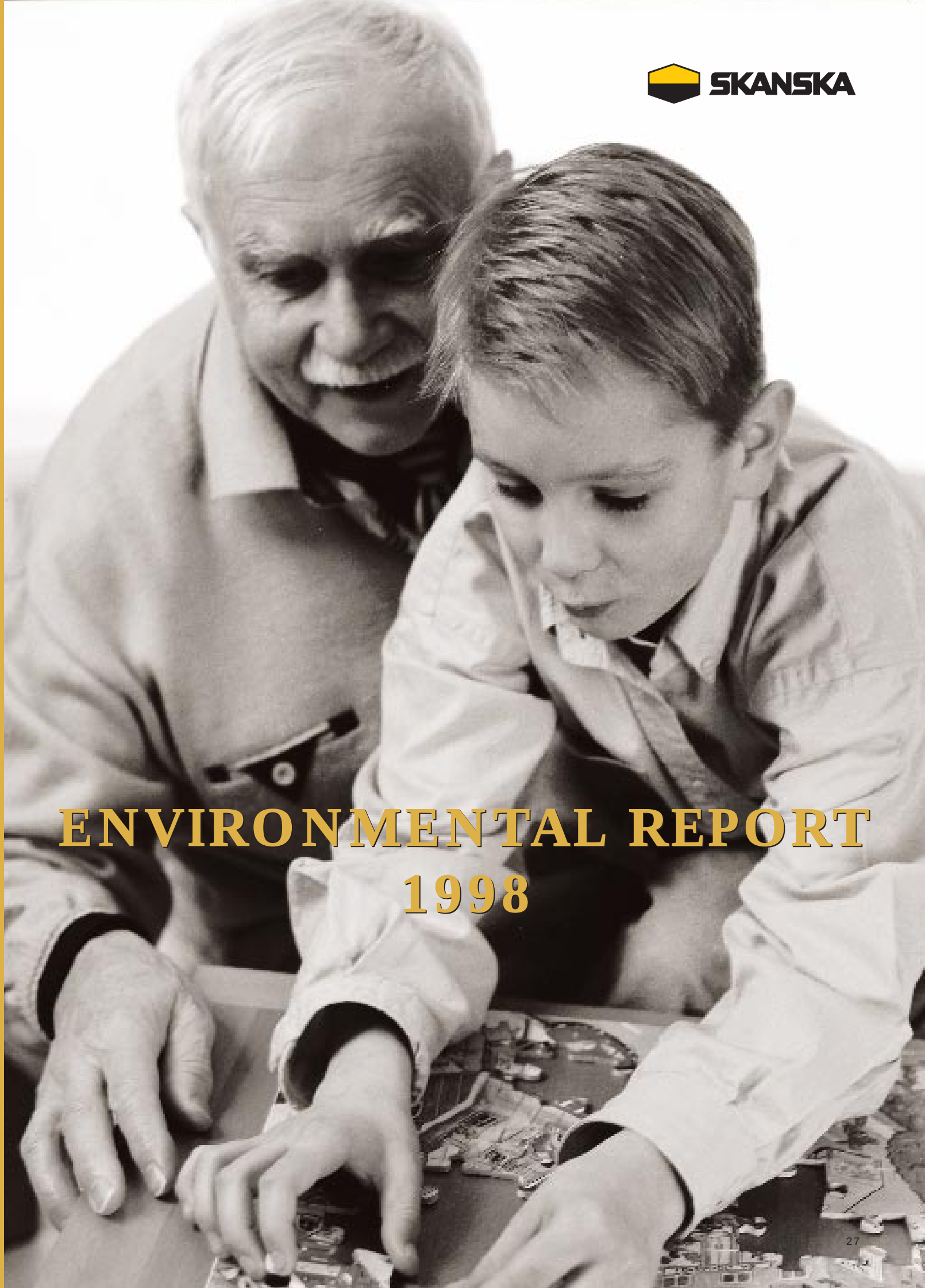
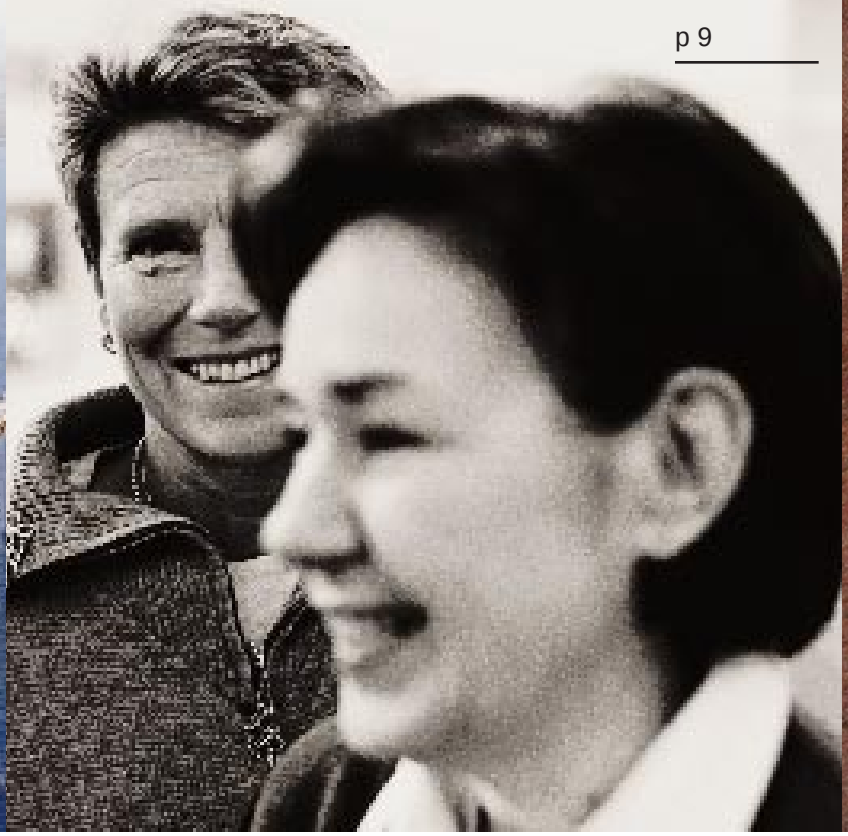

SKANSKA
ENVIRONMENTAL REPORT
1998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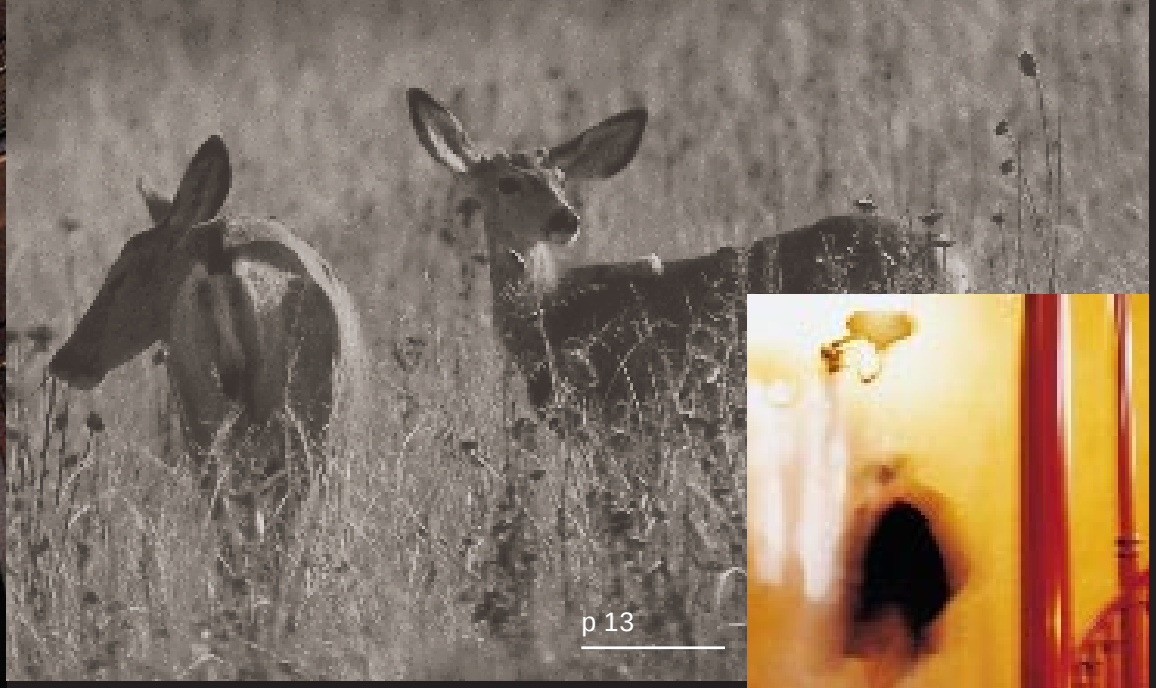
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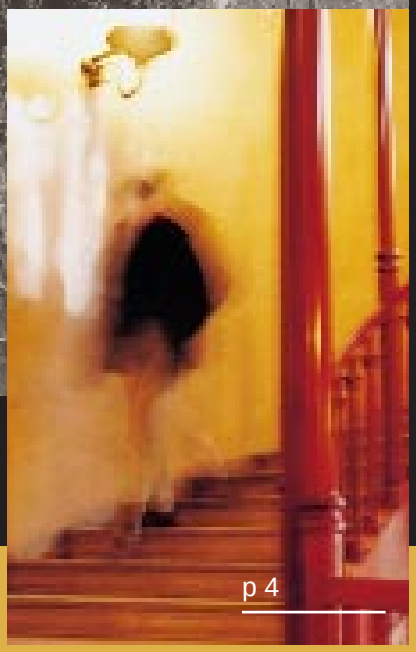
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THIS IS SKANSKA

Skanska is one of the world's largest companies in construction-related services and project development. Its goal is to be a world leader in these fields. Skanska has operations in some 50 countries. Its aim is continued internationalization, primarily by means of continued growth in the United States and expansion in European markets.

ENVIRONMENTAL PERFORMANCE INDICATORS

| | **1997** | **1998** |
|---|---|---|
| Number of employees who have received environmental training | 12,400 | 17,400 |
| Percentage of all employees who have received environmental training | 33% | 44% |
| Number of environmentally certified/registered units | 14 | 23 |
| Percentage of all employees working in environmentally certified/registered operations | –[1)] | 9% |

[1)] Not monitored in 1997.

