Fig. 22 - The internal street

Move in date:	winter 1992
Location:	Oxie7 km SE of Malmö
Project initiators:	municipality
Size:	37 households

MYRSTACKEN

I trudged over the hill from the commuter train on a rainy day. I wondered if I would ever find my way to the former site of the ancient Viking village, Torup, when I saw the row of red roofs dabbled with solar panels across a shallow valley. Inside the warm, wood heated house, my hosts and I sat sipping tea in an bay window overflowing with plants.

Entering Myrstacken seems a little like taking a step back in time. It lies adjacent to the site of a Viking village, called Torup. The houses enclose a curving central pedestrian street opening into four courtyards. The yellow ochre houses are separated from the street by a grassy terrace. All this harks back to a small country town. A former country road remains on the southern side of the site. Residents from surrounding neighborhoods often follow this road which lies between the houses and the gardens because of the expansive view it offers over surrounding the farmland edged by forests. It is hard to believe Sweden's second largest city lies just twenty minutes away by commuter train. Near the gardens is the common house, complete with laundry facilities, guest rooms, a sauna and a Ping-Pong table. Adjacent to the commonhouse is a marshy field, which attracts birds and other critters. The marsh is a component of the on-site waste water treatment system. Behind the common house the residents have built a hockey rink where several children were trying out their skills on their skates.

The idea for Myrstacken was initiated by the city council[8] in 1988. One-hundred fifty families quickly expressed their interest in the project. Many people were familiar with Solbyn, the ecovillage that lies thirty kilometers northwest. Solbyn had received a lot of publicity. The proposal for another ecovillage was quickly embraced. However, even though Myrstacken had more commercial and municipal support than Solbyn, something went awry, and only two families involved in the planning from the beginning moved into Myrstacken.

Myrstacken - Getting there

Malmö and Lund, lie just thirty kilometers apart. If Lund had an ecovillage (Solbyn), Malmö wanted one too. In 1998 the city council of Malmö, in cooperation with the developer -HSB, proposed to build an ecovillage just east of Malmö.

Myrstacken had the same architect, landscape architect and developer as Solbyn. In a way, Myrstacken was a chance to do what failed to be done in Solbyn. In the flurry of activity to build a "better" ecovillage, in a technological sense, the importance of the social side - the participation of the future residents in planning -

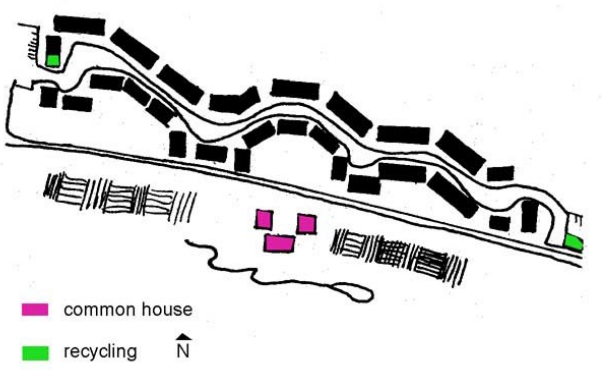
Fig. 23 - Sun Porch

was neglected. An article in the member's magazine for HSB in March of 1989 explains: due to the higher demands on the residents in the maintenance of an ecologically friendly lifestyle, "we want those who will live in this sun village to be part of the planning from the beginning." However, HSB's words seem to have been merely propaganda to ensure there would be interested buyers once Myrstacken was built. When interviewed by Fredrika Mårtensson the project leader from HSB admits that " what it [resident participation] should entail was never really defined. I have looked at the articles we put in the media . . . here it states the residents plan their homes, but that is not really the same as saying they are, in fact, participants in the planning." [Mårtensson 102] Other HSB representatives implied resident planning was not really necessary because we "to a large degree already know how an ecovillage should be."[Mårtensson 48] The role of the residents was neither clear to the developers, nor the architects nor to the residents. Of the one-hundred fifty families that initially expressed their interest in the Myrstacken project, two moved in. HSB had trouble selling all thirty-seven homes and turnover has been high.

Myrstacken was built in record time. The first whisper of the ecovillage was in 1988. By February of 1990 the initial plan proposals were finished. The final plans finished by February 1991, and building began in the November of 1991. The first residents moved in December 1992. From a technical perspective Myrstacken is an good example of the ecovillage principles.

