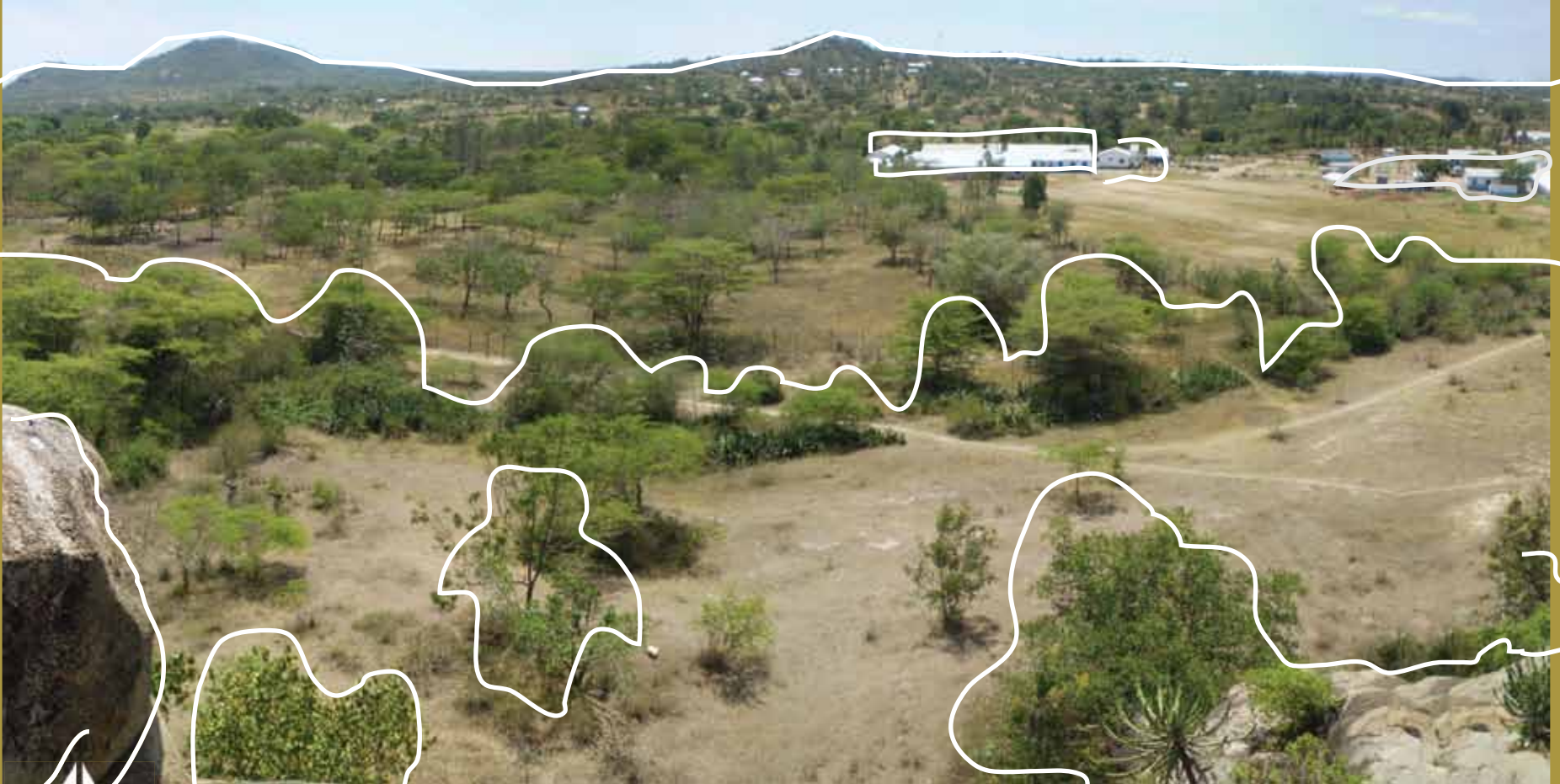


DEVELOPING LANDSCAPES

A conceptual proposal for an Agroforestry Training Centre in Musoma, Tanzania
based on a field study



Master Thesis in Landscape Architecture
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Department of Urban and Rural Studies
Uppsala 2010
Swedish University of Agricultural Sciences

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Abstract

In this thesis we propose a conceptual plan for the development of an Agroforestry Training Centre (ATC) in Musoma, Tanzania. The aim is to make a proposal to support peasant education in agroforestry. How can an ATC in Musoma be developed into a stimulating and educational park suitable for teaching agroforestry methods to peasant farmers and other potential users? To answer that a field study was conducted to investigate how our client Vi Agroforestry Programme (Vi) and the target groups of the client can benefit from the site.

The thesis begins with a short explanation of the context, in which the ATC plays a part followed by a methodology chapter. Next are three chapters presented which introduce the reader to the research conducted before starting the proposal, these include: results of literature studies, study of precedents, and results of field study. The reader is introduced to subjects and results of importance to the proposal: agroforestry, participation and spatial structures.

The results of the field study include how peasant farmers can gain from an ATC, the aim of Vi for the ATC, and our own site analysis. Our conclusions of the

results of the field study, the precedents, and theory, which are the base for the proposal, are that the ATC is inaccessible and difficult to comprehend, it lacks excitement, and it expresses its uniqueness weakly.

Based on the conclusions, a conceptual design proposal was carried out where new spatial landscape structures for the ATC have been developed. Strategies for what is important to emphasise are put forward and explained in diagrams. Two places of interest are presented in depth: the entrance area and the homestead area. In these two areas examples are given on how the strategies can be interpreted.

Finally comes a reflection where we note what we have learnt and how it can benefit others. It includes possible bias like the involvement of Vi in our work which for example has affected who has participated in interviews and workshops. We also reflect on our work; that it can be taken to a more detailed level, and the possibility to set our work in a larger scale by examining other outdoor centres for education around the world. This project has been conducted within the framework of a Minor Field Study, funded by SIDA. The work of this thesis focus on the process, the field study is presented in more depth in another report.

Sammanfattning

Den här uppsatsen presenterar ett konceptförslag för utvecklingen av ett Agroforestry Training Centre i Musoma, Tanzania. Målet har varit att förslaget ska stödja småbönders utbildning i blandbruksmetoden agroforestry. Hur kan ett ATC i Musoma utvecklas till en stimulerande och pedagogisk park som lämpar sig för bönders till de studier som har gjorts innan förslaget togs fram. De tre kapitlena innefattar resultat av litteraturstudie, studie av förebilder, och resultat av fältstudien. Läsaren introduceras i dessa kapitel till ämnen och resultat som har varit viktiga för förslaget: agroforestry, brukar-medverkan och rumsliga strukturer.

Resultaten av fältstudien innefattar hur småbönder kan dra nytta av centralt, Vi-skogen mål med centralt, och vår analys av området. Slutsatserna vi drar av fältstudien, studien av förebilder och teorin ligger till grund för förslaget. Slutsatserna är att ATCt är svårtillgängligt och svårt att förstå, det saknar spänning, och det uttrycker sin säregenhet dåligt.

Baserat på slutsatserna är ett konceptuellt designförslag framtaget där nya strukturer för landskapet har utvecklats. Strategier för vad som är viktigt att betona läggs fram och förklaras i diagramform. Två platser som

vi anser vara extra viktiga presenteras där strategierna översatts till konkreta förändringar.

Slutligen reflekterar vi över vad vi har lärt oss och hur det kan komma till nytta för andra. Det innefattar bland annat problem som kan ha påverkat vårt resultat. Till exempel diskuteras att Vi-skogen varit involverad och möjligheten att de påverkat urvalet av deltagare i intervjuer och workshops. I reflektionen tas även upp att vårt koncept kan vidareutvecklas i mer detaljerad skala, och att det vore intressant om vår uppsats kunde sättas i ett större perspektiv genom att fler studier av liknande centra gjordes i andra delar av världen.

Projektet har utförts inom en Minor Field Study som sponsras av SIDA. Uppsatsen fokuserar på vår process i arbetet, fältstudien är presenterad mer utförligt i en annan uppsats.

Acronyms

ViAFP Short for the organisation “Vi-Agroforestry Programme”, also called ”Vi-Skogen in Sweden”.

NGO- Non Governmental Organisation

ATC – Agroforestry Training Centre

FFS – Farmer Field School

ICRAF – World Agroforestry Centre

SLU – Swedish University of Agricultural Science

PPP-Dollars - Purchasing Power Parity

Preface

The idea to make a Minor Field Study for a thesis was born long before we had even got to know each other. A search for a country and setting to work with started already 2007, two years before we embarked on the trip to Tanzania. The idea of this MFS started to form after a tip from Tove's grandmother, Johanna. Johanna has been a proud supporter of Vi since many years and she recommended her granddaughter, Tove, to contact them.

After positive contact with Vi, Tove sent an email to all landscape architect students about to write their thesis. One of the replies was from Sanna, who had been thinking about doing something similar. A long journey started at this point, one that includes much more than this essay could possibly cover.

One year later, we have been living, travelling and working together. Two people who had never heard of each other little more than a year ago, now not only know each other very well but also know a place we had never heard of before. But that is a different story.

Vi had told us that they needed assistance with their

Agoforestry Training Centre in Musoma, Tanzania, and preparations for the field study were started in the autumn of 2008. We were happy to receive a SIDA scholarship for students intending to base their thesis on work executed in low income countries.

We were very well taken care of by Vi in Musoma and we would not have been able to carry out our study without their support. We want to send our greatest thanks to everyone who helped during the field study: The farmers, other stakeholders and the Vi staff who participated in our interviews and workshops, the drivers for making every drive a joy, the staff at Vi Mara who looked after us and explained local culture, the staff at Vi Kitale who with great energy showed us their centre, Ylva Nyberg for guidance, Kizia for all lovely meals and the Vi Mara manager Björn Horváth who made us feel like a part of his family.

We have also had support from our supervisors in Sweden: Dick, thank you for thoughtful and always well formulated comments on our text. Petter, thank you for your dedication to our project that even made you visit us in Musoma. And a thank you also to Ylva Dahlman who was able to give us good advice on very short notice.

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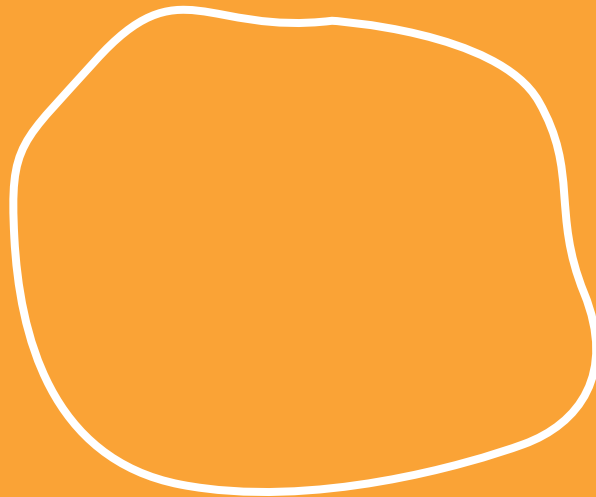
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CONTEXT

The ATC in Musoma sits in a geographical context and in a context of the organisation behind it.



Why and what?

The modern world is becoming more and more globalised which put new demands on the knowledge of all kinds of professions. Landscape Architects can work with more or less familiar places and spaces. As graduating students of landscape architecture we want to set our knowledge, methods and experiences in, to us, new context regarding environment and culture. We chose to do this by working with an existing park in Tanzania, an Agroforestry Training Centre, ATC. The organization Vi-Agroforestry work in low income countries around Lake Victoria, among those Tanzania. We have been asked to assist Vi with their ATC in Musoma, Tanzania.

Vi's plan for the ATC in Musoma:

“The Agroforestry Training Centres (ATCs) in Musoma should demonstrate and compare different agroforestry systems and farm management options. The target group for the ATCs is wider than earlier and addresses farmers, students, families, course/ training participants, other stakeholders and the public, who all should be able to learn from a visit. The centre is developed to be more attractive and to be able to host fairs, exhibitions and other presentations, which are designed to be interactive. Each ATC should have appropriate, local equipment for its activities.”

The aim of this thesis is to propose landscape strategies for the development of the ATC in Musoma, based on the needs and wishes of local people. How can an ATC in Musoma be developed into a stimulating and educational park suitable for teaching agroforestry methods to peasant farmers and other potential users?

To do this we chose to study precedents in an Eastern African setting, in a Swedish setting, and in an international setting. We wanted to study literature relevant to an ATC and to landscape architecture and chose the subjects of outdoor education, agroforestry and participation, as well as literature on fundamental landscape elements such as place, space and structure. The studies of precedents and literature work as a base for our site analysis and proposal.

A field study was carried out to get an understanding of what ATC users need and wish for. To identify these needs and wishes we wanted to find and test a suitable participatory method. We held a workshop to test how mental mapping works in this context.

The thesis does not go deeper into issues regarding certain trees, the dependence of aid help to low-income countries, gender issues or the situation of peasants in

Tanzania. The story of our meetings in and with the environment and the culture which was new to us is further explored in another project in addition to this.

What is an ATC?

An Agroforestry Training Centre is a term developed by the organisation Vi. It functions as a park where agroforestry techniques can be demonstrated and a site for training and practice in agroforestry methods. (Vi's website) It has to be instructive to make it easy for visitors to understand the scope of the centre.

The main aim of the work of Vi is to provide information to local farmers, and students, in the region about agroforestry and rural development. Together with its educational purpose, the ATC also has the function to serve as a demonstration of the work of Vi to all kinds of visitors. For example international students and visitors travelling to Musoma on trips that are hosted by Vi.

Tanzania, Mara and Musoma

To get an understanding of the ATC in Musoma some information of the country and the local region is necessary. The amount of people living on less than 2 dollars a day in Tanzania is 89.9% which makes it one of the poorest countries in the world. The country's GDP is low and the economy depends on farming and cultivation. 80% of the population are farmers or workers on farms but because of the climate and topography only 4% of the land is suitable for cultivation and a high percentage of the GDP is made up by foreign aid (Human Development Report, SIDA's website).

The Mara region is located by Lake Victoria and stretches along the Tanzania-Kenya border. It is one of 26 administrative regions in Tanzania with a total population of over 1,3 million. The Mara region is most known to be the home of one of the worlds best known wildlife parks, the Serengeti National Park, which attracts a great number of tourists every year. Tourists rarely make it to the regions capital, Musoma, where people talk little English and tourist institutions are few. Musoma is a relatively populated place with over 100,000 inhabitants

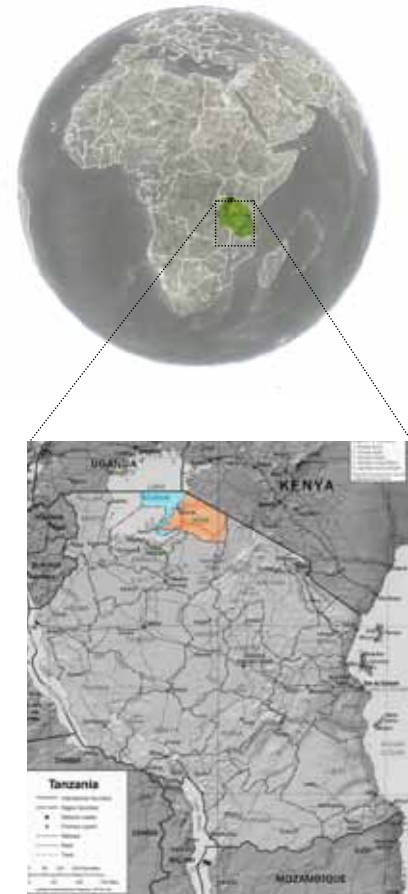
(National website of Tanzania). There are four seasons of the year in Tanzania but they are not as clear in Musoma as for example on the coast. To simplify, there is a cycle of three months dry, three months wet, three months dry, three months wet. According to the meteorological station at Musoma Urban, the average temperature is 31°C, which is relatively cool compared to other parts of Tanzania. The low temperature is mainly due to the high altitude of about 1100m above sea level (Musoma Municipal Council, 2003; Ndembwike, 2006).

According to Vi Agroforestry the potential of the agricultural sector is far from realised and it is often overlooked by government policies. Rapid population growth together with inadequate farming techniques have degraded the soil, cleared the land of trees and bush and favoured erosion on the landscape.

Vi Agroforestry Programme

The magazine Vi started a fund raising for tree planting in the Lake Victoria Region in 1983 and the “Foundation Vi Plant Trees” started to help stop the deserts in Africa from spreading. Today tree planting is implemented by

using agroforestry technologies. Agroforestry helps to restore soil fertility and increase land productivity and helps to insure better yield. Vi uses the definition of agroforestry from 1993 defined by World Agroforestry



Location of Tanzania on the African continent and of Mara region in Tanzania

Centre (ICRAF) (see chapter on agroforestry) (Nilsson, 2007).

The Vi Agroforestry Programme is registered under the name of Vi Tree Planting Foundation, an international non political, non religious and non profit organization (NGO). The vision of the Programme is “ A sustainable environment offering good living condition for farmer families” (Vi Agroforestry strategy 2008-2011).

Vi started working with small-scale farmers in Mara region in 1994 (Nilsson, 2007) but at the time they already operated ATCs in other areas around Lake Victoria. There are well-established and operational ATCs in Kitale, Kenya, and in Masaka, Uganda. According to Björn Horváth, Vi project manager in Mara, there was a need to develop an ATC also in Musoma because of the different climatic and environmental circumstances (interview, February 2009).

The Development objective of the organisation is: “Improved living conditions for 250 000 farmer households by 2012” The way of doing this is by informing and educating peasants through five major components:

- Land use, environment and climate change’

- Farm enterprise development
- Farmer groups and demand driven advisory services
- Capacity building and training
- Policy and advocacy work

Vi aim to address HIV/AIDS affected households and child or female headed households. For households affected by HIV/AIDS food and nutrition security is of greatest importance. For women, cooking and fetching fuel-wood are often main tasks, agroforestry can make these tasks easier and less time consuming (Nilsson, 2007).

The intention with the ATC in Musoma is to provide support to the field activities through practical demonstration, training opportunities and interactive learning, experimenting and research, and to be a source of inspiration of agroforestry technologies (Nyberg, September 2008, Technical Programme Adviser at Vi, email conversation).

In Musoma the ATC has an area of approximately 12.3 ha. It is located in Bweri, a suburb about 7 km from Musoma town. The aim, to have a functional, cost-effective, attractive and well-utilised park for training and demonstration was brought forward when we contacted Vi.

