



Above: The slope through the willow tunnel makes the slides accessible to children in wheelchairs

Right: The smell of honeysuckle, lavender and lemon thyme fills the sensory garden at Geelsgaard School with pleasant scents

All images on this page are of Geelsgaard School



A Sense of Place

Improving children's quality of life through design,
by Helle Nebelong.

“Green is good for the eyes”



Helle Nebelong is a Danish Landscape Architect MAA and Master of Public Management, MPM. She has created children's outdoor spaces, sensory gardens and other green spaces for more than 20 years. From 1994-2004 she was employed full time by the City of Copenhagen. Now Helle runs her own private practice, *Sansehaber.dk*, that specialises in the design of natural spaces for children, young disabled people and the elderly. Helle is President of the Danish Playground Association, Vice-president of International Play Association Denmark and since 2007 a member of the leadership team for the Nature Action Collaborative for Children, NACC. www.sansehaber.dk

says mother duck in Hans Christian Andersen's fairytale *The Ugly Duckling* and science has proved that well designed green places influence the human mind positively. The five senses are open to impressions and through these senses we acquire knowledge from the world around us. We experience and learn by seeing, hearing, smelling, tasting and feeling. Designing sensory gardens and play spaces for children with physical or mental diseases is a question of designing accessible spaces that work for all children, irrespective of abilities and skills. Disabled children wish to be treated like other children and should be given the same opportunities.

Uncontrollable movements

At Bispebjerg Hospital in Copenhagen a play garden for children with mental diseases was constructed in November 2007.

“The children want to move around but they are unable to control themselves”. This was one of the comments I heard when I first met

charge nurse Liselotte Lindgren and the other very committed staff members at Bispebjerg Hospital. The interdisciplinary team at the children's psychiatric ward are educators, nurses, psychologists and psychiatrists who observe and treat children with difficult mental illnesses. The majority of the children suffer from fundamental developmental disturbances and their average stay at the hospital is around three months.

When I visited, play equipment in the old garden was worn-out and had been removed. The children had problems playing in the garden because each one finds it difficult to translate thoughts and fantasy into either playing alone or together with other children. They need play equipment or elements that are uniformly shaped with a design concept that directs and encourages them towards specific activities, where the purpose is obvious and an attraction itself.

I listened very carefully to what the staff had to say, as I realised that they had a great deal of experience and many ideas for what would be

good for the children; how the garden design could improve the children's quality of life, and their health, as well as create opportunities for them to develop social abilities and motor skills.

New ideas

Looking at the old garden that belongs to the hospital I found the inherent qualities already there. Bispebjerg Hospital was designed in 1913 by famous Danish architect Martin Nyrop, who also designed the City Hall in Copenhagen. The garden was designed by landscape architect Edvard Glæsel and some of the trees are around one hundred years old. The beech (which might be the tallest one in Copenhagen), the old Chinese wingnut trees with their graceful necklaces of emerald green, winged nutlets and the European hornbeam that stands like a sunshade above the sandpit, vary throughout the year and give wonderful light and shadow experiences in the garden. It was a challenge to design a plan for the garden that could both live up to the expectations of the staff and show respect to the old trees that represent



“The path is an experience itself as it changes character and texture along its way”

All images on this page are from Bispebjerg Hospital

Above left: The playhouse enclosed with a white painted fence looks like a Danish allotment garden in miniature

Below: A heart shaped sandpit for the children to play in on a hot summer's day, in the shade of the European hornbeam

Bottom: A low bridge underneath a mighty beech leads the children close to its old gnarled root

genius loci – the spirit of the place.

To make it easier for the children to move around in a more controlled way, the most important element is the asphalt path that winds through the garden and links the different play areas. The path is an experience itself as it changes character and texture along its way. The children can walk, run, bike and drive go-carts or make drawings with chalk in different colours on the plain surface.

