Mejlgade

A Case Study of the Interaction Between Bicycle Transit and Urban Life

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Malene Laustsen Larsen
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Abstract

This research seeks to examine the interaction between bicycle transit and urban life. It does so by conducting a documentation study of a bicycle street implemented in Mejlgade.

Mejlgade is located in the oldest quarter of Aarhus, Denmark and is one of the main bicycle routes in Aarhus. Furthermore, it is characterised by being mixed use with many recreational functions, which generates a diverse urban life. Thus making it an interesting case to study interaction between transit and urban life.

The research analyses how the street operates based on three criteria: flow, urban life and the interaction between the two. It applies theory about conflicts and urban life activities and corresponding observation methods provide the basis upon which the analysis is conducted.

The analysis finds that in general Mejlgade facilitate both bicycle flow and urban life activities. Though, obstructions to the flow do occur due to vehicles and limited space in the street. Furthermore, the conflict level between pedestrians and cyclists are found to be low on a severity scale due to mainly two reasons. 1) The daily rhythm of bicycle flow and urban life activities are staggered. 2) The conflict management between pedestrians and cyclists are somewhat self-organised.

Preface

This report is a master's thesis conducted as part of the Master Programme in Urban Planning and Management at the Institute for Planning at Aalborg University. The research is a documentation study of how Mejlgade in Aarhus, Denmark operates as a bicycle street and seeks to contribute with knowledge about the interaction between transit and urban life in the case of a bicycle street located in a mixed-use area in the city centre. All of the work presented henceforth was carried out by Malene Laustsen Larsen from February 2016 until June 2016.

References in the report are cited according with the Harvard style. This implies that sources are cited by the author's surname and the year of publication. Full references to the corresponding sources are found in the reference list at the end of the report. The transcripts of the interviews conducted and data gathered can be found in the enclosed Appendix along with the interview and observation guides.

Finally, I would like to thank Pablo Celis from Aarhus Municipality for contributing with knowledge about the field and case and my supervisor Assistant Professor, Ph. D., Morten Skou Nicolaisen, for the support and guidance through out the project and especially towards the end.

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1.0 Introduction

In recent times the focus on promoting cycling as an everyday transport mode has increased. Cycling is considered one of the most environmentally, socially and economically sustainable transport modes (Harvard University, 2016). Furthermore cycling is believed to enhance the liveability of cities (Presto, 2016). As a part of promoting cycling infrastructure need to be in place to make it safe and comfortable to cycle. In Denmark this have traditionally been done by implementing bicycle lanes and separating bicycle and motorised traffic (Copenhagenize, 2012). However, in some places limited space can make it difficult to improve the conditions for cyclists using the aforementioned methods. It can be argued that this especially is true for older quarters in the city and the city centres where the streets in general at least in a European context are somewhat narrow. Thus leaving little room for separation of all transport modes. Furthermore, in some of these streets it is not possible or desirable to exclude vehicles because of functions located in the street. As a result Aarhus Municipality chose as the first city in Denmark to implement a bicycle street (Celis, 2012). The bicycle street is implemented in Mejlgade, which is located in oldest part of Aarhus.

Bicycle streets prioritise the flow of cyclists without excluding vehicles. The concept is known from Germany and the Netherlands where it usually is implemented in residential areas (Knjazeva, 2015). Thus, there is little experience with how it operates in other contexts such as streets with a more commercial or recreational profile in urban areas. These functions are dependent on a certain flow of pedestrian traffic or urban life taking place. Therefore, it can be argued that when introducing prioritised bicycle infrastructure into the aforementioned streets both the flow of cyclists and urban life need to operate well.

However, knowledge about the relation between bicycle traffic and urban life is limited and somewhat contradictory. In a paper reviewing the consequences of allowing cyclists in pedestrian zones in Denmark and Sweden there are examples of cases, which operate well, and others, which does not (Weitemeyer, 2006). In Odense and Roskilde they have had to redesign the street or exclude cyclist during some parts of the day because of conflicts between pedestrians and cyclists. The conflicts are mainly due to pedestrians not acknowledging the cyclists right of way or being unaware of cyclists. Additionally there are examples of cases with a limited amount of conflicts.

Building on the abovementioned it can be argued that there is a need for more knowledge within this field. Such knowledge can be useful for planners in terms of future improvement of conditions for cyclists in urban areas, which depend on the generation of urban life.

2.0 Research Question

As the introduction indicates there is a need for more knowledge about the interaction between bicycle transit and urban life activities. This research therefore aims to examine this subject by conducting a documentation study of the relation in the bicycle street, Mejlgade, Aarhus. As argued a bicycle street implemented in the city centre should both facilitate flow for cyclists as well as urban life. Furthermore, it should facilitate such with a minimum of conflicts. Therefore the research question is as follows:

> *"How well does Mejlgade in Aarhus operate as a bicycle street based on the three criteria flow, urban life and interaction?"*

To answer the research question three sub questions are formed each focusing on one of the criteria:

> *"How is the flow of the bicycle traffic in Mejlgade?"*
>
> *"What kind of urban life is carried out in Mejlgade?"*
>
> *"How is the interaction between the users of Mejlgade?"*

2.1 Delimitation

This research focuses on Mejlgade and does not take in to consideration the surrounding area and the possible effect it might have on the traffic flow or urban life. Furthermore, the research focuses on the everyday use and situations in Mejlgade and does not look into how the street works when events take place in the nearby area or in Mejlgade itself.

3.0 Theoretical Framework

The aim of this chapter is to form a theoretical framework, which allows for data to be collected in order to answer the research question. Thus the theoretical framework becomes the lens through which this research is analysed.

Urban spaces and the activities, which take place in them, can often be categorised or viewed upon as either spaces of flow or spaces of place. Where a space of flow can be considered as a space which focuses on transit and a space of place is more connected to the concept of urban life (Gehl, 2010a). However, it can be argued that most urban spaces are a mixture of both though sometimes leaning more towards one than the other. Though it sometimes can make sense to design a place purely for one or the other it can be argued that in most cases a mixture is preferable. As there can be negative consequences of designing a space purely for transit or place. One consequence being that spaces of transit can feel and be unsafe both in a social and traffic sense due to lack of eyes on the street and high speed (Jacobs, 1992; Gehl, 2010a). In the same lines it can be argued that spaces of place are dependent on some sort of flow, mainly pedestrian, if they are to function. Another argument for why it is important to combine the two perspectives is that it can encourage people to use softer transport modes as it becomes more interesting to travel through the city at a slower pace. However, combining the two perspectives can in some instances result in conflicts between the users of the space.

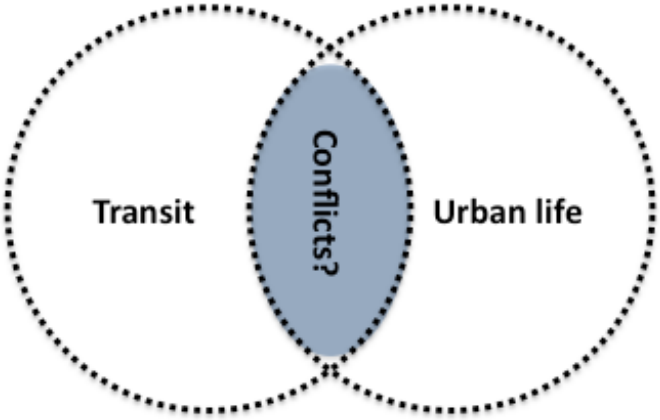

***Figure 1** Illustration of the overlap between transit and urban life, which can result in conflicts between the users of the urban space.*

The conflicts between the two typically occur when the transit primarily consist of motorised traffic. Whereas transit consisting primarily of pedestrian traffic can have a positive effect on urban life activities (Gehl, 2010a). However, it is unclear what effect bicycle traffic has on urban life and the conflict level. As it can be argued that bicycles are somewhat placed in between the before mentioned transport modes. Bicycles are less of a safety threat for pedestrians than motorised vehicles but cycling is conducted at a higher pace than

walking. To get a better understanding of two perspectives and the how they relate, the main parameters influencing them are presented in the following.

3.1 Space of Transit

When analysing or designing urban spaces certain parameters are connected to the different types of spaces. When analysing or designing a space of transit the main objective can be described as facilitating travel flows while minimising risk. Thus it can be argued that the most important parameters in relation to a space of transit are flow and safety. Flow focuses on creating an efficient movement of traffic through a given space while minimising possible congestion (Arain & Arain, 2015). Depending on the transport mode and the strain it is to start and stop it can be more or less affected by obstructions of flow (Meng & Mikkelsen, 2015). Cyclists are one of the transport modes where starting and stopping causes most strain. Thereby making it a transport mode that seeks to keep momentum. A route where cyclists experience too much friction, which causes obstruction to their flow can therefore be argued to be unattractive for the cyclists.

Safety often focuses on the number of actual accidents which occur but attempts to broaden the understanding of the concept have been made. Hydén (1987) divides safety using different levels of conflict on a scale of seriousness from undisturbed passage to actual accidents, see figure 2. Hydén defines the different levels of conflict on a time-based measure, more specifically a time to accident scale.

Level of conflict	Description
No conflict / undisturbed passage	A road-user can move freely through the street or intersection without being influenced by the presence of other road-users.
Potential conflict	Two road-users are approaching each other in such a manner that the occurrence of a conflict is imminent unless avoidance action is undertaken by either of the road-users involved. Sufficient time is at hand for action thus offering margins to compensate for mistakes.
Slight conflict	Two road-users are approaching each other in such a manner that the risk of a serious conflict is obvious. The margins are fairly small thus demanding a rather precise and alert action to avoid an accident.
Serious conflict	Two road-users appear in a situation that demand sudden and harsh action to avoid an accident.

Figure 2 Based on Hydén (1987:28)

The fewer occurrences of conflicts and the less serious they are, the safer the street or urban space is deemed to be from a transit perspective. However, even though a street is deemed to be safe it can be argued that the occurrence of potential or slight conflicts might lead to road-users perceiving the street as unsafe. As these conflicts might arise from a lack of transparency of the traffic situation as well as the separation level between transport modes (Institute for Road Safety Research, 2012). This in turn might lead to road-users being less willing or avoiding to use the street or space. This can especially be an issue if the street incorporates functions, which rely on visitors, such as commercial or recreational

functions. Or when trying to improve the conditions for softer transport modes as it is these who often are more likely to avoid streets with many potential or slight conflicts, as they are more vulnerable.

Therefore it is important to not only focus on the serious conflict situations when looking at urban spaces located in city centres where the number of soft transport modes are higher and the before mentioned functions often are located.

3.2 Spaces of Place

In relation to spaces of place and urban life other parameters become important and interesting. According to Gehl (2010a) urban life can be divided into three activities on a scale of necessity, see figure 3:

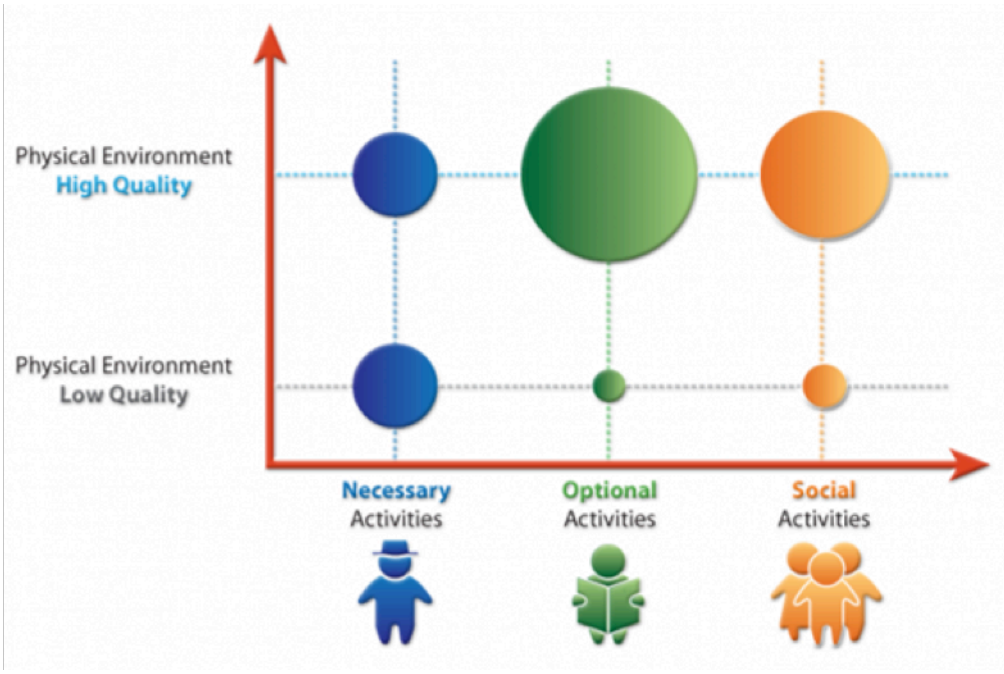

***Figure 3** Figure illustrating the different categories of activities that takes place in the public space and their relation to the physical environment, which include transit. (Gehl, 2010b:20)*

Necessary activities: purposeful activities which are an integrated part of everyday life such as commuting to and from work.

Optional activities: mainly recreational activities such as spending time in the public space e.g. reading a newspaper on a bench or watching people passing by.

Social activities: refers to all forms of social interaction, from passive interaction such as see and hear contact to more active interaction such as greetings and conversations with people.

The necessary activities are not very impressionable to the climate or quality of the urban space, whereas the optional activities increase with the quality of the urban space as well as with the conditions of the weather. As the optional activities increase and thereby the

overall activities, so does the social activities. Gehl argues that the necessary activity of transit does not contribute to the experienced liveliness of the public space, as the activity in itself is not of a long time span (Gehl, 1986). However, transit can have a negative impact on the attractiveness and thereby the liveliness of the urban space. As transit especially in the form of motorised vehicles can make it less desirable to carry out optional and social activities as it lowers the quality of the urban space (Gehl, 2010a). Though, the slower the pace of the transit the more likely it is to contribute to the experience of liveliness. E.g. pedestrians are more likely to stop and look at windows or activities taking place in the urban space. Thereby, their activity is more likely to become more optional and less necessary (Gehl & Svarre, 2013a). Also, the flow of pedestrians can become an attraction in itself for people to sit and watch. The experience of liveliness therefore mainly comes down to the optional and social activities. Urban life can also be said to be measured by both quantity and quality, meaning the number of people using the space and the duration of the activity (Gehl, 2010a). Gehl argues that the quality outweighs quantity, when it comes to the experience of city life, in that a transit space feels less lively than a space where people choose to stay for longer.

Connecting the two understandings of urban spaces it can be said that there is an overlap of the parameters. As it can be argued that conflicts between road-users when facilitating necessary activities (i.e. transit) can have an effect on optional and social activities of the urban space. I.e. potential conflicts might lead users to feel less safe and thus not wanting to perform recreational activities in the urban space.

4.0 Methodology

This chapter seeks to settle the operational measures being used in this research. Firstly, the research design is presented and explained followed by an operationalisation of the theoretical framework. Secondly, the methods used to conduct the research are described.

4.1 Research Design

In order to answer how well Mejlgade operates as a bicycle street a theoretical framework is set. The theoretical framework functions as the lens through which data is gathered and the case is analysed. The theoretical framework consists of theory connected to the two perspectives on urban spaces; space of transit and space of place. Before the analysis is conducted an introduction to bicycle streets is presented. Along with an introduction to the case itself including the objective and motivation of Aarhus Municipality behind the implementation of a bicycle street in Mejlgade. This functions as background information to the analysis of how Mejlgade operates. The analysis is divided into three parts each focusing on one of the sub research questions criteria: flow, urban life and the interaction between the two.

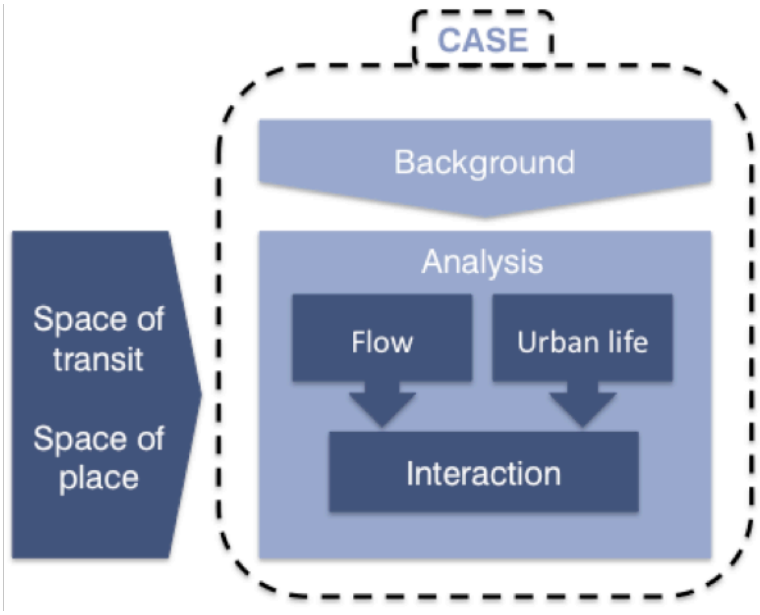

***Figure 4** Diagram illustrating the structure of the research*

4.2 Operationalisation of the Theoretical Framework

As mentioned, the theoretical framework is the lens through which the case is analysed and data is gathered. In the following it is described how the theoretical framework is applied in this research, and thereby how it is operationalised.