Headquarters Vi
Agroforestry Programme,
Musoma

Musoma Town

HAENDO

IRIJOBE

IRIMBO

KITAJI

KAMINYONGE

Lake Victoria

NYAMATARE

NYASHO

NYAKATO

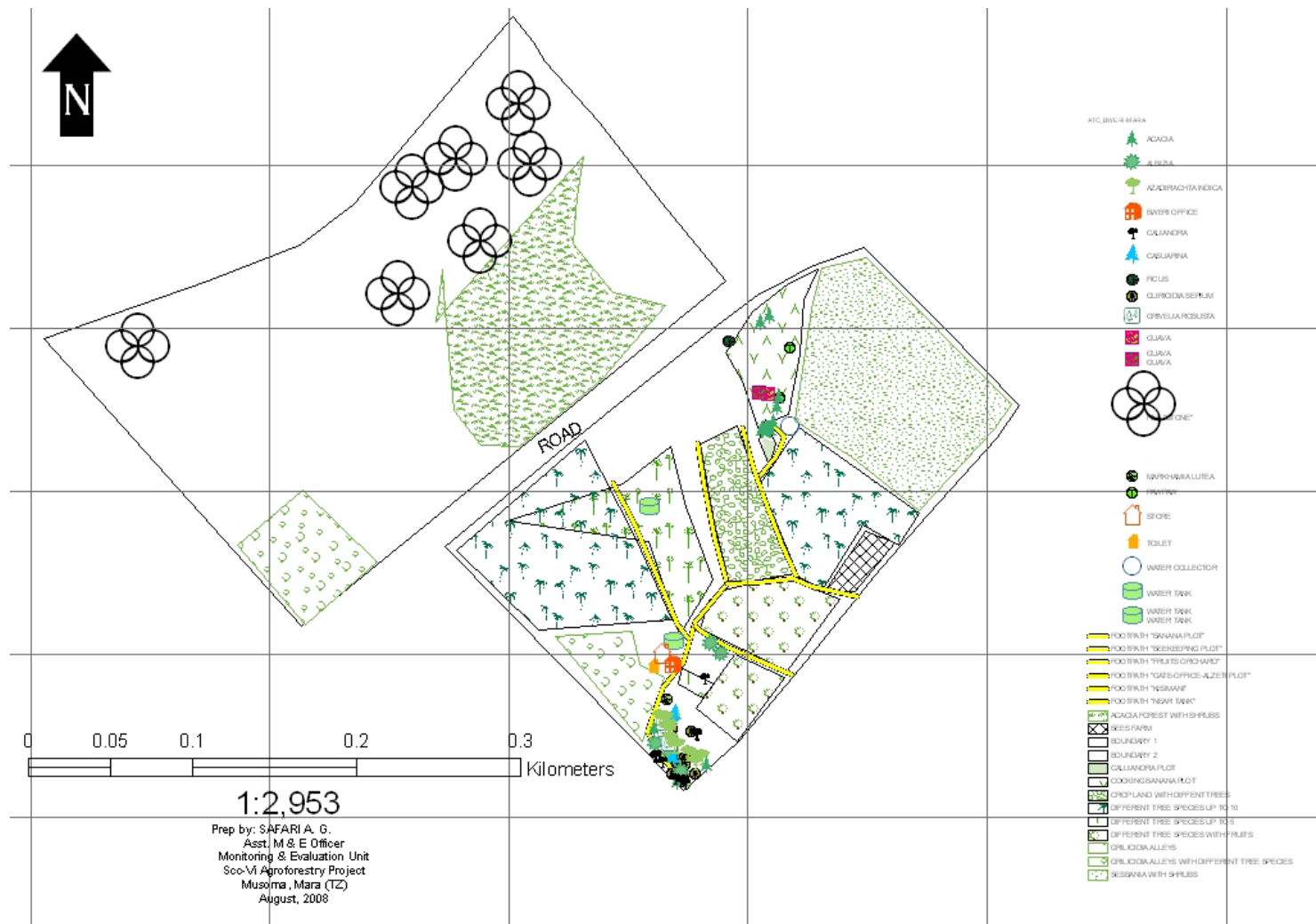
KIGERA

BWERI

NYANKANGA

Location of the ATC





The ATC in Bweri, Musoma (Map from Vi Agroforestry Programme, Musoma)



The border of the ATC in Bweri, is symbolized by the white line. The photo is taken from the hill towards the western cultivated area. South of the cultivation area is a school, Mashi, which have been involved in the field study.



ENTRANCE

MARSHI,
SCHOOL

PUBLIC ACCESS ROAD
DIVIDING THE ATC IN TWO



METHODOLOGY

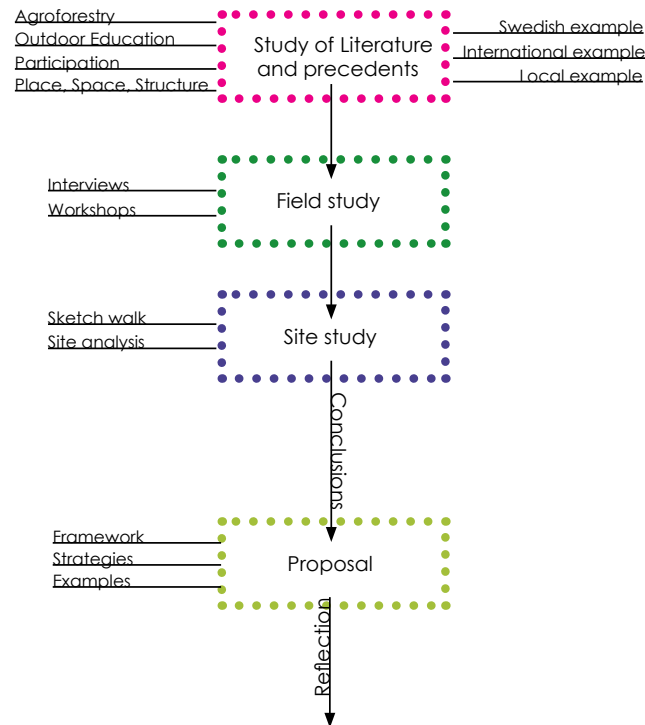
To gather information during the field study we conducted interviews and held workshops. In this chapter we also explain how we used literature and precedents in our work.



Sequence of work

Our research methods can be divided in three parts.

The first part, a preparation of the field study, include literature studies, internet sources and precedents. The second part, methods for the field study which focus on how we collected data through interviews and workshops. The third part includes methods for our site analysis. The conclusions of the three parts of our study lay the foundation for how we chose to work with the proposal.



Literature and precedents

Literature and internet sources were valuable for us to get a wider picture of what we expected to explore in detail during the field study. During these studies we learned more about topics necessary for us to understand and comprehend the work of Vi together with the life of peasant farmers in Tanzania. After studying literature we decided what methods were suitable to use in field. On site in Musoma we got access to relevant books and reports that were more site specific than the literature we had found at home which gave us a deeper understanding of e.g. agroforestry and Musoma.

Three Important Background Subjects

We found it important to learn more about Agroforestry, Outdoor education and participation. These make up the main theories and results of these studies are presented in the next chapter. Apart from these three subjects we read a wide range of other literature, some of which is presented here.

Essence of Landscape architecture

We asked ourselves what landscape architecture can bring to an ATC in Musoma? There are of course many issues

to be considered , but we have chosen to highlight three which we have found especially important to our work: Space, place and structure. The three respond to the framework which was set up for our proposal.

How to write

We have studied literature to support the report writing and the design process. Books like “The student’s guide to preparing dissertations and theses” (Allison & Race, 2004) has been employed. It has been far more easy to find literature on how to write a regular scientific thesis than to find subjects on how to conduct scientific design. We have found support in “Inquiry by design” by John Zeisel and “Form and Fabric” by Catheryn Dee. Dee exemplifies how landscapes can be understood and illustrate how design activity can be presented theoretically and visually.

Cultural and geographical facts

Since the climate, soils, culture and language was new to us, we tried to prepare ourselves by reading books like “Tanzania - The land and its people”. A book about Tanzania, written by a native. We also received information from Vi regarding the specific conditions in the Mara region.

Who is the Client?

To understand the context of our field study we had to get an understanding of our client. What does Vi stand for, what are the pros and cons with NGO’s? What is the point of having an ATC? These were all topics we had to get an understanding of, even though it is not directly included in our result and proposal. Vi’s own material has been a good base for understanding their strategies and work.

Literature on Architecture in Africa

We tried to find examples on how projects were carried out in a low income country, preferably in East Africa, but it was not easy. We did find some inspiring literature on architectural projects in low income countries but not from the Mara region. We haven’t found any literature about landscape architecture anywhere near Eastern Africa. Architect students at ARDI university in Dar es Salaam told us there is no architecture typical for this region. We found information about architecture projects in low-income countries published in:

Architecture for Humanity ed. (2006) *Design Like You Give a Damn: Architectural Responses to Humanitarian Crises*, Metropolis Books; 1st edition

Crouch D. P. (2001) *Traditions in Architecture: Africa, America, Asia, and Oceania*, Oxford University Press, USA; illustrated edition

Cumberlidge C. (2007) *Design and Landscape for People: New Approaches to Renewal*, Thames & Hudson)

Internet sources

Since we have been dealing with several subjects that were new to us, like agroforestry, Farmer Field Schools, Vi's organisation etc. We have used the internet to see how these subjects are presented and to find out where we might find more reliable sources. Most internet sources we refer to are articles or facts from the homepages of Vi, SIDA, ICRAF and the government of Tanzania. The internet sources were also necessary to get the most updated statistics and facts that have not yet been printed.

Study of Precedents

To get an idea of how other parks for learning work we chose two precedents with which we were familiar with and studied them closer: The Landscape Laboratory in Alnarp and The Eden Project in Cornwall. We also studied a precedent in Eastern Africa, Vi's ATC in Kitale. We chose precedents that were educational parks, and

preferably had focus on education in agroforestry or related subjects.

The Eden Project was chosen because of its educational methods, and because it utilises architecture as a mean to attract visitors. Its great international recognition was yet another reason to study it for inspiration. One of us has visited Eden and we have also studied the park by reading about it.

Alnarp's Landscape Laboratory was chosen because it is an example of what Bweri ATC might have looked like if located in Sweden. We have studied its background and concept in literature. One of us has experienced this park from a student perspective.

The ATC in Kitale, was chosen because it has resemblance to the ATC in Musoma. It is run by the same organisation, has similar goals, and is located in Eastern Africa but in another country and with another cultural and climatic context. We studied it in detail during a visit. Walkthroughs and interviews with staff in the park were conducted as well as our own analysis.

Interviews and workshops

The field study included interviews and a workshop together with a site analysis. Key person interviews were used to get answers to questions relating the process of Vi and for getting specific answers from people we found out to be in possession of a lot of information.

Interviews

The field study meant conducting several interviews and with this came a need for us to learn more about interview techniques. Support was found in "Praktisk Intervjuteknik" by Mats Ekholm & Anders Fransson. We have conducted unstructured and semi-structured interviews together with spontaneous observations.

We made two types of interviews:

- *Key person interviews with staff at Vi who have some connection to Musoma ATC.*
- *Interviews with farmers, and groups of farmers, co-operating with Vi together with observations.*



The interviewees for the key person interviews were chosen by us. All the interviewees spoke English and we decided not to use an interpreter. We conducted all the interviews together, one of us being mainly responsible for asking questions and the other person by taking notes, either by hand on or a laptop.

The interviews with farmers were carried out in field at their home and were chosen to get an insight into the lives of the peasant farmers and to learn about their expectations. The ATC officer, to whom we were introduced the very first day at the office in Musoma, arranged the interviews for us. He assisted us in choosing which zones to go to and made sure there was at least one field officer (another Vi employee) that could interpret for us. The field officers chose which farmers to visit. All interviewees were collaborating with Vi and had been for a few years. These interviews were conducted in the field and usually we had an introduction so that the interviewee knew what we were doing and then made a walk around the grounds. We mostly asked questions as we were walking around. The ATC officer was with us to answer questions at all field-interviews apart from one.

After the first field visit, we decided to base our field-interviews around five themes that we found were

needed to understand the needs of the peasant farmers:

Pedagogic related questions. What have you learned?
How have you learned it? Why have you learned it?

1. *Social status issues. What symbols represent high and low status? How can agroforestry affect status.*
2. *How the land is managed. What parts of the land is planned and why? How is the land structured and organised?*
3. *Relation to Bweri ATC. Is it familiar? Have you been there? What are the experiences of training?*
4. *Visions about the future. What will it bring? What are you planning? What do you wish for?*

We decided at an early stage to take notes and not record the interviews on tape. After the interviews we tried to summarise them as soon as possible, as to not forget important things. We wanted the interviews in field to feel as natural as possible. It was important that the interviewees felt comfortable and understood that we were not doing research on the them but rather tried to find out how they could benefit from the ATC.

Workshops

Workshops were held to get opinions from as many competences as possible, to set the foundation for a satisfactory participatory process and to begin possible co-operations for Vi in the future. “Workshop participants can play an active part in analyzing their situations and finding ways to change.” (Commonwealth Foundation, 2004)

We invited different stakeholders that might have an interest in the ATC, such as farmers, representatives from different NGO’s, staff at Vi and government officials. We had two workshops on two separate days since over 40 persons were invited. The visitors were invited via letters from Vi.

The reason we wanted to hold a workshop was to increase the level of participation of the target groups. We decided that we would be able to consult and inform a smaller group of people. There are different opinions whether this is participation or not (see literature study) but it was as far as we would be able to reach in this study.

Suzanne de Laval say (Salama and Adams, 2003) that “It often begins with interviews and walkthrough evaluation of the existing facility. This establishes the basis for an initial workshop [...] A follow-up design workshop and a site walkthrough are conducted to explore options and design concepts, while rediscovering the site and its constraints and realities. In these workshops the basic



organization of the site and the school building (s) are discussed with consensus arrived at about the future direction to be pursued.”

The structure explained above is the structure we have chosen to follow in our workshop. The participants first visited the site and were guided around in groups. We walked together with them and listened to what was discussed. We then returned to the office to do mental maps and proposals for future development. This was the framework for the two days.

- Introduction and breakfast
- Visit and walkthrough at Bweri ATC
- Individual mental maps
- Lunch
- Group proposals
- Presentations

After the first workshop we made a few alterations and the other workshop was also different because the group of participants was different.

A mental map is a tool used to visualise people's perception of a place. It shows the drawers subjective

ideas of the important features of a place and is drawn out of memory. The purpose of the mental map is not to function as a map, but to be a diagram of the experience of a place. (de Laval, 1997)

The participants at the workshop made individual maps using pen and paper and the mental mapping was launched shortly after we returned from the site visit at the ATC. After the individual mental mapping session were the participants grouped to do proposals for the future development of the ATC. Our aim was to get a picture of the needs and wishes of the target groups as well as employees at Vi. The results from the workshops were 35 mental maps and eleven proposals for what they wanted for the ATC in the future.



Site analyses

We did three types of analysis to learn more about the specific site we were working with: Sketch-walk, Site analysis, and SWOT stating strengths, weaknesses, opportunities and threats.

Sketch-walk analysis

Before conducting our common site analysis we both did an individual sketch/photo-walk to feel the spirit of the site and to put on paper what our most subjective reflections on the site were. The route came to us as we walked and along the way we took ten photos each and did sketches. The chosen routes and objects of the pictures tell us about how we perceived the site and what caught our interest.

“As we think and talk, we draw on a mental picture of our topic, either vague or clear, held either consciously or subconsciously (Korobkin, 1976). When our topic is a physical environment, we call our mental picture a “cognitive map”; when our topic is less tangible and more conceptual, a related term – cognitive image – can be used (Boulding, 1973). “ (Zeisel, 1984)

Systematic sketching was employed to investigate spaces, conditions or activities we found interesting at the ATC. Sketches become more detailed the more we think we know about the subject of the drawing (Zeisel, 1984, p22). We have sketched and photographed the things which captured our ideas of the ATC in Bweri. This shows us possible bias of our work, we might for example have emphasised the questions of the drawings more than others.

A descriptive text explains the pictures from our sketch walks. The style of writing is based on a writing method recommended to us by ethnologist Kjell Hansen and is commonly used in ethnology. The aim is to tell our story of a place, in this case the ATC in Bweri. It is meant to give the reader a better idea of how we experienced the physical environment at the site which could cause possible bias.

Landscape site analysis

On site, we investigated the key issues shown below. To be able to make a relevant site analysis we based our key issues on our aims and objectives and chose to analyse the context, access, topography, flora and fauna, districts, functions, views, scale, enclosure, paths and edges.

The key issues are partly inspired by Lynch's analysis method (Lynch, 1960). Whether it is right or not to be inspired of an American method from the sixties for participatory city analysis when we are doing an expert analysis of a park in Tanzania could be discussed. First of all the method was familiar to us, which was an advantage. Expressions like paths and nodes, we argue, are as suitable for parks as for cities. Regarding using it as an expert method we refer to Schibbye & Pålstaam (2001) who say that the method is commonly used as an experts method in Sweden.

SWOT

We carried out a SWOT analysis. SWOT stands for Strengths, Weaknesses, Opportunities and Threats. It is commonly used for business plans but can be used for many different situations. (CIDP's web site) We have used it to see what good there is at the ATC today, and what the future could bring if all went as good as possible. The SWOT has also shown what need to be prevented from happening and what bad there is at the centre today that needs to be changed.

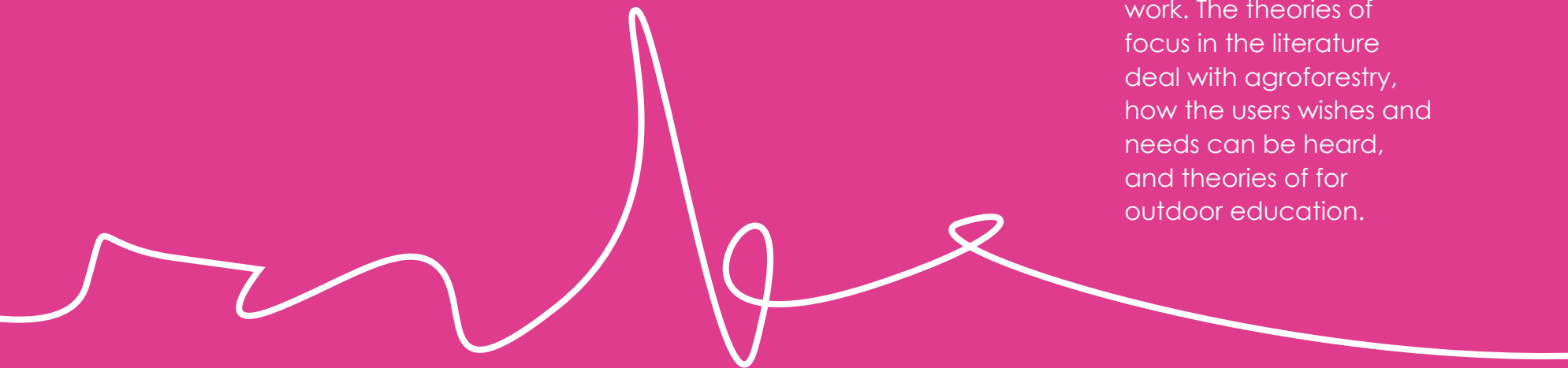


SWOT Diagram, from CIDP



STUDY OF LITERATURE

We have established that the ATC is an educational park and that its main aim is to provide a ground for demonstrating and practising agroforestry techniques. We have conducted literature studies to support our work. The theories of focus in the literature deal with agroforestry, how the users wishes and needs can be heard, and theories of for outdoor education.



Place for Learning

An ATC is a place for learning, it is about learning in the outdoor environment. One of the few educational research disciplines which deal with location of learning is Outdoor Education (Dahlgren and Szczepanski, 1998) and it is therefore necessary to explain more about it.

So what is outdoor education? Ken Gilbertson (2006) refers to Priest (1986) who “describe outdoor education as an umbrella that includes all forms of education about the outdoors.” He hereby states that outdoor education has to do with learning about the outdoors, which is what visitors should do at the ATCs of Vi.

Gilbertson (2006) adds that outdoor education also “includes building relationships with the earth through understanding the natural world and the place of humans within the natural world.” This is exactly what one of our precedents aim to do (see later chapter on Eden).

The authors Dahlgren and Szczepanski (1998) acknowledge three forms of knowledge: catalogue (memorising), analogue (understanding the surrounding world and the ability to see the same thing from different perspectives), and dialogue (active usefulness

of knowledge). By learning in direct contact with the environment all three forms can be used, if not at the same time, at least within a short period of time. By mixing the three forms of learning, the learner can draw parallels between the forms of learning and there for learn more about something he already knows a little about. According to D. Ausubel (1968 In: Dahlgren and Szczepanski, 1998) “the most important factor influencing our learning is what the learner already knows”. The visitor should preferably relate to what he/she already knows when visiting a park with an educational purpose.

FFS

Farmer Field Schools, FFS, is a pedagogic idea of group based learning used by many NGO's. Among those are Vi, whose work are influenced by this idea. The first FFS was designed by the UN Food and agriculture organisation in 1989 (Duveskog & Friis-Hansen, 2009).

Outdoor education is a main ingredient in FFS and farmers “learn by doing” (Gallagher, 2003) on their own fields together with a field officer. All three previously mentioned forms of knowledge are parts of FFS. The farmers learn more about species, soils, climate, etc. and they use their own farms as a base for learning, and are

organised in groups to learn from and discuss results with each other.

As mentioned outdoor education has to do with place based learning. So what about the place? What function does it have for learning? Kemp (2006) state that “Learning becomes meaningful when rooted in place”. There comes the word place again. To develop further Kemp refers to Inara Scott (2002) who has noted that “A sense of place is a sense of history of human and non-human interactions, and the vital connection between where we live and who we are.”

Sense of place, or genius loci as it is often called, is commonly debated in landscape architecture. Jackson (1994) describe his own belief of sense of place as “something that we ourselves create in the course of time. It is the result of habit and custom.” Jackson do, however, also make clear that others disagree and that a sense of place often is thought to come from “unusual composition of space and forms - natural or man made”.

Place, Space & Structure

The other subjects which are introduced are important as background to our work, those subjects were all new to us. So what is it that we as landscape architects can bring to the re-shaping of the ATC in Musoma?

Space, place and structure are examples of what is essential in landscape architecture (Dee, 2001; Motloch, 2000). All three issues correspond to the framework of our proposal and are main concepts in our strategies. Spaces can increase the perceived experience of a site by forming rooms of different sizes and with different content. Places can hold meaning or spirit which enhance the site specificness. Structures can ease orientation and improve the cohesiveness of a site.

