Kährs Group

AB Gustaf Kähr, Reg No. S-S-0005E

KÄHRS ENVIRONMENTAL REPORT EMAS 2013

This report is a translation of the controlled Swedish EMAS-report and includes Kährs Group's subsidiary AB Gustaf Kähr and its facilities in Nybro and Blomstermåla.

CONTENT

Cover photo:
During 2013 Kährs received its first Swan-labels. Oak Danaborg, on the cover photo, was on of them and in 2014 numerous products will also be Swan-labelled.

LETTER FROM OUR CEO

To summarize the full year of 2013, integration between AB Gustaf Kähr and Karelia-Upofloor Oy was one of our major focuses.

This has meant a change in our network of production units and that the group's product scope has been broadened to include both multiple brands and a new product category, resilient floors.

Kährs Group, which is the name of the Group, now has production units in more places in Europe which means greater flexibility and greater proximity to several key markets. Just as before, the raw materials and its origin has a strong meaning for us no matter where we produce there is always a quest to refine the wood as close to its habitat as possible to avoid unnecessary transport.

The Group has added resilient flooring in its product portfolio and it makes us a more interesting and complete supplier to our project customers. Also in regards to the resilient side, we have a strong focus on the environment, innovation and development and in our PVC-free resilient flooring, we have a unique product for construction projects where its product requirements and its environmental characteristics are particularly important, such as for hospitals and schools.

During the year we have launched a number of major projects in Nybro in order to increase our competitiveness both through improved productivity but also by increasing the proportion of Swedish-made wood flooring with added value and great design focus. This is something that is demanded by customers and that is also a step towards a better utilization of primarily local oak raw material.

Gladly we see that our share of certified wood has increased during the year. This is one of our environmental targets but we are dependent on our suppliers, forest owners developing their range as the supply of certified wood is limited.

Requirements from our clients in regards to environmental properties continues to increase and we have launched the first Nordic Ecolabelled floors. In 2014, we will take another step and certify the majority of Kährs' range.

During the year we have started a project studying regrowth of the endangered stag beetle. It is the largest beetle in Sweden and Kährs has built its own so-called fauna depots and also assisted with oak logs for conservation research. The Stag beetles regrowth is a slow process so the results of these projects will be determined later in the future.

Christer Persson

President and CEO

ABOUT EMAS

EMAS is the European Union's voluntary environmental regulation. Its purpose is to promote environmental management, environmental improvements and environmental audits within the industry as well as to provide the public with information about the participating companies and their status.

Det Norske Veritas (DNV) is accredited as an environmental verifier by EMAS and by SWEDAC (accreditation number 1053).

DNV has reviewed Kährs production and has found that our environmental management system meets the requirements stated in the EMAS regulation (nr 1221/2009).

From 2006 and forward, Kährs' Swedish units are registered collectively as Kährs Nybro. SE-000055.

Approved

DNV has reviewed the environmental statement in 2013 and has found it to be accurate, and detailed enough to meet the requirements in EMAS.

The report includes the production units in Nybro as well as Blomstermåla and AB Gustaf Kähr's collective functions in Nybro. The next environmental audit for Kährs will take place during the first half of 2015.

Stockholm 2014-06-02

Ann-Louise Pått

Management Representative

DNV Certification AB, Sverige

About Kährs

Company:
Kährs Holding AB (publ)

CEO:
Christer Persson

Owner:
Triton & Hartwall Capital

Activity:
The group develops, manufactures and markets wood flooring as well as resilient floors

Global sales:
In more than 50 countries

EMAS-statement comprises: The subsidiary AB Gustaf Kähr and its operations in Nybro and Blomstermåla (760 employees)

Production in Nybro:
Approx. 5 mill m² wood flooring

ENVIRONMENTAL YEAR SUMMARY

Our environmental efforts in 2013 focused on mainly two points, meet increased demands from the outside world on product certification and stormwater issues related to irrigation.

Kährs' comprehensive approach to responsible and sustainable businesses and stakeholder's expectations means that we consider principles of social, economic and environmental considerations into our planning and operations

Our production facilities are located in the heart of urban areas, close to residences and other municipal operations that take up the issue of noise, dust and traffic. Tests show that we have met the required levels today but some noise will need to be diminished in order to meet future requirements.

Work on product certifications places demands on the entire operation at Kährs from product development and purchases via production and environment and safety functions as well as marketing and communication departments.

Natural tannins come from the oak and that gives a dark colour in stormwater. Researchers from Linnaeus University run pilot studies of various methods to reduce discoloration and tannins in stormwater at Kährs.

Climate change and the reduction of our carbon emissions affect all planned activities and in particular transport and energy use. One of Kährs' strengths is a very high proportion of renewable raw materials in both production of flooring and biofuel.

Delivering our floors to over 50 countries leads to a high quantity of transportation, mainly by boat or truck. Dependence on fossil fuels for transport is accordingly a part of the climate impact, and thus requires future improvements and research.

A carbon offset although is that Kährs has an excess of bioenergy from our continued operations and that our wood products store carbon dioxide decades under the floors use, furthermore we stored more carbon dioxide than we released during the entire year of 2013.

Positive Results/ Actions

MIFO Phase 2 investigation has not revealed any contamination of soil or groundwater due to past activities.

- Energy saving measures to reduce our energy use by 2 300 000 kWh per year in the future.
- Built a vegetative sedimentation filter for purification of irrigation water on the basis of results from Linnaeus University's research.
- Through collaboration with our chemical suppliers we are better suited to meet customer demands and requirements in regards to different product certifications.
- Nearly 5 million square meters of hardwood flooring means that over 70 000 tonnes of carbon dioxide has been stored away.
- We have built fauna depots at the Kährs location in Nybro as the breeding ground of Stag beetles.

Difficulties

- Increased shipments between Kährs Group units and external suppliers.
- Reducing the amount of tannins in our irrigation water is a challenge for the ongoing research project.
- Chemical management requires continuous improvement in accordance with the updated risk analysis.

KÄHRS - HISTORY AND ENVIRONMENTAL EVENTS

In 1857 Johan Kähr the elder moved from Mönsterås to the small, but thriving community of Nybro in Småland. He brought with him a lathe and a few other tools to setup a shop crafting wooden utility goods such as parts for spinning wheels. These simple beginnings became the foundation of the modern Kährs today.

History

In 1919, Gustaf Kähr, grandson of Johan Kähr, set up the company AB Gustaf Kähr. Under his leadership the company developed and became an important and innovative producer of wooden doors, toys, furniture and flooring.

Gustaf was dedicated to find efficient ways to use the sustainable wood raw material and to improve the stability of wood when used in building materials. His perseverance paid off when in 1937 he received the patent for the invention of the modern multi-layer, laminated door.

Following upon this success he worked hard to find a solution for the problem of gapping, twisting and cupping of solid wood floors. After several years Kährs was awarded a patent, in 1941, for the invention of today's modern engineered hardwood floor, the multi layer floor.

Kährs today

Kährs is still located in the town of Nybro, deep in the heart of a Swedish forest, where our company was born in 1857. The wood knowledge we have accumulated over the years has been passed down from generation to generation. We are constantly discussing new ideas how to improve our floors. At work, we are trying, testing and eventually succeeding. But the goal is always the same: how to find ways to make our floors even better looking, stronger, easier to install and more sustainable.

We're proud that people all over the world appreciate the result. Today, our floors can be found in homes, offices, shops, hotels, concert halls, theaters and sports arenas from Europe and Asia to the Americas.

World Class Innovations

Kährs has always been at the forefront when it comes to innovations.

1921 we begin using waste wood as biofuel for steam energy.

1937 we were awarded the first patent for the multi layer wood door.

1941 we get the first patent for multi layer wood flooring.

1958 we introduce the first factory finished floor.

1965 we develop the first sports floor system.

1984 we introduce the first solvent-free, lacquer system.

1995 our veneer wood floor, Linnea, is introduced.

1999 first glueless joint, Woodloc® is introduced.

2004 new generation Activity Floor.

2010 we introduce Woodloc® 5S, the next generation wood joint.

2010 we open the first LEED certified (green) warehouse.

2011 we are certified according to DIBt, French VOC A.

2011 we make the first wood floor made from dual labelled FSC®-Fairtrade certified wood.

2012 merger with Karelia-Upofloor, provides even better conditions for the continued development of products and activities towards a sustainable business.

2013 Kährs' first Nordic Ecolabelled products were launched. The company's Swedish production units PEFC certified.

KÄHRS RESPONSIBILITY

Corporate responsibility means, of course, to create a strong, efficient and profitable operation but also a responsibility for the impact on society from an environmental and social perspective. This is usually called CSR, Corporate Social Responsibility. A similar responsibility, we maintain through our work with ESG (Environmental, Social and Corporate Governance). Our owner, Triton, has signed the United Nations' "Principles for Investment" and these principles give us guidelines for our work with ESG to benefit our stakeholders and society.

Here are some examples:

People

- In our company, safety comes first. We continue working in a diligent and structured way to improve equipment and education, to minimize the risk of injuries on the job.
- We want to encourage employees to exercise and participate in physical activity We have our own gym, private tennis court, free admission to Nybro's municipal swimming pool, and every year hold a joint group activity for all of our employees.
- Kährs also has its own art society where the profits are financed by membership fees and contributions from the company itself.
- In our Code of Conduct we make demands on our business partners regarding responsible, ethical and sustainable business.

Society

- Kährs has a responsibility to minimize the emission of substances that are harmful to humans and nature. As a company in the middle of a city, we must also show consideration to our neighbours by minimizing noise and disturbances.
- We have a long tradition of openly reporting our environmental performance through our EMAS report available on www.kahrs.com

Environmental Management Council award for long-term environmental work.

- We support local sports clubs.
- We are open to children as well as students that require contacts within the industry for special jobs, internships, and graduate jobs.
- Our exhibition floor at the factory is open to the public every weekday and we receive visits from various stakeholder groups.
- We support various projects to promote and preserve the deciduous forest and biological diversity. One example is Project Oak Damages in cooperation with the Forest Agency, Swedish sawmill association, Southern Forest and Forestry Society 2000-2010.
- Logs that can not be used for flooring production is used in various conservation projects such as the County Boards project to safeguard the Stag beetle, Sweden's largest beetle.
- 2012 we were the first to manufacture and sell floor with both FSC® and Fairtrade labelling, originating in Chile.

