TRANSFORMING **VASBYHÄVE**

PROJECT PROPOSAL BY ECO QUEENS



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C40 CITIES Students Reinventing Cities

VASBYHAVE, COPENHAGEN

In the heart of Jernbanebyen, a former rail yard now poised to become a global example of sustainable urban development, lies Vasbyhave - a one-hectare park integral to the neighbourhood's first phase of transformation. As students of urban planning, we recognize the immense potential of Vasbyhave to serve as a dynamic hub that promotes health and well-being for both its residents and visitors.
Our proposal for Vasbyhave aims to create an inclusive, intergenerational, and environmentally sustainable green space that addresses the diverse needs of Jernbanebyen's community. This vision is grounded in three core principles.

1. HEALTH PROMOTION

We propose a park design that encourages physical activity, mental wellness, and social interaction. This will be achieved through the integration of multi-use sports areas, outdoor fitness equipment, peaceful natural oases, and community gathering spaces. By offering accessible opportunities for exercise and relaxation, paths and fitness zones for all ages and abilities, Vasbyhave will become a catalyst for healthier living.

2. INTERGENERATIONAL INCLUSIVITY - A SOCIAL HUB

Understanding the importance of catering to all age groups, our design includes play areas for children, recreational areas for teenagers, tranquil gardens for the elderly, and flexible spaces that can be adapted for various community interactions and cultural events. This approach ensures that Vasbyhave serves as a meeting point where different generations can gather, connect, interact socially, learn, and thrive together.

3. SUSTAINABILITY ACTIONS

Our proposal places great emphasis on sustainability and biodiversity. We integrate native plant species to promote local ecosystems, design permeable surfaces to manage cloudbursts, provide green energy solutions and low carbon measures, and create shaded areas to mitigate the urban heat island effect. These elements will not only enhance the park's ecological value but also contribute to Jernbanebyen's and Copenhagen's broader climate resilience goals.

In line with Jernbanebyen's approach to rely on evidence to create a healthy neighborhood development, our proposal is also grounded in research that we conducted in preparation to come up with the best possible design for Vasbyhave. Based on surveys, participatory mapping and the provided requirements, data on the best ways to create a park that works for all generations and on the effect of urban green spaces on mental health was gathered.

By blending these elements, our design for Vasbyhave aims to set a new standard for urban parks, showcasing how thoughtful planning and design can foster a healthier, more connected, and resilient community. We are excited to present our vision for Vasbyhave, a park that anticipates to meet the needs of Jernbanebyen's residents and adapt to future challenges, ensuring a lasting positive impact on both people and the planet.

INTRODUCTION

OUR CONCEPT

BASED ON RESEARCH

Involving future users in the planning process ensures that Vasbyhave meets residents' and visitors' needs, which is crucial for promoting age-inclusivity, physical, mental, and environmental health. Since Vasbyhave and its neighborhood are not yet built, we conducted two research projects in Malmö, Sweden, as part of a university course. One project explored the 'restoration city' model, focusing on urban space satisfaction. The other examined intergenerational perceptions of public parks to understand valued features across different ages. Besides the research projects, we also visited the site and spoke to stakeholders at Spor10.

Our research showed that different age groups have similar needs but prioritize them differently. To reconcile these needs, we propose zoning the park. Each zone caters to specific needs, such as relaxation or physical activity, while seamlessly flowing into one another, creating an interconnected and harmonious space. They should not be mistaken as separate, isolated areas in the park.



ZONE 1: CALM ESCAPES

The first zone is primarily dedicated to peaceful and calm contact with nature. In addition to plants and other natural elements, this zone features relaxation-promoting elements such as hammocks and a community garden.

ZONE 2: ACTIVE RECREATION

The second zone, located in the middle of the park, is designed to promote physical activity. This zone includes elements such as a multi-functional sports court, an outdoor gym, and trampolines.

ZONE 3: SOCIAL HUB

The third zone functions as the social hub. The area contains a café and an amphitheater, where events can take place and foster the sense of community. It invites users to spend time with friends and family or make new acquaintances.