Let us start with places. What is it and how does it relate to architecture? “Architecture means to visualize the genius loci, and the task of the architect is to create meaningful places ... [where] he can orient himself within and identify himself with an environment.” (Norberg-Schulz 1980; in Motloch, 2000) Motloch continues “Landscape design should concentrate the genius loci of

the place, concentrate meaning, and increase placeness.” So one part of our profession is to find or invent “that special something” which makes a space into a place.

How can that special something be found or created? Garnham (1985) brings up ingredients contributing to the spirit of place: “Aspects of the existing natural environment such as land form and topography, vegetation, climate and the presence of water; cultural expressions such as bridges, forts, or hilltop churches which are a reaction to landscape, social history, physical location, human activities, and place as a cultural artefact [...]; and the sensory experience, primarily visual, which results from the interaction of culture with the existing landscape.” What he says is that natural, cultural and visual phenomena are important to the spirit of place. We have thus tried to study these phenomena in our field study and use them in our proposal.

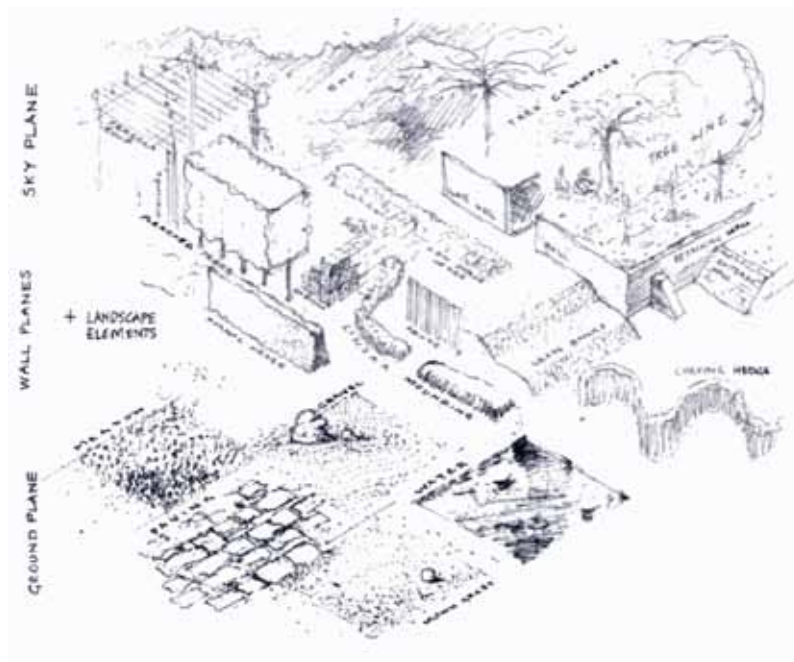
When it comes to space, Dee (2001) state that it is a medium and concept for landscape architecture and that “Spaces are enclosed and defined by landform, vegetation, water and structures for human activity.” Dee continues and say that space is a place for outdoor activities.

Frank Ching (1996) say that “ four planes completely

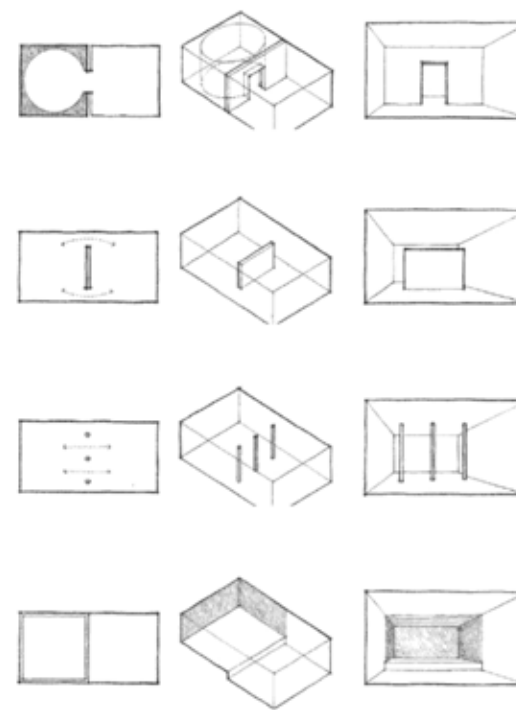
enclosing a space is probably the most typical, and certainly the strongest, type of spatial definition in architecture.” Both Dee and Ching give illustrative and instructive explanations of what space is, how spaces can interact with each other and with paths.

To connect spaces together one might need a system to organise in. This is where structure is relevant to our case. “...the structure and the space are both meant to form parts of the same context. What we may call contextuality (structural form in its architectural and spatial context) is an important aspect of structural design” (Sandaker, 2007).

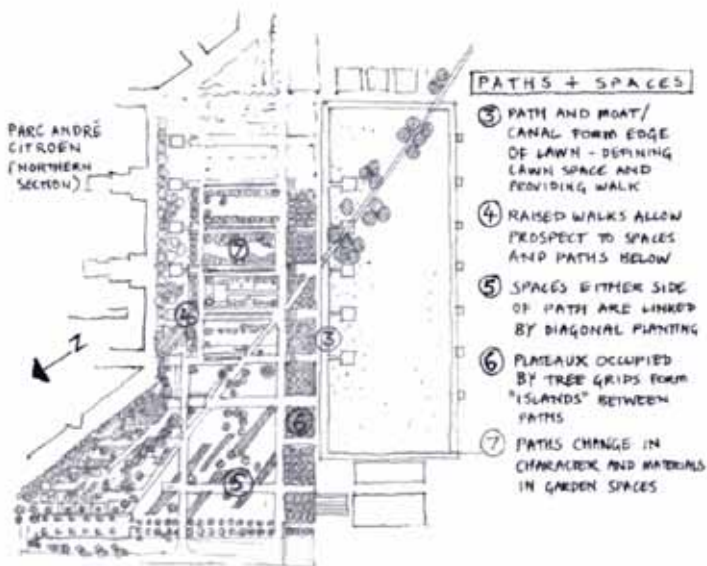
Structures have according to Sandaker both a mechanical as well as a spatial function. We have focused on spatial structures for organisation of land rather than on its mechanical function. That means that we have shown more interest in the spaces and places that the structure can give a context to, rather than the material which the structure consists of.



Design planes and landscape elements, Dee (2001)



Adjacent Space, Chang (1996)



Spaces and paths, Dee (2001)

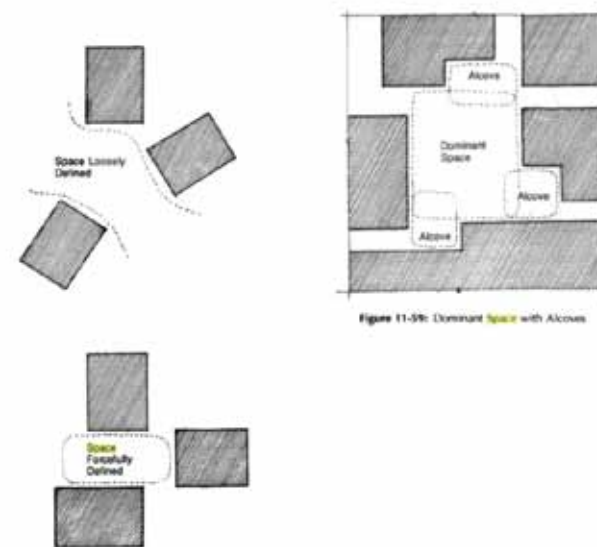


Figure 11-57: Building Alignment and Spatial Definition

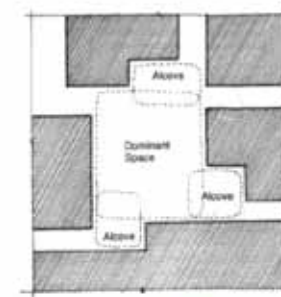


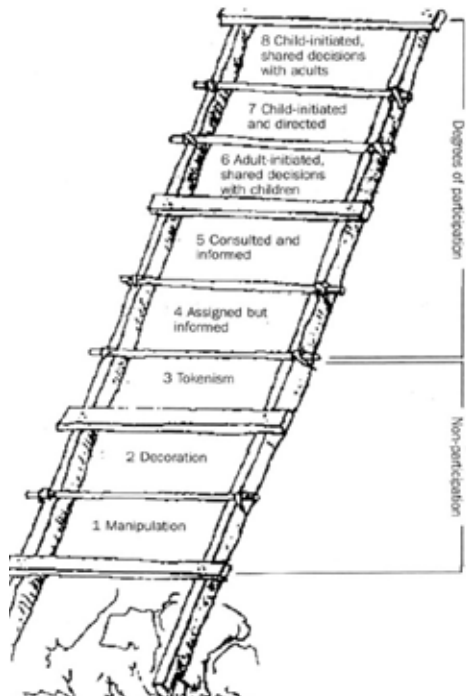
Figure 11-58: Dominant Space with Alcoves

Grades of defined spaces, Motloch (2000)

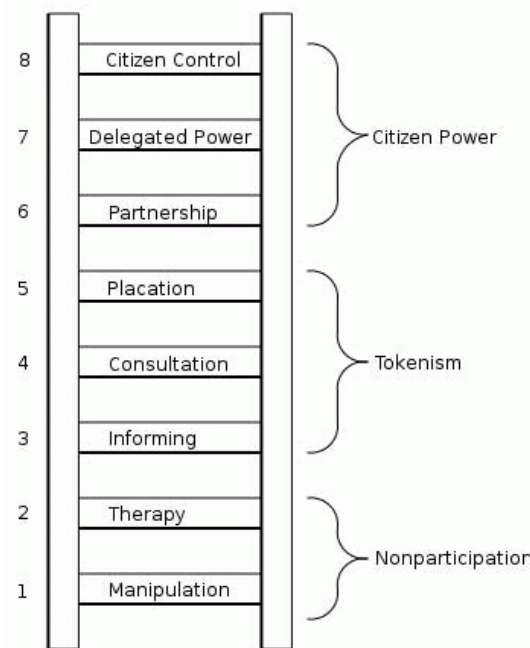
Participation

Different types of participation exist, all with the main aim to involve individuals, groups and organisations in a project or programme of activity. Bottom up approaches mean that the formerly excluded from power get the power to act. A local knowledge belonging to the people who were formerly excluded should be included to achieve better results. In development projects, wrong decisions are often assumed to be taken because the knowledge of the target groups that held the local knowledge are not included.

Hart



Arnstein



Roger Hart's ladder explaining the level of children's participation is one example on how the level of participation can be valued. Sherry Arnstein used another picture to describe citizen participation with "Ladder of citizen participation". It has the main focus of power structures in society and how they interact. The two models can be put next to each other to get an idea how a similar topic can be described in a similar way with a different outcome. As we do that it becomes clear that the level of participation we have chosen to aim for is regarded as participation by Hart but only as tokenism by Arnstein.

Participatory Rural Appraisal

Participatory Rural Appraisal (PRA) is a method used by many NGO's and other agencies. It aims at involving people with local knowledge in projects and programmes. (Salmen & Kane, 2006) Its most known preacher is Robert Chamber (Murkherjee, 2004).

“The participatory approach is very much action oriented. The stakeholders them selves are responsible for collecting and analyzing the information, and for generating recommendations for change. The role of an outsider is to facilitate and support this learning process” (Salmen & Kane, 2006, p. 30). The idea of participation that Salmen and Kane speak of lay the ground for our workshop where we were facilitating and the participants analysed and gave recommendations for change (see field study chapter).

Participation and Community Design

Participation in building and planning has its roots in the “third world community development of the 1950s and 1960s, Western social work, and community radicalism” (Midgley, 1986, In: Sanoff, 1999).

Salama & Wilkinson (2007) “outline community design and participation as a basic requirement in contemporary

design pedagogy”. They say that design students today need to learn more about it. In their book *Design studio pedagogy: horizons for the future* they explain that “community design is based on participation [...] one can see it as a generic concept that covers different forms of decision making by a number of parties involved in the shaping of a new environment or in the re-shaping of an existing environment”. Shaping and re-shaping of an environment is essentially what landscape architecture is about.

So why should one work with community design and participation? Salama and Wilkinson (2007) assert that “community design and participation would have two major impacts on culture and society and ultimately on place making processes. On the one hand, it increases people's trust and confidence in the organization and the profession. On the other hand, it provides people with a voice in planning and decision making and thereby improving the overall service delivery system of the profession.”

Here we have to return to the question of when participation is achieved. John Habraken (1990) differentiates between two aspects in community design: having a voice and having a decision making power.

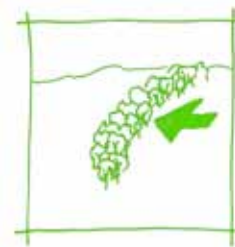
Preferably the people who participated in our workshops are also invited to take part in the realisation act and given the possibility to decide. Peasants involved with Vi's work could be offered join the board where the future of the ATC is decided. We argue that full participation is reached when the participator is the facilitator, which is not as far as we have neither aimed nor reached. Whether informing and consulting is participatory or not, it gives the participants an insight to the project which according to Salama and Wilkinson (2007) increases peoples trust in the organisation.

Agroforestry

To make a proposal for an ATC we needed some knowledge of the methods and ideas behind agroforestry. Agroforestry means to use trees combined with other types of crops and sometimes animals. The integration can be both spatial and temporal, or both. According to ICRAF the benefits of trees in intercropping are many: They transfer nitrogen from the atmosphere to the soil, give organic material that is mulching the soil, give shade which protect the soil from drying out, stabilise soils which decrease erosion, and protect the crops from the wind. "In the late 1970s,

agroforestry attracted the attention of the international scientific and development communities due to its potential for improving the environment and livelihood of rural tropical communities." (Alavalapati, Mercer & Montambault, 2004)

Are many trees of any species always a positive thing? The type of agroforestry has to be decided on, species of trees planted have to be suitable for the purpose and area etc. Where desertification is a problem, such as in many places in Tanzania, animal production combined with agroforestry results in better pasture and



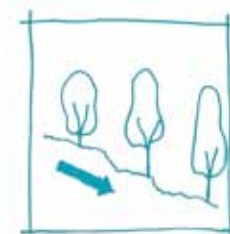
Windbreak



Alley Cropping, trees in lines together with crops



Silvopasture, grazing animals with vegetation



Terracing for erosion control

erosion control. Agroforestry also increases biodiversity on a farm (ICRAF's web site). These factors are all extremely important under the current climatic circumstances in Tanzania. The National Forest Policy and the National Development Strategy ("MKUKUTA") act on this and include afforestation in their curriculum. This means that a nationwide base for future agroforestry work in Tanzania is put in place.

Agroforestry is however not a new phenomenon. Through out the tropics farmers have long traditions of integrating crops and livestock with trees (Alavalapati, Mercer & Montambault, 2004). There is even a method traditionally used in the Mara region called Obohochere which roots hundreds of years back in time (ICRAF Policy Brief No. 03, 2009). One aspect of these methods is the use of multi-layered systems with a mixture of annual and perennial plants which imitate natural ecosystems.

According to research from World Agroforestry Centre, ICRAF, the most suitable or important methods in Musoma are fertilizer trees and silvopasture systems. (ICRAF Policy Brief No. 03, 2009) Many more agroforestry methods are available (Table 1) but other complimentary aspects to agroforestry are important to attack the core problem (Mbwambo, 2004). These include (Rocheleau, Weber & Field-Juma, 1988):

- Water harvesting: techniques for forming the land, collecting from roofs and irrigation techniques.
- Energy: firewood, manure biofuel, wind power, solar power, energy saving cooking.
- Value-adding: honey, cheese, dried fruits, dried meat and fish.

Table 1. Showing different types of agroforestry techniques and what their result is

Intercropping in cropland	Dispersed	Contour Vegetation	Alley Cropping	Multistorey patches	Mulching
Intercropping in fallow cropland	Nitrogen fixing period				
Intercropping in pastures and rangeland	For shade and mulch				
On boundaries and border spaces	Live fence	Boundary markers	Windbreaks		
Along waterways	Floodplain gardens	Erosion control			
In home cropland	Home gardens	Decorative shelter			
In public and shared spaces	Decorative symbolic shelter	Community plots	Roadside planting		
In forest, woodland and woodlots	Forest enrichment	Combined plantations of seedlings and crops	Woodlot enrichments	Tree-crop plantation	

STUDY OF PRECEDENTS

We have chosen relevant examples that have a similar idea to the ATC in Musoma. All of the places have theory of outdoor education as a basis but have interpreted it in different ways.



The Landscape laboratory in Alnarp

Alnarp is one of the main campuses of SLU and is surrounded by a large park where one can study trees and shrubs standing in rows in an arboretum or just enjoy a stroll under old oak trees and the mats of blue, white and yellow leek flowers covering the grounds in springtime. It is a park for learning and for research, as is the ATC in Musoma.

Alnarp Landscape Laboratory is unique in Sweden due to its focus on establishment of new landscape elements and landscape characteristics. Using the same species in different contexts is one way used to pedagogically demonstrate the several qualities of the each species. This could be a way for Vi to approach the pedagogy of the ATC. There are no definite borders of the laboratory but rather parts with different focus which together form the laboratory. The two main parts are Alnarp Västerskog and Tor Nitzelius Park and these will be further described below.

According to Prof. Roland Gustavsson, project coordinator of Alnarp Landscape Laboratory, the

initiating aims of the Landscape Laboratory is achieved by combining the three major research fields of Environmental, Social, and Technical science. The aims are:

- increased attention to landscape
- increased appreciation of landscape; re-connecting people with landscape (as managers)
- outdoor learning, outdoor action, outdoor design
- communicative approaches
- developing multifunctional lead concepts
- highlight a dynamic perspective; multiple alternatives for the future

These are all valuable ideas for us to take further in our work with the proposal. During the 90s Alnarp Västerskog and Tor Nitzelius Park was established and only five to ten years later (which is a short period of time regarding tree plantations in the Swedish climate) recreational visitors could loose themselves on the winding paths under high trees and dense shrubs.

Ten concepts are or are planned to be demonstrated in the laboratory: environmental forestry, edges of forests, alleys and rows of trees, tree and shrub windbreaks,

solitary trees or groups of trees, field corridors, ditches and wetlands, environments in connection with farm, species arboretum, and finally an arboretum of habitats. The design and placement of each landscape component is based on what Anders Folkesson (1996) calls the “staircase model”. It means that especially the grade of isolation, protection, complexity, ambition, and the size of the component could be studied.

The establishment of both Alnarp Västerskog and Tor Nitzelius Park is based on the following order (Gustavsson, 2009):

1. Establishment of trees and shrubs
2. Establishment of perennials, herbs, grasses, ferns etcetera
3. Catching the changes and the dynamics
4. Comparing Asian-North American and middle European high woodland
5. Reference landscape studies. Searching the contextual, place- and situation related knowledge

Alnarp Västerskog

The area comprises about 13 hectares which is more or less the same size as Bweri ATC. It consists of

for example different types of forests groups, forest edges, meadows, road plantations etc, and focus is on combining recreational values with biological and productive values.

Alnarp Västerskog is located on the fringe of central Alnarp and is the last dense part of the landscape laboratory before the open agricultural fields, which are so dominant for this region, take over and open for glimpses of Öresund. It is built up around a stream and wetland area which also includes three ponds. The ponds are of the same sizes but due to different designs they are perceived completely different. The space along the stream has an open character and the surrounding parts have a decreasing gradient of density from south to north. In the area surrounding the wetland the diversity achieved by management can be explored. The area is divided into smaller patches, each with a variety in species and constellation. Through pruning and cutting etc. diverse design ideas are tested and the management has given each patch a special character. The aim is to find new solutions for urban or semi-urban forests or parks. (SLU's website)

Tor Nitzelius Park

This part of the laboratory is a contribution to the work

of one of the internationally most known Swedish dendrologist who propagated for the use of exotic trees. It works as a library of forest groups where species from North America and East Asian plants are mixed with North European. Canopy, shrub and ground layers are considered as well as species diversity and the aim is to explore and demonstrate the possibilities that these new combinations can offer in a Swedish context. (SLU's website)

The park is based around a path along which rows of demonstration squares run on both sides. It initially worked as a windbreak protecting the rest of the park from the western ocean winds.

The importance of the research undertaken in Alnarp is as important as ever. Climate change affects the climatic conditions and the Swedish climate zone system is already changing (SMHI website). The exotic species tested in Alnarp today could become common trees in Swedish cities in just a few years. The ATC in Musoma focus on native species but the research systems from the landscape laboratory in Alnarp could be helpful for future development. The park in Alnarp has been divided into different areas which ease orientation and improve the cohesion.

