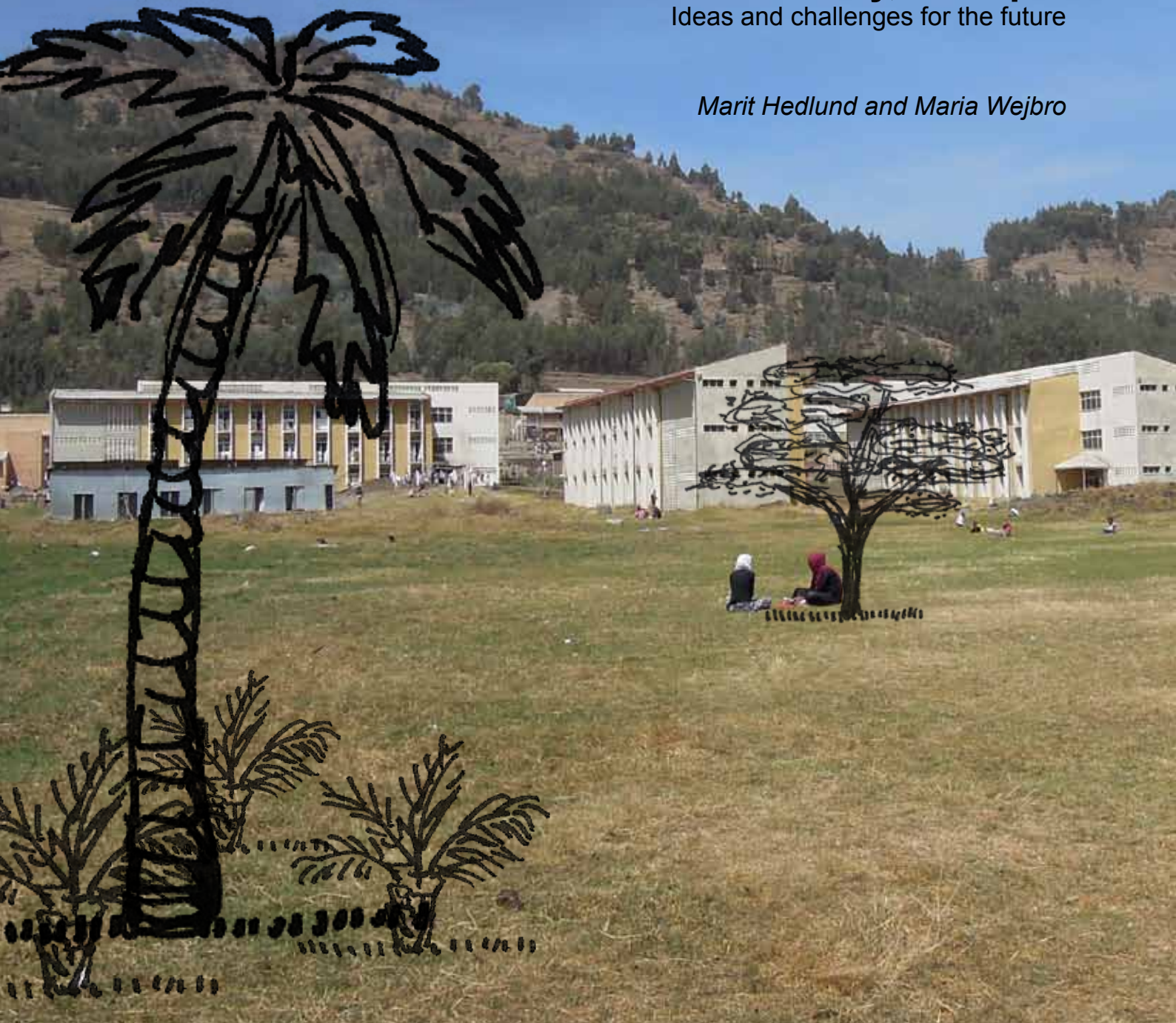
Swedish University of Agricultural Sciences
Faculty of Landscape Planning, Horticulture and Agricultural Sciences
Department of Landscape Architecture

Design Program for Dessie Campus, Wollo University, Ethiopia

Ideas and challenges for the future

Marit Hedlund and Maria Wejbro



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Design Program for Dessie Campus, Wollo University, Ethiopia
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Abstract

A geographical position and its social, cultural and political context as well as climate and specific physical characteristics define the scope for a landscape design project. This has become clearer for us in our master project where we have made a Design Program for the outdoor environment of Wollo University in Dessie, Ethiopia and analysed and reflected on the work and process. The aim for the project has been to design an attractive and functional outdoor environment for the Campus, based on the inventories and the needs and wishes of clients and users. But, the aim has also been for us as landscape architect students to gain a greater knowledge about landscape architecture and the design process by position ourselves outside our usual context. The method has been open and seeking where the site, literature studies, dialogues with people and our own experiences from the field study in Ethiopia has influenced the work.

Wollo University is situated 400 kilometers north of Addis Ababa, in a mountainous landscape. It faces problems of heavy rainfall during the summer, soil erosion, a lack of essential facilities, and is still a construction site with empty spaces in-between buildings and infrastructure. Our Design Program for future development of the Campus is based on visions from the University, dialogues with site users and inventories of the site and brings up an overall proposal, where problems and opportunities are dealt with. The large empty spaces between the buildings are transformed to places in different scales for various situations and a new system of pathways. Vegetation is used to make today's large-scale of the Campus to a more human-scale. We emphasize the use of a various kinds of vegetation to increase biodiversity and to become a role model in the country. Also the Design Program gives solution of how to deal with storm water, where it is essential to lead away water with swales and confronting the steep slopes next to buildings by vegetated slopes and terraces. Areas identified to lead the way for future change were chosen to be dealt with more into detail and as inspiration for the rest of the site.

Making a design project in Ethiopia has raised many questions and traces to follow and we have gained both general and specific knowledge when reflecting upon our work.

Acknowledgement

There are many people we want to thank, both in Ethiopia and Sweden, that have made this work possible. It has been a journey where external inputs from people has been very important for the result of our work.

First and foremost, we want to thank all people at Dessie Campus, Wollo University, for all help, hospitality and kindness. Without help from local people this work would not have been possible. We would have been lost. Here follows a list of people that made extra effort for making us feel welcomed and who gave us inputs on the design project.

Thank you
Dr. Assefa Balch, the President of Wollo University, for welcoming us to the University, sharing the vision for the University and arranging the study trip.
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All engineers at GIZ and MH Engineering for helping us with technical drawings and plans and explaining the situation of the Campus for us. Yonaz Tamiru and Tsegaye Debalke for all effort to find material.
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Thanks to all other teachers, engineers and administration staff, who have helped us to clarify all our questions, showed us the area, learning us the language and taking us on study visits around the country to show us the rich landscape and culture of Ethiopia.
To all drivers for taking us to school every day and on weekend trips.

A special thank
To all students who have showed us the Campus area and helped us to understand how the Campus life is.
And to Yibeltal Getahun and Yasin Mohamed for making our daily life easier, arranging our days and explaining culture and customs, always looking after us.

We also want to thank people in Sweden that helped us during our process. First of all thanks to our tutor Eva Gustavsson for helping us when we doubted our work. To Ylva Hillbur for introducing us to the project. Also thanks to Samuel Rubenson at Lunds University that gave us an insight in the culture, Johan Fogelberg for sharing his experience of being a student in Addis Ababa, Eva-Lou Gustafsson at SLU for all help on water catchment and slope management, and Erik Johansson at Lund University for clarifying the climatic conditions of Dessie.

Last and not least, we want to thank our friends and families.

Thank you all!

Table of Content

1. Introduction

Background

This is our Master Project in landscape architecture at the Swedish University of Agricultural Sciences in Alnarp. We both knew early that we were interested in designing and working international. Through our tutor Eva Gustavsson, Senior Lecturer in Landscape Architecture and Ylva Hillbur, Researcher at the department of Plant Protection Biology at SLU, we heard about a design project at the newly constructed Wollo University in Dessie, Ethiopia. They wanted a landscape plan for the University and that was basically all we knew when we agreed to the project.

After five years of studies we have been schooled in Swedish and Western landscape architectural and design theories and conditions. Making a design proposal for Wollo University in Ethiopia gave us the possibility to challenge and examine our hitherto knowledge and experiences. Through this project we have wanted to extend our perspectives as landscape architects and by reflecting over our process we hope it has rendered some new approaches to our future work and design processes. Besides our personal growth as landscape architects we of course wanted our work to result in a good outdoor environment for the Campus in Dessie.

With its 85 million inhabitants Ethiopia is the second populous country in Africa and also one of the poorest. In the beginning of this century the government laid a strategy for higher education nationwide, and Wollo University is a part of this new structure. As one of the younger universities in the country it started educating in

2007 with 750 students. During the academic year 2010/11 the University had totally 3828 students at the five faculties: Agriculture and Veterinary Medicine, Business and Economics, Medicine and Health Sciences and Social Science and Humanities and Teacher Education and Pedagogical Science.

The University is located 400 kilometres north of the capital Addis Ababa and consists of two separate campuses; the one we have worked with north of Dessie and the other one in Kombolcha, around 10 kilometre southeast of Dessie. The Campus in Dessie covers an area of 72 hectares and the buildings and roads are already constructed or on its way to be constructed. According to information publications from the University the biggest issues for the students are deficiency of water, toilets, books and cafés, as well as problems related to that the site is till in a construction phase.

Instantly questions arose: How can you prepare yourselves for a project situated in another culture and is it even possible from here? How do you start a project before you have visited the site? What is our role as landscape architects and what can we contribute with? Obviously there will be predicaments when starting a project in an unfamiliar context. In this project nearly everything has been unfamiliar to us; from the economical, cultural and social issues to the new flora and technique situation. In our education we have been taught that landscape architects know a little about a lot and that we have a holistic approach. This project will really be our final exam!

Objective

The goal is to do a Design Program for the outdoor environment at Wollo University in Dessie, Ethiopia and to mediate our reflections on the work and process. The Design Program will consist of an overall landscape plan as well as more detailed solutions.

The Aim for the Design Program is to design an attractive and functional outdoor environment for the Campus, based on the inventories and the needs and wishes of clients and users.

The Aim with the project is also, for us as landscape architect students, to gain greater knowledge about landscape architecture and the design process. We hope that making a project situated in a different context than we are used to will broaden our view and understanding of landscape architecture.

Questions that have to be considered to reach our goal are following:

- Does Ethiopia have any landscape architecture tradition?
- How do people use the outdoor environment in Ethiopia?
- What does a University need to consist of and communicate?
- What are the preconditions and opportunities for Wollo University's Dessie Campus?
- What is our role as landscape architect students from Sweden doing a landscape project in a developing country?
- How to communicate and present a landscape architecture project to people unaccustomed to architectural terms and drawings?

Disposition

The thesis will be a reflective text about the project we have done for Wollo University in Dessie, Ethiopia. It consists of three parts:

1. The first two parts provide a background to Ethiopia and Dessie; *Context of Ethiopia* and *Typical landscape traits*. The aim is to gain an understanding of the country and the context we have been dealing with by explaining Ethiopia's history, current situation, geography, culture, its landscape characteristics and universities. The parts are based on both literature studies, dialogues with people that have experience from Ethiopia and our own experiences from the field study in Ethiopia.

2. The second part is the Design Program; *Context of Dessie Campus*, *Wollo University* and *Proposal for future Campus development*. The first section of the Design Program explains the context of Wollo University, as well as our inventories and analysis. The second section is the proposal, where we delineates the results and propose a design for future development.

3. The last part is a reflection on our work; *Reflection*. We discuss the process of our work; our weekly process in Ethiopia, how external inputs have affected our work, our role as landscape architect students working towards a client and how we dealt with communication problems. This part also covers a discussion about our method and a final conclusion.

Delimitations

Our approach has been to do a project for Wollo University and deliver a usable proposal of the University's landscape. We have not chosen a specific subject to examine since the University has requested a whole landscape plan. It is a real project with entirely new conditions and context than we are used to. Therefore it has been a challenge to do delimitations. The project has been the main focus with the creation of a Design Program as the primary goal. The Design Program has an overall approach consisting of a landscape plan with general and specific solutions. The design project have guided our literature study and reflections, where we have let it raise many questions, speculations and traces to follow and the result has not always lead to a specific answer or conclusion.

Method

Before we went to Ethiopia for our six weeks field trip, we could not foresee what to expect or what kind of work we were supposed to do. All we knew were that Wollo University wanted a landscape plan for Dessie Campus, but nothing more: no limitation and explanations of the site's conditions. When we before the trip tried to get files of technical plans and drawings, the answer was that it will be organized when we arrive in Dessie.

Due to all the uncertainty we have tried to have a broad and open approach through the whole process. Instead of deciding the product from day one we have allowed the process to be creative until the last day. The main intent has been to get to know Ethiopia and its culture, and use the gained knowledge in the project.

Our method has been categorized in three stages to elucidate our approach further; preparation, field work and proposal work

Preparation

The preparation work lasted for one month and started with a genuine literature study of the country with the aim of getting to know Ethiopia. Our research included academic texts, information texts and fictions, all to gain as wide knowledge as possible. To further understand the culture we met persons with experience from the country; one professor in theology who was raised in Ethiopia and one exchange student from SLU, who had been in Addis Ababa for six month.

In the preparation work we searched for a method to be applied on the study trip and investigation of the Campus. We prepared for many possible options and tried to have an open approach, to avoid letting a specific method accede the process. However, the book *Development Fieldwork a practical guide* by Scheyvens and Storey (2003, p. 2) influenced our approach to the task, through describing the problematic of making fieldworks in developing countries and the risk of *"academic tourism"*. We decided to work hard not becoming just a viewer from distant and instead try to be a part of the daily life and culture. Therefore *"go with the flow"* became a motto to us. The motto explains our working approach rather well, to let external and internal inputs and events influence and form the direction of the project.

Field work

The desire of getting to know the country and its culture grew even bigger when we arrived in Ethiopia. Our approach *"go with the flow"* made us easily influenced and affected by the surrounding and their comments and wishes. Both physical inventories, mapping and empirical studies of Wollo University and Dessie were executed to further understand the site, culture, people and the daily life in Ethiopia. We walked around the Campus site several times drawing maps and sketches, taking photos and notes. The documentations were then summerized in different analysis and finally in a SWOT (strengths, weaknesses,

opportunities and threats), which further on was the base for our design.

Study trips to well-known places for Ethiopians were made in order to observe and document what type of places were seen as attractive and get a wider picture of the usage of the outdoor environment. Further on, other universities in the country were visited for inspiration; the University in Addis Ababa, Bahir Dar and the Kombolcha Campus.

We have conducted several dialogues with clients (the University), students, teachers, experts and engineers to achieve a wide idea of the today's life as well as wishes for future life at the Campus. Our aim has been to have many and regular dialogues and to keep them open and seeking. Most of them have been spontaneously done, which in our case means that we knew what kind of information we sought, but did not use a script since the occasions of the dialogues were unplanned. The dialogues with the students were to a large extent accomplished while we were walking around the area, except for one prepared occasion when we had a possibility to gather two male students for a more structured interview.

Living in a condominium apartment became a beneficial method to avoid being a distant viewer, but more a part of the daily life. Our friendly neighbours gave us great opportunity to get to know the culture, inviting us to holiday celebration, traditional coffee ceremony and teaching us customs. This has enhanced our way in understanding the country, knowledge that has been influential for our work.

All our experiences in Ethiopia have been carefully written down in a journal to use as the base for the reflection of our work, project and process, in the thesis.

Proposal work

The sketching process started in Ethiopia and is based on what we observed, learned and experienced during our stay. Technical plans and drawings of the Campus site were given to us by the engineers behind the design of the Campus, and became a base for our sketching. The scale of the sketching has shifted between the whole Campus site to more detailed drawings. A sketching method has been to design by walking and talking, and always alternating between having the eye perspective in mind and sketching on a plan.

The first sketches and ideas of the Campus done in Ethiopia were presented to Wollo University in Dessie during our last week of stay. When we came back to Sweden the process revived with new inspiration from the response and the more detailed comments we got from the presentation. The problems we found during our inventories navigated the literature study, and all gathered information has influenced our design. Hindsight our thesis is a synthesis of a spiral process, where many questions and traces have been raised and followed.

All the work has been done in close cooperation as a team, and both texts and graphics has been jointly decided and edited. The sketching has alternated between sketching together and sketching individually to optimize the time.

10th of Mars. 2012

Today a family invited us for lunch. We got nervous since there are a lot of customs when it comes to eating in Ethiopia. We were glad we had our friend who told us how to behave; wash your hands, stand up for the elderly, eat with your right hand, and eat more and more and more...

2. Context of Ethiopia

In our initial work in Sweden our knowledge about Ethiopia was low. The images that got to our minds had to do with famine and drought, war, the two Swedish journalist imprisoned, the music style reggae, the Rastafarian movement and Haile Selassie. To learn more about the country we started the process by searching for information. During our search we met a lot of facts, statistics and numbers, stretching from demography and culture to sights and travel routes. In this case all indicate that Ethiopia is poor and under-developed, suffers from famines and have a lack of water supplies. In the *United Nations Human Development Index* 2011 (p. 126) Ethiopia is ranked 174 out of 187 countries (Sweden are in place ten and USA in place four). However what does all these figures and facts really say about a country in comparison with the experience you will have there? It contributed to questioning our role as a landscape architect doing a design project there: for what purpose?

To enrich and get a wider picture of what to expect we talked to people who have been living in Ethiopia. We met Samuel Rubenson, a professor in theology at Lund University, who grew up in Ethiopia, and a former exchange student in Addis Ababa, who lived there for half a year. Both narrate their experience with great positivity and they were especially emphasizing peoples' generosity. They confirm that the guide books are right in pointing out the rich culture and extraordinary landscape.

When comparing the information we read with the impression we got from the two with experience from Ethiopia another picture evolved. We saw a widened picture of an economically poor country but also a country rich of helpful, generous and nice people. What you read and what people tell you do not always correlate with your own experience, but the information impinge on your expectations and experiences.

In *Brandt Travel Guide* by Briggs (2009, p. 319) one can read that Dessie is *"probably the least interesting of Ethiopia's major cities"*, though it serves as a logical point to take a break on a long trip between the capital and the more northern sights. To read beforehand that Dessie is boring and for five weeks experience it are two different things. The beautiful surrounding and the friendly social climate give another insight of the city, which is more than its physical appearance.

All information we gathered are from our western point of view. Hall (1998) writes in his *Cities of Tomorrow* that we are historical actors that perform in response to the world we found ourselves in and to the problems we confront in that world. We are part of a society and historical context that we act or respond to. This can also be applied to different geographical positions. Our context and the context of the site users are different. The world we confront every day and our background differ from each other, from social, historical, cultural, political, to economical and daily context. However we are living creatures, having the same basic needs. How do you avoid being biased and keep aware of yourself, your position and context in the world?

Altogether this chapter will be our background to Ethiopia and Dessie based on information and facts we have collected throughout our work. Our frame of reference will be based on literature, meetings and dialogues with people who have various relations to the country and our own experiences during our field work in Ethiopia. It is an attempt to gain an understanding of the context of the site we have worked with, by explaining the Ethiopian history, existing situation, geography, culture and climate.

A rich history

Ethiopia, formerly known as Abyssinia, is sometimes referred to as the Cradle of Human Kind. The origin of modern human beings have often been located to the African Rift Valley that intersects Ethiopia (Briggs, 2009, p. 3 & 8) and that is where the skeleton of *"Lucy"*, a more than four million years old hominid ancestor, was found in 1974 in Afar (Utrikespolitiska Institutet, 2011, p.12).

The Rift Valley shows that human beings have lived in this part of the world for a long time. 700 years before Christ a high culture arose in the northern Ethiopia. They had agriculture, irrigation systems, were constructing iron tools and ceramics and traded with Greeks, Romans, Arabs and other people around the Red Sea. From this the Aksum Kingdom evolved around year 300-600 after Christ. The king of Aksum converted to Christianity in the 4th century and it became the official religion. The Ethiopian Orthodox has played a prominent role in Ethiopia since then and influenced its culture. As the declination of Aksum the political focus gradually moved south (Utrikespolitiska Institutet, 2011, p. 8-9 & 13-14).

Year 1930 Ras Tefari Mekonnen was crowned under the name of Haile Selassie I (Utrikespolitiska Institutet, 2011, p. 14). He was considered to be descended from the famous dynasty of kings that were founded from Queen Sheba's relation to King Salomon of Jerusalem, a legend that still are important for Ethiopian national self-assurance, according to Pankhurst (1974, p. 10-11). Haile Selassie I governed the country until 1974, with an exception of the five years exile during the Italian Occupation 1936-1941. Then he was removed from his position by a military committee called the Derg that seized power and pronounced a socialist state. Industries and agricultural land were nationalised. The government's large scale agriculture was ineffective and several year of drought led to a large famine 1984-85 where around one million of people died. The government then faced more resistant and after the fall of the Soviet Union the regime collapsed, Ethiopian People's Revolutionary Democratic Front (EPRDF) seized the power in Ethiopia (Utrikespolitiska Institutet, 2011, p. 14).

The first car in Ethiopia.

Ethiopia's has a beautiful landscape where Acacia trees are a typical characteristic.

Existing situation

Ethiopia is since 1995 a Federal republic, with nine ethnic defined states and two city regions; Addis Ababa and Dire Dawa. On paper they have self-determination but in reality the government party EPRDF holds the power (Utrikespolitiska Institutet, 2011, p. 10-11). Ethiopia is one of the poorest countries in Africa and one of the least developed countries in the world according to the *United Nation's Human Development Index 2011* (p. 126), where they were ranked 174 out of 187 countries. News of draught and famines comes now and then. The latest being the Horn of Africa famine catastrophe in 2011. But the World Food Programme's Overview of Ethiopia (2012) also mentions recent positive gains in education, extension of health system and long-term strategy of Agricultural Development-led Industrialization to address food insecurity.

Cornell (2004, p. 41-43) writes that the 2000 year old intact history of Ethiopia and long tradition of sovereignty have been seen as a role model for other African countries, as a genuine and untouched country. Ethiopia and Liberia were the only countries in Africa which avoided colonization (Cornell, 2004, p. 41). Although, Cornell further explains, this could have contributed to why the country stayed undeveloped when it comes to road quality, railways, schools, health care etc. Other countries in Africa that were colonized have been much more developed in these matters. However, Ethiopia has no complex relationship to a colonial power that has generated money in the country.

Addis Ababa, the capital of Ethiopia.

A Saturday market in a small town attracts many people.

Geography

Ethiopia is located in north-eastern Africa, the so called Horn of Africa, with a surface two and a half as large as Sweden. Since the sovereignty of Eritrea 1993 Ethiopia has no coastline. The country is dominated by the Ethiopian Highlands, which is run through by the large African fault line the Great Rift Valley (Utrikespolitiska Institutet, 2011, p. 3-4). The altitude differs from the lowest area less than 116 meters below sea level, the Danakil Depression, to the fourth highest peak in Africa, Ras Dashen, at 4620 meter (Unicef, 2012). The landscape is also highly diversified; in the east the scarcely populated Afar depression holds a desert and active volcanoes, the southwest tropical rainforests and south and southwest steppe and dry savannah (Utrikespolitiska Institutet, 2011, p. 4).

The town of Dessie, where we have done our work, is the capital of South Wollo zone of the Amhara Nations region situated 400 kilometres by road form Addis Ababa. It is located in the north-eastern highlands on an altitude of 2500 meter above sea level (Briggs, 2009, p. 319 & 323). The town was founded by Emperor Yohannis IV in 1882 (Briggs, 2009, p. 323) and today Dessie has become a middle-seized city with a population around 200 000 (Utrikespolitiska Institutet, 2011, p. 3).

Climate

Ethiopia belongs to the tropical climatic zone, even though the climate varies with the height above sea level. Within the country there are three climatic zones where most of the inhabitants live in the middle zone at 1700-2400 meter above sea level, with an average temperature between 16-30 degrees Celsius. Higher up the temperature becomes cooler as well as the lowlands are warmer, for example Dallol in Danakil Desert is seen as the place with the highest average temperature in the world, 34 degrees Celsius all year round. Also the Rainfall varies across the country. Most rain comes during a period from the middle of June to September, even though lowland areas in the east often suffer from drought (Utrikespolitiska Institutet, 2011, p. 4).

Dessie is located right above the middle zone, on an altitude of 2500 meter above sea level. Students have told us that they find the climate cold and uncomfortable. We found it comfortable and sometimes even warm, but our experiences differs from the Ethiopians since we are used to a cooler climate in general. According to climate data from Johansson (2012, oral), researcher on urban climate and outdoor comfort at Lund University, the climate conditions in Dessie are classified to be under the thermal comfort zone which means that to experience and feel the climate to be comfortable external contributions have to be implemented.

People and Religion

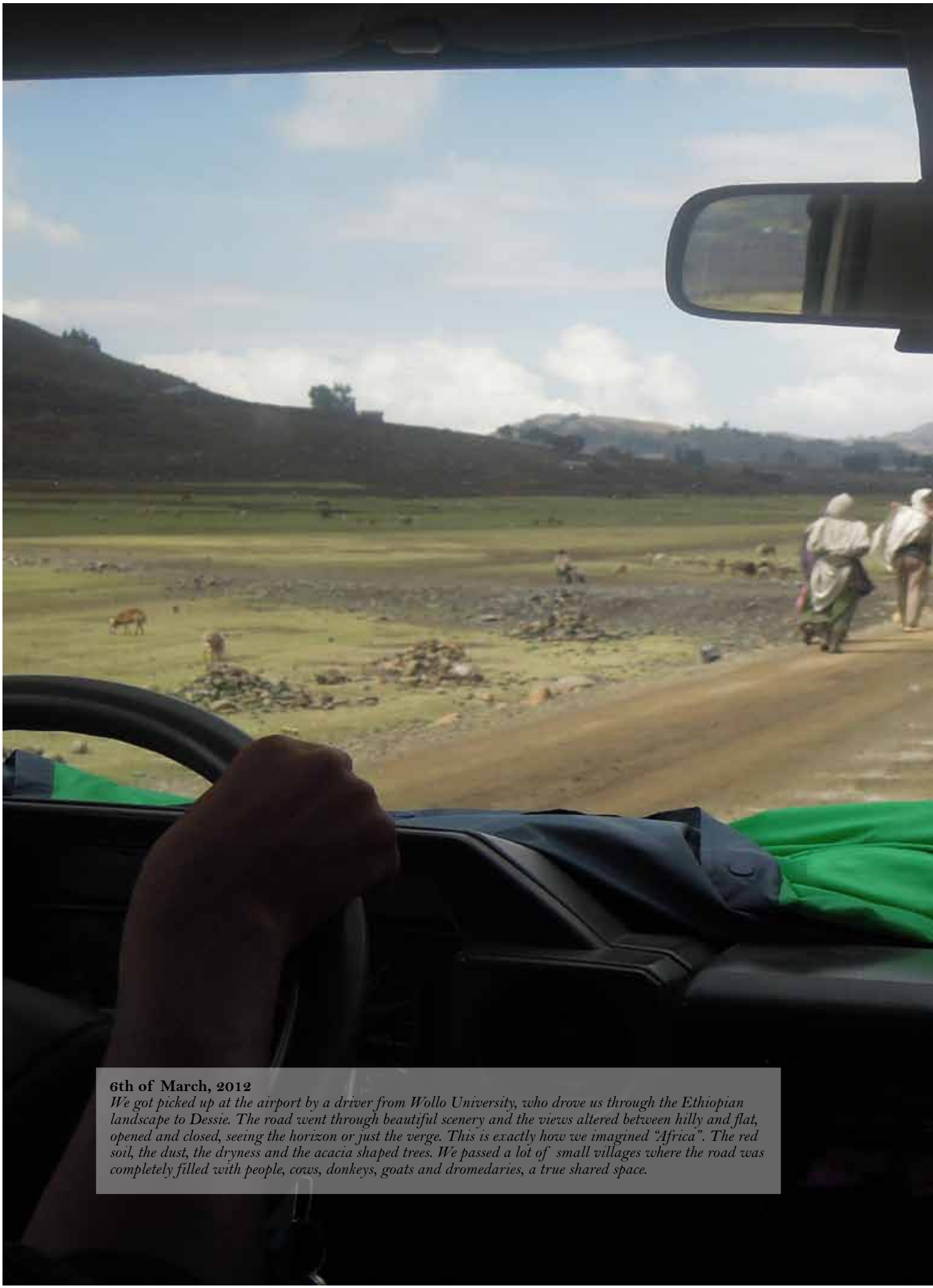
As already mentioned, Ethiopia is with its almost 85 million inhabitants the second populous country in Africa. The population is diverse with more than 80 ethnic groups, where the major ones are Oromos (34,5%), Amharas (26,9%), Somalians (6,2 %) and Tigreans (6,1 %). The official language is Amharic, although English is used in school and official contexts (Utrikespolitiska Institutet, 2011, p. 4-5).

Ethiopia has one of the lowest proportions of urban population, but it is rapidly urbanizing, from 6.4 million in 1990 to 13.8 million in 2007 (Unhabitat, 2010, p.1). Still only around 17 % lives in urban areas, where Addis Ababa is the only large city (Utrikespolitiska Institutet, 2011, p. 4). Most Ethiopians live in the Highland area, where climate and soil conditions are more beneficial, and in rural areas. In the World Food Programme's *Overview of Ethiopia* (2012) one can read that 80 per cent of the population are dependent on rain-fed agriculture thus household's food security is determined of external factors such as rainfall, climate change, population density, land degradation and the global market.

Since the former kingdom of Axum in the 4th Century adopted Christianity to official religion, Ethiopia is one of the oldest Christian countries. Now there is no official religion, but freedom of religion and the most common religions are still Ethiopian Orthodox (Christianity) and also Islam (Utrikespolitiska Institutet, 2011, p. 7).

Dessie is located in the Amhara region, belonging to the more predominating ethnic group amharas. The town houses a mixture of both Muslims and Ethiopian Orthodox and we were told that there were no tensions between the two. We experienced religion, culture and history very important for people and it permeated the whole society. During our stay it was fasting period for the Orthodox which meant nearly all restaurants only served vegan food. Our neighbours invited us for traditional coffee ceremony and other national festivities and we experienced more proximity here than ever felt in Sweden. The social climate was overall more bodily, friends holding hands and everyone eating from the same plate with one's fingers (right hand).

Coffee ceremony; traditionally the coffee should be served three times and scented smoke and popcorn are a part of it.



6th of March, 2012
We got picked up at the airport by a driver from Wollo University, who drove us through the Ethiopian landscape to Dessie. The road went through beautiful scenery and the views altered between hilly and flat, opened and closed, seeing the horizon or just the verge. This is exactly how we imagined "Africa". The red soil, the dust, the dryness and the acacia shaped trees. We passed a lot of small villages where the road was completely filled with people, cows, donkeys, goats and dromedaries, a true shared space.


Stim

3. Typical landscape traits

In the beginning of a project you are custom to look at precedents for inspiration and ideas. When we started to search for landscape architecture in Ethiopia we did not find much and Professor Rubenson (2012, oral) at Lund University confirmed that there are no field of study or outspoken landscape architecture in Ethiopia. Even Architecture and Planning are fairly new subjects, first in 2010, the Ethiopian Institute of Architecture, Building Construction and City Development was officially founded in Addis Ababa (EiABC, 2010). However, human dwellings have shaped and affected both the rural and the urban landscape throughout the years. It has just been done without a common planned strategy for the development of cities and rural areas.

Mikyas Tesfaye Aragaw writes in his master thesis *Urban Open Space Use in Addis Ababa: The case of Meskel Square* (2011, p. 2), that there are no public spaces in Addis Ababa, except streets, street joints, unplanned left over places and a few squares. We experienced the same situation in Dessie, where people are using the streets as public spaces, hanging, meeting, talking and walking. Since the cities are growing there is a need of planning for public spaces, greenery and parks, to make sure they are not forgotten as an important part of the city fabric. We have met a great interest from Wollo University when it comes to landscape architecture in forms of wishes and ambitions to establish it as a subject at the University.

To be able to do a sufficient design that people use and like it is necessary to get an insight in the culture, how people use the landscape. *Ways of Life as Basis for Housing Design in Ethiopia* (Nevanlinna & Pöyhiä, eds. 1986, p. 3-4), a publication from a master

course for architects from developing countries at Helsinki University, brings up the importance of understanding not only your own culture but the actual culture where the project will take place in order to make a sufficient design in another context. Habitats and ways of life effect dwellings and is a frame how one lives, and understanding *how* can be a tool to modify and improve the ways of living. The book is highlighting the theme about the danger of applying western architectural concepts in other contexts. Eyob Andemeskel from Ethiopia participated in the book with the text *Ways of life in Hudmo & Ethiopian urban houses* (p. 21-41) and contributes to the discussion by meaning that the western concepts only represent one idea among many. Instead one should look at local culture, specific needs and ways of doing things. S/he continues that the basic needs of humans as eat, sleep, breathe, drink and love are handled within built form and it is not whether one does it or not, but where and how. Further on, s/he gives an example of a foreign architecture firm that designed a student café without a hand-wash basin, a crucial thing to have since there are a strong cultural custom to wash hands before eating.

To approach our project, doing a landscape design in Ethiopia, we wanted to put ourselves in the context of the local landscape tradition, to get to know and understand the regional landscape and get an insight in how people use their outdoor environment. Rubenson (2012, oral) gives us the idea of visiting places of importance, like churches and pilgrimage places to see how significant landscapes have been designed. The following pages are a collection of our observations in the landscape gained during our stay in Ethiopia.

Live fences to mark territory are common, cactus-like Qulqual (Euphorbia abyssinica) is frequently used.

Eucalyptus is an invasive species that can cause soil erosions if planted in monocultures.

A typical characteristic in the northern Ethiopian landscape are terraces.

General landscape observations

During our stay in Ethiopia we have got a general conception of the landscape in the northern parts of the Ethiopian Highlands. It is mountainous, has great height differences, visible remainders of landslides, horizontal flat hilltops, and a rocky and sandy landscape. The dust is very noticeable; sometimes you are surrounded by a cloud of sand after being passed by a car. When the rain comes, the mud is more obtrusive.

Even though Ethiopia has no outspoken landscape architecture people have worked and formed their land to better fit their needs and desires. The most visible elements are the terraces, where the mountainous and stony landscape has been altered to make agricultural use possible. The walls of the terraces are constructed by stones, and those lines of stones create a strong characteristic in the landscape. Stones from the arable land have also been collected and ordered in lines dividing and creating a linear pattern in the agricultural landscape.

Eucalyptus trees are another common feature in the landscape, with its silver grey foliage, long leaves and hanging habitus. The areas covered with eucalyptus usually lack any kind of undergrowth, and when we were travelling along roads across the country we saw a lot of example of this where the root system was coming out from the ground due to soil erosion caused by the species.

The incredible scenery of the highland plateau in the northern part of Ethiopia

City Landscape

Elements of shaped and designed landscapes are also found in cities. Bahir Dar, in the north-western part of Ethiopia, we experienced as a larger city with higher building structures in the central parts, wider asphalt streets with street plantings, both trees, bushes and flowers, and at least one larger park. Addis Ababa, the capital, was the only city that felt substantially large where a lot of construction was going on. Parks were often in connection to important places (buildings) like for example one in the University area and one in front of the Ethiopian National Museum. According to already mentioned Tesfaye Aragaw's (2011, p.13) master thesis there are seventeen parks in Addis Ababa, used mainly for weddings, graduation, community activities and for recreational purpose.

Meskel Square was one of few public spaces we found in Addis Ababa. It is a terraced square, shaped as an amphitheatre, trees in the back and facing a parking lot and a wide road in the north. Tesfaye Aragaw (2011, p. 17; 21-23) writes that it is the only place recognized as a city plaza by city administration. The square has important religious function, where significant celebrations are held, but are also important for political and cultural ceremonies and sport occasions, like car races. His study shows three activities that people conduct there during remaining time; sporting, relaxing and trade activities (Aragaw, 2011, p. 24; 27; 29). During our visit we saw people running, playing soccer, hanging and trading, indicating the credibility of Aragaw's conclusion.

A view of Addis Ababa.