At one point the path transforms into something reminiscent of a pedestrian crossing with white stripes painted on a larger asphalted area. In another place it suddenly becomes a low bridge that runs underneath the mighty beech's treetop, passing very close to its old trunk and gnarled root. The surface of the path offers a variety of tactile experiences: hard, practical asphalt as well as soft planks which also make a special sound when moved around on.

The play spots along the path encourage the children to pause and play for a while before continuing to the next spot. The play elements have been given a visual shape that compensate for the children's lack of imagination. They are all placed low down because the young patients suffering from attention deficit hyperactivity disorder (ADHD) act on impulses and have difficulty in managing risks and understanding the consequences of their acts.

Experience is everything

There's a row of stones to practice balance and a small area with a playhouse and a mini flagpole enclosed with a low white painted fence that looks like a Danish allotment garden. There's a scented garden with herbs, perennials, roses and thornless blackberry, plus a nest swing and a slide placed directly on a grassy hillock. The sandpit is heart

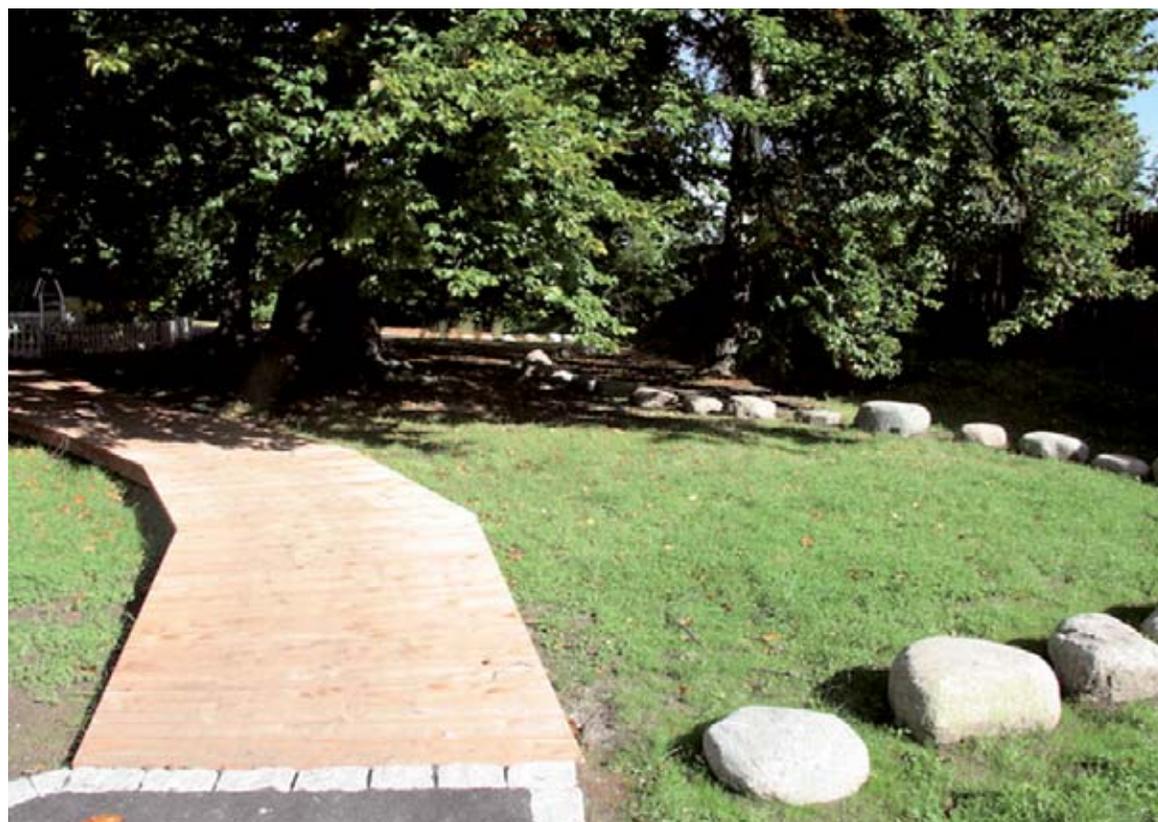
shaped because a garden like this one must have a heart beating for the children.

