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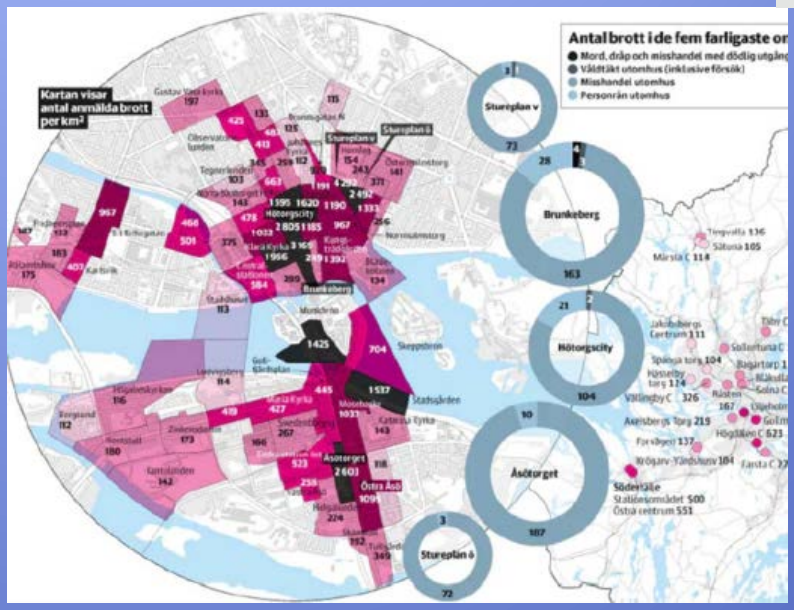

SAFETY IN THE MAKING:
Lessons from & for urban planners

STUDENTS' FINAL PROJECT REPORTS
Spring 2017

sPnät

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SAFETY IN THE MAKING:
Lessons from & for urban planners

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SAFETY IN THE MAKING –
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ANALYZING THE SENSE OF SAFETY IN FOLKUNGATRAPPAN AND TORINETÄPPAN, MEDBORGARPLATSEN

Mackenzie Childs

Mathilde Riou

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1. Motivation

Our chosen study area is Folkungatrappan and Torinetäppan, located in Medborgarplatsen, which connect two roads at different levels. Leaving the metro at Medborgarplatsen, one group member often takes this route home, instead of walking on Götgatan, which is very crowded. This area is close to office and residential buildings, a cinema, and an indoor market, and there is a small 'park' down the stairs, which is not well taken care of. The space connects Folkungagatan to Västgötagatan through three separate levels connected by stairs. The varying levels are due to a height difference in streets and because of an underground car tunnel. Sometimes the group member avoids passing through the area and at other times realizes she is at high alert in the space. We would like to understand what generates fear in this specific location, in order to improve the general safety and sense of safety.

Figure 1 The stairs towards Folkungatrappan and the pedestrian tunnel leading to Medborgarplatsen: poor visibility and uninviting spaces which may trigger a feeling of unsafety

2. Aim and Objectives

The project aims to analyze the space at Folkungatrappan and Torinetäppan to understand the patterns of use and determine what could lead to a sense of unsafety in the area. The objectives were to visit and visually analyze the space and the adjacent spaces, conduct interviews with employees in surrounding buildings, compare our findings with theory, and suggest improvements to create a heightened sense of safety.

3. Theoretical Background

3.1 Crime through place and time

Crime is not random. There are certain places and times where crime occurs, so learning where and when these are can help improve benefits of crime reduction (Cozens, 2014). Police officers understand there are certain places where crime occurs. In response, it is common to increase patrol and deal with the problems through arrests and investigations, rather than understand what makes these places high-crime (Braga, 2010). There are three types of land-uses that relate to crime: crime attractors, crime generators,

and crime detractors. Crime attractors are “activity nodes, which attract large numbers of people…they potentially provide increased opportunities for crime” (Cozens, 2014, p. 51). Crime generators “are similar activity nodes, but provide well-known criminal opportunities to offenders” (Cozens, 2014, p. 51). Crime detractors are “activity nodes, which lack attractive activities and discourage use by legitimate citizens” (Cozens, 2014, p. 51). Crime also varies depending on time of the day, the day of the week, and the seasons (Cozens, 2014).

There are three theoretical perspectives that support the thought that crime is not random. The rational choice perspective that believes crime is purposeful and aims to meet the needs of the offender. It focuses on understanding the separate stages of the decision-making process: the initial involvement, continued involvement, the decision to desist from crime, and the decision to complete a crime. Depending on the crime, the decision processes and information used by the offender can vary greatly, so it is important to understand these differences in order to appropriately intervene or prevent further crime. The routine activity theory believes that crime occurs based on what they encounter in their daily routine. For a criminal act to happen there must be an offender, a suitable target and the lack of a guardian. Environmental criminology focuses on the interaction of factors across time and space. It notes there are different crime habitats present opportunities for different types of crime and understanding these habitats can lead to improved crime prevention (Braga, 2010).

The broken window theory also relates to locations where crime is likely to occur. It states that social and physical incivilities lead to fear and anonymity in neighbourhoods and a lack of informal social control, which leads to an increase in incivilities, an increase of potential offenders, and a higher amount of crime (Braga, 2010). Research on this theory has shown varied results, so it is unclear how well the theory holds true, but it is a common concept for those attempting to understand crime and safety to use.

3.2 Fear of Crime

There has been a growing interest in understanding fear of crime. In fact, understanding what influences people’s perception of safety or unsafety in a situation can help in apprehending better criminal activity and crime prevention.

Fear of crime is not a random event. First of all, it is concentrated in space and time. People might avoid certain places at certain times, for example going through a park at night. Fear of crime also differs between individuals, according to gender, age, socio-economic situation, and past experiences. People who have reported crime the most are women, the elderly, children, the poor, the less well-educated and ethnic minorities (Cozens, 2014). For example, the perception of safety in the same location might differ between a man and a woman. Concurrently, fear of crime strongly depends on the layout and the design of the physical environment. In environmental psychology, affordances are the possible actions that the built environment allows an individual to complete (Gibson, 1979). Depending on the affordances existing in the built environment, specific actions can be encouraged or discouraged. For example, a surveillance camera in the metro station might discourage potential criminals to take action.

Environmental psychology further demonstrates that fear of crime depends on the presence or absence of three physical features in the environment which are prospect, refuge and escape (Fisher & Nasar, 1992). In other words, an individual who feels that there is poor visibility, few escape options and few hiding opportunities will experience higher levels of fear of crime. Additionally, there are many other parameters which can trigger fear of crime. Media, for example, has a significant impact on perceived safety, as well as social influence in general or the collective “image” that an area can have (Cozens, 2014).

Also, the presence or absence of the police, poor maintenance of spaces, restriction on activities, and the lack of surveillance and visitors lead to increased fear of crime.

Fear of crime, however, is an emotional perception which is complex to measure. So far, the main tool has been the use of questionnaires, but as they usually refer to an event that occurred in the past, they become a depiction of an average perceived risk than of the actual experience (Solymosi et al., 2015). A more effective way to "capture emotions, motivations, and cognitive processes is by asking people to describe them at the moment they occur" (Hektner et al., 2007, p.24). New methods include experience sampling methods (ESM) which are able to characterize the event as it occurs, and geo-localized information based on volunteering (Solymosi et al., 2015). This new approach, made possible due to technology – such as phone applications – enables people to map fear of crime as it occurs, in a space- and time-specific context. Although much more precise, these tools have limitations as they require a large sample of data to become significant, and also raise the question of geo-localisation and its associated risks.

3.3 CPTED

Crime Prevention Through Environmental Design (CPTED) aims to "influence the design, management and use of the built environment; to clearly define the boundaries and preferred use of urban spaces; optimize opportunities for surveillance; and create and maintain a positive image to reduce criminal opportunities" (Cozens, 2014, p. 13). There are seven strategies of CPTED: territoriality, surveillance, image management, access control, activity support, target hardening, and geographical juxtaposition. Territoriality is when people see a space as being their own, leading to more legitimate use and defence of the space against criminals. Territoriality can be expressed through symbolic and physical barriers, well-maintained space, and well-used space. Surveillance can be in the form of formal or mechanical surveillance and helps to reinforce territoriality. It can be implemented through orientation of windows and entrances, landscaping that does not offer concealment, and overall visibility in places. Image management is the design of space to encourage positive behaviour and can be implemented through maintenance and rapid repair of any vandalism and disorder. Access control helps protect potential targets and creates clear boundaries through signage, improved connection between walkways and buildings, and appropriate route configurations. Activity support aims to increase activity levels while maintaining safety through placement of play areas, ATMs and bus stops, providing complementary land uses, and encouraging varying opening and closing times for businesses. Target hardening uses physical barriers to prevent crime such as locking doors and windows, installing alarm systems and security patrols. Finally, geographical juxtaposition focuses on how various spaces influence crime. It can be addressed through understanding how certain uses can affect future development (Cozens, 2014).

It is only recently that social factors have been incorporated into CPTED (Cozens, 2014). Social factors are critical in understanding the safety of a space, however, and must be understood when attempting to prevent crime. Creating a well-maintained and well-used environment can illustrate there is some social control, which can deter possible offenders and encourage use by legitimate users.

4. Methods

We used a mixed-methods approach of quantitative and qualitative primary and secondary research. The main method used to experience the study area was direct observation and a visual survey. The visual survey was used to retrieve empirical evidence of surrounding building use and to map the qualities and physical features of the space. The data was collected through written description and photographic

evidence. We analyzed the pattern of use in the space to determine how many people walked through the site at various times of the day and how many people stayed in the space at various times of the day. We used interviews to gather data on people's perception of the site to complement our visual survey. The interview questions were not the exact same for each respondent, as we developed more questions based on the respondents' answers. In collaboration with our primary research we obtained data from academic sources to create a knowledge base on the subject and to gain ideas for improvements of the space.

5. Findings

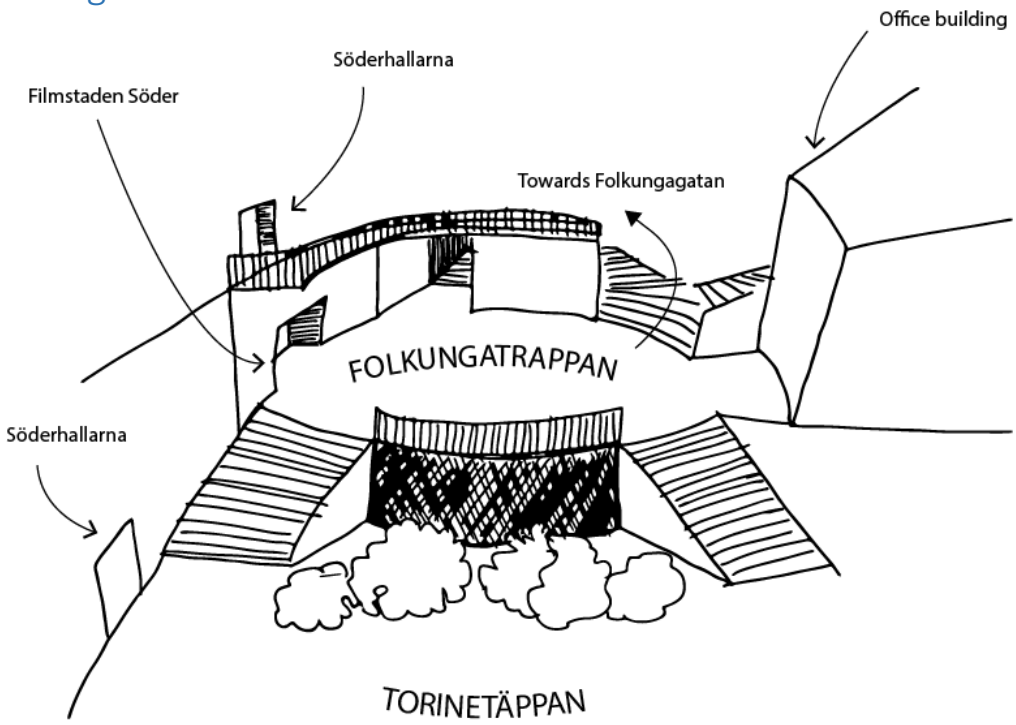


Figure 2 Configuration of the space

5.1 Physical Conditions

Through our visual survey we gathered data on the physical conditions of the site. Overall the space is mostly concrete, and is made up of sets of stairs connecting three levels, a circular amphitheatre-esque landing, a wall consisting of a grate on the bottom level, poorly maintained bushes, and bicycle racks. There are very few entrances to the adjacent buildings, as shown by Figure 3. There is one public entrance on the bottom level connected to Söderhallarna, which is mostly used for truck delivery, and beside that a private entrance to the theatre and a door to the residential part of the building. On the second level there is an entrance to the theatre that has now been closed, and on the third level, another entrance to Söderhallarna. There are no entrances to the office building located to the south of the square – only windows covered with tape.

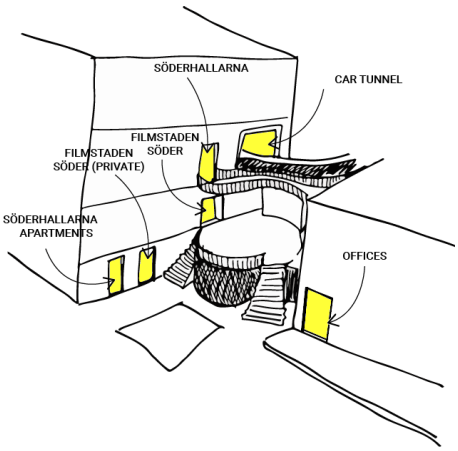


Figure 3 Entrances to the square on different levels

Figure 4 Openings directly facing the square

Although the entrance to the movie theatre is closed, there are still movie posters on the wall, which provides a small piece of visual entertainment. The space is poorly lit even though there are a fair amount of lights. During night visits we noted that the rows of lights under one of the bridges were not on, reducing the light in the space, as shown in Figure 5. The lowest level consists of bicycle parking, poorly maintained bushes, landscaping that is surrounded by a low fence, and a small open space extending from the sidewalk.

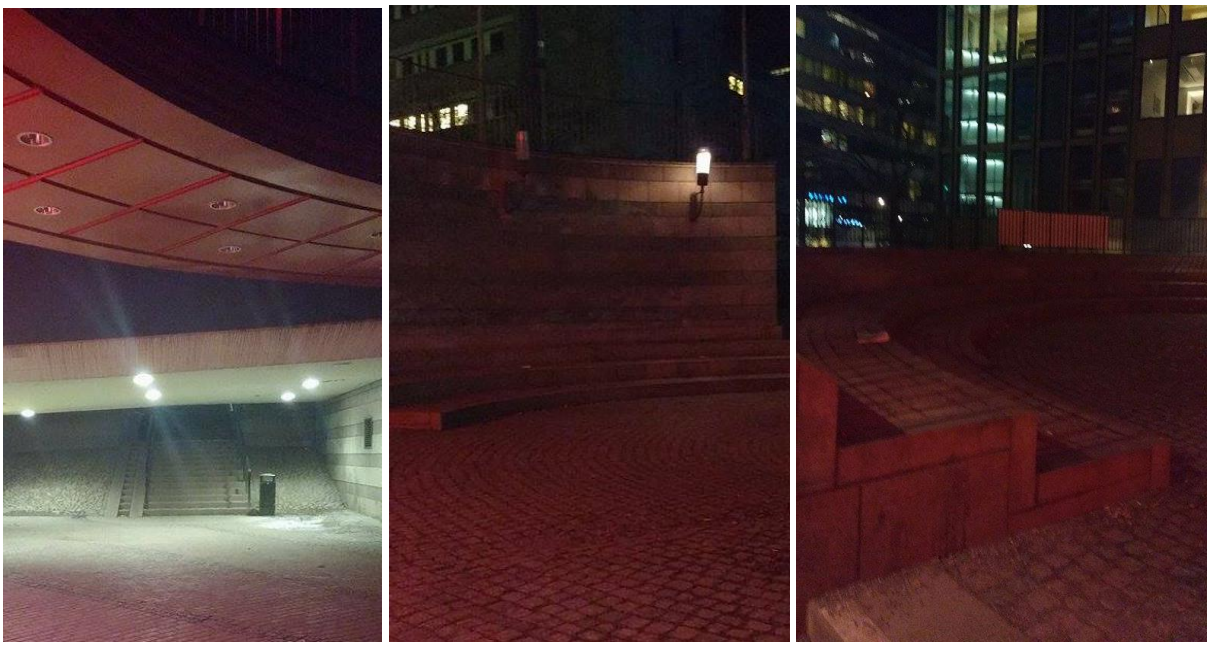


Figure 5 Poor lighting conditions at night

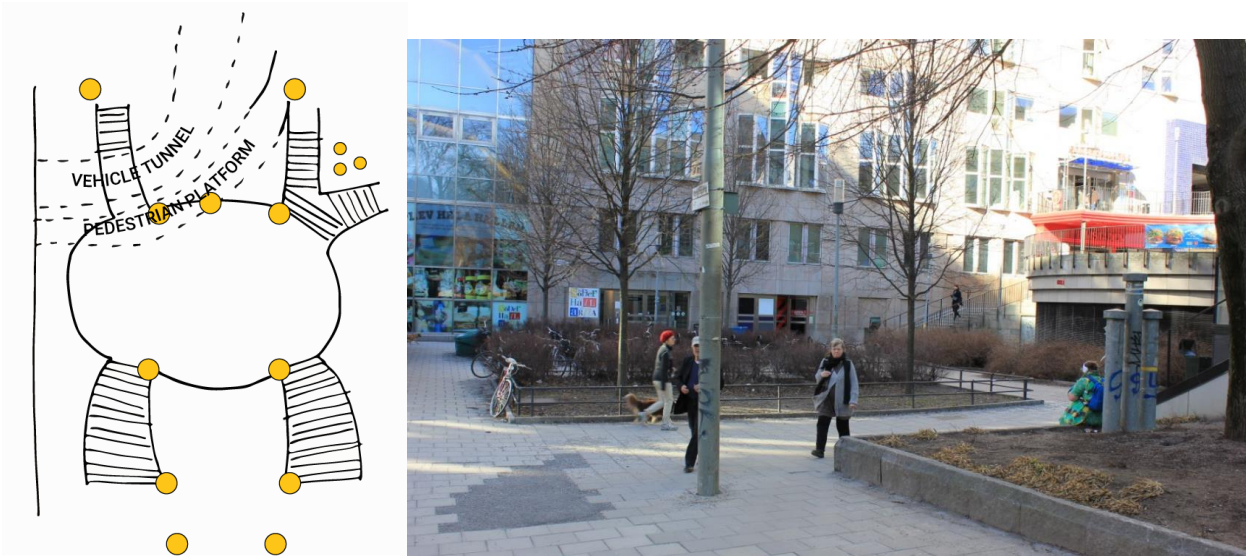


Figure 6 Location of public lights on the square. On the right, the park "Torinetäppan"

The space is connected to Medborgarplatsen, two roads, residential buildings and office buildings. The connections between the adjacent uses are very poor. There are unused spaces, awkwardly shaped spaces that are poorly maintained and spaces in between buildings that are at different ground levels, as shown in Figure 7.

Figure 7 Connections to the square, uninviting spaces

There are many examples of graffiti throughout the space, shown in Figure 8, demonstrating that it is poorly maintained and has poor surveillance.

Figure 8 Graffiti around the square

5.2 Patterns of Use

Through site visits at various times during the day and different days of the week, we have determined some general patterns of use. The area is mostly used as a thoroughfare, with very few people staying, except for a select few. During most visits there was a group of 3-5 men drinking alcohol on the site, and during one visit there was a separate individual drinking alcohol. During one visit there was someone

publicly urinating at the site and during each visit we noted a smell of urine in various places within the site. There is often a panhandler sitting on the stairs on the northern side of the site, rotating between a few different people. During our visits we counted the number of people passing through and during the day there was on average 30 people every two minutes. Most people walked on the north or south side without crossing through the middle, although some people did cross. This is probably due to the fact there is no crosswalk on the upper road so crossing it once you are at the top is difficult.

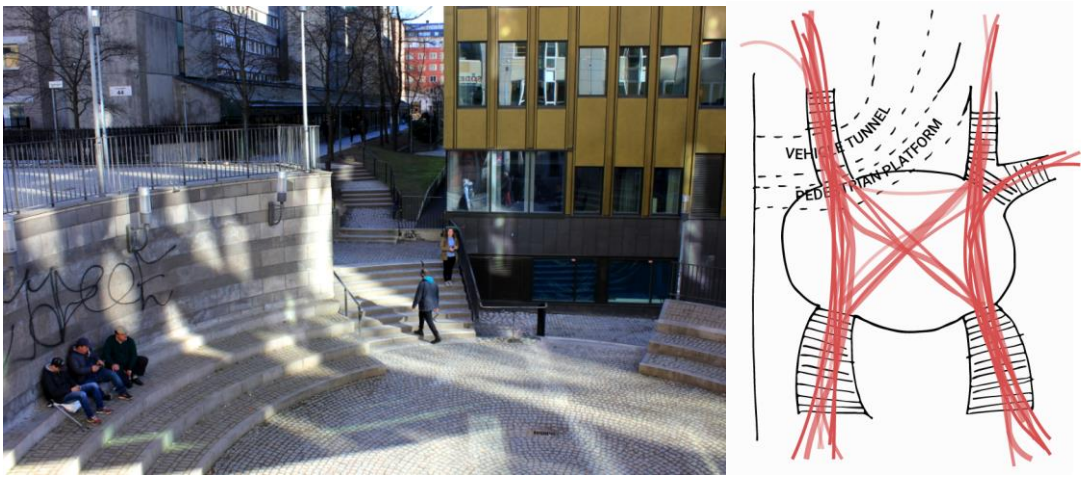


Figure 9 On the right, patterns of movements. On the left, the "regulars" of the square

5.3 Interviews

We conducted interviews to determine the general sense of the area from those working nearby. We interviewed a movie theatre employee to ask their general perception of the site, why the theatre entrance at the site was closed and if there are any plans to re-open it. They described the location as hidden and unpleasant and said the theatre entrance was closed due to people using the entrance who were not movie-goers, and that they did not believe it would be re-opened. We inquired if the movie signage would stay but they were not sure. Two employees of a bar in Söderhallarna described the area as dark and noted people are often drinking there. An employee at the adjacent office building described it as unpleasant and dark, noted people are often drinking there and that those drinking provide unwanted attention to passers-by. None of the interviewees described the space as unsafe initially, so we asked if they felt the area was unsafe or just unpleasant and each one said they thought it was just unpleasant.

6. Discussion of the results

Overall our results show that the space is poorly maintained, has little surveillance, and is a place for people to drink and vandalize, but is not necessarily unsafe. The broken window theory seems to be relevant here as there is so much graffiti that has not been removed so it seems to be a place where people know they can vandalize without being caught. This area could also be seen as a crime detractor because it lacks any activities and it does not encourage legitimate users, but rather encourages those who are breaking the law.

The seven strategies of CPTED could be better implemented here. There is little territoriality because rather than the adjacent uses claiming the space as their own, or having activities in the space, illegitimate

users have claimed the space as theirs. Surveillance seems to be lacking because there is a lot of graffiti, illegal uses occurring, landscaping that allows for concealment, and poor connections to the attached buildings. There is no image management as displayed by the graffiti and the lights that are not turned on or are broken. Access control is lacking because there is poor connection between the levels and the different entrances to the buildings. There needs to be better activity support in order for legitimate activities to happen, rather than those happening now. We are unsure about target hardening because we do not know what the building security measures are. Geographical juxtaposition could be improved because even though the uses in surrounding buildings are appropriate, there are two roads on either side that do not enhance the space. Figure 10 shows the connection of the space to the upper road where there is no crosswalk, no connection between the space and the road, and no connection across the street.

Figure 10 Poor connection to upper road

From those we interviewed, fear of crime does not seem to be a major issue, but they do choose to avoid the area whenever they can. Overall, the space was said to be unpleasant as it hosts illegitimate uses and users. The area does have a steady flow of people throughout the day and throughout the week, however very few actually stay in the space, rather they walk through it.

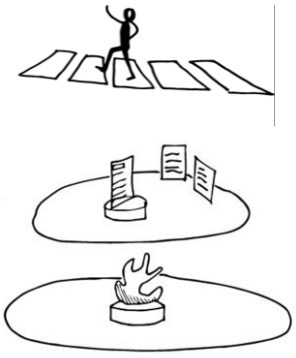
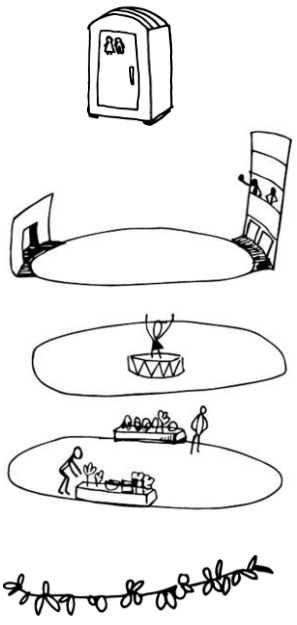
7. Limitations

There were limitations encountered when completing the research for the report. As we chose a space off-campus that the general public used, we were unable to create a survey to distribute, which would have provided more input on people's perceived safety. We were able to interview employees of the adjacent buildings who were familiar with the space, but more of this data would be useful to get a better idea of people's thoughts of the space. We completed a visual analysis of the space to determine what could make it feel unsafe and be unsafe, and although this is useful information, having data on peoples' perception of the space would have provided a more well-rounded analysis. Due to a limited time for the research, the data we collected does not represent an adequate amount of information to determine any significant findings, but rather a base to use for further research.

8. Suggestions

The first two suggestions in moving forward with improving safety in this space is to first understand if crime occurs in the area and how people feel about the space. The first suggestion is to obtain police records of the area to determine if this area is indeed prone to crime. At first glance it seems to be an appropriate space for crime to occur, but it is necessary to look at crime statistics to know. This data will not show people's perception of the area, but if this space in fact is unsafe. More work has to be

completed involving people's perception as well as if the area is prone to crime. The second suggestion is to distribute surveys, conduct more interviews, or use another method to gather data about perception. Many people pass through the area as it is a central location, which provides a large data source, yet because there are so many users who quickly pass through, it might be difficult to obtain this data. This type of data collection would have to be researched more to determine the best way to obtain accurate data. The third suggestion relates to the design and the layout of the area. The design solutions draw on the theory on CPTED principles, as well as on the result of the interviews and our own observations and experience. Our suggestions are separated into short-term and long-term solutions and we believe most of the short-term physical changes could be quick, cheap and easy to implement.

SHORT-TERM SOLUTIONS	Cleaning the graffiti.	
	Opening up the office building towards the square. A first and easy step would be to remove the tape on the windows and make the ground floor generally more inviting – or at least more attractive.	
	Maintaining the ads and lighting from the cinema and on the long-term re-opening the entrance to the square, after it has been proven to be more pleasant.	
	Improving way-finding signage at the bottom and the top of the stairs.	
	Installing a pedestrian crossing at the exit of the vehicle tunnel to make it easy and safe for people to cross from one side to the other of the tunnel stairs.	
	Programming on the circular square: temporary exhibition in partnership with the cinema, or an art exhibition or temporary outdoor library, together with the Forsgrenska Medborgarhuset (social centre).	
LONG-TERM SOLUTIONS	Bringing legitimacy to the Torinetäppan park by managing well-kept vegetation.	
	Adding lighting on the square and in the stairs.	
	Placing a public toilet, either at the top of the stairs, close to the Thai restaurant; or down the stairs in front of the ventilation frame in hopes to reduce public urination.	
	Programming: ephemeral shows or an outdoor market.	
	Opening up the office building towards the square, hence bringing natural surveillance and people. This could be made by placing office desks at the window or by opening a door towards the square for people to have their smoking break outside.	
	Placing speakers outside for the movie theatre to display some ambiance music. This would both sound nice for the pedestrians and would contribute to attract customers to the movie theatre.	
	Improving the entrances to Söderhallarna by opening them onto the space, adding more windows and making them generally more appealing.	
	Creating a plan for the entire area, including the adjacent buildings, pathways, and roads in order to create one cohesive, easy-to-navigate space that is better connected	

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Safety in the Making
KTH Royal Institute of Technology
Alexandra Starostina
Andrea González

Safe Journey
Students perceived safety on their way to University

Introduction

Moving to a new city, getting to know new people and settling down in a new home for a few years, starting an education in Sweden is an exciting opportunity for many international students. KTH Royal Institute of Technology has around 12,000 full time students studying in four different campuses around the city. Every year over 1,000 international students join KTH to study a Master programme and as part of their studies, they are entitled to a room in a student accommodation managed by the university. There are 11 different options ranging from those located on campus to others located in the conurbation areas of the city.