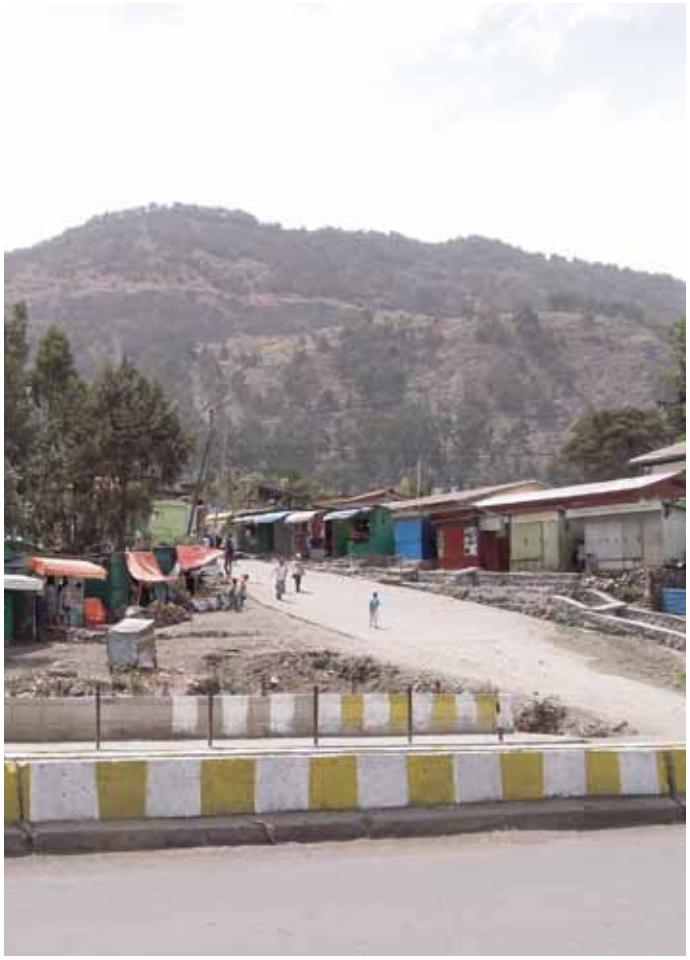
A formal park in front of the Ethiopian National Museum, where the Lucy replica is found.

A nice variation of big trees with large canopies and smaller trees in the centre strip.

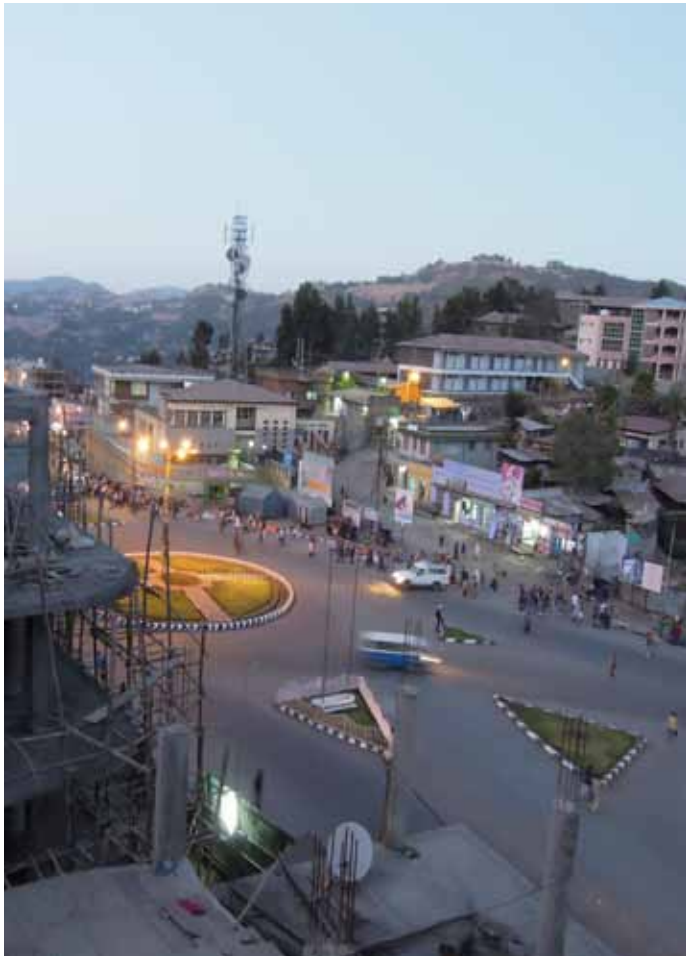
Meskel square in Addis Ababa is used as a market place, for sport activities, as well as a parking lot.

Dromedaries are a common sight in the warmer cities. Here in the city of Kombolcha.

Kettles have a natural part in the urban fabric.



Low buildings in Dessie with Tossa Mountain Ridge behind.



The Roundabouts are one of few planned green places in Dessie.

Dessie is a much smaller city than both Bahir Dar and Addis Ababa, with a totally different feeling. Nonetheless the city has some traces of landscape design in forms of designed roundabouts with formal shapes of both paved and vegetated surfaces, and plantings of lawns with smaller trees along and in the centre strip of the asphalt roads. These elements are all recurring in a larger extent in the cities of Bahir Dar and Addis Ababa.

As the rest of Ethiopia, Dessie consists of mainly one-storey houses. 1994, 98.3 per cent of housing nationwide were one-story buildings, only 1.7 per cent were multi-storied (UN-Habitat, 2010, p. 6). The central area along the asphalt road consists of three-storey buildings with shops and restaurants. The Italian occupation in the 1930s has strongly influenced the architecture and form of the town, and most of the modern town centre dates back to that period (Briggs, 2009, p. 323-325) Otherwise the structure of the town is formed after the two main asphalt roads. Further out from the centre a more informal housing structure occurs, even though some multi-storied buildings could be found in the more peripheral locations.

According to the publication *Condominium Housing in Ethiopia: The Integrated Housing Development Programme* by UN-Habitat (2010, p.1) the combination of high population, urban growth and poverty challenges Ethiopian cities. They suffer from a high degree of homelessness, 80 percent of the urban population lives in slum-housing and there is high unemployment. The cities face problems with environmental degradation, urban decay and a lack of infrastructure and basic services. To face these problems a government-led program by the Ministry of Works and Urban Development were initiated in 2005; *The Integrated Housing Development Programme*, with a goal to increase housing supply for low-and middle-income households in Ethiopia. The common attribute for these housing projects is the condominium housings types, a multi-storied building for several households that are jointly owned and managed (UN-Habitat, 2010, p.13-14). This housing type is found in the earlier mentioned peripheral areas of Dessie, and during our stay in Dessie we rented an apartment in one of these houses.

The national problems described by UN-Habitat (2010) are recognizable in Dessie. We have experienced a large amount of one-storey buildings of informal structure, as well as the new drive for condominium housing. Most developed housing structures are around the asphalt roads and we have seen a tendency in Dessie of paving the smaller roads with cobble stone in order to promote a more structured city. Otherwise most roads are gravel, which becomes either dusty or muddy depending on dry or rainy season.

In both Dessie and the other Ethiopian cities we visited, we experienced much more closeness to the rural areas than we do in typical Swedish cities. In Ethiopia people are farming the land next to their homes, both in the lower and the multi-storied building areas. An example of this could be seen just outside our condominium window, where our neighbours were cultivating all kinds of edible plants. The division between the rural and urban was very fluent, a fact that became even clearer to us when we understood that the town was a place for both humans and animals. The shepherds were grazing their kettles; cows, sheep, donkeys and horses in the central strip of the roads as a natural part of the daily life in the city.

Vegetation

Hundred years ago more than a third of Ethiopia was covered with forest, year 2000 it was three percent, which means a huge decrease of the country's forests resources. One reason to deforestation is that the energy supply for households comes mainly from wood, charcoal and animal dropping. Efforts have the last years been made on forestation and year 2010 the official number was nine percent of the surface (Utrikespolitiska Institutet, 2011, p. 25).

As mentioned earlier the most common tree in the country and the areas around Dessie is the Eucalyptus tree. It is an exotic species, introduced because of its qualities; it could be used as firewood, charcoal, house and building material, windbreaks and as a nice ornamental tree (Bekele-Tesemma, 2007. p. 533). However, when introducing it the deficiencies were missed out. Eucalyptus is an invasive species that suppresses undergrowth which enhances soil erosion (Negash, 1995, p. 40). It also absorbs a lot of water with negatively affect on the groundwater level with the consequences of drying out river beds in great value for many people (Muluneh, 2012, oral & Pankhurst, 2001, p. 198).

After talking to several local vegetation experts we understood that there was a need to diversify the vegetation and avoid monocultures. Due to this issue, we decided to get into and extend our knowledge of the flora of Dessie and its surroundings. We visited a plant nursery, the forest of Tossa Mountain, studied the plantings along the roads of Dessie and visited the testing sites at Dessie Campus. To this we supplemented with literature studies and talks with trees and plant experts at the University.

Trees sighted on the mountainside of Tossa.

Tossa Mountain

During our first week we ascended Tossa Mountain next to the Campus site. At the hillside of the mountain we observed a whole range of naturally growing tree species. We saw the obvious Eucalyptus, but also Juniperus, Chamaecyparis, Euphorbia abyssinica, cactus-like species, Aloe-like species, and flowers neither we nor our guide could the name of. It was an interesting and inspiring walk showing us that other species than Eucalyptus could thrive as well.

Aloe-like species found at Tossa Mountain.

A flowering Cactus.

Tall Euphorbia abyssinicas on the side of the walking track.

Testing sites at the University

To get a deeper understanding of what kind of vegetation the University wanted and found functional and attractive we did a plant walk with the agriculture department. They showed us the testing site for trees within the University area and also a neighbouring village with interesting species. During the walk they explained which species there were of interest and which were not.

Found trees with expert comment

Casuarina equistifolia
Cupresus lustanica – An exotic species
Haginia Abssinica – A big and wide tree that is soil conserving and has medical value
Grevillea Robusta – Beautiful tree with ornamental value
Juniperus Procera – An indigenous species
Oila Africana – A big tree with small leaves
Acacia – There is a whole range of acacias
Dovyalis Abyssinica – Dense tree with torn, used as live fence
Rosa Abyssinica
Cordia Africana– A hard wood used for furniture
Euphorbia Abyssinica – Used as live fence
Chamaecytisus proliferus – Not of interest
Discopodium Penninervum – Not of interest
Eucalyptus Citriodora – Not of interest

Agricultural testing site within the site used for crops.

Saplings are brought up in colorful buckets.

One of the Acacia species found in the testing site.

Documenting trees after road in Dessie

We were told that the upper asphalt road in Dessie would have outstanding plantings on its roadsides, and therefore we spent a Saturday walking around in Dessie observing street plantings. We saw a lot of small trees and shrubs planted in either grass or gravel. The species observed were; Bottlebrushes, Roses, Hibiscus, Jacaranda tree, Palm trees, Grevillea Robusta and many other.

The conclusions from the day were that the usage of street trees in Dessie was limited to shrubs and smaller trees (maximum around 4 meters), with a few exceptions of Grevillea robusta and jacaranda mimosifolia that in the future will be large. More larger trees could be of importance since they offer shade and a different microclimate. The plantings along the roads were a wide mixture of different species; we could not see two of the same species planted next to each other. Also, they were planted on an evenly distance, in our mind, a bit too far away from each other. A stronger coherent feeling could be generated if they were more closely planted.

Pink Hibiscus flowers lights up the road.

Many of the trees along the road in Dessie are small and colorful.

Bottlebrush is a recurring street tree.

Plant Nursery

We visited a plant nursery in Dessie to get inspiration of popular and locally used plants. At the nursery we saw thriving greenery for the first time during our stay. Our first thoughts that nothing could grow here in this dry, stony and dusty landscape were challenged and we got hope and understood that with persistent work it would be possible. From then on we were convinced that the Campus site also could become a thriving green park.

We saw flowering plants, trees, shrubs and climbers. The visit explained to us what is considered to be nice and good to use, what is ornamental and what is not.

Thriving greenery in the plant nursery.

Lantana.

Pink Geranie-flower.

A pink Fuchsia.

A red Fuchsia.

Groundcovering plant.

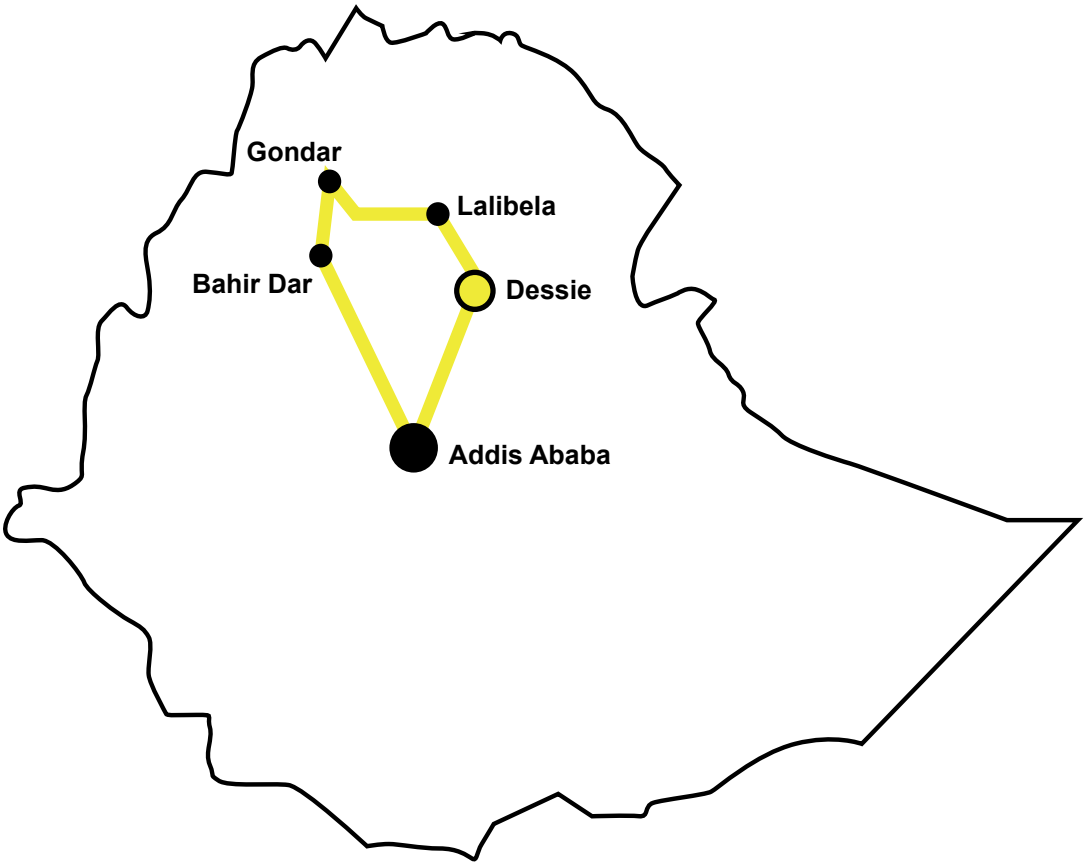
Elephant ears.

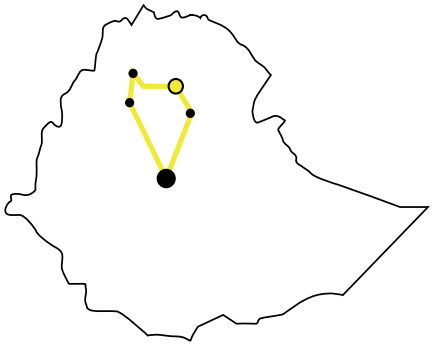
Inspirational study trip

Beyond our general observation of the Ethiopian landscape we made a study trip to both historical places of significance and other places we discovered people liked to visit. The landscape of Ethiopia is very diverse and the location of our study trip has taken place in a circumscribed area around the central parts of the country towards north-west, as seen in the map below.

Historical significant places

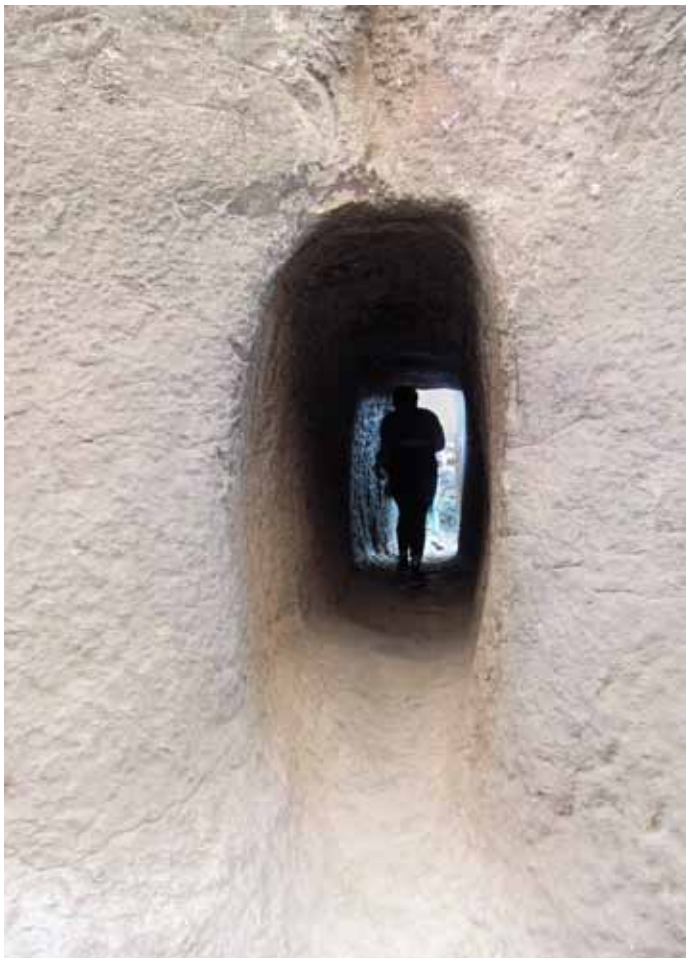
Many significant places have historical meaning and are places for pilgrimages. These places still play an important role for the local people but have also become tourist attractions. We have visited Lalibela's rock hewn churches, the Palace in Gondar and the monasteries around Lake Tana.





Lalibela 7th of April 2012

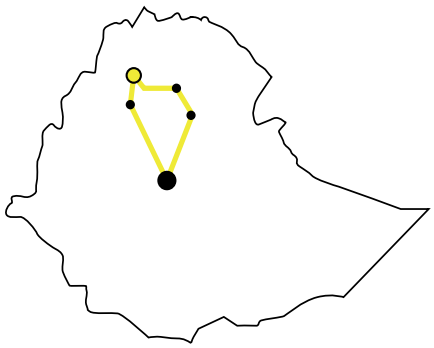
The rock hewn churches in Lalibela are directly carved out of the mountains and are a notable heritage from the time in the 12th and 13th Century when the power in Ethiopia was focused here (Pankhurst, 1974, p. 10-11). The churches are not visible from far, they melt into the surrounding landscape and do not affect the skyline. A great contrast to "normal" built constructions, which have visible structures that are occupying space. When approaching the churches, a magnificent construction in the ground appears. All the churches have been directly carved out in the rock and every feature is built in the scene. The churches consist of an exciting spatiality with a variation of smaller passages, larger openings, different sizes of room, and is an overall pleasant deliberated sequential experience.



A smaller passage between two churches.

Lalibela churches melt into the landscape.

The churches are directly carved out in the rock.



Palaces in Gondar

The palaces of Gondar and their grand and magnificent architecture is a heritage from the 17th Century, when power for less than 200 years was focused around Gondar (Pankhurst, 1974, p. 10-11). The sequential spatiality in the palaces, with small passages is intriguing. The landscape is designed in a conscious way with lawns and large trees, and in front of one of the palaces a small more formal garden could be found.

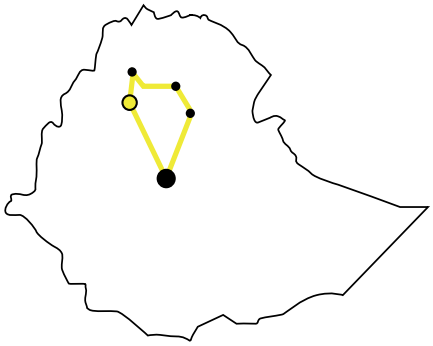
One part of the palace area was extra inspiring; the palace placed in a pool. Through a system of channels water was led from a passing river and filled up the pool on special occasions. The system was exciting, water used as a resource, and surround the pool area tree roots were searching themselves down the concrete walls to reach the water of the pool.

A more formal character of the palace gardens.

The great palaces of Gondar.

The palace placed in a pool.

The root system is seeking its way to the water of the pool.



Lake Tana Monasteries

Lake Tana is situated north of Bahir Dar and consists of several small islands that are occupied by old monasteries, still in use. The monasteries are typically small houses, often round, and located on the top of the islands surrounded by forest. They provide a view, but are not visible from the shore. We did a boat trip and visited some of these islands, and we found out that there were more to experience than just the monasteries. All the islands had small bridges to sit on and the paths going to the religious monastery houses went often through a mysterious, dense and quiet forest.

Mango fruits.

One of the round monasteries.

A view of Lake Tana from one of the small islands.

Places for hang-out

During our trip we also discovered several places where people seemed to like spending time. A synthesis of our experience is that many of these places, the seating areas, are arranged in lines where one sits next to each other. Not like in Sweden, where seating areas often are arranged in groups facing each other. This was something we both experienced in outdoor environments but also inside. A typical example is in the traditional music clubs whereas one sits in a line around the room facing all the others and the middle of the room where the dance is taking place. Here, though, it is a social aspect where all people are facing each other, instead of just facing your own company.

Seating areas in Lalibela- a place for rest

While walking around in the village Lalibela we found a terraced seating area half way up the slope under a couple of large trees. It is a good example of a conscious made place dealing with the tough height differences.

A terraced seating area in Lalibela.

Terraces in Gondar

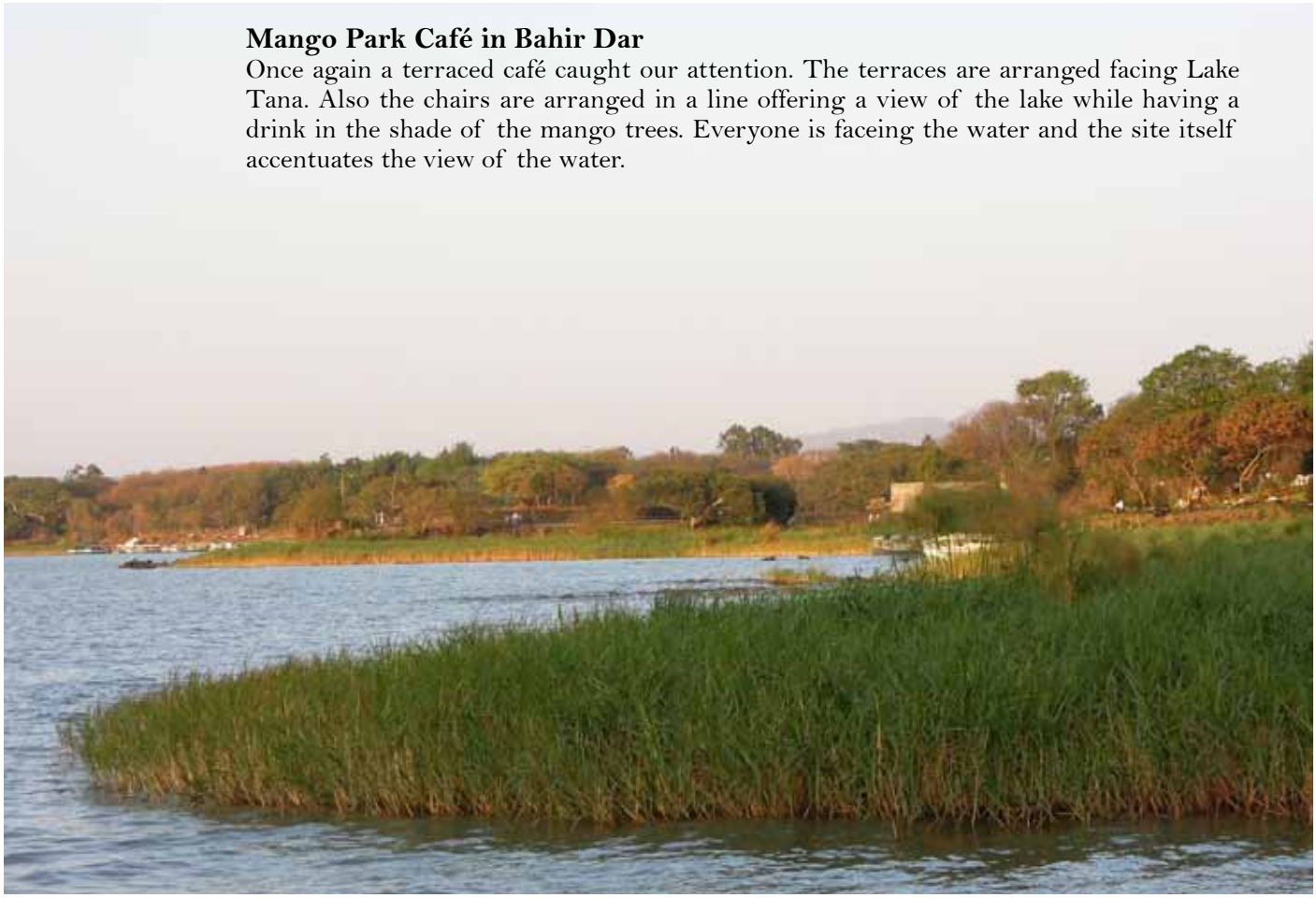
In Gondar a café was located in a terraced slope. The terracing divided the area in different natural rooms with different sizes, which made it comfortable to visit the café both alone and as a large group. The whole café was a garden with a lot of plants, trees and shrubs. The design is aware of the heights and the location of trees to keep the view open from the top of the café but at the same time create a distance to the surrounding. It felt like a piece of calm nature in the town.

A café with a great view in Godar.

All sit next to each other in a line facing the water.

Mango Park Café in Bahir Dar

Once again a terraced café caught our attention. The terraces are arranged facing Lake Tana. Also the chairs are arranged in a line offering a view of the lake while having a drink in the shade of the mango trees. Everyone is faceing the water and the site itself accentuates the view of the water.



Nice view from the café.

Blue Nile Falls.

Blue Nile Falls, outside Bahir Dar

A 30 minutes drive from Bahir Dar and 30 minutes more by foot, takes you to a 40 meter high waterfall. The quantity of water is fluctuating depending on rainy or dry season. The fall is a appreciated tourist attraction, both natives and people from abroad comes here to stand in the splash of the water having ones photograph taken.

Lake Hyke

Lake Hyke is situated north of Dessie, and is a place people visit during weekend and for celebrations. Compared to the dry season in Dessie, Lake Hayk is filled with verdure; plantings, bushes, varying sizes of trees, and the lake besides, making the air feel less dusty. Here people spend time in huts made of bamboo with a view of the lake. There were no accessible shore, but we heard there were plans of constructing a beach.

Bamboo huts.

Lake Hyke.

University in Ethiopia

Wollo University, our project site, is one of 13 new universities constructed in a short period of time in the 21st Century government investment in higher education (GIZ, 2005-2012). All the new universities are built as low budget projects with standard building types and structures. This new investment is a product after years of deprivation of higher education due to recurrent reconstructions of the system, enforced by occasions in the history.

The first schools in Ethiopia were founded in the late 19th century by missionaries mainly from France, Italy and Sweden. In 1923, when the emperor Haile Selassie came to power he continued to invest in schools (Cornell, 2004, p. 70), but the five year Italian occupation (1935-41) put an end to it when more than 70 percent of the higher educated people were eliminated. After the occupation Ethiopia and Selassie once more had to build up a new education system (Cornell, 2004, p. 50). Next adversity came with the communism coup, controlled by Soviet in 1971, when the main victims again were the higher educated. The collapse of the Soviet Union meant, once more, that the country had to build up the educational system from scratch (Cornell, 2004, p. 51), the fourth time in a century.

When understanding the history of the educational system, we desided to visit some of the Ethiopian campus sites. We also asked ourselves if there is a general concept in campus design.

Campus design

The literature on campus design we found were a bit limited and perhaps more what we believe to be a western, especially American view, as for example Dober's (2000) book *Campus landscape.* He writes; *"Trees and lawns are a standard Campus landscape"* (Dober, 2000, p. 9) and the landscape of the Campus is seen: *"... as a green carpet upon which buildings are placed, or it is articulated as a device to extend a building design concept into open space, with a garnish for an architectural feast."* (Dober, 2000, p. XVI). This could be an accurate description of a Campus, although one can argue it to be a bit one dimensional and lame. It has a focus on buildings and the landscape is only seen as their decoration. If we would transfer these thoughts to our site it means that the design concept of the buildings should be desirable enough in order to contribute to the landscape design. However, the outdoor space should support the functions of the buildings and provide good conditions for the campus as places for study, work and student residential.

The limited information we found contributed to our wish to visit other universities in Ethiopia to get inspiration of local campus design.

University study trip

We visited three Campus sites other than Dessie Campus, which all were from different time periods; Addis Ababa University, Bahir Dar University and Wollo University's Kombolcha Campus.

Addis Ababa University Landscape

Haile Selassie University 1 was established in 1961 (Cornell, 2004, p. 71) and is today the oldest University in Ethiopia. Today it is called Addis Ababa University and is located in Haile Selassie's old palace. The surrounding landscape, Haile Selassie's old garden, is an extraordinary park that belongs to the University. Most of the faculties are surrounding the park, even though some are located outside the area. The entire area is planned to be a palace park more than a Campus area, and you can see the traces from its period as residence.

The park is well planned with a formal structure, and consists of lawns, mature trees and ornamental plantings. In the central vista from the old palace, a fountain is located surrounded by benches and other sitting opportunities; in forms of steps and walls. The landscape is planned into smallest detail.

Fountain located in the centre of the park.

Nowadays, the palace garden is a Campus park.

Haile Selassie's old palace is today the main building of the University Campus.

Bahir Dar Landscape

Bahir Dar University started to be built around the mid 1960s, and has a more intended Campus design compared to Addis Ababa. Both the architecture and structure are clearly influenced by the modernistic aesthetics, and resembles Le Corbusier and his grandiose approach to architecture. The entire area is a planned structure of large scale buildings, roads, green areas and a sport ground.

The green areas could be divided into formal structural areas and more free green spaces. The structural green areas have ornamental plantings, trees with interesting forms and flowers and well-maintained lawns. Most of the lawns are surrounded by hedges, which make them impossible to be trodden and thus have no other function then being viewed.

The more free green spaces, not as common as the structured ones, are found in between different areas and work as fill out spaces. This type of spaces could for example be a forgotten area behind buildings or an area along an alleyway. These areas are looser in their appearances than the more maintained and structure ones. We observed students using them for hang-out and as private study places. One can argue if the more loose structures are more inviting to appropriate for your own purposes than the more formal planned structures.

Kombolcha Campus landscape

Kombolcha Campus is the other campus of Wollo University, located around 10 kilometres southeast of Dessie. The two campuses have good exchange and are using one another in the teaching. Since Wollo University is a part of the government's low budget investment in higher educational the two campuses are constructed with the same type of buildings which make them almost look the same.

Kombolcha is, however, located on an altitude around 700 meters below Dessie, which gives a significant variation of the climate conditions. Kombolcha is much warmer and has other prerequisites. When it comes to the outdoor environment Kombolcha and Dessie Campuses look the same, a construction site with open original soil and pebbles, dust, mud and lack of vegetation.

In Kombolcha some of the existing trees are kept.

The buildings of Kombolcha Campus are of the same characters as Dessie Campus.

Modernistic buildings in Bahir Dar with sitting opportunities in front of the hidden lawns.

Students in Bahir Dar are using the unplanned areas as private study places.

Pedestrians use both the roads and the paths for walking.

4. Context Dessie Campus, Wollo University

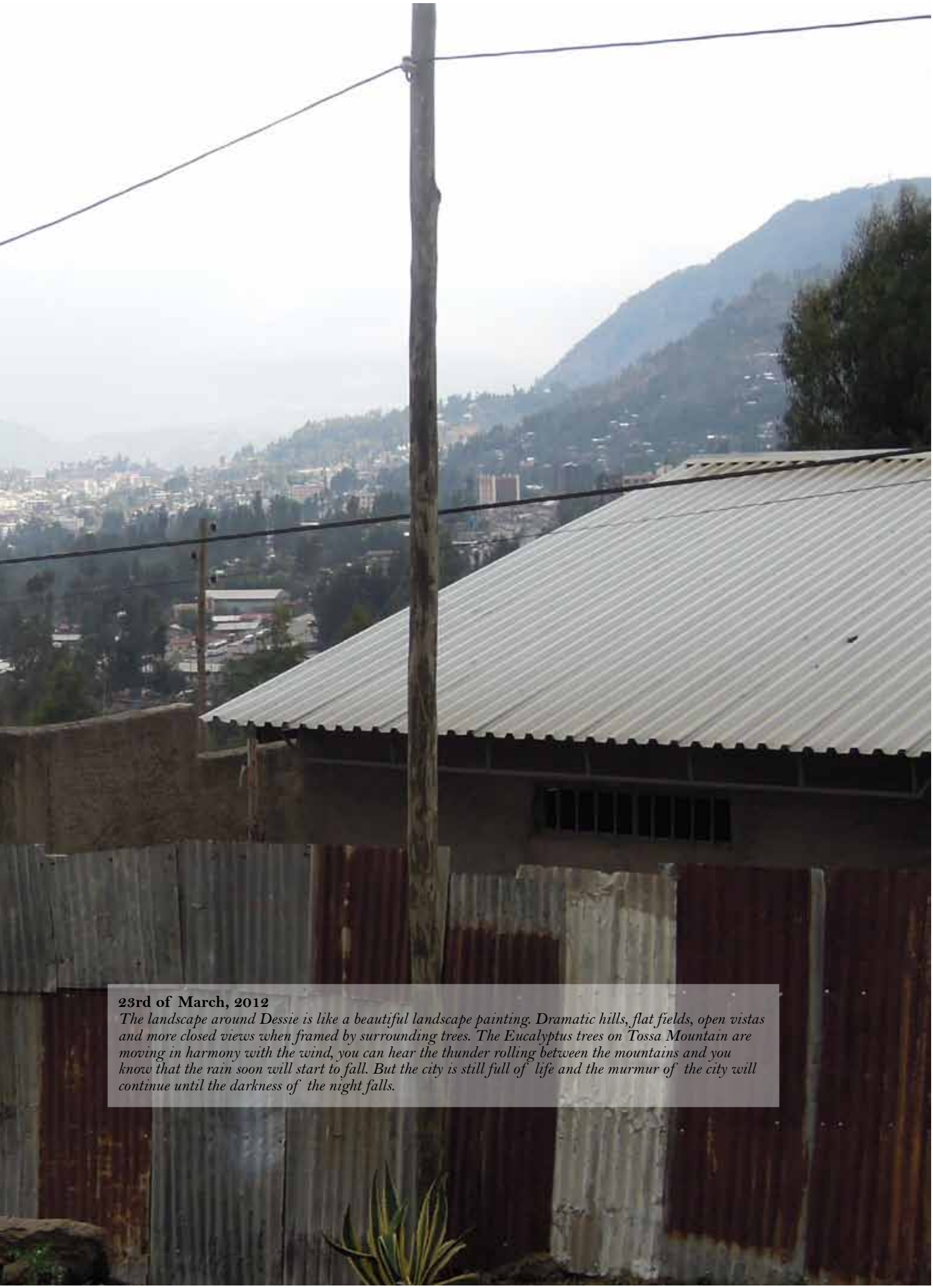
Wollo University's Campus in Dessie is situated in a mountainous landscape a few kilometres from the city of Dessie. At this place we have been spending five weeks walking around, mapping, taking photos and talking to clients and site users. This is the initial part of the Design Program for future change of Dessie Campus, and includes contextualisation, problematizing and analysis of the site and its surroundings. By bringing forward existing future visions for the University, valuable landscape characteristics and different problems the site is facing, this part delineates the foundation for the proposal of future change.

Visions for the University

The University has great visions and plans for the outdoor environment at the Campus. They want Wollo University to be something outstanding, something to show and something that attracts people. The outdoor environment should contribute to put Dessie and Wollo University on the map and should give an opportunity to compete with other universities.

The request of us is to produce a landscape plan covering the whole University Campus site and to let it include vegetation and trees, treatment of the heavy rainfall and water runoff, new paths and new thoughts of solutions as well as inspiration. The University wants to have exotic trees, ornamental plantings, fountains, monuments and statues. There is an outspoken wish from the Department of Agriculture to be part in the final selection of vegetation, to both contribute with the local knowledge but also for them to learn more about landscape architecture (Muluneh, 2012, oral). The students could also contribute during the construction phase (Woldehawariat, 2012, oral). One of the main goals of the Design Program is to create something the University can strive for together, to make all work in the same direction.

There are already plans and specific visions for some parts of the Campus. For example the University has a plan to create a large park with flat lawns west of the Campus and an idea of making the adjacent Tossa Mountain into a botanical garden with more than 35 000 different species. The wish is to make the parks available for the people of Dessie town (Muluneh, 2012, oral).



23rd of March, 2012

The landscape around Dessie is like a beautiful landscape painting. Dramatic hills, flat fields, open vistas and more closed views when framed by surrounding trees. The Eucalyptus trees on Tossa Mountain are moving in harmony with the wind, you can hear the thunder rolling between the mountains and you know that the rain soon will start to fall. But the city is still full of life and the murmur of the city will continue until the darkness of the night falls.

