



Gamla Väster and Värnhem

- Analysis in transport and mobility



Inventory and Analysis

The two districts we been analysing in this project is Gamla Väster and Värnhem. Both districts are central in Malmö and close to Malmö Central Station. Despite that the districts are located close to each other they look different in morphology and layout.

Gamla Väster

Gamla Staden is 87 hectares but we been focusing on a smaller part of the area, called Gamla Väster. Gamla Väster is the most central neighbourhood in Malmö and has a large selection of shopping, hotels, restaurants and entertainment. It has proximity to Malmöhus Slott, green areas and the beach in Ribersborg. The architecture of the area are older houses from different centuries. The area has also a good connection to Malmö Central Station where you have the access to bus and trains and also the busstation at Gustav Adolfs Torg. During our transport analysis in Gamla Väster, we can see that it is easier for the people who live there to use sustainable transportation like bicycle, walking and public transport like buses than using a personal vehicle, like a car.

Värnhem

Värnhem is 38 hectares and it is located between Rörsjöstaden and Slussen, in the eastern part of Malmö but is still in close proximity of the most central parts of Malmö. The area have good connections for travelers and it is an important node for Malmö bus service and is close to the train station Östervärn Station. The area not only have good public transport but also a big extent of bicycle paths and roads. Värnhem is also close to highways, green areas and shopping. The residential buildings in this districts are mostly built in the 1920's-30's. The architecture are built in a minimalistic style called functionalistic.



Figure 2: Map of Gamla Väster. Source: Malmö Stad.

Figure 3: Map of Värnhem. Source: Malmö Stad.

Street patterns and quality of the roads

Gamla Väster is an older part of Malmö consisting for the most part of pedestrian streets, pedestrian routes and some access roads in various sized grid-like blocks. The area's outer limits consist of larger access roads or local distributor roads. These larger streets are structured around vehicle traffic, both car and public transport. While the narrower streets within the area are mostly one-way streets, pedestrian areas with limited passability for cars or even pedestrian streets where no traffic is allowed. In Gamla Väster there are no specific bicycle lanes but rather they mix with the pedestrian and cars exempt from on the surrounding access or local distributor streets where there are a few designated bike lanes.

Värnhem consists for the most part of larger streets connecting to highways, district distributor roads or other primary roads and areas in Malmö. On Lundavägen, Föreningsgatan and Nobelvägen there is a larger number of lanes for cars, buses and also designated bike lanes and walkways. In the area there are also two large four way-intersections. On the smaller streets, like access roads, there is still a separation of vehicles and pedestrians. In Värnhem it is also more common with street parking than in the older parts of Malmö but there is a sub area that is more recently developed which consist of smaller access roads and pedestrian routes. Overall the blocks and buildings in Värnhem vary in size and consist of mixed functions. In the area there is also Värnhemstorget, which is a node for public transport, as mentioned before.

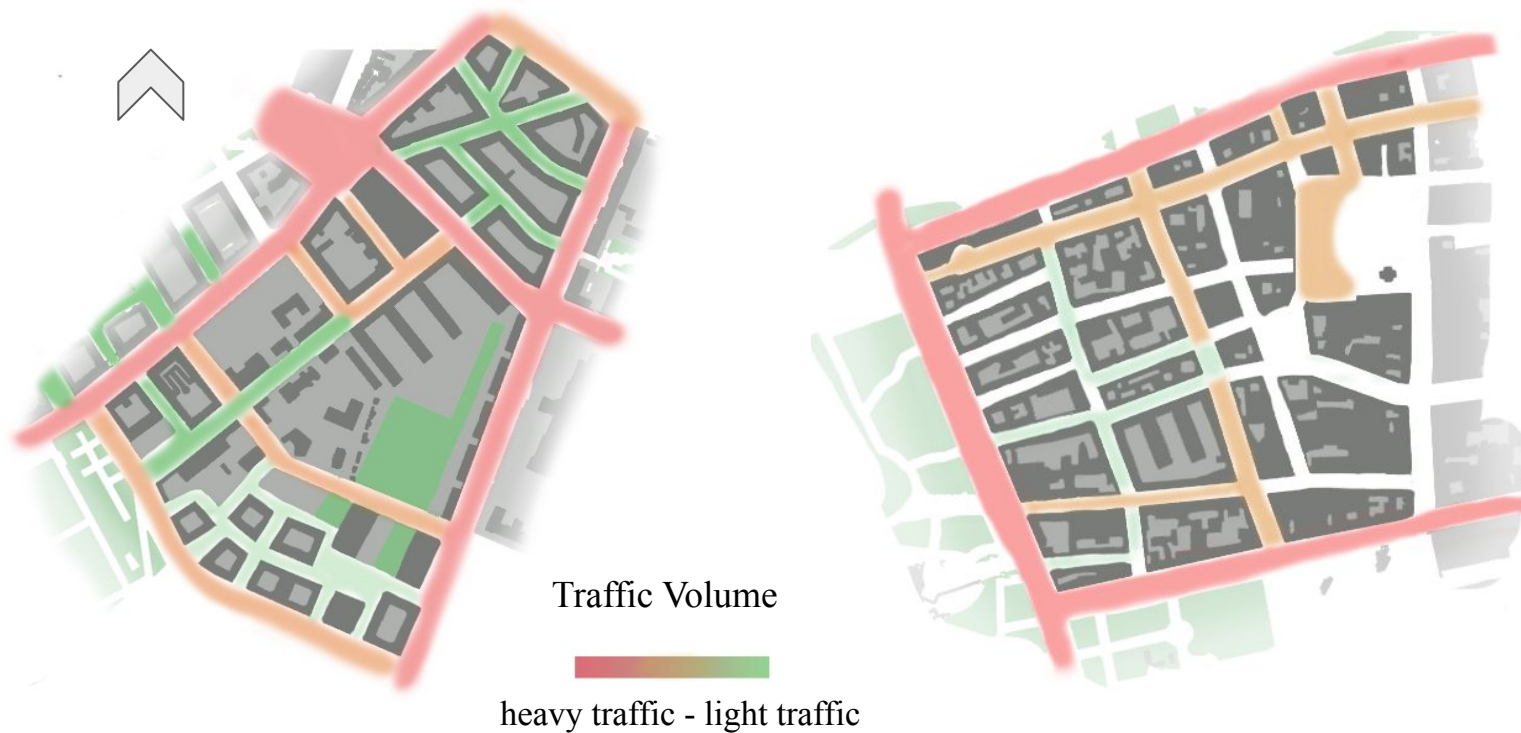


Figure 4: Traffic Volume in Värnhem and Gamla Väster. Source: Malmö Stad, Google Maps and Observation. Made in Photoshop.

The maps are focusing on the traffic volume to give a better example of the road functions and the traffic situation in the areas. The maps are mainly based on observation of the traffic, number of lanes, width, function and quality of the streets.



Figure 5: Photo of Värnhem.



Figure 6: Photo of Gamla Väster.

Traffic Volume

In the map of **Värnhem** it is visible that most of the roads are available for automobile traffic and that the amount of cars passing through the area is substantial. But there is also a difference showing between the older less dense blocks and the more newly developed area in the south parts. This area is possible to pass through on the narrower roads between buildings. It is also visible that there are no significant pedestrian areas. In Värnhem the pedestrians, bicycles and vehicles have the same possible routes, but depending on the scale of the street have different roles in the traffic hierarchy.

In **Gamla Väster** on the other hand there are several pedestrian routes and areas (the ones that are not colored in). From the map, and our observation, the conclusion can be drawn that the streets where cars can pass through have a high traffic load because of these restrictions in passability. But even on this streets there is no separation between cars, bicycles and pedestrian which leads to a different traffic flow and a slower pace. In this area there is no significant street parking but rather some smaller designated parking lots. In Gamla Väster the pedestrians set the pace for the traffic and motorist need to comply to this.