The Eden Project

The Eden project is built on a much greater scale than what we are working on in Musoma, but it is still an example of an educational park. Eden is a greenhouse project located in Cornwall and is one of the biggest garden and conservation tourist attractions in the UK. To get an idea of its scale, one of the two greenhouses is the world's largest, called the Rainforest Biome. This greenhouse covers 3.9 acres, and measures 55 m high, 100 m wide and 200 m long.

What is of interest to our project is mainly the environmental educational aspect of Eden. Apart from having many plants and displaying diverse growing conditions, the project focuses on environmental education and people's dependence on plants (Eden project website).



Picture showing one of the many exhibition stations in the rainforest Biome.

The philosophy of Eden began as a project to exhibit plants from around the world and show how they were domesticated. This idea developed into a strategy of using plants as the common ground from where human life is led. Plants around the world are

adapted to broadly similar uses. They are being used for medicine, fuel, shelter, cosmetics or food. To this philosophy were added social, cultural and economic perspectives together with spiritual ideas. Spiritual in this context means examining how in many cultures



Looking down on the two Biomes of the containing a rainforest plants and Mediterranean plants.

man is often regarded as apart from nature rather than a part of nature (Smit, 2001). When visiting the project some observations were proved to be of value to us in our project.

At the Eden Project the visitor is led through different gardens, indoors as well as outdoors, from other parts of the world. Signs, exhibitions and interactive features, together with plants tell the visitors a story of plants and culture. Attached to this core of learning are several opportunities to get involved for all ages, supporting the project financially or to contribute with ideas. Festivals and commercial features also play a great part in the Eden Project. Another thing worth to mention is the striking visual strength in the landscape which is very appealing to visitors, at least it was to me.

Kitale ATC

Vi runs a couple of other ATCs apart from the one in Musoma. Olof Palme Agroforestry Centre (OPAC) is located in Kitale, Kenya, and is a model for ATC Musoma since it is more developed. In addition the present project manager in Musoma has worked at the centre in Kitale for several years. The main objective of the centre is, just like the ATC in Musoma, to

demonstrate agroforestry land use systems in tangible and understandable terms, and to encourage farmers to efficiently harness available resources using modern farming techniques (ADC Kitale's documents, given to us by Juliet). Kitale is situated high up in a hilly area and has quite a different climate compared to Musoma. It is colder and not as dry. The ATC situated in Kitale town lies much further away from lake Victoria than the centre in Musoma does.

What we learnt from the ATC in Kitale

OPAC has done well partly due to the strong financial support. After the assassination of Olof Palme many people donated money to Vi in his honour, hence the name of the ATC. Interviews in Musoma have showed that financing has been a problem for the ATC in Musoma and that it also is one of the worries for the future.

Vi only had a small office in Kitale in the 1980s but started looking for a larger plot after the increased funding. The present land is rented to Vi by the National Museum of Kenya which still has the neighbouring ground. It is agreed that Vi will return the plot to the Museum if they ever leave the area.

There would be less reason to have multiple ATCs if

they were all the same. It is important that each of them show the qualities of its specific region and site. Although it could be done by showing similar things so that the climatic conditions are enhanced. The mountainous situation of the ATC in Kitale offers the possibility to make the centre lush. The site of the ATC borders a native forest and this has been integrated with the ATC. The southern end of the ATC bordering the forest is more dense and enclosed than the northern area where e.g. research is undertaken.

There is at the moment no place for the staff at the centre to meet during breaks e.g. to have lunch, or for visitors to take a rest. To be able to sit down and reflect on what can be seen at the ATC is an important part of the experience.

We found that even though Kitale ATC had a lot more information for the visitors than the ATC in Musoma, there is still a lot that could be better. The signs for example all look different and there are almost only facts on them. It would be interesting for visitors to be able to read about the experiments that are being undertaken or what is special about the layout or the plants on each field.

Capacity building is a main activity at the ATC but several of the interviewed at Kitale were of the opinion that more emphasis is needed on this. Involving schools more and education for staff are a few suggestions for how to achieve this. Another way is to provide better physical facilities for education at the centre like some kind of outdoor tuition hall combined with more information.



Map of Kitale ATC, shown by its officer, Juliette.



In Kitale, just like in Musoma, there is a lack of tradition of preserving or in other ways adding value to products. A wish for a processing unit where visitors can learn more about value-adding has been wished for. Several people expressed the wish for a green house to keep monkeys and other animals away from the most precious fruits.

There were originally plans on establishing a fishpond but there were a problem of water. Today there is a tank of water collected from the roof of the office. One of the employees meant that this water could be used to sustain a fishpond just behind the office.

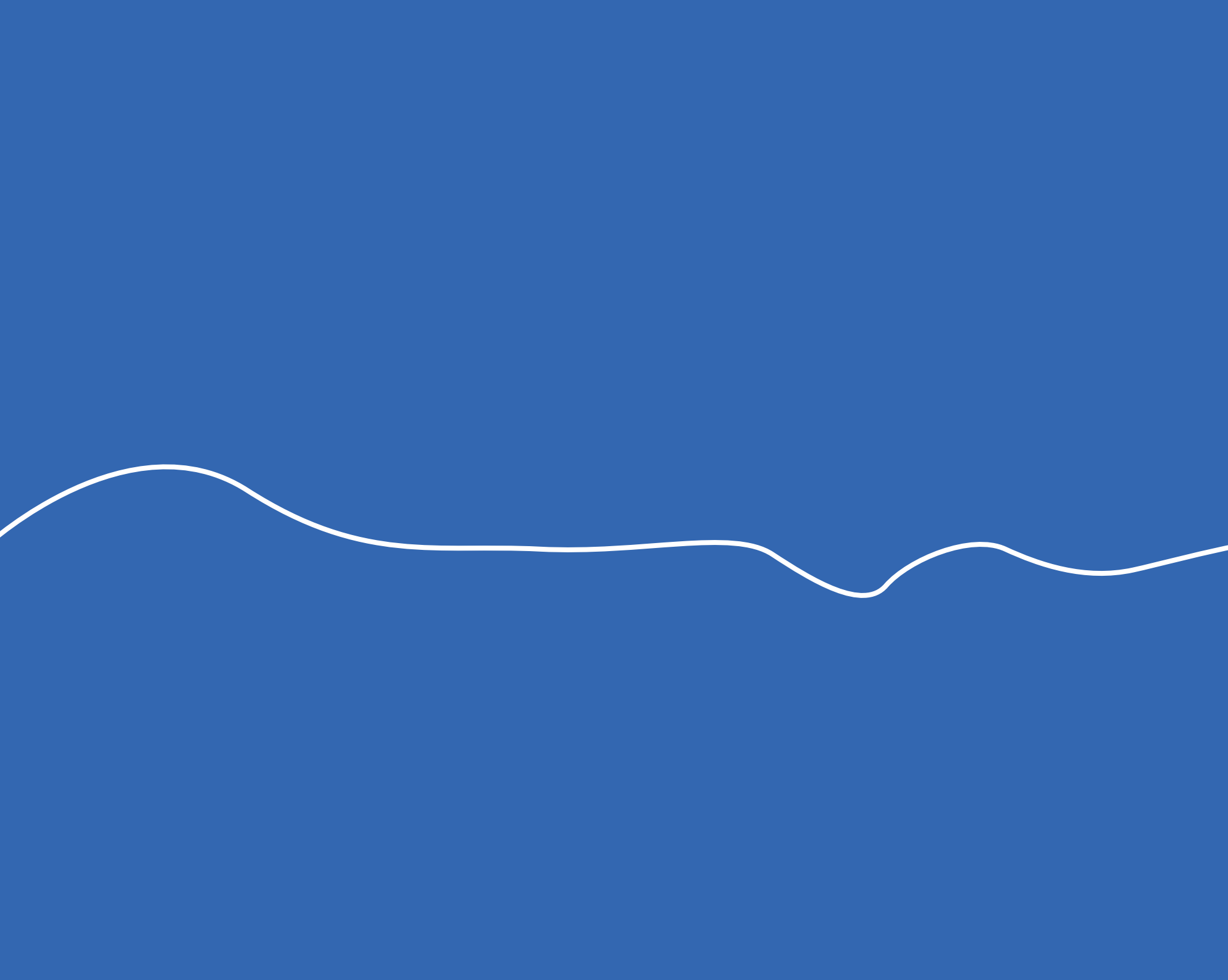
There is a greater variety of scales at the ATC in Kitale than in Musoma. There was even an original concept of the layout based on showing different scales of farming. It makes a visit at the centre more interesting. However, some parts of the Kitale ATC do not feel united with the others. There are no logical way to observe the centre and no logical order which make the different activities belong together.

The ATC in Kitale gave us a good picture of an ATC in action. Although there were things which could be improved it is much more developed than the ATC

in Musoma. There was a clear structure that ease orientation for visitors. The park had different focuses: research, production for home use, demonstration of species and animals. The diversity of what was shown made a visit interesting and offered something for various visitors. The area was planned to be integrated with its surroundings and show species specific to the area.



A main path at Kitale ATC. It is framed and emphasized by hedges and signs keep the visitor informed. On the field is banana plants combined with nitrogen fixing Sesbania trees.



FIELD STUDY

A lot of information was gathered from the field study. In this chapter we present the findings of our interviews, workshops and also the result of our site analysis.



Grouping of results

As we sorted out our results in a method-outcome diagram we found that our results could be arranged into three categories:

Results describing what Vi want from the ATC, their visions and ambitions.

These results are mainly based on interviews with staff in Musoma. It was important to find out what our client had in mind for their ATC and to hear what questions they wanted to highlight.

Results describing the stakeholders, mainly farmers, wishes and needs regarding the ATC and what they want to learn about agroforestry.

The interviews and the workshop have been the main methods to find out what the stake holders needs and wishes are. These results have been summarised in lists in order to make the result more comprehensive.

Results showing how we perceive the ATC.

We try to make the reader understand how we perceived the site by a descriptive style of writing and by photos and sketches we took during our “sketch walk analysis”. This is further developed in another essay which focuses

on our experiences from this project; experiences from the meeting with people and places around Musoma.

Next is the analysis of the sites prerequisites shown. The analysis is laid out mainly to describe the physical elements of the site that we find important to find existing or missing structures. Last of all we present a SWOT which in a lucid way show what we have found.

Visions and ambitions of Vi

Through interviews, we have come to understand that the core idea of the ATC is to teach farmers agroforestry, other stake holders are important but not first priority. Addressing specific groups of farmers or addressing schools and other NGO's could benefit the farmers too. In one of the interviews we were told that “Collaboration with the government took place regarding natural pesticides and with ICRAF regarding intercropping of Sesbania and Cassava.” It is in the interest of other institutes, in this case the government and ICRAF, that farmers learn more about cultivation methods like agroforestry.

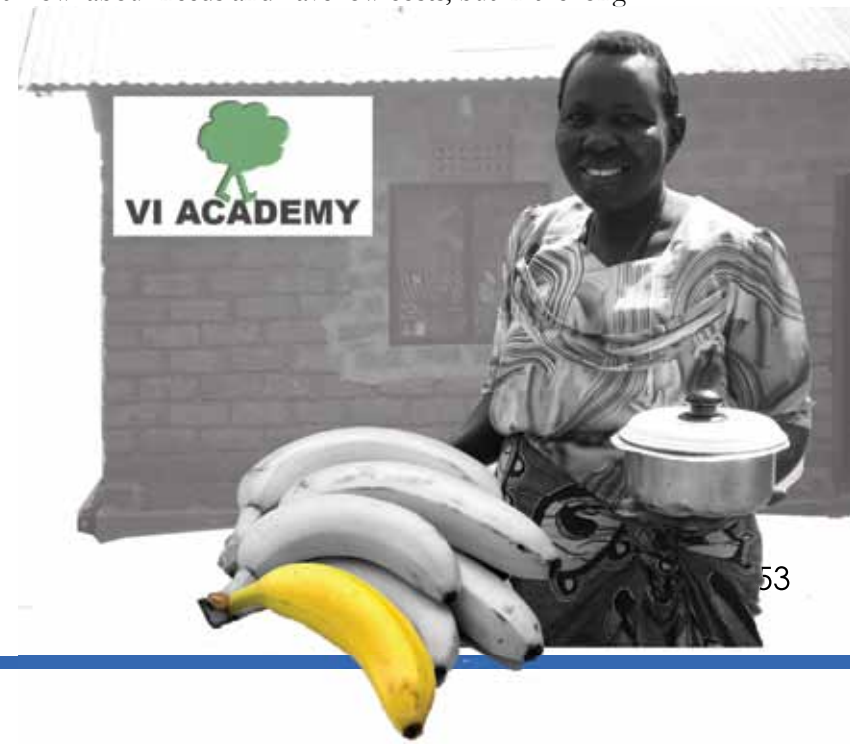
It has been expressed in interviews that there is no direct need for a place to host fairs and exhibitions at the ATC, especially since this can be done at the headquarters. On the other hand it has been brought up that the centre could benefit from accommodating exhibitions and fairs since it would result in more visitors and recognition.

What is demonstrated at the ATC should be easily applicable for the peasant and other stakeholders. That means that agroforestry methods and other technologies that are shown should be inspiring and informative but not so advanced or expensive that a visitor feel that it could not be a part of the visitor's own farm. The ATC in Kitale did for example use a tractor for a while. The negative result was that farmers thought that a tractor was needed. The positive outcome was that rent-a-tractor business was introduced to the market.

Vi want to address “marginalised” people specifically, that includes women, child headed households and HIV/ AIDS affected households. Through interviews focusing specifically on this topic, we found that information and inspiration regarding food and nutrition would be one way to attract these groups of stake holders. Advice for a healthy diet as well as cooking advice like recipe tips, information on spices and how to prepare and

preserve food. These suggestions have been brought up by women during interviews. In one interview a woman said “Horticulture and home gardens, should be demonstrated since that is what most women are occupied with, and which men don't do. To address AIDS affected could traditional medicine like Moringa be promoted. Moringa adds nutrition and increases the immune system, Amaranthus too. A special processing unit for AIDS affected people could be another good thing. Visitors could learn through training and there could also be an income from the products.”

Finances play an important role in the development of the ATC. We found that Vi want the ATC to start off with low labour needs and have low costs, but in the long



run generate income that covers its expenses. Low labour solutions and entry fees are Vi's way to address the issue. The number of labourers at the ATC in Kitale as well as in Musoma has been limited to four persons. When necessary more staff are employed for a limited period of time.

Vi specify that a participatory planning process should be put in place. We have found that it is presently not practiced regarding the ATC. Most stakeholders we met had never visited the ATC, many had not even heard of it, and the neighbouring school did not have a positive relationship with Vi. The centre has during 2009 implemented a new visitors book at the ATC to be able to evaluate the visitors' experiences in a systematic way. Vi hope that this feedback can be used to insure a participatory planning process.

Wishes and needs of the local users

We found three common themes among what was brought up by the target groups:

- Agroforestry plant material
- Farm activities
- Facilities

At the workshop and during the field visits we gained most of the information about what sort of plants, activities and facilities that were wished for. These are presented here.

Types of Agroforestry plant material that need to be shown at the ATC Musoma:

Fruits, vegetables and other home garden plants (including: Spices and herbs) are important to include at the ATC partly because it addresses women and those affected by HIV/AIDS. It could also be combined with value adding, meaning that it is possible to earn money from these plants. Other important plants include soil improvers, firewood, timber, and fodder. Again, there is an economical benefit of these plants.



Many agroforestry methods have been mentioned during our field study. This list does not include all of them, but those that have been most positively propagated.

Field activities

- *Compost*
- *Contour vegetation*
- *Crop rotation*
- *Improved fallow*
- *Intercropping*
- *Natural pesticides*
- *Soil improvers*
- *Windbreaks*

Farm activities:

- *Dairy production*
- *Animal keeping (including: ducks, goats, cows, fish, pigs, poultry and cattle)*
- *Energy (including: firewood, bio fuel, solar power, wind power)*
- *Seed, seedling and flower production*
- *Value adding*
- *Waste management*
- *Water harvesting*
- *Home nursery*
- *Arboretum (extended)*

- *Irrigation*
- *Live fence*
- *Boundary markers*

Facilities that were brought up by stakeholders:

For long distance visitors

- *Camp site*
- *Hostel*
- *Rental houses*
- *Museum*
- *Guesthouse*

For comfort

- *Canteen*
- *Rest house*
- *Parking*

For research and studies

- *Conference*
- *Laboratory*
- *Library*
- *Meeting room*
- *Training institute*
- *Premises for education*

For employees

- *Managers house*
- *Workers house*

For fun:

- *Play ground*
- *Swimming pool*

For production

- *Market structures*

Results of mental maps

During the workshop the participants made mental maps to describe how they remembered the ATC. The most obvious result was that the rocky part of the nature conservation area was under-dimensioned and in some maps the conservation area was missing. We interpret this is because it was difficult to enter, and therefore difficult to comprehend. A majority of the participants were more interested in, and had more knowledge, on productive growing rather than conservation.

Another interesting result was that the entrance was put in different locations in relation to other features of the ATC. This could mean that it is difficult to understand the layout of the area and that the entrance in special is difficult to relate to.



Two examples of mental maps from the workshops. We received almost 40 in total and had more information than we could handle.

Site Analysis

A common landscape site analysis was undertaken and complemented by a SWOT analysis and a Sketch-walk analysis. In the latter do we try to capture our personal perception of the site to become aware of possible bias.

Context

Bweri is located in Musoma urban, a District in the Mara Region in the north of Tanzania. Bweri is located outside the town of Musoma, but this is also one of the few directions the area can spread in the future. Today many houses are being built in the area and we expect it to be a part of the town in a not too far future. The land belonging to Vi does not quite stretch all the way to Lake Victoria. Farmers cultivate land partly belonging to Vi. They are also farming on prohibited areas on the shore of Lake Victoria.



Access

Access today is made by visitors and workers from the Bweri tarmac road onto a road that goes past the neighbouring school, Marshi Academy. This windy dirt road is the most common way for vehicles to enter the area.

The road on the way to the ATC has no sign posts, and finding it is not easy if you don't know where it is.

Other people circulating in the area are farmers cultivating the land outside the fence. They use the many paths leading up to the path around the fence.

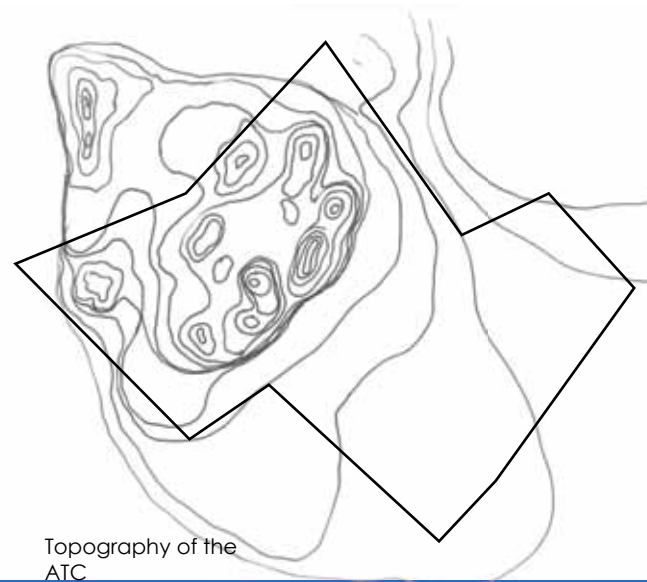


Topography

The surroundings are generally hilly around the lake shore and flat with rocky outcrops further in towards land.

Half of Bweri ATC is located on flat land and half on and around a hilly area, that has two main hills. The hilly area is not cultivated and is merely used for the neighbours to keep their cows and goats.

The hill is a distinct landmark that instinctively draws us and other visitors up it. The hill has many potential sites with a good view, but this is not taken advantage of today.



Flora and Fauna

1. The areas close to the shore are thriving, partly due to extensive care but also due to access to water. There is a patch of forest along a steep and rocky hill. Monkeys live in the forest patch along with native birds and most lightly reptiles. The fauna has not been surveyed further.

2. The rocky hills are rugged with draught resistant plants like Mexican sisal, different cacti and smaller Acacia shrubs. The southern side of the hill is dry, vegetation is scarce and the area is being overgrazed.