Based on our three core principles (health promotion, intergenerational inclusivity and sustainability actions), we utilize the three zones to also fulfill *The 10 Principles for a Green & Thriving Neighbourhood* provided by C40 with a priority on the following principles:

1
COMPLETE NEIGHBORHOODS

4
A PLACE FOR EVERYONE

5
CLEAN CONSTRUCTION

8
GREEN SPACES, URBAN NATURE & CLIMATE RESILIENCE

GENERAL PLAN

1. Community garden
2. Area with hammocks
3. Multi-functional sports court
4. Hill
5. Amphitheatre
6. Trampolines
7. Train Café
8. Outdoor gym with storage boxes

- Insects houses
- WC — Toilets
- Bicycle parking
- Trash bin
- Rain gardens
- Green house
- Day care facility edge
- Residential buildings edge
- Pathways for pedestrians
- Bridge
- Fire escape route
- Pathways for logisticts, waste collections,etc.
- Pathways for cyclists
- Green fence



HEALTH PROMOTION

Vision

1. Promote physical health through various activities.
2. Integrate features to enhance mental health.
3. Implement measures to support planetary health.

- Outdoor gym
- Trampolines
- Multi-functional sports court
- Area with hammocks
- Bicycle racks
- Outdoor storage box (ex. “Piffl” in Sweden)
- Hill



Well-being solutions

- Creating zones both for active physical pastime and emotional restoration (ex. zone with hammocks)

HEALTH PROMOTION

HEALTHY FOR THE PEOPLE

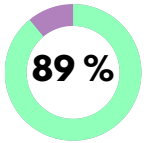
Physical health

Various activity features in the park promote physical health and encourage interaction with other people. The *outdoor gym* offers the opportunity for effective exercises and workouts with own body weight for different age groups. *Trampolines* that are integrated into the ground blend seamlessly into the surroundings, promoting fitness and coordination for young and old. Spontaneous and joyful activities can also be undertaken on the *multi-functional sports court* for volleyball, badminton, lacrosse and hockey.

Two low-threshold measure for promoting physical health are the *artificial hill* that can be used for sledging or the *outdoor storage box* with rental equipment. It contains sports and play equipment for all age groups such as balls, nets, frisbees fitness equipment or boule that can be borrowed free of charge through an app within the park. *Bicycle racks* should be installed at two entrances to the park to ensure easy access by sustainable means of transport. Accompanying bike repair stations with tools and a pump make life for cyclists even easier and promote the healthy and sustainable way of traveling. Keeping in mind the increasing temperatures on our planet, the access to water becomes increasingly important. Therefore, water refill stations in the form of drinking fountains should be provided to enable accessible opportunities for everyone to stay hydrated. Also offering public sun cream dispensers could be a health promoting measure to implement.

Mental health

People's direct contact with vegetation and nature reduces anxiety, stress, depression, ADHD and other psychological deficiencies. Zone 1 therefore comes with different nature elements and is designed to stimulate the senses: sound, sight, smell, taste, touch and the more fleeting sense of atmosphere and ambience, leading to positive health effects. The feeling of belongingness to the place is strengthened by the friendly and relaxing sounds of nature, or the chance to enjoy the surrounding from a *hammock*.



STATE THAT PARKS HAVE A POSITIVE IMPACT ON THEIR QUALITY OF LIFE AND WELL-BEING. (OWN RESEARCH)

HEALTHY FOR THE PLANET

To promote sustainable living and awareness, the park should provide various trash bins. This encourages visitors to separate their waste properly, keeps the park clean and promotes recycling.

INCREASING THE QUALITY OF LIFE & WELL-BEING

INTERGENERATIONAL INCLUSIVITY - A SOCIAL HUB

Vision

1. Create inclusive spaces that are welcome for everyone and cater for the needs of all age groups,
2. Fostering community interaction and cohesion.

Hill

Community garden

Amphitheatre

Train Café

Multi-functional sports court

Green house



Sense of community

- Designing places for comfortable pastime and for different purposes
- Keep spaces open for interaction with visitors and residents of the area (ex. Community garden, Amphitheatre)

INTERGENERATIONAL INCLUSIVITY - A SOCIAL HUB

COMMUNITY SPACES

The overall goal of the social hub is to promote social interaction and to provide activities for people of all ages, abilities and social and financial backgrounds. Social engagement can be encouraged on the *hill*, the *multi-functional sports court*, but also in the *community garden*, the *Train Café*, the *amphitheater* and the *green house*. The design should therefore be on a human scale to enable activity and mobility in everyday urban life for everyone.
An inclusive pathway system will ensure access to all park areas, accommodating people with disabilities, families with strollers, and the elderly, with features like adequate slopes and tactile surfaces. Good lighting, using the existing lamp posts fitted with energy-efficient LED lights, will create a safe and secure environment. Clear signage in multiple languages will guide visitors through the park, with visible indicators for the three zones and a map displayed at the entrances for easy navigation.