When students move to their new home, it is probable that they don't know much about the context, the location or the services of the area. Some of the accommodations are located far away from campus, others for example, are located in areas that are not provided with sufficient services. Long walks to the station or to shops and a long commute to your daily activities can affect the perceived quality of a residence and are important factors when choosing an apartment. Furthermore, students often start their journeys early in the morning and come home in the evening, making the journey to and from campus mostly in dark hours. An important part of having a good life quality is a sense of security and comfort in your home. We thought it was important to evaluate whether students living in KTH accommodations were perceiving their living environment as safe. Having information about the quality of life in different areas of Stockholm can help students choose where they want to live, be more informed about their surroundings and be aware of possible risks around their area. As a university, KTH should consider its students' opinions on where they are living and improve the communication between the accommodation office and the tenants. It is also important for the University to ensure the safety of the students while they are travelling to and from campus.

Aim and Objectives

In this study, we focus on the perception of safety of the students living in accommodations around Stockholm, especially during the journey between home to their studies. We consider the "whole journey" approach, evaluating sense of security on the way to the transportation, waiting at the station and during the commute.

We wanted to find out whether students feel safe or unsafe during their journey, and if they did feel unsafe, what were the reasons for it. As stated by Vania Ceccato (2013) there are three different aspects that determine the safety in and around public transportation. These are the physical, social and environmental attributes at the station, the characteristics of the immediate environment and neighbourhood and the relative position of both station and neighbourhood in the city. These were aspects that we were interested in researching, as the context of the accommodations varies greatly depending on their location and the different conditions can lead to different perspectives on safety. For the study we gathered data on the mode of transport used to travel and the times of day when it was used, in order to get more specific results on the difference between walking, biking and taking public transport and the influence of night and day conditions on the sense of security.

Another issue that we were interested in understanding was the difference, if any, on the sense of security of women and men when traveling to university. Evaluating which elements of the environment cause insecurity from a gendered perspective can help us understand the different experiences that each student has.

As a last objective, we wanted to compare the overall perception of safety in each accommodation to hard data from crime in the studied areas and with other studies done in relation to safety in public transportation. This would give us a clue on whether it was purely a perception issue or a real crime threat situation. This influences the type of response and necessary actions needed to improve the safety conditions.

First we will mention relevant theoretical concepts on crime prevention through environmental design (CPTED), generators and detractors of crime, research on the influence of gender on the study and perception of safety and finally focus on the perception of safety in public transportation. After that we will present the findings of a research with the student target group and expand on our findings and what we can infer from them when comparing them to what we learnt in the literature. As a conclusion, we propose certain improvements to be made in unsafe environments and different approaches to increase the student's safety.

Location of KTH Campuses around Stockholm.

Theoretical background

Crime and Fear

It is important to mention the difference between *risk of crime* and *fear of crime*. While the concepts might be related, the emotional, contextual and subjective components of fear of crime, must be analyzed separately from hard data on actual crime rate in an area. Fear of crime is defined as a "negative reaction to crime or symbols associated with it" (Ferraro, 1987). Crime has a spatial and temporal distribution. This means that certain location, city structures, land use, design layouts, demographics, seasons and time of the day, will affect the opportunities for crime. However, fear of crime has an unequal spatial and temporal distribution, as it has to do more with personal perception and attitudes towards certain conditions. The hot spots of crime and the hot spots of fear of crime don't always overlap (Nasar, 1993). For example, there have been several studies on the effect of graffiti, litter and vandalism on the perception of crime, usually making a place feel more insecure due to the lack of maintenance (Hunter, 1978). Research by Guedes et al. (2013), established the influence on darkness conditions on feelings of vulnerability. Insecurity and negative emotions are usually greater at night because of the reduction of the area vision field. This also includes blocked viewpoints, alleys and corners, dense vegetation that can make visibility difficult, etc. Guedes also mentions a series of individual generators of fear, that have to do with each individual. These are sex, age, education and social position, victimization, community and global factors and the media.

As we can see, fear of crime is something that can be influenced by very different factors: personal context, external environment conditions and even the reputation of a place caused by the media. This leads to the involvement of different fields of research into themes of safety. Fear of crime can be approached from a security expert perspective, a psychological one or a designer's view. In urbanism, Crime Prevention Through Environmental Design (CPTED) is the field that has been most explored.

Crime Prevention Through Environmental Design

According to Rachel Armitage, a visiting lecturer at the Safety in the Making seminars, CPTED (with a particular emphasis on domestic burglary, but with theory that also applies for crime prevention on the streets) is based largely upon five principles (Armitage, 2000) which can be easily followed at the planning stage. These principles are: physical security, surveillance, access/egress, territoriality, management and maintenance. Armitage talks about certain neighborhoods in the UK which have been designed following these principles, in a concept called Secure By Design.

Surveillance

*S*BD is a way of achieving maximum natural surveillance without compromising the need for privacy. When applied to a housing development, where an informal social control emerges due to the design. Each development contains a mix of dwellings to fit the needs of the residents and increase the variety of typologies and inhabitants. By having this mix, it is more likely that at least one neighbour will be at home during the day and the night, increasing surveillance and safety. (Armitage, 2000). This is related to Jane Jacobs' famous concept of "Eyes on the Street" as a well-known form of natural surveillance in the city.

Management and Maintenance

The management and maintenance of SBD developments is an issue of continuing importance. Maintaining an area's cleanliness encourages pride amongst residents and portrays an image to offenders that crime and disorder will not go unnoticed (Armitage, 2000). Well-maintained houses create a sense of ownership, which helps to deter criminals. A good maintenance strategy directly impacts the fear of crime in a community due to residents' perceptions of responsibility and caring in the neighborhood.

*Access/Egress (Access control (*Cozens, 2014*))*

SBD estates are designed to include a minimum number of access/egress points in an attempt to avoid unnecessary entry onto the estate by non-residents and potential offenders. Through-routes and footpaths provide the opportunity for offenders create "awareness space" as defined by Beavon Brantingham & Brantingham (1994). Potential offenders become familiar with locations they frequent during their daily activities. When an offender can move through an area with ease, it increases their familiarity with the area and also provides them with an excuse to be there without any reason. (Armitage, 2000). If offenders who want to commit a crime need to go to and from the place of crime using the same road, and chance that someone could see him/her becomes twice as likely, making design an important element to consider in preventing this types of crimes.

*Territoriality (Defensible Space (*Cozens, 2014*))*

In an attempt to achieve maximum informal social control, SBD takes Newman's principles of 'Defensible Space' (1972). If space has a clearly defined ownership, purpose and role, the residents of an area can recognize who should or should not, be in a particular place (Armitage, 2000). Territoriality helps to define acceptable patterns of usage and behaviours in particular locations.

*Physical Security (Target hardening (*Cozens, 2014*))*

SBD sets standards of physical security for each property and its boundaries. This means using materials, devices and technology that can create "target hardening", making the building harder to damage or break into (Armitage, 2000).

The focus of CPTED is to influence the design, management and use of the built environment; to clearly define the boundaries and preferred use of urban spaces; optimize opportunities for surveillance; and create and maintain a positive image to reduce criminal opportunities (Cozens, 2014).

Gender Perspectives on Fear and Crime

According to Alec Brownlow we live in hegemonic society where hegemonic masculinity is the ‘‘configuration of gender practice which embodies (...) the legitimacy of patriarchy, which guarantees (...) the dominant position of men and the subordination of women’’ (Brownlow, 2005, p.583). The hegemonic male is defined through attitudes of aggression, fearlessness, physical and emotional strength, control, and risk-taking (qualities and characteristics considered ‘‘not feminine’’). It often happens that men choose to hide their weaknesses in order to project an image of masculinity that has been created by the social context they live in. However, it doesn't mean that men don’t feel fear, but that they usually don’t speak about it. This can be a problem when trying to understand safety perception from a gender perspective, as answers can be biased by preconceived gender norms or attitudes.

According to Alec Brownlow’s research (2005) when dealing with an unsafe situation, two coping strategies are commonly identified: *protective* strategy and *avoidance*. Protective strategies are those behaviors and activities ‘‘that seek to reduce or deter the risk of victimization [fear] by increasing the ability to deter or resist a criminal act’’. For example, it could be carrying a weapon or traveling in a group. The goal of protection is control. Among men, control is measured in terms of one's ability to ‘‘handle’’ the situation and manipulate the potential for violence through intelligence or strength. On the other hand, several authors indicate control measures adopted by women to minimize the risk of male sexual violence such as traveling in a group or with a man, feigning madness, dressing conservatively, etc.

The avoidance strategy is to stay clear of particular people, places, or situations that are perceived to be risky or dangerous, especially strangers in public spaces. Avoidance is the most common response to crime among men and women alike. Researchers found that women are significantly more likely than men to adopt avoidance strategies. It was also found that “boys and young men who adopt avoidance as a response to their fears are often feminized and labeled ‘‘faggots’’, ‘‘sissies’’, ‘‘poofs’’ or ‘‘wussies’’ by their hegemonic counterparts” (Brownlow, 2005, p.583).

In conclusion it was said that abandonment of public places (in the research it was Cobbs Creek Park in Philadelphia) by women is epidemic (Brownlow, 2003) and participation in park activities is often incumbent upon the presence of companions, either friends or family, often

male. The findings for this research also indicate that men do indeed fear violent crime despite repeated claims of fearlessness and invulnerability.

Safety in Public Transportation

According to Vania Ceccato's research on safety on public transport journeys, internal and external design may influence crime, as well as events such as overcrowding and lack of supervision during off-peak hours. Crime can occur in three different types of transit environments: on the journey to the transportation nodes, waiting for the transportation or moving between sections of the stations and travelling onboard (Smith and Clark 2000, cited in Ceccato 2013).

Ceccato introduces two concepts that are important in understanding how opportunities for crime can be happen in certain environments and to describe the level of risk of a person. These are:

Risk setting: (for criminal involvement) a setting in which the individual spends time in a public space, unsupervised, together with peers, engaging in a unstructured activity.

Environmental risk: composed of summed hours of exposure to risky setting/neighborhood contexts this gives a weekly environmental score.

Crimes tend to occur in particular geographical areas and in certain hours and seasons. And how individuals perceive risk/fear in outdoor environments is space dependent. Space with lack of social control leads to high levels of fear. The location of the station has an effect on the perceived security and objective safety of a station, for example, spillover from bars or higher crime areas will be at higher risk of crime. There is evidence of the positive effects of CCTV on crime reduction. However, in the case of Stockholm, the reduction of crime with surveillance techniques has happened only in the inner city, but had no effect in suburban areas. In this case other techniques such as enhancing the visibility, the presence of guards and staff, the uses surrounding the station and the maintenance of the area are more influential in the reduction of crime. Safety at a station are influenced by the type of land use in the immediate surrounding area and social activities it may attract, and demographic and socio-economic characteristics of the population residing or working in the area. In an early study low economic status, ethnic heterogeneity and residential instability leads to community disorganization. In addition to this findings, Ceccato mentions how often stations that are located in the inner-city could be more targeted by crime than those in the outskirts, but end stations can be more criminogenic, due to linkage to other transport, large flows of passengers, and adjoining parking lots and commercial areas. (Ceccato, 2013, p. 43-66). According to the research done in Stockholm, women are usually more fearful than men. The first are afraid of sexual harassment and assault and the second of personal violence by other men. Women travel often shorter routes than men and do most of the travelling during daytime. Men are more likely to use cars and take long standardized routes.

This information on patterns of crime in different locations and the perception of crime by different individuals, is useful for planners as an initial input for CPTED.

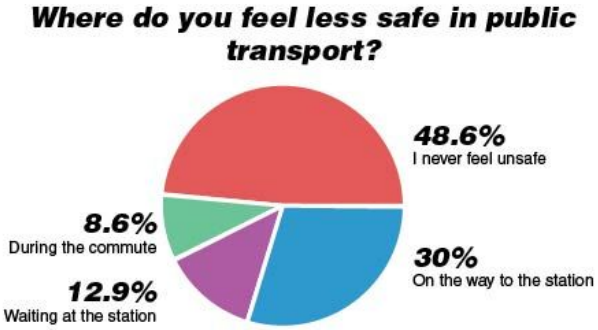
Data & methods

For our own research, we limit the target group to students living in KTH accommodations around Stockholm. Will they have similar perceptions of safety as the ones discovered by Ceccato? Is there a correlation between the characteristics of the context where the accommodation is located and the perception of safety from the students?
The survey was conducted during a period of two weeks and was made available online through websites dedicated to students of KTH and group pages belonging to each of the accommodations. Questions included: "Gender", "What time do you usually arrive/leave campus?", "How safe do you feel when travelling between home and University during the day/night?", "Which of these elements make you feel unsafe on your journey home?", "When you take public transport, where do you feel less safe?" and others. We also included the option to leave "comments" so that people could write their thoughts about daily commuting, location of the accommodations and other important information. After collecting of the data we examined it from various aspects: sex, location of the accommodation, day/night differences in the perception of the crime, location of the different facilities nearby (subway station, park, forest, shops, Systembolaget, etc.)
The next initiative was to collect personal experience in interviews. This information helped us to understand more about daily pattern of people's movement, some special characteristics of the places and aspects of crime (if any) which happened towards/on the eyes of the students.
Additional measurements and observations were made using maps in order to understand if the distance from the subway/bus station to accommodation and the presence of other uses or elements (forests, bars, parks, supermarkets) affects the perception of crime.

Results

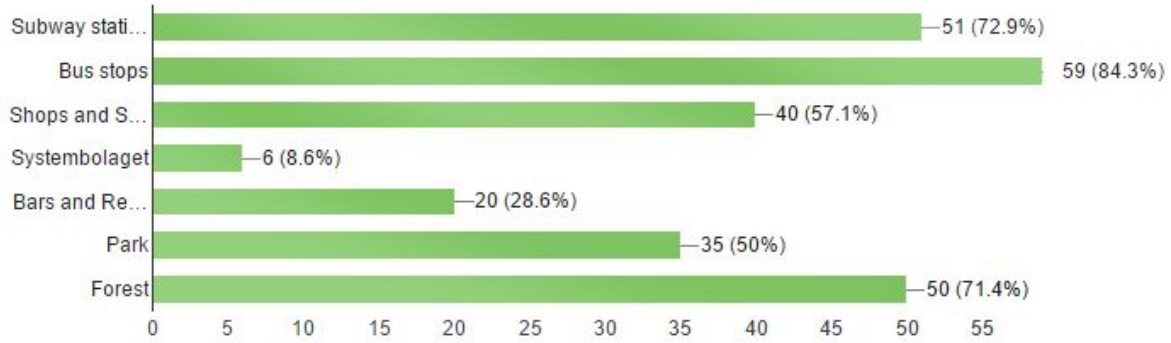
In the online survey we received 70 answers, out of which 40% were female, 57.1% were male and 2.9% didn't specify. Out of the 12 officially recognized KTH accommodation options for international students, we didn't receive any participants for 3 of them. On the other hand, we received 4 responses referring to other student accommodations in Stockholm (this answers were referring to locations in Solna). Regarding the mode of transportation 74.3% of the interviewed students use public transport to commute to university. Walking was done by 20% most probably by those who live in accommodations located on campus. Only 3% of the respondents used the bike and 1.4% replied "other". Although a lot of students (34 answers) felt safe when travelling between their homes and university, most of the students felt safe at some point during their journey. Feelings of insecurity on the way to the station were common (21 answers), followed by

feeling unsafe while waiting at the station (9 answers) and finally during the commute (6 answers).



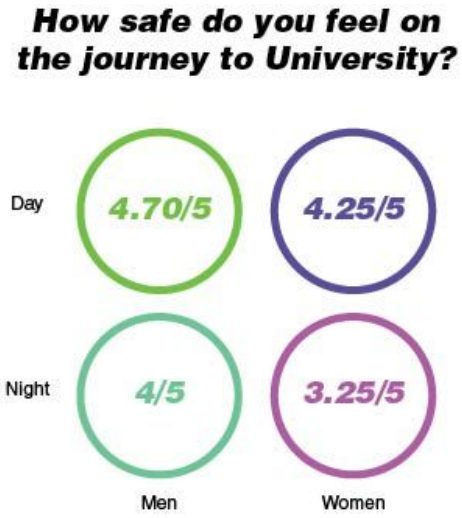
When asked what they feared the most when moving through the city, the most common answer were the lack of lighting in paths (45 answers). The presence of strangers or suspicious people was almost equally popular (43). Empty paths were perceived as scary by 25 people, while garbage and dirty areas (18), beggars (15) where also scary for some of the students. On the other hand, graffiti, dense vegetation, and others (animals, slippery surfaces) had 6 answers each, suggesting that presence of this elements isn't a big concern amongst the students.

The students were also required to select all the elements that could be located within walking distance of their accommodation. This to understand better how surrounding uses affected the perception of safety on their way home and while waiting at the nearest station.



Discussion of the Results

Once observing the general results, we were interesting in analyzing the information by dividing answers given by male and female participants. This would prove whether sex difference is a factor in the perception of safety. By doing this we found out that in average, women feel less safe than men during the whole day, but greater variation happens when comparing answers during the night. One a scale from 1 to 5 where, 5 was very safe, women had an average perceived safety of 3.25 at night compared to 4 of men while travelling at night. The results could be affected by what we learnt in the theory about trends in males trying to show "masculinity" by not admitting to feeling fear. However, as we saw in other research, it is quite common that overall women feel less safe than men.



In the question, "Where do you feel less safe when travelling to university?" we notice a greater difference in safety perceptions when dividing the results in men and women than when looking at the overall numbers. This is proof of how gender does play a role in the perception of safety in public transport and in the city in general.

Lastly, we wanted to discover which accommodations were generally perceived as most dangerous and safest. For this we filtered the data by accommodation and created an average of the 1-5 scale of safety during both day and night for all the participants. The top 5 safest accommodations were: Hemmet (located in KTH central campus), DKV (located in KTH central campus), Lappis (located near Universitetet metro station), Skrapan (located near Medborgarplatsen, Södermalm), and Kungshamra (located in Solna near Bergshamra metro station). As we can see, most of these accommodations are located within the inner city of Stockholm. Commuting time to university is not more than 20 minutes for all of them and the access to services and surrounding urban areas make them be perceived as safe areas to live. On the other hand, the 5 accommodations perceived as most dangerous were: Hanstavägen (located in Kista), Pax and Strix Västraskogen (located in Solna), Industrivägen (located in Tyresö), Björksätra (located in Skärholmen) and Ekebergabacken (located in Farsta). All of these accommodations are located in the suburbs of Stockholm, making the commuting time to university almost an hour in some cases. Most of this accommodations are located in low density areas or in single use areas of the city, making them quite empty during the night and far away from services. This, along with the physical characteristics of the surroundings, can increase the perception of insecurity in these areas.

Conclusions and Suggestions

We take as an example the accommodation located in Björksätra. It consists of 300 one room studio apartments. It is located about 40 minutes away from the main campus, 50 minutes from KTH Kista, and 30 minutes from the Central Station. The nearest subway stations are Sätra and Bredäng on the southern part of the red line. This accommodation was perceived as one of the least safe according to our research. Also, we received 27 answers from people from that accommodation, and some personal interviews were students told us their experiences while living there. In general, the lack of people and uses surrounding the pathway leading to the

accommodation from any of the subway lines and bad conditions of lighting make it seem very unsafe by the people living there. We propose certain measurements that could be taken in order to improve the safety conditions in the area, based on the principles of CPTED. Apart from that we also suggest some other techniques such as place making events, phone applications for students and other ways of interacting to increase the natural surveillance of the area and the place attachment. We believe that implementing these ideas could help improve the perception of safety but also the objective safety in the area.

For the short term we identified the set of actions that could be done to increase the feeling of safety of Björksätra accommodation residents. The first and the simplest thing is adding the lighting along the dark paths which lead from subway station to accommodation. It will increase the "natural surveillance" (CPTED principle) and the safety feeling, as "Dark areas/Lack of lighting" was the most scary element making students feel unsafe on the journey home. The second activity is the good maintenance of the green areas (trimming of the bushes and trees, collecting of the fallen leaves, etc), it will help to improve visibility, which is really important aspect of the safety feeling evaluation. The next step is to integrate activities in the accommodations (meetings, small parties, team sport exercises, different clubs of interests), so students could meet their neighbors. This can create a bigger community, place attachment feeling and increase the feeling of safety. Another useful solution could be using apps that could inform the relevant authorities (KTH, police, SL) about the feelings of safety of students in different areas of the city. In this application students can pin places around the city where they feel unsafe and describe why it happens, after government/local authorities can work on this places making them safer. Another interesting application that could be a KTH initiative could be a creation of phone/web application where registered students living in accommodations can find a company for their way home by sharing their route and the time they will travel (like car-sharing, but for public transport). We think it would greatly increase the safety feeling among the students who live in suburb's accommodations and also create opportunities for interaction between students.

For the long term actions we propose, firstly, to rethink the location of certain accommodations as some of them far from any facilities (shops, groceries, subway station, etc.). It would be nice to see them close to other housing areas. The creation of the new subway stations, for example, right in front of Björksätra accommodation, would increase the feeling of safety because the distance between station and accommodation would be drastically reduced.

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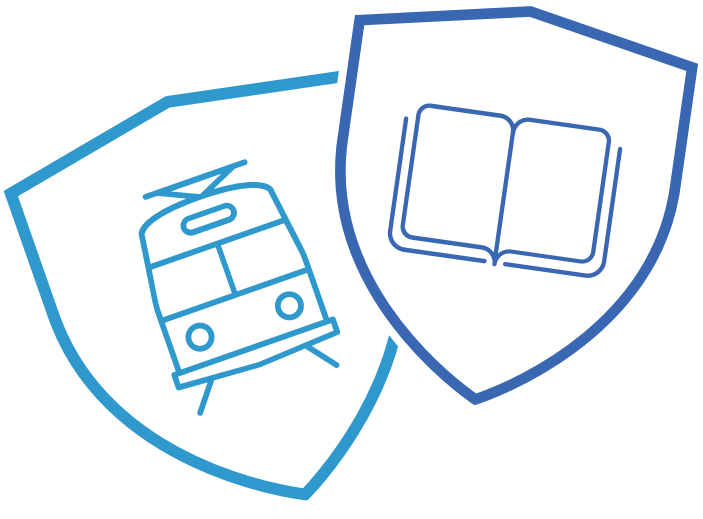
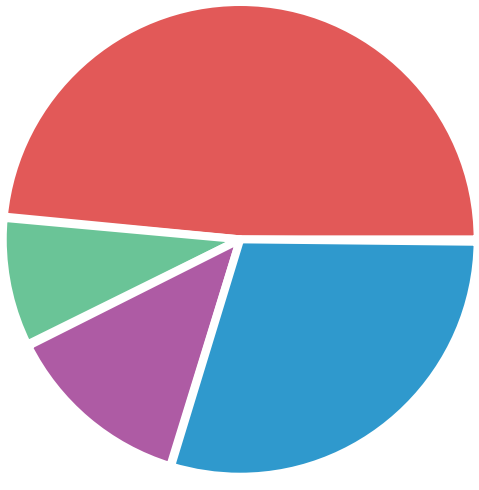
SAFE JOURNEY

STUDENTS PERCEIVED SAFETY ON THEIR WAY TO UNIVERSITY



Where do you feel less safe in public transport?



48.6%
I never feel unsafe

30%
On the way to the station

12.9%
Waiting at the station

8.6%
During the commute

How safe do you feel on the journey to University?

	Men	Women
Day	4.70/5	4.25/5
Night	4/5	3.25/5

More scary

dark paths & lack of lighting

suspicious people

empty pathways

garbage & dirty areas

beggars

graffiti

dense vegetation

Less scary

Which accommodations are perceived as most and least secure?

2.75/5
Hanstavägen, Kista

4.63/5
Lappis, Universitetet

3/5
Strix Västraskogen Solna

5/5
Hemmet, Tekniska Högskolan

“I think Sweden is safe at present, so I don't have to worry about safety on road.”

/from the private interview/

men

70%
never feel unsafe

20%
feel least safe on the way to the station

7.5%
ffeel unsafe waiting at the station

2.5%
ffeel unsafe during the commute

women

15%
never feel unsafe

46%
feel least safe on the way to the station

21%
ffeel unsafe waiting at the station

18%
ffeel unsafe during the commute


T METRO
J RAIL
INNER CITY
CONURBATION
GREEN AREA
WATER
KISTA
KTH KISTA
T 20 min
Danderyd
Vaxholm
KUNGSHAMRA
Tensta
Hässelby
Sundbyberg
LAPPIS
Lidingö
Solna
Vällingby
PAX, STRIX
DKV
KTH CAMPUS
HEMMET
5 min
Bromma
Fjäder-
holmarna
Stockholm
SKRAPAN
Nacka
Hägersten
Årsta
BJÖRKSÄTRA
Enskede
Nackareservatet
Ekerö
Skärholmen
EKEBERGABACKEN
KTH FLEMINGSBERG
J 20 min
TYRESÖ
Norsborg
Huddinge
Farsta
Tyresö
KTH SÖDERTÄLJE
J 45 min
Tullinge
Vendelsö
Tyresta nationalpark
Tumba
Södertälje
KTH HANINGE
Handen
J 25 min

Björksätra accommodation

Short term

- Adding the lighting along the dark paths which lead from subway station to accommodation to increase the "natural surveillance" and the feeling of safety

- Good maintenance of the green areas (trimming of the bushes and trees, collecting of the fallen leaves, etc) to improve visibility

- Integration of activities in the accommodations (meetings, small parties, team sport exercises, clubs of interests) to create a bigger community, place attachment feeling and to increase the feeling of safety.

- Creation of an app for further research in detail where students feel fear around Stockholm. In this application students can pin places around the city where they feel unsafe and describe why it happens, after government/local authorities can work on this places making them safer.

- Creation of a phone/web app where registered students, who live in KTH accommodations can find a company for their way home by sharing their route and the time they will travel (like car-sharing, but for public transport) to increase the safety feeling among the students who live in suburbs.

"Not enough lighting on my way home. I usually don't go along."
/from the private interview/

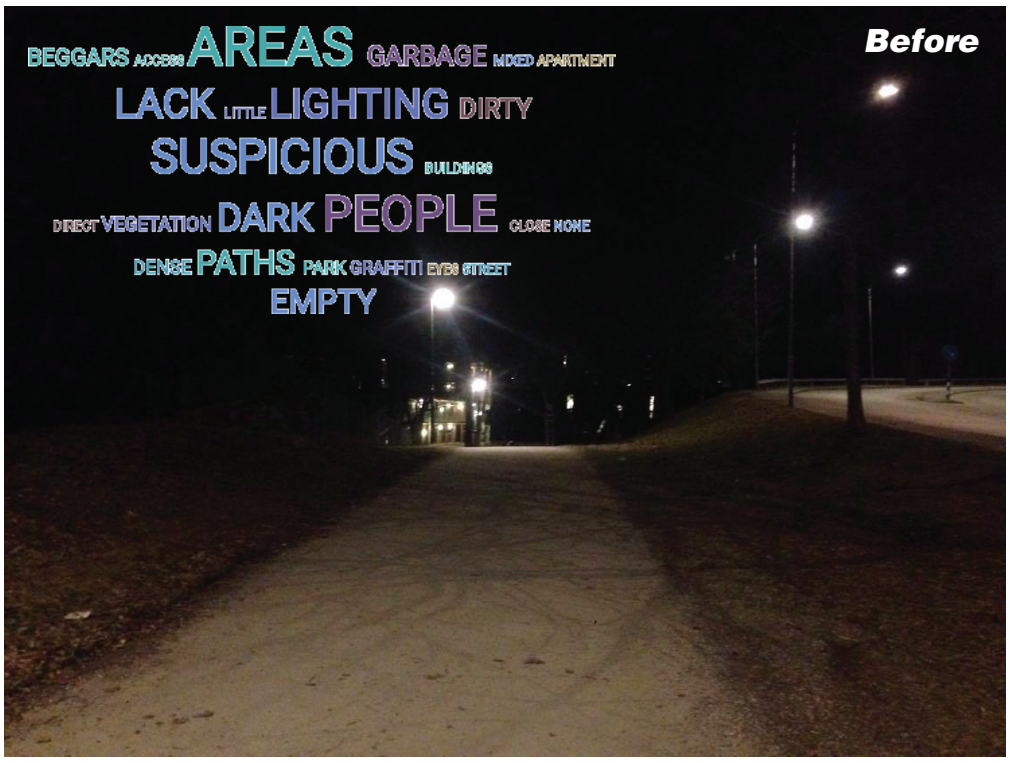
"Once I walked with my friend (we were two girls) in the evening, when we passed the bench right after the tunnel, a scary man with a mask got up and started to follow us. I tried to find some sharp thing in my bag to protect us. It was really scary..."
/from the private interview/

Long term

- To rethink the location of the accommodation as it is far from any facilities (shops, groceries, subway station, etc.).

- Replace this accommodation closer to other housing areas and in more suitable landscape (not in the lowland).

- The creation of the new subway station, for example, right in front of Björksätra accommodation to increase the feeling of safety because the distance between station and accommodation will be drastically reduced.