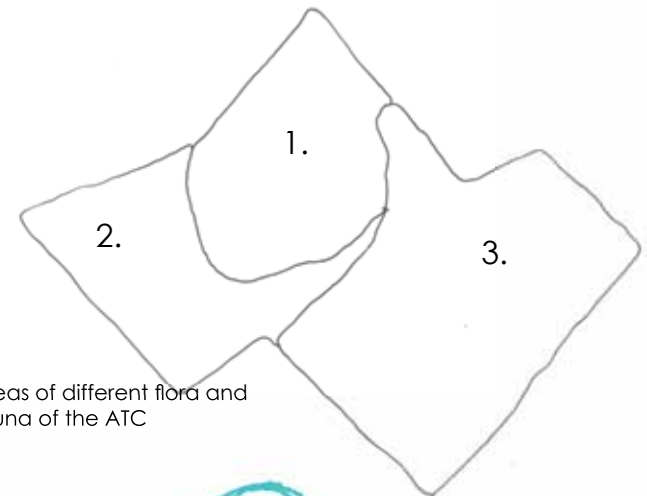
3. Most of the plain has been cultivated or prepared for cultivation by Vi and are planted with trees which has reached their full height by now. An exception is the conservation agriculture plots along the public access road. It follows a rotations system which at the moment is in a period of *Sesbania sesban* fallow.

Districts

The districts in the area consists of areas with a slightly different qualities for growing.

Functions

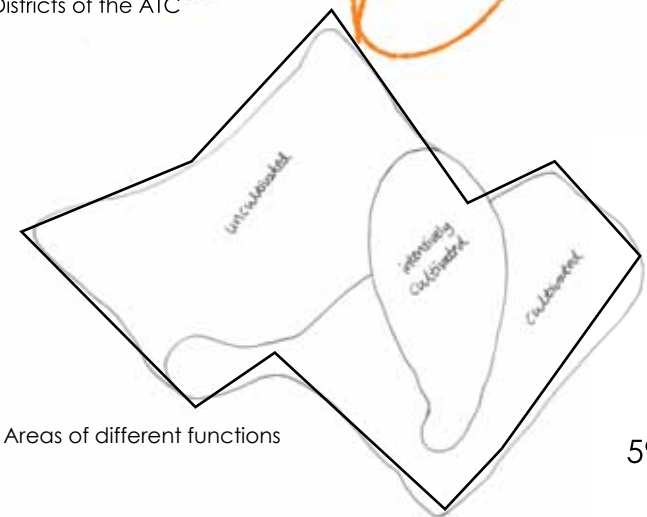
Mainly the area is divided in to areas to show different methods for agroforestry. The areas are cultivated with different intensities.



Areas of different flora and fauna of the ATC



Districts of the ATC



Areas of different functions

Views

Along the paths are short distinct views. They are created by alleys of trees, and in some places rocks along the paths, creating a strong visual lead. Other strong views are the long views leading to and from the hill

Scale

The scale of the south-eastern area is smaller than in the area of the nature conservation. On the maps it is clear that the south-eastern it is more developed for human uses. The fields here are divided in to smaller plots.

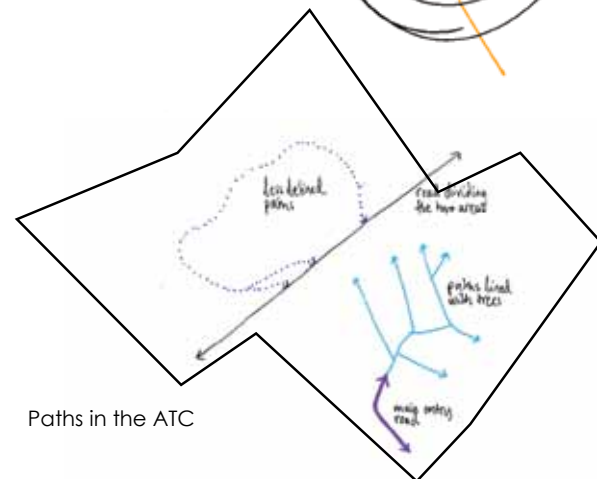
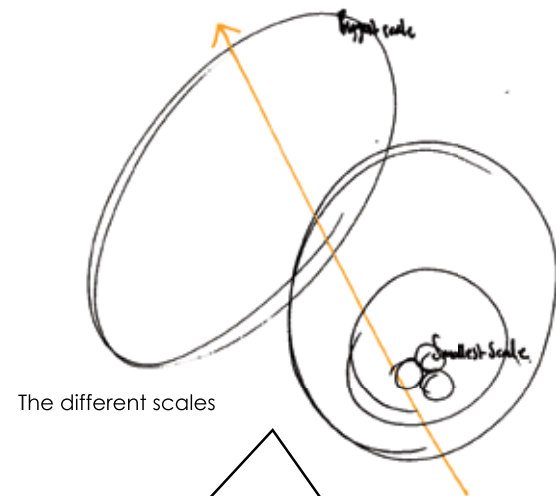
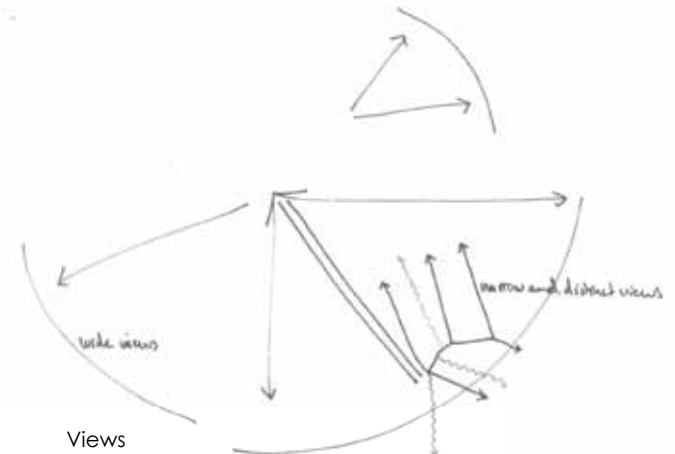
In the nature reserve the scale is much bigger. There is a risk one might get lost. There is a great view of the surroundings. Here one feels small, with the great blue skies above and the lake visible in the distant. The elements giving the area scale are much bigger and consists of surrounding mountains and rocks.

Paths

Paths in the area are well defined because of tree alleys but the are in many places broken and lead nowhere.

Nodes

One node is currently by the storage house, which also offers the only available seating. Another node is located outside the area by the cross-roads where a lot of people pass.



Enclosure

On a large scale the enclosure is created by the surrounding hills. On a smaller scale enclosure is mainly created by different types of vegetation.

More open space is experienced on top of one of the peaks of the hill. Here you get a view of the whole of the southern area. The vegetation of the hill is mainly shrubs that do not create much enclosure. On a smaller scale, more enclosed space is experienced in the southern areas, especially in the areas with orchards and the avenues. Also, here the trees are higher.

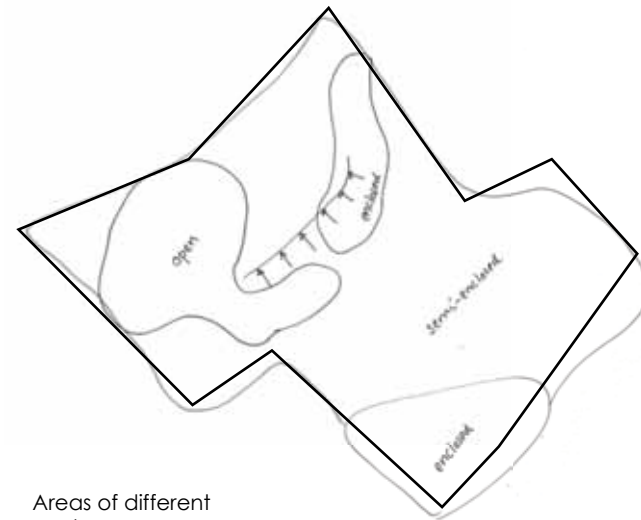
Spaces created are changing depending on time of year, fallow, harvest and weeding. This means the enclosure of the south area is interestingly variable, with continuous changes.

Edges

The area is divided in two characteristic areas. The southern one is clearly defined by a fence, while the northern area has no clearly defined edge.

Landmarks

Landmarks are the storage house, near the entrance, and the hill in the north area. A small landmark is one of the watertanks.



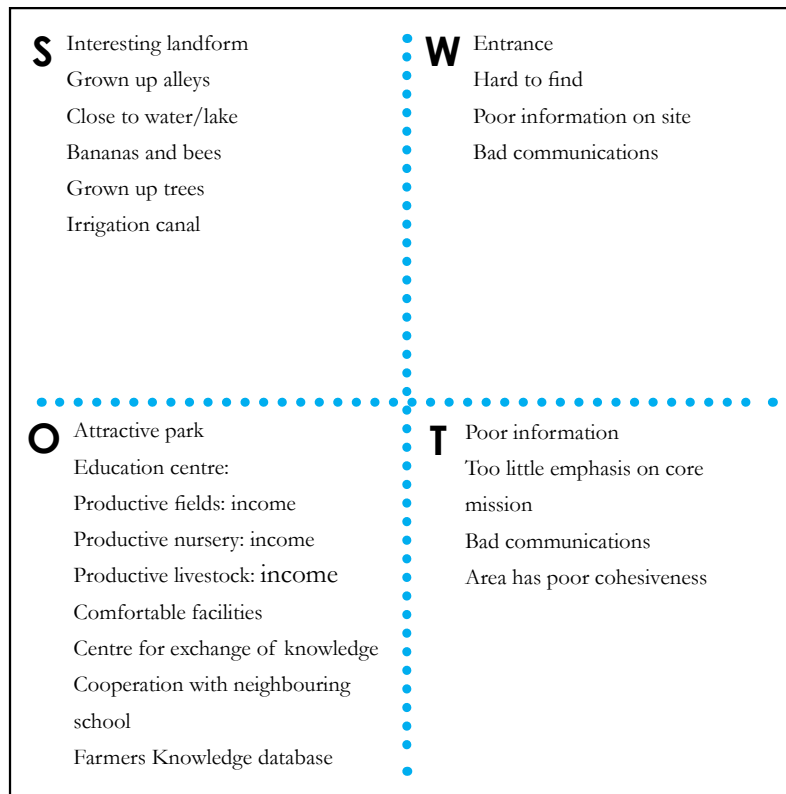
Areas of different enclosure



Edges

SWOT

A SWOT was carried out as a means to structure the findings of our analysis. It summarises what we learnt regarding the site during the analysis and visualise what we need to emphasise respectively prevent in our proposal.



Spirit of the place and Sketching/photo walk analysis

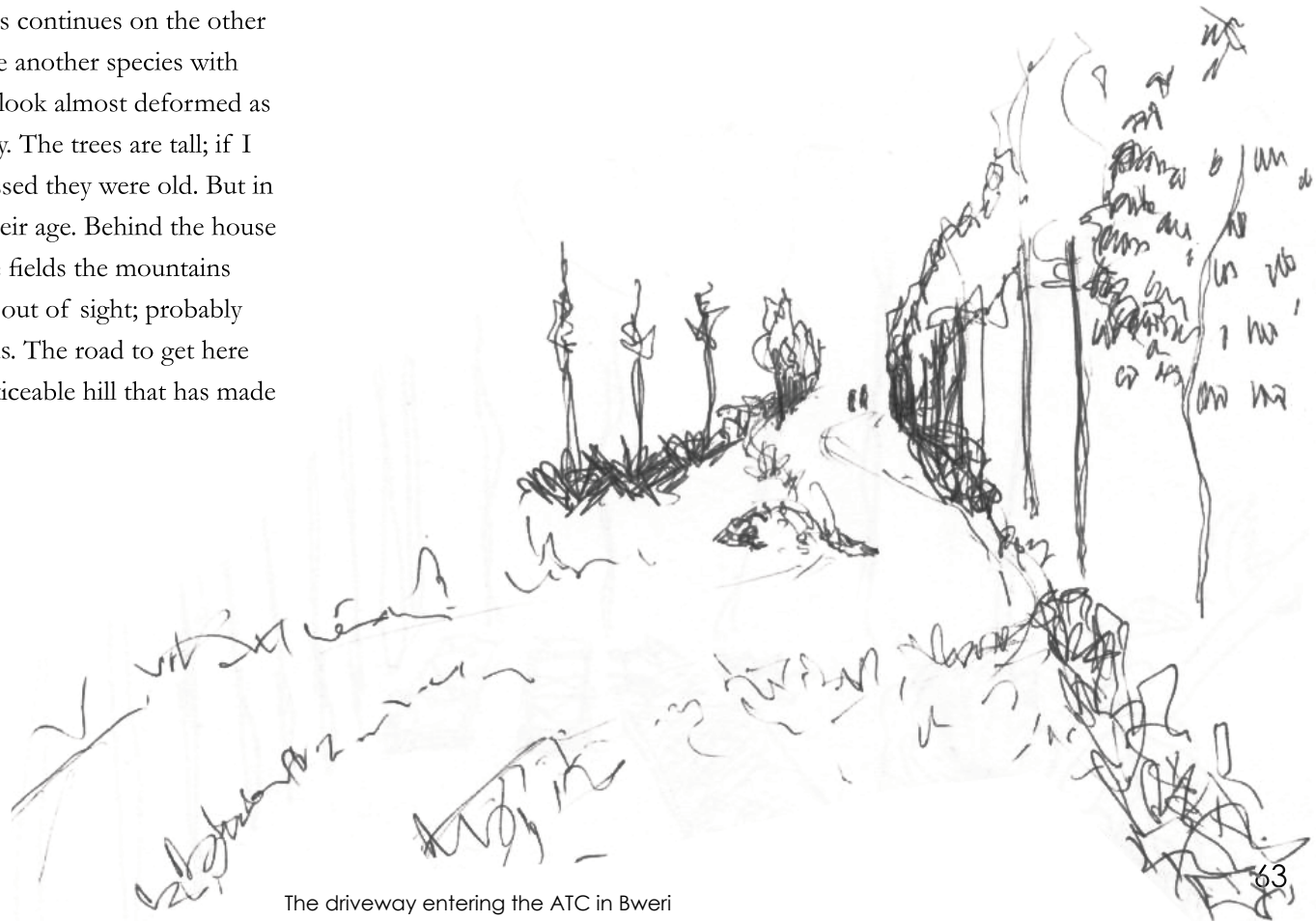
Between the mountains I manage to catch a glimpse of the lake. If I did not know better I would say it was an ocean. The car jolts on the road and I have to hold on to the handle in the door to stay in my seat. The road is full of cycling and walking people who only scatter to let us pass when the driver uses the horn. Without warning the car turns left, off the sealed road, and on to a red dirt road. It is hard to tell what are speed bumps and what are potholes. We have to shut our windows as the dust from the road starts to fill the car. My shirt sticks to my back and the rubber seat makes it worse. I wish I could at least see where we are going.

We drive past a number of houses with white facades. Colourful clothes are hanging on the barbed wire fence in the sun to dry. Three girls walk on the road; they are all dressed in a purple skirt and shirt. Between the houses I see more children dressed in a similar uniform. A man with a bare torso is doing woodwork outside one of the houses. I still can not tell where we are going. A pile of litter is in blocking the road, which is now no more than a wide path, and it forces us to take a detour. A rusty gate blocks our passage

and the driver steps out to open it. On the other side of the gate the path is lined with trees leading up to a brick house with a tin roof. We have arrived.

The trees make it lush and the heat is less prominent here. We step out of the car right outside the red brick house. Our feet are immediately surrounded by billions of dragonflies. The alley of trees continues on the other side of the building, but they are another species with gnarled branches, making them look almost deformed as they stretch towards the blue sky. The trees are tall; if I were at home I would have guessed they were old. But in this climate I have no idea of their age. Behind the house I see small fields and behind the fields the mountains loom. The lake has disappeared out of sight; probably it is hiding behind the mountains. The road to get here must have passed over an unnoticeable hill that has made the lake disappear.

In an enclosure of tall and narrow trees a man is walking around with Wellingtons. He is watering seedlings, which grow in little black plastic pots. Some of the pots only seem to contain black soil and no plants. Apparently some of the seedlings are to be planted as a live fence around the area once they grow. I look around. The alley of trees



The driveway entering the ATC in Bweri

branch off in a fishbone pattern across the area and suddenly stops in front of a field. After the many fields it is unclear what happens before the mountains. I get a sudden impulse to climb the top of the mountain. From there I will be able to see everything! Understand how the landscape and the place fit together. And I have a notion the lake is resting behind.

We walk further on, surrounded by trees and tall grasses. To me the trees are still just trees. I have yet not learned how to tell them apart. Our guide tells us the names of the trees and their use. There is nothing about the shape of the trees which I can relate to the plants and trees back home. Eventually I realise we are standing in an orchard. The compact and round trees around me are mango trees. But I only know this because I am being told they are. The map I have in my hand shows definite borders between the fields and plantings of different vegetation. None of this I see when I look up at the trees. It all dissolves in to one big area with different plants and the only obvious pattern and fabric of this landscape is the alleys and the fishbone pattern which they create.



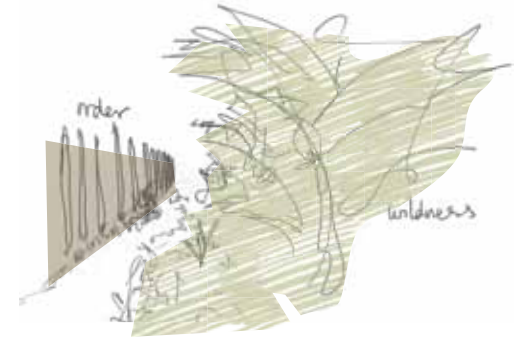
An avenue decorated with stones, the honey processing house in the back.



The paths have their own mind



At the nursery could bird song and the stroke from a hammer be heard.



The cultivated and orderly versus the "wild nature"



A water tank offering the only arranged sitting possibilities at the ATC



The rugged land in the cultivation area



1.



2.



3.



4.



5.



6.



1. The turn off point from the main road to the ATC in Bweri.

2. The office and honey processing room welcomes the arriving visitor at the ATC.

3. The shed for tools and a cooking unit are for the ATC labourers.

4. Two ATC labourers showing the nursery.

5. Tove talking to one of the labourers by the nursery.

6. The water tank by the office holds the one of the few sitting possibilities. It is also popular to sit under the water tanks out on the fields.

7. One of the avenues. Here, close to the office it is decorated with stones.



8. A bee hive hanging from a tree to decrease the risk of termite attacks.



9. A field with grown up trees, prepared to demonstrate some type of agroforestry method.



10. Two of Vi's employees are showing us around along an avenue.



11. A research field with the hill at the conservation area in the background.



12. Fields just outside of the ATC area.





13. Some areas are bushy and not yet cleared for cultivation.

14. The banana field which has just been cleared after a test of intercropping.



15. Farmers cultivating Vi's land without permission, but with seemingly good results. An irrigation canal from Lake Victoria keep the soil moist. It is not allowed to cultivate land closer to the lake than 60 meters, which is about the distance that Vi's land has to the lake at the moment. The level of the lake changes.

16. The public path dividing the ATC into two areas; conservation and cultivation.

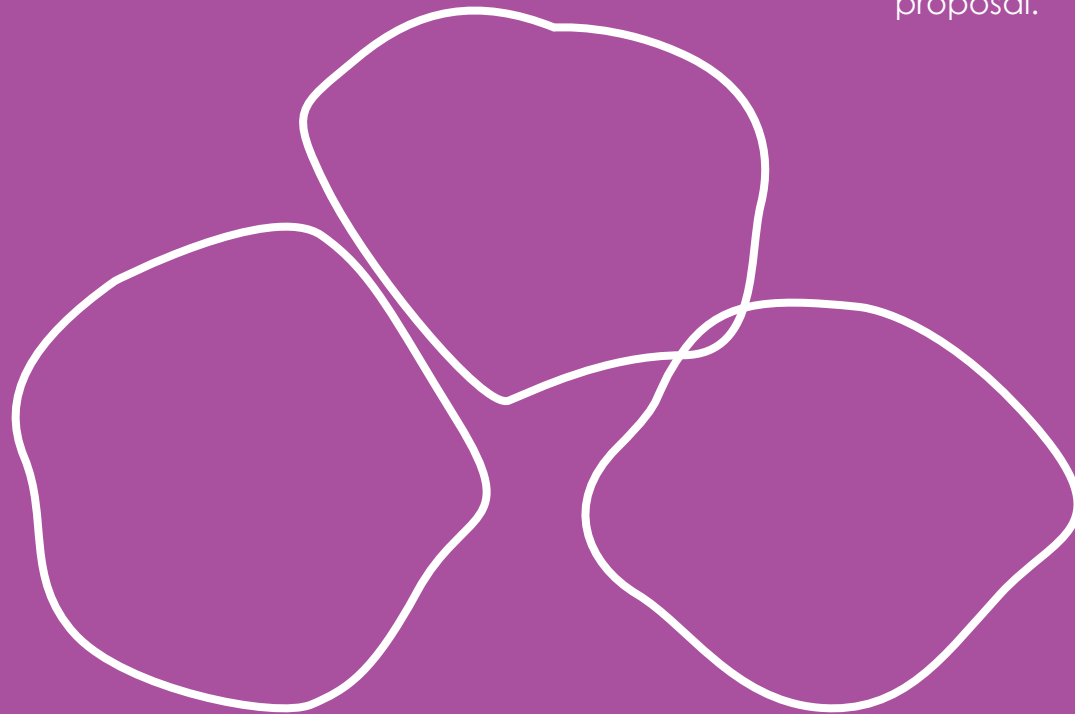


17. The public path along the fenced cultivation area and into the small forest of the conservation area.

18. The rugged land on the hill at the conservation area, with a beautiful view over Lake Victoria.

CONCLUSIONS

This chapter aims to summarise the important findings from our literature studies, study of precedents and field study and to clarify the link between this and our proposal.