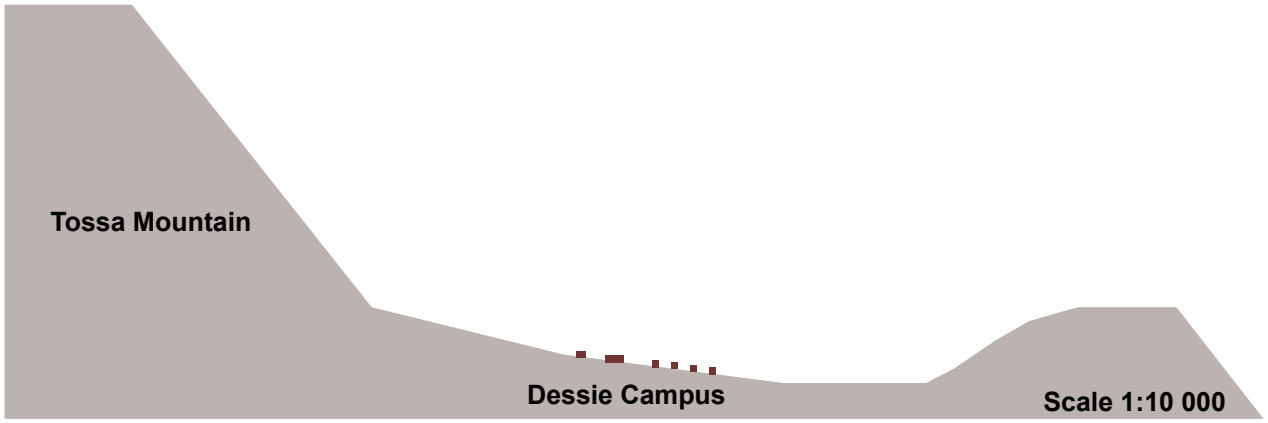
Location and preconditions

Wollo University is located 2-3 kilometres north of Dessie. The location of the University is rural and peripheral with a weak connection to Dessie, since it is not located after the asphalt road going between Addis Ababa and the northern parts of the country but along a gravel road taking approximately 20 minutes to go by car to town.

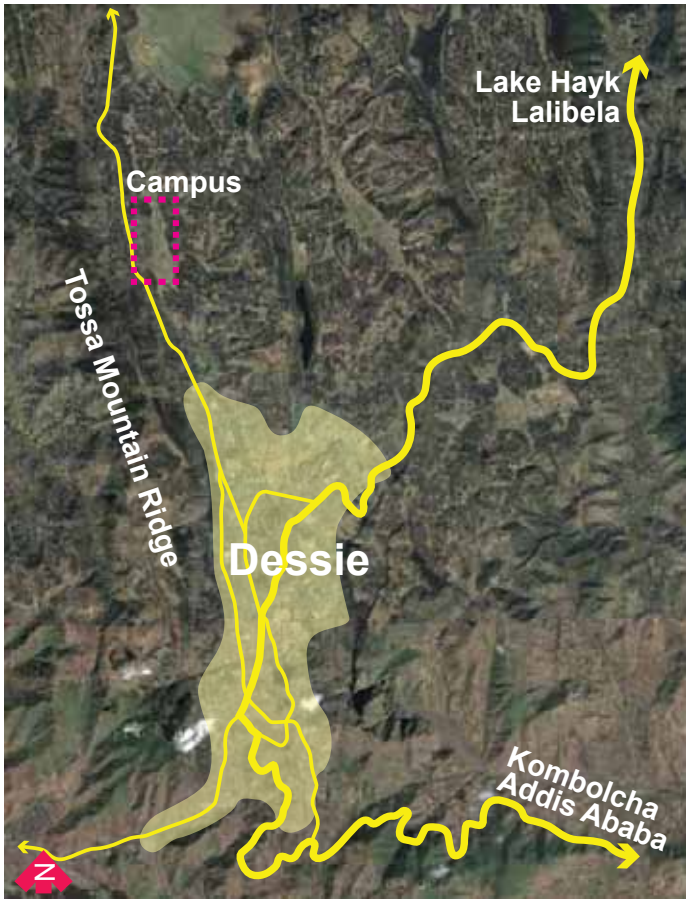
The Campus site covers an area of 72 hectares (Mengistu Dargie, 2007, p. 6) and is elongated in a south-north direction. Like Dessie, the surrounding landscape has defined its form, situated in a valley between a mountain called Tossa and a hill. This mountainous area puts Wollo Campus in a beautiful and dramatic setting. The Campus faces the gravel road in the west with small shops, taxi busses and horses going to Dessie town, further west Tossa Mountain arises. On the eastern side a grazing land stretches out with a smaller pond and a partly overgrown stream.

The Campus consists of student residential areas, educational buildings (departments, lecture halls, libraries etc.), administration buildings, infrastructure and empty open spaces. There is a lack of essential facilities, as for example functioning toilets. The students live at Campus, and the peripheral location makes them to some extent isolated from town.

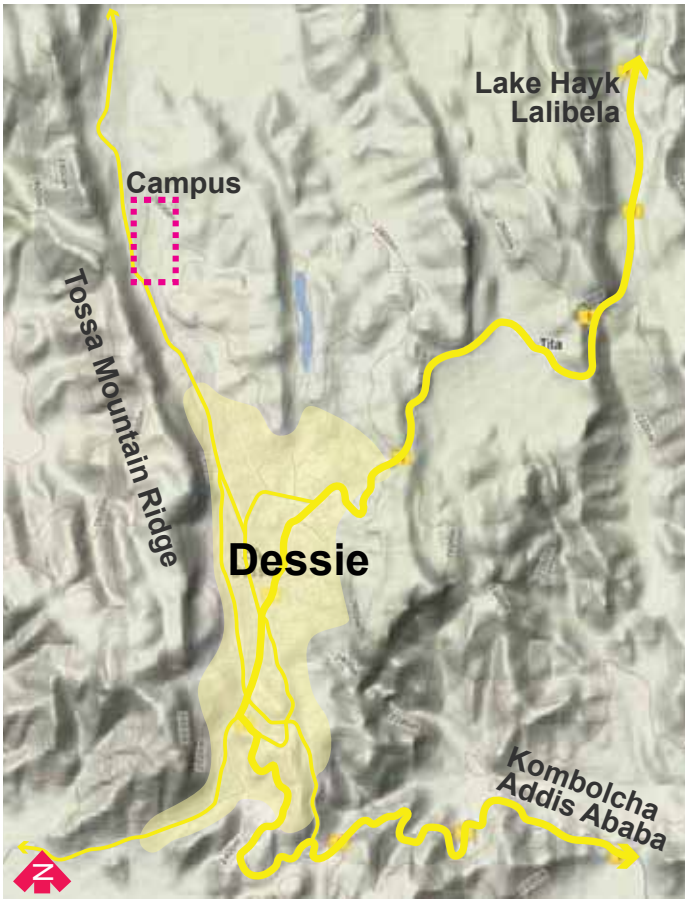
The GIZ (Gesellschaft für Internationale Zusammenarbeit) engineers, together with MH Engineering a consulting firm from Addis Ababa, are the one that have constructed and drawn the overall design of the site. They told us that the University program, which Wollo University is a part of, is a low budget project (Debalke, 2012, oral), which explains the simple arrangement and construction of the buildings. The buildings just cut through the ground and are not adapted to the terrain of the landscape, which has caused a lot of problem with steep slopes next to them.



The location of the Campus in relation to its dramatic surrounding.



The Campus is located north of the town.



Dessie and the Campus are surrounded by mountains.

The mountainous area put Dessie Campus in a beautiful and dramatic setting.

Connection to Dessie

The connection between the Campus site and Dessie town is via a gravel road that passes through a rural area of small one-storey houses and many people and animals. The journey feels longer than it actually is since the road is very bumpy. The gravel road contribute to this feeling of remote location and if it would be changed to an asphalt road it would make a huge difference in accessibility and for the houses along it, since we generally experienced settlements to be more developed along asphalt roads.



Snapshots from the car trip between Dessie and Wollo University.







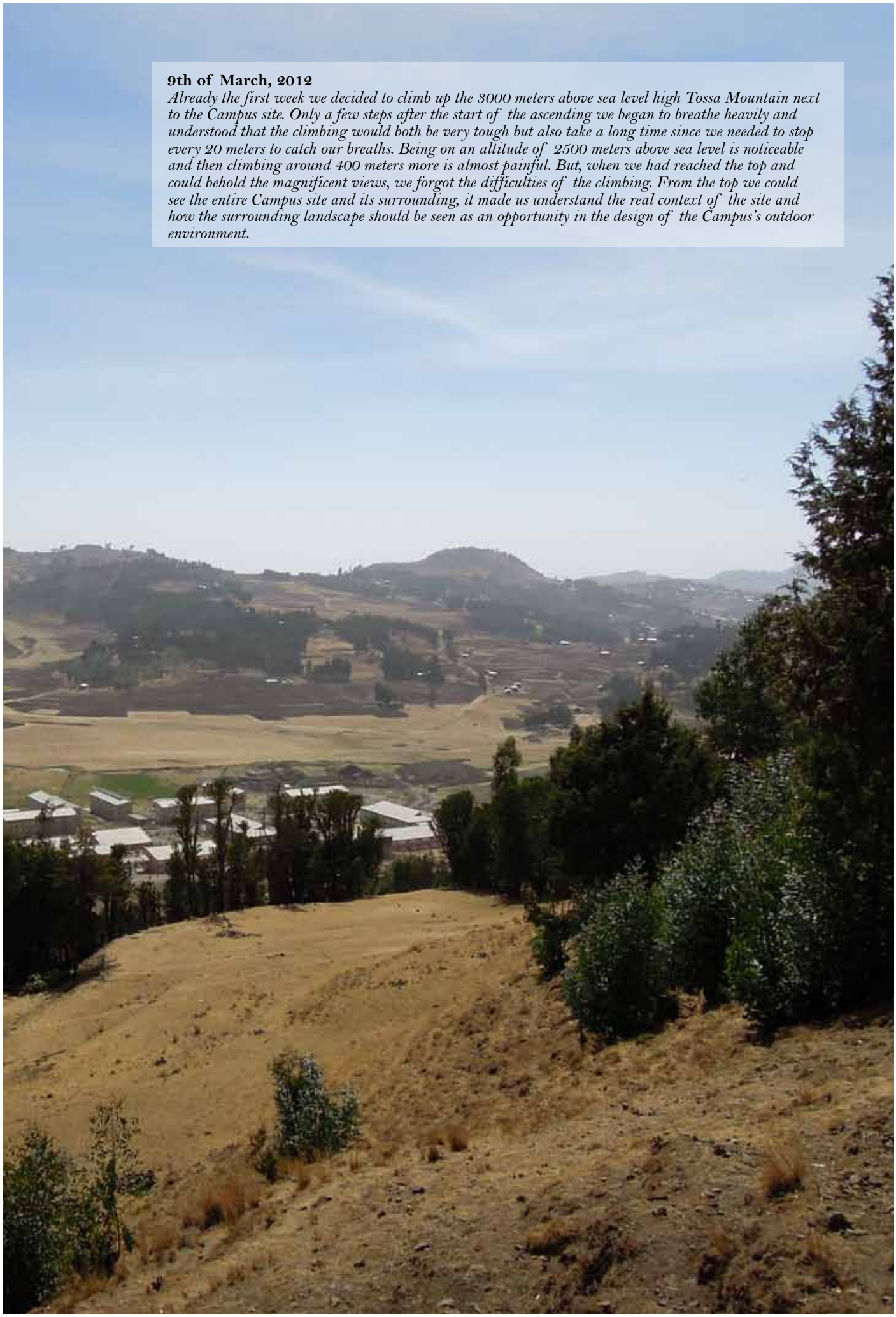







9th of March, 2012

Already the first week we decided to climb up the 3000 meters above sea level high Tossa Mountain next to the Campus site. Only a few steps after the start of the ascending we began to breathe heavily and understood that the climbing would both be very tough but also take a long time since we needed to stop every 20 meters to catch our breaths. Being on an altitude of 2500 meters above sea level is noticeable and then climbing around 400 meters more is almost painful. But, when we had reached the top and could behold the magnificent views, we forgot the difficulties of the climbing. From the top we could see the entire Campus site and its surrounding, it made us understand the real context of the site and how the surrounding landscape should be seen as an opportunity in the design of the Campus's outdoor environment.



Habitat and climate conditions

The habitat of Dessie is moist highlands, called Moist Dega (Bekele-Tesemma, 2007, p. 9), and the soil type at the Campus is called black cotton soil, an unstable soil that suffers a lot from heavy rainfall and erosion (Debalke, 2012, oral).

Dessie has two rain seasons; a short period in March and April and the main period in July, August and September. During the rainy season more than 200 mm per month can fall (Johansson, 2012, oral) and the rains are both heavy and long lasting. In October and January there is hardly any rain falling at all and the climate is very dry, the days are warmer and the nights are cooler. This system of three seasons makes the rain periods very important for the survival of the vegetation, but also for the people since, as we wrote earlier, most of the people in Ethiopia are farmers and therefore dependent on the rains.

The temperature of Dessie varies between 10 °C and 25 °C (Johansson, 2012, oral) and the climate is often experienced as cold, a physical matter brought up several times during our field work. The wind on the site is contributing to the coolness and is affected by the surrounding mountains. What we have been told is that the toughest and coldest winds come from south, which, according to Muluneh (2012, oral) the Dean of Agriculture, has contributed to the name of that part of the Campus site to be Siberia.

Site users

The students are the main users of the Campus site since they both live and study there, but it is also a working place for teachers, academic and administration staff among others. During our field studies and inventories we have spoken to a lot of people, and a majority of them have been students since they are the ones spending most time at the Campus. The conversations have mainly been about the usage, wishes and expectations of their outdoor environment, to give us a more personal picture of what is seen as positive and negative features.

A conclusion we could draw from both observations and conversations was that most of the students spent their time outdoors, either hanging with friends, walking, talking, studying and some liked practicing sports. The existing landscape is considered as not maintained, lacking qualities and either too muddy or dusty. The site users have more than once pointed out their wishes and needs for a better outdoor environment with a good standard and a sustainable approach. Another opinion brought up several times was the climate being too cold and consequently prevented outdoor activities.

Both teachers and students have pointed out the prevailing lack of study places. The libraries are crowded and do not have enough chairs for all the students at the Campus, and the dorms are small and shared, not an ideal place for studying. The students, however, have found their way of dealing with the problem by using the outdoor environment for studying, especially the hillside of the mountain and the grassland east of the site are well-visited places for their peace and quiet.

Students used the grazing land for studying.

The field was a popular area for practicing sports.

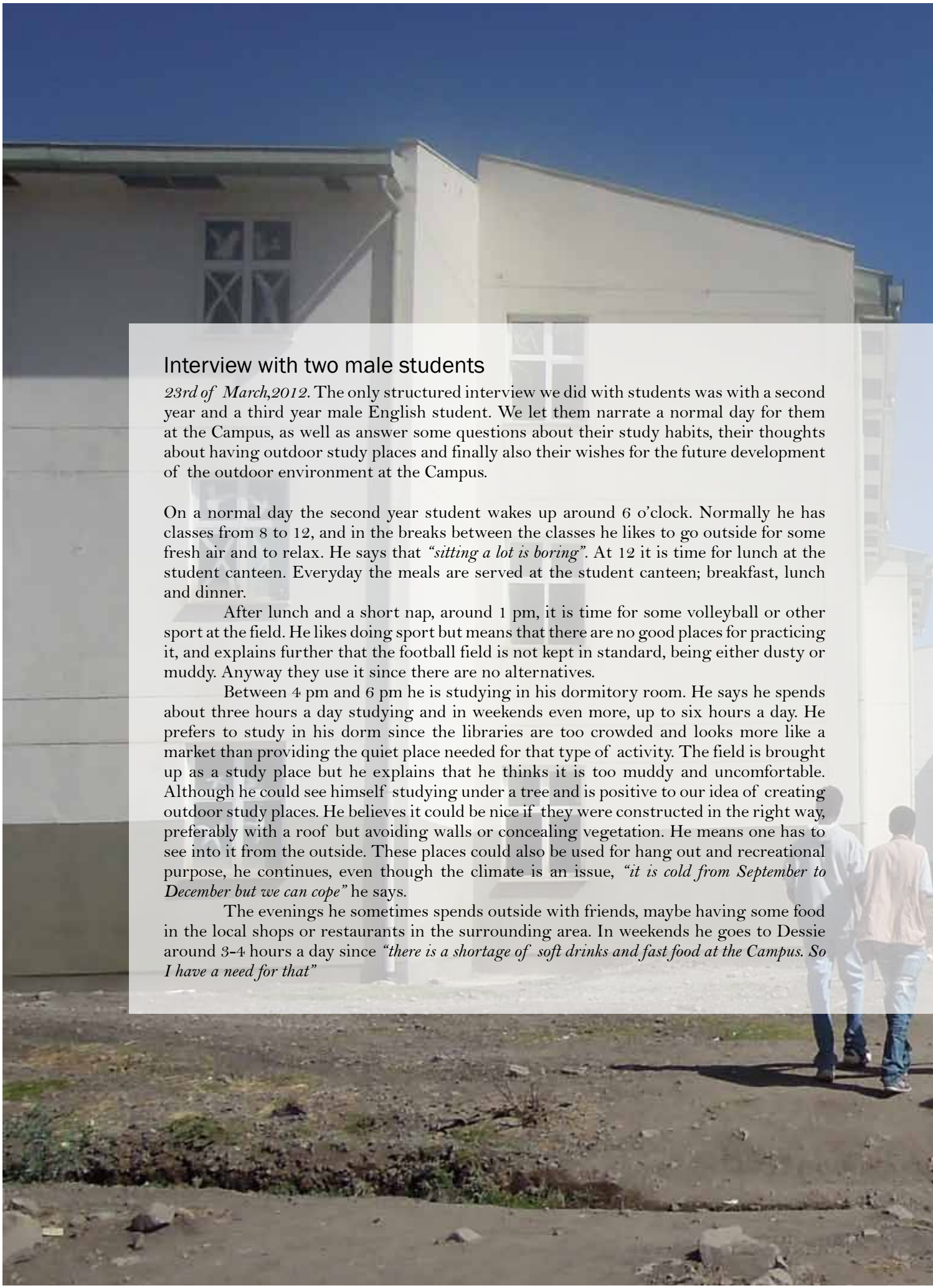
We were told that some students used the quiet and calm hillside of Tossa Mounatin for studying.

Well-visited shops and cafés outside the Campus area.

The Campus site was well used by grazing kettles as well as other animals.

The students used the courtyards for drying laundry.

The area is still under construction.



Interview with two male students

23rd of March,2012. The only structured interview we did with students was with a second year and a third year male English student. We let them narrate a normal day for them at the Campus, as well as answer some questions about their study habits, their thoughts about having outdoor study places and finally also their wishes for the future development of the outdoor environment at the Campus.

On a normal day the second year student wakes up around 6 o'clock. Normally he has classes from 8 to 12, and in the breaks between the classes he likes to go outside for some fresh air and to relax. He says that *"sitting a lot is boring"*. At 12 it is time for lunch at the student canteen. Everyday the meals are served at the student canteen; breakfast, lunch and dinner.

After lunch and a short nap, around 1 pm, it is time for some volleyball or other sport at the field. He likes doing sport but means that there are no good places for practicing it, and explains further that the football field is not kept in standard, being either dusty or muddy. Anyway they use it since there are no alternatives.

Between 4 pm and 6 pm he is studying in his dormitory room. He says he spends about three hours a day studying and in weekends even more, up to six hours a day. He prefers to study in his dorm since the libraries are too crowded and looks more like a market than providing the quiet place needed for that type of activity. The field is brought up as a study place but he explains that he thinks it is too muddy and uncomfortable. Although he could see himself studying under a tree and is positive to our idea of creating outdoor study places. He believes it could be nice if they were constructed in the right way, preferably with a roof but avoiding walls or concealing vegetation. He means one has to see into it from the outside. These places could also be used for hang out and recreational purpose, he continues, even though the climate is an issue, *"it is cold from September to December but we can cope"* he says.

The evenings he sometimes spends outside with friends, maybe having some food in the local shops or restaurants in the surrounding area. In weekends he goes to Dessie around 3-4 hours a day since *"there is a shortage of soft drinks and fast food at the Campus. So I have a need for that"*

The third year student's day looks almost the same, having classes, breakfast, lunch and dinner at the same time. Though, he points out that he might not spend that much time on studying during the weekend, because of his time-consuming obligations as a student representative.

He believes the best place for studying is in his dormitory room with close friends. The outdoor is too crowded, he means, and the libraries do not offer any rest or peace, it is a noisy place where mobile phones are constantly ringing. *"I don't like it at all"* he says. He continues to explain that during the exams one cannot find a single chair and it is a general lack of space. The idea of having outdoor study places makes him sceptical and he does not understand the reason of such places. But *"it is related to my nature, I prefer a place where it is quiet"* he concludes. Although, these places would probably be used for other purposes as well like hangout which he means could be cool. But, as the second year student already elucidated, the third year student also finds the climate conditions to be a problem.

As well as the second year student he likes spending his evenings outdoors, taking walks with friends and talking. Normally he eats dinner at the small restaurants west of the site, and says that *"the food at the student café* [canteen] *is not that good. The state pays eight birr per day* [around three Swedish crowns] *for food"*. Overall he spends most of his time at Campus.

Both of the students wish for a general better quality of the site, since they today see a lack both in the physical environment and in the facilities. The third year student says he think it is good that something will be done with the outdoor environment, but he really states clearly that it must be something sustainable and encourage us to *"do it nicely!"*, referring to the buildings of the Campus that already are starting to fall apart. They both agree to Bahir Dar University as a good example of a nice outdoor environment.

Walk thought the site with a male student

13th of March, 2012. During one of our inventories at the male residential area we met a Public Health Student, who voluntarily showed us the Campus site and shared us his opinions about it.

The first place he wanted to show us during our guided tour at the Campus was his dormitory room. He informs us that *"girls are not permitted here but for you two I'm sure it's ok"*. We said we did not want to cause him any trouble but as usual it is *"no problem"* for us. The small clean room was located on the second floor and he shared it with five other male students. He explained that for the moment they were only three sharing the room, and when we came the other two were studying in their bunk-beds. Then we continued our walk to the student canteen where all the meals are served. Even though they do get food everyday it is only a loan from the state. *"When you get a job you pay back"*, he explains. He goes on explaining the functions of the buildings; the south building is for freshmen students and the north one is for senior students. The middle one is not yet in use but is supposed to be the future kitchen. Today all the food is prepared in a temporary shed outside. Inside the canteen he described the lack of a queue system for the food and said that everyone wanted to come first which creates a chaotic disorder. *"That's the way we learn to do it"*, he concludes. The tour ends with him inviting us to join him for lunch: *"Tuesday and Thursday are good. days. It is meat"*. We politely declined the offer: *"maybe another day"*.

During the walk he shared is opinion about the Campus. He was critical to the facilities of the area, especially the shortage and the poor quality of the toilets. People are peeing everywhere, even directly from the dorm windows, he said. *"You can feel the smell"* and yes, we could feel the smell. He continued elucidating the fact that the Campus site still is a constructing site where nothing is adequate or finished neither the buildings nor the roads. The lack of constructed roads and paths are during rainy season causing problems with mud which makes it difficult to go from point A to B. He says: *"when the rain comes we can't even go outside. It is hell for us!"*

A very positive side of Campus life he really emphasized was the friendly social climate and he embraced the fellow students: *"Love is good at the Campus. People really take care of each other"*.

Talk with two female students

12th of March, 2012. One day when we were doing inventories at the female residential area we met two female students who started to talk to us. They asked us about Sweden and our University, and we about their Campus.

They told us that they lived four persons in a too small room, with only two desks and one locker. The facilities, they continued, are bad and they explained how they have to use temporary toilets that are dirty and unhealthy, since the real ones are not yet installed. They also complained about the deficiency of study places and books, and meant there are not enough spaces for everyone. If they wanted to have a place or a book at the library, they had to go up really early in the morning otherwise they would all be occupied. This situation made it more common for them to study in their room or at the field.

Talk with a male student

13th of March, 2012. Another student we begun talking to when we moved around the area was a first year medical student. He said he thought the life at the Campus was similar to living in a rural area, referring to its peripheral location and its lack of facilities. These lacks found within the Campus he talked a lot about; the lack of toilets, the unstable electricity, overcrowded cafés and lack of water. The cold climate however, which many other students have complained about, he thought was something positive because it prevented microorganisms and bacterial growth in the bad sanitary situation, and thus prevented cholera and diarrhoea. He also believed that the cold climate conditions made it easier to study since it was not too hot.

He ends by concluding that a maximum limitation of six students per room was good, since it was beneficial from both a health and economical perspective, as well as from social aspects, you never have to be alone.

Building types and their distribution

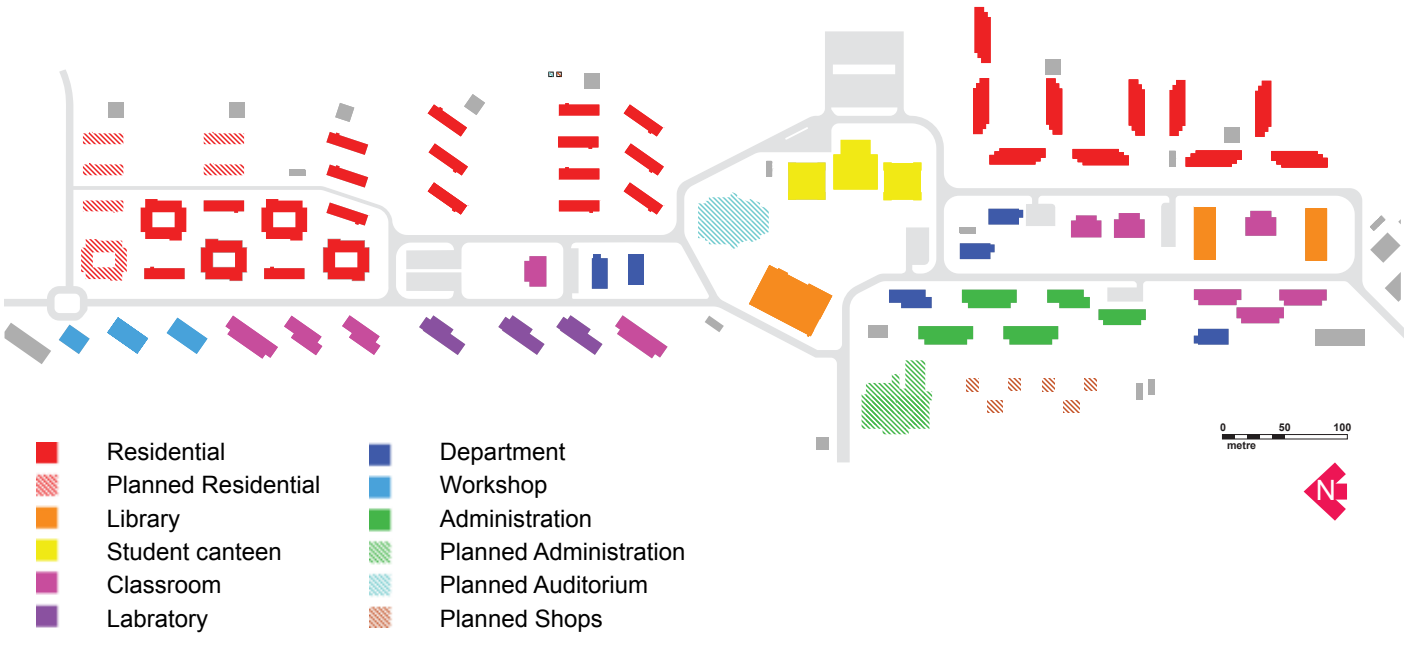
The general character of the site is towards a more large-scale structure, where the arrangements of buildings are evenly distributed all over the Campus. There is one exception in the middle of the site, between the main library and the student canteen, where there is a large open surface planned to be a greenery. Next to this surface there are plans in the future to build an auditorium.

A limited number of different building types are found within the site and each scope of use has its own appearance. Most of the buildings have open staircases which we think creates a fluent and interesting transition between inside and outside.

In the northern part of the Campus the male residential area is located, consisting of two different types of buildings; one with courtyard and one block building. The block buildings are arranged facing south-west. The female residential area is located in the southern part of the site, beside the grazing land. The buildings are all of block buildings arranged towards each other in a U-formation. The area suffers a lot during heavy rainfall because of its location in a swampy low point area.

The administration is today located in the central south-western part of the site, but there is a plan to build a new administration building centre next to the new entrance road located west of the main library. Also some new shops, restaurants etc. are planned to be build in connection to this new administration building.

The class rooms and lecture halls are located both in the southern-central part, but also west of the male residential area. Two smaller libraries are found in the southern part of the site.



Administration Building

Administration Building

Administration Building

Administration Building

Male Residential

Female Residential

Class Rooms

Class Rooms

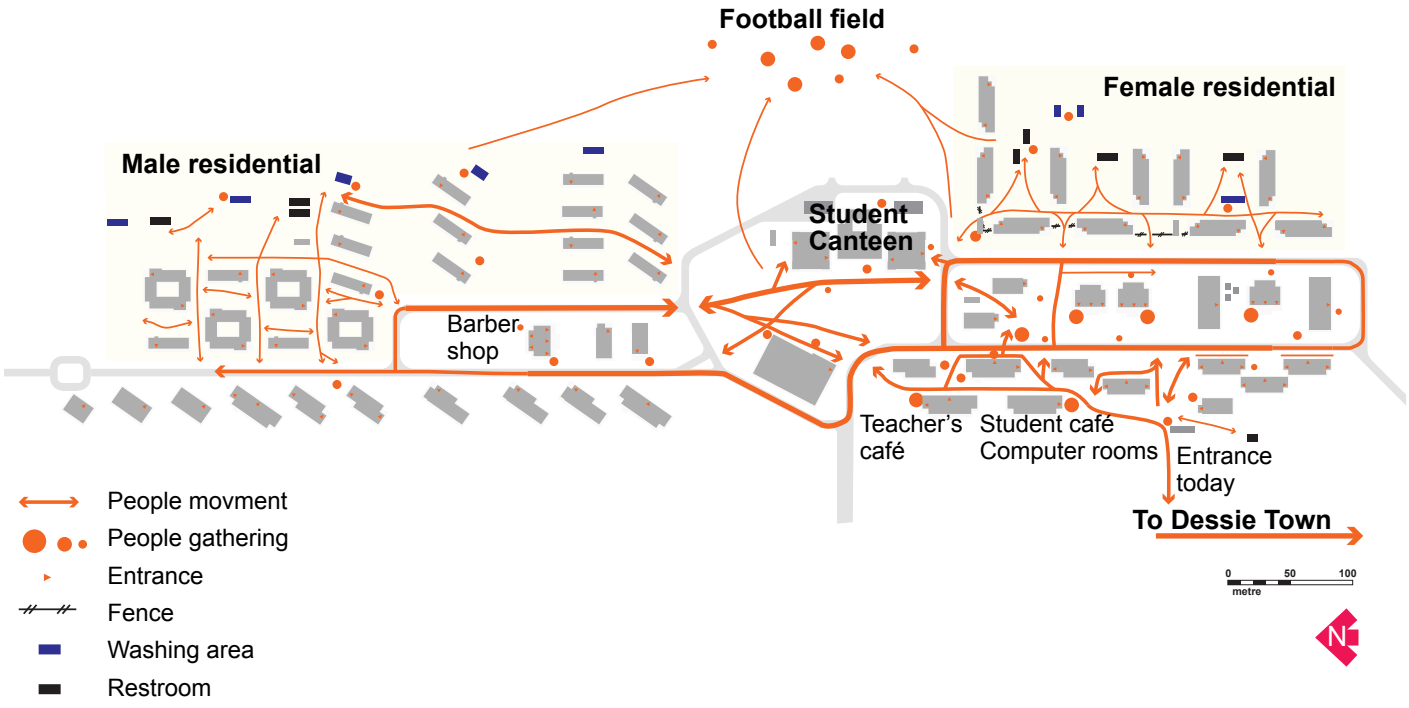
Gathering areas and pedestrian flow

In the begining it was tough to see av pattern of how people moved and used the site, but after spending a few weeks at the Campus, observing and walking around, we got an overall picture of the use of the outdoor environment. We could identify a lack of pathways and a finsihed road system since the people appeared to walk everywhere.

We also saw lack of a defined centre place and there were no planned places for gathering, except the students' and teachers' café and canteen. The gatherings of people are more substantial around the administration buildings and the lecture halls where people are hanging mainly along the roads and close to the buildings. Also the football field in east are frequently and greatly used, both for practicing sports and for studying. We have been told and observed by ourselves that many students also use the hillside of Tossa Mountain for studying. Generally during daylight a lot of people are spending their time outside hanging everywhere. There is a strong shared space mentality where people, cars and animals like grazing kettles, share the space of the streets. During darkness though there are not enough light throughout the area to enable people to be outside.

The biggest flow of people can be found between the residential areas and the location of the lecture halls and administration buildings. The pedestrians are moving both on the newly constructed roads, as well as on informal walking tracks leading between different functions. The infrastructure of the site is mainly focused on the scale of cars, with a substantial focus on parking lots and quite wide roads with narrow sidewalks for the pedestrians. To have a main focus on cars instead of pedestrians when designing the area is to make the area in a nonhuman scale, which contradicts to the today's great number of people moving around in the area.

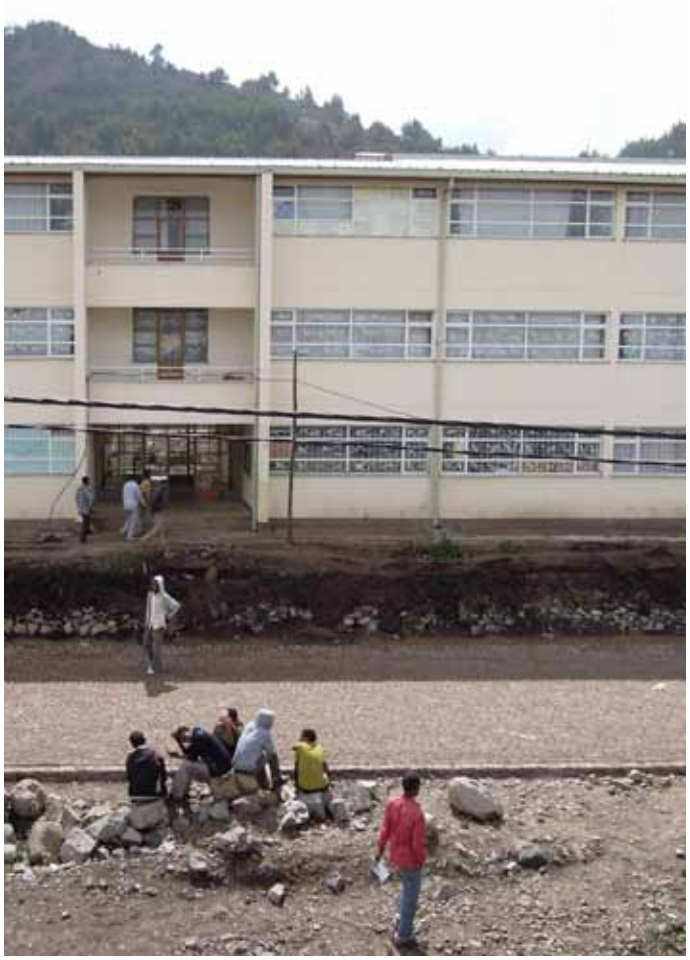
Existing conditions



The roads are wide and designed for cars, even though the pedestrians are dominating the site.

The female residential area is fenced off.

It is easier to see the pedestrian pattern after rain.



There are generally a lot of people outside

Students are walking between the centre area and the male dormitory.

