



Fig. 12

Move in date:	summer 1990
Location:	8 km NE of Västerås
Project initiators:	developer
Size:	28 households

ÅKESTA

Five kids were racing around the backyard when a neighbor came by in search of the hand lawn mower. The hand mower my family had when I was growing up took all my might to push. I skeptically inquired about the mower's efficiency. "It works great," she says, "and my ears don't ring for two hours afterwards, like they do with a gas mower." Each household is responsible for its own lawn. The association voted to leave some of the shared space uncut for meadow plants and divided up the responsibility for the rest.

I had heard all types of stories about Åkesta before I arrived, most of them negative or skeptical. I was glad to find the rumors untrue. Åkesta did have a very rough start, but the residents have turned that around. The initiative to build Åkesta was taken in by a developer 1986. The project was supposed to be complete for the 1990 building fair being held in the city

of Västerås. The developer initially sought out a group of interested persons to participate in the planning and received over 200 inquiries. An excited architect, full of ideas, was hired. The trouble, however, started when the developer realized they did not have time to incorporate the architect's or future residents' novel ideas. The first architect's sketches were replaced by slightly modified blueprints from a previous project. Costs spiraled and the future residents felt excluded from the entire process. Finances were shaky in the first few years after building. The home owners association considered declaring bankruptcy and several families had to move. Eight years later, the residents have the upper hand. They have made a success out of what appeared to be a catastrophe. They have taken the initiative to try new techniques and formed a positive social network. One of the duplexes has been converted to a parent cooperative daycare. When I was wandering about with only a name and no house number to the man I was to meet I had no trouble getting directions from a woman who was out weeding her flowerbed.

Åkesta - Getting There

The president (VD) the development company, Riksbyggen, Ulf Karlsson, saw ecovillages as the new trend in building. "We must meet the growing interest for this type of living. Today there are just a few ecovillages in Sweden, but I am convinced that will have twenty or more within five years. . . We want to be a part of developing housing which is kind to nature."¹ Karlsson wanted to be ahead of the game. The importance of the resident's taking responsibility for maintenance was not lost on him, "The heating and ventilation systems should be simple. It all builds on the idea that the residents are active and their own caretakers,"² said the Ulf Karlsson. However, the value

of resident participation in the planning process was unfortunately subjugated to the need to finish the houses for the building fair.

What happened to the future residents in all this? *“Nothing was as we planned. . . We were run over towards the end by the building company. They were focused on the prestige of it all. The project was to be finished for the building fair and all of it was pushed through.”* But, notes another resident, *“Who knows when or if the ecovillage would have been finished if it hadn’t been for the exhibition.”*

To Riksbysgen’s defense, their idea was not immediately embraced by municipal officials causing unexpected delays. Only after the Social Democrats stated in their support of the ecovillages in their election campaign did the city give the go ahead on the program in the fall of 1988. That left precious little time to design

and build the project. The average time, from idea to move in, for a housing development is about five years, and that is without resident participation. Only half of the houses were finished in time for the June 1990 exhibition. The residents were left to deal with the consequences of the rushed job. The most dire consequence was inflated costs. The home owner’s association considered declaring bankruptcy. Several families could no longer afford to move in at the increased price. Some houses stood empty for some time and the association had to pick up the slack. Every single survey I received from Åkesta mentioned the financial difficulties. Only a handful of the surveys from other sites mentioned financial woes. The experience is best summed up by this resident, *“It was hard in the beginning, we were duped by the building company. Now, after eight years, it has all fallen into place. We are happy here.”*

Åkesta- Location

Åkesta is prized by many residents for being *“in the country, but close to the city.”* It is a twenty minute bus ride north west of the center of Västerås. Västerås is a mid-sized city, population 120,000, in central Sweden. Aerial photos show Åkesta surrounded by woods and farmlands, but it is not as isolated as it first seemed to me. Åkesta is just three kilometers from the center of the nearest suburb, Rönby, where basic services, a grocery store, post office, are located. Not close enough to walk, but close enough to bike. A bus line runs every fifteen minutes during the week, but only once every hour, or every second hour on weekends and evenings. A bike path runs parallel to the road to Västerås. Several residents bicycle to work, some take the bus, but the predominant form of transportation is the private automobile. The location has its advantages.