BRIDGING SAFETY

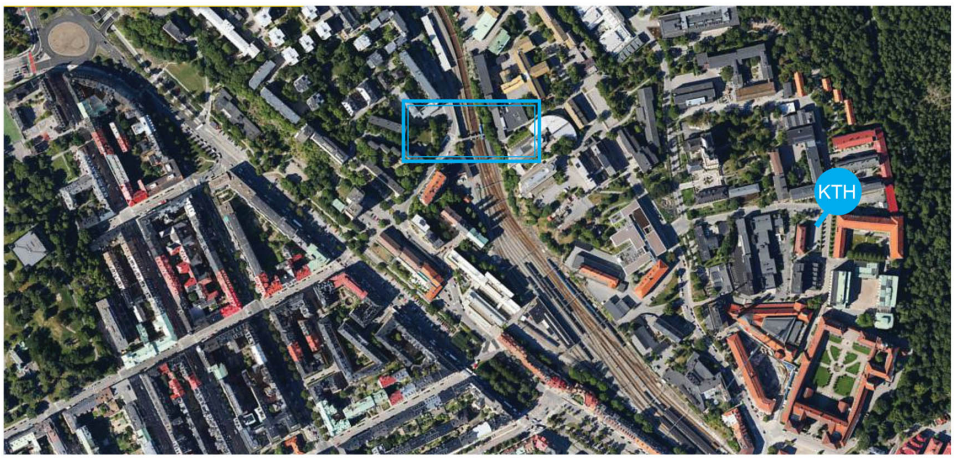
INTRODUCTION

In the city of Stockholm, the public transport system is a subject of constant analysis, especially because of its substantial importance to the city and the deep impact its infrastructure causes in the urban scenario. Its physical frame requests special attention in order to support mobility across the city, at the same time the subway and train infrastructure might cause other limitations, due to the complex network of rails, high voltage cable systems and limited access levels it requests. Many solutions to overcome these barriers are developed, but some one them might end up generating other sort of problems, including problems regarding safety, in places they are meant to increase accessibility. Some examples that can illustrate these solutions are access tunnels, underground passages and bridges that allow people to move from one point to the other without being exposed to risks created by this indispensable structure.

However, many of these passages are not safe or not considered safe by experts and population. In most cases, the design of these elements and the physical environment of the surrounding areas are two of the aspects responsible for that perception. While the configuration of such spaces might actually facilitate the actions of potential criminals, it can also change the impressions of individuals about the space and influences the impression and behaviour of users in certain areas. It is, therefore, important to understand those elements and how or if their design, settings and location affect the notion of the space as a safe place and, consequently, the use of these areas. Through the analysis and study of the place, combined with applied theory, the intention is to identify and propose solutions to tackle the problem(s) through physical improvement of the area.

BACKGROUND

The object of this study is the pedestrian bridge located over the light rail tracks near KTH Campus, connecting it to other parts of the city and acting like a shortcut for those who use bus 61, line that serves Ruddammen to Hornsberg. As part of the context, the adjacent areas to the bridge in each side are also included in the observation and analysis of the physical environment.



Location of the studied area

This passage was selected to be part of the study because of its location and the surrounding area where it is found. The choice was made based on previous observations of the place as users, and then brought to a deeper research of the area for a better understanding of its context.

Regarding the physical conditions, the bridge is composed by a 60m-long wooden deck and high fences as lateral protections (approximately 160cm to 180cm high). Metal railings follow the extension of the bridge from both sides. In the map below, this area is identified as Part Two. The surrounding area has several different services and functions. Part one has a recycle station, bus station, small transition park/green area and a building with several carports closely linked to the bridge. This area is also connected to residential buildings. Part three, on the other side of the bridge, includes mostly KTH-related buildings with lecture rooms, offices and other organizations. This means that there is a high presence of people during the day, but almost no flow of people during late evenings and weekdays. Furthermore has the area (part three) a partly sunken terrain and the buildings feel displaced, which affects the overview and perception of safety.

Studied area divided into three parts and identified spots for investigation

GOAL & OBJECTIVES

In this study, we take the subject described above to exemplify and analyse possible impacts that necessary interventions in the urban space might have not only in the safety but also in the perceived sense of safety of individuals. The physical conditions of the space drive a set of perceptions of the place, and the intentions are to investigate the relations between the design and location of the have in the feeling of safety in this specific case.

The aim is then to investigate if people feel safe or not while using the bridge as a passage on their daily routine and, if they do not feel safe, what are the possible reason(s) for that. From this investigation and from the suggestions given by the prime users through the information captured, the aim is to provide a roll of possible improvements that can be offered in order to change the image of the bridge and to enhance the feeling of safety and real safety on the site.

THEORY

Cozen (2016) explains in his book *Think Crime!* that the theory of Crime Prevention Through Environmental Design (CPTED) started through inputs by Jeffrey and Newman who argued that there was a strong correlation between the built environment and opportunities for crime. Newman developed the first ideas further and formulated the theory of *Defensible Space*: Crime Prevention Through Urban Design who had support from Jane Jacobs work about Eyes on the street and the idea of areas being controlled by a community instead of the police. Newman's concept of defensible space for urbanism and architecture, includes the four different aspects:

- Zones of territorial influence
- Surveillance opportunities
- Design's influence on the perception
- Influence on geographical juxtaposition and safe zones (Cozen 2016).

Routine Activity Theory

The Routine Activity Theory by Cohen and Felson (1979) is based on the relation between crime, time and space. To explain this correlation they've designed a triangle with the three corners: Motivated Offender, Absence of Capable Guardians and Target, which then can be a person, object or a place. Even though RAT looks from the offender's perspective it is highly context- and time specific and is primarily about the opportunity for a crime for the offender. Since the presence of a capable guardian at a specific location or that this guardian may show up at this location at a certain time, can in many cases prevent crime from happen (Cozen 2016). This scenario is likely connected to the area in our survey, which makes the matter of the guardian(s) the most essential aspect. RAT is as CPTED & Defensible space, closely linked to the concept of Eyes on the street.

Crime Pattern Theory

RAT is also closely linked to the theory of Crime Pattern (CPT) in terms the space and time relation, and crime opportunities on different scales (city, neighbourhood and building envelope). It is according to Cozen in some cases overlapping RAT and common when investigating local streets on the neighbourhood level. Part of this theory is about analysing crime patterns in terms of nodes, paths and edges where paths are mainly the common

everyday travel routes. The nodes include the locations or spots people commonly travel to and from, for example home and work (Cozen 2016).

Fear and perception of crime

According to Cozen, individual's fear of crime affects their behaviour and does in that sense influence the opportunities for crime and the levels of crime protection. He explains it as "*For the citizens, their perceptions influence their sense of personal safety, which influences their behaviours, routine activities and their level of caution and protection against crime risks*" (Cozen 2016:67). These aspects are though not showed by the crime statistics presented by the police. This means that how we perceive our surrounding environment and urban spaces is connected to our personal safety and our fear of crime, which affects our behaviour. Where fear of crime can lead to people avoiding some areas during certain times. Cozen explains that our routine activities, which give opportunities for crime in the everyday life, requires an understanding of individual's perceptions, but also of groups and communities. This is essential the when working accordingly to CPTED. He adds that an understanding of personal safety and perceptions of crime risks, for the different groups, are highly important for developing and implementing CPTED strategies, which attempts for reducing both crime and fear of crime (Cozen 2016).

Other aspects of fear of crime have been formulated and some of them are; *emotional responses to fear of crime, spatial avoidance, police and security presence, social patterns of fear of crime* etc. (Cozen 2016:71). This subject is closely linked to environmental psychology, which is often taken into consideration when working with CPTED. Cozen refers to a study made by Fisher & Nasar (1992) which resulted in three main physical factors in the relation between the two fields. These are *open views, protection from potential danger outside* and *opportunities to get away*. These aspects reach different levels depending on place, where CPTED often is used to analyse them in its physical context. As Cozen explains physical space in itself does not cause the crime, but people's fear of crime and behaviour becomes shaped by their associations with its design (Cozen 2016).

CPTED

The theory of Crime Prevention Through Environmental Design has existed for long. According to Ekblom (2013) is the formulated practice commonly used in Scandinavia, UK, Australia among other countries. As Cozen explains in his book is CPTED divided into two generations. Here we refer to the one of today, which is described by Ekblom. The concept has several links to fields such as architecture, urban planning, crime prevention and as mentioned; environmental psychology. To define CPTED, Ekblom refers to Tim Crowe as follows:

"(CPTED is) The proper design and effective use of the built environment, that can lead to a reduction in the fear and incidence of crime and improvement in the quality of life…The goal of CPTED is to reduce opportunities for crime that may be inherent in the design of the structures in in the design of neighbourhoods (2000:46)" (in Ekblom 2013:2). Based on work by Cozen and Armitage, Ekblom summarizes the seven principles of CPTED as:

- *Defensible space*: which is about keeping criminals away through physical design of buildings;

- *Access Control*: more about preventing crime through limiting the access for people who don't have a right to be there, in different ways for example technical solutions or other structures;
- *Territoriality:* concerns the feeling of controlling the space and how it is used, where a good design can increase this kind of motivation;
- *Surveillance:* is about how people in the area can function as guardian an take action if they see or hear anything uncommon, rare, the same idea as Eyes on the street*;*
- *Target Hardening:* covers the efforts of physical structure as barriers, for example walls and high security doors;
- *Image Covers:* Concerns the image or reputation of a place, neighbourhood or a building and its buildings. This includes according to Ekblom also the matter of *maintenance,* where lack of maintenance affects how the environment is perceived from a safety perspective;
- *Activity Support:* includes the effect from the flow of people passing and their routine activities, but also the ongoing activity in the area in general (Ekblom 2000:2-3).

For the purposes of this research, the analysis will be associated to three of the seven principles of CPTED, being the following: surveillance, image covers (maintenance) and activity support.

The relation between gender and safety is often connected to women's victimization and higher fear of crime. According to Sandberg and Rönnblom (2015), the ways a public space is used, visited and controlled has a direct interrelation to fear, as stated by them: "from a spatial perspective, safety depends on the kinds of people using spaces, the kinds of activities they perform in them and when they perform them" (2015:2667). However, studies often show that men are the ones exposed the most to the risk of victimization than women, according to Brownlow (2004). In this research, we will study both male and female perspectives through their perceived safety answers collected from online forms, and try to interconnect gender and perceived safety, as well as perceived safety regardless gender.

METHODS

For our research study we used, in addition to safety and CPTED related literature, observations and a questionnaire as methods. The observations were made during both daytime and evening hours, as well as in different weather conditions, to investigate the difference in use, perception of safety and lighting. Observations of the space in other seasons were also considered in a minor scale, relating also the influence of lighting (both natural and artificial) in the perception of safety.

A questionnaire was formulated and distributed to different groups in order to achieve answers from a broader spectrum of users. It was conducted with target groups that are related to KTH (residents, students and employees), and also occasional users and other individuals that are not directly related to campus activities. The aim of the survey was to collect information about situations when and if people felt unsafe along the passage, as well as to understand the essential factors that made people feel unsafe when passing. The applied questions in the form were formulated in a way that multiple information could be gathered in each question, and persons were asked to answer multiple choices, checkboxes, rating options

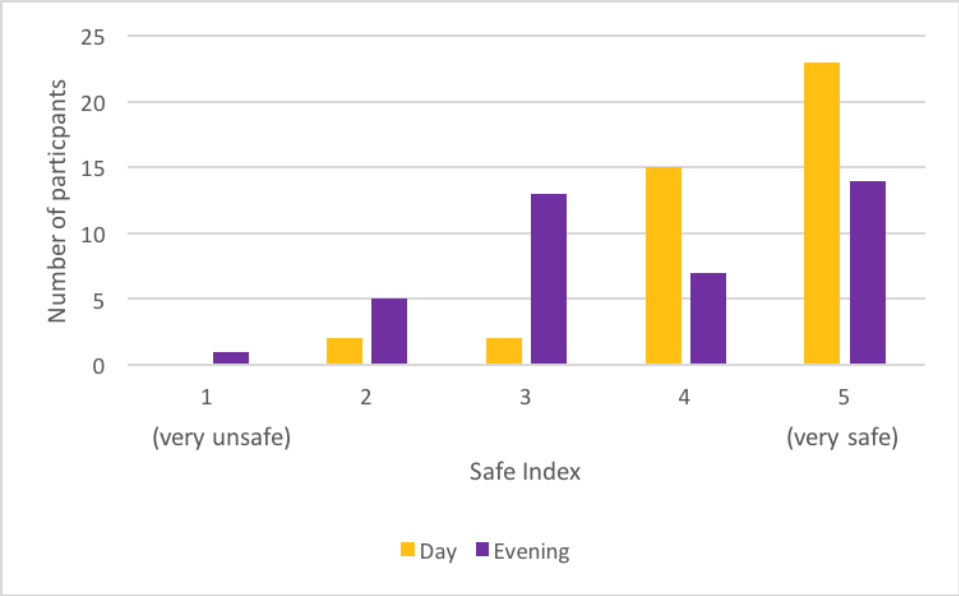
(for questions regarding the feeling or perception of safety) and written answers and comments, in order to get an extensive range and variety of each one's personal point of view.

The first questions were set for identification purposes (gender and relation to KTH Campus or other), followed by the individual's' routine and use in different days (weekdays and weekends), in different hours (from a range between 8am and 6pm or after), and the reasons why the bridge passage was a choice for each of them. For questions about perceived safety, rating options were graded from 1 to 5, from feeling "very unsafe" being rated as 1 to "very safe" being rated as 5, in different moments (day or evening). In the case of feeling unsafe, written answers were asked for the possible reasons why. Final questions were placed to analyse experiencing/seeing/hearing about crime committed in the area, and if, which crime was experienced. The form was completed with a roll of checkboxes and also written opinions displaying which improvements were considered necessary in the area and could contribute to a change of perception of the bridge and its surroundings. In the end, space for comments was placed.

DATA

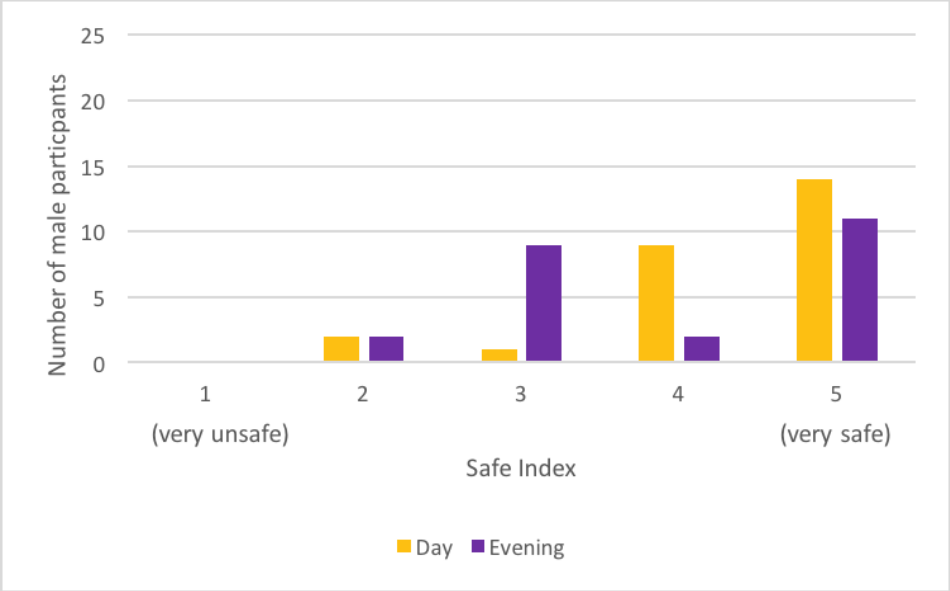
The data described below presents the results of the survey about perceived safety applied for the area of study. In 3 days, 42 answer sheets were collected from different users, mostly students (39 of 42) of KTH. The majority of the people (30 responses - 71,43%) answered as "occasionally" as referring to how often one uses the bridge, followed by "on weekdays" (8 responses - 19,05%), and everyday (4 responses - 9,52%). No answer was related to only "on weekends".

Regarding the feeling of safety, from the total responses, 38 (90,47%) reported feeling safe (rates 4 or 5) during the day, 2 (4,76%) reported less safe (rate 3), 2 (4,76%) reported not safe (rate 2). During the night, 21 (50,00%) reported feeling safe, 13 (30,95%) reported less safe and 6 (14,28%) reported feeling unsafe. In this case, 2 individuals did not answer.



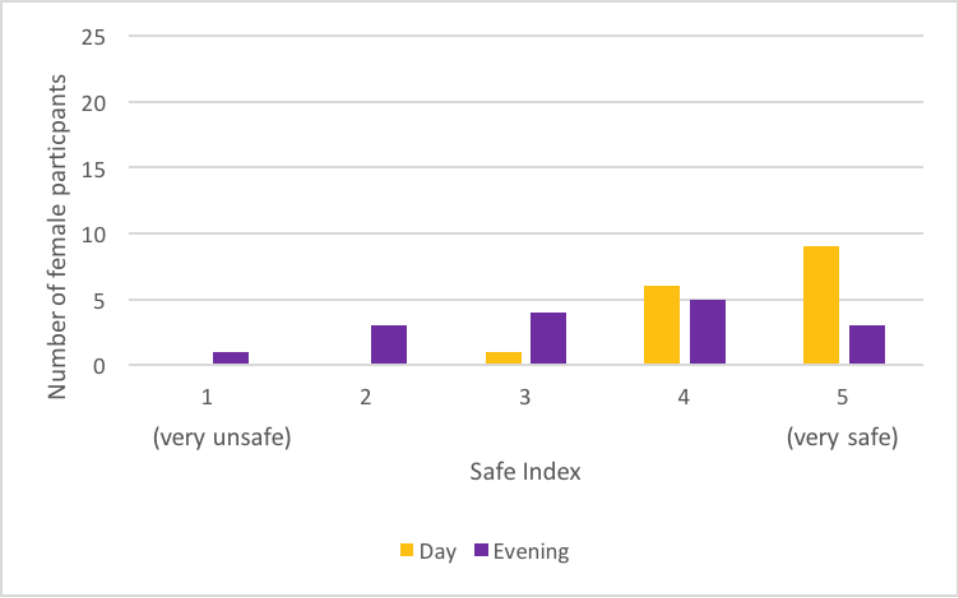
Evaluation of feeling of safety during the day and the evening by the 42 participants

Separating this data above by gender, 26 of the submitted forms were answered by males and 16 were answered by females. From the total of males, 23 (88,46%) reported feeling safe (rates 4 and 5), 1 (3,84%) reported feeling less safe (rate 3) and 2 (7,69%) reported feeling unsafe during the day. During the night, 13 (50,00%) reported feeling safe, 9 (34,61%) reported feeling less safe, 2 (7,69%) reported feeling unsafe and 2 (7,69%) did not answer.



Evaluation of feeling of safety during the day and the evening by 26 male participants

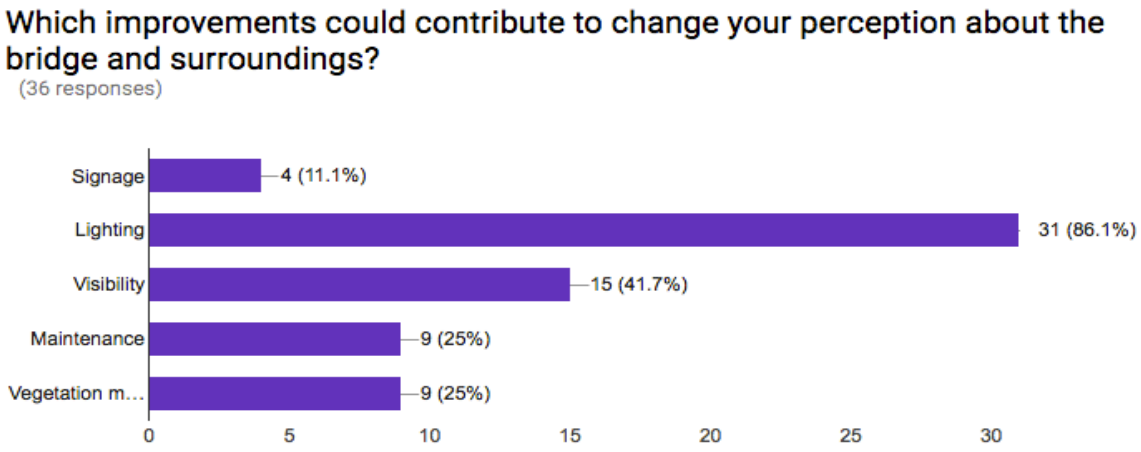
From the total of females, 15 (93,75%) of them reported feeling safe (rates 4 and 5) and 1 (6,25%) reported less safe (rate 3) during the day. During the night, 8 (50,00%) women reported feeling safe, 4 (25,00%) reported less safe and 4 (25,00%) reported feeling unsafe (rates 2 and 1).



Evaluation of feeling of safety during the day and the evening by 16 female participants

Among the answers describing the reasons why one would feel unsafe (or not safe) in the area, the most mentioned was the darkness and lack of lighting in the area (9 occurrences). The "emptiness" of the area, caused by both lack of pedestrians and activities, is the second most mentioned one (6 occurrences) and the third one is climate related (4 occurrences mentioning snow and wind as promoters of discomfort).

In relation to suggested improvements that would contribute to the change of perception of the space, the most chosen one was to enhance lighting (31 occurrences), followed by visibility (15 occurrences), in a total of 68 suggestions (image below).



Relation of suggested improvements considered by the participants

Finally, regarding other improvements asked in an open suggestion field, the three equally mentioned ones were concerning about winter maintenance (snow and ice removal), the addition of more attractive fence and materials and decorations (photographs, images, paintings) along the bridge and, last but not least, the installation of security cameras and emergency phones. The template of the online form can be found in the end of this report as "Appendix A", followed by the full result of the online survey as "Appendix B".

ANALYSIS

The collected data and the site visits provided interesting material for discussion. The analysis will consider the impressions of the environment captured during the visits as well as two main aspects of the survey: the perceived safety during different times of the day and its possible relation to gender, and the perceived safety related to the physical aspects of the space, specially concerning lighting and visibility. These last factors are also interconnected to the idea of safety in day and night time.

During the visits and analysis of *Activity support*, it was possible to identify a considerable difference between the flow of pedestrians at daytime and nighttime. Especially at lunch hours, during the observation of the site, the amount of people (most of the observed were students) crossing the bridge was noticeably high in comparison to other site visit times, and the flow after 6pm was almost inexistent. Since it is a commonly used passage in the everyday flow of movement this situation is within the frame of RAT where most of the

activities in the campus end before or around 6pm. It is also important to consider that the reference to "evening" might be understood in a different way in Sweden. During winter, when the days are shorter and the amount of snow intense (the days when the passage was used the most by one of us), the amount of people was not as intense as in spring day, at the same hours. Considering the relation between physical factors and changed behaviour is related to the theory brought up by Cozen about how we perceive our surrounding, and in this scenario two possible drivers of the change of behaviour could be:

- The amount of snow and the occurrence of ice in the passage drives people way from it because of the risk of a fall: mentioned in 3 (three) of the reports a reason for some not to feel safe;
- During dark hours, the poor lighting brings another aspect to the area: 9 (nine) of the reports mentioned lighting as a reason that they the perceived the place as not safe.

The configuration of the buildings in the adjacent areas also collaborated to the impression of darkness and emptiness. On the KTH side, the buildings form a narrow alley, with plenty of vegetation and bushes, no alternative exits, and considerably high fences. These are according to the principles of CPTED reducing the surveillance in the area, where the alleys do not allow a complete comprehension of the space and, together with the poor lighting (also caused by the amount of vegetation), they interfere on a possible presence or identification of strangers and impede a possible necessary scape.

Regarding the relation of feeling of safety in different times of the day, generally there is a decrease of 44,73% in the quantity of individuals perceiving the place as safe or very safe in the evenings (or better, considering dark hours) in comparison to the reports of the day. There is also an increase of 200% in the quantity of individuals perceiving the place as unsafe. When separated in matter of gender, it is possible to notice a decrease in the perceived safety both in female and male reports, when shifted from day to night hours. Analysing the male statistics, there is a decrease of 43,47% in the quantity of rates "safe", but no increase in the rate as "unsafe" (the difference is then noticed in the reports of rate 3 - there was an increase of individuals reporting rate 3 – less safe - of 800%). On female reports, there is a decrease of 46,66% in individuals feeling safe, an increase of 300% of rate 3 (less safe), and while no reports of feeling unsafe were given in day time, in night time these reports appeared representing 25% of the total women who started feeling unsafe. Therefore, it can be noticed that the difference in the percentage of increased feeling of unsafety is not so substantial between female and male reports. However, the degree of unsafety can be discussed measured by the increase of reports in different rates for safe or unsafe environment. Women tend to feel less safe (in different degrees) than men.

CONCLUSIONS

Through this study, it was possible to understand the current use of the area by different public, and relate conditions of the use to different aspects of space and time. This behaviour is also deeply related to the perception of the space regarding safety, which can be analysed in matter of gender as well. It was clear that the perceived safety among women changed in worse degree when shifted from day to nighttime. This could also be perceived among men, but in a lower intensity than the women. Analysing both groups together, there was a general

decrease in the perceived safety from daytime to night (or dark) hours. The physical characteristics of the space were also a determinant factor of the bad impression transmitted by the place, especially when it comes to lighting, visibility and maintenance.

The results collected from the survey indicate that there are many aspects that could be improved in order to change the perspective of people regarding safety on the site. Above all other aspects, need for better lighting of the area in general was the most requested one, followed by increase of visibility. From the observations it was also possible to notice that the large volume/amount of vegetation, which becomes flourishing green in spring time, makes the area less visible and the problematic hidden corners get even more hidden. Hereupon, the implementation of better and more lighting and maintenance of the vegetation (trim and cut, if needed) and cleanliness of the space are urgent and considerably simple actions that could help substantially in the change of impressions and increase the use of the passage studied. Fulfilling these first needs, a set of long-term interventions can be thought of, regarding changes in the physical aspect of the bridge, including new materials on the bridge structure, as well as in the adjacent buildings and façades. Some sort of interactive design features could also contribute to the increase of pleasantness of the passage. Thus, the perception of safety might be affected in positive ways; regardless the gender of the individual, and it might prompt new activities, new flow and new relations to the use of the space.

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1. Introduction

The discussion of public safety and fear is often centered on crime. Criminal activity no doubt has countless negative effects on both a societal and an individual level, but the actual rate of crime might actually be outcompeted by the fear of crime when it comes to negative consequences. These include, but are not limited to, weakened social bonds, stress and even fear of leaving the home. The ironic effect of this is that the increased fear and distrust might even lead to an actual increase in crime rate (Nasar & Fisher 1993). This finding raised my interest in not only the effects of fear of crime, *but of the effects of the measures taken against crime on perceived safety as well*. Since fear and actual crime and intricately liked together, it is conceivable that generalized fear alters our behaviour in multiple ways which might amplify other problems further. I realize that the subject of urban fear and correlation with anti crime measures is a very broad subject for a project of this magnitude, which is why I have elected to limit my study in other ways. In order to expand knowledge and understanding, rather than trying to quantify fear, my project is of a qualitative character. That means than rather than asking a large amount of people using a space when and how they feel fear, I have interviewed just a few people more deeply to try to get to the root of the fear. Conducting large-scale statistical analyses to map crime and fear thereof is certainly needed to be able to address it in the right way, but smaller, qualitative studies are also of usefulness as they can broaden the way we look at an issue and gain a better understanding of underlying complexities.

As previously mentioned, I have limited my study not only in scope but also when it comes to place. Since public transport is a large part of everyday life in Stockholm, as well as a subject extensively studied within the field of crime and safety in urban design (Ceccato 2013), I wanted to examine how risk and safety are perceived within that context. My chosen location is the Solna Station commuter train station and the area directly adjacent to it. This is a highly complex urban setting, being an intersection of different types of public transport, highways and walking paths as well as mixed residential buildings and commercial areas. The area is very busy throughout the day as well as night, owning to the commuter trains stopping there as well as connections to several bus lines, the light rail and the proximity to a large mall. Because of the complex infrastructure, the movements between the modes of transport largely take place within several short pedestrian tunnels, stairways and paths, creating many potential places for fear. To further complicate the situation; a new exit for Solna Station at the other end of the platform was recently added, leading directly to a newly built mall attracting many visitors. This causes some confusion as first time visitors end up at the wrong place, and local residents use the platform as a shortcut to get to the mall, effectively using a commuter train station without having any intention of using the public transport. My study focuses only on the older exit with adjacent area, which lies to the west of the new one.

Above: Solna station's location in Stockholm as well as urban context of its western exit.

The area is very mixed typologically with complex infrastructure. Important locations nearby are Hagalund, which is part of Miljonprogrammet, several areas of mid-century housing as well as detached houses and light industrial areas. It is infrastructurally complex, with a highway passing by it leading to pedestrian tunnels between the areas right by the station. Solna station lies just north of inner city Stockholm, 7 minutes by commuter train with light rail and several buses connecting it to other areas within Solna as well as Stockholm, Sundbyberg and Danderyd municipalities among others.

