**MUNKSØGÅRD - a process from a well designed Danish ecovillage**

Munksøgård is the name of a farm – but also the name of a Danish ecovillage in the outskirt of the city of Roskilde located about 25 km west of Copenhagen, Denmark. The development that includes 100 row houses distributed in 5 living groups was established in 2000.

The key idea behind the community was to create a development that integrates environmentally friendly technologies and practices in the construction of the houses as well as in the operation. At the same time high priorities have been given establishing a strong community among residents supported by facilities for joint activities, many common areas etc.

The original residents of the community have planned the development themselves, but with assistance of professionals. There is therefore a high degree of felt ownership among the residents, who, in spite of three of the groups being rental accommodation, are in charge of management of the settlement.

**Diversity is key**
The ecovillage has been designed to provide diversity in housing sizes, ownership types and in support of different age groups. It includes 100 row houses of different sizes and accommodates about 225 children, youths and adults. The community is subdivided into five living groups of each 20 row houses. Each living group has their own common house for joint activities (common dinners, meetings, parties etc.).

The living groups have different types of ownership. One is privately owned as single family houses, and one is a co-operative association (the residents own the houses collectively as an association, but at the same time the residents also privately own a share of the house they occupy). Three of the living groups are owned by a building association and are for rent. Who moves into the rented houses is under the control of the residents – which is a dispensation from normal rules, but is one of the principles at Munksøgård, that residents say YES to each other and make sure that everybody is aware of and sympathizes with the vision. One of the three rental living groups is only for young people (under 30 years), one is only for seniors, and one is open for all age groups.

The old farm that belongs to the community is located in the heart of the five living groups. The farm buildings support many common activities: a cafe, a cooperative shop, office space for rent, guest rooms, a place for bicycles, bicycle repair workshop, storage space and keeping of animals.

**VISIONS**
One of the key ideas behind the community was to create a place that integrates environmentally friendly technologies and practices in the construction of the houses as well as in the operation. This vision has been implemented practically in the following ways:

Building materials

All houses are wooden houses painted with environmentally friendly paint outdoors and indoors. The dividing walls between the individual row houses are made of unburned compressed soil bricks (minimum of energy used for construction compared to normal burned bricks). We have used paper-based insulation materials (minimum of energy spent compared to energy intensive materials like Rockwool usually used in Denmark). The outer walls are made without plastic barriers to provide for better indoor climate and all houses have wooden floors and solid wooden doors inside. Energy efficient windows are everywhere and you will find gravel roads and walkways (minimum energy used for construction compared to paved roads). One of the common houses is a straw bale house built by the residents (the owner group).

Renewable energy and energy efficiency
The heating plant is operated on wood pellets and a local district heating system supplies CO2-free space heating and domestic hot water, but solar collectors are placed on all common houses and supply almost all the hot water during the summer. A demonstration installation of solar cells produces electricity and all houses have ‘under floor heating’ for comfort and energy savings. Also in daily use, many residents use electric appliances with high energy efficiency and a ‘green balance report’ of the ecological performance is done every few years.

Recycling of nutrients and garbage
When we pee, the urine is collected in separation toilets and stored in outdoor underground storage tanks and spread on nearby farm fields as an organic fertilizer. Our garbage is separated into many fractions for recycling at our waste recycling station, food scraps and garden wastes are composted and we also have a room for recycling of clothes and other things.

Local wastewater treatment and water management
The wastewater is treated locally in a biological sand filter, we collect rainwater for use in laundry rooms in the common houses and our separation toilets also save a lot of water.

Production of organic vegetables and meat
Many of the residents grow organic vegetables in designated vegetable plots. Smaller groups of residents keep sheep, cattle, and grow corn on adjacent fields.

Transportation
We are located close to a railway station to provide good opportunities for use of public transportation. Also, we have a car sharing association that offers members to book cars on-line and pay based on their use (hours and km). Car sharing decreases car use substantially compared to owning a car yourself. Also, they are electric cars. Residents use bicycles intensively and sheltered storage is provided for all bicycles.

