

KARLSTAD (SE)

A PATTERN FOR VÅXNÄS

In many ways Våxnäs is a place where history has almost been erased. The big fire in Karlstad in 1865 did not only burn down the houses but also destroyed historical maps and documents. In the 1960's, the construction of the E18 highway had the landscape flattened and houses surrounding the area demolished. At the same time, the ground of Våxnäs was covered with asphalt to construct a car dependent industrial area that still is there today.

This does not mean that pieces of history do not exist and they became more obvious when we started to look deeper. We realised that the northern road Säterivägen is the old road leading through the area and into the forest and we found remnants of farmland ditches in Lågländet.

In our process we have tried to retrace those pieces of history to find a pattern for urban development in Våxnäs. A pattern that can be followed and built upon to both face the challenges of today and the needs of tomorrow. In this way we hope that a transformation of Våxnäs into a resilient and vibrant mixed use district can be done in an organic way.

OVERCOMING BORDERS

In 1967 the E18 highway was finished, creating a barrier that cut of Våxnäs from the city centre of Karlstad. The railroad had already created a barrier in the east and as if this was not enough a long lawn with a ditch called Lågländet created a border between the residential and industrial parts of Våxnäs, making the industrial area completely framed.

To overcome these manmade borders, different tactics will be needed. In the west two new pedestrian and cyclist paths are created with the help of a space syntax tool, making them the obvious choices for people biking from Våxnäs residential area to Karlstad city centre. This method also includes remodelling the sports area in the northwest into a more welcoming sports park.

In the east densifying with new houses along the Säterivägen/Nya Depåvägen, which passes over the railway, would connect Våxnäs with Kasernhöjden. This is also something that partly already is happening, as new residential houses are under construction west of Kasernhöjden.

Finally, a bike and pedestrian bridge going over E18 highway would not only connect Våxnäs with the residential area Strand in the south but also make the Lågländet park and its extension I2 forest in the north easily accessible for the rest of Karlstad.

THE SITE TODAY

Våxnäs today is an active industrial area with versatile businesses, such as car dealers, restaurants, offices and stores. There is also a sports area in the northwest, mainly for football after the demolition of the track and field building Våxnässhallen. The ground, which is largely covered with asphalt, consists of the north type silt with good capacities for water infiltration. This means that removing asphalt to create green space not only makes the area more pleasant for humans but also deals with storm water challenges. Silt does however lose its strength when saturated with water, which means that the houses need to be attached to the bedrock with piles.

REINTRODUCING COMBINED GREEN AND BLUE SPACE

Before Våxnäs was covered by asphalt it was farmland and before that a river or a lake covered the area. It is now time to reintroduce some of this water and greenery by making holes and removing parts of the asphalt. Chunks of asphalt can then be laid back to act as stones and gravel in the new green spaces or act as landfill shape the topography in Lågländet. It will however need to be tested first to make sure it does not contain toxic substances.

As heavy rains will start happening more frequently due to climate change the risk of flooding will increase in Våxnäs. There are already a system of ditches and stormwater pipes, and the aim is to do interventions that strengthen this already existing infrastructure. The largest of these interventions is the remodelling of Lågländet in the western part of the site. Since there are already stormwater pipes leading there an increasing stormwater capacity of Lågländet would mean a strengthening of the resilience for the whole area of Våxnäs.

Today there is a long straight ditch, connected to stormwater pipes in both ends, that runs through the park. This ditch is remade into a meandering ditch, making the waterway longer and increasing the infiltration of water into the groundwater. By remodelling the topography of Lågländet with the help of asphalt from the site, pits are created that can act as basins in case of flooding. In the southern part the lawn is remade into a meadow, supporting biodiversity and water purification. Paths are created to make the area walk- and bikeable and smaller pocket places are created for rest. All the existing trees will be kept. In the northern part of Lågländet hills and fields will be created, making the area suitable for social activities. The road in the north of the area only be accessible for buses, which will simplify the connection between Lågländet and the sports field in the northwest. Furthermore, the sports area is remodelled into a sports park which will host more activities than only football and act as a green link between Lågländet and the forest.



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AN ACCESSIBLE NEIGHBORHOOD

In order to achieve the transformation from an industrial to a mixed use area, the dependence on car transport needs to be minimized, for which several solutions are provided.

Firstly, sidewalks and bike lanes are added to the existing roads where it is not currently available. The large block structure is also broken up into smaller blocks, shortening the distances to get from one place to another and increasing accessibility to more places in the area.

Secondly, bus lines through the area are rerouted and more bus stops are added to increase the connectivity to surrounding areas and the rest of the city. The new Våxnäs is also prepared for the possibility of constructing a tramline going from the city center, through the area and continuing further east, along the already existing railway tracks and bridge.

Lastly, the majority of the roads in the area are made one-way for cars, and are prioritized for pedestrians. This is while keeping ordinary roads in an outer ring and in the southern industrial part.

When creating new green areas from previously asphalt-paved surfaces, the asphalt can be reused in chunks acting as stones.

THE FIELDS

The north section of the Lågländet park is transformed into a space for social activity and play. Hills are created with reused material from elsewhere on the site and the water is present and close to the walking paths.