4.2.1 Conflicts and Flow

Conflicts can be measured or detected in various ways. Hydén (1987) uses a time-based measurement, however in this research another measurement is applied to identify potential conflicts between the road-users. The measurement focuses on the actions and behaviour of the road-users as it is deemed to be easier to observe in relation to the other parameters of the observation study. Furthermore, it makes it possible to combine Hydén's division with the understanding of the perceived safety, which might be influenced by potential conflicts.

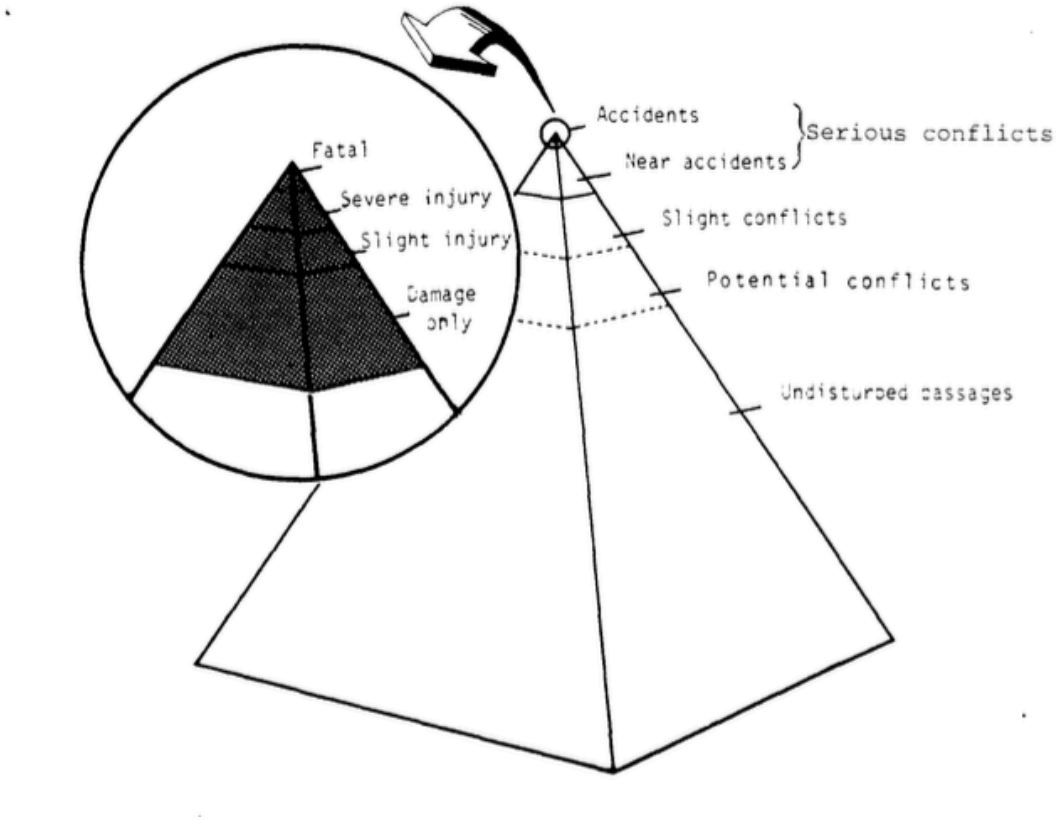

Figure 5 The division of conflicts constructed by Hydén. (Hydén, 1987:27)

The division made by Hydén (see figure 5) serves as mentioned as inspiration for the division of the different levels of conflict. As the pyramid illustrates, undisturbed passages are the most predominant with a decrease of occurrence in conflicts according to seriousness. Only a small part of serious conflicts ends in accidents and out of those again only a small part is severe or fatal. By observing conflicts it is also possible to study the flow of cyclists as conflicts can obstruct the flow.

The way conflicts are divided and detected in this study is on a scale from no conflicts (what Hydén refers to as undisturbed passage) to serious conflicts where:

No conflicts can be observed as the users of the space moving through the street with out being influenced by other users, thus moving through the space at a some what constant

pace and without deviating or stopping because of other users. Furthermore, this category can also give an insight into how pedestrians perceive the street in terms of safety and conflicts. This can be detected by observing how they act in the role of guardian, e.g. when walking with kids or dogs.

Potential conflicts is defined as situations where one or more users slow or speed up their pace or have to deviate from their route to avoid an accident. Also, potential conflicts can also be detected through how the users orientate themselves in the urban space. E.g. if they are aware of other road users when crossing the street and therefore are aware of a potential conflict. Furthermore, the use audible effects such as ringing the bell can be a way of avoiding a potential conflict.

Slight conflict is defined as situations where one or more users have to come to an abrupt stop or deviate abruptly from their route to avoid a collision. Additionally, the use of audible effects can also be used to detect slight conflicts. Within the slight conflicts the audible effects can be both ringing the bell, honking the horn or shouting at other users. This differs from the potential conflicts by being more immediate reaction.

Serious conflicts are defined as and detected through collisions between two or more users of the street.

4.2.2 Urban Life Activities

The research adapts the categorisation of urban life activities constructed by Gehl (2010a). Thus operating with the activity categories, necessary, optional and social.

In general necessary activities are defined as activities to do with transit and optional activities are defined as mainly stationary activities. However it cannot be divided so rigidly. As figure 6 shows, stationary activities can also be necessary and non-stationary activities can be optional. Figure 6 will therefore serve as guideline to differentiate the two activities from each other. All activities that are not solely necessary will be seen as optional.

The optional activities are registered through mapping, which focuses on the stationary activities of standing and sitting. In addition, field notes will supplement the registered stationary activities by specifying the reason behind. Thereby making it possible to distinguish between whether the activity is optional or necessary. Furthermore, field notes will also serve to register the non-stationary optional activities.

Social activities are defined as the social interaction between users. It will be detected by noting down the number of people conducting the different optional and necessary activities.

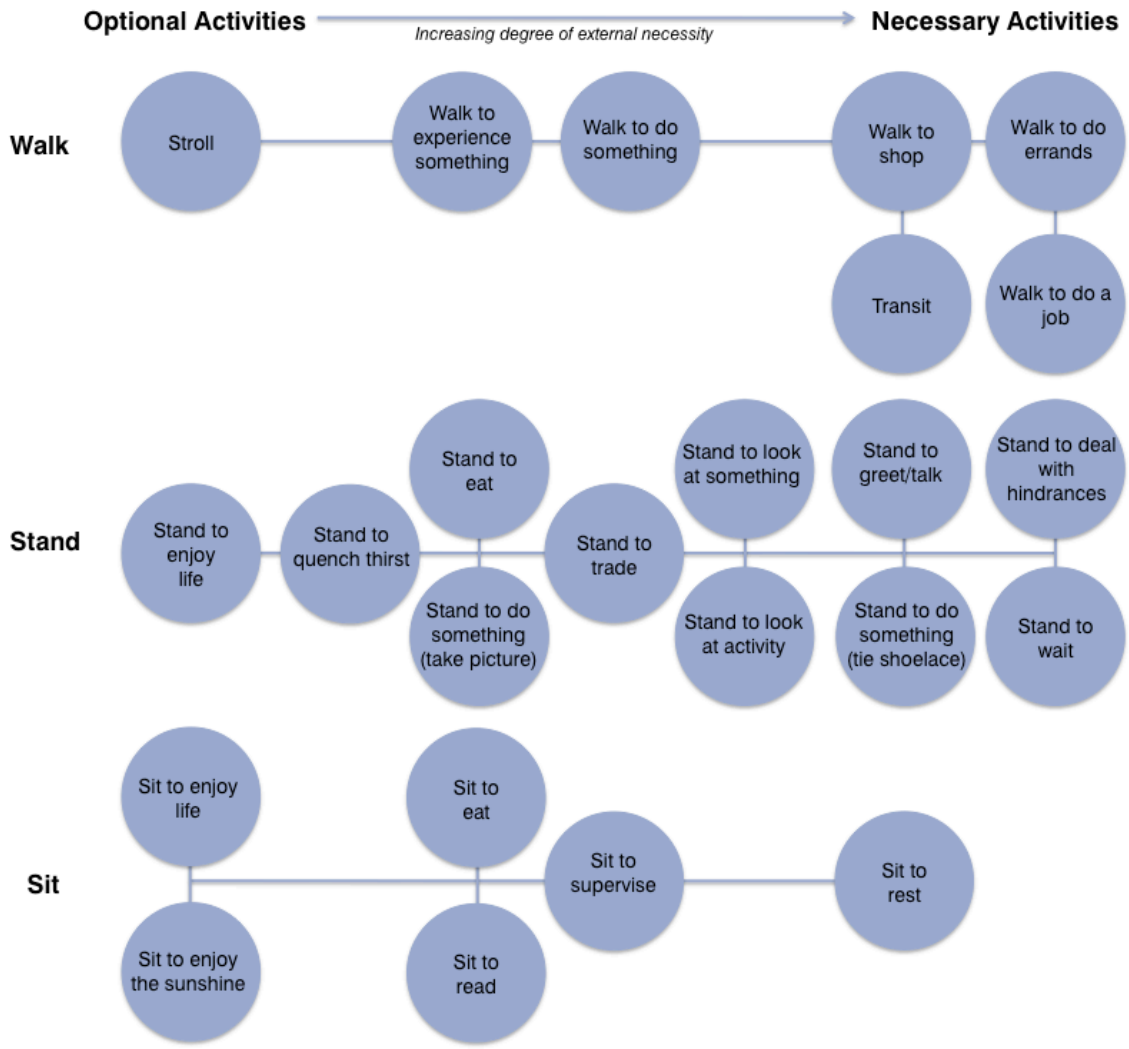

Figure 6 Illustration of different activities taking place in the public space placed on a scale of necessity. Based on (Gehl & Svarre, 2013b)

4.3 Case Study

This research aims at providing more knowledge about interaction between bicycle transit and urban life. It does so by documenting how well Mejlgade a bicycle street in Aarhus, Denmark operates. In other words the research seeks to examine a contemporary real-life situation thus making the case study approach ideal (Soy, 1997). Mejlgade is chosen as a case as it is one of the main bicycle routes in Aarhus thus making the flow of the cyclists essential to the function of the street. Furthermore, Mejlgade is located in the city centre and have both commercial and recreational functions that can generate urban life activities. Therefore, Mejlgade is chosen as it is deemed to provide information about flow, urban life and the interaction between the two. Thus making it a single case study based on an information-oriented selection (Flyvbjerg, 2006).

4.4 Expert Interview

As background information about the case is scarce, an expert interview with Pablo Celis is carried out. Celis is the driving force behind the project "Aarhus Cykelby", which aim to improve the conditions for cycling in Aarhus and was in that context directly involved in the redesign of Mejlgade. Besides being a planner at Aarhus Municipality he also has his own consultancy firm and have published three manuals including one about bicycle traffic. He has previously been an adviser for the Danish Cyclists' Federation and been the director for the Danish trade journal "Trafik og Veje". Thus, Celis possesses expert knowledge within the field of bicycle traffic as well as about the case in particular (Bogner et. al, 2009). An interview with Celis helps to uncover the municipality's motivation and objectives behind the redesign of Mejlgade.

The interview was carried out on the 25th of April and took place on Mejlgade. The location improved the communication about the redesign. However, as the interview took place outside in somewhat fickle weather conditions the environment was more stressful. Thus it was more difficult to follow up on the questions and get into the more complex issues. Therefore a follow-up telephone interview was conducted on 27th of May with questions derived from transcribing the interview as well as the observation study, which took place in between.

4.5 Observation Study

In order to research how well functioning Mejlgade is data about the flow, urban life and interaction is needed. However, it was found that this was hard to come by therefore it was deemed necessary to conduct an observation study. As it is deemed the most effective in collecting data about the flow as well as the interaction between and activities of the users of the Mejlgade. The observation study is based on the theoretical framework and therefore focuses on conflicts and urban life studies. The observation study consisted of four different methods; conflict counting, mapping and timing activities, field notes and photographing.

The observation study was conducted on Wednesday the 4th of May, which was the day before Ascension Day. Thus it can be argued that the day of observation more resembles a typical Friday than a typical Wednesday. Traffic and urban life observations are normally conducted between Tuesday and Thursday, as these days are deemed more likely to represent the average flow of traffic and everyday use of the city (Vejdirektoratet, 1995; Gehl & Svarre, 2013a). However, due to time pressure and the changing weather conditions in Denmark it was chosen to conduct the observation study at that time. Seeing that the day of observation was one of the first days within the project period with appropriate weather conditions for observing possible optional activities (Gehl & Svarre, 2013a). The weather on the day of observation was sunny with few clouds and a temperature between 7-14 °C. As the data collected is likely to resemble a typical Friday instead of a typical Wednesday there is a risk that there will be an overrepresentation of people visiting the cafés. However, this should not be seen as a flaw in the data but should be something taken into account when analysing and interpreting the data. As Gehl and

Svarre (2013b: 23) put it "the results of registrations will always be a kind of modified truth because, hopefully, nothing is entirely predictable"

As Mejlgade is too long to observe in its whole, two points of observation is chosen. One over looking the intersections in the southern part of the street and the other over looking a corridor section of the street (see figure 8). Thus making it possible to study whether there is a difference in conflicts, interaction and activities depending on the two observation points. The main area of observation is chosen because it is deemed to be the liveliest and with the most functions. This is based on an initial observation made in conjunction with the expert interview. Thereby, making it the most relevant stretch to study the relation between transit and urban life i.e. if the conflict level is low then it can be said to be low elsewhere as well (Flyvbjerg, 2006).

The different observations were carried out by one person from 7.00 to 19.00, observing one hour at each observation point shifting between the two observation points every hour (see figure 7). Another way of conducting the observation study would have been to split up the observations conducting only a few hours on different days. This method is useful if the study focuses on specific times during the day or if the area of observation only becomes lively at a certain point during the day (Gehl & Svarre, 2013a). However, by breaking up the observation it is hard to gain an insight into the rhythm of the street or area observed. By carrying out observations through out a whole day, insight into the daily rhythm of the street can be gained. Thus revealing whether some periods of the day creates different interaction between the users than others. Moreover, this also uncover whether issues observed are general issues or whether they are limited to a very specific time of the day. Furthermore, in the case of Mejlgade it is important to gain an understanding of the rhythm as it contains functions, which generates activities throughout the day.

Intersection	Corridor
7.00 – 8.00	8.00 – 9.00
10.00 – 11.00	11.00 – 12.00
13.00 – 14-00	14.00 – 15.00
16. 00 – 17.00	17.00 – 18.00
18.00 – 19.00	

Figure 7 Table showing the times of observation at each observation point

As mentioned the different observations were carried out by the same person. It was decided not to break up the observation in smaller parts focusing only at one method at the time as it was deemed that it would be manageable to do all at once. However, this meant that the observer could not focus completely on one task at the time and therefore not being able to count conflicts while writing field notes. Still, the data collected is deemed to be representative of the interaction between and the activities of the users.

In the following the different observation methods are described.

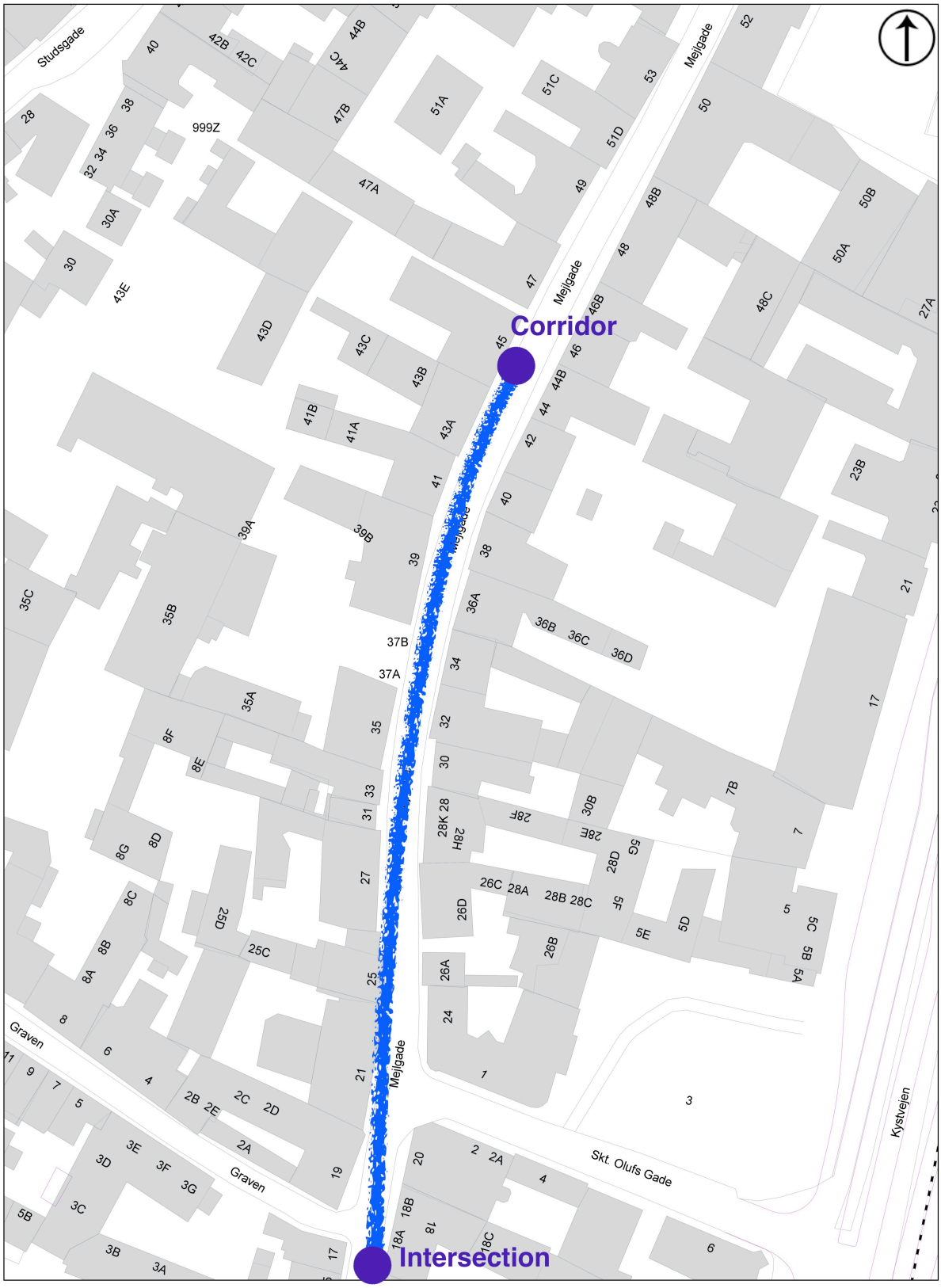

Figure 8 Map of Mejlgade illustrating the two observation points and the main observation area

4.5.1 Conflicts

As described in the operationalisation of the theoretical framework conflicts are divided into different levels from no conflicts to slight conflicts. Based on this division an observation chart is created stating different situations, which can indicate the different levels of conflict (see appendix E). Furthermore, the chart is divided into different times during the day, morning, midday, afternoon and evening. To see whether some conflicts occur more often at specific times of the day. Each time one of the situations occur a line is put down on the paper. Before conducting the observation study a trial was done on a street in Aalborg to test the observation chart.

