

Ribersborg and Rådman svängen

- Transport, mobility and urban planning; an analysis



We have chosen to focus on Ribersborg and Rådman svängen. Ribersborg is located by the beach on the north of Malmö. The area consists mainly of residential areas with one small park, two preschools and schools, one small square and a church. The type of buildings in Ribersborg were mostly new considering that the area was developed in the 1960s-70s during the functionalism and modernism time period. Therefore most buildings are made of concrete and are mostly toned down gray colors (Hällström, 2020).

RIBERSBORG



Modern church in Ribersborg vs older church in Triangeln.

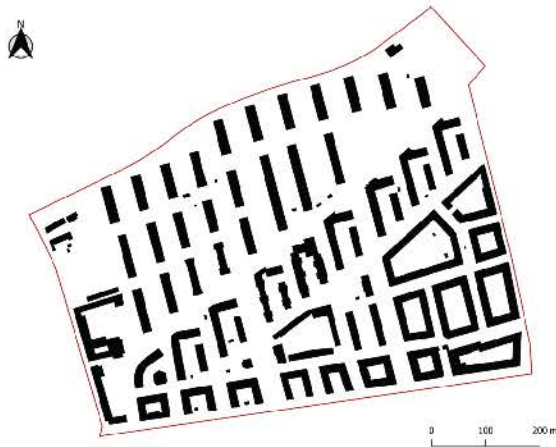
Rådman svängen is located in the centre of Malmö and is one of the largest nodes for public transport, shopping and activities. The area of Rådman svängen and Triangeln started to develop around the 1700 to 1800s but existed long before (Malmö Stad, 2021). This is translated in the type of buildings we found there. The area is quite dense and the buildings are made of bricks, have interesting designs and are of different radiant colors.

RÅDMAN SVÄNGEN

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Morphology and street network



Pedestrians on Ribersborg

Ribersborg is a residential area in Malmö. In a morphological view we can see that the streets are broad with two or four buildings that all have an inner garden. In the south we have building blocks with inner gardens. All the pavements are connected with the streets and there is a large space between the different buildings to follow the ideal of open buildings and light and air in the city to reflect the functionalistic ideal.

Car traffic in Ribersborg

The biggest and most active roads in Ribersborg are the ones surrounding the area, except for the one street, Tessins street. The three streets: Mariedalsvägen in north, Limhamnsvägen in east and Regementsvägen in south surrounding Ribersborg are especially important since they connect Ribersborg with the rest of Malmö. Mariedalsvägen connects Ribersborg with Västra hamnen. Tessins väg cuts through Ribersborg on the diagonal, allowing travellers to enter the neighbourhood and reach the residential area. Ribersborgsvägen connects Limhamnsvägen with Regementsvägen and also offers passageway to Fridhem. Mariedalsvägen and Regementsvägen are the main ways for a car driver to reach Rådmanvången.



Pedestrians on Rådmanvången

The Triangle shopping mall is located middle-north of Rådmanvången. Left to the shopping mall, the street is built for pedestrians and buses. On the right side to the shopping mall there is also a smaller street for other transportation. South of the shopping mall, we have a square and a church. Here there is free space for pedestrians to walk and sit. West of Rådmanvången is a park and playground, and east are buildings with either housing or cafes. East, there is one street for only pedestrians and bikes during summer. Rest of the streets on the east side of Rådmanvången are particularly small and do not consist of a lot of transportation vehicles other than bikes and some cars. The pavement is somewhat smaller in the area, two to three people can walk side by side.

Car traffic in Rådmanvången

In Rådmanvången the biggest and most frequently used roads are Föreningsgatan, Östra Rånneholmsvägen, Amiralsgatan, Bergsgatan, Södra Förstadsgatan, Carl Gustafs väg, Pildammsvägen and Södra Förstadsgatan. Föreningsgatan together with Östra Rånneholmsvägen create one long road that stretches past the northern parts of Rådmanvången. It is an important road that connects the eastern and western parts of Malmö. Amiralsgatan is part of a junction which later connects with Bergsgatan, which in turn, eventually, leads to the highway Inre ringvägen. Bergsgatan is an important road since it grants access to the neighbourhoods in Rådmanvången. These roads are Möllevångsgatan, Friisgatan (partially), Norra skolgatan, Spångatan and Södra Förstadsgatan. These roads lie in the eastern parts of Rådmanvången, the rest of Rådmanvången is basically free of cars. Carl Gustafs väg is also part of an important road that connects different parts of Malmö and so is Pildammsvägen. Pildammsvägen leads to the southern parts of Malmö and connects to the highway, Yttre Ringvägen. It takes about 10 minutes to reach Ribersborg from Rådmanvången.