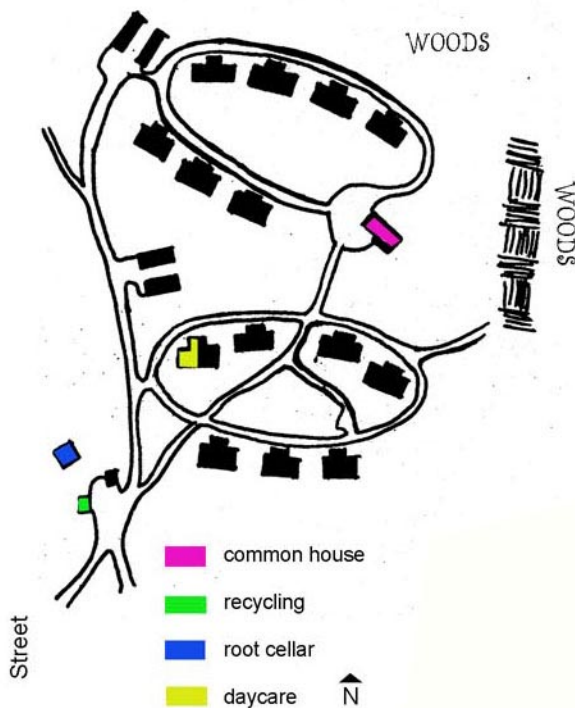


Fig. 13 - Site diagram

It fosters communication between neighbors. Since residents do not have a corner store where they can run for a liter of milk, they borrow from each other and get to know one another better. The woods on the north edge of the site are a common destination for walks on beautiful days.

Åkesta - Design

The appearance of Åkesta bears shades of Tuggelite, which is not surprising. Riksbyggen paid a visit to Tuggelite which appears to have had quite a formative impact on the consequent design of Åkesta. The 14 duplexes are traditional, red with white trim. The houses are sited around two wide oval paths, the entrances are on the north side, and glassed in verandahs grace the south side. The houses are attractive with little touches such as: a corner windows and an outside door on the green house. Inside, the livingroom has high ceilings (two story) with high windows through which the sun shines in the winter and reflects off the opposite white wall down into the living room, without creating a glare. The awnings are just long enough to keep out the summer sun when it is high in the horizon. The open spiral staircase is made of pine and the kitchen wall is made of red brick. The red brick wall gives a warm, slightly rustic feel to the room and also stores



Fig. 14 - Entrance to houses

solar heat which shines through the abundance of windows. I did not see many plants growing in the glassed-in verandahs, but I did see a lot of tables and chairs indicating the space is used as an extra room. The glass room has the advantage of having a door to the exterior which supports informal visiting between neighbors. The houses are heated by an electric, forced air system. However, many families heat with the compact, but powerful, wood stove in the kitchen. Some families have installed an additional hot water accumulator and hot water radiators to maximize the benefit of the wood stove. Half of the survey respondents made disparaging comments about the heating and sewage systems. The bathrooms have two separate toilets, one for urine and one for feces and the gray water leads, after a settling tank, to a soil infiltration bed. Comments about the toilets did not have to do with the dual system, but rather with maintenance - hard to clean, awkward to empty. The residents, especially the children, had little trouble getting used to the dual toilet set-up. The next evolution in toilets was to have one toilet that separated urine and feces. The evolution of alternative toilet systems is discussed in Part II, Design. Each household has its own garage, but some use the garage for storage and park their car by their homes. One gentleman has a part-time business selling environmental products - from compost holders to environmentally friendly cleaning supplies. His business is housed in an old timber building near the entrance. He sells to neighbors and outside of Åkesta as well. The old timber house provides better facilities than the common house may, at some point, be used for crafts.

Åkesta - Social

Residents surveyed sited concern for children's happiness and safety was listed as often as the



Fig. 15 - Natural wood features

environment when asked what their primary reasons were for moving to Åkesta. In a way, Åkesta, is like one large playground with expansive meadows, wide paths for bicycling, and acres of woods with wide paths. One of the duplexes is used for a parent cooperative daycare. The common house is small and doesn't see the traffic that those in Solbyn or Tuggelite, in part because everyone has their own laundry machines and the daycare is in another building. Like the other ecovillages, Åkesta holds regular meetings and maintenance responsibilities are divided among workgroups.

I had a very positive experience at Åkesta. Although I had had trouble getting an initial appointment, once I was there I was referred from one household to the next, and even invited to join in a mother's day celebration with a delicious cake made with hand-picked berries. Åkesta has received some flack, even called a "mess," and a "failure" and perhaps it did seem that way for a while at the beginning, even to those who lived there. Some were so disappointed that they chose not to remain. But the residents have made the

difference. They have made it work. They have pushed to keep native meadow flowers growing instead of mowing, and fixed the glitches in the sewage system, among other things. Åkesta is a good example of how important the people, and not the packaging, are to making an ecovillage.