Children with mental and developmental diseases need fresh air and space to move around just like all other children and children suffering from ADHD often have more need for activities that stimulate their development and improve their well-being. The vision for the garden therefore has been to create a play space that is exciting and fun but also challenges and stimulates the children's senses and motor skills.

The staff are very pleased that the hospital can now offer the children good quality outdoor facilities: “We know that motion and motor challenge has a positive impact on the children, both physically and mentally,” says leading nursing officer Tina Jacobsen.

The A P Møller and Chastine

Mc-Kinney Møller Foundation gave financial backing for the project – £100,000 in total towards the construction work.



Scientists Stephen and Rachel Kaplan have a theory regarding two kinds of human attention.

Involuntary attention is the instinctive, automatic attention which appears when we are under influence of sounds, smells, visual impressions and changes of temperature in nature and natural environments. It demands no special mental effort.

Directed attention is the one that uses energy; the one we devote lots of hours to daily, when we force ourselves to eliminate unnecessary noises that interrupt our concentration on, for instance, specialised work. Directed attention has limited resources and according to Kaplan's theory, we will collapse mentally if we go beyond the limit, trying to solve more and more complex problems. When we collapse mentally we need to recreate ourselves in peaceful green spaces to gather new strength.



“Children get experiences that stimulate sight, smell, taste, touch and hearing”

Fenrishus in Aarhus

The little girl in the wheelchair is placed outside the building and her educator disappears into the house. The girl is pretty and she turns her head restlessly from one side to another. Her mouth is open and she punches out loud shrilly noises. She's out of my reach and as I am visiting the place, I hold back to be sure not to frighten her. It's a sunny day and the wind is light. After a short while her educator comes back and gently pushes the girl around the garden. Passing the fountain, the big formation of willows and the fragrant herbs the girl becomes silent. Now the only noises that could be heard are the wind in the willows, the water from the fountain and the birds singing.

Fenrishus (The House of Fenris) is a residential home for children with multiple handicaps, aged 0-18 years

located in Aarhus, Denmark's second largest city. There are facilities for 16 children and a special kindergarten with room for three children age 0-7 who are living at home. All children need a great deal of care.

Stimulating the senses

In the sensory garden the children get experiences that stimulate sight, smell, taste, touch and hearing. The garden is a peaceful and quiet place with shelter and opportunities for experience nature in the 'wild' wood and among the plants that have lovely scents and attract butterflies and humming bees.

In everyday life at Fenrishus, care and pleasure at being alive are essential elements. The fundamental idea is that the children have the same emotions and needs as other children, although their level of function is very different. Nurses, therapists and educators work close together to find the best way to solve problems. The aim is that the children keep up and develop the skills they already have. The parents are the most important people in the child's life.

I originally designed the garden back in 1995. The images on this page are from 2007, taken when I

visited the garden. I was very happy to see what a nice place it had turned into – the plantations had grown tall and protect the garden from the wind, lots of perennials offer pleasant smells, beautiful colours and all of



All images on these pages are of Fenrishus

Above: Overgrown with climbers, the gazebo is full of shadow inside while it's light and sunny outside

Centre image: The sound of splashing water stimulates the sense of hearing and has a positive impact on the human mind

“Humming insects, chirping birds, the wind in the leaves, the splashing fountain”

them can be put into one’s mouth, nothing is poisonous. The beds are raised to a level that makes it easy for the children to reach out from their wheelchair and touch the plants.

There’s a grotto made of bamboo and a gazebo overgrown with climbers where one can experience slight coolness from the shadow on a hot summer day.

Something for everyone

The tiny ornamental lake is slightly concave so that children in wheelchairs can be placed in it. There are exquisite granite boulders for the staff to sit on and water wells up from some of the boulders. The sandpit is meant to be used by brothers and sisters visiting the home, but the teachers also use it to sit with the handicapped children, so they can sense the sand with their feet.