Linking study with proposal

We have decided to divide the outcome of our conclusion into three categories:

- *The centre is inaccessible and difficult to comprehend*
- *The centre lacks excitement*
- *The centre expresses its uniqueness weakly*

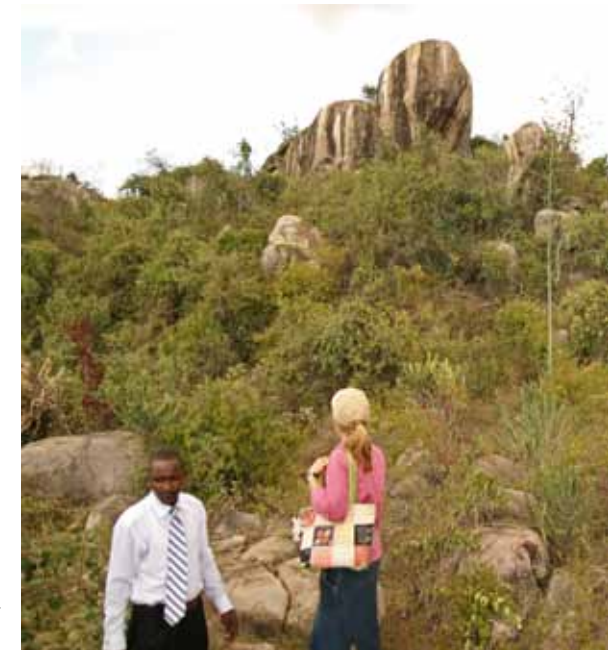
Our research points at the weakness of structures regarding orientation, such as paths, landmarks nodes, scale, information, access and districts.

Inaccessible

From our analysis and from the workshops held, we can see that the ATC is both inaccessible and difficult to comprehend. The strongest existing structure at the ATC consists of the avenues of trees and the number of trees on the site. Vi deals with agroforestry and because of this we consider avenues an appropriate structure. As an example an employee of Vi puts it “I am proud of the many trees. There is even an arboretum in the ATC.” (Interview with Vi employee, 2009-03-06) However, all of these avenues end abruptly and a careful consideration

of how the avenues are laid out could be a way of using the trees to a greater extent. Paths in the area mostly follow the avenues but sometimes they are separated from the trees. The paths take the clear form of a fish-bone pattern, however this structure does not cover the whole area. From our landscape analysis we can see that the layout for the ATC is unclear and the areas with different functions appear random.

The mental maps clearly show that the entrance is indistinct and the location confusing. Since the school next to the ATC has expanded, the location of the entrance is no longer satisfactory for the centre. It is located at the end of a small, winding path and behind the school buildings.



The conservation area was little mentioned in the mental maps which could be an affect of its poor access.

Information on the site is lacking at every scale. One Vi employee summarise that “the ATC lacks information about why what has been done has been done“.

(Interview with Vi employee, 2009-01-23) Signposts leading to the centre are non-existing as well as labelling and information about the centre. The precedents all present better labelling and signs.

During the field study it has become clear that there are three activities which should be in focus at the centre: production for home use, production for cash, and nature conservation. Information on nutrition has shown to be important for women and HIV/AIDS affected and there has been a wish for facilities for eating and sleeping. The centre lacks this today but by clarifying the interests in focus the centre would become easier to comprehend.

Lack of excitement

Today a visitor would quickly realise that there is a lot of potential on the grounds of the ATC, but according to the manager very little is planned today. This was also stated at both of the workshops. One of the participants had been to the centre at the end of the 1990s and commented when walking around the ATC on “how much better it had looked back then”. Suggestions of the stakeholders were brought forward during the

workshops. Among these are to add new methods or activities at the ATC that are not commonly practised in the visitors’ home. Livestock keeping is one key wish.

Many of the visitors who participated in the workshops expressed a wish to get to the top of the hill during the site visit. We had the same wish ourselves, as did our visiting professor and supervisor. From this we draw the conclusion that the hill is a strong landmark which could be used in the making of our proposal. The topography holds unused potential for excitement and a top view of the area could ease orientation.



A farmer and her dairy cow.

The size of spaces and enclosures is largely the same throughout the area, with the exception of the conservation area. The diversity in scale can be enhanced and attention to details in the layout could be better. Places for social interaction are few, existing places are spontaneous and occur in the shade and in connection to water. Further places for social interaction could be developed, especially if the centre should cater for more visitors.

It is stated in the aims of Vi to address so called marginalised groups. Today the ATC hosts no activities or features addressing these groups. In the key person interviews it has been suggested to introduce information and training regarding cooking and nutrition in order to address these groups.

Weak uniqueness

The reason for Vi to have several ATC's, in different regions and countries, is to demonstrate agroforestry methods and to create a place where the methods can be practised in a local context. It is important that the ATC shows activities, methods and visually explains its local and regional context. This connection is not obvious at the centre today. There is also potential to involve neighbouring schools and institutions in the work. At the ATC in Kitale information on species was



Signing at Kitale ATC.

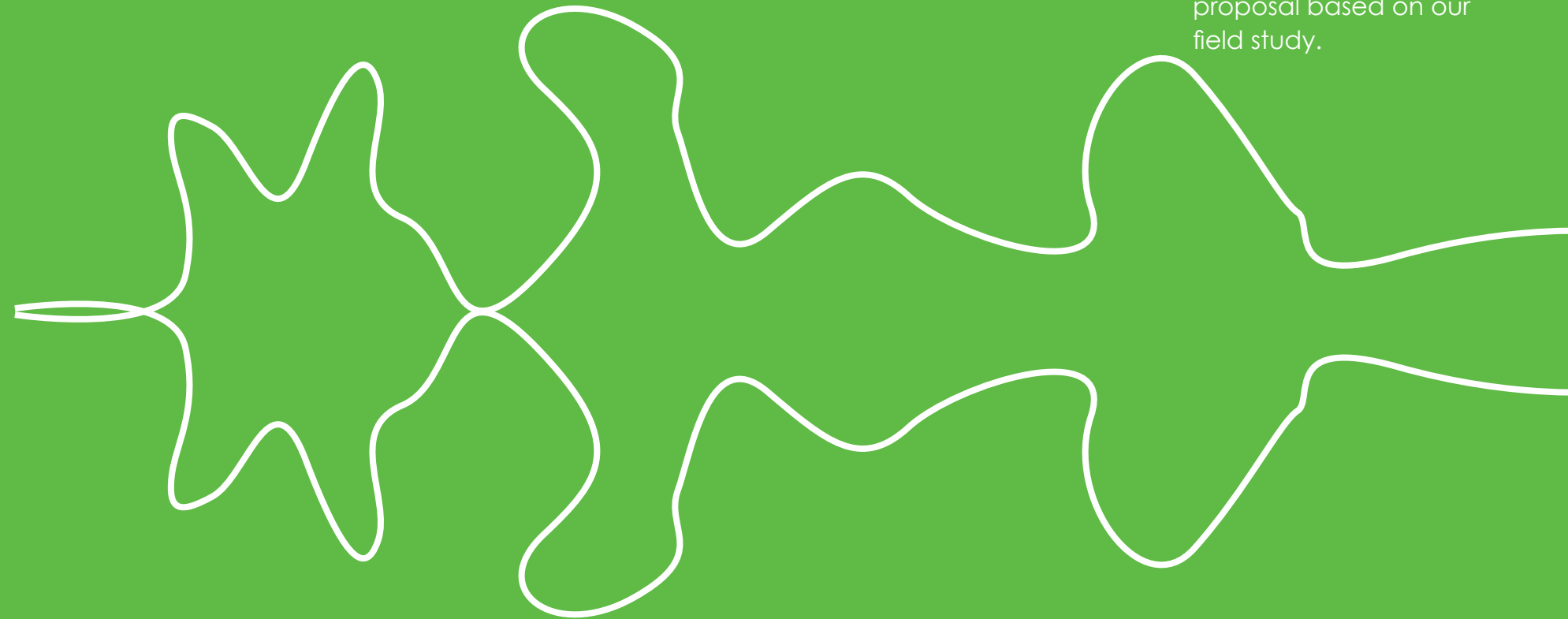
abundant which strengthens the local identity. The additional information adds to the experience of the site and makes it more interesting. At Kitale ATC the information about local market prices was placed at the entrance. This information is missing at the ATC in Bweri and could possibly be a new feature. The common trading locations for the ATC's region are thereby displayed.

In the past, one of the features at the ATC has been to have a part of the centre which resembles a small scale farm in the region. This feature is no longer apparent for the visitor. This would also be in line with D. Ausbel's thoughts that the learner should be able to relate to what he/she already knows (see chapter on Place for Learning).

During our field study we have stumbled upon a large number of agroforestry methods, but only a small number are shown at the ATC. The number of methods shown can, and should be, increased. The increased number of methods shown can also be a way to address more stake holders. As brought forward in the chapter on Agroforestry, fertilizer trees and silvopasture system are recommended as suitable or important methods in Musoma and there is a cultivation method resembling this that is traditionally used in Mara.

PROPOSAL

The aim of our field study was to make a proposal for the ATC. This chapter aims to explain our proposal based on our field study.



What is proposed?

We have concluded that the ATC has three major weak points

- *It is inaccessible and difficult to comprehend*
- *It lacks excitement*
- *It expresses its uniqueness weakly*

The conclusions of our study has given us three objectives for the proposal. These objectives make up the framework of our proposal and comprise needs and wishes of the local users'. There are many ways to work within the framework but based on our study we propose twelve strategies which explain how we propose that the ATC in Bweri is developed within this framework. The strategies result in a conceptual plan from which we have chosen two important areas that are used to explain the implementation of the strategies.

Framework for what we want to achieve

- Improved orientation
There is a need for structures which are easily understood and visually let the visitor notice different

areas of the park, ease orientation by visual objects or views.

- Enhance perceived experience of the site.
The park needs more excitement. A visit should tickle in the toes, give butterflies in the stomach and inspire new ideas. This is partly affected by the content of the centre but we also wish to enhance the experience by working with spaces and places.

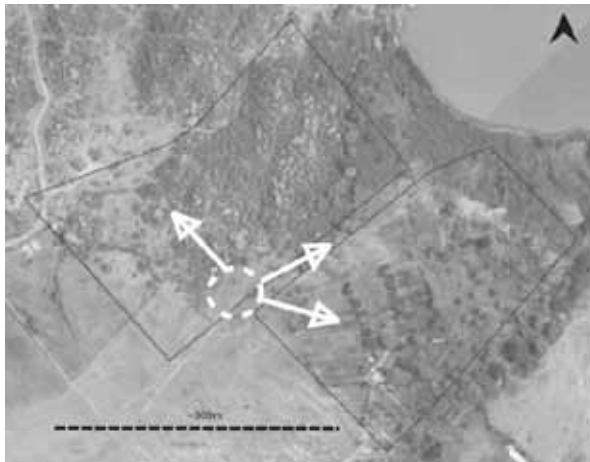
- Strengthen the special features
Local visitors should recognise elements in the park and feel at home, long-way visitors should be given a picture of what agroforestry in the landscape of “Mara-Musoma” is about.

Strategies

We propose strategies as a means to realise our framework. The strategies draw upon our conclusion in that they improve the weak points and enhance what was strong.

Entrance

The results of the workshop show a need to ease orientation the entrance is moved north to where the



The new entrance has a central location for better access.

two parts of the ATC area meet. The entrance is located here because it provides a better location both for access reasons and

because it can then provide a link between the two areas. The aim of the entrance is to provide information for visitors, make a good first impression and function as way finder with a focal point to visitors that have just arrived.

Division in zones

Based on results from the site analysis three zones are proposed which aim to ease orientation and comprehension. One zone would work on the smaller scale and function as a small farm would do, a homestead. Another zone would be directed at production where cash crops and ways to increase the yield can be shown among other things. The upper part of the conservation area is proposed to function as the

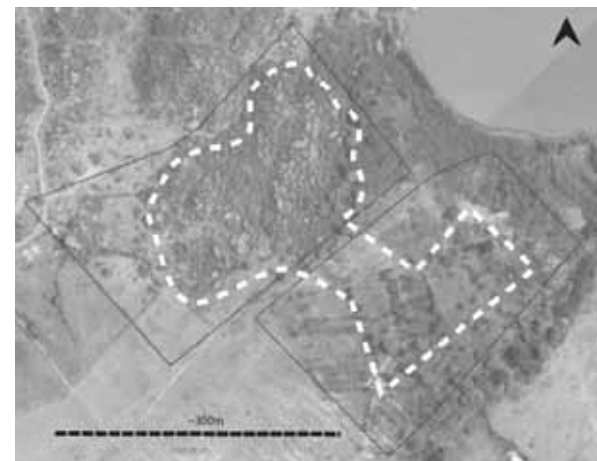


Dividing the park into three areas emphasising agroforestry at different scales.

third zone. Information on erosion and over grazing can be combined with examples on how to prevent those problems through agroforestry. This is also a good area to inform on the natural fauna and fauna of the Mara region.

Path structure

Results of the mental maps and the site analysis indicate poor access on site. To ease orientation and cohesiveness, the path structure is proposed

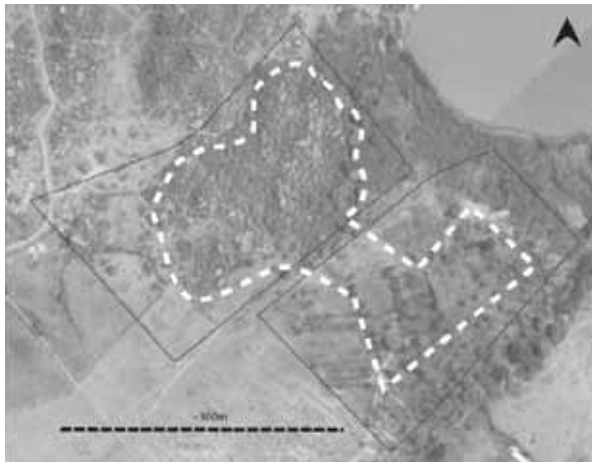


The layout for the main path.

to consist one main path around the entire area. This path is more formal in the south-east and has an organic shape in the north-western parts. The main path need features that makes it unified but at the same time enhance the difference between the wild and the cultivated.

Enhance the avenue structures

The strongest structures on the site today are the avenues of trees. They are however unclear and end abruptly into nothing, as shown in the site analysis. In some places the paths have taken another direction than that of the avenue. The idea of avenues of trees should be kept and improved along a new main path to ease orientation. To enhance the wild versus the cultivated, the avenues will only embrace the main path along

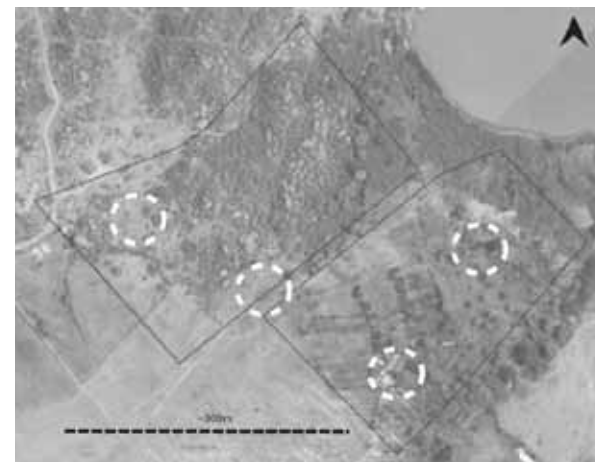


The avenues enhances the main path in the cultivated area.

the cultivated land. Other features, like ground material and the width of the path, will ensure the unity of the complete main path structure. Enhancing differences at the site will result in a greater perceived experience.

Nodes

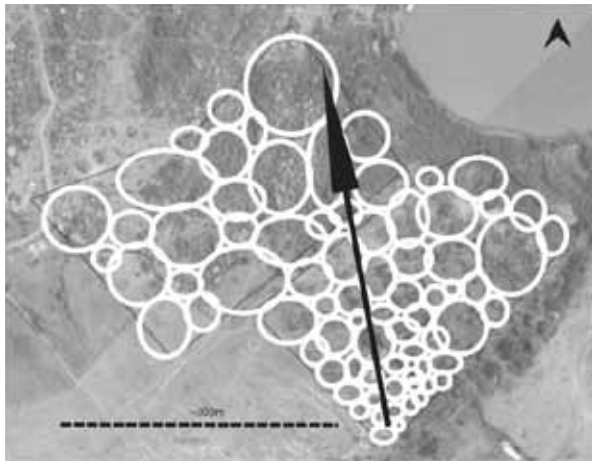
Nodes arise where paths are crossing or where there is something of special interest to visitors. Nodes can gather people and are good places for information and interactive training, which is one request of Vi that was explained in interviews. We propose four nodes: one at the entrance, and the other three are divided between the zones. The nodes are situated along the main path structure.



Location for the four nodes.

Variety in scale

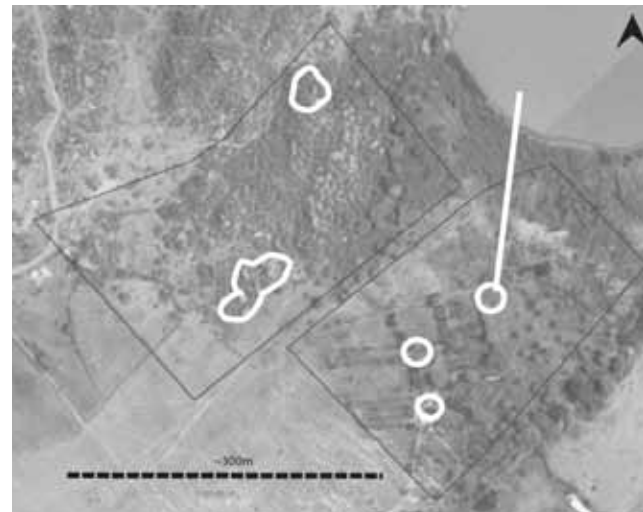
The experience of the site is enhanced by making it more thrilling and inspiring. Examples from precedents show us the importance of spaces in different scales. Today the site is spatially monotonous. The only difference is between the hilly parts in the north-east and the more cultivated area in the south-east. We propose to keep this gradient and make it stronger, creating small scale plots around the homestead in the south-east corner and then have a middle scale before getting to the hill with its big scales spaces. More details and information at one end of the centre, and a feeling of a risk to get lost in the other end. A greater variety in scales has the function of giving the visitor a feeling of constantly finding new places and enhancing the perceived experience.



A variety in scale can make the site more interesting and enhance the difference of natural and cultivated.

Landmarks

Some features that exist on the site are typical for the region and preferably the should be made more visible. The hill is a clear and visible landmark and we noticed that it meant a great deal to the visitors we brought to the workshop. The rounded hill formations are



Views of hills, water tanks and the lake are enhanced

typical for the area and are apparent in the open landscape. Accordingly, vegetation around the hill at the centre should be cleared to increase the character of the rock formations. Another landmark, at least mentally, is the lake. One knows it is there but apart from at the top of the hill, it is presently not visible at the ATC. Views

through the vegetation assure that visitors can relate to the hill and the lake for better orientation. We recognised the importance of the

water tanks as landmarks during the field study and these are therefore to be emphasised. We also propose that the irrigation canals should be enhanced. On the one hand to ensure lake views but also to emphasise the canals existence.