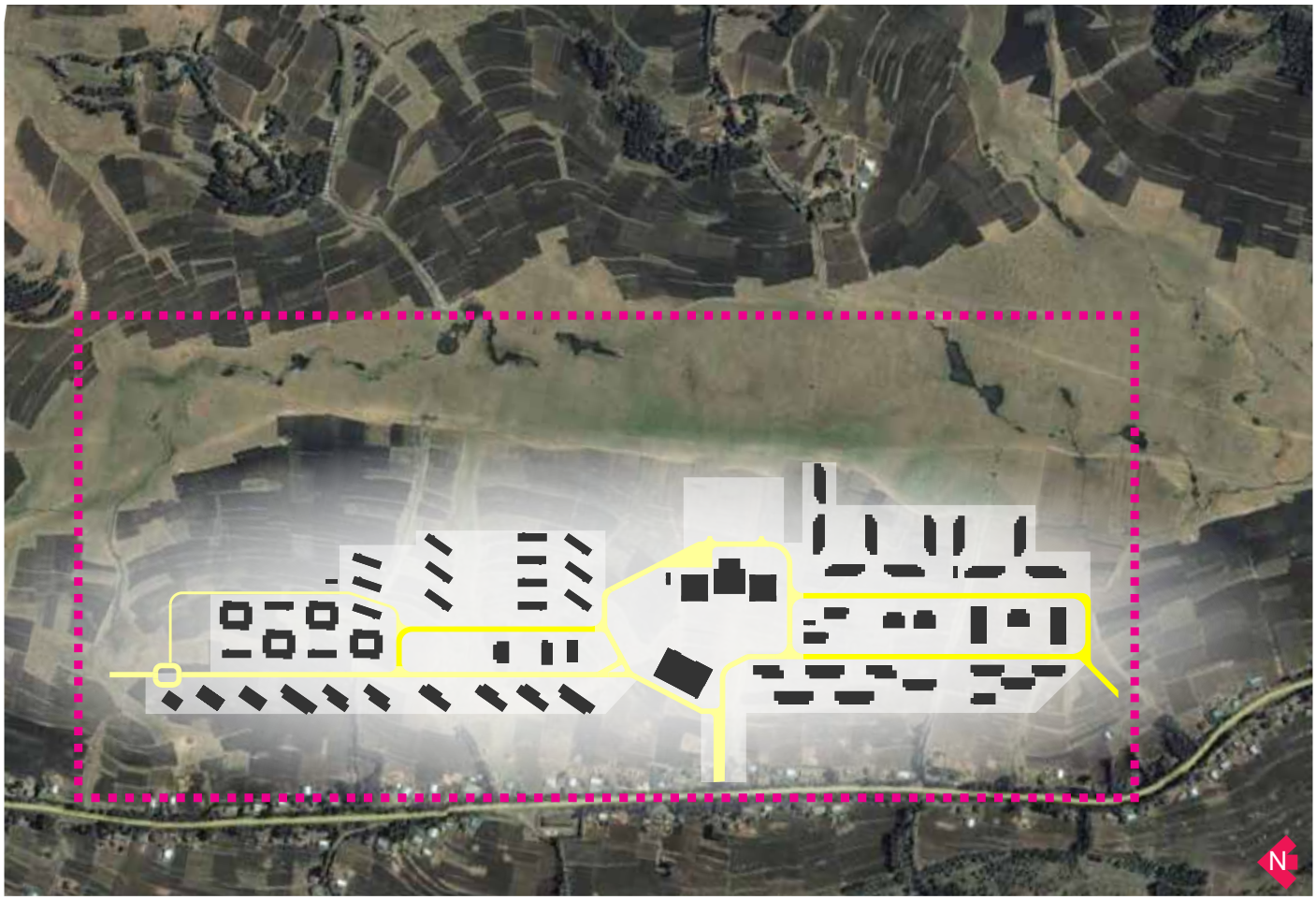
Many people approached us for a talk.

People are using stones and the edge of the newly constructed road to sit on.

Unplanned ground as main appearance

The Campus site mainly consists of bare soil, gravel and stones, and is to a large extent still experienced as a construction site. There is hardly any vegetation found within the site, except some invaded grass, a few newly planted trees in the administration area and two agricultural testing sites; one for trees and one for crops. Some smaller shrubs, considered to be weeds, can also be found on the site.

The existing landscape of the Campus is changing due to season. During the dry periods it is a dry and dusty place without any trace of vegetation. When the rainy season comes the vegetation starts to thrive but the site gets almost impossible to use. The soil is turning into mud and is swept away of the heavy water runoff.



Almost the whole site is still under construction.

Cobble stones are the material that are planned to be used on all the roads within the site.

The dominating part of the open spaces is still unplanned.

There are many bumpy and rambling landforms that could be difficult to cross.

Soil and pebbles are the most common ground material.

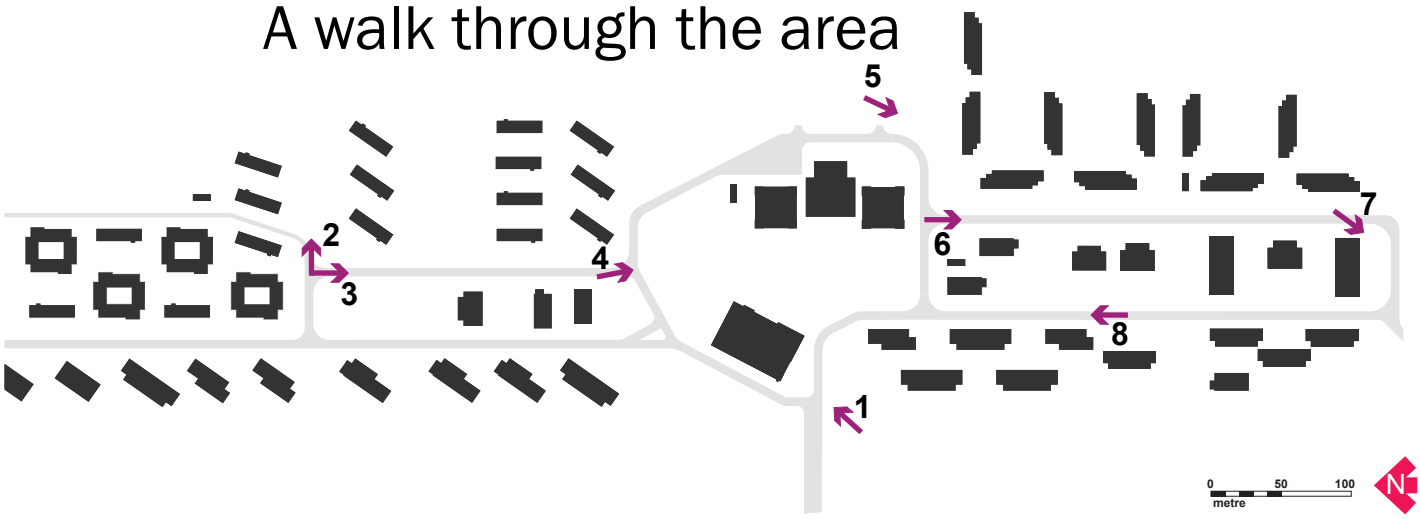
Open space with dry grass is a common view.

During the rainy season the dry grass becomes green again.

A nearly flat plane of gravel that is planned to be a parking lot.

Newly spontaneous planted trees.

The main library with the male residential area on the left hand side and the student canteen to the right side.



View from the male residential area towards the lower parts of the Campus.

The female residential area to the left and the kitchen at the Student canteen to the right in front of the Tossa Mountain.

Road along female residential area under construction.

Green area with spontaneous vegetation has invaded the site from the field in the east.

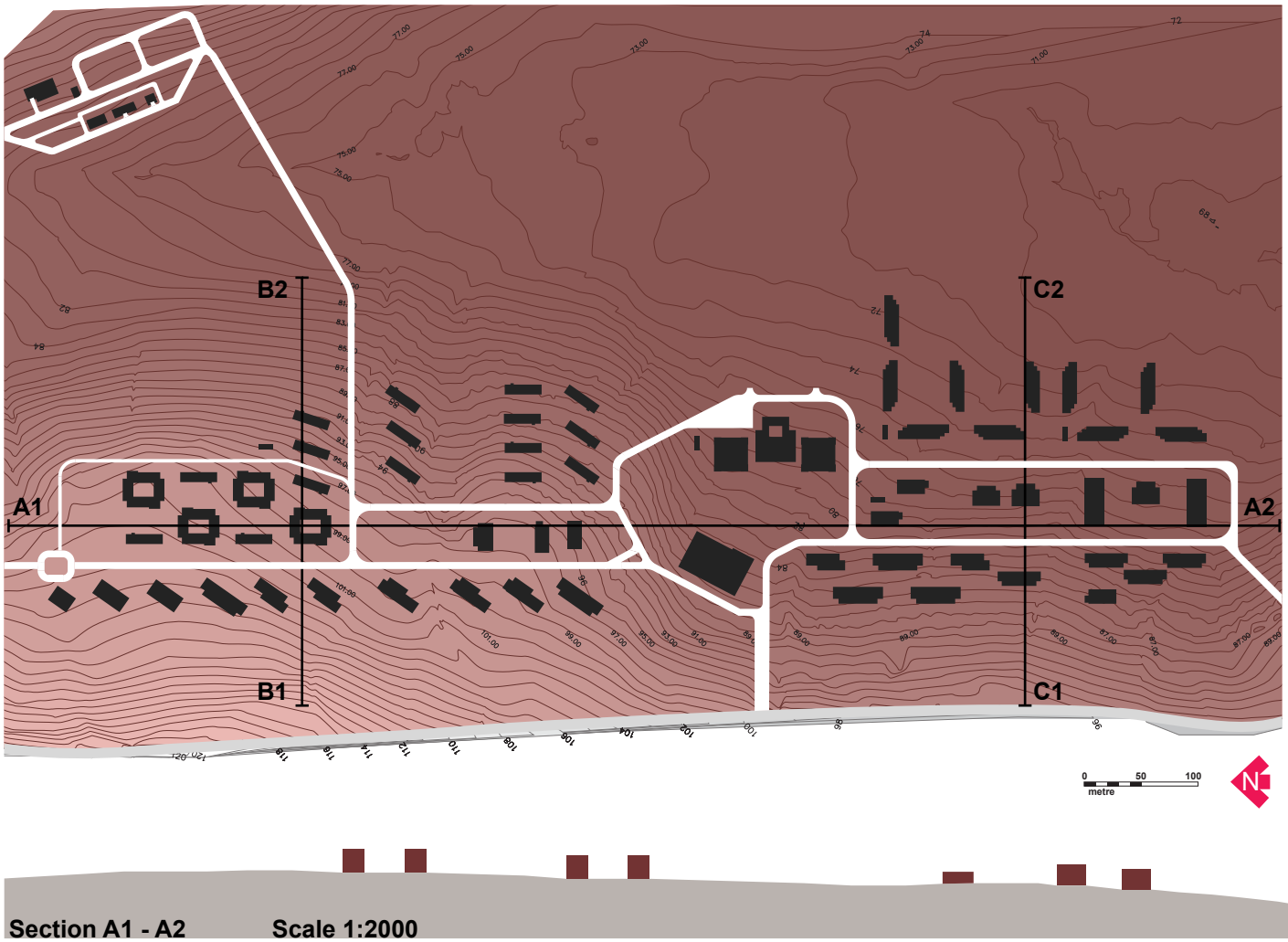
The Tossa Mountain Ridge is always a part of the view from the Campus site.

The southern part of the Campus

The road alongside the administration area with a big open space on the right hand side.

Consequences of the hillside location

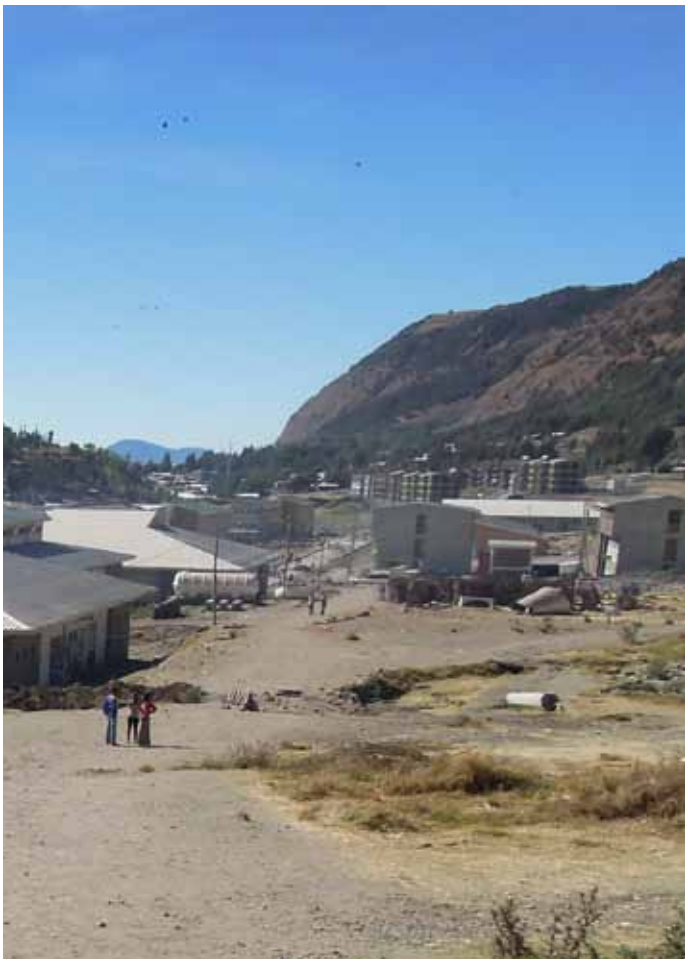
The whole Campus site is located on a hillside facing southeast. The highest situated area of the Campus is in the northern part where the male dormitories are located. From there the whole area is sloping towards the lowest location, which is the female residential area in the southeast. The total height difference between these two areas is approximately 40 meters. The highest pitch is next to the main library, which creates a natural division between the male residential area and the rest of the Campus site. The hillside location and the unstable soil cause problems with water runoff and erosion within the site, a risk of flooding in the lower parts and problems with steep slopes next to the buildings. This problematic is further described below.



Section A1 - A2 **Scale 1:2000**

The whole area is sloping towards south.

The ground is very steep towards the male residential area.



Looking from the male residential area towards the lower parts of the site, in the south.

Section B1 - B2 Scale 1:2000

The male residential area is sloping towards east.

Section C1 - C2 Scale 1:2000

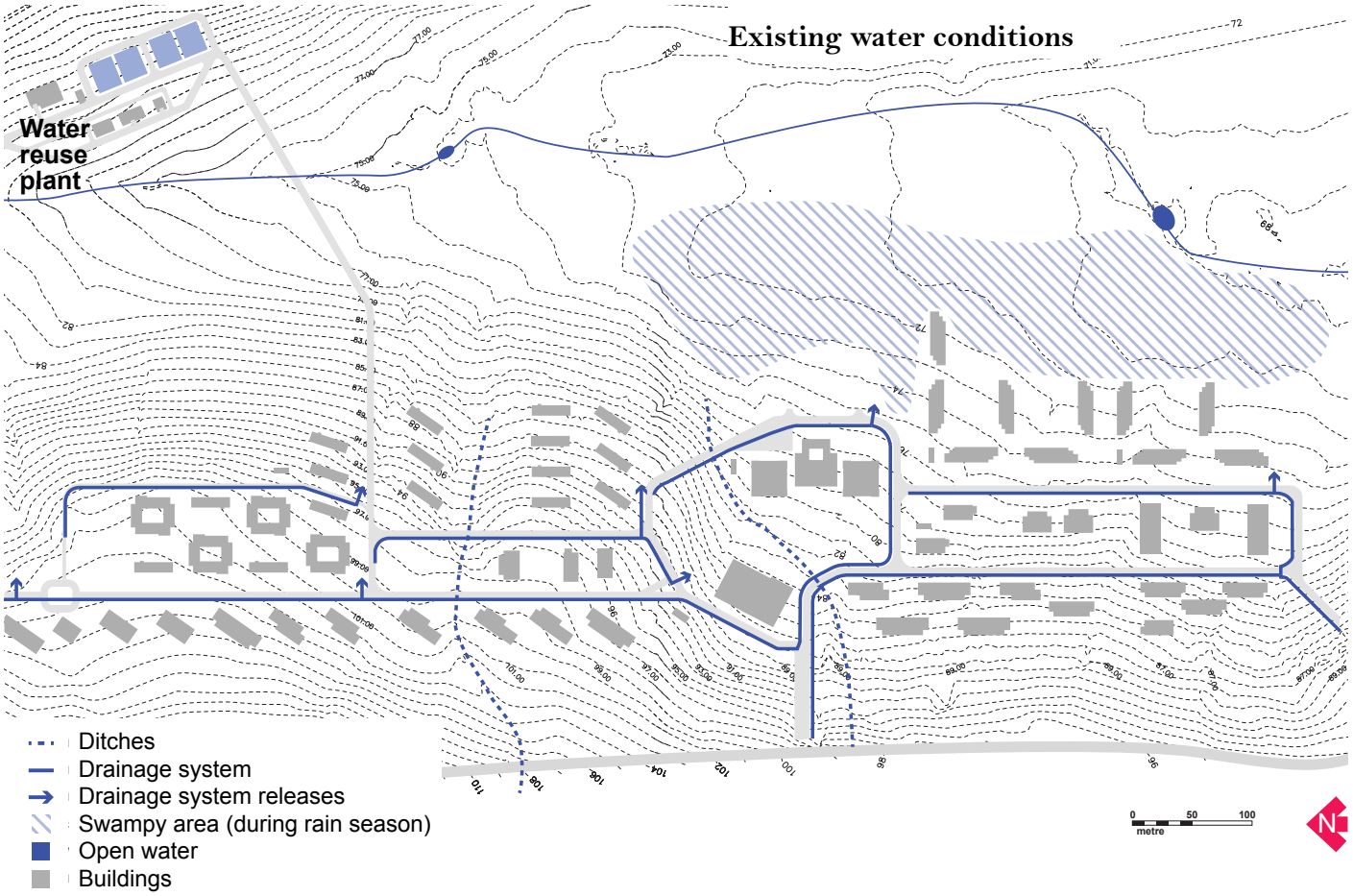
The administration area is sloping towards east and the female residential.

Insufficient drainage

Water is one of the major problems found at the Campus site, particular during rainy seasons, but the traces are seen all year round in forms of ditches and moved soil. The problematic with water is both the large amount falling within the site but even more the water coming from the surrounding landscape, the Tossa Mountain ridge.

The heavy rainfall that reappears twice a year changes the ground into a muddy and unusable area with accumulations of water and natural ditches. The ditches are formed by the will of water and are cutting through the entire site on its way to the lowest point. A drainage system has started to be constructed along the roads, but it lacks a final processing. During rain periods the water is standing still in the channels instead of running away as it should, partially because of the lack of inclination in the channels. Further on, the drainage system causes problem since it do not have a final destination or treatment of the storm water, but just releases the water onto the ground. At these places the water has formed ditches and deltas on its way down to the lowest point, where the female residential area is located. Water is a major problem there and the ground is swampy and to some extent unusable during rainy season.

A water reuse plant that will take care of the water is planned to be build in the north-eastern part of the site.



Ditch leading the water away from the female residential area.

Today the water cuts though the ground and forms natural ditches.

The heavy rainfalls coming twice a year have great impact on the site's usage and appearance.

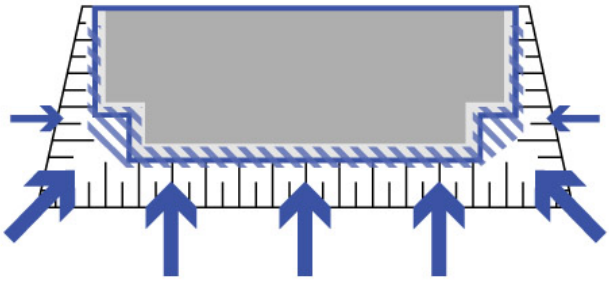
Bridges are constructed to lead people over the water and mud.

During rainy seasons large amounts of water are gathered in the unfinished and incomplete drainage system.

The ground materials are swept away with the water runoff.

Soil and mud is moving down the hills and towards the buildings during rainfall.

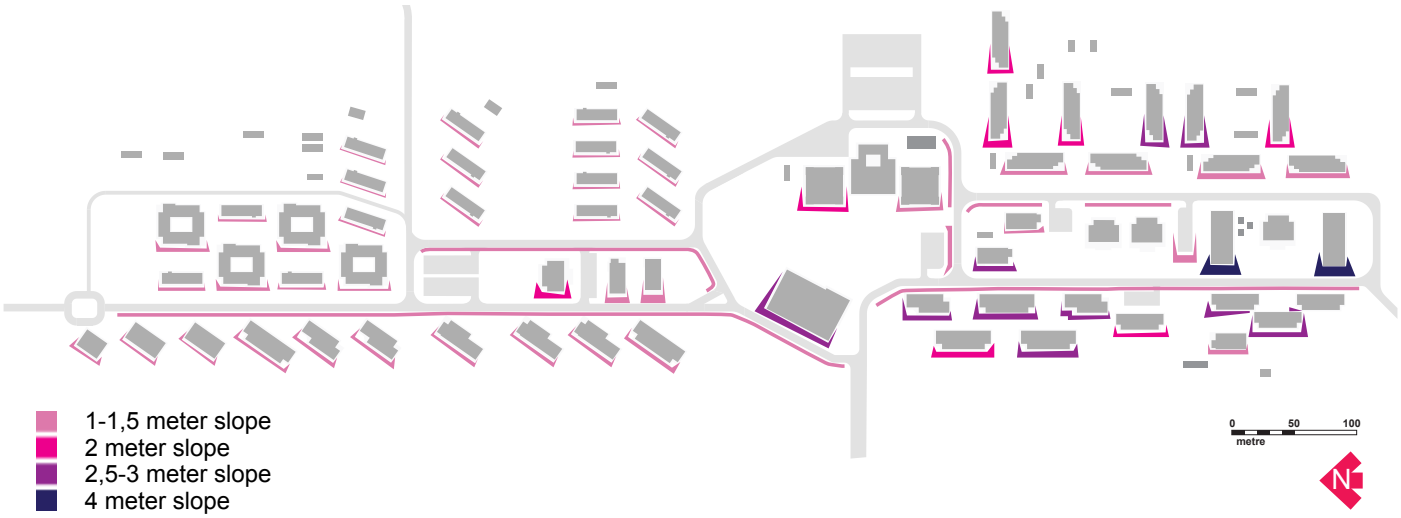
Water is accumulating too close to buildings during rainfall.



Today the water runoff flows straight down to the buildings without any obstacles.

Grass, mud and water at bit too close to the buildings in the female residential area.

Slopes found in the area



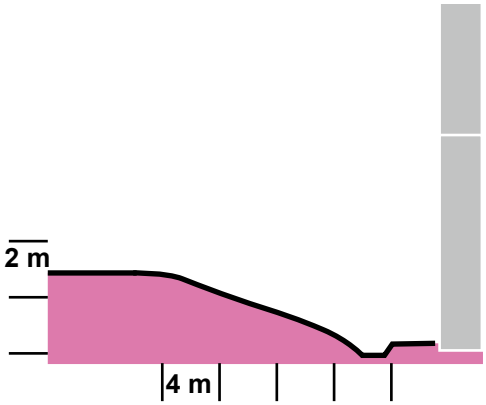
Steep hillsides next to buildings

As mentioned before, the entire site is built on sloping ground. This fact along with the horizontal fundaments the buildings are constructed to stand on is a poor combination. In order to have the buildings perpendicular to the ground the fundaments are forced into the hillside, resulting in very abrupt and steep slopes around them. The slopes cause problems during heavy rainfall since the water runoff is led towards the buildings instead of away from them, placing additional strain on the buildings and enhances the risk for soil erosions.

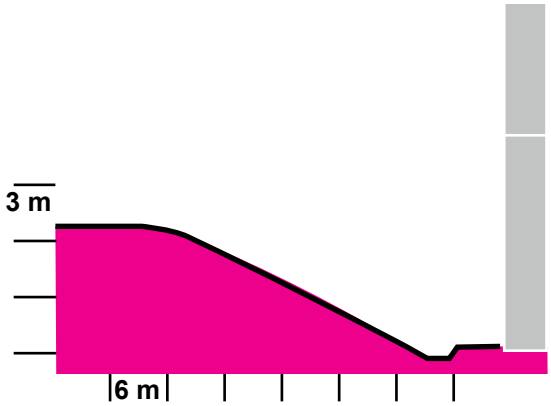
Categorizing of the slopes

All of the slopes around the buildings differ from each other in size as well as in gradient and inclination. In this analyse we have identified the variations of slopes found on the site. The categorizing is based on the estimated inclinations of the different slopes and further on divided into five groups. The lowest and least steeping slope character could be found both in connection to the buildings but also along the roads. All the other steeper slopes are found around the buildings.

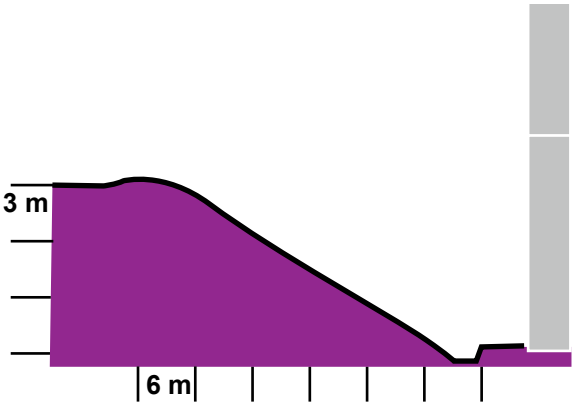
Slopes between buildings and roads are today approximately 1 meter high, and a few meters wide.



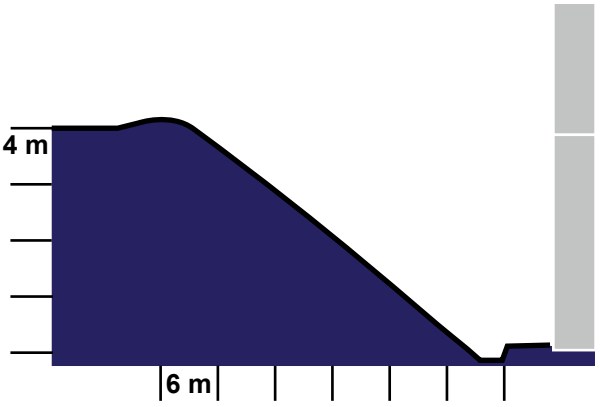
1-1,5 meter Slope



2 meter Slope



2,5-3 meter Slope



4 meter Slope

SWOT

After spending a lot of time making inventories and trying to understand the site, we decided to summarize what we have seen as the most important features and elements to deal and think of in the continued proposal work. This seeking resulted in a SWOT, where the strengths, weaknesses, opportunities and threats are brought forward. We have used this analyze as a tool to find and draw conclusions from all the data, inventories, maps, photos and talks we have done and collected at the Campus site, and further as a base for the next part of the Design Program.

Strengths

- Big plans and visions for the University
- Friendly social climate
- A rich Campus life, a lot of people walking and hanging outside.
- Agricultural testing sites
- Naturally undulating landscape
- Rural location
- Beautiful surroundings
- A green wedge of spontaneous vegetation is entering the site from east.
- Green area with football plane
- Cobble stones on the main roads

Tossa Mountain puts the Campus in a dramatic setting.

The Campus and its beautiful surrounding.

Testing sites are found within the site.

Small hills as nice landscape elements.

Weaknesses

- Unplanned outdoor environment
- Large scale landscape, lack of human scale
- Under construction
- No defined centre
- Lack of study places
- Almost none planned vegetation
- Dusty or muddy landscape
- Windy and cold area in the southern part of the Campus, called Siberia.
- Steep areas around buildings
- Insufficient facilities; toilets, water, electricity, waste management.
- Bumpy and dusty access road to Dessie town

The site is still under construction.

Dry and dusty ground or ...

... muddy and difficult to walk around in!

Opportunities

- The size and shape of the Campus gives opportunity to create a variation of characters within the area in order to enhance the landscape qualities.
- The beautiful rural setting could be an opportunity to include in the Campus design.
- The large scale landscape and its open spaces can be used for greenery and recreation.
- The rich Campus life and large amounts of students give opportunity and a need of large gathering areas and smaller hangout places.
- Height differences make favourable microclimate and together with terraces they create areas beneficial for plants and humans; places for rest, study and gathering.
- Enhancing the partly hidden stream in the east gives opportunity for a nice recreational path, and the soil from the excavation can be used to flood proof other areas.

Threats

- Rain
- Landslide
- Drought
- Cold climate

There is a vision from the University to have a park in the western part of the site.

The partly hidden stream at the lowland could be a nice water feature in the design.

5. Proposal for future Campus development

Proposal for future Campus development is the second part of the Design Program and will function as a framework for the development of Dessie Campus's landscape. It could act as a toolbox for how to make various interest groups work in the same direction and towards the same goals. Thus, it should be regarded both as a tool for how to handle different problematic matters and as a source of inspiration for a more attractive outdoor environment.

As introduced earlier the University has many ambitious and great visions for the outdoor environment, and our proposal has partially been formulated based on those existing visions. What has affected the proposal even more were the actual findings through inventories, analysis, sketches, photos and dialogues, and the proposal takes its point of departure in the SWOT-analyse where weaknesses has been confronted and opportunities developed.

The goal of our Design Program is to achieve an attractive, recreational and varied landscape at the Campus. To achieve this we see it as necessary and important to solve the most apparent physical problems found on the site; insufficient drainage,

heavy rainfall, steep hillsides and slopes, the lack of places for gathering, meeting and study, and the lack of both pathways and vegetation. The proposal includes technical solutions, design principles and general ideas of how different situations at the Campus can be solved and developed. By focusing on principles and ideas for solutions we want to open up possibilities for the University to develop what best could fit their needs and desires. In this way the University will also get a great impact on the final selection of for example plants and tree species, where especially the botanical staff should be able to deliver crucial competence.

Four areas of special interest are identified and suggestions are made for how they should be handled and what kind of character they should have. The aim is to let these four areas work as inspiration on a more detail level for how the rest of the site could be designed and improved.

We have in this initial part of the design proposal formulated our intentions in three questions, where the answers of them could be a substantial contribution to the future development of the University:

1. How can Wollo University become an attractive and memorable University?
2. How can the landscape of Wollo University contribute to a healthy outdoor environment for the students and teachers?
3. How can the Campus be a part of its beautiful surrounding, taking advantage of its rather isolated location in the landscape?

Disposition of the proposal

Our proposal consists of an overall landscape plan of the Campus with design principles that will bring an overall identity to the Campus. Based on the existent situation our general suggestions have been formulated under three parts, which focus on the following design issues:

- Distinct and inviting places for gathering, rest and study in the outdoor environment.
- Softer forms of terrain with slopes and swales together with terraces and moving soils as solutions of the height differences and water runoff.
- Different characters of trees and vegetation for a more diverse landscape.

As the economical resources are limited we have chosen to make a priority of areas due to their location, possible usage and importance for the Campus. A result from this is the four identified areas of foucs, which will make a good contribution to the understanding of the overall design thoughts. A description and visualization of the design principles for these areas will also serve as inspiration and guidance for the design of the remaining parts of the Campus. The prioritized areas are:

- The square
- The central park
- Residential areas: female and male dormitory
- The recreational path, consisting of the river walk and park in west

Landscape plan of the overall design

The premises for the overall landscape plan has been set by the construction plans for the Campus site, both existing but also future planned buildings, infrastructure and drainage system. Our contribution has been to add a landscape approach, adapting it to the natural terrain with an overall green structure.

Today's large open spaces are transformed into parks, squares, places for gathering, studying and resting, all with a human scale in mind. A varying spatiality, different dimensions of space, are created with vegetation and built form. Generally the vegetation is of a less dense character, since we have been told dense vegetation can create issues of opacity. The vegetation is general more structured along the roads and parking lots than in the rest of the area. Emphasizes on streetscapes are made to make the road design more human in scale, since the planned roads are more focused on cars. Walking paths has been added to gain a stronger connection between the areas of the Campus with a looping path throughout it for strolling. The plans from the University are to move the main entrance to the central parts of the area and we have enhanced it by colourful trees and a view of the new central park.

The surrounding landscape will be included and strengthened through complementary vegetation. In east the vegetation will open up towards the lowland and be kept more open to remain its rural character of grazing land. Following the enhanced stream more vegetation will be used to contrast the open field, frame it and create places for hangout, but also to increase biodiversity and to stabilise the soil around it, preventing erosion. In west it will be an extension of the existing forest on Tossa Mountain. Vegetation facing the gravel road will be partly enhanced to create a more enclosed feeling in the park, simultaneous as other parts will be more open to strengthen the connection to the outer landscape.

One exception is made from the existing construction plans of the Campus; the planned road going to the water reuse plant in north-east, that today will intersect the male residential area, is moved to the northern part of the site to create a larger and more continuous green recreational area.

The focus has been to get a general and coherent design, while more detailed issues are handled in specific parts.

Landscape plan of the overall design

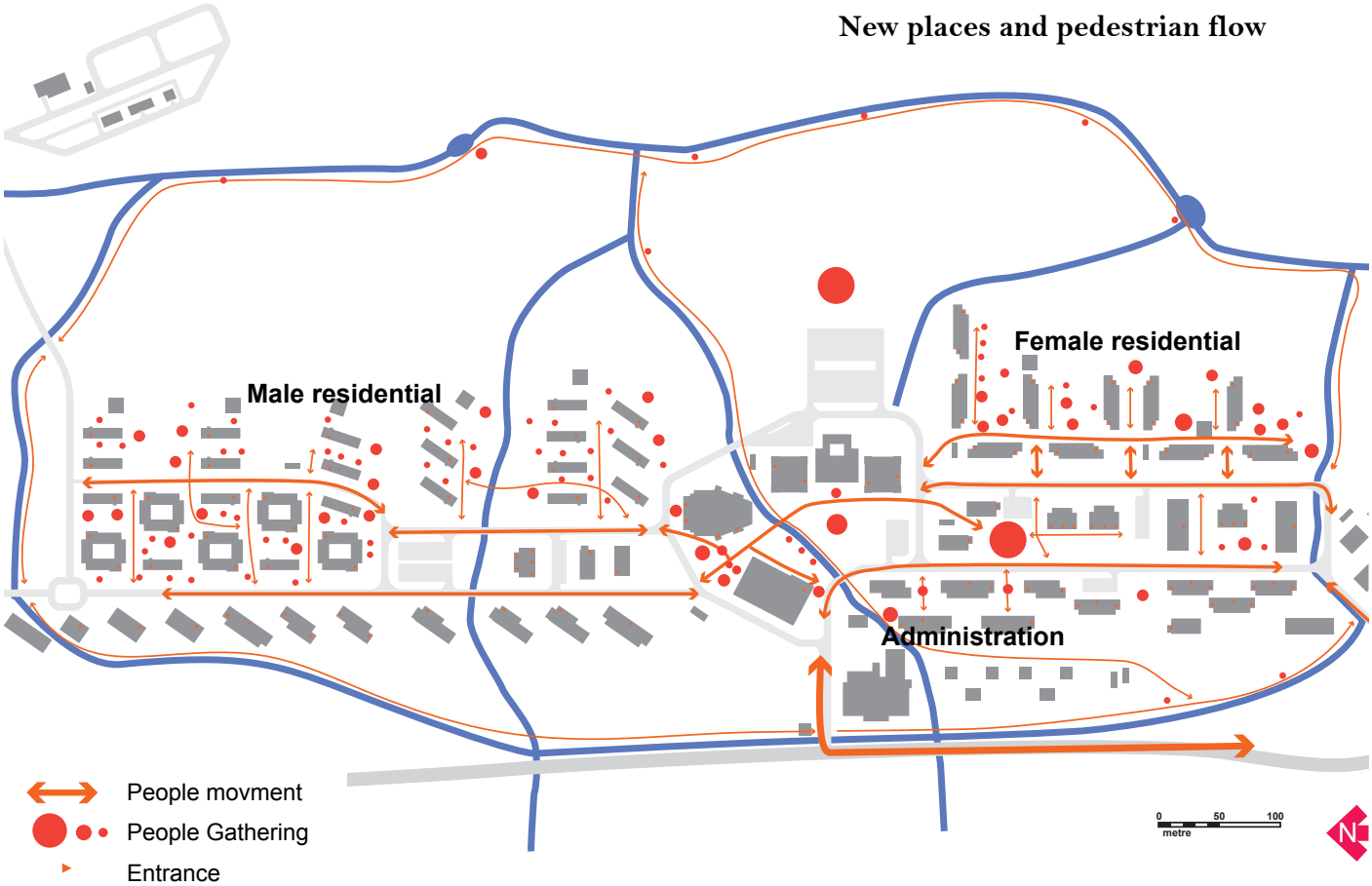

Buildings
Contours
Grass
Trees
Street trees
Plantings
Fontain
Sitting areas
Path
Recreational Path
Roads
Gravel road
Ditches
River walk
Football field
Parking
Female residential
Student canteen
Auditorium
Central park
Parking
Square
Library
Library
Main Library
Class rooms
Western park
Testing site
Administration
Shops
Main entrance
0
50
100
metre
N
SCALE 1:3000

Places and pedestrian flow

The new landscape plan of the Campus creates places in varying scales for gathering, resting and studying. Our inventories and dialogues with students revealed a lack of places both for larger groups and smaller ones with for example possibility to study. In the proposal new places are identified and created, based on the analysis of pedestrian flow showing where the higher assemblages of people are located.

Since many people today spend their time around the administration area where the most important public functions are located, a new central meeting point is created there. Smaller places are located throughout the whole area, with higher accumulation in the residential areas, where they generate possibilities for study and hangout, and provide a more private character. The smaller ones will suit a varied amount of people, and be more or less planned with either a couple of benches or just a tree to sit under.

New places and pedestrian flow



A variation of patterns will increase the attractiveness.

Inspiration of how the paths could be enhanced by plants.

Paths

The technical drawings we got, consisted of plans of future pathways and the inventory showed a lot of informal roads, together they lie as an inspiration for the net of paths created throughout the area. The paths are designed in different scales to fit the specific need, from the smallest ones on the yards to larger ones escorting people between areas.

A recreational path designed in a loop will go through the whole area both along the river, park in west, central park and the surrounding landscape, to invite and make it easier to have a walk in the area without having to turn back, a path for strolling.

Ornamental plantings will be arranged along some of the paths, Addis Ababa University.

