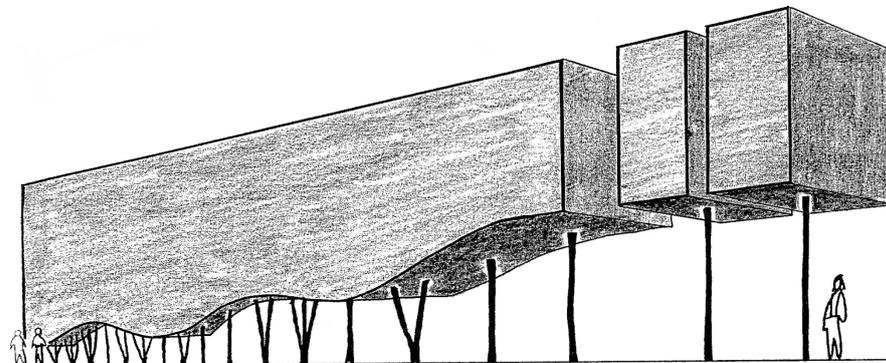




LANDSCAPE ARCHITECTURE
HORTICULTURE CROP PRODUCTION SCIENCE
Reportseries



Creative Management in the young landscape of Alnarp's Landscape Laboratory

Writers and drawers: Dana Hladíková och Jan Šesták

Editors: Björn Wiström och Allan Gunnarsson

Swedish University of Agricultural Sciences
Faculty of Landscape Architecture, Horticulture and Crop Production Science

Report 2017:16

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Summary

During the years 2003 to 2005 the project “Creative Management in the young landscape of Alnarp’s Landscape Laboratory” was carried through by the young landscape architects Dana Hladikova and Jan Sestak with Roland Gustavsson as project leader. Using a design approach emphasizing creative management and place based knowledge certain spaces in the Landscape Laboratory were transformed into places giving character and experiential values to a young landscape otherwise still waiting to mature. Reversing the order of design, starting outside with discussions and practical actions and then conceptualizing the process and the result in graphics and text afterwards, showcases an alternative approach to the dominating indoor design model that shows much promise for the future. The project and its physical results also demonstrates the benefits letting managers take part in and even being responsible for the ongoing creative and architectural development of a landscape and its structures.

Over a decade later, after hundreds of guided visits, numerous presentations, workshops, publications and continued management actions, the value of the project is in many ways undisputable. However the actual process and detailed actions of the project have not earlier been published in detail. This report compiles the working material from the Project “Creative Management in the young landscape of Alnarp’s Landscape Laboratory”. As such the material has only been moderately edited concerning spelling and other formalities. In its present form it presents not only an in-depth look on the creative management process but also an important historical and pedagogical documentation of the Landscape Lab of Alnarp.

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Introduction

The main parts of the Landscape Laboratory in Alnarp were established in the nineteen-eighties and -nineties. The oldest part, Tor Nitzelius Park with smaller woodland stands including both native and exotic species was planted 1982 to 1985 and ten years later the southern part of Alnarps Västerskog with a mixture of woodland stands with mainly native species as well as meadows and waterbodies was constructed and planted. About ten years after the establishment of Alnarps Västerskog, 2003 to 2005, the project “Creative Management in the young landscape of Alnarp’s Landscape Laboratory” was carried through by the young landscape architects Dana Hladikova and Jan Sestak with Roland Gustavsson as project leader. The main area in this case was the southern parts of Alnarps Västerskog but two places were also chosen in Tor Nitzelius Park to be part of the project.

Using a design approach emphasizing creative management and place based knowledge, certain spaces in the Landscape Laboratory were transformed into places giving character and experiential values to a young landscape otherwise still waiting to mature. Reversing the order of design, starting outside with design discussions and practical actions and then conceptualizing the process and the result in graphics and text afterwards, showcases an alternative approach to both design and management that shows much promise for the future. The project and its physical results also demonstrates the benefits letting managers with a sense of design, take part in and even being responsible for the ongoing creative and architectural development of a landscape and its structures.

Over a decade later, after hundreds of guided visits, numerous presentations, workshops and publications, the value of the project is in many ways undisputable. However the actual process and detailed actions of the project have not earlier been published in detail. This report summaries the working material from the Project “Creative Management in the young landscape of Alnarp’s Landscape Laboratory” in the early 21.st century.

As such the material has only been moderately edited concerning spelling and other formalities. In its present form it presents not only an in-depth look on the creative management process but also an important historical and pedagogical documentation of the Landscape Lab of Alnarp.

The material is ordered after the different places that have been created from a spatial logic and not on the basis of a time based chronology of the different management operations. Additional to this a proposed maintenance plan produced at the end of the project has been added as an appendix, as it captures important part of the working process and touches on important conceptual questions, however without any certainty that the proposed actions were performed as suggested. The work of compiling Dana Hladikova's and Jan Sestak's working material in this report have been carried through by Björn Wiström and Allan Gunnarsson. We are very grateful to Dana and Jan for making the material available and for their support in finalizing this report. We also greatly appreciate all the efforts made by professor Roland Gustavsson as Dana's and Jan's supervisor both in the practical implementation in the landscape lab and when writing, drawing and putting the material together.

Björn Wiström and Allan Gunnarson

Alnarp 2017

Swedish University of Agricultural Sciences

Creative Management in the
Young Landscape of Alnarp's
Landscape Laboratory 2003 -
2005

Dana Hladikova & Jan Sestak
Project leader: Roland Gustavsson



ALNARP'S
LANDSCAPE LABORATORY

9. The Hazel meadow -
a new entrance zone

8. The Children's landscape

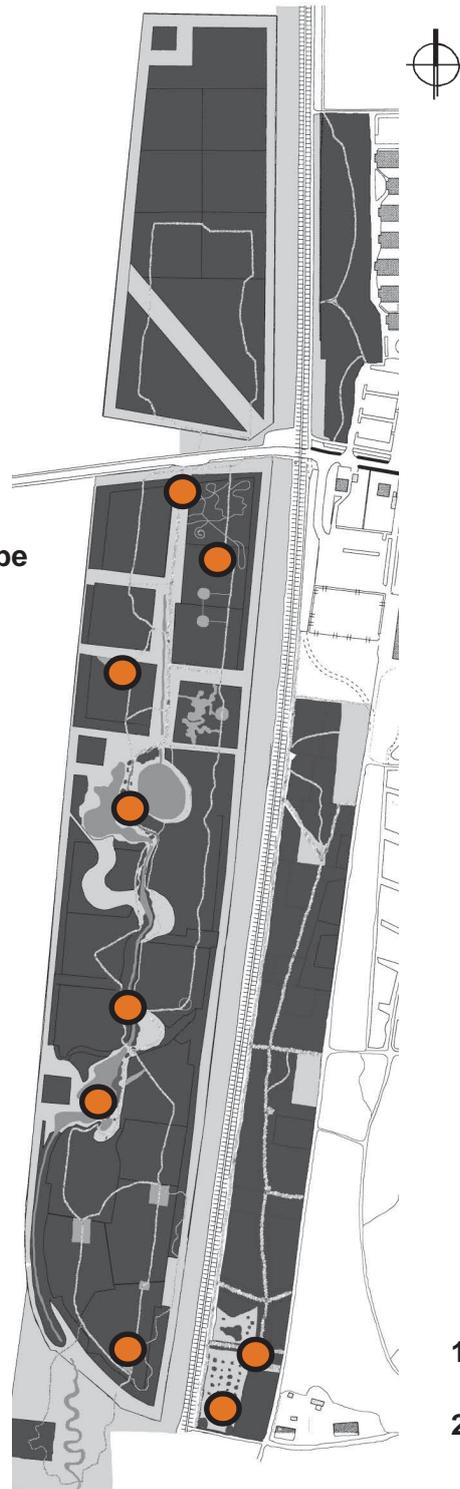
7. The Larch & ash

6. The Strip between
the two ponds

5. The Alder shore

4. The Heron's pond

3. The Tunnel &
baby pillar hall



1. The Hazel hall

2. The Orchard of apple trees

Swedish University of Agricultural Sciences

Project: Creative management in the Young
Landscape of Alnarp's Landscape Laboratory
2003-2005

Dana Hladikova & Jan Sestak
Project leader: Roland Gustavsson

2005

the overall map of
creative management
spots in Alnarp's
Västerskog and Tor
Nitzelius park



Swedish University of Agricultural Sciences

Project: **Creative Management in the Young Landscape of Alnarp's Landscape Laboratory 2003-2005**

Dana Hladikova & Jan Sestak
Project leader: Roland Gustavsson

2004

place nr.1:

**THE
HAZEL
HALL**

1.The Hazel Hall

Four rows of hazel shrubs with paths in between are forming a strong architectural expression with strict well defined walls and interior space.

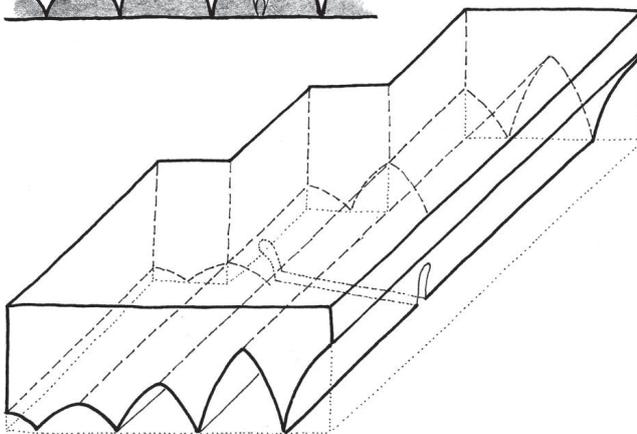
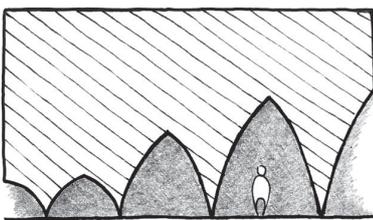
Key words: hazel, tunnel effect, straight rows, spatial barrier, increasing complexity through management, field layer effect in the spring

Hazel is one of the most dominant woody plant species after the iceage all over Europe. It has a long history of various usage by man and consequently has become a leading cultural plant in many European countries. Here, hazel is used to honour the history of this place. Parallel the aim is to test new design principles based on the specific structure and habitat. Four rows of today mature hazel shrubs were 1928 planted side-by-side. Now the unit acts as a monolithic vegetation mass between the Magnolia grove and the Apple orchard. Many have got surprised by its unexpected and specific space inside. It is also a place with a great potential to be used by children as the hazels create a specific micro room optically enclosed from the surrounding. The hazel hall also belongs to the favourite places because the straight stems can be used as building material.

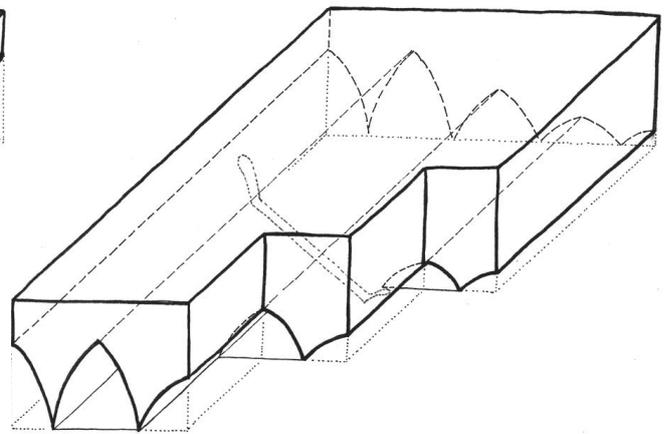


State of art:

- The four rows of hazel, *Corylus maxima* have various lengths, from 20 to 60 meters.
- Distance between the rows is 4 m, the height of the hazels is up to 6 m.
- *Corylus maxima* do not reach the height of *Coryllus avellana*, but has larger nuts.
- Hazels form very thick shrubs with many old, down bending branches.
- There are a lot of seedlings of trees and bushes growing in between the hazels. Some of them, like elm (*Ulmus*) and ash (*Fraxinus excelsior*), are stronger and are easily taking over the top canopy position, suppressing the hazels.
- The ground is covered by dead branches and sparse field layer with dominant raspberry shrubs (*Rubus*) in the light pockets. Too low branches create obstacles for walking in between the rows.



view from the east side



view from the west side

Figure 1.1. Schematic overview of the hazel section showing the gradation of interior space and position of the inner halls of various lengths

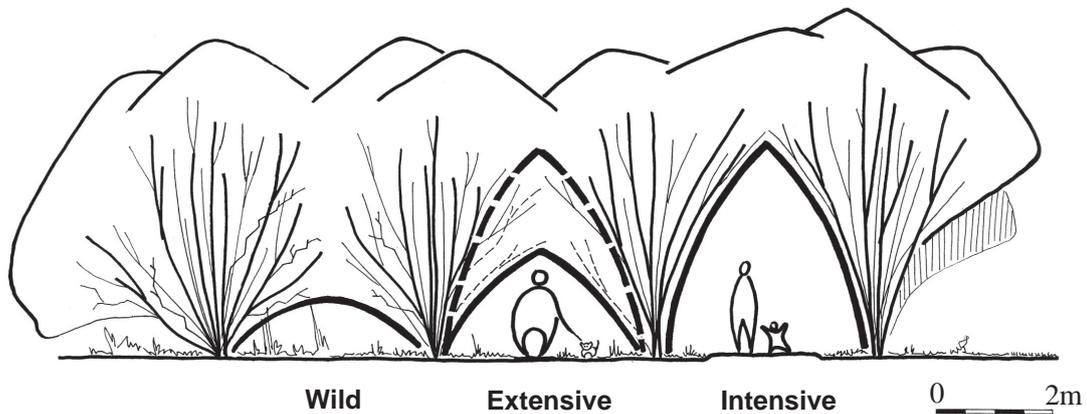


Figure 1.2. A cross section through the rows of hazel showing the interior room and the gradual change of the inner space due to three different maintenance strategies.

Management principles:

- The rows of hazels and the three paths in between the rows were the basic elements on which the management action was focused.
- The main aim was to use the specific growing form of the hazels and create an architectural strict, well defined interior space and within this stress the visual variation by different intensities of the management.
- The rows of the hazel shrubs were divided into different parts which were classified from their values. But before transforming this strategy to a certain maintenance regime the whole area was restored through a cleaning from seedlings of different trees and shrubs. Especially elms and ashes were more and more suppressing the hazels. Such individuals and dead branches of all sorts on the ground were taken away.
- In the longest and middle tunnel, hanging branches were cut away to shape the interior room. The shortest tunnel was kept with its wild character to be a contrast and reference area.
- At last the focus was oriented to the ground. In the longest tunnel the path was underlined by 7cm thick layer of wooden-chips, which created a smooth and soft surface to walk on. As a contrast, the second tunnel was cleaned from branches, grasses and herbs but was left without other improvement of the floor, like adding wooden-chips or gravel.

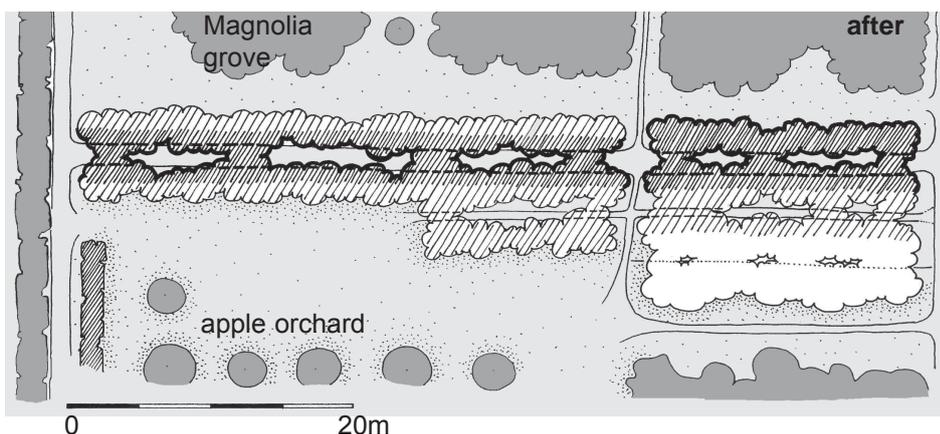
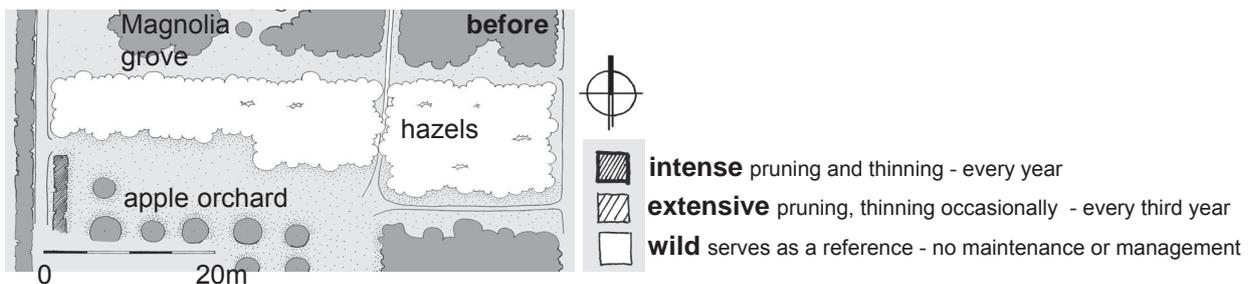


Figure 1.3. Principle figures showing the situation before and after the restorative management action. After the seedlings were taken away and the oldest branches were pruned, the overall thickness was transformed into an inner space, which became wider and more distinct.

Future strategies:

- **The intensive** maintenance strategy is set out as a continuous care proceeded once a year to keep the strictly defined interior space. Here it is most important to keep away all spontaneous seedlings as well as all branches bending down to the ground. Specific attention should be paid to the layer of wooden-chips. Casual weeds should be taken away and new layer of wood chips put out every 3 - 5 years. In the long term it might become necessary to coppice the hazels in order to renew it. This should be done in sections as a two-step process with 2-3 years in between.
- **The extensively** maintained middle tunnel has the same program of controlling invading seedlings and taking down hanging branches as the intensive part, but the action is repeated in the intervals of 3 to 5 years. This gives the area a more dynamic character emphasized by the strictly kept shape of the bordering tunnel on one side and the shortest tunnel with wild character on the other side. The ground is trimmed once a year in the middle of summer to cut back invasive species.
- **The wild** reference part is meant to document the development without any intervention of maintenance, with one essential exception - the seedlings of problematic species (such as elm and ash). Those plants have to be removed before they start to take over and threaten the future existence of the hazels.
- The improvement of the field layer will be implemented in the next years.

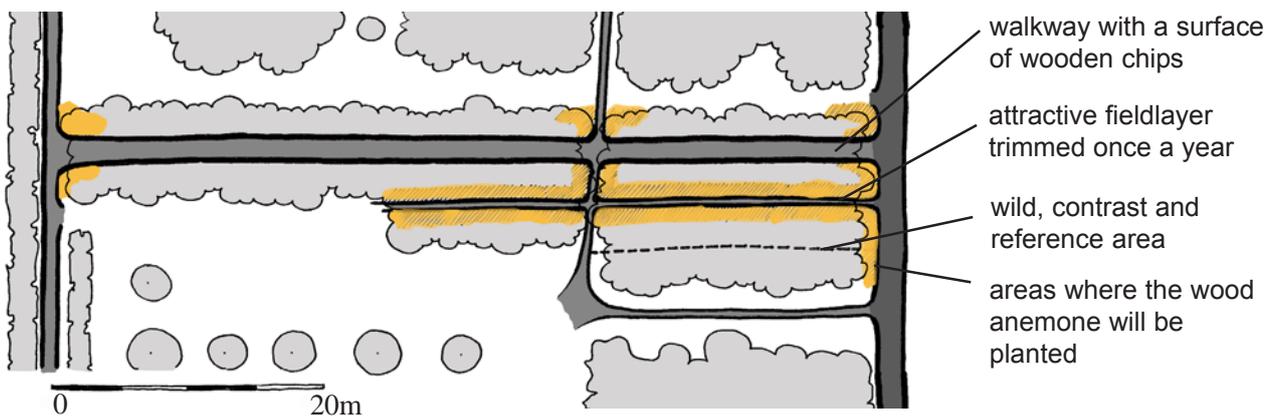


Figure 1.4. Proposed management focusing on the ground surface, with attractive herbs, flowering in the spring, before they become shaded by the canopy. The goal is to create a unique character and to increase the attractiveness of the section.

Vision

Various degree of intensity in the maintenance creates even on quite a small area, a whole set of different treatments focused both on vegetation and ground cover. This is highly reflected in different shapes of the vegetation and thus in the character of the place. Using this strategy in a way not just to divide the area in several parts with different status, but rather to go for both, a degree of similarity and a sense of belonging to each other in contrast to the neighbouring parts, contributes to an interaction between all the various parts and characters included. Furthermore, this example shows that even only one species can create a large diversity by taking in a proper management strategy. The example also demonstrates the need of maintenance to keep hazels in the shaped form. Such an approach will at the same time articulate the dynamics in the visual appearance during all seasons.

After the first year, the surface of wooden-chips was chosen for the path in the longest hall. In the second year there were new suggestions aiming to develop seasonal effects by using flowering herbs in the hall with extensive maintenance here and in the surroundings of entrances. This has not been realized yet. Spot planting is suggested at the beginning for all rows of hazel, to make the visitors feel invited and to catch their interest while passing by. In the middle hall the spring flowering wood anemones (*Anemone nemorosa*) will be planted along the path to create an even carpet of white flowers.



Figure 1.5. The picture on the left demonstrates what the third tunnel looked like after several years of spontaneous development and before the restorative management action was taken through in 2002. The same picture is also demonstrating the wild reference character and its importance for creating a contrast with the neighbouring tunnel to the right, where intensive maintenance was set up to stress the strict architectural pattern of the interior room. A character, which became completed by the new layer of wooden-chips.



Figure 1.6. Spring flowers can create fascinating effects and contribute to a stronger interest and relationship between visitors and the area.



Swedish University of Agricultural Sciences

Project: **Creative management in the Young Landscape of Alnarp's Landscape Laboratory 2003-2005**

Dana Hladikova & Jan Sestak
Project leader: Roland Gustavsson

2003

place nr. 2

**THE ORCHARD OF
APPLE TREES**

2. The Orchard of Apple Trees

Inside dense hedges there is an interior room with a collection of fruit trees with open grown crowns and a lawn below. The management is stressing the interaction between regularities and individual characteristics, the expected as well as the surprises.

Key words: management, orchard, small scale openness, lifted regular canopy, light pockets, individual apple trees, interruptions, exceptional entrance views, unexpected windows, raster, simple and strict hedges

The main aim with the management activity is to stress the regularity in the pattern, based on the trees and the rectangular area of apple yard, the surrounding hedges and the straight rows of young apple trees (*Malus domestica*). A place to visit, walk through, and stop to pick-nick during the whole year, especially in time of florescence and time of harvest.

State of art:

- Apple orchard framed by three hawthorn hedges, and the hazel hall walk
- Apple trees of different varieties, height, and growth. Low canopy which stops the physical and visual overview.
- Various height of hedges. Other species like *Ulmus*, *Sambucus*, and *Cornus* are self-seeded in the hedges.

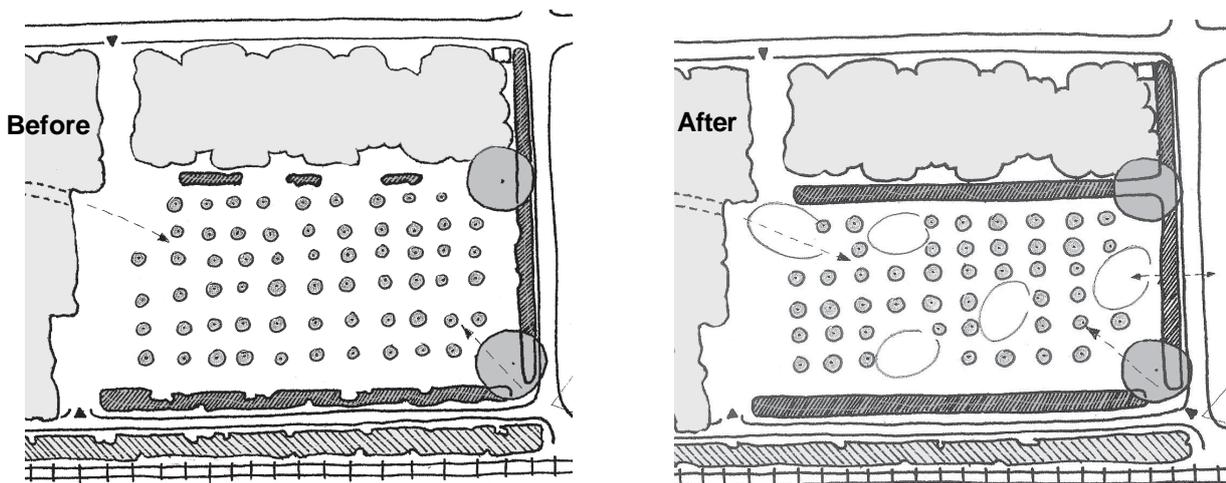


Figure 2.1. Plan showing the area before and after the management action. New openings in the tree pattern and strict form of hawthorn hedges are stressed.



Figure 2.2. The cross section shows the shape of the southern hedge before management.

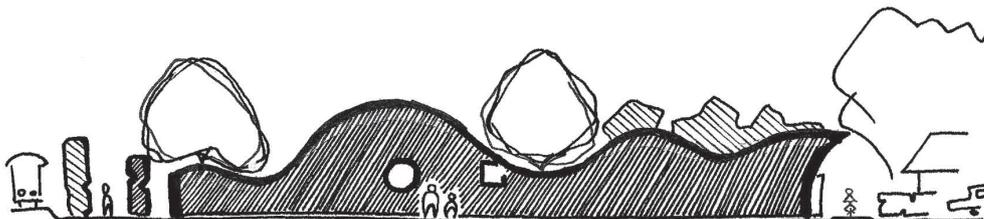


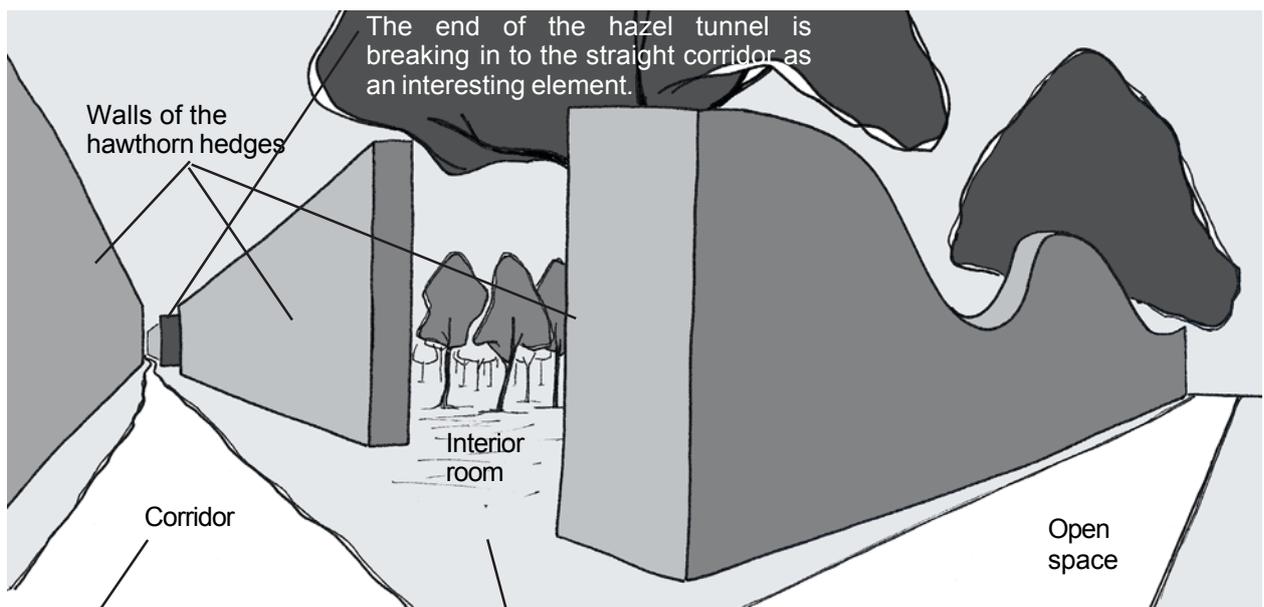
Figure 2.3. The sketch illustrates an intended future shape of the hedge with rhythmically changing higher and lower parts like dynamic waves. Visitors passing outside get small glimpses through the round and square windows cut in the hedge.