This could be done by planting trees along the canal, like trees grow along rivers. A bridge would enhance the canal further by telling the visitor that he/she is walking over something. From a bridge the visitors could get a view along the canal. The canal should be kept clear enough for a view but not expose it for sun causing evaporation.

Labelling

The lack of information on the site today is apparent. This can easily be improved by sign posting, both the way to the site and on the site. By labelling species together with explanations of their character, significance and labour demand, the site becomes more instructive and informative. This will enhance the experience. All trees are to be labelled with names. The entrance should have a map of the area together with general information of the site like the different characters of the zones. The specific character of this particular ATC should also be

emphasised. The nodes should have information points where the zone's special activities are explained in detail.

Interactive

To enhance the perceived experience the ATC should offer possibilities for interaction. This can for instance be points where woodwork, brick making and/or cooking is possible. It also means the opportunity for visitors to take part in the constantly changing centre and leave something behind that they are proud of, for example learning to make raised beds and being allowed to write a name or in other ways decorate the finished work.

View point

A thrilling view point at the top of the hill is proposed. From there one can get the bird perspective of the ATC and be thrilled by the height. It would ease orientation and add excitement.



A view point for more excitement

Adding a symbol

To highlight the special character of the ATC, a new object could be introduced. The creative dotted stone “Bobbo’s heart” which stands on a node at the precedent Alnarp’s landscape laboratory is an example of this. Instead of using a traditional farm related symbol as sculpture could a symbol for the set of mind be used. In Alnarp creativity is expressed through the dotted stone, at the ATC in Musoma networking could for example be expressed through a new sculpture. The sculpture could be placed by the entrance as a landmark and meeting point.

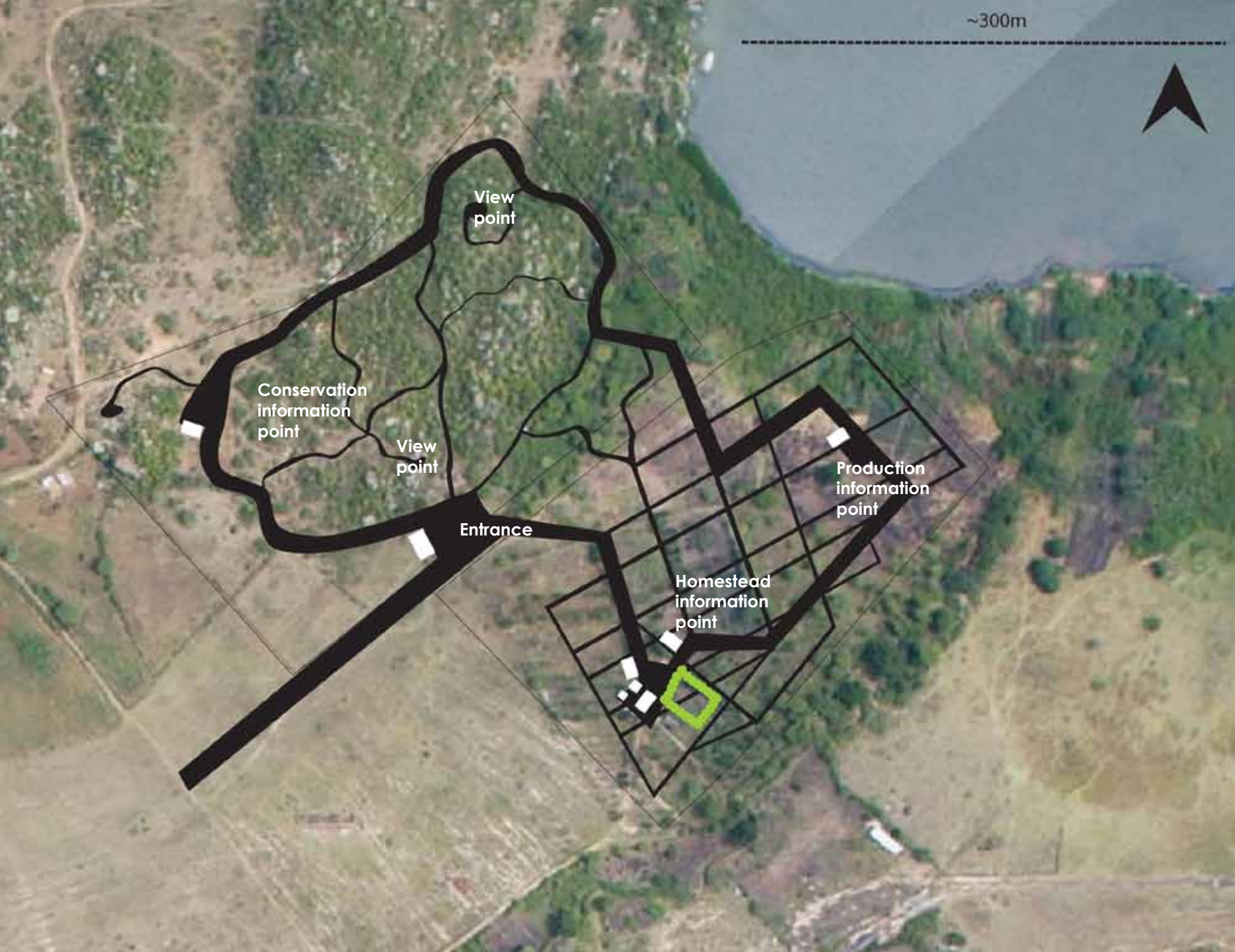


Bobbo’s heart

Conceptual Plan

The proposed strategies can be introduced all at once or gradually over time. Using these strategies as guidelines in the development of the centre can ease decision making by keeping all involved to strive towards the same goal.

To ease the implementation of the strategies a conceptual plan is presented on the next page. The most striking changes are the proposed entrance and the main path that ease access to the site. Additional, the division in zones, and the three nodes communicating the zones to visitors, are among the more comprehensive strategies in the proposal.



Implementation - Two Examples

To demonstrate the idea of our strategies we have chosen to show our proposal for two specific sites; the new entrance, and the homestead.



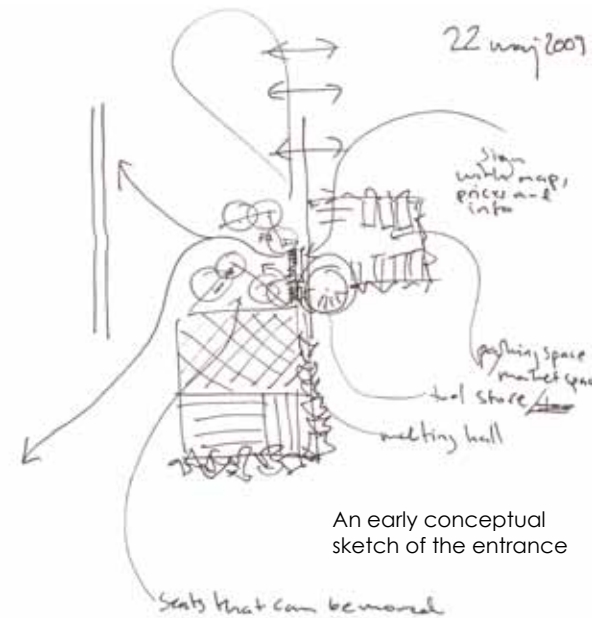
The Entrance

Sanna Ahrens

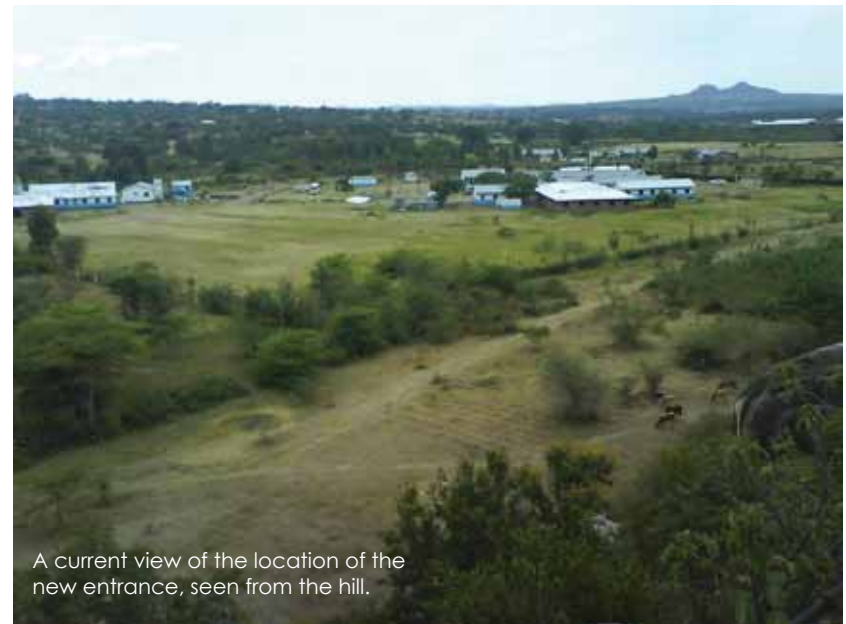
The entrance has to be informative and visible and make a good first impression of the ATC. It also has to be in line with the strategy for the whole area.

A few things have to be taken into account for the entrance, the road from west to east has to be able to continue past the entrance as the farmers need to reach the other end of the field. Parking spaces should be insured for buses, cars, motorbikes and bikes. Usually there are not many cars parked up, and the area immediately to the north-east of the entrance area is kept uncultivated for this purpose.

The main function of the entrance is to be a starting point for visitors. Information should be visible and easily accessible. Spaces should be provided for shelter, meetings and outdoor classrooms. The proposed new entrance is strategically located between the nature reservation area and the more cultivated part of the ATC to provide a good starting point for both.



An early conceptual sketch of the entrance

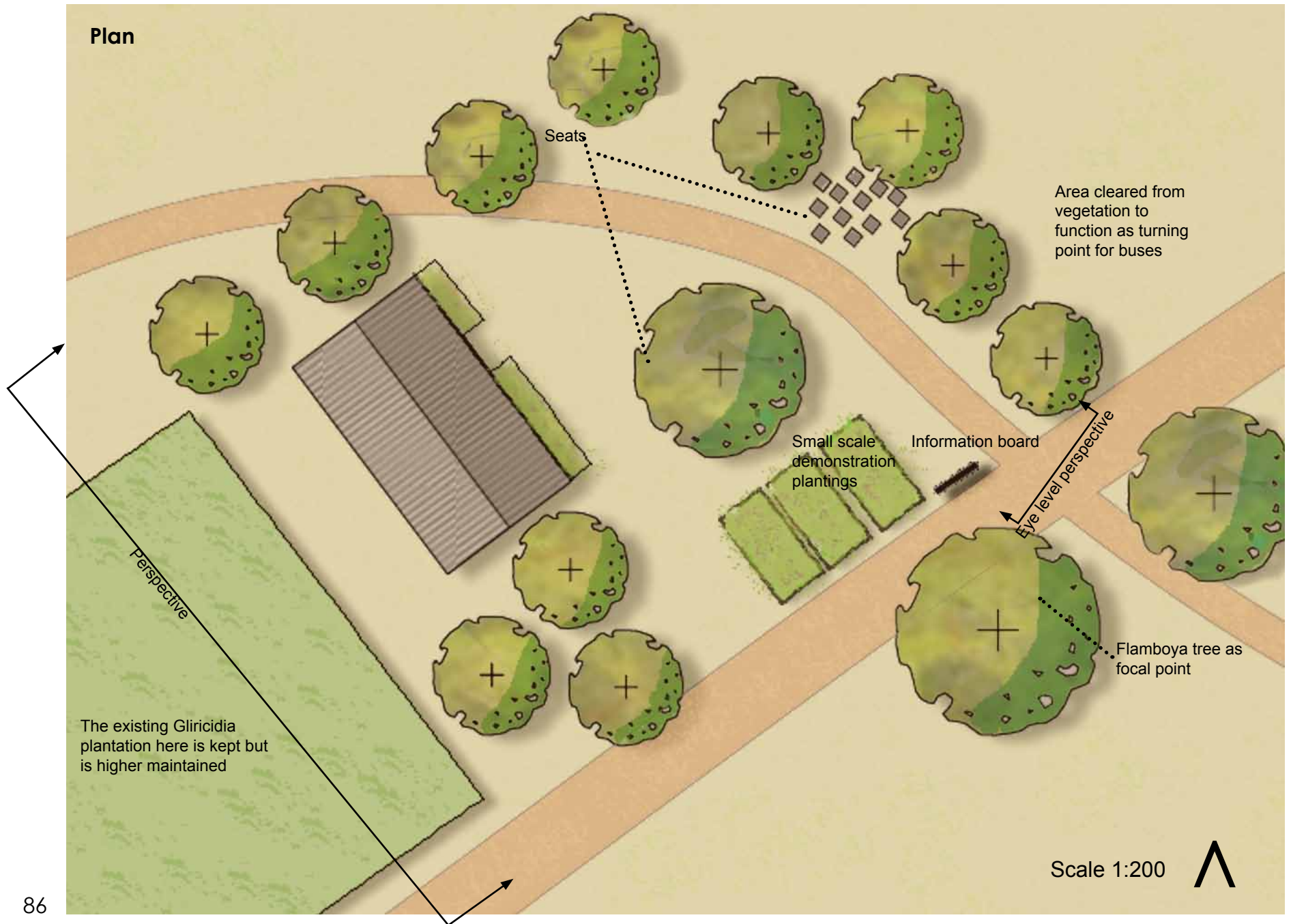


A current view of the location of the new entrance, seen from the hill.



Model of the proposal, view from the hill.

Plan



The entrance needs to be clearly marked with a focal point, for example a big distinct tree. Meeting places in connection to the entrance would be appropriate, these should be in the shade. Information is needed by the entrance, map, information etc The plantings leading up to the entrance need to be of good standards as it is the first thing you see. In connection to the entrance is proposed a building for gatherings and storage.

Different structures in the landscape can be used to achieve this and create an appropriate entrance. An example of the layout using appropriate structures is presented here to give a notion of what it could look like. The entrance is given a more inviting and enclosed layout, with a building suitable for storage and meeting place. The trees surrounding the entrance have seating possibilities. Two focal trees are planted, marking the entrance from a distance. The one to the east is preferably a visually striking tree, leading the visitor. One of them is located in the middle of the entrance courtyard. Next to this tree is a good place to meet. A sign proving visitors with a map of the ATC and with up-to-date market prices of crops is situated where visitors enter. Plantings with crops for sale are also placed in connection to the immediate entrance area.



A colourful Flamboya tree

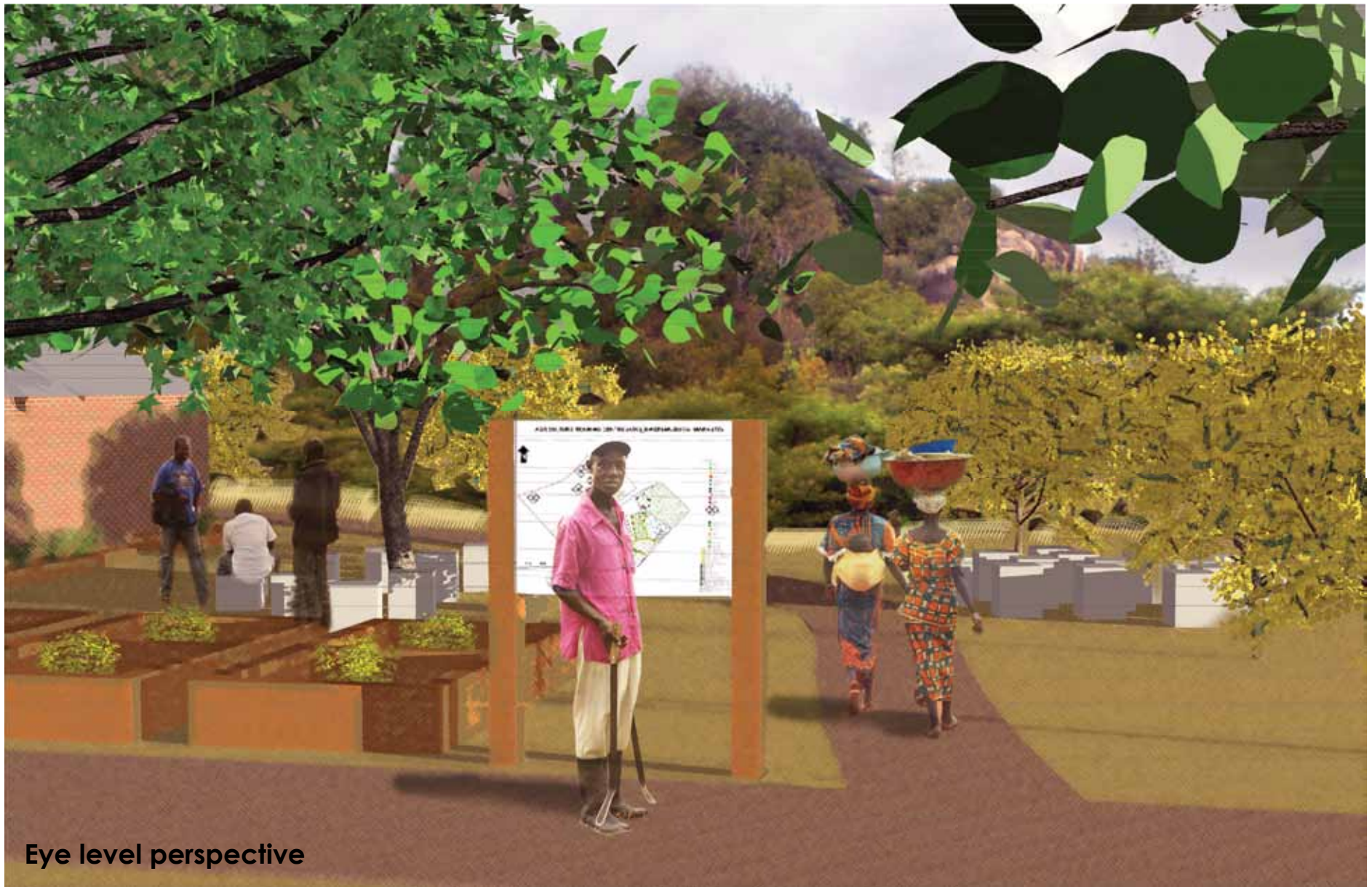


A tree is a place for shade and a place to meet.



A map of the Kitale ATC located by the entrance





Eye level perspective

The Homestead

Tove Falk

The field study has shown the importance of having a homestead at the ATC. A place where visiting farmers can recognize the activities from their own farms, and which is instructive and inspiring.

The homestead is one of the three proposed zones at the ATC, and is also proposed to hold a node. The chosen location for the homestead is a reinforcement of the original plan. The land is prepared for cultivation and there are existing structures to build on; like the office building and the nursery. The homestead can emphasize locality by showing an example of a common small scale farm from the region. It can offer a diverse range of activities and information to enhance the experience of the centre.

As described in the field study Vi wishes to show what goes on in close connection to the home of the farmers who are involved in their programme. That includes showing favourable crops for home use, handling of livestock and nursery activities. Additional activities as brick burning, biofuel production, water harvesting, and information on nutrition and cooking makes this zone extra interesting for visitors.

The existing office building is suitable for meetings in small groups or for storage for the workers team, but some new constructions are needed. Vi wish to keep poultry, cattle and goats at the ATC in the future. The cattle and goats are proposed to be kept in a zero-grazing unite as in Kitale and a separate space is proposed for the poultry. We have seen an excellent example of how to keep poultry as we visited the women's group in Kigora. A new construction which can accommodate the livestock is proposed.



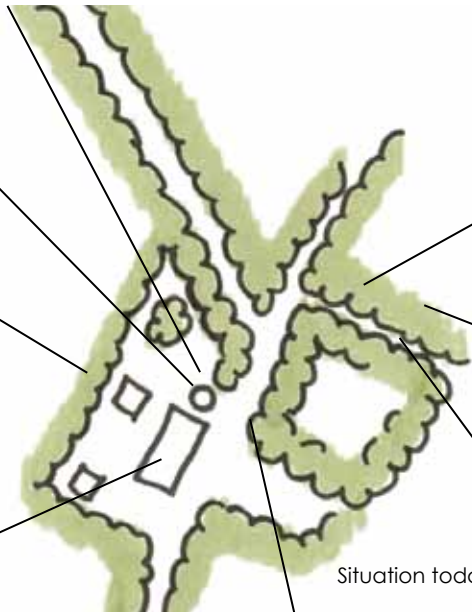
An example of a homestead in Mara region.