Skanska's Environmental Report describes the Group's environmental activities during 1998 and its strategies for continuing this work. The Report is based on written information from Skanska's environmental organization and is produced by Group Business Development.

The Report is aimed primarily at Skanska's clients. Financial aspects of the Group's environmental performance are also summarized in the 1998 Annual Report.

For those interested in obtaining more detailed information on these issues, this Report lists contact persons in the various business areas. The Report is also available at Skanska's Web site, **www.skanska.com**

Environmentally sound infrastructure and buildings are prerequisites for creating a society that conserves resources.

Skanska's task is to plan and carry out environmentally sound construction, as well as to develop and manage properties for itself and others based on good environmental economics. This creates added value for the client – but also for society in general.

# STATEMENT OF THE PRESIDENT AND CEO

Construction involves changes and its purpose is to create added value for users. The great challenge lies in improving living conditions for many people by building sound homes, workplaces and infrastructure – and to do this in a way that preserves the environment for future generations.

Environmental, social and ethical issues must therefore be accorded greater weight when designing construction projects. To do this successfully, a dialogue with the Company's stakeholders is necessary. In particular, this requires active collaboration with clients and suppliers during the early phases of project design. Skanska must also set a good example in its own project development work in order to illustrate these possibilities.

Long-term thinking pays off, and it is always better and cheaper to do things properly from the start. It is primarily a matter of minimizing resource consumption throughout a structure's service life. The construction process should, of course, also be as resource-efficient as possible. Materials and substances that will generate future clean-up and waste problems must be phased out. Understanding of these issues is increasing both among our clients and ourselves.

It is important to have respect for the task of making all construction work environmentally sound. The resource consumption of construction and real estate operations must decrease radically. According to the Worldwatch Institute, which for many years has analyzed the state of the world environment, the construction and use of homes and offices account for 40 percent of global material and energy flows. Given a growing world population and rising living standards in developing countries, it is logical for the debate on using resources much more efficiently to accelerate. Factor Ten, that is the need to use natural resources ten times more efficiently than today, is one example of the conclusions of the respected Wuppertal Institute in Germany. This conclusion is already influencing debate on the environment in the business community and among politicians.

In certain areas, we are already seeing solutions that will sharply reduce future consumption of resources. One example is energy savings related to space heating of buildings. However, the problems of the transportation sector appear more difficult to solve. Developing environmentally sound transportation systems will require fresh thinking both with regard to infrastructure and vehicles.

Because construction involves changes, disadvantages must always be weighed against advantages. Adverse environmental impact should be weighed against the added value created for users. This requires a holistic approach and long-term thinking when analyzing a proposed project. Skanska's task is to further enhance its expertise and methods for evaluating project proposals and, where necessary, to suggest environmentally better solutions. Conducting an early, broader dialogue with clients, local authorities, financiers and other stakeholders at an early stage is vital in this work.

In some cases, Skanska should refrain from participating in a project. This may be true, for example, when we believe that a project's negative environmental or social consequences will be too large. In recent years, we have refrained from bidding on a number of projects for these and other reasons. When we decide to submit a tender and receive an assignment to carry out a project, we must be able to accept this responsibility. We cannot hide behind official permits or the terms of our contract with the client.

When I look back at Skanska's environmental activities in 1998, I value the Group's commitment to these issues. Our expertise has grown impressively in a short period of time. Skanska's new Environmental Policy, which was adopted in early 1998, has helped promote our environmental ambitions.
I notice a more open and humble attitude toward environmental issues at Skanska. Our ability to ask questions, seek support and provide information about these issues is increasing – and this, in turn, improves the dialogue.

Skanska's goal of introducing certified environmental management systems throughout its entire operations by the end of the year 2000 will, in some cases, be achieved earlier. Environmental management systems – sensibly integrated with other management systems – are necessary tools for high environmental performance. The certificates themselves are not the goal, however. Instead, what counts is results and the process of continual improvement. In order to succeed,


Skanska President Claes Björk. In the background is "Vision House," Skanska Installation's new office building in Växjö, Sweden, where technical solutions cut energy use by at least one third. It has been nominated as the 1998 Building of the Year by the Swedish construction trade magazine *Byggindustrin*.

environmental issues must become an integral part of Skanska's day-to-day work.

These issues signify an enormous challenge for us. At the same time, they open up major business opportunities for Skanska. Increasingly, we meet clients – both large and small – with high ambitions for creating environmentally sound solutions. International organizations that finance infrastructure projects also value a proactive approach to environmental issues.

Our environmental efforts will demand continued improvements in our expertise and attitude changes on our part – but also among our clients and suppliers. Our task is to demonstrate the possibilities by planning and implementing environmentally sound projects and creating added value for the client – but also for society in general. This is a long-term reform process in which we have high ambitions. Skanska has reason to take a more active role in the debate on environmental issues in order to contribute to greater openness and dialogue.

I personally look forward to hearing your opinions and questions about Skanska's environmental activities.

Claes Björk
*President and CEO*

*claes.bjork@skanska.se*

Man-made structures are beneficial to society. At the same time, they account for a significant proportion of the total human environmental impact. Skanska's operations span a structure's entire life cycle. This enables Skanska to generate increased environmental value added by means of proactive environmental performance throughout the value chain of a structure.

## ENVIRONMENTAL ASPECTS AND THE POTENTIAL TO INFLUENCE IT

### CONCEPT AND PLANNING

Concept and planning comprise a project's entire design and planning process.

#### ENVIRONMENTAL ASPECTS

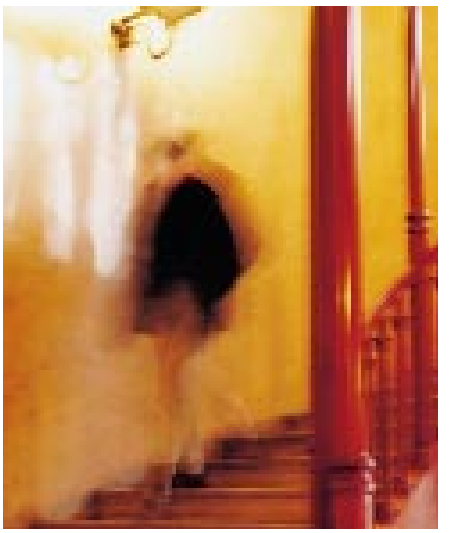
Much of a building's future environmental impact is determined during this phase. The choice of construction site, design and materials, among other things, is crucial to the building's environmental impact during its construction and period of use, for example with regard to energy and water consumption. The choice of materials also determines the environmental impact of any renovation and demolition work. Another aspect of future impact is a project's potential for alleviating an existing environmental problem. This is true of many civil construction projects that may help shorten transportation distances, facilitate mass transit systems and improve water treatment.

### CONSTRUCTION

Construction includes work carried out at the construction site, haulage and purchasing as well as Skanska's own production of building materials.

#### ENVIRONMENTAL ASPECTS

Large quantities of materials are used during the construction process. This, in turn, entails utilizing large quantities of resources such as raw materials and energy, indirectly resulting in emissions and waste. Local disruptions such as noise and dust may result from haulage work and the use of construction equipment. Large volumes of residual products are generated by renovation and demolition work. Residual products can be partly recycled or reused. Because certain materials contain hazardous substances, hazardous waste must be separated and handled in ways that minimize environmental risks.



### SERVICE LIFE

Service life comprises a structure's entire period of use, including operation and maintenance as well as further improvements in buildings and products.

#### ENVIRONMENTAL ASPECTS

Many Skanska products have long service lives, and their greatest environmental impact occurs during their period of use. Studies show that this period accounts for around 85 percent of total energy consumed during the life of a building. Calculations also show that the largest quantities of waste are generated while the building is in use, for example as a result of property management and renovation.

Similar general assessments are difficult to make for civil construction projects. However, in many cases infrastructure projects that replace activities with strong environmental impact may result in a sharp decrease in this impact – for a very long time.

**Concept and planning**

Skanska's construction of a school in Vikingstad (Linköping, Sweden) illustrates how it is possible to achieve environmentally sound solutions. Two reasons for the favorable result were an open-minded, knowledgeable client that showed a genuine interest in creating an environmentally sound building and smooth collaboration between Skanska and the client in attaining a common goal. The school was largely built using recycled or reused materials, but the total construction cost was no higher than if new materials and traditional techniques had been used. Crushed concrete was used as raw material for walls. The main entrance, interior doors, windows, interior walls and roofing tiles were taken from nearby renovation projects.

THE POTENTIAL TO INFLUENCE

Skanska seeks an early dialogue with the client to be able to participate in choosing environmentally sound solutions. It is vital to view environmental issues from a holistic and life cycle cost perspective. Skanska can actively participate in the concept and project planning phase owing to its experience with other projects, its evaluation systems and its environmental expertise. One of Skanska's support companies, Skanska Teknik, is currently implementing an environmental management system that emphasizes environmentally sound project planning and technical solutions for design, geotechnical engineering, foundation work and installations.

Together with several other real estate owners and consultants, Skanska has developed a system for evaluating the environmental status of existing properties. Skanska has tested the system as a tool for project planning and the system helps clients to systematically take into account the environmental aspects of a property.

Skanska has also developed products and installation solutions that lead to a reduction in a product's total environmental impact. Throughout 1998 the Environmental Unit at Skanska Teknik continued to publish concise environmental advisories on the selection of building materials.

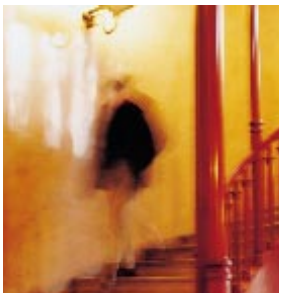
**Construction**

Skanska is one of the main contractors of the Öresund Bridge, part of a bridge/tunnel link between Sweden and Denmark due for completion in the year 2000. The control of environmental considerations are one of the project's overall objectives. This include a focus on environmentally sound purchasing, good planning and conservation of resources in order to limit material use and the quantity of residual products. Residual products are separated at the source. Environmental aspects have been incorporated into the project's quality plans to ensure that environmental targets and contractual and legal requirements are met. In order to increase awareness of these issues, everyone working on the project receive basic environmental training. In addition, the construction sites an ongoing compete to be selected as the "greenest site on the bridge" each quarter.

THE POTENTIAL TO INFLUENCE

Good planning can limit the environmental impact of a construction site. The quantity of waste can be reduced by purchasing custom-tailored materials or by industrializing the construction process through increased prefabrication. A smoothly functioning at-source waste separation system is an important prerequisite for reusing and recycling residual products. Choosing construction equipment with efficient exhaust gas purification and low noise levels improves the environment for people living in the vicinity.