Management principles:

- Lift up the canopies of the apple trees to the same level, except for some few selected individuals.
- Exclude self-seeded species from hedges.
- Cut the hawthorn hedges into strict walls, form the top of the southern hedge into waves, this also includes shaping two "windows" into it.
- Exclude some few apple trees to create open spaces as light pockets.



Figure 2.4. View at the orchard from south-west. In this view from the outside the hawthorn hedges are most dominant. A glimpse through the narrow view to the interior room can be caught creating a sense of expectation for more and contrasting experiences with the special mood and atmosphere of the orchard. The main space and enclosing elements are outlined.



"The Long Hawthorn Walk"
Path going straight between walls of hawthorn hedges. At the very end it gets an organic shape.

Inviting entrance to the orchard. The overall grid of the apple trees will with increasing age generate a high aesthetical value, advanced by the strict and simple expression of the walls of the hawthorn hedges surrounding the orchard.

Figure 2.5. The main elements are here highlighted and presented by architectural graphics, illustrating the base in the chosen design concept.

The two figures above are both used to stress the fact that here is a particular interesting view from the south-west corner of the orchard. Here it is possible to enjoy different kind of characters, and how they interact. The long, almost infinite corridor between the hedges on one hand, and the more private and pleasant atmosphere of the apple orchard on the other hand. All framed by green walls and opposing the open space of the agricultural landscape with the city at the horizon. This is also the spot in which a decision, of the many opportunities of where to go, has to be taken.

Future strategies:

- Keep the space under the apple trees open to stress the interior room.
- When pruning respect the individuality of each apple tree.
- Maintain the hedges, excluding unwanted seedlings and young shots.
- Cut the hedges to get a dense cover and a strict shape.
- Keep working with the wave and the windows in the southern hedge.
- Let the seedlings of hawthorn at the eastern side grow and by this build a new hedge.

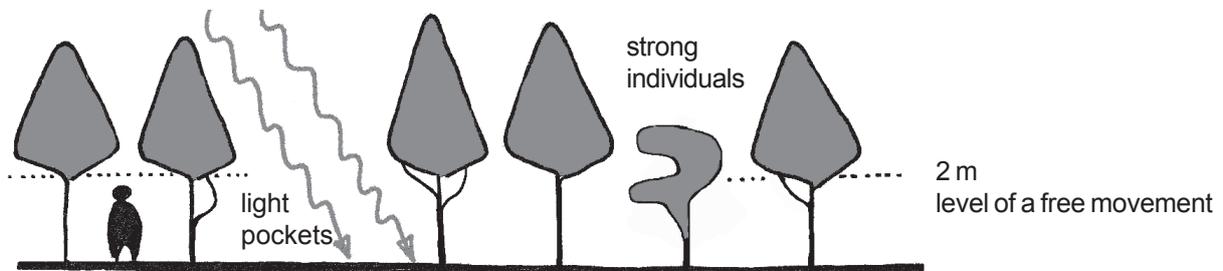


Figure 2.6. Sketch showing principles of the new approach for the management of the orchard

Principle discussion about the orchard with references:

An orchard is characterized by its regular grid of planted trees, with a high degree of uniformity in the shape, structure of branching and height of canopy. With reference to different cultures the canopy can be low as often found in Sweden or lifted high up as in countries like Czechia and Slovenia or when used in old meadow landscapes. By stressing creativity in the management we can extend and capture more. Through our choice of principles some trees will become exceptions and will be spatially strong rather than uniform as the others. This means a balancing act of two choices - by cutting make the trees look the same as most others, or stress the singularity articulating more individual characteristics.

A lot can also be gained by taking some trees away, to disrupt the even plantation spacing, creating a small scale openness as light pockets with more light coming down to the ground.



Figures 2.7. & 2. 8. Reference orchard. Photos of old apple trees, which underlines a strong individual appearance as a result of a long management tradition. (Eastern Scania, 2003)

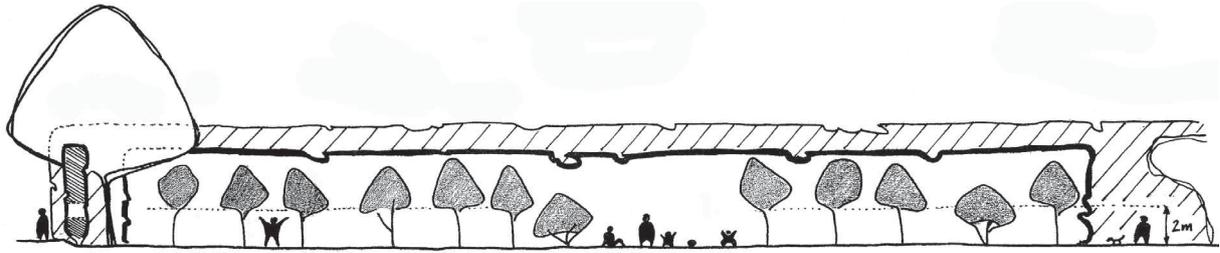


Figure 2.9. A cross section showing the orchard after the management action. The design strategy was here concentrated to the interior room, particularly focusing on the trees with an individual growth habit, stressing the small scale openness within a homogeneity, and giving place for some few light pockets.

The apple trees were at the start the main element of our interest in this management action. Our intention was to make the apple trees look well pruned and become even more attractive. The surrounding area was seen just as a screen and an addition for species diversity.

As we have tried to show through the references there are many varieties of apple trees growing in orchard with various height and growth habit. Here, most of the tree canopy (80-90%) was lifted up to create a bigger interior room with an increased visual as well as physical openness. Some trees, of special size or with a multi-stemmed growth habit, were managed with a special approach to develop their individuality. Regarding the low-branched trees these will create improved possibilities for children to climb the trees and pick apples.

Without disturbing uniformity as a main theme one of the aims has been to break the total order of straight lines of trees. Consequently some few trees were excluded to achieve a small scale openness bringing more sunlight down and creating a space that can be used for short-term recreation and pick-nicks.



Figure 2.10. View through the orchard after the management action.



Swedish University of Agricultural Sciences

Project: **Creative management in the Young Landscape of Alnarp's Landscape Laboratory 2003-2005**

Dana Hladikova & Jan Sestak
Project leader: Roland Gustavsson

2003

place nr. 3

**THE BEECH TUNNEL,
BABY PILLAR HALL &
THE SQUARE**



3. The Beech Tunnel, the Baby Pillar Hall & the Square

From a dense anonymous green mass of beech towards strongly contrasting characters.

Key words: straight direction, corridor & tunnel, leading walls, interior compact room, monoculture, density

South of some species-rich and structurally very varied stands a large section of European beech (*Fagus sylvatica*) monoculture is situated. Two main paths – the western and the eastern, are here leading us through Alnarps Västerskog. It became obvious when taking the management action through, that such a young beech stand has a great potential for creative management.

State of art:

- A monoculture stand of European beech (*Fagus sylvatica*).
- A co-dominating mass of young trees of beech, 10 years old, 4 to 5m high, densely branched almost down to the ground.
- The eastern path, which is focused here, is following a row in the planting scheme of the monoculture.

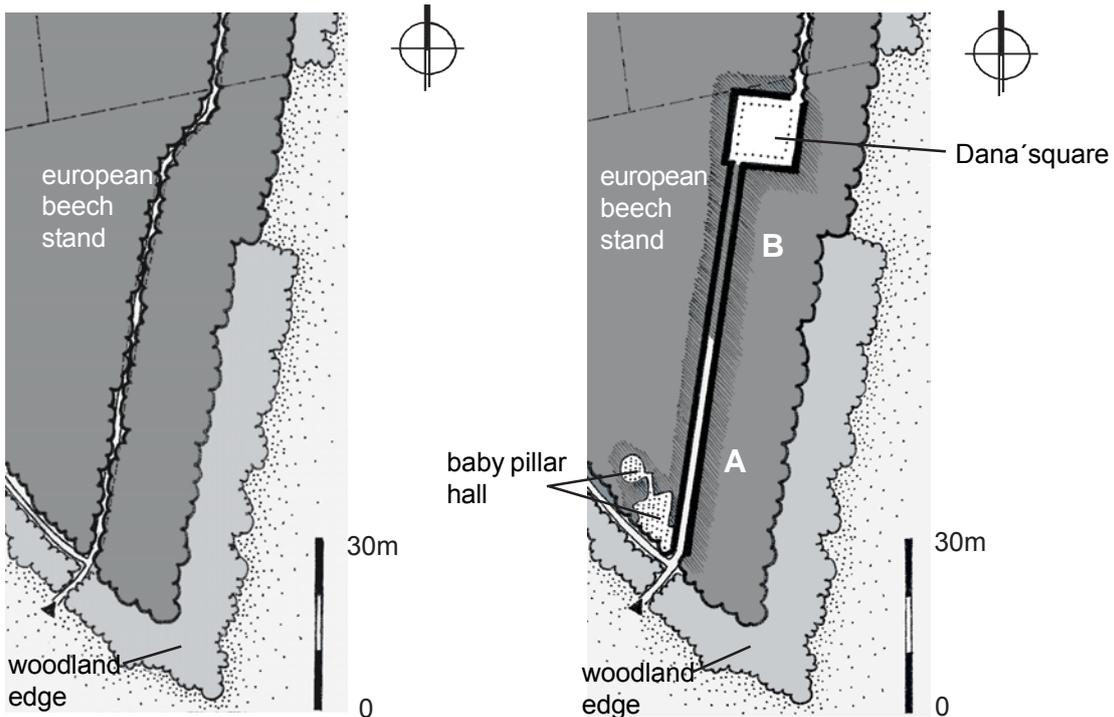


Figure 3.1. The site plans above show the situation before and after management, when the tunnel, Dana's square and the baby pillar halls were created.

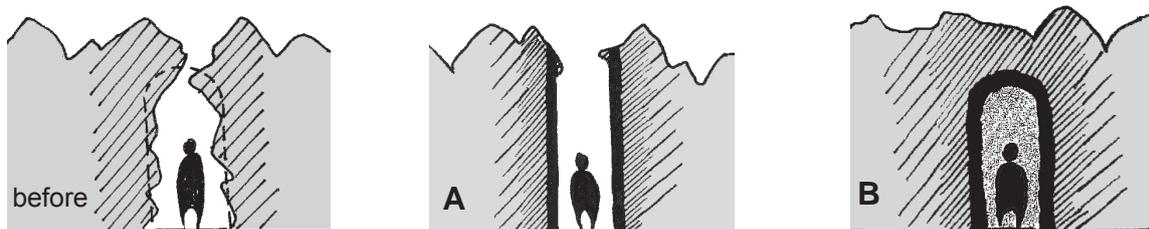


Figure 3.2. The cross-section illustrates the idea of making an open corridor (A) and an enclosed tunnel (B).

Management principles:

- On the crossing of the paths, a baby pillar hall was created in 2002 by pruning. This was meant to be a risky action because the individuals were young and still short. In autumn 2003, this baby pillar hall was followed up by a second one.
- The branches along the demonstration paths were strictly cut back in the dense beech stand to underline a sense of dense green walls.
- The eastern of the two demonstration paths, which earlier had been located between two plant-rows and therefore had become straight, was divided into two halves with contrasting open and closed roof, creating a corridor and a tunnel.
- This was, again, contrasted as a prolongation of the tunnel by opening up a strict square - "Dana's torg"- with beech as pillars along the sides like in a monastery yard.

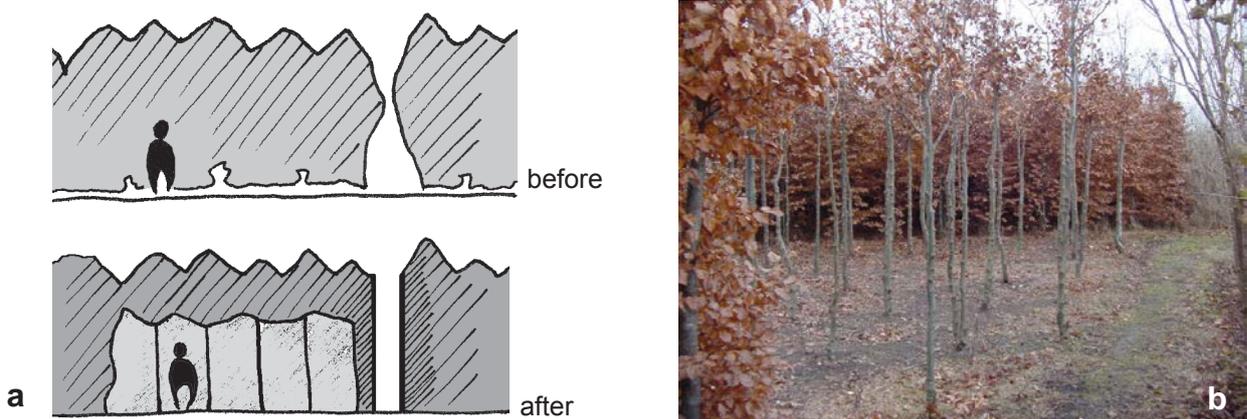


Figure 3.3. By lifting the canopy a small interior room - a baby pillar hall was formed aside the corridor (a). Photo of the hall after the management action in autumn 2002 (b).

The European beech (*Fagus sylvatica*) is one of the most used trees in European forestry. The traditional way to cultivate beech is either to bring it up in a monoculture or in a mixture with nurse species like larch, birch or alder. In all cases, the young stand with European beech is seen as not particularly attractive, rather the opposite. Furthermore, normally thinning to open up and create interest is avoided not to destroy the individuals fight upwards, in order to get a pillar hall character in the long run. Except light standardized thinning, there are normally no other management techniques practiced in forestry for beech.

In an urban situation, as illustrated here the non-interference in the young phase of European beech should be reconsidered. Maybe qualities which normally are seen as disadvantages or something negative are of great potential and should be used in the management. Young beech trees and thus all beech stands have some unique characteristic that few other species have. Some of these qualities are typical only in the young age and will disappear completely later.

- **Density.** One of these qualities is density. Beech has a natural ability to grow in very dense collectives.

- **Regeneration ability.** Second quality is the strong regeneration ability after pruning. Something, which traditionally has made people choosing beech for hedges or coppice. Here, it was used to create dense walls of branches and leaves just like what sometimes can be seen made with evergreen bushes such as *Taxus* and *Buxus*. By a consequent use of this ability the straight path was transformed into a combined corridor and tunnel with a strong and attractive character, easy to remember by all visitors to Alnarps Västerskog.

- **Contrasting light and shadow.** The third one is to use another quality of beech, and that is its ability to give strong shadow. By this, if one takes away some trees, a sense of strong light is created. Here this ability to contrast between openness and closeness has been utilized in a series of different contexts. The first Baby Pillar Hall was followed by a second a little further away from the edge. Something, which should give two light pictures and contrast strongly to the surroundings. Finally, it was used in the strict square, called Dana's square. How far in time these characters and contrast will persist is another important question.

Future strategies:

- To cut the walls along the western path regularly 2-3 times per year, or when needed, to keep the density.
- To eliminate thinning of trees in the immediate surrounding of the path, the baby pillar halls, and around Dana's square.
- To cut the tops of the trees along the corridor in order to provide enough sunlight for the walls. This should be reconsidered after a few years. It might as an action stop after another 5-10 years.

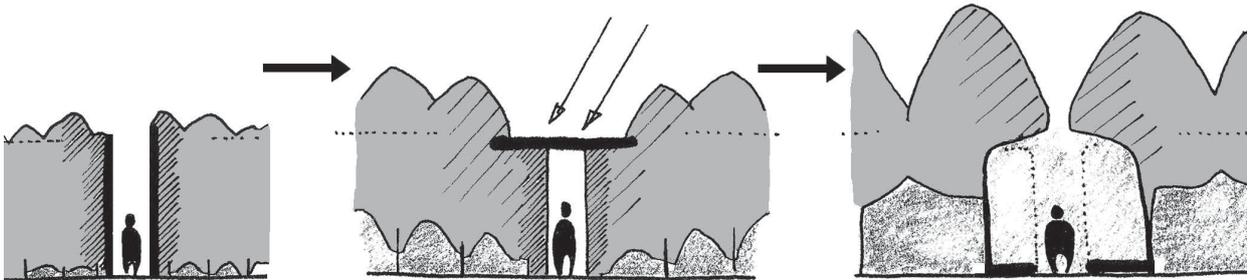


Figure 3.4. Development possibilities concerning the corridor to preserve its endurance in time and allow the real dynamics of growth



Figure 3.5. Photo giving an overview and parallel, focusing the pillar hall in the crossing point of the two paths.



Figure 3.6. Children from Helsingborg are taking part in the management creating a second pillared hall in the form of a secret circle.



Figure 3.7. The eastern demonstration path and its shift from a corridor with open roof to a closed tunnel.

Figure 3.8. The young beech plantation; so rich in potentials, so forgotten in management.



Figure 3.9. 'Dana's square' - a formal square positioned where the path bends and shifts from one character (beech monoculture) to another (beech + larch).

One of the functions of this beech stand is as the south main entrance to Västerskog, where one leaves open fields and meadows and enters young stands of trees, stepping into a more closed atmosphere where dense vegetation determinates direction and possibilities of movement. Consequently to this, directly to the entrance two 'Baby Pillar Halls' where created to extend the space and provide a possibility for free movement between the beech trees.

The east path with its long straight course was thanks to the natural growth habit of young trees divided into the Corridor - meant as narrow deep draft with view to the sky, suddenly fading into the second part the Tunnel, where branches compose a dark interior feeling of a tube with a leading spot of pale light at the end of the Dana's square.



Swedish University of Agricultural Sciences

Project: **Creative management in the Young Landscape of Alnarp's Landscape Laboratory 2003-2005**

Dana Hladikova & Jan Sestak
Project leader: Roland Gustavsson

2003

place nr. 4

THE HERON'S POND

4. The Heron's Pond and its Watershore

In the surrounding of restful water, between dense stands and open rooms a spectacular and attractive space is situated. Attractive not only for enjoyment and recreation of man, but at the same time being an environment for wild life - home of the grey heron (*Ardea cinerea*).



Key words: water shore, solarium chamber, surprise windows, opening and closing rooms and views through creative pruning, management for harmony and contemplation, archaic, scenic approach

The east bank of the third pond has an obvious key position in "Alnarps Västerskog" as the place in the middle. To reveal and enable its rich potential through a creative management is an inspiring challenge. The presence of water and the open, partly narrowed, partly widened space along its eastern shore gives the chance to design sceneries as different types of viewpoints. The overall intention is to highlight this area giving it a very specific atmosphere.

State of art:

- The shore was totally covered with very dense and non-transparent growth of alder (*Alnus*) and different species of willow (*Salix*).
- The water line had become occupied by a cover of tall growing grasses and water plants like reed (*Phragmites australis*)
- A series of small places, located along the western main path leading trough "Alnarps Västerskog", were all surrounded by thick stands of trees and were overgrown by tall grasses and herbs like thistles (*Cirsium*) and nettles (*Urtica dioica*).
- In the northern part a monoculture of hornbeam (*Carpinus betulus*) and in the southern parts a plantation of beech (*Fagus sylvatica*) combined with alder (*Alnus glutinosa*) borders the open area.
- The pond is also important for wildlife, like nesting birds. Particularly this concerns the opposite western shore.

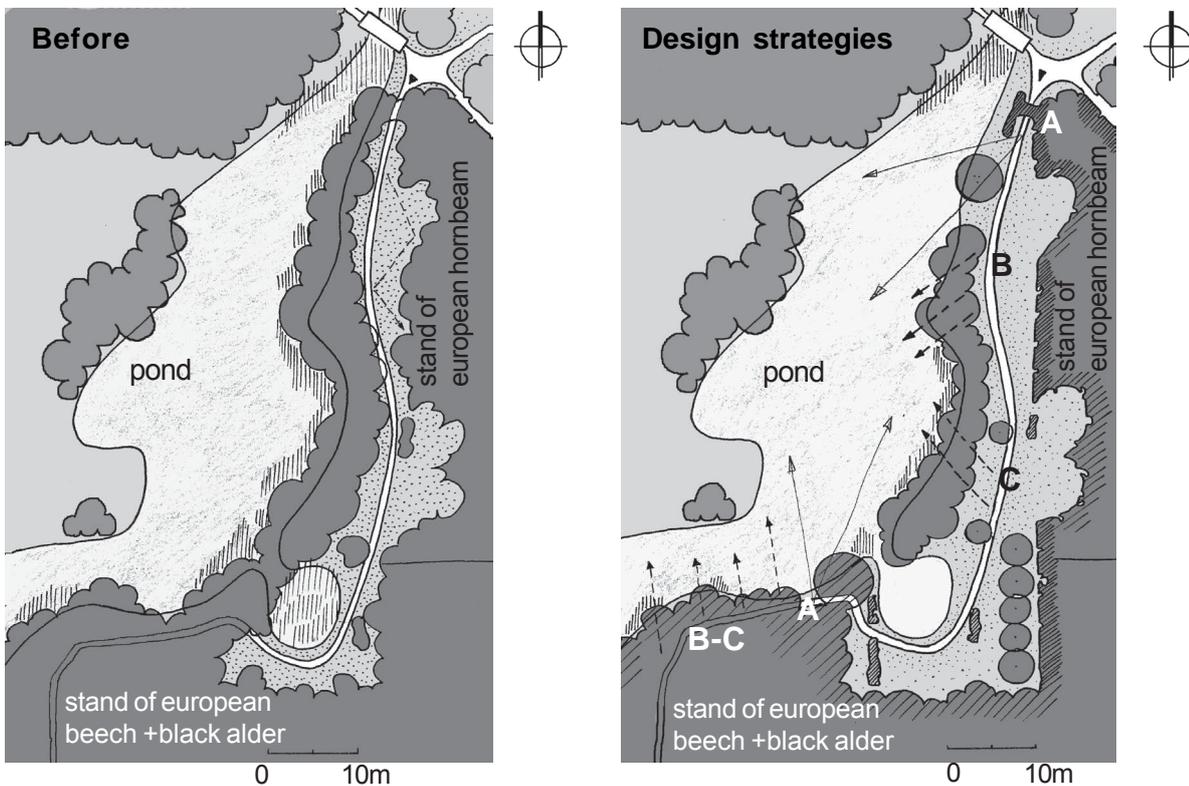


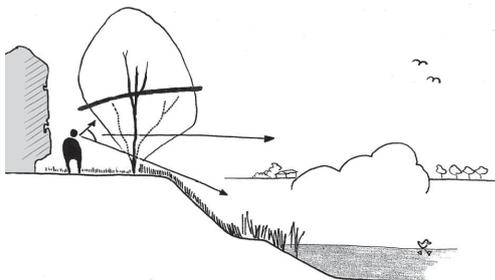
Figure 4.1. The left plan shows the area before the management action. The place was overgrown by trees and tall grasses. The plan to the right indicates the main goals of the management, especially when considering views, entrances, in between zones, and identified rooms.

Management principles:

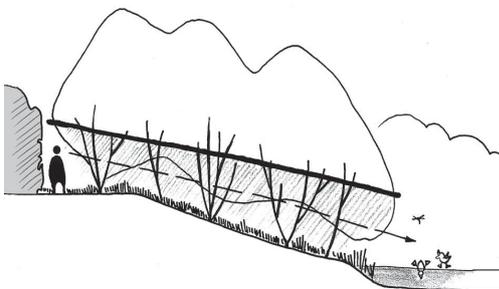
- Cut back high grasses, other water plants including willows in the zone 1-2 meters from the shore
- Lift the canopies of the alders along the bank, to create an intended degree of openness in the identified views of the surroundings and the water.
- Expanding the open meadow along the main path through a periodical cutting of the grass to perceive a sense of a park-like lawn.
- An individual directed thinning and pruning along the east side making some individuals into solitaires.
- Develop some of the trees to unexpected funny 'follies'.
- Actively utilize natural failure of some trees which were planted in rows to create small scale pockets between the remaining trees, promoting private solarium chambers.

Future strategies:

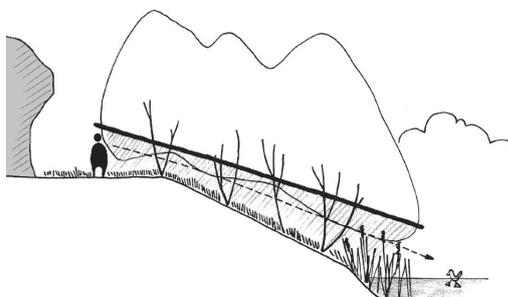
- Park maintenance of the grass combined with periodical cutting of the meadow at least twice a year. This is also the case for the water plants along the eastern shore.
- The canopy of the alders have to be lifted when needed to preserve the views.
- The contact with the hornbeam stand next by, should increase in the year to come by a creative thinning and pruning, with a strategy explained by key words like uniformity, individuality, walls and entrances.



A - wide open view



B - local transparent view



C - local half transparent, impressionistic view

Figure 4.2. Three management alternatives regarding the views.

The strategy for the shore views is deriving from a combination between the shape of the terrain, presence of trees and other options also present related to water plants and high grasses. Concerning the steep bank the crowns of the trees are lifted high especially in points where long distance views of the landscape were possible. On other locations the canopy was lifted less to rather focus the close surroundings. Among the trees a gradient between one-stemmed to multi-stemmed trees were used. Views with high transparency were used together with a contrasting concept in which the visitor was allowed to stay hidden for wild life, especially the water birds.



Figure 4.3. Photo illustrating the view through the pruned alder along the shore of the pond. The line shows the canopy level

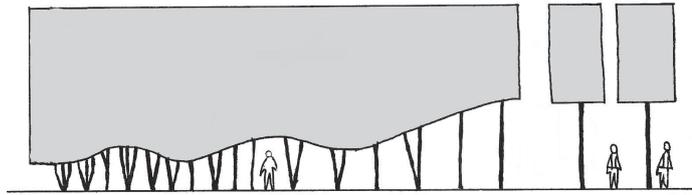
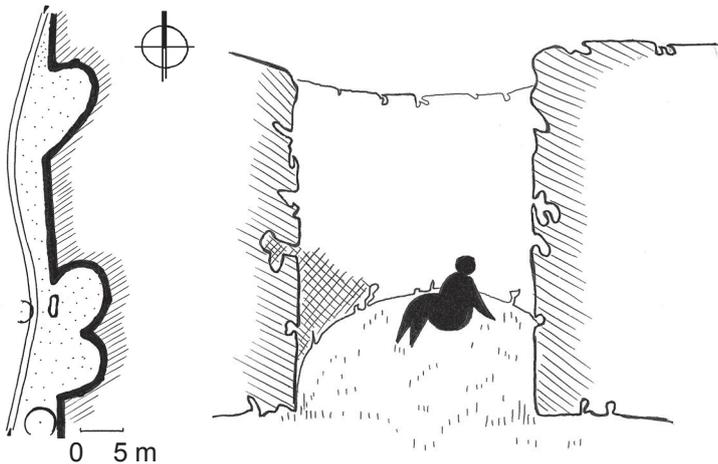
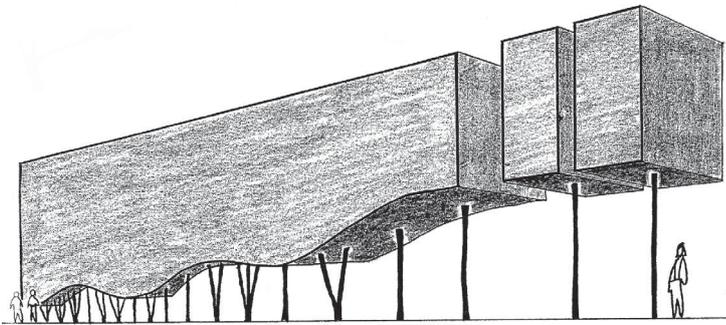


Figure 4.4. These illustrations show the design concept for the trees between the main path on the left and the pond on the right side. The distance between the trees, number of stems and height of the lowest green branches is fluently changing from the right to the left. Thus was the Alder, commonly seen as a non-attractive pioneer species, used in a new way emphasizing its aesthetic qualities.