Environment

- Kährs has a comprehensive view on environment and quality and it has for a long time been of central importance. In 1993 we were the first flooring manufacturer in the world to receive ISO 9000 certification, and in 1997 we were certified according to ISO 14001.
- Long-term and responsible forest management is the foundation of our business. At Kährs we devote great care to ensure our raw material quality and origin. We are both FSC®- and PEFC-certified. We have an ambitious environmental program in manufacturing, which includes both energy efficiency and optimum resource management.
- Kährs wood floor is, mainly made in a multi layer construction, where the raw material is used as efficiently as possible. Residual material becomes biofuel that heat Kährs factory as well as nearby communities. The remaining ashes are returned to the forest as fertilizer.
- A selection of Kährs wood floors are Nordic Ecolabelled and the number of labelled products in our range is increasing rapidly.

The Stag beetle is Sweden's largest beetle and is endangered. Using fauna depots, we offer an environment of dead oak trees and decaying oak wood where the Stag beetle can lay their larva.

The magazine Oak is part of our communication with forest owners. An important message is that beautiful meadow oaks are not interesting as a raw material in flooring production but is most useful where they are, preserved nature conservation and promoted by the deciduous Swedish forest.

KÄHRS ENVIRONMENTAL WORK

1. Environmental Aspects

The cornerstones of Kährs environmental work are knowledge about our company's impact, the laws we follow, and the requirements we face from our surroundings and our stakeholders.

Environmental aspects are updated and re-evaluated each year to ensure that our development is in the right direction and that real improvements are made. These different aspects support our long-term efforts to improve the organization's processes continuously.

2. Planning of the most important environmental aspects

Kährs environmental policy sets the direction for environmental work.

All environmental factors are examined once a year at each of Kährs' units. The assessment we have made shows which are the most significant environmental aspects (with the greatest effect on the environment), and the environmental goals and program are set up against the background of at least one significant environmental aspect. Environmental impacts and risks in the significant environmental aspects at Kährs are examined in the next section.

It is our overall environmental goal that drives us when it comes to continually improve environmental performance. Identification of the laws and requirements are regularly checked. The laws are stored together in a common file and is connected to responsibility and routines.

3. Implementation

The people affected by the significant environmental aspects are key individuals in carrying out the environmental program at Kährs.

A large number of them work in the production organization, and receive training to cover the environmental issues that affect their work. We draw in a broad participation through improvement groups in TPM (total productive maintenance), which operates in all production lines.

Through the deviation handling system, which is easily accessible on the Intranet, events and proposals for change are put forward.

Environmental issues are communicated internally in the company and externally. All matters included in the environment management system are documented as processes and are in our manuals. Most of the procedures and instructions that regulate efforts to protect the environment in the organization are accessible via the Kährs Intranet. There are specific precautions or routines to deal with identified environmental risks.

4. Control

In order to monitor and measure the company's environmental impact, measurements are taken frequently.

A deviation handling system is in place to check that the internal processes function correctly and to ensure that incorrect actions are not repeated.

Internal audits are performed regularly throughout the year by specially trained personnel who monitor compliance with the environment management system. The inspections also aid the management in assessing whether the management system is effective and will lead to improvements. The environmental system is also a support to the legal demand of self-monitoring.

5. Action

The Kährs management group follows up on the environmental program and environmental management system.

Any significant new environmental aspects are presented at the review, and new environmental objectives are set, after which the company enters a new phase of Planning - Implementation - Monitoring and Action.

6. Transparency

EMAS audits and reports during the past 15 years show our history and transparency in our environmental work. This EMAS report is accessible at www.kahrs.com.

As an element in maintaining the company's ISO 14001 certification and EMAS registration, impartial external auditors from DNV verify compliance with EMAS standards and ISO 14001 standards annually.

Information is available on our Intranet. The material is used for internal training, but also as material for presentations to our customers and other external visitors.

The outcome concerning statutory requirements are defined for each unit.

Model showing the Kährs environmental management system

Environmental Policy

• Our commitment to the environment must be genuine and all issues handled with the upmost thought and respect.

• We will strengthen our environmental commitment further and create a long term sustainable business, for the benefit of current and future generations.

• We must contribute to and support responsible forestry.

• We must lessen our environmental impact through continuous improved management of chemicals, raw materials and energy.

• Our development and wood floor manufacturing processes must reflect the natural life-cycle, following the principles of sustainable development.

• We must fully understand and comply with legislation and environmental requirements, and apply this method throughout the whole supply chain.

Christer Persson, President and CEO
2012-06-01

ENVIRONMENTAL ASPECTS

An environmental aspect is a part of an organization's activities, products or services that affect or could affect the environment.

The identified environmental aspects are evaluated one by one to decide whether they should be regarded as significant or not. In order to make the assessment, the following points must be evaluated:

Laws: Connection to legal requirements (regulations) and if any connection is found the environmental aspect is treated as significant.

Risks: How large is the risk of accidents are due to the activity, service or product.

National Environmental Goals: Connection to Sweden's 16 national environmental goals.

Scope: Amount of emissions and resources used.

System conditions:

1. The concentrations of substances from the crust of the earth must not be systematically increased in the natural surroundings.

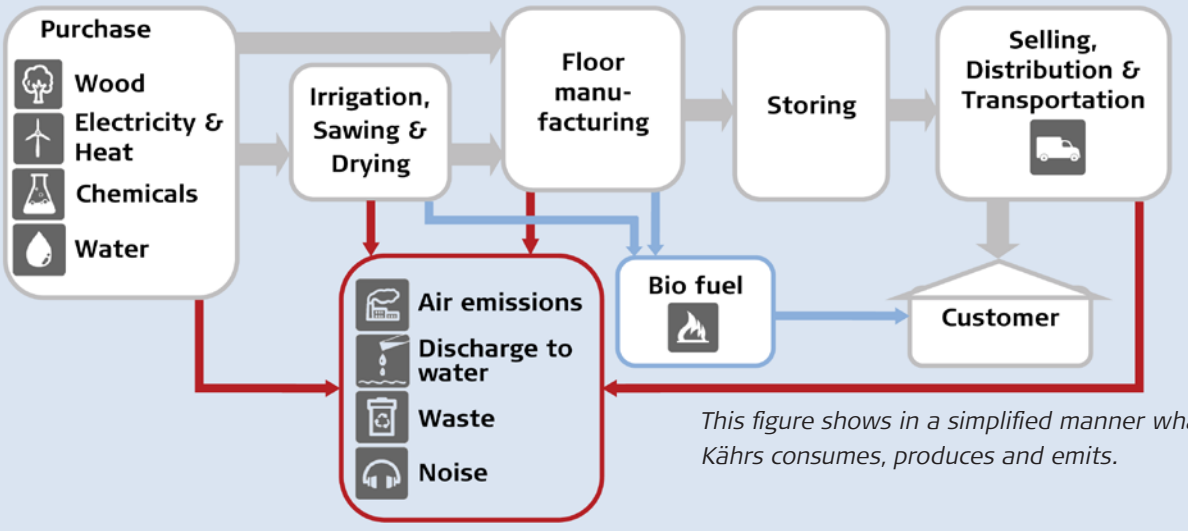
For more information see page 31 for contact details.

2. The concentrations of substances produced by society must not be systematically increased in the natural surroundings.

3. The physical basis for natural productivity and diversity must not be systematically impoverished.

4. Effective and fair distribution of resources to satisfy human needs.

The environmental program is concentrated on the significant environmental aspects.



This figure shows in a simplified manner what Kährs consumes, produces and emits.

SIGNIFICANT ENVIRONMENTAL ASPECTS

Some aspects will have no impact on the environment during normal operation, but only in connection too incidents or accidents. The ecological balance in the next chapter presents key trends and development for Kährs' significant environmental aspects.

Significant environmental aspect	Activity that affects the environment	Environmental impact	Risk	Symbol in the report
Climate impact	Transport of materials to, from, between and within Kährs' factories.	Emissions of carbon dioxide from fossil fuels to the atmosphere leads to increased levels of carbon dioxide and enhanced greenhouse effect.	Procurement of less efficient transportation.	
Energy Use	Drying materials is the process that uses the most energy in Kährs.	Acidification, emissions of carbon dioxide and consumption of resources in the conversion of energy.	Increased energy use	
Risk from non-sustainable forestry	Purchase of wood.	Felling that is not sustainable in the long term.	Wood material from felling operations that do not meet requirements could be delivered to Kährs.	
Air emissions of dust	Extraction and transport of sawdust.	Spreading of particles that are harmful to breathe in creates a poorer air quality.	Major fire in the factory. Breakdown of filter with high emission in a short time. May result in nuisance to neighbouring residents.	
Air emissions of volatile organic compounds (VOC)	Surface treatment, filling, gluing and maintenance of machines and buildings.	Deterioration of air quality.	Emissions are diffuse and the use of smaller containers ensure a low risk of major discharges.	
Discharge of pollutants to the soil in the surface water or waste water drain net	Cleaning process equipment factor floors, saw blades and trucks. Events that result in discharge of chemicals. Irrigation and storing of wood chips of oak.	Bio-accumulable wastes are absorbed in the sludge of the purification plant. During normal operations the environmental impact is insignificant. The spread of tannins in irrigation.	Risk of leakage when chemicals are loaded or unloaded, if they can cause pollution to the recipients of surface water or to the soil. Extinguishing with water during a large fire. The spread of tannins during heavy rain.	  
Hazardous waste	Cleaning gluing machines, filling machines and surface treatment machines generates polluted water from washing, which is classified as hazardous waste.	Waste is not efficient use of materials. Hazardous waste represents a risk of violating system condition 2.	Handling and storing hazardous waste means a risk for leakage to nearby soil and ground water.	
Noise	Transport, extraction fans and transport of sawdust.	Noise level causes a nuisance for neighbors.	Risk of nuisance resulting from inadequate maintenance or dimensioning and project planning.	

Green symbol = Positive development during the year compared to the previous year.
Yellow symbol = The situation is stable.
Red symbol = Environmental impact increases, needs immediate action.

ECOLOGICAL BALANCE 2013 & TARGETS

Here we present the ecological balance of Kährs and the two production sites. A summary is only made for Kährs in total as the main facility in Nybro is the main site and Blomstermåla is part of the Kährs' sawmill operations.

In 2013, AB Gustaf Kähr partnered with Karelia-Upofloor Oy and formed Kährs Group. Changes during the year affect Kährs activity to some extent. Some ecological balance data for Karelia-Upofloor is not represented in this controlled report. See pages 24-26.

Controlled Wood Sourcing

Producing wood floors

Ash is returned to the forests as nutrients

100% of heating is from wood waste

The surplus of carbon dioxide-neutral energy lasts for 10.000 households.

