



Skavsta Forest City is a living and innovative city, thoughtfully designed to accommodate everyone, including workers, visitors, locals, children, commuters, travelers, tourists and wildlife.

The existing natural environment on the site exhibits a range of diverse qualities. Preserving and promoting the high-quality forest land that currently exists in the area is a priority.

Existing areas of forest land found throughout the site are carefully preserved and extended to form an interconnected network of green spaces that provide a framework for the city's development.

A network of paths, boardwalks and viewing towers are proposed to allow for accessibility and interaction with nature. The new system of trails will naturally become an addition to Sörmlandsleden.

The built environment, interspersed among the forested areas, provides urban qualities and vitality throughout the day, while maximizing the connection to nature.

The city, with all its buildings made of wood, is designed to be a resilient and partially self-sufficient city with a positive impact with regard to ecology, energy and social sustainability.

Analysis

Nyköping

Nyköping is a medium-sized Swedish city. It is the home of approximately 33,000 persons – with roughly 58,000 inhabitants in total within the municipal borders. Its geographic position south of Stockholm along the coast of the Baltic Sea has given it historic importance as well as future potential.

Apart from Nyköping's strong relation to Stockholm, several larger municipalities with a population of more than 100,000 persons can be reached within a driving range of 100 kilometers – including Norrköping, Södertälje, Eskilstuna and Linköping – further strengthening the city's strategic position.

The name Nyköping can be translated into "Newmarket" which tells about the importance of the city as a trading site. Historically the site was the home of a population living on fishing. Eventually a town was established and Nyköping gained a status as trading site. By the 12th century Nyköping was one of few sites in Sweden to have permanent trade with other countries.

Nature

The city lies in the province of Södermanland. Södermanland has a low topography with only a few areas above 100 meters above sea level. The landscape is characterised by small hills with numerous larger and smaller woodlands in between hollows that either are lakes, peat mosses or mud plains.

Throughout the province a large network of hiking trails, known as Sörmlandsleden, passes. It consists

of around 1000 kilometers of trails in total. The trail runs past several historic sites, points of attraction and viewing towers. The main route goes through Nyköping and one of the secondary routes leads out to Skavsta.

Skavsta Airport

In the municipality of Nyköping lies one of Sweden's most frequented airports, Stockholm Skavsta Airport. It is located 7 kilometers to the northwest of Nyköping city and can be reached within 25 minutes by bike. The airport was built and in use for military purposes between 1941-1980. In 1984 the airport was reopened for commercial use. It is today one of four airports in the Stockholm region and is owned to 90,1% by Arlandastad Group and to 9,9% by Nyköping Municipality.

The East-Link

The East Link, a 160-kilometer-long railway, is expected to be fully operational by 2035. It will connect Linköping with Järna, strengthening the transportation connection along the east coast and improving accessibility to Stockholm. The new railway will generally increase the capacity of the railway net and create new connections in Linköping, Norrköping, Skavsta, Nyköping, Vagnhärad and Järna. The project will shorten travel within the region as well enabling a sustainable rail-bound mode of communication to and from Skavsta Airport for the very first time.

Project Site

With the development of the new East Link the area around the airport will gain new potential. With the direct proximity to the airport, the railway and the deep-water harbour, Skavsta will have a unique strategic position for new establishments. South and

east of the airport area, the municipality together with the property owner of Skavsta Airport, Arlandastad Group, want to develop the area for future needs and purposes. The project site for the competition encompasses 28 hectares of this area and is bordered to the north by the future railway. The project site consists today mainly of planted forest land which has been felled at different stages.

In the northern part of the project site, next to the future railway and railway station, lies a gravel-yard long distance parking. At the centre of the site a natural rocky hill breaks the flatness of the site. The flat gravel-yard is set to become a future public square and the rocky hill a preserved natural park. A new central boulevard is planned to connect the station and the square in the north, via the park in the middle, with a new roundabout and access road in the south. Along the western border of the project site a new road will lead to the airport area over the railway.

