



Invention and analysis

District background

Holma

Holma is a district that has gone from being situated in the far end of Malmö, to being fairly central due to the development of the City tunnel, linking southern As time went on and the political climate changed, benefiting homeowners, Malmö to the central parts of the city. This way, Holma is well connected to the trade, schools and service supplied by surrounding neighborhoods (Malmö Stad, often newcomers in Sweden. This is the reason behind the ethnic diversity that n.d).

land, to being exploited for housing as a part of the Swedish Million Programme. Almost a fifth of housing in Sweden were built in the Million Programme, offering higher standard rational residences and solving the housing shortage as a result of WW2 (Boverket, 2020).

wealthier people moved out of these tenancies and in came the less fortunate, is apparent in Holma today (Sundgren, 2019).

therefore have a very similar aesthetic expression. Like many other areas built within the framework of the Million Programme, Holma is traffic separated. This allows free movement by foot or bike within the borders of the district since car traffic is restricted in the area (MKB, n.d).

There is currently a plan in the pipeline to increase attractiveness in the area by offering housing, bicycle paths and trade of better quality (Malmö Stad, n.d).

Gamla Limhamn

Gamla Limhamn is considered a charming part of the bigger district, Limhamn, and can be seen as its own small town. It is situated in the western part of Malmö and consists of mixed housing. There are a lot of 1800s townhouses, villas as well as a few apartment buildings. Gamla Limhamn is connected to the Limhamn square which offers a variety of shops, restaurants and services (MKB, n.d).

During the 1800s, the exploitation of Limhamn began, offering housing to fishermen in the area. The area developed quickly and became both a center for fishing, but also for mining and industry. Limhamn did not become a part of Malmö until 1915 which was the same year the tram line 4 was inaugurated. The port area of Limhamn is considered an important part of the history and is therefore preserved as Malmö develops. Other ways of showing the historical connection is the preservation of old silos and the roundhouse. Today, the area is still developing, creating housing, improving the environment and streamlining commuting for people in the area (Malmö Stad, n.d).

Statistics

While Holma and Gamla Limhamn feature nearly the same percentage of private housing cooperatives, Holma doesn't have any ownership accommodations and a considerably larger percentage of rentals (see figure 2).

As seen in the diagram (see figure 4), the percentage of people with post-secondary education in Gamla Limhamn is approximately double in comparison to Holma. Also, in Holma there is a larger percentage of people with only pre- or secondary level education. This reflects in the statistics of income in the two areas (see figure 8), with a difference of 100 000 kr.

Most houses in the district were built during two years, 1972-1974, and they

By an analysis of statistics and maps we can conclude that Holma is drastically smaller by area, to the extent that you would think it would be the same with inhabitants - but so is not the case. Compared to the differences in area, the difference in inhabitants is small - this means that Holma is more densely populated. According to Jane Jacobs (2005), areas with dense population don't indicate popularity, on the contrary, it indicates that the area's residents don't have any other alternative place of living. The distribution between men and women are relatively equal.

When looking at statistics regarding ethnicity (see figure 3) you can see a considerable difference in the distribution of ethnic groups. Gamla Limhamn is an area with roughly 84 % of inhabitants of Swedish descent and with only 14 % of the population with variation of ethnicities. Holma on the other hand has a majority of inhabitants from countries outside of the nordic region, roughly 55 % of its population, and 41 % native born Swedes. Foreign born in nordic countries represent only a small group of people with less than 4 % of the population or less than 150 inhabitants.

Current plans

Ramavtal 8

Sustainable and efficient urban development with traffic solutions is made possible by cost-effective investments. Other goals are to increase housing construction, streamline work commuting and promote well-functioning labor market regions. A prerequisite for reaching the goals is that there is cooperation between the municipalities concerned through co-financing, after which each municipality has to carry out a benefit analysis at municipal and regional level. Overall, the agreement was made with the aim of both maximizing social economic profitability and identifying cost-effective measures. This is to improve accessibility and housing construction with a focus on resource efficiency, sustainability and densification. the areas, and can indirectly also reflect on car ownership statistics (see figure 6). This aspect also reveals that fewer women than men in Holma own cars. In Gamla Limhamn, this is also the case, but not to the same extent.

Co-financing can help build trust in cooperation by allowing the parties to assure each other that they want the best for everyone. In order to facilitate the collaboration, all parties must also maintain a communicative approach and



inform each other about what may affect the work.

How does this affect Holma and Gamla Limhamn, as well as the city in general? Ramavtal 8 can contribute to streamlined and simplified commuting in and out of Gamla Limhamn and Holma. The developed cycle paths will be adjacent to stops and stations, which will further facilitate the development of a sustainable society. The changes will also contribute to stronger connections between Malmö's neighborhoods and surrounding towns (Trafikverket, 2017).

"With Framework Agreement 8 Greater Malmö, it will be possible to realize in a shorter time a vision of a complete and sustainable Malmö, where the expanded public transport creates the conditions to be able to maintain a high pace of housing construction."