The basis used for calculating key performance indicators is the number of square meters (m²) of Nybro produced wood flooring.

All values in the ecological balance refers to full-year 2013.

Water Sources & Usage

Municipal drinking water	24 000 m³	4,8 l/m²
Ground water for irrigation of logs	1 100 m³	0,2 l/m²
River water for irrigation of logs	31 000 m³	6,2 l/m²
Storm water for irrigation of logs	50 000 m³	10 l/m²

The largest proportion of water use goes to irrigation of timber and to regulate the moisture content in the drying process.

Irrigation is done to keep up the yield by less cracking. About 21 000 m³ of oak and ash timber is irrigated in Nybro and Blomstermåla. Most of the water used in Nybro is collected rainwater with support of groundwater if necessary. The process for the irrigation of timber in Nybro is based on recirculation to reduce the use of water.

Research collaboration with Linnaeus University is carried out to improve the purification of process-, storm water and leachate. "Integrated Wastewater Management for the Wood Industry - Process water, Storm water and Leachate". During 2013, a pilot plant for the treatment of stormwater was run by researchers from Linnaeus University. A vegetative sedimentations filter has been built according to recommendations based on this research.

Leachate from biomass stock and timber causes raised levels of oxygen demanding substances. Treatment of this water in the pilot plant, consisting of a wet land and an aerated, zone have shown positive results.

Process wastewater generated within the manufacturing is mainly for the cleaning of machinery and equipment.

Risks to contaminate water or soil are related to the loading and discharge of chemicals. These risk are identified in the Kährs risk analysis. Procedures have been developed to prevent incidents and to minimize environmental impact in the event of an accident.

Read more about the LNU-Project

Material Efficiency

Wood material	162 000 t	30,8 kg/m²
Logs	92 600 t	
Sawn wood and semi manufactures	69 400 t	
Extra material for the products	3 200 t	642 g/m²
Renewable	810 t	163 g/m²
Non-Renewable	2 380 t	479 g/m²
Maintenance chemicals	50 t	10 g/m²
Renewable	30 t	6 g/m²
Non-Renewable	20 t	4 g/m²
Fuel	116 t	23 g/m²

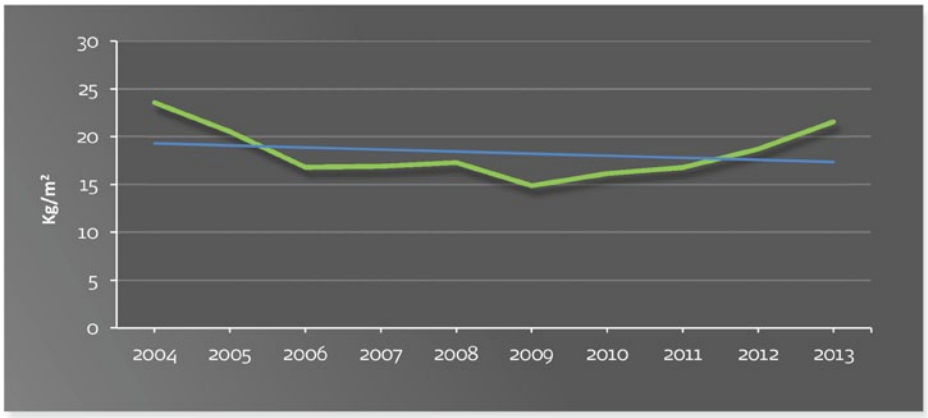
Wood material

The wood materials consist of coniferous wood and broad-leaved deciduous wood or semi-manufactured in the form of sawn board materials. The floor boards consists of a surface of hardwood and auxiliary materials(chassis) of softwood. Oak, beech and ash is first sawn in Nybro or Blomstermåla. After the drying the material goes to the flooring factory. The surface and auxiliary materials are processed, assembled and surface treated.

Kährs' focus is to use primarily Swedish wood raw materials. About 70% of all the wood used comes from Swedish forests, while only less than 2 % originates outside of Europe. The oak logs bought directly from forest owners come from forests in southern Sweden, which is primarily within a 180-kilometer radius to Kährs' sawmill.

Logs purchased from Denmark and Germany mainly go by train and ships.

Partial manufacturing for the veneer floor Linnea comes from Poland and consist of a HDF board with a veneer top layer.



Amount of wood material to produce 1 m² wood flooring in floor factory (estimated on sawn, external or own sawing to the floor factory). Logs converted to sawn timber.

Auxiliary materials to products

To produce wooden flooring, other materials such as glue, filling and lacquer are also needed. The packaging is also an auxiliary material, and at Kährs it consists of corrugated cardboard and plastic wrap which can be recycled.

Before any new chemicals are introduced for use in any of our operations they are individually assessed for environmental and safety criteria aspects. Approved chemicals are then listed in our database, the chemical register, where information about each chemical also can be found, such as material safety data sheets. Currently, about 500 approved chemicals are listed.

A water-based glue is used to join the multi-layers in our flooring. Since the surface (top) layer hardwood is not entirely smooth after sawing, wood filler can be applied to smooth out the surface if necessary.

After sanding, the surface (top) layer is then prepared for a surface treatment. Lacquers and or oils are used for the surfaces of the flooring to produce the desired appearance and performance.

The different finishes we can apply give the flooring a durable and longwearing surface. Kährs finish lacquers are waterborne and UV cured.

The stains and oils contain small amounts of VOC's that are emitted during curing.

The final products meet indoor air certifications E1 and CARB (ATCM) Phase II.

The renewable auxiliary materials also consist of wax and cardboard for packaging. The supply of renewable auxiliary materials is limited and constitutes a challenge in product development and purchasing. Among non-renewable auxiliary materials are the plastic wrap, plastic banding and metal banding used in pallet packaging, the metal and plastic can be recycled. The paper in all of our carton packaging is from recycled paper while the paper used in printing of our product magazine is Forest Stewardship Council, FSC® Mix certified.

Maintenance Materials

Maintenance materials such as lubricating oils and hydraulic oils for machinery are also listed in our chemical registry. A review of our range of lubricating and hydraulic oils has shown that we have reduced the number of products accepted.

Fuel

At Kährs we use almost exclusively diesel and alkylate petrol. Alkylate petrol is a cleaner fuel and particularly important for smaller motorized tools. Diesel is used for our forklifts and loaders and alkylate petrol is mainly used in our chain saws at our production facilities.

Responsible forestry

Target- Certified wood

One of Kährs' main environmental targets is to increase the amount of certified wood.

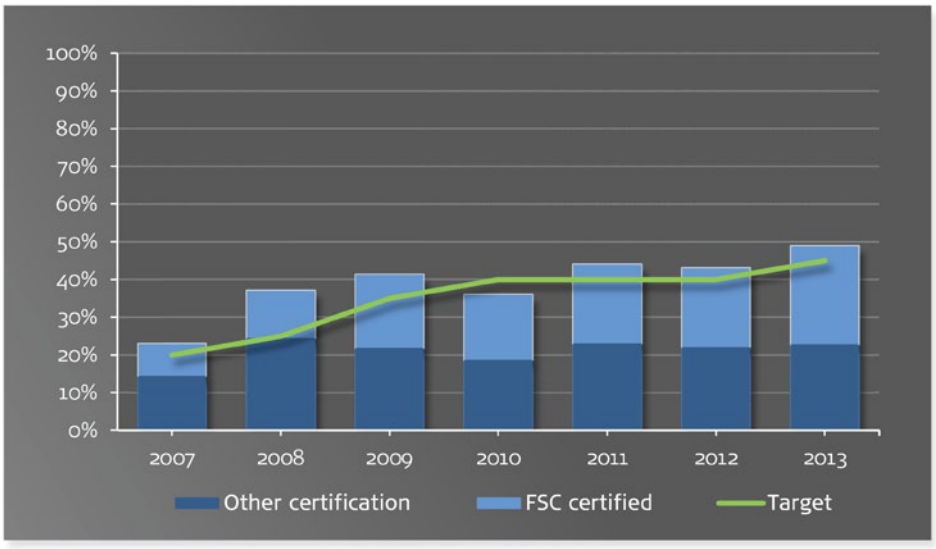
• In 2013, our goal for certified wood was 45%. This is calculated as a proportion of the total volume purchased. Kährs achieved 49% certified wood.

• Two of our major suppliers have improved their ability to deliver certified or certified controlled wood, which is a very positive improvement.

The forest certifications Kährs accepts are FSC, FSC-Fairtrade, FSC Controlled Wood, PEFC and other certifications Kährs has deemed acceptable in conjunction with leading environmental NGO organizations.

All timber purchases follow our specifications that all wood must be in full compliance with the requirements of the Lacey Act and the 2013 EU Timber Regulation.

Our ambition is the purchasing of FSC controlled wood, as our minimum acceptable level is an important step to give support to responsible forestry. The amount of sold FSC certified flooring is driven by demand of our customers.



The proportion of FSC-certified oak logs in Sweden is dependent on the proportion of woodland that is certified. All the local Swedish raw material is classified as "from low risk area" by the FSC but due to costs considerations many of the small landowners choose not to become FSC certified today.

A sustainable forest is the foundation of Kährs' business

One of Kährs' main environmental aspects is the risk of using wood from a non-sustainable forest. It is our belief that a future, sustainable supply of controlled wood is of outmost importance not only for Kährs but is a global concern as well.

80 % of the floors we sell have a surface layer of oak.

The Swedish oak tree is harvested and maintained according to the Swedish Broad Leaf Act (Ädellövsskogslagen). There was financial and technical support from the EU in 2013 and the Swedish government to replant and take care of the Swedish broadleaf forests.

Kährs' hardwood purchasers have contact with over 1000 forest owners. These contacts include discussions and education at Kährs to encourage and to protect high nature values in the forest.

Normally there is no conflict between nature conservation and floor production connected to old oaks.

It is very important however that forest owners actively take care of their protected valuable broadleaved forest; otherwise they will be overtaken by spruce and other softwood species.

Kährs carries out a number of activities to support a growing, active forest and to further strengthen the southern Swedish oak forestry:

• Special forest days for the education of local forest owners at Kährs in Nybro.

• Production and distribution of the Kährs "Oak" (Ek) educational magazine to 7000 forest owners.

• Bonus for certified wood.

• Projects for the rejuvenation of including stag beetles where fauna depots have been built with logs from Kährs.

Waste & Recycling

To energy recovery	154 t	31 g/m²
To material recycling	292 t	59 g/m²
Sent as hazardous waste	151 t	30 g/m²
To landfill	28 t	6 g/m²

Material by-product that is collected for **energy recovery** consists of domestic refuse (for example) and anything from sand paper to seat cushions.