Sections

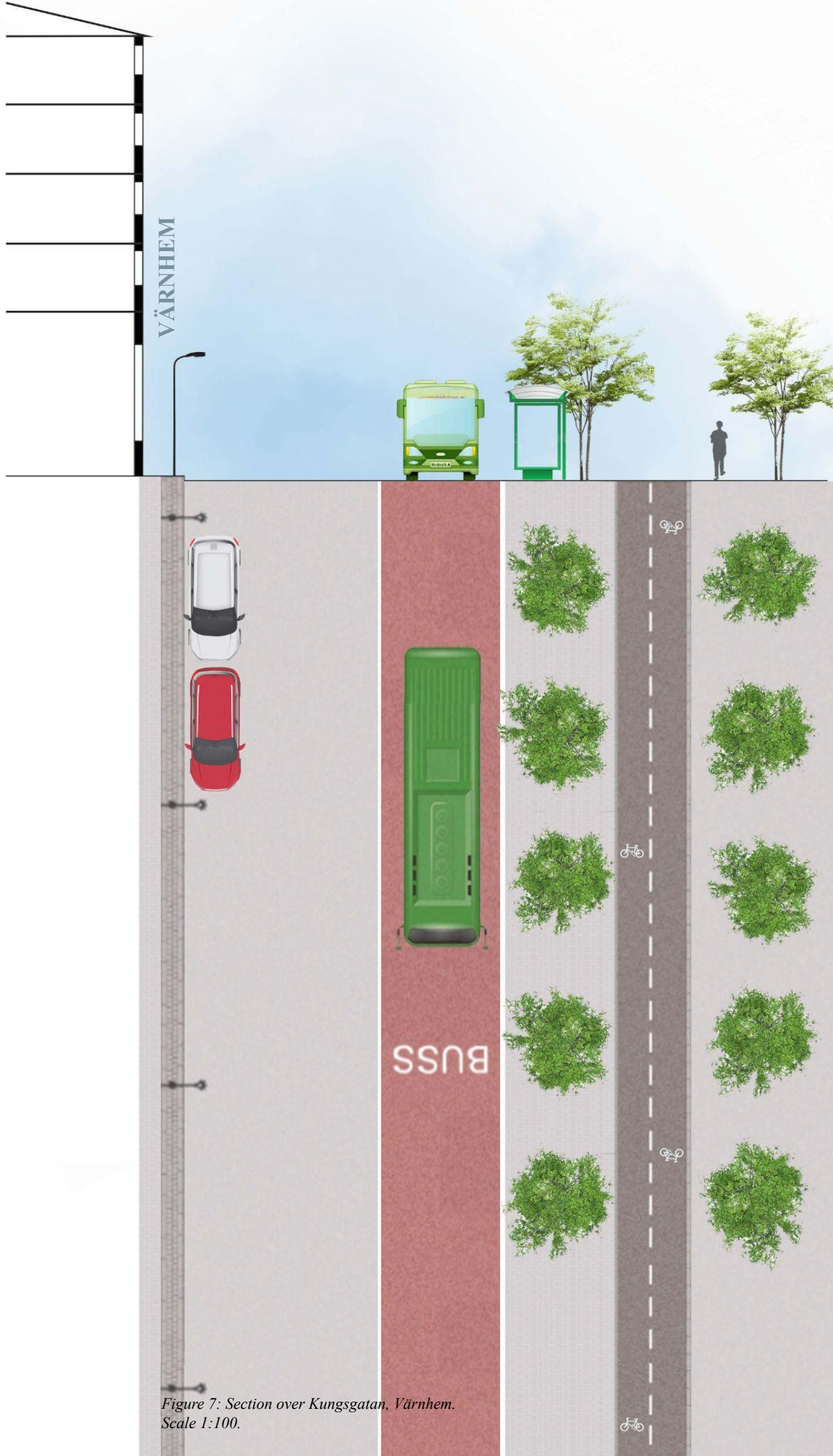


Figure 7: Section over Kungsgatan, Värnhem.
Scale 1:100.

Plan and section show a typical street in each district. The section of Värnhem is taken from the western part of Värnhemstorget on Kungsgatan, where the different lanes are clearly divided and wide. Trees are also planted between the bus lane and the bicycle lane to create a safer feeling in the traffic. The streets are mostly made of asphalt. This is convenience for cyclists and pedestrians, especially elderly people as it facilitates access.

This section shows a typical street in Gamla Väster, Långgårdsgatan. In this area, pedestrian streets and roads are narrower and the district have an older architecture. The majority of the ground layer is of cobblestones. This surface makes it uncomfortable for cyclists and pedestrians to get around in the area. There are no clear divisions between car and cycle paths. Most of the cyclists and motorists share the same street due to the narrow pedestrian street. The area also lacks greenery, giving it a grey feel.

What we can see in Värnhem is that the streets are wider and more car-friendly. This may be because this sub-area is planned during the era of the car. Gamla Väster on the other hand, is an older district and is not as car friendly.

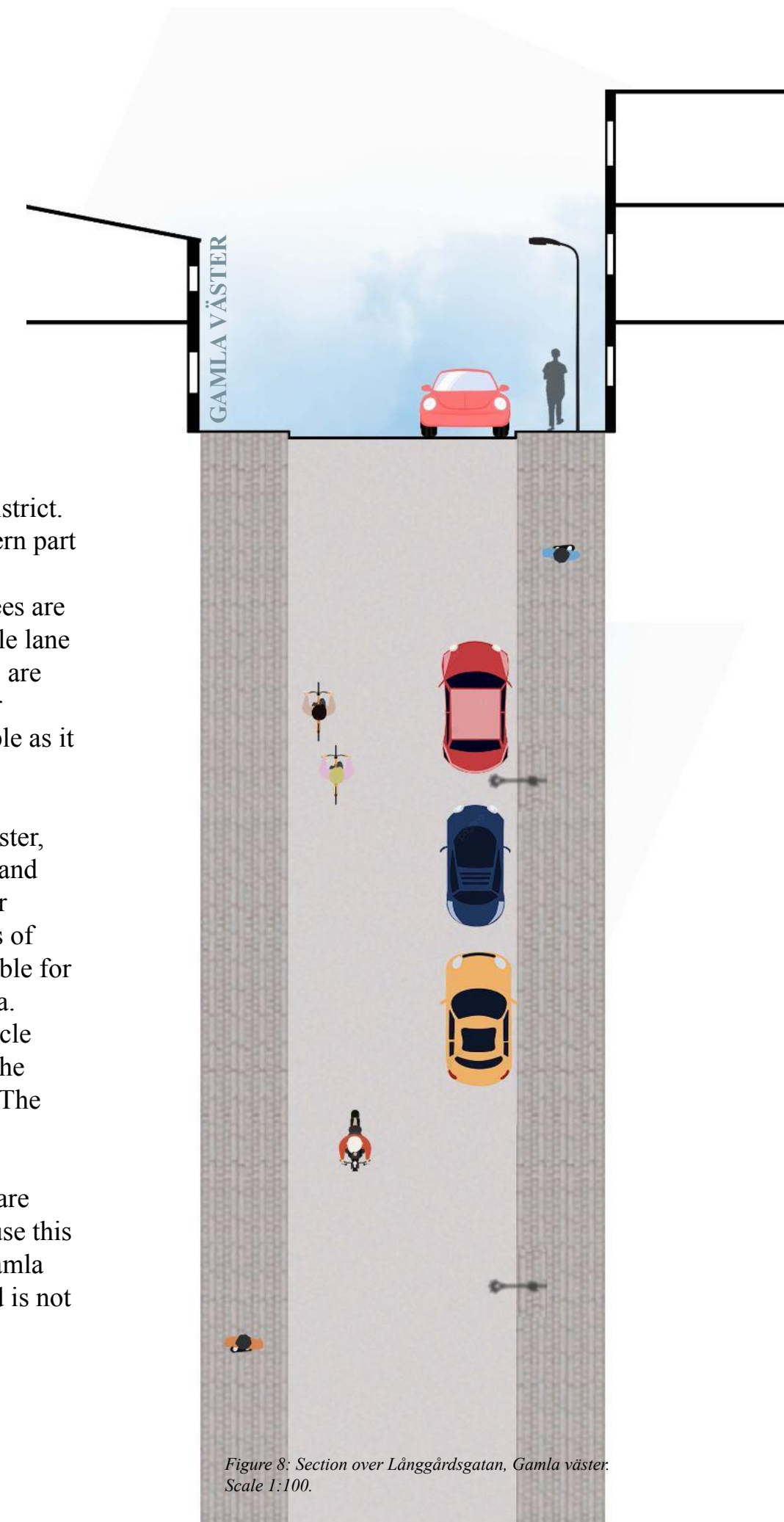


Figure 8: Section over Långgårdsgatan, Gamla väster.
Scale 1:100.

Land-use map and Connectivity

Through our designed depthmap, other analysis and observations it has become clear to us that there are several streets around and passing through our selected areas. This indicates that the connectivity in our areas is very vast, since its many streets are mixed between walking, bicycling and motorized vehicles. The connectivity of the streets has its fair share of benefits, for example it makes it easier to get about in the area since more streets are connected, and people save time by not having to travel excessively far because there are no streets that connect with one another. Jane Jacobs (1961) confirms that the areas with more connectivity feel more open, when there are more streets around building areas, it also leads to more eyes on the streets which in turn provides a feeling of safety. Stephen Marshall (2005) suggests that there are different street types, and one of them is connector street. Marshall (2005) explains that “Connectors are supposed to carry moderate levels of local traffic smoothly, in a way that is compatible with bicycle and foot traffic” (Marshall, 2005:26). That the traffic runs smoothly among different commuters is something we value and strive for in our selected areas.