Internal environmental audits are conducted to detect possible shortcomings at Skanska's construction sites from an early stage. At the same time, these audits disseminate knowledge about environmentally sound and efficient working methods, an important supplement to a Skanska employees' basic environmental training. High-quality construction also reduces environmental impact through fewer mistakes and a longer service life.



**Service life**

Skanska Øresund's prize-winning renovation of the Holbergsgade office complex in Copenhagen, Denmark is an example of successful collaboration between real estate owner, architect and building contractor. This culturally historic building has been carefully and ambitiously improved and upgraded. One conclusion that can be drawn from this project is that renovation work that uses sound building techniques and materials is a good investment for the real estate owner because among other things it helps keep down maintenance costs. Long-term thinking pays off. These historic buildings are now being used by the Danish Ministry of Food, Agriculture and Fisheries and the Ministry of Health.

THE POTENTIAL TO INFLUENCE

Upgrading a building and thereby adapting it to new needs can extend its operational life. Good planning and effective systems in conjunction with renovation work can reduce waste and ensure a high degree of recycling. A property's environmental impact can be reduced by consciously choosing environmentally sound building components. It is also possible to improve the property by using new, more economical technology and installations. Determining the current environmental status of each property makes it possible to establish clear environmental targets. New technology can also allow for less resource-intensive maintenance of roads.

Providing a client with environmental information can reduce a building's impact during its period of use. Knowledge of materials and maintenance requirements of installations ensures that a building will function properly, thereby extending its operational life.


Skanska's intranet is an effective way of spreading environmental information within the Group.

Skanska's Environmental Policy states the objectives of the Group's environmental activities. The Policy emphasizes the obligation of each employee to incorporate environmental responsibility into his or her daily work. The development of specialized skills enhancement, effective management systems and common guidelines facilitate rapid progress in this field.

## ISSUES IN FOCUS DURING 1998

During 1998, the Skanska Group prioritized the continued build up of environmental management systems and basic environmental training for all its employees. Other important issues included developing specialized skills in the environmental field and further refining guidelines for the purchase and handling of hazardous substances. Environmental responsibility is a line management responsibility. Each operative unit must devise a plan for its environmental activities within the framework of the Group's common objectives. The current status and the type of environmental issues and their relative importance varies depending on the country and the type of operation.

### ENVIRONMENTAL ORGANIZATION

Each business area is responsible for designing an environmental organization that effectively promotes environmental performance. The Parent Company, Skanska AB, is responsible for policy, strategy and coordination of the Group's efforts in this field. Per Westlund, Skanska AB's Executive Vice President for Group Business Development, is responsible for environmental issues in the Group Management. There is also a Vice President for Environmental Affairs who reports to the Executive Vice President.

Skanska Teknik, one of the Group's support companies, functions as an internal consultant, actively bridging the experiences of the various companies, divisions and business areas.

An Environmental Managers' Forum is being established during the spring of 1999 in order to further strengthen collaboration and the development of specialized skills enhancement.

### ENVIRONMENTAL MANAGEMENT SYSTEMS

In November 1997, Skanska decided that all Group units must have environmental management systems in place by the end of 1999. These systems must be certified under the ISO 14001 international standard or approved by the European Union's Eco-Management and Audit Scheme (EMAS) by the end of the year 2000.

The first checkpoint regarding this work took place during the summer of 1998. It showed that the implementation process is underway throughout the organization, but that extensive and resource-intensive work remains. Studies analyzing environmental aspects and evaluating Skanska's current work in this field have spawned important improvements. Among other things, these studies have increased Skanska's understanding of the complexity of environmental aspects. For example, the future use of Skanska products often accounts for the lion's share of environmental impact, when viewing the entire life cycle of a structure. The studies also pointed out shortcomings in organizational structure and lines of authority within the Company and emphasized the need for supplementary training programs targeting certain Skanska employee categories.

At the end of 1998, twenty-three units were certified as meeting the ISO 14001 standard or were registered in accordance with EMAS. This means that nine percent of Skanska employees already work in units that have met the Group goal for the year 2000.

### SKILLS ENHANCEMENT

One prerequisite for smoothly functioning environmental management is that everyone is committed to and familiar with the company's environmental objectives and targets. A total of 17,400 employees have now received basic environmental training. This represents 44 percent of Skanska's overall work force and is in line with the estimate of 18,000 employees made for 1998. Active environmental efforts require new skills. As a natural step in conjunction with the introduction of environmental management systems, each company is carrying out supplementary training based on its identified needs.

Skanska is engaged in management training for current and prospective managers and executives at various levels in the Group through the Skanska Management Institute. This training emphasizes such issues as visionary thinking, the ability to initiate and lead reform work, ethics, the environment and social responsibility.

Information technology (IT) plays a key role in quickly spreading information. Infoforum, Skanska's internal IT network or intranet, contains environmental information that is pertinent to the Group as a whole. It also features a well-developed system of links to informational sources within the environmental field.

### SPECIALIZED EXPERTISE AT SKANSKA TEKNIK

Skanska Teknik has built up an Environmental Unit for the purpose of supplying the Skanska Group with specialized environmental expertise. During 1998, the unit developed and carried out environmental training programs, initial environmental reviews, audits and studies of purchasing agreements. It also provided environmental support for certain projects. The unit regularly provides a support service to which Skanska employees can turn if they have questions on environmentally related issues. Six people currently work in the Environmental Unit.

### PURCHASING GUIDELINES

In light of the accident at the Halland Ridge (Hallandsås) rail tunnel project in southern Sweden in the autumn of 1997, Skanska decided to develop guidelines for purchasing


SKANSKA'S ENVIRONMENTAL TRAINING EFFORTS CONTINUE WITH PROGRAMS TAILORED TO VARIOUS EMPLOYEE CATEGORIES. IN COLLABORATION WITH KALMAR UNIVERSITY COLLEGE IN SOUTHEASTERN SWEDEN, ONE DIVISION OF SKANSKA SWEDEN HAS DEVELOPED A COURSE FOR ITS ENVIRONMENTAL COORDINATORS AND ITS MANAGERS.

hazardous substances. This task has proved to be more extensive than expected. A proposal has now been put forward and these guidelines are expected to go into use during 1999.

## OPENNESS AND DIALOGUE

During the year, Skanska expanded its dialogue with the Company's stakeholders regarding environmental issues. In the autumn of 1998, Skanska conducted a series of interviews in Sweden to obtain a clearer picture of what these stakeholders expect from Skanska's environmental programs over the next few years. A number of infrastructure projects that Skanska has carried out in developing countries were also evaluated in 1998.

Skanska hopes that new and expanded contacts will lead to a deeper dialogue with Swedish and international environmental organizations.

During 1999, Skanska plans to implement an external evaluation of its environmental performance in relation to the environmental program of the International Chamber of Commerce (ICC), of which Skanska became a signatory in 1995.

For a more detailed account of Skanska's external dialogue on these issues, see page 24.

Using environmentally sound materials may mean reusing old materials or selecting new ones that can be reused or recycled.

In collaboration with other Skanska units, the Project Development and Real Estate business area is responsible for identifying, launching and developing real estate and infrastructure projects in Sweden and other countries. Its operations also include managing and improving Skanska's real estate holdings as well as having the responsibility for the Group's shareholdings in a number of other listed companies with real estate operations.

# SKANSKA PROJECT DEVELOPMENT AND REAL ESTATE

*Our strength lies in the business area's collective resources and expertise in financing, project management, construction, leasing and property management. Over the next few years, we will improve the environmental performance of our operations and utilize our collective resources in order to achieve results quickly.*

*Clients, local authorities, financiers and insurance companies are increasingly demanding environmental awareness, and as part of our real estate operations we are working methodically with these issues. Taking environmental issues into consideration in the early stages of a project is one way we can limit environmental impact during the project's entire life cycle. This not only helps protect the environment but also means lower costs.*

*We are developing an environmental management system for our real estate operations in order to ensure structured, effective environmental management. In this way, we will continue to develop and integrate environmental considerations into our operations. Our environmental ambition is a strategic issue in creating a strong, long-term market position.*
mats wäppling, head of the skanska project development and real estate business area

## ENVIRONMENTAL ORGANIZATION/MANAGEMENT

Environmental issues must be a natural element of our day-to-day work. This means integrating environmental management into the line organization. The commitment and knowledge of the business area's employees is a prerequisite for achieving success.

To create an effective tool for its environmental activities, the business area began to develop an environmental management system in the spring of 1998. The goal is for Swedish operations to be ISO 14001 certified by the end of 1999 and all other operations during the year 2000.

During 1998, external environmental consultants were hired to conduct, together with Skanska employees, a study of the business area's environmental impact. The significant environmental aspects of Project Development and Real Estate's operations are energy consumption, the phase-out of CFC and HCFC use and the choice of materials and products. The largest potential for a long-term reduction in the business area's environment impact is related to new construction and renovation, conversion and extension work. It is therefore important to conduct environmental studies and establish environmental plans in the early stages of new projects.

An analysis of the Business Area's environmental activities emphasized the following strengths:
— current environmental activities take place mainly via the line organization
— a strong commitment to environmental issues exists throughout the organization
— basic environmental training has been carried out within a large part of the business area's operations
— energy-saving measures have been implemented for many years.

The weaknesses noted in the report were that environmental efforts are currently less developed in units outside Sweden and that collaboration and follow-up need to be improved.

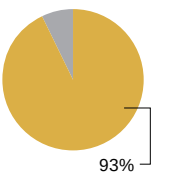
A generic program is in place for new construction projects within Swedish project development operations. It establishes technical solutions that provide a favorable energy balance in buildings and allow the buildings to be easily adapted for different uses. The program will be continually updated.

## ENVIRONMENTAL TRAINING

The business area conducted an inventory of employee skills and training needs in conjunction with the initial environmental review and adopted a training program for its Swedish operations. A majority of the Business Area's employees had previously received training on general environmental issues.

During the autumn of 1998, all employees took a basic, one-day training course covering the business area's environmental impact, basic elements of environmental management systems and environmental legislation. Its management teams also received introductory training in communication and crisis management. In 1999, the basic training program will be supplemented by additional training targeted to various employee categories in the fields of purchasing and procurement, waste management and energy conservation.

**Percentage of all employees with environmental training**




## ENVIRONMENTAL ACTIVITIES IN 1998

Throughout 1998 environmental activities focused on building up expertise and working methods in order to systematically – and proactively – integrate environmental issues into day-to-day work. Environmental management systems are therefore an important foundation for future work.