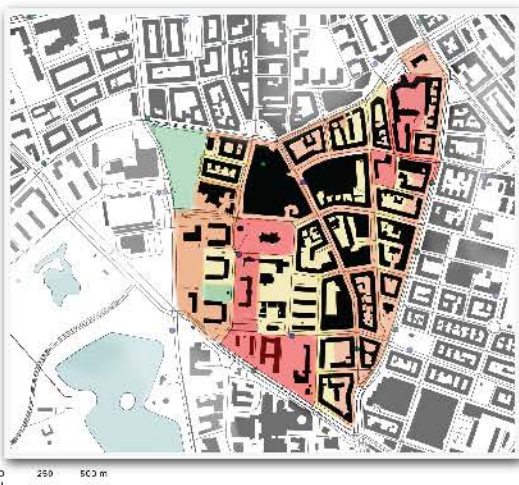
Land Use - Activities



- Residential Areas
- Commercial Areas
- Public services
- Park Areas

The two areas have different functions. Ribersborg is a residential area by the beach, and Rådmanövången is a centre and service area. Hence why the activities in the respective areas are very different. In Ribersborg most of the land use is for residential slots such as houses and apartments from 4-6 floors. As mentioned, Ribersborg is a newer part of the city developed under functionalistic values and is very car-oriented, which is why we found wider car roads, lots of parking areas and parking garages. Most of the commercial parts lie on the main and larger road 'Tessins väg'. There we found some restaurants and shops, a Coop etc, and they were usually found on the bottom floor of a residential apartment. The public services in that area were mostly schools and a church.

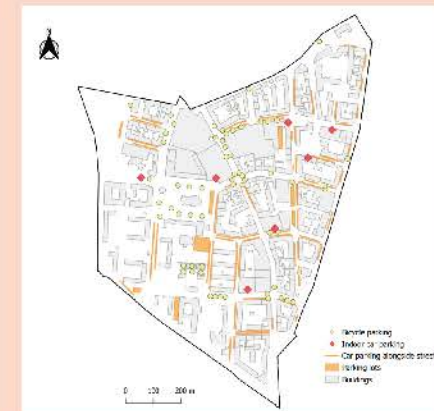
Rådmanövången is of course known for its many services and shopping mall Triangeln. The commercial services that can be found in that area include restaurants, cafés, clothing stores, etc. There were lots of public services, including schools, the city hall (stadshuset), stadsbyggnadskontoret etc. The residential slots were mainly apartments that had a maximum of 4 floors and blended well with the other services in the area.



Land Use - Parking Spaces, car and bike

Ribersborg also has a lot of car parking along the streets, however the area boasts more outdoor parking spaces and less indoor parking garages. Most parking garages in the area are only for private use to the residents in the neighbourhood and the same goes for other parking spaces in the area. In Rådmanövången there are less private parking spaces. This shows that Ribersborg also has a high amount of car ownership and usage. This may be because Ribersborg is less integrated to the rest of Malmö compared to Rådmanövången. Ribersborg also has a low amount of bike parking in the area. This is because most bike parking lies in connection with the residential area, i.e. on private areas.

The map shows the availability of car- and bike parking in both Rådmanövången and Ribersborg. Rådmanövången has many parking spots and big indoor garages, for example the Triangeln indoor garage has up to 800 spots. There is a scarce amount of big outdoor parking spaces, however there is a lot of parking along the streets. Most streets have a speed limit of 30 km/h which translates into low car traffic inside the neighbourhoods. However the amount of parking spaces in the area suggest a high car ownership rate and usage. It is also likely that many people travel to the area by car. The area does however also have a high amount of bike parking which in general is used well.



Public Transport

Huvudlinjer

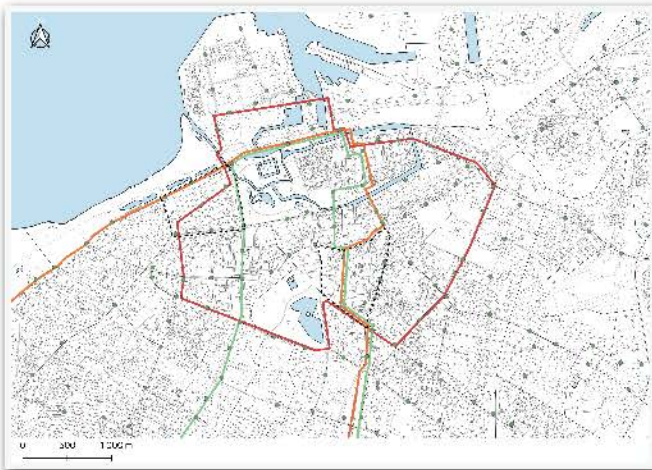
- 1 Elinelund–Jägersro–Kristineberg
- 2 Kastanjegården–Västra hamnen
- 3 Ringlinjen
- 4 Bunkeflostrand–Limhamn–Segevång
- 5 Stenkällan–Västra hamnen
- 6 Klagshamn–Bunkeflostrand–Videdal–Toftanäs
- 7 Svågertorp–Centralen–Ön
- 8 Lindängen–Centralen–Hyllie



Bus 7 from Ribersborg to Triangeln



Bus 8 from Kronprinsen to Triangeln



Transport routes connecting Ribersborg and Rådmanavången



Transport routes connecting Ribersborg with Rådmanavången to rest of Malmö

Triangeln is one of the biggest nodes for public transportation including buses and trains. The bus stop there is one of the largest stops in the central areas of Malmö and therefore most green buses pass through that area. This includes buses nr 2,8,1,6,32,7 which covers and connects most of Malmö.

