

KARLSKOGA (SE)

“AT THE EDGE OF TOWN”

Site theme:

VALORIZING NATURAL ELEMENTS AND LANDSCAPES

The two massive pieces of infrastructure that will cut through the site create intriguing challenges to be solved. How to create interfaces with porous edges across, not one, but two walls of noisy concrete? And a smooth transition from urban to rural at the edge of town?

Maybe, in some cases, one ought not to. Instead of trying to dissolve a barrier of that magnitude, it might be better to find what positive aspects such a barrier could provide for this specific site, and define which qualities to try to mitigate and which to draw strength from.

Urban sprawl can be a considerable impediment when it comes to achieving today's values of a sustainable and desirable urban habitat. Karlskoga, already a relatively spread-out town, will with the new station and district around it, spread even further. A well-defined barrier, could be an incentive for the future to focus on improving what's already within the edges of the town, rather than to continue spreading outwards.

Main idea

The train line and highway that cuts right through the middle of the site divides the area into two distinctively different landscapes. To the south the area remains as rural as possible, with no new functions or residents. To the north is a new, highly urban and diverse district of town. At the heart of this district is a square, to which all new and old functions are connected, either directly or through the green corridor that runs through the area and down to the lakeside. This green corridor park provides an inclusive, safe and welcoming main route through the residential area, giving safe passage to residents on the way to school, kindergarten, work, socializing, shopping, or any other activity, be it by walking, by bike or by using the local self-driving transport pod.

Urban scale varies in accordance with function, position and the speed at which one travels. The closer you come to a residential area, the more human the scale becomes. Slightly winding streets give you a hint of what is behind the next corner but do not reveal all at once.

The residential area explores new ways of social housing, where inclusiveness, accessibility and direct democracy are able to thrive.

Main features

Transportation hub and station square

The station square is the centre point of the new district, connecting all functions to thereby create a vibrant meeting point, for not only necessary, but also voluntary and social activities. The transportation hub is located at one side of the square, and it provides accessible travel connections by fast train, long distance bus, local city bus, local neighbourhood transport pod, taxi, private car, bicycle and walking. It is also the main crossing point for the pedestrian routes in the area.

In addition to transportation the station square connects a multitude of other functions; shops, restaurants, services, small scale workshops, offices, rooftop terrace and viewpoint, residential apartments, as well one end of the main park and a playground. This mix of functions will keep the square a vibrant place throughout the day and late into the evening. The buildings surrounding the square are well-suited for mixed use, with a gradual transition from commercial to residential, so that the proportion of functions can vary according to needs and trends.

meeting points:

Necessary meeting points (*workplaces, everyday shops, public transport, schools etc.*) are mixed with voluntary (*sports, parks, services, shops etc.*) and social (*parks, restaurants, pubs, pedestrian connections etc.*) meeting points, in order to create spaces with diverse function, that can be vibrant and welcoming both if you have to go there or choose to go there. And you are more likely run into a friend by coincidence as well.



Social residential blocks

The social residential blocks consist of 3-5 buildings that creates a common inner courtyard for each block. The apartment blocks are 3-5 stories high, in order to maintain a human scale for the courtyard and the streets between the blocks.

Each house or staircase has a shared roof terrace and interior space at the top floor so that every inhabitant has access to the terrace and living room with the best view. The roofs can be used as chosen through direct democracy by the inhabitants of each house. The roofs must have the readiness to hold solar panels, saunas, allotment gardens and other functions the residents might decide to have there.

Because the blocks have similar dimensions to one another they should have somewhat different style regarding roof types, materials, colors, windows and balconies, so that each block and each courtyard have their own distinctive expression. This means that one easily recognizes one's own home without having to look at the house number. Both the materials and methods of construction will be sustainable and natural (the primary material will be wood).

The parking solution for the residential blocks is robot parking in units, which partly occupy one building closest to the entrance road. It has the same dimensions and style as the rest of the block and will serve the parking needs for two residential neighbourhoods. In this way, there is no need for big parking areas or underground parking solutions. The cars are kept safe and dry, and if the need for parking decreases in the future, a module can be rebuilt with a new function without having to change the dynamics of the rest of the block. The maximum distance to walk to the parking is 100m. All parking spaces are accessible parking (see robot parking)

Social town houses

The social town houses consist of dense and organic blocks of terraced housing, 2-3 stories high. The buildings consist of unique housing units in the corners with modular units in between, adding up to a total of 10-25 units per neighbourhood. Most units have their own small garden and roof terrace. In the middle of the block there is a shared garden with a small canopy, barbeque area, tables, playground and an allotment area.

