity. The model is made in Sweden and offers a revolutionary design. Logs up to a thickness of 1001 mm can be handled on the sawmill. With its unique saw head setting, you can easily produce the board dimensions you want, just as accurately every time. The Logosol B1001 is an extremely stable log bandsaw that provides you with professional capacity. The robust saw rails have been designed to cope by a clear margin with the weight of the enormous logs that the sawmill can handle.



B1001 Hydraulic band sawmill

Logosol's fully hydraulic sawmill, the B1001 Hydraulic, is an absolutely fantastic sawmill that gives you control of the entire sawing process from the control unit. Sawing is not only efficient, it also prevents wear and tear on your body. You can effortlessly lift logs off the ground and rotate them into the correct position. Being able to easily handle logs up to 2,000 kg is a fantastic experience. A wise choice for anyone who wants a first-rate band sawmill that is a pleasure to use!



B1651 Band sawmill

Logosol B1651 is an extremely stable band sawmill with enormous capacity. It is suitable for efficiently sawing slabs (wide wooden discs with a natural edge) up to 1500 mm wide. The heavy-duty saw rail is designed to easily handle the weight of the enormous logs that the sawmill can handle. A unique feature is that you can saw both huge logs and small logs in the same efficient and precise way, which makes the usability very broad. Compared with sawmills of similar size and price range, there is a big difference in both function and robust construction.



STORING TIMBER AFTER THE STORM

Bengt-Olov Byström, founder of LOGOSOL, thinks small as usual, and has also received several pieces of advice and tips from affected customers who have got in touch.

“Like me, they think there has been very little talk about how to deal with your wood without turning everything into pulpwood and sawn timber – even though this is necessary in most cases, of course,” he says.

A battle against time

The clear-up work is not only dangerous and extensive. For many affected forest owners, clearing-up is a battle against time when it comes to removing as much timber as possible before the summer. After this, there is a considerable risk of the fallen trees, still with their bark attached, being subjected to significant insect infestations..

Saving timber for log houses

The raw material for house timber is spruce or pine. The trees are felled in the winter, usually around January/February.

“The logs are canted to avoid rot damage. This can easily be performed on the Logosol chain sawmill. The timber is then spaced out under cover. The warping that can occur during drying can easily be sawn off with the Logosol chain sawmill, providing you with a straight block.

Canted logs can be used to build your own log house, or be sold.



“Processing to produce house timber multiplies the value,” says Bengt-Olov Byström. For further information about the quality and price of the timber, we recommend that you contact a local log house manufacturer.

Store outdoors or indoors

Stack the wood so it is well ventilated, to ensure there is

no risk of rot or fungal attacks. Proceed as follows:

Cut some supporting blocks to a length that corresponds to the width of your pile, ideally larger pieces e.g. 5”5, to raise the wood off the ground, which must be dry, level and free of growth. The spacing should not exceed 1 m and should lie level and in line with each other.

Cut spacers or drying sticks in the same length as the supporting blocks. They should be the same thickness (1x1” or 1x2”) and dry. (You can get material for these by making an extra cut when trimming your boards.)

Place the first row of boards on the underlying surface. The board thicknesses are to be equal and they should be positioned a few centimetres apart. Then place a spacer on the boards before the next layer is laid. It is important to place the spacers exactly above one another, to keep the boards from warping or bending.

The higher you pile the boards, the better pressure there is on the lower boards. Place a cover made of plastic, metal sheeting or Masonite over the top to provide protection from rain, but leave the sides open. Place a weight of some sort on the cover to put pressure on the top planks.

If the wood is to be used for fine carpentry, it ought to be stored in a heated facility for a further 3-4 weeks (longer for thicker dimensions) or be dried in a kiln for a perfect result. Using this method, you obtain dry construction timber for the summer.

Building with raw timber

It is possible to use undried wood in some constructions, but you must bear in mind that the width and height will shrink by 5%. Wood also shrinks by around 0.3% in length, although this can usually be disregarded. In order to avoid rot, you should not enclose undried wood in a way that makes it hard for air to circulate. A further tip: Do not drive in two nails next to each other. The board will probably crack in the middle as it dries out. Drive one nail and wait with the second until the wood has dried.

An example of when you ought to use undried wood is when building log structures. In such a situation, a heavy wall is a plus, as is the possibility that the logs can still be shaped when they are pressed against each other.

BEWARE OF BARK BEETLES – DEAL WITH THE WOOD IN TIME!

A few fallen trees are sufficient to create a genuine bark beetle factory. The insects can then spread to standing, healthy trees, causing far greater damage than the storm itself. Following previous storms, the Swedish Forest Agency has used fines to force forest owners to deal with damaged forest.

“The important thing is to locate and deal with as much of the overblown wood as possible. It is most important to deal with spruce, in order to prevent a spruce bark beetle infestation by the summer,” says Pär Larsson, regional manager at the Swedish Forest Agency.

Helped by fungi

The reason why the insects primarily choose fallen trees is that they first have to kill living trees in order for their eggs to develop into larvae and a new generation of insects. This has a high price, as a large number of beetles have to bore their way in. There is not much space between the larvae and there is a risk that the food will run out.

A fungus helps the insects to kill the trees. This fungus is known as blue-stain. It clogs the sapwood and stops the transportation of water.

If the weather is favourable, both the parents and the new generation can swarm later in the summer, laying eggs rather than overwintering.

There are other species that cause similar damage. The ambrosia beetle is common and is recognisable by the white boring dust, black entrance holes and small black passages. The blackness is caused by a fungus. With current sorting rules, this wood is downgraded to firewood.