Buses 3,4,7 and 8 pass through or along Ribersborg. These buses connect the residential areas of Ribersborg and even the beach area to the rest of Malmö. In most of the bus stations at Ribersborg one bus passes at a time, leaving the stations rather empty in comparison to the crowded stations in Rådmanavången like: Tandvårdshögskolan, Triangeln where multiple buses pass at the same time creating general traffic congestion. (Yaliniz, 2011)

Buses 7 and 8 connect Ribersborg and Rådmanavången to each other. Therefore we have chosen to look further into them and done a prognosis analysis of how many people are on a specific bus which are available on Skånetrafiken. We picked Triangeln as the final destination from Kronprinsen (bus 8) and from Ribersborg (bus 7) around 8am on a Tuesday and the busses were 60-90% full.

There can be multiple reasons as to why the Triangeln station is so full. One being that the train station is also located in Triangeln, connecting Malmö to the rest of Sweden and even Copenhagen, allowing people to commute to schools and universities or their workplaces to and from that area. Besides that, the large range of activities, restaurants and the shopping mall make a good stop and hangout place. Ribersborg consists mainly of residential places and houses. Which explains why the busses from that area are very full seeing as people take the bus to school or work.

Pedestrian, bicycle and car - volume and flow

We made on site documentation of the pedestrian, bicycle and car flow in Ribersborg and Rådmanvången. The documentation was made on a weekday from 16 to 18 o'clock and compared to google maps traffic flow. The maps are the combined result data of google and the on site documentation.

Car flow



There is not a lot of car flow in Ribersborg, there is heavy flow on the edge of Ribersborg, north and south and fewer on most streets in the middle. The one road that is somewhat heavy with flow is the street in the middle.



In Rådmanvången some streets marked with X, is where cars are not allowed. Rådmanvången is popular among pedestrians and cyclists, however we can still see that there is a somewhat heavy flow of cars on the east side of Rådmanvången.

Pedestrian flow



There is not a lot of activity in Ribersborg for there to be a heavy flow. Along Tessins väg there are some shops and cafes, which makes the sidewalks also more trafficked.



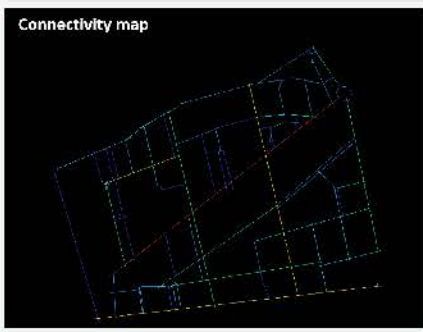
Rådmanvången has a lot of sidewalks and bigger commercial areas for pedestrians, even if the roads are popular among cyclists. Around Triangeln in the north of the area and Södervärn in the south we can see that it is the most heavy flow of pedestrians and cyclists.

- Heavy flow
- Medium flow
- Low flow

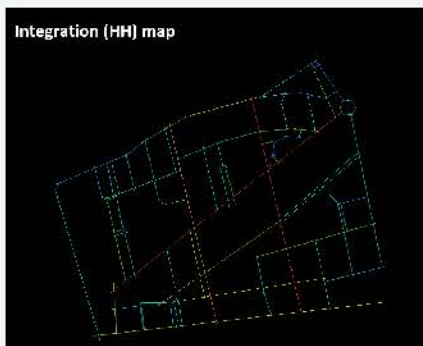
We have come to the conclusion that because Ribersborg is a residential area, there is not that much flow. There is not a specific node for people from outside to visit Ribersborg, compared to Rådmanvången where we have Triangeln and more commercial areas.

Connectivity, choice and Integration maps

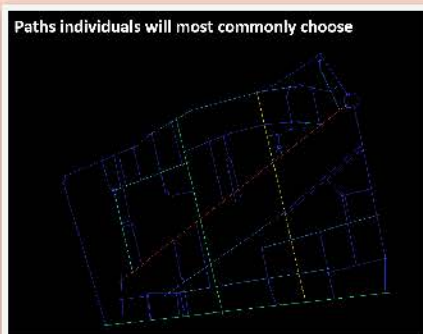
RIBERSBORG



Ribersborg has lower connectivity than Rådman svången, which may be because Ribersborg is a mainly residential area and lies beside the district Malmöhus which is mainly parks and areas under development. Ribersborg is also cut off by a beach and ocean to the north. Therefore the area in general has a lower accessibility and connections in its northern and eastern parts. Residential areas often consist of a lot of private areas which also lowers the amount of paths one can take, i.e. lower connectivity. Tessinsväg is a street which cuts through Ribersborg on the diagonal and offers passageway to all areas of the district, hence its high connectivity. This road also leads its travelers to the commercial area of Ribersborg, in the south. It also offers connection to another street with high connectivity, in the south, this street leads to Rönneholm. Through Rönneholm one can get to the central business district of Malmö, innerstaden.