Under **material recycling,** recyclable waste is included, such as office paper, metal and plastic.

Hazardous waste consists of items such as batteries, waste from the filling and surface treatment processes, and electronic waste such as capacitors containing PCB.

• The amount of hazardous waste depends largely on changes in production processes and new product test runs.

Intensive efforts to develop new products have led to many tests of chemical solutions.

The waste is collected in approved containers, located throughout the facility for their particular purpose, and stored and managed under control at the production centers. Licensed vendors are used to handle the hazardous waste professionally and to ensure that it is correctly and environmentally processed collect the containers.

Everything that is unsuitable for recycling or incineration are included in **landfill**, which can be waste such as concrete.

Waste from renovations handled by construction companies is not reported here.

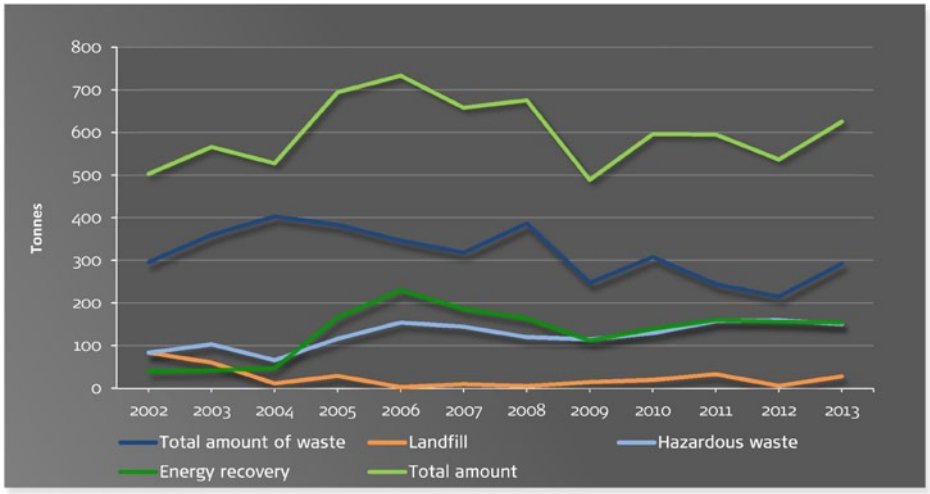
Even though all the waste is dealt with an environmentally acceptable manner, it still interrupts the natural cycle. Waste, and especially hazardous waste, constitutes a risk of emissions with an environmental effect.

In order to take the next step and reduce the quantity of hazardous waste, new cleaning methods are required, and we must improve our methods and knowledge concerning environmental practices in the various manufacturing processes.

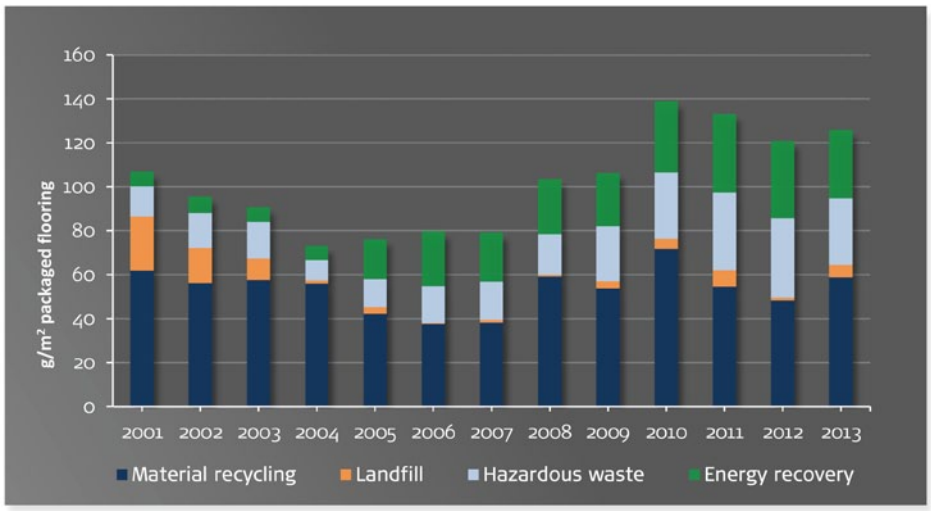
Target for 2013

• To reduce the amount of waste by 10 g/m² and the cost of management by 10% compared to 2013. The goal has been pushed back a year because of changes in operations that changed the conditions.

This section does not deal with by-products such as wood chips and sawdust. (See instead Energy and Biofuel production on the next spread).



Total amount of waste 2002-2013, expressed in tonnes.



Amount of waste per square meter manufactured floor 2001-2013. Total and broken down by waste fraction.

Transportation

	Transport work (tonne-km)	Carbon dioxide CO2 (tonne)	Nitrogen oxide NOx (tonne)	Sulphur dioxide SO2 (tonne)
Transports to production and warehouse	290	4 200	60	70
Transporter out	125	4 100	40	20
Intermediary transport	2	160	1	~0
Internal transports	9*	360	7	~0

**All internal use converted to truck transports.*

All calculations of transportation emissions are based on material from NTM and DB Schenker contractors. The distribution shows that the main types of transportation are by ship and trucking. Transportation by rail comprises the incoming transport of logs to the Blomstermåla sawmill.

Cargo ships are used primarily to transport incoming wood material from Europe and other sources, and for outgoing transport of finished flooring to customers around the world.

Truck transportation is used for short distance transport between suppliers and the production sites and for transport needs that cannot be served by ship or train.

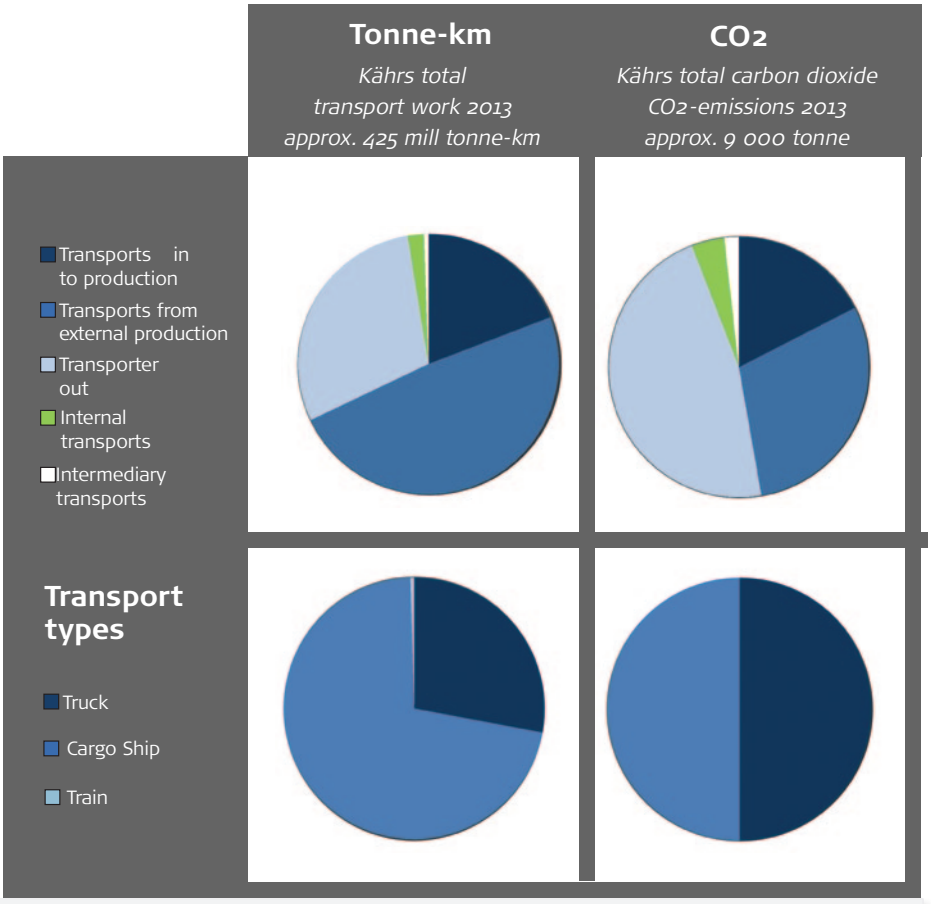
Most transportation work is via cargo ships, but the largest carbon dioxide emissions come from over the road transports.

As an alternative to cargo ships, trains have been used for the transport of goods between China and Nybro when faster delivery is necessary. This provides a faster but more expensive freight, however, no direct environmental benefit. The train's environmental benefits are difficult to exploit when the train does not meet customers' requirement for delivery time and precision. Cost combined, the train also loses out because of several stops to re-load.

Carbon dioxide emissions

Kährs sells wood flooring all over the world, which involves long-distance transport. The resulting fossil carbon dioxide emissions that arise, contribute to an increased greenhouse effect (measured in GWP100) and thus an increase in the risk of climate change.

Kährs' emissons of carbon dioxide come from transportation and amounts to about 9 000 tonnes, or 9 000 000 GWP100. In this years report, we have changed the division between production and Kährs' repositories. The results give a higher value of transport and emissions for incoming transport.



Climate Impact

Our main activities to reduce carbondioxide are to increase the efficiency in the logistic planning and use transportation methods that give lower carbon dioxide emissions.

When all internal use of energy and use for transports are subtracted from the total amount of biofuel produced, there is still 145 000 MWh left. This corresponds to an emission of approx. 40 000 tonne CO2 which is the same as burning 14 000 m³ of heating oil.

Burning wood does not give a net increase of atmospheric carbon dioxide, when the forests are replanted. A Kährs floor can have life cycle of fifty years, and it is then usable as biofuel (98% wood), or for use as another wood based product.

The greatest decrease of carbon dioxide is in the use of wood floor. Kährs sold quantity, during 2013, stored over 70 000 tonne of CO2 for 50 years in installations.

Energy Efficiency and Biofuel Production

Electricity consumption	40 000 MWh	8,1 kWh/m²
Heat consumption	43 000 MWh	8,6 kWh/m²
Transportation energy (fossil)	44 000 MWh	8,8 kWh/m²
Production of biofuel	292 000 MWh	59 kWh/m²
Net-Energy Produced (Carbon Neutral)	145 000 MWh	29 kWh/m²

• All electrical energy consumed at Kährs is contracted as 100% renewable hydropower.