Originally the idea was to include some outdoor musical instruments as part of the garden, but the staff changed their minds and concluded

that nature’s own sounds would be much better. Humming insects, chirping birds, the wind in the leaves, the splashing fountain and the voices of people are pleasant, well-known and comfortable sounds that strengthen the young disabled children’s well-being.

Below: Prickly evergreens contrast with the soft fragrant herbs

Bottom right: Blackberries stimulate taste and look beautiful



From inside snoezelen room to outside sensory garden

According to Helle Nebelong the idea of a sensory garden derives from the Dutch term *snoezelen* which means to sense actively and passively. Actively by being open and curious to new impressions from the surroundings. Passively by being affected by stimuli from outside, by for example, the scent of flowers, sounds, the warmth of the sun and so on. The word *snoezelen* is a mix of two Dutch words *snuffelen* (to sniff) and *doezelen* (to doze). The term is connected with indoor sensory rooms for children and grown ups with multiple handicaps where they can extend their perception of themselves in relation to their surroundings, together with people they know who make them feel safe and secure. In the *snoezel* room the senses are stimulated by music, smell, light, warmth and water. The sensory garden has literally grown out through the walls of the *snoezelen* room as a logical result of the good experiences from indoors. The difference between inside and outside is that outside one has nature’s multifarious register of effects that stimulate the senses to mix and arrange in thousands of ways.

Helle Nebelong also believes that a sensory garden is a concentrated world of nature and sensory experiences, produced by the landscape architect who carefully thinks of every single detail. Which plants with which fragrances should be accessible? What special shapes of leaves and branches and which colours of flowers should be available? How should the path run through the garden? Which materials should be used to construct the different pieces of scenery? Lots of questions to consider and one has to prioritise according to the target group and their needs, the size of the area present and the economics.

A sensory garden concentrates themes from nature and its most important purpose is to compensate for real nature which may be far away and hard to reach/inaccessible. Even though a sensory garden could function as a therapeutic garden, it is important that it is first of all seen as a space for breathing and a free place for one’s senses to be extended and stimulated, a place in which to relax and enjoy without necessarily being productive. A place to experience and recreate and where no one makes any demands.



“The design challenges the children’s perceptions”

Above: View of the playground at Geelsgaard School that is accessible to all children

Below left and right: Stones and trunks to balance on at practice motor skills

All images on this page are of Geelsgaard School

A multi-functional garden

Geelsgaard School is the largest special needs school in the capital region of Denmark, for children aged 5-18, with either severe motor difficulties, general learning difficulties or congenital deafness and

blindness. There are 129 pupils who come from all over the region. They use wheelchairs, walking appliances and special bikes to get around in the garden. Many of the children are visually impaired or blind or both deaf and blind and suffer from different kinds of developmental diseases.

An interdisciplinary team of teachers, educators, occupational therapists and physiotherapists support the children. The garden is open to the public and divided into a sensory garden, a playground, a

sports ground and a summer blossom garden named ‘The Garden of Strindberg’ after the famous Swedish writer August Strindberg who stayed there in the summer of 1888 and did some of his most famous writings at the place.

The garden has lots of different spaces where the children can absorb delicate sensory experiences. There are herbs, flowers and bushes that attract butterflies. The surface varies throughout the garden: cobblestones, flagstones, tiles etc. The western part of the garden is supposed to echo stylised cliffs and the eastern part contains upturned tree roots which could be decorated for each season: Easter eggs at Easter, colourful ribbons and flowers in May, wind chimes during summer, sheaves of wheat and lights in the autumn and during winter.

The play ground is designed to consider all children, irrespective of age, gender, abilities and skills. The design challenges the children’s perceptions and motivates them to practice their motor skills.

There is traditional play equipment – swings and slides and more specific elements like two grassy snake shaped hillocks which are used to practice walking and challenge the children’s motor skills. A village of woven willow huts and plaited fences was constructed by parents, pupils and teachers under professional instruction.