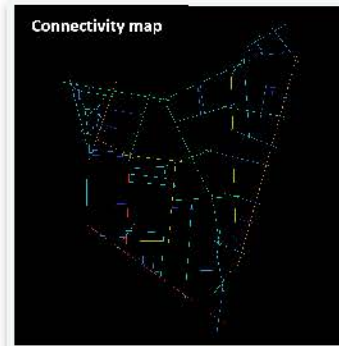


Ribersborg has a low connectivity value but a slightly better integration value. This may, again, be because of its location by the ocean and Malmöhus which mainly consist of parks and development areas. In the western parts of Ribersborg lies a school, which can be seen on the land use map. A school is typically a private area which is why this area has both low connectivity and low integration. Ribersborg has its highest integration values in the commercial areas to the south and in the central street Tessinsväg. The southern parts of Ribersborg also offer connection to the rest of Malmö.

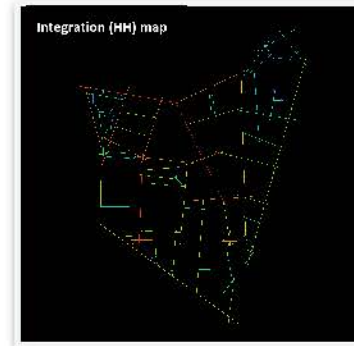


Nes (2021) writes that "According to cognitive science, human beings seem to choose the straightest routes to avoid route complexity". This can be observed on some streets on the maps, in both Ribersborg and Rådman svången. These roads also happen to be those with the highest connectivity and integration values, i.e. main roads which are vital to the area.

RÅDMANSVÅNGEN



Rådman svången has a slightly higher connectivity than Ribersborg, but in general it's pretty low in both districts. Rådman svången has a variety of land use and a good mix that consists mainly of commercial areas, public service and residential areas. The low connectivity might be because the buildings mainly consist of big blocks, which can be seen in the morphology map. This means that one has to travel a long distance to reach the end of a building, and therefore there are less turns (connections) available. The paths with high connectivity are those which offer passageways to the southern and eastern parts of Malmö. And also the roads that offer access to the commercial and public service areas, e.g. the Triangle mall and train station.



"Global integration analysis estimates the degree of accessibility a street has to all other streets in the urban system taking into consideration the total number of direction changes of the urban entity." This means that a global integration analysis can show how accessible an area is by calculating the amount of turns one must make on each street (axial line) to reach a destination. An area which has a lot of streets with low integration values,

also offers less connection to the rest of the city. Which means that it is a segregated area, an area which does not offer connections with other parts of the city (Nes, 2021). Rådman svången has a quite high integration value, which may be because it lies in the central business district of Malmö. Within the district the commercial areas are well connected to the residential areas. Rådman svången also offers connection to all parts of Malmö since several vital roads, which can be seen on the traffic flow map, lie on the periphery of the district. Therefore even if the district has pretty low connectivity value within the area, in a bigger picture, the area offers easy access to many parts of Malmö.



Typology of street network

- bike paths

RIBERSBORG

We noticed when we walked through Ribersborg that most of the infrastructure was newly built. Both the bike paths and the roads were made of new asphalt. The bike path was well planned as there were obstacles and parking spaces between the bike path and the road. This is safer both for the cyclist but also for the driver. The bike path was also very wide, which increases the feeling of convenience. The average speed in the area was 40 km/h, which is enough as there are a lot of cyclists and schools nearby.



RÅDMANSVÅNGEN

In Rådman svången, the bike lanes generally had space for improvement. Most bike paths were narrow and could barely fit two cyclists. During our observation, we were drawn to a specific bike path. It is located just outside the shopping centre Triangeln. The bike path ends out of nowhere and starts again on the other side of the street, and in between the cycle paths there is a road that is only for buses and forbidden for cyclists. The problem with this cycle path is that despite the ban on bicycles, the majority of bicycles cycle across the road anyway. This creates danger for both cyclists but also for the buses crossing the road, as they sometimes have to stop to avoid running over cyclists.



Safety perception of the areas

Throughout our analysis we are finding many differences between Rådman svången and Ribersborg. However despite the two areas and their morphology being quite different, the safety of them can be compared.

