Skanska 1997

Environmental Report

Skanska AB
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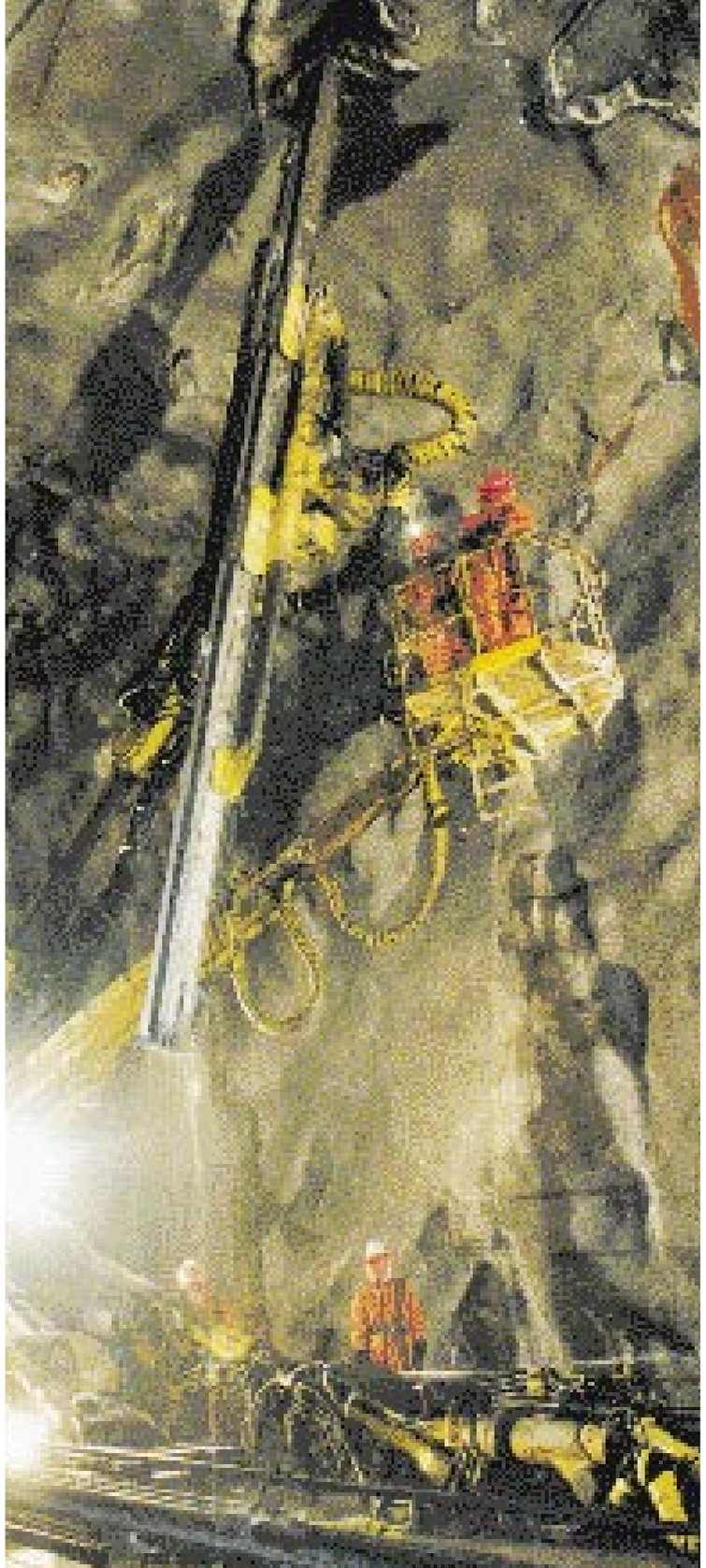
SKANSKA

SKANSKA

Contents

This Report describes Skanska's environmental activities during 1997 and strategies for continuing this work. The information is based on a variety of sources, including questionnaires answered by about 150 units in the Skanska Group. The Report is aimed primarily at Skanska's clients and employees. It was produced by the Group Development staff unit, which is responsible for environmental issues, in collaboration with the Corporate Communications unit. If you have questions, please contact Ingela Blomberg, Group Environmental Manager, Skanska AB, telephone +46 8 753 88 00 or by e-mail at environment@skanska.se



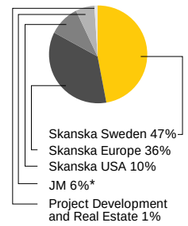
This is Skanska

Skanska is one of the leading companies in Europe and North America in construction-related services and development of projects and real estate. Its vision is to be a world leader in these fields. Skanska has operations in some 50 countries, with "domestic" markets in Sweden, Denmark, Finland and the United States. Its strategy is continued internationalization, primarily by means of continued growth in the United States and expansion in European markets.

FINANCIAL HIGHLIGHTS	1997	1996
Net sales, SEK M	54,847	45,849
of which, outside Sweden, %	56	47
Operating income, SEK M	2,358*	3,787
Net profit for the year, SEK M	7,505	3,857
Return on equity, %	46.5	27.9
Net profit per share, SEK	62.60	30.60
Dividend per share, SEK	11.00**	10.00

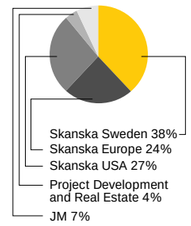
* Provisions totaling SEK 1.5 billion, mainly for restructuring of Swedish operations, were charged to operating income.
** Proposed by the Board of Directors.

Average number of employees, 37,240



*The Skanska Environmental Report does not include the operations of the construction and real estate subsidiary JM.

Net sales, 1997



"Skanska's vision is to become the world's leading company in construction services and project and real estate development. This requires, among other things, that all of us at Skanska take environmental issues seriously."

Claes Björk, President and CEO, and Per Westlund, Executive Vice President in charge of environmental issues in Group Management.

Environmental issues assuming a larger role

In recent years, Skanska has worked methodically with environmental issues. Many people have committed themselves to this work, and their enthusiasm has been obvious. We have succeeded in developing new business opportunities in a number of areas, and we have a growing number of examples showing that sound environmental work is profitable. Our know-how in this field has led to new contracts and satisfied clients.

However, we must improve our efforts to eliminate environmental risks, which are also business risks. The toxic leak at the Halland Ridge (Hallandsås) rail tunnel project in southern Sweden was a warning signal to Skanska. The accident created great concern among local residents, personnel at the site, other employees, clients and shareholders. Our ambition and expertise were questioned and confidence in our environmental work waned.

Commitment and understanding

In the autumn of 1997, we devoted substantial resources to resolving the problems that arose at the Halland Ridge. At the same time we conducted an evaluation of our environmental work and revised our Environmental Policy.

The quality of Skanska's work in this field is determined by the expertise, knowledge, commitment and willingness of our employees. If our environmental work is to be successful, it is of vital importance that our line organization assumes responsibility, that we have access to specialized expertise and that our employees understand the issues. Environmental issues are so complex that it is not possible for all employees to have specialized knowledge of this field. On the other hand, it is necessary for everyone to have a sensible attitude, based on responsibility, sensitivity and commitment. It is important that all employees undergo Skanska's basic environmental training program. In addition, we also need environmental specialists in our organization.

The events at the Halland Ridge illustrate the importance of actively and systematically evaluating our methods and material use from an environmental standpoint. We can unfortunately not always trust our suppliers to give us reliable information. Evaluation of different alternatives must, of course, always take place in close collaboration with the client. Environmentally sound technology may require a larger initial investment for the client, but in the long term it is often more economical to use such solutions, especially since they often involve better conservation of resources.

Dialogue with the client

By pursuing a dialogue with the client at an early stage about the various alternatives available to them, and by proactively suggesting environmentally sound technology, methods and materials, both the client and Skanska achieve advantages. Together we can design better products. If we identify work processes that involve environmental risks, we should avoid the proposed method and offer environmentally sounder alternatives. In the long term, it also benefits the client if we state clearly that we believe that unacceptable damage may occur.

Evaluating environmental consequences in advance, and avoiding materials and methods that involve risks, must be a natural element of our work. Even in cases where the appropriate public agencies have granted permits, or the client has specified how the job should be done, Skanska will be blamed if environmental damage occurs. The world at large does not care that contractual conditions often limit Skanska's freedom of action. Therefore, when we carry out a project, we must also be prepared to assume responsibility for it.

Environmental management systems

Achieving our goals in the environmental field requires effective systems for managing and following up our work. This is why Skanska has decided to accelerate the task of building up environmental management systems based on the ISO 14001 international standard or the European Union's Eco-Management and Audit Scheme (EMAS) at all its operations during 1998 and 1999 with certification to occur no later than the end of the year 2000.

"The quality of Skanska's work in this field is determined by the knowledge and commitment of our employees. If our environmental work is to be successful, it is therefore of central importance that our line organization assumes responsibility, that we have access to specialized expertise and that our employees understand the issues."

Considering that Skanska has nearly 10,000 projects, properties and production plants of its own in some 50 countries, this is an ambitious undertaking that will require hard work and serious commitment. These management systems must be tailored to fit each operation, regardless of whether they involve construction work, property management, project development or the manufacture of construction systems and components.

The introduction of environmental management systems is not something that a company does once and for all. Instead, it is a dynamic process. Properly implemented, they will continuously improve corporate environmental performance and increase employee commitment and understanding of Skanska's environmental impact. Furthermore, our experience indicates that the environmental audits that are conducted when these management systems are being introduced often lead to measures that improve the competitiveness of an operation.

Reducing environmental impact is often synonymous with ensuring optimal use of resources. This may include lowering the use of energy and materials, improving logistics and reducing the quantity of residual products and environmentally hazardous emissions. These steps also have the potential to save money.

It is important that all of us at Skanska embrace environmental issues in ways that enable us to integrate environmental and business development. Environmental issues neither can nor should be viewed in isolation. Instead they must be connected in a natural way to our day-to-day operations.

Environmental Policy

SKANSKA

To all employees at Skanska,

Our vision is that Skanska shall become the world's leading company in construction-related services and in project and real estate development. This requires, among other things, that all of us take environmental issues seriously.

What we do today affects the environment of both current and future generations. Caring about people and the environment must therefore permeate all of our work. This responsibility rests with all of us. Our environmental awareness will help us prevent and minimize adverse environmental impact and improve our operations, thereby generating new business opportunities. We must be open-minded in our dialogue with others. In order to be successful, we need knowledge and commitment.

We shall always follow these principles in our work at Skanska:

- Think ahead about how your work will affect the environment.
- Ask questions and obtain help if you are unsure. Use common sense.
- Be cautious and keep in mind that it might be better to avoid materials, methods and procedures if you cannot properly assess their environmental risks.
- Bear in mind that there are circumstances where, due to environmental risks, we should not participate.
- Choose or propose environmentally better alternatives when this makes sense.
- Conserve natural resources.

Every operative unit must build up an environmental management system and set its own environmental goals in order for our environmental policy to yield results in our daily work. Legislation and the environmental demands of our clients provide a foundation for our environmental ambition. Beyond this, we shall endeavor to make continuous improvements. All operations shall have environmental management systems in place no later than December 31, 1999 and be environmentally certified no later than December 31, 2000.

By letting responsibility for the environment and the future permeate our day-to-day work, we will gain the confidence and respect of others.

Danderyd April 1998

Claes Björk
President and CEO

This Environmental Policy document replaces the policy adopted in 1995.

Strategy

"Skanska's operations affect the environment, both positively and negatively. It is important that in everything we do, we think about the environment and take it into consideration."

Ingela Blomberg, Group Environmental Manager, Skanska AB.