Inspiration of colourful path going through the trees at Bahir Dar University.

Placemaking

Dessie is experienced to have a relatively cold climate, according to students, staff and climate data (Johansson, 2012, oral). To create a nice and usable outdoor environment the climate has to be a natural part of the design. In cold climates most important concerns are to protect from the wind and make access to the sun (Givoni, 1998, p. 428).

Our suggestion of slopes and terraces, as a way of handling the escarpments at the Campus site, will contribute to make the microclimate more favourable by facing south-east, north-east or east. This is, according to Evans (1980, p. 55), the most favourable way of making slopes at higher altitudes close to the equator; it will in the cooler mornings receive maximum of solar radiation. Evans (1980, p. 55) means the warm season will be extended when creating slopes like that, as we done in this proposal. Due to the profit gained from slopes and terraces, seating and hangout places should if possible be arranged in combination with them.

A lot of people requires peace and quiet to be able to study, thus the experience of privacy and seclusion becomes important when designing study places. The tools we have used in this proposal are the choice of location and the creation of shields with vegetation. The seating areas will be surrounded by trees and shrubs to protect them further from uncomfortable winds (Givoni, 1998, p. 428), and should preferable be of evergreen species since they will protect all year round. The vegetation will mainly be on the western side of the seating areas,in the back, to keep an open view to the east. This arrangement will give the user of the site a safer feeling, since one feel safer with the back covered and the ability to overlook the landscape.

Seating area under a tree.

Seating for relaxing.

A pergola is a cosy shelter for seating.

Terraces can create nice and attractive landscape, like this café in Gondar.

Seating with view over plantings.

Photo taken by: Yitbarek Woldehawariat

Some of the seating areas will be covered by roofs, which could be made of vegetation, fabric, or any other suitable material.

Water runoff and height differences

Our analyses have clearly showed that one of the main problems at the Campus is heavy rainfall, which causes risk of flooding. The greatest problem is faced in the lower parts of the site and behind every building, due to steep slopes as a result of the applied construction principles. This fact together with the unstable type of soil found at the site makes it essential to have a coherent and well functioning solution for the water runoff throughout the site.

Here both a general solution of how to handle water runoff at the site and how the female residential area could be flood-proofed are presented. Further on we have identified various solutions for how to handle the steep slopes behind the buildings.

The closeness to Tossa Mountain makes the storm water situation unsustainable.

The lowest location at the Campus site.

Reducing the negative effects of rain water runoff

The most important thing to consider when planning storm water management for a site, according to Eva-Lou Gustafsson (2012, oral) lecturer at the Swedish University of Agricultural Sciences, is to avoid water runoff from the surroundings. In this case it means that solutions for taking care of the water runoff from Tossa Mountain must be arranged.

We propose the surrounding storm water to be led around the site in ditches. Some of these ditches will sweep along the outskirts of the site and some will go straight across it, all ending up in the existent stream at the lower eastern part. The system of these ditches will not be connected to the rest of the site's storm water system since the large amount of water passing though them would destroy more than benefit the situation. The idea of this system is to avoid the surrounding water to integrate with the site.

Reuse of excavated soil from the stream

To further solve the problem with floods, particularly in the female residential area, a new lowest point will be created by digging out the overgrown stream in the eastern lowland part of the Campus. The soil from the excavation will be moved into the female residential area in order to additionally flood proof the area by raising the ground level. The soil will also be formed in small hills to create a more varied, attractive and drier landscape beneficial for the women living here.

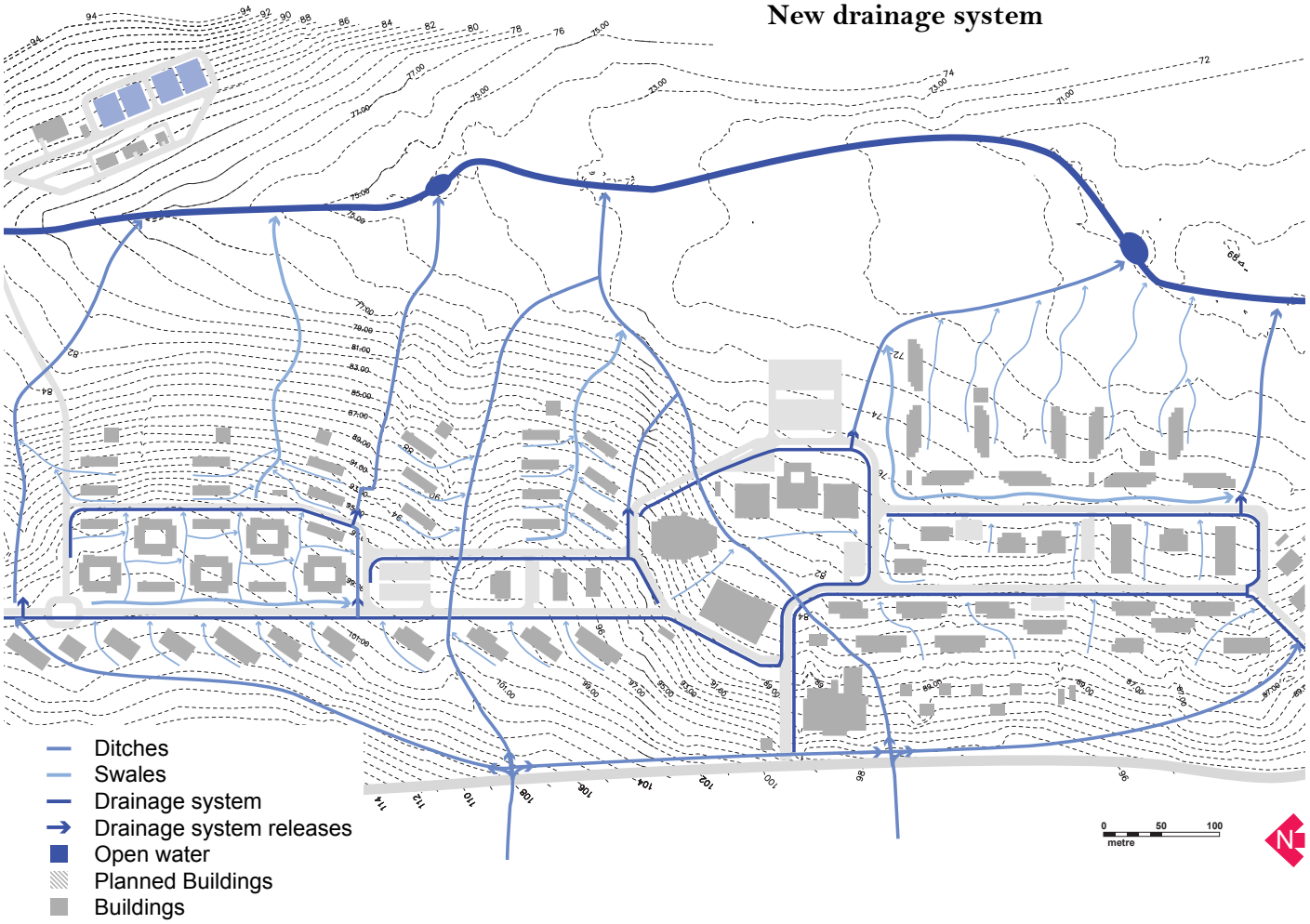
The future river is suggested to be meandering and enriched by some smaller ponds. The ponds will be constructed to provide a better habitat for animals and plants but also opportunities for nice seating areas along the recreational path.

Swampy area in connection to the female residential.

Management of storm water with swales

The water falling within the site will also be led away towards the stream in east. This will especially be managed by constructed vegetated ditches, so called swales. Unlike the ditches leading the water around the site, this is suggested to be a more complex system. It will consist of rather shallow and wide swales in order to adapt to the existing terrain and thus become a natural element, which aesthetically will contribute to the outdoor environment all over the site.

The swale system will work as a flood proofing tool for the grass areas and to some extent also for the buildings. All flat areas within the site will be provided with swales, which will make the areas drier and free of mud and therefore possible to use even during the rainy season. The swales will at some parts be connected to the planned drainage system along the roads, both leading water to and from them, which will extend the catchment area and make sure the water always is led to a final destination and treatment. This system is not just an effective way of collecting and leading storm water, but also one of the cheapest solutions (Pushard, 2012).



According to Gustafsson (2012, oral) the swales do not have to tilt much, since they only are guidance for the water flow. They are easily constructed as a shallow vegetated ditch with an incline of 1-2 % from the start to the end. The swales should have an approximately depth of 5 to 30 centimetres, a rounded or a trapezoid shape and the sides should have an inclination of no more than 30 % (University of Connecticut). The overall design of the swales should be meandering, avoiding long and straight lines, since a curved swale will have higher capacity to absorb and collect water runoff due to its longer appearance (Gray and Sotir, 1996, p. 37). A meandering form will also have better possibilities to fit into the landscape and thus function as a more aesthetically attractive element than a straight line.

The main vegetation in the swales will be grass since it is easy to maintain and cheap, as well as an efficient way to reduce erosions due to its density and tightness (Gray and Sotir, 1996, p. 55). Some parts of the swales should be enriched with herbaceous plants and trees to get a more varied and attractive look. Trees will make the absorption of water more efficient, strongly reduce the water runoff and make the swales more cost-efficient (Pushard 2012).

During the dry season the swales will contribute to an attractive undulating landscape.

When the rainfall comes the swales will turn into thriving streams meandering through the lawns.

The swales could be planted with grass and have steeping stones to allow passages.

The meandering appearance of the swale makes it melt into the landscape.

Juniperus species are desirable since they are evergreen.

Vinca species could be of interest due to its dense coverage.

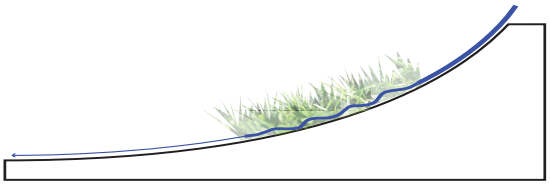
Construction and management of slopes

The slopes around the buildings are managed with vegetated slopes and terraces. They will have a variation of appearances since they have different preconditions, but the principles will be the same. Both the vegetated slopes and the terraces should preferable be planted with higher grass, lower shrubs or tightly herbaceous plants covering the whole area, since a dense vegetation will mitigate the velocity of the heavy rainfall running down the slope and protect from rainfall and wind erosions (Gary and Sotir, 1996, p. 54). Evergreen plants are especially benefiting since they protect the slope all year round (United States Department of Agriculture, 2011). Species of interest could among others be Vinca species and lower Juniperus species.

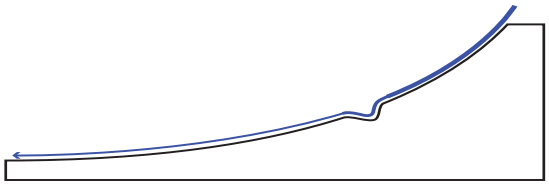
Vegetated slopes

Vegetated slopes are according to Gustafsson (2012, oral) the most cost-effective solution to erosion problems caused by high gradient and rainfall. However the fact that the Campus site has an unstable soil type, the vegetated slopes principle is only appropriate for smaller to medium inclining slopes. All the vegetated slopes should have a concave shape and decline close to its toe in order to reduce the risk of moving soil (Gray and Sotir, 1996 p. 37). They shoul also be combined with ditches, channels or swales at both the top and bottom to lead away and protect the slopes from large amount of water runoff during rainy season, preventing erosions and collapses. A steeper slope should have a feature that reduces the velocity of the water runoff downhill. It could preferably be done with either an excavation in the middle of the slope or dense vegetation preventing the water to run through (Gustafsson, 2012, oral).

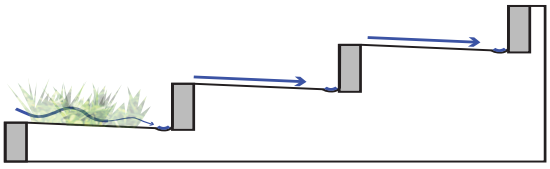
The vegetation planted on the slopes should always be as dense and tight as possible (Gustafsson, 2012, oral). Lawn can be used on slopes with lower gradient, but should be avoided on the steeper ones since it will be difficult to maintain. The establish period for the vegetation on the slopes is problematic since bare soil is contributing to erosion. If there are any existing vegetation it is favourable to plant the new vegetation among it, to avoid exposing bare soil for a longer time (United States Department of Agriculture, 2011). It is also valuable to support the plants growth and facilitate them to establish as quick as possible. When the vegetation is well established it is an effective way of protecting the slopes from erosions and soil movement.



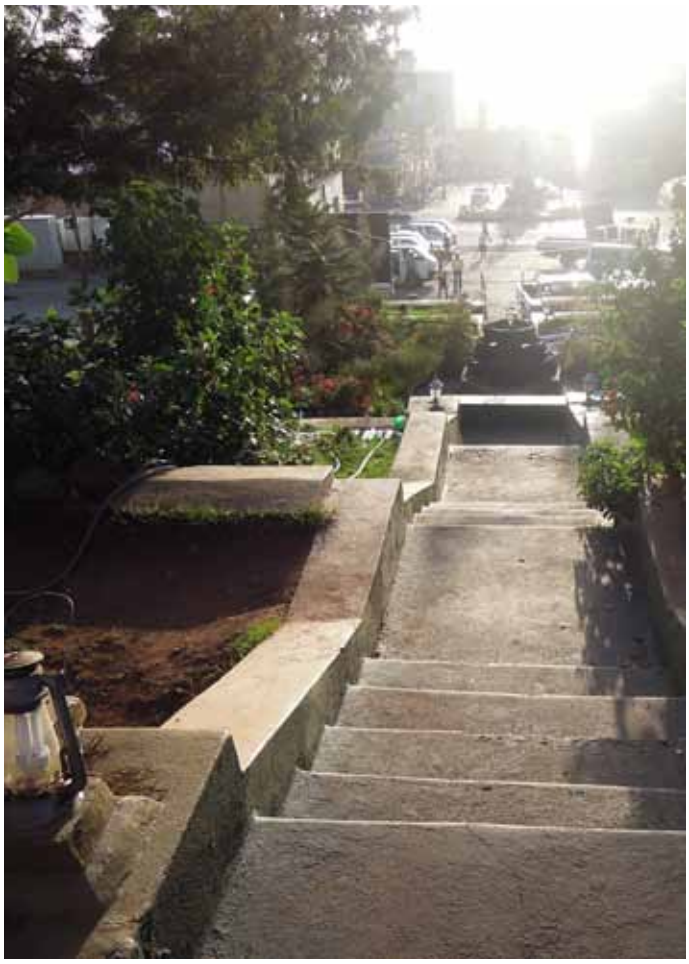
Vegetation is an effective way of reducing the velocity of the water runoff.



An excavation in the slope is another solution to reduce the water flow.



Vegetation and backwards tilted planes reduces the velocity a risk for erosions.



Inspiration of managing height differences with terraces from a café in Gondar.

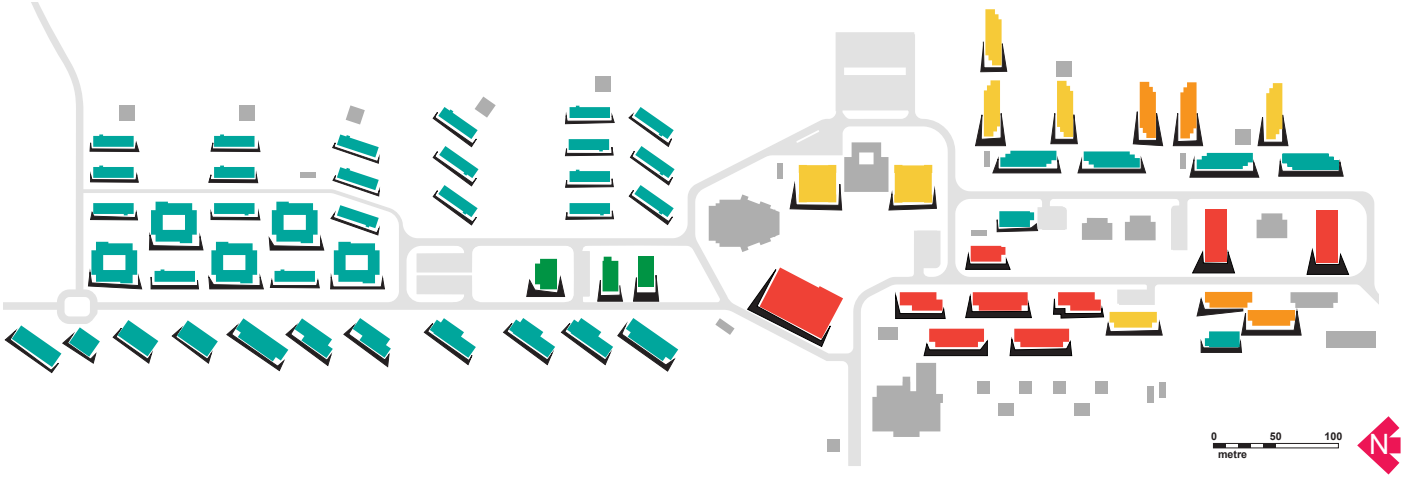
Terraces

Terraces can handle steeper slopes than vegetated slopes, if constructed correctly. The preconditions and technique for constructing terraces can vary in different regions, thus local knowledge should be applied. Wrongly constructed terraces can be worse than a bare steep slope when it comes to erosion problems (United States Department of Agriculture, 2011). One thing that Gustafsson (2012, oral) points out to be very important when it comes to the construction of terraces, is to tilt them backwards towards its inner part to save the front wall from heavy pressure. The lower inner part have to consist of a channel or a ditch inclining towards the sides to make sure the water runs away (Gustafsson, 2012, oral).

The walls of the terraces are creating variations in microclimate since they will either give shade or reflect the heat to the flat terrace plane (Watson, 2009 p 3). This could be taken advantage of, especially in situations where exotic trees could be planted or seating areas arranged. Terraces also create a wide space at the bottom of the slope letting a lot of light though to the building.

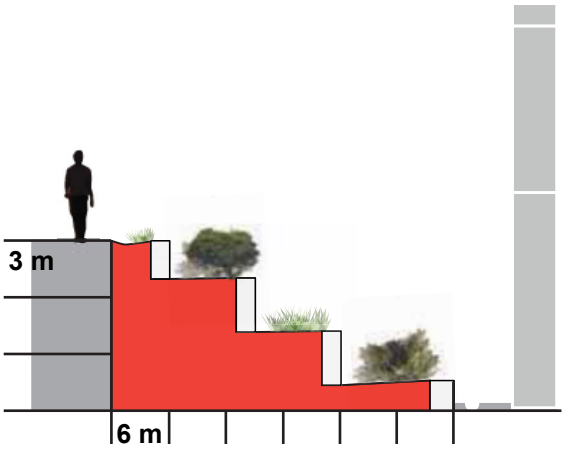
Just like the slopes the terraces should preferably be planted with vegetation. Plants on an even surface, as at a terrace plane, have a good ability to absorb water runoff and therefore reduce the overall runoff from that particular area (Gustafsson, 2012, oral). Notwithstanding the fact that a lawn can be a good choice on a plane terrace area, shrubs and other plants can be more desirable due to more flexible and easier maintenance. A lawn has to be mowed frequently, and even though weeds are a factor in plantings, they only have to be maintained a few times during a season. Mowing a narrow terrace plane can also be problematic and almost impossible at some places.

Distribution of slope solutions



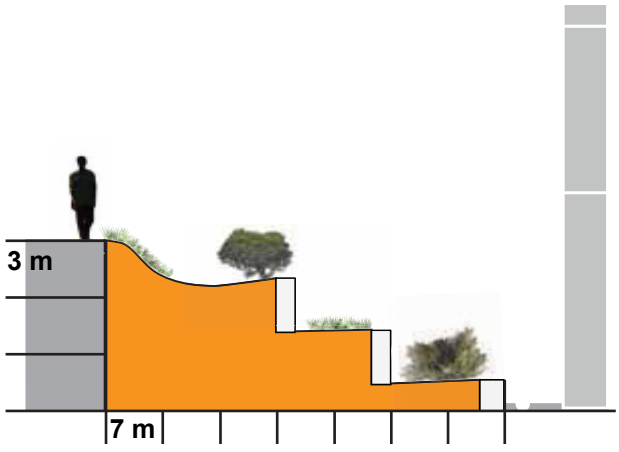
Principles how to handle the identified slopes

Depending on the situation the slopes found at the Campus are handled by five basic solutions of terraces and vegetated slopes. The suggested models are shortly described below:



High terrace slope

The highest and steepest slopes are managed as high terrace slopes. This model consists of three or more terraced planes, each one stabilized with a wall of about one meter high. A small hint of a channel on the top plane will collect the surrounding water. All the planes will be planted with shrubs, climbers or herbaceous plants and the walls will either be covered with climbers or hanging plants.

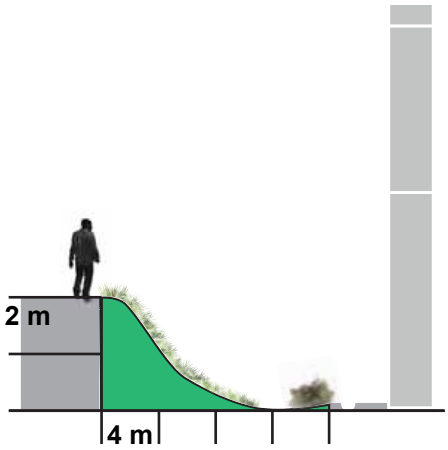


Terrace with buffer zone

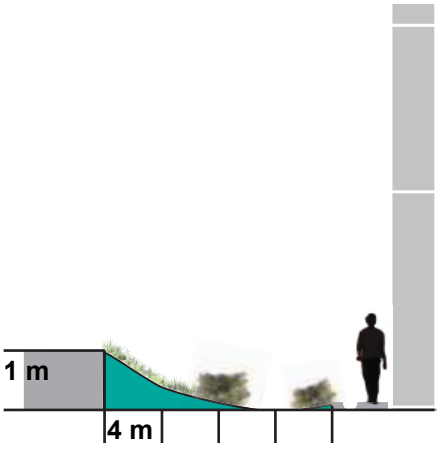
Terrace with buffer zone can be chosen as a solution for managing the steeper slopes, but in contrast to the high terrace slope it includes a swale on the top plane to lead away the water. Thus, this model demands a larger area than the previously one. The walls may also here be covered with climbers or hanging plants.

Hanging plant on a wall.

Lower Terrace with buffer zone
This solution will manage the medium steep slopes. It consists of two planes, where the top one is a swale. The swale will be planted with herbaceous plants and grass, and like *terrace with buffer zone* it will work as a channel leading away the water runoff. The bottom wall could on some places (for example in the female residential area) be used as a wall for sitting



Vegetated Slope
Vegetated slope shows another solution how medium steep slopes could be handled without terraces. It requires higher grass, herbaceous plants or shrubs to reduce the velocity of the water runoff coming down the slope. There should be a ditch on the toe of the slope leading away all the water that has managed to pass through the vegetation. There should also be shrubs between the ditch and the concrete foundation to prevent water from passing on to the building.



Low Vegetated Slope
This solution is a vegetated slope used for the lowest slopes with smaller gradient. As they are easier to maintain they can be covered by lower grass and lawns. Still, it is necessary to have both a ditch and some shrubs at the toe of the slope in order to protect the buildings and make sure the water flows away.

Vegetation

One of the most important materials to achieve a green and healthy Campus is various kinds of vegetation. This part of the Design Program should be seen as an inspiration and guidance for the vegetation where different types, characters and arrangements are proposed. Even though the climate and flora of Ethiopia differs from Sweden, the landscaping approach could be viewed the same way; what functional and aesthetical aspects do we want to achieve with the vegetation? What are the preconditions, and what vegetation, adapted to the environment, could help us to achieve our vision for the site? Our and the University's intention is that the Agricultural Department should add their more detailed knowledge in the final selection of the species in order to get the best result.

The site's premises have been the base for the proposed vegetation, where the choices have to be adapted to the local conditions of Dessie, situated in the highlands at an altitude of 2500 meter above sea level, the rain and dry season and the easily eroded black cotton soil. Further on we have been considering how various plants can fulfil the client's and user's wishes and supposed needs, the technical and social functions of the site, aesthetical aspects as form, colour and size and also spatiality and recreational values.

We have made our choice of vegetation on conclusion drawn from all the information gathered during the field trip; talks, inventories, study trips, nursery visits, information from the Agricultural Department, a power point about ornamental trees suitable for Dessie by Worku Belayhun (2012, oral) and the book *Useful trees and shrubs of Ethiopia: Identification, Propagation and Management for 17 Agroclimatic Zones* by Azene Bekele-Tesemma (2007). The book is a handbook presenting a selection of what the author estimates to be the most important species of the different agro climatic zones of Ethiopia, both indigenous and exotic species are included, but the later only if the tree has been naturalized (Bekele-Tesemma, 2007, p. 4).

Some staircases on the buildings will be covered with climbing vegetation

Overall Vegetation Design

To fulfil the great vision of an attractive landscape at the Campus which the University is aspiring for, vegetation is a necessary asset and tool. By planting a variety of plants with different characters the whole Campus could get a more interesting appearance and places and streets would be climatically more favourable for people to dwell and move around. The vegetation will be beneficial in its appearance and design, and it will have recreational value for everybody; the students, the ones working at the University and for the whole community of Dessie. There will both be indigenous and exotic trees, ornamental trees and plantings combined with the technical benefits as soil binders, wind stoppers and space shaping trees. The Campus will have a whole range of different colourful plantings attracting the different senses of sight, smell, taste, touch, and hearing, for example through attracting humming bees and other insects (also of importance for the pollination of plants).

In the process of choosing vegetation we have taken technical, social and aesthetical functions into consideration, and formed a proposal based on where the different functions are the most necessary. The technical functions we have examined are how vegetation can mitigate soil erosion and stabilize slopes in order to spare the buildings, and how vegetation can benefit the microclimate. The microclimate issue has been an important approach since places to a large extent are depending on pleasant microclimates, especially in Dessie where the climate is found to be cold. Our intention has been to use plants as wind shelters and to moderate the cold climate and heavy rain falls.

Aesthetic aspects to be considered are for example tree forms and colours. For one example, Dessie is through the dry period dusty, which can give a grey impression, due to that silver foliage should be less frequently used. We have instead tried to inspire the usage of more green and colourful trees and plantings. The choice of vegetation should stand as a clear contrast and a more durable feature to the quite monotone and dilapidated appearance of the buildings, to show that this University is planned to be there for a long period. For example some staircases on the buildings will be covered with climbing vegetation to give the site a more attractive and colourful appearance and also to benefit the microclimate.

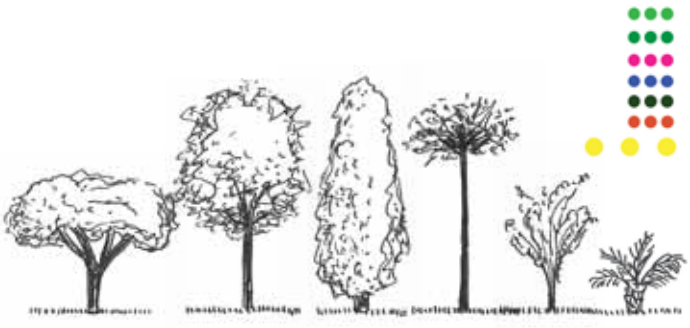
Most vegetation needs a regular access to water. Irrigation is especially important during the establishing phase of the plants, but it can also be of great importance during dry periods. We were told, by the University, that the irrigation was not seen as a problem at the Campus site and therefore we have not done any deeper research in the topic.

Maintenance is an aspect that can be used as a design tool, when the vegetation once has been established. By quite small efforts, interesting and beautiful effects can be acquired through pruning, thinning, variation of mowing etc. One example is to prune higher stems to avoid a bushy character and instead have a more open and transparent character. Moore details regarding these possibilities will be given later, in the passage about Time aspect.

Vegetation character of different areas

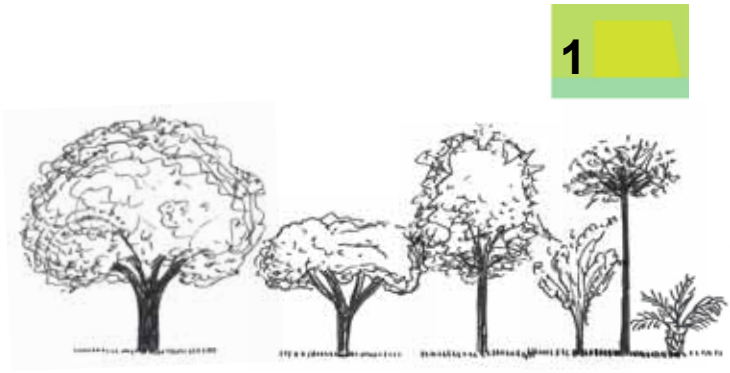
We have identified six areas of special interest at the Campus site from a vegetation point of view. The found areas will have a pronounced variation in the choice of vegetation and overall character, based on the today's functions of each area, its preconditions and our plans for it in the future. The proposed trees and plants should be seen as inspiration for what characters to strive for.

The central parts, residential areas, the western park and river walk will be further expanded in the focus area part. All the different streetscapes will be explained in the following chapter and the wind breaks area is described here.

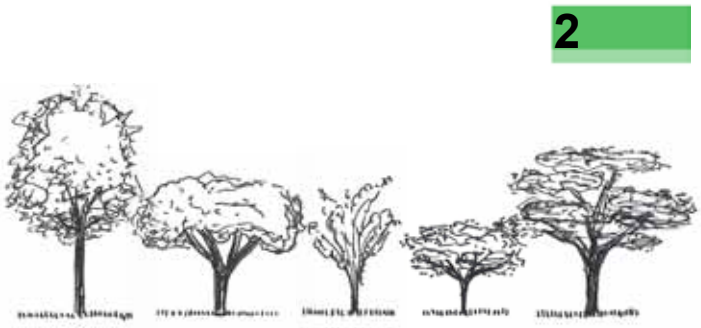


Varying streetscapes

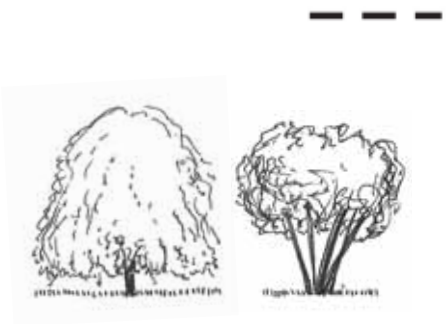
To facilitate and help the orientation ability of the Campus site, the site is divided in different streetscapes, each with a unique character and look made with trees and plants. The variation will make the whole site more interesting and covert the roads to a more human scale compared to how they are perceived today.



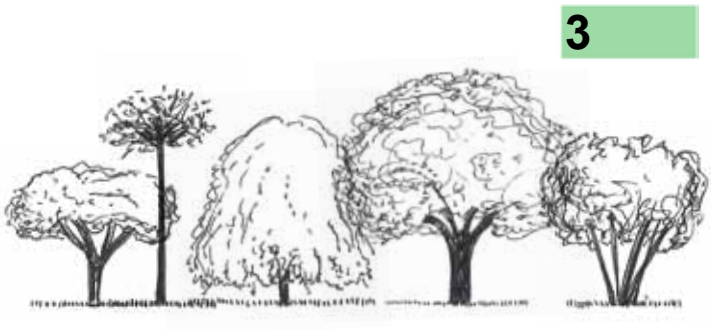
The central parts; the square and the park
The central parts of the Campus will be enhanced by the creation of a park with ornamental, colourful and in other ways striking trees and plantings. There will be testing sites for plants and flowers, seating areas and paths. Here people will gather and meet and the environment will convey an atmosphere of pride for the University.



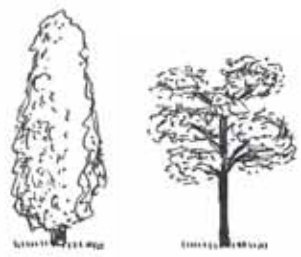
Residential areas: Female and Male dormitory
The residential yards are designed in a smaller and more intimate scale, with a private garden feeling. The students should feel that it is their home. The vegetation will to a part be edible and colourful, and there will be plantings available for the students themselves to plant and maintain.



The river walk
Along the new excavated river meandering through the grazing land, we have attempted to create thriving greenery with both paths and sitting areas. The path will stretch along the river and be lined with weeping and multi-stemmed tree groves. The trees will have soil binding functions to mitigate the risk of soil erosion.



The western park and surrounding landscape
On the western side of the Campus a recreational park will be created. The surrounding landscape will function as a model for the landscape in the park, with natural undulating hills, large trees, open lawns and a general relaxed feeling.



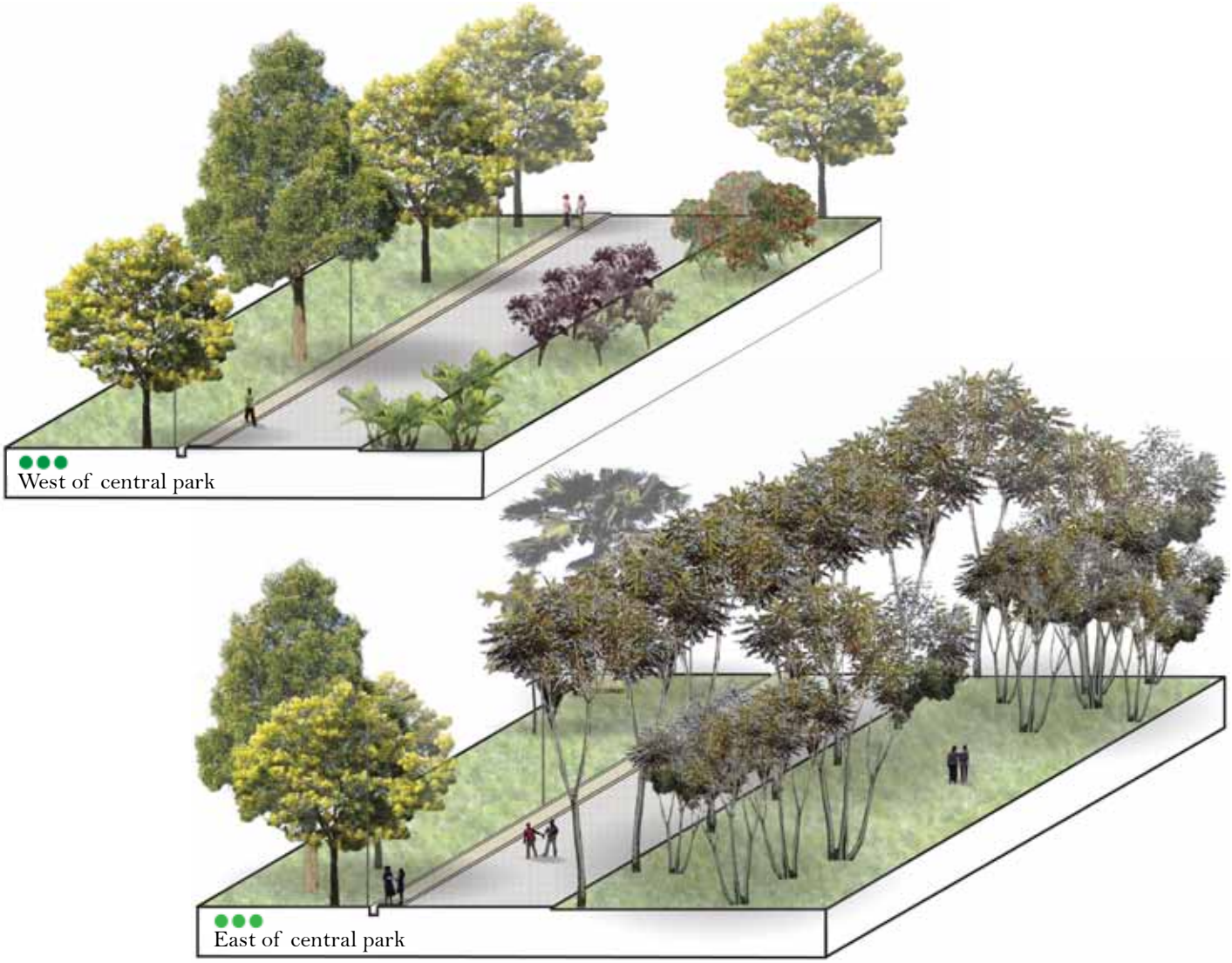
Wind break
The southern part of the Campus site is called Siberia due to its exposure to wind, and therefore we propose it to be planted with trees. A medium dense tree grove is the most effective way of reducing wind speed (Oke, 1987, p. 244-245), and suitable species for the site could be Juniperus procera and different Pinus species.

Streetscapes

The variation of the streetscapes will enhance the spatial experience of the whole site, facilitate the orientation ability and increase the attractiveness of the site. They will be beneficial for the pedestrian and give the site a human scale. The division of the streetscapes are based on the different usage and functions of the site and we have endeavoured to use different characters of vegetation, when it comes to forms of trees, different leave shapes, sizes and flowering species etc.