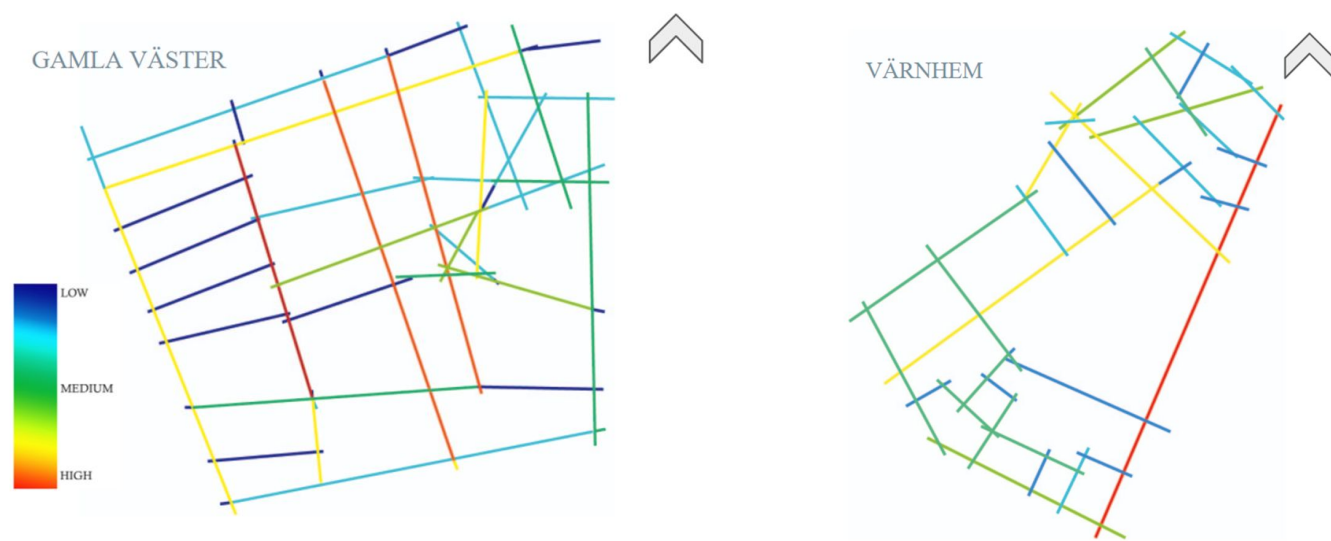


Figure 9: Space Syntax. Source: Depthmap.

In relation to the Space Syntax maps and the Land Use Map, people choose the easiest way to walk from point A to point B. According to Malmö Stads Fotgängarprogram (2012-2018), level difference, traffic volume, speed and street width are factors that influence the choice of routes for pedestrians. People also tend to choose the straightest street to see what is in front of them as shown in the map below (Van Nes & Yamu. 2021).



Figure 10: Space Syntax. Source: Malmö Stad.

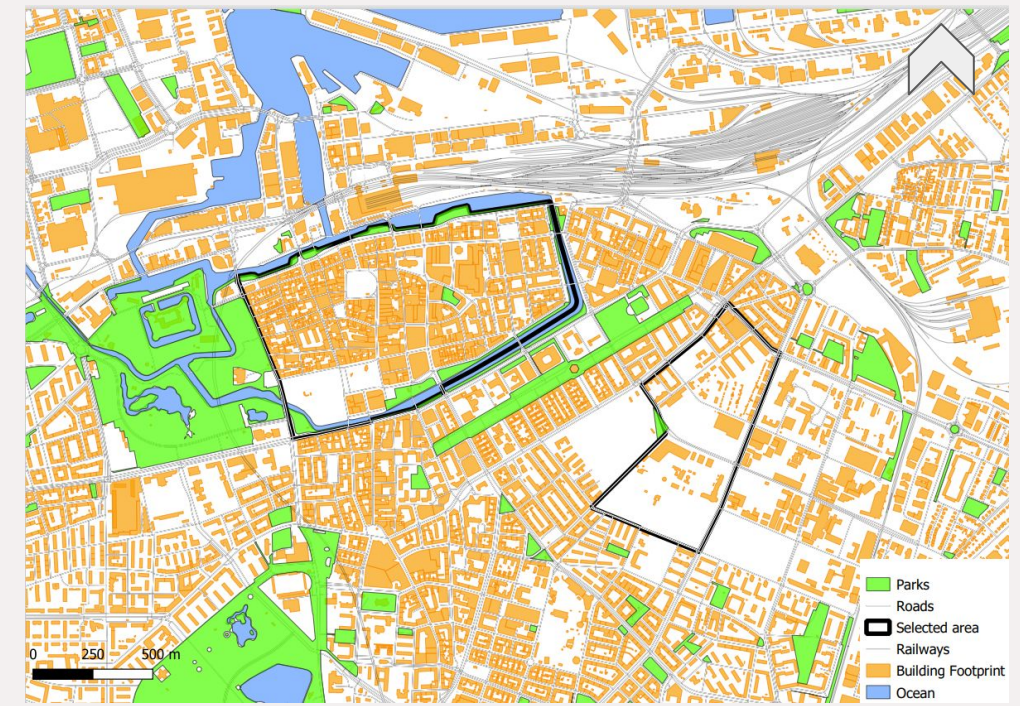


Figure 11: Land Use Map. Source: QGIS.

In the land use map we can clearly see the different subareas in Malmö, including our selected areas Värnhem and Gamla Väster. We can also see where the roads are and where the railways pass through the city, furthermore the map clarifies the distinction between water and land since important canals run through the city. Lastly, it shows us the building footprints and parks which can be useful when planning. It is also visible how much green areas the city contains, which is important for both the environment and people's well being.

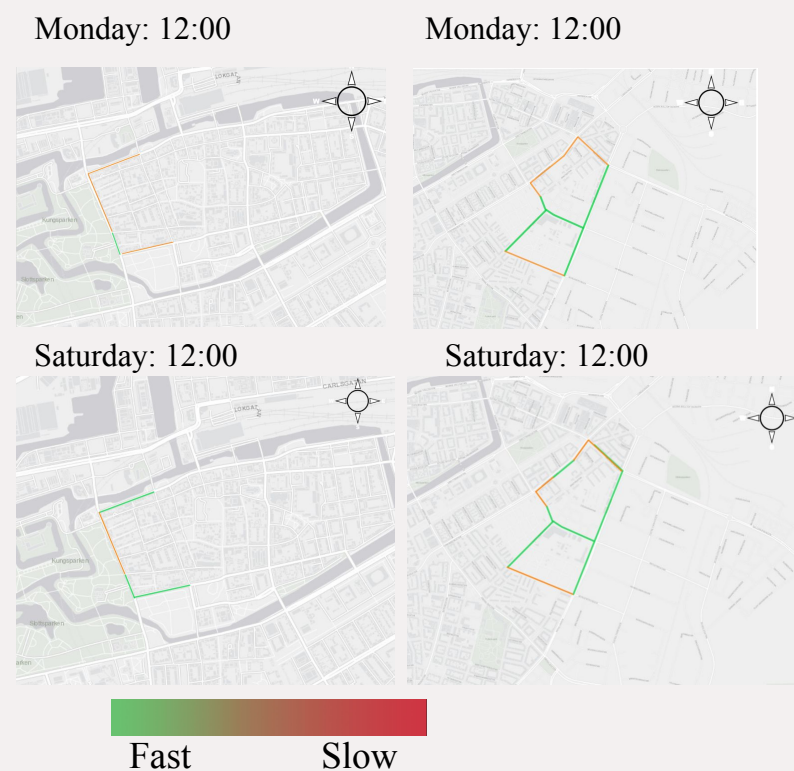


Figure 12: Traffic flow. Source: QGIS and Google maps.

Through the speed scale the map displays the different speeds when using a car in our selected areas. All maps are measured around 12:00, but to get a dignified comparison between weekdays and weekends, the two maps on top are measured on a Monday and the bottom ones on a Saturday. As the red color suggests a slow pace and the map does not contain it, it is obvious that the speed in both selected areas is often medium or fast.