During our observation of Ribersborg we found the 'neighbourhood watch' sign in one of the neighbourhoods. The sign indicates that the neighbours cooperate with each other and keep eyes open even for each other's property, reducing the risk of burglary and theft. This can be linked to Jane Jacobs "eyes on the streets" where Jacobs explains that the more people there are on the street, the safer the street is. This is a good example of how to make a street safer to stay in, it doesn't always have to be about there being restaurants and bars to make the place feel safe. Rådman svången on the other hand is very lively and has many activities, restaurants and cafés that are open later in the evening, meaning there are always eyes on the streets even at night. Both areas felt rather safe but they contribute to a feeling in different ways.



Plan programme for Triangeln - Malmö Stad

The City Planning Office has been commissioned to start a plan programme for the triangle area in Malmö. The plan programme, Pp 6039, aims to formulate a strategy for the area's further development based on the specific conditions of the Triangle area.

The role of the triangle area as one of several focal points in Malmö's growing city and the area's links to the immediately adjacent parts of the city.

Pp 6039, Triangeln - Malmö stad (malmo.se)

Interviews

Questions we asked

1. Does this bike path affect you?
2. Do you feel that you have mutual understanding with pedestrians/cyclists?
3. How could we improve this bike path, for it to benefit both parts?

Cyclist 1.
32 years
man
random

1. Yes, it affects me everyday since I work nearby and have to drive through it.
2. Not really. I would have liked to have better eye contact with those who walk to prevent accidents.
3. Perhaps signpost the road more so that pedestrians can be more observant.

Answer 1

Cyclist 2.
17 years
man
random

1. It doesn't affect me that much, I usually just move if I see a pedestrian standing in my way.
2. No, I have never really thought of that.
3. Forbid pedestrians from staying near the bike path.

Answer 2

Cyclist 3.
48 years
woman
random

1. It's irritating that some pedestrians don't care that I'm biking on the road.
2. When it's crowded it's hard to keep track of pedestrians.
3. Move the bikepath.

Answer 3

Cyclist 4
41 years
Man
random

1. Yes, the bike path has bothered me for many years and I think it's terrible, but no one does anything about it.
2. No, cyclists only think about themselves and the same goes for pedestrians.
3. I don't know how it can benefit both parts, maybe move the bike path?

Answer 4

From the analytical study and the observations, we've come to the decision to look further into the bike path outside the shopping mall Triangeln. Therefore we decided to interview seven pedestrians and cyclists crossing that path.

Pedestrian 1.
28 years
man
worker in poke bowl

1. Cyclists tend to bike fast, it's ok, but when it's crowded it's annoying.
2. No, it's russian roulette.
3. I don't know, isn't it your job...

Answer 5

Pedestrian 2
23 years
Woman
Friend who works in kicks

1. I've never thought about it.
2. I think so, yes.
3. I don't know, build a bridge or something.

Answer 6

Pedestrian 3
36 years
Man
Security guard at Triangeln station

1. It does actually. I have witnessed several accidents here between cyclists and pedestrians.
2. Some people are cautious, some are not...
3. It's hard to say because both parts are in need of this path and I think that it will be hard to please both parts.

Answer 7

From the interviews we can conclude that mainly people who work in the area or pass the area everyday were affected by the bike path and thought negatively of it. Some people even witnessed accidents, hinting that there is room for improvement on that bike path.

Inventory Analysis

The analysis concludes that Rådmanvången has a good transportation infrastructure for bus-, pedestrian- and bicycle traffic. This means that the area offers transit modes that are accessible to individuals of different socio-economic status. The area is a central node for bus stations in Malmö, allowing passageway for several buslines. The road housing this central bus node is also free from bus traffic, prioritizing bus traffic and also reducing pollution, congestion and noise caused by cars. Bus only lanes reduce congestion on streets by discouraging additional growth of cars. It also increases the speed of bus traffic, encouraging others to use buses instead of cars (Schiller et. al., 2017).

The Triangeln station also lies here, a train station in central Malmö that is part of the city tunnel. The area also prioritizes pedestrians by granting easy access by foot and also having reduced car speed to 30 km/h on many streets. The same holds true for bicycle traffic, with the area boasting several parking spots for bicycles, which shows a high usage of bikes in the area. Adding housing close to CBD can reduce car usage since it cuts down the need for long transportation distances. This encourages the usage of other sustainable modes, e.g. walking or cycling (Schiller et. al., 2017).

Rådmanvången already has a good land use mix, offering both residential areas and commercial areas. This can explain why so many streets have a 30 km/h speed limitation. Therefore the area has a good mix of transportation modes and encourages sustainable transit modes. However the area is surrounded by heavily trafficked streets, and a high amount of parking spots, both indoor and outdoor, suggest a high car usage- or ownership in the area. The area is a CBD and lies in the central part of Malmö, which may contribute to the high car traffic surrounding the area. Thus the area also has a high integration value, however Rådmanvången has pretty low connectivity. This might be because most blocks are rather big, meaning that the pedestrian has to travel a greater length to reach a new connection, i.e. another street (Nes, 2021).