The Square

Surround the square the species Grevillea robusta will dominate the streetscape. The species has an oval leafy crown, fern-like leafs and golden-orange flowers that attracts bees and sunbirds (Bekele-Tesemma, 2007, p. 290). It is a medium sized tree, planted on a regular distance that will work as a well-defined separator between the street and the square area. When planted in this system it allows the pedestrians on the road to alternately feel openness and closeness, either look beyond the trees or into the trees. On the other side of the road, towards the administration in west, the roadside is narrower and contains a more ornamental plantation of smaller palm trees and red bottlebrushes.



West of central park

The streetscape west of the central park will contain a rich mix of different species in a varied size and shape. It will have higher solitaire trees and groups of lower trees and bushes, placed in a way to gain views towards the lower point and grazing land. The variation of small and large trees will benefit the experience of the street to be airy and at the same time define the streetscape.

Species of interest along these roads are: the higher trees; Acacia melanoxylon, Acacia decurrens (golden flowers), Erythrina brucei (orange-red flowers on bare tree) and the smaller ones; multi-stemmed trees, bushes with flowers and small palm trees.

East of central park

East of the central park the streets will be surrounded with a different character than west of the park. Here the trees will be larger and have higher stems to show that this is a part of the central park and the surrounding landscape as well as the recreational path. The trees will mainly be placed in groves of varied sizes, from three to plenty in one grove.

The species on the central park side of the road will be Polyscias fulva (both solitaires and multi-stems), which is a palm tree with extremely high canopy and a very high smooth stem. The trees nearest the road will be solitaires and the ones behind will be multi-stems, this arrangement will create a room of grey pillars and a green defined roof more open and lighter to the road.

On the other side of the road, the groves will be denser and give a more closed impression. The variation of open and closed will be more visible, to connect it to the surrounding landscape. Species of interest are: Acacia melanoxylon, Acacia decurrens and Erythrina brucei.

Female dormitory

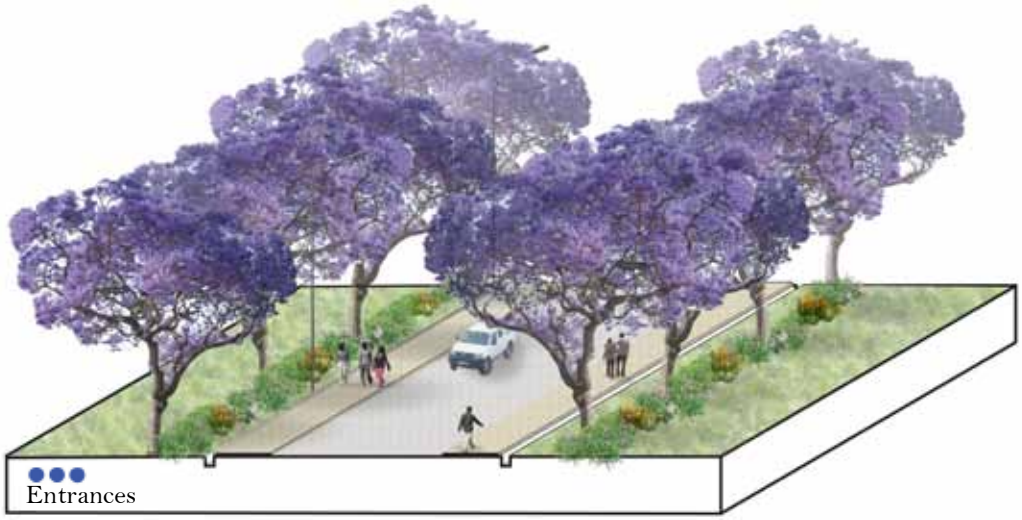
The streetscape will consist of Grevillea robusta on the side towards the square (further described under the square) and of groups of trees towards the female residential area. The groups of trees will be spread along the road and consist of a mixture of small and medium sized trees. The variation of grove sizes and spaces between will give an interesting rhythm to the street and create a feeling of an open and closed streetscape.

Suggestions of interesting trees to be placed in groups: Apodytes dimidiata (rounded crown), Maytenus undata (shrub to small multi-stemmed tree with long leaves), Rhamnus prinoides (evergreen shiny shrub to small tree, 6 meter, red round berries) as well as Grevillea robusta to connect the vegetation on the both sides of the road.

Male Dormitory

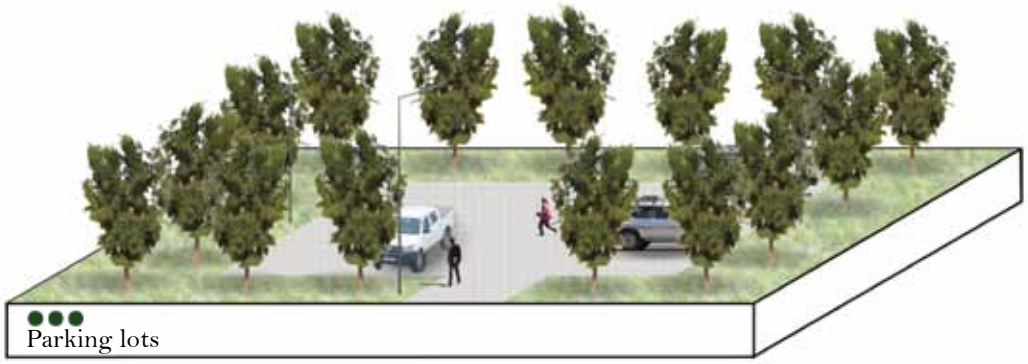
The road west of the male residential area will have the same character as the streetscape of the female area, with groups of trees. To enhance the functions of the site the residential side of the road will have a more loose and airy feeling than the more strict side towards the laboratories and workshops buildings west of the road.

The western roadside facing the educational buildings will consist of larger palm trees of for example the specie Borassus aethiopum, placed in a line, a strict and well-structured formation. Suggestions of trees to the residential side: Apodytes dimidiata (rounded crown), Maytenus undata (shrub to small multi-stemmed tree with long leaves) and Rhamnus prinoides (evergreen shiny shrub to small tree, 6 meter, red round berries)



Entrances

The main entrances will be defined with an appearance strongly divergent from the rest of the site's streetscape. The roadsides will be lined with blue-flowering Jacaranda mimosifolia trees. The blue flowers will welcome the guests and make the orientation to the entrances easier since the colour of the trees both will standout and be seen from a distance. The species is also quite big and creates a natural pedestrian room of the sidewalks, offering protection from both rain and sun.



Parking lots

The tree suggested around the parking lots is an oval shaped tree species with a low stem called Casuarina cunninghamiana. When planting this specie on an evenly distance it provides the opportunity to gain both an enclosed feeling and the ability to overlook the cars by views in-between the trees. The tree should be side pruned to get this desirable look.

Time aspect

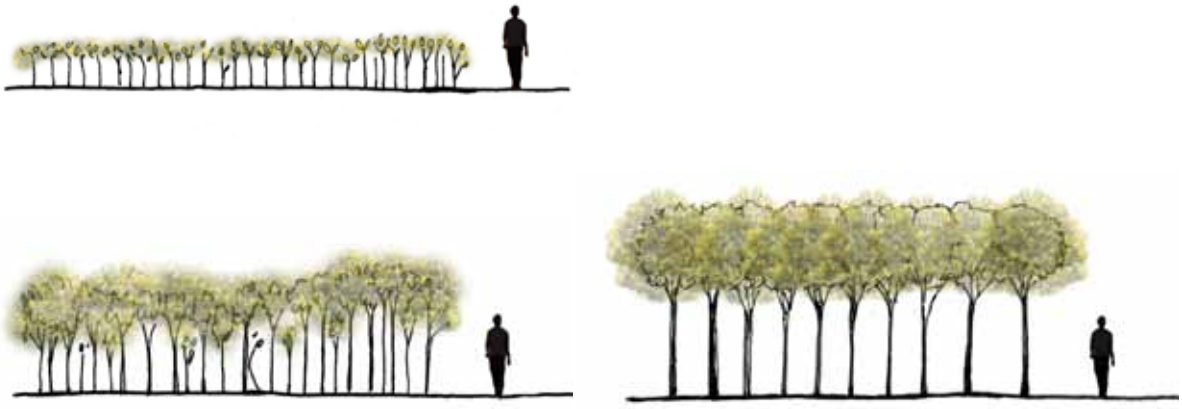
Time is a dimension that affects the design of the Campus landscape. There are a lot of different strategies when it comes to maintenance and establishing plants, leading the design in totally different directions. We have limited this Design Program to explain three strategies that mainly will be used on the Campus site. The different strategies, explained below, should be used depending on if it is the direct affect or the possibility to alter over time that is of interest for the specific area.

Strategy 1: Planting large trees

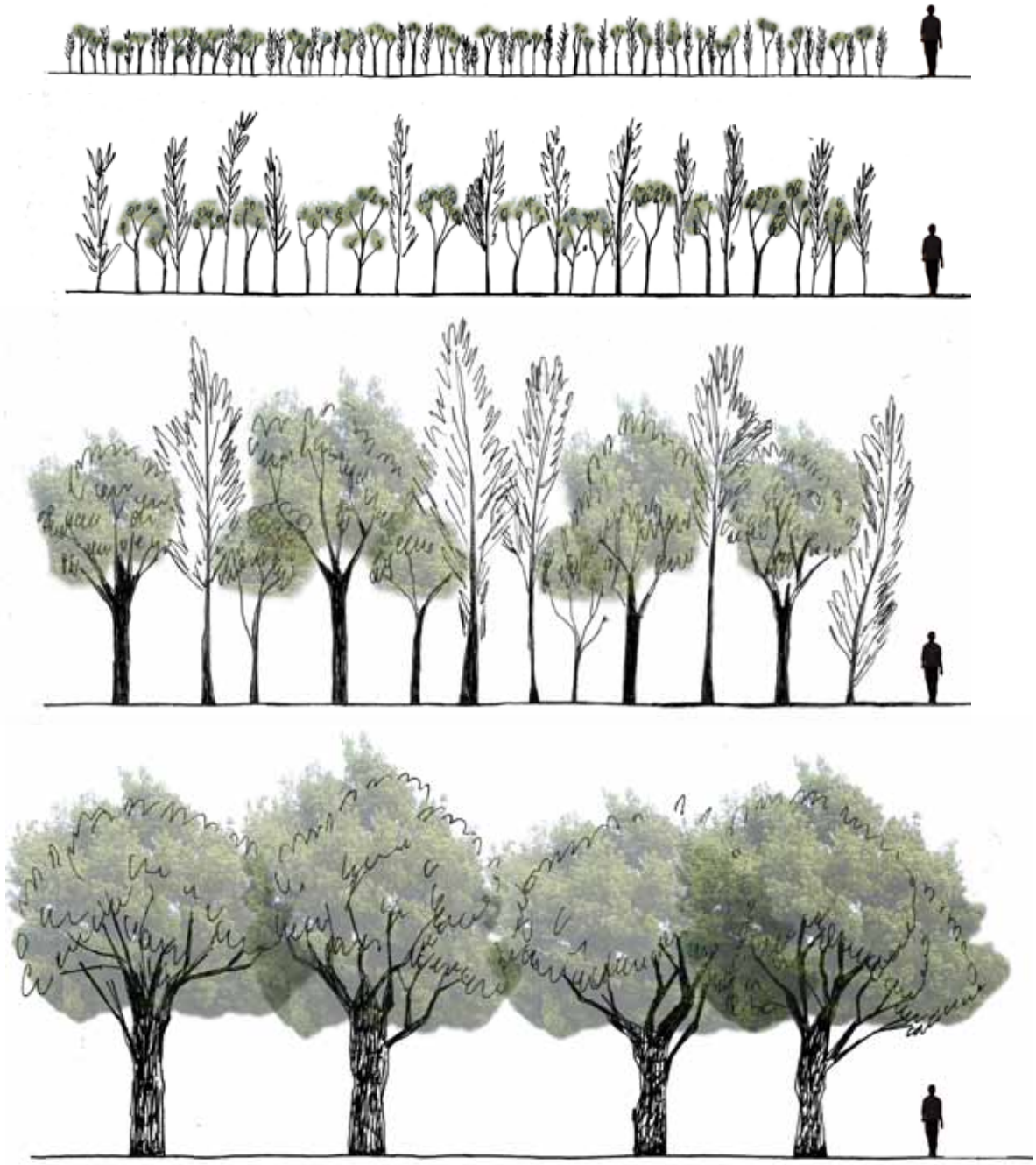
To get a feeling more quickly of the final design one can plant larger qualities of trees that already have grown large. However they have a bit tougher to establish and get potent, and are often a more expensive alternative. Sometimes though, it can be important to get this quicker "final" feeling at significant places.

Strategy 2: One-storied high stand

Trees with higher canopies and stems (one-storied high stand), so called pillar rooms, are achieved by from the beginning planting the trees very closely together, which makes the steams grow straight. At consistent interval they will be thinned out until they have a desirable distance.



The process of establish one-storied high stand trees.



Larger solitaire trees are received by planting a lot and then thinning it out.

Strategy 3: thinning out a large volume

This strategy gives a quick volume and is a dynamic alternative that is both economical and effective. It can create large solitaire trees with interesting shapes if maintained in the correct way during the establishing phase.

From the beginning a large amount of different saplings (both fast- and slow-growing species) are planted. They will give an instant effect and volume, even though they are low and possible to see beyond. During the growth of the plantation the fast-growing trees will help the slower ones and thus get a higher volume faster. After some years the area will be thinned out, and the more potent and interesting trees will be favoured and left to grow.

Material

We have in our Design Program strived to making the solutions and choices as economically and sustainable as possible. As a product of these thoughts we want to promote the usage of local knowledge. For example the local knowledge in constructing the terraces is of great importance to make the terraces stable and sustainable. During our study trips in the country we have observed a lot of interesting and inspiring local materials, technical solutions and of course vegetation (as described earlier). Using local knowledge in the construction work and when choosing the vegetation species and the materials will make the Campus become a natural part of its contexts and give the Campus a sense of place and a feeling of a local proud.

Inspirational pictures of local material

Local paving

Focus areas

As described earlier, we have chosen four areas of focus. The identification of the focus areas are based on their extra significance, complexity and conditions, and therefore, all together a good illustration of the entire richness of the Campus in functions and characteristics.

We have distinguished a lack of outdoor gathering and meeting places, and therefore identified two new spaces appropriate for this purpose; a paved round inviting square and a green park with a large gathering lawn.

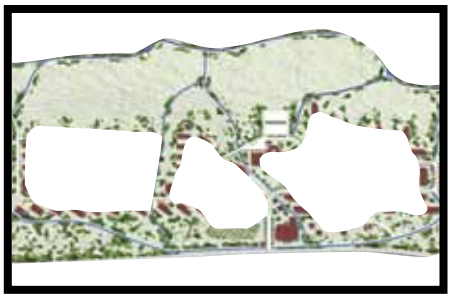
The largest proportion of the site users is the students, who both are living and studying at the Campus, and therefore we saw it naturally to let the third focus area deal with the students' residential areas.

The surrounding landscape is, as mention many times, beautiful scenery perfect to connect the Campus site to in forms of paths, vegetation and formation of the landscape. The fourth focus area describes this connection further in the recreational path consisting of the western park and the river walk.

Male residential

Female residential

Central park



Recreational path

The Square

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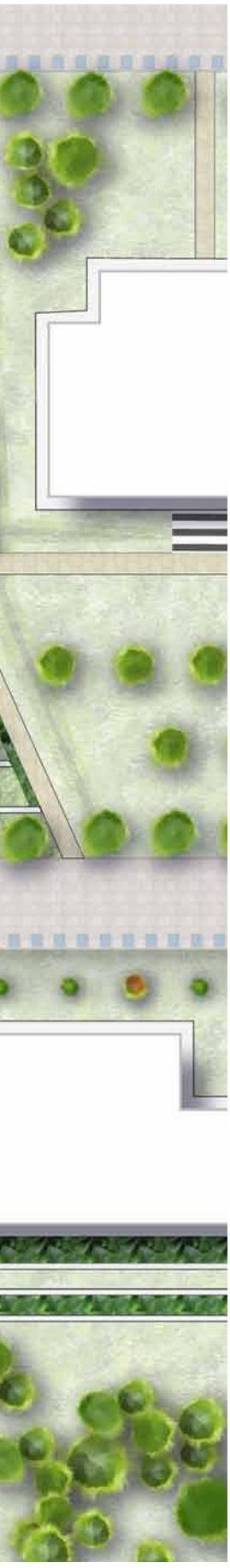
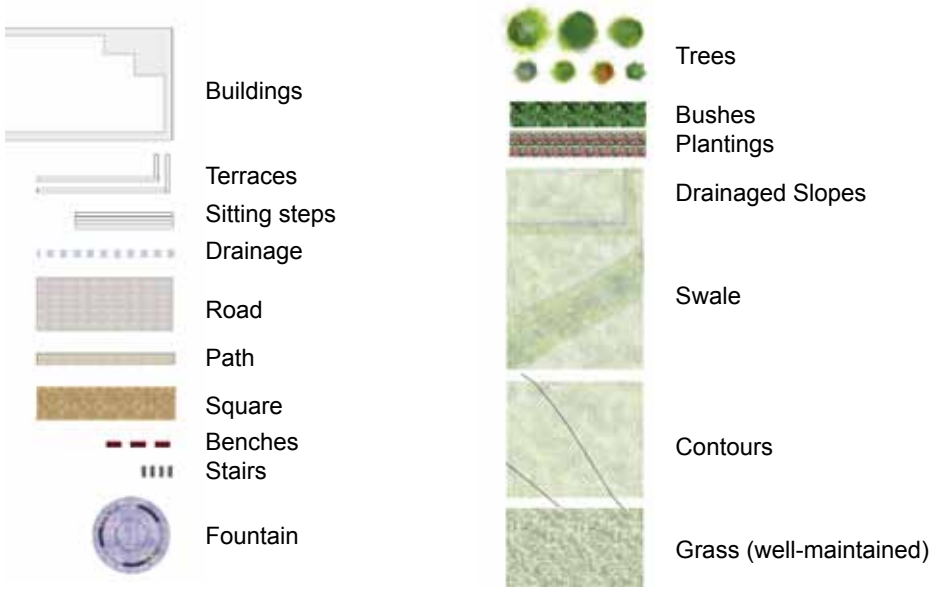


Square

The square is located to the middle of the administration area, surrounded by departments and lecture halls, to be in the centre of the Campus site where almost everybody passes by. It will be the new obvious meeting point and the place where all the holidays are celebrated.

The design of the square is formal and strict to suit more ceremonial festivities. The shape of the square is round to invite and encourage the users to gather and meet. Surround the square seating areas, smaller trees, bushes and plantings will define the boarder of the spatiality. To indicate that this place is important and something special, the paving material should stand out and be of a different type from the rest of the site.

In the middle of the square a fountain is positioned as a natural focal point. The fountain will be the centre of attention during celebrations, but also an attractive and usable feature when not filled with water, when one can experience the ornamental plantings and colourful tiles while sitting down on the fountain wall. Between the fountain and the road west of the square, the height difference will be solved with terraces and stairs which also create seating areas with favourable microclimate.



Between the administrations buildings a smaller entrance area could be found. It has benches, plantings and a blue jacaranda tree to brighten up the surrounding. Behind the entrance area, the square and the fountain could be glimpsed.

Inspirational pictures

Bird's eye view of the square.

Taken by: Yitbarek Woldehawariat

Planting in the centre of stairs is a nice feature.

Terraces with plantings.

Tiles as inspiration for the square.

During an ordinary day, when the fountain is dry, the square is a part of the University's daily life. It offers both places to sit, met or just pass by, but also beautiful vegetation informs of ornamental plantings and smaller trees.

Inspirational pictures of the fontain

A water feature with a diffuse transition between being a fountain or just a surface.

Fountain that looks more like a statue with an strict form and patterned material.

Fountain with strong formal appearance.

Fountain with plantings and sitting opportunities.

The square is also the place for celebration and during holidays this is the place to be! The fountain is splashing water and the square is filled with people dancing and celebrating.

Fountain where the water shapes the area more than an actual built fountain.

Light and color during dark hours.

Vegetation

The main idea of the vegetation at the square is to have it controlled and in a human scale. There will be smaller and multi-stemmed trees, bushes and plantings surrounding the square, and since the place is of great significance for the University the chosen species must have ornamental value, with flowers, nice shapes and interesting characters.

The trees along the road, generally described in the chapter *Streetscape*, will be sparser in front of the square to open up the sight between the square and the road, but also to keep views to the surrounding landscape (as seen in the views on the previous pages).

Planting at terraces with bushes and small trees.

Plantings at erraces with herbaceous plants.

Grevillea Robusta

Taken by: Bernard Loison, Wikimedia Commons (2012-08-26) http://commons.wikimedia.org/wiki/File:Erythrina_abyssinica1MTFL.jpg?uselang=sv

Erythrina abyssinica

Palm trees

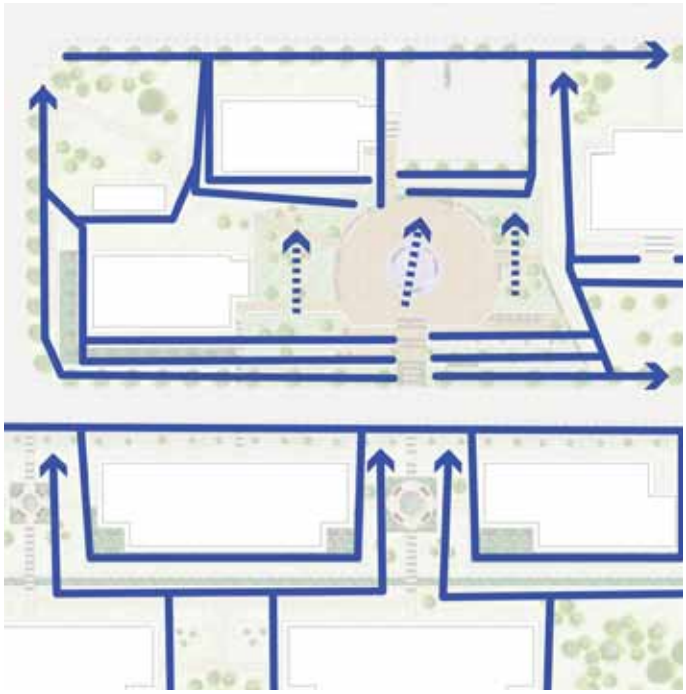
Callistemon Citrinus

Callistemon Citrinus (Bottlebrush) An often multi-stemmed bush with red flowers that look like bottlebrushes, it can reach up to 3 meter high.

Erythrina abyssinica (Flame tree) is good for soil conservation, nitrogen fixation and bee forage. It is a short stemmed tree with thick branches formed into a rounded crown (6-12 meter). The orange-red flowers are in heads at the bare tree (Bekele-Tesemma, 2007, p 242).

Grevillea Robusta (Silky oak) Has an oval leafy crown with fern-like leafs. Flowers are golden-orange and attracts bees and sunbirds (Bekele-Tesemma, 2007, p 290).

Small palm trees Lower species that are not growing too high. Has ornamental values.



The water runoff will be lead by swales along the terraces and finally end up in the drainage system along the road in east.

Buildings
Terraces
Sitting steps
Drainage
Road
Path of Cobblestone
Path

Tiled area
Patio
Benches
Stairs
Trees
Bushes
Plantings

Drainaged Slopes
Swale
Contours
Grass (well-maintained)

Central park

In the files we got from the engineers we noticed that there was a planned green area in the middle of the site in front of the main library. The idea appealed to us and we have used it as a base in our proposal. The idea is further developed where we made a park in the whole middle area demarcated by the main library and the student canteen. The location of the central park will also work as a part of the entrance to the Campus site, showing the guests that this Campus is a green and biodiverse place.

The character of the park will be formal and ornamental, and if the square, described above, is the paved gathering point, the central park will become the green gathering place for the University. A lot of people will be able to gather there at the large open grass surface in the centre of the park. The lawn will be surrounded by plantings, benches and high stemmed trees. The trees will create an impression of a transparent forest, like a pilar room, with sight lines that open up even more. Today's ditch, going through the area, will be enhanced to a beautiful part of the park, by emphasizing its form and appearance. The new ditch will be more meandering, have vegetation along it and the recreational path will follow its edge.

South of the library a testing site for plants and flowers stretches along the water as a nice feature in the park. The testing site will be a place to show different flowers, designs of flower beds and variation of plants that over time could be altered. We want to encourage the use of the outdoor environment in the education where this would be a compliment to the other testing sites found at the Campus. To facilitate the teaching we propose the testing site to include benches and a larger gathering place for groups or classes.

There is a steep slope between the main library and the planned auditorium that in our proposal will be terraced. By doing terraces, both the height differences will be solved and a more favourable microclimate will be gained. The terraces will consists of plenty of benches placed on both grass and paved surfaces, perfectly to use both alone or when meeting friends. It will have varied vegetation with trees to sit under and plantings of bushes and herbaceous plants to watch.

When standing on the top of the terraced area you will look out to an open and green view. The jacaranda tree with its blue color will glow and the testing site on the toe of the terraces is welcoming you with color and blossom!

The section is cutting through the terraced area, showing the height differences and the solutions of different planes.

View of the center flat plane in the terraced area. This space will work as a place for meeting, sitting and gathering both larger and smaller groups of people. A place to hang around at!

Bild's eye view of the terraces in the central park.

Vegetation
Trees will be high-stem and formal around the gathering point in the Park, and define the space at the same time as it gives the impression of transparency. There will also be trees with large canopies to rest under. The trees at the terraces will have the same character as at the Square.

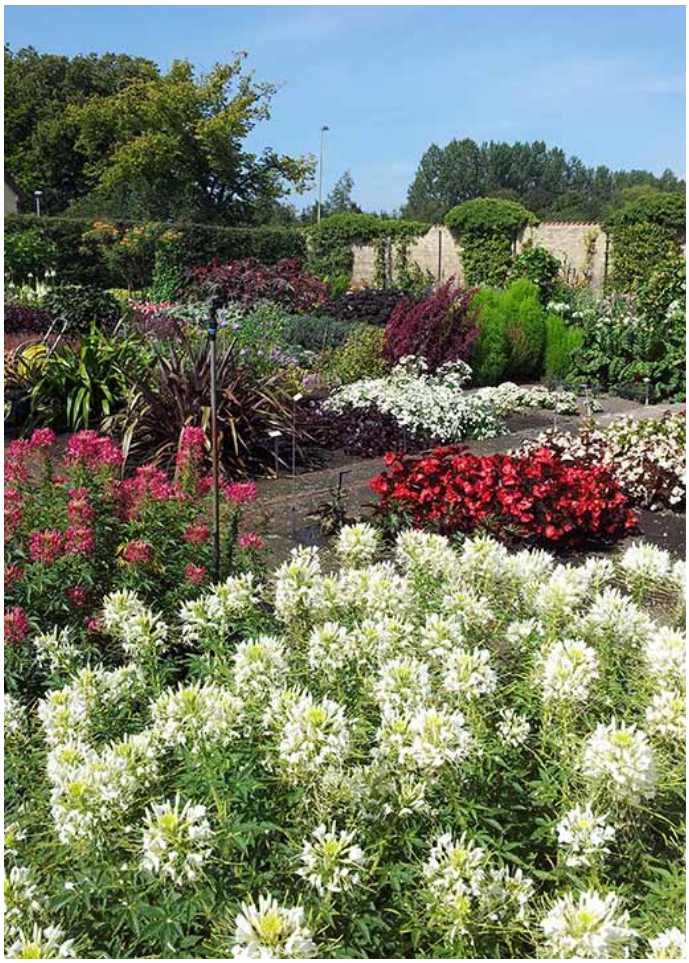
Places for rest in the testing site.

Tiles as inspiration for the terraces.

Flowering trees and formal character.

Testing site with herbaceous plant can be altered and changed over the years to change character and atmosphere.

It will be like an ocean of flowers.



Acacia decurrens (Green wattle) Upright growth, 6-12 meter, with golden-yellow flowers. It is bee forage, nitrogen fixative and soil conserver (Bekele-Tesemma, 2007, p 64).

Polyscias fulva (Parasol tree), a high tree with a straight bole, flat crown, up to 9 meter (Bekele-Tesemma, 2007, p 410).

Callistemon citrinus (Bottlebrush) An often multi-stemmed bush with red flowers that look like bottlebrushes, it can reach up to 3 meter high.

Taken by:J Brew,Wikipedia(2012-08-26)http://en.wikipedia.org/wiki/File:Acacia-decurrens-catalina.jpg

Acacia decurrens

Callistemon citrinus

Maintenance and Time

The forest of high stemmed trees in front of the canteen in the park will be achieved by planting many trees closely together and thus forcing the stems to grow straight. The strategy is further described in the chapter *Time aspect* strategy two: one-storied high stand trees. Around the lawn larger qualities of trees, that already have grown large, can advantageously be used to get a "final" feeling quicker since it is one of the Campus site's most central parts. At the parking lot an instant volume is desirable, and therefore a variation of seedlings can be planted and thinned out after time to achieve a substantial mass already from start.

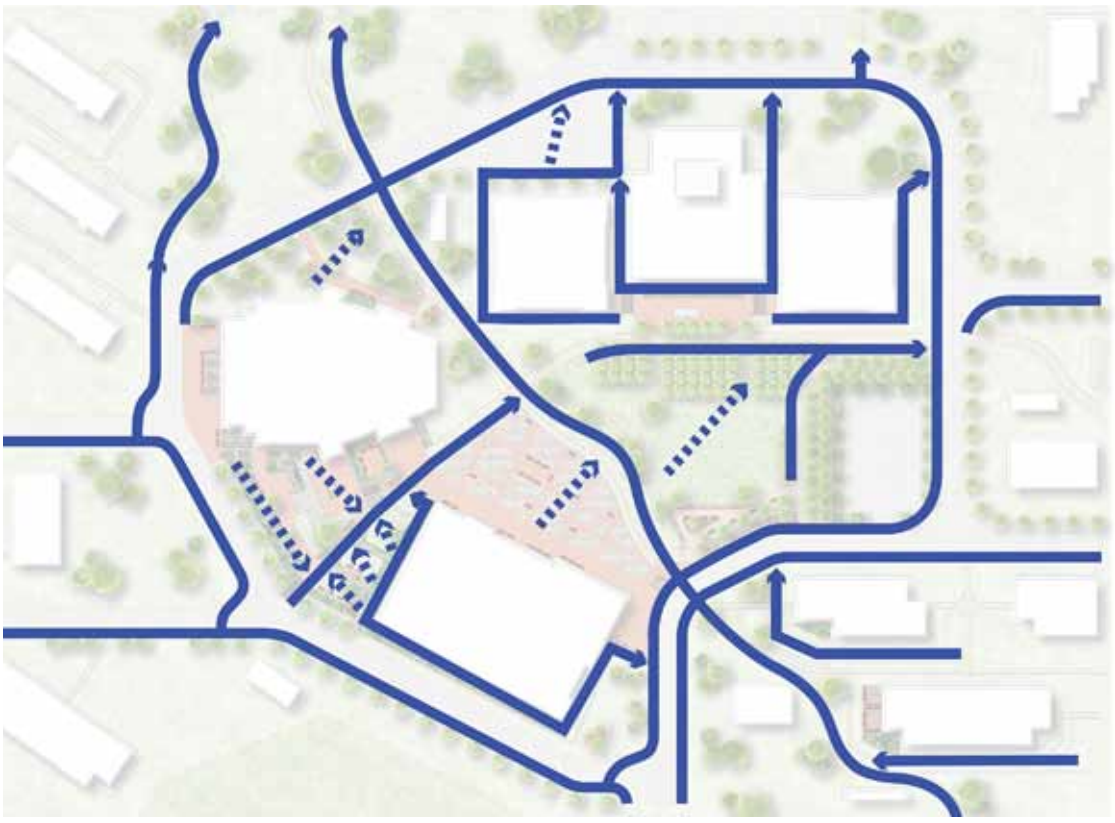
The lawn can get a variation of looks throughout the year by changing its maintenance. The grass can both be shorter and longer, and by alter the mowing the place gets different appearances, for example in a form of a circle to gather people or different pathways to encourage a direction and playing.

Grass mowed in different ways can create a more defined gathering area and paths.

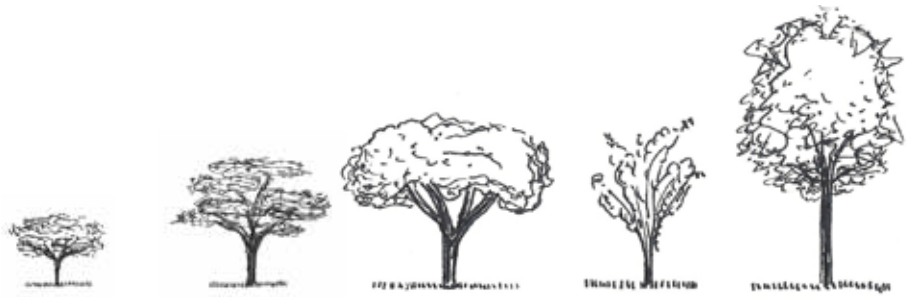
Grass mowed in different ways can be a nice changable feature in the park creating paths, forms and places.

The trees in lines in the central park will have paths going through, here inspiration of path and younger stemmed trees.

After some years the trees will be high-stemmed, and a groundcover underneath can enhance the transparent feeling.



Swales and ditches will lead the water away from both the buildings and lawns to the drainage system along the roads and the major ditch going though the park ending into the river.



Residential areas

The outdoor environment in the students' residential area will have a garden feeling with patios and fruit trees. The vegetation should be varied where the fruit trees is a nice feature. Since there are a lack of fruit trees growing at this altitude (Muluneh, 2012, oral) this could be an opportunity to test different ones, like Apple trees (Malus species) but also look for other types of fruit trees, for example species that have been cultivated for food in history, like nuts, tea, coffee etc.

The patios will differ in size to suit both individuals and larger groups of people. They will consist of outdoor furniture, and tiles will be used as paving. The plantings surrounding them give opportunity for the students themselves to plant and maintain.

Pergola with climbers creates nicer microclimate for seating.

Bushes surrounding patios can be low or stemmed to be create a more transparent character.

Smaller paths to patios can be stepping stones.


Taken by: Ethel Aard Vark, Wikipedia (2012-08-26) http://en.wikipedia.org/wiki/File:Carissa_edulis_HabitusFlowers_BotGard0906b.jpg

Carissa spinarum flowers.

Vegetation

Carissa spinarum is an ornamental and soil conserving spiny shrub to small tree (5 meter). Flowers are pink white and edible berries (Bekele-Tesemma, 2007, p. 156).

Casimiroa edulis (White sapote) is a ever shiny green tree up to 12 meter, that has green-yellow edible sweet fruits (Bekele-Tesemma, 2007, p. 158).

Ensete ventricosum (Wild banana) Fast growing leafy herb with large leaves. 6-12 meter high. The fruit are not edible, but it has ornamental value (Bekele-Tesemma, 2007, p 234).

Dovyalis abyssinica is an evergreen, glossy shrubby tree with rounded crown (up to 8 meter). It has an edible sweet sour fruit good for jam (Bekele-Tesemma, 2007, p 224).

Malus domestica (apple) is grown for its fruit and ornamental values. Since its thriving in well-drained rich soil (Bekele-Tesemma, 2007, p 334), at the female residential area it is more suitable where the areas been flood-proofed with hills.

Mimusope kummel is a large indigenous tree that provides orange-red fruits from December to March. It is evergreen (Bekele-Tesemma, 2007, p 354).

Morus Alba (Mulberry) could manage to grow at this altitude, although it is more common in the lower areas of Ethiopia (Orwa et al. 2009 & Bekele-Tesemma, 2007, p 358). The shapes vary, but often it is kept quit small, and through pruning it could be kept on desirable height. It is bee forage, soil conserving and can be good as windbreak as well (Bekele-Tesemma, 2007, p 358)

Myrtus communis (Common myrtle) used since ancient times in Ethiopia as flavouring, perfume and incense. Leathery leaves, evergreen shrub (3-5 meter high) with white sweet scented flowers (Bekele-Tesemma, 2007, p 364).

Schinus molle (Pepper tree). Light weeping foliage, up to 15 meter high. Fruit are small round berries, green to red then black. Useful for bee forage, soil conservation and spice (edible fruit), but should not be planted to close to buildings (Bekele-Tesemma, 2007, p 458). Preferably planted towards the field.


Taken by: Dalgial, Wikimedia Commons (2012-08-26) http://commons.wikimedia.org/wiki/File:Morus_alba_in_Incheon.JPG

Morus Alba habitus.


Morus Alba berries.


Schinus molle habitus.