This agreement includes 26,750 new homes, four new bus routes adapted for MalmöExpress and three electric bus lines, three kilometers of new cycle paths, and expanded Pågatåg traffic to Lomma/Kävlinge. One of the bus lines agreed on is the Malmö Express 4, MEX4, which is an electricity-powered double-jointed bus that will drive between Segevångsbadet and Limhamn (Malmö Stad, 2022).

Cykelstaden Malmö and Supercykelvägar

Malmö is one of the best cities in the world when it comes to sustainable travel Traveling by bike should always be a good option, no matter weather or destination. In order to further develop Malmö, making it a close, compact and green city - transport by bike is considered a vital element (Malmö Stad, 2022).

Therefore, Malmö municipality is planning six new bike lanes along existing commuting routes. These new lanes are consistent, coherent, and of good standard - all to offer an efficient way to travel by bike. The goal is to create paths where the bicyclists can travel safely at high speed. This is a part of the Framework Agreement 8 (Malmö Stad, 2023).

Linnégatan

Linnégatan is the main street of Gamla Limhamn. There are several activities along the street such as cafés and shops. The street is currently featured by two-laned mixed car and bus traffic as well as on-street parking and pavements



to offer safer and faster travel to/from Limhamn to/from the central parts of the city. This will be made possible by reducing on-street parking, asphalting existing gravel pavements and introduction of speed-controlled pedestrian crossings. The so-called Supercykelväg will reach from Köpenhamnsgatan in the north, to Rudbecksgatan in the south. This will prevent bicyclists fr om detouring into smaller surrounding streets, avoiding the dangerous car traffic, and will hopefully inspire people to travel by bike. Other than the things mentioned above, traveling by bus or car will also be made more efficient by rebuilding the carriageway to feature one lane in each direction and a passable center strip, enabling faster and easier motorized movement in the area. This will also have a positive impact on the MEX4 bus line that will pass through the neighborhood (Malmö Stad, 2022).

Road hierarchy

The entirety of Gamla Limhamn consists of local streets in order to access the



many villas and townhouses in the area. There are a few bicycle roads in the area but very few are separated from the car traffic. In order to pass through the neighborhood by bike, you need to share the street with cars on several occasions. Pedestrian paths are mainly apparent by the apartment buildings in the north-eastern part of the area. Otherwise, most local roads feature narrow, graveled pavements causing pedestrians to also share the road with the cars and bicycles.

In this map, you can clearly see the separation of traffic in Holma. Except for a few instances, there are no local roads inside of the neighborhood. There are a few in order for cars to access the parking areas and allowing delivery trucks to reach the few businesses on the Holma square. There are several bicycle paths piercing through the area and it otherwise only consists of pedestrian streets and open spaces in between buildings where pedestrians can roam freely.

Figure 10. Detailed plan of



Connectivity & Permeability

As a part of our analysis of chosen areas we conducted a street connectivity mapping analysis. This analysis aims to measure the areas street permeability and connectivity. The permeability of an area shows if the street network is interconnected and can be easily navigated and used. This type of street network encourage street users to choose a more sustainable mode of transportation, like walking and bicycling, as well as it makes travelling by public transport. An areas permeability could, if sufficient enough, make the car an unnecessary mode of transportation in many of the cases.

To measure the permeability of the areas we used several methods, one method is called, street connectivity mapping. This method is suitable for evaluating an areas walkability, which is crucial for getting people to travel by public transport. According to Schiller and Kenworthy (2017), by mapping all the different intersections and giving them a score (4-way intersection gives 2 points, 3-way intersection 1 point, and cul de sacs -1 point) we can obtain a score that shows intersections per square kilometer. This score is especially important for understanding how walkable and legible the area is.

Another method we used is "link to node ratio". This method involves calculating all the of the links connecting the areas nodes and divide them by the number of nodes (intersections). An area with a score over 1.0 is considered to have good connectivity.

The aspects of permeability, connectivity and walkability can be evaluated based on the total scores of the areas. In this case all of the intersections are suited for bicycle traffic since they are our main focus in this analysis. In Gamla Limhamn the road network for bicycles are well integrated in the cars network but in Holma they are totally separated. Our empirical studies shows that cycling in Holma is a much more welcoming mode of transportation than in Gamla Limhamn.

Travel Survey

Local road

Bicycle path

We conducted two different types of methods for establishing contact with residents and the first method was reaching out to residents through social media. We reached out to the people of Gamla Limhamn by publishing a message in their official facebook-group and we quickly gained attention. Several people answered with complaints and thoughts on the existing and planned traffic situation in Limhamn. A lot of anger and distrust was brought up in the forum. The main points being made were that it was problematic traveling by car in the area and that this would be getting worse considering the future developments of the area. They also didn't find it necessary to introduce the MEX4 buses in Limhamn since the current buses are barely being used. Overall, they were satisfied with the development of bicycle-traffic but didn't want it to affect the car traffic in the area negatively. Complaints were made surrounding the quality of existing roads as well as lack of consideration of car parking in future plans. This, regarding the growth of population in connection

Connectivity ratio Nodes 220





Pearmeability Cykel Totalt = 153p

to the city development.