One unit in each neighborhood is a shared unit with social areas (workshop, meeting room, terrace, storage)

2-3 units per block are allocated for residential parking. Due to its function (see robot parking below) all parking spaces here meets the demand for accessible parking as well. The units have similar dimensions and style to the rest of the residential units, but it contain a rotary parking system within, which has space for 8 cars each. Temporary parking and guest parking is allowed on the streets.

Both the residential blocks and the town house blocks have in common the idea that everyone has not only access, but also inclusivity and influence over all four levels of private and public spaces:

- private: the apartments, small gardens in front of townhouses
- semi-private: roof terraces, common interior spaces (workshops, meeting rooms)
- semi-public: the courtyards (BBQ - place, playground, allotment), robot parking
- public: parks, squares and outdoor activity nearby, as well as public and commercial services within walking distance

The green corridor, surface water, erosion and vegetation

On the southern side of the highway the woods and fields are left as intact as possible, to maintain the country side appearance. Trees and vegetation are planted on the new slopes created by the highway and train track. This will stabilize the ground and also reduce the flooding of surface water. Surface water is to be led through delaying- and filtration pools.

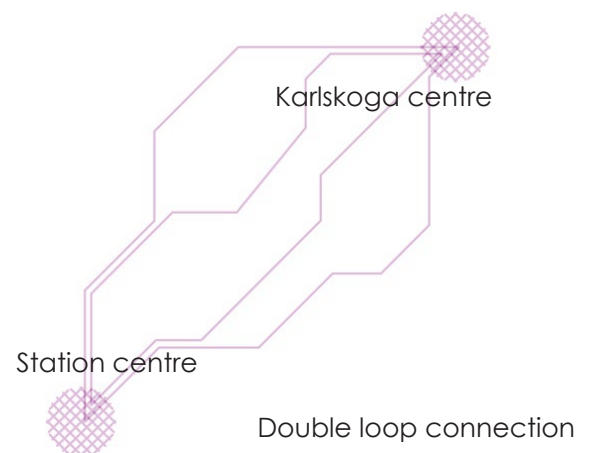
The northern side of the train track is considered urban, and development here is more extensive. The few areas with wood, both next to each square, as well as the forest directly north of the site are preserved in a natural state. The green corridor park connecting the two woods is an urban park, maintained and available as an outdoor "living room" for the residents. Through the park runs the main surface water canal for the area. It varies from more natural sections to built-up canal-like sections, with small lakes, filtration pools, wetlands and streams along the way. It also works as a flooding route if necessary.

Pedestrian routes and local public transport

The new district has a wide network of pedestrian routes, with the main emphasis of making them inviting, direct and safe to use. They mainly go through park areas, thus avoiding car roads. The main pedestrian connections towards Karlskoga are also moved away from the main street, so that the new route goes near the lakeside (Finneböck) and another through the residential area at the western side of the main road. A pedestrian bridge also crosses the lake under the two other bridges, hanging down quite close to the surface. It is situated on the southern side so that it gets more sunlight but still has some protection from rain from the bridge above. Bicycle parking areas are placed intermittently over the district with long-term parking inside the main station building.

Any transportation leading out of Karlskoga can be done via the main transport hub. However, there is also public transport within the city as well as within the district itself. The city buses have three stops within the district. One at the main square, one at the school and kindergarten, and one at a central point between the residential blocks. A double loop of bus routes, connect the district centre and Karlskoga centre in a way that gives wider coverage between the centres and more frequent traffic near the centers. Furthermore there is a local self-driving transport pod that circles between two squares with another four stops in between. At a slow and safe speed of 10-15km/h it will manage to do one lap of 1.5km in about 10 minutes. At less busy times it can stop to charge and when needed, be called upon by pressing a button at any of the stops.

To achieve a high level of accessibility, safety and inclusiveness for all residents, young and old, the pedestrian routes and public transport stops are placed in natural meeting points, well-lit places, which are also visible from residential houses.

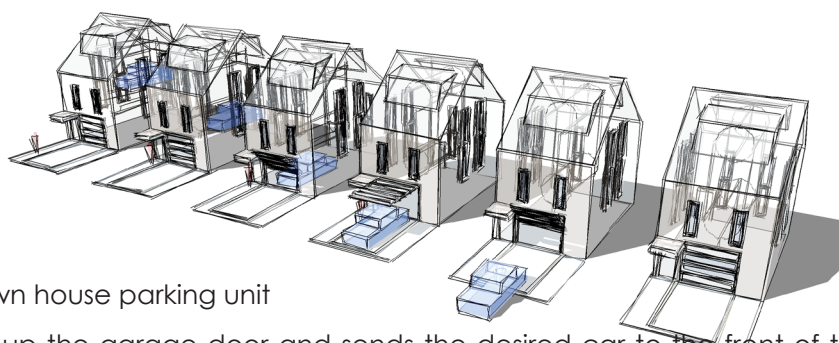


Car parking solutions

For public transport it's well accepted to have to walk a hundred meters or more, and if the use of private cars is to be discouraged, then the "right" to park right in front of your door should be questioned. The outset usability and comfort requirements for these two means of transportation should be equalized – to start with. This however doesn't mean worsening one but primarily improving the other.