The park includes two safe and inclusive *toilet houses*, which are barrier-free, wheelchair accessible, and gender-neutral. These free facilities will have baby changing tables, trash bins, and possibly free menstrual products to promote hygiene and menstrual equity. To enhance the park's visual appeal, the toilets will feature train-themed paintings or graffiti by local artists, preserving the site's identity.

EVERY FOURTH PERSON RATES SOCIAL INTERACTION AS THE MOST IMPORTANT REASON FOR A PARK VISIT. (OWN RESEARCH)

Community garden

Through people's involvement in the *community garden*, people come into contact with each other and participate in public life. In addition to strengthening the neighborhood, promoting social interaction and enhancing the social network, raw and organic food is also produced and urban agriculture is promoted.

Train Café

The *Train Café* is a place where people can meet with friends or family, enjoy some solitude, and buy drinks and food. To preserve the area's identity and emphasize a nostalgic atmosphere, we decided to repurpose a discarded train wagon into a café. There will be both outdoor and indoor seating available. To support the local art scene, the wagon will be painted by local artists.

Amphitheater

The *amphitheater* near the *café* serves as a meeting place for lingering, sitting, relaxing, picnicking, and cultural activities. Visitors can enjoy drinks and food from the café or bring their own, offering a non-commercial gathering point. Besides casual gatherings, the *amphitheater* could also serve as an open-air cinema, host concerts, or provide a small ice rink in winter.

Green house

The *green house* serves as a multifunctional social hub, which offers people a variety of different ways to participate in urban life, interact with other people or just hang out. Besides the flowers, various seating areas, a book exchange shelf, Wi-Fi and charging stations will be provided. There will be no room for hostile architecture that excludes certain groups of people.

A PARK FOR EVERYONE

SUSTAINABILITY ACTIONS

Vision

1. Promote biodiversity by creating spaces for various wildlife.
2. Enhance climate resilience through cloudburst management.
3. Counter the urban heat island effect with greenery.
4. Minimize carbon emissions during the park's construction.
5. Provide green energy solutions.





Nature life promotion

- Community garden for local residents
- Incorporating insect habitats as an educational tool
- Diverse tree species to support wildlife flourishing

SUSTAINABILITY ACTIONS

Biodiversity

To achieve biodiversity, the park's flora as well as the *community garden* and the *green fence of the day care facility* consist of native trees and plants, providing a habitat for animals and insects. Additionally, *insect houses* do not only contribute to biodiversity and ecological health but offer learning opportunities and therapeutic benefits for everyone by raising awareness of the importance of insects in our ecosystem. The green roof of the *toilets* offers many benefits such as improving air quality, absorbing rainwater and reducing the urban heat island effect. However, green roofs are also beneficial for the ecosystem and biodiversity as they provide habitat for various animal species. Green roofs on *toilets* also have a noise-reducing effect, as they can reduce noise by 3 to 10 dB. Another health-promoting effect is that they trap air dust and contribute to better air quality.

Low carbon actions

By reusing materials from the area of Vasbyhave that is to be demolished, resources can be conserved and waste reduced to contribute to environmental friendliness and sustainability. These materials can be used, for example, for pathways or park furniture like lamps. This approach avoids producing emissions when undertaking new construction projects. However, interventions are also being developed that reduce the total amount of emissions generated.

The artificial green meadow *hill* next to the *multi-functional sports court* is created of the soil from demolition work and provides a place to rest, sit down and enjoy the surroundings. Existing streetlights will be converted to LED operation and powered by renewable energy, reducing light pollution and making them energy-efficient and environmentally friendly. Creating an attractive cycling infrastructure helps to encourage people to use carbon-friendly modes of transport instead of relying on emission-generating modes such as the car. Investing in this approach avoids the generation of emissions.