Public transportation

- bus and train

There are good bus connections around Gamla Väster and Värnhem as shown on the map. In the figure you can see that no buses run on the streets in Gamla Väster. The route of the bus service is centered outside our chosen area. To use the bus as a public transportation, if you live in Gamla Väster, the nearest locations is Malmö Central Station or Gustav Adolfs Torg. You can also go by train to and from Malmö Central Station.

In Värnhem, bus routes are more inclusive than in the city center and some road lanes are dedicated to bus traffic only. The node for buses at Värnhem is Värnhemstorget. Buses from here running both within the city of Malmö and outside Malmö. We have looked at the bus routes that are most central and that connect our areas.

The bubble map shows the service coverage in our areas. By service we mean train station and the biggest bus stations. According to our bubble map, we can see good accessibility to service for those who live in the areas or passing through the areas. A requirement for sustainable transportation is well-function transit service and good accessibility. Mobility management includes some specific strategies and we think our areas fall into some of the categories mentioned: 1. *Improving and expanding travel options* and 2. *Priorities for transit and efficient modes as incentives for use* (Schiller and Kenworthy 2017).



Figure 13: Accessibility to public transport. Source: Google Earth and Photoshop.

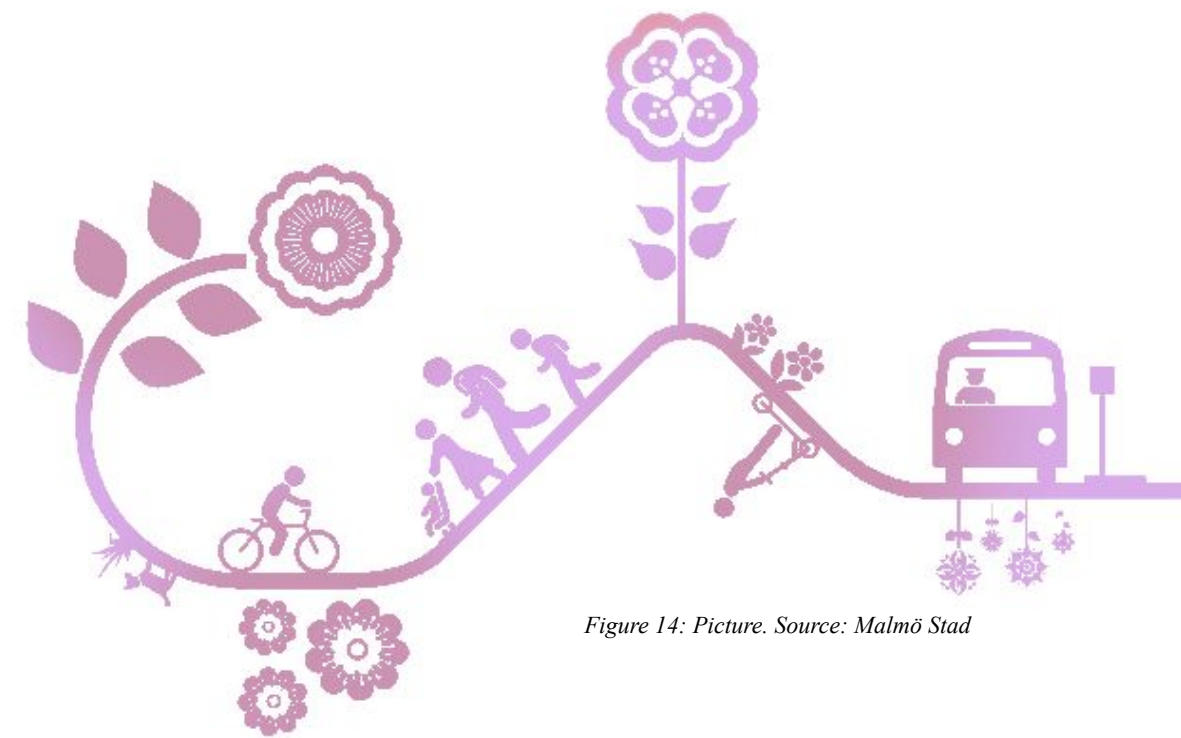


Figure 14: Picture. Source: Malmö Stad

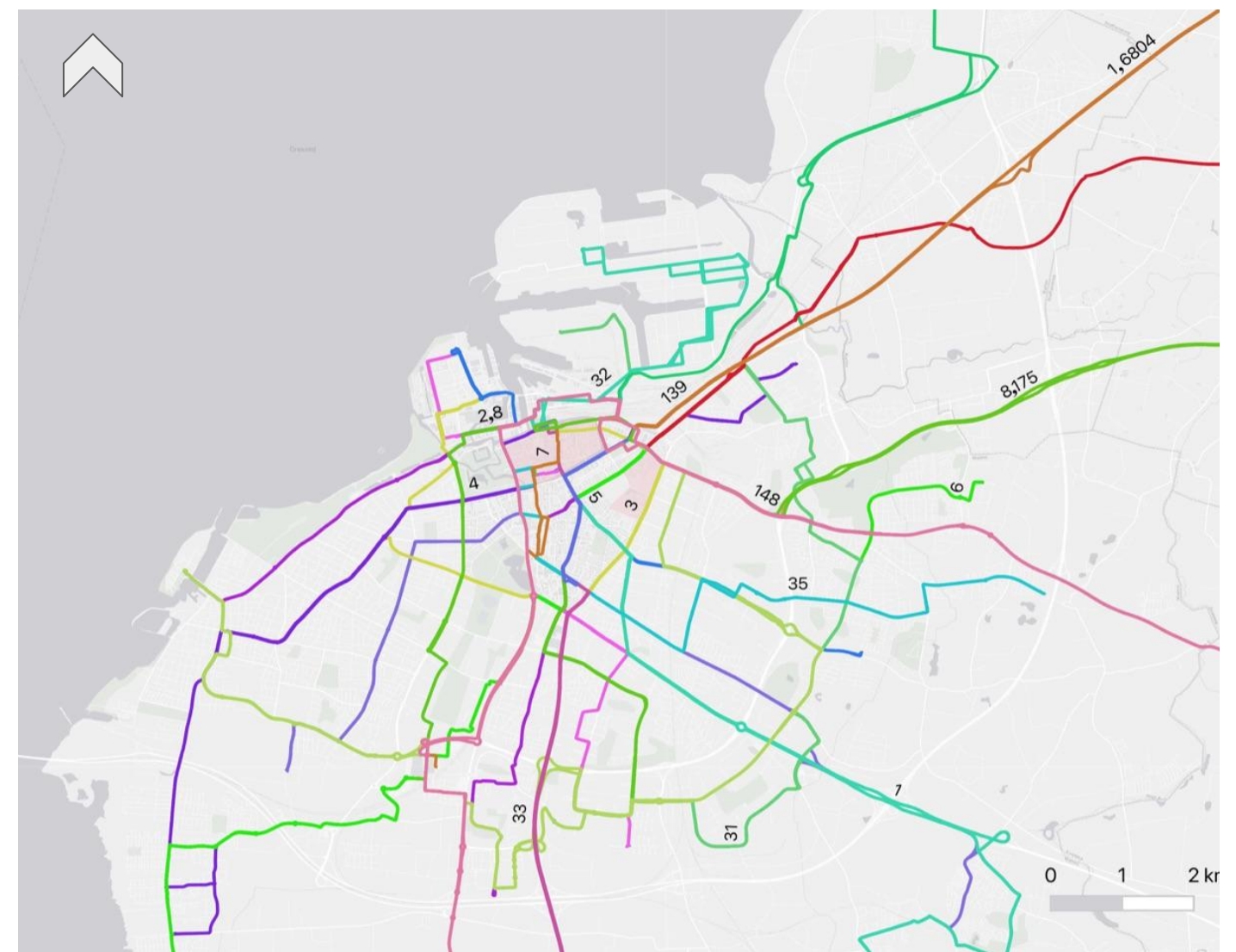


Figure 15: Bus lines passing Gamla Väster and Värnhem. Source: QGIS.

Bicycle paths & parking

Gamla Väster: As the map displays there are a smaller amount of bike lanes in our selected area. However some of the bike lanes the map displays are often shared with pedestrians. Considering the narrowness of the street and the block in its entirety, bicycle and walking makes the best way to get about. Although the roads are made out of cobblestones which might make the road a little bumpy and uneven unlike riding on regular pavement or cement. The roads are often quite safe due to lack of cars and the area is provided with many traffic signs which reduces accidents. This being said, there is not much public bicycle parking, as the residents often have access to private parking within their residential area or buildings.

