



Fig. 20

Move in date:	<b>winter 1990</b>
Location:	<b>Övertorneå 100 km NE of Luleå</b>
Project initiators:	<b>municipality</b>
Size:	<b>9 households</b>

## RUSKOLA

The ecovillage, Ruskola is unlike the other ecovillages in many ways; because of its location, its design, and its founding/establishment. The town of Övertorneå lies 20 km south of the Arctic Circle with a population of circa 2,000. On weekends only one bus a day travels from Luleå, the closest train station, 100 km to the south. When I arrived on April 24 the landscape was still blanketed in a meter of snow. The climate here is extreme. The growing season is just over three months long. For twenty-five days of that season the sun never sets. In the winter the sun does not rise for three weeks. Northern Sweden is sparsely populated. The entire municipality of Övertorneå, 2,400 square kilometers, has 6,000 inhabitants. Distances between towns are long and the weather can make those distances many times as far.

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**Swedish municipalities** - Sweden reorganized its system of local government several times in the 20<sup>th</sup> century. Today Sweden is divided into 288 municipalities (*kommuner*). In 1931 Sweden had 2,531 municipalities. At that time the municipalities were comprised of local town and city governments. Rural inhabitants were left without representation in this system. The system was reorganized in 1971, forming 464 *kommuner*; and again in 1996, creating today's 288 *kommuner*. Today's municipalities are more like American counties. Each municipality/county is comprised of one or several towns/cities and a certain geographical area. This system streamlines government and the administration of services such as schools and medical care.

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Two kilometers from the center of Övertorneå lies a cluster of nine homes surrounding around a wide oval central lawn covered with trees. Unlike the other ecovillages, where the houses are clustered close together, each of the lots here is 2500 m<sup>2</sup>, with one household per lot. The large lots are intended to allow for additions to the homes as families grow; a spare room or small cottage for a teenage son or for grandparents who want their family nearby but not under their feet. A small ice hockey rink and barn for pigs border the gravel road up to the ecovillage.

### Getting there - Ruskola

Distinct from other ecovillages the development of the Ruskola ecovillage was an integral part of a larger initiative in Övertorneå to become Sweden's first ecological municipality in 1983. The municipality of Övertorneå was suffering greatly from the urbanization and high unemployment in the 1960's and 70's. Many people, especially young people, moved away from the

area. The area experienced almost a 40% drop in population, from 10,000 to 6,300 from 1967 - 1987. Businesses, capital and jobs were fleeing as well. Unemployment was at 8-10%. Morale was low and the *kommun* was very concerned about its future. Övertorneå needed hope. They needed a plan.

In 1983, Övertorneå, was declared an eco-municipality. The idea of a “green” municipality was originated in Suomussalmi, Finland in 1981. A native of Övertorneå, Torbjörn Lahti, returned to his home town to help establish Sweden’s first eco-municipality. Today Sweden has 60 eco-municipalities, all of which Lahti and his consulting firm, Esam Utbildning, has had a part in developing.

Övertorneå *kommun* has been successful in improving both the morale and the economy of the area through “green” planning projects such as: organically grown produce, eco-tourism, honey production, education and training to raise environmental consciousness, recycling, aquaculture, research and development on birch forests, and, of course, ecovillage Ruskola.

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## Eco - municipalities

Conditions for an eco-municipality:

- 1) strive to be **an example and a forerunner** in the the change of the society towards a sustainable
- 2) strive to be **more and more self-supporting** in question of goods and services
- 3) strive for **diversity in nature and the community** change
- 4) all goals **incorporate a global perspective**, since the the final objective of change is global
- 5) the community should be an **interactive leader**, encouraging grassroots and democratic initiatives

Six phases of development of an ecomunicipality:

- 1) **Initial phase** - establish interest in change
  - 2) **Problem oriented phase** - identify problem areas society
  - 3) **Enlightenment phase** - information gathering
  - 4) **Experimental phase** - implement pilot programs
  - 5) **Structural change phase** - carry out system
  - 6) **Exporting phase** - exchange knowledge with others
- More about eco-municipalities in part III, where next
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In 1987, the municipal council decided to initiate plans for an ecovillage. The current site for Ruskola was chosen. Later that fall an informational meeting was held for interested citizens. Almost forty people attended the meeting. The “pioneer” group of interested members began to research and draw up plans for the project. A steering committee composed of municipal officials oversaw the “pioneer” group. Another work group consisting of architects, environmental consultants, and experts from the University of Luleå consulted on the project. This second group worked closely with the “pioneer group.” A prerequisite for purchasing a lot in Ruskola is to participate in a study circle for at least sixty hours. The study circle discussed topics such as: environmental awareness, ecology, and ecological design. Five families participated in the initial study circles. The next four families participated in a second study circle.

