PK.0279 – Bachelor’s Thesis

Programmable Public Activity

*Revitalisation of an abandoned railway section*

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INTRODUCTION

Tartu with its 100 thousand inhabitants is the second biggest town, the cultural capital of Estonia, the county seat of Tartumaa. Situated on the South-West part of the country, 200 kms from the capital. In the Soviet Union, government planning produced grim totalitarian cities dominated by wide roads and high blocks, set far apart. The town is slowly recovering after Estonia regained its freedom from 1990. The historical sites being renovated, new modern centers and commercial areas built. The quality of urban design in the areas is rather depressing. In large measure the problem results from entrusting the design of each component to specialists - without any serious attention to design of the space between buildings (‘the outdoor landscape’). Highway engineers design roads, builders and architects design houses and apartment blocks, manufacturers design industrial sheds. Then, at the end of the day, one might commission a gardener to green-up the space between buildings, with ghastly results. If we want our city to have good open space between buildings, and on top of buildings, then landscape plans should precede urban development. The principle applies on greenfield sites and in urban renewal and regeneration projects such as the chosen topic the revitalization of urban railway section.

PLANNING MOTIVATION AND LOCAL CHARACTERISTICS

Area of the project: 152000 m²
Length of the embankment: 3370 m
Area of planting: 2700 m²
Planting: 160 perennial and ornamental plants, 370 bulbous plants, 194 trees and bushes. 
Number of flowerbeds and hills: 32, 14 of which are breast walls
Area of paving: 39600 m²
Length of bicycle lanes: 3670 m
Light: 72 light
Area of green houses and gardens: 875 m²,
Bike-rental pavilion 1: total area 30 m².

The planning area is a linear, curve area, located in the southern part of the town, between the operating part of the railway and the Emajõgi. The abandoned railway section used to serve as a supply line between the downtown harbour and the Tartu main station. It is 3,4 km in length with varied width from 40 to 200 meters. The area is very clearly divided into five different sections in the matter of view, structure and functions as follows: Väike-kaar –
Võru street, Võru street – Tähe street, Tähe street – Turu road, Turu road – Sõbra tee and last one from Sõbra tee until the southern bridge.

The first section is a very opened area bounded by the operating railway and garden houses. Starts with opened, wide scale and narrows down as we approach Võru tee and the corner of Ropka-Tamme cemetery. The vegetation is minimal and accidental. Mainly grass cover with few plants breeded out form the gardens of Võru street. From here starts the second section following straight line with East-West direction. The scale is much more narrow 20-40 meters followed by garden houses and 5 story high appartman houses. Here the planting is more organised due to the straight line of the backyard fences of Teguri tee garden houses on the Northern part and the parking lots of the appartman houses from South. Between these borders runs the line of the rails with approximately -2 m level differense, creating a nice urban valley. The are is accessable from Vru and Tähe street as well as from Ropka street through the parking lots and little green areas of the appartman houses. This is the most densely populated of all sections.

As we arrive to the third section the scale opens up to its widest of the planning area. It means 300 meters between the firewall of the warehouse of Common Mööbliäri and Ropka street. The messy commercial area of Teguri street on the northern border is complemented with planted pine-stand from the opposite direction. Here is a great chance to re-think the spatial structure in a way that meets the much more desirable park that also needs revitalisation. The area is flat with minimal height differences. As the planning area is the largest here multiple access points are available from Ropka, Ardla and Tähe street. Slightly populated surroundings.

The continuity of the opened wide space is followed with the most narrow part that last for about 800 meters. The scenery is industrial. Factories, warhouses and abandoned buildings rule the area. The vegetation is very poor only grass and weeds show themselves. This is the one area that needs the most the development. No living area in the immediate vicinity.