The areas with the highest connectivity, integration and choice value in general lies by the Triangeln mall. This is also the area where the central bus station, train station and most pedestrians and cyclists reside. Here it could also be observed that many bicycle lanes were poorly planned, having unclear boundaries with the pedestrian lanes and being narrow in some instances. This means a heavy flow of different traffic in one area which could be a safety hazard. This is something several interviews also expressed, feeling unsafe, having witnessed accidents on the streets and complaining about congestion of cyclists and pedestrians.

In contrast Ribersborg is a very different area compared to Rådmanvången. Ribersborg is mainly a residential area, offering some public services in the form of schools, and a small commercial area in the southern parts. This also means that there is a lot less activity in the area compared to Rådmanvången, which is a CBD. The area has a more open neighbourhood, in comparison to Rådmanvången where buildings consist of big and closed blocks. However most of these neighbourhoods are not permeable, lying on higher grounds or being closed off by other boundaries.

On the northern side of Ribersborg lies the oceans and on the eastern side lies the district Malmöhus, which consists mostly of parks and development areas. In the south lies the area Rönneholm which offers passageway to the CBD of Malmö, e.g. Rådmanvången. Ribersborg also lies on the periphery of Malmö, meaning that the district is not as accessible as Rådmanvången. The easiest way to access Ribersborg is through Tessinsväg, which cuts the district through the diagonal. This street offers access to all parts of Ribersborg, most notably from the residential areas to the commercial area in the South. This is why the street has the highest connectivity, choice and integration value. Through this road one can cycle, walk, take the bus and drive the car, making it a road which many people use.

In comparison to Rådmanvången, the pedestrian, cyclist and car traffic is clearly separated with boundaries and different signs. This means that there is no problem with traffic safety and crowding of pedestrian and cyclist streets. The area offers good accessibility by bus to the rest of Malmö. Many streets inside Ribersborg have a 30 km/h speed limit, which limits the traffic flow and noise. Most cars choose to use streets that go around the neighbourhood instead, which results in a high traffic flow of cars here. This is similar to the traffic flow in Rådmanvången.

Like Rådmanvången, Ribersborg has a lot of land use dedicated towards parking both alongside streets, outdoor parking lots and indoor private parking spaces. Most of these parking spaces have a parking fee. However Rådmanvången has more large public indoor parking spaces, thus dedicating more land use towards parking. This concludes that both areas have a high amount of car usage- or ownership. This could be because Ribersborg is a residential area that lies on the periphery of Malmö, with low accessibility from its southern and eastern parts. This means that the easiest way to reach the area today might be by car and bus, according to our analysis. Ribersborg is mainly a residential area meaning that many people probably travel to other parts of Malmö to work. Ribersborg has a low amount of public bicycle parking compared to Rådmanvången which might be because most parking spaces lie in connection to the residential buildings.

Proposal for Change: Long term strategies & Solutions

Strategy for sustainable transportation in Rådman svängen

Based on our inventory analysis, we propose a strategy according to transportation demand management (TDM) to reduce car usage- or ownership in Rådman svängen and promote cycling instead (Schiller et al., 2017). Our analysis concludes that Ribersborg has a well thought out street construction which Rådman svängen could be inspired by. Rådman svängen has a messy layout for pedestrian and cyclist traffic that could be improved. Ribersborg does not have as much activity and traffic as Rådman svängen and we believe that bringing this area closer to sustainable transportation could favour the whole of Malmö. If the central parts of Malmö keep working towards sustainable transportation it could change the travel habits of many visitors and inspire the same development in the rest of the city. One part of our strategy for Rådman svängen is our detailed proposal which, inspired by Ribersborg, will offer a more pronounced separation of the bicycle- and pedestrian roads outside of Triangel köpcentrum. This will perhaps encourage more cyclists to use the road and also increase safety for users by creating a smoother traffic flow.

Another part is reducing the amount of land use dedicated towards parking spaces. Most streets in Rådman svängen offer parking alongside them, there are also several parking lots and a high amount of indoor parking facilities. Some of these indoor parkings facilitate up to 800 cars and can be connected to inefficient land use. Parking spaces take up a lot of space that can be used in much more efficient ways. Public roads are also tax free, which only benefits the drivers and gives them another reason to continue using cars (Schiller et al., 2017).

In Rådman svängen, our idea is to remove all car parkings along the road on both norra and södra skolgatan, and to transform the car parkings into bicycle parkings. If there is not enough free outdoor parking spaces, drivers will seek into the parking garages. At the same time, the prices in parking garages will be increased, through this we hope to reduce car use in Rådman svängen and encourage people to use bicycles instead. Also by removing the car parkings along the roads we try to lead Rådman svängen towards better land use.