Female residential areas

Buildings

Terraces

Terraces for sitting

Drainage

Road

Path of Cobblestones

Path

Patio

Benches

Clothesline

Trees

Bushes

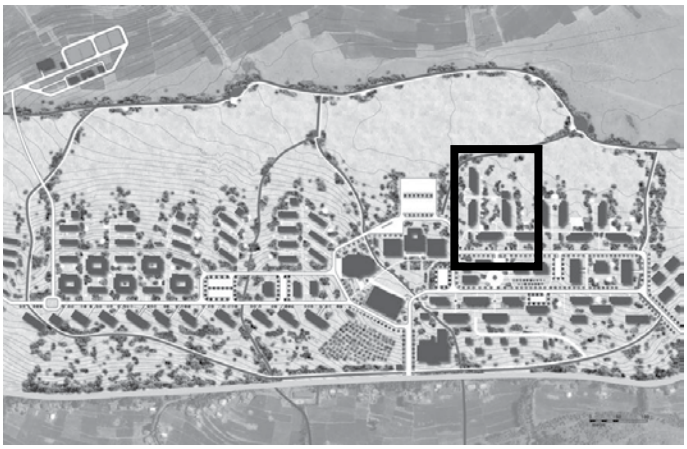
Plantings

Drainaged Slopes

Swale

Hills

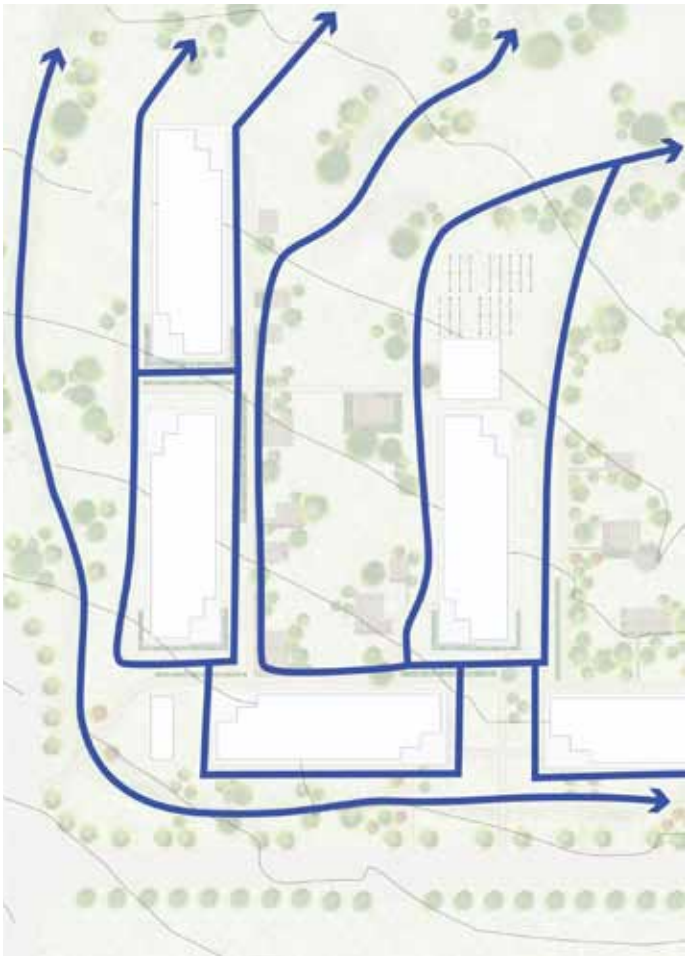
Contours



Female residential areas

The outdoor environment of the female residential area will be connected to the grazing land with trees and small hills.

The swampy ground at the female dormitory will become more accessible by a system of ditches, swales and small hills. The swales will lead the water away from the buildings and lawns into bigger swales which will finally end up in the river. This will make the site more attractive and usable.



The general idea of the swale system at female residential area.

Different depths of the swales to lead the water away from the site.

Male residential areas

Buildings

Terraces

Terraces for sitting

Drainage

Road

Path of Cobblestones

Path

Patio

Benches

Clothesline

Trees

Bushes

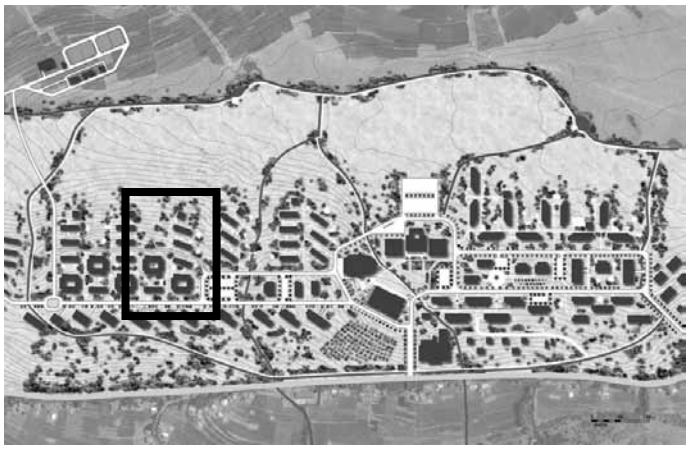
Plantings

Drainaged Slopes

Swale

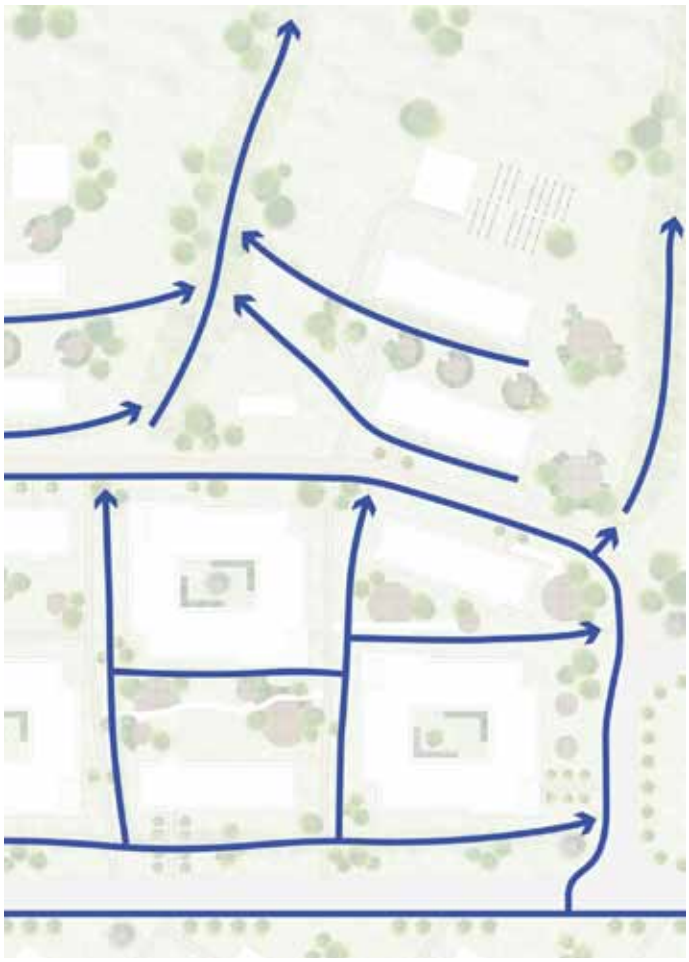
Hills

Contours



Male residential area

The male residential area will be filled with greenery, and consist of both solitaire and groups of trees. The idea is to strengthen the feeling of being a part of the surrounding landscape. The today's green wedges stretching into the area will be enhanced and made into green valleys for recreation. The water will, like in the female residential area be lead away through swales and end up in the river.



The general idea of the swale system at male residential area.

A nice round seating area under a tree.

Recreational path

The recreational path is a walking track going through the whole Campus site. It will go along the river in the lowland, have a shortcut through the central park and pass the western park as well as the southern and northern parts of the site.

The passage along the river, called the river walk, will offer a calm and quiet place where you can sit, study or meet friends. The peaceful feeling of the place will be strengthen by weeping tree groves and plantings of both herbaceous plants and shrubs. The river walk will both be a nice feature in the landscape as well as it will create a new low point and thus flood proof for example the female residential area.

The western part of the site will be enhanced and made into a park. The feeling will be like an English park with undulating lawns and trees with large canopies, offering opportunities to sit, rest and hang in the shade. By keeping the today's undulating character the future park will be more interesting, attractive and beneficial for the life in the park through creation of more varied spatiality and a nicer microclimate.

Recreational path

There will be many beautiful places for resting along the river walk.

Moveable benches could be an interesting feature under the large canopies in the western park.

The recreational path will take you under the large canopies and along the undulating and lawn.

Vegetation along the river

The vegetation in connection to the water should be soil conserving and prevent soil erosion.

Erythrina abyssinica (Flame tree) is good for soil conservation, nitrogen fixation and bee forage. It is a short stemmed tree with thick branches formed into a rounded crown (6-12 meter). The orange-red flowers are in heads at the bare tree. (Bekele-Tesemma, 2007, p 242)

Erythrina brucei a small tree (5-10 meter) that are soil conserving and nitrogen fixing. It is suitable for stream banks and along rivers the tree may not shed its leaves. Flowers are orange-red in big heads on bare stem and the branches are thick and form a round shaped canopy .(Bekele-Tesemma, 2007, p 244)

Phoenix reclinata (Wild date palm) may reach 10 meter and grows naturally along river banks and in swamps. Leaves are up to 2,7 meter long and the fruit are yellow-brown and edible. (Bekele-Tesemma, 2007, p 394)

Salix mucronata (Wild willow) is used for stabilising river banks and gullies. Its an evergreen shrubby tree (2-10 meter). (Bekele-Tesemma, 2007, p 450)

Taken by: Kahuroa, Wikimedia Commons (2012-08-26)
http://commons.wikimedia.org/wiki/File:Phoenix-reclinata-AK.jpg?uselang=sv

Phoenix reclinata

Taken by: Hedwig Storch, Wikimedia Commons (2012-08-28)
http://commons.wikimedia.org/wiki/File:Erythrina_abyssinica1MTFL.jpg?uselang=sv

Erythrina abyssinica

Both taken by: Abu Shawka, Wikimedia Commons, http://commons.wikimedia.org/w/index.php?title=Special%3ASearch&profile=default&search=salix+mucronata&fulltext=Search&uselang=sv

Salix mucronata

General vegetation for the recreational path

Acacia abyssinica (Flat-top Acacia) has a wide crown and can be a large tree, although it is possible to manage it to different sizes. It attracts honey bees, is a nitrogen fixer and is useful for conserving and improving degraded soils and landscapes. (Negash, 1995, p. 171-172 & 177). Plant on the field, not to close to buildings since it has horizontal root system.

Cordia africana (Large-leaved Cordia) A large tree with rounded crown. Should be planted dense to encourage straight growth and thinned as they are growing. Positive as bee forage and soil conservation (Bekele-Tesemma, 2007, p 196).

Ekebergia capensis is a medium to large tree (10-30 meter), traditional used as a shady meeting place in grasslands, soil conserving, bee forage and has small-white scented flowers (Bekele-Tesemma, 2007, p 230).

Erythrina abyssinica (Flame tree) is good for soil conservation, nitrogen fixation and bee forage. It is a short stemmed tree with thick branches formed into a rounded crown (6-12 meter). The orange-red flowers are in heads at the bare tree. (Bekele-Tesemma, 2007, p 242)

Ficus elastica (Indian rubber tree) is a large tree (up to 30 meter) that can grow aerial roots from the branches. Leathery shiny leaves. (Bekele-Tesemma, 2007, p 272). Suitable as a solitary tree out on the field.

Hagenia abyssinica. Leafy rounded crown with red-brown bark. Young leaf red and flowers pink-red or white-yellow (Bekele-Tesemma, 2007, p 298). The tree is positive for soil and rain water conservation. It is rather branched which reduces the speed of stormy rainfall that protects from soil erosion, fallen leaves also protect soil erosion and surface runoff (Negash, 1995, p.128-129)

Millettia ferruginea is a tree that provides shade, has large purple flowers, long pods and is a nitrogen fixater (Negash, 1995, p. 149 & 153-154)

Podocarpus falcatus (East African Yellowwood) An evergreen dense tree, with droopy nature of the branches (Negash, 1995, p. 44). It is slow growing and hardy once established (Bekele-Tesemma, 2007, p. 408).

Acacia abyssinica

Ekebergia capensis

Podocarpus falcatus

Hagenia abyssinica

Challenges for the future

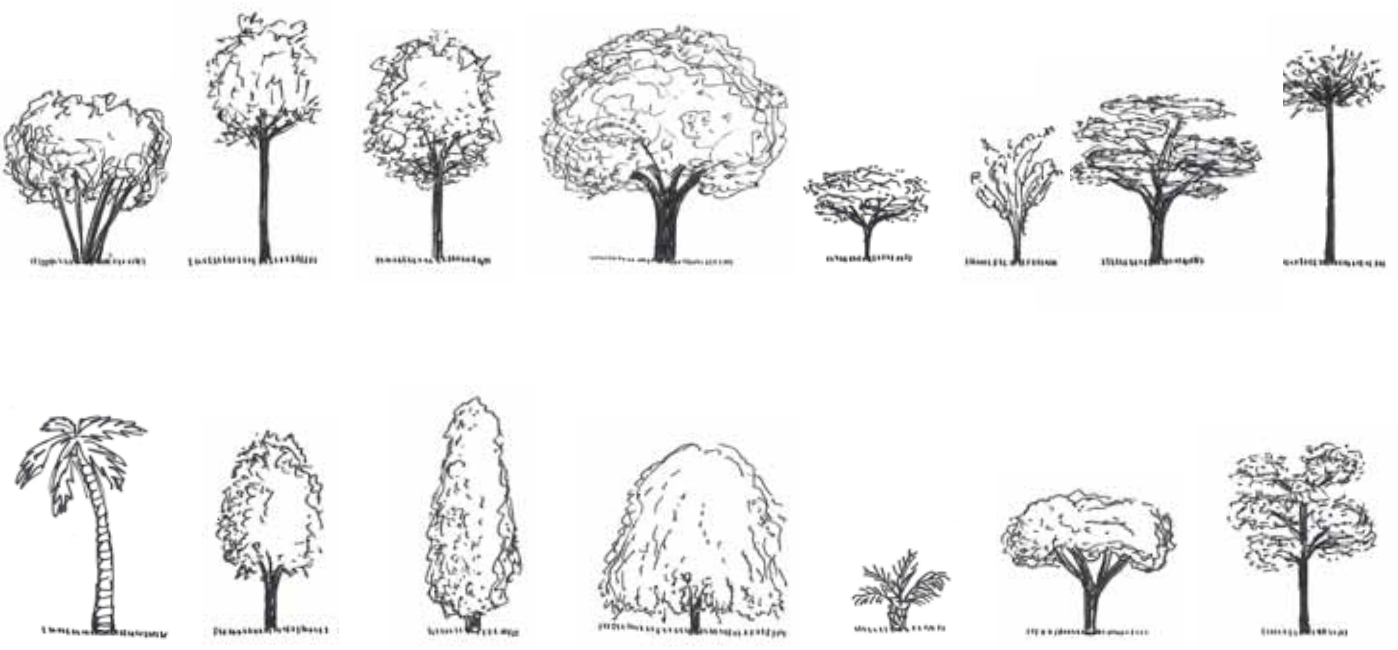
The area of Dessie, along with other parts of Ethiopia, does face problems of land erosion, landslides, draught, flooding and deforestation. Ethiopia is however a biodiverse country with nearly seven thousands different plant species. Even so, many of the species are endangered for extinction, mainly because of over-grazing, rapid afforestation of monocultures as well as deforestation due to the needs of fuelwood and construction materials. About 92% of the nation's total energy comes from biomass sources, with wood and tree residues accounting for 77%. (Bekele-Tesemma, 2007 p. IV and p. 2)

One reason for this troublesome situation is the absence of information and knowledge about how farmers can use vegetation in a more efficient way and incorporate it in the farming systems. Too often exotic species are promoted at the expense of a rich indigenous flora (Bekele-Tesemma, 2007 p. IV and p. 2). An example of this is the excessive use of eucalyptus in the country, also the most common tree around Dessie. Eucalyptus has, as described earlier, many deficiencies and are not contributing to biodiversity.

Being aware of some of the problems concerning the unused potential of vegetation, our vision is to influence Wollo University to become a biodiverse Campus and take on a leading role in Ethiopia and thus be an inspiration for the rest of the country and community. The University has already today declared a vision and future plan to make Tossa Mountain into a botanical garden with more than 35000 tree species. The implementation of this plan provides a great opportunity to combine testing sites for biodiversity with more specific needs of the site and its users. Planting 35000 species is also a great opportunity to explain the importance of variation and the needs of avoiding planting monocultures, to create a sustainable environment.

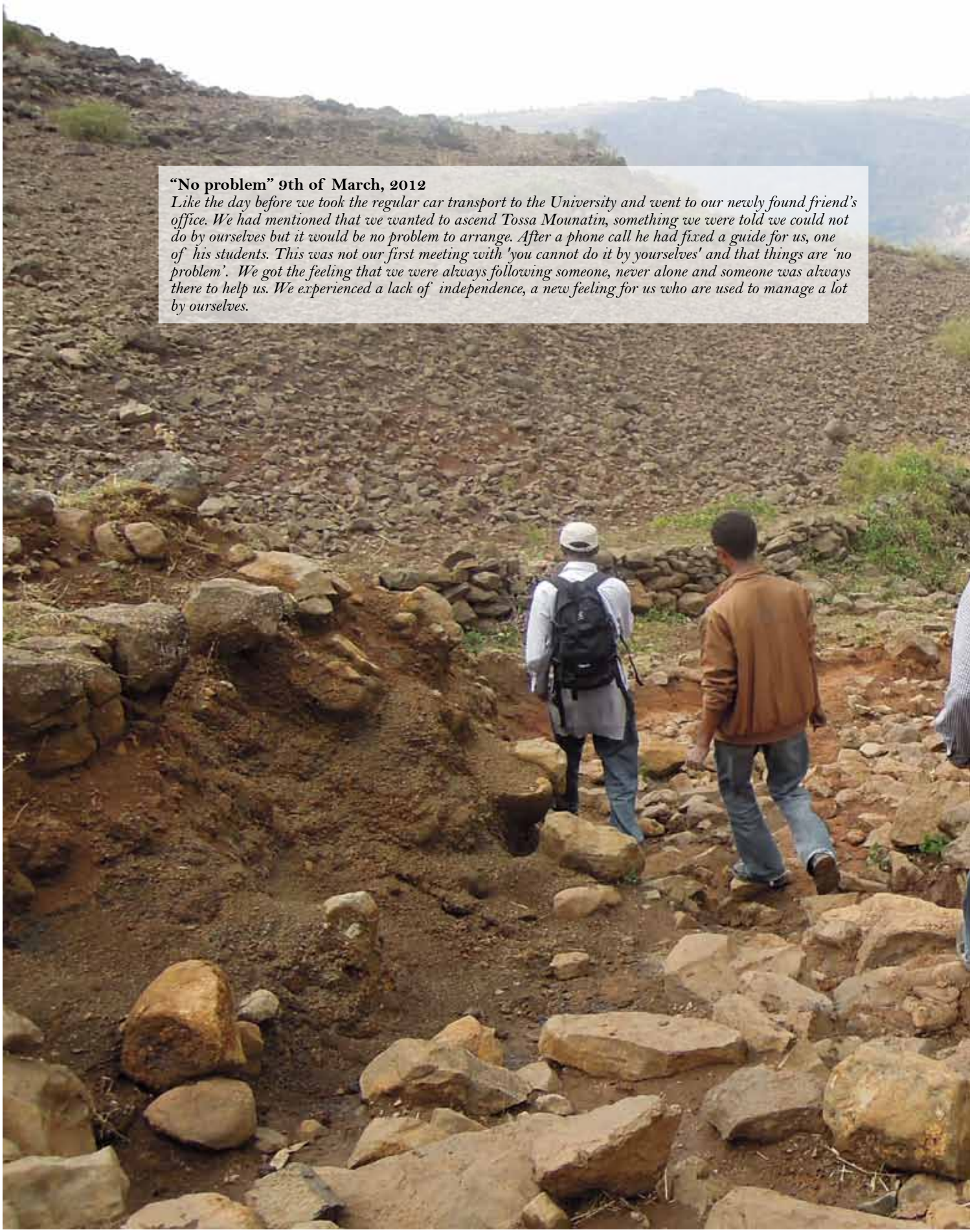
We have in the Design Program aimed to make Dessie Campus to a green and attractive site. The program encourages the University to invest in the landscape and the outdoor environment because of its impact on biodiversity and humans; we are happier and healthier in green environments. By planting a huge variation of trees and using the Campus site for testing different species the University would benefit a lot of different groups and people. The educational programs could use the testing sites and plantations as a part of the teaching and learning process, and the whole community of Dessie, which today lacks parks, could be benefited by being offered an attractive park with recreational value.

Last but not least, having a nice outdoor environment creates something to be proud of, something to show others and a unifying identity for the people studying and working at the Campus.



A variation of trees should be planted to increase biodiversity.

The beautiful landscape in Ethiopia is threatened by the fact that Eucalyptus trees are the most common to be planted.



"No problem" 9th of March, 2012

Like the day before we took the regular car transport to the University and went to our newly found friend's office. We had mentioned that we wanted to ascend Tossa Mounatin, something we were told we could not do by ourselves but it would be no problem to arrange. After a phone call he had fixed a guide for us, one of his students. This was not our first meeting with 'you cannot do it by yourselves' and that things are 'no problem'. We got the feeling that we were always following someone, never alone and someone was always there to help us. We experienced a lack of independence, a new feeling for us who are used to manage a lot by ourselves.

6. Reflection

As landscape architect students we have been trained to carry through simulated design projects, collect and analyse information, assess and reassess, take decisions and argue for our ideas, both verbally and visually. Doing a design project in a country far way and with strikingly different conditions have tested our skills. We have experienced both challenges and obstacles, but also got the insight that a design project in Ethiopia does not distinguish too much from other projects we have done.

The final part of our thesis is a discussion of our working process, a reflection of what we have done and why we have taken different decisions and turns during the project. First, a weekly diagram is presented, where we mainly document and reflect over our field study in Ethiopia. We will bring up critical and crucial moments and stages of our process that have affected our final design, some of it as our own inner doubts but mostly external influences. Secondly, two crucial questions will be dealt with further; our role as landscape architects in a developing country and the communication problem. The communication issue includes everyday communication but even more the visual presentation of our project. Finally, our method is assessed more into depth, ending up with a conclusion of the knowledge we gained.

Weekly diagram in Ethiopia; Events and process

Since the main part of our project took place in Ethiopia and a lot of decisions were affected by events there, we have reflected upon our process in a chronological order to get an understanding of our project and process. The following reflections are based on such external inputs, experiences and our inner doubts.

Week one; orientation, getting adjusted, inventory

Before we went to Ethiopia our role in the project was very diffuse and unclear to us. We did not knew much and the only thing we really were sure about was that the University wanted us to make a landscape plan, but what it should include was vague and harder to foreseen. Hence, our preparation work was to try to be prepared for many possibilities and approaches. From the very first day at the University, we understood right away that many of our initial plans of how to approach the project would be difficult to realise. The first encounter with the conditions of the University site made us doubtful about the whole project. It turned out to be a substantial large area of naked ground with pebbles, gravel, some grass and buildings. How could we grasp all this? Nonetheless, without really discussing it further we both knew that we needed to go back to basics of how to get to know a site; classical inventories, a lot of walking, observing, mapping, work by hand and talking to site users.

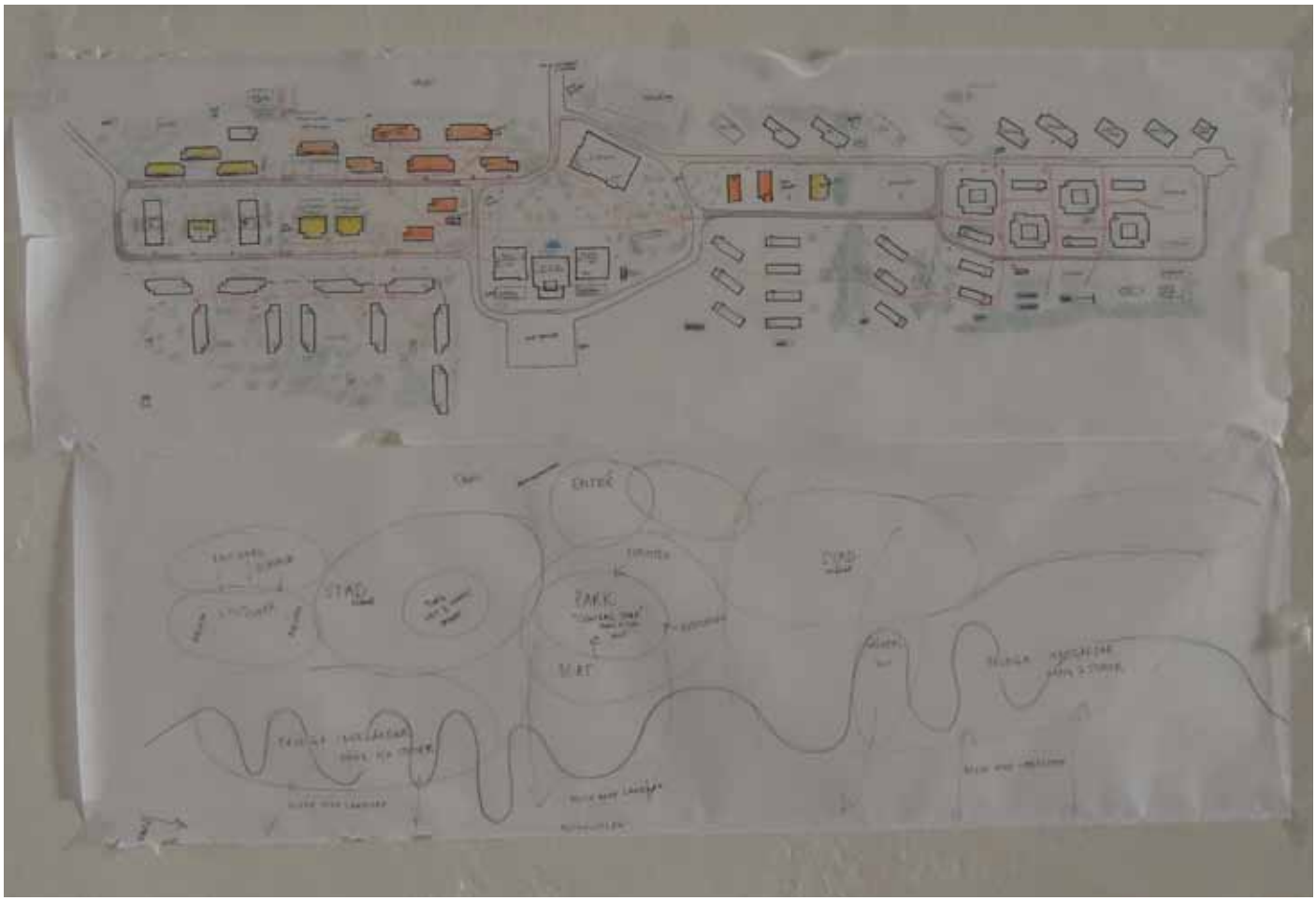
Additionally to this, many hours were spent on trying to understand how we would manage all practical things of living in this totally new country. Already our first day and encounter with Ethiopia we were thrown straight into the culture and the landscape. For example we wondered how we would ever find our way by ourselves. Addresses in Ethiopia were not widely spread instead they used references of geographical positions as "next to", "behind", "on the asphalt road" and so on to explain a particular location. Therefore a lot of time was spent familiarizing our neighbourhood, and we met a lot of friendly people who were going to help and brighten our stay. We got an office space in the same building as the engineers of GIZ and MH engineering, which were the constructing firms behind the University and they have been helpful in our working process.

Being abroad also makes you reflect on your own situation and the way you see life. Talking to people at the Campus made us realise that important design issues in Sweden are not relevant in the same way here. An example of this was the confused and uncomprehending faces we got in return when we talked about places for socializing and meeting, which is an essential design tool in Sweden. This is not an issue in Ethiopia where we experienced the habit of socializing and meeting to be a natural part of the existing everyday life. In Ethiopia people talk, socialize and hang around together and approach all guests with a welcome. Nothing special has to trigger this behaviour, it is an essential part of the culture and just the way many Ethiopians are. The obvious question raised from this realization is what culture do we have in Sweden where we have to make such an effort to make people meet and see each other?

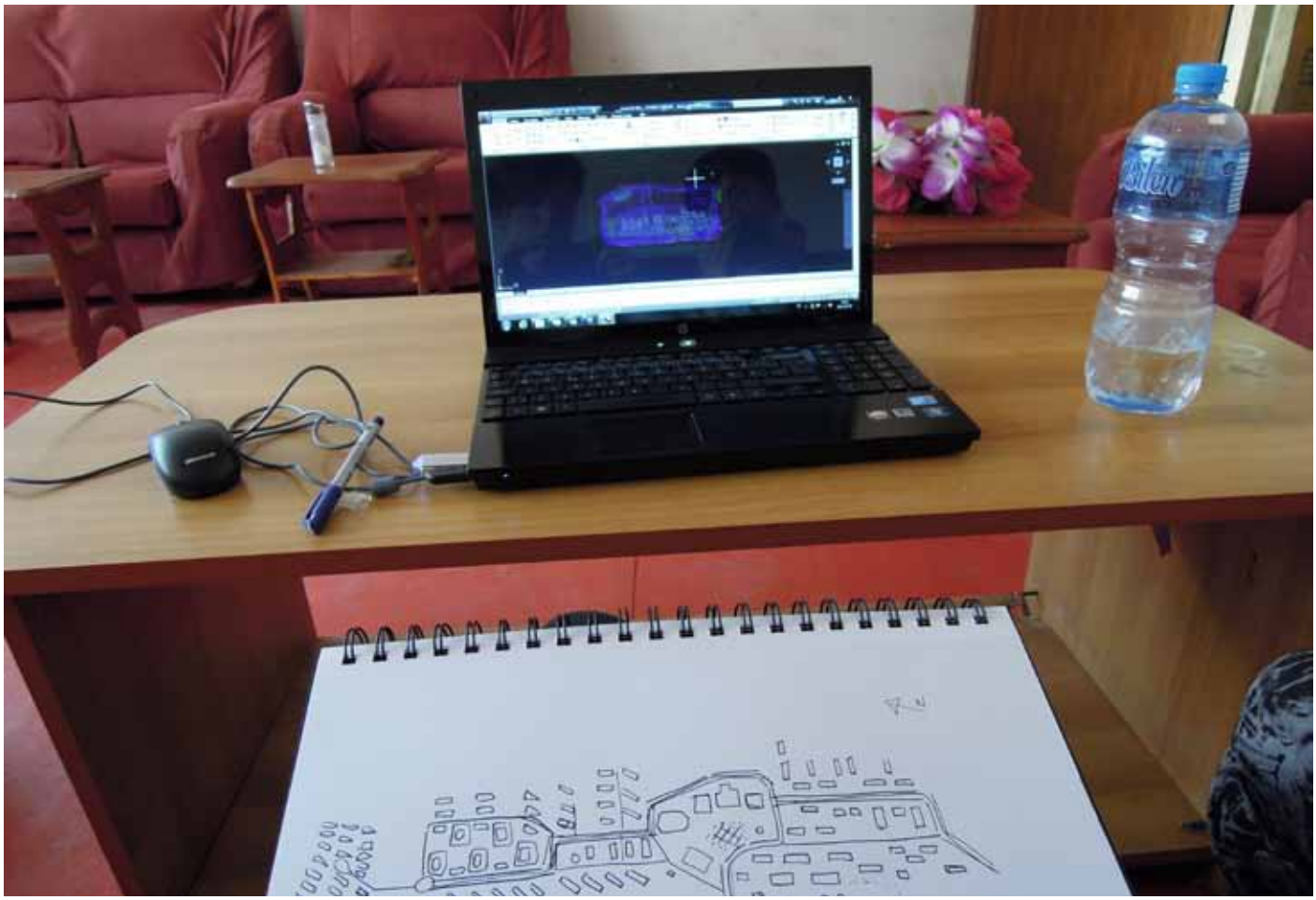
Week two; defining a scope

The second week of our stay in Dessie we started doing inventories of the physical features of the Campus site and began the sketching process. We had a meeting with our contact, Yitbarek Woldehawariat (2012, oral), assistant professor of entomology at Wollo University, where he explained more about what they expected from us. From then on we understood that having one specific focus area would not be possible since they wanted us to make a landscape plan over the entire area. We got inspired by the meeting and all the interest and wishes for new thoughts which were brought forward and also by the notion that students and staff could have a part of the construction work. We were also presented to the idea that a 3D model might be a good final product in order to make it easier for everyone unaccustomed to read plans.

The neighborhood where we lived.



Our first overall sketch of the site.



Preparation for inventory.

Even though many of our questions were answered during the talk, a lot of uncertainty was still left. We talked to the engineers and realized that the expectations on our work were to design everything between the buildings and the roads, the today unplanned areas. Our mission would then be to, more or less, do the decoration. A question started to rise in our heads; if a vision of landscape does not come before the buildings, is it then okay to make the landscape as a compensation for this neglect on a site where the construction of buildings already is done? In our case, we had for example regarded the steep slopes behind the buildings as a product of ignoring the landscape consequences when planning for the layout of buildings. In our view a better landscape with less steep slopes could have been established, if just we (or other landscape architects) would have been consulted earlier. If correctly designed a building and a landscape should benefit from one another, but unfortunately we could not see this at the existing campus site. However this also, of course, has economical reasons, where cheap solutions have been favoured. Further on, one can wonder if that really is the most economical approach in the long run.

During this week the project was constantly growing. We had been told that the University wanted to have monuments, statues, fountains and a fish pond. It made us unsure and hesitant. How do you place monuments in a landscape of 72 hectare? Our conclusion was to continue with the sketching without thinking too much of monuments and statues, since we had assured ourselves that the two issues were in two different scales, where the landscape plan was the precondition for placing any ornamental object. Thus, the landscape plan needed to be done first! We would never have thought of these types of aesthetic features if we had not been told that it was something they wanted. It made us start to think of the differences between their and ours aesthetic preferences and ideas of the outdoor environment.

Week three; Overall design, tree & vegetation, first rain

The theme of this week was our lack of knowledge about the local conditions, mainly concerning the vegetation, materials and storm water catchment in extreme situations. All these questions that had been raised made us start doubting on ourselves and on our work so far. How could we, two landscape architects students from Sweden, believe we could do a well functioning landscape design in this to us totally new and extreme situation?

For this reason, we spent a lot of time this week at the forest and agricultural department, exchanging ideas and knowledge with the staff. We started to get an overall knowledge about the most common species in the area. Despite this insight we doubted the extent of our competence; how would we ever be able to grasp all this new knowledge and be confident enough to suggest tree species? As we were thinking about vegetation as the most central and economically plausible design element we wondered how to approach that and make the most suitable selection for the existent growing conditions. Unlike our experience from Sweden it was not possible to turn to well developed nursery catalogues where we could find a whole spectrum of plant species. Later on, we understood that the forest and agricultural department wanted to be a part in the final selection of the species, which eventually made us calm down.

Trying to understand the consequences of the height differences.

This week we also met Dr. Assefa Balch (2012, oral), the President of the University and heard his ideas and thoughts of our work. He expressed his wish for a design with exotic tree species, and also asked us how we would handle the huge amount of storm water during the rainy seasons which caused problems with flooding in the area. At that moment we were not ready to answer any of those inquiries since it was too early in the process, but we kept them in our minds.

Another issue raised this week which made us think of how we should continue with our work, were the responses we got on our first sketches. When we started to sketch the overall design by hand using transparent paper we got a lot of comments. The engineers in the same building thought that we were doing child drawings and we were asked why we did not work in AutoCad. We became aware of the differences in working methods and this discrepancy became a contributory factor to why we started to reflect upon how we best could show our ideas in our communication with the University. The sketching by hand has however been a very effective tool for us since it has given the opportunity to sketch together on the same paper. We have also done a lot of hand drawn sections of the sites which has been a necessary and efficient way for understanding the substantial inclination of the site.

This was the week when we really understood the magnitude of the work we had to do, how it had to cover the insufficient drainage problem, how we had to improve our lack of knowledge in local vegetation and materials and how to explain our ideas in order to make them legible and understandable.

Week four; Computer work and electricity failure

This was the week when the rain started to fall and the point earlier made by the President Dr. Assefa Balch (2012, oral) about the rain as a major problem was heavily visualized. By talking to people it became obvious to us that the problems caused by heavy rainfall and storm water were a returning issue. However, before we had experienced the rainfall ourselves, we could not understand the magnitude and force of it, how it changed the whole area from being dry and dusty to become a wet, muddy and inaccessible landscape, where a major problem was to go from point A to B.

The rainfall also caused electricity failures, and in our working process this was very bad timing, especially since we just had started to work digitally. We had to use all the possible time when the electricity was on to be able to produce the plans, sketches and materials to the presentation we were going to have the week after.

It could not be a too strange coincidence, that at the same time as the electricity failure occured also our faith in the project burst. In this week we had reached the lowest confidence to our project and all our ideas felt shallow, flat and boring. Our constant focus on such ideas that we thought “they” wanted to have, together with the useless feeling of doing “a park” when they did not even have functioning toilets, made us questioning our design aspirations. The result of this dip was a walk through the site, where we talked, redefined and developed some new ideas and design elements, taking our stand in the actual landscape. The new ideas rendered us new energy and we could finalise the first concept of the design in terms of plans and visuals.