There are many concrete examples of environmental activities currently being carried out within the business area's various units. The following sections present some Skanska projects and other activities that

IN SKANSKA'S LILLA BOMMEN OFFICE BUILDING LOCATED IN THE HARBOR DISTRICT OF GOTHENBURG, SWEDEN, WATER FROM THE ADJACENT GÖTA RIVER IS USED TO GENERATE "COMFORT COOLING" – AN ENVIRONMENTALLY FRIENDLY ALTERNATIVE THAT REDUCES THE USE OF CHEMICAL REFRIGERANTS AND ENERGY CONSUMPTION.

contain an environmental focus. Their purpose is to illustrate what environmentally sound activities mean in practical terms within a few high-priority areas. These examples may also inspire similar and even more far-reaching environmental initiatives in 1999.

**Project development with an eye to the environment**

In the Atleten city block next to the railroad station in Sundbyberg, a suburb of Stockholm, new, modern and practical office space is being built in an effective, environmentally sound way. The office building will, in addition, function as a noise barrier for the homes being constructed nearby. Working systematically with the project's environmental plan led to decisions on a number of measures that reduce hazardous waste, the use of raw materials and the building's energy consumption. These include:

— installing a connection to a district heating system that uses heat pumps to extract heat from municipal wastewater. This cuts fossil fuel consumption to one third of normal levels
— recycling the energy from the building's exhaust air via heat pumps
— using low-energy lighting where technically possible
— prefabricating building components to reduce waste and thereby cut resource consumption
— selecting environmentally sound materials such as wooden floors or linoleum in offices
— implementing at-source waste separation by using efficient spaces, convenient transport routes and smoothly functioning systems for waste collection

**Early dialogue with clients**

During 1998, Skanska Øresund completed the first stage in the construction of the new University College in Malmö, in collaboration with university officials. The renovation of former industrial premises into a modern educational center has been characterized by a holistic approach and care for the environment. Together with the client, Skanska has succeeded in preserving genuine portions of the old premises without sacrificing a high standard of quality. At the same time, technical solutions and choice of materials have been employed to create an environmentally sound building, including a ventilation system controlled by motion sensors, a water-based cooling system, outdoor sun shades using reflective glass and environmentally friendly materials such as lead- and halogen-free cables. All materials and installation work are documented in an environmental logbook.

**Environmental retrofitting of current properties**

An extensive environmental inventory of Skanska's real estate holdings is being conducted during 1998–99. By the end of 1998, 51 percent of the holdings had been inventoried. So far the inspections have shown that the properties meet high standards. The findings are being used to plan and implement measures to further improve the environmental performance of the properties.

In the initial environmental review, energy consumption was identified as a significant environmental aspect. Today a system is in place for monitoring the energy consumption of each property. Property-specific energy programs are also being devised. At the end of 1998, 47 percent of properties had their own energy programs.

The phasing out of chlorinated, ozone-depleting refrigerants in cooling plants is continuing according to plan. At the end of

ENVIRONMENTAL MANAGEMENT, TRAINING AND CONTACT PERSONS

The chart below shows when the business area's various units are expected to complete environmental certification and the percentage of their employees who have received basic training. For those who would like further information, contact persons within each unit are also listed.

| | Estimated completion of environmental certification Month-year | Percentage who had completed basic training by Dec. 1998 | Contact person | E-mail |
|---|---|---|---|---|
| Skanska Real Estate Stockholm | Dec. 1999 | 100 | Hans Wallström | hans.wallstrom@skanska.se |
| Skanska Øresund | Dec. 1999 | 100 | Jan Ekblad | jan.ekblad@skanska.se |
| Skanska Real Estate Gothenburg | Dec. 1999 | 100 | Gunnel Lundegren | gunnel.lundegren@skanska.se |
| Project Development Sweden | Dec. 1999 | 100 | Ulf Ranhed | ulf.ranhed@skanska.se |
| Project Development Europe | Dec. 2000 | 0 | Tommy Herloff | tommy.herloff@skanska.se |
| BOT Projects | Dec. 2000 | 0 | – | – |

1998, the quantity of CFCs totaled 189 kg or 417 lbs (of which 150 kg or 330 lbs solely exists in one newly purchased property) and HCFCs amounted to around 5,870 kg (12,940 lb). The CFCs and HCFCs will be replaced during 1999. Meanwhile Skanska occasionally purchases properties that contain CFCs and HCFCs. Skanska's objective will therefore be reformulated to state a fixed phase-out period from the time of acquisition. CFCs and HCFCs is replaced at Skanska's properties by HFCs, district cooling systems or by retrofitting that eliminates the need for cooling.

In accordance with Swedish legal requirements, ventilation systems are inspected at regular intervals. By the end of 1998, 70 percent of real estate holdings had passed the mandatory ventilation inspection (OVK).

**Environmentally sound management**

Real estate management operations carry out systematic, practical environmental activities. Here are some examples:

— reducing sulfur emissions and saving energy by recycling flue gas in heating boilers
— reducing energy consumption by switching to low-energy lamps and improving control equipment for ventilation systems
— reducing water and energy consumption by replacing nozzles on sinks and showers
— using environmentally sound fuels in vehicles transporting goods and people. Tests are currently being performed regarding the replacement of fossil fuel-operated service vehicles with vehicles powered by electricity or by a fuel containing rapeseed (canola) oil.

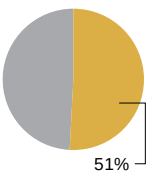
## FINANCIAL ASPECTS

Under Sweden's new Environmental Code, which took effect on January 1, 1999, real estate owners must assume greater responsibility for decontamination of the property they own. In certain cases, they can be held responsible for environmental damages caused by tenants. Skanska is further refining its procedures for performing environmental studies in conjunction with real estate acquisitions. When necessary, these will be supplemented by an assessment of the tenants' activities. The managements of all companies in the business area have received introductory training regarding the new regulations in the Environmental Code.

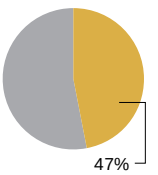
An assessment of the potential need for decontamination is also being carried out as part of the ongoing environmental inventories of Skanska's existing real estate holdings. No new decontamination needs were reported in connection with the inventory.

Necessary provisions have been made for properties with previously known clean-up needs.

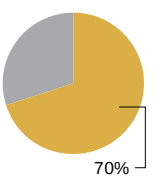
**Percentage of Skanska properties with conducted environmental status assessments**




**Percentage of Skanska properties with their own energy programs**




**Percentage of Skanska properties that passed mandatory ventilation inspection**




## ENVIRONMENTAL OBJECTIVES

During 1999, Project Development and Real Estate will devote a great deal of energy to the implementation and certification of environmental management systems. In 1998, the business area established four environmental objectives for its Swedish operations. They are:

- completing the ongoing phase-out of CFCs in cooling systems during 1999
- adopting an environmental plan for each new construction project
- reducing annual energy consumption in comparable real estate holdings
- continually developing employees' environmental expertise to meet the standards required by their assignments and Skanska's Environmental Policy.

As part of the process of implementing the environmental management system, the companies in the business area will further refine these environmental objectives.

Waste separation at the construction site improves the working environment and reduces waste disposal costs.

Skanska USA includes the Group's North American operations in the building and civil construction sectors. Its building construction units are Beers Construction, with operations in the southeastern United States, and Sordoni Skanska in the northeast. The civil contracting units are Slattery Skanska, Koch Skanska and Tidewater Skanska. Spectrum Skanska specializes in residential development.

# SKANSKA USA

*Over the next few years, Skanska USA will further increase its environmental expertise, giving priority in its business development work to continual environmental improvements. These issues affect all our operations.*

*Throughout 1998, we focused on developing and gradually implementing ISO 14001 standard environmental management systems. This is a business strategy that is appreciated by our partners, employees and clients.*

*Greater awareness of environmental issues is an important step toward improving the company's performance in this field. One essential element of introducing ISO 14001 is therefore to give all employees of Skanska USA suitable environmental training. This will ensure that all employees understand what environmental issues apply to their workplace, regardless of whether they work at project sites or in an office. This will enable us to focus on the most important environmental factors in all parts of the organization.*

*We are proud that Skanska is one of the first construction companies in the world to implement a certified environmental management system.*

stuart graham, head of the skanska usa business area

## ENVIRONMENTAL ORGANIZATION / MANAGEMENT

In 1998, Skanska USA worked intensively to build up environmental management systems that comply with ISO 14001 standards. In most cases, the system has been developed on the basis of existing health and safety management systems. For many years, Skanska USA has had guidelines and procedures in place for minimizing risks and ensuring compliance with legal and regulatory requirements. This applies, for example, to legislation on the handling of chemical substances at construction sites. The implementation strategy envisions providing the managers of each project with effective support for both their environmental and safety work through the new environmental management system.

Early in 1998, each company in the business area formed a team that is responsible for developing its respective environmental management system. These people received specialized training in the task of implementing ISO 14001. Representatives of these teams meet regularly to compare and discuss with their experiences and implementation schedules. This process has resulted in a very open exchange of experiences in the business area. Due to this exchange, most of the environmental management systems will appear relatively uniform in the various companies. Meanwhile, environmental activities have served as a catalyst for increased cooperation between companies in the United States in other areas as well.

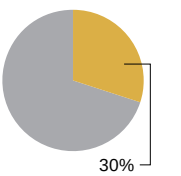
All companies in the business area plan to be certified according to ISO 14001 by October 1999. This effort has progressed according to the established timetable throughout 1998. Early in 1999, the companies will work out operative environmental targets and action plans.

Skanska USA views an environmental management system as an effective framework to ensure safe and environmentally sound working methods. ISO 14001 certification will also give Skanska USA a competitive advantage. To clients, it will confirm that Skanska USA takes environmental issues seriously and has effective systems in place to manage them. Clients will also be provided with alternative options, methods and materials for achieving higher environmental performance in their projects. Besides benefiting the environment, this will also strengthen Skanska's market position, because the number of projects with an environmental focus is expected to grow over the next few years.

## ENVIRONMENTAL TRAINING

Effective environmental performance requires a high degree of environmental awareness in the organization and well-defined procedures for ensuring that projects take environmental, health and safety aspects into account. Training programs during 1998 focused on company executives, environmental specialists and project managers. All executives received ISO 14001 training. The environmental teams in each company underwent training on environmental issues and management. Early in 1999, they will also receive training in internal environmental audits. Training programs for project managers focus on enhancing their environmental awareness and their knowledge of ISO 14001. Basic training for other employees is expected to be completed by April 1999.