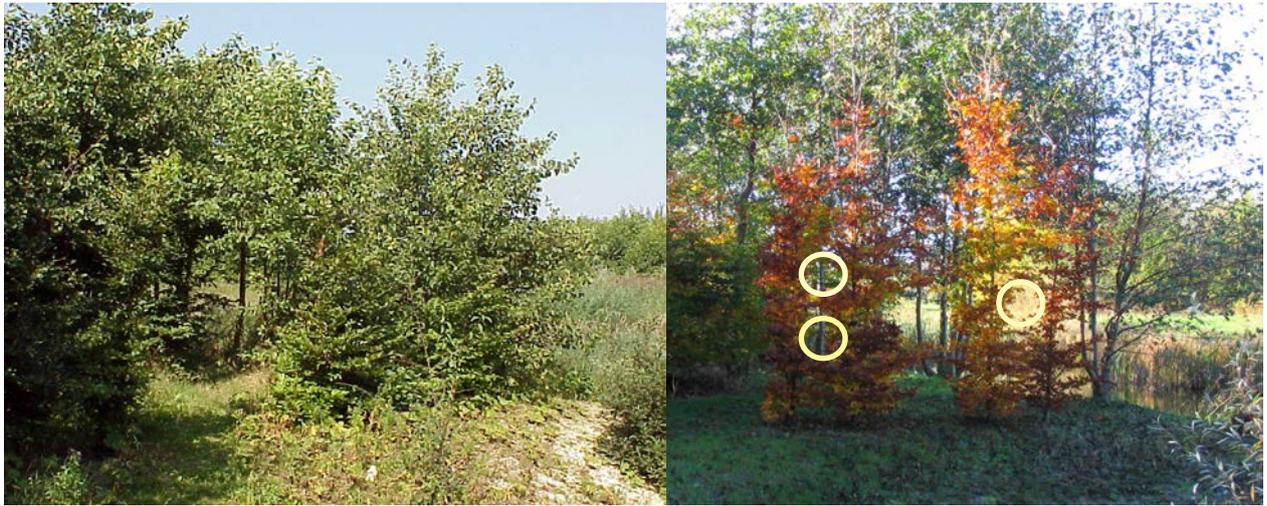
The solarium chambers offers undisturbed places to rest and relax on fresh grass when trying to find a deeper sense of contemplation - a spirit which hopefully strengthen this kind of feelings for the whole area. If lying down in one of the chambers east of the path, the afternoon and evening sun might catch you. Moreover, you will become protected from winds and insight.

Figure 4.5. Left sketch shows the situation after the edge of the stand was more strictly defined. To the right one of the solarium chambers oriented towards afternoon sun is illustrated.

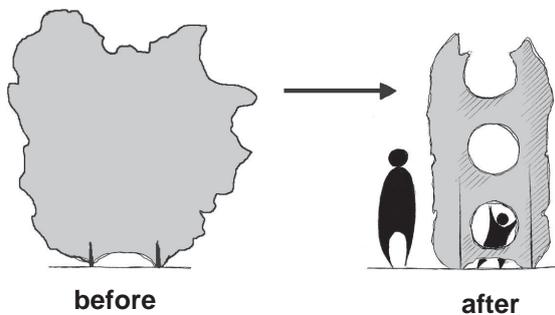


An **alder mini alley** was created after pruning of the stand border. The row behind with beech, cut as a green wall, stressed the importance of the alders in front of it. After the pruning the canopy was lifted exceptionally high to accentuate the straight trunks and parallel the surprising height of the trees only 9 years after plantation. Other independent solitary trees without such an intervention should support the more focused scenic expressions of the place.

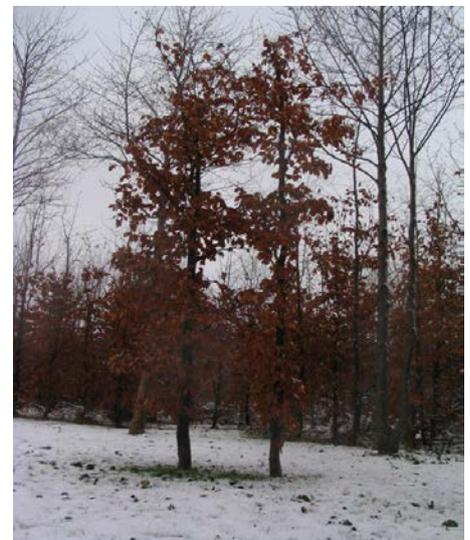
Figure 4.6. In spite of the fact that the alders are of the same age as the other species in "Alnarps Västerskog", they permit a particular variable management work focused on their form due to the fact that they grow exceptionally fast during their first years. Some of them have today reached over 8 meters in height.



Figures 4.7 & 4.8. Follies. The left picture shows the situation from the year 2002 before any actions. The right one, taken in autumn 2004 shows the improvement after pruning. In the autumnal colour the shaping of the follies emerges even stronger and more extraordinary.



Figures 4.9. & 4.10. Follies. Work with some selected trees as they were pieces of sculptures in a material, which easily could be formed. By regular pruning of beech, even when it becomes older, upkeeps the ability for it to hold the leaves in the winter.



Separated tree individuals, so-called 'Follies' or 'Screens', which were left in the open meadow, were transformed in to funny sculptures by opening a few circle gaps. The intention was to give children, and why not also adults, a chance to hide and seek for the unexpected. The development of the shape is not something that can be frozen forever. It will, even when cut regularly, change from year to year. The principle idea behind this action was to illustrate types of management efforts to create new forms, which do not destroy the possibility for another kind of directed or free growth later when reaching a more mature phase. Parallel it also illustrates types of efforts which are meant to be very informal and short lived. They will come and go, and the manager can with small efforts change position every year for the implementation.



Figure 4.10. At the southern view point, a group of alders allows the visitors to overlook the whole water area as well as the slopes with their different levels and most of the surrounding space.



Swedish University of Agricultural Sciences

Project: **Creative Management in the Young Landscape of Alnarp's Landscape Laboratory 2003-2005**

Dana Hladikova & Jan Sestak
Project leader: Roland Gustavsson

2004

place nr.5:

**THE
ALDER
SHORE**

5. The Alder Shore

Here one might suddenly feel a character of a flood plain forest coming through. A character based on a mixture of different elements, in which nettles and elders are dominant in the undergrowth, below a dark green canopy of alder shading the ground. From a dense and messy green character the aim was to discover the strong potentials, and through management create an area with its own specific characteristics. Based on an atmosphere with shifting light, the visitor is lead towards visual openness and an interior character, interacting with the water surface and its reflections of the sky.

Key words: monoculture of alder, rediscovered stream, improvement of visual pattern, hidden



State of art:

- One species stand of Alder (*Alnus glutinosa*). This together with 2-5 m high and dense spontaneous ruderal undergrowth creates little of interest for the visitors
- The overall character of the stand is chaotic and wild, evoking an early stage of flood plain forest.
- Most of the alders have a straight trunk. Particularly at the edge there are many multistemmed trees. Bellow the living canopy, dead and dry branches are left on the trunks for years, down to 1m above ground.
- The field layer is composed mainly of species belonging to nutrition rich soils, such as elder (*Sambucus nigra*) and nettle (*Urtica dioica*). Few grasses are present in lighter spots and along the water shore but rarely as a dense cover.
- In the current situation the water feature in Alnarp's Västerskog is recognized and highlighted mainly as a pond due to the dimension and openness. Here the section of alder monoculture gives the opportunity to underline and experience the stream in a more intimate and personal surrounding.

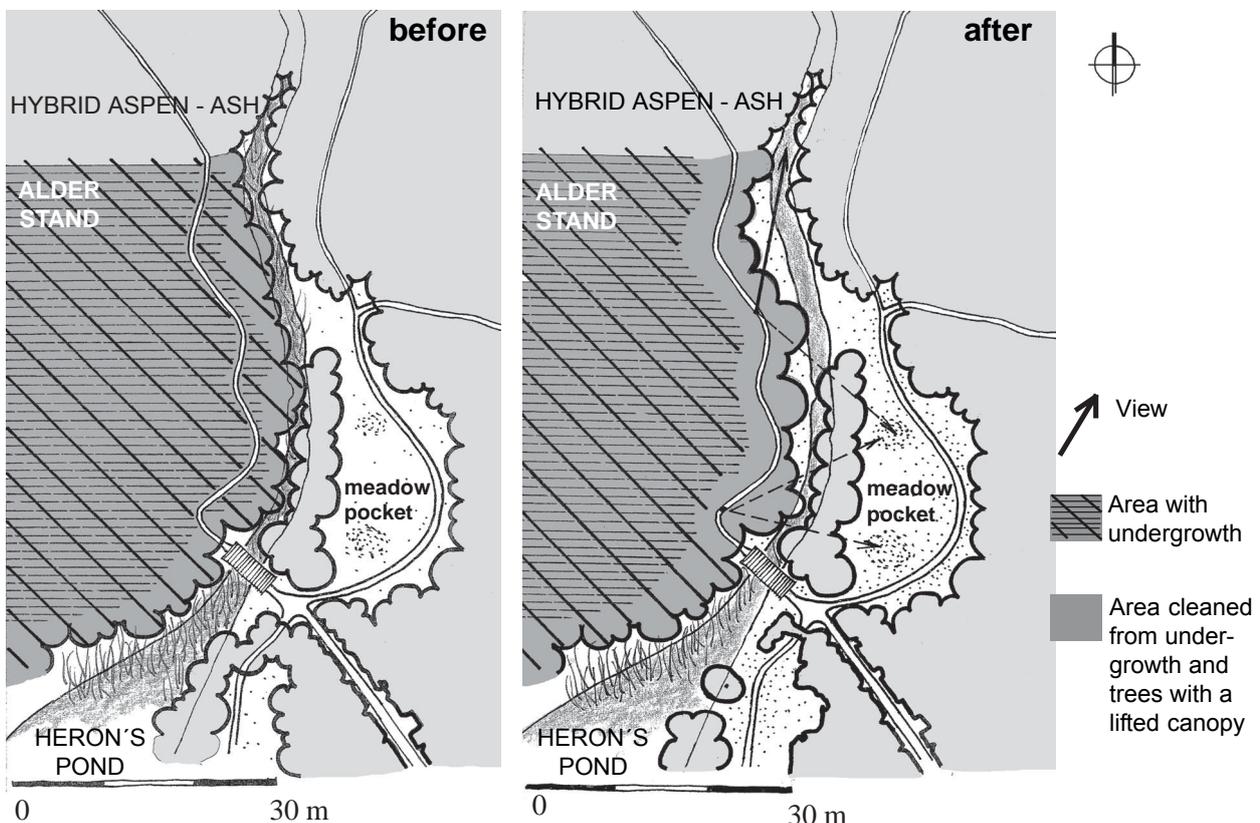


Figure 5.1. Illustration plans showing the key area and its surrounding and describing the changes between years 2002 and 2004.

- Both shores of the stream are covered with dense spontaneous vegetation, consisting of willows and water plants such as *Typha*, *Epilobium* and *Sparganium*. Behind the dense growth of willows, further on to the east, there is free space meant to be an open and sunny meadow pocket.
- The main path is situated on the east edge of the stand running parallel with the stream the eastern limit of the experienced room. The path is during the summer season "attacked" by the growth of nettles, which are also expanding in direction to the stream.
- On the south east corner of the alder stand the path is crossing the stream, which is here flowing into the pond. From the bridge there is an open area surrounding the Heron's pond.



Figure 5.2. The left picture represents the situation before management action in 2002. The path is hard to find, green branches all the way down to the ground are separating the path from the stream on the left side. The right picture from autumn 2003 shows the situation since the canopy of the alder was lifted, and the visual connection to the stream had been created.

Management principles:

- The management actions, which are presented here have been taken trough over a 3 years period. Using such a progressive year to year and three-step approach has given wider chances to deepen and reinterpret the aims of the whole development. It has also lead to a corresponding extension of both, size of the area and complexity of the management progress. Aside these place- and walk- related management actions, within the project 'Creative management' a forestry thinning program has continued, and will be mentioned here when the programs interfere.
- In the first year, during the summer of 2002, the action was focused on the area between the path and the stream. The trees were pruned up to the height of 3 meters to extend the inner space, and at the same time the grass, nettles and elder were cut within this zone and the ground cleaned from dead branches. Moreover, the bank of the stream towards the path was cleaned from willows and water-plants to allow visitors to see the water surface all the way along the path. Furthermore, the opposite bank was left as a thick green wall limiting the inner space and to guide the visitor's view length-wise to the stream.
- In the summer of 2003 the field layer of the alder stand along the path and along the shore of the stream were cut back with the aim to support development of a denser grass-turf and thereby to hold back ruderal species. The sprouts of the willows were cut again and some more crowns of alders was lifted. This action resulted in a strengthening of the individual characteristics of the place based on an articulation of elements and stressing the contrast of the dense and dark alder stand on one hand and on other hand the light from the hybrid aspen - ash stand in the north and the stream with the surprising openness of the Heron's pond in the south. To supplement the overall atmosphere between the path and the stream and to enrich the visual experience, two views were opened by pruning for "windows" in the compact wall of willows at the other side of the stream, to create a visual connection with the sun-drenched meadow pocket behind. This also highlighted two patches of tall type of grasses with decorative flowers lasting from summer to winter.

- During the winter of 2003/04 the periodical forestry thinning set off in the alder stand. About 50% of the trees were thinned, and trunks and branches were left on the ground. This resulted in the opening of the canopy layer and thus in a stronger and higher growth of the field layer with a dramatic expansion of elder (*Sambucus nigra*), both in width and height. Within the area close to the water the thinning created a situation with more light, which supported the growth of grasses. On the other side the nettles expanded as well.
- In late summer 2004 the shore and the path was cleaned from what had been cut down in the winter and the field layer, now with patches of grasses and nettles, was cut twice. Shoots of the willows were cut back. Remaining multistemmed alders were recognised and decided to be kept and supported in this area. The two views in direction to the meadow pocket, now filled with young shots, were not reopened, because with more light coming inside the section this feature lost its impact and importance. Instead, a longer part of the stream was integrated in to the area. By total cleaning of the stream from tall water plants and down hanging branches of willows a spectacular view following the curve of the stream was opened, presenting the stream as a dynamic and vivid element of this young landscape.

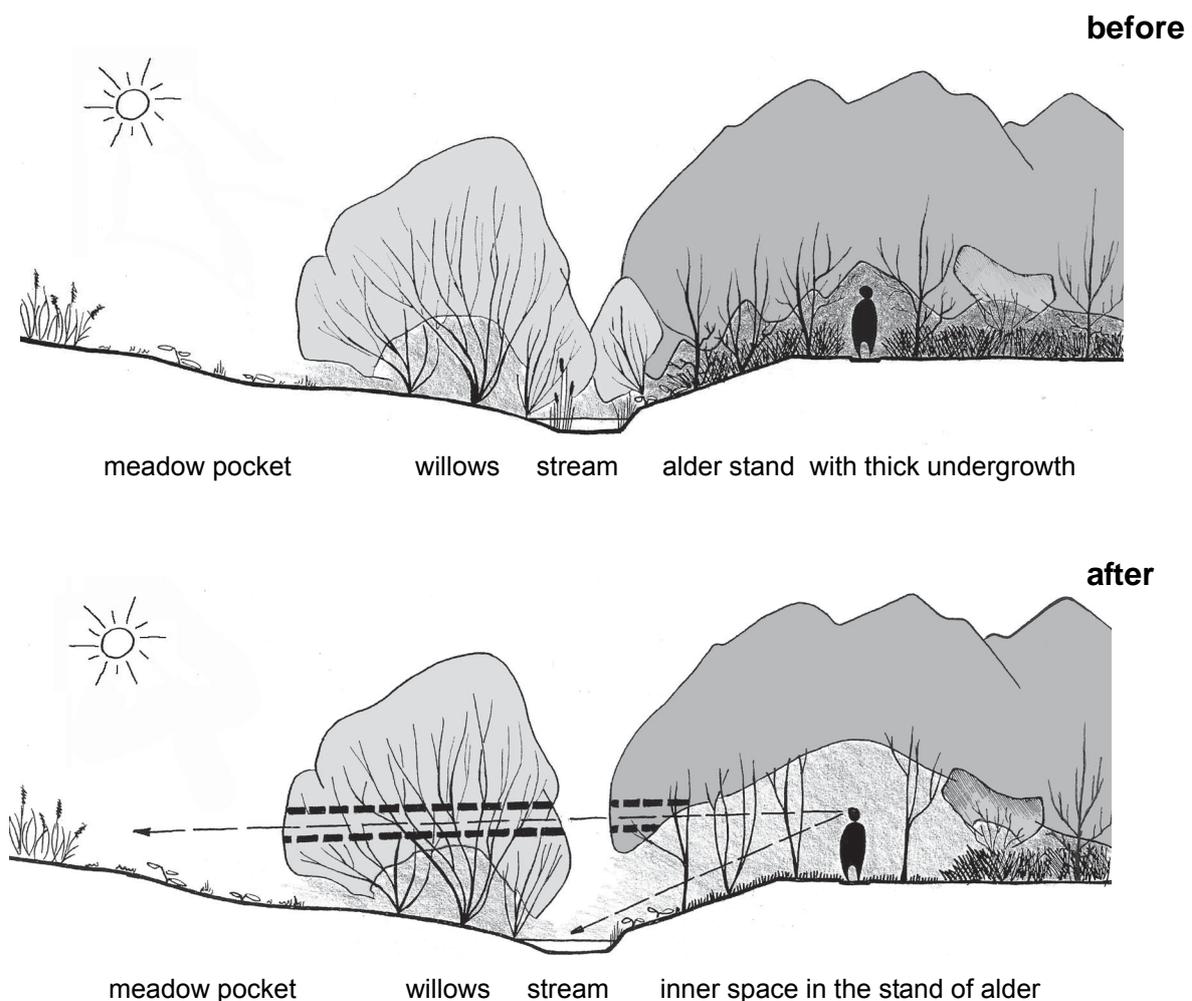


Figure 5.3. Cross section through the area before and after management action (with the situation in the summer 2003) illustrating the segmentation of the vegetation, an interior room with optical connection to the meadow pocket on the other side has been created.



Figure 5.4. Two panorama pictures showing how the interior room emerges. The picture a displays the situation in summer 2003 - showing trees close to the water with lifted canopy. Picture b shows the same area after summer 2004, when the management rather became focused on the field layer and the stream.

Future strategies:

- In sequences of 3-5 years the lowest branches of the alder trees should be removed to keep the open view from the path, and the shoots of willows on the bank of the stream should be cut back as well.
- The newly created view along the stream directed to the north will need extensive maintenance dealing with yearly removal of invasive water plants and branches of willows bending down.
- After the three year period when the specific characteristics were found, developed and empowered, the future management will focus more on the field layer and the connection between water and land. The yearly maintenance should be reduced to regular cutting of the grass along the path to avoid nettles and elders to take over towards the stream. The shore will be maintained as a yearly cut meadow.
- One aim is on selected areas, to speed up the process of establishment of an attractive and diverse field layer. Thus a proposal has been made in 2004 and the establishment phase will be carried out in the summer of 2005.

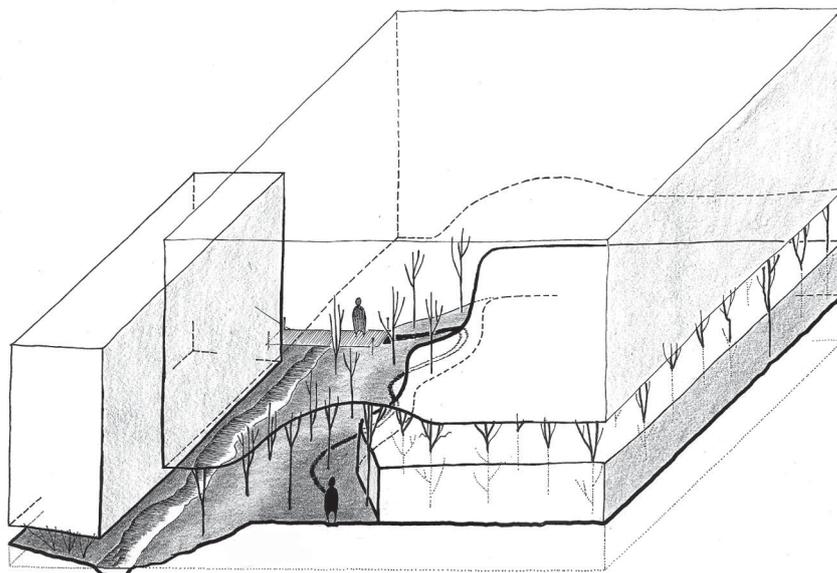


Figure 5.5. Sketch showing the alder stand with the stream from the north. After the cleaning of the shore suddenly a compact room, where the water plays an important role, started to arise.

Discussion - concepts and dynamics within relatively small spaces:

As indicated above, actions means an involvement of several processes. This should be noticed due to the fact that the area is not very large. The importance of giving a fair chance to find a strong concept in a place like this should also be pointed out. Too often it stays hidden.

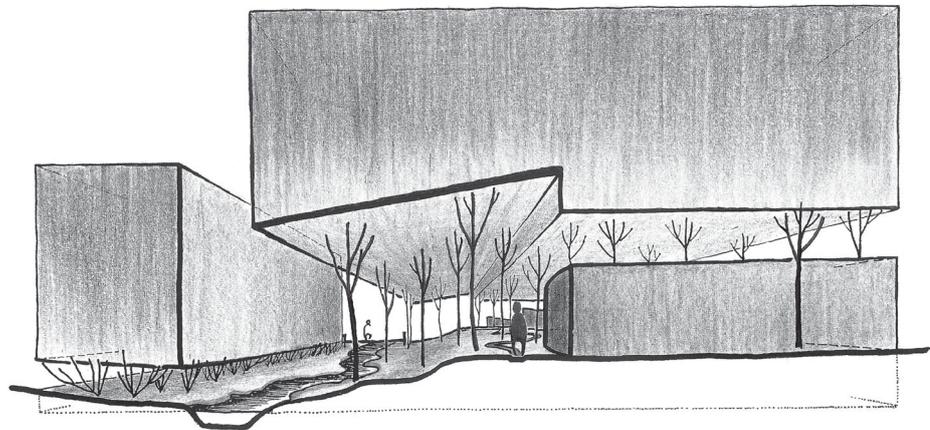
The water itself brings vitality to the area. The constant fluctuating of the water level changes the image from a wide brook flowing through the area to a narrow springlet slowly moving forwards, or even to just a wet surface without visible water surface during extremely dry periods of the year. Moreover, water and its shores brings typical self-establishing natural vegetation, which is rather unpredictable, creating positive experiences or problematic situations, which have to be dealt with.



Figure 5.6. Water is an important element in the landscape. The aim was to emphasise the stream by the management making visitors experience it as an important, dynamic element of the place.

The interior space is determined by the man-made plantations of alder trees, which is interactively complemented by spontaneous vegetation occupying the same spot. But what is important as physical outlines within the space and time is not just a question of vegetation. In this part it is also about the water stream, with its carefully designed topography of banks providing a gradual transit between water and land with different water gradients. With purpose the path was designed to follow the organically shaped bank and to create a visible wavy line as an expression of dynamic movements of the water, changing the directions of views and movement of the visitors.

Figure 5.7. Sketch showing the main ideas of the management action. A new interior room was outlined from the top by the canopy of alder as a ceiling. The spontaneous undergrowth together with willows are forming a dense background - functioning as walls, which are limiting the space from the side.



The vegetation as mentioned above plays a central role in the definition of spatial limits –the ceiling of canopies, the walls of thick growth of willows or nettles combined with elder on the sides and trunks as columns filling the inner space. All these elements of vegetation are of course subject to change between seasonal periods with some notable aspects. As for example, in the late autumn the stage of nettles and elders is still fresh green until the first heavy frost. Something, which is very contrasting and looks exotic compared with all surrounding trees dropping their leaves and standing bare. There is another dynamic process again caused or better to say coordinated by man and nature. After the winter and the basic forestry thinning a higher amount of light is coming into the plantation, which causes an empowered growth of ruderal plants which will slowly retreat again as the trees start to close these gaps and give more shade in following years.

The awareness and understanding of such processes, elements and compositions of elements are of high importance to make a **creative management** successful and sustainable.



Swedish University of Agricultural Sciences

Project: Creative management in the Young Landscape of Alnarp's Landscape Laboratory 2003-2005

Dana Hladikova & Jan Sestak
Project leader: Roland Gustavsson

2005

place nr. 6

THE STRIP BETWEEN
THE PONDS

6. The strip between the two ponds

One of the most attractive features of all categories within a young landscape is the water. Vivid and surrounded with vigorous vegetation, accompanied with water birds and insects, it offers another dimension to the landscape. In the long run this is meant to become a central spot for what is called "Lilla Alnarpslunden"- The little Alnarps grove.

Key words: ponds, dynamic growth, local and long distance views, terrain modelling, picturesque landscape, search for identity



Even if this area was focused from the very beginning of the project there is still quite a wide range of possibilities how to develop the place in the future. In the process of management there have been different shifts and the area is still on a way to develop its real value. The vision of the future is rather flexible and open, not in a sharp or exact shape. Many potentials are shown, which can lead towards multiple solutions. This in a way makes the place very special forcing us to reconsider our thoughts and images year after year and also to be patient and tolerant to its dynamic changes and own pace when shaping its own sense of place and identity.

State of art:

- The top of the strip was planted by a species rich mixture of broadleaved trees and shrubs. Nowadays it is dominated by grasses, willows (*Salix*) and hazels (*Corylus avellana*) but containing a whole set of more slow-growing tree species as well.
- The slow growing speed is primarily caused by the soil conditions which are not entirely favourable. The soil was compressed by heavy machinery during the construction period and the slopes of the ponds covered by pure clay. The slopes are covered hardly by any vegetation after a ten year period.
- The woody species were planted in rows while the vegetation at the water shore is spontaneous and dominated above all by willows and tall water plants such as bulrush (*Typha latifolia*) and reed (*Phragmites communis*).