2. Aim and Objectives

As stated in the introduction, my project is of a qualitative nature. That means that, unlike a statistically rigorous survey, it does not claim to mirror the reality exactly, neither to catch every aspect of the subject. Rather, my goal is to expand the way we think about fear within the context on urbanism. I seek to discover not only what parameters we learned of in the course are applicable here, but also to try to identify new ones and even fin contradictions. As such, Solna Station is merely the object of a case study and not necessarily a place I wish to improve when it comes to fear and safety. I use the station as an entry point into a discussion about urban fear as it is readily relatable to the people using it, and try to contrast and compare my results here to previous studies with the hope of finding relevant similarities and differences. Therefore, my proposed suggestions might not be only about Solna station, but contexts like it in general as well as on the theory and practice on research on fear and safety. I do this with a critical mind of the standard ways of thinking about fear in order to expand knowledge and open doors to new interpretations.

In order to achieve my aim of expanding knowledge, I conduct open interviews with a limited amount of people who regularly use the space. Some of them live close to the station, while others use it as a transit hub to change to adjacent modes of transportation or to visit friends or services nearby. I try to get an as wide group of respondents as possible in order to receive different opinions and standpoints. However, since the survey is not statistically based, my respondents might not necessarily represent the reality in any quantitative ways.

3. Theory

The choice to work with a public transport hub limits what theoretical models and applications within the field of safety that can be used. While CPTED can be useful in some cases, it is only partly applicable here. Limiting through movement, enhancing territoriality and creating defensible space are not attractive or even possible options in a commuter train stop. Management and maintenance, though, is still relevant as a run-down appearance of a station can send the message that nobody cares for it or cares for what happens in it (Ekblom 2011). The concept of scripts clashes is highly applicable here. A public transport hub comes with many requirements that might make crime prevention more difficult. Part of my study is to examine how the crime prevention that is used at the station clashes with its users.

Situational crime prevention is another model, which includes many different strategies. Increasing the effort, increasing the risk, reducing rewards, reducing provocations and removing excuses are the main categories here (Braga 2010). I am interested in how these measures are interpreted, and if they clash with the users of Solna station. The first category includes limiting access and generally making it harder to access places to commit crimes. The second, increasing the risk, aims to make it less desirable to commit crimes because of the risks involves, while the thirds2 makes it undesirable by reducing the benefits. The fourth deals more with interpersonal psychology and can be applied at a station for example by providing big enough waiting areas to reduce stress, while the last category is meant to make it easier to do the right thing.

When it comes to understanding crime and fear rather than trying to prevent it, I also look at gendered fear and how men and women respectively express fear differently. Women have been shown to be more concrete in their fear, acknowledging the fact that it takes just one rapist to commit a rape, while men fear in a more abstract way, dealing more with violence as something evil “out there” (Brownlow 2005).

Since my study is of a qualitative character, though, models for how criminal activity operates on a structural level are of less relevance as I deal with personal stories. Very relevant, though, is an understanding of how and why fear happens and the effects it has. One aspect is related so socio-economic status and the actual costs related to fear of crime. Solna is not a poor

municipality and the area around the station is mixed, but the bog Hagalund area is part of the million program, which is often associated with lower socio-economic status. Fearing crime can make this even worse as it inhibits your behaviour (Cozen, 2016), which is especially relevant when it comes to using pubic transport. Fear is also dependent on social background, where women, elderly and minorities fear crime more. The actual risk of crime, though, is not related to the level of fear. This makes fear problematic in itself, maybe even more so than actual crime in some cases as many more people are fearful that what are actually victimized. Fear also lead to spatial avoidance, in which people who are fearful of a certain place will avoid it, leading to more opportunities for crime, then actual crime, which further feeds the fear in a vicious cycle (Cozen 2016).

4. Method

Since I use the open format, my interview does not consist of a set questionnaire. Rather, I open with general questions about Solna station with a focus on perceived safety and fear, of crime or otherwise. Depending on the answers I lead the discussion onwards to develop the respondents thoughts and try to probe for relevant information concerning fear and safety. This technique has several drawbacks compared to statistical surveys, but also some unique advantages that cannot be replicated in a more quantitatively focused study. While I cannot claim to pin down a representative level of fear or actual effects of anti crime strategies on a statistically significant level, I can gauge into experiences not usually seen in safety surveys. Some of them might not be seen as relevant by the usual survey makers, while others might represent only a small faction of people and are therefore left out. However, even if just a few people experience fear and insecurity in a certain situation, their story is still worth telling even if interventions should not necessarily be based on these few stories without conducting a wider survey to check for their actual prevalence within the user group. I then analyze my interviews, looking at the theory of crime prevention and try to identify the respondents' attitudes to these tools. I try to stay aware of theory while doing the interviews without pushing the respondents too hard in a certain direction. Asking some open questions and asking them to develop t the most relevant statements as well as encouraging them to keep speaking about what worries them allows their voice to be heard without being lead by me.

It should be mentioned that all interviewees have some relation to me personally. Two of them are acquaintances to me while the others are friends or parents of people I know. I acknowledge the fact that this might color the answers which is why I went to great lengths to act professionally and stress their anonymity in the study. This arrangement is not ideal, but had to suffice because of the short time afforded for the project.

5. Analysis

I interviewed four people: a middle-aged man, a middle-aged woman, a young man and a young woman. In general, the women were much more talkative which might reflect the fact that women usually experience more urban fear, or are more encouraged to talk about their fear than men (Brownlow, 2005).

Middle-aged man

The middle-aged man, who does not live near Solna station but visits relatives nearby at least once a week, expressed the lowest level of fear. While he had at one time had to pass through a rowdy group of young men at the station, this did not make him fearful or uncomfortable but he acknowledged that the situation might have had that effect on other people. He was the only one to express a certain discomfort with the beggar daily sitting outside of the station, but did not relate this to fear. There were only two points brought up by him that could be improved: lighting in the tunnels and the quality of lighting at the platform, which he described as too yellow which made him uncomfortable. The low level of lighting in the tunnels was also problematic, but he did not fear the tunnels per se. Unlike some other respondents, he felt safer with no people around in the tunnels than when other people were using it. The yes of strangers, thus, did not make him feel safer. The presence of policemen and uniformed guards, though, did heighten his sense of security.

Middle-aged woman

The middle-aged woman lives in Hagalund, a million-program area located near the station. She uses the commuter train to get to work every day and usually during the weekend as well, for errands in the city and displayed the most fear of the people I interviewed. Unlike the middle-aged men, she was of the opinion that Solna station is not safe, but plagued by gangs of young men making her feel unsecure. She hinted that all those men were immigrants and displayed a somewhat racist attitude but did acknowledge that those men might have less to lose by acting like they do, displaying a basic class analysis. She often feels unsecure on her way to the train and in the station, especially at night and in the tunnels, which she really hates, also calling for better lighting but she would prefer to do away with the tunnels altogether. While she has never been personally assaulted, she feels that young men sometimes call things after her to mock her although she is not sure if this is their intention.

Maintenance was a big deal for the middle-aged woman, who displayed a very intolerant attitude towards graffiti and litter. She feels safer if you can easily tell that someone looks after the place and quickly begins to feel uneasy if the maintenance is not top notch. The presence of vegetation was not problematic to her, even if it's overgrown as she thinks it adds something positive in the otherwise grey area. She was also very positive to the small kiosk located outside the station, feeling that the woman there keeps a watchful eye and will notice if something actually happens. She generally feels more at ease when lots of people are moving around, especially "normal people" going to their place of work and not people just loitering about. While

she displayed a positive attitude towards police in the station, security guards she was more torn about. Associating many of the problems regarding safety with men, she felt that guards make the situation worse, partly by being aggressive men themselves, and partly because they make other men more aggressive. She described this as fostering a sort of competition of cockiness, thus preferring either police or just the watchful eyes of other passengers to security guards.

Young man

Standing out among my interviewees, the young man displayed a low level of fear towards other passengers, but also a large degree of uneasiness towards authority. He lives nearby the station and routinely walks across the platform to get to the big mall on the other side of it. Since he does not have a public transport card, he often jumps the gate doing this, which has lead to some trouble for him. He was recently stopped by two policemen in plainclothes when doing this, which upset him greatly. The police did not mention him gatecrashing, but separated him and his boyfriend and asked them about drugs, threatening to take them to the police station without any reason for suspecting them other than they looking, in the policemen's words, conspicuous. After this incident, he feels greatly insecure when he sees police officers and even security guards, and avoid using the station altogether, opting for a longer detour to get to the mall. He displayed a negative attitude to police in general, questioning their hunt for petty criminals instead of investigating murder and rape. He stated that he feels Solna station is safe aside from the police who dramatically decrease his feeling of safety and wondered why they are there.

The tunnel did not bother the young man at all as he did not display any fear for other people, but he mentioned seeing people crossing the highway above it just to avoid it. Rather, the bicycle path running past the station that you have to cross to get there represented his biggest fear. While he would appreciate better lighting in general, he had not thought of it as being sub-par until I pressed him to come up with something that could be addressed to increase safety. Like the middle-aged woman, he showed a great deal of appreciation for the small kiosk and the woman working there, as well as for the beggar outside the station, which he viewed as a guardian. He also showed a great deal of appreciation for the vegetation, acknowledging that someone could potentially hide there but did not fear it and wanted it to stay or even increase.

Young woman

Similar to the middle-aged woman, the young woman displayed a somewhat high degree of fear and unease at Solna station. She does not live there but visits her boyfriend several times a week, usually at night. Similar to the older woman, she pointed to med as being the primary antagonist in any threatening situation. She had many times witnessed men coming on to women they don't know in a way that was uncomfortable, but not enough so to feel that she should say something. The same thing had happened to her at

the station without anyone doing anything to stop it. She said it is hard to know where to draw the line in ambiguous situations like that, and understood that the same mechanism probably stopped people from helping her. Unlike some other respondents, and possibly because of this lack of help from strangers, many people moving about did not make her feel more safe but rather more uneasy. While disliking the tunnels and calling for better lighting, she greatly preferred to walk through them alone to sharing them with other commuters. She implied that violence could come from anyone, and said that in general the risk increases the more people are around you. Eyes on the streets, thus, did not seem to work for her perceived level of safety. This somewhat blasé attitude also became evident when she said you fear a tunnel when you walk through it, but fear the openness and being exposed when you walk on a footpath without tunnels. While she did not mention vegetation, she said she would prefer if there were fewer places for potential criminals to hide in the area.

Like the young man, she was very critical of security guards, finding it problematic that private companies emulated police and felt that they only served to make the climate more threatening. She wound them incompetent and even potentially violent, hugely preferring to use the station without any security guards. Police, too, she was somewhat critical of. Although not on the same level as the young man, she felt that with police around you probably have a reason to fear something, increasing her level of unease, She likened this to a hypothetical situation in which everyone would wear a gasmask - there would probably be a reason for this. Beggars and alcoholics did to a degree make her uncomfortable, but mostly because they reminded her of the societal problems of inequality. Comparing the situation to the alternative, she said she feels even more uneasy in places where beggars and alcoholics don't have access, describing them as artificial, fake places for the middle-class to forget about society's problems.

6. Conclusions

Several interesting conclusions can be drawn from the interviews. Looking first at CPTED, only maximizing surveillance and maintenance are applicable here. While maintenance was not brought up directly but anyone except the middle-aged woman, the method seems harmless when it coms to classing with users. Maintaining the station area is generally felt as something positive, and no negative effects of it can be concluded from the interviews. When it comes to surveillance, the picture is less clear. Most of the interview subjects wanted more, not less greenery even it if interferes with sightlines and makes it easier to hide. Lighting in the tunnels, though, was brought up by everyone as a very important factor.

Controlling access to the facility was seen as very problematic by one respondent who used the station as a shortcut. It not a given that everyone should be able to pass the station without paying or having any intention to take the train, but it is still an interesting example of a clash. Guardianship as well was disliked by many respondents, especially the use of security guards

which were viewed as illegitimate, incompetent and even as a factor increasing unrest. On the issue of police they were more split, one person having had bad experiences with them that colored his perception, while some felt there were probably reasons to fear with police around and other appreciating their presence. Guardians in the form of shopkeepers, or even beggars, was seen as positive though and most also appreciated having many people around, if not necessarily in the riskiest spaces, like the tunnels. Frustration in waiting areas was not brought up by anyone as problematic, but the space is very limited and can be packed in winter. Few steps appear to have been taken to address this, but no clashes were evident from the interviews.

Gendered fear was heavily evident, with the women in general being more fearful. The men were more likely to express frustration with the crime prevention methods applied and did not appear to fear other people to any significant extent, unlike the women who both talked about other people in concrete terms. There was also an age gap, where the older interviewees tended to support crime prevention measures to a much higher degree than the younger ones who were critical of them.

7. Suggestions

Because of the limited scope of my study, I feel reluctant to draw too strong conclusions about what to do on a practical level at Solna station. This is partly because too few people were asked, but also because of the nature of my investigation. Qualitative case studies such as mine do not necessarily aim to improve the place studies but rather to expand knowledge and understanding in order to develop future studies with the aim of doing that. While some of my results pointed to already well-known facts, such as tunnels being disliked, there were some nee aspects that came up as well. One of them was that most respondents called for better lighting in the tunnels, even though they are not actually dark. This points to a knee-jerk reaction to solving problems with tunnels, though the problem might actually be the tunnel in itself and not its darkness. This is especially interesting because tunnels are often constructed for safety purposes – separating pedestrians from car traffic. Since one respondent eve reported seeing people crossing the highway in a dangerous way to avoid the tunnel, this is highly relevant. The question is, do we need more light or do we need other solutions?

The negative attitude towards security guards in three of the four people who answered is also highly interesting. A clear distinction can be made between private security companies and police here. Aside from the young man with a bad personal experience with police, they were in generally much more positive about them. An important point here, though, is the function. When it comes to guardianship, almost all interviewees preferred shopkeepers or even beggars to security guards or police officers. This might be partly because the presence of security personnel sends the message that there is something to worry about which can increase fear. Of course, shopkeepers are not always enough to defuse a bad situation and had any respondent

actually been a victim of crime, they might have been more positive to security guards that can actually help out. It is still important, however, to be aware of how security personnel are understood by commuters and think about trade-offs in future studies. More security does not necessarily mean less fear.

Developing a new study like my own would also be interesting. One aspect is the young man who, while not criminal (to my knowledge), displayed many such characteristics to the extent that he attracted police attention. It is conceivable then to believe that he might make other people fearful. A new study, focusing on the experiences with people who cause fear rather than feel it, would be very interesting to me.

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Perceived Safety In A Student Dormitories

Lappkärrsberget Area Study

Safety in The Making _Urbanism Studies_ Royal Institute of Technology
WANG Qiao

Introduction:

The housing area was built in the late sixties and is called “Lappis” for short. It is located in a green environment in the outskirts of Stockholm city and is close to Stockholm University. The buildings are between four and six storeys high and there are 10-12 rooms in each corridor. All the corridors are mixed gender and mixed nationality. As the biggest concentration area for the international student, it provide a special lively atmosphere. While at the same time, the renting limitation for these international students also cause there are no steady residents in these area. On the other side, the location little bit far from the campus area and next to the forest area is another physical feature. And the perceived safety in these area is worth an investigation.

AIM:

To assess people perceived safety living in Lappkärrsberget with intention to improve safety.

Objectives:

Using questionnaires to have their ideas about the feeling of safety in lappis area.

to investigate whether there are places they feel not safe

to assess why they feel unsafe

to inspect these places and compare with the theory

to suggest improvements

The theory model : CPTED principles

Our built environment should encourage our treasured (especially outdoor) lifestyle and assist us in our pursue sustainability. It should provide us with safe, secure, vital and attractive places in which to live, work, meet, celebrate, reflect, shop, play, educate and more, and it should set out to do so without resorting to fortresses, technological hardware or guards. With the help of CPTED principles, we could have tools to guide and encourage students living in Lappis area to participate in creating and maintaining the safe living environments.

Natural Surveillance.

Natural surveillance is achieved through design and maintenance that allow people engaged in their normal activity to easily observe the space around them, as well as eliminating hiding places for people engaged in criminal activity.

Territoriality.

Territoriality means providing clear designation between public, private, and semi-private areas and makes it easier for people to understand, and participate in, an area's intended use. Territoriality communicates a sense of active "ownership" of an area that can discourage the perception that illegal acts may be committed in the area without notice or consequences.

Access Control.

Access control is a concept directed primarily at decreasing criminal accessibility, especially into areas where a person with criminal intent would not easily be seen by others. Examples of access control would include a highly visible gate or entry way through which all users of a property must enter, or the appropriate use of signage, door and window locks, or fencing to discourage unwanted access into private space or into dark or unmonitored areas.

Activity Support.

Activity support involves both passive and active efforts to promote the presence of responsible pedestrian users in each area, thus increasing the community value of the area, while discouraging actions by would-be offenders who desire anonymity for their actions.

Management and Maintenance.
While CPTED principles supplement effective maintenance and management practices, they could not make up for the negative impacts of ineffective management. Damaged fencing, overgrown hedges, graffiti left to weather and age, litter and debris, broken windows, as well as such factors as inattentive or overly-permissive management practices will attract would-be offenders and, equally, drive away responsible users of the space. While effective design is an important part of good crime prevention, following through with consistent maintenance and management practices ensures that the designed-in elements keep their effectiveness.

For CPTED principles to accomplish the goals of enhanced livability and better natural safety, each principle must work together with the others. The intent is to use the combined balance of these principles to promote a safer, more livable environment for all.

Data & Methods:

In order to get lappis people's idea about their safety feelings, and if the current condition achieved the CPTED principle guidelines, I made a google forms to make a questionnaire, asking people who living in Lappis about their feelings about safety and if they have some demands to improve the safety feeling. The questions included some basic information such as age group, gender and the duration they had been living in lappis, as well some questions such as their daily view, routines, what are worrying them, and if they are willingly to take responsibility for maintaining this lappis area.

At the same time, I also go around lappis area during weekday and weekends, daytime and night to see how the environment look like and compare the differences during different time.

A survey about the feeling of safety of people living in lappis area.

Here are some basic questions about your ideas when living in lappis and we will have some analysis basic on your feelings of safety to improve the living condition of lappis. Thank you for your participation!

How old are you?

- ○ 15-18
- ○ 19-25
- ○ over 26

And your gender is?

- ○ female
- ○ male

Do you live yourself in lappis?

- ○ yes, I live myself.
- ○ no, I live with partners.

How long have you been living in lappis?

- ○ less than 3 month
- ○ 3-6 months
- ○ 6 months - 1year
- ○ longer than 1 year

Do you feel safe living in lappis ?

- yes ,generally I feel safe without worry.
- sometimes I feel a little bit fear of potential dangerous.
- no, I always feel myself under the anxious of being robbed or having a burglar in my room.

Do you have a clear view of outside from your room?

- yes, I can see what is happening outside .
- sometimes I can see what is happening outside.
- no, I raley have access to see what is happening outside.
- I do not care what would happen outside.

Do you like to have a walk around lappis ?

- yes, I like to walk around the neighborhood and to the forest around if I have free time
- just sometimes I would like to walk around the neighborhood and to the forest around.
- no,I just have the daily routine from my building ,ICA and the bus station.
- Other...

Do you think you have a safe space around your building where you could left your stuff for a while and would not be stolen?

- yes, I would left my bike unlock or some stuff outside the building for a while.
- no, I am sure if I left my bike unlock or some stuff outside over 10 minutes they would be stolen.

If you notice some people who have some strange behaviors wandering around lappis, would you

- I would ask them who they are and remind them not to do something bad.
- I would try to avoid them and talk to my neighbors to take care .
- I would just avoid them and lock my door.

Will you take the responsibility to remind people who do not throw the garbage properly or do some damage to the public properties?

- yes, i would remind them to share the responsibility of maintaining the lappis area.
- maybe I would talk to the sssb office and ask them to take charge of that.
- no, I think anyhow some people will take away the garbage and repair those properties.

In your mind, do you have some spots that you would feel danger and try not to go around lappis?

- 1
- 2
- 3
- 4
- 5
- 6
- Other...

What do you think we need to add or take away to improve the safety of lappis?

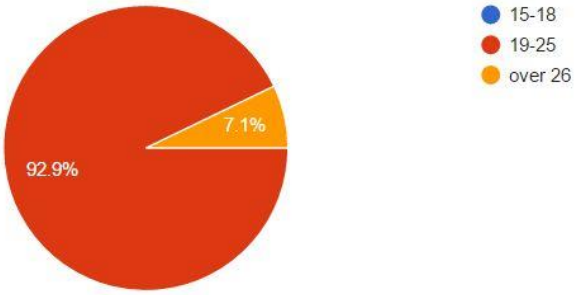
- ○ more lightnings at night
- ○ more shops or entertainments
- ○ take away the infrastructure boxes between buildings
- ○ Other...

Any other suggestions to improve the feelings of safety when living in lappis?

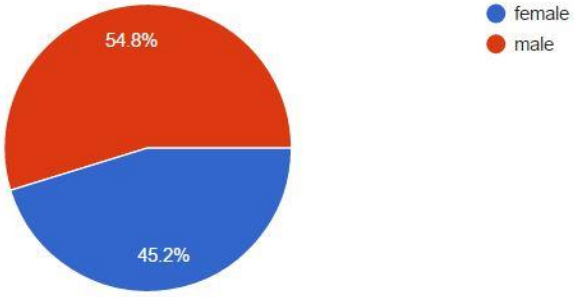
Results and Analysis:

Having 50 participants helping with the questionnaires, I summarized their responses and see how would the expectation be like in reality. Most of people have a feeling of safety living in lappis area, and the maintenance work is quite satisfactory, while there are some points of surveillance and territoriality need to be improved. Two third people do not have the sense of security of leaving there stuff outside the building for a while. Half of the people would like to remind other people to behave properly when they notice some negative actions. And comparing with some specific locations people show there fear of potential dangerous, some small corners around buildings and some blind areas between infrastructure containers were mentioned more. Here are the summaries about the questionnaires.

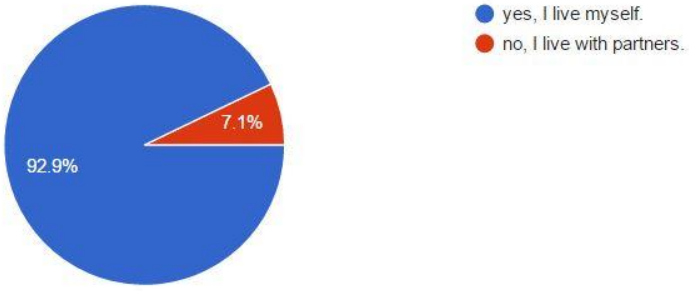
How old are you?



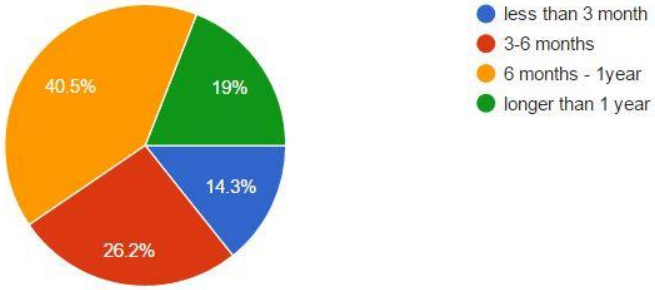
And your gender is?



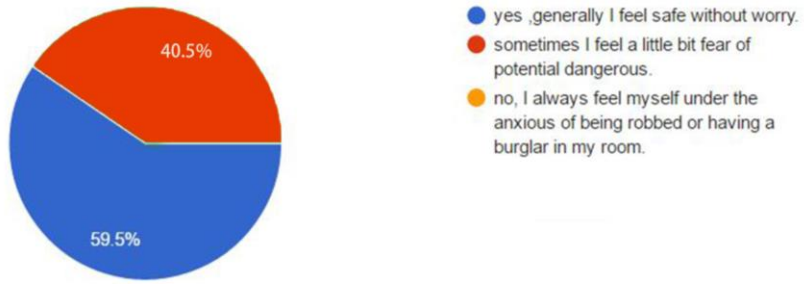
Do you live yourself in lappis?



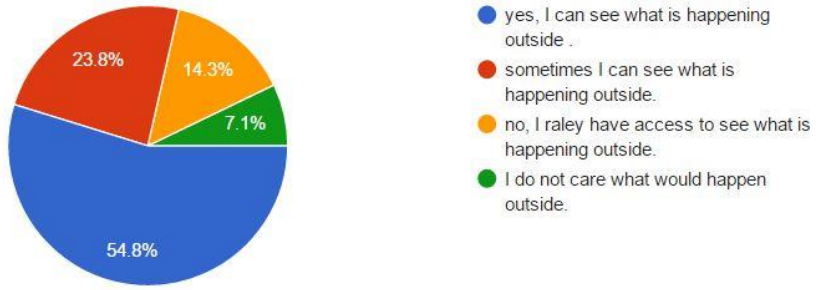
How long have you been living in lappis?



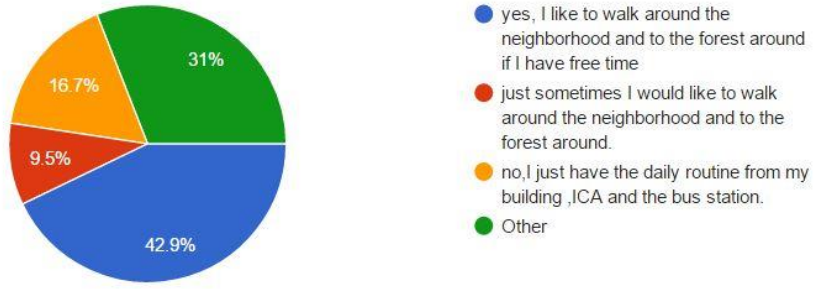
Do you feel safe living in lappis ?



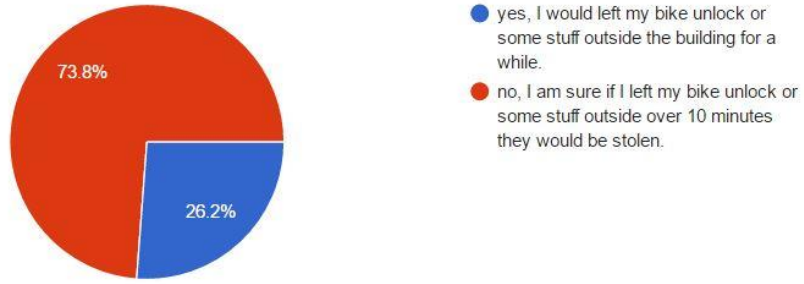
Do you have a clear view of outside from your room? (42 responses)



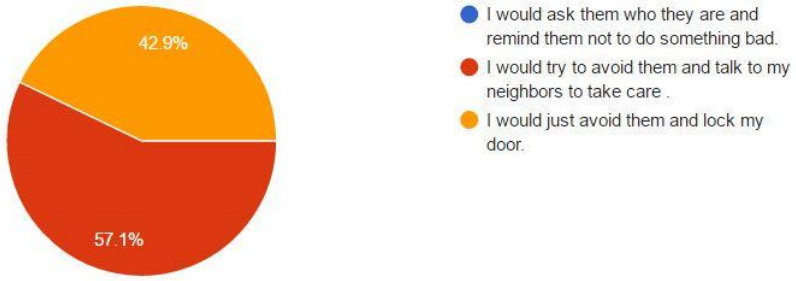
Do you like to have a walk around lappis ? (42 responses)



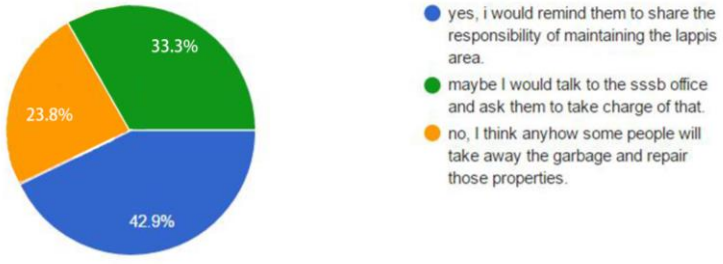
Do you think you have a safe space around your building where you could left your stuff for a while and would not be stolen?



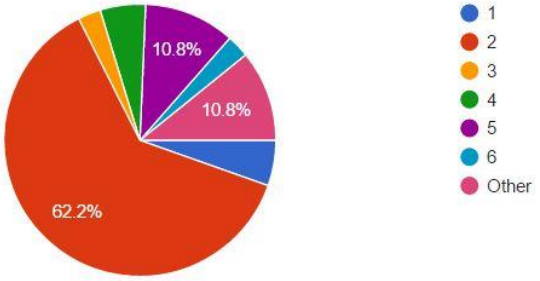
If you notice some people who have some strange behaviors wandering around lappis, would you



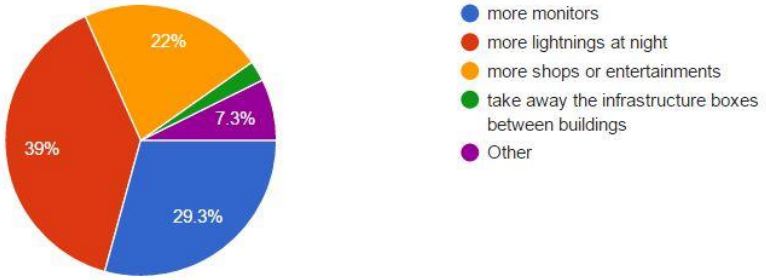
Will you take the responsibility to remind people who do not throw the garbage properly or do some damage to the public properties?