No online contact with Holma inhabitants was possible since they didn't have a public facebook-group. We then contacted a person responsible for the local youth recreation center, but didn't get a response.

The second method consisted of in-person interviews in the districts in hope of acquiring in-depth knowledge about different travel patterns, routes and preferred modes of transportation. The interviews consisted of basic questions of social characteristics such as gender, age, occupation, & educational level. We also included more explanatory questions about their travel patterns, such as "why do you travel with desired transportation mode and why not choose a different transportation mode?". Other explanatory questions regarded the area as a whole, eg if they have experienced any issues with traffic and how traffic accessibility could improve for them. The main goal of the interviews was to acquire comparable quantitative data but the result of the interviews took the form more of a qualitative study.

The interviewees consisted of mostly males and three females in ages varying between ages 40-65 years old in Gamla Limhamn, and between ages 22-86 years old in Holma. Transportation modes varied between the areas. The majority of the residents in Gamla Limhamn preferred cars over other modes and it was due to the vast reach of the car, the free selection of route and the speed. A reason for the choice of the car was according to one respondent due to the unreliability of the buses. One resident stood out, being the only electric-bicycle and bus rider from Gamla Limhamn in the survey.

The Holma residents showed an opposite behavior where the majority of the people did not use a motor-vehicle in their day to day. In that group of people most used a combination of different transportation modes such as public transport, bicycle, electric-vehicle, and walking, suitable for their needs and weather conditions of the day. The non-car users justify their choice of transportation with regard to the climate and the unaffordability of cars. Some expressed that it feels more simple. The bus riders of Holma expressed how reliable the buses are but on the other hand how unreliable the trains are. The single car user of the area had a job in the food delivery industry making him completely dependent on the car.



We got a rough picture of different activities the respondents were taking part of during their daily lives. Activities such as grocery shopping at the nearby bigger store, picking up kids at the local school and work-out activities at the local gym, or public swimming pool, were common among both areas. Seniors above the age of 65 in both areas had more leisure time that they spent on longer walks and bicycle rides. The seniors in Holma showed a more farther reach of their activities whilst the senior in Gamla Limhamn could do his errands within the area. The rest of the respondents with either work and/or studies as occupation had routes in Malmö but others were stretching so far as to other cities in the county of Skåne. The train connection, especially the one from Holma to Hyllie, and the usage of cars on fast motorways, made such trips possible.

Holma residents mostly expressed satisfaction while residents of Limhamn raised some varying traffic issues and also some general issues that they had with the upcoming developments. One traffic issue was the amount of traffic experienced during rush hours. The majority of the population in Gamla Limhamn owns a car and this could the cause of the traffic jams, according to one resident. The traffic jams occur many times due to faulty parked vehicles on important streets of the area, eg Linnégatan where the whole street clogs up, according to some. Due to the street's importance it has a huge impact on the traffic flow in the area. Another traffic issue was regarding high parking costs in and outside the area. This was one of the reasons the bicycle-riding senior of the area switched from car usage to bicycle and bus.

The other general issue that some of the residents of Gamla Limhamn expressed was about the re-development of the public transportation and the upcoming

Silo residential-buildings. A few residents thought that there wasn't any need for upgrading the bus line 4 because in some hours of the day hardly anyone occupied the bus. The male explained further that the city should build functionally so that the youth has somewhere to live.

A traffic issue that was voiced by residents in both areas was about concerning prices of public transport in the Malmö region. The critique was especially high amongst interviewed seniors, who were concerned for their fellow low-pension seniors in a time with high living costs due to high levels of inflation. Other issues were brought up in Holma as issues that had a bigger impact on the area than traffic. One issue was with the lack of activities or meeting places for adults. A second issue voiced by the inhabitants was safety during dark hours of the day. Holma has a history of high crime rate in the area to such a big extent that media representation of the area is filled with warnings of shootings and open drug dealings on the streets (Kasurinen, 2020). A third issue brought up was the distribution of native versus non-native people in Holma. A resident described how the population of Holma is losing its native born Swedish residents and that it will in the future affect the area negatively, thus increasing the difference between Holma and other "richer" areas in Malmö. This viewpoint can be proven by the communication and attitude of some landlords in Malmö, where they advise against moving into areas such as Holma if you want to avoid immigrants (Forsberg, 2022).

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The respondents had different suggestions for traffic improvements, except for those who didn't voice any suggestions at all due to them not expressing any traffic issues. Some common suggestions for improvements were regarding street and path maintenance, bus and train reliability and public transportation prices. Improvements voiced by car users consisted of better accessibility to pedestrianized areas and reduction of parking prices.

Parking facilities

Bostadsbolag: Här ska du bo för





Figure 19. Picture of an article regarding immigrant dense neighborhoods in Malmö.

In Holma, there are several larger parking lots scattered around the area that

offer free or paid parking depending on possession of permit. Since car traffic is restricted in the area, there is nearly no on-street parking availability. The opposite can be said for Gamla Limhamn, focusing on the southern parts. Here, the main source of parking space is found along larger streets, and of course on people's private plots - this is resident or paid parking. Exceptions are made in connection to the two supermarkets in the south, which both feature relatively large parking areas, offering free parking for up to two hours. A lot of on-street parking along the southern border of Gamla Limhamn is paid parking in the Tax E price category.