4.5.2 Mapping and Timing Activities

As a way to register the different optional and to some degree the social activities taking place in Mejlgade, it is chosen to use a mapping method. Mapping is a way of getting a picture of the stationary activities at a certain time of the day (Gehl & Svarre, 2013a). Beforehand specific stationary activities are selected with inspiration from figure 6, page 10, presented in the operationalisation of the theoretical framework and the functions and opportunities located in Mejlgade. The specific activities chosen is: standing, sitting – café, sitting – bench, sitting – secondarily. On site another activity was added as it differed from the already chosen categories. The activity was named "other", which was workers helping the residents to handle and sort their trash as part of the municipal project "Genbrugsvognen" (Aarhus Stiftidende, 2016). The Mapping is conducted every hour from 7.00 to and including 19.00. Mapping stationary activities holds both quantitative and qualitative qualities. I.e. the element of what and where provides a qualitative aspect to the mere quantitative element of counting the different stationary activities (Gehl & Svarre, 2013a).

In addition to mapping, the stationary activities are also timed to gain an insight into the average time spent on each stationary activity. Thereby gaining an insight to how much each of the stationary activities contributes to the experienced liveliness of Mejlgade (Gehl, 2010a). Without the timing element it can be hard to say how much they contribute to the experienced liveliness. As the mapping in it self only counts the number of people conducting the activity. If the time span of those activities is short the space can seem less lively than if the time span is longer. Gehl explains it as follows:

"One person spending 30 minutes in the street will equal 30 persons each spending one minute in the street. Thus it is not the total number of persons, but the total number of minutes spent in the streets that matters" (Gehl, 1986: 92)

Thereby it is the mixture of the mapping and timing that indicates the activity level and how lively an urban space is. Building on the quote it can be argued that a space where a lot of people conduct short timed activities resembles a transit space more than space of place. As well as a space with fewer people conducting long timed activities resembles a space of place more than a space of transit.

Because of the changing of observation point every hour some of the longer stays were hard to note down. Some of the stays extending over the one-hour observation time had to be deleted. Thus resulting in fewer end observations of people sitting in cafés compared to shorter stays such as people standing. Also, some activities were only timed once. This influence the validity of the average time spent on some of the activities. However, it is deemed that the data provides an inside to the time span of each activity.

4.5.3 Field Notes

In addition to the observation chart and the mapping and timing of activities, field notes are used to note down specific and general situations or activities, which are not covered by the other methods (see appendix G). Thus supplementing the quantitative data with more qualitative data. Before conducting the observation specific themes of observation was noted down, to focus the observation on what was deemed relevant:

- The overall interaction between the users.
- The demographic represented in the urban space
- The pace and volume of the users
- Whether the users travel alone or in groups

4.5.4 Photographing

To illustrate the conflicts and give the reader an insight into the design and function of the case area photographs are taken under the initial and main observation day. Additionally, photographs also function as a supplement to the field notes capturing situations that are not written down. Hence, the photographs also function as a way of recalling the situations of interaction or behaviour in regard to the analysis.

5.0 Background Information

The aim of this chapter is to provide background information to the analysis. Firstly, as this research examines a bicycle street a short introduction to the concept is needed. Secondly, a description of the case area is given followed by a description of the objectives and motivation of Aarhus Municipality.

5.1 Bicycle Streets

Bicycle streets are most used in Germany and the Netherlands but have also been implemented in the USA. Walker et. al (2009) describes it as a bike facility that takes shared roadway to a new level. Bicycle streets have many benefits. One being that they are affordable and often more affordable than creating bicycle lanes (Knjazeva, 2015). Another benefit is that they still allow motorised traffic in the streets, which means they can be implemented in locations where banning motorised traffic is not possible.

The Dutch definition of a bicycle street defines it as being an estate road, which is part of a main cycle route. The design should be recognisable and with a limited amount of motorised traffic or where motorised traffic is categorised as subordinate traffic (CROW, 2007). In Germany and the Netherlands bicycle streets are mainly implemented on estate access roads where they function as a traffic calming measurement to ensure a comfortable beginning and end to a bicycle journey (Knjazeva, 2015).

In order to implement a bicycle street certain conditions need to be in place. CROW (2007) recommends that the number of cyclists is equal to or more than the motorised traffic times two. Thereby ensuring that there are enough bicycles to dominate the traffic and force the motorised traffic to decrease their speed and adapt their behaviour to fit the cyclists. However, a maximum for motorised traffic of 500 vehicles pr. day for two-way streets and of 2.000 vehicles pr. day for one-way streets is advised. Moreover, CROW recommends that bicycle streets are only implemented on streets with a minimum of 1.000 cyclists pr. day (As Easy as Riding a Bike, 2014). Also, the motorised traffic should be limited to a speed of 30 km/h in order to create the best conditions for the bicycle street to function as intended.

There is different design rules in the different countries were bicycle streets are implemented. In the Netherlands the roadway is often marked by red asphalt to make the motorised traffic aware that they have to drive on the terms of the cyclists (Knjazeva, 2015). The red asphalt also creates a clear division of the roadway and the sidewalks. Furthermore, in order to keep the roadway free and ensure the safety of cyclists parking should not be allowed on the roadway. Instead it should be located off the roadway e.g. parallel to the roadway. CROW (2007) recommends that the roadway should be 3 m for one-way streets and 4,5 m for two-way streets. They operate with three different design layouts for bicycle streets; combined profile, bicycles more to the sides and bicycles in the middle. Figures 9-11 illustrate the different design layouts.

Figure 9 *Example of a combined profile, where the whole carriageway is used by both cyclists and motorised traffic. Photo (As Easy as Riding a Bike, 20159)*

Figure 10 *Example of design layout where the roadway is divided by a medial stripe dividing the two lanes. Photo (As Easy as Riding a Bike, 2014)*

Figure 11 *Example of a design layout where the cyclist in the middle of the street and with two buffers on each side. Photo (Tiny pic, 2016)*

Even though that the design rules and other parameters differ according to where a bicycle street is implemented it can be said that there is common theme or aim. This aim can be described as reducing motorised traffic volume and speed and thereby creating a comfortable and attractive space for cyclist (Walker et. al, 2009).

5.2 Mejlgade – Case Area Description

Mejlgade is located in the centre of Aarhus, the second largest city of Denmark. It is located in the oldest quarter of Aarhus known as the Latin Quarter (Visit Aarhus, 2016). The quarter is characterised by narrow and twisted streets giving its resemblance to the Latin Quarter in Paris, France, which it is also named after (Visit Aarhus, 2016).

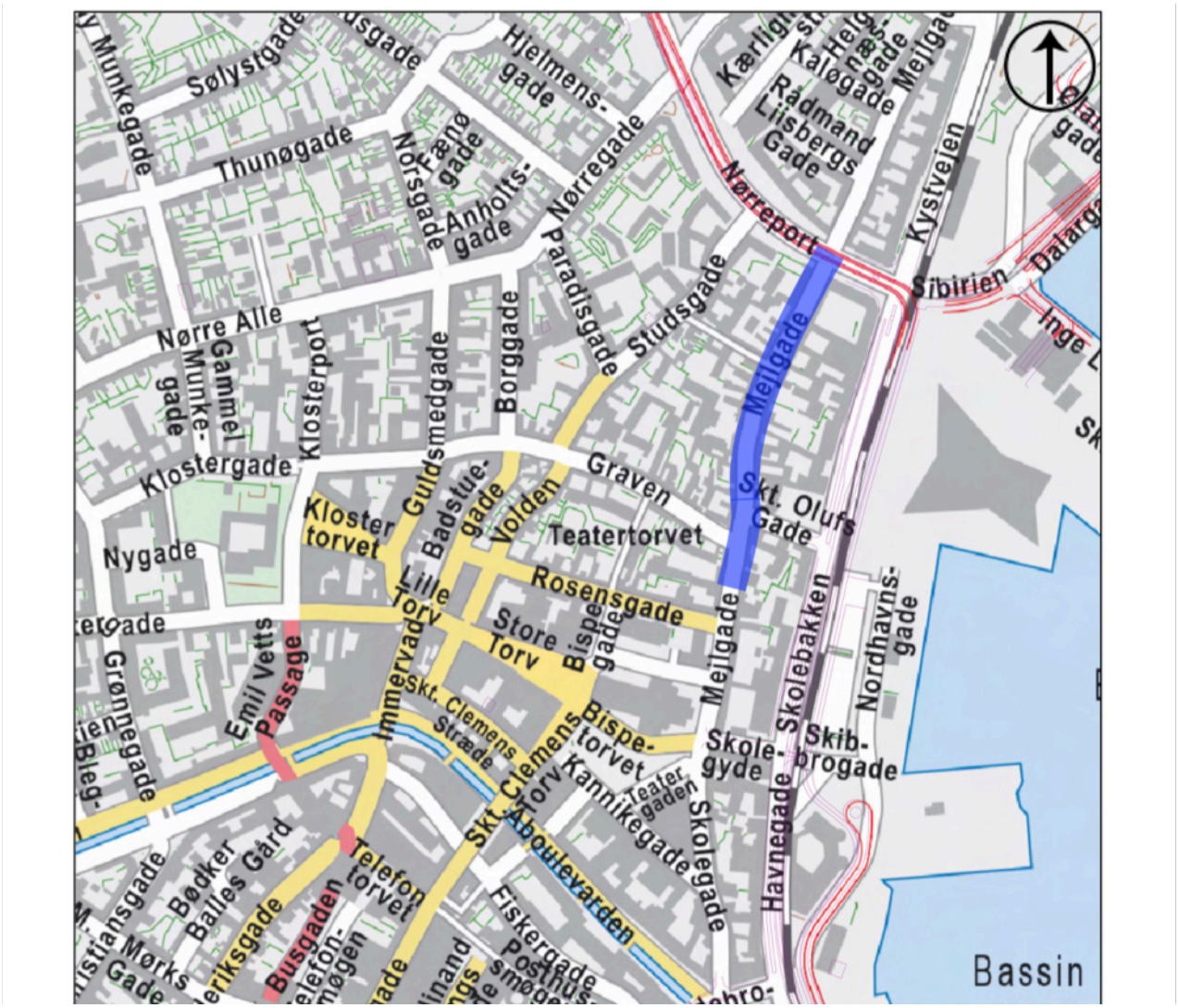

***Figure 12** Map of the location of Mejlgade. The case area is marked with blue. (Aarhus Municipality, 2016)*

As the bicycle street is not implemented on all of Mejlgade the case area is limited to the blue stretch shown on figure 12. The case area is characterised being mixed-use with

residential, commercial, recreational and business functions. In the southern part of the case area there are two adjacent streets: Graven, which has similar functions as Mejlgade, connecting Mejlgade to the central part of Aarhus and Skt. Olufs Gade connecting Mejlgade to the harbour area and the parallel road Kystvejen. Mejlgade is part of Aarhus Municipality's bicycle network and functions as one of the access roads for the bicycle ring, which is a ring of streets in the central part of the city. In 2007 an average of 4.600 cyclists passed through Mejlgade making it the 5th busiest street for bicycles (Aarhus Municipality, 2007). By 2013 the estimated average number of cyclist has risen to 8.000 cyclists a day (Grøn, 2013).

5.3 Aarhus Municipality's Motivation and Objectives

In 2007 Aarhus Municipality introduced a bicycle action plan with the aim of increasing the percentage of cyclists in the municipality by improving the conditions for cycling (Aarhus Cykelby, 2015). One of these projects of improvement is the redesign of Mejlgade. Pablo Celis, transport planner at Aarhus Municipality, explains that the main objective with the redesign of Mejlgade was to improve the traffic flow and accessibility for cyclists as well as pedestrians. Thereby, reducing the number of accidents occurring in the street as well as reducing the amount of circling motorised vehicle traffic induced by the parking facilities in or adjacent to the street.

Figure 13 Picture showing the previous design of Mejlgade

Before the redesign, see figure 13, Mejlgade was characterised by being a one-way street for motorised vehicles, where cyclist were allowed both ways. Furthermore, it was characterised by having narrow sidewalks, which meant pedestrians often was forced out on the roadway and many parked cars, which decreased the traffic flow and safety for cyclists. Celis describes the street as a battlefield, where the different transport modes were fighting for the space. Aarhus Municipality saw two ways of approaching the issue of improving the conditions for cyclists either cyclists should be removed or the street should be dedicated to bicycle traffic. Redirecting the bicycle traffic to the parallel road, Kystvejen, was not seen as an option as it was deemed that it would be too unattractive for cyclist to use because of the heavy motorised traffic, the lack of experiences and scenery and the intersections, which increases the risk of accidents. Therefore it was chosen to implement a bicycle street with inspiration from Germany and the Netherlands (Aarhus Municipality, 2012).

***Figure 14** Mejlgade after the redesign with wider sidewalks, similar surface, lower curbs and two-way bikelane.*

Aarhus Municipality finished the redesign of Mejlgade in May 2012, see figure 14 (Aarhus Municipality, 2012). However, there were factors restricting the design of the street. Contrary to Germany and the Netherlands bicycle streets are not legally permitted in Denmark and Aarhus Municipality were not able to get a dispensation from the authorities. Therefore the bicycle street had to be designed according to, at the time, current safety regulations. Furthermore, the location of the street in the central and historic part of Aarhus also put up limitations for the design. The redesign included wider sidewalks for

***Figure 15** One of the parking booths implemented with the redesign*

pedestrians and thereby a narrowing of the roadway for bicycles and motorised vehicles. The wider sidewalks also allowed the restaurants and cafés to have outdoor serving, which was not possible before. The roadway was turned into two bike lanes divided by road markings and direction marked by bicycle symbols on the asphalt. Thus creating a roadway where cyclists have the priority and motorised vehicles are allowed on the terms of the cyclists. Furthermore the parking in the street was restricted. Only two designated parking booths were implemented with the capacity to hold one-two vehicles each and parking outside was made illegal. Moreover, Celis explains that they wanted to create a homogeneous surface from wall to wall to indicate that the bicycle street was different from other streets in Aarhus. Thereby hoping that it would make users more aware when travelling through the street. Therefore, the municipality chose to use asphalt as a common surface on the sidewalks and on the roadway. Besides the common surface it was also chosen to create less of a barrier between the sidewalk and roadway by lowering the curb. Thereby creating a greater freedom of movement for cyclists and pedestrians i.e. cyclists would be able to cycle or divert on to the pavement with out having to get off.

The project was originally viewed upon purely as a transit project focusing on cyclists but during the process it changed to also including pedestrian and urban life aspects. The municipality now views the objective of bicycle streets as facilitating flow for cyclists while increasing the possibility for a more differentiated urban life.

In general Aarhus Municipality deem the project in Mejlgade to be a success as it has increased the volume of cyclist using the street and minimised the circling motorised traffic and accidents. However, there has been no official evaluation of the project. Instead the project has been under ongoing evaluation. Celis states that they have been in close contact with the residents as well as the owners of restaurants, cafes and shops located in Mejlgade. Furthermore, they have conducted unstructured observations while travelling through the street as well as conducted traffic counts and looked at accident numbers recorded in the hospital or police files.

The municipality's evaluation has focused on the traffic flow and safety aspects and has not dealt with how the implementation of the flow of cyclists influences the urban life. The following analysis therefore aims to analyse this aspect.