Strengthening our environmental work

Focus on environmental issues
Skanska is increasing its environmental expertise both by training its employees and by recruiting specialists. Numerous environmental audits are being undertaken in order to improve Skanska's knowledge of the environmental impact of its operations. Environmental studies of various construction products are being prioritized. Skanska is developing new business opportunities, for example in the fields of soil decontamination and after-treatment and recycling/reuse.

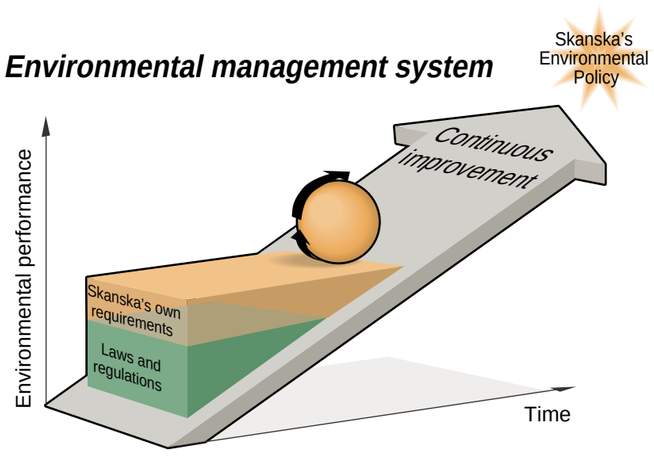
Developments during 1997
The reorganization of the Group that took place in the spring of 1997 and the environmental accident at the Halland Ridge rail tunnel project absorbed a great deal of energy and hampered efforts to pursue environmental work planned for 1997. Despite the environmental measures that had been implemented and the large number of Skanska employees who had committed themselves to environmental work, the Halland Ridge accident occurred. As a result, late in the autumn of 1997, Skanska initiated a review of its environmental work and tightened its operational procedures.

The events of 1997 illustrate the importance of pursuing a proactive Environmental Policy, and giving high priority to environmental issues at all levels of the Company.

New Environmental Policy
To further highlight the importance of these issues, Skanska adopted a new Environmental Policy in 1998. To lay the groundwork for implementation of this policy and the related goals, Group Management also decided that all operations shall build up environmental management systems.

In the Environmental Policy document, Claes Björk, President and CEO of Skanska, directly addresses each employe, emphasizing that to ensure the success of Skanska's environmental work, everyone in the Company will need knowledge and commitment.

Basic principles of environmental work
Skanska's Environmental Policy contains six principles to be followed in all Group operations. These principles (see page 4) outline Skanska's environmental aims and intentions. By consistently following them, Skanska can avoid environmental risks and achieve improvements. Construction work always has an environmental impact, and it is important to prevent and minimize damage. Any adverse environmental impact must be weighed against the benefits of the project or work processes in question.



There are projects and work processes that Skanska should not participate in due to the environmental risks they pose.

Caring for the environment is something that must permeate all of Skanska's activities worldwide.

Environmental management systems

Skanska's Environmental Policy defines the level of ambition of the Group as a whole. Each operative unit must then formulate its own plan, stating how it will implement the Group's environmental policy in its day-to-day work.

Achieving these goals will require a well-designed environmental management system that is integrated with other management systems.

Building up such a system takes time and requires commitment. Important steps in developing a certifiable environmental management system include initial environmental reviews, the development of procedures to ensure the control and minimization of environmental impacts, and extensive employee training programs.

All operations in the Group are required to establish environmental management systems by the end of 1999, to ensure that:

- Their environmental problems are identified and addressed.
- All employees receive environmental training.
- Their specialized expertise in the environmental field is enhanced.
- Their environmental and business development programs are integrated.
- Their environmental work is followed up by regular audits.

This will create the prerequisites for achieving Skanska's Environmental Policy and the environmental goals of its operative units.

Pages 24-27 present the work of each business area. On page 17 is an account of how many operations were environmentally certified as meeting the ISO 14001 standard or were registered in accordance with EMAS by the end of 1997.

The Group's environmental work

Environmental responsibility is a line responsibility that requires specialized support to address environmental issues properly.

The Parent Company, Skanska AB, pursues Environmental Policy and strategy issues, coordinates the work of the business areas in the field and prepares the Group's annual Environmental Report. Skanska AB also ensures that the line organizations receive support from environmental specialists and that the Group develops suitable specialized expertise.

Skanska's Environmental Council. Front row, from left: Mike Lacey, Skanska USA; Peter Gamst, Skanska Jensen; Per Westlund, Skanska AB; Helena Jörnlid, Skanska Teknik AB; Mauri Niemi, Skanska Oy.
Back row, from left: Thomas Pehrson, Skanska International Civil Engineering AB; Walter Aertker, Skanska USA; Åke Pettersson, Kährs Group; Lars Nihlén, Skanska International Building AB; Ingela Blomberg, Skanska AB; Ola Månsson, Skanska Teknik AB; Thomas Svensson, Skanska Europe; Leif Stridh, Skanska Asphalt and Concrete Division; Gunnar Östenson, Skanska Øresund AB.

The Group has an Environmental Council, which mainly consists of line managers from its business areas. The Council meets twice a year in order to exchange experience and coordinate current environmental activities.

A new business area structure went into effect on February 1, 1998. During the spring of 1998, Skanska will establish how its environmental work will be organized within each business area.

The Group's environmental managers and officers are listed on page 28. There are environmental coordinators at the department level and environmental officers for projects, properties and production plants.

Skanska Teknik, the Group's consulting company is continuing to develop specialized and strategic expertise in the field of engineering and environment.

Environmental specialists from Skanska Teknik help build up environmental management systems in the various Group operations. Skanska Teknik is also entrusted with providing specialist support to the line organization and to environmental managers/officers in companies and divisions.

Support tools

The growing focus on environmental issues at Skanska is increasing the importance of simple support tools in the line organization and of finding the right environmental expertise at the right moment. The Skanska Environmental Support unit will open in 1998 and Skanska employees will be able to contact this unit for answers to environmentally related questions.

Information technology (IT) plays a key role in facilitating exchanges of experience between business areas and companies. Throughout 1998 Skanska's intranet will continuously improve its Infoforum Environment service.

Environmental training

Employee expertise and commitment to environmental issues is crucial to successful work in this field. Skanska has developed an internal environmental training program. By the end of 1997, nearly 12,500 people – about one third of Group employees – had completed the basic program or the equivalent.

Because Skanska has a decentralized organization, it is especially important that managers deal with environmental issues in a responsible way. Skanska will therefore develop an environmental training program for managers in the Group. The program will focus on fostering an understanding of managerial responsibility and the environmental and business consequences of management decisions. Skanska's goal is for all heads of companies to complete this program.

Environmentally sound purchasing

Much of the Group's environmental impact is determined by its choice of production methods, materials and subcontractors. Purchasing via central agreements facilitates both environmental studies and quality assurance. Joint projects together with suppliers and subcontractors lead to environmental improvements. Skanska is endeavoring to reduce the number of suppliers and products.

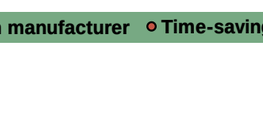
Another way to improve the purchasing process from an environmental and cost standpoint is to reduce the number of intermediaries, since each additional link in the delivery chain involves processing and warehousing. It is easier and more effective to address environmental demands directly to the manufacturer.

The task of environmentally adapting Skanska's purchasing operations has begun and has high priority. Environmental recommendations in the form of a three level scale (recommended, accepted, not recommended) will be developed for the most important product categories. Because a large proportion of purchasing takes place locally at the project level, it is important to continue developing environmental support tools for project-specific purchases, including various environmental checklists.

During 1998, Skanska will develop guidelines stating minimum environmental requirements for the products and services that it purchases.

Follow-up

Responsibility for operative follow-up rests with the line organization. Skanska's Group Management will follow up the decision to introduce environmental management systems. This will take place at two checkpoints during 1998 and 1999.



In conjunction with the gathering and compilation of information for the Skanska Environmental Report, the Group conducts a follow-up of its environmental work.

Skanska will increasingly use environmental audits to ensure that its units are pursuing environmental work as planned. There are currently 73 internal environmental auditors in the Group.

Collaboration

Skanska collaborates with universities and institutes of technology by participating in environmentally related research projects. International environmental collaboration takes place through the World Business Council for Sustainable Development, in which Skanska is a member.

Reducing the number of intermediaries

- Less environmental impact
- Lower costs
- Easier to make demands on manufacturer
- Time-saving

Environmental impact of construc tion and existing structures

Production and construction stage

Large quantities of materials

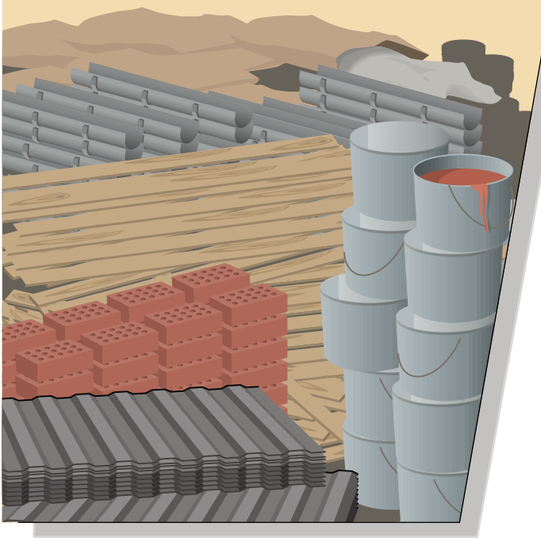
Skanska uses extensive quantities of materials, thereby consuming large resources in the form of energy, raw materials and shipping services. In the Swedish market alone, there are 45,000 construction and installation products, and many of these contain chemicals. Acceptable environmental product declarations are often lacking. This makes it difficult to assess the environmental impact of products.

Environmentally hazardous substances
A newly constructed multi-story building contains nearly 100 different chemical compounds, some with known environmental and health effects, for example lead and chlorinated paraffins.

Wastes
The cost of building materials averages 60 percent of the total cost of construction. By prefabricating, standardizing and industrializing construction operations, the use of materials can be optimized. This reduces environmental impact as well as costs.

Emissions
The construction sector accounts for 15 percent of commercial traffic. Carbon dioxide emissions from this traffic contribute to the greenhouse effect, while nitrogen oxide emissions contribute to eutrophication (nutrient overload, for example in the sea). The use of construction equipment accounts for a large proportion of nitrogen oxide emissions. In the United States, construction equipment emits as much nitrogen oxides as truck traffic.

Impact on natural environments
Construction operations have an impact on the environment where these operations take place. Sometimes natural environments are affected, in other cases already developed areas. Sometimes it is a matter of restoring destroyed natural environments, for example wetlands.



Period of use

Long service life

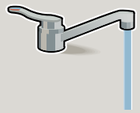
Most structures have a long service life. The largest impact on the environment occurs during this period, for example due to energy and water use, wastes, emissions and land use.

Land use
Sixty percent of all capital in the economy is tied up in man-made environments: buildings, factories, roads, hospitals, bridges, wastewater systems, hydroelectric power plants and harbors.

In Sweden, about 3 percent of land has man-made structures on it.

Wastes and residual products
Each person in Sweden generates 360 kg of waste per year. During a 50-year period, this means that 18 metric tons of waste are generated per person.

Water consumption
Only half the population of developing countries has access to clean water. In Sweden, households use 540 million cubic meters of water per year. This means that each person uses approximately 170 liters each day.



Energy use
In the United States, buildings account for about 35 percent of the country's total energy consumption. Including the energy required to manufacture and transport building materials etc., buildings account for about 45 percent of energy consumption.