Distinct from all of the other ecovillages, the residents in Ruskola were responsible for arranging the construction of their own homes. The houses are detached homes on large lots. The site plan was the only collective design. Some guidelines were established. The houses were to have extra insulation, a renewable heat source, and on-site waste water treatment. The houses had to be placed on the lot in such a way that the lot might be subdivided at a later date, adding a small house or office/work space. The purpose of this was

to encourage multiple generations of a family to remain in close proximity, but not necessarily in the same house.

### **Location - Ruskola**

Ruskola, in actual distance, is very close to the center of Övertorneå, just 2 kilometers to the south. It seems further away because the land in between is not developed. All basic services are located in Övertorneå, schools, stores, post office, restaurants, and so on. It is a short walk or bicycle ride to town. The residents of Ruskola are integral members of the larger community. It is a common to run into people you know when out and about the town. Everyone I met was tremendously friendly, even in the grocery store. The chairman of the city council, Kurt Larsson, personally took me on a site-seeing tour of the municipality and the ecovillage.

Two main roads border the east and west side of Ruskola. The site is mostly wooded. An open field, part of which is used for gardening, is at eastern entrance. The children's hockey rink and area for animals are also located on this south eastern corner. Most of the houses face east towards the river. The river, Torne Älven, is the northern border between Sweden and Finland. Övertorneå overlooks the river as well. A number of Swedes and Finns commute across the river to work in the other country. The culture of this area has significant Finnish influences. Principle employment in the area is in public sector jobs (childcare, education, healthcare, administration, etc.), almost 50%. Manufacturing, agricultural and forestry jobs comprise another thirty percent of the labor force.

Övertorneå itself is about 100 kilometers from Luleå, population 70,000. Two daily overnight trains travel from Luleå to Stockholm. Luleå has the closest train station and airport to Övertorneå. The province of Norrbotten, which includes the municipality of

Övertorneå, has an extensive bus system. All towns are have some type of bus service. Automobile travel is the predominant form of transportation.

### **Design - Ruskola**

The houses in Ruskola are single detached homes. Each family chose their own design, therefore, appearances vary a good deal. All of the houses have wood panel facades and a peaked roof. The houses were built on large lots around a wide oval gravel road. The center of the oval is thinly wooded. The view from one side of the oval to the other is not blocked by the trees. Most of the houses face east towards the river. This is not merely to have a view of the river. Because of the strong northern winds and the long days and strong summer sun in the south it is best to have the north and south exposure as small as possible.

Each family chose its own design. The houses were chosen from catalogs of designs from local builders. The builders are able to make a profit by prefabricating multiple homes from predetermined plans, therefore any variation from the catalog design is very costly. It was hoped to have many more natural materials and other fine details but this proved cost prohibitive in many cases. The houses are well insulated. Each house has its own heat source, mostly from wood stoves with a back-up electric furnace. In at least two homes the massive wooden stove forms a focal point of the house. One family installed a heat pump (find correct english translation).

Seven of the houses have a sauna. A sauna is not considered a luxury in this climate. It is an aspect of the culture. Eight of the houses share three waste water treatment systems ( 3 houses to 1 system, 3 to 1, and 2 to 1). The toilets are low flush. All water goes to a chambered settling tank and then to a soil infiltration

bed. Cold winters and a high water table made it difficult for to find an effective solution for waste water. The system must be built deep enough into the ground to avoid freezing in the winter, but high enough to not leak directly into the water table. Residents met with Nils Nyberg, an expert in waste water treatment at the University of Luleå, to find the best solution for their waste water treatment. One family chose to install a unique system. They have a dual toilet system, one for urine and one for feces. The feces are composted and the urine is collected in a tank. The gray water travels first through a peat filter, then to a collecting tank (from here water can be taken for garden use), finally to a rock infiltration field. All families received significant communal subsidies for their waste water treatment systems.

### **Social and organization - Ruskola**

The nine families know each other quite well. They borrow items from one another and help each other out. The residents are responsible for maintaining their homes and common spaces. Most of the adults feel collective responsibility. The group functions reasonably well. A commonhouse was neither built nor planned. Some residents have taken part in raising pigs together. Everyone pitched in to build a hockey rink.

### **Resources - Ruskola**

Most of the literature about Ruskola was produced by Övertorneå municipality in conjunction with the development of an eco-municipality.