6.0 Mejlgade as a Bicycle Street

This chapter seeks to analyse how well Mejlgade operates as a bicycle street according to the three criteria: flow, urban life and interaction. The criteria focus on different user groups. Flow focuses on the flow of the cyclists. The urban life aspect focuses mainly on pedestrians and the interaction includes all the users but primarily focuses on the interaction between pedestrians and cyclists. The analysis is divided into sections addressing each criterion.

6.1 Flow of the Cyclists

This section of the analysis seeks to examine the flow of the cyclists in Mejlgade. The analysis of flow is based on observations, which are written down in the field notes as well as observations and registrations of conflicts. The later providing data about the obstructions of flow. The actual flow and frequency of each transport mode is not registered. Instead the analysis is based on estimates of the frequency formed by the before mentioned observations.

The frequency of cyclists that passes through Mejlgade changes depending on the time of day. The morning hours between 7.00 and 9.00 are the time of day with the seemingly highest frequency. During midday the frequency then decreases and increases again in the afternoon, though not to the same level as in the morning. At around 18.00 in the evening the frequency of cyclists are once again decreased. Most of the southbound cyclists come in groups whereas the northbound cyclists are more scattered. This is especially noticeable in the morning. This is due to the traffic light in the intersection between Mejlgade and Nørrebrogade in the north and the lack of traffic lights in the southern part. Because they come in groups from the north the southbound lane's capacity is often reached. However, because the capacity of the northbound lane is not it does not result in any reduction of speed or conflicts between cyclists going in opposite directions. Hence the flow is not affected by it, though if the same frequency of cyclists came from the south it could cause obstructions.

On figure 16 an illustration of the predominant direction of flow for bicycle and motorised traffic is shown as well as where on the street obstructions of flow is observed.

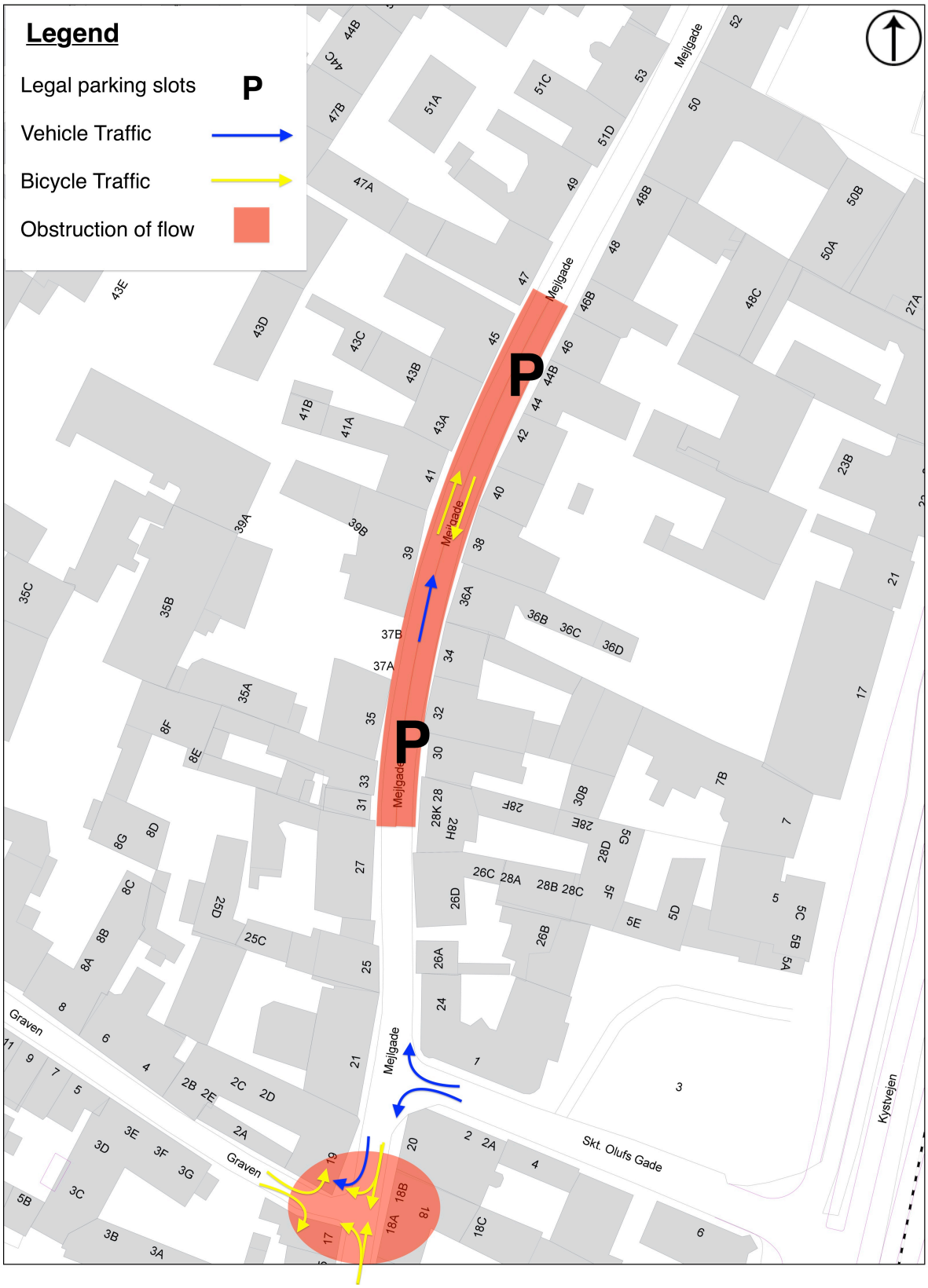

Figure 16 *Illustration of the predominant flow directions and where on Mejlgade obstructions of flow occurs. The arrows indicate the flow and the red markings indicate spaces where obstruction of bicycle flow is observed*

***Figure 17** Picture illustrating the narrowing of the northbound lane in relation to the designated parking spots. The blue line indicates where white dots on the surface mark the width of the parking spots.*

In general the flow of the cyclists are somewhat undisturbed but issues do occur. Most of the obstructions are observed in connection to vehicles, though pedestrians are also observed to create obstructions for the flow of cyclists. As figure 16 illustrates, obstructions are observed both in the corridor section of Mejlgade as well as in connection to the adjacent streets mainly Graven. In order to understand how vehicles obstruct the flow of cyclists in the corridor section a short description of the design is needed. The design of Mejlgade allows for two cyclists to cycle next to each other on each lane in both directions. A vehicle depending on its size takes up a bit more than the width of one lane. There are two designated parking spots on the street each with the capacity for one to two vehicles each. The parking spots are placed on the northbound lane and the lane becomes narrower where the parking spots are located, see figure 17. Therefore, when a vehicle has to pass by the parked vehicles most of the roadway becomes occupied. The obstruction of flow is observed to occur when southbound bicycle traffic is present. Figure 18 shows such a situation. As the picture to the left shows the southbound cyclist has been forced onto the sidewalk and have come to a hold. He waits for the vehicle to pass and then continues his journey, though, not on the roadway but on the sidewalk. This might indicate that he finds the sidewalk more pleasant as it provides more space between him and the oncoming cyclists. In this example the southbound bicycle traffic is rather low and the vehicle is able to pass by, which means that the flow of the northbound cyclists are not obstructed as much. Since they can keep moving forward, though, maybe at a lower pace than they prefer.

Figure 18 *Pictures illustrating a situation where flow of bicycle traffic is obstructed, as a vehicle has to pass both legally and illegally parked vehicles.*

Figure 19 *Pictures illustrating a situation where vehicle is blocking the roadway and obstructing the flow of both south- and northbound cyclists*

However, a situation with a higher number of southbound cyclists was also observed, see figure 19. In this case the southbound cyclists forced the vehicle to a hold as they made their way through the small passage left between the vehicle and the curb of the sidewalk. Some of the northbound cyclists diverted onto the sidewalk while others stayed behind the vehicle waiting to resume their journey.

In both observed situations the illegally parked vehicles influenced the obstruction. At the day of observation there were illegally parked vehicles in varying numbers between the two designated parking spots from the morning until the late afternoon. This created a somewhat long and narrow roadway where it was hard for the moving vehicles and cyclists to share the space no matter the frequency of southbound cyclists. However, obstructions in connection to the legally parked vehicles were also observed later in the day when most of the illegal vehicles had disappeared. These obstructions weren't as profound as those observed earlier in the day. Still they indicate that in general parked vehicles can cause obstructions in the flow of cyclists when other vehicles have to pass. Also, the many illegally vehicles meant that the problematic stretch was elongated and thereby more likely to create bottlenecks for the cyclists as suppose to how the street is designed. If there were only parked vehicles in the designated parking spots it would be possible for moving vehicles to drive through the street causing fewer obstructions. Since they would be able to wait behind the legally parked vehicles until it is possible to pass without causing obstructions to the cyclists. Furthermore, the illegally parked vehicles combined with the curves of Mejlgade also makes it difficult for vehicles wanting to pass through to asses the volume of cyclists and whether it is possible to pass. Thus resulting in the second example shown on figure 19.

The parked vehicles also created obstacles for pedestrians as the sidewalk became narrower see figure 20. Most pedestrians chose to divert onto the roadway or the opposite sidewalk, as the passage left by the parked vehicles was too narrow for them to get through. Especially people with prams or strollers chose to walk on the roadway, as the outdoor serving made it difficult for them to stay on the opposite sidewalk as well. These obstacles can also be challenging for other user groups such as wheelchair users as they require a certain amount of space to navigate safely through the space. However, no wheel chair users or others with walking disabilities were observed in Mejlgade on the day of observation. This might be due to the challenges that the parked vehicles or outdoor serving poses for this user group. Though, it can also be due to the functions located in the street, which to a large degree are targeted a younger audience. Thereby not attracting an older audience and thus decreasing the likelihood of people with physical disabilities.

***Figure 20** Illegally parked vehicles takes up most of the space on sidewalk*

As the parked vehicles diverted pedestrians to the roadway it also became more congested when only pedestrians and cyclists were moving through the street. Though, the obstruction of traffic was not as profound when pedestrians and cyclists were sharing the

roadway, as they could navigate around each other. Only one observed incident indicated that a cyclist felt that a pedestrian was in the way. The cyclist rang the bell to signal a pedestrian with a pram to pull more to the side.

A reason behind illegally parked vehicles can be found in fact that the municipality was not able to signage the parking rules in the street but had to place them at the entrance to the street, Skt. Olufs Gade (Celis, 2016). Hence, the parking restrictions are not clear leading drivers to park unknowingly in the street. Furthermore it can be argued that the present of illegally parked vehicles can contribute to this misunderstanding.

Another place were obstruction of flow for cyclists occur is at the adjacent streets Graven and Skt. Olufs Gade. At Graven the obstruction occurs when vehicles wants to turn onto Graven from Mejlgade at the same time as cyclists wants turn onto Mejlgade from Graven, see figure 21.

***Figure 21** Pictures illustrating a situation where the flow of bicycle traffic is obstructed, as a vehicle has to turn onto Graven. The orange circle marks a group of cyclists who have come to a hold behind the turning vehicles.*

In this situation the vehicle has to wait for the cyclists from Graven to make space for it, while it is waiting to pass it is obstructing the flow for the southbound cyclists. The southbound cyclists who have to turn onto Graven either wait behind the vehicle or divert onto the sidewalk. For the cyclists continuing south their flow depends on the northbound frequency and whether they are turning onto Graven as well. If the frequency is high or if they are waiting to turn it becomes hard for the southbound cyclists to continue their journey. Furthermore, depending on the vehicle it can be difficult for the southbound cyclists to assess whether they can continue by using the northbound lane. This factor also influences the flow of the cyclists as it can force them to come to a hold because they cannot assess the situation from their position.

As the frequency of vehicles is rather low it the general flow for cyclists in Mejlgade is fairly undisturbed. However, as no interviews were conducted with cyclists in Mejlgade it is difficult to state to which degree the obstructions to the flow caused by vehicles are an

influencing their journey. Furthermore, whether it affects their experience of cycling through Mejlgade and their satisfaction with the current situation. A survey among the cyclists seeking to determine their experience and satisfaction could uncover the affect the obstructions have on their journey.

In situations were the cyclists are obstructed the design of the street with low curbs works well in order to ensure a better flow for cyclists. The design makes it possible for the cyclists to hold their momentum by diverting on to the sidewalk. Though, using the sidewalk is only possible if the volume of pedestrians is low, as a high volume also would create an obstruction for the cyclists.

6.1.1 Sub Conclusion of Flow

In general Mejlgade facilitate a somewhat undisturbed bicycle flow. Though obstructions do occur mainly in connection to vehicles. One situation found to create obstructions of flow is parked vehicles, both legal and illegally parked, as it causes the roadway to become too narrow to facilitate both bicycle and motorised traffic. The other situation is in regard to turning vehicles and mainly when turning onto Graven from Mejlgade at the same as oncoming cyclists have to turn onto Mejlgade. However the design of Mejlgade makes it possible for cyclists to divert onto the sidewalk thereby decreasing some of the obstructions. Though, this is only possible at times with low pedestrian volumes.

6.2 Urban Life Activities

This section seeks to examine what kind of urban life is carried out in Mejlgade. The analysis is based on mapping and timing of the stationary activities as well as more qualitative observations of the non-stationary activities. As the data is gathered through observations the objectives behind the activities are not uncovered and the activities are judge on their external necessity.

Throughout the day a variety of activities are carried out in Meljgade. As figure 22, see next page, shows the stationary activities are spread throughout the street, though, the highest level of stationary activity is located within the two points of observation and thus the observation area. These observations support the initial expectation and selection of observation area. Furthermore, the two predominant stationary activities observed in the street is people standing and people sitting outside cafés and restaurants. Which is why the bulk of the stationary activities are observed in relation to the restaurants and cafés located in the street. On the other hand only a few people were observed sitting on benches or secondarily. This might be due to the lack of non-commercial sitting possibilities in Mejlgade.

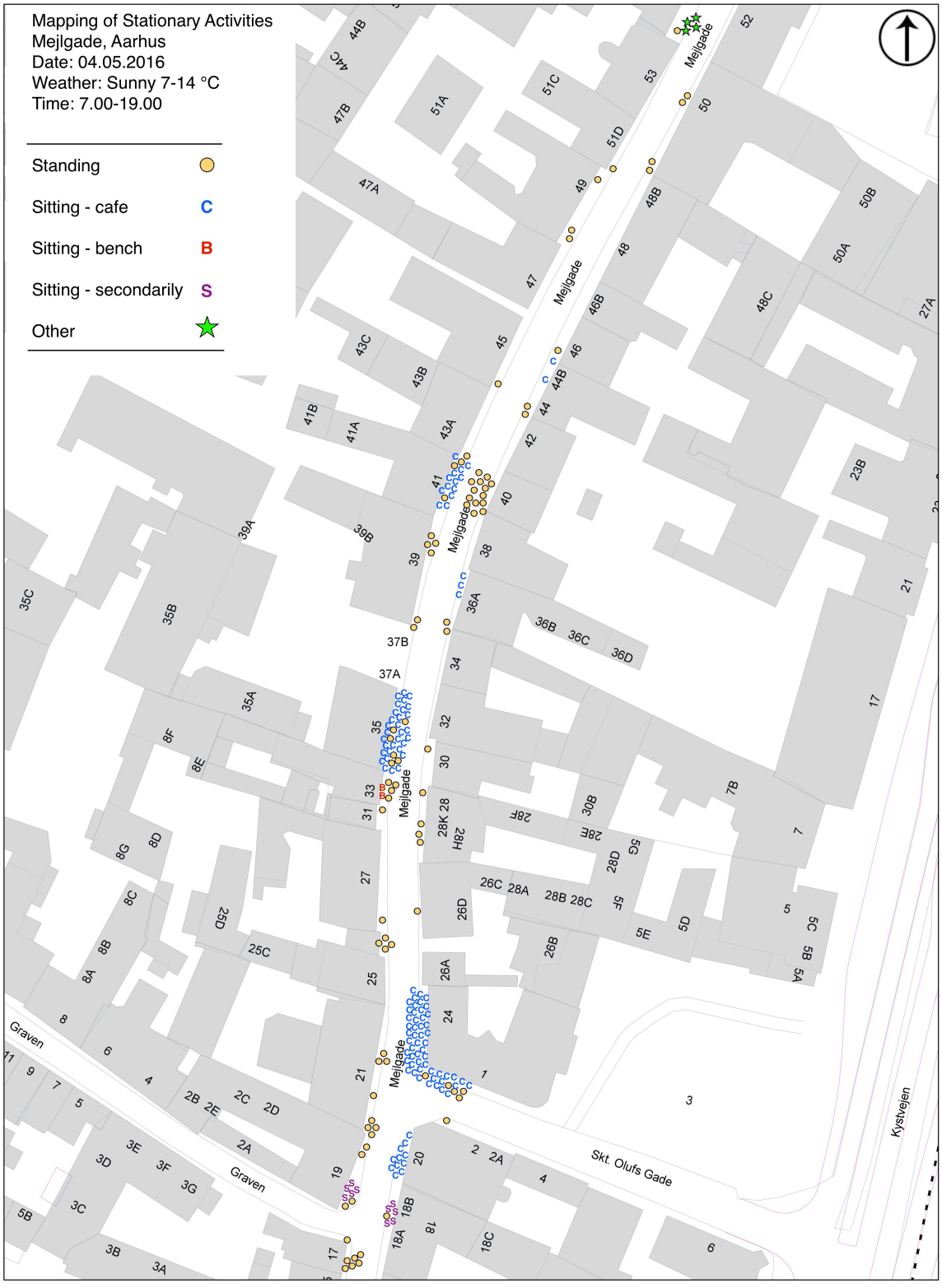

Figure 22 Illustration of the accumulated stationary activities in Mejlgade from 7.00 to 19.00