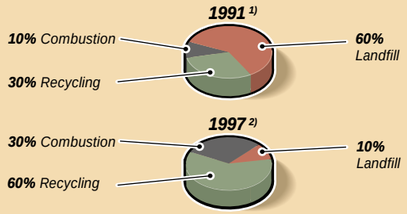
*In a building, **85 percent** of energy use occurs during its service life.*

Demolition

Large quantities of wastes

In Sweden, the quantity of construction and demolition wastes is usually estimated at 3 – 5 million metric tons per year. Altogether, this means that each newly constructed or renovated apartment or single-family home generates 25 tons of construction and demolition wastes.

Construction and demolition wastes



Complicated at-source waste separation
Because there are numerous types of materials, management of residual materials from demolition is complicated.

Hazardous wastes
Old buildings may contain such substances as mercury, lead and PCB. Approximately 900,000 metric tons of lead are believed to have been built into Sweden's real estate stock. In all, an estimated 1 percent of wastes are environmentally polluting.

Working environment
The numerous types of materials and the frequent shortcomings of environmental product declarations make efforts to improve the working environment more difficult.

[1] According to Statistics Sweden.
[2] Refers to Skanska Southern Sweden (Skanska Syd) in 1997.

What is Skanska doing?

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If Skanska's environmental work is to succeed, both breadth and depth are required. Environmental training must continue and personnel at projects must have direct access to specialized know-how. That is why we are recruiting environmental specialists."

Ola Månsson, President, Skanska Teknik AB

Developing expertise and technology

Environmental training

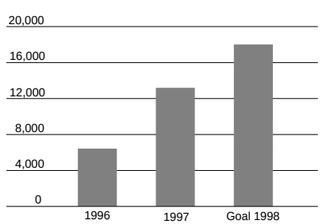
Since 1995, the Skanska Group has provided internal environmental training. Each division and company tailors the contents of the program to its own operations. The emphasis is on awareness and how each employee can reduce adverse environmental impacts in his or her own occupational role.

To date, nearly 12,500 of approximately 37,000 Group employees have received basic environmental training. Skanska did not meet its goal of training 15,000 employees by the end of 1997.

If the current rate of training continues, an estimated 18,000 employees will have received basic environmental training by the end of 1998.

The estimated cost of the training program during 1997 was SEK 15 M.

Total number with environmental training



Number of employees with basic environmental training.

Expanded environmental expertise

In recent years Skanska has increased its number of environmental specialists, for example at the Group's consulting company Skanska Teknik. Initially, Skanska Teknik focused on documenting and evaluating the environmental aspects of building products. However, during 1997 it broadened its work to include services such as environmental evaluation of building products, purchasing agreements and environmental training, audits and property inventories. The demand for these services will increase. Skanska Teknik has therefore recruited specialists in environmental management and auditing, geology, hydrology and city planning. It will continue to expand its resources and skills base.

Development projects

In order to develop expertise and environmental technology, Skanska collaborates with universities and institutes of technology.

Skanska is participating in the Solar Power Envelope project, whose aim is to design a building that is self-sustaining in energy and does not cause any air pollution. An office building will be constructed for demonstration purposes. The project receives partial financing from the European Union and is a joint effort by Skanska, the Danish Technological Institute, the French building materials manufacturer Saint Gobain and the German glass manufacturer Vegla.

Skanska is represented on the program committee of a research program for sustainable building[1]. The program budget totals SEK 32 M and MISTRA[2] is responsible for most of the financing.

During 1997 researchers completed a project to devise industry-wide systems for the packaging and pallets used for building materials. The project was initiated by Skanska, and some 30 companies in the construction and materials industries participated. The study indicates that recycling systems are preferable, both from economic and environmental standpoints.

In Aneby, Sweden, Skanska is constructing 16 buildings totaling 3,000 sq m in size as part of Ekotopia, a knowledge and skills center partly financed by the EU. Ekotopia is intended to provide a model for robust, sustainable construction. This work is taking place in collaboration with the university colleges in nearby Kalmar and Jönköping as well as Linköping University.

Environmental help on the intranet

The Skanska intranet is an increasingly important support tool for the Group. Known as the Infoforum, it provides environmental training programs, guidance on drafting project-specific environmental plans, checklists for project-specific purchasing and handling of chemical products, names of contact persons and links to environmental agencies and organizations worldwide.

At the end of 1997, 4,500 of the Group's 37,000 employees had access to this intranet, including most people in managerial or specialist positions.

[1] For a presentation of the program, visit www.sustbuild.chalmers.se and www.mistra-research.se/progr.html

[2] The Swedish Foundation for Strategic Environmental Research

Environmental technology

Skanska is expanding its knowledge base in environmental technology – defined as technology that solves environmental problems or tried and tested techniques applied in an environmentally sound way. During 1997 Skanska landed a number of contracts because of its environmental technology know-how.

Soil decontamination and after-treatment

During 1997 the total market for soil decontamination in Sweden amounted to an estimated SEK 100 M.

The Swedish Environmental Protection Agency has estimated that Sweden needs soil decontamination and after-treatment costing at least SEK 20 billion. To date, it has been difficult to finance these projects.

The Swedish government has drafted a proposed comprehensive Environmental Code. Under this new legislation, those whose operations have caused soil pollution would bear the primary responsibility for decontamination and after-treatment. Secondarily, purchasers of polluted properties would be responsible. If this bill is adopted, the Swedish market for soil decontamination and after-treatment is expected to grow rapidly.

On its own or through collaboration, Skanska has a broad spectrum of methods for decontaminating polluted soils. During 1997 Skanska performed about ten assignments involving soil decontamination and after-treatment. Methods used were soil washing, biological purification, chemical ground water purification and soil ventilation. In some cases, severely polluted soils were sent for final disposal in an environmentally safe manner.

During 1997, Skanska sold its stake in soil decontamination subsidiary Cedeca.[1] Instead Skanska will intensify its collaboration with other participants in the industry in order to be able to provide clients with the best technology in each individual case.

Environmentally sound products

In 1997, Skanska Prefab introduced a prefabricated oil separator. This device, which is installed underground, purifies the wastewater and surface water from filling stations, workshops and restaurants. It is smaller and more efficient than other oil separators in the market.

[1] See Skanska's 1996 Environmental Report.

Another Skanska subsidiary, Elit Fönster, has developed a new low-energy window, the Elit-super. It has a very high insulating capacity, thereby reducing energy consumption while improving indoor comfort. A single-family home that switches to Elit-super windows saves about 2,500 kWh/year, equivalent to 250 liters of heating oil. The new window is now part of Elit Fönster's standard product range.

Recycling

In 1997 Skanska joined with Gotthard Nilsson AB to form a specialized company, Gotthard Skanska Miljö AB. Its purpose is to establish recycling units for construction and demolition wastes.

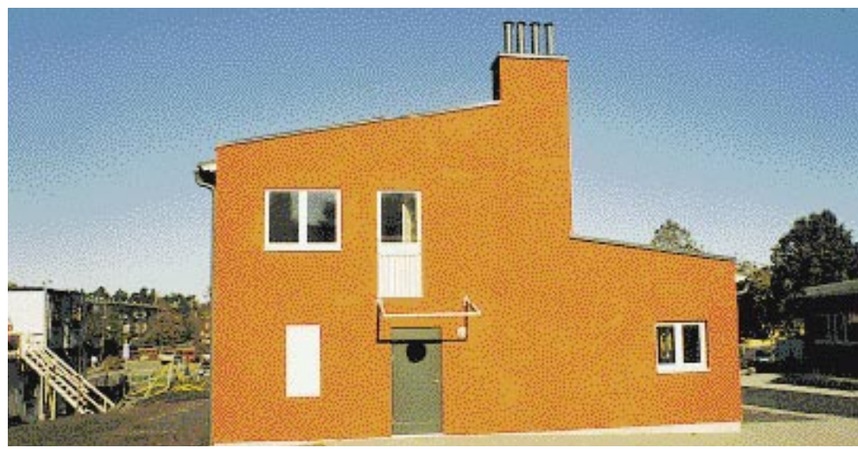
In partnership with Partek Rockwool and Salen Coal, Skanska opened a factory for recycling of mineral wool. The facility can recycle 2,700 metric tons of mineral wool per year that would otherwise have gone to landfills.

Selective demolition and reuse

During 1997, Skanska performed a number of selective demolitions. In some cases, building parts were reused. The foundation engineering subsidiary Stabilator carried out a selective demolition of a large apartment building in Hammarkullen, outside Gothenburg. The building, which contained 176 apartments, was totally demolished. More than 3,600 concrete elements were removed, sorted and stored for reuse. On the same site, Skanska and Stabilator are constructing a semi-detached residential development consisting of 16 homes. These buildings largely consist of reused parts from the demolished building. In Vänersborg, a similar reuse project was completed. The two upper floors of a three-story building containing 25 apartments were demolished. The bottom floor was then renovated and a new roof was built. The total value of contracts for reuse projects during 1997 was about SEK 40 M.

Pipe jacking, a non-intrusive technique

Skanska Lundby is a subsidiary that specializes in pipe jacking in clay soils. In this technique, which has been used since the 1960s, pipes are pushed through the ground instead of being installed in trenches. Unlike conventional pipe laying, no excavation takes place, traffic disruption is minimal and soil wastes are insignificant. The method is economical and requires less construction time than conventional techniques. During 1997, Skanska used this method to install concrete piping for electrical cables in central Bangkok. Two pipe packing projects (with a total contract value of SEK 200 M) are underway, and the company has landed two additional contracts.



Large portions of the homes in this semi–detached housing development at Hammarkullen, outside Gothenburg, Sweden, were built from reused materials.

Teknikum in Kalmar

One example of far-reaching environmental adaptation is Teknikum, which Skanska built in Kalmar, Sweden. The contract value was SEK 60 M. Skanska was able to incorporate environmental thinking in this design-construct assignment from the very beginning. The building is used by the Kalmar University College, among other things for instruction in environmental science. At 6,000 sq m, Teknikum is one of the largest environmentally sound buildings in northern Europe.

Healthy materials

Materials containing environmentally polluting substances were avoided. Local materials were used – for example limestone from the island of Öland and wooden floors from Kährs in Nybro.

Low-energy designs and systems

During normal operation, the building is self-sufficient in heat. Its concrete frame stores energy and smooths out temperature fluctuations. Solar heat and body heat from the people who spend time in the building provides space heating. The air that enters the building is cooled during the warmer half of the year and heated during the colder half by being channeled through an underground culvert that smooths out temperature fluctuations.

Water conservation and natural purification

Surface water and gray water (from washing) are purified in a pond on the grounds of the University College. This water is reused, for example, to flush toilets that feature separation of sanitary wastewater. Nutrients are recycled to nearby farmland.

Minimal electricity use

Teknikum's large glass windows and façades reduce the need for indoor lighting. Lighting shuts off automatically when daylight is sufficient or when no one is using common areas.

Photo courtesy of Rāta Linjen Arkitekter.
Photographer: Thomas Jeanson.

During the summer of 1997, Skanska Lundby also completed an 891 m pipe jacking project beneath a heavily trafficked freeway, a trunk railroad line and a rail switchyard in Gothenburg, Sweden. The value of the contract was SEK 10 M.

New environmentally sound buildings

There is growing interest in environmentally sound buildings, and caring for the environment is a natural element of construction work today. Environmentally sound building material, energy-conserving appliances and water-saving toilets are examples of common adaptations.

Together with the IKEA home furnishings chain, Skanska has created a new type of housing called *Bo Klok* (Sensible Housing), which incorporates intensive development efforts and systematic environmental studies and quality assurance work. The *Bo Klok* homes that have been built in different parts of Sweden are examples of Skanska's success in marketing environmentally aware, cost-effective construction.