In your mind, do you have some spots that you would feel danger and try not to go around lappis?



ıink we need to add or take away to improve the safety of lappis?



Any other suggestions to improve the feelings of safety when living in lappis?

(3 responses)

People actually having a greater sense of courtesy for other and improving the security for themselves and others by making sure doors are locked at all times and not left propped open
Build more laundry rooms in each building
make a main door and hire a guard

Conclusions and Suggestion:





With the help of CPTED principles and the feedback of the participants, these spots in lappis area could be located as potential to start with some improvement. The solid fence wall which made several blind spots could be changed with some transparent materials. The high plant fences should be maintained in less dense in order not to block the view. As some corners blocked by hills, buildings or the construction installations, I would suggest some suitable locations for more lighting at night, and manage the containers in time.

Besides the physical aspect, the encouragement of participation of the people is another part to improve the safety feeling. Since from the questionnaires people tend to show a negative attitude to have an “ownership” idea. Maybe some activities could be hold in lappis to connect people and provide a livelier OTO system for people to have access to the real-time information about lappis.

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https://www.sssb.se/en/news/?kat=senastenytt

Safety Route to student accommodation
at Lappkärrsberget (Campus Lappis)

By Xiangyang WU & Nawarat Yangsomran

Introduction

In fact, most of student need to commute to university from their accommodation by walking and cycling and sometimes, walking through unsafe route is inevitable. Since we are student who live in student accommodation at Lappkärrsberget (Campus Lappis).We have experiences while walking back at night time during winter. The route start from subway station (Universtetet T-bana) to student accommodation at Lappkärrsberget (Campus Lappis). In general, a walking trip takes such a long time, 10-15 minutes in average. The walking is inevitable to pass through unsafe areas such as carparks, forest, tunnel and narrow staircase. These areas make us feel unsafe due to their quality such as dense vegetation, no lighting, blind spots and so forth. This study,therefore,investigated in major subjects 1) which area makes students feel unsafe and feel fear crime, 2) which quality makes student feel unsafe and fear of crime at night time during winter.

1.Goal and objectives

1.1 Goal

Our aim is to assess students' perceived safety on the route from from subway station (Universtetet T-bana) to student accommodation at Lappkärrsberget (Campus Lappis), with the intention to improve and enhance quality of safety route and reduce feeling of fear of crimes for students in everyday life, especially during the night and winter time.

1.2 Objectives

Firstly, we need to learn about the relevant theories and backgrounds so that we can ground our research. Secondly, we will propose certain places where people feel unsafe based on the theories and our experiences. Thirdly, a survey needed to be conducted to show how people feel walking on this route. And we'll analyze the results using the theories we've learnt on crime preventing and suggest improvements for this area.

2. Theory & backgrounds

2.1 Routing theory: bus stop; on the way to lappis

The theory stipulates three necessary conditions for most crime; a likely offender, a suitable target, and the absence of a capable guardian, coming together in time and space. In other words: for a crime to occur, a likely offender must find a suitable target with capable guardians absent.

Motivated offenders: individuals who are not only capable of committing criminal activity, but are willing to do so.

Suitable targets: people or objects that are seen by offenders as vulnerable or particularly attractive.

A capable guardian: It has a 'human element', that is usually a person who, by their mere presence, would deter potential offenders from perpetrating a crime. A capable guardian could be friends, neighbors, police and could also be CCTV, providing that someone is monitoring it at the other end of the camera at all times.

The analytic Focus of the Routine Activities takes a macro-level view and emphasizes broad-scale shifts in the patterns of victim and offender behavior. It focuses on specific crime events and offender behavior/decisions. Routine Activity Theory is based on the assumption that crime

can be committed by anyone that has the opportunity. The theory also states that victims are given choices on whether to be victims mainly by not placing themselves in situations where a crime can be committed against them.

2.2 Gender

It is reported in lots of statistics that men commit more criminal acts than women. Self-reported delinquent acts are also higher for men than women across many different actions. Women often feel more fear of crime than men. Some researchers found that low levels of self control are associated with criminal activity. Many professionals have offered explanations for this sex difference. Some differing explanations include men's evolutionary tendency toward risk and violent behavior, sex differences in activity, social support, and gender inequality.

Here we relate our research to the gender difference and see if there exist matches between our results and previous studies on gender. The gender study looks at the different perspectives of gender. This discipline examines the ways in which historical, cultural, and social events shape the role of gender in different societies. The field of gender studies, while focusing on the differences between men and women, also looks at sexual differences and less binary definitions of gender categorization.

2.3 Crime Prevention Through Environmental Design (CPTED)

Crime prevention through environmental design (CPTED) is one of the urban planning strategies for improving safety in cities. It is based on the urban design and environmental psychology belief that human behavior can be influenced by the surrounding environment (Cozens, Saville,& Hillier, 2005) Logically, crime prevention measures are designed to prevent crime—whether they also reduce *fear* of crime. CPTED principles will likely decrease the fear of crime by enhancing environmental design. The measurement design of the CPTED components was based on principles which are access control, natural surveillance, territoriality, activity support, and maintenance. This report was expected to examine at context levels – route to student housing where is located in Lappkärrsberget at nighttime during winter. This report, therefore,The

CPTED principles can be translated into various measurement in planning and design strategies that would enhance security. These strategies can be categorised as follows:

1) Street Lighting

From a security point of view, lighting that is strategically placed can have a substantial impact on reducing the fear of crime. Sufficient lighting along walkway is necessary for students to see and be seen. A basic level of lighting should allow the identification of a face from a distance of about 10 metres for a person with normal vision (Council). And also street lighting plays a part in creating a feeling of territoriality. Lighting can influence an individual's feelings about his environment from an aesthetic as well as a safety standpoint. A bright, cheerful environment is much more pleasing than one that appears dark and lifeless.

2) Landscaping

From a natural surveillance standpoint, landscaping and vegetation are suitable to enhance safety through management and allow unobstructed view. Landscaping is adaptable and can be used to perform a variety of design functions.

3) Quality of walkway

Quality of walkway can influence in creating a feeling of unsafe. Poor quality of pavement result from using poor materials, grazing ground and lacking of maintenance.

2.4 Fear of Crime: A significant obstacle to psychical activities and active living

Fear of crime has a critical factor for a student while commute at night time during winter. It may have more effects on some students or residents than actual crime itself. Fear of crime differs from actual crime which tends to be concentrated in particular areas and are committed by a small number of offenders. (Cordner, 2010). Psychologically, students often choose where to live, commute and socialize based on their perceptions of the relative safety of different areas. With this in mind, fear of crime is a devastating effect on the quality of living for many students during winter. While it is widely recognized that crime is a threat to health and well-being, the review also indicates that crime and fear of crime are significant barriers to physical activities.

As widely recognized, the fear of crime is subjective and cultural because individual levels of fear of potential victimization vary. For example, gender, significant research evidence showed that women were consistently more likely to have a higher level of fear of crime than men.

3. Method & data

3.1 Methods

1) Selection of context - route to student accommodation at Lappkärrsberget (Campus Lappis) from Universtatet t-bana

The route has a highly potential to improve the safety route since a large number of student walk and commute through this route every day. In addition, student takes a long walk from subway to campus lappis at night time (10-15 minute walk on average).

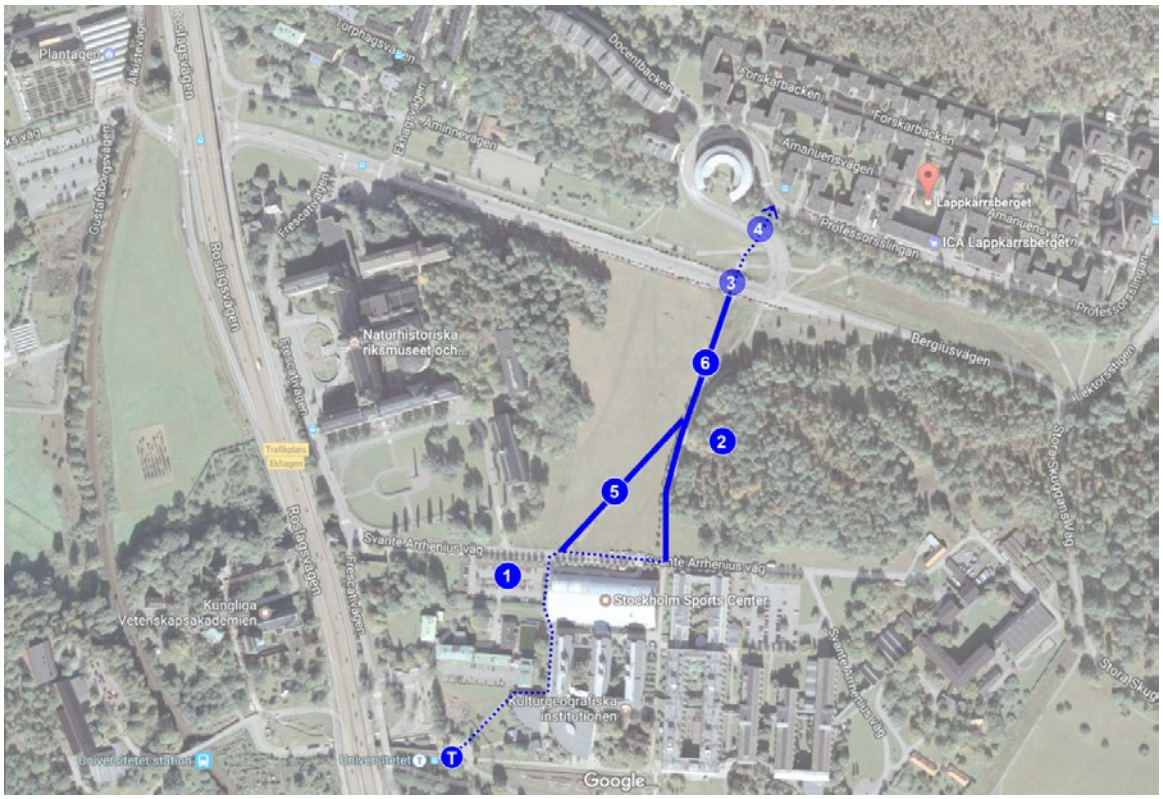


Figure 1- Selection of context

2) Observation by walking through the route and taking note of unsafe areas and quality of unsafe. We had chosen 4 areas which were 1) Carpark, 2) Forest, 3) Tunnel, 4) Narrow staircase and 2 walkways which were 5) Pathway withnin the grazing ground, 6)Asphalt pavement.

3) Questionnaire survey *(Refer to appendix A)*

3.2 Collected Data

1) Data of Bus table *(Refer to appendix B)*
2) Total student 3,386 students
https://www.sssb.se/en/living-with-sssb/our-areas-in-the-north/lappkarrsberget/

3.3 Further data needed for future research

1) What kind crime has happened before and how often?
2) Who takes the responsibility of this area? (eg: It's a privately owned grazing land, is it possible to input lighting and carpark)

4. Analysis

Firstly, based on the results collected from the questionnaire, we categorize the results into groups by gender and try to analyze and reach an agreement on the causes of the differences. Also, we visualize the most "unsafe areas" on the route from station to lappis with the percentage on the map and try to figure out what features of such places make people feel unsafe. What's more, there are some factors that will influence people's choices of walk or taking a bus and here in this survey we mainly focus on the time issue.

4.1 Summary of Gender and The feeling of fear of crime

From the chart no.1 and 2, the responses showed that students have more effects on feel of crime than actual crime itself. Interestingly, we can see that almost all the females claim that they do feel fear of crime when walking from the station to lappis as shown on chart no.2. However, nearly all men feel safe on the same route.

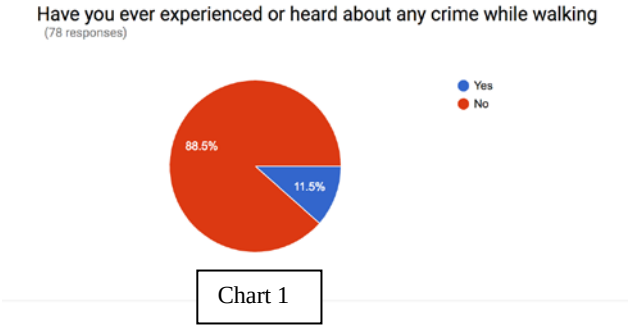


Chart 1

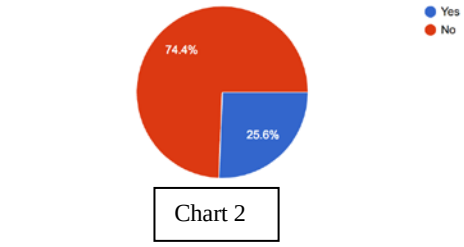


Chart 2

Chart 3

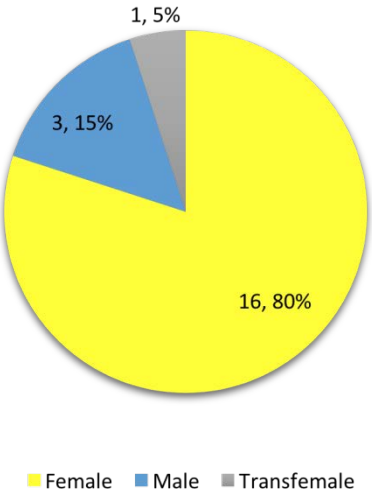


Chart No.1&2&3 - Summary of gender and feeling of crime

4.2 Mapping summary of unsafe Area

Before we conducted the survey, we had chosen 4 areas which were 1) Carpark, 2) Forest, 3)Tunnel, 4)Narrow staircase and 2 walkways which were 5) Pathway withnin the grazing ground, 6)Asphalt pavement that we thought were unsafe based on our own observation and experiences. And in the questionnaire, we provided the subjects with these places (with photographs) on the route from train station to campus lappis. And we asked them to choose which area that makes them feel unsafe. After that, we visualized the collected data on the map with percentage. Surprisingly, the result showed that forest and carpark were the most unsafe

places while pathway inside the grazing ground was the most unsafe walkway.

Figure 2- Mapping summary of unsafe Area

4.3 Summary of quality of route

Based on our observation, this survey was expected to examine at measurement of quality of route that makes student feel unsafe or fear of crime. The questionnaire were provided the sample of quality are as follows: 1) Walkway is too dark and no lighting,
2)Walkway is surrounded by forest 3)Tunnel is too dark and it is blind spot, 4)Dense vegetation,5)Cars parking block views, 6)Walking distance takes a long time.

The result of the survey (as shown in chart no.4) illustrates the quality of route that the most unsafe quality seems likely effect from the walkway was too dark and no lighting (73.8%) ,Tunnel is too dark and it is blind spot(41.5) and Walkway is surrounded by forest (29.2%) in respectively.

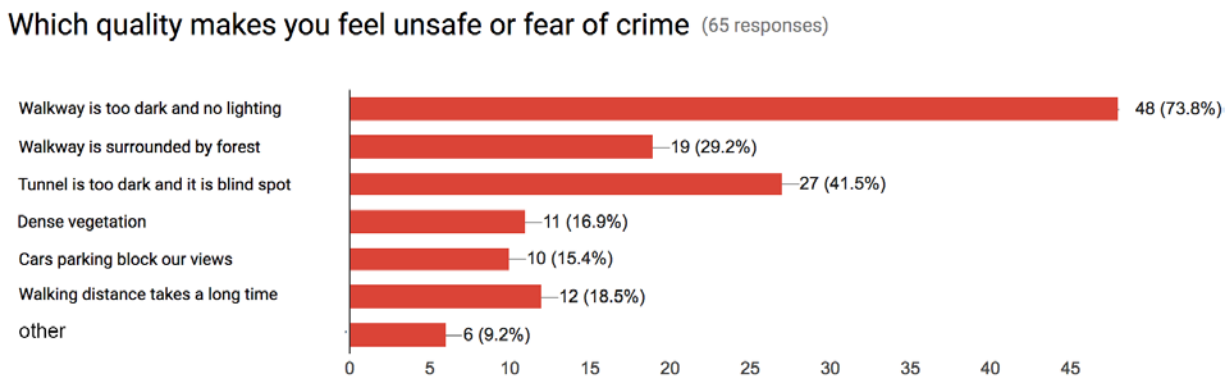


Chart No.4 - Summary of quality of route

4.4 the choices influenced by different time

From the charts below, we can see that on weekends and at night, people are more likely to walk back to lappis and our group think the reason lies on the fact that fewer buses are available during the weekends and the night. Also, we found that in winter, bus is prefered due to the difficulty of walking in extreme climate.

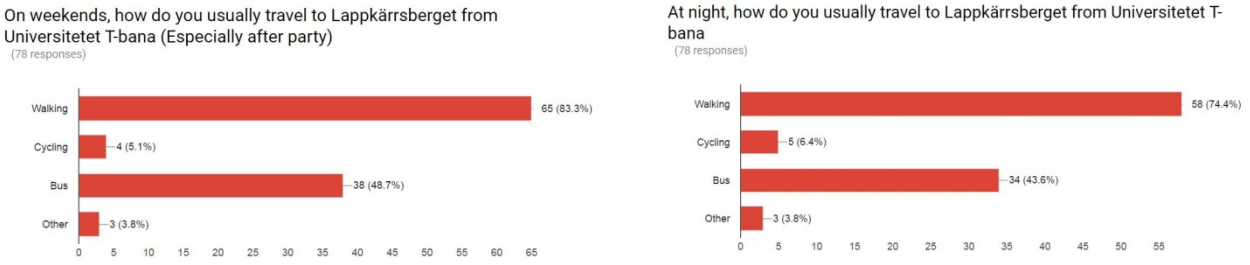


Chart No.5 - Summary of different choices

5. Conclusions

The route to student accommodation (Campus lappis) from subway has a highly potential to improve the safety route since a large number of student walk and commute through this route

every day. In addition, student takes a long walk from subway to campus lappis at night during winter.

The result of survey showed that most student both female and male do not prefer to walk back to Lappis at night time, but in reality most of them have to walk back due to the lack of buses. Surprisingly, female feel fear of crime than male. Forest and carpark were the most unsafe places while pathway inside the grazing ground was the most unsafe walkway. The most unsafe quality seems likely effect from the walkway was too dark and no lighting.

To improve safety route, we need to consider both short term and long time. Providing lighting along walkway is one of the most effective solution for short term.When used properly, light discourages criminal activity, enhances natural surveillance opportunities, and reduces fear of crime.

However, the further research need more factors that influenced residents' fear of crime, such as demographic characteristics, victimization experience, and neighborhood conditions. The design of the urban physical environment was tested as one of the major factors affecting fear of crime, and multiple studies evaluated CPTED-related variables.

6. Suggestions for actions/improvements and obstacles

Short term

1. Lighting needs to sufficiently provide along walkway
2. Car parks and tunnel should be well lit and obvious to ensure safe pedestrian access. However, lighting should not be so bright as to prevent users from observing people approaching in the dark.
3. Access to parking areas and tunnel should be via a surveillance entry point.
4. Trees and bushes should be trimmed adequately to allow unobstructed lighting and surveillance entry point.

5. Add some CCTVS on the route.

Long term

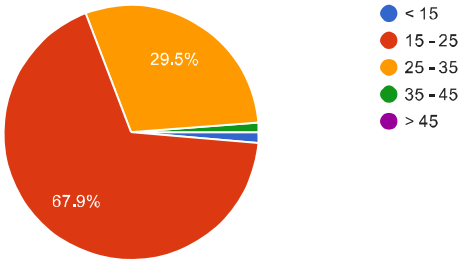
6. Negotiate with the landlord and find out the possibility to implement new functions of the grazing land to activate the route.
7. Hold weekly or monthly events on the route from lappis to Stockholm University.
8. With the help of social media like “facebook group in lappis”, we can easily build up the lappis community and improve residents’ engagement in reducing fear of crime.
9. Try to collect data of the frequency of taking bus in different times and situations and add more buses selectively under certain situations.

Appendix-A

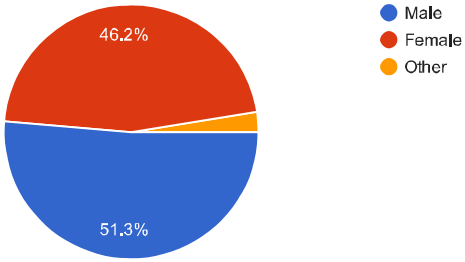
Safety Route to student accommodation at Lappkärrsberget (Lappis)

78 responses

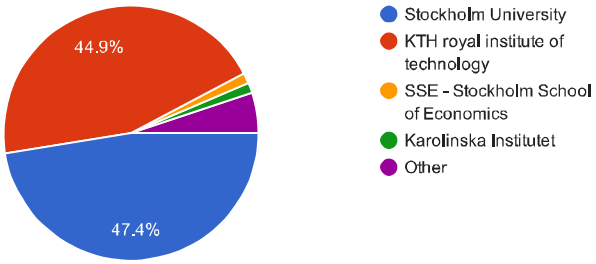
What is your age (78 responses)



Gender (78 responses)

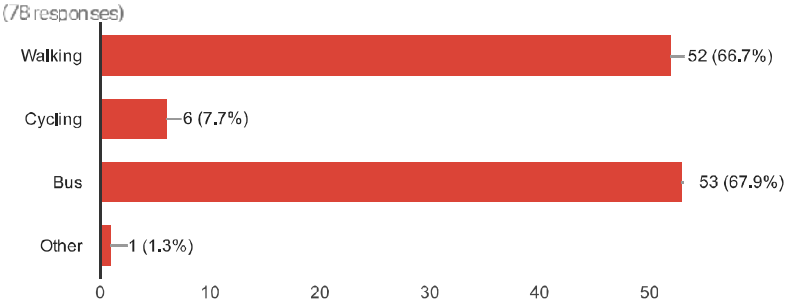


Which university are you studying (78 responses)



On weekdays, how do you usually travel to Lappkärrsberget from Universitetet T-bana

(78 responses)

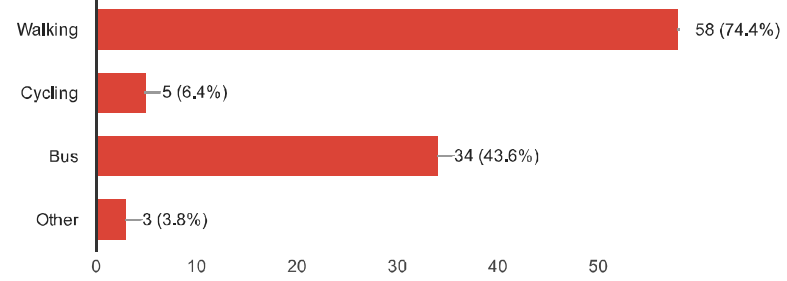


On weekends, how do you usually travel to Lappkärrsberget from Universitetet T-bana (Especially after party)

(78 responses)

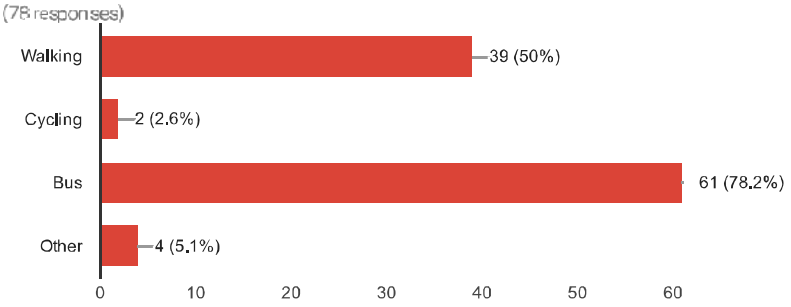
At night, how do you usually travel to Lappkärrsberget from Universitetet T-bana

(78 responses)



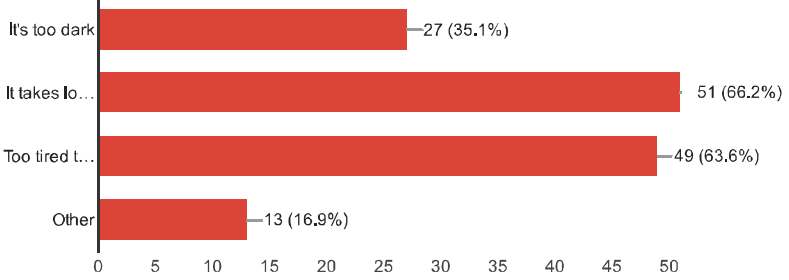
In Winter, how do you usually travel to Lappkärrsberget from Universitetet T-bana

(78 responses)

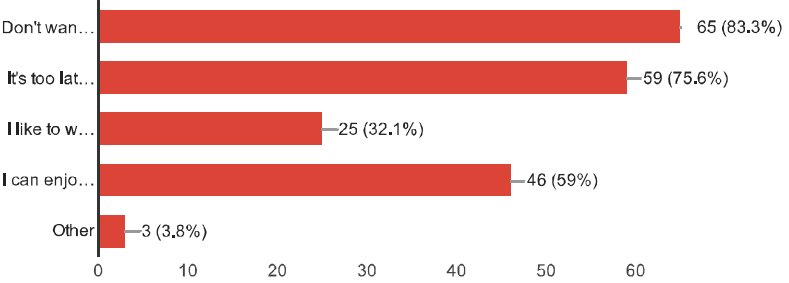


Please mark the conditions on which you prefer to take the bus

(77 responses)

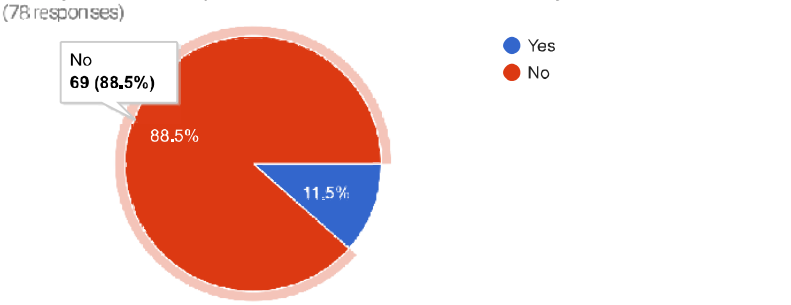


Please mark the conditions on which you prefer to walk (78 responses)

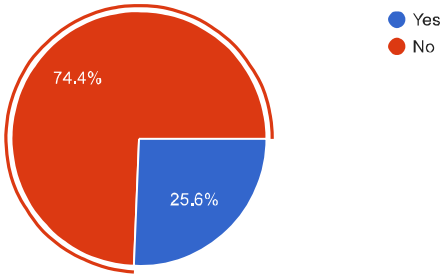


Have you ever experienced or heard about any crime while walking

(78 responses)

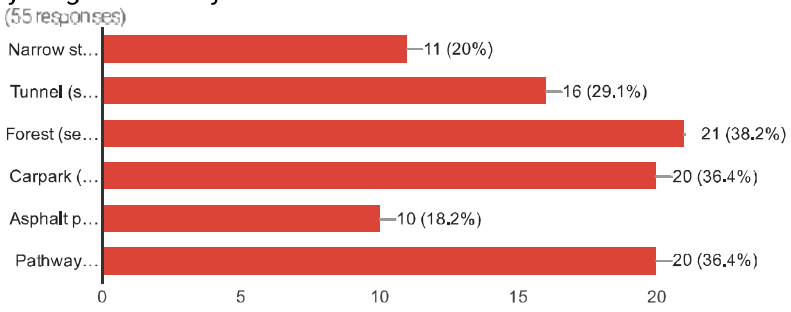


Do you fear of crime on the way home (78 responses)

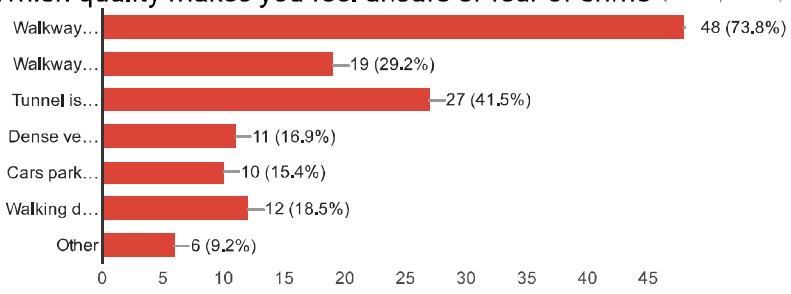


Which area makes you feel unsafe or feel fear of crime while walking or cycling on the way home

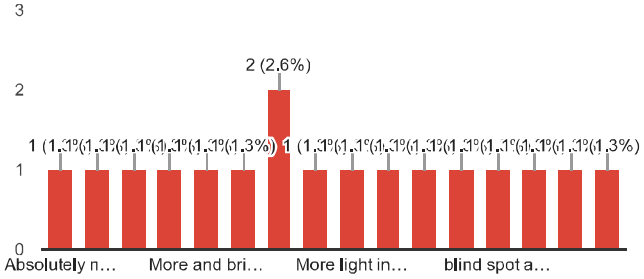
(55 responses)



Which quality makes you feel unsafe or fear of crime (65 responses)



Suggestion for quality of unsafe route (17 responses)



Suggestion for improvement (26 responses)

More lights

More lights

More lights

Glow in the dark road and a clear paved road from the University to lappis.