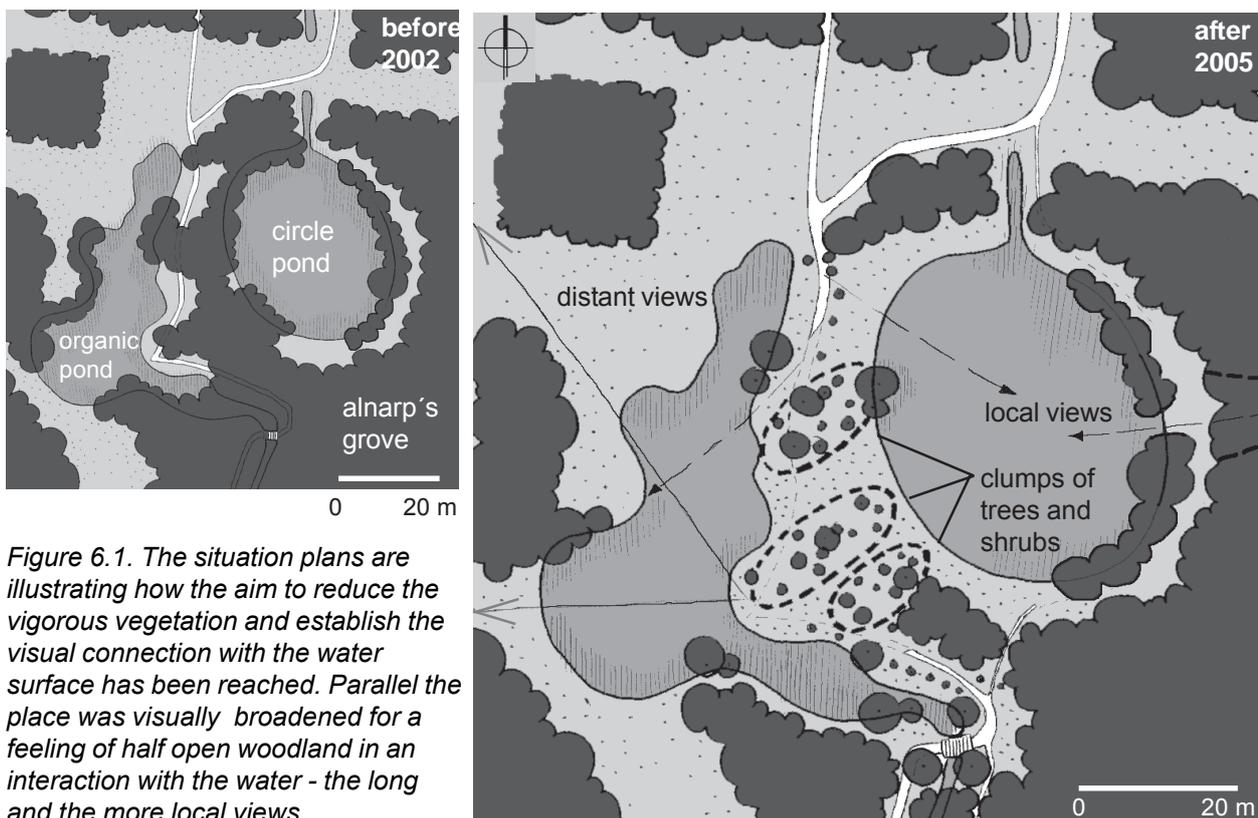


Figure 6.1. The situation plans are illustrating how the aim to reduce the vigorous vegetation and establish the visual connection with the water surface has been reached. Parallel the place was visually broadened for a feeling of half open woodland in an interaction with the water - the long and the more local views.

Concepts:



the clumps



the grazing level



views and terrain



strong individuals

Management principles:

- The most striking action was to reduce the wild vegetation through felling and pruning along the shores connected to the central strip in 2003. Suddenly the water surface aroused and offered a much larger scenic view.
- All elms and also some nurse trees were cut away to support growth of long lasting secondary trees. The aim was to create several clumps of trees and shrubs. The rest of the area was aimed to be developed as an half open area covered by herbs and grasses inspired by landscapes where grazing is dominating. This association brought the terms "pastoral" or better "picturesque" due to the missing grazing animals.
- Many trees were pruned and their crowns were lifted to provide enough space for visitors to move freely giving the possibility not to follow the demonstration path.
- With more openings several views connecting this area with a wider context of agricultural landscape were set up. The opening up, also helped in perceiving the topography of the terrain shaping more clearly and the connection to the water.
- Following the traditional choice of tree species in the first design and traditional management measures was also brought into the management. Some willows and ashes were pollarded or coppiced to bring a number of very expressive individuals in the future.
- The bare slopes of both ponds were covered with hay in 2005 and in some spots flowering herbs were planted as a first step in the establishment of a meadow.

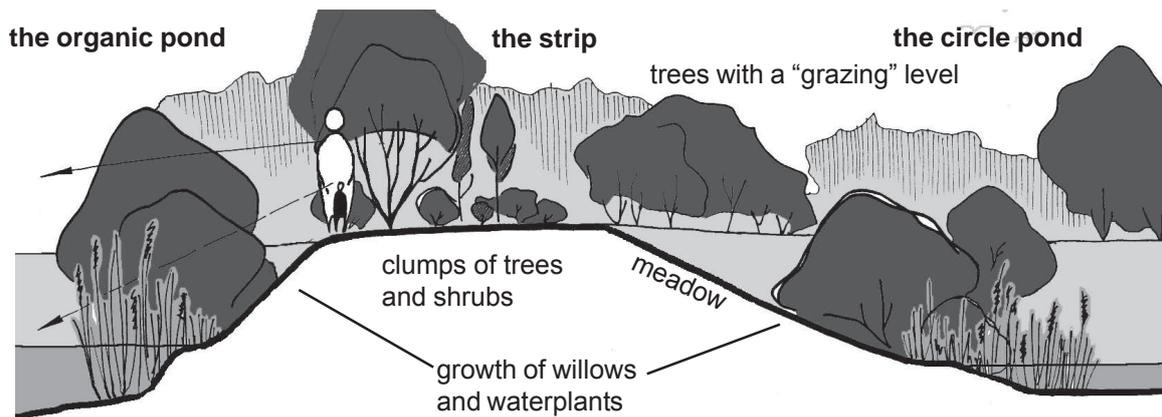


Figure 6.2. The fluctuation of the water level together with various angles of the slopes creates an important topography which is expressive in a flat landscape as in southern Scania.



Figure 6.3. & 6.4. The upper panorama view shows the area and its surrounding with the two ponds in 2002. On the lower one (from 2004) the difference is visible when the water surface rules the scene. By the management, the vegetation on the watershore was reduced and the canopy-base level of the trees was lifted.



Figures 6.5. & 6.6. Some parts like the organic pond in this case has to be cut in the interval of 2 to 3 years, otherwise it will be overgrown by willows once again.



Figures 6.7. & 6.8. The third year of the management (2005) focused a detailed work with the spots. Here the clayey slopes with spare vegetation were covered by hay. The green stripes are areas where several species of herbs were planted. They are meant to support the natural processes and function as a seed banks for spreading along the shores.

Figure 6.9. (below) On certain spots designed as strips, different herbs with attractive flowers were introduced to support the development of a meadow on the slopes (2005).

Future management strategies:

- The water shore along the two ponds has to be controlled and cleaned periodically to control young willow sprouts and tall water plants with the main reason to provide clear view on the water surface. Favourably it could be a mixture of more intensive cutting along the tract and extensive interval (5 to 10 years) of care for the shores at the back side of the ponds while focusing individuals or groups of plants.
- Newly established meadow communities on the slopes of both ponds have to be cut once a year after the plants have seeded.
- It is necessary to keep the vegetation aside the main long distant views on the other sides of the ponds by pruning each year.
- The woody species like willows and hazels has to be piece after piece cut away so that the main stems can remain and develop as almost solitary growing individuals on the strip.
- In the time scale of 3 to 6 years the trees should be repruned respecting their shape to develop strong individuals for the future.



Discussion:

As mentioned earlier this place is still evolving and it will probably take another series of years and special effort of coming managers to find the inherent character of the place. Some of the qualities for the future are already uncovered but others, no doubt, are still hidden. The search for key characteristics and the understanding of and interaction with natural processes makes the management decisions and actions in this area complex and difficult. There is a need of imagination when searching for proper actions towards step by step solutions for the future. This is particularly the case when working with the vegetation. For example today “invisible” oaks and ashes will gain in importance and slowly create a contrast to the today dominating willows and hazels, which will play a minor role later. Despite some doubts in our minds mentioned above about the former management actions, it is obvious that there are already qualities enjoyed by visitors.



Figures 6.10., 6.11. & 6.12. Even if planned to be only supportive nurse trees the willows are playing an important role in the spatial perception. The same willow tree can be a part of the visual scenery or a challenge for climbing. The area functions as a welcomed meeting point for social gathering.



Figure 6.13. Furnishing places like the strip between the two ponds suddenly raises the opportunities to enjoy and rest, especially for elderly visitors (2005).

Figure 6.14. The children are using space according to their activities more freely (2004).



Swedish University of Agricultural Sciences

Project: Creative management in the Young Landscape of Alnarp's Landscape Laboratory 2003-2005

Dana Hladikova & Jan Sestak
Project leader: Roland Gustavsson

2003

place nr. 7

THE LARCH & ASH

7. The Larch & Ash

The stand is supporting a feeling of an interior room. Speeding up a sense of maturity, catching a diffuse interior light by a creative pruning of the young trees. Concentrating the effort in the northern part to get the best effect, using a falling ceiling to create impressions.

Key words: Light pillared hall character, combination of two light giving tree species, scattered or diffuse light, falling ceiling triangle, colour and texture of bark, columns.



In this section the two light giving species of larch (*Larix x eurolepis*) and ash (*Fraxinus excelsior*) are combined. Both of them are fast growing in the early years and today have got straight stems. Even if both of them spontaneously raise their living part of their crowns, letting the lower branches die back, these dead branches stay on the trees for several years. Especially larch is in this way densely branched down to the ground. The western path leading through this section is straight and the experience of the whole section is almost the same through all of the passage and captures little of interest before the management action took place.

State of art:

- The mixed plantation of larch and ash was planted in rows with a distance of 1.5 m within the row.
- 9 years after plantation, the height of the trees was between 7 and 11 m. Equal and strong competition has resulted in straight trunks.
- The average level of first green branches was at that time on a height of 4 m, and the dead branches below reached down to the ground, especially on the larches.
- The management action was taken through in the autumn 2003.
- The spare foliage density of ash and larch gives a diffuse light to the interior of the stand.

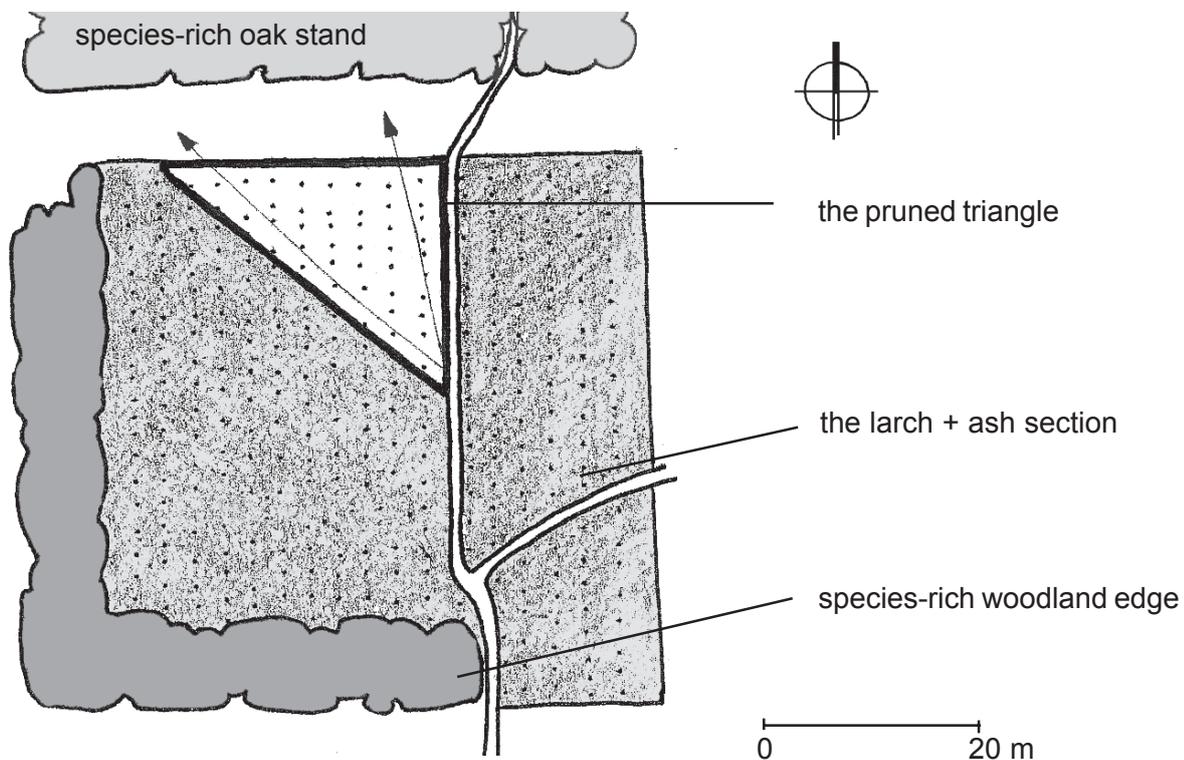


Figure 7.1. In the northern part of the mixed stand an area in the shape of a triangle was pruned and cleaned from wood and branches on the ground.

Management principles:

- A northern part of the site was chosen for the action. Here, the canopy of all trees were lifted right out to edge
- The ground plan of the treated area was shaped as a triangle with the highest level of the pruning in the middle, next to the path slowly sinking towards the edge.
- All the cut branches were removed from the area.

Future strategies:

- By natural fall of dead branches as well as an effect of coming forestry thinning of the area sets in question our management efforts of today and it will slowly disappear.
- Letting more light coming in might mean a changing fieldlayer with unattractive herbs and seeding of trees destroying the effect, and thereby demands a complementary maintenance. However, it does not exclude the possibility to follow up with similar principles, but then using new levels and sizes, and an understanding that the experience will be something different.

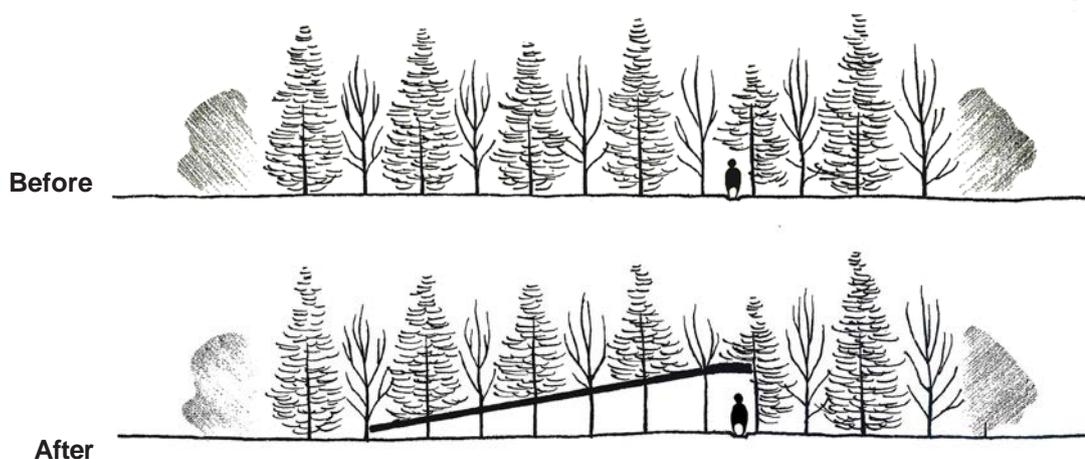


Figure 7.2. An articulation of the interior room enlarging the sense of space, increasing the possibility to move under the trees freely.

The pruning taken through in this area emphasised the geometrical rows of trunks, which can be seen as building columns supporting the canopy. In the scattered light the colour and texture of the bark of both species are highlighted – grey green and lucid for the ash and ferruginous rough for the larch.

The view from inside of the section to the meadow on the northern side after pruning represents the inclined plane with the falling ceiling in the best way in which it is visible. The view towards the fields behind the section is more transparent now and screens the prompt of the landscape.



Figure 7.3. Photo from inside the stand towards the north and the meadow. The trees close to the path were pruned up to 4 m and from there the level of canopy declines slowly to 1 m at the end of the triangle. View from the south.



Figure 7.4. Two types of lines in the photo are marking the area, where the trees were pruned. The dashed line marks the descending ceiling of the interior room. The full one follows the triangle margins of the pruned area.

The space in the newly opened interior enables free moving choices. The visitors are not obliged to keep to the path. The movement in between the pillars permit the visitor to really feel as part of the place and recognize the differences between pruned and untreated areas. Especially this comes clear along the path, where the crowns of the trees are contrasting to the new open interior room. As an overall experience such management succeed to bring a new meaning and importance to the earlier overlooked and quite anonymous plantation.

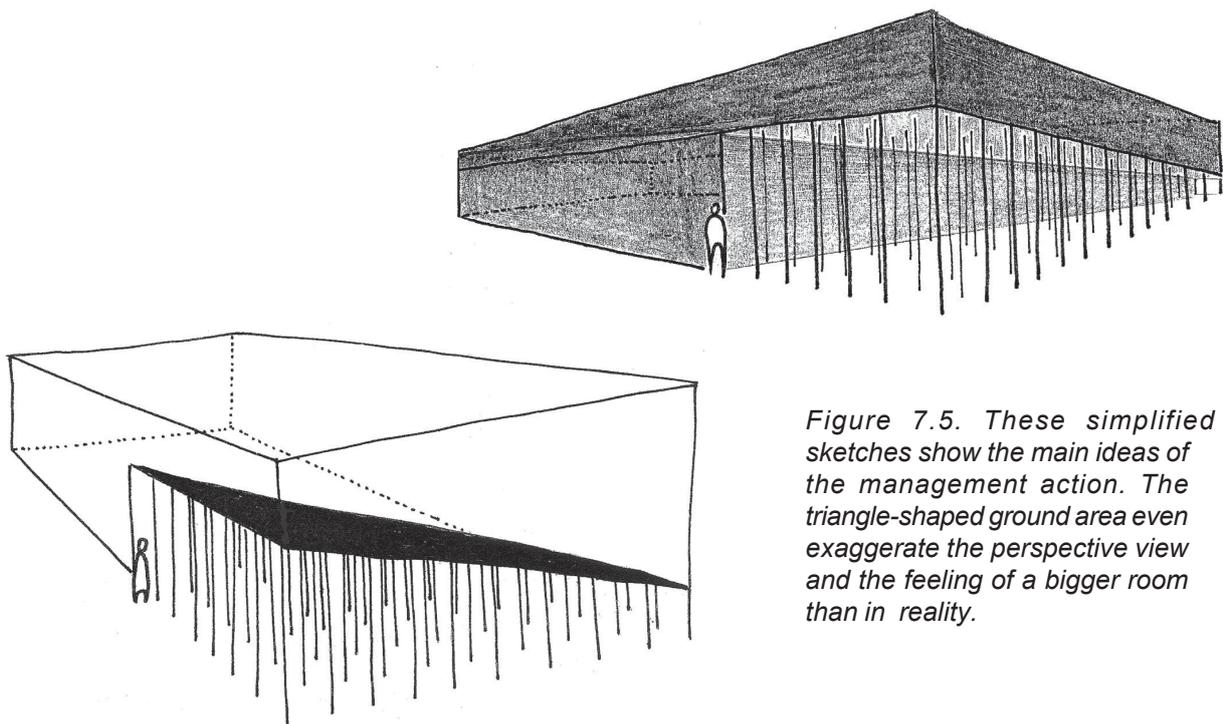


Figure 7.5. These simplified sketches show the main ideas of the management action. The triangle-shaped ground area even exaggerate the perspective view and the feeling of a bigger room than in reality.



Figure 7.6. Not just the space, but also details as the individual trunks and the leaves on the ground are valuable to observe and touch, to get a deeper experience of the place. Such elements are easy to affect by a management action.



Swedish University of Agricultural Sciences

Project: **Creative Management in the Young Landscape of Alnarp's Landscape Laboratory 2003-2005**

Dana Hladikova & Jan Sestak
Project leader: Roland Gustavsson

2004

area nr.8:

**THE
CHILDREN'S
LANDS-
CAPE**

8. The Children's Landscape

The mosaics and the micro-scale in management are in focus. Here the management is used as a tool to see and transform the potentials of the vegetation for a varied utilization by children. Four complementary areas close to each others are expected to be a core area for children and their entertainment. Parallel it should function as an entrance area for children, stimulating them to go further and experience the whole of Västerskog.

Key words: meadows and savannah forest, dense stand with mosaic qualities, micro-rooms, variability, colourful, children's games

Twigs, leaves, spikelets of grasses, stones, balls and figures of clay everything hidden in the small concealed shelter knitted from branches and grasses. The world of children's fantasy is colourful, filled by fairy tales and hundreds of creatures. Different parts of Västerskog should become interwoven in a net of adventures and stories.



State of art:

- The four stands represent a set of monocultures without a use of any nurse trees. Entering from the north first two sections, of rowan (*Sorbus aucuparia*) and Swedish whitebeam (*Sorbus intermedia*), are characterised by very weak growth. Comparing to other sections this area still looks like an open grassland or a young savannah landscape, and the trees are rarely taller than 2 m.
- The neighbouring stand to rowan and Swedish whitebeam consist of Norway maple (*Acer platanoides*). Here the balanced competition among the tree individuals results in straight growing trees, now, a after little more than ten years they are reaching the height of six meters, with a more or less even canopy both in horizontal and vertical direction. Low density of the crowns together with a foliage situated mostly in the upper parts of the crown is transmitting enough light to allow a development of a grassy field layer.
- Finally the stand of Small-leaved lime (*Tilia cordata*), is part of this series of stands. It is quite specific with a very irregular growth of the trees. Despite they all are at the same age they vary between 1 to 6 metres in height. They also vary between those with straight stems to others which are bushy and multistemmed. Due to this there are gaps and patches of open ground covered by grass shifting with denser parts without much grass.
- On all sides these four sections are surrounded by stripes of yearly cut meadows and the east branch of the main path leads through these stands, as shown in figure 1.

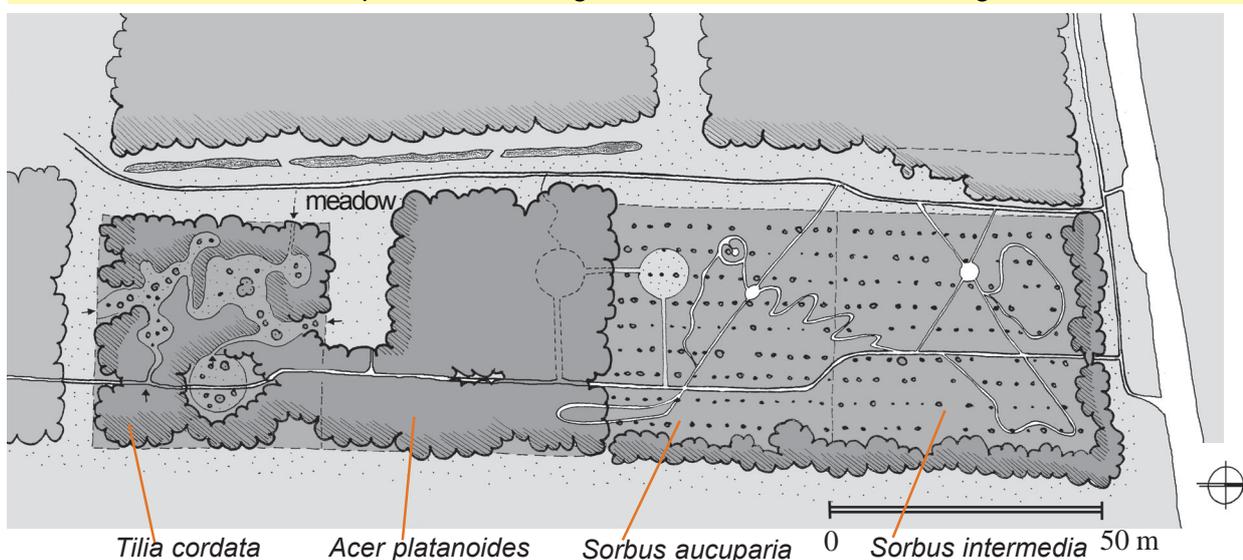


Figure 8.1. Site plan showing the four stands with new paths and openings, surrounded by meadows, forest edges and the stream.

Management principles:

- Several narrow footpaths, shifting between straight to undulating parts were cut in the field-layer in the stands of rowan and Swedish whitebeam, between the small trees. Hay was left on the spot in form of haycocks, serving as a marking point in the crossing of the small paths. Different tracks were marked out with colourful ribbons to make the orientation easier, but also to make it more joyful.
- New openings in shape of circles were created in the stand of rowan and Norway maple. In the rowan stand, the grass was cut and taken away. The trees were pruned to lift up the canopy to the height of 2.5m and the field layer was trimmed to stress the shape of the circle.
- In the last stand of small leaved lime trees similar circle as the earlier mentioned, were made around the main path by cutting the grass. From here a whole mosaic was created, based on a small path leading into organically shaped spaces changing in scales and leading the visitors into different pockets in a sort of maze with five entrances and exits. The trees were pruned to the height of 1.5 m or cut away to create the labyrinth of micro rooms, which should fit the children. At the same area the grassy field layer was trimmed.
- Trees along the main path in the section of the lime trees were pruned to support the multi stemmed individuals in the northern part. At the southern entrance one specific tree was pruned to get a strong character, to point out the entrance of the stand.
- A first step towards an aesthetical improvement of the field layer was carried out. The seeds, covered with hay, were spread out in the circles in the section of the rowan and the Swedish whitebeam.

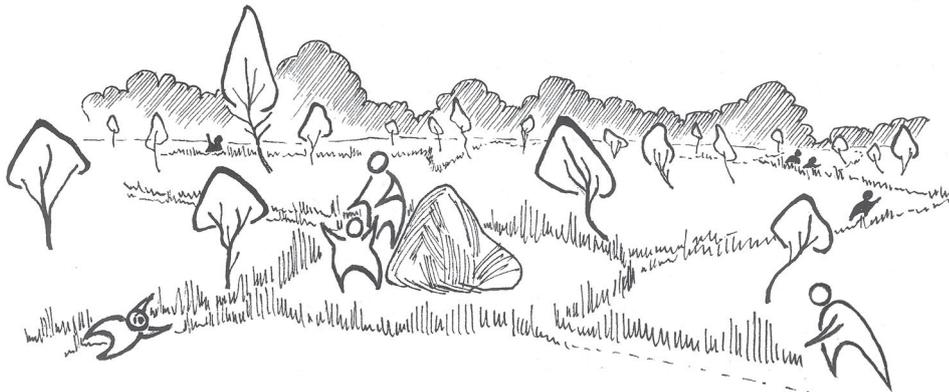


Figure 8.2. Movement and energy are connected with activities of children, here concentrated to new paths in the young savannah forest dominated by the tall grasses. Covered by small trees with sparse foliage it creates an open landscape with good overview and orientation and an optical connection to other children around. Parallel, the grass allows children to be at least half hidden.

Future strategies:

- The pattern of paths cut in the stands of rowan and Swedish whitebeam might be changed and designed together with the children every year.
- The field layer in the circle in the rowan stand as well as in the stand of Norway maple needs to be cut once a year.
- In the stand of lime trees there will be a need to re-prune again, concentrating on these which have been shaped the year before. Some of them will over time be recut to traditionally pollard lime trees. Sprouts from the trees that were coppiced should be partly kept over a 5-10 years cycle while the rest should be removed again on a yearly basis. Trees with strong individual character should sometimes be supported by pruning. Similar "individual" attention must be given to trees good to climb in. The field layer in the circle and in the micro rooms should be cut two to three times a year.
- In the following years different strategies of attractive field layer establishment will be tested.
- Special attention should be given to watch how children use the area, which micro-parts and tree individuals are belonging to the favourites (why and when). But also of how they effect the vegetation and which traces they leave at the site. All these should be considered and respected in the management action.