Figure 21. Parking

inventory of Gamla Limhamn with focus on the south, activity-de nse area.



Limhamn

Buffer maps

The buffer maps analyze how far you can get by different transport methods. The same time reference has been chosen in both of the selected neighborhoods. From Holma you can reach 4 bus stations within a 5 minute walk, which is about 400 meters. This distance is tolerable for a bus stop in a densely populated area (Skellefteå kommun, 2018). 12 bus stations are available within a 15 minute walk. By bicycle, you can reach about 90 bus stations within 15 minutes. This is a 750% increase in accessible bus stations, bicycling compared to walking. From Limhamn you can reach 3 bus stations within a 5 minute walk. While 16 bus stations are available within a 15 minute walk, compared to the 92 bus stations one will reach within the same time span, but by bicycle. Thus, both neighborhoods have almost the same accessibility to public transportation. By car, you have access to an even larger number of bus stations in both areas, but the parking availability is limited compared to the other alternatives. An interesting fact that the bicycle map shows in Limhamn is that there are a lot less bicycle paths available. The bicyclists are therefore forced to ride on the car streets, which might be the reason that people in this area choose to use their cars more frequently.





Figure 23. The two maps on the left represents the natural distance one can walk from the center of Holma and Gamla Limhamn.











Figure 20: Picture of how the parking signs look in Gamla

165



Figure 24: The two maps on the left represents the natural distance one can drive a car from the center of Holma and Gamla Limhamn.

Figure 25: The two maps on the left represents the natural distance one can bike from the center of Holma and Gamla Limhamn.

Public transportation

The two focus areas are situated in the western part of Malmö. Both areas have various bus routes that pass through or border the area. In Holma there is the bus line no. 6 passing through the area and it has multiple important stops such as the city's main hospital and Triangeln within 15 minutes. This area is also a 19 minute walk and a 4 minute bike ride from Hyllie. Both Triangeln and Hyllie have shopping malls and train stations, which will give you easy access to the rest of Sweden and nearby countries. The bus line no. 10 makes it available to visit two renowned parks in the city, the main library, the university and the central station. Gamla Limhamn, being the bigger area of the two, has four bus routes passing through the area to some extent.

Bus line no. 4 also gives you access to the main library and the central station, but also stops at several squares which are some of the city's biggest nodes in Malmö. Bus line no. 7 has a few stops in common with the other bus lines, but this one gives you access to Ribersborg, which is one of Malmös beaches and Svågertorp, which is an area with a lot of unique stores as well as a train station. Bus line no. 9 passes through Amiralsgatan. This is one of the most important streets in terms of connections and traffic, being that it is one of the city's longest streets. There is a uniqueness to bus line no. 34 as this is not a main bus line but it is the only one that connects the two selected neighborhoods.





Figure 27: Picture of Bus line 4.

Bicycle infrastructure

The bicycle facilities such as bicycle parking and bicycle paths are mostly a quite available amenity. In Holma you can find many public bicycle parking spaces that can be used by the residents and by visitors. Some of them are private, only available for residents. There are also many bike paths shared with pedestrians in the area with connections in every direction. In the area there are some bicycle restrictions on paths only meant for pedestrians. The quality of the bike paths varies in the area and in the paths connected to the area. During our visits we've observed major reconstructions of some central bike paths so this is

northeast near Mobilia.



an issue that's being worked on. In Gamla Limhamn the bike paths differ from Holma's due to the differences in street network. All the available roads for motor-vehicles are also available for bicycles. Other than that you can find some bike and pedestrian crossings across bigger streets e.g. on Kalkbrottsgatan. The continuous intersections in the area requires that vehicle and bicycles need to yield for one another which could increase the number of accidents in such places (see figure 30. A few areas in between medium/high density residential buildings are completely pedestrianized.. The usage of bicycles is quite extensive with many passerby and



Figure 29: Map of bicycle infrastructure and facilities in Gamla Limhamn.

stopping bicyclists. The quality of the central and most used bike paths is of good quality but maintenance of some other not so widely used paths vary. The

biking sharing facility MalmöByBike is situated in both areas. Gamla Limhamn is the only area that has a bicycle shop, the closest bicycle shops for Holma residents is approx. 1 km to the south in Hyllie or 1.3 km to the

Figure 28: Map of bicycle infrastructure and facilities in Holma

Accidents

Data of accidents is from The Swedish Traffic Accident Data Acquisition, shortened to Strada. It's an information system for data about injuries and accidents within the road transportation system (Transportstyrelsen, n.d). Strada is based on data from two sources, the police who report road traffic accidents with personal injury, and healthcare who report information on people who have sought care for an injury in a road traffic environment.