Local democracy in use
The residents here manage the operation and further development of the ecovillage themselves. A number of associations with general assemblies and resident elected board of directors manage the commonly owned property and operation thereof e.g. heat plant, wastewater treatment plant, waste recycling station, the old farm buildings, common houses etc. A living group usually holds their own meetings every month. At a common meeting held about every second month open to all residents issues of general interest are discussed and decided.

The technical operation of our place is managed in a number of working groups e.g. snow clearing and road maintenance, maintenance of drains and waste water treatment, operation of the heat plant. Apart from technical working groups we also have working groups directed to social activities e.g. arrangement of parties, social activities in relation to certain national holidays. Each of the working groups manages their own budget assigned at the general assembly. All residents are expected to take part in at least one working group.

*THE ORIGINAL VISION
The ecological way of thinking will be integrated in the design of the buildings, as well as in the choice of building materials, and energy, water and waste solutions etc. The goal is to create local energy and resource circuits that have a minimal impact on the environment and are at the same time manageable for the residents. The buildings must provide good opportunities for the community. Great emphasis will therefore be placed on facilities that create a good framework for joint activities (communal houses etc.). The residents will take greater responsibility for the management of their buildings. This applies to the practical tasks such as caretaker tasks, etc., but also active participation in the association's decision-making bodies, which are based on the idea of ​​participation - one head, one voice. Together with ecology and community, diversity is a key word for the settlement. We want to live in a broad-based community of young and old and different business groups. Therefore, emphasis has been placed on mixing different forms of ownership and different apartment and house sizes.*

Here a statement from one of the founders of Munksøgård, about the process:
It was an exciting but also a patience demanding process to be part of. I - and most others I think - personally fluctuated a lot in the belief in how and when the project would be implemented. It was hard to be willing to relocate for several years in a row, waiting for the project to materialize.

When external obstacles like postpone our schedules, I get frustrated and annoyed at the "system" and try to identify political shortcuts. It is even harder when the obstacles come from ourselves. Eg. when some members were reluctant to inject money into the costs that inevitably come with it. Or when decisions about the concept - e.g. compost toilets, which i.a. I have spent a lot of time getting approval for – are being put up for discussion again. The art of coexisting with people with our eternal ability to question even what seems obvious to someone is a challenge that I continue to try to make into a ‘personal development process’, even though I occasionally get very tired.

Another side of this process is the kids. It is good to discuss options for having a horse, etc. with them, in this new place. But it was hard to talk about the time horizon with a teenager who reached the time to move away from home before we even managed to move in.

The art of negotiation
Working with advisers and authorities has been very educational for me. Although there have been some sharp negotiations along the way, I have seen how much it matters whether one is personally on the same wavelength. Distant negotiations for e.g., with ministries are typically more difficult than for local authorities, where you meet face to face, as persons. And the direct contact to the architect who designs the homes was worth gold to all parties. Openness and trust can create a fruitful process. However, care must be taken not to make a mistake about which side of the table the partners are sitting on.

About conflicts and doubts
We have learnt to take care of each other. If there are disagreements, we do not always get to express what it is about, in the actual situation. Then it is sometimes important to get it picked up afterwards, so no one feels harmed. My conviction is that the biggest risk of a project failing is disagreements on values and goals.

Also, I experience that we get tired in turns. It is hard to always keep the energy high. At times, there are some who cannot bear more meetings, discussions, presentations and negotiations. Then it is important that others can take over with new energy. Therefore, it is also important that more people are involved in the various tasks so something will not end up in a vacuum if one person happens to be down.

I often consider whether the ecological considerations we made are good enough. Have we found the best solutions within the financial framework we have? Could we have designed the houses so that we could reduce/avoid heat supply from a wood chip boiler? Should all the houses have been oriented to the south for the sake of sunlight rather than the more social location around courtyards? We made some choices - and we have many more to make.

A combination of technical and intuitive arguments, but also a number of coincidences determine our choices. I can only hope that through the process we have built some relationships that can carry on, so that Munksøgård will always be a good place to live.