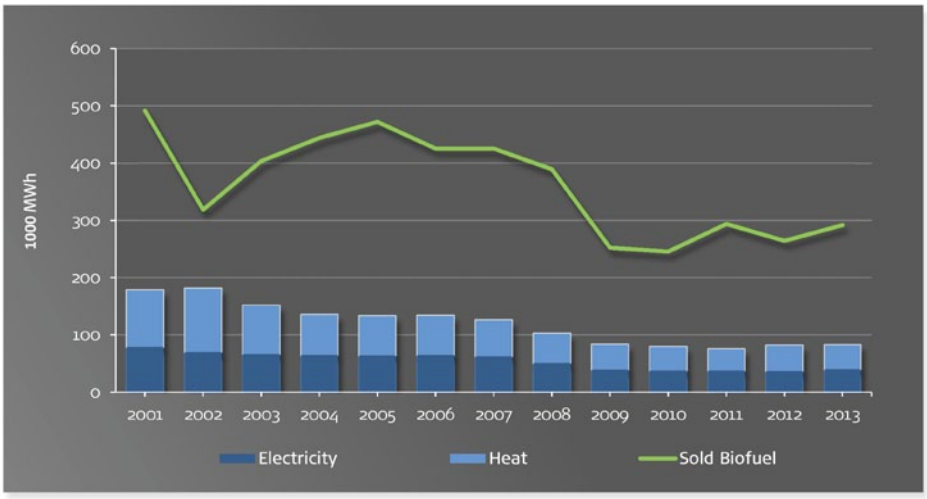
All heat energy at the Nybro headquarters come from our own wet-waste (biofuel material) from the bark and branches generated from the sawmill

• The total energy amount of fossil-based fuel which was used for Kährs' transportation in 2013 was approximately 44 000 MWh.

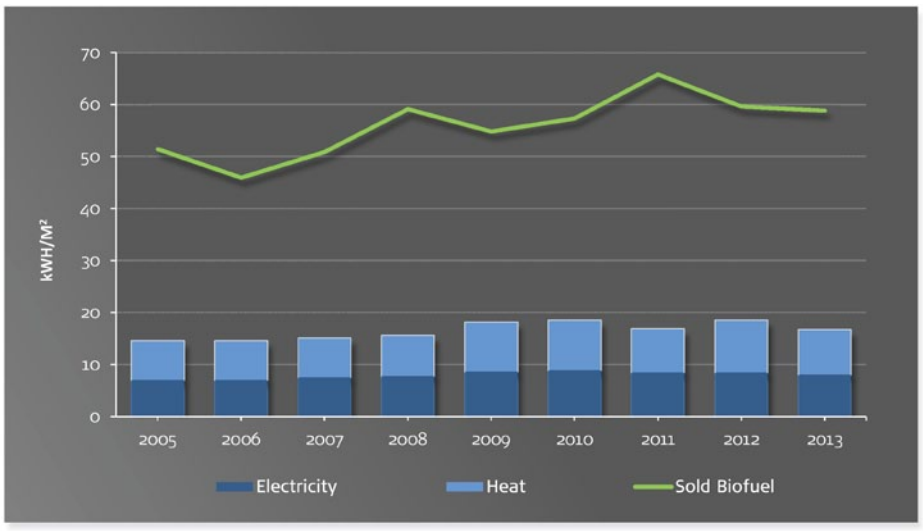
• The total amount of produced biofuel shipped from our facilities would generate, in an efficient power plan (90% efficiency), approximately 90 000 MWh of electricity and about 170 000 MWh of heat.

• Kährs' activity in 2013 resulted in a surplus of carbon neutral fossil energy of about 145 000 MWh.

Our dry residues (sawdust) is purchased by a local energy company to produce wood power or pellets for heat consumption. The ash from the combustion of biomass boilers is collected and then spread back in the local forests as a nutrient.



Kährs' energy use 2001-2013.



Kährs' energy use per m² 2005-2013.

Target - Energy use

One of our environmental targets is to carry out measures that will decrease energy use by 3 GWh per year.

The target for 2013 was not fully met by our conducted activities. Measures to reduce energy use by 2.3 GWh/year have been completed.

- Heat recovery from IR/UV oven.
- Circulating air to machines.
- Searching for air pressure leaks and measures.
- Automated light saving measures and the installation of LED lighting. Installation of a regulated speed compressor.

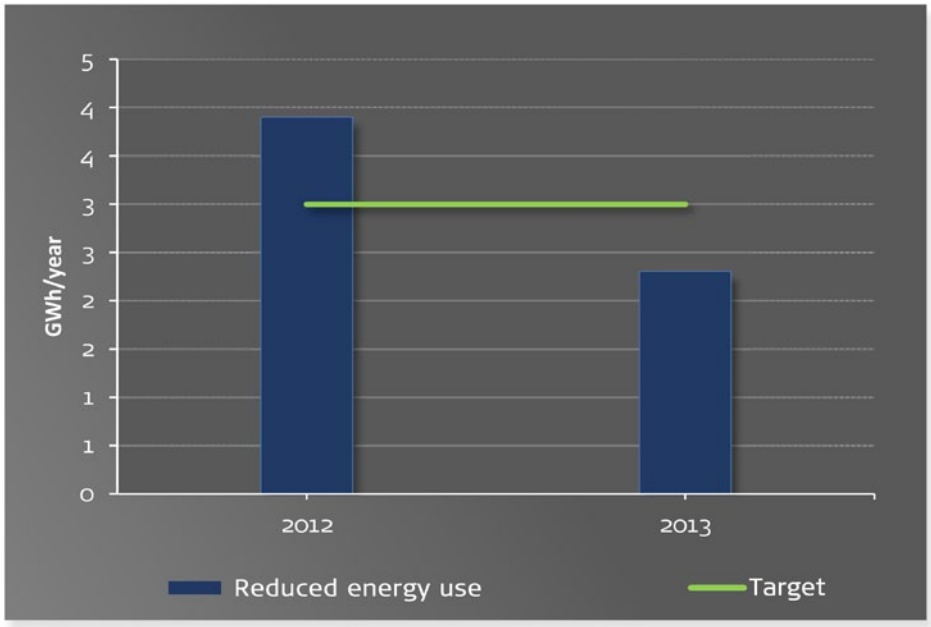
In 2014, the focus of our plan of action is:

- Continue to measure energy use in our facilities and processes.
- With those results and measurements to identify and implement new possibilities for reduced energy use.
- Studying the feasibility of recovering energy (heat) from the exhaust air from our enormous filtration system.

Note: The potential for reducing energy consumption is influenced by many factors, including weather, mild and severe winters and increases or decreases in production volumes.

Effective energy use reduces our environmental impact and makes renewable energy accessible to other consumers who currently use fossil fuels.

All conversion of energy has some effect on the environment, primarily in the form of climate influence because of the fossil fuel consumption and the formation of acid gases.



Noise

Noise is caused primarily by our fans and filters in the manufacturing plant, but also can be in connection with transport (loading/unloading or road/motor noise). Excessive noise may be harmful or least cause a nuisance to people both inside and outside the company premises (employees, neighbours and nearby residents).

In order to avoid noise problems, preventive maintenance is continuously carried out on fans and filters. The question of noise is taken into consideration in various decisions when planning investment projects and rebuilding. Noise management is also described in project routines. Noise is included specifically under the terms of the permits for each of our sites and the results for noise conditions are included in the statements for each facility.

• Noise reduction measures in 2013 have been effective. Kährs is working to be a good neighbour to local residents and take responsibility for the employees' work environment.

• Processing of wood, sawing, planning and sanding gives inevitable high noise levels. We are constantly working to reduce this noise by making demands on our equipment suppliers, to reduce noise at the source.

Emissions

VOC (Volatile Organic Compounds)	3,8 t	0,8 g/m²
Dust (estimated quantity)	3 t	0,7 g/m²
TOC in process water, to sewage plant, estimated	0,25 t	0,1 g/m²
TOC Irrigation water, estimated value	1,3 t	0,3 g/m²

Emissions to the atmosphere from production processes are primarily diffuse emissions of VOC and dust from the filter installations.

VOC

VOC's originate from dissolving agents in lacquer, stain and glue, and from various chemicals used in machine and building maintenance. The greater part of dissolving agents used for cleaning in the production processes, are handled as hazardous waste and sent for treatment by regulated waste service providers.

• The VOC emissions have decreased since 2006, which are partly due to reduced production and partly due to on-going product development in gluing technology. Changes in the product range has meant that a trend has been broken in recent years.

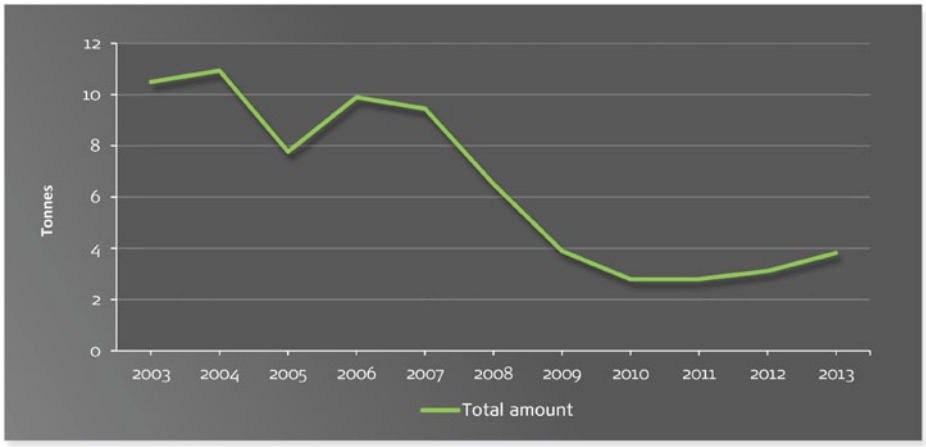
Dust

Pipelines transport large quantities of wood shavings and wood dust through filters at Kährs' plant in Nybro. A preventive maintenance program ensures that the filter equipment operates well. Our maintenance is designed to prevent accidents in the filter by measuring, examining and listening to the equipment and in proper time maintain or replace parts as needed.

Other emissions to the atmosphere

The heat energy for the production units is obtained, as mentioned above, from burning bio-fuel. The burning process releases carbon dioxide, nitrogen oxide, sulphur dioxide and dust. The carbon dioxide emissions contribute to the greenhouse effect, but bio-fuel does not cause a net increase of carbon dioxide in the atmosphere. However, nitrogen oxide and sulphur dioxide contribute to acidification.

The energy conversion does not occur on Kährs' premises, and no emission is therefore stated for this in the report.



Emissions of VOC from Kährs 2003-2013.