Värnhem: Through QGIS and our own analysis and site observation we could examine that Värnhems bicycle paths primarily surround the area, but have one path crossing through in the middle. The bike path is often connected with the path for pedestrians on the sidewalk, next to the actual roads. This makes the paths both safer and smoother for the bike riders, because they do not have to worry about getting into car related accidents. The bike lanes are more open and not overly narrow, and the street are made out of regular pavement, unlike in Gamla Väster. Just like Gamla Väster, there are not many public places where you can park your bike, since most people living in the area are provided with parking spaces within their residential areas.

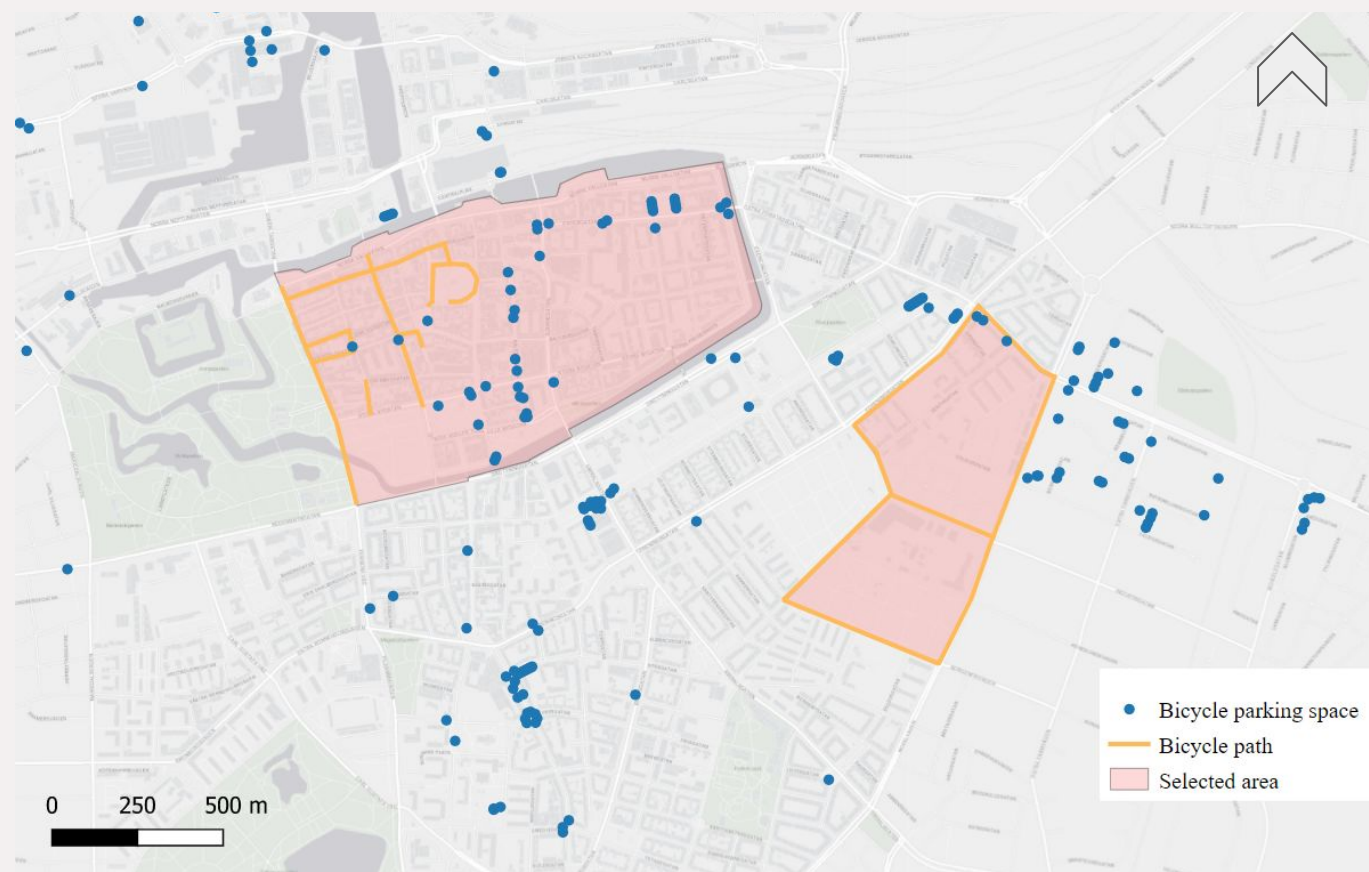


Figure 16: Bicycle paths & parking. Source: QGIS.

Parking space



Figure 17: Parking space in and surrounding Gamla Väster and Värnhem. Source: QGIS.

Gamla Väster: There is not a lot of public parking space in Gamla Väster. The parking spaces that do exist are located in the center of the district. The area is mostly residential and therefore there are no activities that require public parking space. The several public parking spaces in Gamla Väster are along the streets and this is often where people living in the area park their cars. The morphology is different from other districts in Malmö. There are many streets that do not allow car traffic and are dedicated to bicycles and pedestrians only. There are not many roads into Gamla Väster either, which can lead to longer car queues at peak times.

Värnhem: The public parking spaces at Värnhem is also limited. Värnhem consists mostly of housing and green spaces, which means that the parking spaces in the area are along the streets. The morphology is different from Gamla Väster and on Värnhem it is more permissible to drive and the area consists of major roads. Värnhem is also located on the road in and out of Malmö which leads to larger traffic flows. The location of Värnhem in relation to the city of Malmö means that there is a lot of traffic at peak hours which is leading to long queues for bus- and car traffic.

Survey

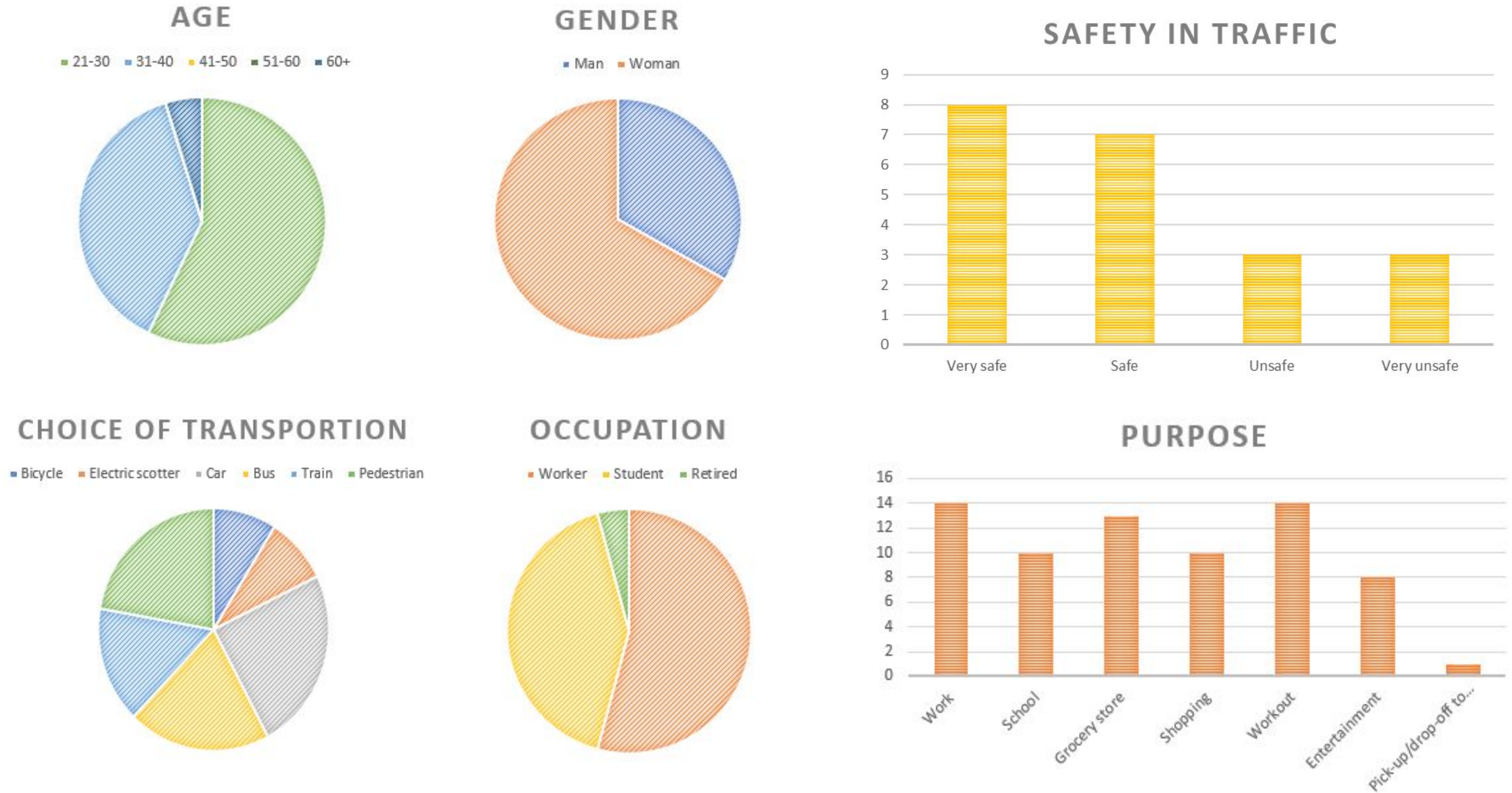


Figure 18: Survey summary. Source: Excel.