**Percentage of all employees with environmental training**




## ENVIRONMENTAL ACTIVITIES IN 1998

In 1998 environmental activities largely aimed at building up expertise and working methods in order to enable Skanska USA to systematically – and aggressively – pursue environmental issues in its day-to-day work. Environmental management systems are thus an important foundation in this work. Procedures to secure the environmental aspects of projects are increasingly important to clients. In addition, the number of projects

TIDEWATER SKANSKA IS DECONTAMINATING A 70 SQUARE KILOMETER (27 SQUARE MILE) AREA IN THE ROCKY MOUNTAINS, COLORADO. THE PROJECT INVOLVES TURNING A FORMER MANUFACTURING SITE FOR CHEMICAL WEAPONS BACK INTO A WILDLIFE REFUGE.

with an environmental dimension is growing. Examples of such projects include investments in mass transit and traffic reduction in downtown areas and improved wastewater treatment. They also include projects related to the management of old landfills requiring action to minimize the risk of continued environmental impact. Skanska USA's investment in high environmental expertise and experience of several environmentally related projects will be an increasingly important competitive advantage.

There are many examples of environmental activities currently underway in Skanska USA's operating companies. The following sections present selected projects and other environmentally related activities. Their purpose is to illustrate in practical terms what environmental activities mean in certain areas. These examples may also inspire additional and even more far-reaching environmental initiatives in 1999.

**Improved traffic**

Slattery Skanska is currently involved in a large-scale infrastructure project which will create many environmental advantages. The project involves relocating an existing freeway system leading into central portions of Boston to newly constructed underground tunnels. The result will be the reclamation of approximately 60 hectares (150 acres) of surface area in the heart of the city that can be used for other purposes. There are plans to create a botanical garden and other parks for recreational purposes on this tract. Air quality will improve due to reduced traffic congestion, and noise levels in central Boston will diminish.

The project has been underway for a few years and will lead to major improvements for residents of the area. Another positive side effect of the project is that an old landfill close to Boston Harbor will be covered with excavation material and transformed into a park and yacht harbor. This will mitigate an existing environmental and aesthetic problem.

**Rail connection to JFK**

Slattery Skanska has recently been awarded a contract to build a light rail line to New York City's John F. Kennedy Airport outside Manhattan. The line will link up nine terminals at JFK and allow quick, reliable transportation to central New York City and Long Island. Passengers will be able to reach JFK from Manhattan in approximately 45 minutes, compared with the two hours it often takes by car. When the line goes into operation in 2002, an estimated 34,000 passengers will use the train service daily. The number of passengers is then expected to grow rapidly. The clearest environmental benefits are less air pollution and noise, due to reduced car traffic.

**Environmental dialogue with clients**

Spectrum Skanska specializes in high-end real estate construction. In 1998, the company introduced formalized environmental assessments on all property at the time of purchase. This is related to important liability issues but is also a significant issue for home buyers. Spectrum Skanska is now working out a package of extra options in which home buyers on all future projects will be able to choose among a number of environmentally friendly options. Among other things, this package includes water-saving installations and a choice of environmentally sound materials.

ENVIRONMENTAL MANAGEMENT, TRAINING AND CONTACT PERSONS

The chart below shows when the business area's various units are expected to complete environmental certification and the percentage of their employees who have received basic training. For those who would like further information, contact persons within each unit are also listed.

| | Estimated completion of environmental certification Month-year | Percentage who had completed basic training by Dec. 1998 | Contact person | E-mail |
|---|---|---|---|---|
| Skanska USA Inc. | Oct. 1999 | 100 | Mike Lacey | mike.lacey@skanskausa.com |
| *Companies:* | | | | |
| Slattery Skanska | Oct. 1999 | 8 | Mike Okuniewicz | michael.okuniewicz@slatteryny.com |
| Koch Skanska | Oct. 1999 | 4 | Jerome Koch | j20645@aol.com |
| Spectrum Skanska | Oct. 1999 | 5 | Craig Doyle | craig.doyle@spectrumskanska.com |
| Beers Construction Co. | Oct. 1999 | 61 | Brent Darnell | bdarnell@beerscc.com |
| Sordoni Skanska | Oct. 1999 | 3 | Dan Wurzburg | dawurzbu@sordoni.com |
| Tidewater Skanska | Oct. 1999 | 1 | Ed Keeter | ehkeeter@aol.com |

### Reducing waste – and costs

Sordoni Skanska has introduced a recycling program at several of its construction sites on a trial basis. One example is the new headquarters of Pharmacia & Upjohn in Bridgewater, New Jersey. When the old building is demolished, roofing tiles, lighting fixtures and carpeting are among the items being saved. Carpeting is being returned to the supplier, which in turn makes new carpets out of the material, reducing carpeting costs in the new building by 50 percent.

Spectrum Skanska works systematically to limit the quantity of waste at its home construction sites. One way this is done is through "Value Engineering." This method uses technical solutions to reduce the amount of materials necessary to achieve the same result. "Value Engineering" has been evaluated in a few projects and will be adopted as part of Spectrum's environmental management system.

For some years, Beers Construction has systematically practiced waste separation at construction sites. Office equipment, metals, concrete, doors, wood, steel pilings and other materials have been separated out. Besides the environmental benefits of at-source waste separation, this practice has also replaced a waste-related expense item with a revenue item in the accounts.

### Safety and the environment

In addition to the obvious aim of creating safe work sites, in the United States there is also an economic incentive for limiting the number of accidents. Many projects are required to set aside a certain sum of money related to the possible risks of a project. The premium is considerably lower for companies with a low frequency of work site accidents.

As a result, all Skanska companies in the United States have had extensive safety programs in place for a number of years, thereby reducing the number of work-related accidents.

Before beginning a project, Slattery Skanska conducts an inventory to identify potential safety risks related to project implementation. A project plan is devised on the basis of this inventory and is communicated to everyone working on the project. The company provides general safety training and conducts follow-ups to ensure compliance with the plan.

Nielson's Construction, a unit of Tidewater Skanska, has developed a far-reaching risk management program that has reduced the number of accidents and raised productivity at its construction sites. The program includes extensive employee training regarding safety issues and an economic incentive that gives employees a bonus if their site is accident-free. Nielson has won a number of prizes for this program, including a national prize for having the safest construction sites in the United States. Its successful efforts to increase risk awareness has also helped it win additional contracts from major industrial companies.

The systemization found in Skanska USA's safety work – which today is well-established from top management to on-site workers – is being applied to its environmental management work. The purpose of this coordination is to enable employees involved in safety issues to also pursue environmental issues at the project level. Integrating environmental issues into an existing management system will achieve major synergies and increase in efficiency.

### Clean-up projects

Tidewater Skanska has been involved in a number of environmental remediation projects in recent years. Old environmental problems often require careful work to reduce the risks of future impact. For example, this may apply to clean-up projects on land previously used for military practice or maneuvers. Projects of this type require a contractor that has special expertise both in the environmental and safety fields.

In 1998, Tidewater Skanska was involved in several projects related to hazardous waste repositories and remediation of waste from former mines. In Leadville, Colorado, the main task was to correct the most significant environmental problems caused by mining waste. Meanwhile great importance was attached to preserving the character of the historical mining town, while minimizing project impacts on area residents and businesses as much as possible.

### FINANCIAL ASPECTS

Financial aspects can be divided into risks and opportunities. There currently exists a well-established risk awareness at Skanska USA companies. Among other things, companies carry out soil inspections to identify potential environmental problems before purchasing a property or beginning a major civil construction project.

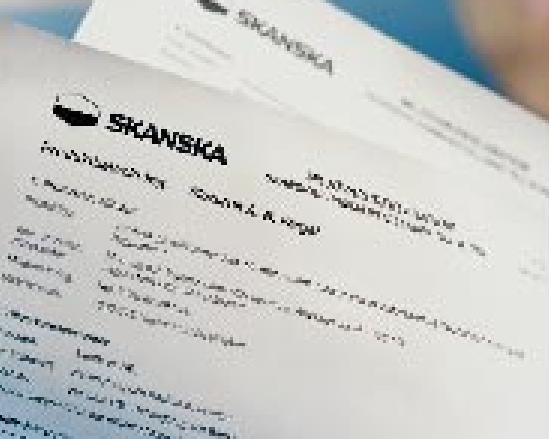
Skanska is one of the first construction companies in the United States to create an environmental image for itself. The U.S. market for environmentally related projects has grown strongly in recent years. Skanska USA is currently implementing several large projects of this type. In Skanska USA's view, strategic efforts to continue improving its environmental expertise are expected to strengthen its market position.

### ENVIRONMENTAL OBJECTIVES

During the year, Skanska USA adopted an environmental policy which highlights four priority areas:

- Waste
- Resource consumption
- Air and water emissions
- Impact on sensitive natural environments

Each company in the business area is responsible for establishing its own environmental objectives and targets. Beers Construction established such goals in 1998. Other companies will establish their objectives and targets early in 1999.




Environmental Product Declarations contain information on a product's contents and its environmental impact throughout its life cycle.

Skanska Sweden includes the Group's Swedish operations in the fields of building and civil construction-related services. The business area also includes a number of specialized subsidiaries with construction-related operations. In addition, Skanska Sweden is responsible for the Group's exports of large civil construction projects to countries not regarded as "domestic" markets.

# SKANSKA SWEDEN

*Skanska Sweden's clients are demanding higher and higher environmental performance. It is clear to us that environmental consideration will become a significant competitive factor. For this reason, our clients play an active role in our environmental activities.*

*Many residual products from the construction process are hazardous and affect the environment both during and after the implementation of a project. How, then, do we translate this realization into practical action?*

*Environmental considerations will need to become part of our day-to-day work. We must work systematically to incorporate environmental issues into project evaluations, employee training, management systems etc. All units will be environmentally certified by the year 2000 at the latest. The environmental management system in itself is not the goal, but is instead a tool to fulfill our vision "to become a model for the Swedish business sector" in the environmental field as well. This is no easy task, and we are still only at the beginning of this effort. However, we are convinced that when we achieve our goal, we will also see result in the form of better environmental solutions, greater confidence from our clients and greater profitability.*

per-ingemar persson, head of the skanska sweden business area

## ENVIRONMENTAL ORGANIZATION/MANAGEMENT

Several studies conducted during 1998 illustrated how operations affect the environment and how this impact can be minimized. Significant environmental aspects common to the business area are:

— chemicals/hazardous substances in building products
— waste, including hazardous waste
— energy consumption and emissions of hazardous substances into the air
— environmental impact of products during their service lives.