THE MEADOW

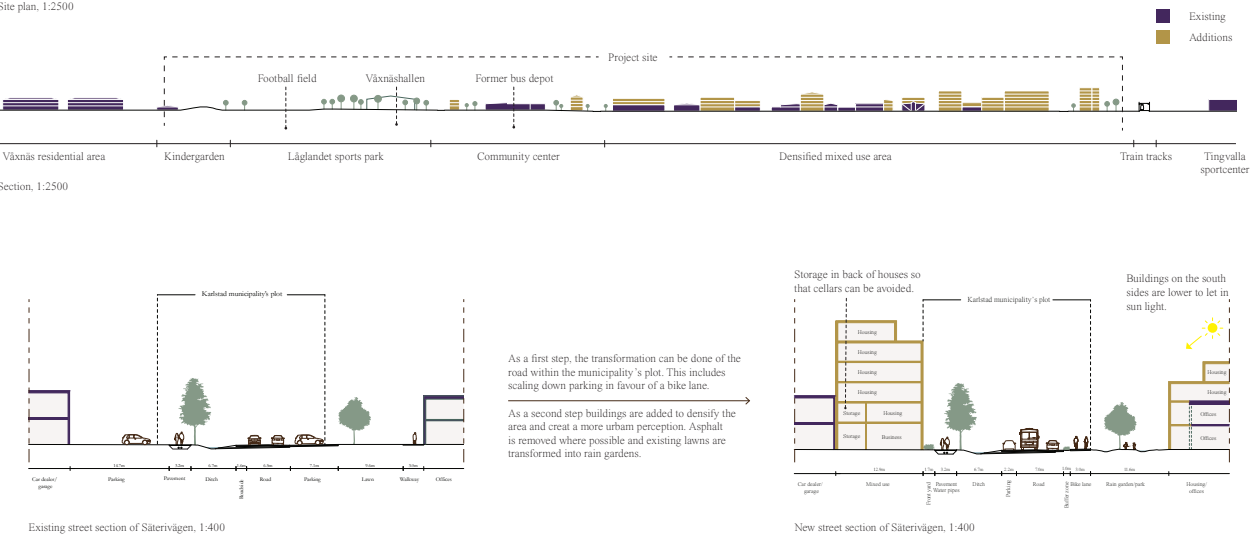
In the southern part of Lågländet a space for biodiversity is created with a more wild character. There are paths to walk on and small pocket places for rest. To slow the water it is led through many smaller ponds connected through culverts.

DENSIFICATION

Every building is a resource, and the aim should be to keep them. Sometimes they do however become obsolete as functions and needs change and need to be remodelled. When this is done, the existing footprints of the buildings should be kept, in order of avoiding the tedious work of making more piles to the bedrock than necessary. However, the current density of the site is typical for an industrial area and densification is needed to remake it into a vibrant mixed use district. The strategy is to remodel and build upon existing buildings as well as fitting new buildings where possible. In this way both the existing buildings and businesses are kept and resourced. The houses are also fit into the existing plots so that the densification can be done in phases. This will naturally make a versatile urban morphology, as different building types fit into different places in the existing fabric. The southern part is kept as an industrial area, as the closeness to the highway makes it unsuitable for residential houses. This also goes in line with what the municipality is planning for. The other strategies, such as removing asphalt and reducing car dependency, are however implemented in the whole area, including the southern industrial part.

MULTIPLE PLOTS

The site is divided into multiple plots, which means that an urban development needs to be done with compliance with the multiple property owners. We do therefore suggest that the municipality starts remodeling the roads, as those are owned by the municipality. This would include removing parking spots, adding bus stops and bike lanes as well as creating pocket parks. In the next phase the densification is done within the plots.



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THE BUS DEPOT

As the bus depot is moving to a new location the building as well as the plot will be available. This presents a great opportunity two both create a new community hub and test out the different strategies for developing Våxnäs. As the track and field building Våxnässhallen is being demolished a part of the bus depot is remade into a sports facility. Another part is made into a workspace for local businesses and startups. Finally the rest is reserved for cultural activities and associations. The asphalt on the western side is remade into a combined sports park and playground, linking the bus depot with the sports area on the other side of the road. The eastern side is made into a park and rain garden by cutting holes in the asphalt. The road on the eastern side is reserved for buses and a parking lot on the other side of it is made into a new square for Våxnäs. Finally four types of mixed use houses are added to the plot: row houses, a two-story and a four-story apartment building and an extension to an existing office building.

In keeping with the historical narrative of farmland and production in the area, the roofs of the bus depot are fitted with solar panels to make use of all spaces that are available.

By doing this the bus depot becomes a part of a placemaking strategy which will attract more people to the area and make landowners more positive to development. It is also a great way to evaluate the project on a smaller scale before implementing it for the whole area. As more plot owners become available for development the procedure for the bus depot can be repeated at other places in the area. In this way a logical and organic pattern for developing Våxnäs is created.

We work with the existing structure — it has presence and character worth preserving. Rather than replacing it, we build within it. A room-within-a-room solution allows the space to adapt to different sports: basketball, dance, volleyball. The sport hall remains flexible and can also host events.

By opening the east and west façades, we create visual connections between inside and outside. Light enters more freely, and the hall becomes inviting — transparent, yet grounded.

This approach gives new life to the building. It stays true to its original form, while becoming a space for movement, gathering, and shared activity.

The southern part of the building becomes a community hub — a new meeting place for the neighborhood.

Inside, we create a multifunctional space that can shift between uses: a small theater, a library, a concert venue. It is open, adaptable, and welcoming.

The existing sauna is preserved — an anchor of memory and intimacy — and is complemented by a community café. Together, they form a place of warmth and encounter, where everyday life and shared culture come together.

Street only for buses and deliveries

New mixed use building

Space for cultural performances

Lågländet

Asymmetry of the former bus depot transformation and new square

Remaking of roads on municipal ground, creating sidewalks and bike paths for increased pedestrian access

Construction of new roads to establish the new, more pedestrian friendly road network

Breaking up paved areas to create new green spaces

Remaking of the northern part of Lågländet, creating The Fields

Transformation of the bus depot as a pilot project for future interventions, and as a placemaking strategy

Densification on vacant plots and parking spaces

Potential construction of a tramway connecting Våxnäs to the city centre via the existing railway tracks and bridges