The accidents reported are shown in blue and red colors respectively, with some symbols having both which indicates that both the police and the emergency hospitals have reported it. The data we've acquired can not be geographically categorized in different accident types. To get access the data we contacted the Swedish Transport Agency and requested the specific accident types. The data table shows all the different traffic accidents in the area from the period of the year 2016 to the year of 2022 (see figure 30). Even though the areas differ in size and population, with Holma being the smaller one with less inhabitants, the accident statistics is in Gamla Limhamns favor. Accidents including motor-vehicles in Holma consist of 57% of the total number of accidents including motor- vehicles in Gamla Limhamn consist only of 33 % of the total number of accidents. According to the data there are more accidents between bicycles and motor-vehicles than there are between pedestrians and motor-vehicles. Both areas show a sizable amount of single accidents involving pedestrians and cyclists.

In Gamla Limhamns case (see figure 30) you can see a massive amount of accidents on the Linnégatan in the south and also some accidents spread out on the northern border of the area. Otherwise there is a spread of accidents on the local roads in the area. In Holma you can see a hefty concentration of accidents in the north-east corner of the area, which presumably shows accidents involving motor-vehicles due to the placement of a roundabout, and along the northernmost street that is connected to said roundabout (see figure 30). You can also find a concentration of accidents in the most central part of Holma, on the streets called Snödroppsgatan which is situated close to Holma square. A smaller but similar concentration of accidents is found by the local streets that are accessible by cars.





OLMA 2016-2022		LIMHAMIN 2016-2022	
ccident type	Total	Accident type	Total
edestrian single	47	Pedestrian single	63
cycle single	43	Bicycle single	69
oped singel	5	Moped singel	2
edestrian-Cyclist	1	Pedestrian-Cyclist	5
cycle-Bicycle	2	Bicycle-Bicycle	6
cycle-Moped	1	Bicycle-Moped	1
edestrian-Motor vehicle	11	Pedestrian-Motor vehicle	15
cycle-Motor vehicle	32	Bicycle-Motor vehicle	41
oped-Motor vehicle	5	Moped-Motor vehicle	3
otor vehicle single	17	Motor vehicle single	2
otor vehicle	73	Motor vehicle	15
ther	5	Other	7
otal	242	Total	230

Figure 30: Collected quantity of accidents in Holma and Gamla Limhamn

Land-use inventory

The two areas vary in size, Gamla Limhamn being 102 hectares big compared to 36 hectares for Holma. Gamla Limhamn being the bigger one has a great variety of different building types and uses. In the outskirts of the area you can find light industry and single residential buildings. There is a

variation between single residential and medium/high density residential buildings in the center of the area. Clustered along Linnégatan and Järnvägsgatan are the mixed use buildings, consisting of residential, commercial and community purpose buildings. As for Holma you can see that the majority of the million programme buildings are medium/high density residential. Some of these have incorporated different ground level activities such as kindergarten, hair salon, elder care, community garden and youth center. Holma has a greater connection to green areas because of the neighboring park and Gamla Limhamn is close to the sea and nearby beaches.







Figure 31. Map of land-use in Holma

Figure 32. Map of land-use in Gamla Limhamn.

Building uses		
Single residential		
Medium/High density residential		
Commercial		
Community purpose		
Educational buildings		
Light industry		
Mixed use, Residential/Educational		
Mixed use, Residential/Community purpose		
Mixed use, Residential/Commercial		
Mixed use, Residential		
/Educational/Commercial		
Mixed use, Residential/Commercial		
Mixed use Desidentia//Educational		
/Community purpose/Commercial		
Mixed use, Educational/Community purpose		
Mixed use Community purpose/Commercial		
Other buildings		
Buildings outside the area		

Figure 33. Legend for figure 31-32.

Comparison and proposal

Discussion of inventory and analysis

As shown in our previous analysis, one of the stronger qualities of Gamla Limhamn is the wide variety of services and activities available. The current bus network is adequate for the size of the area but one of the weaker points is car dependency. Both from analysis of bicycle paths and from interviews, it has come to our attention that the people of Gamla Limhamn see cars as a necessity and really can't consider using another transport method at the moment. Also, another weakness is the multi-functioning streets. One road being used by different transportation modes makes it vulnerable for inconveniences made by daily simple human mistakes. This can be one of the reasons people consider the traffic situation along Linnégatan being chaotic. Furthermore, Limhamn is also closer to the city's coastline than Holma, and considering the amount of wind that Malmö suffers from, to bike might result in being a liability.

The composition of Holma is something we see potential in. The inhabitants of this area are car independent and can roam freely around the neighborhood. As with many other Million Programme areas, we see improvement possibilities in the integration to the rest of Malmö. It is possible for the Holma residents to choose the transport method that suits them most - although the different methods have different strengths and weaknesses. Focusing on bicycles, the signposted route Figure 34: Map of existing signed bicycle path, the from Holma to the western parts of Malmö, and the ocean, is rather impractical. It features several drastic turns, and crossing gates which complicates the journey.

A large part of our project depended on contact with residents on both Holma and Gamla Limhamn. Hrelja writes about how policies shape 'problems', and that local politicians and planners are active in creating policy problems rather than reacting to problems 'out there' (Hrelja, 2019). To tackle this issue with problem definition we deemed it suitable to let the citizens define the issues.