Skanska has developed supplementary allergy-adaptation packages for people with dust or contact allergies and offers them wherever possible from a construction engineering standpoint. The client selects a new home, which Skanska then individually adapts. People who are allergic to dust can select a home featuring filtered intake air and designed for extra easy cleaning. People allergic to nickel can specify a home with no surfaces that emit this metal. During 1998, additional allergy packages will be developed.

The headquarters that Skanska Jensen is building for the Danish Society of Engineers in Copenhagen is a demonstration project aimed at promoting the use of environmentally sound technology in the construction industry. Environmental thinking permeates the entire process from planning and construction through the service life of the building. Because Skanska Jensen asked material manufacturers to meet environmental standards, the project has led to the development of new products, such as PVC-free cables and an “energy glass” featuring very low heat loss. The building is equipped with a solar cell system and is cooled by seawater. Rain water is recycled to flush toilets, thereby conserving water. The contract value is about SEK 125 M.

Environmental retrofitting

The market for new construction has diminished in Sweden over the past few years. Meanwhile the existing building stock is in great need of modernization. Retrofitting can reduce energy use and water consumption, which lowers operating costs.

One example of environmentally sound retrofitting during 1997 was the renovation of Arkaden, a Skanska-owned office and hotel property in central Malmö. Skanska selected building materials that met environmental criteria and had environmental product declarations. The result was a modern, environmentally sound building. Careful planning has led to optimal use of space. To reduce the need for cooling, the property is equipped with outdoor sun shades. Exhaust air is used for space heating in the garage and other areas. The total investment cost was SEK 100 M.

Civil engineering projects

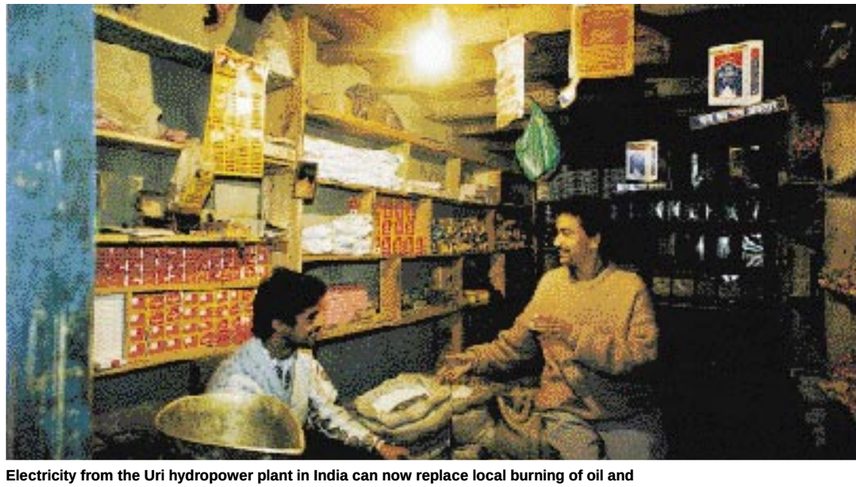
Environmental issues play an increasing role in civil engineering projects, especially because some projects are perceived as environmentally controversial. In recent years, for example, international lenders have demanded higher environmental standards. In conjunction with project financing, an environmental assessment often takes place. It provides the basis for a project -specific environmental plan that is followed up by means of environmental audits during the construction period.

The Uri hydroelectric power plant

During 1997, the Uri hydroelectric power plant was completed in India. Skanska's share of the contract was SEK 2.1 billion. With an annual energy output totaling 3,200 GWh, it is a run-of-the-river power plant. This means there is no water reservoir, but that part of the water in the river is led directly through the turbines. The power plant has no impact on downstream conditions, since the diversion system does not impede the flow of water.

Water supply project in Zimbabwe

In Zimbabwe, Skanska is engaged in a major project to supply the city of Mutare with drinking water. The contract value is SEK 640 M, and the Swedish International Development Cooperation Agency (Sida) is among the financiers. Water will be led via a 4 km tunnel from the Pungwe River, then via a 72 km long pipeline to Mutare. By using gravity to transport the water, the need to use pumps is minimal. Because the tunnel begins in a national park, the project must fulfill strict environmental standards. The financiers have appointed a special on-site inspection group to monitor observance of these standards.



Electricity from the Uri hydropower plant in India can now replace local burning of oil and coal, thereby reducing air pollution – especially in cities.

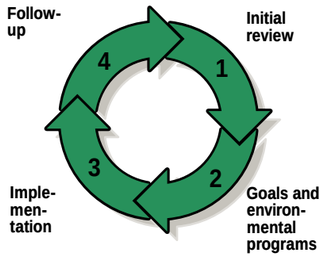
"We have reduced our environmental impact and simultaneously saved money by introducing environmental management systems. Above all, we have identified ways to improve our energy use and conservation."

Leif Stridh, Divisional Manager, Skanska Asphalt and Concrete

Environmental management systems

The process

Building up a smoothly functioning environmental management system takes time and requires commitment. Although it is important to base the system on the specific conditions of an operation, all EMS's are implemented and maintained using the following model:



Initial review

Numerous chemical products are used at building sites, such as solvents, fuel, joint sealing compounds, paint and glue. During the autumn of 1997, Skanska studied the handling of chemicals at about 900 work sites, (approximately 10 percent of Group sites).

This review indicated a need for tighter chemical-handling procedures, especially in construction work. Among other things, 60 percent of work sites studied had no list of chemical products being used. In addition, 25 percent had shortcomings in labeling and/or storage of chemicals.

By meeting the standards specified in Skanska's checklist for handling of chemical products, work sites achieve safe and environmentally sound handling. The checklist is a support tool for auditing chemical products and is available on the Skanska intranet.

In conjunction with its environmental certification process, the Skanska Asphalt and Concrete Division conducted an initial appraisal of its use of chemicals. This study revealed that the Division is using more than 1,000 chemical products. The study showed the importance of reducing the number of chemical products and introducing environmental assurance systems in purchasing. The Division is doing this as part of building up its environmental management system.

Material and energy balances
Skanska has produced complete material and energy balances for more than 15 of its production plants. Their purpose is to increase knowledge of the resources used for production as well as how much value they add. This will enable the Group to achieve more efficient use of resources.

Use of grouting materials
Skanska has banned all use of Rhoca-Gil and other acrylamide-based grouts. After the environmental accident at the Halland Ridge, Skanska conducted a review of the grouting materials used in the Group. It revealed that acrylamide-based grouting agents had been used on three occasions:

- Subway system excavation in Sundbyberg, near Stockholm, 100 liters, 1982
- Stripa mine, Sweden, 30 liters, 1987
- Lundby Tunnel, Gothenburg, 1,300 liters, 1997.

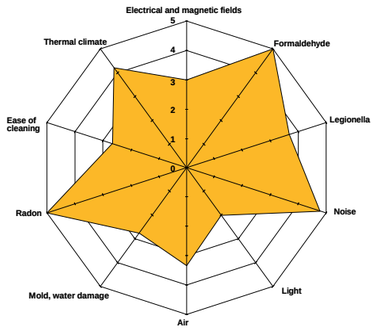
Excluding its use of Rhoca-Gil, during 1997 Skanska used nearly 6,000 metric tons of grouts to seal and reinforce soil, rock and concrete structures. Most of these materials (99 percent) were cement-based. The remainder were chemical-based agents such as sodium silicate (36 tons), polyurethane (4 tons) or epoxy (3.6 tons).

Environmental studies of building materials
During 1997 Skanska began more systematic environmental studies of various material categories, mainly those used in buildings. The purpose was to develop support tools for planners and purchasers. A number of material categories have been studied: concrete, joint sealing compounds, paints, PVC products, putty and leveling compounds, explosives, heat insulation materials and surfacing materials.

PCB inventory in properties
During 1997 Skanska conducted an inventory of most of its properties to determine the presence of PCBs. PCBs were found only on a small scale and is therefore not considered a major problem. The inventory will be completed during 1998.

Environmental inventory of real estate
Skanska, in partnership with J&W and about ten other real estate owners in Sweden, has developed a system for inventories and assessments of buildings. The inventory is based on a form that contains 87 questions. The responses are processed with the aid of a computerised environmental evaluation system, then compiled into a series of diagrams that illustrate the environmental status of a building.

During 1997 Skanska conducted inventories and assessments of six properties using this system. The goal is to complete inventories of its remaining properties in 1998 and 1999.



The environmental status of a building that has undergone an inventory is presented in a series of diagrams known as "environmental roses." A rose that is completely open, i.e. fills all the fields, indicates that the property has achieved the highest scores.

Phase-out of CFC-based refrigerants

Skanska has conducted an evaluation of CFC use in all its properties. A phase-out is underway and must be completed by the end of 1999. One large refrigeration unit containing about 2 tons of CFC's will be converted during the spring of 1998. The CFC's will then be replaced by HFC, which contains no chlorine. Other more environmentally friendly refrigerants were considered but do not fulfill the client's refrigeration requirements plus the applicable fire safety standards.

Ventilation inspection
In 1997, 97 percent of Skanska's commercial properties and 95 percent of its residential properties in Sweden passed the mandatory ventilation inspection. By way of comparison, one fourth of all rental apartments in Sweden do not have approved ventilation systems, despite the mandatory inspection.

Goals and environmental programs

Skanska's Environmental Policy states its overall level of ambition in this field. During 1998 each business area must establish environmental goals for its own operations. Based on their initial environmental appraisals, divisions and companies are to establish environmental programs and take steps to achieve these goals. Skanska's intranet, the Infoforum, includes a guide for drafting project-specific environmental plans.

Implementation

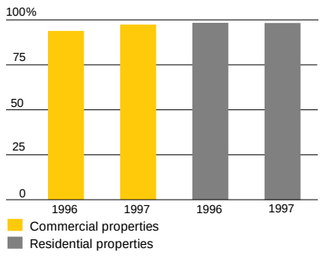
A functioning environmental management system requires the build-up of expertise and support to the line organization. Skanska's environmental organization is outlined on page 28. For various Group support functions and human resource development programs, see pages 10-13.

Environmental adaptation of purchasing work
In the Swedish market, there are an estimated 45,000 construction and installation products. Every year Skanska buys about SEK 30 billion worth of goods and services and endeavors to limit the number of suppliers.

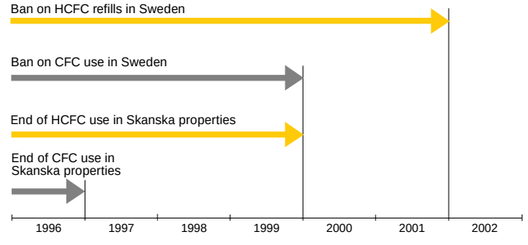
From an environmental standpoint, it is an advantage that more and more purchases are being made via central agreements, because this makes it possible to systematize environmental examination of products and suppliers. Skanska today has about 100 central purchasing agreements, many of them valid for two or three years. They cover nearly one third of the purchases made in the Group's Swedish building construction and civil engineering operations. A large proportion of other purchases take place under agreements by which subcontractors buy construction materials.

Beginning on September 1, 1997, Skanska conducts systematic environmental examinations when it negotiates and signs Groupwide purchasing agreements. Skanska has also implemented a review of its existing agreements.

Percentage of Skanska properties that passed mandatory ventilation inspection



Phase-out of CFC-based refrigerants



Ozone depletion potential (ODP): CFC 0.4–1 and HCFC 0.05–0.1.

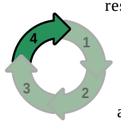
The Group has compiled environmental declarations for several hundred building and installation products, including many of those bound by agreements. A declaration is a description of the product from an environmental standpoint. These declarations can be used in environmental evaluations and are intended both for Skanska's clients and for internal use.