Climate resilience: Cloudbursts

To counteract the negative effects of cloudbursts, the City of Copenhagen developed the Cloudburst Management Plan in 2012, which is a component of the Copenhagen Climate Adaptation Plan. The aim of the plan is to improve the city's resilience to future extreme rainfall events due to climate change and to reduce the risk of flooding. Measures can include green and blue solutions or subterranean tunnels. As we want to make Vasbyhave a safe place for people and animals, now and in the future, it is important to implement adaptive measures for cloudbursts.

The lower terrains offer not only opportunities for recreation, relaxation and exercise, but also to handle Copenhagen's current and future challenges in case of extreme rain. Rainwater can be stored and re-used for watering greenery, but also to clean the streets. The *multi-functional sports court* and *amphitheater* serve as measures against cloudbursts. As these areas are lower, they can accommodate a lot of water during extreme rain. This enables multifunctional use all year round in everyday life and in heavy rain. *Rain gardens* are an additional high impact and low cost solution for protecting waterways and the environment, as they are designed to prevent rainwater runoff from polluting water with nutrients, waste and sediment. They help to keep toxins out of the water and ensure the quality of the groundwater.

Green energy

Solar cells are installed on the roof of the *Train Café* and on the *green house* to generate green electricity on the building. The efficiently generated energy can be used in a variety of ways within the buildings, e.g. for operating electrical appliances, heating and cooling systems or Wifi. The energy supply in the less sunny months is made possible by other renewable energies from the public grid.

APPENDIX

ICON LEGEND (10 PRINCIPLES)

1 COMPLETE NEIGHBORHOODS

2 PEOPLE-CENTERED STREETS & LOW-CARBON MOBILITY

3 SMART & CONNECTED PLACES

4 A PLACE FOR EVERYONE

5 CLEAN CONSTRUCTION

6 GREEN ENERGY & BUILDINGS

7 CIRCULAR RESOURCES

8 GREEN SPACES, URBAN NATURE & CLIMATE RESILIENCE

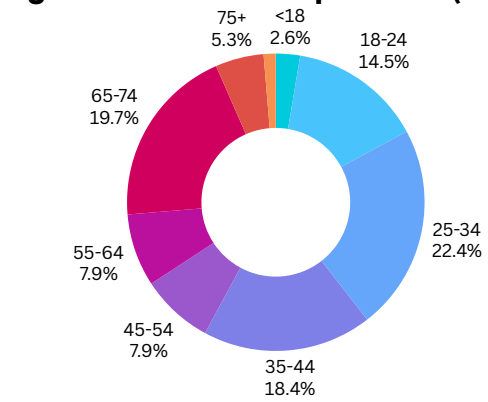
9 SUSTAINABLE LIVING

10 GREEN ECONOMY

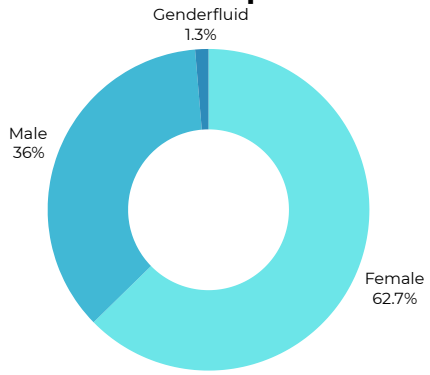
DETAILS ABOUT OUR RESEARCH ON INTERGENERATIONAL PERCEPTIONS OF PUBLIC PARKS

- Research areas: Pildammsparken, Folkets Park & Slottsparken incl. Kungsparken, Malmö, Sweden
- Surveys were conducted in April and May 2024 in each park individually.
- Sample: Surveys were completed by park visitors of various age groups in paper-based format in English and Swedish.