Our proposal will add to already implemented traffic calming and minimising solutions, e.g. that most parking spaces in Rådman svängen have to be paid for and that many streets have a 30 km/h speed limit. The fact that most parking spaces are charged for deters people from, e.g., using their car to access the area, instead they might choose the bus or cycling. The speed limitations in the area have made the traffic amount low or even nonexistent on some streets. This encourages pedestrian traffic and returns public space to them that has been overtaken by cars (Schiller et al., 2017). All in all we believe that our strategies, together with already implemented solutions, will help Rådman svängen reduce the car usage- or ownership in the area and encourage cycling as a transportation mode. Especially since the area already offers very good possibilities to move by bike, walking or taking the bus, instead of driving the car. This will push Rådman svängen further in the direction of equity in transit modes.

Proposal for Change: Detailed Plan

Based on our inventory analysis, we noticed that multiple bike lanes between Triangeln and the station start and stop right in the middle of the pedestrian traffic and was therefore causing congestion and confusion. Some people from our interviews even said they witnessed accidents on that lane. Schiller et. al., (2017) mentions that a sustainable environment and transport system is one that does not endanger public health, therefore we chose to reconstruct the existing bike path for it to be more sustainable with less misunderstandings between the pedestrians, cyclists and buses.

The pedestrians coming out of the station don't notice the cyclists that bike fast through the area, and both cyclists and pedestrians cross over the street to the bus lanes causing congestion and uncertainty of which traffic flow is prioritized. For our detailed proposal for change, we suggest that the bike path should be extended to the area behind the station and connected to the bike path across the bus lane. We also added the bike symbol to the bike lane, to clarify the information for pedestrians and added the symbol for the cyclists to wait for the busses to pass before they can bike through.

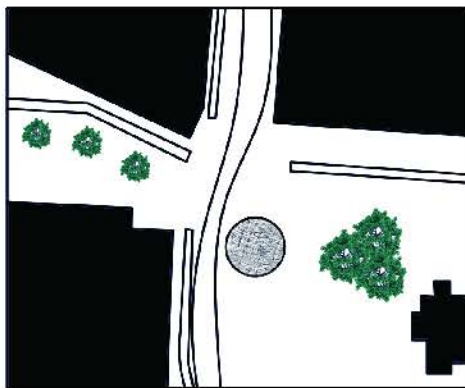
This allows the pedestrians to walk freely to and from the station, it also allows a smoother flow for the bike traffic to bike through Triangeln without crossing paths with pedestrians, and at the same time allows the busses to pass safely without worrying about cyclists and pedestrians passing through dangerously.



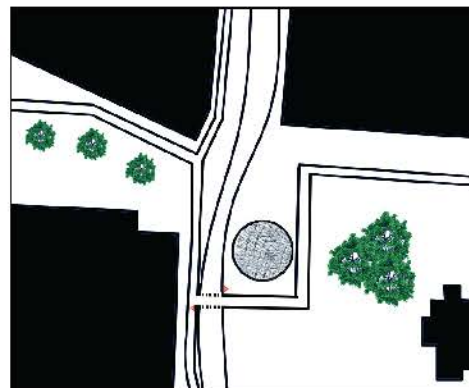
Bike path stopping in front of the station and starting across the street

The main focus for this plan is to increase the traffic safety in the area of Triangeln. The strategy which will be followed is Transport Demand Management or mobility management which is found to significantly reduce per capita crash rate according to new research. This strategy may increase safety by allowing the bike, pedestrian and bus traffic to co-exist in the same area and flow naturally without disruptions.

Furthermore, mobility management facilitates intermodal connectivity and will increase comfort for traffic users to change traffic modes. For example it makes it easier for people who move around Triangeln or commute to Triangeln to continue their journey either by bike, bus or walking, creating a smooth transition and integration between the modes. (Schiller et. al, 2017).



The bike path today from above



The new suggestion from above

Conclusion of the proposals

From the analysis we concluded that Ribersborg and Rådmanvången are very different areas with different characteristics. This reflects the time periods that they were developed in and their location. Ribersborg being a rather new residential area, developed during the functionalistic and modernistic era, had a much newer construction of streets, including bike and car lanes. Rådmanvången differs when it comes to its function seeing as it is more of a central business district which is much older than Ribersborg. It is located in the centre of Malmö and is visited by many, yet we found a few faults in the streets and in the inefficient land use of the parkings. Therefore we shifted our focus to Rådmanvången in our proposal for the second part of the project.

As mentioned, for our long term strategy we aim to reduce the number of outdoor parking spaces in Rådmanvången seeing as they can be considered inefficient land use. Our goal with minimizing car parking spots and increasing bike parking is to minimize car usage in the central areas of Malmö and encourage more sustainable modes of transport such as biking and walking. There are many existent indoor parkings in Rådmanvången, meaning that cars will still be able to park, but we aim to encourage more cyclists in the city and make them more visible. This will hopefully promote a change of behavior in many when it comes to choosing transport modes.