Environmental declarations for products covered by central agreements have also been added to the Group's purchasing program, and are posted on the Infoforum.

Many purchases are made locally by building and civil engineering projects. To facilitate environmental examinations, Skanska has compiled environmental checklists for project-specific purchases. In the case of certain construction materials, there are guidelines for planning and use in order to make it easier for planners and buyers to take environmental factors into account. These support tools will be further refined during 1998, and all environmental support tools are posted on the Infoforum.

Follow-up

It is important to follow up and report the results of environmental work. More and more companies in the Group developed environmental information for their clients and employees during 1997.



Environmental audits
During 1997 environmental audits were conducted primarily in Skanska's industrial operations. Skanska believes that such audits will become a vital tool in its continued environmental work. Quality audits are currently underway in a number of projects. These audits should be further refined into project audits that also include environmental issues.

The establishment of environmental management systems will sharply increase the need for environmental auditors at Skanska. Today the Group has 73 internal environmental auditors. This autumn, an advanced training program for Skanska's quality auditors, who currently number nearly 200, will cover environmental issues.

Environmental reports to public agencies
Skanska has developed an industry-wide system for gathering and reporting environmentally related information from asphalt and rock crushing plants as well as concrete factories to municipal governments and county administrative boards.

The Environmental Logbook
Most of the environmental impact of a building occurs during its service life. In order to reduce this total impact, it is important that those who live or work in the building should think environmentally. This is why Skanska has developed the Environmental Logbook. The Logbook is individually formulated for each residential unit. The goal is that it should be distributed to everyone who moves into newly constructed or renovated apartments and other homes that Skanska builds in Sweden. The Logbook describes Skanska's environmental work and gives residents factual information and practical advice on how to make their daily existence more environmentally friendly. The Logbook also includes a presentation of the building in question, descriptions of its materials and technical systems, directions for maintenance and tables in which residents can enter their own energy and water consumption.

An evaluation indicates that residents appreciate the Environmental Logbook and use it as a reference book.

Aside from the Environmental Logbook for residents, there is an Environmental Logbook for each property. It contains detailed information on materials and technical systems in the form of environmental product declarations, as well as the environmental plan and criteria for the project.

Products with environmental declarations
During 1997 Skanska compiled environmental declarations for another 33 products that the Group manufactures and sells. The aim is to report environmental performance and facilitate comparisons between different products. Via its Ecocycle Council, the Swedish construction industry has made a commitment to providing environmental declarations for all construction products in the Swedish market during 1998.

Generally speaking, the Skanska Group's building component and building systems companies have progressed very far in the task of producing environmental product declarations, but their work must be accelerated further if this commitment is to be fulfilled.

During 1998 and 1999, all Skanska properties will undergo an environmental inventory.

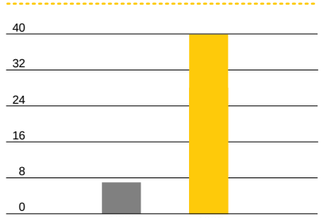
Environmental certifications
Certification or registration is a form of evidence that environmental work is being pursued in a systematic way. The diagram below indicates the number of Skanska facilities that were certified according to ISO 14001 standard and registered according to EMAS in 1996 and 1997. Some 20 Group operations have been certified for their quality control work according to ISO 9000 series standards.

In January 1998, a total of 114 facilities in Sweden had been certified according to ISO 14001. Of these, 5 percent were Skanska facilities.

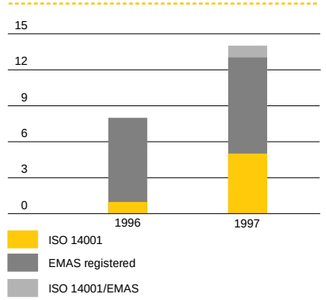
Annual Environmental Report
Each year, Skanska carries out a compilation of the Group's strategies, results and ongoing environmental work. This compilation is based on forms containing some 50 questions directed to all companies and divisions. Responses are gathered from each department or facility, a total of about 150 units. The main target groups for the Environmental Report are Skanska's employees and clients.

In partnership with the IKEA home furnishings chain, Skanska has developed Bo Klok (Sensible Housing), a new type of residential building. The apartments are bright and airy, and natural materials are used. Environmental Logbooks are distributed to residents.

Total number of Skanska products with environmental declarations



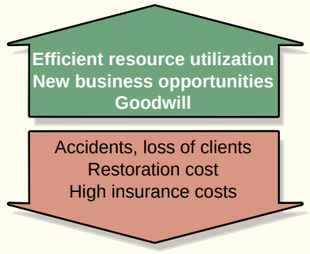
Total number of environmentally certified/registered facilities in the Skanska Group



Financial aspects

Opportunities and risks

Good environmental work is among the prerequisites for ensuring satisfied clients and a long-term improvement in profitability. If an environmental accident occurs, however, this has an adverse effect on the entire company, its clients and other business partners. Sound environmental work is an important company asset that generates business opportunities. Even an isolated failure can damage a company's credibility.



Increased environmental demands

In recent years, the environmental demands of the market have increased. For Skanska, this means taking greater account of environmental concerns in its construction operations. A finished building, facility or product is environmentally sound because of a proper choice of materials and designs. Public agencies have increased their environmental demands, as evidenced by the growing number of construction projects being subjected to environmental reviews.

In Sweden, the construction market has been weak during the past few years. The low level of construction activity is delaying the introduction of environmentally sound construction methods. Public agencies have introduced various subsidies for environmentally sound renovation, especially in the mass-produced apartment developments built during the government-sponsored "Million Program" of the late 1960s and early 1970s. However, these subsidies cannot outweigh the shortage of natural demand.

In the United States, environmental work is primarily being fueled by the need to prevent environmentally related risks.

In Denmark, a number of demonstration projects have been built in recent years to promote environmentally sound solutions. Demonstration buildings featuring extremely low water consumption or the reuse of demolition materials are examples.

In a number of cases, financiers such as the European Bank for Reconstruction and Development (EBRD) and the World Bank have made financing of projects conditional upon the fulfillment of environmental criteria. Such criteria have been imposed on projects that Skanska has carried out in Eastern and Central Europe.

Although the choice of contractor hinges largely on price, environment is a factor in a growing proportion of procurements. In the long term, good environmental work is a prerequisite for a strong market position.

Skanska's share price

At the time of the environmental accident at the Halland Ridge in southern Sweden, Skanska's share price fell somewhat more than the General Index for the Stockholm Stock Exchange. Skanska's share price showed a weaker trend than the General Index until the end of November. After that, the price has risen more rapidly than the General Index. It is difficult to interpret the role of an isolated event in determining the price of a company's shares. One assessment, however, is that the market's uncertainty about the accident and its financial consequences, any effect it might have on Skanska's business operations, had at least a temporary effect on the company's share price.

Environmental work is likely to become an increasingly important parameter in assessing the strategic development of a company.

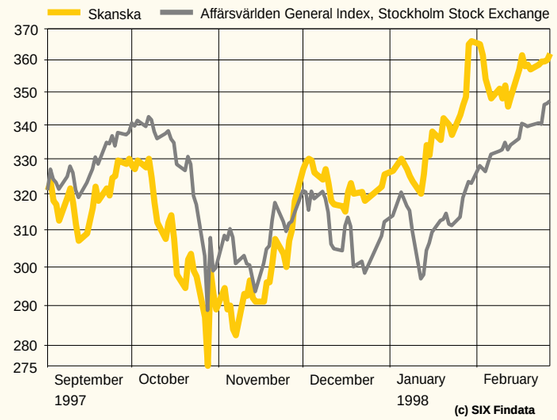
New business opportunities

In both Europe and the United States, there is a need for technology that will solve existing environmental problems, especially in the fields of soil decontamination, after-treatment, water management and recycling. In recent years, Skanska has performed contracting assignments in the following fields:

- soil decontamination
- after-treatment
- selective demolition and reuse
- restoration of damaged scenic areas
- restoration of wetlands
- environmental dredging of polluted bottom sediments
- adaptation of homes to needs of people with allergies

The market for this type of contracting work is still undeveloped. However, in Skanska's judgment it will expand, mainly due to greater environmental demands but also because of stricter legislation.

Skanska's share price from September 1997 to February 1998



Potential savings

Large resource consumption

Skanska's operations use large quantities of materials, electricity, fuel and water. More efficient use of resources will reduce the negative environmental impact of these operations while also cutting costs. Now that the Group is introducing environmental management systems, its operations are being analyzed from an environmental standpoint. These analyses often lead to steps that reduce the consumption of energy, materials and other resources. In some cases, there is considerable savings potential, while elsewhere major improvements have already been achieved.

Because man-made structures have long service lives, it is important that they be designed in such a way that their resource consumption will be low throughout this period.

Wastes and residual products

In 1997 Skanska's costs[1] for disposing of wastes and residual products totaled SEK 76 M. In 1996 these costs[2] were SEK 89 M. A number of companies reported lower waste management costs. Among other things, this was due to the introduction of at-source waste separation. In some cases, savings were due to better planning and management of operations, which made it possible to minimize the quantity of residual products.

Energy

Skanska buys about 225 GWh of electricity from Sweden's Sydkraft power utility every year. Its contract with Sydkraft encompasses most of Skanska's industrial plants and a large proportion of its real estate holdings in Sweden. There is currently a lack of satisfactory procedures for monitoring electricity use in the Group.

As part of its cooperation agreement with Sydkraft, detailed electricity use analyses took place in two properties and at some of the production facilities in the Skanska Asphalt and Concrete Division. The Division's electricity costs amount to some SEK 25 M per year. Analyses indicate that improvements at these production facilities can reduce their electricity use by 10 percent, which implies annual savings of SEK 2.5 M. Analyses of real estate management operations indicate similar savings potentials.

At-source waste separation reduces costs. Example from construction operations

At-source waste separation lowers waste management costs. During 1997, Skanska Southern Sweden thus saved SEK 1.8 M, or nearly 20 percent. In 1997 the quantity of wastes totaled 18,500 metric tons, of which 11,500 tons were separated at source into various fractions (scrap metal, combustibles unpainted wood, painted wood, asphalt, concrete, light concrete, bricks, asbestos and plaster). The remaining 7,000 tons were sent to a sorting station, where 80 percent was separated for recycling. Thus 1,400 tons were sent to landfills –. less than 10 percent of the total quantity.

The SEK 250 per ton waste tax that will be introduced if a government bill is approved would have resulted in the following annual increase of costs at Skanska Southern Sweden:

Without at–source separation	SEK 4.6 M
With at–source separation	SEK 0.4 M

At-source waste separation reduces costs. Example from building component production

The at-source waste separation program at the German-based Essmann Group, a Skanska subsidiary which makes building components, reduced total waste volumes and has led to recycling of 70 percent of wastes today. In this case, savings amounted to SEK 400,000 per year.

At-source waste separation in completed project properties and permanent facilities properties, %

	1997	1996
Skanska Sweden		
Building construction	**88**	57
Roads and civil works	**35**	25
Permanent facilities properties	**61**	56
Project exports	**20**	0
Skanska Europe		
Skanska Jensen[1]	**100**	96
Skanska Oy[2]	**100**	99
Skanska International Building[3]	**5**	0
Skanska Entreprenør	**100**	100
Skanska USA	**10**	2
Skanska Project Development and Real Estate		
Commercial properties	**91**	73
Residential properties[4]	**62**	71

[1] Does not include operations outside Denmark.
[2] Does not include operations outside Finland.
[3] The low level of at-source waste separation is due to the difficulty of finding markets for the sorted materials.
[4] The lower percentage of at-source waste separation was due to the acquisition during 1997 of properties where at-source separation had not yet been introduced.