The water tank



Rows of trees surrounding the homestead



Situation today

10m

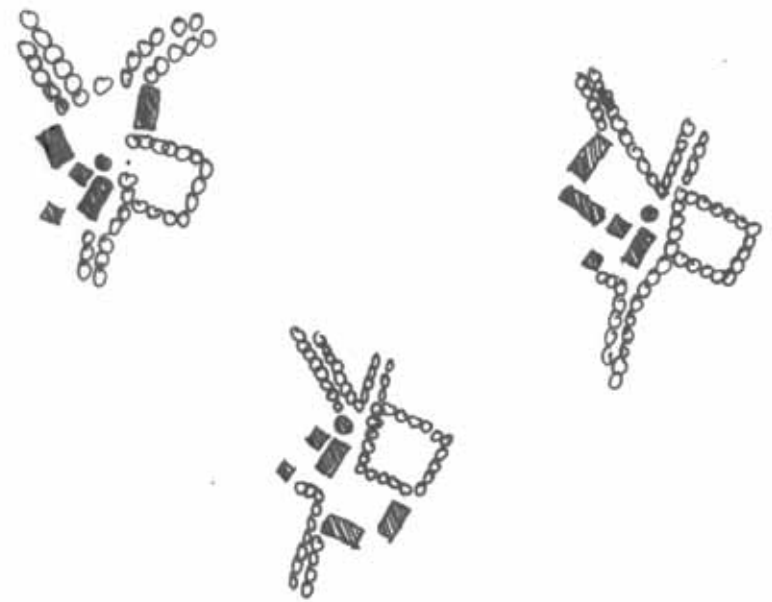


Toilet and office

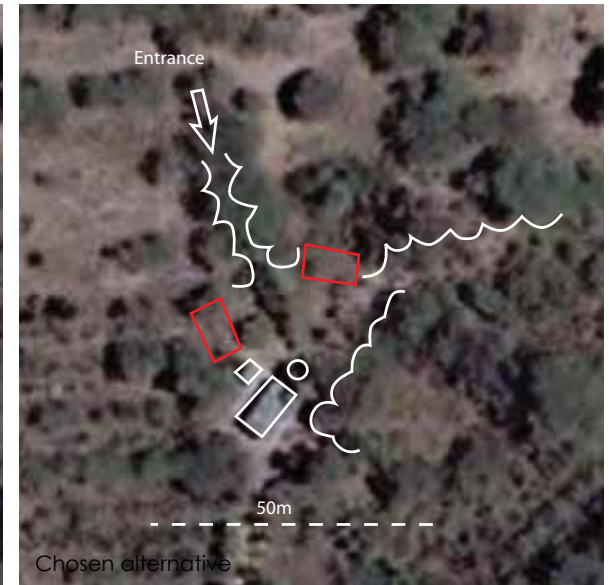
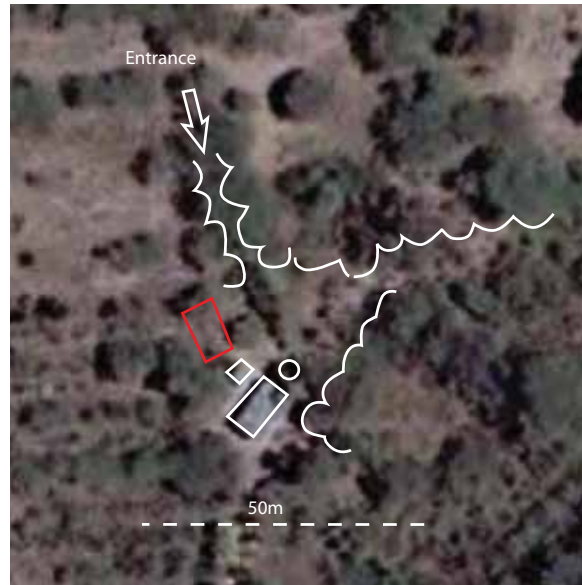
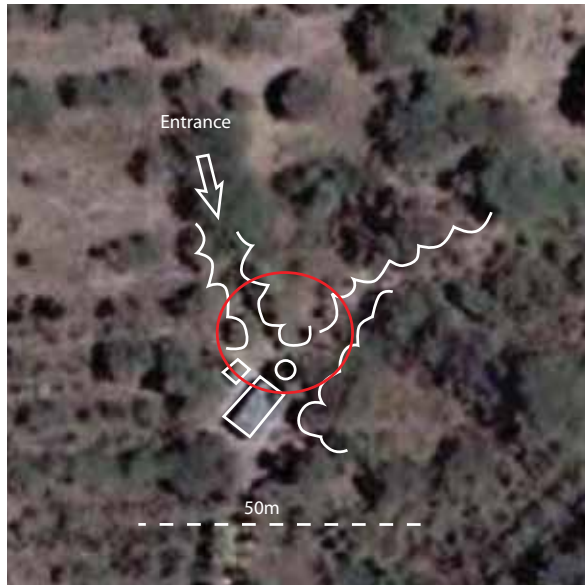


The nursery

An information point is proposed along the main path. It could become a natural location to find information and provide an opportunity for social interaction. Information and/or exhibitions also need to be accommodated by some kind of structure. It needs to be able to hold groups of visitors and hold both an exhibition as well as a workshop area. The proposed constructions has the same measures as the existing office building in the modulation but could take different forms. Too transparent structures would not contribute to create the desired space and it is therefore important that this function is taken in to consideration as the constructions are designed. Pillars or trellises could provide the walls that are needed. Rows of trees are also



Modulation for spaces at the Homestead



contributing to the making of a space. The transparency of the edges will affect how much the space interact with the surrounding. Preferably there is much roof area to harvest water from and that can give shade from the sun.

Modulating the open space it was important to find a solution that opens up around the main path. An open space in immediate contact with the main path naturally catch the interest of passers-by'. The edges should be rugged to create sub-spaces (Dee, 2001) with more intimate character. This correlate with the strategy suggesting a diagonal change of scale according to which the homestead should hold small scale spaces. The spaces can hold activities such as brick burning, biofuel production, compost and recycling unit and information on water harvesting. These are all activities which has shown to be important for a homestead.

The workshop showed that the water tank function as a landmark. Colour could accentuate the tank further to enhance it. A bright colour is proposed to minimize the accumulation of heat. The water tank is presently the only man made seating possibilities that the ATC offers. More sitting possibilities are needed around the homestead. Nutrition and cooking has been proposed

during the field study as an feature that could specifically address women and persons affected by HIV/AIDS.

Raised beds for herbs and spices are proposed on the open space to make it a natural attraction for all visitors. Cooking tips and information of nutrition in presented edibles should be presented in direct connection to the raised beds.

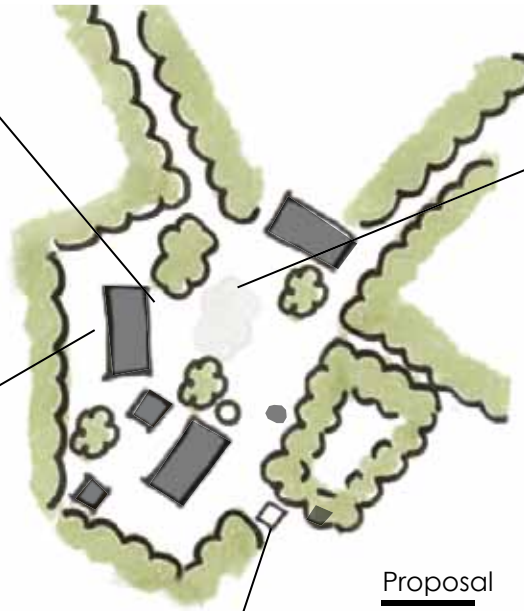
The homestead is proposed to be decorated to show a home-like atmosphere. Pot flowers, and wall paintings are examples that we have seen in the field.



A "care tree" for the homestead yard. A tree with cultural and aesthetic value, for example Moringa. The picture shows the only tree saved from the establishment phase at Kitale ATC and which has both cultural and aesthetic values.



Introduced zero grazing livestock unit.



Proposal
10m

Inspiration for sitting possibilities from a national park in Mara region.



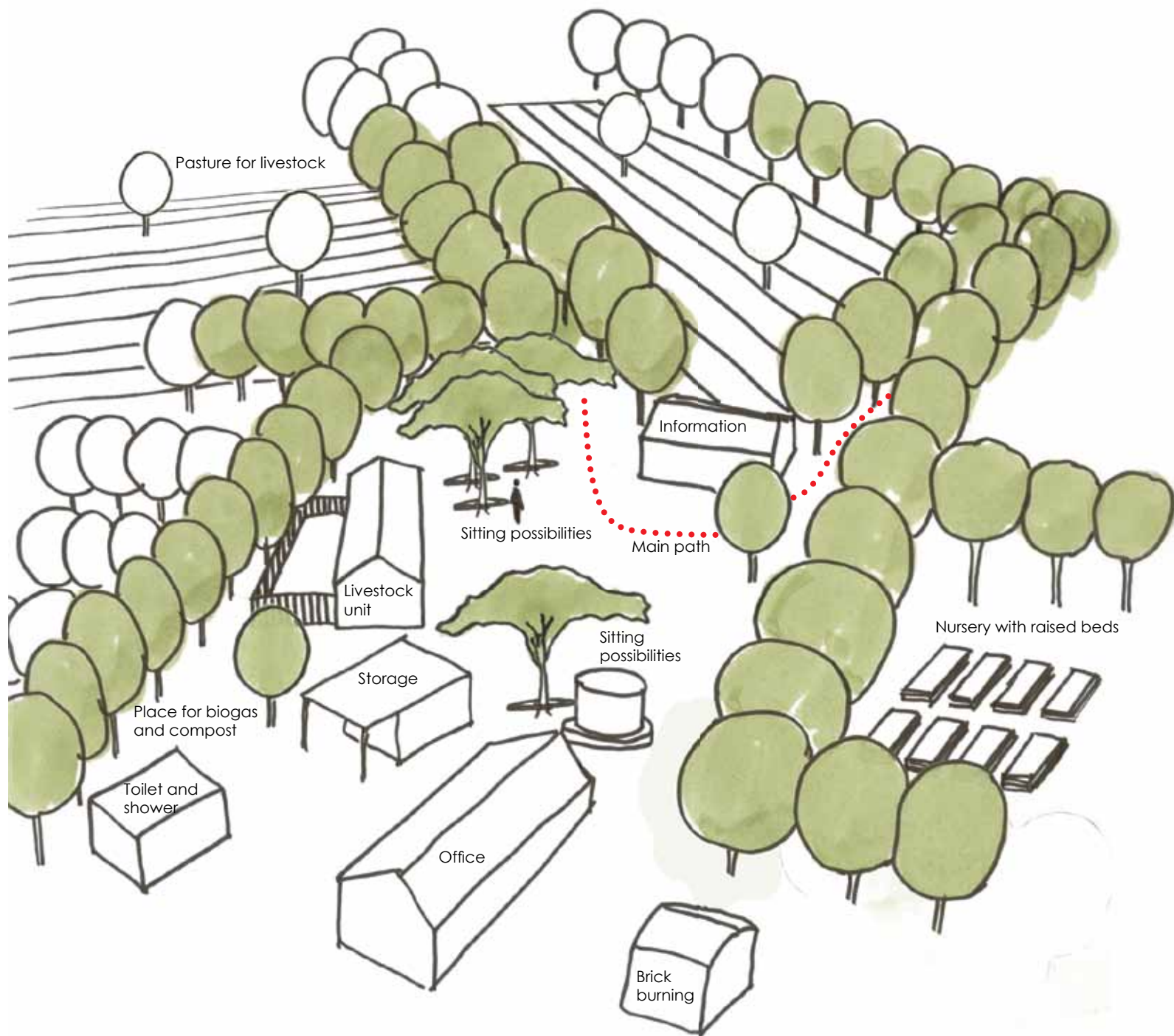
Inspiring sitting area under a Bougainvillea at a farmers home.



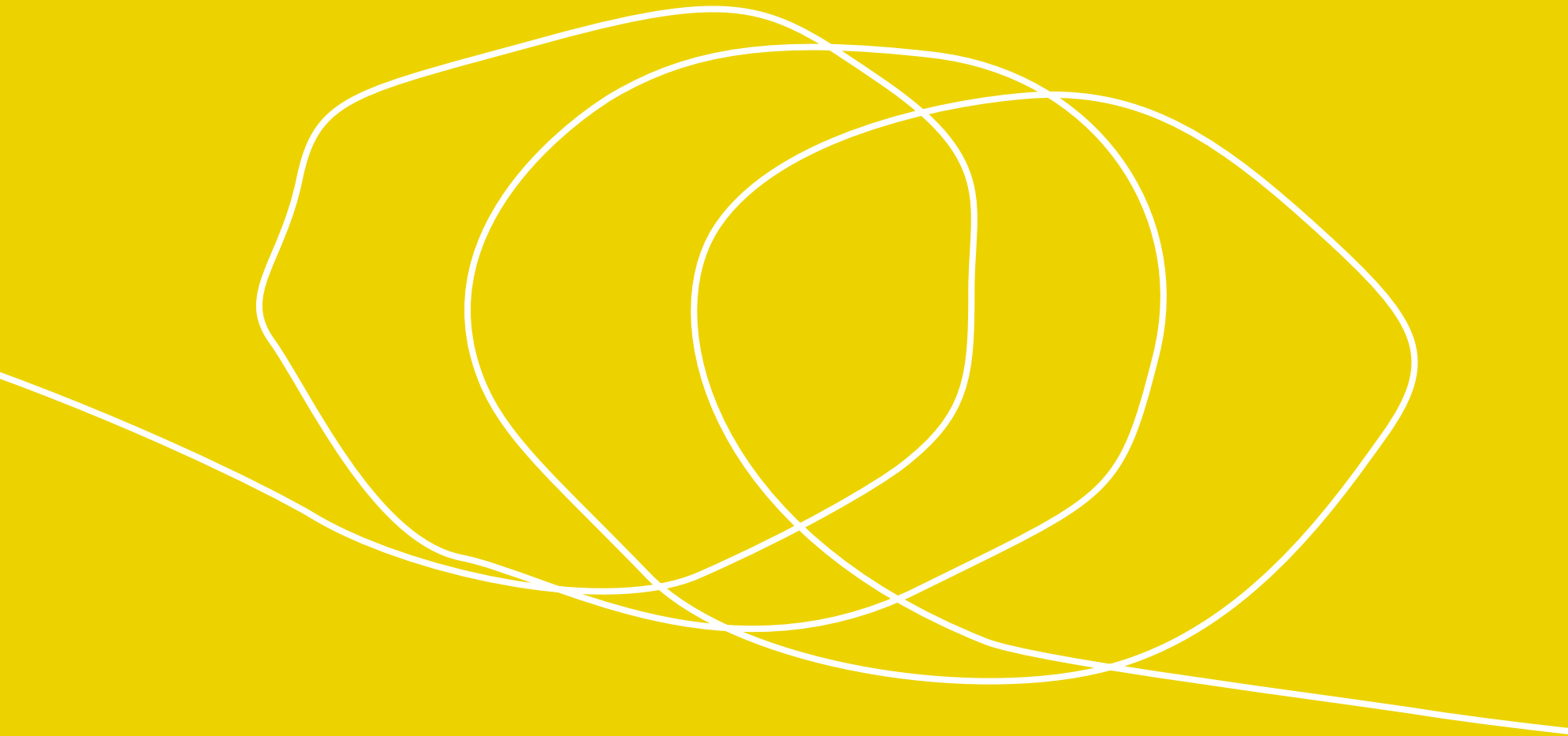
Inspiring homestead layout.



Oven for brick burning.



REFLECTION



Possible Bias

Our proposal has been conducted for the stake holders and Vi, with Vi also being the client. It has to be acknowledged that our work has been largely influenced by Vi as they have been involved in the whole process. At many times we chose to use the contacts of Vi in our field work and this could have affected the outcome, but it also meant that we could be more effective in our work. Less time than expected has been used trying to find who to talk to and looking into who would be a key person to talk to. When it comes to the ATC we have tried to take a step back from the aims that Vi have for the centre.

Through interviews and workshops we have got an understanding of the peasant farmers in the Musoma and Mara region. Meeting women, and to get their opinion, has been difficult and despite making efforts to talk to women, they have been under represented in our field work. We have tried to acknowledge this by paying more attention to the needs and wishes of women and also by listening more carefully to opinions of the women. To reach out to HIV/AIDS affected households have been difficult, mainly because it is a sensitive issue in Tanzania. Indirectly we gathered information about

the needs for people with a weakened immune system from other people and this has been put forward in the proposal.

We have seen many examples of physical structures used in educational parks throughout the process. To decide which ones are important for the needs of the stake holders of the ATC depends to a great extent on the cultural setting and context. This relates to the problem of us being outsiders in the landscape we have been working with. The cultural differences are something that have influenced our work in many ways. It would be interesting to have a more ethnographical approach in a similar project.

A participatory process was our aim and this was mainly restrained by the relatively short period of the field study in comparison to the whole project. To implement a participatory process throughout has not been possible due to the distance, therefore the main focus of participation has been at the beginning of the project, during the field study. By trying to conduct a satisfactory participatory process we understand the difficulties to a greater extent than we did before.

Starting our thesis with the aim to make a proposal for one of the Agroforestry Training Centres run by Vi, little did we know how much we would learn that was not directly related to the subject. The ATC in Musoma is affected by the world of NGO's and political currents, just to mention a few factors. Many subjects can be studied in the context of the ATC in Musoma, which we have not looked into to try to keep the focus on the ATC. To pin-point our task to mainly involve the ATC has been difficult throughout the whole process.

Impact of Results

We have not had time to look into how different agroforestry species could be used to implement our ideas. That is to examine the mechanical side of structures which we have chosen not to work with. What plant material is suitable to express our strategies in the best possible way? How can for example the main path be designed to be cohesive but still express the different environments that it goes through?

We have suggested a sculpture symbolising the core of the ATC or of Vi. How could that be designed and built at the ATC? What is contemporary public art in Mara? Can art contribute to local participation? Can art

contribute to the ATC's attractiveness? Can art give the ATC that little extra something which is called spirit of place, or what else could?

It would be interesting if our thesis could be put in a larger perspective. One possibility for future studies is to examine parks for outdoor education in other continents and other contexts. That could result in a coherent collection which give the possibility to compare the diversity of these kinds of parks all over the world.

Zooming out even further one could examine the role of the landscape architect. Should we act on request of those who pay the best or can we choose? Is there a need for landscape architecture in low-income countries where our services can not be afforded? Can landscape architecture improve the basic human needs like having shelter and food? Can landscape architecture lighten up the every day life of people? Is that done differently in a low income country than in a high income country?

We have used spatial structures, an architectural tool, too propose changes for the development of the ATC. We aimed to base our proposal on the users wishes and needs. Are spacial structures perceived differently in different cultures? This is not something we have

examined but can result an interesting research for someone else. If Vi want to consult landscape architects again, another interesting issue would be to look at the impact that their work has on the landscape. We have seen that there is an impact. Is there anything Vi can do in their work to be able to control this impact?

We have just touched on subjects like outdoor education, participation and agroforestry but we hope that it can encourage more landscape architects to cooperate with other areas of research. In our profession we will always cooperate with other professions so we need to be able to listen to what the others have to give to us and be able to clearly express what landscape architecture can offer them. We all have different glasses through which we observe the world. Looking at a tree we might wonder if it is there as part of a larger green structure, or because of its attractive flowers. A forester might wonder how long the tree has to stand before it can generate an income, or if the timber can be sold as firewood or furniture material. Combining the two fields, the result could be an attractive green structure for recreation which is profitable and instruct the users how the timber is used. In landscape architecture a greater regard to cultivation methods like agroforestry, or as another example permaculture, might result in more interesting

green structures. How cultivation methods like these can influence landscape architecture is yet another idea for a future thesis.

From our workshop we gathered a lot of material. Maybe an approach to try and get less material, and instead examine it more thoroughly would be of more use. Also a more parallel process, including the participants at an early start and throughout the whole process would be a way to try to secure the level of participation.

We present our field studies in depth in a report independent from this one: IN0652 Individual Course International Field Work, 10 HEC.

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In this thesis we propose conceptual design strategies to support peasant education in agroforestry and investigate how our client and the target groups of the client can benefit from the site. The work of the thesis is to a great extent based on the results of a field study.

Based on conclusions of theories, precedents, and the field study a conceptual design proposal has been carried out where new spatial landscape structures for the ATC have been developed. Two places of interest are presented in depth: the *entrance area* and the *homestead area*.