The detailed plan is also a part of a sustainable plan to make the living environment safer for pedestrians, cyclists and buses and reduce the misunderstandings between them. Our plan to change the street layout in front of the Triangeln train station and implementing the waiting signal for the bikes can contribute to the coexistence of the different modes of traffic and encourage intermodal connectivity in the centre of Malmö. We aspire to reach a more sustainable Malmö, and starting in the heart and centre of the city will hopefully inspire the same development in the rest of the city.

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Individual Reflections

Alisa: The assignment was very fun and I had a chance to practice my skills in qgis and learn how to show information in maps better. I also learned a lot about sustainable transportation through the readings. I also got the chance to learn how to use depthmapX and how to create a axial map in qgis which was a challenge. To create the maps in depthmapX i followed the video tutorials provided by teachers, read the tutorial files and also read a bit in the Introduction to space syntax in urban studies. I first created an axial map in Qgis by comparing it to real life observations and looking at google maps. Then i transferred the file to depthmapX and followed to video tutorials. The lines in the pictures were enhanced using Word. I also created a map showing parking spots in our districts, two morphological maps and the maps for the parking space changes. The maps were created in Qgis and then edited in windows photo editor and Word. I also wrote about car traffic in the districts, about land use for parking spaces, about connectivity, integration and choice, the analysis and part of the long term solution strategy. The inventory was conducted using google maps, observations and other maps provided by Malmö stad. The literature was also used to analyse the results and suggest a long term solution and detailed plan. We had many meetings online, participated in tutoring and discussed through text. That means that everything we produced was discussed together.

Nourhan: This was an interesting assignment to do, comparing two areas enhances our knowledge on how different areas can look like and why they possess the characteristics they possess. The literature was very broad and we got to read about many different aspects of transport and mobility. As a group we had rather good communication, continuous online meetings, and we visited our two areas together in order to conduct some research and analyze. The only main difficulty we faced was structuring the work and the text considering that everyone had different parts of the project. We overcame his challenge through frequent communication. In this project I got to work with QGIS to create maps over our two areas. This includes the land use map which shows the activities in both areas. I also analyzed the bus traffic and therefore made the two public transport maps, the first one showing the connection between Ribersborg and Triangeln, and the other showing the main bus lines of Malmö and the connection of the two areas to the rest of Malmö. I wrote about our detailed plan proposal and created the two vision pictures to show two different perspectives of the change and for the reader to be able to get an image of what we wanted to create. The methods we used during the process of the inventory are observations, google maps, our interviews, pictures, online websites etc. We were able to support our analysis with concrete information from the literature, mainly Schiller. We even connected knowledge from previous courses such as Jane Jacobs theory on 'Eyes on the street'.

Alma: This assignment has been very interesting to do. I liked the concept of comparing two areas in the same city, and to see what type of infrastructure connections these areas have with each other and with the rest of Malmö. Because of the seminars that we had, I found this assignment even more interesting when literature was taken in and it became easier to understand why and how parking is inefficient land, for example. The literature was very good and concrete. I think our collaboration in the group was very good as we had communication basically every day via Messenger, had zoom meetings, and met at school and studied together. What I appreciate most about this group is that when one of us ran into problems, we talked about it and tried to help each other and solve it together. In this assignment, we had the chance to develop our previous knowledge of Qgis. I made two maps that showed what routes the trains in Malmö were running, and how far from the nearest train station were our affected areas. But since we kind of changed the theme, the maps were not relevant so we didn't use them. But it was very fun to do and also good practice for the future. I also wrote about the safety perception of the areas where I connected the Jane Jacobs "eyes on the streets" method, the typologies of the areas and the long term solution plan for Rådman svängen. The methods we used in this assignment were google maps, observations, other maps provided by Malmö stad, interviews and pictures. Also the literature for this course, for example Schiller.

Iman: I found it interesting that we had one course that only focused on the connectivity of areas and transportation. It was also good that we needed to compare two areas for us to actually understand the importance of mobility in transportation and the quality in the streets. Investigating in real life and then needing to implement it graphically is also a creative way of learning. The group dynamic functioned well. We kept in touch frequently and had zoom meetings at least twice a week, and whenever someone felt that they needed extra help. At first we divided the parts, but later we all kind of helped each other with each other's parts. The first concrete assignment I did was to summarise the flow observation and data in text and the maps I made in GIS and photoshop. The second was the interviews, me and Alma interviewed and we helped each other to put it together. During the whole assignment I took the responsibility for putting everything in an A3 and made a structure of how all the parts could combine. We were all discussing how we could make the proposal for change and then we divided it, where I made the detailed maps from above outside Triangeln. For those maps I used AutoCad and Photoshop. For the literature, I felt that Schiller et. al, (2017) was an interesting book and I wanted to be given some more time to read it.