Discussion:

The idea of a Children landscape in Västerskog emerged step by step. The first thoughts came when looking at the very open and grassy area of the rowan section, where small trees and narrow rabbit paths seemed to fit children and their search for a place for their games. At the same time, the idea of involving young visitors into the area arrived, to test how a young landscape with various vegetation elements could be attractive for children of different ages, which places they prefer for different types of activities and how they might interact with them. The area of the four sections was drafted as a territory concentrated on amusement for children, in a way which should not separate or diminish the value of the area for adult visitors. Neither it should stop the children from interacting and play within other parts in the whole of Västerskog as well. The first two stands consist of rowan and Swedish whitebeam, characterized as an open, sunny place that is optically connected with surrounding areas. The third stand of Norway maple is recognized as a rather light forest, with enough space under the canopy, offering free movement for the children. The last stand in the area is a monoculture of small leaved lime, notable by trees of various shape and height, creating dense foliage separating the inner rooms from the surroundings. Still, due to its mosaic and rather slow growth there is a good chance of keeping the space with an open sky for another 5-10 years, and maybe even longer, depending on the management.

However, it should be stressed, the intention was not to create playground with defined features bounding the youngsters where and how they should play. The aim was rather focused to create an accordant background for their own ideas and fantasy, leaving them to find their favourite spot and use all possible materials found in the laboratory with some more added, like piles of branches, cones and piles of dry leaves.

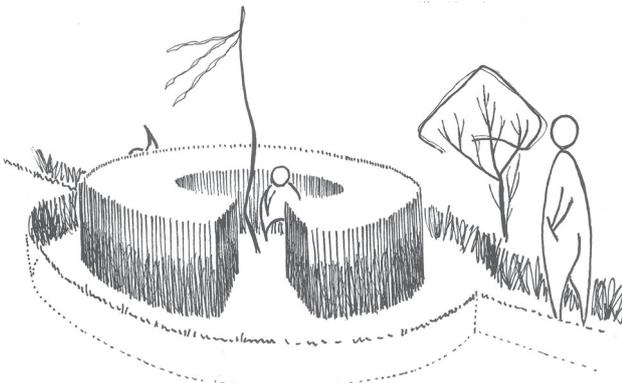


Figure 8.3. When the children explore the area a clump of tall grass can be changed into a fortress within few minutes. As part of a creative management it took almost the same time to cut the space inside and thus open new possibilities to use this spot.



Figure 8.4. There is a big variability in appreciating the surroundings among the children, depending on their age and interests. Up to the age of 7, the coloured ribbons were the most important and eye catching element rather than the different tree species.



Figure 8.5. The stand of rowans with the main path. Visible growth difficulties among the trees has resulted in a very open area character.



Figure 8.6. A circle around the main path in the lime stand was created by cutting the grass and lifting the canopy of some trees. The circle is part of the special spots which are all over Västernskog, but serves also as an entrance area belonging to the labyrinth of micro rooms, which was created in the stand. The very uneven growth of the lime trees can be observed here, like in a wooded meadow with its characteristic mosaic.

From the pilot-studies in 2004 with children as visitors the following remarks can be made. Compared to adults, children are much more focused on details. They also perceive different dimensions of the present space. Sometimes they do not respect paths made by adults, because they do not like to be bounded by any obstacle in movement. There is no problem for children to touch and discover different surfaces and it is very important for them to test and experiment with different materials. Sometimes this might give rise to a high level of wear and tear and damage on the vegetation – but this is in most cases possible and important to tolerate, because it represents the children as **users** of such areas in contrary to most adults, who can be described more as **observers**, enjoying other values without really interfering.

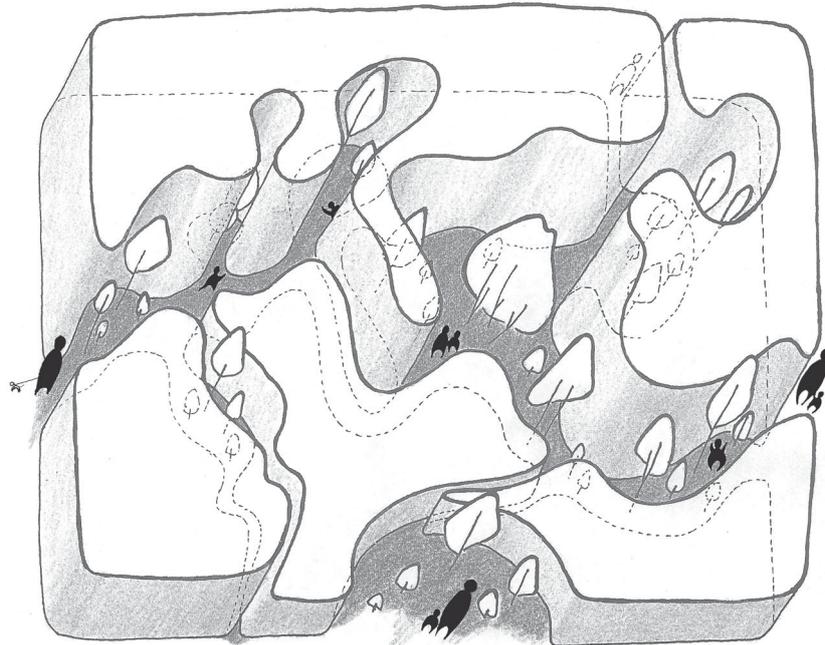


Figure 8.7. Organically shaped micro-rooms by enlarging spaces that can be used by children in their many kinds of games. The rooms vary from big with a contact to the main path to small, hidden places, providing privacy from the surrounding.



Swedish University of Agricultural Sciences

Project: **Creative management in the Young Landscape of Alnarp's Landscape Laboratory 2003-2005**

Dana Hladikova & Jan Sestak
Project leader: Roland Gustavsson

2005

place nr. 9

**THE HAZEL MEADOW -
THE ZONE OF AN
ENTRANCE**

9. The Hazel Meadow, the zone of an entrance



The main entrance area to Västerskog is getting more and more important as the number of visitors is increasing. This has to be a place where management is particularly focused on giving a distinct inviting expression. Rather than having a gate as an entrance the attention is given to the hazel meadow as the "entrance place" emphasizing the characteristics of Västerskog as a whole.

Key characteristics: entrance, hazel, involving half open area, field layer effects from spring to autumn time, flowering meadows, patterns in the grass, winter meadow concept

Entering Västerskog from the north the visitors experiences a very long narrow view towards the heart of the woodland environment. While moving along the path and the rows of hazels the east side gradually opens up and provides the feeling of a widely stretching space. The path is visually connected with the two sections of rowan and

Swedish whitebeam, with hazels giving an impression of half open savannah forest or wooded meadow with no distinct character or end. All this contrasting with the west side where the barrier of the oak and alder section provides a wind shelter and closes of the view. Further on, the meadow is dominating the scene and other plantations of trees are forming a screen leading the visitors to the ponds and the central parts.

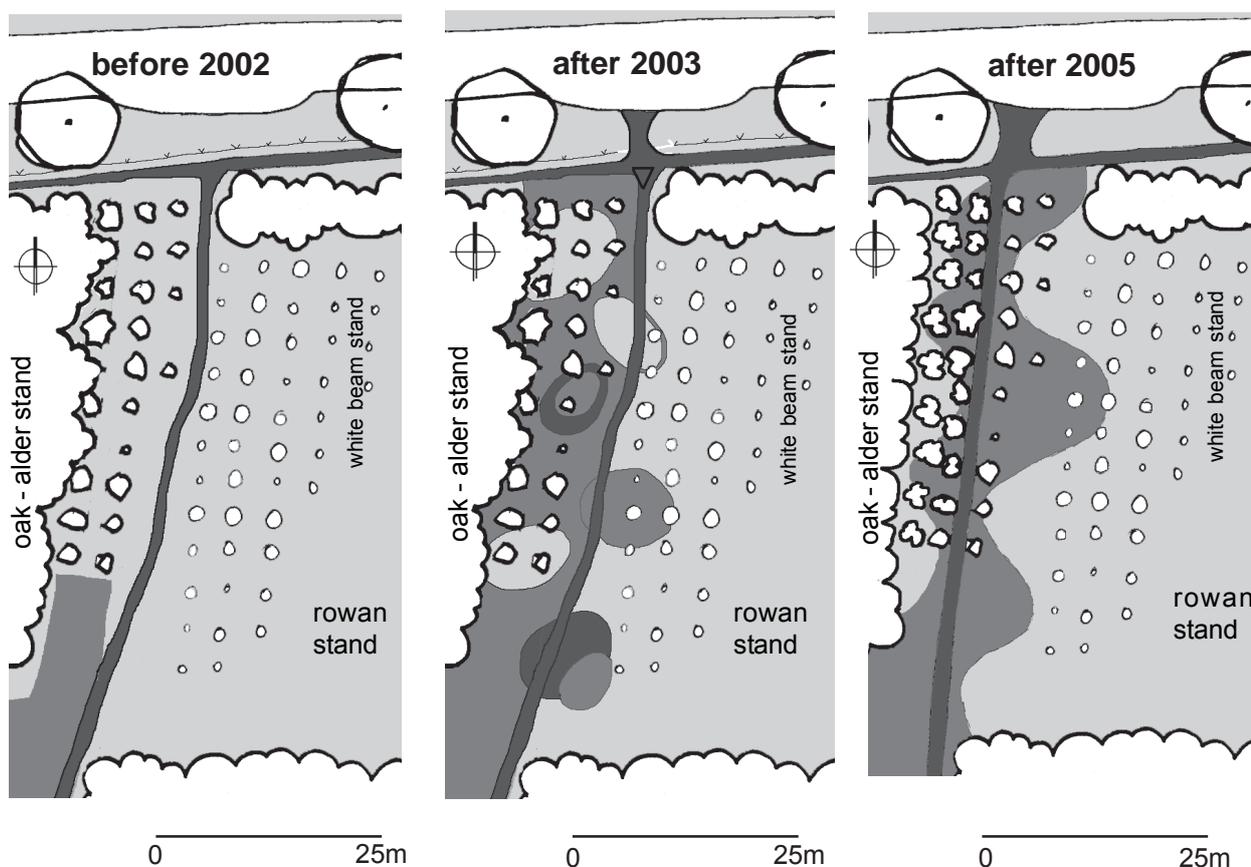


Figure 9.1. The first situation plan (2002) shows the entrance area with rows of hazel. The darker grey colour shows the area treated as a yearly cut meadow in the late summer. The two plans (2003 and 2005) are showing the variability in use of different strategies of cutting the meadow. In 2005 the main demonstration path was shifted to get a straight shape and the shrubs of hazels were pruned and so was the edge of the western section to make a more distinctive edge between the two parts.

State of art:

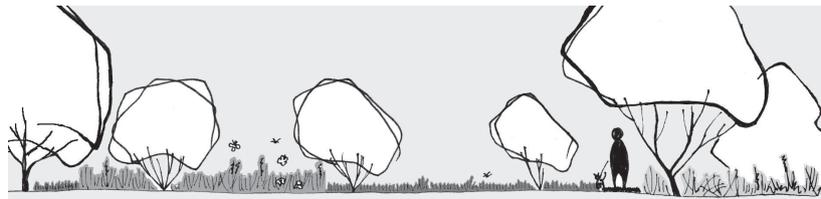
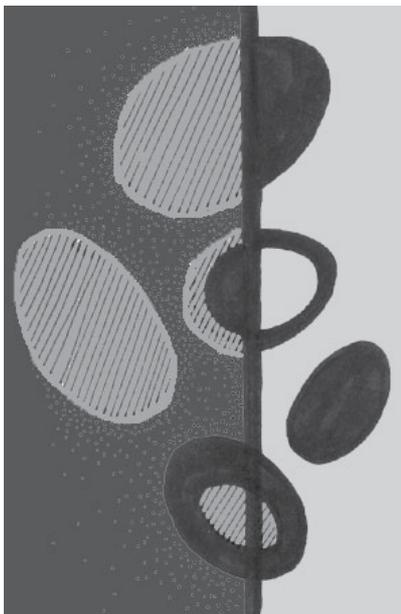
- Four rows of hazel shrubs were planted at a distance of 4 meters in between the individual plants. Nowadays the hazel have developed almost as solitaires surrounded by grassland with exception for the hazel row close to the oak - alder stand. Here the shrubs are much stronger in growth and interact with each other as well as with the edge trees of the section.
- Since the establishment of the plantation in 1994 the meadow in between the hazels and in the sections of Swedish whitebeam and rowan has not been cut. After 10 years of development there is a carpet of grasses sometimes with seedlings of woody species or ruderal herbs.
- The main demonstration path was lead aside of the hazels and along the border of the white beam section and then smoothly continuing in to the centre of a wider meadow stripe towards the two ponds and further on into Västerskog.



*Figures 9.2. & 9.3.
While the effect of establishment of meadow vegetation was not immediately visible during the first years partly due to lack of management, nowadays the entrance zone is covered by hundreds of cowslip (*Primula veris*) in the spring followed with a well-developed flowering meadow during the summer season which is dominated by oxeye daisies (*Leucanthemum vulgare*).*

Management principles:

- In **2003** the action of management was focused on cutting the old grass growth in between the shrubs where heavy machinery was not able to reach and parallel to show alternative management possibilities that meadows and grassland offers. This means different characters and stages in strong forms. In the year 2003 the ovals were cut around the main path using both sides of the hazel meadow as well as parts of the whitebeam section. All grass which was cut was removed at once.
- To attract the visitors and to show them that the area is cared for and managed a willow tree at the crossing aside the main demonstration path was pruned and the canopies of a few trees and shrubs within the edge zone were lifted to 2.5 m. In particular this should draw the attention of people passing by so they already from the road are able to see what is behind the thick and species rich edge. This was a part of the main goal of bringing new and articulated experiences to the entrance area.



lawn and path cut regularly - 5x / year



hay meadow cut once or twice in the late summer



winter meadow cut in early spring



grassland without any maintenance



Figure 9.4. & 9.5. The alternative approaches of cutting the grass were implemented to bring a series of different and visually strong patterns and images.

- In the spring time **2004** the patches of old "winter meadow" were cut away from this area. Later during the season the grass was treated in the traditional style - cut in late July, drying it on the ground a few days and then collecting it in haycocks.
- In the autumn old hey was spread around the weakest shrubs of hazel to improve soil, water and nutrition conditions and at the same time to weaken the growth of the surrounding grasses. All shrubs were pruned to support a development of new sprouts.
- The fence around Västerskog was removed. That strengthened the need to change the main demonstration path and its stretch along the parking place.
- In year **2005** the concept of the "winter meadow" was repeated again. There was only a part of the area cut in early summer in shape of big waves and the rest of the meadow was left as winter meadow again. Both parts of the hazel and whitebeam stands were connected by this pattern. Hay cut in July was dried and collected to haycocks and hey constructions. Later in the summer the hay was spread around the smaller shrubs of hazel to improve the soil conditions again.
- An important change came with the main demonstration path being moved to a position between the hazel shrubs. Connecting directly the parking lot with the entrance zone this should highlight not just the long straight view but also the hazels slowly building up an interior hall as well as a closer contact with the flowering effect of the herbs during early spring and then with the meadow in the summer.



Figure 9.6. (Left) The patches in the winter meadow, cut in oval shapes, break up the long meadow stripe and contribute to a richer aesthetical as well as ecological variation and complexity (2003).

Figure 9.7. (Right) The cut ovals can serve also as small side paths to come closer to the rowan trees(2003).



Winter meadow - the concept of this feature came from research focused on butterflies and other insects. According to that the winter meadow is important for many species as an environment to produce new generations. From aesthetical point of view this meadow is contrasting extremely much with the rest of the cut meadows and gives the highest effect in the late summer, autumn and in the winter as well.

Hay meadow - these areas are cut in the traditional way once or twice a year in the middle of summer after the rich flowering period. In the spring and early summer those meadows look almost the same as winter meadows but the radical change comes with the first cut. The grass and herbs re-growing after the harvest are more green and also some herbs start to flower again.

Lawn - in this context it is not a park like lawn cut regularly but comparing to the rest of the meadow it is kept quite low and possess contrasting green colour. So far present only on the paths, it has got a new image to be recognised and noticed when used within the reliefs cut in the grass.

Figure 9.8. A wavy shaped line brings the winter meadow closer to the path on certain spots. Otherwise the path is surrounded with hay meadows (2005).

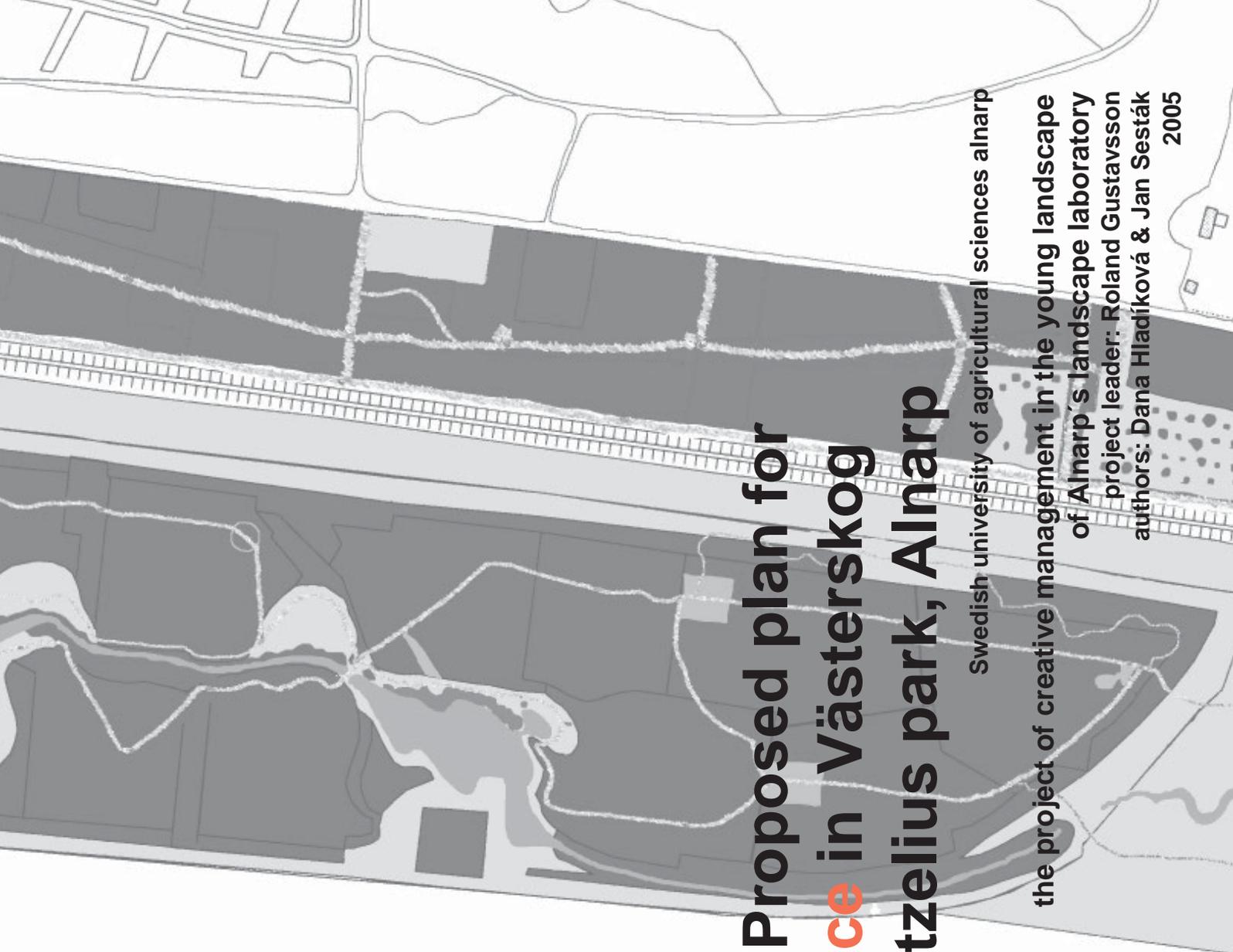
Figure 9.9. Nowadays haystacks are not a common sight in the countryside landscape which they used to be in the past. Here we wanted to reconnect such an "old fashioned" element with a young and dynamic landscape of Västernorrland and by this stress the manual work which is crucial for creating a more detailed and refined design of the landscape no matter if it is recreation- or production lead (2005). Figure 9.10. Even less expected is the special hay dryer that is still commonly used for example in Romania. Here a bit overdone to evoke an obscure creature. The kids perceived it as a giant animal and many of those not that familiar with mammoths and bison have inspected it, to test if it might be a hut ready for their games (2005).

Figure 9.11. The chicory flowers, *Cichorium intybus* (below, 2003)



Future strategies:

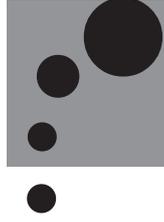
- Due to the important position at the entrance and the high quality of the flora which is dependent on haymaking the yearly maintenance is of highest priority. The minimum is to cut the area once a year in the middle of July to middle of August.
- Moreover from a creative point of view it is desirable to keep the tradition of developing some extra ordinary patterns using various times of cutting the grass as well as different number of cuttings. This should be done in order to attract the visitors making them curious about the grass design of the year.
- The hazel shrubs could still be supported in growth by a layer of hay around them over the winter time, but it will also be possible from now on to coppice them, particularly the row close to the oak - alder stand otherwise they might provide too much shade for the meadow community.
- If aggressive species like nettles and cow parsley (*Anthriscus silvestris*) invade the meadow there is a need for an early summer cutting before they seed.

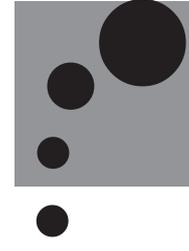


appendix: Proposed plan for **maintenance** in Västerskog and Tor Nitzelius park, Alnarp

Swedish university of agricultural sciences alnarp

the project of creative management in the young landscape
of Alnarp's landscape laboratory
project leader: Roland Gustavsson
authors: Dana Hladiková & Jan Sesták
2005





proposed maintenance plan for

Västerskog and Tor Nitzelius park Alnarp



Swedish university of agricultural sciences Alnarp

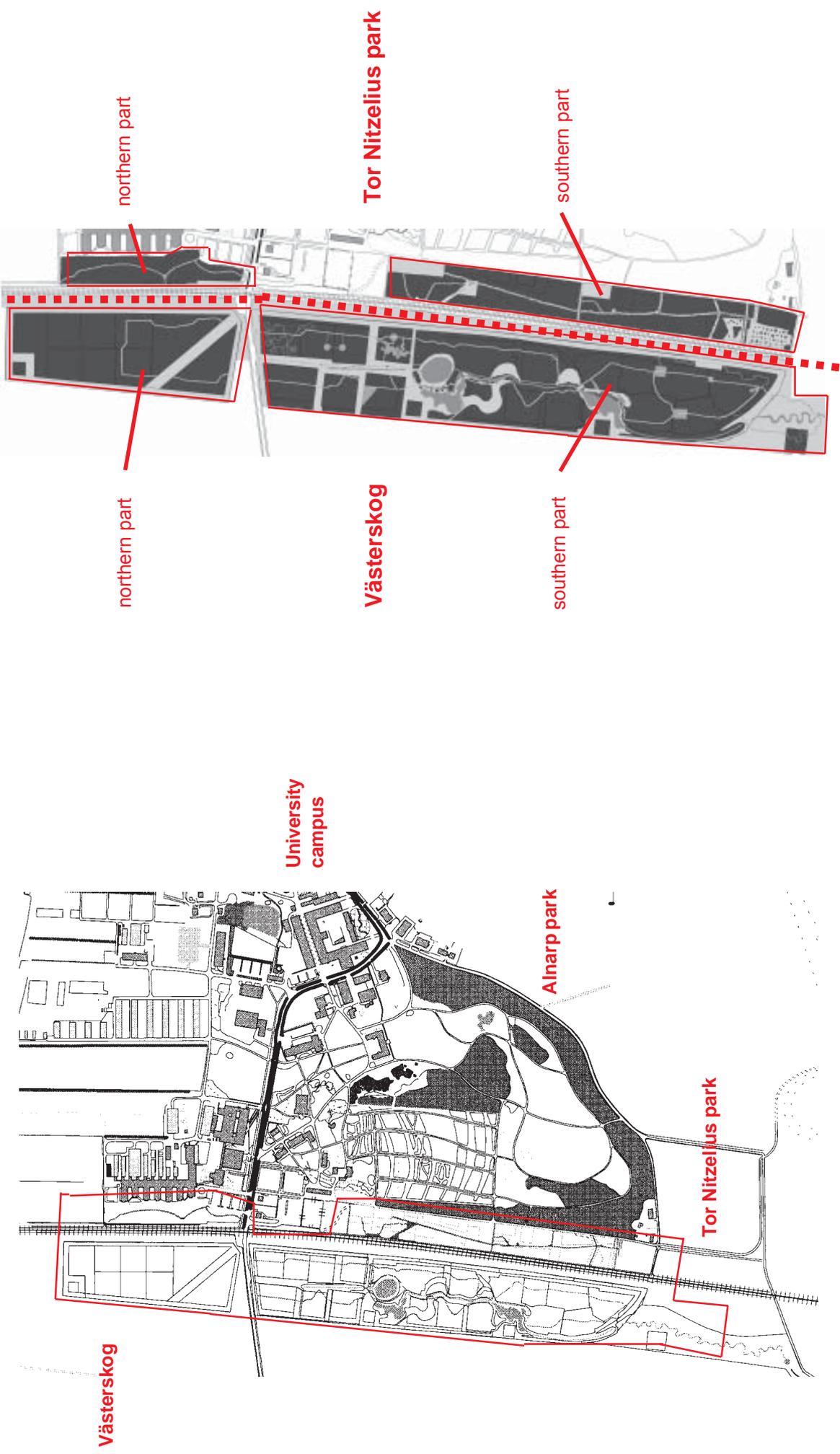
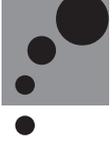
creative management in the young
landscape of Alnarp's landscape laboratory



project leader: Roland gustavsson
authors: Dana Hladíková & Jan Sesták 2005

maps of action

Proposed maintenance plan for Västerskog and Tor Nitzelius park, Alnarp

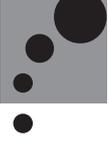


the Landscape laboratory and its parts where maintenance is carried out

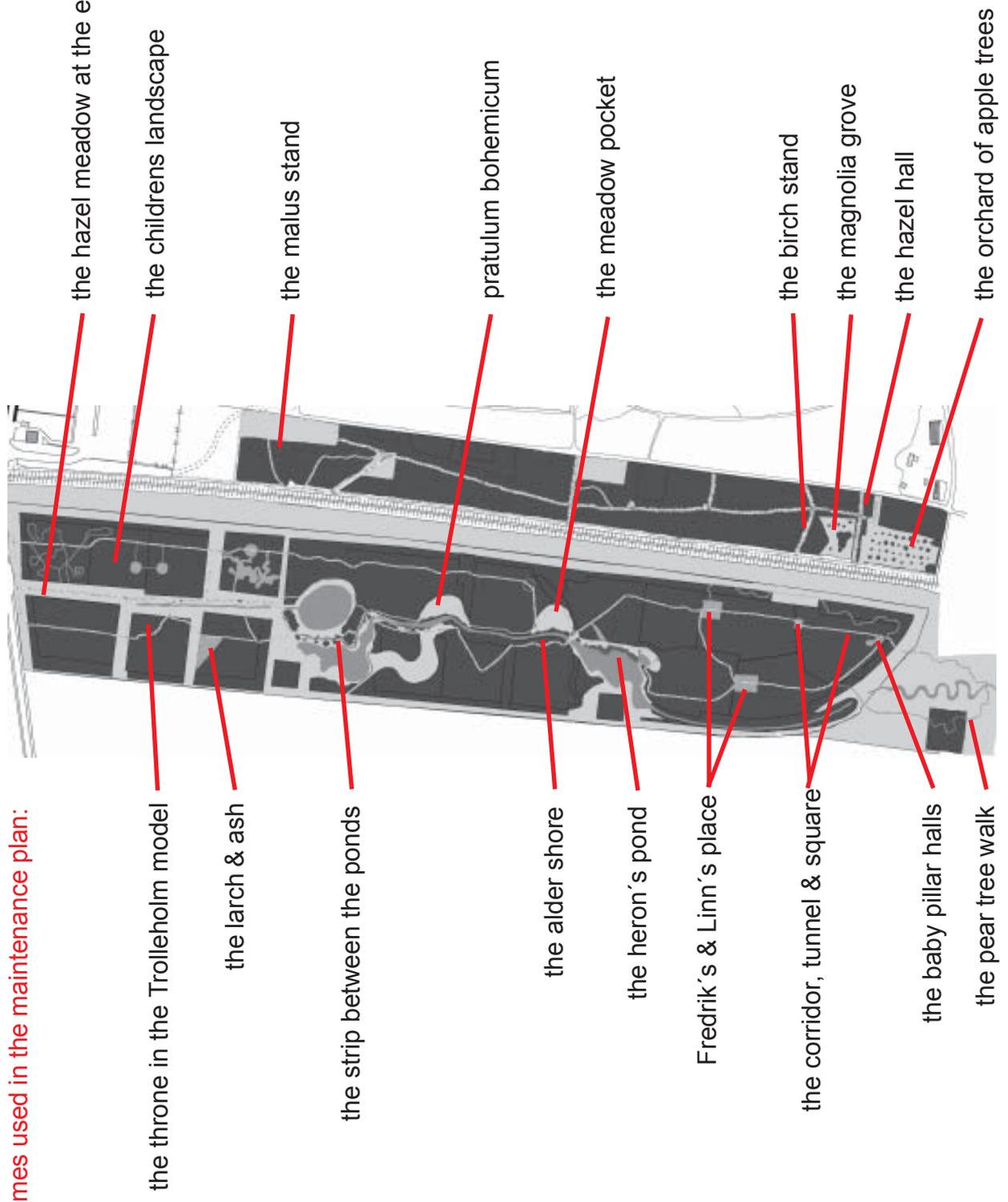
Alnarp

maps of action

Proposed maintenance plan for Västerskog and Tor Nitzeius park, Alnarp

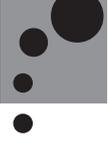


Map of local names used in the maintenance plan:



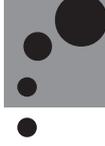
complementary information

Proposed maintenance plan for Västerskog and Tor Nitzeius park, Alnarp



place	■ place abc	The names of certain areas derived during the project of the Creative management to simplify orientation and cooperation. so far most of them are in English, but there is no problem to convert to Swedish names.
action	•action aaa •action bbb	Actions of maintenance were placed into a time schedule, which should make the planning easier. More seldom it is about standard procedures, like cutting grass and so on...
hours/men	8/1	This numbers were derived from 3 years' experience within the project, but occasionally it might vary as it is dependent on natural processes.
recommended tools, machinery		As with working time needed also the choice of tools and machinery was developed, this experience can contribute to efficient work in the laboratory, but it is not excluding usage of other tools
notes	remove the grass... 	Short reminders to highlight some additional but necessary actions Even if the maintenance in some aspects should be creative, it is necessary to understand the main goals of the project and to be aware of certain circumstances. So with this sign we recommend an extra check-up in the chapter explaining the area and actions.
1. half of the month		The time line is approximate, as the weather might change the space of time of natural processes

yearly maintenance



Proposed maintenance plan for Västerskog and Tor Nitzeius park, Alnarp

April

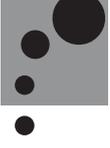


Proposed maintenance plan for Västerskog and Tor Nitzelius park, Alnarp

	place	action	hours/men	tools/machinery	notes
1. half of the month	■ path system	•cleaning away dead branches	2/1		especially after forestry thinnings in the winter
	■ hazel meadow at the entrance	•cutting of the winter meadow	4/1	  	variation and creativity see chapter 9 
2. half of the month	■ pollard trees	•cutting young sprouts	2/1	 	see page 35a 

May

Proposed maintenance plan for Västerskog and Tor Nitzelius park, Alnarp



notes

hours/men tools/machinery

action

place

1. half of the month

2. half of the month

■ path system

• cutting grass

2/1



see map at page 33a

■ Heron´s pond

• cutting grass

2/1



rake the grass over the bare clay on the slopes

■ alder shore

• cutting grass on the slope

3/1



remove the grass; note the planted species!!

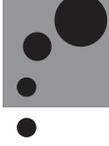
June

Proposed maintenance plan for Västerskog and Tor Nitzelius park, Alnarp

	place	action	hours/men	tools/machinery	notes
1. half of the month	■ birch stand TNP	•cutting grass	2/1		if needed remove dead branches
	■ malus stand TNP	•cutting shrubs in the fieldlayer	4/1		
	■ magnolia grove TNP	•cutting grass	2/1		
	■ pratulum bohemicum	•cutting grass	2/1		special care during 2006!!! 
	■ strip between the ponds	•cutting grass on the slopes	4/1		newly established meadow see chapter 6 

2. half of the month	■ path system	•cutting grass	4/1		trim tall grasses on the sides
	■ corridor,tunnel,square	•cutting sides of the path	2/1		remove young shots
	■ Fredrik´s, Linn´s art	•cutting sides of the corridor	3/1		up to 4 m + tops
	■ Heron´s pond	•cutting grass	4/1		remove grass
	■ hazel meadow at the entrance	•cutting grass	2/1		rake the grass over the bare clay on the slopes
		•cutting "follies" and sides	4/1		follow strategy in chapter 4 
		•cutting grass and hey making	8/1		variation and creativity see chapter 9 

July



Proposed maintenance plan for Västerskog and Tor Nitzelius park, Alnarp

place	action	hours/men	tools,machinery	notes
1. half of the month				
■ orchard of apple trees TNP	•cutting seedlings, remove sprouts	4/1	 	remove invasive species 
■ hazel hall TNP	•trimming fieldlayer, cleaning	4/1	  	follow strategy in chapter 1 
■ pear tree walk	•cutting grass	2/1	 	
■ children´s landscape	•cutting grass	6/1	  	remove the grass see map and strategy in chapter 8 
■ path in the north TNP	•cutting sides and cleaning	8/1	   	note the flowering herbaceous species

2. half of the month				
■ path system	•cutting grass	4/1	 	trim tall grasses on sides
■ Heron´s pond	•cutting grass	2/1	 	rake the grass over the bare clay on the slopes
■ throne in the Trolleholm model	•cutting grass	2/1		
■ strip between the ponds	•cutting grass on the top	4/1	 	rake the grass over the bare clay on the slopes
•cutting grass on the slopes		4/1	 	newly established meadow, follow chapter 6 

August



Proposed maintenance plan for Västerskog and Tor Nitzelius park, Alnarp

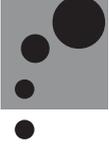
place	action	hours/men	tools/machinery	notes
■ pratulum bohemicum	•cutting grass	2/1		special care during 2006!!! 
■ magnolia grove TNP	•cutting grass	2/1		
■ orchard of apple trees TNP	•shaping hedge and the wave	8/1	 	see chapter 2 

■ path system	• cutting grass	2/1		see map at page 33a
■ alder shore	•cutting grass on the slope	3/1	 	remove the sprouts of willows along the stream as well!
■ pear tree walk	• cutting grass	2/1		
■ Heron´s pond	•cutting grass	2/1		rake the grass over the bare clay on the slopes
	•weeding islands	6/1		take away all seedlings of willow !!!

1. half of the month

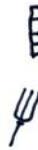
2. half of the month

September



Proposed maintenance plan for Västerskog and Tor Nitzelius park, Alnarp

place	action	hours/men	tools,machinery	notes
■ pratulum bohemicum	•cutting grass	2/1		special care during 2006!! 

■ path system	•cutting grass	2/1		see map on page 33a
	•cutting sides of the path	2/1		remove young shots 
■ water system	•checking, cleaning, improving	4/1		see chapter 4, 6 
■ strip between the ponds	•removing water plants and willows	16/1	 	see chapter 6
	•cutting grass on the slopes	4/1		newly established meadow follow the chapter
■ Heron´s pond	•cutting grass	2/1		rake the grass over the bare clay on the slopes
	•removing water-plants and willows	8/1	 	see chapter 4 

1. half of the month

2. half of the month

October



Proposed maintenance plan for Västerskog and Tor Nitzelius park, Alnarp

	place	action	hours/men	tools,machinery	notes
1. half of the month	■ hazel meadow at the entrance	•removing hey	4/1	 	variation and creativity see chapter 9 
2. half of the month	■ path system	•cutting grass	2/1		see map on page 33a

the hazel hall



Proposed maintenance plan for Västerskog and Tor Nitzelius park, Alnarp

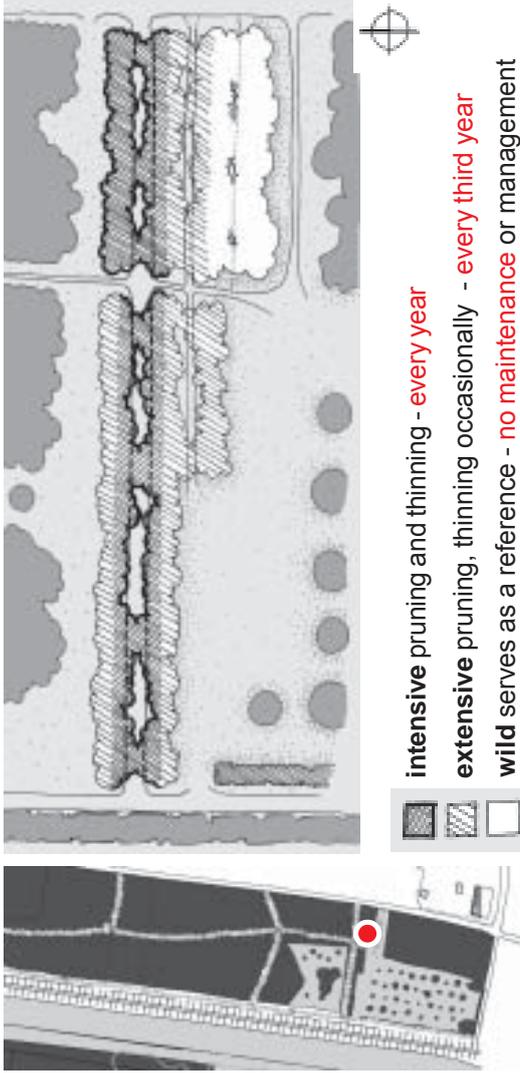
Maintenance strategies:

- **The intensive** maintenance strategy is set out as a continuous care proceeded once a year to keep the strictly defined interior space. **Here the most important aspect is to keep away all spontaneous seedlings as well as all branches bending down to the ground.** Specific attention should also be paid to the layer of wood-chips. Casual weeds should be taken away and new layer of wood-chips put out every 3 - 5 years. (The existing layer was laid out in 2003.)

- **The extensively** maintained middle tunnel has the same programme of controlling invading seedlings and taking down low hanging branches as the intensive part, but the action is repeated in intervals of 3 to 5 years. This gives the area a more dynamic character emphasized by the strictly kept shape of the bordering tunnel on one side and the shortest tunnel with wild character on the other side. **The ground is trimmed once a year in the middle of summer to cut back invasive ruderal species.**

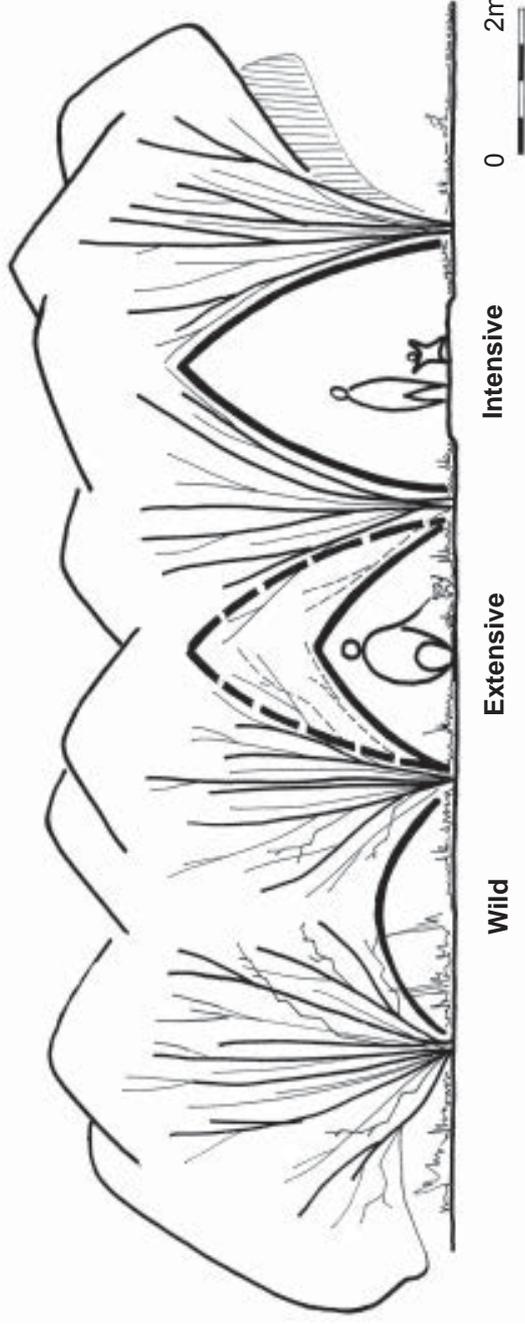
- **The wild** reference part is meant to document the development of such features without any intervention of maintenance, with one essential exception - the seedlings of problematic species (such as elm and ash). Those plants have to be removed before they start to take over and set in danger the existence of individual hazel shrubs.

The shortest tunnel as wild reference (left photo) and the longest tunnel with intensive maintenance (right).



Tor Nitzelius park





A cross section through the rows of hazel showing the interior room and the gradual changes of the inner space due to three different maintenance strategies.

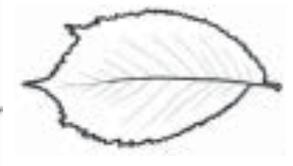
Species needed to be controlled within this area:



Crataegus sp.
Hawtorn, Hagtorn



Ribes alpinum
Mountain currant, Måbär



Rubus caesius
European dewberry, Blåhallon

Acer pseudoplatanus
Sycamore maple, Tysklönn

Ulmus glabra
Wych elm, Skogsalm
-seedlings and sprouts

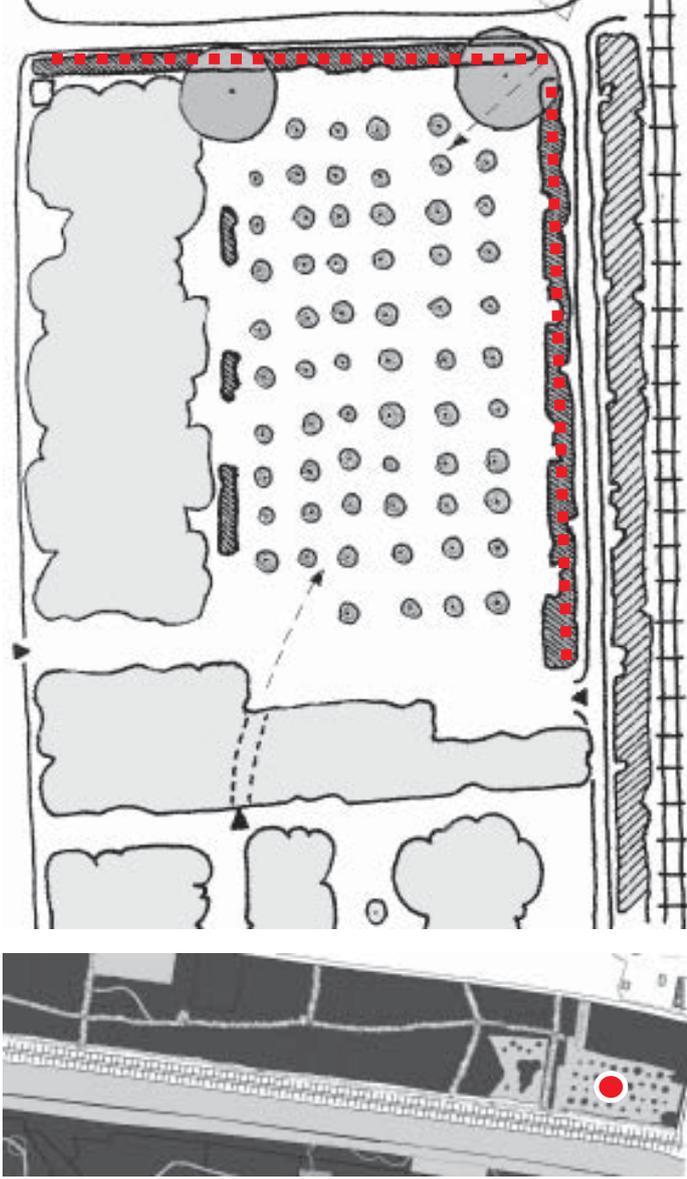
the orchard of apple trees TNP

Proposed maintenance plan for Västernskog and Tor Nitzelius park, Alnarp

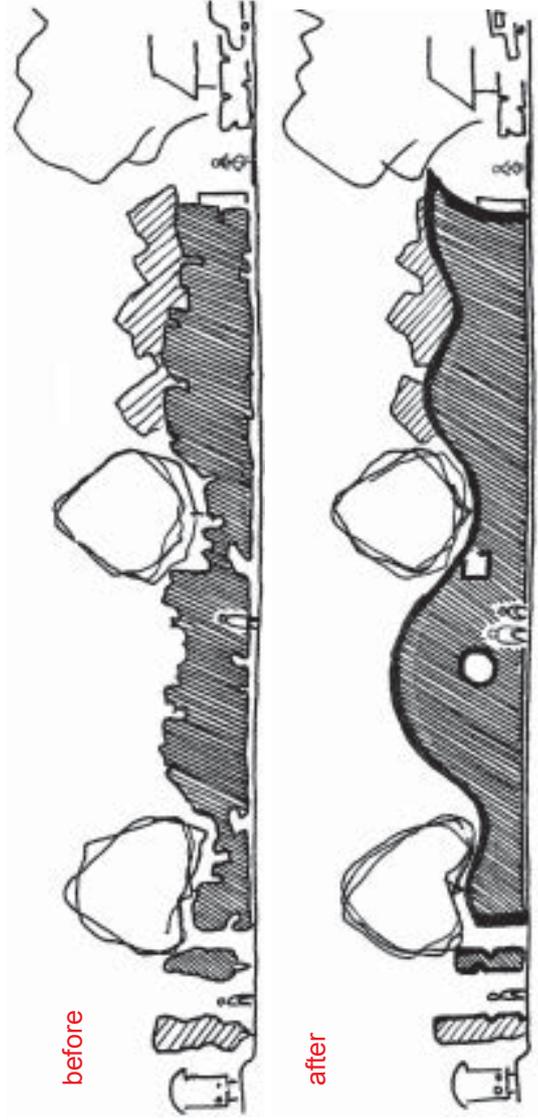
Maintenance strategies:

- Maintain the hedges, cut away unwanted seedlings and young shoots.
- Cut the sides of the south hedge to get a dense cover and a strict shape.
- The upper line of the southern hedge should be wavelike and reopen the window in the middle every season.
- Let the seedlings of hawthorn at the eastern side grow and by this build a new hedge here.
- It is recommended to periodically prune the apple trees for good harvest of apples, but with respect to their individual growth to develop different shapes. Especially the low ones have to be suitable for kids to climb in the future.

The southern hedge must be cut regularly on the sides and on the top shaped in the form of waves. Seedlings and sprout of invasive species must be removed and the circular window in the middle reopened every year.



Tor Nitzelius park ■ ■ ■ ■ hedges where the control of seedlings is necessary



Species needed to be controlled within this area:



Acer pseudoplatanus
Sycamore maple, Tysklön

Ribes alpinum
Mountain currant, Måbär

Rubus caesius
European dewberry, Blåhallon



Sambucus nigra
Elder, Fläder



Fraxinus excelsior
Ash, Ask

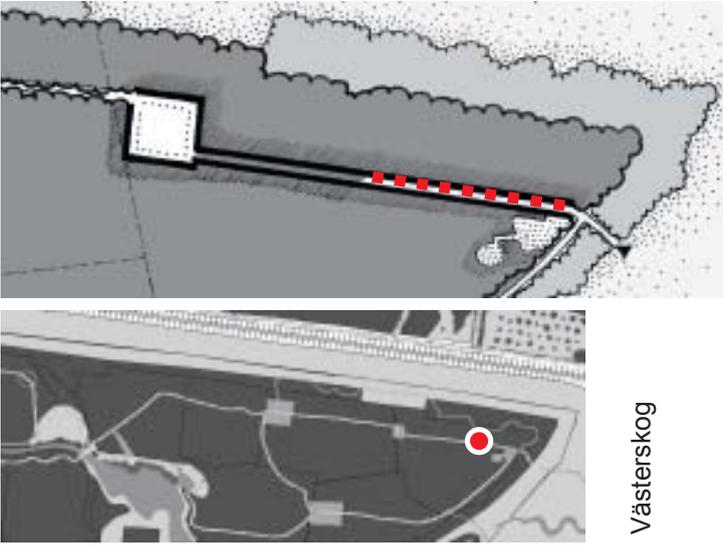


Ulmus glabra
Wych elm, Skogsalm
-seedlings and sprouts

the corridor



Proposed maintenance plan for Västerskog and Tor Nitzelius park, Alnarp



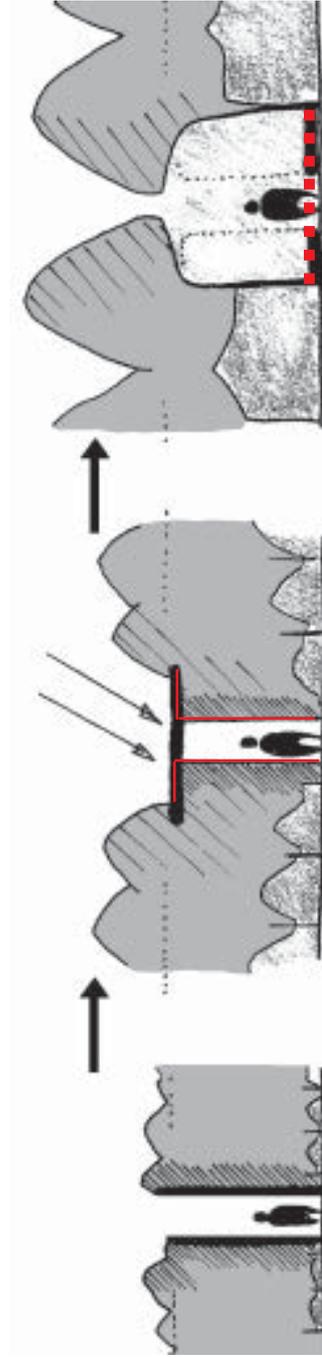
Västerskog



2004



2004



since 2002

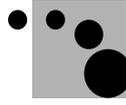
tops cut 2004

walls cut away (approximately 2008) establishing of a wider tunnel part

Maintenance strategies:

- The former strategy was to cut the tops of the trees along the corridor in order to provide enough sunlight for walls and to cut the walls
- In year 2008 the future of this feature has to be reconsidered. If the walls are still green enough preserve the corridor in the same shape for following years. But if the second line of beeches has already overgrown the first line of the walls and the trees remain in bad condition it is the right time to cut them away. By this action we will gain a wider tunnel part (as in the figure).

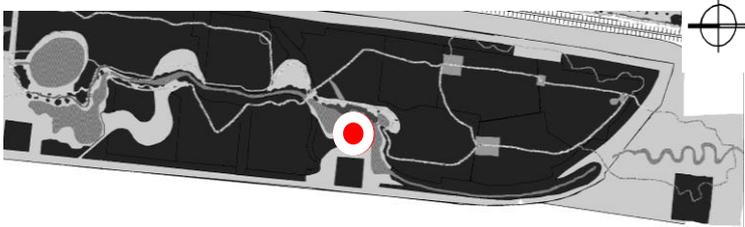
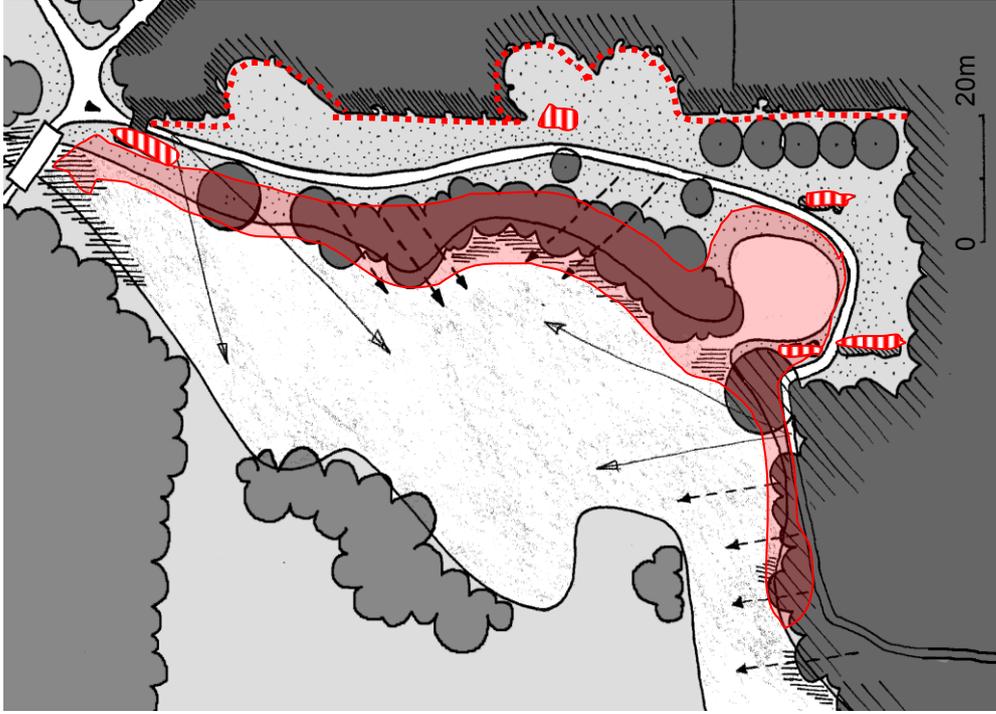
the Heron's pond



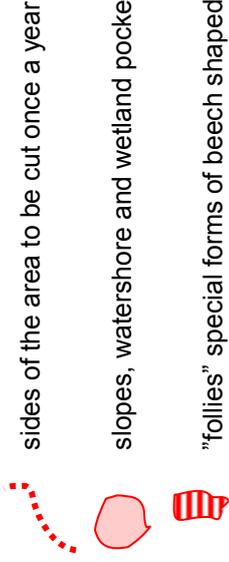
Proposed maintenance plan for Västerskog and Tor Nitzelius park, Alnarp

Maintenance principles:

- The grass along the main path must be periodically cut every month to get a short thicker **park like lawn**.
- The slopes and water shore as well as the wetland pocket should be trimmed **once a year to hold back the tall water grasses and young willows** reshooting from old stumps.
- All the material has to be removed.
- The funny 'follies' shaped out of some solitaire beech trees should be cut as the pictures (on the next side) are showing.