Operating expenses for real estate

Skanska's property management units continuously take steps to lower their costs, but also to minimize their environmental impact. Reducing energy consumption by the equivalent of SEK 5 per square meter per year lowers operating expenses for Skanska's property holdings by about SEK 6 M.

Stronger market position

By investing in new environmentally sound technology, a company's market position can be strengthened as environmental demands increase. In recent years, Skanska has made important investments aimed at offering its clients the best technology from an environmental standpoint. In some cases there is not yet a clear demand, but interest in such technology is increasing.

The Åstorp quarry, which is located in the middle of the town of Åstorp, posed major problems to the external environment until 1995. Noise and dust from blasting disturbed both nearby residents and employees. The SEK 50 M invested in a new crushing plant, employing new technology, has largely made it possible to suspend blasting.

Skanska's market share for sales of natural gravel in the Swedish market totaled 8 percent in 1996[3]. The Group's share of crushed rock sales amounted to 20 percent during the same period.

In Sweden, most old asphalt is reused as a base material for small roads or as filling, for example in the construction of noise

[1] Applies only to purchased services, rents for machinery, costs of waste removal and treatment fees.
[2] Skanska's 1996 Environmental Report gave this amount as SEK 110 M, because Skanska USA had overstated its waste management costs.

[3] Statistics for 1997 are not yet available.

barriers. The volume of old asphalt removed from roads amounts to 900,000 tons per year in Sweden, In Germany and Denmark, asphalt is reused when new roads are paved. Skanska owns Sweden's first asphalt plant with organized recycling. This plant, located outside Stockholm, can process 30,000 tons of asphalt per year for reuse in high-quality road pavements. The increased environmental interest among clients and other interested parties is expected to result in an improved market demand for recycled asphalt.

In 1997 Skanska invested SEK 32 M in the largest back hoe dredger in Europe. The new dredger operates with high precision, thereby reducing the quantity of spills. Low noise levels, an oil collector, oil pumps and the use of biodegradable hydraulic oil are other examples of environmental adaptation. This investment gives Skanska access to the most environmentally sound dredging technology, enabling the Group to meet strict standards.

Restoration and after-treatment

The proposed new Environmental Code in Sweden will mean, among other things, that companies must pay for clean-ups in the event that their operations have polluted the soil or water, or if they have purchased a property where such pollution exists.

Skanska continuously buys land to develop projects for its own account. When it does so, the Group has an advantage because of its access to soil decontamination expertise. This facilitates risk assessments when buying land. If decontamination is required, this can be done using Skanska's own resources.

Skanska has sizable land and property holdings, mainly in Sweden. In Skanska's U.S. operations, land holdings are insignificant. In connection with the introduction of environmental management systems, most of Skanska's own industrial plants have undergone soil pollution appraisals. Two cases of polluted soils have been reported. In one case, the contamination was the result of oil leakages. In the first stage, 20-30 cubic meters of soil were removed and replaced with clean new soil, and there is now a proposed action plan for completing the clean-up. In the other case, a study is underway in partnership with the municipal government and the Swedish Environmental Protection Agency.

In Skanska's judgment, additional cases of soil pollution in its property holdings are highly likely to become known as environmental management systems are established in all Group operations.

Skanska properties that were built between 1956 and 1974 have undergone appraisals to determine the presence of PCB. In addition, all of Skanska's real estate holdings are currently undergoing an environmental inventory. See page 14. Initial appraisals indicate that Skanska's properties maintain high standards from an environmental standpoint.

Due to the environmental accident at the Halland Ridge, Skanska set aside a provision of SEK 100 M in the 1997 accounts. This sum is expected to cover both Skanska's own costs and any liability claims that may be lodged against the Group.

Crushed rock and natural gravel

In quarry operations that produce natural gravel or rock, there are well-established rules on land restoration after operations have ceased. As of December 31, 1997, Skanska had allocated SEK 17 M to cover costs related to restoration in its Swedish operations.

Environmental taxes and fees

Skanska's Environmental taxes and fees are payable mainly in Swedish operations. The amounts stated in the table below refer to direct costs in the Group's own operations. A large proportion of building construction and civil engineering work is performed by subcontractors, and their costs for environmental taxes and fees are not included.

Environmental taxes and fees of less than SEK 1 M are not reported separately in the Environmental Report. This applies to sulfur tax, nitrogen oxide fees, chemical fees and fees to the Swedish producer liability register (REPA).

Compared to other industries, the building construction and civil engineering sector has only a small proportion of operations that require licenses and permits. This explains the low costs of inspection fees and mandatory environmental damage insurance.

Compliance with legislation etc.

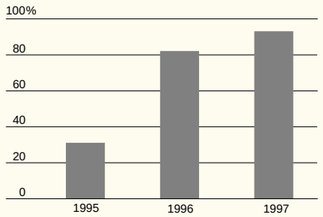
During 1997, no significant complaints or disputes in the environmental field involving Skanska were reported. In the case of the toxic leak at the Halland Ridge tunnel project, investigations are underway to clarify the liability situation.

Environmental taxes and fees, SEK M

	1997	1996
Inspection fees[1] plus mandatory environmental damage insurance[2]	**1,9**	1,0
Carbon dioxide tax[3]	**52**	34
Quarry fee[4]	**2,6**	—[5]
Natural gravel tax[6]	**10**	4

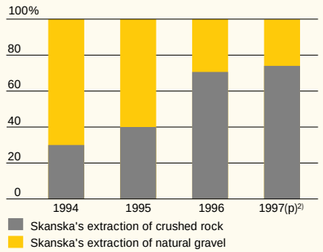
[1] Fee for operations required to undergo inspection and paid to the inspection agency, such as the County Administrative Board or the municipal environmental and health agency.
[2] Insurance coverage for those carrying out certain environmentally hazardous operations.
[3] Based on the carbon content of the fuel and based on the fuel volumes that Skanska buys from the Preem oil company.
[4] A fee for testing and inspection of quarries.
[5] No data were collected for 1996.
[6] Introduced on July 1, 1997 and amounting to SEK 5 per metric ton.

Environmental Class 1 fuel[1] use as percentage of total



[1] Refers to fuel purchased via the Preem oil company.

Crushed rock and natural gravel



[2] Statistics for 1997 are not yet available.

"I am thankful that the scope of the damage caused by the environmental accident at the Halland Ridge has turned out to be limited. We are now devoting all our energy to carrying out the clean-up."

Jan-Gunnar Glave, deputy head of the Skanska Sweden business area

The Halland Ridge

Clean-up underway

During the spring of 1998, the clean-up after the environmental accident is in progress. Between October 1997 and March 1998, more than 1,000 water samples were collected from waterways and existing wells in the risk area. At the peak, 29 wells showed elevated levels of acrylamide and n-methylolacrylamide. In March 1998, one well showed elevated levels.

A report by the Swedish Environmental Protection Agency states that "even if the impact in a small area may be substantial if there is a massive discharge, it will not be long-lasting or capable of spreading to a large area." In a communication dated March 1998, the Swedish National Board of Health and Welfare made the assessment that "water from wells that are not affected may be used for household purposes" and stated that "isolated minor instances of excessive levels do not lead to any health effects."

Water samples are being taken regularly from three creeks: Vadbäcken, Stensån and Vadebäcken. These samples indicate that acrylamide and n-methylolacrylamide levels in nearby waterways have gradually declined since grouting was interrupted and the clean-up began. In the case of Stensån and Vadebäcken, these levels are below the detection threshold, 0.0005 mg/l. The National Food Administration, applying the precautionary principle, advises against using water from Vadbäcken and affected wells for crop irrigation. However, well water that no longer contains pollutants may be used as drinking water for animals and for irrigation. According to the National Food Administration, meat and milk from animals in the area that drink unpolluted water may be consumed. The Administration is no longer advising against consumption of wild game from the Halland Ridge.

In mid-March, the municipality of Båstad lifted its "risk area" designation.

Tunneling halted

On October 6, 1997, tunneling through the Halland Ridge was halted. The toxic substances acrylamide and n-methylolacrylamide had spread via water leakages from the tunnel to Vadbäcken and surrounding wells.

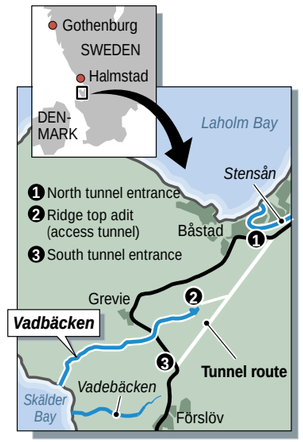
Acrylamide and n-methylolacrylamide have neurological and certain carcinogenic and genetic effects. These substances break down relatively fast when exposed to light and oxygen and do not accumulate in humans, animals or plants.

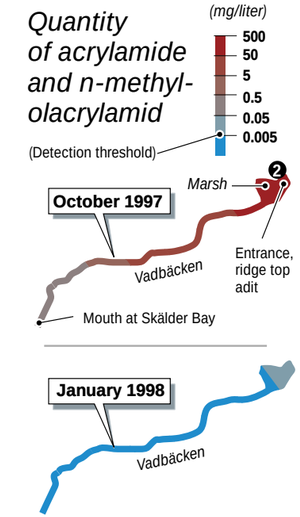
After the accident, the municipality of Båstad established a risk area of about 7 km² of Vadbäcken, equivalent to 3 percent of the area of the municipality. There are 150-200 residents in this risk area. They were advised against using water from the creek or from wells in the area. Farmers in the area were not allowed to sell their milk or cattle for 60 days.

Waterproofing methods

When the Halland Ridge was formed about 100 million years ago, cracks occurred in the rock. These cracks are filled with water, making the ridge a giant underground reservoir.

Cement grouting is the traditional method employed to prevent water from leaking into tunnels. Due to the structure of the cracks in the Halland Ridge, cement grouting does not provide sufficient waterproofing. A more expensive but effective waterproofing method is to line the tunnels with concrete.





In its role as client, the Swedish National Rail Administration wanted to evaluate additional grouting methods before a decision was made as to what waterproofing method to use.

A survey of alternative waterproofing methods led to test grouting with three different chemical waterproofing agents. The agent that produced the best waterproofing effect was Rhoca-Gil, which is made by the French chemicals and pharmaceuticals company Rhône-Poulenc. The agent has been used for nearly 30 years at more than 25 major civil engineering projects around the world. Aside from its 1997 use at the Halland Ridge and in the Lundby Tunnel (1,300 liters), Skanska has used acrylamide-
based grouting agents in small quantities on a test basis on two other occasions (see page 14).

Rhoca-Gil consists of two chemical solutions. One contains the toxic components acrylamide and n-methylolacrylamide. When the two solutions are mixed, their components are designed to react and form a polymer, a silicon-like gel. This polymer is not toxic.

During the survey and testing periods, Rhône-Poulenc's experts were consulted to obtain information and instructions on mixing procedures, handling and protective measures for personnel.

In March 1997, the first Rhoca-Gil test grouts in the Halland Ridge took place. At that time, an analysis of water leakage samples did not contain any Rhoca-Gil residues. Late in June, full-scale testing began in a 200 meter tunnel section. This work continued during the summer. On September 30, all use of Rhoca-Gil was halted after high levels of acrylamide and n-methylolacrylamide had leaked out into Vadbäcken and poisoned cows that drank the water. In the Halland Ridge project, the polymerization process did not work, and the toxic components therefore leaked out. By then, about 1,400 metric tons of mixed Rhoca-Gil had been used in 700 meters of tunnel.

Action program

To limit the damage and shed light on the environmental consequences of this accident, Skanska and the Rail Administration agreed on an action program.