“Moderate bark beetle attacks do not affect the strength of the wood, but result in it being downgraded,” says Åke Lindelöw, researcher into insect pests and coordinator for the monitoring of bark beetles in Sweden.

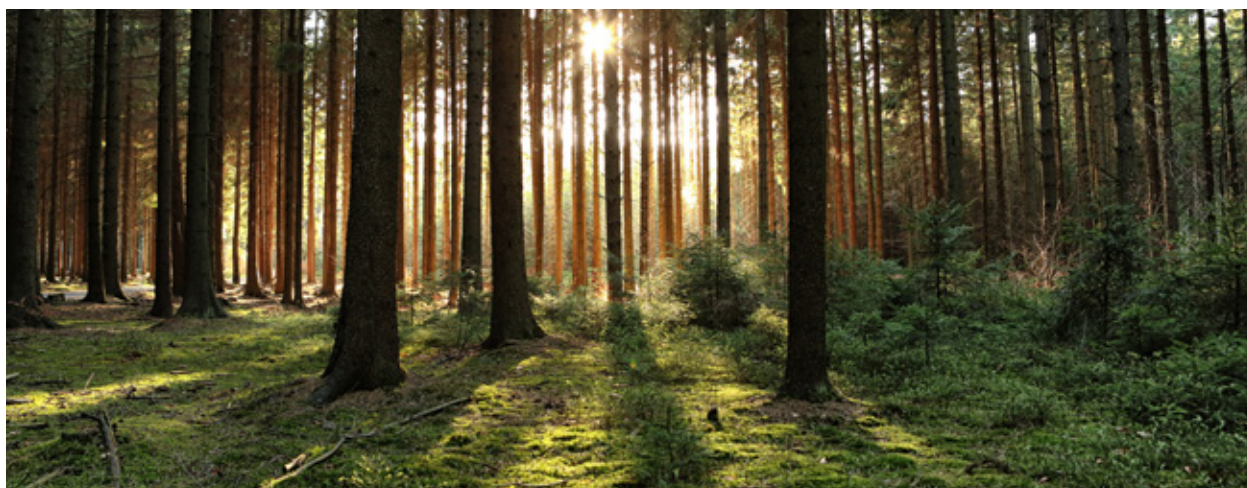
Nothing wrong with the wood

“Moderate attacks do not affect the strength of the wood. It is perfectly OK to use as structural timber, if you are prepared to accept the damage to visible wood,” says Åke Lindelöw, researcher into insect pests and coordinator for the monitoring of bark beetles in Sweden.

Since the numbers of storm-felled trees are relatively small in most parts of the country, it is rarely worth hiring a contractor and selling the timber. A more sensible solution for a person who has their own sawmill is to process the wood themselves, for their own use.

How damage is discovered

But how do you discover that a living tree has been infested with spruce bark beetles?



How should you combat bark beetles?

- Fresh, thick wood with its bark still attached must be transported out of the forest during the spring.
- Trees whose root contact is sufficient that water is still being transported can remain longer.
- Living trees that have been attacked must be felled and removed from the forest, which is known as the search and pick method.
- The effects of pheromone traps are limited and poorly documented, although they do catch many insects.

“When the males bore their way in, a cinnamon-coloured powder is created. This settles in a ring on the ground around the tree. You can also look for resin and small holes in the trunk,” Åke Lindelöw answers.

The felled trees must be quickly debarked or sawn, as otherwise the next generation of insects will develop. When swarming, some bark beetles can fly as far as 20-30 kilometres, although they do not fly further than necessary to the nearest suitable tree or piece of wood.

Other pests

Åke Lindelöw points out that there are other insects that cause greater damage.

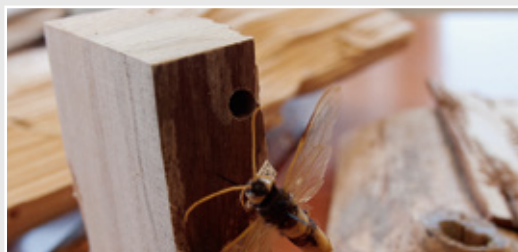
“I left some logs with their bark attached over a summer and then sawed them up using a Logosol sawmill,” he says, and shows the result. The sample is full of large holes. The pest is the pine sawyer beetle. It lays its eggs in the middle of June.

July sees the swarming of another insect with a predilection for fresh wood. This is the wood wasp. The larvae eat their way through the wood and clog the passages behind them with gnawed dust. At a quick glance, the passages are not visible. The larvae survive sawing and air drying.

“There are reports of wood wasps having gnawed their way out through wallpaper and flown away,” says Åke Lindelöw.



• The pine sawyer beetle makes large holes in pine and spruce.



• Wood wasp larvae survive sawing and drying.



• The bark beetle with the grooves in the bark that it leaves behind.



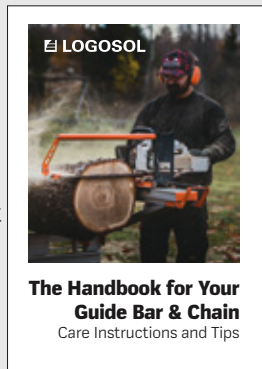
• The bark beetle normally only damages the surface wood.

So there are good reasons to take care of damaged trees quickly. And to process the wood yourself to get greater benefit from it than just firewood.

MORE INFORMATION

The handbook for your guide bar and chain

Everything you need to know about taking care of your guide bars and chains to ensure perfect results. Download for free from www.logosol.com or call and order on +46 611 182 85.



From log to log cabin

Sven-Gunnar Håkansson has written a fantastic book about sawing his own timber and building a cabin. Definitely worth reading. The book can be ordered from LOGOSOL, although it is also available in most bookstores. In English: ISBN 978-1936013159



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