TOC process wastewater

Process wastewater is treated in a sedimentation/adsorption process to reduce persistent organic substances - these are difficult to treat in the municipal wastewater treatment plant in Nybro. The development of this treatment process is carried out in collaboration with researchers from Linnaeus University.

• In 2013, improvements for the treatment plant for wastewater have resulted in reduced amounts of organic matter (TOC) to the municipal treatment plant. As the industry's chemicals often do not break down, it is important to take care of it at the source.

Irrigation water

• Storm water diverted from irrigation water contains tannins from the watering of oak logs.

The amount of irrigation water diverted is limited to the retaining reservoir and recirculation in Nybro. In 2013, a vegetative sedimentations filter was built in Nybro to reduce the amounts of organic matter to the recipient. In Blomstermåla no recirculation of irrigation water is taken place but it is infiltrated into the ground before it reachers Alsterån.

A pilot plant to purify the irrigation water is being conducted by researchers from Linnaeus University.

RISKS

Once a year, a Kährs' risk analysis is conducted from an environmental point of view, by a group responsible for environment, fire, recovery and safety.

Laws have evolved towards greater demands on risk assessment and measures to reduce the risks. Both of probabilities and consequences of an event affect that risk.

At Kährs we have for several years coordinated out risk work in a group with representatives for environment, work environment, infrastructure and security.

The risk analysis is followed by an action plan established with measures of what should be corrected to reduce risks. Measures based on the previous risk analysis have been carried out, e.g. fire alarm systems in offices and the expansion of spark prevention in air filters. In 2013, the risk assessment was updated. Implemented measures have been followed up and a new action plan has been developed, where continued management of chemical is one of the heavier elements.

Accidents with oil spills at the sawmill has been handled in a positive way so that no oil has come to the stormwater system.

Expanded collection of stormwater prepares us in the event of a chemical spill on the ground.

A review of chemical hazards and training of staff has been made in connection with the deployment of new acute boxes for chemical spills. According to the risk analysis, the major environmental risks are associated with fire and filter failure and loading and unloading of chemicals.

INTERNAL AND EXTERNAL AUDITS

Internal audits are a tool in the function follow-up of important processes, by ensuring compliance and endeavour of the requirements and targets set in the management system.

Management prioritizes the processes to be evaluated through audits. The standards for each management system (SS-EN ISO 9001:2008 and SS-EN ISO 14001:2004 together with the EMAS regulations) define the requirements for internal audits.

We conduct internal audits at planned intervals to determine whether the management system has been properly introduced and maintained in an appropriate manner.

Internal auditors with different roles in the company comprise a competent group of auditors. Both planning, execution and reporting are designed to evaluate and support continuous improvements in Kährs according to the PDCA (plan, do, check, act) wheel.

The audits are carried out according to Kährs' shared management systems for environment and quality. Effectiveness verification of the system at the different production sites is included in the audit.

External Audits

Periodic audits of the management system for environment (ISO 14001) and quality (ISO 9001) were made during the year. For Kährs FSC certification, we have had an external audit. During the year we have also completed a certification audit for PEFC. Audits were also conducted to verify that we meet the demands of our flooring products.

LOCAL CONDITIONS

KÄHRS NYBRO – Permitting Terms

In 2013, we have made a notification of changes to reduce the need for ground water for irrigation. Measures to improve the quality of the storm- and process water is ongoing.

No noise complaints were received during the year. Measures have been made to reduce noise from filters and saw dust pipes.

Activities to develop the handling of process water has continued in cooperation with LNU.

Efforts to develop the self-control programs continue. Notes from inspections have been taken into action or are in progress and are reported in the environmental report.

No elevated levels that indicate any environmental impact from the landfill has been registered.

Term (Date of issue)	Guideline	Status
3. Discharge of VOC (2005-02-04)	Max 0,75 tonnes of VOC per started million m². As a limit value, however, 15 tonnes of VOC per year.	Met: 0,67 tonnes per started million m²
4. Noise (2005-02-04)	55 dB (A) Monday - Friday. 07:00 to 18:00 45 dB (A) at night 10:00 p.m. to 7:00 50 dB (A) at other times The maximum momentary noise level at night may be 55 dB (A).	Target for night met in the current operating times.
5. Noise (2005-02-04)	At a new establishment, measures shall be taken to reduce noise emissions to the Swedish Environmental Protection Agency's guidelines for newly established industry.	Noise suppression by fans in a dryer has performed with acceptable results.
8. Decontamination and aftertreatment	Examine the need for decontamination and aftertreatment measures	MIFO-FAS2 was conducted in 2013.
9. Dust (2008-11-25)	2 mg/Nm³ dry air, measured as random sampling.	Measurement performed, < 0,5 mg/ Nm³. Maintenance and monitoring of the filters is made according to the regular maintenance system.
10. Water (2010-09-09)	Process wastewater shall undergo sedimentation and adsorption before it is released to the municipal sewage network.	Met through the operation of a new process water treatment plant.
11-14. Water (2010-09-09)	The residues arising from the sedimentation and adsorption shall be disposed of as waste. Outgoing water must not damage the municipal sewage network, water treatment plant or the recipient. In the environmental report, Kährs shall annually present its work to reduce the amount of process waste water and pollutants into the municipal sewage treatment plant.	Glue and sawdust from treatment processes are disposed as waste for energy use. Low pH in some operating modes, changed operation modes and the choice of adsorption materials are tested. Evaluations and pilot studies with Linnaeus University is underway to improve processes and reduce environmental impact.

KÄHRS BLOMSTERMÅLA

Risks

Transports and the risk of accidental discharge into the nearby Alsterån river are most important environmental aspects connected with the Blomstermåla sawmill. Kährs is included in the Alsterån Water Council and follows the program for recipient monitoring. No complaints concerning external environmental findings were received during the year. Renewal of protective equipment on trucks and preparedness in case of spills near the stormwater retainers. New cleaning procedures for asphalt surfaces to reduce the spread of dust.

Irrigation

The watering system has operated the entire season. Tests of the runoff from the irrigation have been, conducted, and reported to the Environmental Office (Mönsterås). Analyses of water from irrigation were made in 2013 in collaboration with Linnaeus University. Analyses of TOC in water from irrigation gives a result of approx. 40 mg TOC/l. 5800 m³ logs were irrigated with 31 000 m³ of water from Alsterån.

Transports

About 75% of the logs delivered to Blomstermåla were transported by train and boat in 2013.

Supervision

The last supervised visit was conducted in May 2013. Spreading of sawdust was not mentioned. A plan of action has been started. A new storage facility is planned to be constructed to prevent the spread of wood chips to the adjacent area. Improvement of self-monitoring has begun to secure measures and monitoring of environmental aspects. A new location for the storage of bark has been created.

The sawmill in Blomstermåla sawed 17 500 m³ timber in 2013.

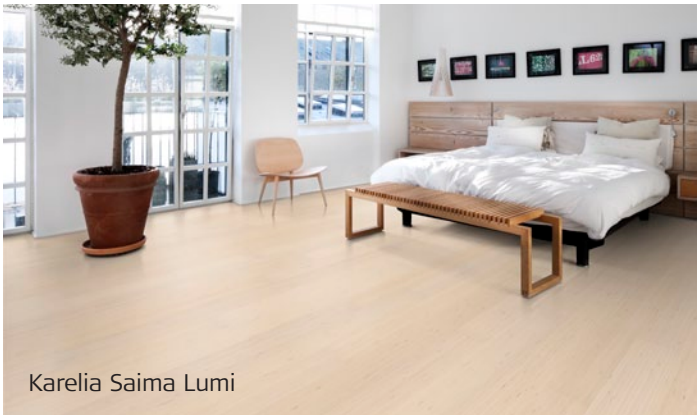
No changes affecting noise have been made during the year.

KÄHRS GROUP - OTHER PRODUCTION UNITS


Maklino, Russia

Satulung, Romania


Tuupovaara, Finland


Karelia Saima Lumi

Ecology Balance Data Wood	2013	Unit	Per m²	Unit
Energy				
Energy Use				
Electricity	24 082	MWh	14,1	kWh/m²
Heat	14 533	MWh	8,5	kWh/m²
Other	0	MWh	0,0	kWh/m²
Material Use				
Wood material to products	43 357	Tonnes	25,5	kg/m²
Chemicals to products, Adhesives, hardeners, lacquers, stains, oil etc.	877	Tonnes	0,5	kg/m²
Emissions				
Dust	2 200	Kg	1,3	g/m²
VOC	54	Kg	0,032	g/m²
TOC or COD in process water	1,14	Kg	0,001	g/m²
Other				
Waste				
Recycling of paper	7 780	Kg	5	g/m²
Recycling of plastic	36 355	Kg	21	g/m²
Recycling of metal	66 623	Kg	39	g/m²
Hazardous Waste	30 837	Kg	18	g/m²
Energy recovery	3 432 200	Kg	2 015	g/m²
Production				
Flooring Production	14 478	Tonnes		
Semi finished, wear layers	7 010	Tonnes		
Bio Fuel		Tonnes		

Karelia-Upofloor Oy

Kährs Group's subsidiary Karelia-Upofloor Oy has three production facilities for the manufacturing of wood flooring and components for wooden floors.

Wood flooring

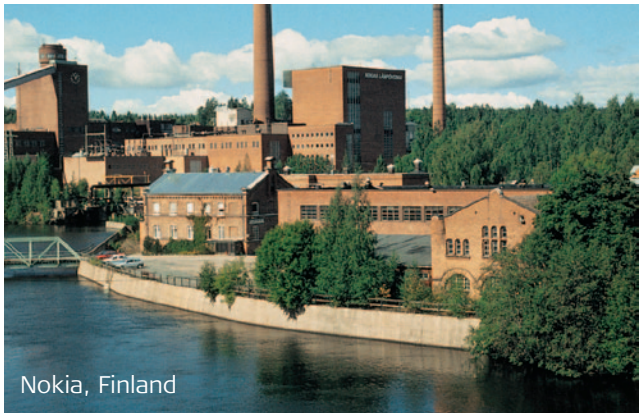
In Tuupovaara Finland the design product Saima is manufactured.

In Maklino Russia, the full-scale flooring factory mainly supplies the Russian market.

The factory in Satulung Romania provides the other flooring factories with surface layers of different wood species.