The next and last section is opening up with a nice opened scale with the riverbank of Emajõgi and closing down with Sõpruse bridge. The noisy, dusy ugly looking old factory scene is changing into a poorly handled commercial area. The Prisma parkig lot is a good access point to the area as well as the little park under the Sõpruse bridge. The area is easily accessible from the Prisma parking lot (Sõbra street) and Siili street. However the direct neighbouring area is commercial zone the sorrunding area has mixed living area with appartmam houses and garden houses.
Analysis is focusing on accessibility, structure of the land, what is there want is not? Gardens play an important role here. Big space is available but not actual usable space for human. Different analysis techniques are used to understand the area. Drawing the mindmap from fresh memories, measuring the area seeking for the type of land use, re-drawing the maps to understand the borders of landplots and building areas and seek for blocking zones, potential access points and viewpoints. Following this steps was essential in the planning process in accordance to be able to join the five sections of the area into an understandable space. (page 6-7.)

OBJECTIVE

To turn a quiet abandoned railway into a new city landmark thereby bringing life to the deserted area all along the railway from Väike-Karja to the Sõpruse bridge and the riverbank of Emajõgi.

How to link the five very different areas? How to give value to an abandoned area? What function should become part of the design? With imagination and skill, land uses can be integrated. The challenge is to create design make sure public open spaces are inviting and well use. Create a space that is attractive, create a space that people can enjoy.

CONCEPT

Solution: To link the park to a 4 km pedestrian and cycling route that starts at Vaike-karja. To replace the railroad with landscape park with distinct transit and sport features using the sleepers and metal parts of the existing railway as „free” material for outdoor furniture, including chairs, swing-chairs, benches, litter-bins, dogipots, lamp-posts, public toilets, flower-beds, green houses, bird-houses, artistic installations in a universal design-concept up to the end of the area to Sõpruse bridge.

DETAILED OPEN SPACE DESIGN

The the old railway is sited in a long valley shape. This geographical feature offers excellent opportunity for walking and resting. Creating a wave-shaped multilevel layout in summer can be used for walking, cycling or roller-skating while in winter it is a perfect setup for sledding, skating or skiing. Design for those who experience the landscape in a faster and
more dynamic way than most human beings. Important planning objective is that the various planting areas, built areas and curves are systemized in a 100 meter sequence. This is how far the human eye can “see”. This distance is what information is comfortably usable for the brain. The silent and active recreational sites, gardens, allees and crossings are planned that the park becomes a walkable compact connected community.

PLANTING PLAN

The park is furnished mainly with steppe plants. Trees and bushes with decorative crowns like lindens, hawthorns, rowan trees and ornamental apple trees were planted on hills from where one can easily contemplate the scenery. The main idea behind the plantation is to place as much indigestible plants as possible. Offering beauty and food throughout the year in a variation of colours. This type of planting is highly educative and complements the secondary concept of Public Green Houseing which will be discussed on the following pages in detail. The plant list therefore contains several berries: blackberries (*Viccinia myrtillus*), raspberries (*Rubus Idaeus*), dog rose (*Rosa Canina*) and wild strawberries (*Fragaria vesca*); fruit trees: apple trees (*Malus domestica*) plum trees (*Prunus domestica*), cherry trees (*Prunus cerasifera*); ornamental plants as *Tilia cordata* which is very good source for tea, *Sorbus acuparia*, *Coryllus avellana*, *Cornus avellenana Mindwinter Fire* and *Craetegus monogyna*. The flower bed will be planted with tulips, Lily, Iris, Orchid, Red Helleborine, Ivy, Blackthorn, Arctic brambles mixed with herbs. The variety of these plants offer great beauty even they are local species with their colours and various shapes can give a little bit exotic feel to the site.

FUNCTIONS AND MATERIALS

Multiple type of sitting, multiple chars, movable chars are key essence of a well planned site. The park has a very special feature. It has very big amount of good quality material resource. The sleepers, the metal rails and the foundation of the railway the gravel-bed. Saving the costs of buying in materials and transport money. The sleepers are good wood resource, the metal can be used in more heavy construction work or being sold raising founds for the further work. The average price of 1 kg metal is 0.20 EUR on the metal market. The gravel-bed is excellent foundation for the pedestrian pathway and the amount of it is enough to supply some amount of the bike-lane foundations. The project invites artists and designers to create a universal outdoor furnishing based on these materials following the fashionable upcycling planning method. It is a kind offer to involve the public into the planning and creation process. The design has to give answers for a wide scale of
outdoor furnitures. Benches, seats, chairs, swing-chairs, stairs, flowerbeds, drinking fountain, bird houses, playground elements, lights, litter-bins, dogipots and public toilets.