The technology for automated parking solutions as well as self-driving cars is developing all the time and it will have a significant impact on town planning for the future. At the same time there is a will to reduce the use of private cars. Therefore new residential areas should be planned in a way that can be adapted to either an increase or decrease of demand for parking, without having to rethink the whole dynamic of the residential area.

Robot parking houses that are integrated in the housing block can be one solution. These can be concentrated near the entrances, towards main roads or otherwise least attractive side of the block. One might have to walk a maximum of 100m to the parking but can still temporarily park closer to the door, for pick-up or drop-off. In the future, one can step out of a self-driving car at a drop-off point closer to the door and then let the car drive itself away for parking.



Example:

The use of a town house parking unit

The robot parking flips up the garage door and sends the desired car to the front of the parking unit. The garage door functions as a rain shelter and the area to enter the car meets the dimensions for accessible parking. Therefore, all robot parking spaces can be considered accessible parking.

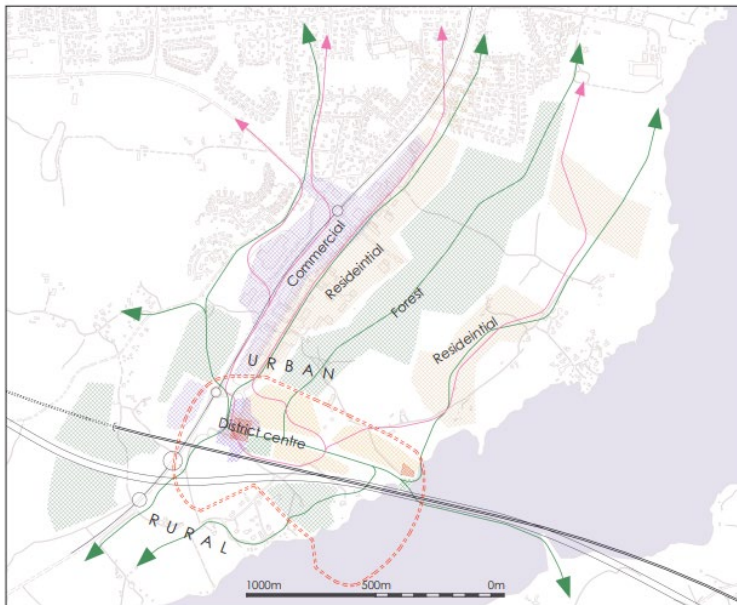
Traffic noise

With the new highway and train line creating a lot of noise, it is vital to prevent the noise from disturbing residents and others. The highway is likely to be the noisier one, and has therefore been placed behind and in part under the railway. This combined with conventional noise reduction barriers, such as earth berms and trees, efficiently blocks highway noise from reaching the residential areas. The railway is likely to be less of a noise polluter, especially with brand new trains and train tracks. However its noise pollution too needs to be taken into account. The housing blocks are formed in such a way that the building masses create a barrier against noise. Robot parking occupies the noisiest facades of the buildings. Lastly, the alleys between the houses have trees and vegetation to further block out noise. The aim is to keep the courtyards, small streets, squares and parks free of outside noise pollution.

Phasing and connection to the rest of Karlskoga

The area is to be developed starting from the main station and the station square in the western side of the area, and then towards east until the whole area is developed, with the green corridor developing at the forefront and the residential areas on each side following afterwards. Public parking can grow gradually by installing higher robot parking units anytime the need arises. The development of the areas (especially pedestrian routes) between the site and the centre of Karlskoga should be prioritised so that the new district is well connected to the rest of the city right from the outset.

The Storängen commercial area, especially on Skogsbovägen should be developed into a more mixed and urban environment, and becomes part of a diverse urban corridor that reaches towards the centre. As the new built environment will be comparably urban, the remaining areas of wood north of the train track should be preserved and cared for, so that it has recreational value for the residents. South of the train urban development should be avoided, and it is to remain as country side.



The view from the highway and speed train over the new face of Karlskoga may intrigue bypasser to slow down, look around, and find out if Karlskoga is a place where they can belong.