Skanska and the Rail Administration appointed a joint team to ensure quick processing of damage compensation claims from individuals and companies. By early February 1998, the team had received about 130 claims and disbursed SEK 6 M, mainly to claimants in the agricultural industry.

All those working at the project, a total of 223 people, underwent medical examinations. Blood tests were taken to determine the degree of exposure to acrylamide and n-methylolacrylamide. Personnel who showed symptoms of neurological effects underwent more extensive examinations at Malmö General Hospital. These examinations revealed that out of 36 people, seven had a probable correlation between exposure and mild or moderate neurological effects. According to the doctors at the Occupational and Environmental Medicine Clinic in Lund, earlier experience indicates that these neurological effects disappear. New examinations will take place after six months. The risk of genetic changes and cancer is negligible, according to medical experts.

Local residents who had come into contact with water from Vadbäcken or wells in the risk area, were offered medical examinations by the municipal government. Altogether 197 people underwent medical examinations and blood analyses were done on 20 people. The results showed minor exposure to acrylamide and n-methylolacrylamide. No symptoms that can be connected to the exposure have been observed.

Clean-up measures

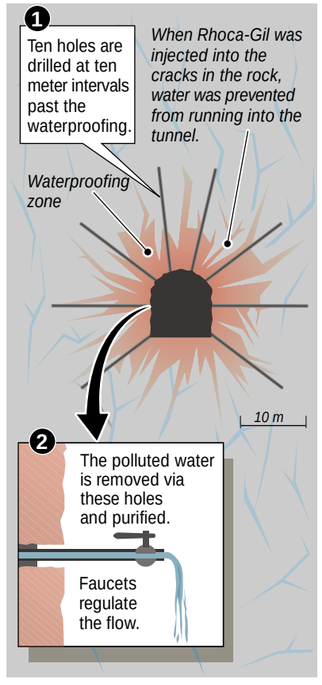
The first measure for cleaning up the groundwater around the tunnels in the Halland Ridge was to install water purification units.

Clean-up personnel surveyed the level of acrylamide and n-methylolacrylamide in the groundwater around the areas where Rhoca-Gil was used. In the Halland Ridge, the tunnels are functioning as drainpipes. Because of the groundwater pressure around the tunnels, water either runs into the tunnels via cracks or remains behind the sealed curtain. Analyses of the groundwater showed high pollution levels in a 100–150 meter section at the far end of the tunnels drilled from the north entrance and on the tunnel front inside the ridge top adit (access tunnel). In another, approximately 200 meter long section, there were slightly excessive levels in both northern tunnels.

Early in February, the Rail Administration received permission from the County Administrative Board to clean up the north tunnels by draining out the polluted water and purifying it. A detailed monitoring program for measuring changes in acrylamide and n-methylolacrylamide levels in the subterranean groundwater, changes in groundwater levels as well as the effect of purification of drainage water, is underway as part of the clean-up process. About 95 percent of the groundwater pollutants in the north tunnels have dissipated since the survey began.

The Rail Administration is studying how the rock debris blasted out of the tunnels should be handled.

How the clean-up works



The groundwater issue

Because water is leaking into the tunnel, the groundwater level is falling in the area, affecting nearby wells. In response to this, during the autumn of 1998 the Rail Administration plans to install concrete lining in portions of the completed tunnel sections.

The Rail Administration has received the permission of the National Water Court to remove a maximum of 33 liters per second of groundwater from the entire length of tunnels. Today the leakage into the tunnels is larger than this, and the terms of the ruling are not being fulfilled.

The tunnels through the Halland Ridge (Hallandsås) in southern Sweden are an important link in the west coast trunk line between Gothenburg and Malmö. The current railroad over the Ridge – with its steep inclines and sharp curves – limits freight transport. The tunnels through the Ridge will make heavier and faster freight traffic possible on this route.

Completion of the project

After the accident, the Rail Administration appointed an independent environmental investigation group, which is currently studying the consequences of the accident and the potential for completing the project in an environmentally safe manner.

This investigation will provide the basis for future decisions about the project by the Rail Administration and the affected public agencies. The report of the group is being published in April 1998.

Investigations

Several investigations related to the Halland Ridge accident are underway. The Swedish government appointed a commission to examine what happened during the Halland Ridge accident. An initial description of the situation is due on May 15, 1998 and a final report is scheduled to appear no later than November 17, 1998.

A police investigation is underway to determine whether there were any violations of the applicable laws.

The Halland Ridge tunnel project

Technical facts

Project	General contract, two 8.5 km parallel railroad tunnels
Client	Swedish National Rail Administration
Value of contract	SEK 930 M
Beginning of construction by Skanska	1996

Background

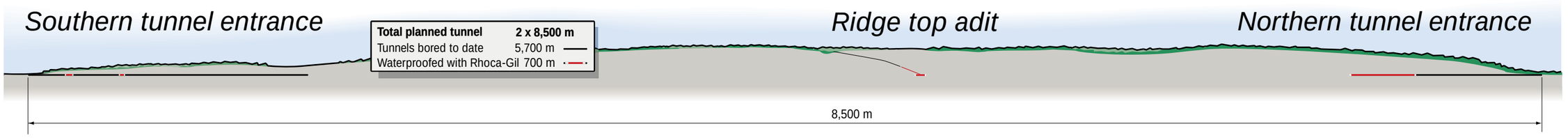
After competitive bidding in 1991, Kraftbyggarna, a subsidiary of the Swedish government-owned power utility Vattenfall, was awarded the contract to build tunnels through the Halland Ridge.

This work was done using a full face boring machine. The technique did not work, and the Rail Administration reached a settlement with Kraftbyggarna, which then withdrew from the project.

In 1995 the Rail Administration published new general contract documents and opened up another round of competitive bidding, in which Skanska presented the bid most advantageous to the Rail Administration.

In 1996 Skanska began the tunnel project. The work is in the form of a general contract, based on agreed prices and prescribed technical solutions. Grouting with Rhoca-Gil was not part of the contract between the Rail Administration and Skanska.

All grouting with Rhoca-Gil was ordered by the Rail Administration in the form of separate supplementary agreements.



Environmental work by business area

"Environmental work is both about avoiding risks and taking advantage of opportunities. We will continue to develop business opportunities in the environmental field, but we must also become better at minimizing business risks, for example by also including environmental criteria when we assess new projects."

Per-Ingemar Persson, head of the Skanska Sweden business area

Skanska Sweden

Skanska Sweden includes the Group's Swedish operations in the fields of building construction, roads and civil works-related services. The business area also includes a number of specialized subsidiaries with operations closely connected to construction work. In addition, Skanska Sweden is responsible for the Group's international civil engineering projects.

Environmental and business development

In project-based operations, intensive work is underway to develop the "Skanska's Way of Working" management system, in order to effectively control the construction process. All management issues, such as construction and financial controls, working environment, quality and environment are integrated. Responsibility for implementation rests with each divisional manager. In February 1998 one department engaged in building construction was certified according to the ISO 9001 quality standard. A certified quality system is a good basis for the task of putting an environmental management system in place.

During the spring of 1998, organizational structure, resources, activities and schedules will be established to ensure that environmental issues are integrated into the management system.

Six facilities within Skanska Sweden are ISO 14001 certified or registered according to EMAS. By year-end, an additional 41 operations are expected to be certified.

All personnel shall have completed basic environmental training by the end of 1998. Skanska will increase its collaboration in the environmental field with clients and suppliers.

ENVIRONMENTAL WORK

Skanska Installation	Environmental work is organized via the company's management team and is prioritized by each project manager. The subsidiary IV Produkt has an environmental committee and a chemical products group. During February 1997, IV Produkt was ISO 14001 certified.
Skanska Prefab	All personnel have undergone basic environmental training. Initial reviews according to ISO 14001 requirements have taken place in all facilities. The company is expected to be ISO 14001 certified during the summer of 1999.
Skanska Stålteknik	As a result of at-source waste separation, 90 percent of residual products are recycled. Two facilities have been ISO 9001 certified and another two certifications are planned during 1998. This process constitutes a good basis for the company's environmental work.
SektionsByggarna	Two of the company's three facilities were ISO 9001 certified during 1997 and one person has been appointed to handle the certification process. Environmental improvement projects are being pursued at each factory under the leadership of the plant manager.
Skanska Maskin	Site managers bear the principal responsibility for environmental work in the company. They have an environmental coordinator to help them. Environmental studies are scheduled during the spring of 1998 and ISO 14001 certification is planned by the spring of 1999.
Residential Construction Division	The division's environmental efforts are headed by an environmental manager. There are working groups for at-source waste separation, moisture measurements, environmental programs, demolition plans and allergy adaption packages. ISO 9001 certification is planned during 1998 and ISO 14001 certification during 1999.
Commercial in **Buildings Division**	Two out of four regions plan ISO 9001 certification during 1998. At least one department in the Southern Sweden region plans ISO 14001 certification during 1999.
Road Construction Division	Each department has quality and environmental coordinators. One paving department has ISO 9002 certified. All units in the division intend to obtain ISO 14001 certification during 1999.
Asphalt and Concrete Division	All personnel have undergone basic environmental training. At the end of 1997, five facilities were ISO 14001 certified and during 1998 an additional 35 are expected to be certified. These 40 facilities account for more than 85 percent of division sales.
Underground Construction and Bridges Division	There are environmental coordinators at department and project levels. One unit will be ISO 14001 certified in 1999.
Stabilator	Environmental work is led and organized by Stabilator's management team and administered by the company's environmental manager and coordinators. Five Stabilator facilities are ISO 9001 or 9002 certified. All fixed facilities have undergone environmental inventories.
Skanska International Civil Engineering	The Hong Kong area group expects to be ISO 14001 certified by February 1999. In the Pungwe water supply project in Zimbabwe, the financiers oversee environmental impact via an environmental auditing team. The subsidiary Skanska Dredging has implemented environmental studies of all barges and dredgers and expects to be certified by the end of 1998.
Sundlink Contractors	Environmental issues are coordinated with quality and working environment issues. This means that the safety officers at each work site are also environmental coordinators. Environmental audits take place twice a year. In addition, there are frequent quality audits, which also include asking environmental questions. The environmental coordinator has overall responsibility.

"The line organization is in charge of our environmental work. Environmental issues are a management responsibility and should therefore always be on the agenda."

Anders C Karlsson, head of the Skanska Europe business area

Skanska Europe

Skanska Europe includes the Group's Finnish and Danish domestic markets as well as its other European operations outside Sweden in the fields of construction-related services, building components and aftermarket services. The business area's building components companies in the kitchen, flooring, roofing and window sectors have sizable market shares, especially in Western Europe. Skanska Europe is also responsible for the Group's project exports in the building construction field.

Environmental and business development

Skanska Europe includes a number of companies that are among the environmental leaders in their fields. This applies, for example, to Poggenpohl and Kährs. The existing expertise will be utilized and developed through active exchanges of experience in the business area.

About ten production plants are EMAS registered or ISO 14001 certified. During 1998 and 1999, the other companies in the business area will build up environmental management systems.

Skanska Europe's follow-up procedures will also include issues related to the environment, quality and working environment. This will enable the management of the Skanska Europe business area to monitor this work continuously and ensure that its goals are achieved.