"I feel unsafe because of the lack of crossovers in Gamla Väster"

"Värnhem has good cycle paths but lacks bicycle parking"

Frequent and common travel patterns

- Travel behaviour and activity travel pattern

This is the result from the survey in Gamla Väster and Värnhem, which we have put together in various pie- and bar charts. The survey gathered information from 21 people and they answered 11 questions related to the two areas. The questions is regarding their daily journeys in the area they live in. We have made different activity patterns for the areas that show how different people move according to age, time, occupation an choice of transport.

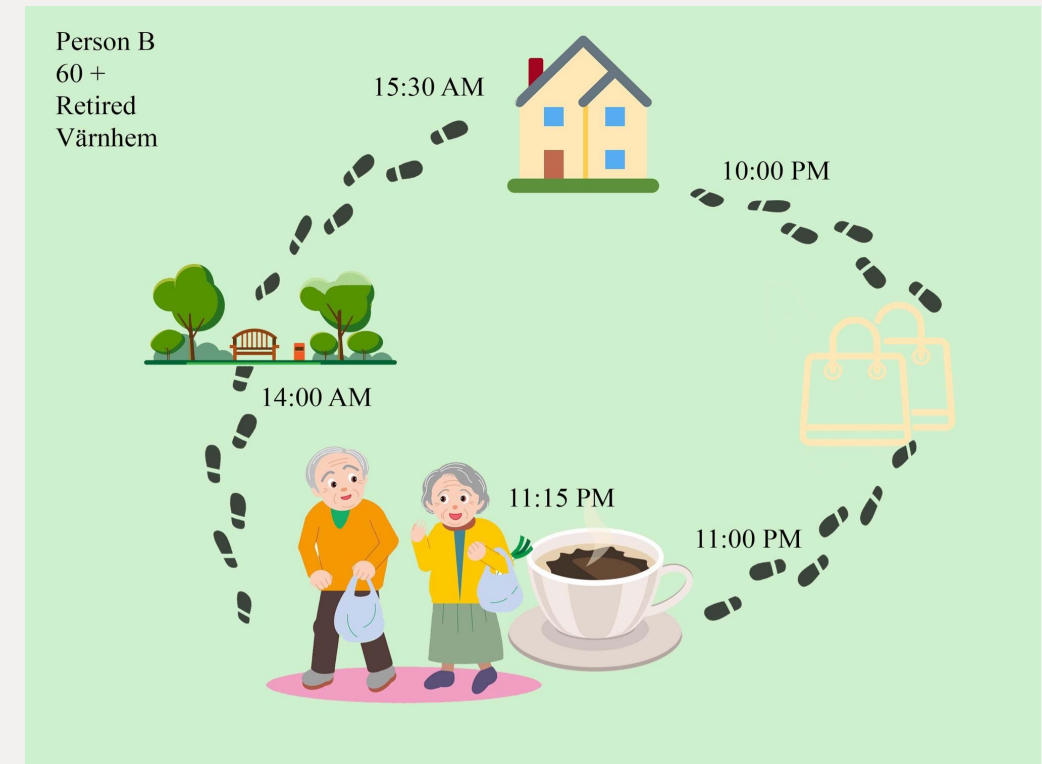
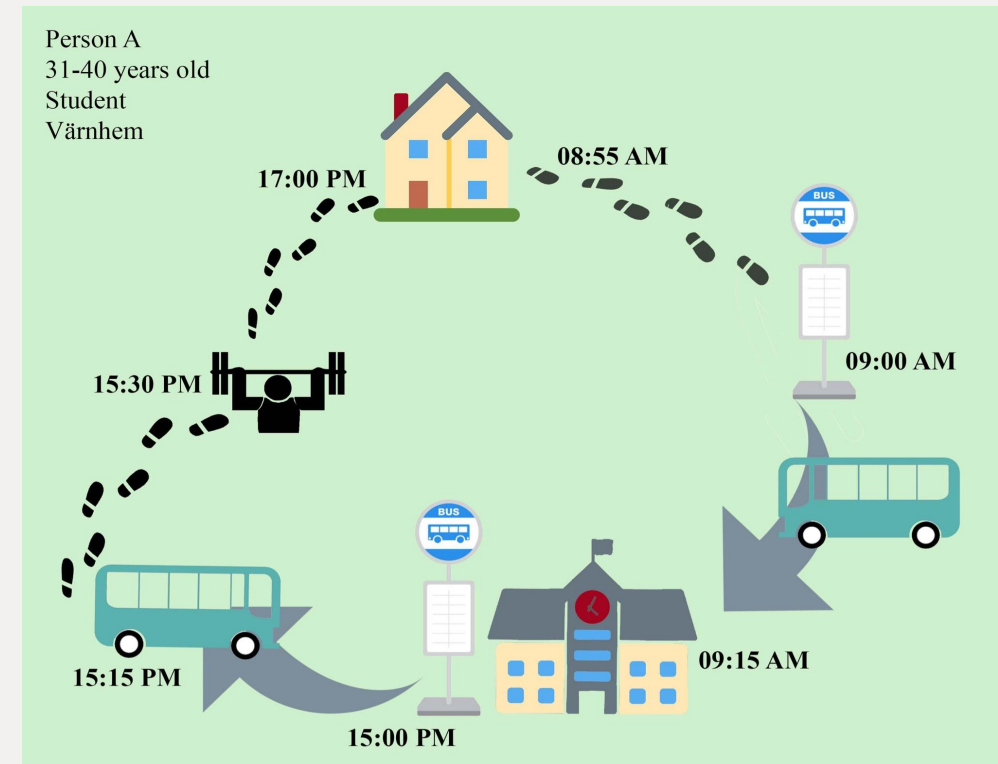


Figure 19: Travel behaviour in Värnhem. Source: Survey and Photoshop.

We chose to show these people in Värnhem as it was one of the most common routes in people's daily lives. Person A shows how a student moves around the city by public transport and by foot. We also chose person B because that person stood out from the crowd of participants.

We have chosen two different people in Gamla Väster to show their travel patterns for a day. Person A has no car and is a student, which results in the person is walking or using public transport. Person B, on the other hand, has a car and travels in and out of Malmö by car but does not use the car when they moves within Gamla Väster or the city.