Västerskog



— grass cut regularly as park like lawn

⋯ grass and shore cut once a year here just after cleaning

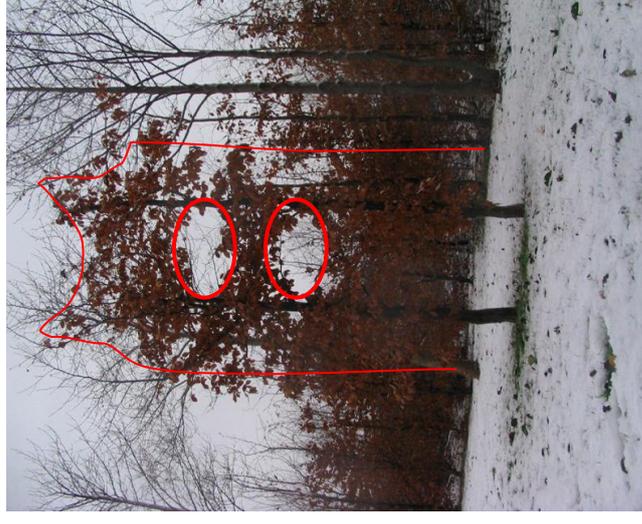


The cutting of the shore and the wetland pocket means that the tall water plants as **reed** and **bulrush** has to be cut also "in the water". The most important place is close to the bridge in the northern part, where the reed must be cut away to ensure view over the water surface. Other lower and fine grasses and water plants should be kept along the shore.

All the cut grass has to be raked over the bare plots of clay on the slopes for the first two or three years, after that the grass has to be removed from the area (for example spread in the stands of trees).

In the wetland pocket it is also necessary to cut the above mentioned species but the work should be carefully done because of the many species planted along the shore.

The islands has to be relieved from seedlings of willows every year until the alder trees are mature enough and the surface of the islands covered with a herbaceous fieldlayer.



Follies as shaped in 2004. Some low hanging branches of the alders in the surrounding of "follies" might be cut away to assure enough light.



The wetland pocket is meant to be a place for several flowering plants enriching the flora of this area, some of them were planted in the pocket and its surrounding. So whenever any action should be performed in this area, it is important to **watch and think!!!**

Problematic species necessary to control within this area:



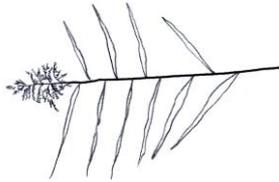
Urtica dioica
Nettle, Brännäsia



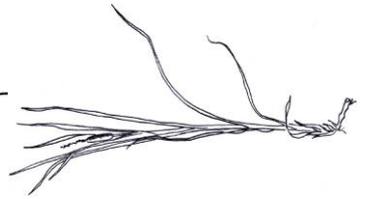
Salix alba
White Willow, Vitpil



Salix caprea
Goat Willow, Sälq



Phragmites australis
Reed, Vass



Typha latifolia
Bulrush, Breckavedun



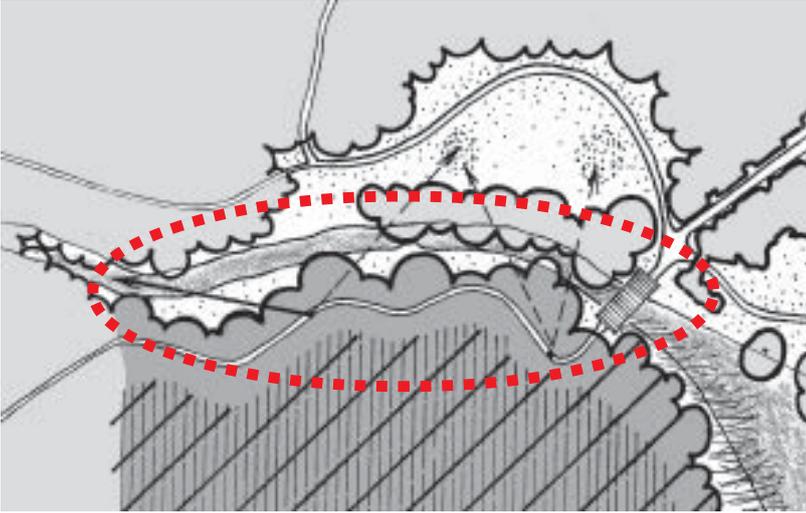
Iris pseudacorus
Yellow Iris, Svärdsilja

**DO NOT MISTAKE Bulrush WITH Yellow Iris
WHICH IS PLANTED IN THIS AREA**

the alder shore

Maintenance strategies:

- The yearly maintenance should be reduced to regular grass cutting along the path to avoid nettles and elders to take over towards the stream (this action is within the framework of the path system maintenance and has to be repeated every month). **The slope will be maintained once a year as a cut meadow and the shoots of willows on the bank of the stream should be cut back as well to keep the open view from the path to the stream.**
- On certain spots decorative plants were planted in 2005, such as ferns and species of grass, therefore it is **extremely important to carefully cut the grass on the slope** and not to close to the ground.

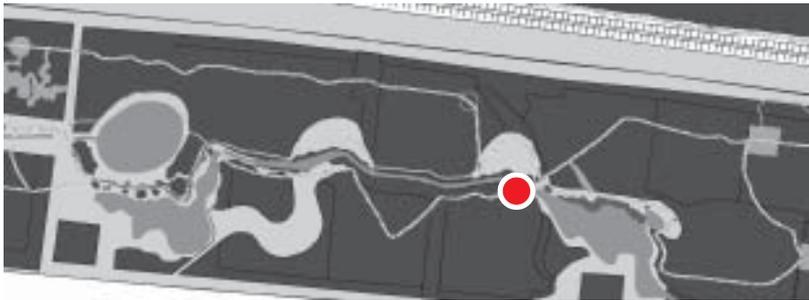


area of the alder shore



agressive growth of nettles and elder

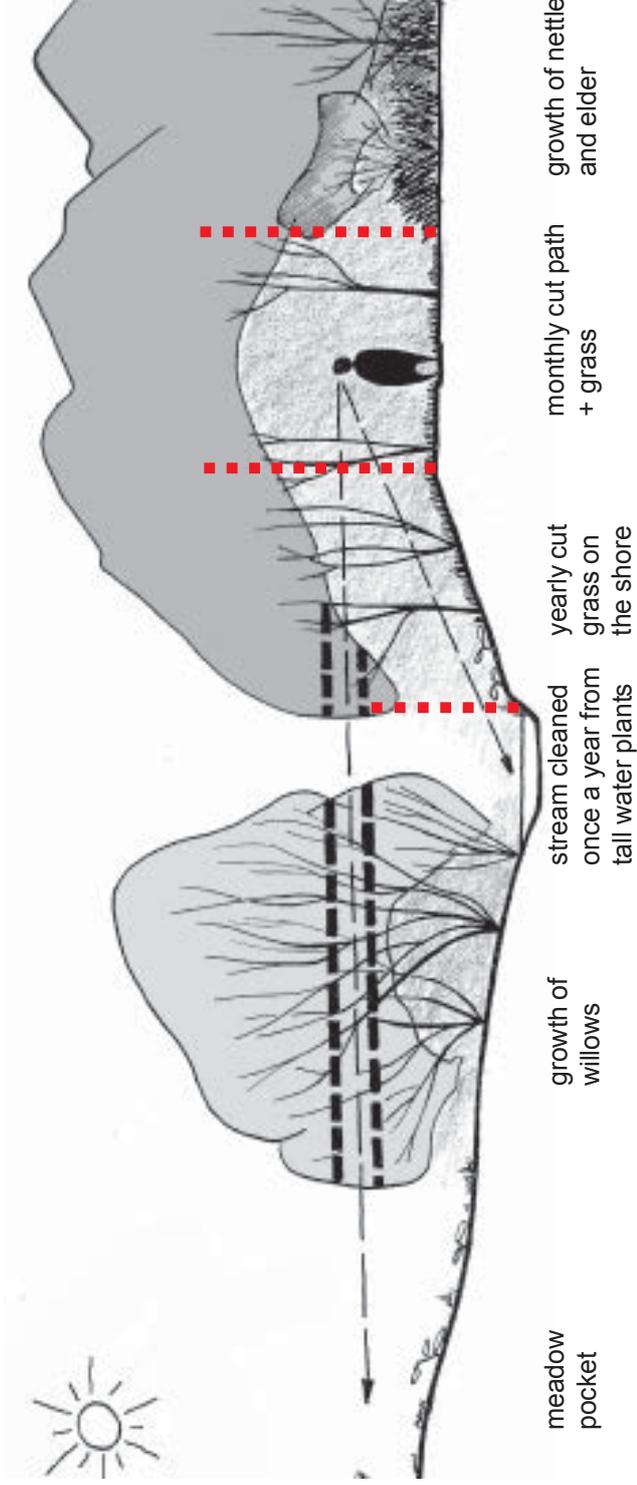
directions of the main views



Västernskog



View from the south. The slope is covered by thin growth of grasses, behind the path thick growth of nettles and elder is visible



Species needed to be controlled within this area:



Urtica dioica
Nettle, Brännäsia



Salix caprea
Goat Willow, Sälgräs-sprouts



Sambucus nigra
Elder, Fläder



Salix alba
White Willow, Vitpil sprouts

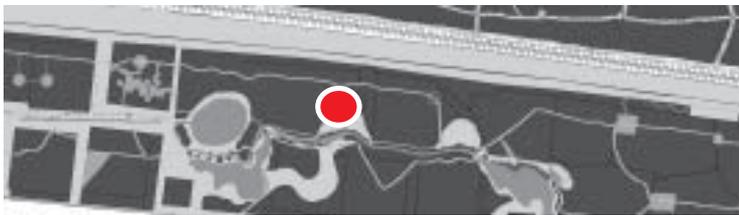
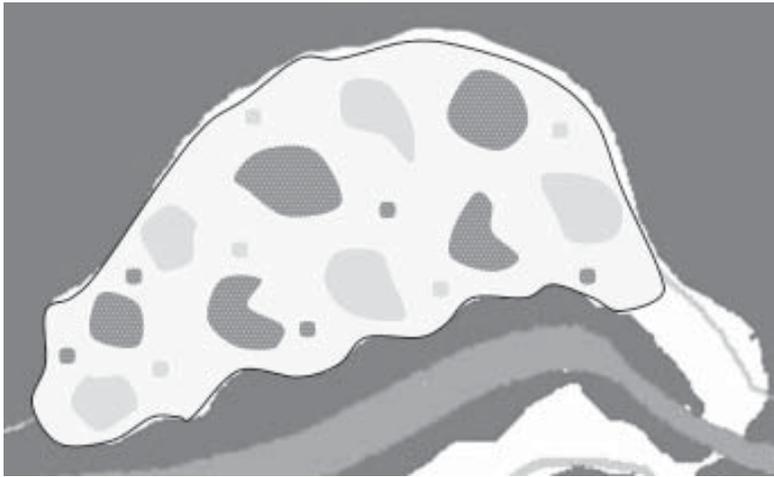
pratulum bohemicum

Proposed maintenance plan for Västernsö and Tor Nitzelius park, Alnarp

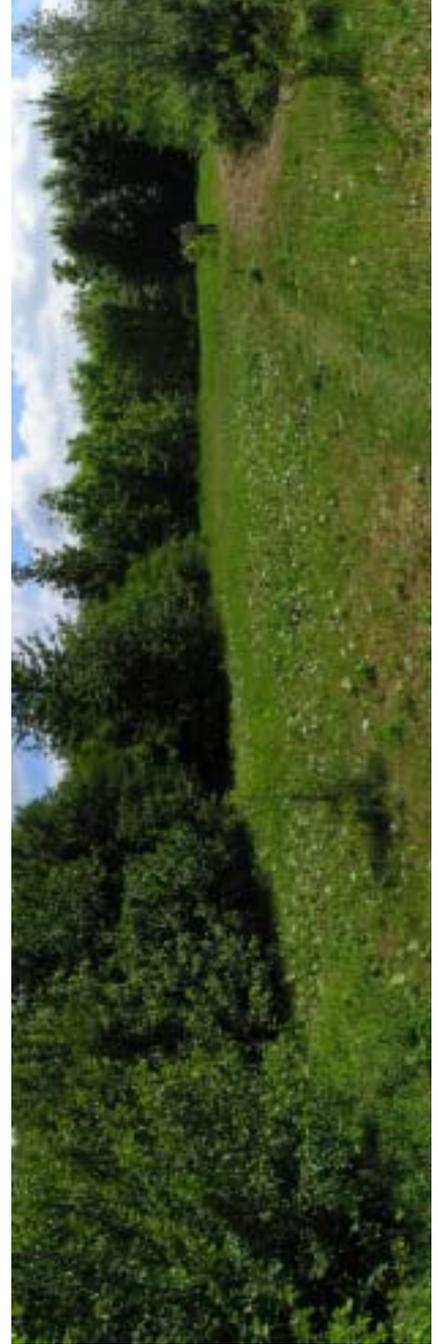
Maintenance strategies:

The seeds of meadow herbs and grasses were spread at this spot in the summer of 2005 that means all those plants are still very weak. Additionally ruderal species are still strong enough to suppress the newly established meadow community. **Therefore it is extremely important with a special strategy the following two years!**

- In 2006: from the very beginning of the vegetative period (May) the meadow must be cut as soon as the plants reach the height of 10cm. Then the cutting height should be **lowered down to 4 cm, but NOT lower since that might destroy the plants seeded.** This operation has to be repeated during the whole summer, it is very much depending on the weather and the growth of the ruderal species so approximately the mowing need to occur every month.
- In 2007: the meadow has to be **cut twice a year** and in case that some patches of ruderal species will be still present on the meadow, those spots have to be trimmed more often to weaken the plants.
- In 2008 and further on: the area should be treated as an **once a year** mowed meadow (at the end of July).



Västernsö



The meadow pocket before the establishing of a new meadow

Two modes for normal mowing of the meadow:

cut twice a year



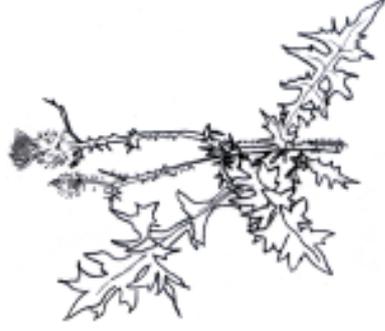
Two cuts suppress the invasive species so they can't flower so easily. The vegetation is kept lower so flowering herbaceous species don't need to compete with tall grasses.

cut once a year



Only one cut a year is done later in the summer so the community of all plants can develop fully. The meadow vegetation is growing taller and there is more of the biomass left over the winter.

Species necessary to control within this area:



Cirsium vulgare
Spear Thistle, Vägtistel



Urtica dioica
Nettle, Brännäsla



Senecio jacobaea
Common Ragwort, Stånds

the strip between two ponds



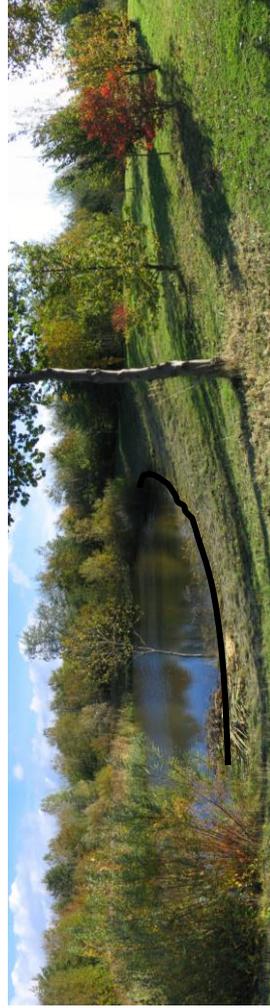
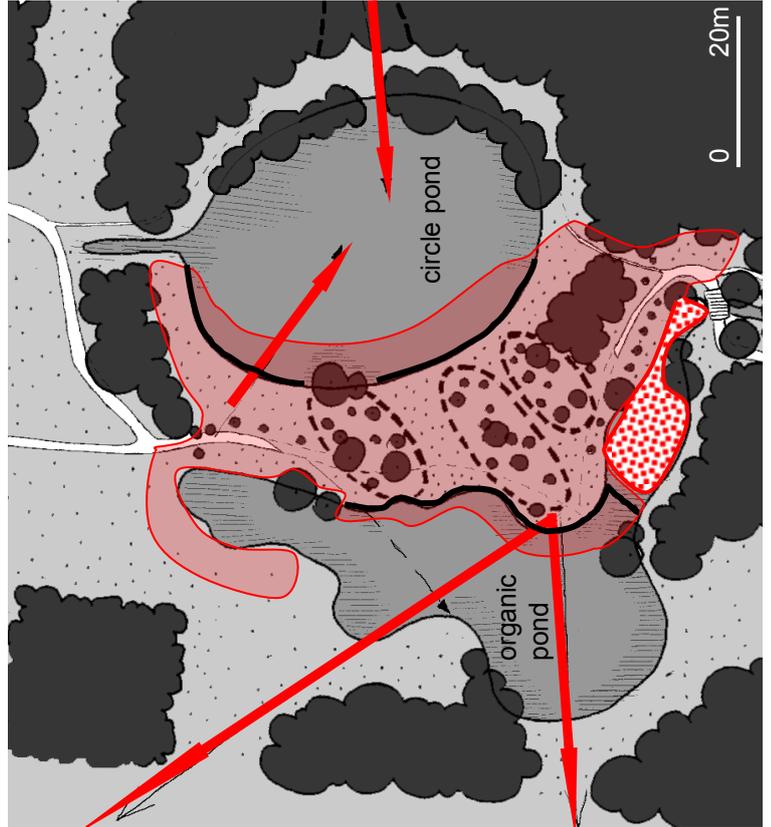
Proposed maintenance plan for Västerskog and Tor Nitzelius park, Alnarp

Management strategies:

- All elms and also some nurse trees were cut away to support growth of long lasting main trees.
- The aim was to create several **clumps of trees and shrubs** and to keep the rest of the area as half open, covered by herbs and grasses inspired by landscapes where grazing is dominating. Pioneer species have to be cut away, piece after piece, so that the main individuals can remain and develop as almost solitary growing individuals. In the time scale of 3 to 6 years the trees should be pruned, respecting their shape to develop strong individuals
- With more openings, several views connecting this place with the wider context of the agricultural landscape were gained. The openings also helped us to more clearly perceive the terrain connected with the water features. **It is necessary to keep the vegetation aside the main views.**
- Following traditional land-use thinking connected to this place, some willows were pollard with the vision of very expressive individuals in the future (see the chapter of pollard trees).
- The bare slopes of both ponds were covered with hey in 2005 and in some spots flowering herbs were planted to establish meadows. Those newly established meadow communities on the slopes of both ponds need to be **cut once a year.**
- The water shore along the two ponds (as marked) has to be controlled and cleaned periodically to control young willow sprouts and tall water plants.



Västerskog

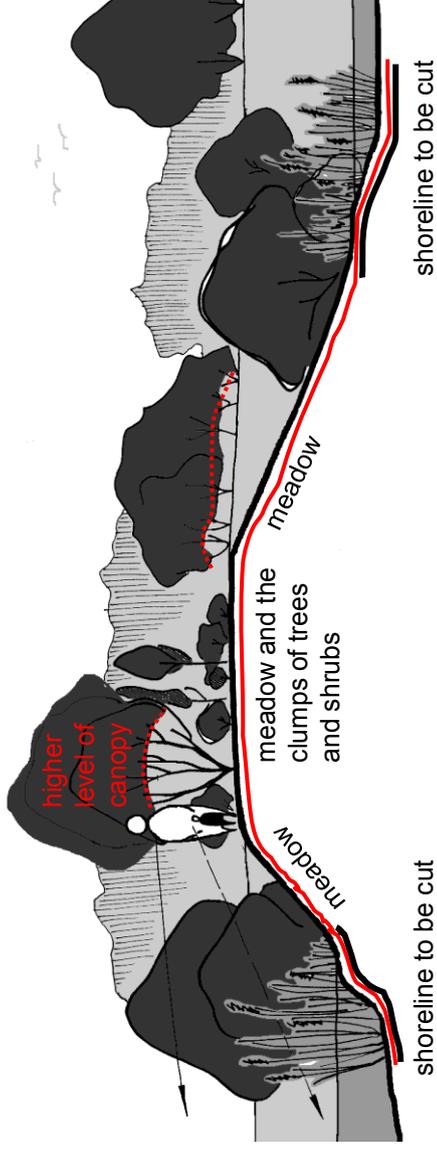


View of the circle pond and its cut and cleaned part of the shore. On the left side the clump of trees and shrubs together with once a year cut grass are evoking the half-open woodland area.

- area of yearly action
- shore line marking the area of effort – cut and cleaned once a year
- this part of the organic pond has to be cleaned periodically (2-3 years) from young willows and tall waterplants. But some individuals already older than others remain there in form of trees.
- clumps of trees and shrubs
- main views, all the vegetation around has to be cut or pruned to keep them



Table and benches should be placed under the willow during the summer season



The narrow part of the organic pond has to be cleaned periodically

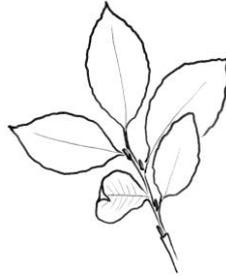


The slopes were covered by hay to establish a meadow, regular cutting is necessary

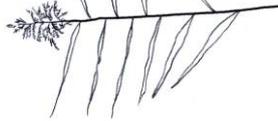
Problematic species necessary to control within this area:



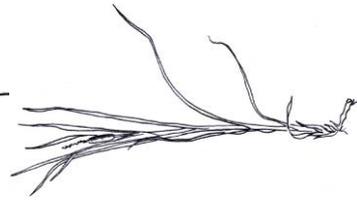
Salix alba
White Willow, Vitpil



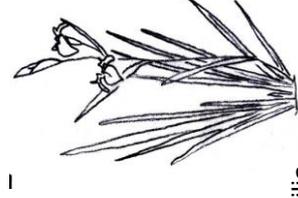
Salix caprea
Goat Willow, Salg



Phragmites australis
Reed, Vass



Typha latifolia
Bulrush, Bredkaveldun



Iris pseudacorus
Yellow Iris, Svardsliija

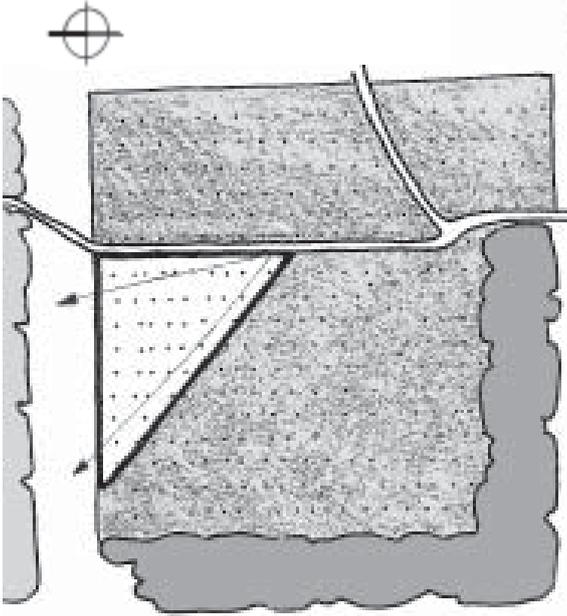
**DO NOT MISTAKE Bulrush WITH Yellow Iris
WHICH IS PLANTED IN THIS AREA**

the larch & ash

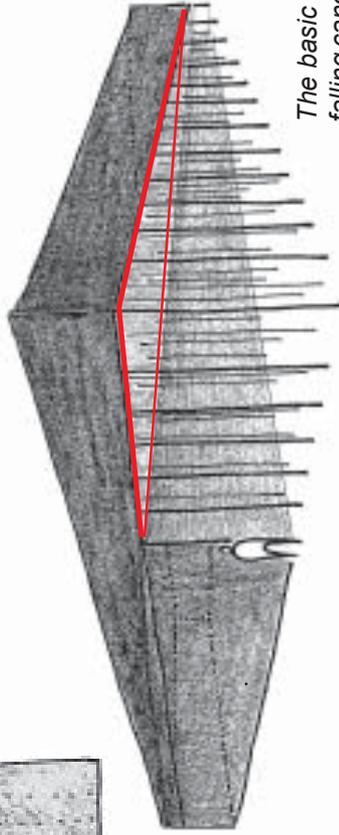


Maintenance strategies:

- The ground plan of the treated area was shaped as a triangle with the height of the pruned trunks sinking from the middle, next to the path to the edge.
- The shape of the triangle will persist in the same size. The action of maintenance is focused on **lifting the canopy of the trees higher**, standing just next to the path and following the concept of the **"falling canopy ceiling"**.
- All the cut branches have to be removed from the area.