KÄHRS GROUP - OTHER PRODUCTION UNITS


Ikaalinen, Finland


Nokia, Finland

Ecology Balance Data Resilient	2013	Unit	Per m²	Unit
Energy				
Energy Use				
Electricity	7 725	MWh	5,7	kWh/m²
Heat	3 598	MWh	2,6	kWh/m2
Other	2 308	MWh	1,7	kWh/m²
Material Use				
Polymers to Resilient Floors	4 804	Tonnes	3,5	kg/m²
Chemicals to products, Adhesives, hardeners, lacquers, stains, oil etc.	0	Tonnes		
Other				
Emissions				
VOC	0	Kg	0,0	g/m²
Waste				
Recycling of paper	7 180	Kg	5,3	g/m²
Recycling of plastic	47 045	Kg	35	g/m²
Recycling of metal	5 080	Kg	3,7	g/m²
Hazardous Waste	24 000	Kg	18	g/m²
Energy recovery				
Production Waste	359 280	Kg	265	g/m²
Household Waste	67 980	Kg	50	g/m²
Production				
Flooring Production	4 496	Tonnes		

Resilient flooring

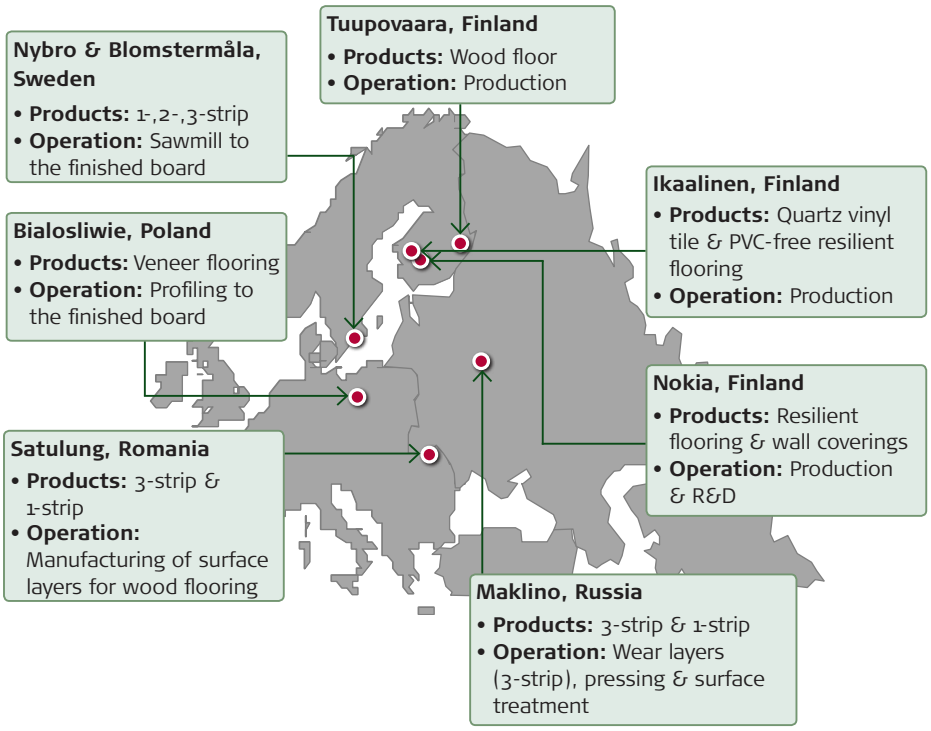
In Ikaalinen and Nokia in Finland the manufacturing of resilient flooring is under the brand Upofloor. The main product is a PVC-free floor that has a growing market within the public project sector such as hospitals and schools with a high environmental profile.

KÄHRS GROUP AT A GLANCE

Kährs Group is a world's leading wood and resilient floor manufacturer with a number of strong brands in the product portfolio such as Kährs, Karelia and Upofloor. The company's innovations have shaped the industry throughout the history and Kährs is dedicated to continue supplying the market with new innovative flooring solutions. The group delivers products to more than 50 countries and is a market leader in Sweden, Finland, Norway and Russia, and holds strong positions also in other important markets, e.g. the UK and Germany. The group employs some 1,500 people and has an annual turnover of approximately MEUR 300.

Kährs Group's three "power brands". The group's global brands which are marketed within all Kährs' sales regions worldwide.

The Group's production units



SS-EN ISO 9001

SS-EN ISO 14001

Units	ISO 9001	ISO 14001	PEFC
Wood floor manufacturing			
Tuupovaara, Finland	Yes	Yes	Yes
Maklino, Russia	Yes	Yes	-
Satulung, Romania	Yes	Yes	-
Bialosliwie, Poland. Start under 2014	-	-	-
Resilient floor manufacturing			
Ikaalinen, Finland	Yes	Yes	
Nokia, Finland	Yes	Yes	

CERTIFICATES

Kährs' Group subsidiary company AB Gustaf Kähr and its Swedish production units in Nybro and Blomstermåla are included in the quality and environmental management system according to ISO 14001 and ISO 9001 and EMAS registration. Certificates are available for download at www.kahrs.se

Certification	EMAS	FSC	ISO 9001	ISO 14001	FSC© and Fairtrade	PEFC
Year	1997	2005	1999 (ISO 9002 1993)	1997	2011	2013

EMAS' purpose is to promote environmental improvements. It is a voluntary EU program that requires public reporting of environmental conditions.

FSC® is an international organization working for global responsible forest management that takes into account both the environment and the people living in and from the forest. Kährs "chain of custody" certification means that we may buy FSC material, manufacture and sell flooring products as "FSC Mix" products.

PEFC (Programme for Endorsement of Forest Certification) is an international system for sustainable forest management. Kährs has a chain of custody certificate.

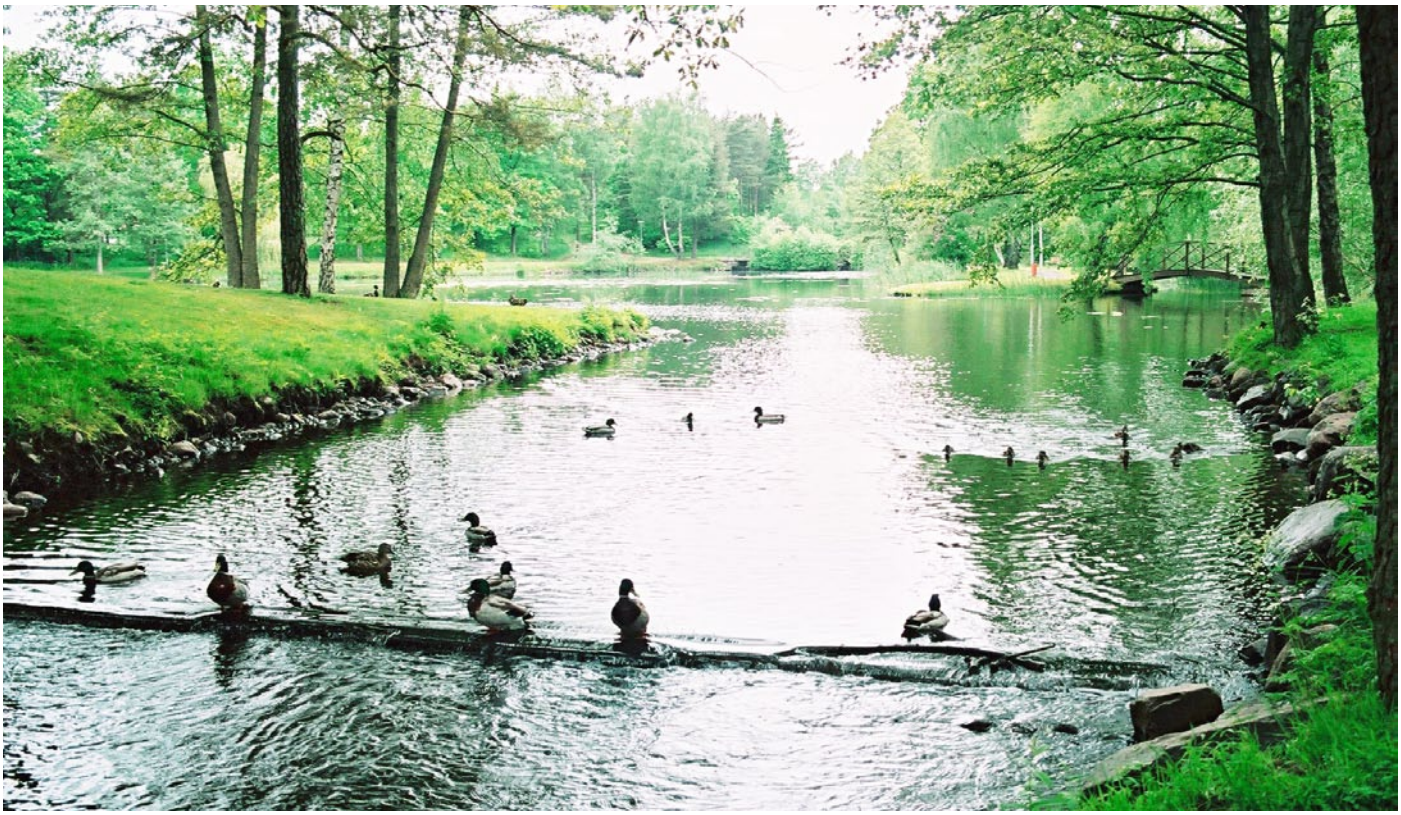
ISO 9000 is a set of internationally agreed standards that provide guidelines for a Quality Management System.

ISO 9001 is the international quality management system.

ISO 14000 Family of related, auditable, international standards and supplementary guidelines that apply to an organization's environmental management system. Administered by the International Organization for Standardization.

ISO 14001 is the international standard for environmental management, designed to protect the environment, prevent pollution and achieve constant environmental improvements.

Fairtrade (FLO Cert) is an independent product labelling standard and organization tackling poverty and injustice through Fairtrade. Aiming at better prices, decent working conditions, local sustainability in disadvantaged regions of the world.



CERTIFICATIONS & REGISTRATIONS

Terms and certification systems of which our wood flooring products are covered under and which are marketed under the brands Kährs, Karelia and Upofloor.