The design competition contains two bigger elements. A bike-rental and repair kiosk and the public green house design. Both of the houses must use the sleepers the rails and/or other recycled materials and solar-panels as a power source. The bike rental kiosk will contain an awariness raising campaign with bicycle driven generator and the green house design has to be based on a survey. It is important to measure the needs for this kind of experimental design as the project aim is to revitalize the area not to create a more pretty looking deserted area. The idea is to create space where people who are living in appartments also can enjoy their gardens, grow their food without the need of giving up the advantages of living in a flat.

The further materials used on the bike lane and pathways contruction are innovative tecnologies. The bike lane surface is made of UV powered starpath by Pro-teq. The company offers a quick drying, patented, spray applied system which forms an elastomeric membrane into which any type of decorative stone or aggregate can be injected leaving a flexible, seamless, waterproof surface. The extra in these decorative blue bikelanes is the UV power. It means that the surface contains a fluorescing material that absorbs the the sunlight and the path when cleaned of snow are visible helping to keep the line in long winter nights as well as in summer. The polyurethane and TPV rubber crumb system offered by the same company is good choice for playground combined with thick grass surfaces. The pedestrian pathway using a similiar technology but the BASF elastopave surfaces work differently. Elastopave® polyurethane is a two componentpolyurethane binder for pavement applications. When it’s combined with local aggregates, it creates a strong, durable composite that can be used for parking lots, driveways, sidewalks, patiosand other walking surfaces. It’s easy to work with and install using conventional construction equipment. It’s also easy to repair and prevents tree roots from cracking the pavement.

BUILDING PLAN

First Etap: 2014 autumn – 2015 winter

Preparing the site. The collection of the materials available on the site takes longer time than usual. The railway parts are valuable resources for the plan, they need to be sorted an taken care of properly. After the railway is picked up the landscape contstruction can start with preparing the foundations for the pathway, bikelanes and the green houses. The outdoor furnitures can be fabricacated simoultaneously.
Second Etap: 2015 winter – 2015 spring

The construction of the bike-lane, the paths and the green houses can start. After the main structures done the more detailed pieces can find its places. By the first days of spring the final shapes has to be constructed in accordance that the plantation can start and the public can start to use the green houses.

WHY BIKE LANE?

Cycleways should be beautiful, safe and luxurious. This is not the case in Estonia, but it could be. The bicycle is a delicate instrument requiring muscular exertion. In favourable conditions, cycling is a sublime pleasure: one can bowl with a silent grace unattainable by any other means. Even in bad conditions, it can be as enjoyable as swimming or sailing in a rough sea. But this only applies if one's struggle is against the forces of nature. Decision-makers should never forget that cyclists' behaviour is environment-friendly in the highest degree. It is also good for personal health. No expense should be spared in the planning and design of utterly superb cycleways. Society should invest in facilities which persuade citizens to become 'green commuters'.

Taking one very spectacular study as an example “Protected Bikelanes means Business” A report from PeopleForBikes and Alliance for Biking & Walking it is clear that riding a bicycle is much much more than a joyful transporting method.

As cities across the country build better biking systems, it’s becoming clear to more businesses and politicians that, when used right, these networks are part of the path to prosperity. Protected bike lanes promote economic growth in several common ways.

Boosting real-estate value - As city populations grow, motor vehicle congestion increases. New roads are rarely an option in mature cities. Protected bike lanes bring order and predictability to streets and provide transportation choices while helping to build neighborhoods where everyone enjoys spending time. By extending the geographic range of travel, bike lanes help neighborhoods redevelop without waiting years for new transit service to debut.

Helping companies to attract talented workers - Savvy workers, especially Millennials and members of Generation X, increasingly prefer downtown jobs and nearby homes. Because protected bike lanes make biking more comfortable and popular, they help companies locate
downtown without breaking the bank on auto parking space, and allow workers to reach their desk the way they increasingly prefer: under their own power.