Glow in the dark road and a clear paved road from the University to lappis.

more light, clear and open view

more bus at night

more buses available

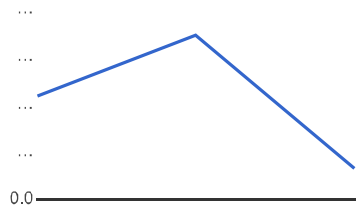
More buss times

An emergency alarm along the path

More light

It is the safest

Number of daily responses



Safety Route to student accommodation at Lappkärrsberget (Lappis)

Survey of the sense of safety route while travelling at night time between Lappkärrsberget (Lappis) to Universitetet station.
Your answer is important to help improve safety route where we live! Thank you everyone

* Required

1. **What is your age**
   Mark only one oval.

   - ◯ < 15
   - ◯ 15 - 25
   - ◯ 25 - 35
   - ◯ 35 - 45
   - ◯ > 45

2. **Gender**
   Mark only one oval.

   - ◯ Male
   - ◯ Female
   - ◯ Other: _____

3. **Which university are you studying** *
   Mark only one oval.

   - ◯ Stockholm University
   - ◯ KTH royal institute of technology
   - ◯ SSE - Stockholm School of Economics
   - ◯ Karolinska Institutet
   - ◯ Other: _____

4. **On weekdays, how do you usually travel to Lappkärrsberget from Universitetet T-bana**
   Check all that apply.

   - ☐ Walking
   - ☐ Cycling
   - ☐ Bus
   - ☐ Other: _____

5. **On weekends, how do you usually travel to Lappkärrsberget from Universitetet T-bana (Especially after party)**
   Check all that apply.

   - ☐ Walking
   - ☐ Cycling
   - ☐ Bus
   - ☐ Other: _____

6. **At night, how do you usually travel to Lappkärrsberget from Universitetet T-bana** *
Check all that apply.

- [ ] Walking
- [ ] Cycling
- [ ] Bus
- [ ] Other: _____

7. **In Winter, how do you usually travel to Lappkärrsberget from Universitetet T-bana**
Check all that apply.

- [ ] Walking
- [ ] Cycling
- [ ] Bus
- [ ] Other: _____

8. **Please mark the conditions on which you prefer to take the bus**
Check all that apply.

- [ ] It's too dark
- [ ] It takes longer time to walk home in the heavy snow
- [ ] Too tired to walk back
- [ ] Other: _____

9. **Please mark the conditions on which you prefer to walk**
Check all that apply.

- [ ] Don't want to wait for bus
- [ ] It's too late and there is no bus
- [ ] I like to walk for exercise
- [ ] I can enjoy the nice weather and beautiful view on my way home
- [ ] Other: _____

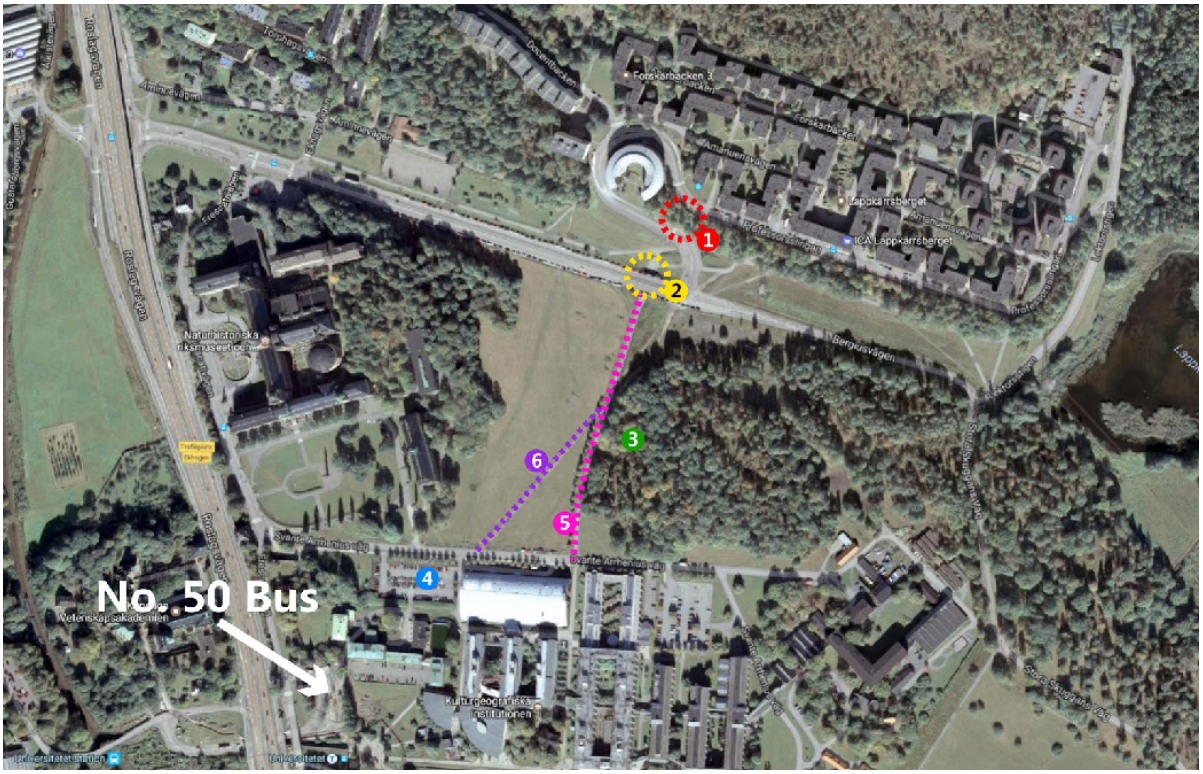
10. **Have you ever experienced or heard about any crime while walking**
Mark only one oval.

- ◯ Yes
- ◯ No

11. **Do you fear of crime on the way home**
Mark only one oval.

- ◯ Yes
- ◯ No

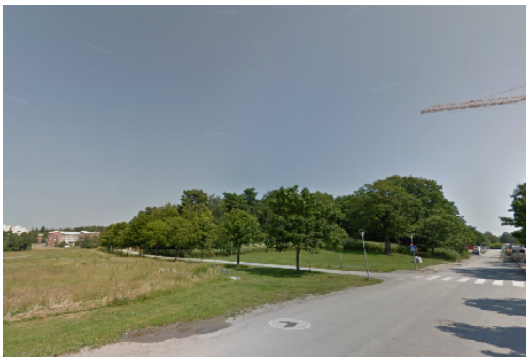
12. **Which area makes you feel unsafe or feel fear of crime while walking or cycling on the way home**



Check all that apply.

☐ Narrow staircase (see no. 1 on map)

☐ Tunnel (see no. 2 on map)



☐ Forest (see no. 3 on map)

☐ Carpark (see no. 4 on map)

- [ ] Asphalt pavement on the edge of the grazing ground (see no. 5 on map)

- [ ] Pathway withnin the grazing ground (see no. 6 on map)

13. **Which quality makes you feel unsafe or fear of crime**
Check all that apply.

- [ ] Walkway is too dark and no lighting
- [ ] Walkway is surrounded by forest
- [ ] Tunnel is too dark and it is blind spot
- [ ] Dense vegetation
- [ ] Cars parking block our views
- [ ] Walking distance takes a long time
- [ ] Other: _____

14. **Suggestion for quality of unsafe route**

_____

15. **Suggestion for improvement**

_____

_____

_____

_____

_____

B 50 Universitetet mot Stora Lappkärrsberget

2016-12-11–
2017-06-22

24/12 [illegible] 5/1 2017 samt 26/5 och [illegible] med något glesare tidtabell. [illegible]aljerad information på [illegible]sse eller i reseplaneraren.

a Går bara på fredagar. Går även 13 apr, 24 maj & 22 jun
d Går bara 25 dec, 6 jan, 14 apr, 16 apr & 30 apr

Zon

A **Universitetet (T)**
Naturhistoriska riksmuseet
Bergiusvägen
Professorsslingan
Stora Lappkärrsberget
Lektorsstigen

Måndag–fredag

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Söndag och helgdag

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SAFETY IN THE MAKING

AN ANALYSIS OF PERCEIVED SAFETY IN AND AROUND THE STUDENT ACCOMMODATION ON KTH CAMPUS.

-Sriranjini Chandramoulee

1. Introduction

The term safety is defined as the condition of being protected from or unlikely to cause danger, risk, or injury. The feeling of safety plays an integral role in the physical and mental well-being of an individual. The place you live, home is often the place where one feels the safest and where one is at their most vulnerable with the confidence that the four walls, protect one from all that lies outside.

The feeling of safety around where one lives, sparked up the idea for the research proposal. Students from all over the world travel to Stockholm to study at KTH Royal Institute of Technology. The university provides student accommodation for international students on campus. The student housing blocks on campus are located on Drottning Kristinas Väg and are in close proximity to all the campus facilities and classrooms on Brinellvägen.

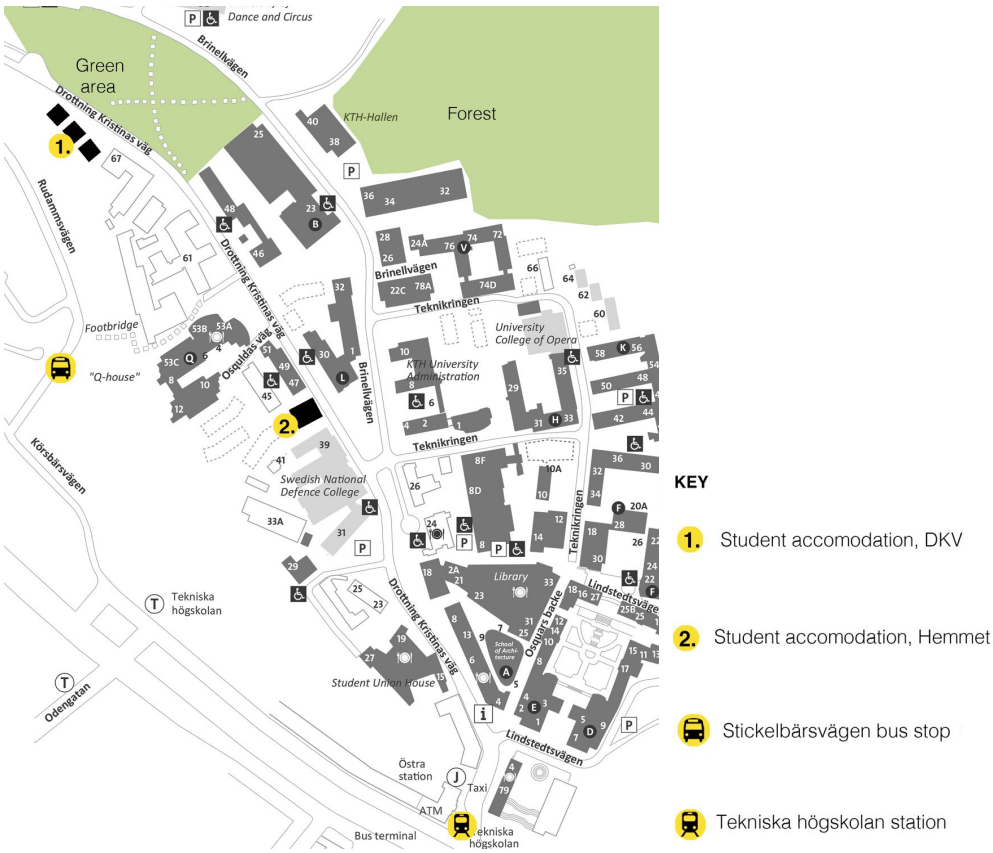


Fig 1. Plan of the campus.

2. Aim and objectives

Aim: This paper investigates the students perceived safety in and around the students accommodation on the KTH campus.

Objectives: The main objective is to investigate:

- The general perception of safety around the accommodation on campus.
- The feeling of safety on two main routes which lead to the campus accommodation, from Tekniska högskolan station to the accommodation and from Stickelbärsvägen bus stop to the accommodation.
- The feeling of safety in the two routes mentioned above during the day and during the night.
- The feeling of safety in the green spaces that surround the accommodation.
- To investigate these spaces using the CPTED theories and surveys answered by the students living on campus.
- To suggest improvements based on the findings.
- Finally to understand if the campus accommodation is actually safe to a certain extent and if the students suffer from the fear of crime.

3. Background and Significance

The study uses the power of observation through the eyes of the students who live on the campus who have taken the survey. The study uses the CPTED principles to analyse the areas that surround the accommodation to see if the place is designed in a safe manner.

The research is divided into:

- The students perception of safety.
- The safety standards measured in terms of the CPTED principles which will help in determining if the spaces are designed to prevent crime.

The daily life of a student involves, moving from the accommodation to the various classrooms spread out around campus. Apart from the educational life on campus, students leave the campus for various other activities. There are two main entry and exit points from the accommodation to access the main city. The first entry/ exit point is located at the Tekniska högskolan station from which the student can take the train to another part of the city. The other entry/ exit point is through a bridge located close to the accommodation across the railway lines which leads you to Stickelbärsvägen.

There are a lot of green spaces which surround the accommodation on campus. While the green spaces can be perceived as a relief from the dense city, they can also be places which people fear.

This study strives to understand how the routes from the two entry points and the green spaces that surround the accommodation are perceived in terms of crime during the day and

night. It also looks into the design of the accommodation to determine if they abide to the principles by which design can prevent crimes.

4. Research, Data and Method

Two types of analysis were employed in this study. The first was a survey which students residing in the accommodation answered and the other was an analysis of the areas in and around the campus based on the CPTED principles.

The survey:

In order to understand the perceived safety of the students, a survey was conducted with a few simple questions which will help in determining how the students felt about the areas that surrounded the accommodation.

The questions for the survey and why they are crucial in the study is discussed below:

1. *The gender of the student*

Gender is important in assessing safety to determine if men and women feel the same way or if there is a greater sense of fear in the case of men or women.

2. *In general, how safe do you feel living on campus? (rated from 1-5, 1- not safe, 5- very safe)*

The general safety helps in establishing an overall sense of safety.

3. *Safety on campus during the day. (rated from 1-5, 1- not safe, 5- very safe)*

The campus during the day is bustling with students and is very lively. Does this movement of people and the sun make people feel safer?

4. *Safety on campus during the night. (rated from 1-5, 1- not safe, 5- very safe)*

The campus after school hours turns into a dead zone with very less activity. Does this, along with the darkness change the perception of safety?

5. *Do you know if there are security cameras located in or around the accommodation?*

This question tests if the students are aware of the presence or lack of the surveillance systems present in or around the accommodation.

6. *Have you been a victim of crime or seen an act of crime being committed in or around the campus housing?*

To determine if there have been any crimes being committed on campus.

7. *How safe do you find the route from Tekniska högskolan station to the accommodation during the day? (rated from 1-5, 1- not safe, 5- very safe)*

To determine the feeling of safety in one of the main routes during the day.

8. *How safe do you find the route from Tekniska högskolan station to the accommodation during the night?*

To determine the feeling of safety in one of the main routes during the night.

9. *How safe do you find the route from Stickelbärsvägen bus stop to the accommodation during the day?*

To determine the feeling of safety in one of the main routes during the day.

10. *How safe do you find the route from Stickelbärsvägen bus stop to the accommodation during the night?*

To determine the feeling of safety in one of the main routes during the night.

11. *How do you feel about the green spaces, such as the parks and the forest that are in close proximity to the accommodation?*

The accommodation is surrounded by green spaces with dense green cover, does this pose as a threat that induces fear of crime or do people feel safe in these spaces.

12. *Do you feel safe walking through the green spaces mentioned above during the day?*

To determine the feeling of safety in these areas during the day.

13. *Do you feel safe walking through the green space mentioned above during the night?*

To determine the feeling of safety in these areas during the night.

14. *Do you feel that the spaces in and around the accommodation need to be made more secure? (yes or no)*

This question is crucial in determining if the students feel that the spaces in and around the campus are not highly secure.

15. *If yes, are there any place in or around the accommodation that makes you feel uneasy and unsafe?*

This questions helps in determining the places that make the students feel uneasy and vulnerable.

The CPTED analysis:

Crime prevention through environmental design (CPTED) is a multi-disciplinary approach to deterring criminal behavior through environmental design. CPTED strategies rely upon the ability to influence offender decisions that precede criminal acts. Generally speaking, most implementations of CPTED occur solely within the urbanized, built environment.

The spaces in and around the accommodation are analysed based on the following principles:

- Natural surveillance
- Territorial reinforcement
- Access control
- Maintenance/Image

5. Result - The outcome of the study

The survey:

The results of the survey are discussed below:

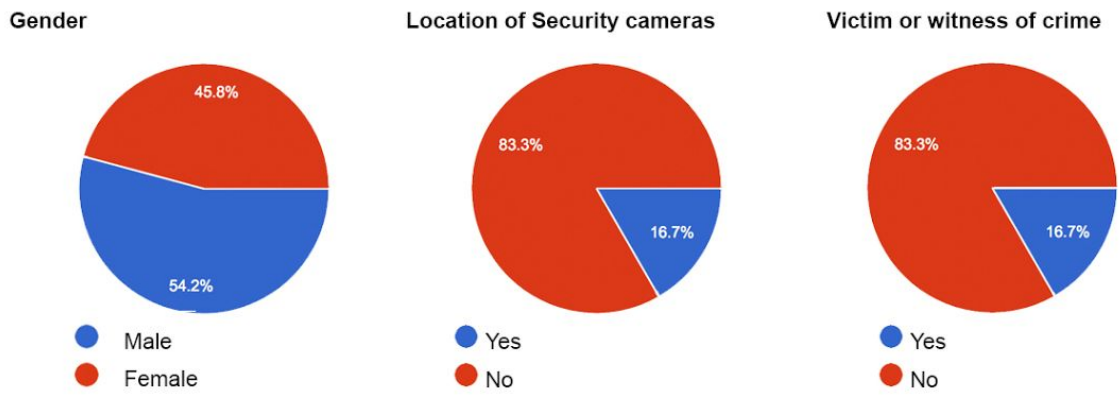
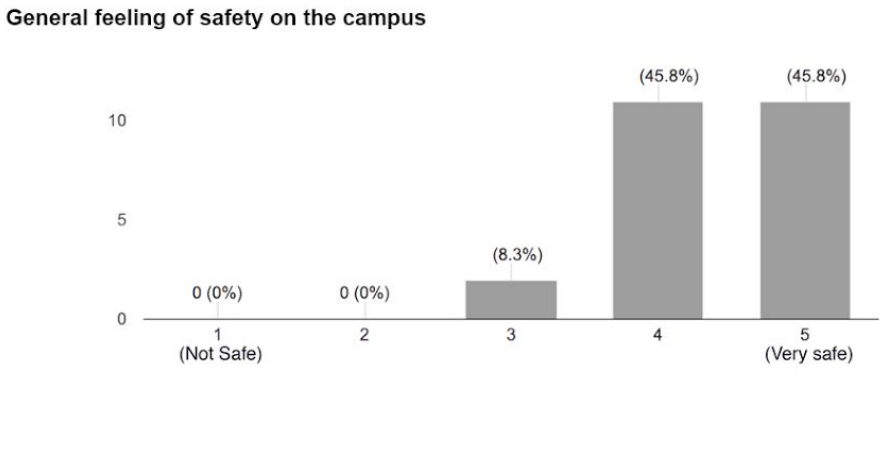
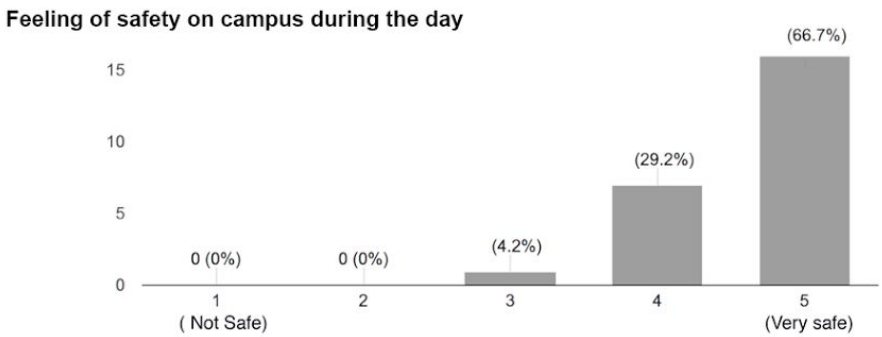


Fig 2. Pie charts to showing the percentage for the questions of the survey.

An almost equal percentage of male and female students took the survey. There are no surveillance cameras located on campus, the survey proved that a high percentage of students are aware of the absence of security cameras and a very few believe that they are present in and around the accommodation. In regards to being a victim or a witness to crime 16.7% of the students who took the survey have been either a victim or a witness. This is in fact a quite high. An investigation on the types of crime one has witnessed or been a victim on led to the understanding that most crimes on campus have been thefts, the most common item stolen in and around the accommodation area are bicycles.





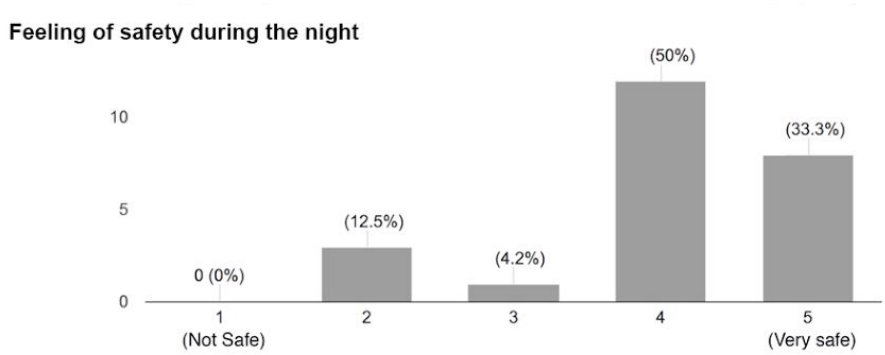


Fig 3. Graphs to indicate general safety on campus.

The general feeling of safety on campus was relatively high with a high percentage of students regarding the campus as very safe. The question of safety during the day and night showed a difference where students deemed the campus from safe to very safe during the day, during the night there was a small percentage of students who regarded that campus as not very safe.

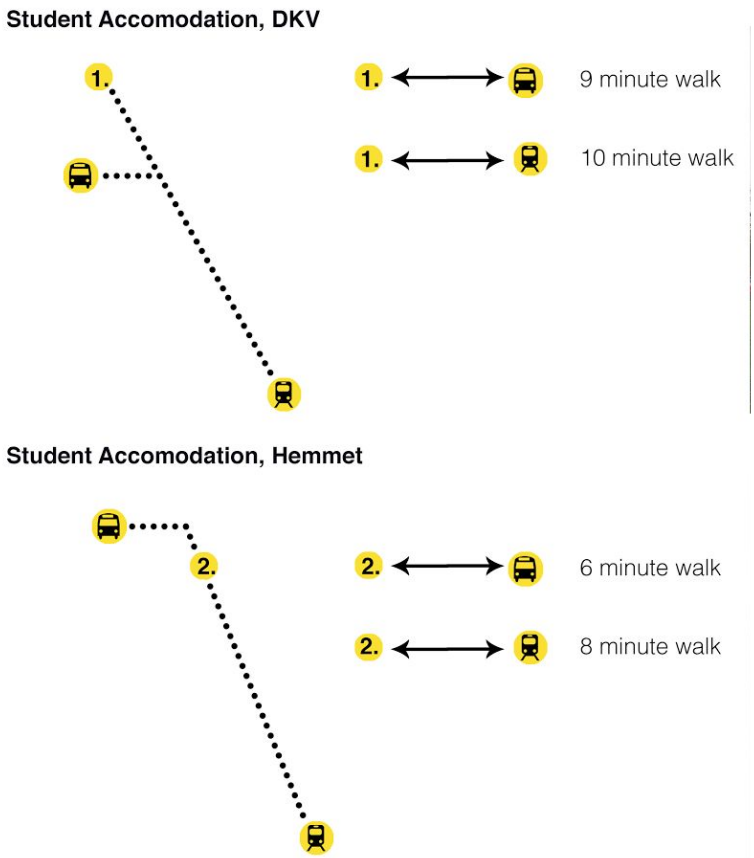


Fig 4. Proximity between the respective accommodations and the train and bus stop.

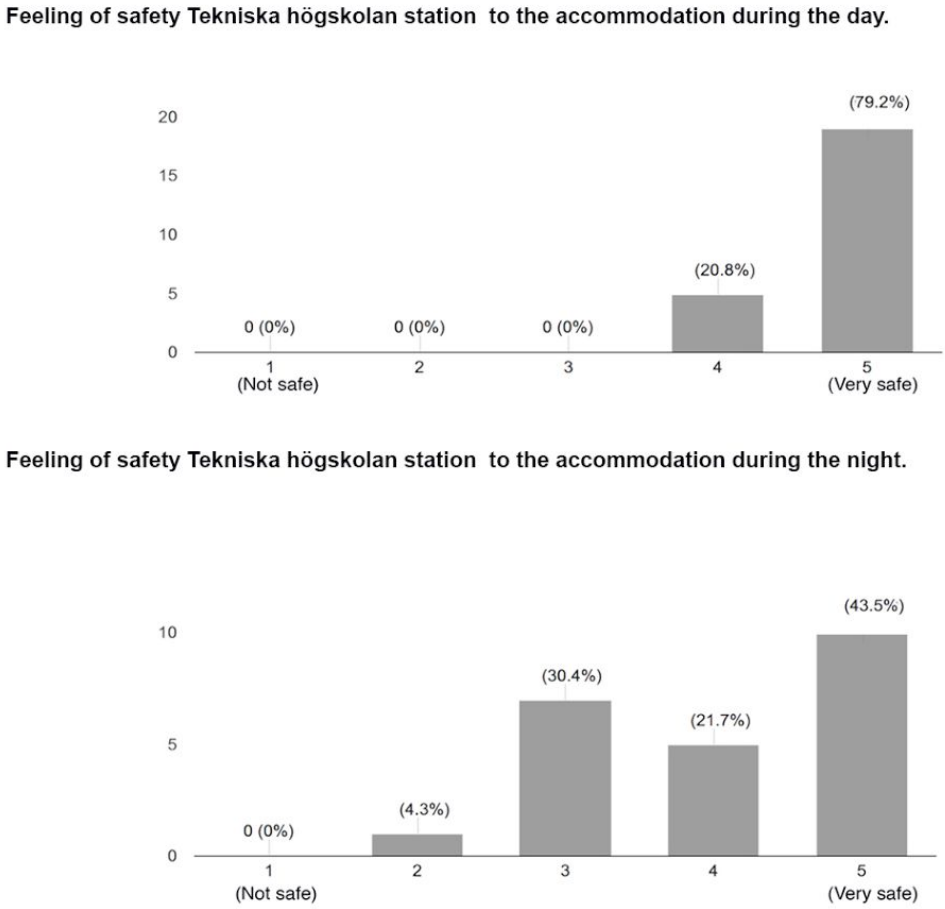
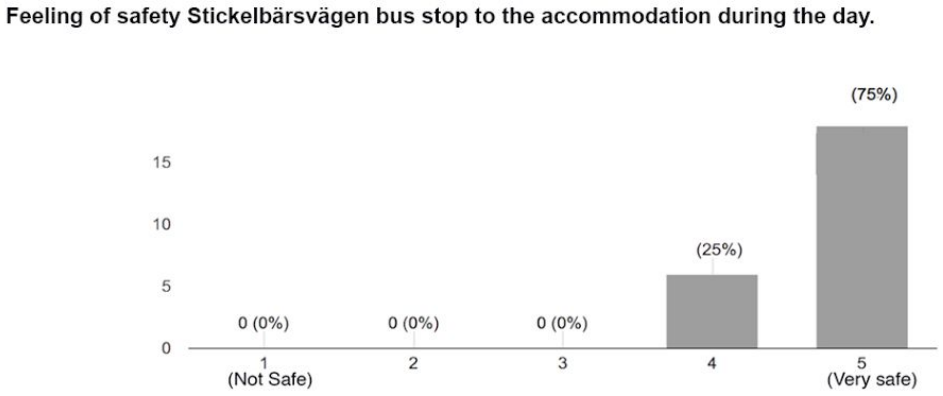


Fig 5. Graphs to indicate feeling of safety from the Tekniska högskolan station to the student accommodation.

The route from the Tekniska högskolan station to the student accommodation is deemed as very safe during the day while during the night the percentage of safety drops to 4.3% of the students finding it not safe with still quite a high percentage of students rating the route as very safe.



Feeling of safety Stickelbärsvägen bus stop to the student accommodation during the night.