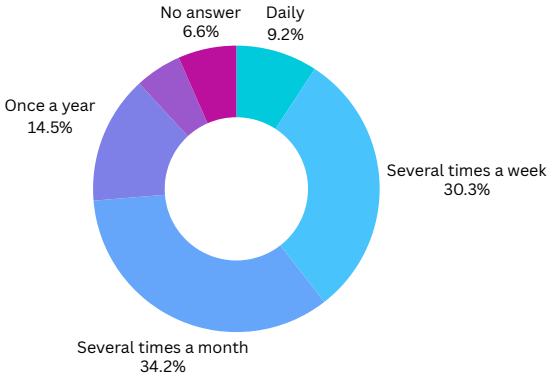
Age distribution of respondents (N=76)



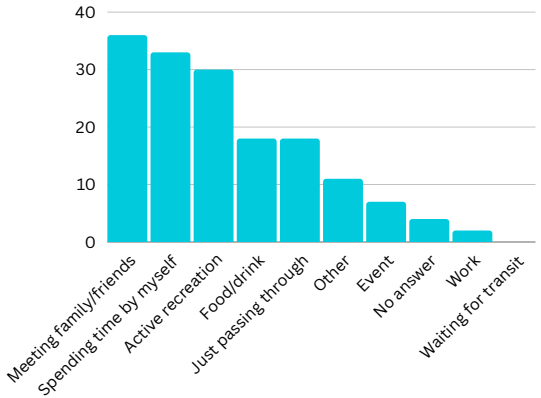
Gender of respondents



How often do you visit the park(s)?



Reasons for park visit



APPENDIX

Liked features in the parks

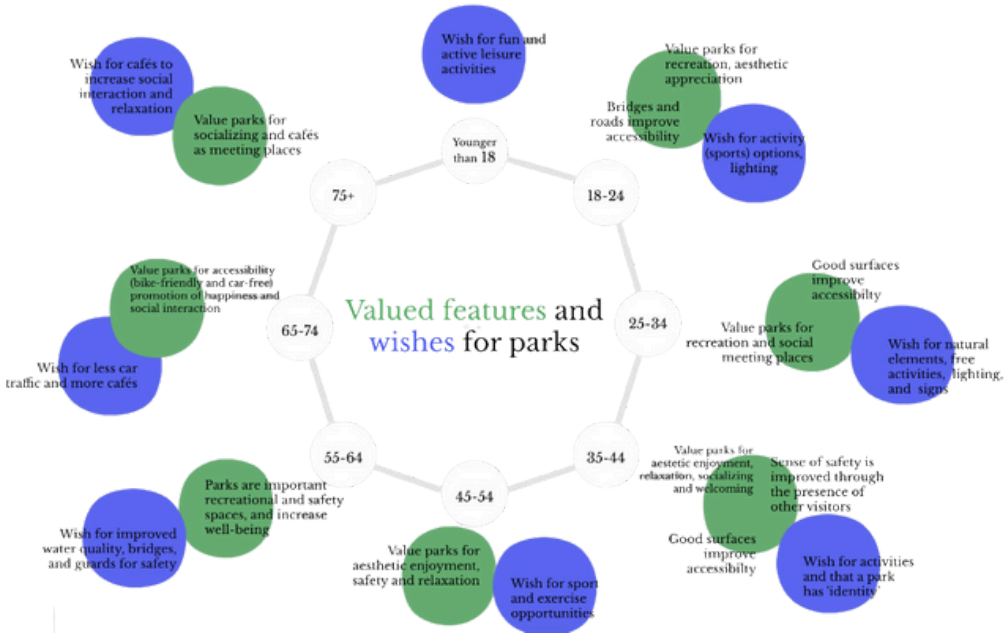
<17	18-24	25-34	35-44
1. activities (50%) 2. playgrounds (33%) 3. bars/cafés (17%)	1. water (27%) 2. meadows/ trees (23%) 3. flowers (17%)	1. water (20%) 2. meadows/ trees (20%) 3. bars/cafés (18%)	1. meadows/ trees (34%) 2. flowers (21%) 3. water (21%)
45-54	**55-64**	**65-74**	**75+**
1. meadows/ trees (40%) 2. landmarks (20%) 3. water (20%)	1. meadows/ trees (29%) 2. water (29%) 3. bars/café (21%)and flowers (21%)	1. flowers (27%) 2. water (23%) 3. meadows/ trees (19%)	1. flowers (38%) 2. bars/cafés (25%) 3. water (25%)

Comparing all age groups, the 'liked' features are similar but differ in their individual importance per age group as shown above. The features that were, regardless of the age, marked most frequently were meadows/trees and water which were both ranked within the top 3 in six of eight age groups. Meadows/trees however, resulted more often as top 1 or top 2 compared to water. These two features are followed by flowers which can be found in the top 3 ranking of five age groups and cafés/bars being ranked within the top 3 in four age groups.