Sketching process.

Week five; Presentation Week

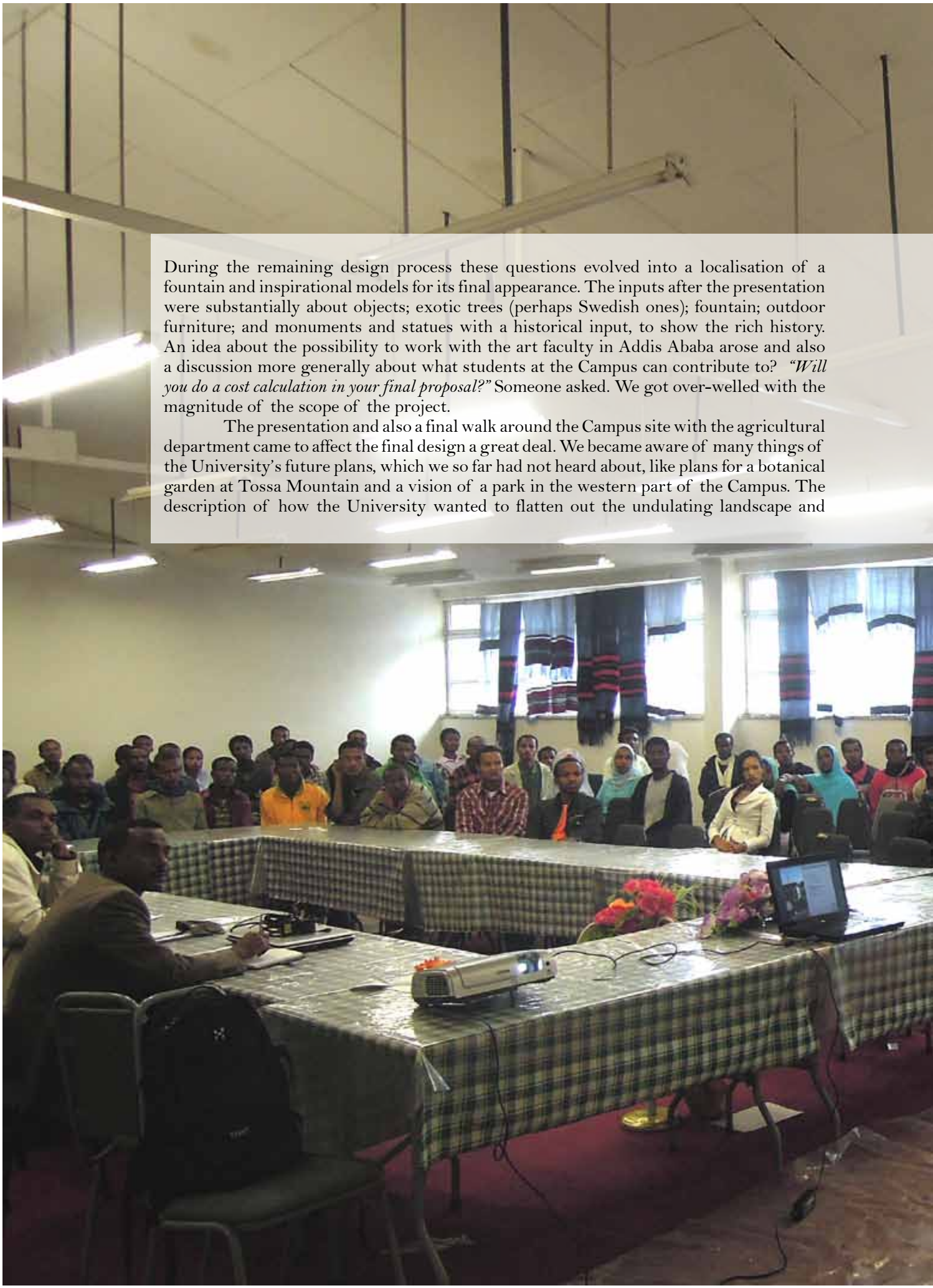
The major event the last week at Wollo University was the presentation; both the preparation for it as well as the actual performance of our ideas. At this occasion we got a lot of interesting feedback, which inspired us to continue the work back home in Sweden. During the questioning part we got the request: *"Can we have the presentation so we can start to build?"* Our answer of course had to be that it was not finished yet. This type of comments however made us utterly aware of the reality of the project and that there actually was someone waiting for our work to be finished.

As we already some week ago had understood, the work had more and more come to deal with the evident difficulty with the insufficient drainage and how to address solutions for how to handle the slopes around the buildings. A response from the agricultural department concerning the slopes was why we had done only terraces and not slopes with lawns. A question we have followed up back in Sweden in a talk with one of our teachers, an expert in the subject.

At the presentation we also got the feedback that it generally looked nice *"but where is the fountain?"*. That comment resulted in a lot of struggle in our further design process, how should we approach a design, which could accommodate a fountain? Where should it be situated and what should it look like? Should we really design a fountain?

During the remaining design process these questions evolved into a localisation of a fountain and inspirational models for its final appearance. The inputs after the presentation were substantially about objects; exotic trees (perhaps Swedish ones); fountain; outdoor furniture; and monuments and statues with a historical input, to show the rich history. An idea about the possibility to work with the art faculty in Addis Ababa arose and also a discussion more generally about what students at the Campus can contribute to? *"Will you do a cost calculation in your final proposal?"* Someone asked. We got over-welled with the magnitude of the scope of the project.

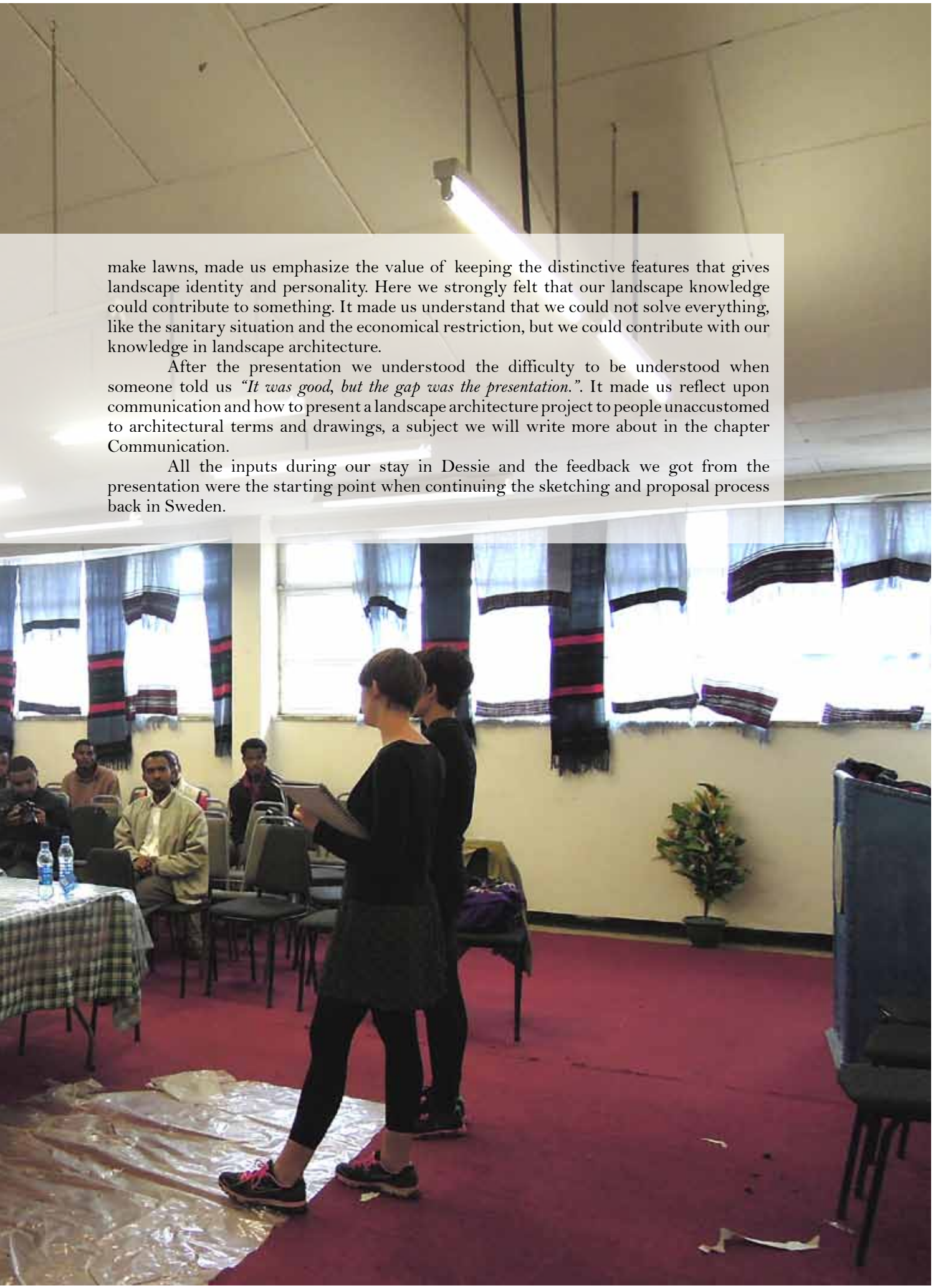
The presentation and also a final walk around the Campus site with the agricultural department came to affect the final design a great deal. We became aware of many things of the University's future plans, which we so far had not heard about, like plans for a botanical garden at Tossa Mountain and a vision of a park in the western part of the Campus. The description of how the University wanted to flatten out the undulating landscape and



make lawns, made us emphasize the value of keeping the distinctive features that gives landscape identity and personality. Here we strongly felt that our landscape knowledge could contribute to something. It made us understand that we could not solve everything, like the sanitary situation and the economical restriction, but we could contribute with our knowledge in landscape architecture.

After the presentation we understood the difficulty to be understood when someone told us *"It was good, but the gap was the presentation."*. It made us reflect upon communication and how to present a landscape architecture project to people unaccustomed to architectural terms and drawings, a subject we will write more about in the chapter Communication.

All the inputs during our stay in Dessie and the feedback we got from the presentation were the starting point when continuing the sketching and proposal process back in Sweden.



Our role as landscape architects in relation to the clients and site

Visiting other countries can make you more aware about how you act, what you think is "normal" and for broadening your minds and perspectives regarding other ways of living. As landscape architects students doing a project in Ethiopia we do not assume ourselves as ordinary tourists, but in a role of being professional and acting towards a client.

The stay in Dessie has made us reflect and question a lot of things about our role as professionals, especially in a developing country. What can we contribute with when the students lack necessary facilities? When travelling from Sweden we saw ourselves as students doing a project, but when we came to Dessie we became regarded as experts. We were asked to hold a lecture about landscape architecture and they also wanted us to start a new faculty of landscape architecture at their University. Their views of our professional expertise raised different feelings both insecurity of their expectations on us, but also of course pride and flattering.

The second week in Dessie it was confirmed that we were supposed to design the spaces in between the buildings at the Campus site. Our assignment from the University was to decorate the outdoor environment and make it usable. All buildings and infrastructure were planned, if not already built, and our mission was to make it beautiful. This is a common opinion of what a landscape architect usually does, but it is not the correct truth of today when landscape architects often have bigger influence over the overall planning. It has been difficult, but anyhow a great challenge to do a good landscape design proposal, when the building structure and layout already was set, since the buildings contributed with more disadvantages than advantages. Examples of that are the steep slopes behind every building and the location of the female residential in the swampy area.

Our role in this project has also been affected by the fact that people at the Campus have found it hard to understand what we actually were doing there. One reason, except that our profession do not exist in Ethiopia, could be the lack of so many fundamental facilities that the students perhaps could not see why someone should care about the outdoor environment instead of fulfilling some of their more basic needs. As discussed earlier, this is something we also have struggled a lot with; why do the landscape design when the students do not even have functioning toilets and showers. But in the end we do believe in what we are doing and that a nice and well-functioning outdoor environment can contribute to a better life on Campus.

Taste vs. taste

This work made us aware of our taste and how much we just see as a hegemonic truth. Of course there has been discussion during our studies about what people think is more or less physical appealing, for example if one happen to prefer corten steal or wood as building material. But in our opinion the overall aesthetics in Sweden are much the same. In Ethiopia we were met by inspirational pictures of Campus areas with an Americanized style of big green lawns, ornamental and formal structure. We were confronted with

formulated wishes for fish ponds, historical monuments, statues and a fountain, all of them such objects, which we somehow are unaccustomed to and which lie far away in our design toolbox.

Our view of the "Ethiopian taste" has been made from observation of sites that people have appreciated, like for example Bahir Dahr University Campus and images that people has showed us. Hindsight, we could have done more investigation about the hegemonic taste of landscapes in Ethiopia, if there is one. For example we could have showed pictures of different landscapes for their assessment, in order to get a greater understanding of what is appreciated. Now our views have been on the edge of being condemnatory, though we have tried to make our interpretations of what we think have been appreciated on other places, in forms of study visits.

Without doubt it has been hard to handle these differences in taste. How should we address it? We think some trees are beautiful and exotic, but people there thought it was common and boring. The University wanted exotic trees, and someone even asked for a Swedish garden, is that not boring trees and plants for us?

That we differ in "taste" is not difficult to understand since we are from two different cultures with other kinds of traditions. We are from a western country with a more structured and technical society where we are surrounded by designed elements, clean streets, paved surfaces and shiny materials. Ethiopia, on the other hand, is a developing country with a more unstructured disorder of streets, where people and animals share the city landscape together. In Sweden, there is a contemporary trend to create either artificial places with more focus on material and colours, or the contrary to create more of a wild green feature in the city. Our experiences and ideal, especially regarding the wild-nature-trend, could be difficult to apply in a developing country with its unplanned city structures. What is needed in the unstructured is the formal and planned.

This project has really opened our eyes for how taste is something culturally created. When our Ethiopian contacts say that they want ornamental and striking plantings and trees, fountains and monuments you can also say that they want the structured and the planned elements. During the whole process we have also made comparisons with historical ideals and what we see as their taste can be compared with the trends during the western baroque period. It is also interesting to note that baroque ideals in some ways have returned to the western society, because of postmodern thoughts in philosophy and aesthetics.

During the process we have taken in consideration all wishes from the University, since they are the clients and site users. What they want their surroundings to express and be experienced as, are of course very important. Their wishes have strongly affected the final design, even though our role in relation to their wishes sometimes has been confusing. Our aim was to contribute with something they might not have, our architectural skills, but at the same time we struggled to avoid too much of prescribing and simply apply our own aesthetics and taste. The line between taking too much into consideration and forget your own wishes and objectives has been thin. Most likely, the reason for our occasional feelings that our project was worthless however was a result of forgetting our own thoughts, wishes and values.

Monday 12th of March
Every day is an adventure. You never know what will happen or what someone has planned for you. Everyone is so nice and helpful!

Communication

Disciplines often develop their own language and communication system, and the sometimes narrowly restricted development of language can cause problems, when used in the communication with an outsider. Even though we still are students, we have become a part of the landscape architecture community of communication, and also the way we practice drawing and reading plans, sketches and sections etc. In this project we have became aware that this can be excluding for an unaccustomed viewer.

During our stay in Ethiopia there were plenty of occasions where we experienced the communication barrier, both when communicating our thoughts and ideas about the Campus landscape but also in more informal situations. The linguistic and visual problems made us reflect of how to communicate our thoughts and design proposal more clearly and legible.

Everyday communication

When walking around the Campus, students approach to us and asked us questions like; *"who are you?"*, *"What are you doing here?"* and *"What do you think about the Campus?"*. The majority of them were male students. if we politely answered them that the Campus site was *"nice"* they were offended, since they were well aware of its deficiencies. Our polite answers and the response to it made us reflect upon *how* we said things. These communication difficulties had to some extent to do with a mutual language barrier. As written earlier, groups of people like within a discipline, can develop a specific way of speaking that is unique for that group. Unaccustomed to their way of speaking English and the cultural differences presumably made us express our thoughts in a different ways than them.

In Sweden we frequently have to explain what landscape architecture is and what it can be used for and our stay in Ethiopia were no exception. Though except one difference, in Ethiopia landscape architecture is nonexistent as a profession. The answer to our purpose of stay obviously led to confusion;*"We are landscape architects students doing or master thesis about this university's landscape"*. Thus, we tried to use other words, which we believed to be easier to understand. Instead of saying *"landscape"* and *"landscape architecture"* we started to use words like *"outdoor environment"*, *"gardening"* and other words we thought to be more generally known. As a result from this we perceived that the communication was being improved.

Visual communication

The generally expressed phrase: *"A picture says more than thousands of words"* can from our experience be argued if it really is a hegemonic truth in the field of landscape architecture. Mertens writes in the book *Visualizing Landscape Architecture:*

"A written explanation is usually provided to support the strategies presented, but this could never be an adequate substitute for a visual presentation. As Visual presentations are universally understood, their significance and statements largely make sense without words, a great advantage in a globalized world" (Mertens, 2010, introduction)

However, a picture gives room for many kinds of interpretations and it can be read and understood in a variation of ways. Our experiences from Ethiopia were that our graphics were hard to understand. Our final presentation at the University made us really analyse and reflect upon how to communicate our ideas. What did we have to do in order to make our visuals legible?

After a literature study and viewing other project's visuals we came to the general conclusion that we had to make the graphics look less abstract and more realistic. Already in the beginning of the project we had discussed this issue and then explicitly decided not to use unrealistic colours; the trees should not be pink, unless they were pink in reality.

In the following pages our different presentation methods will be further discussed; perspectives, plans, 3D-models and how to visualise time aspects.

Visuals/Views

The pictures shown at the presentation for Wollo University were a mix of sketches and photos. The already introduced hints from the engineers during our sketching process, saying our sketches looked like child drawings, had made us aware of the importance of the graphics. However, we thought that if we used a realistic background to each view, the picture would be understandable. The presentation, made us realize this was not the case. Instead there was a general problem of understanding our visuals. We got a range of different comments, for example some did not understand where the views were located, some could not read what they consisted of, and a third did not understand the sketched humans.

We realized we had to make the visuals more realistic and that such an approach should include everything, from the colours of the trees to the appearance of the humans. Further on, we rethought the location of the views and the questions: *"What is most important to show with this place?"*, *"Is it easy to understand where the picture is located?"* and *"What type of life will take place here and how can it be shown?"* All these questions became the basis of the finally selected views.

The first views we did were sketched by hands.

The final views had a more realistic approach.

Plans

The overall plan presented for the University had a very simple expression with few colours. The only elements that varied in colours were grass, buildings, roads, plantings and trees. The colours were chosen in accordance with the elements real appearance, the grass was green, the trees were green and the road was grey and so on. The limited amount of colours and the selected tones gave the plan a grey and thin appearance. The plan looked too simple and was difficult to read, which was even exaggerated by the fact that we mistakenly had forgotten the legend. Our conclusion was that it lacked the joyfulness and interest a plan should have to be appealing and legible.

A fundament for the whole landscape design was vegetation, a dynamic material for creating open and closed spaces and variation of sizes, colours and form. Nothing of this was communicated in the plan. The trees were almost spread in a regular dot system all over the site, the groves did not vary in size, and all trees had the same colour and more or less the same size. Something drastic had to be done to acquire the right feeling. In the same way as we realized with the views, the layout of the plan had also to be more realistic and appealing. We focused on the vegetation which we saw as the greatest problem. To make it look more alive we used a real photo of trees as a base for the forest to illustrate the groves, which gave it a natural diversity of green colours. The trees along the roads were defined with different colours to show the variation in the streetscape. The uniform and flat look of the grass was changed into a mottle pattern of different green colours. Also the colour of representing the buildings were changed from grey to red and highlighted with shadows, which made them pop out from the grass. Additionally the whole plan landed and appeared to be more fixed to the ground when we added an aerial photo showing the surrounding landscape.

Our first proposal plan also included contours, which generated more confusion than clarity. However, since the height differences are significant for the site and crucial for the design we decided to keep them. This time though, they were included in the legend and the heights of each contour were displayed on the plan to indicate that they described the elevation.

Hindsight, we should have put more effort to the plan to make it more legible for unaccustomed viewers. Even so, the new environment and especially the electricity failure due to the heavy rain, limited the time for us to work on our computers and thus the material we presented.

The part of the first draft we presented to Wollo University.

The new plan got a more appealing feeling.

3D-models

In the beginning of our stay we realised that there was an interest from the university to have a 3D computer generated model of the final plan because it would be easier to understand. When moving around in Ethiopia, looking at construction sites they all had billboards consisting of a 3D-model displaying the new building. Gosling (1993) writes in his paper *Techniques of analysis and communication in urban design* that: *"Computer-generated video animation is probably, to date, one of the most effective ways of public communication."* (Gosling, 1993, p. 225). He means that the use of 3D animation videos is a mathematically correct tool, every sequence of the area will more or less be shown and all the design has to be drawn in detail.

As the process went on we realized our limitation of time and that we could not comprehend to do a realistic model of a 72 hectare area. Instead we restricted our use of 3D techniques to the most complicated landscape areas in our proposal; the square and the terraces in the central park. This technique gave us both the ability to try our rather complicated ideas, to examine the solution of the height differences and to create visual models of the areas, both bird's eye views and perspectives from ground level.

The bird's eye views give a quick overall understanding of the site, but at the same time they are not sufficient for showing how the social life is taking place (Mertens 2010, p. 88) and therefore are they only used as a complement to the views at ground level, where there will be better possibilities to visualize this.

In the streetscape chapter we decided to illustrate the different streets with axonometric projections, which show volume and density of a place in a good way. The method is more suitable for smaller areas, like street sequences, since the vertical objects easily can hide what is behind when illustrating a larger area (Mertense 2010, p. 70). By using this technique we were able to show the whole spatial experience of each different streetscape and clarify the difference between them.

To see the site in 3D from above helps the understanding.

Axonometric projection is also a tool that enhances the legible.

Showing aspects of time

The whole area should function during rain and drought, ordinary days and celebrations as well as during school time and free time. Some of the places and features in our design varies in appearance and functions during different time of year. We thought therefore it would be necessary to show how they could be attractive and functional facilities during the whole year and not only during a certain period. As both the fountain at the square and the swales were important design features we decided to make pictures of these elements illustrating what they will look like with and without water.

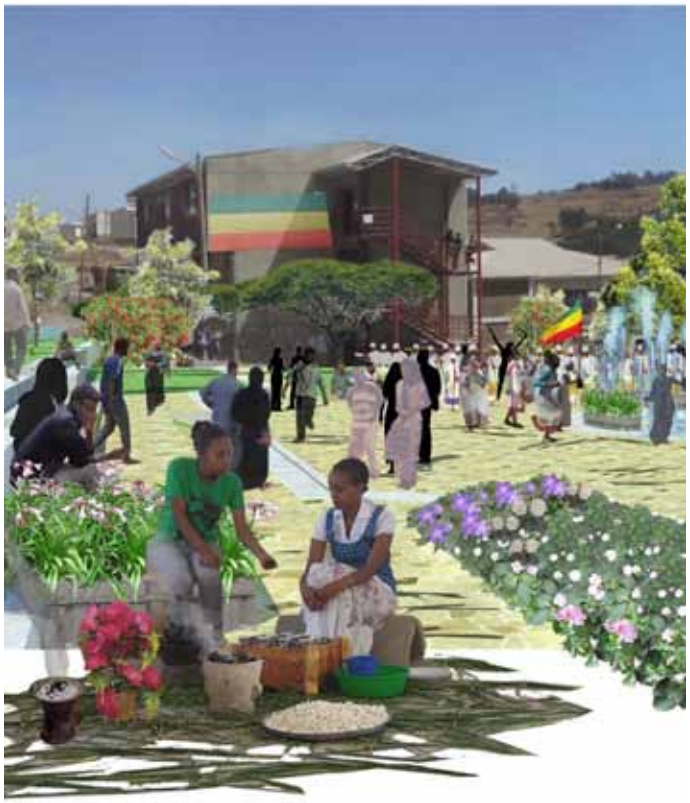
The fountain at the square is visualized by two views from the same position, one during celebration when water is splashing from the fountain and the square is filled with celebrating people, and the other one showing a calmer square during a normal day with some students passing or resting. The same approach we used for illustrating the swales and ditches, trying to show their appearance both during the rainy and the dry season.

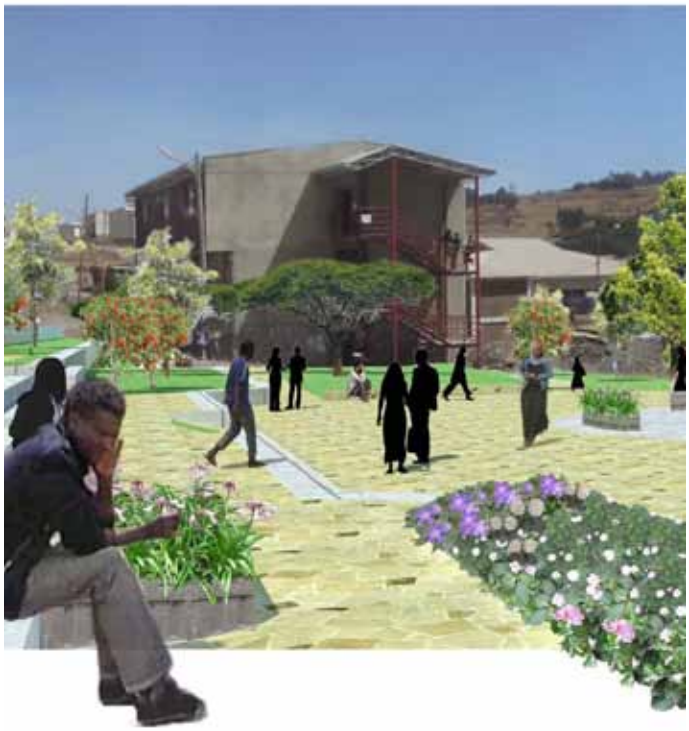
In the chapter about time aspects, we have tried to visualize the growth and development of trees in a mixture of sketches and photos. Even though we earlier had realized that photos of real elements increases the readability, we anyhow made the choice to use sketches as a conscious method for illustrating the process and dynamic of growing trees.

Reflecting on further communication

Our final visual presentation has been influenced by knowledge from literature, our experience in Ethiopia and our beforehand knowledge in the field of landscape architecture. However, we cannot for sure know if the final result is more comprehensible than our first draft. Then we should have done several presentations, evaluating different visual styles and made a more specific study in this topic.

Hindsight we should have discussed the issue further in Ethiopia, trying to evaluate what types of graphics are the more understandable. For examples we could have gathered some examples of various kinds of pictures and photos for a discussion about expressions and what they actually communicated. But on the other hand, we had to delimitate our work and of course our focus included more than the visual presentation.





The square is illustrated in two views in order to ease the understanding of how the place could be used the whole year round. The first view shows the time of celebration when the water is splashing in the fountain and the other view shows the use of the site during an ordinary day.

Method discussion

Our method has not followed a straight line. It has rather been an impulsive and shifting process, recurrently adapting to a deepening understanding throughout the whole time, which we also have tried to enlighten in the passages above. Working in this for us rather unknown context have made us feel responsive about trying to take new influences and inputs into account. We have recurrently allowed external variables affect the work and encouraged ourselves to think in new directions. It has been necessary to let the process take plenty of uncontrolled turns since we did not know the country and its conditions before we went there. Hindsight, it has been positive to keep the process open but at the same time that generates a risk of forgetting some aspects in the process.

In the following we will reflect upon our choice of method and what it consisted of, our time and delimitation problems and how our teamwork developed.

We worked in different ways to understand the site, both field and desk work.

Search for a method

From the very beginning of the project both of us struggled in accepting the absence of a defined method. During our preparation work in Sweden we believed that it would be possible to find one clear method that could be used during our field work. We did an ambitious research for possible methods and immersed ourselves into different anthropological techniques of having people making mental maps of their daily life and surrounding. Our motto *"go with the flow"* though, was the approach that clung.

The risk of *"academic tourism"* (Scheyvens and Storey 2003 p 2) made us anxious of becoming spectators and thus influenced us to try to become a part of the daily life and culture. Our aim to get inside the culture and understand it from within has in some ways been easy to achieve since everybody we met in Ethiopia has been very hospitable, friendly and helpful. You never felt alone, there was always someone there to help or guide you. The first days we even got help to buy food in the supermarket, a thing that otherwise would have been quite complicated.

Our motto showed to be quite suitable, since we throughout our whole stay in Ethiopia found it difficult to plan and organize our work. Things just happened and changed around us, not always in a way that we were aware of. We just had to accept new conditions and ways of doing and planning our work. The electricity failure that frequently occurred during the rain period was one of these external factors, which forced us to draw and sketch a lot by hand. The rain also restricted us to be outside during some periods of the day. Another factor that we more or less became accustomed to, were the lack of access to information. In Sweden this is taken for granted, but in Ethiopia we had to get used to the uncertainty and lack of internet access.

Sometimes we also felt that our approach to "go with the flow" was not a method rigorous enough and that a more structural approach could have been beneficial. Our loose approach made us to a large extent be influenced, anxious to be judgemental and this sometimes affected our proposal in a way that we thought it had became too timid and flat. We had to work hard to find a balance of our own ideas and the external influences and we always felt some uncertainty in assessing information to avoid forgetting important aspects.

An efficient tool in remembering the process and the different turns it has taken was taking daily notes into our journal. When forcing yourself to write down what you experience in a diary you also begin to reflect upon it. The journal writing has been a great base to our final discussion, reflection and it has also contributed to a more personal touch in the thesis.

Dialogues

The motto *"go with the flow"* also influenced our method of talking with site users. For many reasons it was difficult to make structured interviews; we only had the opportunity to perform one interview and that was with two male students. In the best of worlds this type of interview discussion should have been done with more groups of students, both male and female students. However it was difficult to arrange and plan for these meetings, as we could not be sure the meetings would take place. Several times meetings were cancelled. Our approach should maybe have been more persistent here, and less *"go with the flow"*.

Other times when we wanted to arrange a meeting with someone, the response was to have it right away without time for further preparations. A positive thing with these types of talks was that we had the possibility to talk to many people, and our aim to have regular discussions and meetings with the clients anyhow became a well-used method.

When it came to talking with students we did a lot of informal conversations during our inventories. These informal dialogues gave us a pretty good picture of the Campus life and maybe these occasions were more beneficial for the purpose than some formal interviews would have been. In these situations both we and the students were in a more relaxed atmosphere and the conversations were not tied to a certain types of questions in a confined room. According to Flowerdew and Martin (2005, p. 118) relaxed conversations are more lucrative since they offer you to see and understand more of the person you are talking to. This we also experienced when one of the male students showed us his room, which was a great opportunity to understand the conditions for students´ life at the Campus. This insight was a result from a spontaneous conversation that would not have been possible if we only had done formal interviews. The disadvantage of the spontaneous dialogues would be the selection of people approaching us, not everybody wants or dares. Generally we however got profitable conversations with a mix of both female and male students, even though the discussions with the male students became more frequent.

Time and Delimitations

From start we faced problems with time delimitations and structure. To have an open method means letting some of the control go, which makes it difficult to foresee the result. First we had an idea that the project could have one specific focus area, it could for example be all about storm water or a certain area at the campus, where the process of change could start. But on the spot in Ethiopia we realized that they expected us to do an overall landscape plan for the whole Campus site. It was when we comprehended what they expected from us, that we decided to skip the ideas of having one method or one focus area and it became clearer that we had to focus on gathering as much data and information as possible about the whole site during our stay.

Reflecting upon our time disposition our preparation time in Sweden was too time-consuming. It almost went on for one month and during this period we had time both to read a lot about the country, but also be stressed and confused about what we were doing. It would have been better to shorten this period to about two weeks and instead make the trip earlier, having more time after the trip in Sweden. It is easy to be wise afterwards and maybe it was also some uncertainty that made us think it would be necessary with a long period of preparation work.

During a long time we had the project divided into two parts; the Landscape Plan of the Campus site and the Master Project Thesis. This was also very time-consuming, and when we finally saw them as one entity it helped the process further on.

Our teamwork

We suppose that the previous discussion has made it evident that all the work in this project has been carried out in close cooperation as a team. It has worked surprisingly well, both in the design work and in the production of texts. In trying to consider the reasons why we have experienced such a well-functioning cooperation, our conclusion has been the constantly ongoing dialogue. To the utmost we have tried to keep our discussions open and honest, and if we met any opposition from each other, we have dealt with the topic immediately. All constant discussions has driven the process further, making us explain our thoughts and ideas more clearly. This has been an important fuel for the project and for the result.

Inspired by the site local plant species, traditions and material we produced a Design Program for Wollo University.

Final conclusion

We now have carried out a project with the goal to make a Design Program for the outdoor environment at Wollo University in Dessie, Ethiopia with different conditions than we are used to. Our aim has been to gain greater knowledge about landscape architecture and the design process and simultaneously broaden our view and general understanding of how needs and ideals specifically are depending on cultural traditions and politics as well as climatic and geographic conditions. So far, we are ready to conclude that the experience we have got is both general and specific. In order to strengthen our general knowledge we think that it is necessary to continue to get experience from other situations, to go with the flow and be open to many other kinds of specific situations and overall contexts.

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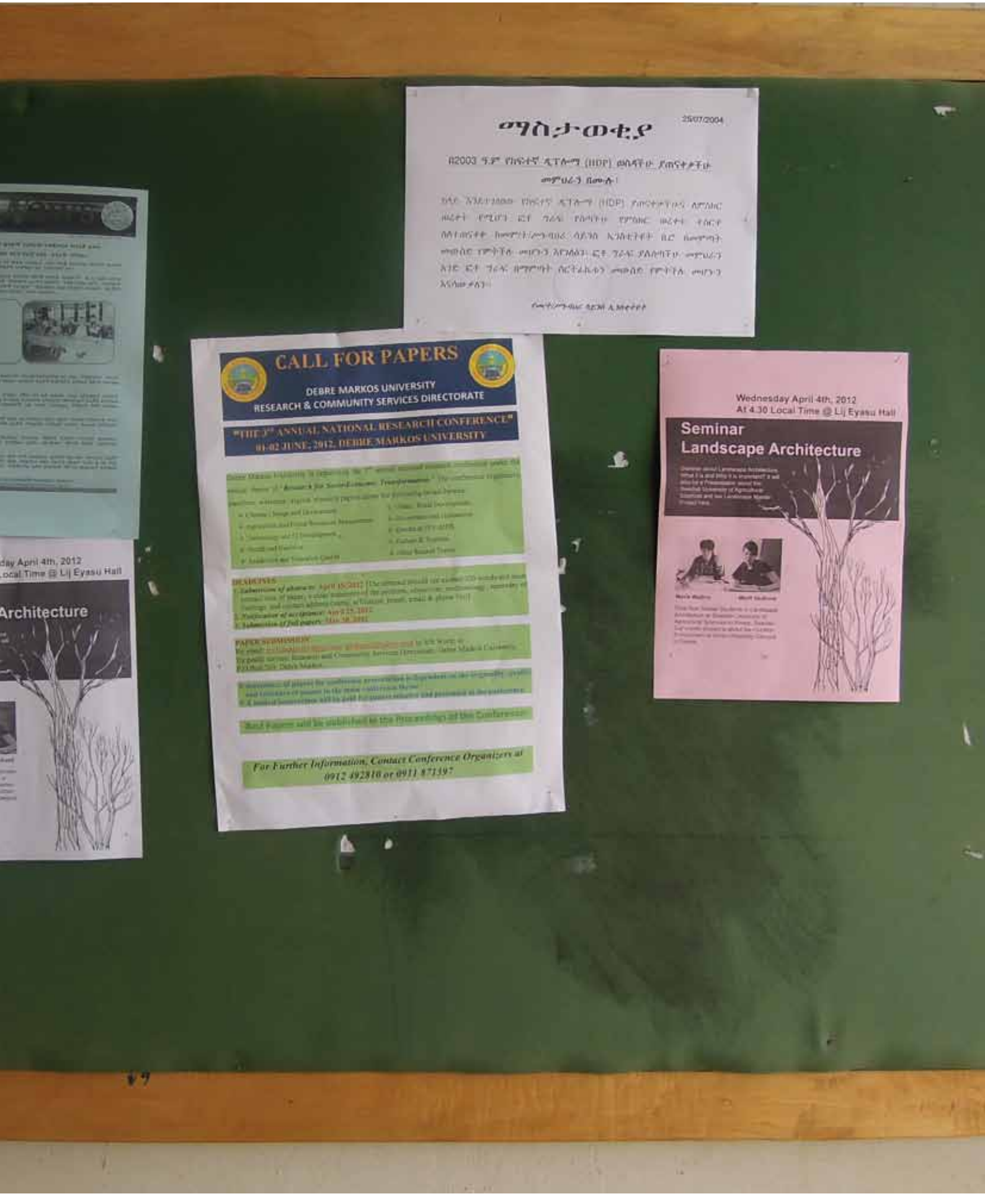
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