Location

After this conclusion we decided that our proposal would concern bicycle traffic. A pretty clear location for this was Rudbecksgatan. It is a wide straight road reaching from Holma to Gamla Limhamn with a lot of potential for an alternative re-figuration. Another option we identified was Sunnanväg but we

connection between our chosen neighborhoods.

Proposal

Adjust Rudbecksgatan for bicycle traffic and connect it to existing bike paths. Create prerequisites for safe and efficient bicycling by adjusting Rudbecksgatan for bicycle traffic and connecting it to existing bike paths, implementing increased bike-parking in Gamla Limhamn, and adding more lighting along Rudbecksgatan. Our target group is existing and potential bicyclists.



Definition of proposal

Strategic: Create a stronger physical and social connection between Holma and Gamla Limhamn by making it easier for bicyclists to transport. Part of this is to inspire bicyclists and potential bicyclists to choose the bike by making it a safer. comfortable and more efficient option. Our proposal aligns with municipal and regional aims at making Malmö and Skåne more bike-friendly.

Detailed: Adapt Rudbecksgatan to bicycling by asphalting the pavement and creating a separate bicycle lane with added lighting. This bicycle path connects to the planned supercycle-path on Linnégatan, an additional connection to the rest of Malmö. Safe and well-designed connections between Rudbecksgatan and existing paths are of great importance. Arrangement of temporary activities to activate the site and residents to inspire cycling is also a part of our proposal. For example teaching people to cycle along the street and chalk-drawing along

scrapped this alternative since we didn't think there was a strong enough the path. In order to prepare for an increase in bicyclists, more bicycle parking in Gamla Limhamn is necessary.

Further about our proposal

The orange line maps out the signposted bike path between Holma and Limhamn (see figure 34). The path is irregular and the signs guide you through several parks and on carstreets. This, plus the crossing gates scattered along the path makes it difficult to catch any speed. If we adapt Rudbecksgatan to bicycles, there is a far more efficient option for transportation between these areas. The street already has wide sidewalks, but they are graveled which slows down the cyclists. Our suggestion is to asphalt the sidewalks and make a separate bicycle lane, which enables faster and easier travel. The relevancy of this proposal increases in connection to the planned supercycle-route and MEX4 line along the south-eastern contour of Gamla Limhamn. Our proposed path will connect to this planned route and streamline commuting to and from the areas. The bike path will connect to Holma where Rudbecksgatan crosses Lorensborgsgatan. To further inspire Limhamn residents to choose the bike, we want to increase bicycle parking in the area, mainly by bus stations. Currently we can see a lack thereof since people park their bicycles freely in the area.

We have chosen not to change anything in Holma. This, because the separation of traffic enables safe and free movement within the borders, something we find inspiring. The problem we identify in Holma is how to lead people in, and how



to show a way out of the area. Therefore, our proposal is focused on the Citizen participation connection between Holma and Gamla Limhamn as well as their connection to the rest of the city. The key here is the crossing between Linnégatan and Rudbecksgatan as well as the crossing between the latter and Lorensborgsgatan.

But why is it necessary to create a stronger bond between these two districts? Except for there being a planned supercycle-route in connection to Gamla Limhamn and its main street, Linnégatan, this district has many social qualities that are not apparent in Holma. For example the proximity to the ocean and the amount of shops and restaurants. In turn, Holma offers close connections to Hyllie train station and several shopping centers. Holma is also connected to a relatively large park that could be beneficial for the social life of people living in between the districts (see figure 33).

Except for the physical qualities, there are more abstract, social advantages of linking together Holma and Gamla Limhamn. Holma offers great ethnic diversity whilst Gamla Limhamn bears the stamp of white, rich people. Introducing them to each other can improve their understanding of each other and offer opportunities that would otherwise go lost.

Local perspective

Facilitated transport by bike in Malmö and surrounding areas. Facilitated commuting by connecting bicycle traffic to public transport (buses and trains). Unload traffic in tourist-heavy areas and during tourist-heavy seasons. Stronger lane. community between different districts in Malmö, introducing people to new parts of Malmö that usually aren't as accessible for them. Favor the social aspect in Malmö by inspiring potential bikers which benefits both the people and the economy of our municipality. Strong relevance in ongoing projects in Malmö like "Cykelstaden Malmö" and "Framework Agreement 8".

Regional perspective

Creating connections between bike lanes and public transport, facilitating transport out in the Region of Skåne and the rest of Sweden as well as the rest of the world. Inspire tourism in Skåne. Strong relevance in ongoing regional projects such as "Skåne som cykelregion" where the aim is to expand bicycle usage within the region (Region Skåne, 2022).