Myrstacken - Location

Myrstacken lies on the edge of the town of Oxie. Residential neighborhoods lie adjacent to the west and farmland to the south and east. Oxie is considered a suburb of Malmö, Sweden's second largest city on the southern tip of Sweden. The commuter train to Malmö stops at Oxie two - five times an hour. A shopping center is a few blocks from the site. While trying to find my way without a proper map I passed stores, a post office, a school, and a ball field.



Myrstacken - Design

The site for Myrstacken was well chosen with: a beautiful view, southern exposure to capture the winter sun, and a hill to the north to protect homes from harsh winter winds. A line of houses hug the northern hill and face another row of houses running east to west across an interior pedestrian street. The street is lined with flower beds, trees and grass. The street opens into four courtyards, perfectly sized for young children to try out their bicycle riding skills. A parking lot, car ports, and recycling cottage is located at either end of the street. The houses are plastered a warm yellow ochre, with red tile roofs, the accents over the entrances and bay windows are red wood paneling with white trim. Bay windows are located on the southern side of the houses.

The southern side of the site opens towards the gardens, a small pond, and the common house. The common house might better be described as common buildings. Three buildings surround a courtyard. One building houses a large meeting room with a Ping-Pong table and small kitchen. Another houses a sauna, guest room, and small laundry room. The third building contains storage space and a control room for the water and electricity. The gardens were being prepared for spring planting when I visited and heaps of compost and mulch were waiting to be distributed. Proud hens and roosters in two nearby chicken coops caught my eye as well. Household compost is tended to in a large rotisserie compost bin in the same shed with the trash and recycling room.

Fig. 24 - Hill north of houses, narrow space between

Adjacent to the common house is the waste water treatment area, which, if you did not know any better, would be indistinguishable from a marsh connected via a small stream to a small pond. The waste water treatment area has works well, with occasional snags. Many more difficulties have arisen with the toilet system than with the treatment of gray water in the submerged wetland (marsh). The original toilets were composting toilets, but the residents had trouble with overflow, flies, etc. The residents, despite frustrations with the composting toilets, did not want to change wholesale to low-flush toilets. Several solutions are being experimented with. The water system is independent from the municipal system. Tap water comes from a 65 meter well and all water must be treated on-site. The original treatment system was not designed to process toilet waste. A student and professor from Germany, Imke Fittschen and Janusz Niemczynowisz, have evaluated the system and made recommendations.

Homes are heated by wood stoves and solar panels connected to a water accumulator tank. The ventilation system is similar to the one installed in Solbyn. The main intake and exhaust fan is located over the kitchen stove. The fan is equipped with a heat exchanger.

Fig. 25 - Gardens and yards south of houses

Myrstacken - Social and organization

The majority of families in Myrstacken are young parents with small children. I asked a resident about the social cohesion in Myrstacken he explained that there are many families with small children, therefore, they have less time to devote to shared interests and interaction. This would make sense if it were not for all the other projects with many families with children and a strong sense of community. ===quote==== The residents have had trouble seeing eye to eye and participation in work groups is spotty. It is the only ecovillage that relies on outside help for work other than snow removal and trash/recycling collection. One of the residents has been hired part-time to carry out maintenance on the site. Some maintenance work has occasionally been contracted from outside. Additional maintenance is carried out by the residents in eight workgroups.

The commonhouse is valued by residents. Starting a daycare has been discussed but not yet implemented. The laundry room is used mostly for large items such as rugs or blankets.

Opinions on the quality of the social life vary. According to Lindén, 47% of surveyed residents see the social side of Myrstacken as its best quality, while 32% list social factors as the worst quality. (with 36 and 34 people responding, respectively) In comparison, in Solbyn, 73% list social factors as the best quality and 19.5% as the worst. Solbyn has, although, has had a few more years to establish a strong social network.

Myrstacken - Resources

Ekologi och Vardagsliv: En studie av två ekobyar by Karin Palm Lindén evaluates the social and design aspects of two ecovillages, Solbyn and Myrstacken. "The main theme of the report is how living in an ecovillage influences the inhabitant's everyday lives," focusing on the resident's experience and the effect of design on behavior.

Att bosätta sig - en kreativ process is an insightful sociological assessment of the planning process of Myrstacken. It includes revealing quotes from the residents, builders, city officials, architect and HSB - the developer. The author, Fredrika Mårtensson, conducted the research for her thesis in environmental psychology at the Institute for Building Research (Statens Institut för byggnadsforskning) in Lund.