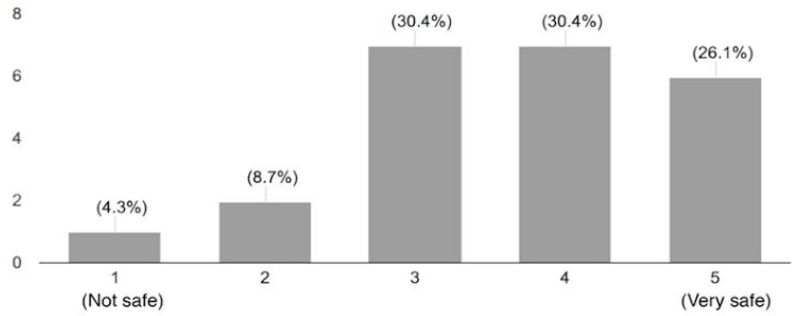


Fig 6. Graphs to indicate feeling of safety from the Stickelbärsvägen bus stop to the student accommodation.

The route from the Stickelbärsvägen bus stop to the student accommodation is deemed as very safe during the day while during the night the percentage of safety drops to 4.3% of the students finding it not safe at all. Though a high percentage still rates the route as safe in the night, many students mentioned that they did not feel safe walking through this route during the night because of the presence of excessive blindspots. These blind spots induce a fear of being a potential victim of crime.

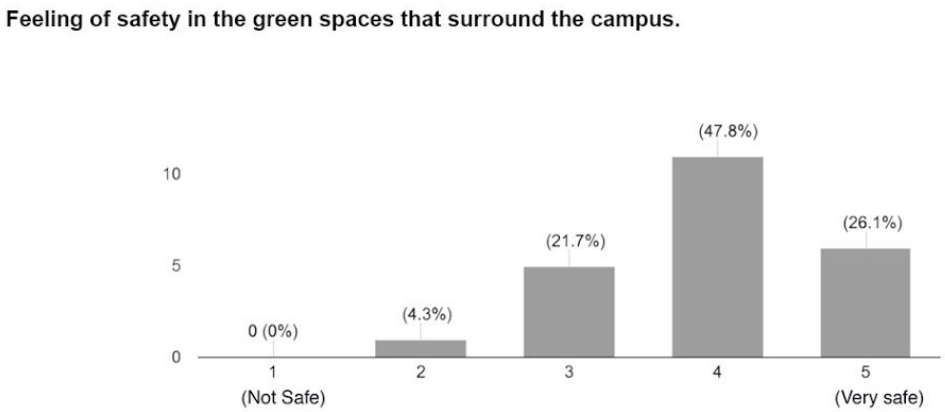


Fig 7. Graphs to indicate feeling of safety in the green spaces that surround the accommodation.

The accommodation is surrounded by green spaces while high percentage of students regard the green spaces that flank the accommodation as safe, their perception of the feeling of safety during the day and night is quite interesting. During the day all the students who took the survey walk through the green spaces but during the night a higher percentage do not walk through the green spaces as can be seen in *Fig 8.*

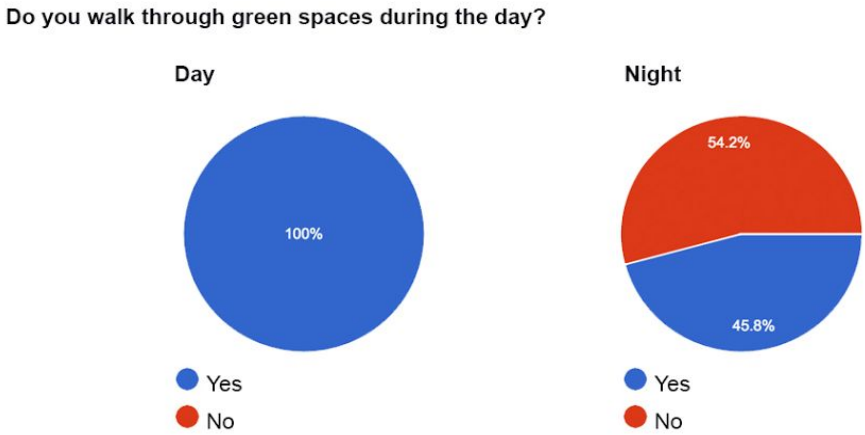


Fig 8. Pie-chart to indicate the feeling of safety walking through the green spaces in the night and day.

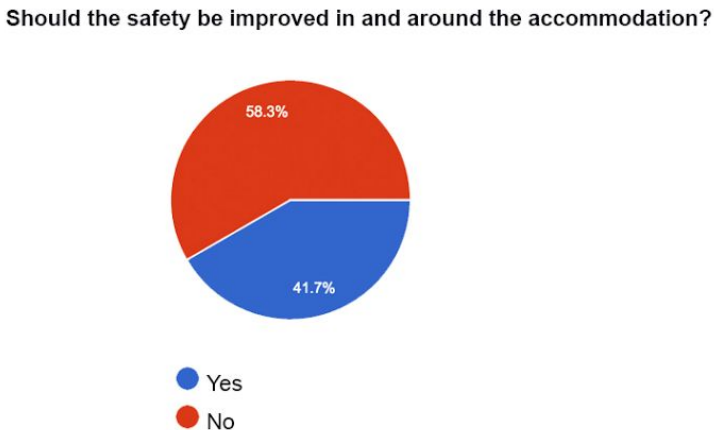


Fig 9. Pie-chart to indicate if safety should be improved in and around the accommodation.

A higher percentage of students felt that the safety around the accommodation needed to be improved. With regards to the question of what made them feel unsafe or uneasy in or around the accommodation, the answers were as follows:

- The green spaces at night become spaces where one can stay hidden and prey on possible victims.

- The dim lighting on the streets and the lack of lighting in some spaces that surround the accommodation.

- The footbridge that connects Ruddammsvägen to the campus has many hidden spots in the night.

- In the case of DKV, the entrance from the back is not secure.

The CPTED analysis:

- Natural surveillance

Fig 10. The one located on the left is DKV and the one on the right is Hemmet.

In terms of natural surveillance, the windows in both the student accomodation face the outdoors. The accommodation buildings are designed in a manner that exhibits indoor-outdoor interaction. Every room has a window that faces the outdoors. There is constant eyes on the street and constant movement of light traffic through the day on the streets adjacent to the the accommodation spaces.

- Territorial reinforcement

Fig 11. The exterior spaces.

There is no territorial reinforcement in both cases. The buildings are open to the road.

- Access control

The hemmet building is more secure in terms of access with just one entry point.

DKV on the other hand has multiple entries and the entries at the back have many blind spots.

- Maintenance

Fig 11. The backyard DKV.

The maintenance of both the buildings are good. The proof of that can be seen in *Fig 11,* recently the back walls of DKV were sprayed with graffiti, the paint was cleaned off the walls in less than five days, this shows that the accommodation buildings are well maintained.

The areas where fear of crime is felt and requires to be improved are as follows:

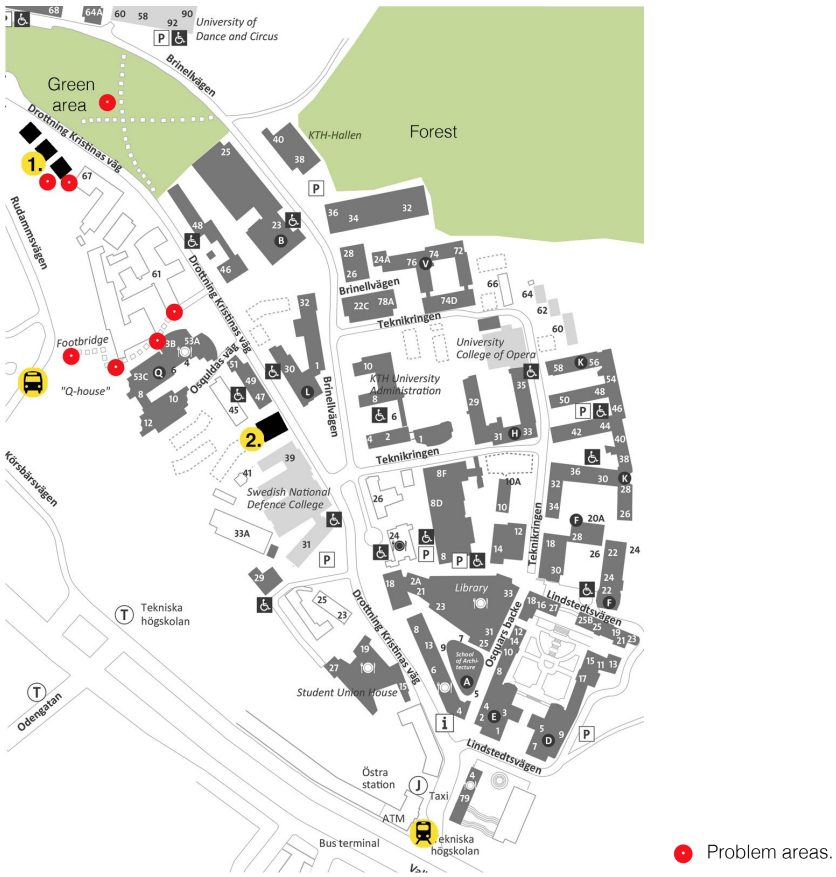


Fig 12. Plan of the campus indicating the areas where fear is felt and improvements need to be made.

6. Conclusion

This study's main aims was to analyse the perceived safety on campus accommodation and analyse the spaces in and around the campus based on the CPTED principles.

Based on the students survey:

- A higher percentage of the students felt that the student accommodation on campus is quite safe.

Analysis based on CPTED principles:

- The campus is safe to a high extent but a few incorporation in terms of access control and incorporation of digital surveillance can increase the safety in and around the student accommodation.

Addition that can improve safety in and around campus accommodation:

- Surveillance cameras in the common areas and the exterior spaces of the accommodation.

- Security cameras in the bike parking areas.

- Adding digital locks which make it more secure to enter and exit the buildings.

- More lighting especially in the green spaces that surround the accommodation.

- Incorporate more lighting in the route from Stickelbärsvägen bus stop to the student accommodation.

- Activating the campus making it more lively especially during the weekend.

To conclude, the accommodation on KTH campus located on Drottning Kristinas Väg are safe but the safety can be improved to a greater extent with minor interventions mentioned above.

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Blåkulla

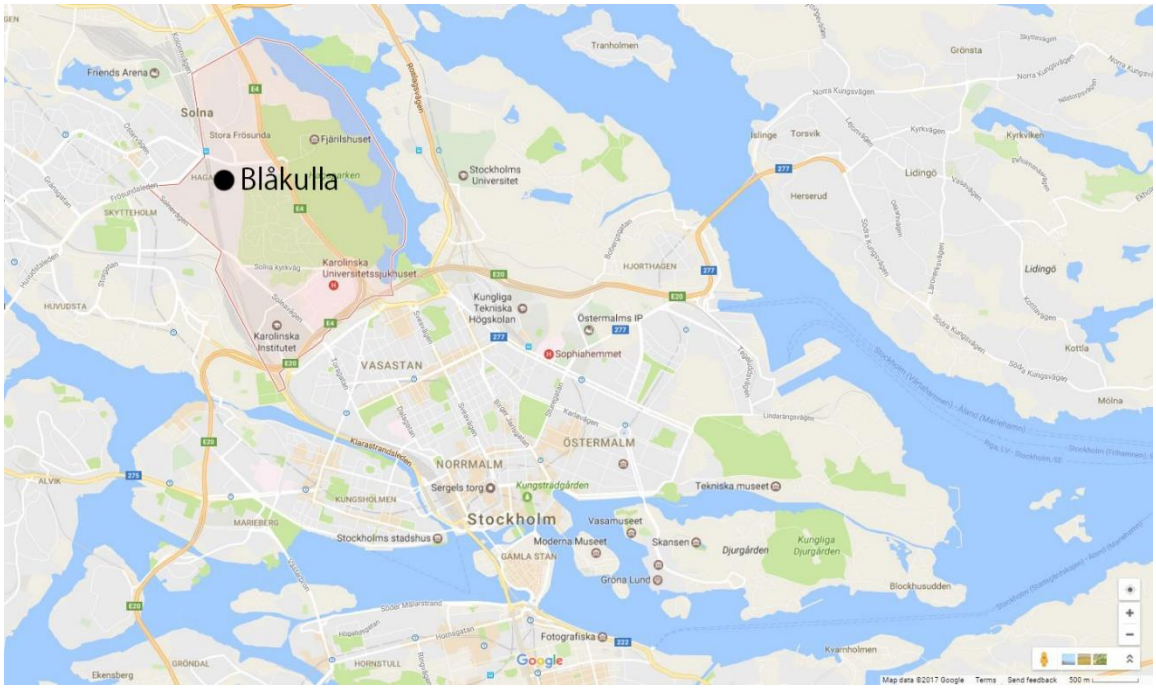
Issues of safety then and now.

Vasilis Ingvar Raptis
March 2017
Safety in the Making
Higher Seminar in Public Places and Urban Spaces Studies

Abstract:

Blåkulla is a hill in central Solna, where in the 1960s new social housing buildings were erected to replace the old small houses that were in slum-like condition. This area has had a bad reputation ever since the start of the twentieth century and this reputation is still maintained in some aspects of social life. However, the situation has gradually become better and the bad reputation seems to just be echoes of the past that some factors choose to reproduce. I have decided to work on this area, partly because I live right under it and because when I first visited this area, it was evident that it had a small percentage of segregation and therefore I felt that I should be alert when walking through it. The area has had crime related events in the past but it is considered peaceful and calm nowadays and my interest lies in how an area of bad reputation has been gradually transformed to the opposite. My aim is to understand how the perception of safety in areas changes over time, what kind of actions made this possible and to study if these actions can be copied to other contemporary areas with the same problems. The importance of this study lies in that, Blåkulla as a 'Miljonprogrammet' development has had quite the same results as this program has in every suburb with the difference that this area is close to the center of Stockholm. All these developments share the same problems but Blåkulla has managed to destigmatize itself over the years and it is important to find out if the same can happen for the 'Miljonprogrammet' housing complex in the suburbs. I will focus on the issues of vandalism and bad maintenance as factors of risk of crime, since those are the only and most prevailing problems this area is facing today. However, I will note my disagreement on particular aspects of the design of the space as a major factor of the consideration of Blåkulla as a bad neighborhood.

History of Blåkulla



1Blåkulla in the vicinity of Stockholm.

Blåkulla is part of Hagalund in the city of Solna. Hagalund has existed for decades but officially became a municipality by the end of the nineteenth century.It was built around 1890, while the Stockholm began to grow, and many people lived very crowded, began to sell plots in Blåkulla in Solna. The residents were craftsmen, such as carpenters, masons, glaziers, painters and panel beaters. There were no regulations and people could build their own houses as they saw fit. This created a diverse urban image in the area that added to its charm. The neighborhood had a strong bond as they were mainly working class poor people but the construction was basic and old fashioned with lots of hygienic issues.

2Hagalund 1959

At the 1940s the area was already considered a slum and was gradually becoming worse and worse, partly because of the low standards of housing but mostly because of the impending destruction for the development of the ‘Miljonprogrammet’ housing project that made any maintenance of the old buildings futile and unnecessary since the project was already decided it would be built. In the late 1960s Solna City finally decided that the buildings would be demolished and replaced by apartment blocks. Today only a few houses, including Carl Bolin's house in the neighborhood where famous painter Odin Olle Olsson lived until he died in 1972. Olle Olsson-house is a museum, with memories of the old Blåkulla.

Today stands the magnificent and large-scale eight blue buildings with about 1900 homes - a stark contrast to the previous old township. The area, with its approximately 4500 inhabitants came to be popularly known as the " Blåkulla" and became a well-known by its high geographical location. As in many new residential areas in the so-called "Million program areas', soon many new residents came from different cultures and countries. A social unrest intensified in the 1980s with youth problems, increased contribution costs and large displacement. Being that this area had the reputation of a slum, undeservedly, this continued to happen to these days, especially in Solna. There was a major change both in Blåkulla and in society at large, in the 1960/1970 where workers and refugees in the 1980s from various countries came to this location. This further intensified the bad reputation of this area and gave it a notion of segregation. However, this might be a premonition of increasingly natural internationalization, integration, and diversity in society.

3Blåkulla from top

Project Description and Method

I am going to study todays Blåkulla environment with focus on vandalism and low maintenance as signs of non-safety related indications. The space is the public space under the social housing structures during the evenings, weekdays under spring. The conclusion would be how to further improve upon these aspects.

Theoretical background

The theory mostly used will be that of the “Broken Window” theory. This theory was developed in 1982 by Wilson and Kelling and indicates that the appearance and maintenance of the built environment is proof of social cohesion and informal social control.

The broken window is a metaphor for ways behavioral norms break down in a community. If one person scrawls graffiti on the wall, others will soon be spraying paint. If one aggressive panhandler begins working a street block, others will follow. In short, once people begin disregarding norms that keep order in a community, both order and community unravel. (Petersen, 2004)

The theory argues that the rapid repair of vandalism and the maintenance of urban spaces, for example, can discourage further opportunities and prevent these problems from escalating. (Cozens, 2014, p.64)

Following this theory, implementations will be based on Crime Prevention through Environmental Design to assess if further actions must be taken to improve this area. Correlation between design measures and maintenance will be made to prove the point that none can be successful without the other.

Resident Descriptions of Blåkulla

Residents in Blåkulla know and remember drug related issues, vandalism and often children not finishing school. There have always been issues with drunk people and fires set on homes and outside, but these are mainly exaggerated by the media because of the rumors this area has as a segregated area. The garage and the parking areas are the most problematic in the neighoborhood. During the 1990s there was a police station situated in the area that moved later because of the small amount of reported problems.

"A square is normally a place that people move across naturally. Such is not the case with Hagalunds square." -Resident about Hagalund

“The place lacks soul. The center consists of flat parking lots where no one wants to stay. Strange walkways are connecting the various parts.” -Resident about Hagalund center

Personal Description of Blåkulla

Blåkulla has been designed based on the principles of modernism. There is a huge resemblance to Le Corbusiers ideas with the separation of vehicle led and pedestrian movement. Hagalundsgatan crosses the area in its center at a lower level and the residents move above on bridges and the public spaces between the buildings. The design itself isn’t safety friendly and has produced many bad rumors about the area with drunk people, drug market and gangs.

Data and methods

Through my research, I have found previous studies on the subject by Carina Månsson, in 2013, with the title "The old Hagalund meets the modern Hagalund an analysis of a stamped neighborhood in Solna", a research of Spacescape about the area in 2014, information from Hagalunds community association, and Hagalundsandan, an association of mothers living in the area, opposed to the new plan for densifying it. I have gathered resident opinions from this research and some statistics to help inform about the area and the situation. My personal visits to the area are included as is some field inspection.

The map on the right shows in green the rental apartments and the yellow the ownership apartments. This shows that the north area is the most vulnerable and also the one with the lowest maintenance and the most examples of vandalism.

The next picture is taken from the website "Opinions about Hagalund" where people could express their feelings about certain areas in Hagalund. The red color means improvements should be made and the blue one means that this is the best places in Hagalund. It's evident how most of them are in the public space and gather at the central street Hagalundsgatan and its centrum and the north part of the housing complex.

Below, follow the on-site inspection I made myself.

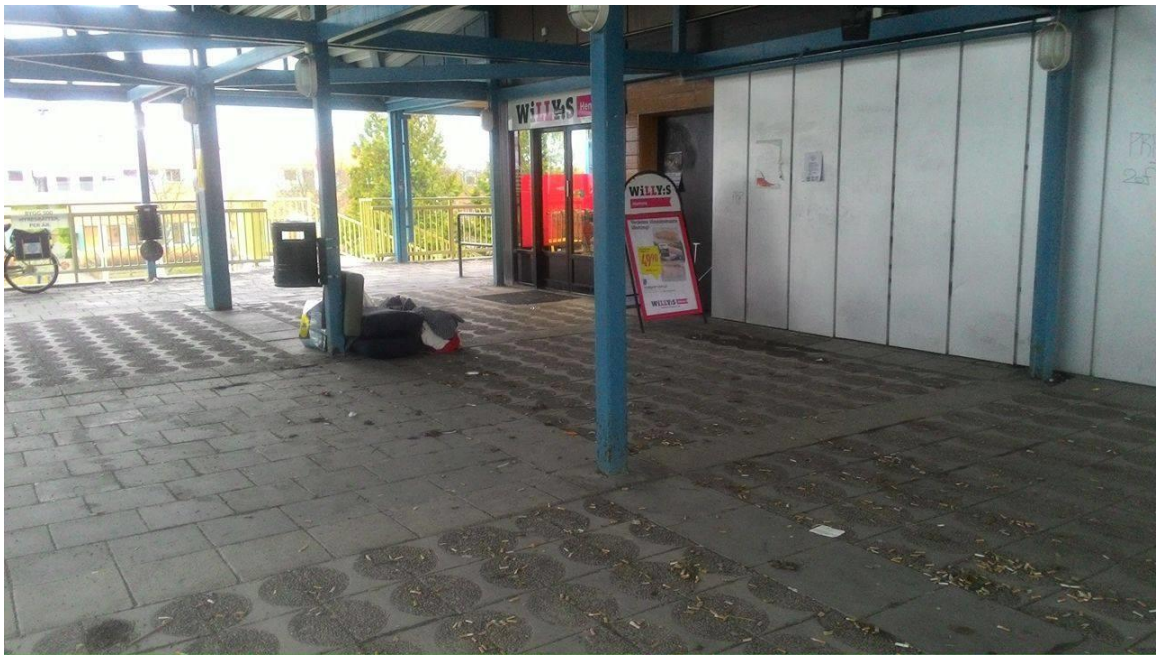
Results

4 The staircase from Solna station to Blåkulla is full of litter.

5-6 Graffiti on the walls of public space and the buildings.

7 Loitering at the bushes

8 The entrance to the center is also graffitied.



9 The center is full of cigarette stubs. A beggar is outside the super market everyday

The results show that there are signs of vandalism and bad maintenance, in the north part of the area which is studied. The issues are mainly the cleaning of the area and keeping things nice.

10 Hagalundsgatan. Under the center is the parking and the storage of the super market

11 Hagalundsgata

Discussion of the results

The results will be based on the main principles of CPTED, physical security, surveillance, movement control, management and maintenance and defensible space as chosen by Rachel Armitage.

Physical security: The locks on the common rooms, as well at the entrances are simple. There needs to be an upgrade on this issue although there have not been problems of break-ins and burglaries to a high extent.

Surveillance: The buildings are high but they have windows on every wall and that provides natural surveillance to the public space. What is even better is that there are apartments and common rooms on the ground floor which makes it active and a suitable guardian to activities happening outside. The only problem is the vegetation that blocks the view.

Copyright Christer Joelsson

Movement control: The public space is open and there are multiple pathways for an offender to escape. Unfortunately, that is how the space is designed. There are plans to densify the area and create more enclosed spaces that would create more control on the movements.

Hagalunds Samhällighetsförening

Management and maintenance: Graffiti is in very visible places and act as a statement against authority. There is much loitering and that is a huge problem for this area as this is the most visual part of it. There is very low maintenance on this part and it clearly does not help this area to be destigmatized as a bad neighborhood. Along with this there are also the unwanted people, begging outside the super market.

Defensible space: There is no defensible space. The private area ends on the borders of the buildings. Unfortunately, that is the case in most social housing complexes. However, residents are very proud of the area and normally don't vandalize the buildings except for graffiti purposes.

There are clear signs of vandalism and low maintenance problems. I want to stress that the main issue in this area is its poor design. As residents claim, the worst parts are at the center of the neighborhood where the street is and the parking areas. The bridges above these areas do not provide safety for its users. The parking areas are very impersonal with many corners along the staircases and the entrances to the parking and there is much vegetation that is not lit well.

I believe this area is much more peaceful than people think it to be but images of low maintenance and the overall design of the center keeps people away from the area. The only reason for visitors to come is the cheap super market at the center or the park at the south edge, without crossing through the building complex. There are few problems in this area compared to other million program housing areas but the stigma is still there and won't go away if the maintenance keeps being as low as it is now.

Residents of the area clearly love this place and have a sentimental connection. This is proved by many associations that declare their opinion about the area both in political issues as well as in development projects that are awaiting to take place.

Initiatives in Blåkulla

Resident initiatives

Blåkulla has always had active residents. Associations active among both Swedes and among people of foreign descent have been created since the 1970s. Ett levande Hagalund was created by volunteer enthusiasts who wanted to organize joint activities of Blåkulla residents. Among other organized events is Valborgsmässofirande at the water tower close to the area, every year. The Hagalund day is held in August every year. They organize mini races for children, musical performances for younger and older people. The youth center Blue Hill and Hagalundsparken organizes various activities. These activities promote the maintenance of the Swedish customs, with May celebrations, while Hagalund day welcomes music and food from around the world. Families of foreign origin gathered happily in the Rosenträdgården for barbecues and organized refreshments. Associations such as Familjecentret for women and mothers are essential for the area.

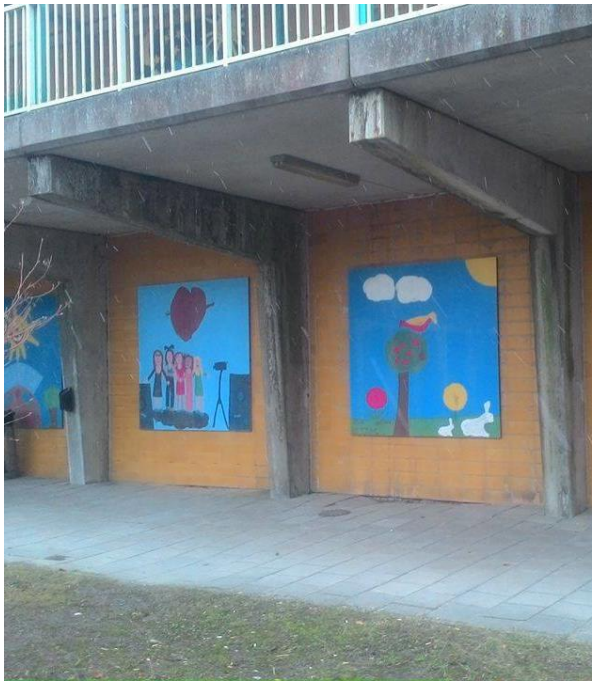
Blåkulla project

In 1990s Solna decided to improve the quality in the area and to start a renewal and joint project in the district. The so-called Blåkulla project was established together with the city's various departments, housing companies, police, association, and residents' representatives. Focus was to make improvements to the physical environment, the social environment, to broaden citizen participation, and better cooperation between the various parties.

One of the first measures of the project was in 1993, the Familjecentret containing child and maternity care, combined with the open preschool and social services. The second center, at 1996 was called "Flaggskeppet", including preschool, housing reception, cafe, club, banquet and conference rooms. A youth project, Blue Hill, was established in 1994 in the center. The young people were responsible for the venue with music, computer and dance studios and a café.

In 1995 Blåkulla project received grants for investments in the Swedish education, labor market policies, migrant women and social meeting points. It served as an example of integrating refugees and immigrants to the Swedish society.

12 Discussion about safety in Hagalund at April 6th



13 Initiatives from people at Hagalundsgatan

This is a picture of an entrance to an entrance to local facilities on the ground floor of one of the blue buildings. It has both graffiti but also hosts the poster for a talk about safety in the area together with the political party of the social democrats in Sweden. The issue of safety in Hagalund still prevails and it is interesting that activities towards that goal are still happening.

The site “Hagalundsandan” is actively against the development project in Hagalund that proposes the densification of the area, something that was suggested by Spacescape for its improvement.

Housing associations also have their own pages about the history and the events being held, handing information about all the aspects of the area.

Conclusions

Blåkulla is an area that has been stigmatized from the very beginning. Through its history, it has not had any major crimes but since its creation in the 1970s it has been associated with drug dealing, arsons, vandalism, and gangs. With this study, I have wished to understand how an area can become stigmatized with no crime at all, and how a bad reputation can be a crime generator. Unfortunately, that happened in Blåkulla but at the same time it isn’t entirely the residents fault. The area has very poor environmental design and that is a crime generator at even the best neighborhoods. Because of the social character of the buildings and the bad reputation it has many immigrants live in the area and that further enhanced the reputation of the area, a racist remark by many media, but nonetheless a remark that would work against the area. However,

with persistence and love towards the neighborhood many initiatives have proven to improve the situation, although not in design aspects, but much more to the feeling of the neighborhood. Many associations have been created through the years, education has been created on its ground, and the municipality has shown that it wants to improve the situation both with the project in the 1990s but also with the new Spacescape study. The bad rumor for this area, still exists and there are some remarks that help towards that notion, the vandalism and the low maintenance being prevalent. The lesson that we can learn from this study is that, the work to improve an area on safety issues is never over and the most important part is to change the perception of safety of everyone. This has slowly been going on in Hagalund, and would not be successful without the collaboration of the residents who really like this place and know that it is not a serious crime related area.

Suggestions

I am very glad that this area has many associations and events that bring peace and happiness to its residents and invite people from all over Stockholm to participate in. The neighborhood has a friendly feeling and everyone are working towards the goals of safety. I argue at this research, that the design is the main influence for issues such as vandalism and drunk people but there are initiatives to change that, with schools and public associations being present at the area. The rental apartments at the north site have the worst conditions, which means that there are responsibilities that need to be addressed to the real estate owners.