We want this project to be inclusive and engaging to the inhabitants in the area as well as relevant organizations or activists in Malmö such as Cykelfrämjandet. In order to do this successfully, we have taken inspiration from proven methods used by the Better Block Movement using design to activate spaces and people. This can be done by inviting people to paint the roads, or arranging a BBQ at the current location. This gives people the chance to express feelings and ideas concerning the plans, it also gives people in different neighborhoods an opportunity to meet. In doing so, people feel part of the process and satisfaction increases as people feel involved. One specific project of theirs is Bike Harwood, as they say on their website:

"This pilot project provided separated micro-mobility lanes, additional on-street parking spaces, and new crosswalks to the street, creating a safe, efficient thoroughfare for those traveling on bicycles, scooters, or other personal mobility devices in the City Center."

(Better Block, n.d)

Another bicycle lane project in closer proximity to Malmö is Superkilen which was an exercise in civic participation where people were allowed to participate in decision-making during the design stage (Arquitectura Viva, n.d.). This can be used in our project, allowing the surrounding neighborhoods to come together and make a decision about the aesthetic expression of the new bike



An example of a possible activity is to have elders of Gamla Limhamn meet with Holma inhabitants at the proposed bicycle lane to teach them how to ride bikes. Apparently, foreigners arriving in Sweden have a difficult time adapting to the traffic rules, and may never have been taught to bicycle in their home-country. There are several successful reference projects that have resulted in better integration of adult immigrants in society (Säker trafik, 2018).

This way people of Holma, a district with a high rate of immigrants, get the chance to learn bike-riding which can be useful in the labor market. In turn, this leads to national economic benefits by utilizing everyone's potential on the labor market.

Före



<u>Design</u>

In order for our proposal to be realistic, we need to compromise with the street hierarchy. The current pavements are around 3 meter wide, which according to Smarta Gator (2022) might be too wide for the sole purpose of pedestrian traffic. Instead we propose to narrow the pavement to 2 meters, which is the ideal width of a street of this type. This measure will open space for a separate bicycle lane. To make the bicycle paths more attractive and safe, we intend to create a dedicated path reaching from Holma to Gamla Limhamn. Our suggested bicycle path runs along Rudbecksgatan which runs through Kroksbäck, and the border of Rosenvång and Djupadal. Rudbecksgatan runs through a low-density residential area with mostly small housing, the street however is a busy road and has stops for public transport. This street creates a

straight axis between Holma and Gamla Limhamn which is ideal for legibility and creates a corollary connection between the two areas. Rudbecksgatan is the street that will support our traffic and we identified two main threats to our new path. Firstly the intersection between Linnégatan and Rudbecksgatan located in Gamla Limhamn is heavily trafficked by all modes of transport, light and heavy. Our suggestion for making this intersection safer for cyclists is implementing a traffic light, this will protect both cyclists and pedestrians from traffic. We suggest building bike lanes that lead the cyclists through the intersection without conflict due to the traffic lights. Both sides of Linnégatan will have one-way bicycle traffic to also decrease conflict but mainly increase space and speed of travelers.

The second intersection that needs attention is Lorensborgsgatan and Rudbecksgatan which is even more used by heavy traffic. The intersection already has traffic lights but no easy access to the bicycle paths. Our suggestion is based on implementing larger and more legible bike paths that separate pedestrians from cyclists, and not least motor vehicles. We have created a new bike path crossing Lorensborgsgatan and leading into Rudbecksgatan where all modes of transportation are separated.

The northern side of Rudbecksgatan has no dedicated parking for cars, this is where we suggest building a bicycle lane. By reducing the width of the sidewalk we can easily fit a 2 meter wide bicycle lane that supports traffic both ways. The bicycle lane can be protected from traffic by simply using road markers and dividing bike lane poles. We find it important that cyclists feel safe on this road since there are many children living in the surrounding areas, and a hostile street should not impede their right to explore and move freely.

Conclusion and discussion

The situation in Holma - with their low level of education, low income and dense population lays a greater pressure on alternative transport methods to the car. The dependence on functioning public transport and bicycling networks is larger in these types of areas. The capacity and extension of bicycle lanes can therefore directly impact people's' abilities to access different parts of the city, and further their access to the rest of the world. The current accessibility for the population of Holma is rather problematic, and has been for quite some time (MKB, 2013), affecting the ability for movement among inhabitants, and further





Map: Gamla Limhamn Specified with focus on the crossing of Rudbecksgatan and Linnégatan







Map: Kroksbäck area Specified with focus on the crossing of Rudbecksgatan and Lorensborgsgatan



- Traffic divider with rose bushe
- Gamla Limhamn district Linnégatan, Rudbecksgatan

to which extent the district can integrate. There are several areas in Malmö where the integration failed. A clear example is Rosengård, situated in eastern Malmö, that is considered by many residents as not being a part of the city. Our proposal simplifies travel between Holma and the rest of the city by connecting to a network of existing and planned bicycle routes bringing Holma residents out and further into the city. It also enables bicycle traffic from other parts of Malmö into Holma which can be useful as the area develops.