Ekologiskt Byggande: En studie av tr ekobyar i HSB:s regi by Hans Bergström provides a technical description of all the facets of the ecovillages HSB has helped develop: Solbyn, Myrstacken, Understenshöjden.

Water Management in the Swedish Ecovillage Toarp by doctoral candidate Imke Fittschen focuses almost entirely on waste management in Myrstacken. It contains the results of extensive testing and monitoring of the waste water treatment system at Myrstacken. His rapport provides some insight into the resident's behavior in regards to frequency of water usage and the cleaning products they use. The project was sponsored by Lund University in Sweden and Karlsruhe University in Germany.

Myrstacken - Overview

Planning start:	winter 1989	Number of Households:	37households, circa 110 people
Move in date:	winter 1992	Size of homes:	8 at 74m2, 2 rooms
Location:	Oxie		12 at 88.5 m2, 3 rooms
	10 km SE of Malmo		17 at 120 m2, 4 rooms
Project initiators:	city officials	Type of ownership:	home owner's association
Project leader:		Project developers:	HSB
Architect:	Krister Wiberg	Builder:	PEAB, steered total contractor
Landscape architect:	Bengt Persson	Building cost:	
S I T E			
Location:	stores, schools and childcare, and other services within a 15 minute walk, open fields and woods adjacent to site, view of southern Swedish farmland		
Transportation:	10 minute walk to the commuter train to Malmo - ride takes 10 minutes, local bus routes can bicycle to Malmo in 30-40 minutes		
Design:	37 households arranged along one east-west street containing four courtyards the 20 houses on the south side of the street are single story, 17 on north side are 2- story gardens and small common house and laundry across pre-existing narrow gravel road paths and internal street of hard pressed gravel carports and parking at either end of street play area in south grassy lawn, skating rink by common house trash, recycling and household compost in small utility building at either end of site pond located near gardens/common house		
Landscaping:	terassed flower beds with room for trees and grass on internal street southern grassy area has trees and bushes, terrrased down to garden area vegetation still very young and therefore small soil improved with topsoil and sand		
Gardens:	about 50m2 per family		
compost:	yard waste composted in gardens, household matter composted in round warm composter		
food storage:	4 root cellars built into northern hillside with wooden staircase over entrance to shade entrance from southern sun		
Common house:	three buildings (total 400 m2) create a common courtyard - one for meeting room, small kitchen, second for laundry, guest rooms, sauna, third for storage and water and electric		
other structures:	car ports and recycling/trash/compost service building at each parking area		
House exterior:	majority of facade - cream/beige plastered bricks copper red and white wood accents on gabels over bay window and entry red tile roof		

INTERIOR	
General:	heavy, heat absorbing construction of houses
Floor plan:	front entry to homes from internal street, varies depending on placement and size of home
Foundation:	concrete slab over double insulation layer and capillary layer of singel/gravel, skirt of insulation around house foundations (U-value circa 0.19 W/m2 C)
Frame:	wood and leca blocks
Insulation:	mineral wool and plastic diffusion layer - exterior walls with lecablock & 17 cm mineral wool (U-value 0.197 W/m2 C), attic 60 cm mineral wool (U-value 0.098 W/m2 C)
Floors:	pine parquet in bedrooms, plastic mat in bathrooms,
Walls:	spackeled plaster walls or wall paper, latex paint in kitchen
Woodwork:	laquered pine
Windows:	wood frames, triple glazed low-emission glass (*U-value 1.6 W/m2 C*)
Glass rooms:	bay window in all houses, one house took the option to add an aluminum framed greenhouse
Kitchen:	standard, white fiberboard cabinets, recycling under sink, ceramic tiles over sink
SYSTEMS	
Heating:	wood stove, solar panels (7.5 m2), & back-up electric furnace with 500 liter accumulator tank
Ventilation:	all intake and outtake through fan over stove with cross stream a heat exchanger - manual or automatic control, bathroom has separate fan - intake from within house, out via attic separate ventilation over wood stove, fan is equipped with carbon filter
Water:	tap water from 65m well
gray water:	settling tank - submerged wetland - soil infiltration - constructed stream - retention pond
black water:	began with all composting toilets, now experimenting with urine separating composting toilets, even regular low-flush toilets
Electricity:	standard, households have separate meters, central vaccum system
Trash/Recycling:	trash and pre-sorted recyclables collected by municipality