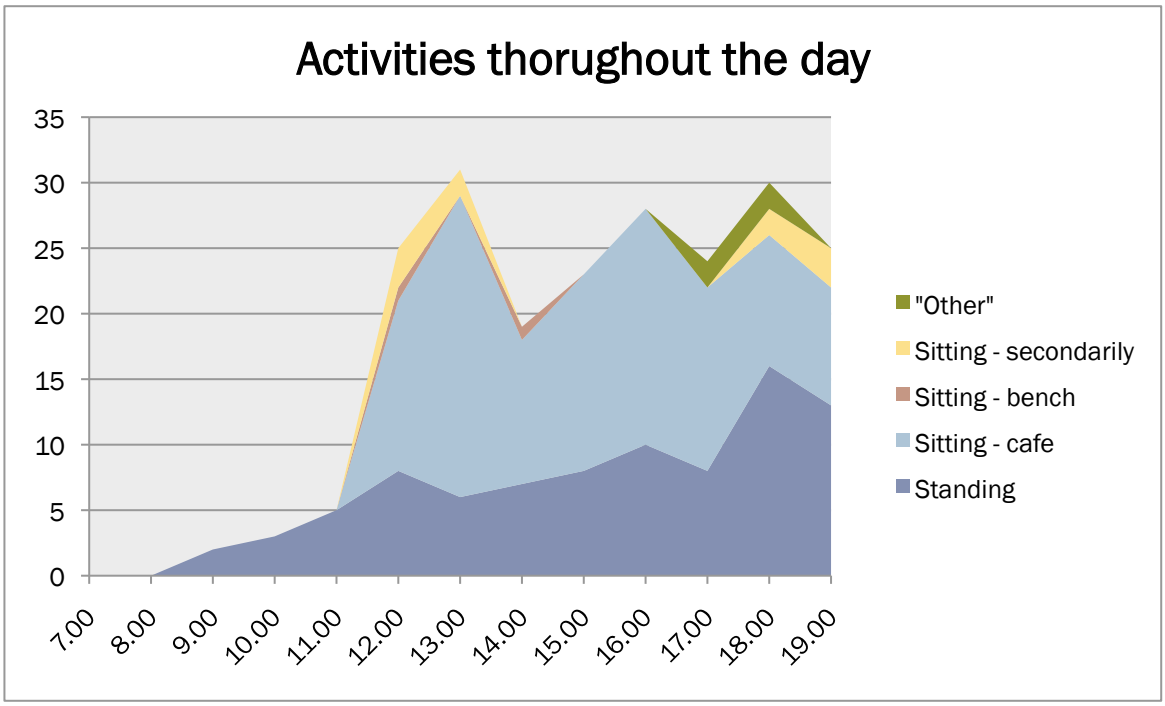

Figure 23 Diagram illustrating the different activities taking place in Mejlgade from 7.00 to 19.00

Looking at when the different activities take place during the day it becomes clear that before 12.00 the street mainly functions as a transit space with few stationary activities, see figure 23. In the hours between 7.00 and 12.00 the activities observed can be said to be mainly necessary activities. The people who were registered to be standing in the street was workers, though, their activity can be categorised as necessary it also had a social element, as they where observed to be having conversations. Besides the people registered as standing, people jogging through Mejlgade were observed. This activity was observed throughout the day, however, the frequency was highest in the first hours of the day (see appendix E). The activity of jogging can be said to be optional, however, as an optional activity it does not contribute very much to the experienced liveliness of the street, as its time span is transient.

At around 12.00 the street becomes livelier as people come the street to have lunch this can be seen in the number of people registered to sit outside restaurants and cafés as well as sitting on secondarily on steps in the southern part of the street. As the day progresses people continue to be observed sitting outside cafés and restaurants. Besides a peak at lunch hours a peak around 16.00 is also observed for this activity. The second peak is caused by people sitting outside the café Ris Ras having drinks, having conversations and people watching. After 16.00 the number of people sitting outside cafés and restaurants start to decrease and does not rise again in the evening in relation to dinnertime (18.00-19.00). Though, this might be due to the end time of the observation as it is possible that there could be rise again in the following hours. The many people registered to have lunch and afternoon drinks increases the amount of optional and social activities carried out in Mejlgade during the middle of the day.

Furthermore, after the morning hours the number of pedestrians increase and their way of walking through Mejlgade changes. The pace of most pedestrians slows down taking time to stop and look at windows or at the restaurants while walking through. Stopping for the later was mainly observed around lunch and dinner hours. Moreover, in connection with the drop of pace there was also an increase in people walking in pairs or groups. Thus increasing the social activity as well as decreasing the necessary activity of walking through the street. As the activity becomes more optional because of the change in objective and the extended time spend conducting the activity.

In the evening there is a third peak in stationary activity level. However, as mentioned it is not due to a rise in people sitting outside cafés and restaurants. Instead there is an increase of people standing. This is mainly due to people coming to Mejlgade to get take-out. The people registered to be standing is therefore mainly people queuing out on the street or people waiting as their own or their friends food gets prepared. As in the lunch hours people are once more registered to be sitting secondarily in the southern part of the street. However, the change in exposure to sunlight means that they now sit on the western side of the street oppose to the eastern side as they did during lunch hours. Another difference from lunch hours is that they are not sitting and eating but instead the reason for their stay is similar to the people observed standing.

Most of the registered and observed stationary activities can be said to be optional. However, some activities are placed lower on the necessity scale than others (Gehl, 1968). All of the sitting activities can be said to be optional, as they possess a recreational element. In regard to the people observed standing most of the activities can be said to be rather high on the necessity scale as they involve people standing looking at something, talking to people or on the phone or waiting to cross the street. Except the first activity they can all be considered necessary activities. Whereas the people looking at windows etc. are conducting an optional activity, though it is high on the necessity scale.

The average time spend by people standing is measured as approximately 3 minutes. Though the there is a large difference in the longest and shortest time spent on standing. For people looking at something and waiting to cross the street the duration of the activity is rather short many being 1 minute or less. Whereas people having conversations in the street are standing for longer one recording being more than 21 minutes. In relation to the average time of the other activities standing has the shortest duration time. People sitting outside cafés and restaurants stay for about 82 minutes. Whereas people sitting on benches or secondarily spend respectively approximately 13 and 11,5 minutes. Combining the average time spend with the number of people conducting the activity it becomes clear that the main contributor to the liveliness of Mejlgade are the people sitting outside cafés and restaurants, see figure 24.

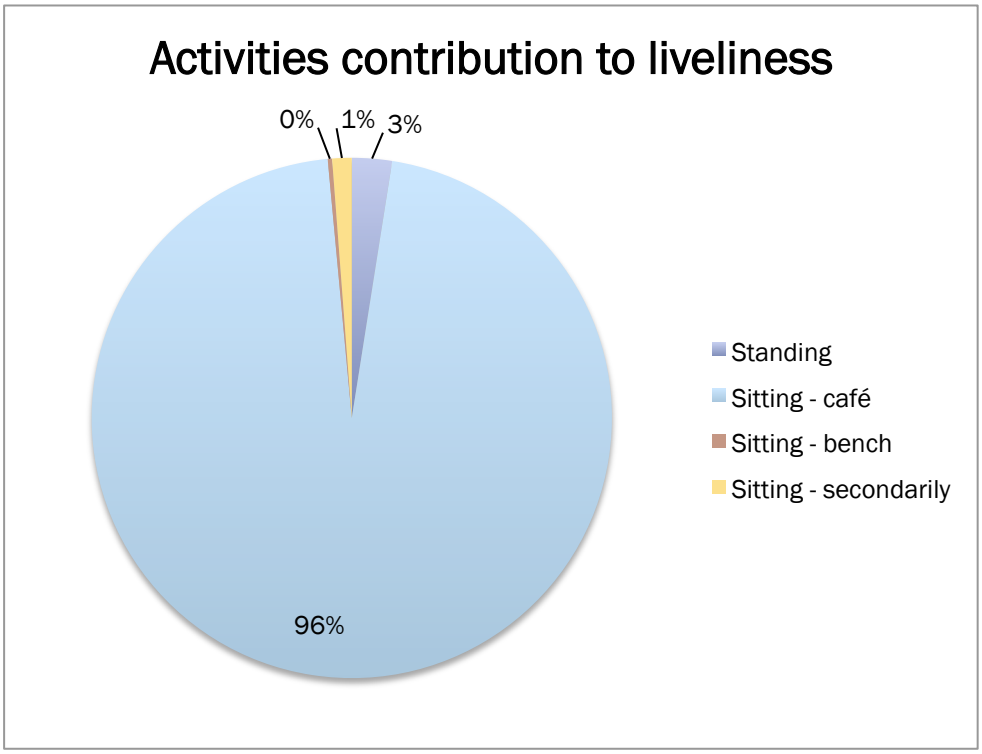

Figure 24 Diagram showing the total minutes spend on each activity

Furthermore, in terms of social activities it can be argued that there is a somewhat high level. Most of the stationary activities are conducted in pairs or groups, which means they are actively interacting with each other in conversation. Moreover, meetings between people who know each other beforehand also occurred e.g. meeting people sitting outside cafés on the way and stopping to have a conversation. Meetings or greetings between cyclists are also observed. Some of the cyclists stopped to talk to each other while others just greeted each other when passing.

6.2.1 Sub conclusion of Urban Life

Overall, the analysis of urban life conducted in Mejlgade shows that the activities are closely connected to the restaurants and cafés located in the street. These functions generate both optional and social activities. Since the activities are so closely connected to the before mentioned functions Mejlgade mainly functions as a transit space before the outdoor serving is put up and before people come to have lunch. Furthermore, it means that the urban life of the street is very determined by the weather and seasons as outdoor serving only makes sense when it is pleasant to sit outside. Especially since this activity accounts for the most minutes used in the street and thereby the main contributor to the experienced liveliness.

6.3 Interaction Between the Users

Interaction between the users of Mejlgade was observed and registered as different levels of conflict. To see if the overlap between flow and urban life can have negative consequences for either of the parameters. The analysis builds on the two previous analyses and the data collected in relation to conflicts both registrations and observations.

The dominating conflict level in Mejlgade is potential conflicts. The registered amount of interaction is higher in the area with the adjacent streets compared to the corridor section of Mejlgade. As there is a higher frequency of vehicles because Skt. Olufs Gade is the vehicles gateway to Mejlgade. The same can be said for pedestrian traffic as the adjacent streets generates creates a higher need to cross or step out onto the roadway. Over half the pedestrians are observed to orientate themselves before crossing or stepping onto the street. This indicates that they are aware of the potential risk involved in the action. However, it would be wrong to say that the street is perceived as unsafe as some observations indicate otherwise. People are observed to walk with dogs and children in the street, subjects which require a certain level of guarding and protection. A study of parents' protection level in regard to their children while walking in the city has shown that parents are more protective of their children in areas with other traffic than pedestrian traffic. In Mejlgade some children were observed to "run free", though, most adults walked hand in hand with the child. Still it do not seem that they are too worried, as the following example underpin:

> *"Mother and child walk hand in hand. The mother does not react when the child steps out on the roadway."* Appendix G

The same can be said for people walking their dog as similar situations like the example given above are observed. Also, one dog was observed walking with out a leash. These examples indicate that in general the street is perceived safe and with a low risk of conflicts for pedestrians.

However, the pedestrians' sense of safety also results in some more severe conflicts. In general the interaction between pedestrians and cyclists only generate potential conflicts with the exception of a few observed incidences. However, in the afternoon a serious conflict between a pedestrian and cyclist is observed. A cyclist falls over as a result of a collision with a pedestrian who did not orientate herself before crossing the street. The collision was not severe as it happened at a slow pace. The situation occurs at a time of the day where the frequency of cyclists is low and the pedestrian volume is increasing. Though these are estimates as actual numbers of pedestrian and cyclist flow is not recorded in this study. The occurrence of this serious conflict might indicate that a high volume of pedestrians can cause issues in bicycle streets. The guidelines for bicycle streets seem to focus mainly on the relation of volume between motorised and bicycle traffic. This can be due to the fact that in other countries bicycle streets are primarily implemented in residential areas with low pedestrian volumes. Though, it might be something, which requires further research if bicycle streets are to be implemented in places with a higher pedestrian volume such as in central urban areas.

Depending on the volume or frequency of cyclists their way of using the street changes. In times with low frequency they spread out. Cyclists cycle closer to the centre of the roadway and pedestrians does not orientate themselves as much as if the frequency is high. In times with high frequency pedestrians try to stay on the sidewalk and only step out on the roadway shortly if necessary. This indicates that the frequency of the bicycle traffic has an influence on the behaviour of the pedestrians. As figure 25 illustrates the same can be said for the urban life activities.

Figure 25 Two pictures showing how the activities become more restricted to the side walk when the frequency of cyclists is higher. The picture on the left is from around 12.00 and the one to the right is from around 17.30.

The picture to the right shows people looking at the menu of one of the restaurants during lunch hours where the bicycle frequency is low. The picture to the left shows people waiting outside a restaurant in the afternoon/evening where the bicycle frequency is higher. The two pictures indicate that at times with a higher frequency of bicycle traffic the urban life activities are confined within the boundaries of the sidewalk. Whereas if the frequency is low the activities are less confined. Thereby, it can be argued that the interaction between cyclists and pedestrians and thus the conflict management between the two user groups are to some extent self-organising. Meaning that they are enough aware about the presence of each other for it not to result in more serious conflicts.

Furthermore, other situations are observed which indicate that the transit aspect of Mejlgade has little affect the optional activities carried out. The first situation is observed at lunch in front of the restaurant Oli Bistro where two young women were having lunch. The outdoor serving area is arranged with two rows of tables, one just outside the restaurant and one closer to the roadway. The two women begin by sitting at a table furthest away from the roadway but when the table next to them becomes free they move to the table closest to the roadway and the passing pedestrians. The other situation is observed en the evening around the time when people come to get take-out. The situation is shown on figure 26 and shows two people sitting on the curb enjoying the sunlight while waiting for their food to be ready.

***Figure 26** Two people sitting on the curb enjoying the last sunlight while waiting for their take-out food to be prepared*

For people to almost sit on the curb they have to feel safe and not feel affected or threaten by the passing traffic neither the motorised traffic nor the bicycle traffic. Comparing the urban life carried out in Mejlgade to the urban life carried out in a street with mainly a motorised traffic flow it can be argued that the bicycle traffic has a positive affect on urban life. As it would be doubtful that a street of the same width with a high motorised traffic flow would be able to generate the type of urban life activities seen in Mejlgade. As the motorised traffic would be more likely to have a negative effect on the optional activities even at lower speeds. Moreover, comparing Mejlgade to a street with a flow primarily constituted by pedestrians it can be argued that the two streets can generate the same urban life. Though, the urban life carried out in Mejlgade is more restricted by where the activities are conducted than in a street with pedestrian flow. Based on the two theoretical comparisons it can be argued that the bicycle traffic flow has a positive or at least more positive affect on the urban life carried out in a street similar to Mejlgade. One of the reasons behind this might be the different rhythms of bicycle flow and the urban life activities. As the flow of cyclists as described in the aforementioned is highest in connection to the commuting hours, meaning in the morning and again in the afternoon. Though, the later is more dispersed over a longer time period than the morning flow. Whereas the stationary urban life activities are not observed to begin before around 12.00 in connection to lunch and then keeps a somewhat steady frequency throughout the rest of the day. The two rhythms are staggered and thereby not peaking at the same time except to some extent in the afternoon. Thus resulting in fewer conflicts between the two.

As described in the flow subchapter most of the interaction between cyclists and vehicles result in obstruction of flow for the cyclists. Thus the interaction also creates conflicts between the two road users. The conflicts are mainly potential as the cyclists or vehicles have enough time to react to the forthcoming collision. However, out of the few slight conflicts observed the majority are conflicts between cyclists and vehicles. One of the main places where the slight conflicts occur is where vehicles turn onto Mejlgade from Skt. Olufs Gade, as the following example illustrates.

> *"A vehicle suddenly turns onto Mejlgade from Skt. Olufs Gade at the same time as a large group of southbound cyclists approaches the intersection. Many of the cyclists have to break abruptly to avoid collision."* Appendix G

The fact that vehicles are the main cause for most of the obstructions of flow for cyclists as well as the reason behind the majority of the potential and slight conflicts between the two road users indicates that there still is a fight for the space in Mejlgade. Though, it might be less because of the lower volume of motorised traffic and the decrease in severity of the conflicts.

6.3.1 Sub Conclusion of Interaction

Generally the interaction between transit and urban life does not result in conflicts high on the seriousness scale constructed by Hydén (1987). Additionally, the analysis indicates that the staggered rhythms of the bicycle flow and the urban life activities reduce the likeliness of the occurrence of conflicts. Furthermore, the interaction between the cyclists and pedestrians mainly results in no or potential conflicts. The two users groups are aware enough of each other's presence, which leads to a self-organising conflict management. Thus avoiding more serious levels of conflict between them.

The analysis also indicates that bicycle traffic has a positive affect on the optional activities, and thereby the urban life. As different situations shows people making use of the roadway when conducting optional activities. Thereby concluding that bicycle flow does not have the same negative impact on urban life as motorised traffic flows does. However, the bicycle flow is found to at high frequency to confine the space of where the urban life activities take place.