The various companies and divisions of Skanska Sweden may also have other significant environmental aspects, which they identify and prioritize in their own targets and action plans.

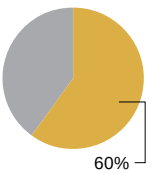
During 1998, Skanska Sweden developed a new management system. It integrates all management issues such as project and financial controls, working environment, quality and the environment. The management system will be implemented in early 1999. Each unit in the business area has its own timetable for the environmental certification of its management system, although this must be completed by December 31, 2000. Some units were already certified at the end of 1998.

## ENVIRONMENTAL TRAINING

Basic training for all Skanska Sweden employees focuses on the environmental impact of the construction sector, Skanska's environmental activities and each employee's responsibility for the environment. This has been supplemented by specific training for various employee categories at Skanska Sweden.

During 1998, the business area developed a training program on internal environmental audits for quality auditors. About 50 people completed this three-day program in 1998. Because follow-ups of experience and progress in the environmental field are a central element of the management system, internal auditors play a key role in environmental management.

**Percentage of all employees with environmental training**




## ENVIRONMENTAL ACTIVITIES IN 1998

During the year, most work focused on building up expertise and methods for systematically taking environmental issues into account in day-to-day work. Integrating environmental activities into the management system is therefore an important basis for future work.

There are many concrete examples of environmental activities currently being carried out at the business area's various units. The following sections present some projects and other activities with an environmental focus. Their purpose is to illustrate what environmentally sound activities mean in practical terms within a few high-priority areas. These examples may also inspire similar and even more far-reaching environmental initiatives in 1999. In some cases, experiences from projects that have been problematic from an environmental standpoint are also summarized.

### Reduced energy consumption

Skanska Installation's operations include design, installation work and servicing in the areas of ventilation and electricity/telecommunications/computers. Environmental performance also provides many business opportunities, because energy and the indoor environment are central issues in contacts with clients. During the year, Skanska further refined an analytic tool that can summarize a property's energy status and savings potential.

One example of how new technology can reduce resource consumption is Skanska Installation's own headquarters in Växjö,

STOCKHOLM'S NYBODAHÖJDEN IS THE FIRST RESIDENTIAL AREA TO INTRODUCE OPTIONAL PACKAGES FOR TENANTS WITH ALLERGIES. EACH PACKAGE IS ADAPTED TO ALLEVIATING A PARTICULAR TYPE OF OVERSENSITIVITY, SUCH AS DUST, CONTACT, POLLEN AND FOOD ALLERGIES. A NEWLY DEVELOPED FILTER THAT REDUCES LEVELS OF VARIOUS PARTICULATES IS ALSO INSTALLED IN ALL THE APARTMENTS.

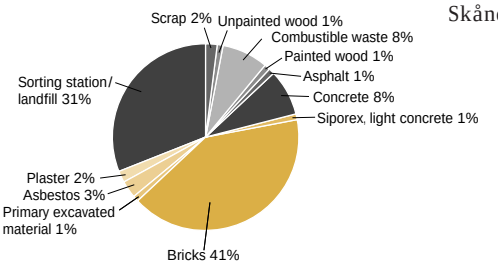
Sweden. In this building, it is possible to control room temperatures and lighting entirely according to individual wishes. Lighting and ventilation automatically shut off when no one is in a room, resulting in sharply lower energy consumption and improved indoor climate compared to normal buildings. The project has drawn a great deal of attention in the market.

### Waste and recycling

In 1998, Skanska Prefab's environmental activities resulted in, among other things, the development of new procedures for handling residue from the manufacture of concrete elements. Concrete residue is crushed and reused in new concrete, streets and roads, covering material and fill. In locations where Skanska Prefab operates, it pursues a dialogue with local municipalities, contractors and other interested parties in order to find nearby markets for the crushed material. As a result of this method, Skanska ends up with a good market for residual products that would have otherwise become waste, and the use of natural gravel and crushed rock can be reduced.

For some years, Skanska has systematically practiced waste separation at its construction sites. The figures in the diagram were compiled from Skanska's construction sites in the Skåne province, southern Sweden, but they provide a good picture of the company's projects throughout the country.

**Categories of waste at construction sites**




Source: Southwest Scania Solid Waste Company (SYSAV).

### Environmentally sound purchasing

One important element of Skanska's environmental management is the work of its purchasing department. Skanska Sweden is evaluating the quality, cost and environmental aspects of its central agreements with suppliers. In addition, Skanska has devised environmental product declarations for the most common building products. According to an industry-wide agreement in Sweden, material suppliers themselves are responsible for formulating building product declarations, stating the contents and environmental impact of building products in various stages of their life cycle. These declarations will be available through a database maintained by the construction consulting firm Svensk Byggtjänst, among other locations. Support tools developed for other agreements and purchases will make it possible to make environmental demands at the time of procurement.

Skanska Maskin and Skanska Road Construction have introduced new environmental standards for buying construction equipment. Purchased equipment is required to meet the European Union's classification directive Stage I standards or to have catalytic converters and/or particulate filters that attain equivalent environmental performance. At time of purchase, environmentally sound oils, tires and alternative fuels are also discussed. During 1998, Skanska Sweden pur-

ENVIRONMENTAL MANAGEMENT, TRAINING AND CONTACT PERSONS

The chart below shows when the business area's various units are expected to complete environmental certification and the percentage of their employees who have received basic training. For those who would like further information, contact persons within each unit are also listed.

| | Estimated completion of environmental certification Month-year | Percentage who had completed basic training by Dec. 1998 | Contact person | E-mail/Telephone |
|---|---|---|---|---|
| Skanska Sweden business area | | | Johan Gerklev | johan.gerklev@skanska.se |
| *Division/Company:* | | | | |
| Northern Sweden Division | Dec. 2000 | 74 | Lars-Erik Rann | lars-erik.rann@skanska.se |
| Residential Construction Division | Dec. 2000 | 56 | Bengt Wånggren | bengt.wanggren@skanska.se |
| Commercial Buildings Division | Dec. 2000 | 80 | Staffan Söderberg | staffan.soderberg@teknik.skanska.se |
| Road Construction Division | Dec. 1999 | 74 | Ronny Wahlström | ronny.wahlstrom@skanska.se |
| Asphalt and Concrete Division | July 1999 | 79 | P-A Truedsson | per-anders.truedsson@skanska.se |
| Underground Construction and Bridges Division | Dec. 2000 | 60 | Mats U Andersson | mats.u.andersson@skanska.se |
| International Civil Engineering Division | Dec. 2000 | 95 | Anna Dahl | anna.dahl@skanska.se |
| Sundlink | — | 75 | Patricia Andersson | patricia.andersson@sundlink.se |
| Skanska Prefab | July 1999 | 100 | Anders Hamberg | anders.hamberg@skanska.se |
| Skanska Maskin | Oct. 1999 | 100 | Anna Lennerstedt | anna.lennerstedt@skanska.se |
| Skanska Stålteknik | Dec. 2000 | 0 | Sune Nordström | 031-89 43 00 |
| Sektionsbyggarna | Dec. 2000 | 58 | Simon Nygren | simon.nygren@flexator.se |
| Skanska Installation | April 2000 | 25 | Peter Lindell | peter.lindell@skanska.se |
| Facility Management | Dec. 2000 | 0 | Mattias Dewoul | mattias.dewoul@skanska.se |

chased some 15,000 cubic meters (20,000 cubic yards) of fuel, of which about 90 percent was Environmental Class 1.

**Evaluation method and chemical database**
The development of an evaluation method for purchased products began in 1998. Among other things, the method includes a number of lists in which Skanska Sweden states its position on environmentally hazardous substances. This evaluation method answers questions such as: Which products are approved? Which are going to be phased out? Which products are an Environmental Choice? This model will be useful in achieving the goal of phasing out all environmentally polluting chemicals used in Skanska Sweden's operations.

To make it possible to monitor and distribute information about chemicals used in its operations, Skanska Sweden has developed a database, which will be available on Skanska's intranet in 1999.

**Indoor climate**
A building's indoor climate is of vital importance to human comfort. Skanska Residential Construction has devised a program to improve indoor climate standards in the homes that Skanska builds. This consists of two parts – supplementary allergy-adaptation packages and a general program for all new homes built from 1999 on.

Each allergy package focuses on alleviating particular allergy or oversensitivity problems and was developed in consultation with experts in health and indoor climate as well as the Swedish Asthma and Allergy Association. Today four allergy packages have been developed, and another two are under development. The allergy packages can be installed in all homes that Skanska builds in Sweden.

The general allergy program focuses on good air quality, which is achieved by filtering intake air. The filter reduces the levels of various particulates. The homes are also designed for easy maintenance and cleaning.

**Clean-up projects**
The Skanska Road Construction Division carried out a number of soil decontamination projects in 1998. One example is a tract of land that the Swedish pharmaceuticals group Astra took over from the municipality of Södertälje.

The project, one of Sweden's largest-ever soil decontamination operations, comprised 40,000 cubic meters (50,000 cubic yards) of soil containing coal tar, cyanide and other substances. The work involved very strict safety regulations. The project has resulted in a number of new decontamination contracts for Skanska Road Construction.

**The Halland Ridge**
The 1997 environmental accident at the Halland Ridge rail tunnel project, caused by an underground toxic leak, illustrates the importance of preventive environmental efforts and an expanded dialogue with clients and suppliers on environmental issues from the planning phase onward.

In 1998, Skanska provided an environmental training program for employees and meanwhile implemented a complete environmental management system for the project. The initial environmental review indicated shortcomings in suppliers' environmental information on a number of chemical substances, and thus the need for increased in-house monitoring by Skanska. Environmental standards in conjunction with purchasing have therefore been supplemented by a detailed risk assessment.

The Halland Ridge clean-up was successful and was ended after a decision by the county administrative board. Waterproofing work in the completed parts of the rail tunnel is continuing and is expected to be finished in the autumn of 1999. This work involves lining the tunnel with concrete, an environmentally safe method, to ensure that there is no leakage of groundwater.

The commission of inquiry on the tunnel project appointed by the Swedish government after the accident submitted its final report in November. This report sheds light on the complex decision-making process, involving many parties, which often surrounds major infrastructure projects. It emphasizes the great impact that decisions made at an early stage of a project can have on its implementation. The Swedish government is expected to decide the future of the tunnel project in 1999.