Kurt Larsson, chairman for the town council for the municipality of Övertorneå composed a twenty-five page description of Ruskola; *Ekobyn Ruskola: Framtidens Bostadsområde*. The booklet describes the project and the principles behind it. It includes the

results of a survey of the residents assessment of the ecovillage. A smaller, eight page version was produced as a promotional brochure - published by the Övertorneå Kommun.

*Övertorneå: The First Eco-Municipality in Sweden* is a brochure published by Övertorneå Kommun in 1991. The brochure, available in four languages, describes the various projects initiated as a result of the establishment of Övertorneå as an eco-municipality.

The information on eco-municipalities comes from a booklet written by Esam Utbildning, *Ekokommunen: Et koncept för förändring i Agenda-21:s anda*. The booklet describes the history, composition, and importance of eco-municipalities.

*Försörjning, Vardag och Miljö*, written by Mona Mårtensson and Ronny Pettersson, was published in 1998. This report is the first in a three part series of



Fig. 21- The snow is still deep in late March

studies on the environment and culture in the daily life of Swedish households. The study compares attitudes and habits regarding the environment in nine communities around Sweden. Ecovillage Ruskola and the ecovillage association planning Understenshöjden participated in surveys and interviews for the study. Four “control”

communities were compared to five communities with an ecological or collective focus. The study was sponsored by Byggeforskningsrådet och Forskningsrådsnämnden and is published by the sociology department of the University of Stockholm.

## Ruskola - Overview

Planning start:	fall 1987	Number of Households:	9 households, circa 30 people
Move in date:	winter 1990	Size of homes:	109 m <sup>2</sup> to 169 m <sup>2</sup>
Location:	2 km S of Overtornea 90 km NE of Lulea	Type of ownership:	individual ownership
Project initiators:	municipality	Project developers:	residents
Project leader:	varied	Builder:	Team Boro, Hortlaxhus Tornedalens Byggnad AB
Architect:	builder, residents		Polar Hus AB
Landscape architect:	residents	Building cost:	6,200 SEK/m <sup>2</sup> to 8,400 SEK m <sup>2</sup>
<b>NOTE:</b>	each household planned their own solutions - descriptions are general		
<b>S I T E</b>			
Location:	located along Swedish-Finnish border, a main road from town passes site, town of Overtornea 2 km north; schools, stores, other services in Overtornea center, closest large city - Lulea (40 km), woods and river adjacent to site		
Transportation:	several buses a day to other towns, limited service on weekends, bicycling a possibility, most transportation by automobile		
Design:	total area circa 9.5 hectares - 3.2 ha of which is private, 6.3 ha shared each lot 2,500 m <sup>2</sup> , can only build on one half of the lot houses set back from road, located around a large oval road of gravel long side of houses face east, towards river - best orientation for climate can only build on one half of the lot hockey rink on site		
Landscaping:	many existing trees retained, other landscaping by residents		
Gardens:	ample gardening space just north of entrance		
compost:	responsibility of individual households		
food storage:	root cellar ( 3 houses)		
Common house:	no common house		
other structures:	some residents raising hogs collectively garages next to or built onto houses		
House exterior:	wooden siding of various colors roofs of steel or ceramic tile		

<b>INTERIOR</b>	
Floor plan:	varied, one and two story houses
Foundation:	cement slab (one insulated with cell-plastic) or crawl space
Frame:	wooden
Insulation:	mineral wool - attic 60 cm, outer walls 29-30 cm ( <i>U-value 0.14 W/m<sup>2</sup> C</i> )
Floors:	wooden flooring, plastic mat in bathrooms
Walls:	-
Woodwork:	-
Windows:	tripled glazed low emissive glass ( <i>U-value 1.2 W/m<sup>2</sup> C</i> ), varies between houses
Glass rooms:	none
Kitchen:	standard
Other:	7 houses have saunas - a cultural aspect of northern Sweden
<b>SYSTEMS</b>	
Heating:	wood stove, electricity back-up, one house has earth-heat pump, forced air or+B17 water circulation of heat
Ventilation:	mechanical ventilation
Water:	tap water from a well, city responsible for maintenance, houses metered individually
gray water:	8 households connected to 3 systems - 3 chambered settling tank to infiltration bed; last household - peat filter, to watering tank, to stone infiltration bed
black water:	8 households as above, one with urine and feces toilets (Wolgast), feces to compost
Electricity:	standard, a transformer station is centrally located Ruskola
Trash/Recycling:	city collection of trash and recyclables, city has had trouble establishing an effective recycling system