7.0 Conclusion

The flow of cyclists follows the rhythm of commuting traffic flow, as it is highest in the morning and afternoon, though the later is more dispersed. In general the flow is fairly undisturbed. Though, obstructions do occur both in the corridor and intersection part of Mejlgade and mainly in connection to vehicles. Vehicles are found to obstruct the flow in two ways. One being creating an obstruction of flow when having to turn either onto or off Mejlgade at the same time as oncoming bicycle traffic. The other is in connection to both legally and illegally parked vehicles. As the parked vehicles create too narrow a roadway to facilitate both bicycle and motorised traffic. Furthermore, the parked vehicles forces pedestrians out on the roadway, which causes further congestion. When obstructions occur the low curbs are found to decrease the level of obstruction, as cyclists can divert onto the sidewalk. However, this is only possible at times with low volumes of pedestrian traffic.

The functions located in Mejlgade are primarily recreational and the main stationary activities are standing and sitting outside cafés and restaurants. However, most of the people observed standing is conducting necessary activities or optional activities with a high level of external necessity. Whereas people sitting in the outdoor serving areas of cafés and restaurants can be categorised as optional and the duration of the activity is found have the highest average time span. Thus making it the activity accounting for most minutes spent in the street and thereby the main contributor to the experienced liveliness. However, this also means that the urban life carried out in Mejlgade is very impressionable in regard to the weather conditions as well as seasons. The recreational functions located in the street are found to generate both optional and social activities. Moreover, as the activities are so closely connected to the recreational functions Mejlgade mainly functions as a transit space before the outdoor serving is put out and people come to eat lunch.

This means that the rhythm of flow and urban life are staggered. Thus resulting in a decrease of the likeliness of conflicts occurring between the different users of the street. In general the conflict level is low on the seriousness scale constructed by Hydén. Besides the staggered rhythms of flow and urban life it is found that the pedestrian and cyclist interaction is characterised by functioning as self-organised conflict management. Due to the low level of conflicts and the self-organised conflict management the flow of bicycle traffic is found to have a positive impact on the generating of urban life. Though at high frequencies of bicycle traffic the urban life activities becomes more confined to the sidewalk.

Based on the findings of the analysis the three criteria: flow, urban life and interaction between the two aspects. It is found that overall Mejlgade operates well as a bicycle street facilitating both bicycle flow as well as urban life. Though vehicles does obstruct the flow of cyclist.

8.0 Further Research

This chapter seeks to suggest further research based on the findings made in this report.

This study examines how well Mejlgade operates as a bicycle street based on flow, urban life and the interaction between the two. The main optional activity carried out in Mejlgade is found to be people visiting cafés and restaurants. Further research could examine another bicycle street with a more commercial profile, such as Frederiksgade in Aarhus. As such a profile might create a stronger need for pedestrians to move more freely. Thus causing more or a higher level of conflict between the transit and urban life aspects. Thereby being able to determine whether bicycle streets operates better in streets with functions, which generate a certain kind of urban life.

The design manual for bicycle streets published by CROW mainly focuses on the relation between bicycles and vehicles. However, a finding in this research indicates that serious conflicts are more likely when the flow of pedestrians is high. Thus knowledge about the critical mass in regard to the interaction between cyclist and pedestrians is needed in order to make recommendations for which streets are suitable to operate as bicycle streets. In the same way that there are recommendations in relation to motorised traffic.

The research find that the design of Mejlgade in regard to the low curbs helps facilitate the flow for cyclists as well as decrease the obstructions that occur in connection to vehicles. However, according to Pablo Celis the design creates too much of a highway effect for cyclist. Further research examining how to design a bicycle street so it facilitates flow but without creating a highway effect could be done. Thereby providing a design manual for bicycle streets located in city centres or other areas with commercial or recreational functions.

References

Aarhus Cykelby (2015) *Cykelhanlingsplanen*, [Online], Available: http://aarhuscykelby.dk/cykelhandlingsplanen/ [31.05.2016].

Aarhus Municipality (2007) *Cykelhandlingsplan: En plan for fremtidens cyklistforhold i Aarhus Kommune,* Aarhus: Aarhus Municipality.

Aarhus Municipality (2012) *Gadehygge I Mejlgade,* [Online], Available: https://www.aarhus.dk/da/omkommunen/nyheder/2012/2-kvartal/Gadehygge-i-Mejlgade.aspx?all=true [19.05.2016].

Aarhus Municipality (2016) *Grundkort,* [Online], Available: http://webgis.aarhus.dk/grundkort/kort.htm [19.05.2016].

Aarhus Stiftidende (2016) *Genbrugsvognen er landet I Latinerkvarteret*, [Online], Available: http://stiften.dk/aarhus/genbrugsvognen-er-landet-i-latinerkvarteret [02.06.2016].

Adopt-A-Box (2012) *Mejlgade – You're the best,* [Online], Available: http://adoptabox.blogspot.dk/2012/03/mejlgade-youre-best.html [19.05.2016].

Arain, S and Arain, A. (2015) *National Highways and Motorway Police in Pakistan: An Illuminative Study,* Hyderabad: Lulu.com.

As Easy as Riding a Bike (2014) *Not everything the Dutch do is transferable*, [Online], Available: https://aseasyasridingabike.wordpress.com/2014/04/15/not-everything-the-dutch-do-is-transferable/ [24.05.2016].

As Easy as Riding a Bike (2015) *A Superhighway that isn't*, [Online], Available: https://aseasyasridingabike.wordpress.com/2015/02/18/a-superhighway-that-isnt/ [24.05.2016].

Bogner et. al (2009) *Interviewing Experts*, Basingstoke: Palgrave Macmillan.

Celis, P. (2012) *Cykelgader – nu også i Danmark*, Trafik og Veje, June/July, pp. 16-17.

Celis, P. (2016) *Interview by Larsen, M.L.* [In person], Aarhus, Conducted 27.05.2016.

Copenhagenize (2012) *Danish Bicycle Infrastructure History*, [Online], Available: http://www.copenhagenize.com/2012/02/danish-bicycle-infrastructure-history.html [01.06.2016].

CROW (2007) *Design Manual for Bicycle Traffic*, Utrecht: CROW

Flyvbjerg, B. (2006) *Five Misunderstandings About Case-Study Research*, Qualitative Inquiry, vol. 12, no. 2, April, pp. 219-245.

Gehl, J. (1968) *Mennesker til fods*, Arkitekten, no. 20, pp. 442

Gehl, J. (1986) *"Soft Edges" in Residential Streets,* Scandinavian Housing and Planning Research, vol. 3, pp. 89-102.

Gehl, J. (2010a) *Byer for mennesker*, København: Bogværket.

Gehl, J. (2010b) *Cities for People*, Washington: Island Press

Gehl, J. and Svarre, B. (2013a) *Bylivsstudier*, København: Bogværket

Gehl. J and Svarre, B. (2013b) *How to Study Public Life*, Washington: Island Press

Grøn, T. (2013) *København skal have sin første cykelgade,* Politiken, 11. June, [Online], Available: http://politiken.dk/kultur/ECE1993249/koebenhavn-skal-have-sin-foerste-cykelgade/ [23.05.2016].

Harvard University (2016) *Promoting Cycling and Walking for Sustainable Cities: Lessons from Europe and North America,* [Online], Available: http://www.gsd.harvard.edu/#/media/promoting-cycling-and-walking-for-sustainable-cities-lessons.html [01.06.2016].

Hydén, C. (1987) *The development of a method for traffic safety evaluation: The Swedish Traffic Conflicts Technique*, Lund: Lund Institute of Technology Department of Traffic Planning and Engineering.

Institute for Road Safety Research (2012), *SWOV Fact Sheet: Subjective Safety in Traffic,* [Online], Available: https://www.swov.nl/rapport/Factsheets/UK/FS_Subjective_safety.pdf [22.05.2016].

Jacobs, J. (1992) *The Death and Life of Great American Cities*, Reissue Edition, New York: Vintage

Knjazeva, H. (2015) *Bicycle Street*, Aalborg: Aalborg University.

Meng, A. and Mikkelsen, T. (2015) *Uhensigtsmæssig adfærd blandt cyklister*, [Online], Available: https://www.cyklistforbundet.dk/cykelviden/Artikler-og-videnblade/Uhensigtsmaessig-adfaerd-blandt-cyklister [28.05.2016]

Presto (2016) *Promoting cycling for everyone as daily transport mode*, [Online], Available: https://ec.europa.eu/energy/intelligent/projects/en/projects/presto [01.06.2016].

Soy, S. (1997) *The case study as a research method*, [Online], Available: https://www.ischool.utexas.edu/~ssoy/usesusers/l391d1b.htm [30.05.2016].

Tiny Pic (2016) *Images*, [Online], Available: http://tinypic.com/view.php?pic=f1f4p0&s=8#.V0Qoq1cf-ys [24.05.2016].

Vejdirektoratet (1995) *Vejledning I manuelle trafiktællinger*, København: Vejdirektoratet.

Visit Aarhus (2016) *Latinerkvarteret,* [Online], Available: http://www.visitaarhus.dk/latinerkvarteret-gdk653391 [19.05.2016].

Walker, L et. al (2009) *Fundamentals of Bicycle Boulevard Planning & Design*, Portland: Center for Transportation Studies, Portland State University

Weitemeyer, B. (2006) *Cyklister I gågader*, Trafikdage på Aalborg Universitet, Aalborg

Appendix

Appendix A: Interview Guide – Pablo Celis, Transport Planner at Aarhus Municipality

- Vil du starte med at forklare lidt om Aarhus Kommunes generelle cykelstrategi og hvordan Mejlgade spiller ind i den?

- Hvad var motivationen bag omdannelsen af Mejlgade?
    - Hvilke problematikker ledte til omdannelsen?

- Hvilke mål har i haft med omdannelsen? – er de opnået?

- Har der været en evaluering af projektet? Hvis ja, hvilke parametre er projektet blevet målt på?
    - Er antallet af cyklister/fodgængere i Mejlgade steget efter omdannelsen? Hvad tror du grunden til det er?

- Hvilken feedback har i fået fra borgere, beboere, restauratørne og andre brugere af gaden?

- Hvordan kom i på ideen om at lave en cykelgade? Arbejdede i med andre alternativer?
    - Hvorfor lede cyklisterne ad Mejlgade og ikke af Kystvejen?

- Hvilke overvejelser gjorde i jer i forhold til at konceptet tidligere hovedsagligt havde været benyttet i boligområder og ikke i tæt by?

- Hvilke overvejelser havde i med hensyn til designet af gaden?

- Har i kendskab til konfliktsituationer mellem nogle af trafikanterne i gaden? Hvordan opstår de? Hvor opstår de? Hvor alvorlige er de?

Appendix B: Interview with Pablo Celis, Transport Planner at Aarhus Municipality

MLL: *Hvis du vil starte med at forklare lidt omkring Aarhus' overordnede cykelstrategi og hvordan Mejlgade spiller ind i den.*

[00:00:11]

PC: Ja, det er jo en lang historie. Aarhus har jo i mange år gjort en hel del for at få flere til at cykle, men noget af det vi har satset meget på inde i midtbyen det er at etablere en cykelring for at få folk til at cykle rundt i. Den bliver forbundet til alle vores oplands byer via seks hovedruter ud til byerne og der er Mejlgade så en af dem, som en central indfaldsvej til vores cykelring. Så det er derfor den er med i vores cykelstrategi.

[00:00:39]

MLL: *Hvis vi går videre til hvad motivationen har været for omdannelsen af Mejlgade.*

[00:00:43]

PC: Ja, altså Mejlgade var jo før en ganske almindelig trafikeret lokalvej, som betjente det her område og som var en vej med ensrettet biltrafik og der var parkering og der var smalle fortov og rigtig rigtig mange cyklister. Problemet var at der var så meget kamp om arealerne, at det var ikke godt for nogen. Det vi kunne se var at hvis vi skulle prioritere det her for cyklister, så blev vi nødt til at gøre et eller andet anderledes i hvert fald. Vi havde ikke plads til at bygge cykelstier, så vi opfandt simpelthen Danmarks første cykelgade. Altså en stor bred cykelsti, hvor du, som cyklist skal cykle midt på gaden og bilerne skal holde bagved cyklisterne og på den måde så har vi kunne gøre fortovene bredere.

[00:01:24]

MLL: *Så var der problematikker med trafikanter der kom i karambolage med hinanden?*

[00:01:30]

PC: Ja, altså også fodgængere som ikke havde plads på fortovet, som blev nødt til at træde ud på kørebanen, hvor der så kom cyklister og biler. Så totalt kaos for alle.

[00:01:43]

MLL: *Hvad for nogle mål har i haft med omdannelsen?*

[00:01:45]

PC: Altså, det var helt primært at skabe bedre fremkommelighed for fodgængere og cyklister og få minimeret antallet af ulykker og mængden af gennemkørende trafik. Før der var der nogle parkeringspladser her på gaden, som folk forsøgte at finde, og det skaber bare en masse unødigt trafik. Og vi kan se i hvert fald på de forløbende evalueringer at mængden af cyklister er steget, mængden af gennemkørende trafik er faldet og mængden

af ulykker er også faldet.

[00:02:18]

MLL: *Har i andet data, nu tænker jeg når der er så mange cafeer, var de der også før eller er der sket en udvikling?*

[00:02:24]

PC: Nej, altså der var lige så meget cafeliv som der var før, men der er mere cafeliv udendørs nu end der var før. Blandt andet de restauranter der ligger lige hernede de har jo lige pludselig fået plads til at lave udeservering det havde de ikke før. Så nu sidder der rigtig mange folk her i aften timerne og når der er sol og især i sommertiden. Men det er jo ikke noget vi måler på som sådan.

[00:02:46]

MLL: *Så mener du at de mål i har haft med omdannelsen er opnået?*

[00:02:51]

PC: Helt sikkert, plus lidt mere.

[00:02:56]

MLL: *Nu snakkede du lidt om at i har set at antallet af cyklister er steget, har i haft nogen evaluering af projektet?*

[00:03:01]

PC: Nej, altså kun den løbende evaluering som vi laver baseret på hvad vi ser når vi cykler forbi og det data vi har omkring ulykker og sådan noget. Så er vi ret meget i tæt dialog med folk der arbejder og bor hernede omkring problemstillinger. For der er også opstået nye problemstillinger, som følge af det her og det bliver vi nødt til løbende at få rettet op på.

[00:03:21]

MLL: *Hvilke problemstillinger er det?*

[00:03:22]

PC: Ulovlig parkering. Når man har så smal en vejprofil så skal der ikke ret mange ulovlige parkeringer til før du så har skabt kaos igen. Fordi så er der ikke ret meget plads til folk der skal forbi. det er et ad problemerne. Et andet problem er at 5-8 % af cyklisterne kører med alt alt for høj fart igennem og det ødelægger det for alle andre. Hvor det før var svært for cyklister at komme forbi, så er det faktisk nu blevet svært for bilerne at komme ind og ud af deres ejendomme fordi der er så mange cyklister. Så det er tre nye problemer, som man kan sige at vi har skabt, som vi så må arbejde på.

[00:03:51]

MLL: *Hvordan arbejder i med dem?*

[00:03:53]

PC: Dels skal vi have farten ned, altså det er helt klart for alle trafikkanter især de der 5-8-10 % cyklister vi har hernede. der kommer til at køre nogle kampagner og der bliver lavet nogle fartzoner inde i hele midtbyen fordi vi har et generelt problem med folk der har for travlt inde i midtbyen. Til sommer kører vi bl.a. en kampagne hvor der vil blive sat klassisk musik på hele gaden i morgentimerne for at signalere til folk at her skal man altså tage farten af og nyde byrummet i stedet for bare at fræse igennem.

[00:04:27]

MLL: *Hvordan kom i på ideen om en cykelgade?*

[00:04:30]

PC: Jamen, cykelgaden findes i jo Holland og de findes i Tyskland og jeg har været på adskillige studieture og det undre mig bare at et land som Danmark med så mange års cykelkultur ikke havde cykelgader. Så det tænkte jeg det skulle vi i hvert fald have prøvet af. Vi har jo ikke det rigtige cykelgade skilt endnu, fordi vi ikke fik lov til at bruge det af Vejdirektoratet og Justitsministeriet. Vi har så bare skiltet som dobbeltrettet cykelsti og så have færdsel på den og i princippet og det må man jo ikke. Men der er efterfølgende kommet et officielt cykelgade skilt og det er jo begyndt at komme i andre byer også.

[00:05:02]

MLL: *Havde i andre alternativer i arbejdede med i forbindelse med cykelgaden?*

[00:05:10]

PC: Nej, det var det eller cyklisterne væk, fordi der er simpelthen ikke plads til det.
[00:05:18]

MLL: *Det leder op til mit næste spørgsmål. Når man har Kystvejen hernede hvilke overvejelser der har været i forbindelse med at flytte cyklisterne dertil eller beholde dem i Mejlgade?*

[00:05:27]

PC: Altså, Kystvejen er meget stærkt trafikeret. altså udover genen ved osen og at det ikke er særlig attraktivt at cykle dernede, fordi du ikke rigtigt oplever noget som cyklist. Så har du også en masse kryds hvor du har potentielle ulykker. Helt naturligt vælger folk den rute hvor der er flest oplevelser - noget at se på, især folk der sidder ude og drikker kaffe og alt det der. Så helt naturligt søger de ind på Mejlgade. Derfor kan vi ikke bare tage dem og så sige at de skal cykle dernede. De vil søge herind.