## FINANCIAL ASPECTS

Clients and financiers are increasingly demanding environmentally sound projects. In addition, Sweden has various forms of governmental investment subsidies for ecological construction. This makes it easier for Skanska to work together with the client to develop environmentally sound solutions.

Skanska conducts an analysis of environmental risks in conjunction with major civil construction projects before deciding whether to submit a tender. During 1998, it began an evaluation of previously completed international civil construction projects. Such evaluations will further improve the Group's risk assessment procedures.

### ENVIRONMENTAL OBJECTIVES

The Skanska Sweden business area's environmental objectives focus on phasing out environmentally hazardous substances and reducing energy consumption. The following objectives have been established:

Chemicals/environmentally hazardous substances
- ensure that chemicals are handled in a safe, correct manner
- phase out environmentally hazardous chemicals/substances used in operations.

Energy consumption and air emissions
- increase the proportion of renewable and environmentally sound fuels/types of energy used
- reduce air emissions
- raise energy efficiency in buildings and facilities.

Each division must apply Skanska Sweden's common environmental objectives and establish its own targets and action plans based on these.

Targets concerning chemicals/environmentally hazardous substances are set at the business area level
- by the year 2002, materials purchased through central and regional agreements must be free from substances on Skanska Sweden's phase-out list
- by the year 2004, all purchased material must be free from substances on Skanska Sweden's phase-out list
- purchased chemicals must be evaluated using the chemical database
- bromine fire retardants used in Skanska Sweden's operations must be phased out by the year 2002.

The divisions set their own targets concerning energy consumption and air emissions.

One important element of environmental program is the careful selection of raw materials.

Skanska Europe includes the Group's established Finnish and Danish domestic markets; its developing markets in Norway, Poland and Great Britain; as well as the Group's other building and civil construction operations in Europe outside Sweden. The business area's building component 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 management assignments outside Sweden in the building construction field.

# SKANSKA EUROPE

*We must understand the importance of approaching environmental issues systematically and with personal conviction. It is also vital that responsibility for these issues rest with each company and that these issues be part of day-to-day operations. This is our overriding goal.*

*The Group's environmental objectives are now being put into practice in the Skanska Europe business area. We have worked hard to provide basic environmental training for our employees.*

*Environmental awareness influences our business priorities with regard to both products and the construction process. A greater focus on environmental issues in project finance work is also driving the development of environmentally sound technical solutions and construction methods.*

*During 1999, environmental management systems will begin to be used in the operations of most of our units. By devoting major resources to environmental training and auditing our operations, we have laid the groundwork for the implementation of active environmental performance at Skanska Europe.*

anders c karlsson, head of the skanska europe business area

## ENVIRONMENTAL ORGANIZATION/MANAGEMENT

Environmental activities take place at the company level in Skanska Europe. The business area's building component companies have had functioning environmental management systems in place for several years in most operations, which are either ISO 14001 certified or EMAS registered. These companies can therefore provide valuable support to other units in their efforts to develop environmental management systems.

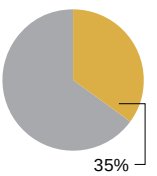
Companies responsible for project-based construction operations have generally not yet progressed as far in adopting environmental management systems. During 1998, the environmental impact of the majority of our companies was audited and their employees were trained.

Environmental audits have made it possible to devise goals and action plans in areas where environmental activities will have the biggest effect. The monitoring systems are the most highly developed in companies that are already certified. For example, the Kährs Group, which makes wooden flooring, has specified the material and energy balances for each facility.

## ENVIRONMENTAL TRAINING

During 1998, basic environmental training continued in most companies. An extensive training program was carried out at Skanska International Construction, which operates in Germany, Spain, the Czech Republic, Latvia, Hungary, Malaysia and other countries. At each training session, the team in charge of the program utilized experiences from an environmental study of one actual project in that country. In this way, people working on the project could effectively link this training to actual environmental issues in their projects. In addition, advanced courses for environmental officers were organized in the various countries, and 12 internal environmental auditors were trained.

**Percentage of all employees with environmental training**




## ENVIRONMENTAL ACTIVITIES IN 1998

During the year, environmental activities focused largely on creating expertise and working methods in order to systematically incorporate environmental issues into day-to-day work. Environmental management systems are therefore a necessary foundation for continued work in this field.

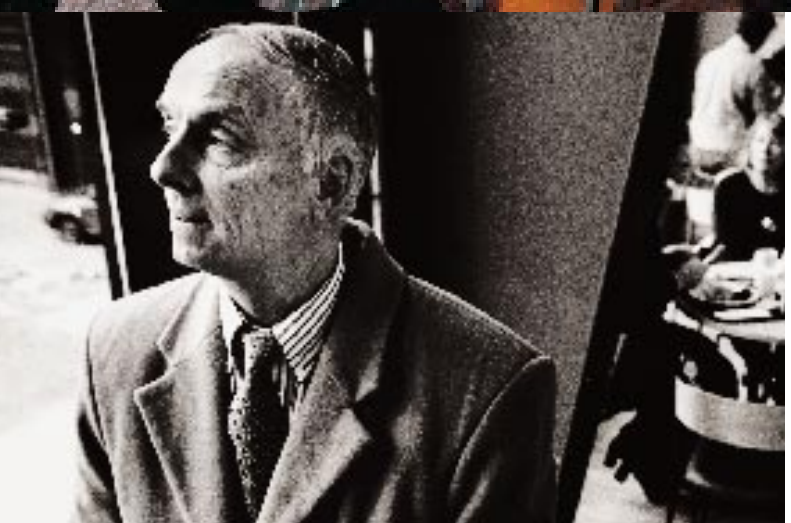
There are many concrete examples of environmental activities currently being carried out within Skanska Europe's various units. The following sections present some projects and other activities with an environmental focus. Their purpose is to illustrate what environmentally sound activities mean in practical terms within a few high-priority areas. These examples may also inspire similar – and even further reaching – environmental initiatives in 1999.

### Resource-efficient construction

Skanska Jensen A/S works with civil and building construction projects in the Danish market. Its environmental program started in the early 1990s and the first environmental management system used in a project was introduced in 1994. During 1998, the company developed a new environmental management system that meets ISO 14001 standards. All new projects beginning from August 1, 1999 onward will use this system.

Skanska Jensen's system focuses on chemicals, waste, indoor climate and energy consumption.

In mid-1998, a new building construction project – the headquarters of the Society of Danish Engineers (IDA) – was completed. Environmental considerations permeated the entire project, which totaled 13,000 square meters (140,000 square feet) The project focused on creating a favorable indoor climate and minimizing environmental impact during the building's entire service life.



SKANSKA CONSTRUCTED THE NEW HEADQUARTERS OF THE UNI STOREBRAND INSURANCE COMPANY IN OSLO, NORWAY. TOGETHER, SKANSKA AND UNI STOREBRAND DEVELOPED AN OFFICE BUILDING WHERE THE CHOICE OF MATERIALS AND TECHNICAL SOLUTIONS RESULTED IN GOOD INDOOR CLIMATE AND HIGH ENVIRONMENTAL PERFORMANCE.

The main environmental measures were:
— controlling general lighting by sections, resulting in energy savings of 20–30 percent
— collecting rainwater, which is used to flush toilets
— using environmentally friendly paints, whitewash for walls and linseed oil paints for wooden surfaces
— excluding all PVC products
— installing a cooling system which uses both cooling water and seawater, thereby reducing energy consumption
— building a solar cell facility.

Using an environmental management process during the planning phase was a new experience for most of the parties involved. The process was educational, exciting and at times laborious and difficult. One of the most important lessons learned was that the best results are achieved when there is an open dialogue between all involved parties throughout the project.

**Environmental purchasing demands – sustainable forestry**

The Kährs Group manufactures parquet flooring and is one of the companies at the forefront of environmental efforts in its field. In 1998, the fourth of Kährs' five manufacturing facilities was certified. This means that 95 percent of its production is ISO 14001 certified or EMAS registered.

One of the company's environmental objectives is to contribute to long-term, sustainable forestry. Kährs is therefore pursuing environmental certification of forestry operations. Its ambition is that by the year 2005, it will procure at least 50 percent of its sawn timber from forest owners and suppliers that have an environmental protection policy and can demonstrate that they also comply with it. At least half of the suppliers of other wood products must be ISO 14001 certified or EMAS registered by the year 2005. This work began in 1997. In 1998, a total of 1,300 cubic meters of lumber from timberland with a Forest Stewardship Council (FSC) certificate or from land with Green Plans was supplied to Kährs' factory in Nybro, Sweden. This is the equivalent of around two percent of the Nybro factory's purchased volume.

Each factory establishes its own material and energy balances, which form the basis for setting targets and ratios in its ongoing environmental management.

**Better indoor climate, "clean construction"**

Skanska AS works with project development and building construction in the Norwegian market.

In 1998, its environmental activities focused on raising the degree of waste separation at its construction sites as well as creating a "clean construction" image for the building construction projects. The degree of at-source waste separation for completed building construction projects averaged 30 percent. The principles of "clean construction" involve keeping a project clean during

ENVIRONMENTAL MANAGEMENT, TRAINING AND CONTACT PERSONS

The chart below shows when the business area's various units are expected to complete environmental certification and the percentage of their employees who have received basic training. For those who would like further information, contact persons within each unit are also listed.

| | Estimated completion of environmental certification Month-year | Percentage who had completed basic training by Dec. 1998 | Contact person | E-mail/Telephone |
|---|---|---|---|---|
| *Project-based operations* | | | | |
| Skanska Jensen A/S | Dec. 2000 | 7 | Peter Gamst | peter.gamst@skanska.dk |
| Skanska Oy | Dec. 1999 | 50 | Tuomas Särkilahti | tuomas.sarkilahti@skanska.se |
| Skanska International Construction AB | Dec. 2000 | 59 | Johan Prison | johan.prison@skanska.se |
| Skanska AS | Dec. 2000 | 9 | Karen Cecile B Möller | mollerk@skanska.se |
| *Komponenter/Byggsystem* | | | | |
| Kährs Group | Dec. 1999 | 93 | Åke Petersson | ake.petersson@kahrs.se |
| Poggenpohl Group | Dec. 1999 | 18 | Ludwig Bremer | +49 52 21 381 207 |
| Essmann Group | Dec. 2000 | 3 | Bettina Sanio | +49 52 22 79 10 |
| Elit Fönster AB | March 1999 | 93 | Lars Erik Hägg | lars-erik.hagg@elitfonster.se |

all its phases. This means continuously removing waste during all building phases, moving work processes that cause a lot of dust to special production spaces and thoroughly cleaning all completed rooms. In addition, great importance is attached to setting aside enough time in the production plan for the drying/ventilation of moisture in a building. "Clean construction" results in both improved indoor climate and a cleaner working environment.