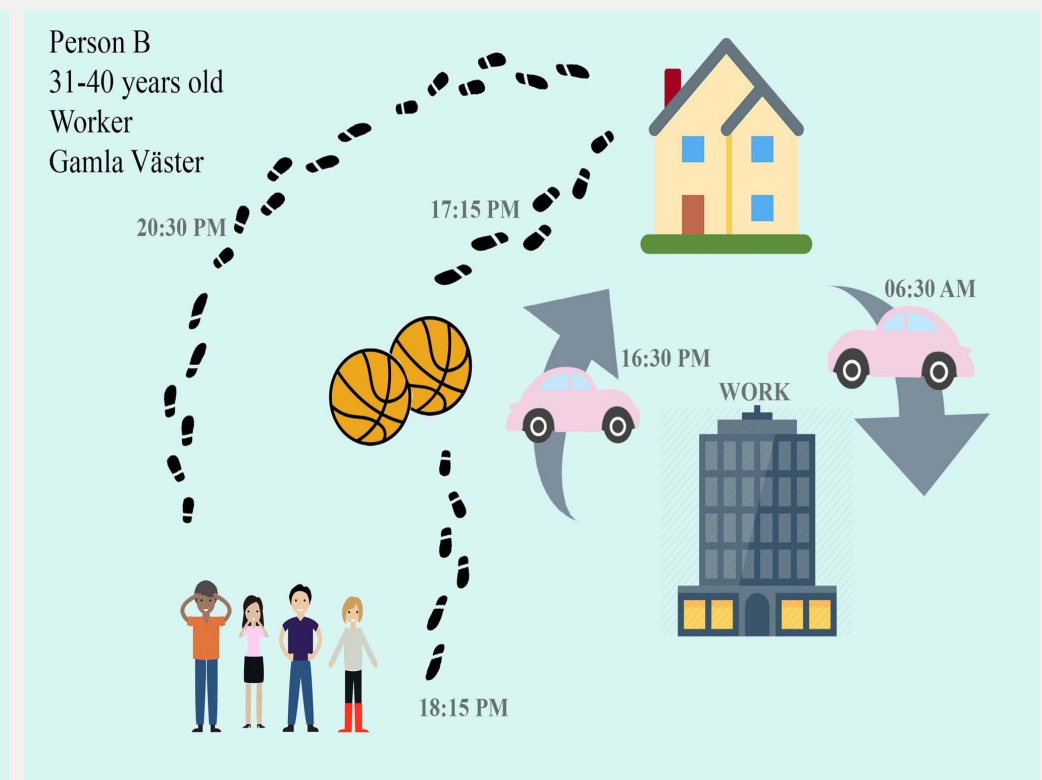
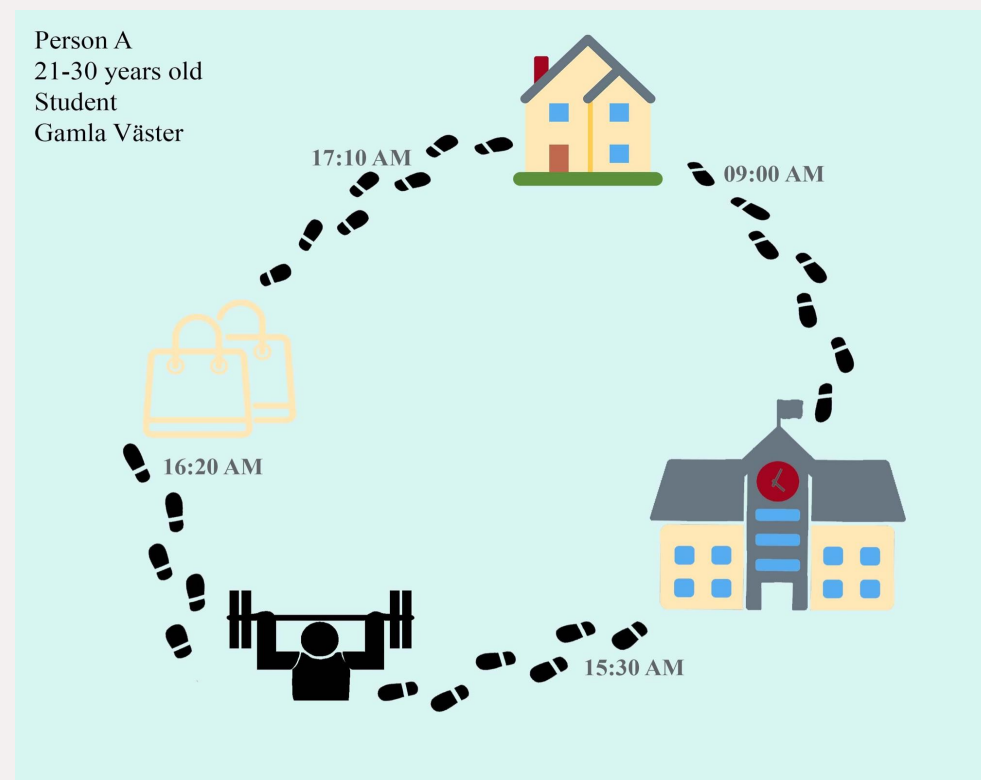


Figure 20: Travel behaviour in Gamla Väster. Source: Survey and Photoshop.

Strategic proposal

In Malmö Stads *Sustainable Urban Mobility Plan* (2016) there is a prognosis for how the number of inhabitants will increase in Malmö. Increasing population means increasing traffic and calls for a denser city and new ways of developing the city's transport system. (Malmö Stad. 2016:26) Since increasing car traffic leads to negative externalities like noise, pollution, congestion and spatial claims for infrastructure there is a need for a more sustainable way to develop the city and meet the new demand. (Malmö Stad. 2016:27) Mobility management is a method aiming to promote sustainable transport through changing travel behaviors (Schiller & Kenworthy. 2017:253) This is an important part of creating a sustainable and attractive urban life in an expanding city. (Malmö Stad. 2016:24)

We identify that transport demand and land-use management would probably be the most effective in our neighborhoods. By reducing the street parking in some areas, for example, we can work towards a more sustainable city by decreasing the tendency to use a car as your main mode of transport. (Schiller & Kenworthy. 2017:275) By freeing up this space there is a possibility to create a more dense city but also make improvements in smaller dimensions like planting trees or building even more bike lanes. By making the land use more effective and attractive the travel time can be reduced and therefore lead to a more sustainable view on transport, where pedestrians or bikes are the most common way of traveling. Walking and biking as main modes also benefits public health through more active transportation. (Schiller & Kenworthy. 2017:253)

Both our studied areas are in close proximity to larger transport nodes and therefore the possibility to promote more sustainable travel in these areas are good. There are already good connections to public transport and by making bike rentals, bike lanes and pedestrian areas safer and more attractive there are benefits both for the environment and the inhabitants of the city if these are well connected. In the report from Malmö Stad they also proclaim that car shares are already on a rise in Malmö. (2016:36) Therefore we see that making the city a greener space with focus on sustainable transport is not only desirable but also achievable in a city like Malmö where these characteristics are valued highly.

Plans and projects - ongoing

Malmö is a constantly developing city in form of infrastructure, buildings and technology overall. This means that different transportation systems and mobility in the city will constantly improve with time, and work towards a more sustainable future. Although our selected areas, Värnhem and Gamla Väster, do not have any specific planning towards transportation at the moment, it does have some planning in progress. However these plans mostly focus on specific buildings and how to maximize their potential in the area, but will have no effect on the transportation systems. The considered plans are not even approved yet, they are still under inspections or consultation. There are of course other detailed plans in Malmö, which will impact the transportation system to some extent. But since these plans are outside our selected areas and are not yet approved by the city, they remain insignificant for our proposals at the time being. (Malmö stad, 2022).

“

VISION

Walking, cycling and public transport are the first choice for all who work, live or visit in Malmö. These travel choices, together with efficient and environmentally friendly freight and car traffic, are the basis of the transport system in our dense and sustainable city - a transport system designed for the city, and for its people. ”

Figure 21: Quote. Source: Malmö Stad, Sustainable Urban Mobility Plan - Malmö Stad.



Figure 22: Picture. Source: Malmö Stad.

Conclusion and suggestion

After our analysis in Gamla Väster and our survey, we have come to the conclusion that many people living in the area or moving through the area use bicycle or walking as a means of transport. When we analysed the traffic flow around Gamla Väster, it was clear that the heavy traffic is located around the area and in the central streets there are more bicycles and pedestrians combined with less car traffic. We also saw that there are no clear bicycle paths in the area and therefore bicycle, pedestrian and motorists are mixing in the traffic, which can be a disadvantaged in peak hours. This also affected by the morphology of Gamla Väster and the street patterns in the area.

After our inventory and survey we saw a clear pattern that many of those living in the area own a car and use it to and from their work which is located outside Malmö. When they move within Malmö City, they instead use bicycles, electric scooter or walk. Our proposal are therefore based on making it safer for pedestrians and cyclists in the area and we have focused on a place with a lot of movement. The pictures on the right shows the site on Engelbrektsgatan. On the site there is an Ica store, shops, hairdresser, parking garage, a hotel, Malmö By Bike (where you can rent bikes throughout Malmö). At different times of the day there are a lot pedestrian movement in the streets around here. Our suggestion involves placing crosswalks and signs to make it clearer for motorists to ensure the safety of pedestrians and cyclists and a safer intersection.

In Malmö Stads Sustainable Urban Mobility Plan (2016) they talk about the benefits a for public health to walk or bicycle in the city, it also shows studies from World's Health Organisation (WHO) that explains what it does for people and the city to choose healthy and sustainable means of transport. Proximity to parks and green areas is also a contributing factor to people's well-being and in Malmö there are good connections to these. It should be easy to get to these areas by good means of transport in the form of walking or cycling, which many people do in Gamla Väster as it is close to Malmö Kungspark and Slottsparken. As we mentioned earlier in our overall proposal for Malmö, the aim is to promote walking as it is environmentally and a cheap means of transport. It also creates life and encounters on our streets which we want to promote in our proposal for Gamla Väster (Malmö - den gångvänliga staden Fotgängarprogram 2012-2018). After the study some measures for pedestrians have been identified and one of them is to reduce conflicts between cyclist and pedestrians. It is also important to make the different surfaces clear to avoid accidents and ensure their safety. Motorists may be negatively affected by our proposal as it may lead to a worse traffic flow and traffic jams due to the crossings. But in order to create a sustainable city, the pedestrians are more important in Gamla Väster.