A healthier worker is more productive - From Tallinn to Pärnu to Tartu, the story is the same: people go out of their way to use protected bike lanes. By creating clear delineation between auto and bike traffic, protected bike lanes get more people in the saddle — burning calories, clearing minds, and strengthening hearts and lungs. As companies scramble to lower health care costs, employees who benefit from the gentle exercise of pedaling to work help boost overall hourly productivity and cut bills.

Sales volume increases visibility - In growing urban communities, protected bike lane networks encourage more people to ride bikes for everyday trips. And when people use bikes for errands, they’re the ideal kind of retail customers: regulars. They stop by often and spend as much or more per month as people who arrive in cars. Plus, ten customers who arrive by bike fit in the parking space of one customer who arrives by car.

WHY PUBLIC GARDENS?

One of the major reasons why people go to the more natural areas is to escape the daily life of the city. As societies become more urbanized, and as people tend to work less in industries as agriculture or forestry, they tend to lose the sense of connection to the land that such work brings. The life of a city dweller, culturally rich as it can be, for many people tends to be stressful in some way, dominated by hectic lifestyles and timetables of transport and work. Many cities, especially in cold climates and with large European populations, have built municipal conservatories to display tropical plants and hold flower displays. This type of conservatory was popular in the early nineteenth century, and by the end of the century people were also giving them a social use (e.g., tea parties). Thinking forward and understanding the fastly changing world and our resources and the surrounding garden house area gave the insipartion to of fer these gardens for the public.

The Public Garden offers a differense for consumers, local public garden makes it much easier to have access to locally made goods. The green houses has designed to meet the needs of local producers, rather than the current supermarket attempts to fit local producers into an existing national distribution system. Supermarkets sell the most emotional product, food. It defines parts of our identity, culture and determines the fate our health. Food reminds us of our past and determines our future. So why is this exciting product sold in the most banal, boring shopping environment? Because supermarkets make much of their profits through promotional allowances from product placement, float on cash and real
Margins on products play a smaller role in the financial success of traditional grocers, and profits on products sold are primarily gained through select high margin products.

Traditional grocers offer very few local food options. This is a lost opportunity for traditional grocers that Public Gardens can offer. It’s very difficult for natural food supermarkets to incorporate locally grown food into their supply network because of the inherent volatility of supply from smaller local farms. The gardens offer the food at the same site where people live to provide a consistent reliable supply no matter what the local supply may be. It is able to manage this volatility by having its own supply of crops grown at the site so that the gardens are ensured to always have a consistent selection of locally grown produce available. This gives the user greater flexibility in choosing from local products.

Quality products! Consumers want the best tasting and freshest possible produce, but fresh local produce is often unavailable due to variations in supply and season. Flavor of national and internationally sourced foods also declines significantly during the off season. A well designed green house is able to ensure a consistent supply and quality of strawberries, lettuces, greens, herbs and gourmet mushrooms.

Reduce economical footprint

Even if this research would be little bit small to make big changes in the world it can show how to cut out the transport form the food chain. Also food often travels great distances to arrive at the store where it’s sold, weakening and ruining the food’s taste and freshness. Additionally, certain weather conditions cause crops to exhibit less than desirable flavor profiles at certain times during the year. With the ideal growing conditions needed to deliver a consistently delicious flavor, regardless of the time of year. Produce grown at the local gardens will always be fresh. It’s often cited that product quality is dependent on freshness of product, and by incorporating a farm into the structure; the Farmery guarantees that it will consistently have the freshest, highest quality produce.

The Farmery supplies the highest quality produce from the most interesting producers by sourcing a great deal of its produce from local farmers, cutting down travel time and refrigeration, which results in fresher produce with longer shelf life. Local farmers are able to provide a fresher product with more diverse varieties than can be sourced from larger industrial farms. Producing its own crops also ensures a consistent supply of locally grown produce to accommodate the high variability in supply from local producers.

Supermarkets have a difficulty locating in urban areas and mixed use developments. Across Estonia, urban areas are improving the quality of life for residents and many towns are experiencing a renaissance with new urban residents. Current supermarket business models - Rimi, Maxima, Selver, Prisma - rely on 10000 to 40,000 sq meter stores with acres of
parking and cannot function within urban areas. The result is supermarkets fighting for market share in oversaturated suburban markets while urban areas become much poor in accessabiltz to fresh food. This presents an incredible opportunity try out a local farming to proliferate in densely populated areas which are relatively far from supermarket chains.