Disliked features in the parks

Things that were marked as 'disliked' most, regardless of the age group, are

1. **roads around the parks** (22% of disliked areas), followed by
2. areas that were described as "**lacking nature/ wish for more nature**" like trees or natural grass (15%).
3. Also marked, with a share of 13% each within the disliked areas, were specific attractions (such as the casino/ club), **"boring areas"** and **areas with a lack of orientation**.



What do you wish for in a park for all ages and what should not be missing? (word cloud, no age-specific results)



APPENDIX

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Intergenerational Inclusivity - A Social Hub

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APPENDIX

DECISIONS ON SPECIFIC TREES

Hazelnut

Advantages: Reduce soil erosion, store carbon, provide wildlife habitat, prefer cool winter and mild summer

Beech tree

Advantages: The production of oxygen. Photosynthesis processes take in carbon dioxide and water and release oxygen gas, producing organic molecules

English Yew

Advantages: Tolerance of winter weather

Maple tree

Advantages: Enhance beauty (because of different colors of leaves), filters pollutants in the air and water, preserves soil, prevents disease, contributes to biological control and promotes plant and vegetation reproduction

White Willow tree

Advantages: Feeds and shelters native wildlife, filter toxins

Silver birch & Lavalle hawthorn

Advantages: Beacon for biodiversity, hub for various wildlife, water uptaker

Magnolia

Advantages: Hub for various wildlife

Poplar

Advantages: Reduce surface runoff (humidity toleratant), soil decontamination

BUDGET CALCULATION

Position	Responsible	Total Costs	Comment
Phase 1: Clean up the area		**1.560.000,00 kr.**	
Selection of materials like lamps or concrete blocks that can later be used for park design and furniture	company for design/ construction of park furniture	10.000,00 kr.	
Removal of cars, buildings and current floor covering - saving materials that can be used for the construction of pathways and the bridge	Demolition company	800.000,00 kr.	in coordination with the construction company and furtniture designers regarding re-use of materials
Construction of temporary transport routes and diging holes for lower areas like sport field and theater seating, using the soil to create an artificial hill in zone 1	Construction company	500.000,00 kr.	
Connecting required areas in Vasbyhave (future café, toilets and green house) to the supply of water and disposal of waste water. Provide necessary infrastructure for solar panels and secure electricity supply	Water and energy supplier	250.000,00 kr.	
Phase 2: Construction work		**3.500.000,00 kr.**	
Provision of an old train carriage incl. transport	DSB Ejendomsudvikling and Freja Ejendomme	2.250.000,00 kr.	
Construction of bridge as part of the whole development project	Construction company	0,00 kr.	costs will be covered by overall budget of developing Jernbanebyen
Construction of toilets and green house	Construction company	75.000,00 kr.	
Construction of multi-functional sports court	Construction company	75.000,00 kr.	
Conversion of the train waggon into a café	Company for design/ construction of park furniture	750.000,00 kr.	
Construction of outdoor gym and playful elements for kids	Company for design/ construction of park furniture	350.000,00 kr.	
Phase 3: Planting and decorating		**763.000,00 kr.**	
Planting of trees and bushes and placement of big stones in amphitheater	Landscape gardener	100.000,00 kr.	
Planting of flowers and creation of green roofs on toilets	Landscape gardener	112.000,00 kr.	
Construction of community garden and insect houses	Landscape gardener	75.000,00 kr.	
Conversion of temporary transport routes into pathways	Landscape gardener	400.000,00 kr.	using materials from the demolition process wherever possible
Planting of grass	Landscape gardener	38.000,00 kr.	
Decorating/ painting of train carriage and toilets	local artists	38.000,00 kr.	
Phase 4: Finalization		**402.000,00 kr.**	
Installation of solar panels and lightning	Solar company/ electrician	150.000,00 kr.	
Furnishing the café and green house	Company for design/ construction of park furniture	112.000,00 kr.	
Placement of benches, picnic tables and hammoks	Company for design/ construction of park furniture	80.000,00 kr.	
Placement of bicycle racks with tools and pump, trash bins, outdoor box etc.	Company for design/ construction of park furniture	60.000,00 kr.	
	Total costs:	**6.225.000,00 kr.**	