	Emission of Formalde-hyde (EN 717-1)	DIBt	Blue Angel	M1	CARB 2	BASTA	Swan Nordic Eco Label	French VOC A	ECHA REACH	Floorscore RFCi	CE Mark
	European Formaldehyde Standard	German Formaldehyde and TVOC	German reviews Entire life cycle, Promotes wood from sustainably managed forests and low-emission wood-based materials.	Finnish Formaldehyde and Odor Testing - BREEAM NO	US Formalde-hyde Standard for Composite Wood	Swedish product database of chemical composition criteria to meet the requirements of REACH	Nordic comprehensive environmental and quality certification production, waste, emissions, quality, LCA, wood	French Formaldehyde and TVOC Emissions	EU regulation to improve the protection of human health and environment from the risks posed by chemicals	Global Formaldehyde and TVOC Emissions, CDPH 01350, LEED 2009 for Green Construction	EU is the manufacturer's declaration that the product meets the requirements of the applicable EC directives.
Notes	All Products meet the E1 standard (0,1 ppm boards)	All Products on German Market Meet DIBt	All Products on German Market Meet DIBt	Visit Kahrs.com for the latest update or ask your representa-tive	All Products are CARB Compliant	All Products in Sweden are Listed	*Visit Kahrs.com for the latest update or ask your representa-tive	All products on the French Market are Compliant	All suppliers to Kährs are required to be listed with ECHA	Visit Kahrs.com for the latest update or ask your representa-tive	All products carry a CE Mark
Link	E1	DIBt	Blue Angel	M1 RTS	CARB	BASTA	Svanen	French VOC A	ECHA REACH	Floorscore RFCi	CE CPR DOP
12mm	E1	☑	☑		☑	☑		☑	☑		☑
13mm	E1	☑	☑	☒	☑	☑		☑	☑	☑	☑
14mm	E1	☑	☑	☒	☑	☑		☑	☑		☑
15mm	E1	☑	☑	☒	☑	☑	*Many products certified	☑	☑	☑	☑
22mm	E1	☑	☑		☑	☑		☑	☑		☑
Activity Floor	E1	☑	☑	☒	☑	☑		☑	☑	☑	☑
Artisan 15mm	E1	☑	☑		☑	☑		☑	☑		☑
Atelier 10mm	E1	☑	☑		☑	☑		☑	☑		☑
Gallery 11mm	E1	☑	☑		☑	☑		☑	☑		☑
Grande 20mm	E1	☑	☑		☑	☑		☑	☑		☑
Linnea 7mm	E1	☑	☑		☑	☑		☑	☑	☑	☑
Spirit 10mm	E1	☑	☑		☑	☑		☑	☑		☑
Studio 9mm	E1	☑	☑		☑	☑		☑	☑		☑

The information in this table is updated continuously. The current status can be found on www.kahrs.com.

	FIBA	DIN	EUTR	Lacey Act	REPA Gront Punk Pyr	FSC	PEFC	FSC and Fairtrade Timber	LEED 2009 LEED v4	BREEAM BREEAM NOR
									LEED 2009 LEED v4	breeam breeam nor
	Global Sports Flooring Certification	German global sports flooring standard certification	EU Reg. No 995/2010 obligations of operators, also known as the (Illegal) Timber Regulation	US - to combat trafficking in "illegal" wildlife, fish, and plants.	Sweden - formed to meet Sweden's common system for the collection and recycling of packaging.	Global E-NGO certifying forests and wood fiber material. LEED and BREEAM, BREEAM-NOR	Global E-NGO certifying forests and wood fiber material. BREEAM, BREEAM-NOR	2 Global NGO's have come together on a small landholder project based in Curacautin, Chile dual labelling pilot project	Leadership in Energy and Environmental Design (LEED) is a set of rating systems design, construction, operation, s of green buildings, homes and neighborhoods.	BREEAM (Building Research Establishment Environmental Assessment Methodology) assesses, rates and certifies the sustainability of buildings.
Notes	Activity Floor Certification #P53-2012	Activity Floor Certified Under DIN	All products comply with the EUTR	All products comply with the Lacey Act	The company is certified by the FTI	150 Products available on demand. Ask your representa-tive	150 Products available on demand. Ask your representative	Kährs is the first producer in the industry supporting this project	*Visit Kahrs.com for the latest update or ask your representative	*Visit Kahrs.com for the latest update or ask your representative
Link	FIBA	DIN	EUTR	Lacey Act	FTI	FSC	PEFC	FSC and Fairtrade Timber	LEED	BREEAM
12mm			☑	☑	☑	Ask Kährs	Ask Kährs			
13mm			☑	☑	☑	Ask Kährs	Ask Kährs			
14mm			☑	☑	☑	Ask Kährs	Ask Kährs			
15mm			☑	☑	☑	Ask Kährs	Ask Kährs	4 Products Available		
22mm			☑	☑	☑	Ask Kährs	Ask Kährs			
Activity Floor	☑	☑	☑	☑	☑	Ask Kährs	Ask Kährs			
Artisan 15mm			☑	☑	☑	Ask Kährs	Ask Kährs			
Atelier 10mm			☑	☑	☑	Ask Kährs	Ask Kährs			
Gallery 11mm			☑	☑	☑	Ask Kährs	Ask Kährs			
Grande 20mm			☑	☑	☑	Ask Kährs	Ask Kährs			
Linnea 7mm			☑	☑	☑	Ask Kährs	Ask Kährs			
Spirit 10mm			☑	☑	☑	Ask Kährs	Ask Kährs			
Studio 9mm			☑	☑	☑	Ask Kährs	Ask Kährs			

DEFINITIONS

Auxiliary material
Material other than wood that is included in finished wood flooring.

Carbon dioxide (CO_2)
Is included in the natural cycle and contributes to the greenhouse effect. Burning fossil fuels results in a net increase in carbon dioxide, which may affect the climate.

Chlorophenols
Chlorophenols is a generic name for chemical compounds that are both chlorinated organic compounds and phenols. Chlorophenols used until the late 1970's to include dipping (rot protection) of sawn softwood.

DNV
Det Norske Veritas Certification AB - the certification body for Kährs environment and quality management system, as well as EMAS and FSC.

Dust
Particles that can cause contamination if discharged.

E1
A requirement for formaldehyde emissions according to European Standard EN 14342:2005 (Wood Flooring), class E1 is < 0.124 mg/m^3.

EMAS
Eco-Management and Audit Scheme - the EU's environment management and environmental auditing program.

Environmental aspect
Part of an organization's activities, products or services that affect or could affect the environment. Kährs' significant environmental aspects are identified, evaluated and prioritized. Expression of Kährs significant environmental aspects, outcome and how we work with them are described in this environmental report.

Examination of permit applications.
Process of decision making on permits for activity that can be dangerous to the environment. Committees, the ECD and the application are involved. The decision is taken by the Environment Inspection Committee of the County Administrative Board.

Formaldehyde
A toxic compound that is found naturally in green plants (including trees) and fruit. Also found in many glues. The glues used by Kährs are within the E1-norm.

Fossil fuel
Oil, coal and natural gas which are not classified as renewable.

FSC
Forest Stewardship Council - an organization that works internationally for environmental certification of ecologically, economically and socially sustainable forestry.

GWh
Gigawatt hour - an energy unit = million kWh (kilowatt hours).

GWP100
The GWP factor indicates how much effect a gas has on the climate compared with carbon dioxide. One kg of carbon dioxide corresponds to 1 GWP. This is calculated on a 100-year perspective, which means for instance that biofuel does not add any carbon dioxide. The hydrocarbons subject to restriction under the Kyoto protocol (various forms of HFC) have GWP values between 120 and 12 000, depending on their absorption of radiation and atmospheric lifetime.

HDF
High Density Fiberboard - layers used as the cores of Linnea floors.

LNU
Linnaeus University, Sweden

MIFO
Methodology for the Inventory of Contaminated Areas. Phase 1 includes interviews and compliation of historical documents. Phase 2 includes sampling and analysis at critical locations.

MWh
Megawatt hour - an energy unit = thousand kWh (kilowatt hours).

Nitrogen oxides (NOx)
A group of gaseous compounds of nitrogen and oxygen, which are formed in combustion. In humid air nitrogen oxides are converted to nitric acid, which falls in the form of acid rain. Emissions of nitrogen oxides also have a fertilizing effect.

NTM
Network for Transport and the Environment).

PDCA
Is short for Plan, Do, Check, Act and is a scheme in quality management for systematic improvement.

PEFC
The Programme for the Endorsement of Forest Certification. An international non-profit, non-governmental organization promoting sustainable forest management around the world and tracking of timber from certified forests as well as the processing and trading chain.

Renewable
When a resource is used up more slowly than it is regenerated. Examples are water, wood and various biomass products. Non-renewable means something that is depleted faster than it is regenerated, e.g. products based on fossil oil, such as diesel or plastics.

Responsible forestry
Wood material that comes from suppliers who can show verification that the forest of origin is managed in a sustainable manner. Examples of verification are FSC, PEFC, documented origin, underwater sawing.

Sulphur dioxide (SO_2)
A gas that is formed when fossil fuel is burned, and the sulphur in the fuel is oxidized by atmospheric oxygen. In contact with humid air sulphur dioxide is gradually converted into sulphuric acid, which contributes to acidification.

System conditions
Four system conditions for a sustainable society:

- The concentrations of substances from the crust of the earth must not be increased in the natural surroundings.
- The concentrations of substances produced by society must not be increased in the natural surroundings.
- Conservation of space for the natural cycle and diversity.
- Efficient and fair housekeeping with natural resources.

Read more: www.thenaturalstep.org

Tannins
Also known as tannins and polyphenols which is found in oak wood and red grapes.

Tonne-km
Tonnes per kilometer - unit of transport work performed. It is calculated as the number of tonnes transported times the number of kilometres.

UV-lacquer
Lacquer that is hardened by exposure to ultraviolet (UV) light.

VOC
Volatile Organic Compounds – A collective designation for organic compounds (solvents) primarily consisting of carbon, hydrogen and oxygen. VOCs contribute to the formation of ozone close to the soil.

CONTACT

Bruce Uhler
Environmental Ambassador

0481 - 461 99
bruce.uhler@kahrs.se

Åke Erlandsson
Environmental Manager

0481 - 462 99
ake.erlandsson@kahrs.se

Helén Johansson
EMAS-Editor

0481-460 45
helen.johansson@kahrs.se

Kährs Founders Collection Oak Gustaf

Kährs Group

AB Gustaf Kähr
Box 805, SE-382 28 Nybro

Tel: +46 481-460 00
Fax: +46 481-178 31

info@kahrs.se, www.kahrs.com

Quality

SS-EN ISO 9001

AB Gustaf Kähr. Cert. No. 2000-SKM-AQ-1481

Environment

SS-EN ISO 14001

AB Gustaf Kähr. Cert. No. 2000-SKM-AE-228

EMAS

AB Gustaf Kähr. Reg No. S-S-00055

FSC
www.fsc.org
MIX
From responsible sources
FSC® C019122

PEFC
PEFC/05-35-153
Främjande av uthålligt skogsbruk.
www.pefc.se