But what other consequences can we expect? One obvious aspect is the gentrification of Holma. Gentrification concerns the result of investments. renovations and development in neglected areas, when the lower class people are pushed out of the developing neighborhood. This, since pricing will increase in pace with the increase of attractiveness. Since our proposed bicycle path has great chances of escalating the experienced attractiveness in the neighborhood, gentrification is a possible outcome. This often results in the central parts of cities not being available for lower-income people and them having to move to outer, less accessible parts of the city (Hernestig, 2013). This is a counterproductive effect of our attempt at developing the

accessibility in Holma. People need community-bonding activities in close proximity to feel happy and have life satisfaction (Montgomery, 2018), although one could argue that the proximity to all activities and meeting places in Hyllie makes it not necessary for having a lot of meeting places in Holma, so there's two sides of this argument.

As accessibility develops and increases, the traveled distance can be experienced as shorter. You get places faster and easier, causing the city to be experienced as smaller (G. Baeten, personal communication, 17 of January 2023). Our proposal is just another attempt to make Malmö feel smaller, allowing people easier access to different parts of the city.

As for the existing plans for Linnégatan, we consider extension of cycle paths and adjusting the road for extended bus traffic an important part of preparing for population increase. The other plans in the pipeline for the area will most likely result in just this, an increase in population. There is then a high probability that this will generate pressure on the public transport that is provided in the area. Although this change is relevant further in the future, we are uncertain of its relevance in the present. It has become clear through interviews that the buses driving through Limhamn today often are empty of passengers. It is then difficult to motivate the need for extended bus traffic in the area. Perhaps there is a goal to inspire car-users to choose public transport instead - and maybe a belief that these services need to be provided in order to have an effect on people's chosen travel patterns and methods. This is also an effect we wish in ur proposal - shift in behaviour. Expanding the bicycle lanes in Malmö, and connecting to existing routes contributes to telenetworking (Schiller, et al, 2017) which further can increase incentives to choose the bicycle before the car.



Figure 40. Visualization of Rudbecksgatan with our proposed bicycle lane.

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Figure list

Figure 1: Map of Malmö, highlighting Holma and Gamla LimhamnFigure 2: Diagram of car ownership distribution in Holma and GamlaLimhamn.

Figure 3: Diagram of ethnic composition in Holma and Gamla Limhamn, year 2021.

Figure 4: Diagram of education level in Holma and Gamla Limhamn, year 2021.

Figure 5: Diagram of distribution of accommodation in Holma and Gamla Limhamn, year 2021.

Figure 6: Diagram of car ownership and usage in Holma and Gamla Limhamn, year 2021.

Figure 7: Diagram of population in Holma and Gamla Limhamn, year 2021.
Figure 8: Diagram of median income in Holma and Gamla Limhamn, year 2020.Figure 9: Comparison between the different types of city-buses in Skåne.
Figure 10: Detailed plan of the changes on Linnégatan in Framework agreement 8. North east.

Förproj Erikslustsvägen-Linnégatan.pdf

Figure 11: Detailed plan of the changes on Linnégatan in Framework agreement 8. South-west.

Förproj Erikslustsvägen-Linnégatan.pdf

Figure 12: Map of road hierarchy in Gamla Limhamn.

Figure 13: Map of road hierarchy in Holma.

Figure 14: Connectivity map of Gamla Limhamn.

Figure 15: Connectivity map of Holma.

Figure 16: Permeability map of Gamla Limhamn.

Figure 17: Permeability map of Holma.

Figure 18: Picture of bicyclists in Holma.

Figure 19: Picture of an article regarding immigrant dense neighborhoods in

Malmö.

https://www.aftonbladet.se/minekonomi/a/y64g5J/bostadsbolagens-rad-for-att-u ndvika-invandare-i-malmo

Figure 20: Picture of how the parking signs look in Gamla Limhamn

Figure 21: Parking inventory of Gamla Limhamn with focus on the south,

activity-dense area.

Figure 22: Parking inventory of Holma.

Figure 23: The two maps on the left represents the natural distance one can walk from the center of Holma and Gamla Limhamn. Figure 24::The two maps on the left represents the natural distance one can drive a car from the center of Holma and Gamla Limhamn. Figure 25: The two maps on the left represents the natural distance one can bike from the center of Holma and Gamla Limhamn. Figure 26: Figure 26: Map of public transport and main activities in Malmö. Figure 27: Picture of bus line 4. Figure 28: Map of bicycle infrastructure and facilities in Holma. Figure 29: Map of bicycle infrastructure and facilities in Gamla Limhamn. Figure 30: Collected quantity of accidents in Holma and Gamla Limhamn. Figure 31: Map of land-use in Holma. Figure 32: Map of land-use in Gamla Limhamn. Figure 33: Legend for figures 31-32. Figure 34: Map of existing signed bicycle path, the MEX4 plan and proposed bicycle path. Figure 35: Bubble map of properties of the two areas. Figure 36: Picture of citizen participation from Bike Harwood in Dallas. https://www.betterblock.org/2020/bike-harwood Figure 37: Sections over Rudbecksgatan before and after our proposed bicycle lane. Figure 38: Detailed plan of our proposal in the crossing between Rudbecksgatan and Linnégatan. Figure 39: Detailed plan of our proposal in the crossing between Rudbecksgatan and Lorensborgsgatan. Figure 40: Visualization of Rudbecksgatan with our proposed bicycle lane.