[00:05:58]

MLL: *I forhold til den viden jeg har om cykelgade konceptet så er det et koncept der mest har været brugt i beboelsesgade og ikke så meget i centrale bycentre. Havde i gjort nogle overvejelser i forhold til at flytte konceptet fra beboelsesgade til en bygade?*

[00:06:19]

PC: Ja, altså vi har også lavet cykelgade oppe på Frederiksgade, som er lidt mere bygade og nu er vi ved at omdanne hele vores cykelring til cykelgader. Det er vi faktisk lige gået i gang med nu, der er en masse gravearbejde i gang. Så vi udspreder faktisk konceptet til hele byen. Plus vi udbreder også konceptet til uden for byen, så det ikke hedder cykelgader, men cykelveje.

[00:06:39]

MLL: *Men kan i se forskel på hvordan gaderne, Frederiksgade og Mejlgade, bliver brugt?*

[00:06:48]

PC: Ja, det kan man godt. Altså, Mejlgade er lidt speciel fordi her der er man mere aggressiv, fordi vi har lagt den røde løber ud for cyklister. Det er helt tydeligt og det er fejl, kan man sige, som vi har lært af og som vi ikke begår igen når vi bygger hele cykelringen om. Der bibeholder vi bare vejen som den er og så skilter vi dem bare som cykelgader og etablere cykelsymboler på cykelbanen og ikke andet. Fordi på den måde tror vi på at folk respekterer hinanden mere og der er en eller anden form for interaktivitet imellem dem, når de bevæger sig i trafikken. Det er der knap så meget af her, fordi man har fået udlagt den her røde løber.

[00:07:26]

MLL: *Så det er designet af selve gaden der har gjort det?*

[00:07:30]

PC: Ja, men vi blev nødt til at gøre det meget stringent det her fordi det var noget vi ikke havde fået lov til at lave. Vejdirektoratet havde ikke godkendt det. Justitsministeriet havde heller ikke godkendt det. Så derfor skulle alle rammer så godt som på plads i forhold til vigepligt og alle de her ting. Derfor blev vi nødt til at designe det på den her måde. Det er også blevet fint nok.

[00:07:51]

MLL: *Hvad for nogle hensyn har i taget i forhold til designet? De billeder jeg har set fra andre steder har det været noget med rød asfalt, hvor man har gjort endnu mere opmærksom på at der har været noget.*

[00:08:02]

PC: Altså, det her nogle meget ømtålelige byrum. Hvor det måske ville ødelægge byrummet hvis man klatter en farve ud over, det har været et hensyn. Et andet hensyn har været at fortovene skulle laves i asfalt så man ikke havde de der opbrydninger og mere

havde en jævn belægning og opfattede det som en samlede væg til væg belægning. Bl.a. også fortovskanten er ikke særlig høj her, normalt så vil den jo være 9-12 cm høj, men det er sådan set også for at give et indtryk af at her bevæger du dig på en helt anden flade, hvor du skal tage hensyn på andre måder end du ellers ville. Samtidig er der også mulighed for at cykle op over den der kant uden at vælte, i princippet, og som fodgænger kan du også lige køre barnevognen ned uden at vælte.

[00:08:48]

MLL: *Når jeg hør det kommer jeg tænke lidt på designprincipperne for shared space, hvor man bevæger sig på fodgængernes præmisser. Det kunne godt lyde til at designet også bære præg af at man har tænkt fodgængere ind i cykelgaden.*

[00:09:01]

PC: Ja ja. Det har man også, men man kan ikke lave et shared space med mindre at fodgængerne er dominerende, fuldstændig, altså som 80 %. Så kan du lave shared space, men ellers så kan du ikke. Så her er der en meget god balance mellem cyklister og fodgængerne.

[00:09:24]

MLL: *Vi har været lidt inde på hvilke konflikt situationer der er i dag. Ved du om der er nogle steder hvor de opstår mere end andre?*

[00:09:33]

PC: Konflikterne? mellem fodgængere og cyklister eller bare generelt?

[00:09:38]

MLL: *Begge dele.*

[00:09:39]

PC: Jamen, det er primært modkørende cyklister, som kommer i mod trafikken som kommer for hurtigt, som er konflikten i forhold til biler og cyklister. Det er den primære konflikt. Der er stort set ingen konflikter mellem fodgængere og cyklister. Der er selvfølgelig fodgængere som tror det er en gågade, som går der ude [på kørebanen] og hvor cyklisterne ringer med klokken og sådan noget. Så det er ikke sådan at du har decideret konflikter som sådan.

[00:10:13]

MLL: *Det vil sige der hvor der er konflikter mellem bilister og cyklisterne. Er det mest ved de tilstødende veje?*

[00:10:23]

PC: Nej, også på fristrækning. Faktisk primært på fristrækning. Men også her hvor bilerne

køre ud, fx lige her [Sankt Olufs Gade]. Der forventer de ikke at der kommer cyklister i begge retninger i så stort antal og i så høj fart. Det overvejer vi at løse ved bl.a. at lave en hævet flade i det kryds der, så alle kommer ned i fart.

[00:10:43]

MLL: *Hvorfor er der kun lavet cykelgade på en del af Mejlgade?*

[00:10:54]

PC: Ja, fordi det primært har været den her strækning der har været problematisk. Lige så snart du kommer derhen så har du stort set ingen biltrafik ingen parkerede biler og stort set ingen fodgængere. Der er masser af plads det behøver vi ikke at lave om på. Det var primært den her strækning der var problematisk og det er derfor vi har fokuseret på den.

[00:11:15]

MLL: *Hvor alvorlige er de konflikter der er i dag i forhold til før?*

[00:11:19]

PC: De er meget mindre. De er meget mindre alvorlige.

[00:11:26]

MLL: *Jeg har sådan set ikke så mange flere spørgsmål. Jeg tænker om der er andet om gaden som du godt kunne tænke dig at fortælle mig om? Der er jo ikke så meget litteratur. Jeg har læst artiklen fra Trafik og Veje ellers har jeg ikke så meget andet information om gaden.*

[00:11:44]

PC: Altså, der sker ikke så meget nyt på Mejlgade, som måske allerede, nu får vi ikke lov at prøve af hen over sommeren, det er faktisk at introducere et flexgade princip. Det er der med at gå lidt væk fra at tænke gaders funktion, som noget statisk over hele året, fordi det egentlig ikke giver mening. For en gade kan jo have en eller anden funktion når det er sommer og når det er vinter. Den kan have en anden funktion om det er en hverdag eller en weekend. Så tanken var faktisk at lave Danmarks første flexgade hernede. Hvor vi i weekenden skilter den til gågade, og så tillader servering helt ud til kørebanen. Så må man ellers bare sive igennem som trafikkant, for der er jo ikke ret mange trafikkanter i weekenderne og behovet for at sidde ud det er jo stort i weekenderne, og især i sommermånederne. Så det er noget af det som vi prøver at indarbejde i en udvidelse af konceptet, som cykelgade. Netop fordi vi er så langt nede i biltrafik at det begynder at give mening at arbejde med sådan nogle typer. Men ellers har vi jo ret meget dialog med folk hernede. Der er jo ligeså mange som er trætte af det som er glade for det. Det er lidt afhængigt af hvem du spørger. for hvis du kører i bil til dagligt og skal ind og ud af din port, så er du pisse træt af det. Men de har fået en helt anden gade der ikke larmer så meget, det skal man også tænke på. Folk de dytter ikke, der bliver ikke kørt aggressivt. Men et helt stort problem det er altså ulovlige parkeringer, og det ødelægger altså gaderne temmelig meget.

[00:13:18]

MLL: *Har man tænkt løsninger? Er det mere parkeringsvagt eller et andet design?*

[00:13:24]

PC: Jamen, det hjælper ikke engang, for vi har stort set parkeringsvagter hernede hele tiden. Der er nogle der simpelthen bare kalkulere med at det koster en p-bøde at parkere i Aarhus. Så parkere de herude og så går de til møde osv. og så koster det dem 600 kr. i afgift. Så det er lidt svært, så vi skal have fundet på et eller andet rent fysisk kan undgå at folk parkerer her. Måske skulle man have tænkt cykelgaden endnu snævrere end den er. For på den måde at lave nogle fysiske foranstaltninger langs vejen, som så gør at du ikke kan køre op over. Så hvis du parkerer på vejen så holder du i vejen for alle andre biler. Og når der først er en bil der dytter af dig så har man det med at flytte sig. Det er sådan nogle ting man må arbejde med. Men ellers helt overordnet, så synes vi det er en pisse god ide. Det er også derfor vi er i gang med at bygge de næste 2 km cykelgader.

[00:14:15]

MLL: *Hvad er den største forskel på Frederiksgade og Mejlgade?*

[00:14:19]

PC: Mejlgade er mere en trafik vej, som så er begyndt at blive mere et bylivs eller byrums livs gade. Altså, Frederiksgade er jo en handelsgade, så folk går jo på tværs. Den er sådan lidt speciel, også fordi mange ikke tolker den som en cykelgade. Det vil sige vi har rigtig mange fodgængere som går på tværs ind over det ene og det andet. Det giver så også nogle specielle konflikter, men det går, folk slår sig jo ikke ud af det. De finder ud af at smile til hinanden eller råbe af hinanden eller hvad de nu gør, så det fungere meget fint. Altså, i Næstved har de lavet cykelgader på en mere traditionel vej, som er dobbeltrettet biltrafik og dobbeltrettet cykeltrafik. den de har lavet i København er sådan set en tro kopi af den her [Mejlgade]. Men Vejdirektoratet prøver jo stadigvæk af, der skal jo laves en vejregl omkring det. De har givet dispensation til at man kan bruge cykelgade skiltning, med en bekendtgørelse og alle de der ting, men nu er det så tanken at man skal have prøvet en masse forskelligt design af til at finde ud af hvad der giver mest mening. Vi er på vej med også at lave cykelgade på Guldsmedegade, som også er en speciel handelsgade, hvor der så i tillæg er parkering på begge sider af gaden, som vi så fastholder. Så vi prøver os frem.

Appendix C: Interview Guide for Follow-up Phone Interview with Pablo Celis

1) I interviewet taler du om nogle målinger af cykeltrafikken og ulykker. Hvilke specifikke målinger har I foretaget i Mejlgade efter omdannelsen, hvordan er de udført og er det muligt at finde dem nogen steder?

2) I relation til dette taler du også om at der er et problem med at 5-10 % af cyklisterne kører for hurtigt igennem gaden. Er dette et estimat baseret på observationer eller bygger det på målinger?

3) Du fortæller i interviewet at I ikke har målt på byliv. Er der andre afdelinger i kommunen, som har vist interesse for projektet eller er det udelukkende blevet set som et trafikalt projekt?

4) Cyklister bliver karakteriseret som en trafikantgruppe, der helst ikke ønsker at stoppe og derfor søger at blive ved med at holde momentum. Derfor kan man argumentere for at for meget friktion, der kan forstyrre dette momentum, kan gøre en strækning uattraktiv for cyklister. Til gengæld kan friktionen være med til at nedsætte hastigheden hos cyklisterne.

Hvad er din holdning til dette i forhold til Mejlgade og cykelgader generelt?

I forlængelse af ovenstående, hvad er hovedformålet med en cykelgade - at prioritere cyklisternes fremkommelighed ved at skabe en korridor eller give mulighed for udfoldelse af et mere mangfoldigt byliv?

5) I er ved at udbrede konceptet til forskellige gader i og uden for byen. Tager I forskellige hensyn i forhold til, hvor cykelgaderne etableres eller er det generelt det samme design, der implementeres alle steder?

Hvis der tages hensyn, hvilke hensyn tages der så i forhold til design?

Hvilke gader vælger I til omdannelse? Er det de mest væsentlige ruter og hvad er fordelen ved cykelgader fremfor cykelstier - er det primært et spørgsmål om plads eller er der andre fordele (her tænker jeg særligt på de planlagte omdannelser udenfor byen)?

Appendix D: Follow-up Interview with Pablo Celis, Transport Planner at Aarhus Municipality

MLL: *I interviewet (det tidligere, red.) snakker du om, at der er foretaget nogle målinger af cykeltrafikken og ulykker i Mejlgade, hvad er det for nogle specifikke målinger der er blevet foretaget dernede?*

[00:00:34]

PC: Det har været trafiktællinger af cykeltrafikken dernede og har været tællinger af biltrafik, og så har vi jo så lidt uheldsregisterring dernede både fra politiets data og skadestueregisterringer.

[00:00:47]

MLL: *Okay. De der trafiktællinger af antal cyklister og bilister, hvor kan man finde det henne, hvis man skal bruge det?*

[00:00:54]

PC: Det kan du finde… Jeg tror at hvis du går ind på hjemmesiden www.århus.dk og så via den der hedder 'borger', så er der en der hedder 'trafik', og så hedder den 'trafik tal' tror jeg nok. Så kan du gå ind og se et kort over trafik mængder inde på bestemte strækninger i byen.

[00:01:20]

MLL: *Super! I den forbindelse snakker du også om, at der er et problem med 5-10% af cyklisterne, der kører for hurtigt gennem gaden, er det også noget i har målt dernede?*

[00:01:29]

PC: Nej nej, det er bare baseret på skøn.

[00:01:33]

MLL: *Derudover snakker du også om, at der ikke er målt på byliv dernede. Så kom jeg til at tænke på efterfølgende om projektet, er udarbejdet hovedsageligt som trafikprojekt eller der har været andre afdelinger inden for kommunes planafdeling, som har været med eller haft interesse for projektet?*

[00:01:54]

PC: Ja altså, det er jo primært et trafikprojekt, som vi også har haft vores by arkitekter på.

[00:02:01]

MLL: *Okay, er det så udviklet sådan at det er med i en større vision for selve området eller er det bare det her specifikke projekt?*

[00:02:09]

PC: Nej, det er lige præcis for den her gade.

[00:02:14]

MLL: *Så hvis vi går videre, så har jeg også nogle andre ting, som jeg kom til at tænke på efterfølgende, efter jeg også havde været nede og observere. Hvis man tager cyklister, som udgangspunkt, så er det jo en trafikgruppe der er karakteriseret af at de gerne blive ved med at holde sig i gang, holde momentum når de bevæger sig. Min tankegang er så lidt, at hvis der er meget friktion, så kan det være uattraktivt at køre på en strækning, altså hvis der er for mange stop, og samtidig kan friktionen også være med til at nedsætte hastigheden hos cyklisterne, som for eksempel i forbindelse med de hurtige cyklister. Mit spørgsmål er egentlig, hvad er jeres, eller din holdning, til det i forhold til Mejlgade, men også cykelgader generelt. Altså hvor meget friktion, kan man ligesom tillade eller hvor meget er okay i sådan en gade?*

[00:02:57]

PC: Altså det der giver mening… Jeg prøver jo i høj grad, for vi er jo ved at omdanne store dele af vores cykel ring til cykelgader, og jeg prøver jo at indføre, det jeg kalder en naturlig friktion, at man møder så mange oplevelser, at selve strækningen som sådan ikke indbyder til at det bare er noget der skal overstås, noget der bare skal cykles hurtigt igennem. Altså hvis man cykler nede langs Graven, der har du jo folk der sidder næsten ude på gaden og spiser og drikker kaffe og sådan noget, og det gør bare at man som cyklist helt naturligt, og også som bilist, tager farten af og respekterer byrummet og oplever byrummet som noget positivt, og noget der beriger din cykel oplevelse, når du nu kører igennem. Det er jo lidt der vi skal hen, når vi bygger nye cykelgader, fordi det er nok det der måske lidt er problemet med Mejlgade, der er lagt for meget rød løber ud, det er for attraktivt bare at blæse igennem. Altså det giver ikke mening at tage farten af og opleve gaden for eksempel, og det er jo sådan det vi arbejder på nu, hvordan vi kan få nogle elementer ind i Mejlgade, som gør at man naturligt, tænker…

[00:04:07]

MLL: *Ja, Du siger naturlig friktion, hvad ville eksempler være på unaturlig friktion?*

[00:04:17]

PC: Altså hvad unaturlig friktion ville være?

[00:04:19]

MLL: *Ja, hvis man siger at den friktion man godt kunne tænke sig, måske relaterede sig til det byliv der bliver levet i gaden*

[00:04:25]

PC: Det ville jo nok i sidste ende være det sidste greb at sætte cyklist bump på gaden, det ville jo være en slags unaturlig friktion, hvor du tvinger cyklisterne ned i fart, men også gennem ubehag ved at skulle gøre det.