Åkesta - Resources

There is no information published for the general public specifically about Åkesta, aside from a few newspaper articles. The Åkesta home-owners association printed a beautiful promotional brochure for the purpose of attracting new residents. The brochure contains just a brief technical and organizational overview. The bulk of the information I gathered was printed by the developer and builder themselves. Riksbyggen, the developer printed more brochures than BPA, the builder. This material was obtained the personal files of architect, Varis Bokalders.

"Mångfalden gav splittrat intryck," *Energi och Miljö*, July/August 1990. Pages 21, 21.

Kubu, Mert, "Ekologiskt boende ända in på toa," *Dagens Nyheter*. June 1, 1990.z

ÅKESTA - Overview

Planning start: Move in date: Location: Project initiators: Project leader: Architect: Landscape architect:	fall 1986 summer 1990 3 km N of Ronneby 8 km NE of Vasteras developer Leif Johansson, Riksbyggen Rein Wirma, Sune Lindqvist	Number of Households: Size of homes: Type of ownership: Project developers: Builder: Building cost:	28 households, circa 80 people 14 at 114m ² , 3 room 14 at 125.5 m ² , 4 room home owner's association Riksbyggen BPA-Bygg AB, total contractor 47 million SEK Lars-Ove Safstrom
SITE			
Location:	daycare on site, site surrounded by woods and agricultural land, 3 km to nearest store		
Transportation:	short walk to bus stop, bus runs every 15 minutes during peak hours, as little as once every 1 1/2 hours on weekends, safe bicycling route to center takes about 30 minutes safe bicycling route to center takes about 30 minutes		
Design:	total area of site is x m ² , gardening space on west side and woods across north edge of site 14 duplexes arranged in two wide ovals, parking and garages on edge of site trash, recycling, supply store, and root cellar located at southwestern corner of site small common house located towards northeast side gravel pathways in two wide loops two formal play areas and lots of open green space		
Landscaping:	a few trees, mostly bushes and open green space, with individualized flower beds builders disturbed as few existing trees as possible, land formally used for grazing		
Gardens:	200m ² garden plot for each family		
animals:	extra space allotted for animal grazing and fruit trees - not yet implemented		
food storage:	root cellar by entrance to site		
compost:	small cellar space in home could be used for cool storage individual compost bins for kitchen waste near house, yard waste composted in garden area		
Common house:	small single story common house built in style similar to duplexes contains a sauna, extra capacity washer, and meetingroom other common space: one duplex converted into a parent cooperative daycare, existing timber house now used for a small business, eventually may be used for crafts, weaving, etc.		
House exterior:	traditional style: cooper red wash on wooden siding with white boarders red tile roof large awnings shade house from summer sun one greenhouse per household on south side		
INTERIOR			
General:	houses designed on passive solar principles		
Floor plan:	two story duplex - living room (livingroom open to second story), kitchen and glassroom on southern side - bedrooms, bathrooms, main entry, laundry/storage on north side		
Foundation:	concrete slab		

Frame:	wood frame
Insulation:	mineral wool with a diffusion layer of plastic - attic = 30.5 cm (<i>U-value 0.13 W/m² C</i>), walls 24.5 (U-value 0.16 W/m ² C)
Floors:	clinkers in kitchen, laundry, and entry - birch parquet in bedrooms and livingroom - plastic mat in bathroom - linoleum in storage/workroom
Walls:	heart wall of brick - other walls wallpapered or painted - ceramic tiles on bathroom walls - ceilings white painted wood panels
Woodwork:	laquered or soaped or painted pine - ceilings soaped or white painted wood panels
Windows:	double glazed
Glass rooms:	double glazed, woodframe, door opens to back yard
Kitchen:	standard, recycling space under sink
S Y S T E M S	
Heating:	forced air electric furnace - wood burning stove in kitchen connected to 300 L hot water accumulator tank, one resident added solar panels other residents have expanded size of accumulator tank
Ventilation:	heat exchanger over stove, intake via glass room and springventilators under windows
Water:	own tap water from a 70 m well
grey water:	on-site settling tank to soil infiltration bed to constructed stream bed to natural stream
black water:	two separate toilets, one for urine the other for feces, second floor toilet only for urine - feces composted (Snurredass and Wolgast), urine collected in tanks emptied by local farmer
Electricity:	standard
Trash/Recycling:	open containers for trash and recycling under a carport near entrance to site