Gourmet Mushrooms are expensive

Mushrooms are one of the most profitable crops small farmers can grow because the low shelf life makes it difficult for larger producers to supply product across the nation. This results in expensive, low product that enables small producers to compete. The Public Greenhouses is able to offer a more accessible and higher diversity on its mushrooms by growing them on site, eliminating issues with the high perishable nature of gourmet mushrooms.

KEY RESULTS

The most important aim of the project is to connect the areas and connect the park with people is fulfilled. An attractive place is created that will invite the citizens of Tartu. The park is offering various activities that was hard to imagine before. It is promoting healthy more sustainable lifestyle with the possibility for the people to act as community in multiple ways. Public gardening is a key motor of a good community as well as it offers alternative high quality food, provides non-formal education and joyful activity. The offered activities has also turned the site upside down, the area was almost completely empty before and the new functions, the multilevel path-system offers a great place for Tartu marathon ski, running and cycling venues as well as a great place for a walk in summer and winter time what was also difficult to imagine. The are becomes safe. In the neighbourhood there is not much areas where kids can play in a safe insipiring environment. The surrounding areas value is increasingly raised in the way of real-estate value as well due to the modern bike lane and the beautiful park.

Public gardens have always been a place of phylosophy. Many says that freedom and happyness is what most of us is after. These things can be found in many places of the world, however the gardens and parks are the desired places. Watching the kids play, think about their future, meeting our loved ones for randevoous. n.We may be different in all ot this. One thing is still agreed in between great philosphers throughout the history: real freedom lies beneeth the active moments when the stream of thougths are stopped even if only for a while.
SUMMARY / KOKKUVÕTE


Suuremalt jaolt on probleem selles, et eri komponentide disain usaldatakse oma ala spetsialistidele, ilma et pöörataks tõsist tähelepanu nende osade koostöölale.

Planeeritav ala on umbes 115 000 m2 suurune. 3,7 km pikkune ala asub Väike-Karja tänav ja Sõpruse silla vahel ning on ümbruskonnas väga erinevaid keskkondi, mis jaguneb erinevate disaini, tiheduse, juuge ja maakasutuse vahel. Projekti eesmärgiks on mahajäetud raudtee muutmine linna uueks tõmbekeskuseks ja seeläbi elustada kogu ala raudteliini ümbruses.

Ala mõistmiseks on kaustatud erinevaid analüüsitehnika, kus analüüs on keskendunud ligipääsule, kruntide paiknemisele ning funktsioonidele, mis seal on ja mis puudub. Aedadel on antud alal keskne koht. Alal on palju ruumi, kuid enamasti on see inimesele kasutu.

Seetõttu on põhikontseptsiooniks luua 4km pikkune, ühtse jõe ja jalgrattateede park, mis algselt Väike-Karja tänavaga ning raudtee asendamisega pargiga, mille eesmärgiks on ühendustee ja sportimisvõimalused. Vanu raudtee liitritud ja metallosioonide kasutatakse pargimõõbili, toolid, kiiktoolide, pinkide, prügikastide, koerte jalutusalade, lambipostide, avalike käimlate, lillepeenarde, kasvuhoonete, linnumajad, kunsti-installatsioonide loomiseks.

Oru laadne maastik loob head võimalused jalutamiseks ja puhkamiseks. Rohutatud kasutatakse palju stepitaimi. Dekoratiivse vöraga puud ja põõsad nagu pärnad, viirpuud, viirakotted ja dekoratiivsed õunapuud on istutatud küngastele kus nad on paremini vaadeldavad.

Vanad tööstus- ja kaubanduspihvid asuvad pargi jaoks olulistes kohtades, mis nende sisustuside tuleks muuta. See on hea võimalus katsetada ja uurida linnapõllumast. Vanu raudtee liitritud ja relssie saab kasutada kasvuhoonete, juurvilja ja maalised kiusad, ning lillepeenarite rajamiseks.

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