[00:04:45]

MLL: *Hvad med interaktion mellem bilister og cyklister? For eksempel nu var jeg nede og observere, og kunne se at når for eksempel bilisterne skulle forbi parkerede biler, og især også de ulovlige parkerede, så var det som om at det næsten var hele vejbanen der blev brugt, og der var ikke rigtig plads til andre, hvordan vil man karakterisere det? For det er måske nødvendig friktion, at der skal være plads til alle trafik former, men…*

[00:05:12]

PC: Ja, men det er en unødvendig friktion i at det er et udtryk for at vi ikke har designet gaden godt nok, fordi de der ting sker og det handler blandt andet om, at det ikke er helt tydeligt hvad der er af færdselsregler på gaden, og rigtig mange af dem, der standser dernede ved faktisk ikke hvad parkeringsreglerne er dernede, og man kan ikke sige at det er fordi de er dumme, men det har nok noget at gøre med den måde vi har skiltet på, fordi vi er jo de første til at lave det, som gjorde at vi blev nødt til at skilte parkering fra sidevejen. Vi må ikke gentage parkeringsreglerne på gaden, og det er jo helt klart – det er jo noget politiet bestemmer, og det betyder, at hvis du som bilist kører ind i Mejlgade og hvis du ikke lægger mærke til parkeringsskiltningen, som er i Sankt Olufs Gade, så har du ikke en jordisk chance for at vide om du må holde der eller ej. Og det virker som om at man bare smider bilen ind over kantstenen og så går ud, og det er der jo også rigtig mange der gør, men det er jo sådan noget vi kan følge op på nu, hvor vi kommer til at skilte med at det er en rigtig cykelgade, der har vi nogle helt andre muligheder for at skilte parkering dernede, så vi undgår alle de der ubetænkeligheder dernede. Det var jo et pilotprojekt, hvor man kan sige at vi blev nødt til at lære af de fejl og mange af fejlene skyldes at vi ikke har haft lovgrundlag med os til at gøre det.

[00:06:34]

MLL: *Okay, det er jo så lidt i forlængelse med det her naturlig og unaturlig friktion, som vi snakkede om, men jeg kom til at tænke på, hvad I ser som hovedformålet med en cykelgade, er det at prioritere cyklisternes fremkommelighed ved at skabe den her korridor eller er det ved at give mulighed for at der så også bliver udfoldet et mere mangfoldig byliv, de steder hvor man har de her cykelgader?*

[00:06:55]

PC: Det er begge dele. Jeg vil sige oprindelig, der var projektet måske møntet på at øge fremkommeligheden for cyklister, men vi nåede sådan ret hurtigt til den erkendelse af, at hvis man gør det, altså lukker lidt for meget op for hanerne, så skaber man bare nogle nye barriere, som heller ikke er tilsigtet. Så det vi går efter er at skabe total oplevelse, hvor der både er plads til cyklister og især for mennesker. Altså også fodgængere og til caféliv og alt det der, altså generelt at få hastigheden ned for alle, og nogle gange så skal man faktisk

heller ikke, det er jo ikke hastigheden du vinder fremkommeligheden på i midtbyen som cyklist, så om du cykler forbi Mejlgade med 35 km/t eller 20 km/t , det er måske kun 3 eller 4 sekunder du sparer ved det, og det er jo ikke en tidsforskel, der som sådan er altafgørende for dig, så det vi prøver på generelt i Århus, nu med idéen vi har for Mejlgade, er jo også at få oplevelsen med ind i hele cykelturen, som reelt set i dit hoved gør cykelturen kortere.

[00:08:09]

MLL: *Så det sidste jeg havde tænkt på var, du snakkede om i interviewet at I er ved at udbrede det her cykelgade koncept til andre gader indenfor byen, men også udenfor byen. Så tænker jeg på om der bliver taget mere hensyn til, hvor cykelgaderne etablisteres i forhold til design, og hvordan udvælger I stederne, hvor I gerne vil have cykelgader?*

[00:08:36]

PC: Altså det er, der er stor forskel. De cykelgader som vi laver udenfor byen, de har kun det ene formål fremme fremkommeligheden for cykellisterne, og hvor det egentlig bare handler om at vende biltrafikken ind gennem de cykelveje, som vi laver, og egentlig i princippet give cyklisterne lov til at have den adfærd, som de har, hvor de cykler midt ude på gaden, og hvor det ikke handler så meget om byliv, for der er som sådan ikke rigtig noget byliv. Men når vi kommer indtil midtbyen, der udvælger vi primært de steder, hvor det giver mening og der skal være en overrepræsentation af cyklister, ellers giver det ikke rigtig mening at lave cykelgader, fordi så kan du opleve, at der er for mange biler i forhold til cyklister, og så er det ikke naturligt, at man tager hensyn til cyklister. Så det er et ret vigtigt udvælgelseskriterium, og det er derfor vi har lagt den på hele vores cykelring, hvor vi har aller flest cyklister. Så kan man sige, så skal vi jo til at indhente erfaring fra det, og så prøve at se om det er noget vi kan udbrede til andre steder, som ikke kun er til decideret cyklister. Altså som et middel til at skabe andet end fremkommelighed, men også mere byliv.

[00:09:56]

MLL: *Hvis vi nu tager de cykelgader der bliver etableret udenfor byen, hvad er det så der taler for at man laver cykelgader i stedet for, for eksempel cykelstier på de strækninger?*

[00:10:07]

PC: Det ville være ret dyrt at lave cykelstier. Cykelgader er et ekstremt billigt tiltag, for det kræver egentlig bare to skilte og det er det, der er fordelen. Det er det, der er det gode ved en cykelgade, der bruger du noget eksisterende infrastruktur, som du bare opprioritere.

Appendix E: Conflict Registrations

Observation point: Intersection

Time	Morning			Midday			Afternoon			Evening		
Conflicts	7.00-12.00			12.00-15.00			15.00-18.00			18.00-19.00		
Undisturbed passage												
Pedestrians do not look before crossing or stepping onto the roadway	33			22			16			11		
Dog walkers and children	ped	cyc		ped	cyc		ped	cyc		ped	cyc	
	9	2		3			4	2		9	2	
Potential conflicts												
Pedestrian looks before crossing or stepping onto the roadway	43			27			30			10		
Pedestrian speed up pace, slow down or deviate while crossing				5			6			6		
Cyclist uses bell				3			2			2		
Cyclist deviate from or slow down because of pedestrian or vehicle	ped	cyc	car	ped	cyc	car	ped	cyc	car	ped	cyc	car
	3		51	4	1	3	5	3	8	3		
Slight conflicts												
Pedestrian stops suddenly while crossing	2			1			2					
Cyclist deviates suddenly	ped	car		ped	car		ped	car		ped	car	
		1			2		1				1	
Cyclist stops to avoid collision	ped	cyc	car	ped	cyc	car	ped	cyc	car	ped	cyc	car
		1	5									
Pedestrian or cyclist yells	ped	cyc	car	ped	cyc	car	ped	cyc	car	ped	cyc	car
											1	
Activities												
Jogging	16			5			9			5		

Oberservation point: Corridor

Time	Morning			Midday			Afternoon			Evening		
Conflicts	7.00-12.00			12.00-15.00			15.00-18.00			18.00-19.00		
Undisturbed passage												
Pedestrians do not look before crossing or stepping onto the roadway	12						1					
Dog walkers and children	ped	cyc		ped	cyc		ped	cyc		ped	cyc	
	6	2					10	2				
Potential conflicts												
Pedestrian looks before crossing or stepping onto the roadway	25			31								
Pedestrian speed up pace, slow down or deviate while crossing	1						1					
Cyclist uses bell	1						3					
Cyclist deviate from or slow down because of pedestrian or vehicle	ped	cyc	car	ped	cyc	car	ped	cyc	car	ped	cyc	car
	14		16	5	4	17	1		5			
Slight conflicts												
Pedestrian stops suddenly while crossing	1											
Cyclist deviates suddenly	ped	car		ped	car		ped	car		ped	car	
Cyclist stops to avoid collision	ped	cyc	car	ped	cyc	car	ped	cyc	car	ped	cyc	car
			5			4						
Pedestrian or cyclist yells	ped	cyc	car	ped	cyc	car	ped	cyc	car	ped	cyc	car
			1									
Activities												
Jogging	11			1			9					

Appendix F: Timing of activities

Number of participants	Standing	Sitting - café	Sitting - bench	Sitting - secondarily
1	1			
2	6			
1	2			
1	1			
1	5			
1	2			
2	4			
3		162		
2	2			
4	8			
2		100		
2	2			
2	2			
3	15			
2	12			
3	3			
2	2			
3	9			
1			13	
2	4			
1	2			
4	40			
3	60			
1	4			

2		378		
2	2			
1				2
2		98		
1	5			
2	6			
2	2			
2	2			
1				10
2				26
5	10			
2				32
4	36			
1	2			
Total	173	738	13	70
avarage time	2,790322581	82	13	11,66666667

Appendix G: Field notes from Mejlgade Wednesday 4th of May

7.09 De færreste cyklister giver tegn når de svinger.

7.11 Cyklerne kommer ofte i grupper nord fra og enkeltvis syd fra.

7.12 En person motions løber gennem gaden.

7.16 Parkerede biler skaber prop når en anden bil vil forbi.

7.23 Der er få cyklister der snakker sammen mens de kører.

7.29 Biler tvinger fodgængere ud på kørebanen.

7.30 Fortov smalle – fodgængere skal smyge sig forbi hinanden for at undgå at træde ud på kørebanen.

7.36 Når der kommer mange cyklister samme vej trækker de over i modsatte vejbane.

7.40 Ofte potentielle konflikter når biler skal forbi parkerede biler.

7.42 Bil svinger hurtigt ind på Mejlgade fra Sankt Olufs Gade mens en stor gruppe cyklister fra nord kommer kørende, flere cyklister bliver nødt til at bremse hurtigt op for at undgå sammenstød.

7.43 Fodgænger står i flere sekunder og venter på at krydse.

7.51 Barn cykler på gaden med far.

7.53 Cyklist bliver nødt til at køre op på fortov for at komme forbi en bil der skal svinge op ved Graven.

7.53 Presset situation – bil skal svinge op ad Graven, hvor der holder mange cyklister. Bilen spærrer for cyklister fra nord.

8.08 Cyklist cykler på fortov, mens han taler i telefon. Der er ikke plads på cykelstien til ham pga. det høje antal cyklister.

8.12 Selvom de fleste cyklister ikke giver tegn, når de svinger eller stopper er det ikke ledt til seriøse konflikter endnu. De fleste cyklister orienterer sig dog også, selvom de ikke giver tegn

8.15 To fodgængere kommer gående, der kommer en løbende mod dem, den ene af fodgængerne træder ud på kørebanen. Han bliver ved med at gå derude (ca. 30-50 m). Han træder op på fortovet igen, da en stor gruppe cyklister kommer kørende forbi dem.

8.29 Vejens snoning gør det svært for cyklister at se forbi parkerede biler.

8.30 Der er plads til at to cyklister køre ved siden af hinanden i hver retning. Tre kan lige gå når de overhaler.

8.42 Folk går mest alene eller to og to.

8.45 Bil kommer kørende sætter farten ned i kontakt med cyklister.

8.56 Mand bevæger sig langsomt igennem gaden og stopper flere gange for at se på vinduer.

10.06 Bus holder på kørebanen – cyklisterne tager den over fortovet, de fleste uden at stoppe op.

10.19 Rush hour 7.00 – 8.30/9.00

10.19 Skoleklasse går igennem gaden. Lærerne virker afslappet, den forreste snakker i mobil.

10.24 Synsfelt ofte begrænset pga. parkerede biler og biler generelt.

10.32 Der har været et par stykker der er stoppet op i et par sekunder for at se på deres telefon o. lign.

10.33 Mor og barn går hånd i hånd, men mor reagere ikke da barn træder ud på kørebanen.

10.34 Der har været en del mødre med barnevogne (ca. 5).

10.35 Der har også været en del der trækker deres cykel på fortovet, også folk der går alene.

10.37 Tre drenge kommer gående ned ad gaden. Den ene går ude på vejbanen har går op på fortovet da det bliver bredere.

10.40 Kvinde går meget langsomt over gaden mens hun taler i telefon.

10.45 Cafe sætter stole ud.

10.49 Det virker til at tempoet hos cyklisterne er sat ned og at de kigger mere rundt end i rush hour.

10.54 Der er flere der er stoppet op i få sekunder som ikke er med i tidsberegningen.

10.56 Bil kører mod ensretningen fra Graven.

11.08 Mængden af parkerede biler er steget. De fleste holder ulovligt. De fleste er varelevering og holder foran Oli Bistro.

11.17 Forskelligt tempo hos fodgængere nogle går forholdsvis langsomt andre går mere målrettet.

11.19 Kvinde kommer ud af cykelbutik, hun siger at det er en meget atypisk dag, der plejer at være flere trafikanter og brugere af gaden.

11.20 Flere restaurationer sætter udeservering op.

11.25 Tre mænd går ud på gaden. De fortsætter med at gå på vejbanen et stykke tid før de krydser helt. Der er ingen cyklister.

11.30 Bil holder og spærrer for cyklister. De holder bagved noget tid før de kører udenom over fortovet.

11.34 Hundeejer går ned ad gaden , hunden er ikke i snor.

11.36 Pakkebud går ude på kørebanen, cyklist cykler bag ham. På et tidspunkt ser han bagud og bliver opmærksom på cyklisten. Pakkebudet stopper hurtigt op og cyklisten kommer forbi.

11.44 Antallet af fodgængere er steget. Det virker også til at der er flere der går i grupper nu.

11.56 Kvinde på cykel stopper op midt på kørebanen for at se på restaurant. Hun virker ikke særlig bekymret eller opmærksom på om der kommer andre cyklister, hverken bag eller forfra.

11.58 De parkerede biler optager både plads på fortovet og kørebanen. Kørebanen er næsten halveret og fortovet er meget smalt, der er kun plads til en person.

13.30 Kvinde med barnevogn går ude på kørebanen sammen med veninde. De går derude til de forsvinder ud af synsfeltet.

13.45 Cyklist står af for at kigge på vinduer og går ind i butikken.

14.07 P-vagt noterer ulovligt parkerede biler.

14.09 Der har været vareindlevering hele dagen, det skaber en snævre passage ud for en af restaurationerne (Oli Bistro).

14.13 De parkerede biler tvinger mange fodgængere ud på kørebanen. Nogle krydser andre fortsætter på kørebanen til de kommer tilbage på samme fortov.

14.17 To fodgænger grupper nærmer sig hinanden. De snævre sig forbi hinanden ved at bruge mindst mulig plads af kørebanen.

14.20 To unge kvinder sidder ved et cafe bord længst mod muren ved Oli Bistro. De flytter til bordet ved siden af der er tættere på kørebanen .

14.21 Barnevogne har generelt svært ved at være på fortovet. En del kører derfor på kørebanen. Det er svært at køre forbi udeserveringen.

14.35 Der er ret stille . Cyklisterne kommer mest enkeltvis mængden af fodgængere er heller ikke høj. Fodgængere og cyklister bevæger sig mere frit, men når der kommer en bil giver det stadig pressede situationer.

14.49 Generelt er alle aldersgrupper repræsenteret. Har dog ikke set nogle svagt gående. Det virker også til at de unge (16-35) generelt er mest repræsenteret.

16.16 Fire veninder går sammen mod nord. To af dem går ude på kørebanen. Tre cyklister bliver nødt til at køre udenom. De fortsætter på samme måde til de går ind på en restaurant.

16.25 Hurtig cyklisterne virker til at være flest i ”morgen myldre trafikken”.

16.28 Par står ca. 7 sekunder og venter på at krydse kørebanen. (Dette gentager sig flere gange i løbet af dagen)

16.38 Par går stille og roligt over vejen mens de snakker sammen.

16.52 Det virker til at det er i krydsene der opstår forvirring og konfliktsituationer/brud af flow. Eksempler:

- Fodgængere/cyklister stopper op for at snakke
- Varevogn skal dreje
- Mange cyklister samtidig med at en bil skal dreje

16.59 Der er stille når der ikke kører biler, man kan høre fuglene synge.

17.06 De store lastbiler der holdt parkeret overfor Oli Bistro er væk.

17.10 To unge mænd går ned ad gaden, den inderste har sin cykel med. Den yderste træder engang imellem ud på kørebanen. Første gang kigger han om der kommer cykler, det gør der ikke. De efterfølgende gange kigger han ikke.

17.12 Der bliver ringet af en barnevogn.

17.13 Fire personer (to par). Tre har cykler den sidste en barnevogn. De går på kørebanen fra de første parkerede biler til de kommer forbi de sidste.

17.17 Selv de lovligt parkerede biler giver problemer når en bil skal igennem samtidig med cyklister.

17.18 Oli Bistro laver om på deres udendørs serverings opstilling. Så de ikke længere står to og to, men står enkeltvis med mere afstand til kørebanen .

17.20 Der sidder og står igen folk ved Oli Nico

17.21 Når der er mere plads breder cyklisterne sig mere. De køre længere inde mod midten og overhaler i den anden modsatrettede kørebane.

17.26 Der står så mange foran Oli Nico at fodgængere bliver tvunget ud på kørebanen når de skal forbi.

17.30 Folk der kigger på menuer, står i gennemsnit mindre end et minut.

17.32 Det virker til at der går flere folk i grupper/par nu end tidligere på dagen.

18.15 Par med hund kommer gående. Hunden går på kørebanen, da de hører en knallert trækker de hunden op på fortovet, da den er kørt forbi går hunden igen på kørebanen.

18.30 Det virker til at der er kommet mange fodgængere. Der er mange nede og hente mad.

18.32 Det virker som en gade, hvor der er en del møder folk de kender. Nogle gange stopper de op og hilser andre gange smiler eller nikker de til hinanden. Det gælder både for fodgængere og cyklister.

18.42 Par fortæller at de tidligere på dagen så en cyklist vælte af cyklen fordi en fodgænger gik ud uden at se sig for.

18.50 Dem der står alene venter ofte på nogen, kigger på vinduer eller snakker i telefon