The company's efforts to build up environmental management systems are also based on a holistic approach and the current Health-Environment-Safety system.

**Minimizing energy consumption**

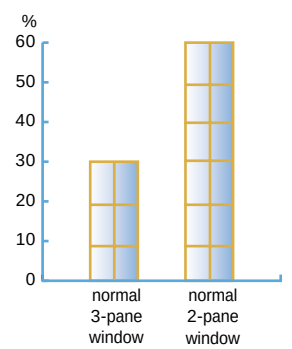
Elit Fönster AB, a window manufacturer, has worked with environmental issues throughout the 1990s. The company has focused on purification techniques, at-source waste separation and product development.

The largest environmental benefit here is in product development. Together with Trätek, the company conducted a life cycle analysis (LCA) of several of its windows. These analyses show that the greatest potential for reducing environmental impact lies in a window's insulating capacity.

A new window, the Elit Super, was launched in 1998. It is a 3-pane window with a low emissivity coating that prevents heat in the room from escaping. Replacing normal 3-pane windows with the Elit Super lowers energy use by 30 percent, and replacing old 2-pane windows with the new ones saves around 60 percent.

Taking into account the current standard for windows, if all windows on today's Swedish buildings were designed like Elit Fönster's new product, the energy saved would be the equivalent of the production at one nuclear power plant (around four TWh).

**Energy saving from the replacement of a normal window to an Elit Super**




**The Ecometer – a tool for measuring environmental impact**

Skanska Oy works with building and civil construction projects in the Finnish and Russian markets. The company actively pursues the research and development of environmentally sound design methods, the development of design and construction methods that make buildings energy-efficient and the reduction of the quantity of waste at projects.

To give clients a better choice of environmentally sounds options when ordering, Skanska Oy has developed a measuring method – the Ecometer – as a support tool to obtain reliable and comparable information on a building's entire service life. Factors used by the Ecometer are choice of input materials, building methods and energy consumption derived from renewable and non-renewable sources during a building's service life. This method can be used today for all types of building construction.

The first project using the Ecometer systematically in its planning work has just begun. If successful, the Ecometer will be further refined to enable it to be used in all new construction projects.

## FINANCIAL ASPECTS

The financial aspects of Skanska Europe's environmental programs can be divided into two parts:

– new business opportunities resulting from increased expertise in the environmental field
– lower costs in the form of more efficient use of resources.

Already today, a number of financiers of major European construction projects are demanding higher environmental standards. Skanska expects this trend to continue. Among other things, there are clear signals from the European Union that its financial support to new member states will prioritize environmental issues.

Over the past few years, Finland's Skanska Oy has devised methods for measuring quantities of waste resulting from new construction projects and relating this to a project's costs. This work demonstrates a link between low quantities of waste and sound financial results for the project. In light of this study, the company has set a target of four kg (nine pounds) of waste per built volume in cubic meters for new construction projects.

### ENVIRONMENTAL OBJECTIVES

Because Skanska Europe's operations are highly differentiated, the companies cannot work toward identical environmental objectives. Each company in the business area is setting its own objectives and targets in conjunction with the introduction of environmental management systems, that is, by the end of 1999. All of the building component companies in the business area established their environmental targets in 1998.

Openness toward the outside world provides new impulses for environmental activities.

During the year, Skanska expanded its dialogue with the Company's stakeholders on environmental issues. This is an important precondition for further developing Skanska's programs in this field. The following section describes some of these activities.

# OPENNESS AND DIALOGUE

### INTERVIEWS WITH SKANSKA'S STAKEHOLDERS

In the autumn of 1998, Skanska initiated a series of interviews in Sweden in order to obtain a clearer picture of what its stakeholders expect from Skanska's environmental programs. These interviews were conducted by external environmental consultants. The interviewees represent clients, subcontractors, public agencies and molders of public opinion. Most of those interviewed have a leading position in their organization and are knowledgeable about the construction and real estate industries.

The interviewees generally agreed on the following:

— Environmental issues will become more important to Skanska. The Company's large environmental impact and increasing number of environmentally demanding clients were often cited as reasons. Many of the interviewees also emphasized that environmental issues are a generational issue. This may explain the increasing expectation that companies will devote attention to the environment.
— Contractors have a responsibility toward clients when it comes to environmental, social and ethical issues. Skanska is expected to have extensive knowledge of these issues and can thus initiate a discussion with the client on suitable changes in a project. In the end, it is a question of whether a contract conflicts with Skanska's policies, and in such cases whether Skanska should decline to participate.
— Skanska has improved its environmental performance over the past two years. Specific areas mentioned were its handling of chemicals, selection of materials and environmental information. One common perception was that Skanska's management has realized that these issues are very important. However, many interviewees said they were uncertain about how deeply Skanska has implemented the environmental policy in its organizational structure.

The interviewees expressed the following expectations of Skanska's environmental performance over the next five years:

— That Skanska should take more initiatives in the environmental field.
— That Skanska should participate in public discourse and initiate improvements.
— That Skanska should realize that it is cost-effective to bring environmental expertise into projects at an early stage.
— That Skanska should be more open about providing information on its environmental activities.
— That Skanska should be able to ensure the environmental soundness of its projects and develop systems and structures that bring environmental considerations into the picture at an early stage of project development.
— That Skanska should become the industry leader in the environmental field, by virtue of being a very large company.

### EVALUATION OF COMPLETED INFRASTRUCTURE PROJECTS

A comprehensive evaluation of hydroelectric power projects that Skanska has completed in developing countries over the past 20 years is underway. Its purpose is to compile lessons to be applied when preparing assessments of similar projects in the future, by examining the following and other issues: How is the project viewed today in the country and in the region? What went well? What went badly? What is Skanska's image?

The evaluation is being conducted by Skanska employees who are highly experienced in dealing with similar projects, but who have not been involved in these particular projects. Some early conclusions are:

— Skanska's work has received good marks in terms of operational reliability, technology, timetables and staying within budget.
— In most cases, the facilities have worked smoothly. The problems that have occurred have primarily been related to machinery.
— Necessary relocations of local residents near the hydroelectric power projects in question have been limited.

Skanska's ambition is to expand these types of evaluations over the next few years in order to pay more thorough attention to the environmental and social aspects of projects. In the case of major infrastructure projects, Skanska hopes that evaluations can take place in close collaboration with the international organizations that finance the projects.

### DIALOGUE WITH ENVIRONMENTAL ORGANIZATIONS

Late in 1998, Skanska initiated discussions with representatives of environmental organizations and environmental journalists. Skanska hopes that this type of interaction can lead to a continued and deeper dialogue. One central theme of this dialogue is how to improve the design and evaluation of projects in ways that give increased weight to environmental, social and ethical issues. Hopefully this dialogue will lead to mutual understanding and a more nuanced assessment of future projects.

### EXTERNAL EVALUATION IN 1999

In 1999 Skanska plans to carry out an external evaluation of its environmental management based on the environmental program of the International Chamber of Commerce (ICC), of which Skanska became a signatory in 1995.

# GLOSSARY

**BOT** is short for Build-Own-Transfer. The idea behind this term is 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.

**Building products declaration.** A Swedish industry-wide agreement on a common system for declaring a building product's internal and external environmental impact from a life cycle perspective.

**Certification.** An independent examination of an operation and a confirmation that it meets 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.

**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 audit.** A systematic, objective review of an organization's environmental work aimed at examining whether an operation is run in accordance with, for example, an environmental policy or an environmental management system.

**Environmental management systems** describe how a company or organization structures its overall environmental work. See also: ISO 14001 and EMAS.

**Environmental status report (on real estate).** A method for surveying a building's environmental status in regard to indoor climate, external environment and energy and natural resource consumption.

**European Union Classification Directive.** The EU issued a directive on the environmental classification of construction equipment with diesel engines, based on their air pollution emissions. There are currently criteria for two environmental classifications, Stage I and Stage II. The latter is the stricter standard.

**Factor Ten** means that the consumption of energy and natural resources in production processes, products, infrastructure and services shall be reduced to one tenth of current levels. Increasing resource effectiveness by a factor of ten is considered necessary in order to ensure an ecologically sustainable society.

**FSC certification.** The Forest Stewardship Council (FSC) is an independent international organization aimed at promoting environmentally responsible, socially beneficial and ecologically sustainable management of the world's forests. Its members represent the timber industry, environmental and conservation groups, indigenous peoples' organizations, forest workers' organizations and companies that use and process forest products. Forest owners can apply to have their forests certified. If their application is approved, they receive a certificate as evidence that their forests are managed according to FSC's principles.

**Green plans** are support tools for the planning of forestry work. They were developed by the timber industry with the aim of striking a balance between efficient forest harvesting and responsible stewardship of natural resources. Among other things, they include environmental protection goals for extremely sensitive areas as well as action proposals.

**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 used as refrigerants. They are chlorine-free and do not deplete 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.

**Initial environmental review.** A survey of an organization's current status in regard to environmental issues. It usually comprises a review of environmental legislation relevant to the organization's operations and a description of its environmental impact. It also analyzes how an organization works in a structured way with environmental issues and any environmental accidents that occurred within the organization.

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

**ISO 14001** is an international standard for environmental management systems.

**Life cycle analysis (LCA)** is a compilation of a product's material and energy flows as well as an evaluation of its total environmental impact during its entire service life, from raw materials to disposal of the used product.

**Mandatory ventilation inspection (OVK).** According to Swedish law, to ensure a building's satisfactory indoor climate, the real estate owner is responsible for seeing to it that inspections of ventilation systems are implemented.

**Ozone** or $O_3$ is a gas found in the stratosphere, 15–40 km (9–25 mi) 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.

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

**Steel piling.** Vertical support structure used in excavation work to accommodate differences in elevations and to distribute the loading of the soil or to prevent water infiltration.

**Swedish environmental Code.** A new Swedish statute that updates and incorporates the contents of 15 existing environment-related laws, including the Nature Conservation Act, the Environment Protection Act, the Act on Chemical Products and the Environmental Damage Act. The Environmental Code took effect on January 1, 1999.

**World Business Council for Sustainable Development.** A global organization for environmentally sound management, of which Skanska is a member.

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