Concept

The proposal aims to create a living city district with an integrated green and blue structure where workers, commuters, travellers and visitors co-exist with nature. Considerable parts of the natural landscape will be preserved and developed. The new structure will be planned and designed, with nature as a key element, to obtain as high values as possible regarding ecological, social and economic sustainability.

Welcome to the forest!

More than roughly two thirds of Sweden consist of forest land. Sweden's identity is closely linked to the image of the forest. The forest is a unique environment

that has been mystified through all times. It is a valuable natural resource that holds special qualities that this proposal aims to bring forward. The forest constitutes the main concept of the proposal and will play a crucial role in the planning of the area. For outside visitors as well as workers in the area the presence of the forest will contribute to make the area a destination and attractive place to work in.

Apart from constituting nature experiences with all that it entails for individuals' quality of life and for tourism, the ecosystem services provided by forests are numerous and important. Some of them include vital societal functions such as the production of wood raw materials for bioenergy, paper production, or construction.

Others qualities of forests are related to the global climate, such as the climate regulation forests provide through temperature equalization and the storage of carbon in trees and soil. Forests also offer flood protection by absorbing water through the trees, the presence of an abundant litter layer on the forest floor, and water storage in swamps.

Forests also provide valuable food resources such as mushrooms, berries, and meat from wild animals. As self-sustaining ecosystems, forests have their own nutrient supply, and the recycling of necessary nutrients is made possible by fungi and microorganisms in the soil, eliminating the need for external input.

Forests also play a role in pollination services through their diverse insect population, benefiting both their own species and distant crop cultivation. Additionally, pest control is achieved naturally through the presence of small and large predators and parasites within the forest, acting as natural enemies to species that can cause damage.

Living in the forest

Besides becoming an attraction for visitors from all over the world, the area will primarily become the future workplace for more than 10,000 persons. To ensure a living city in an area which cannot hold residential buildings (due to the proximity of the airport) the proposal builds on a strategy, disposition and architectural solutions for public and semi-public spaces, attractions and services that allow for and promote social interaction and life throughout the whole day.

These activities take place in the urban and social layer of the masterplan that overlaps and parallels the layer of the green strips. The urban layer is held together by the street structure which is planned and designed for a traffic order that prioritises walking followed by biking, public transport and lastly car traffic. Within the urban layer a substantial part of the surface is covered with trees and plants – acting as a supplement to the primary green layer of the forest strips.

Wood

The building and property sector in Sweden responsible for more than a fifth of the total carbon dioxide emissions. An alarming fact that requires drastic changes within the industry. One way to reduce the emissions is to build in materials that have a low environmental impact.

Wood is a great material in that and many other senses. It has a negative CO₂-impact while acting as a carbon sink, is produced within the country and has several qualities concerning construction and impact on the health. Thus, a natural decision is to propose that all buildings will be built in wood. A policy based on premises related to sustainability but also existing qualities of the site and the future profile of the area.

Resilience

After the construction phase buildings continue to be major emitters of CO₂ related to their energy-need. The day-to-day running of building requires substantial amounts of energy for example for heating, cooling and lighting. The proposal is to allow the new area to be resilient and partially self-sufficient in terms of energy.

Through extensive use of solar panels on the roofs, as well as in facades, the theoretical energy need for the area could be covered. The proposed block types of the future area thus include the integration of solar panels in their design.

Similarly, a strategy for storm-water management and use of rainwater is implemented in the proposal. The proposed structure of greenery in the area, in the forest strips, parks, streets and within building blocks, all play a part in the handling of the stormwater.

The future potential of a growing number of travellers, visitors and more than 10,000 workers in the area will put a high demand on the services in the area. Not least the supply of food. A sustainable way to decrease the import of food is to produce it in the area. Refined technology regarding farming of vegetables has made it possible to have large-scale production in areas which traditionally have not been used for farming before – such as urban areas as this one.

The proposal includes strategies for vegetable farming within the building blocks. This includes pinpointing and creating spaces with suitable conditions for the cultivation of edible plants. Also the airport and its restaurants and operating airlines can benefit from the locally produced food. The airlines could for example declare that their in-flight meals are organically produced in Skavsta.