ENVIRONMENTAL WORK

Skanska Jensen	The environmental and quality manager is in charge of environmental work, aided by quality and environmental coordinators in each department. The task of introducing an environmental management system according to ISO 14001 standards is beginning in 1998, and certification of the system is planned during 1999.
Skanska Oy	Environmental work is coordinated by an environmental team headed by the quality manager. This team includes the environmental coordinators from each department. About one third of employees have basic environmental training. The entire company is ISO 9001 quality certified. The goal is to obtain ISO 14001 certification during 1999.
Skanska International Building	During the spring, all personnel will receive environmental training. At the same time, internal environmental auditors will be trained. An Environmental Council will be formed during 1998.
Skanska Entreprenør AS	Environmental issues are coordinated at company level with health and safety issues. During the year Skanska Entreprenør ran three "clean construction" projects. For example, in one case the company moved a portion of operations that generated large amounts of dust to separate production spaces.
Components and Services	
Kährs Group	Environmental work follows the Kährs environmental manual. Each facility has or is building up its own environmental management system. Material and energy balances are being prepared for each facility and comprise the basis for establishing goals and yardsticks for improvement efforts. Two facilities have been ISO 14001 certified and three have been EMAS registered.
Poggenpohl Group	Four out of six companies in the group have been EMAS registered. Environmental work at these companies follows EMAS regulations. Most companies in the group also have Environmental and Work Safety Councils. During 1998-99, Myresjökök plans to obtain ISO 14001 certification.
Essmann Group	The environmental organization follows EMAS regulations. There are environmental and work safety councils. Heinz Essmann GmbH obtained its EMAS registration in 1996. A number of companies in the group were ISO 9001 quality certified during 1996 and 1997. The other companies plan to obtain such certification during 1998.
Elit Fönster	Environmental officer at each facility are responsible for the work. Steering committees for the ISO 14001 certification process have been established. The company's facilities will be ISO 14001 certified during 1998.

"Through developing an Environmental Management System, Skanska USA will position itself as an environmentally aware company."

Stuart Graham, head of the Skanska USA business area

Skanska USA

Skanska USA includes the Group's North American operations in the building, road and civil works sectors.

Building construction is led by Beers Construction in the southeastern United States and by Sordoni Skanska in the northeast. The primary civil contractors are Slattery Skanska and Koch Skanska. Spectrum Skanska specializes in high-end real estate development.

Environmental and business development

Today there are few explicit environmental demands from U.S. clients. This makes it difficult to gain acceptance for more expensive but more environmentally sound choices of methods. Clients often lack an understanding of their own environmental impact. In certain markets, however, environmental management systems and environmentally friendly solutions are important competitive tools, especially in the northeastern United States, where environmental awareness is greater.

Skanska USA's environmental organization is integrated with the existing working environment organization. American companies are traditionally knowledgeable about risk management and legal issues.

There is extensive legislation on the handling of chemical products at construction sites. Many existing procedures related to the working environment can be incorporated into an environmental management system. Today there are already procedures for assessing business risks in new projects. These need to be supplemented to include any environmental risks.

The business area's environmental work is coordinated by an environmental manager.

During 1997 a manual for environmental management systems was developed. The manual provides a framework for such systems at all Skanska companies in the United States and has been evaluated by being used during a few environmental audits. The results indicate a need to revise the manual, a task expected to be completed in the summer of 1998. On the basis of the manual, each company will build up its own environmental management system. The scale and focus of this work will be determined by each company's environment impact and the expectations of its stakeholders.

ENVIRONMENTAL WORK

Slattery Skanska	Developed a pilot system for measuring use of chemical products and generation of hazardous waste at major projects. The company intends to introduce it at all projects.
Koch Skanska	Implemented environmental analyses at all projects during 1997. An environmental group has now been appointed to implement the introduction of environmental management systems.
Spectrum Skanska	Performs environmental evaluations and audits when purchasing land or properties. At-source waste separation is practiced at projects if it is profitable.
Beers Construction Co.	Has worked since 1989 on the basis of a risk minimization program related to the handling and labeling of chemical products, training etc. Has a Green Team in charge of introducing at-source waste separation at offices and construction projects, monitoring and adapting day-to-day procedures. Environmental programs containing specific goals and action plans are being implemented in May 1998.
Sordoni Skanska	Separate environmental plans were written at 80 percent of the projects completed during 1997. A team will be established to handle the introduction of environmental management systems.

"We are working systematically with environmental issues as part of real estate operations and project development. Good environmental work is important for a strong long-term market position."

Mats Wäppling, head of the Skanska Project Development and Real Estate business area

Skanska Project Development and Real Estate

The business area is responsible for the development, management and improvement of Skanska's real estate holdings as well as for the Group's shareholdings in a number of other real estate companies. The business area's operations also include collaborating with other Skanska units to identify, launch and develop infrastructure and real estate projects in Sweden and other countries.

Environmental and business development

Environmental expertise is important when new real estate and Build-Own-Transfer (BOT) projects are developed. Careful planning makes it possible to reduce the environmental impact of a project or property throughout its life cycle. This often also means lower operating costs.

Property management and project development

In 1995 Skanska adopted an environmental program for its real estate operations. It has been revised regularly and provides the basis for the company-level action plans that control practical environmental work. Environmental training has been provided to all employees.

During 1998 and 1999, the business area is implementing an environmental inventory of properties held by all companies. To ensure structured, effective environmental work, a common environmental management system for all real estate operations is being introduced. It will be integrated with other management systems. During 1998 an environmental study of all real estate operations is taking place. During the autumn of 1998 and the spring of 1999, two pilot projects will build up environmental management systems. After that, such systems will be introduced at the other companies and units. Swedish operations is expected to be ISO 14001 certified no later than the end of 1999. Other operations are to be certified no later than the end of the year 2000.

BOT operations

Skanska's environmental responsibility as a developer and investor in BOT projects is to ensure that the overall project, through the project company in which Skanska is usually among the shareholders, meets the applicable standards. Early project evaluation also includes the assessment of environmental aspects before Skanska goes forward with the project. Any negative environmental consequences are weighed against the positive impact of the project.

ENVIRONMENTAL WORK

Skanska Real Estate Stockholm	The organization consists of an environmental manager, environmental officers in market areas and 1–4 person environmental groups. The company plans to be ISO 14001 certified during 1999.
Skanska Øresund	Work is headed by an organization consisting of an environmental manager and an administrator, but environmental issues are a line responsibility. During the year, the company signed an agreement with the utility company Malmö Värme for district cooling in three large properties. This cooling method will be evaluated and may enable the company to replace 1,500 kg of HCFC.
Skanska Real Estate Gothenburg	The company has an environmental coordinator who is in charge of the work. ISO 14001 certification is expected to be completed during 1999.
Skanska Real Estate Nationwide	Work is headed by a company environmental officer. During 1997, the company devised new procedures for purchasing products and subcontracting work. According to these, if possible subcontractors should use only environmentally labeled products and there should be an approved environmental plan for a project before it starts.
Drott	All personnel have undergone basic environmental training. During 1997 the company joined with the Swedish Tenants' Association to develop an environmental declaration for properties. So far, a total of 65 percent[1)] of properties are covered by such declarations.
Project Development Sweden	ISO 14001 certification will be implemented during 1999.
Project Development Europe	No data have been reported.
BOT Projects	The company is responsible for meeting all environmental requirements imposed on a project. It ensures this by establishing and implementing environmental policies.

[1)] Based on the leasable area of managed properties..

Contact persons (for issues concerning the external environment)

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Skanska Sweden			
Skanska Sweden	Environmental Manager	Johan Gerklev	johan.gerklev@skanska.se
Business Development Division	No environmental officer will be appointed at the divisional level		
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Project Development Europe	Environmental Officer to be appointed during 1998		
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Glossary

Acrylamide Chemical name: 2-propenamide). A substance that is toxic on skin contact if ingested. There is a risk of severe damage to health in case of long-term exposure. Acrylamide exposure can lead to cancer and genetic damage. Mild effects may slowly disappear when exposure ends. Acrylamide is easily water-soluble. In the presence of microorganisms, it is easily biodegradable. For further information, see the web site of the U.S. National Safety Council, Environmental Health Center, http://www.nsc.org/ehc/ew/chems/acrylami.htm or the U.S. Environmental Protection Agency, http://www.epa.gov/opptintr/chemfact/f_acryla.txt

BOT is short for Build-Own-Transfer. It means that in addition to constructing a project, the contractor owns, operates and administers it for a specified period before ownership is transferred to another body, such as a public agency. Examples are toll roads and other infrastructure.

Carbon dioxide is a greenhouse gas formed during combustion.

Certification means independent examination and confirmation of an activity and confirmation that it fulfills certain standards.

CFCs = chlorofluorocarbons, synthetically manufactured substances used primarily as refrigerants. They break down the stratospheric ozone layer of the atmosphere and contribute to the greenhouse effect. International rules for phasing out CFCs are in place.

Design-construct contract = a form of contract in which the construction company is free to configure a structure on the basis of conditions set by the client. The construction company has a greater opportunity to influence the choice of designs and materials than in a general contract.

Detection threshold = the minimum level at which today's measuring equipment can record the presence of a substance.

EBRD is short for the European Bank for Reconstruction and Development, a multinational financial institution whose goal is to support the efforts of countries in Central and Eastern Europe to develop market economies. All EBRD-financed projects are screened to ensure that they contribute to sustainable development.

EMAS is short for the European Union's Eco-Management and Audit Scheme, a set of EU regulations for voluntary environmental management and auditing. EMAS-registered plants must publish an environmental report that is available to anyone.

Environmental management systems describe how a company or organization structures its overall environmental work. There are two international standards in this field: ISO 14001, EMAS.

General contract implies that the client decides the configuration of a structure, and the construction company has little opportunity to influence the choice of designs or materials.

Gwh = gigawatt hours. A gigawatt means one billion watts of electric power.

Grouting = reinforcement or sealing of rock or soil by applying waterproofing agents, usually mixed with cement or similar substances.

HCFC = hydrochlorofluorocarbons, which are used as refrigerants. Environmentally better than CFCs but still not acceptable. Phase-out regulations are in place in Sweden and elsewhere.

HFC = hydrofluorocarbons, which are chlorine-free and do not deplete the stratospheric ozone, but contribute to the greenhouse effect.

Infoforum = Skanska's intranet, an internal company computer network that provides Group employees with extensive information resources. Skanska also has a large public Web site on the Internet.

ISO 14000 is a series of standards for environmental work issued by the International Organization for Standardization (ISO).

ISO 14001 is an international standard for environmental management systems.

M = million.

n-methylolacrylamide. Chemical name n. (Hydroxymethyl)-2-propenamide. The effects of this substance are not known. It probably causes largely the same effects as acrylamide (see above).

NOx is a collective concept for the various oxides of nitrogen. They contribute to acidification and eutrophication (overfertilization of waterways etc.).

Ozone or O_3 is a gas found in the stratosphere, 15-40 km above sea level, which shields all living things on earth from excessive ultraviolet light. Ozone also collects in the troposphere, that is, close to the ground in polluted air (photochemical smog) and is harmful in that case.

PCBs = polychlorinated biphenyls, a group of chlorinated organic compounds that are not easily biodegradable. PCBs are fat-soluble, which means that they easily accumulate in the food chain.

Polymer = a substance consisting of numerous identical groups of molecules strung together into long molecular chains, for example plastics.

Polymerization = A chemical reaction in which numerous identical groups of molecules are brought together into long molecular chains.

PVC = polyvinyl chloride, a plastic used in electrical cables, carpets and elsewhere.

Refrigerants are substances whose task is to transport away heat.

REPA is the Swedish producer liability register, an organization that administers overall issues related to recycling of packaging.

Sediment refers to particulates that have sunk to the bottom of a waterway, for example, and that may contain various environmental toxins.

SEK = Swedish kronor, one USD = SEK 7.60.

Selective demolition is a method for tearing down buildings carefully. Building materials are collected for reuse wherever possible.

Soil decontamination is a method for removing various pollutants from the soil. Also called ground pollution remediation.

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