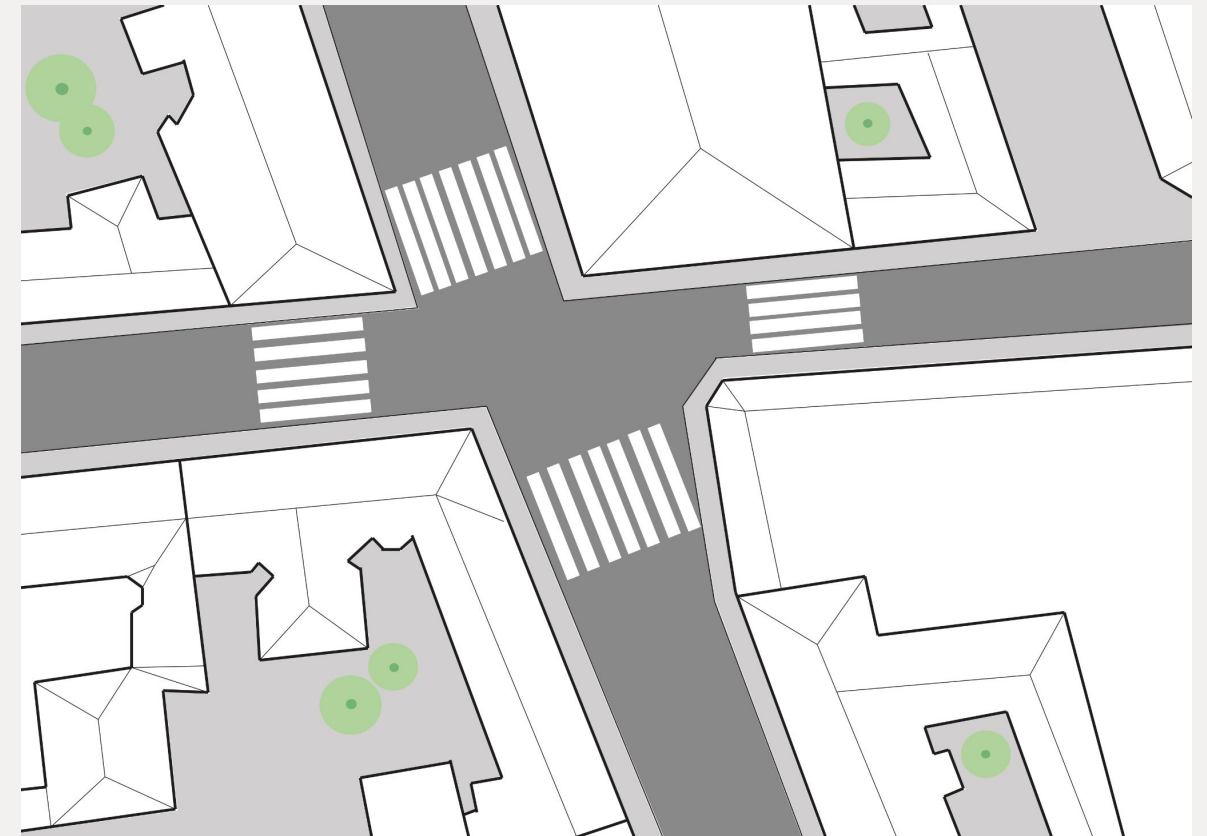


Figure 25: Overview of proposal - Gamla Väster. Source: Malmö Stad.



Figure 26: Photos Gamla Väster today.

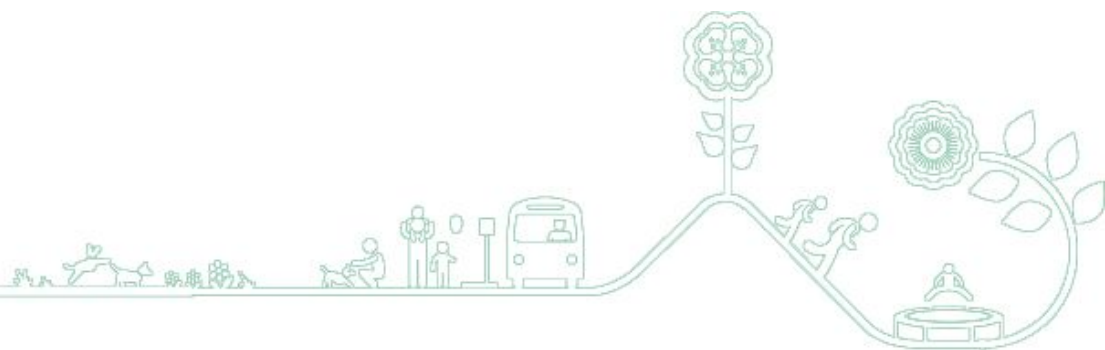


Figure 23: Picture. Source: Malmö Stad

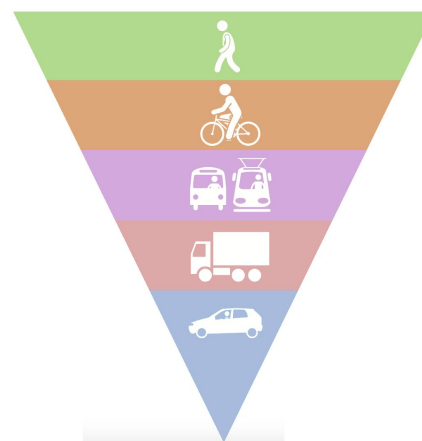


Figure 24: General priority model for different transport modes in urban planning within the City of Malmö. Source: Sustainable Urban Mobility Plan - Malmö Stad.

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Individual reflections

Ida

The group project has worked well in general and we have all taken different roles in it. Me and Vehin have taken the role as a leader for the group work. I have attended all the tutorials. When group members have not been able to participate, we have always updated each other with information and questions, we have communicate in a group on Facebook. I have focused a lot on public transportation, created our survey together with Vehin and Agnes, analysed our results from the survey. I have also written many of the texts in the presentations and worked with Vehin on the layout, from colour to theme for the layout. Me and Vehin have worked together every day at school. The corporation has worked well, if someone in the group has had difficult with a program, we have always helped each other. But, the communication can always be improved.

Agnes

The group project has worked well, the main issue being the time frame. The assignment overall has been informative but also some hard work with new and old computer programs and some technical issues with these. Another difficulty has been the when the data from different sources not always been consistent. I think that most of the literature been very relevant but there has also been a lot of work and reading in the pretty tight time frame with the seminars every week. Overall I think the assignment been educational and a good way of relating our readings in to a more physical perspective, but with a little more time to focus on the assignment I think that we could have learned even more and gotten a deeper analysis and understanding of the areas and of the literature.

We started off by meeting up and walking through the areas all together and divided the work between us. I have produced some of the maps from Photoshop and the maps from CAD and Depthmap and also been looking at the traffic volume, the street patterns and the strategic proposal for which I also wrote the texts for. I think that overall all of us have done a good job and we all have tried to be as productive and engaged as possible.

Vehin

Ida and I have shared the leading role in the group work and have worked together a lot from school. I have been responsible for the visual aspects of the work and a big part of the survey. We have made an inventory of our sub-areas together as a group on two occasions. We have had a lot of online communication and kept the group updated through Messenger on Facebook. Me and Ida have been responsible for the presentation and layout.

Morgan

I think that this group assignment was very educational and practical considering this program. We got to use a lot of different tools while working on this project which was good exercise for us students. Although I believe that it sometimes felt like we had too many assignments, even though they went hand in hand, it became more difficult to get a deeper understanding of different areas. I wrote quite a few texts in our presentation and worked a lot with land use and mobility in different phases. Which means I have created maps which provide clear indications regarding mobility with bicycles and analyzed speed limits to allow a fair representation of reality and so fourth. Our group got along quite well, and I think that everybody contributed to the assignment. Even though all of us didn't always sit side by side in school, we communicated well over social media. We didn't have any particular roles, but I suppose Ida could be considered as the leader since she took charge of things.

The process of analyzing, inventory and developing proposals all came quite natural with the project. After selecting our subareas and went out and analyzed them and also doing research online, it became clear that we wanted to focus on a more sustainable and safer transportation system, so our proposals were based on that. We gathered data from numerous different online sources and course literature, which provided us with valuable information.