Västerskog



The basic concept of the falling canopy ceiling



- ■ ■ ■ ■ the new level of pruned "falling canopy" for this action
- the level of canopies as cut in 2005

the children's landscape

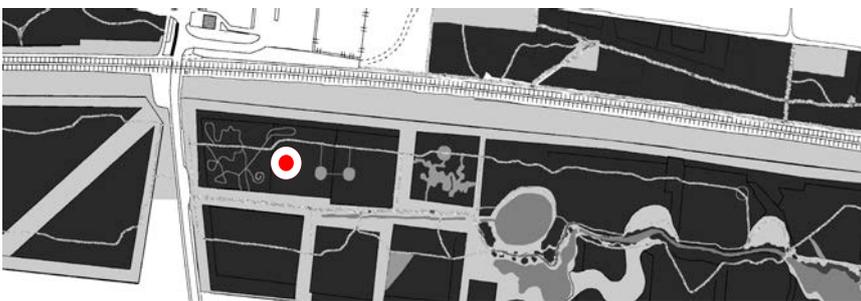
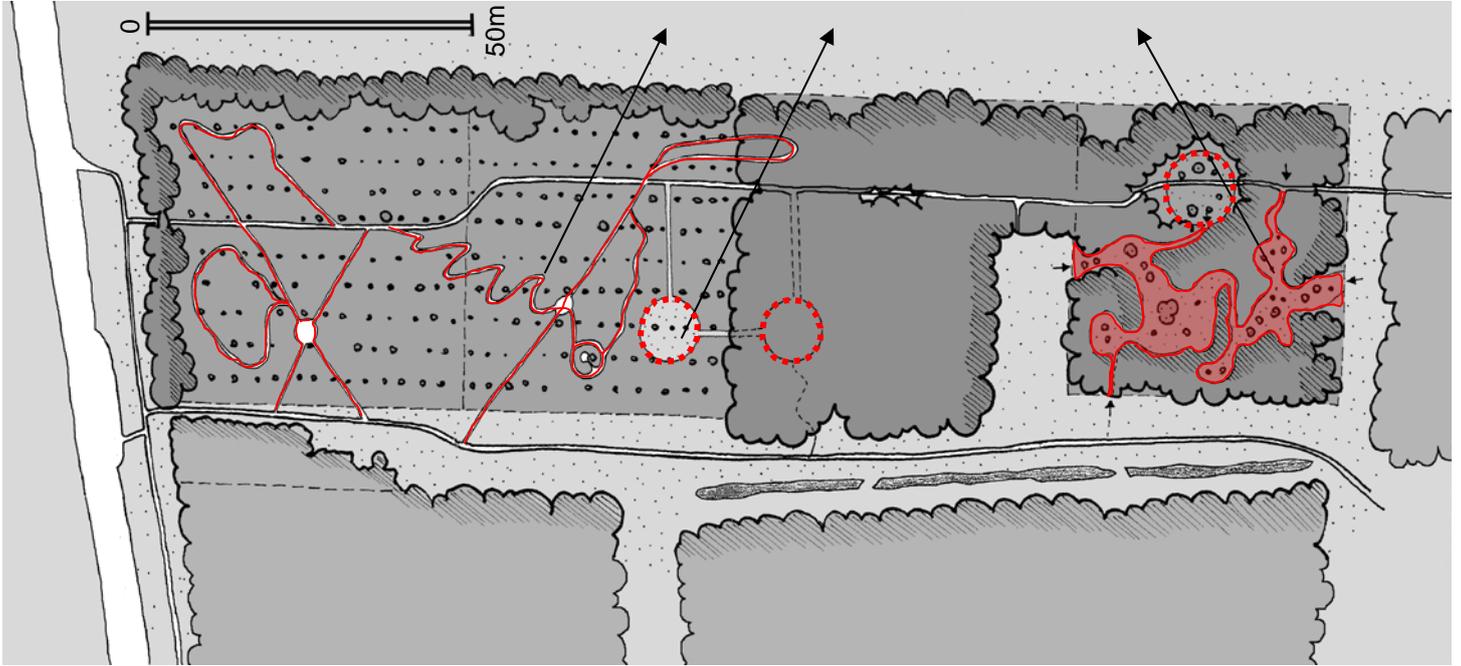
Maintenance strategies:

- The pattern of **paths cut** in the stands of rowan and Swedish whitebeam might be changed and designed together with the children **every year**.
- The field layer in **the circle** of the rowan stand as well as in the stand of Norway maple needs to be cut **once a year**.
- In the stand of lime trees there will be a need to move the field layer in the circle and in **the micro rooms** at least **once a year**.
- Trees with strong individual character should sometimes be supported by pruning, similar "individual" attention must be given to the trees good for climbing.

the labyrinth of narrow paths in the grassland

circles cut in the grass as a marking point connected to the main demonstration path

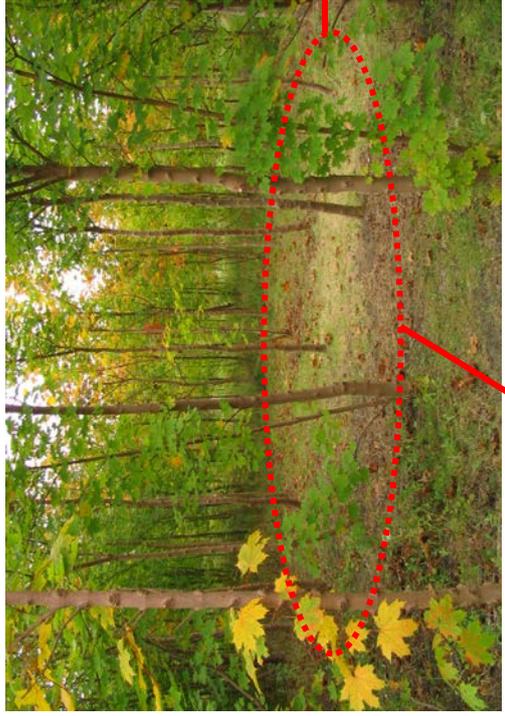
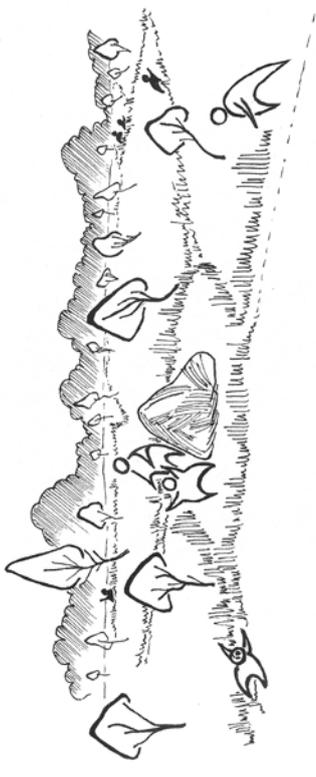
the labyrinth of micro rooms in the lime tree stand



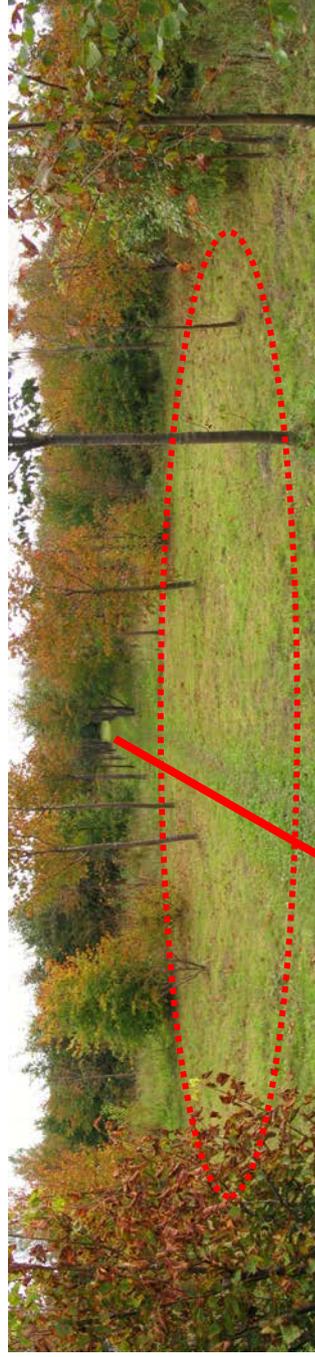
Västerskog



The savannah forest in the rowan sections where narrow paths should be cut in between the trees as a labyrinth. In the crossings a pile of hay usually serves as a marking point.



The circle in the Norway maple stand is connected to a similar one in the stand of rowans. Both circles are of the same size cut in the fieldlayer. The aim is to compare the feeling of enclosed room within the growth of trees and by contrast the same spot within the half-open grassland in the rowan stand.



The largest circle in the lime tree stand is situated around the main demonstration path. Here it serves as one of the 5 entrances to the labyrinth of micro rooms. Both parts of the circle and the labyrinth have to be cut once a year in the middle of summer.

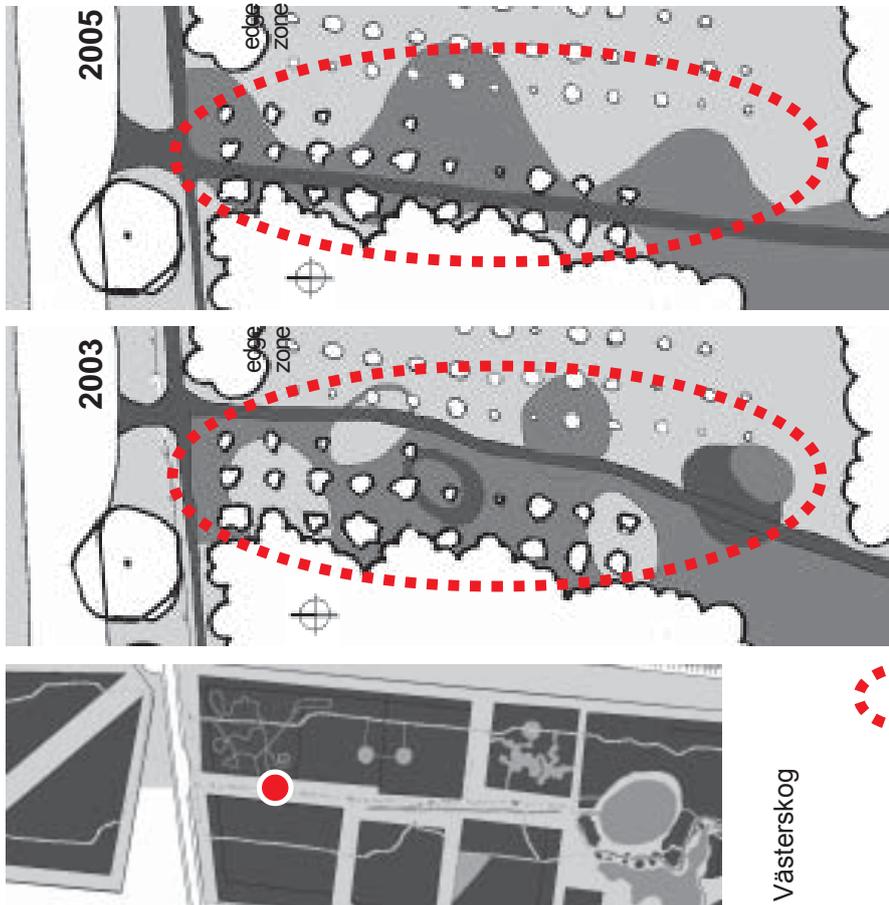
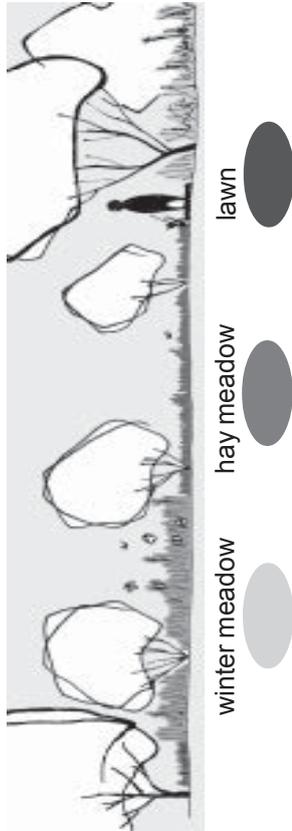


the hazel meadow at the entrance

Proposed maintenance plan for Västernsberg and Tor Nitzelius park, Alnarp

Future strategies:

- It is important to upkeep **the yearly maintenance of this meadow** to preserve the flowering meadow community. The minimum is to cut the area once a year in the middle of July. From the creative point of view it is desirable to develop some **extra ordinary patterns using various times to cut the grass as well as different numbers of cuttings.**
- The hazel shrubs could still be supported in growth by a layer of hay around them over the winter time, but it is also possible in the long run to coppice them, otherwise they might provide too much shade for the meadow.
- At the very entrance the idea of the "window" pruned in the thick edge zone should be kept for a higher attractiveness.



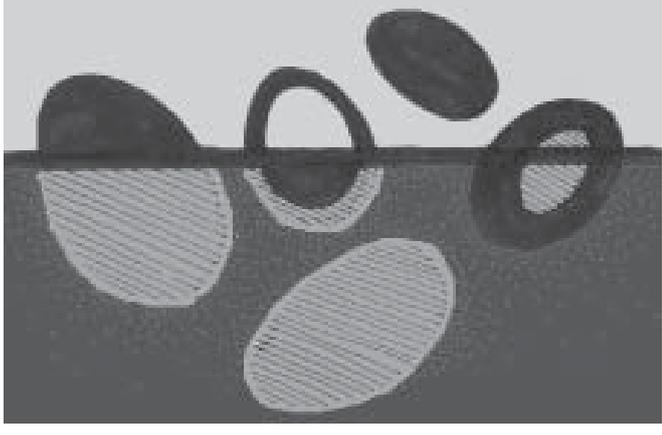
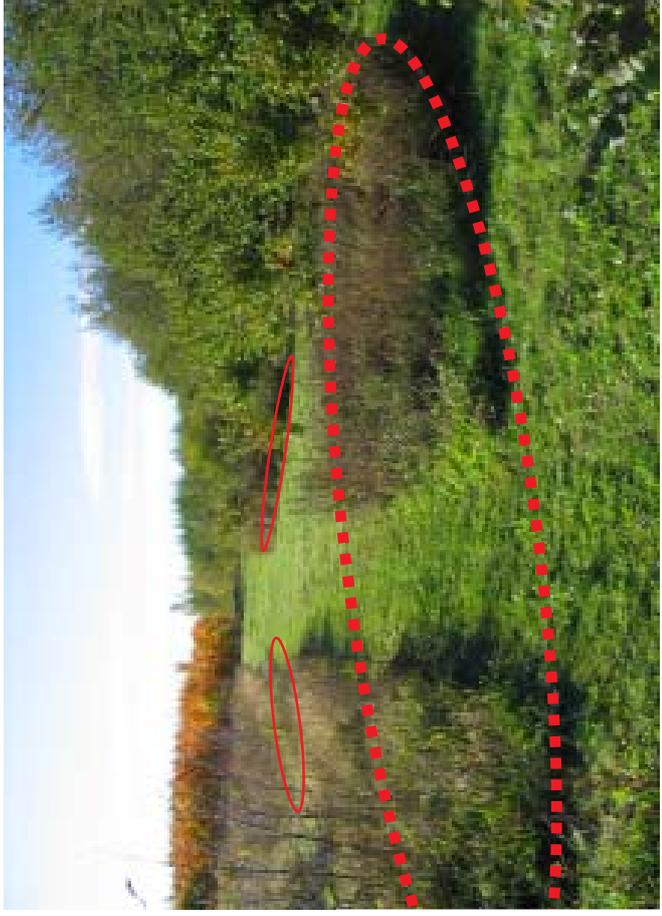
Area where grass has to be cut every year into different patterns

Winter meadow - the concept of this feature came from research focused on butterflies and other insects. According to this, for many species this environment is important in their life-cycle for re-production. From an aesthetical point of view this meadow is contrasting particularly well with the rest of the cut meadows, especially in the late summer, autumn and partly in the winter as well. **This meadow type has to be cut every year in early spring!!!**

Hay meadow - those areas are cut in a traditional way once or twice a year in the middle of summer after a rich flowering period. In the spring and early summer these meadows look almost the same as winter meadows but the radical change comes with the first cut. After that the grass and herbs are greener and some herbs start to flower again.

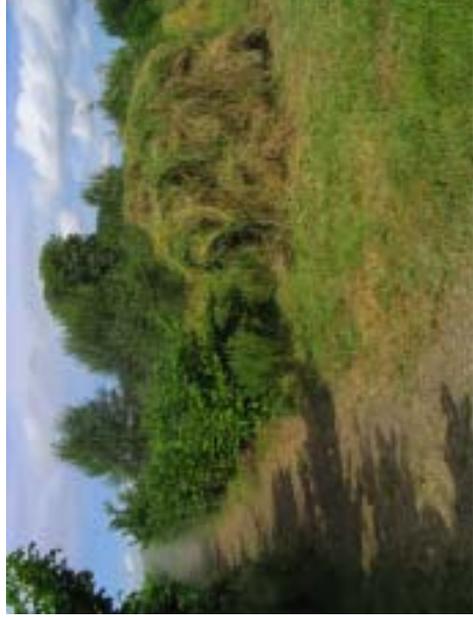
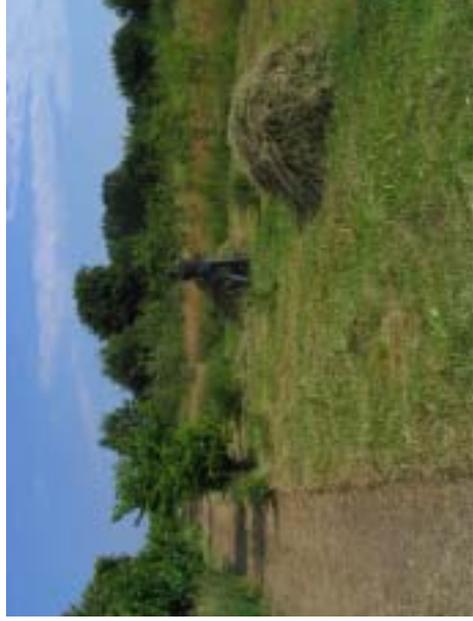
Lawn - in this context it is not a park like lawn cut frequently, but comparing to the rest of the area, it is kept quite low and possess a contrasting lush green colour. So far it is present only on the paths, but new impulses recognizing its contrasting effects, open up for it to be used as reliefs cut into the meadows.

Västernsberg



Shaping the waves (left; 2005) and ovals (right; 2003). These photos should serve only as an inspiration.

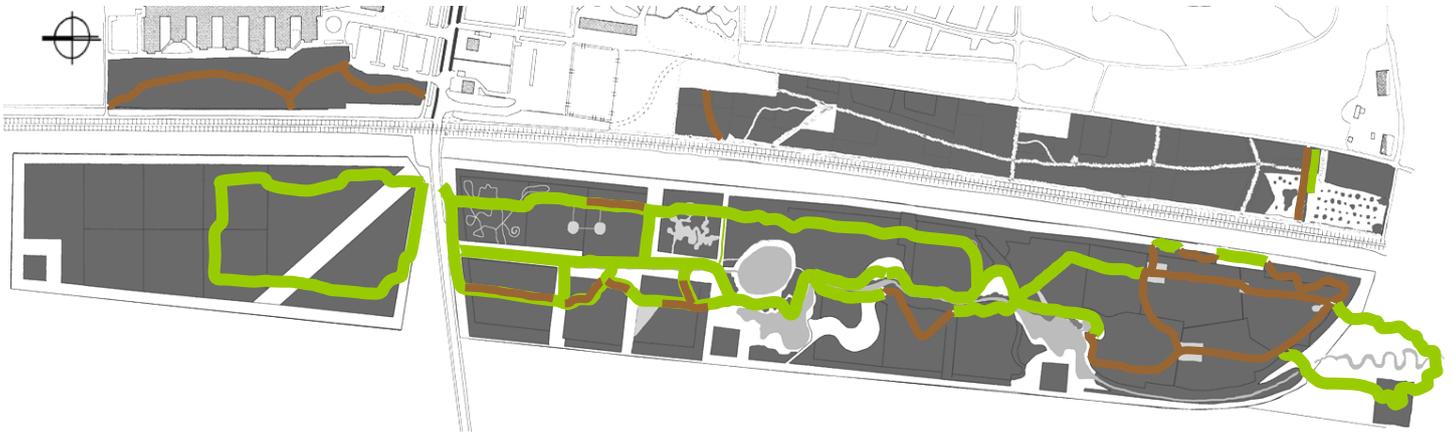
The form of patterns cut in the grass can change year after year.



Traditional work with the cut grass: drying, haycocks or even building hay drying constructions is important in this place.

the path system

Map of paths differentiated after maintenance goals

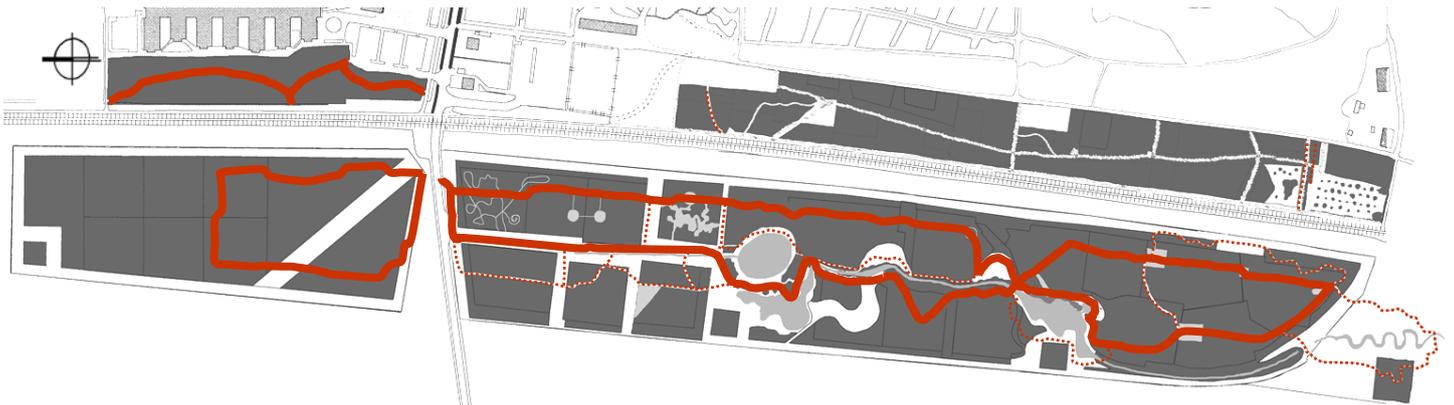


On the paths marked by green colour, the grass or field layer has to be cut regularly. In relation to their importance the main paths are cut up to a width of 1 m. The secondary paths could be kept 50 cm wide.

On all paths marked brown the maintenance is focused on the vegetation on the sides of the path. All branches representing obstacle when walking has to be cut away.

Map of paths

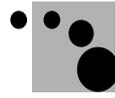
The paths are specified after their importance. There is a main demonstration path leading through the whole Västerskog and Tor Nitzelius park and a number of smaller paths which are important to have more opportunities when walking in the laboratory enabling various tracks every time.



the main demonstration path

the side paths

the water system



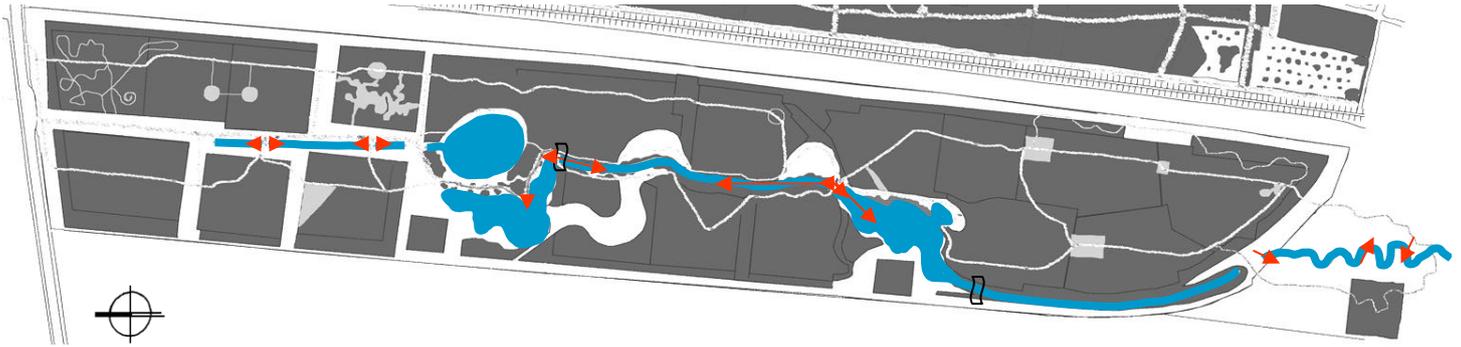
Proposed maintenance plan for Västerskog and Tor Nitzelius park, Alnarp

The water is present in form of the stream and ponds in the southern part of Västerskog. The maintenance consist of **cleaning and cutting away** the most aggressive **water plants** in the closest surrounding of all bridges so that free passing is possible. Where there are longer arrows situated the water plants have to be removed to provide good views over the water surface and further into the woodland environments. There are two points where the water level could be regulated and those water gates has to be checked every year as they need to be in good condition to upkeep the wanted water level.



The stream before and after cleaning. Tall waterplants and branches of willows were pruned away

-  longer views
-  cleaning around the bridge
-  water gates and water level regulation



the pollard trees



Proposed maintenance plan for Västerskog and Tor Nitzelius park, Alnarp

Different species traditionally pollarded in Scandinavia were chosen in the southern part of Västerskog.

Salix alba should be cut every year in the springtime.

Tilia cordata should be cut in a period of 3 to 5 years.

Fraxinus excelsior. There are four rows in the section meant to be pollarded. It is possible to cut some individuals yearly and others in 3 to 10 years cycle.

Alnus glutinosa is recommended to be cut with a 3 years frequency.

Tilia cordata

Salix alba

Fraxinus excelsior – 4 rows along the section

Alnus glutinosa

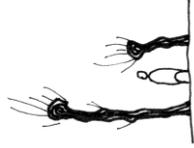
Salix alba

Salix sp.

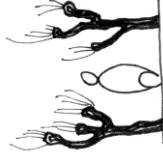


Fraxinus first season after the pollarding

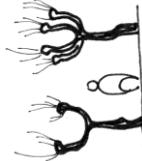
Various types of pollard trees used in the Västerskog:



single stem I. – with one head in various heights from the ground



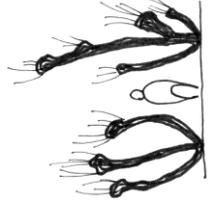
single stem II. – with two or more heads cut on branches in different height



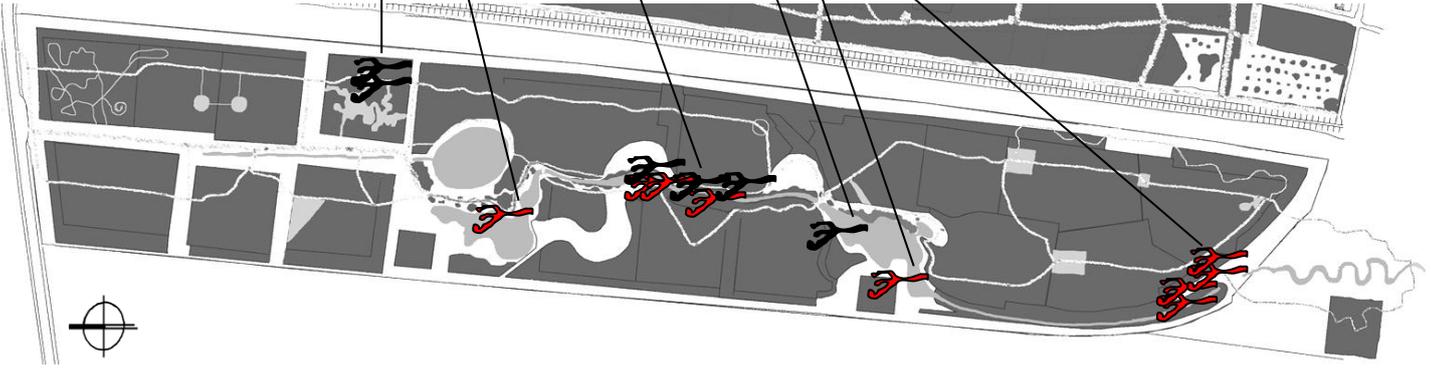
candleholder – single stem with two or more heads cut on branches growing in the same level



special features – experimental cut using diverse thickness of branches, different heights of cut to support or reduce growth



multistemmed – with heads in the same or several levels

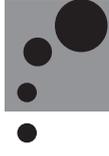


perspectives for the future



Proposed maintenance plan for Västerskog and Tor Nitzelius park, Alnarp

2006



Proposed maintenance plan for Västerskog and Tor Nitzelius park, Alnarp

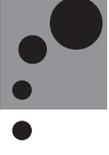
place	action	tools/machinery	notes
■ orchard of apple trees TNP	•pruning of fruit trees	 	pruning for good harvest of apples, but also respecting individual growth of the trees - especially the very small ones. Those are excluded as trees for children so do not cut low branches away.
■ larch & ash	•pruning of "falling canopy"		see chapter 7
■ the northern part of Västerskog	•cover the western branch of the path with wooden-chips •prolongation of the main demonstration path	 	a pile of wood-chips is already there. where and how to place the longer looping path is necessary to discuss with the laboratory core group

2007

Proposed maintenance plan for Västerskog and Tor Nitzelius park, Alnarp

place	action	tools/machinery	notes
■ baby pillar halls	• rising the canopy	 	trees have to be pruned higher up about 1 m extra (only those which were cut before, do not prune any others)
■ Heron´s pond	• pruning of alder trees		in the southern part branches of alders have to be cut away in case they make the growth of beech impossible. Along the shore take only few of the lowest branches away to preserve the view towards the pond
■ pollard trees	• pollarding of <i>Tilia, Fraxinus, Alnus</i>	 	see page 35a 
■ hazel hall TNP	• new layer of woodchips		action for the intensive tunnel see chapter 1 

2008



Proposed maintenance plan for Västerskog and Tor Nitzelius park, Alnarp

place	action	tools/machinery	notes
■ corridor	•cut the walls away	  	the removal of the trees next to the path has to be implemented only if all the branches building the "green walls" are already dead. If not so, this action has to be shifted to another year. In case it will be decided to take the wall away see chapter 3.
■ hazel hall TNP	•pruning	 	action for the extensive tunnel see chapter 1.

