

THE ENVIRONMENT AND SOCIETY

SUSTAINABLE DEVELOPMENT – FOCUS ON ENERGY

Buildings, infrastructure and civil engineering works are important elements of the construction of communities. At the same time, all construction affects the environment over an extended period. It is the construction industry's responsibility to build with as little climate impact as possible and to create environments that provide people with sound conditions for living a healthy life. Another NCC objective is to be the leading construction company in terms of responsible enterprise.

The construction and operation of buildings accounts for about 40 percent of total energy consumption in Europe. Of this energy consumption, approximately 15 percent is spent on the construction process and the remaining 85 percent on operating the building.

Limiting energy consumption is necessary, as are the use of products that do not harm the environment and the handling of waste with the smallest possible environmental impact.

Demand for energy-efficient buildings and solutions is growing.

INTEGRATED RESPONSIBILITY

Within NCC, responsibility for environmental and energy issues is integrated into the entire organization. Every manager, at all levels, is responsible for the operations being carried out with the smallest possible environmental impact and with the greatest possible energy efficiency within the confines of current laws and conventions.

Technical platforms and environmental analyses are tools for the environmental efforts and NCC's own technical consulting units have environmental specialists who assist in the tendering phase and during production.

The NCC Group has defined four overriding goals for its environmental work:

- Create healthy developed environments
- Reduce climate impact
- Reduce the use of harmful substances
- Contribute to recycling

HEALTHY DEVELOPED ENVIRONMENTS

A healthy environment means the absence of harmful substances, limited noise levels, good quality air and water, the absence of pollutants in the soil and limited impact on biodiversity and the ecosystem.

Within road paving, low-noise paving contributes to a better environment for people to be in. This type of paving is in increasing demand and comprises a growing product segment in NCC Roads.

REDUCED CLIMATE IMPACT

Growing insight into global warming contributes to accelerating the construction of energy-efficient buildings. Investors and corporate customers, in particular, are demanding energy-efficient office properties. NCC Property Development was the first property developer in Sweden to become a Green Building Partner. To date, there are two Green Building labeled office buildings – Kaggen in Malmö and Västerport in Stockholm (scheduled for completion in 2008). These properties have at least 25 percent lower energy consumption than the norm for new buildings.

Customer demand for energy-efficient buildings is also growing in the housing market. A study conducted by NCC in western Sweden shows that a majority of customers are willing to accept a larger initial investment to obtain lower energy costs in the long term.

In residential construction in Sweden, NCC is focusing on both energy-efficient buildings and passive homes, which

Remediation of industrial land at Tollare, Nacka, Sweden, where housing is to be built.



are buildings with low external input flows of energy. The Hamnhuset building on the northern shore of the Göta River in Gothenburg, which was constructed on behalf of the City of Gothenburg, is Sweden's first apartment block constructed as a passive building.

In Denmark, NCC began production in 2007 of energy-efficient single-family homes with a Swan eco-label and, in Finland, NCC began an energy-efficiency program with the objective of reducing energy consumption in buildings by 30 percent by 2011.

NCC Construction Sweden is the first Swedish construction company to create a template for climate self-declarations, in addition to the energy declarations included in the Swedish National Board of Housing, Building and Planning's Construction Regulations. The climate declaration goes further than the energy declaration since it takes the building's entire lifecycle into account.

The construction industry also impacts the environment through transports, the majority of which are local transports. Increased efficiency is therefore the foremost way of reducing environmental impact. The growing amount of international purchasing has also made long-distance transports a current issue. In Sweden, NCC is conducting a study in cooperation with the IVL Swedish Environmental Research Institute to establish the carbon dioxide emissions of various transport alternatives.

In 2007, NCC Roads acquired the cold asphalt technique from Danish RGS 90 (DSV Miljø A/S). This technique strengthens NCC's ability to pave in a more environmentally friendly and energy-efficient manner.

HARMFUL SUBSTANCES

The REACH chemicals legislation in the EU is an aid in work to avoid the use of harmful substances in the construction industry. In Sweden, NCC uses the BASTA system for product selection. BASTA, which is a cooperative project between the major players in the construction industry, goes further than REACH and aims at phasing out all particularly hazardous substances.

In Denmark, NCC uses the national chemicals database. In Norway and Finland, there are phase-out lists and NCC Construction Germany complies with national legislation.

RECYCLING

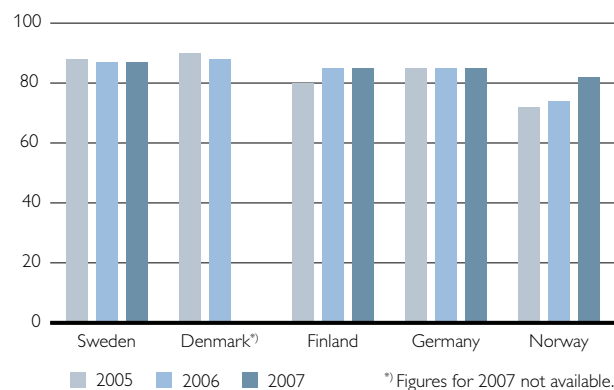
Recycling asphalt is an established process within NCC Roads. Virtually all asphalt that does not contain tar can be recycled. In 2007, recycled asphalt comprised around 7 percent of all hot asphalt. Considerable volumes are also used in cold recycling. During 2007, NCC also tested asphalt production featuring waste products from the steel industry with good results.

The overriding goal for NCC is to reduce the proportion of unsorted waste. During 2007, 40 percent of construction waste was mixed waste in NCC Construction Sweden, which was a reduction of 5 percent from the preceding year.

RESEARCH AND DEVELOPMENT

The environmental and energy perspective is a feature of almost all research in the construction and civil engineering sector. NCC Construction Sweden and NCC Roads together have seven industrial PhD students at Swedish universities and one in Denmark. Industrial construction of passive homes and energy performance for apartment blocks are two examples of areas of research.

Recycled construction waste, percent



During 2007, most of the operations achieved a recycling rate of at least 85 percent. The Norwegian operations have improved steadily and are now at the same level as the other business areas.



Bridge over Dalälven river, Torsång, Sweden.