First of all, to address the crimes of vandalism that is correlated to low maintenances there are some actions that need to be taken.

- The quality and amount of illumination posts must be checked and changed in the are and especially in the public space of the north buildings.
- Use graffiti—and damage-resistant materials so that they can be resistant or cleaned easier. Alternatives for legal graffiti can be chosen.
- A set of rules and clear information about what is legal and permitted must be provided.
- The maintenance is bad, especially at the rental apartments and that needs to be corrected with the handling of deterioration and litter.

Stakeholders

The possible stakeholders for these actions can be the city of Solna, the residents in Blåkulla and the close area, the church which has mark there, the private and public owners of the buildings, Trafikverket for the streets and SL that has the station close to the area.

The city of Solna can actively work towards making Hagalund more visible in its vicinity. Right now it is focusing on the Mall of Scandinavia area, but the Hagalundpark is a very popular destination at summer. The city could work towards making it visited in winter too. The old church and the painters home need to more actively be promoted with events and exhibitions.
The residents must continue their good work, and participate with even stronger voices in all the actions that work with Hagalund.
The church can promote services and help towards the young and the general public space of this area.

The owners of the land must work together for the public space and create an association that works for all the space so not any part of them is neglected and some more favourable by the cleaning services.
Trafikverket can work towards making the streets safer and less noisy with approval of vegetation at its ends.
SL can work towards advertising the area, creating better connections and cleaning up the areas close to the station that suffer too from vandalism. The future plans of SL is to create a new metro station at Hagalundsparken close to Blåkulla which will certainly improve the conditions in the area.

The following picture states the owners of the land.

KARTA MED FASTIGHETSÄGARE PER FASTIGHET

These actors must collaborate at the same time to improve the area of Hagalund. Following these principles on other segregated areas of the 'million program' there might be significant improvements, but there needs to be the same dedication between all stakeholders and the same initiatives from the residents and the municipalities to provide to themselves and the people.

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11,14: Spacescape

Safety in the Million Program Byälvsvagen

– a CPTED approach –

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Master in Urbanism Studies

Higher Seminar in Public Places and Urban Spaces Studies

- Safety in the Making Report -

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Safety in the Million Programme Byälvsvagen

1. Introduction

1.1. Context of the one million homes programme

The Million Programme (Miljonprogrammet in Swedish), is the name for the housing programme implemented in Sweden between 1965 and 1974 by the Swedish Social Democratic Party. The housing deficit has been discussed since the end of the second World War, and to overcome such deficit, the million programme was implemented at that time so people would be assured to have a decent place to live in, at a reasonable price.

"One Million homes in ten years" was the headline for the party and in 1964 was a social and political act, and at the time, the Million Programme was the most ambitious building programme in the world to build one million new homes in a nation with a population of eight million. At the same time, a large proportion of the older unmodernised housing stock was demolished. (Nordal, 1981).

The urbanization of Sweden, from an agricultural society to an industrial one, led to migration from the hinterlands to the cities. It was encouraged by the government and in the war period, there was the need for workers in the industries: the building boom was a consequence of such historical context. It was a period of prosperity and economic growth, and the money involved was used to implement social reforms. The reforms were implemented to ensure the availability of land, such as new land acquisition rules for local authorities, if the landowner was planning to sell it to a private buyer. It was also implemented a new law that guaranteed that a municipality could build homes outside its border ("Lex Bollmora"), because rural municipalities near Stockholm could not afford building so much.[1]

Such aspects and context was implemented on a low-cost and fast way of building, which resulted in a similar, minimalistic appearance and a comparable technical approach in all the areas. Nowadays, about thirty percent of all Swedish households have their origin in the Million Homes Programme initiative (Vidén, 2012).

The Million Programme constructed a mix of housing units with some tower blocks but with the majority of the housing stock consisting of apartment buildings with four, three or fewer floors, terraced houses ("low houses") and one-family houses.

1.2. Byälvsvagen housing complex.

[1] Refers to content in Tyresö centrum och Bollmora (Swedish) website accessed in 2017/03/29.

The Byälvsvagen housing complex is situated in Bagarmossen neighbourhood in Stockholm, Sweden, a 50's suburb that is still well preserved. When Bagarmossen was built, it received great international recognition because of the separation of pedestrian flows from car traffic. As for the one million programme complex, it was built in 1969 and its main access street carries the same name as its complex. The Bagarmossen metro station as well as the centrum are located about 1Km away from the furthest housing unit.

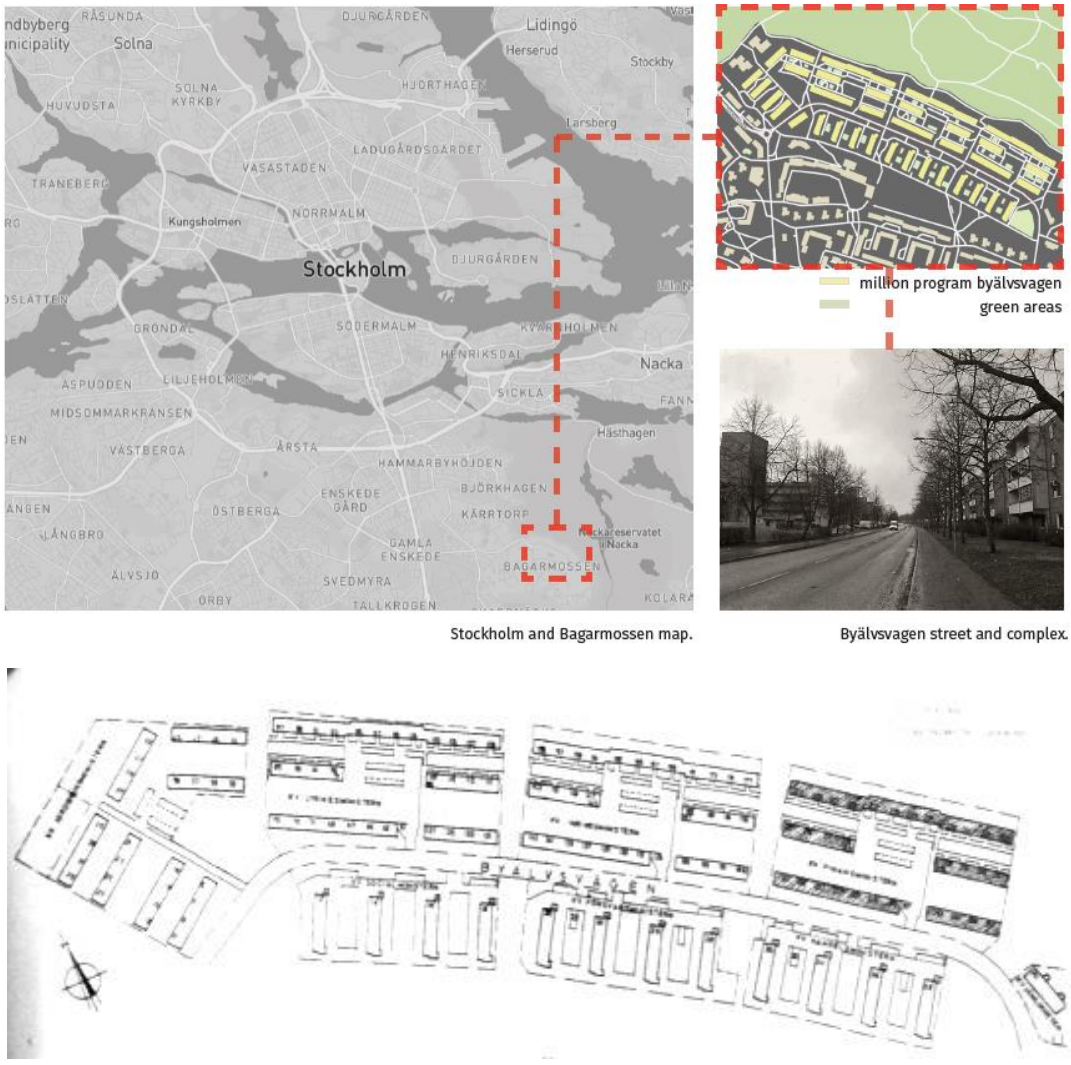
This complex is composed by 34 buildings that share facilities such as laundry rooms and garage. All buildings have their own entrance and are only accessed by the own resident's keys.

Architect: Ernst Grönwall

Year: 1969

Client: AB Stockholmshem

Location: Skarpnäck, Stockholm[2]



Stockholm and Bagarmossen map.

Byälvsvagen street and complex.

Fig. 1: Byälvsvagen housing Plan.

[2] Extract from book: "Structural Systems of the one million Era". KTH school of architecture, 2013.

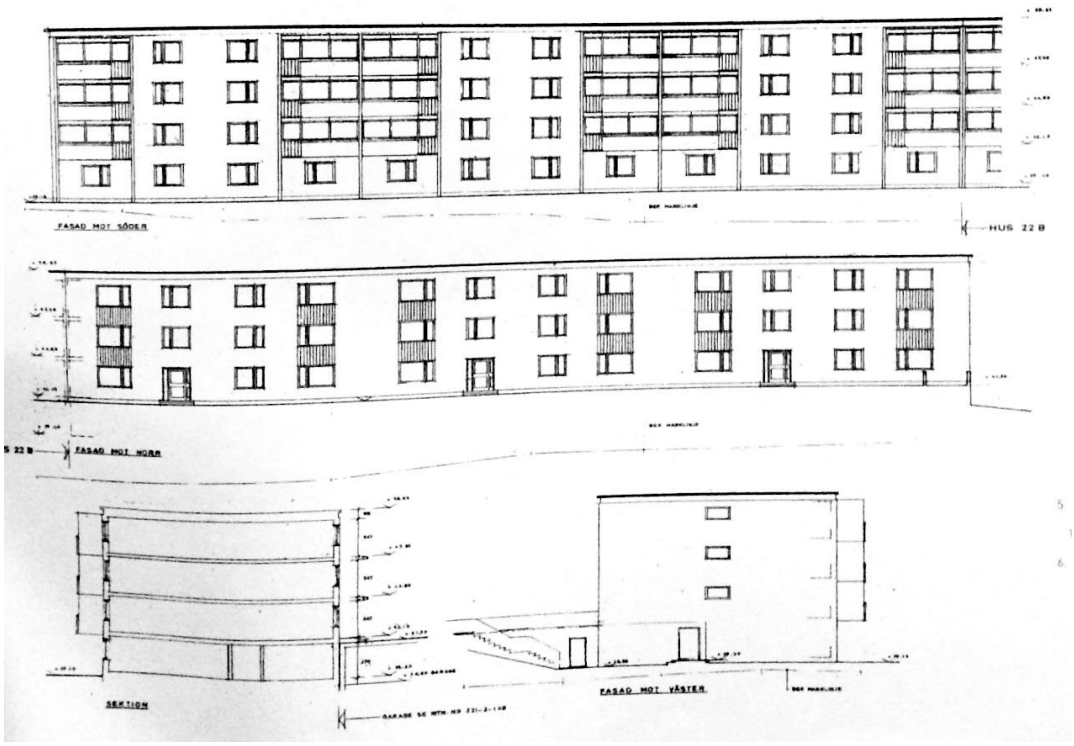


Fig. 2: Sections and Elevations of housing buildings.

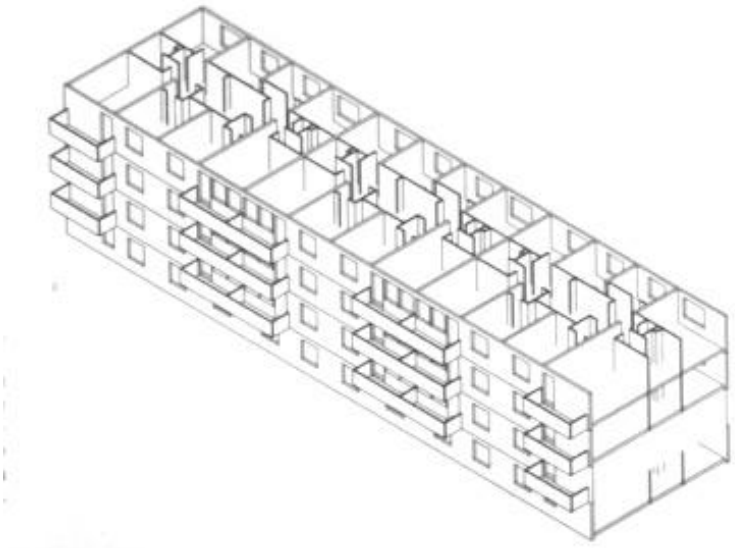


Fig. 3: Isometric of four-stores type building.

2. Safety in one million programme and supporting researches

The one million programme environments are often described as unsafe with low social standards (Ulrich et al, 2013). The factors that are linked to the safety perception are not clear, therefore researches should contribute to point out the problems.

It is important to show the patterns which make the perception of fear and potential improvements in the areas.

Project Data of renovation projects have been carried out in the Swedish Million Homes Programme. Such project datasets help summarize the benefits and costs of the social development project. The Master research “How to renovate the Swedish Million Homes Programme: The development of a value proposition for a renovation project” for KTH served here as a basis for this report and for future improvement on safety. It explains why its inhabitants are concerned with safety issues in Million programme complexes in Sweden and it points out some alternatives for improvement.

An interesting aspect of such research is how it explains the impact on the surrounding areas of such projects that results in a higher image of the whole region and thereby positively influences the property value and safety in surrounding areas (Ulrich et al, 2013). *“Lind and Lundström (2008) state that the size of the renovation project as proportional to the impact on surrounding areas, so estimate per renovated apartment a monetary benefit of 1200 SEK per year and apartment. On the other hand they argue that the benefit for the specific environment Gårdsten is higher than the estimated 1200 SEK per apartment, but that on the other hand a certain amount of problem households move away to other areas, causing social distress. This implies that safety standards and the image of other housing environments get decreased and is therefore negatively impacting factor in the estimation of the 1200 SEK”.* (Ulrich et al, 2013)

In addition, it is important to show how Amra Barlow (2013) from Svenska Bostäder believes in the difference between the physical qualities and social qualities. In terms of physical changes in the area, she sees the contribution to the area safety as a key success factor and describes changes in locking systems and laundry machine locations as measures. Some companies might argue about the functionality of the houses, tenants focus more on design issues and maintenance. She, on the other hand, argues for an expansion of implementation of activities towards an attractive environment.

Solving littering problems, renewal of stairs, hallways, escalators Condition of kitchen and bathroom, condition of walls, doors and floors, is one of the basic features are acts that help improving the safety perception of residents. (Ulrich et al, 2013) Lighting is also important, as well as the private space for parking. The focus towards the outdoor environment of the housing district proves to be a considerable contributor to the tenants and visitors perception of the area, according to the housing company MKB (Blomé, 2010).

In Svenska Bostäder research when asking residents pointed that the biggest complaints (10%) in million programme housing complexes is regarding safety.

Therefore, Svenska Bostäder undertook during the renovation project a number of actions to increase safety provision for their tenants. Barlow

> *(2013) described the moving of laundry machines from the basement into rooms with windows, so that other tenants could see the activity in the room. Furthermore, new locks were installed that decreased the possibility of burglary. In order to meet the challenge of youth gangs and criminals, the housing company also aimed for providing a better perspective to their tenants by offering jobs under and after the renovation project. To offer work implied that tenants did not have the incentive and time anymore to threaten others out of desperation or to secure their living standard by criminal actions. (Ulrich et al, 2013. p. 95).*

3. Crime prevention through Urban design and planning (CPTED) approach

3.1. Concept

CPTED, how it is known, is an approach to determine criminal behaviour using environmental design. It basically studies how to reduce crime and violence, as well as the fear of crime by working with: territoriality, surveillance, access control, target hardening, image and maintenance issues as well as activity support. (Grölund, 2017).

The aspects of CPTED were developed in the 1960's and 1970's in United States and it has been developed ever since. Its principles of design affect elements of the built environment ranging from the small-scale to the overarching, including building form of an entire urban neighbourhood and the amount of opportunity for "eyes on the street"(Jacobs, 1961).

4. CPTED approach in Byälvsvagen

4.1. Methodology:

As for this report, it was selected three of the main basic CPTED concepts: natural surveillance, movement and access control, as well as territoriality.

The student made a field visit and tried to perceive the notion of safety through the inhabitant's eyes. A list of characteristics was made, and the places visited were ticked as good or bad within the CPTED aspect studied.

4.2. Natural Surveillance

In CPTED, Natural surveillance theory is about increasing visibility to spaces in order to avoid crime. It happens when the placement of physical features, activities and people re designed in a way that promotes visibility of space and human activity. Potential offenders might feel observed; therefore, it can prevent crimes and violence.

What is Good:

- Big openings and private access facing inner courtyards and public spaces.
- Good lighting and shading inside courtyards.
- Vibrant pedestrian traffic during the day inside courtyards and pathways.

What is Bad:

- Bad visibility to the parking lots, back of the buildings.
- High ground wall and small openings to the vegetation and pedestrian pathways on the back of the complex (all back sides are vegetation)
- No visibility to the entrance of the buildings due to vegetation and design.

Possible solutions:

- virtual surveillance in blind spots, especially facing access to the buildings.
- Trim of vegetation inside courtyards.

4.3. Movement and access control

Access control as well as movement control are studies about clear limits and physical separation of what is private and what is public. Placing entrances and exits, fencing, lighting, and landscape design to limit access or control flow, natural access control are all part of this CPTED issue.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What is good:

- Lighting only inside coutyards.
- Snow management

- Maintenance of buildings and some, but little fencing.

What is bad:

- Not a clear identifiable entrance.
- No reception structure
- High vegetation.
- Easy escape routes (close to bus stops and main streets)
- No fencing on ground floor.
- Too many access routes to the buildings

Possible Solutions:

- Use shoulder-level, open-type fencing along lateral residential property lines between side yards and extending to between back yards.
- Implement bigger openings facing public backyard (fig. 7)
- Use low, thorny bushes beneath ground level windows. Use rambling or climbing thorny plants next to fences to discourage intrusion.
- Use structures to divert persons to reception areas

4.4. Territoriality (territorial reinforcement)

Promotes social control by the definition of space and property. Through this concept, there is the sense of ownership, intruders are easily identified and crimes are often reported. Fences, pavement, signs, lighting, and landscaping can express ownership and define the spaces.


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What is Good:

- Presence of green areas to boost community use.
- Security locks on doors
- Good maintenance
- Community engagement on maintenance and sense of ownership.

What is Bad:

- Not a clear distinction at some points of what is public and private on ground floor
- Difficult to identify strangers since the pathways are also public
- Not enough amenities
- No community activities
- Lighting is not sufficient outside the courtyards and next to vegetation.

Possible Solutions:

- Fencing or implementing bushes on ground floor for better perception of private and public
- Promotion of community activities
- Providing activities within the complex area
- Lighting is not sufficient outside the courtyards and next to vegetation.

External Bibliography

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4. STENBERG, Erik. Structural Systems of the one million era. KTH school of architecture, 2013.
5. http://www.tyreso.se/Se-och-gora/Upptack-Tyreso/Kulturhistoriska-miljoer/Tyreso-centrum-och-Bollmora/ **accessed Mar/2017.**
6. http://www.spriddarchitecture.com/byalvsvagen/ **accessed Mar/2017.**
7. http://www.spriddarchitecture.com/projects-1/#/millionprogramme/ **accessed Mar/2017.**

External Images:

Fig.1: STENBERG, Erik. Structural Systems of the one million era. KTH school of architecture, 2013. **P. 79.**

Fig 2: STENBERG, Erik. Structural Systems of the one million era. KTH school of architecture, 2013. **P. 31.**

Fig 3: STENBERG, Erik. Structural Systems of the one million era. KTH school of architecture, 2013. **P. 79.**

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KTH Urbanism Studies

Gender and perceived safety in public squares in the suburbs of Stockholm

The case of Rinkeby

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INTRODUCTION

Rinkeby is one of the major residential areas in Stockholm's million program plan, and was built in 1968 -71. Today the area inhabits people from many different nationalities and up to 90% of the population are foreign born or has foreign background. As many other million program areas, the master plan for Tensta – Rinkeby sought rationality and urbanity with dense and highly accessible infrastructure. Rinkeby Torget is a public open space in the heart of the district, surrounded with commercial and business functions, and is used as a meeting spot for the local community, and as a market and shopping center for different sorts of goods.

The liveliness of the square is remarkable as opposed to other public places in the city of Stockholm. However, the male dominance in the space is notable as well. Hence, Rinkeby torget offers an opportunity to explore the female perspective in using public spaces via a feminist approach. Public spaces are occupied and experienced by women on different terms than men, and even though Sweden has come far in its work towards equality between the sexes, it has only begun to have an impact on the way cities are designed. This fact is directly linked to safety issues.

The statistics show that Rinkeby has lower criminality than Stockholm, when it concerns all crimes that have been reported. But Rinkeby has much higher criminality when it concerns crimes that have been committed against other people and have been reported. These findings can justify a higher level of fear of crime in this area, although the media are also responsible for a big part of that fear. Generally, women tend to feel more threatened and being victimized than men. By linking this fact with the apparent male dominance in Rinkeby square, an important issue arises: which is women's spatial perception and how is it affecting their sense of safety in the area. The question at hand is whether crime prevention theories are able to have a substantial impact in ameliorating or reversing the situation.

AIM & OBJECTIVES

The aim of our research lies in the investigation of women's perceived safety and fear of crime in public spaces in the suburbs of Stockholm. The chosen case study of Rinkeby square constitutes a striking example of the male dominance, and its subsequent implications, in these public spaces.

Our main objective is to assess the ways women use, or not, the square and whether they feel safe and comfortable while being there. Furthermore, we aim to investigate the reasons behind their perceptions as well as propose suggestions for potential improvement of the situation.

THEORETICAL BACKGROUND

Lack of security, feeling in danger and a fear of being victimized threaten both the use of the public spaces and the creation of successful urban spaces. (Arjmand, 2017) Studies have shown that certain social groups are more fearful than others, as well as more vulnerable to fear of crime and its consequences. Research indicates the groups who report higher levels of fear of crime include women, the elderly, social minorities, the poor, the less well-educated and children. (Cozens, 2016) The research and literature about safety issues through a gender equality lens within urban studies field is growing. Feminists have long indicated women's fear of crime as a manifestation of gender oppression, which reproduces traditional notions about women's place in society. (Dymen, and Ceccato, 2012) In planning contexts, safety is often discussed from a women's perspective, and women's fear of violence in public space is a problem that is clearly being taken more seriously than a few years ago. (Sandberg and Rönnblom, 2015)

According to NTU report, women's quality of life is more affected by crime and fear of crime. They have been presenting larger worry about crime in society and crime against their loved ones than men. Women are more vulnerable to certain types of crime like threats, harassment and sexual assault. Unfortunately, general measures are addressing more low perceived safety and they are not regarding crime in public space only by strangers, but also they ignore the social reasons for women's fear. (Ceccato, 2017).

When safety is the main goal, the difficulty of adopting a single gender perspective in urban planning resides on the fact that both gender roles and safety are space–time and culture-dependent social constructs. One's perceived safety depends not only on factors such as age and gender but also on contextual factors, such as socio-economic circumstances and society's overall conditions. (Dymen, and Ceccato, 2012) For instance, the structure of the labor market is seen as one factor affecting gender relations. As Forsberg and Stenbacka (2013) call them, 'gender contracts' are the relations between men and women that are produced and reproduced at the local level by people's practices. Gender contracts are shaped by a combination of the overall structure of gender relations and the way in which they have been arranged by local conditions in the labor market, demographic structure, history and traditions. These local gender contracts are the everyday practices that people perform, mostly without noticing or being aware of them. (Forsberg and Stenbacka, 2013)

Moreover, gender differences are also found in travelling patterns. Women are using more the public transportation system than men. They are less likely to have access to a car, and in combination with an increased sense of responsibility for child and elderly care, this implies that women adapt the workplace to the residence more than men do. (Dymen, and Ceccato, 2012) They tend to change their habits and patterns of moving around depending on their perception of crime, so much as to avoiding walking in

their own neighborhoods after dark in a large extent. (Ceccato, 2017) All of the above reinforce the notion that public sphere is spatially gendered.

Specific attributes of public spaces may influence drastically women's perception of safety. Maintenance of public spaces has a crucial effect on how women perceive the space. Signs of physical deterioration and public disorder are thought to be more important determinants of fear of crime than the actual incidence of crime. Thus, women exposed to such environments would tend to be more fearful than those living in areas with high social control and few signs of public disorder. (Dymen, and Ceccato, 2012) The notion of surveillance and control is, also, among the primary concerns of any public space and is regarded to be as crucial as the exercise of power and provision of safety and security. While the notion of surveillance could be explained in terms of panoptic control and hence practice of power, it is a serious concern to be addressed by urban planners in designing any given public space. The delicate task of creating balance between the civil rights of the citizens and the surveillance of a space is easier said than done. (Arjmand, 2017)

However, while the notion of safety and security is undoubtedly a pivotal factor in creating a successful space, it is important to make a distinction between "fear" and "risk". This is referred to as the difference between "feeling safe," for instance due to the reputation of a place, and "actually being safe". It is crucial to take this into consideration, since women are more vulnerable and a more at-risk group in society compared to men, and hence prone to feel more in danger and be subject to victimization. (Arjmand, 2017) Media sensationalism about crime and the exaggerations of gossipers can result in elevated levels of fear of crime as compared to the actual crime risks. It appears that in terms of levels of fear of crime, social influences are more important than direct experience of crime itself. (Cozens, 2016)

From both a research and a public policy perspective, it seems self-evident that what is needed is 'something more' than simply changes in the physical space in terms of, for example, more lights in parks. (Sandberg and Rönnblom, 2015) Even though there is an ambition to address men's violence and gender inequalities in society, the practices that are possible to implement need to follow an audit rationality, which means that instead of challenging male privileges in society these practices address the problem of women's (individual) fear. (Sandberg and Rönnblom, 2015)

Crime Prevention Through Environmental Design (CPTED) is often proposed by planners as a possible solution to safety issues in public spaces. The general idea is that environments can be planned in a way that reduces the possibility of crime occurring, by stimulating surveillance, fostering territoriality and reducing areas of conflict by controlling access from outsiders. This first generation of CPTED planning strategies was criticized for portraying individuals as passive agents in the environment, and ignoring the social construction of physical space altogether. Attempts to develop CPTED strategies have included anti-segregation measures and active community participation, and the gender perspective was put into practice in Canada with the development of safety audits with women's groups, police and transit officials as participants. However, these measures continue to be criticized for addressing crime in public spaces by strangers only, which ignores the wider social causation of women's fear. (Dymen, and Ceccato, 2012)

DATA & METHOD

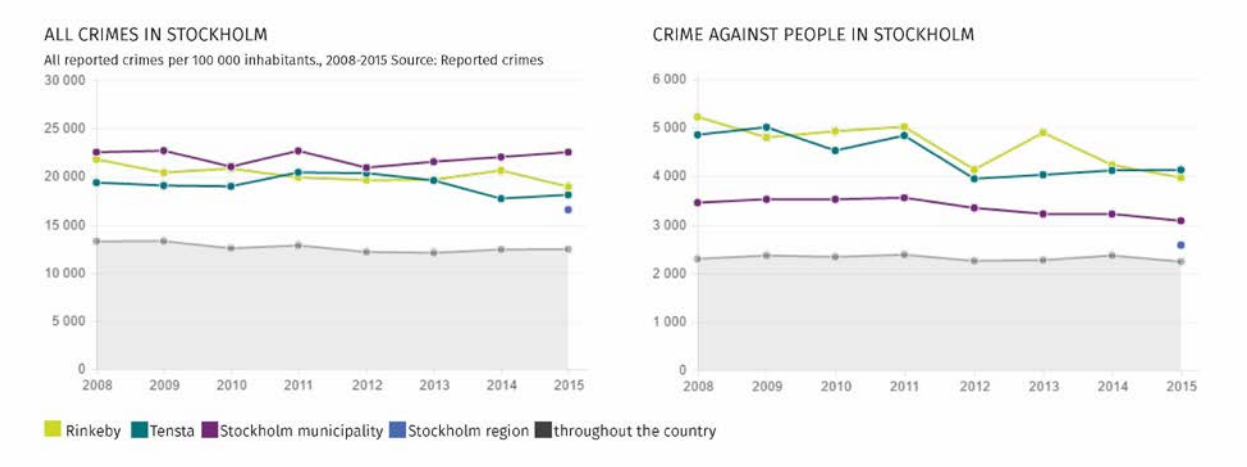
A vast number of primary data was collected through city of Stockholm online portals concerning rates about crime, unemployment and so on between women and men, both for our area of study and the whole city. We, also, researched and collected through the web information about crime incidents in the area as well as related initiatives which took place in other suburbs facing similar problems. A qualitative

analysis was conducted in order to capture the essence of Rinkeby square and the perceptions of people about it. First, we made observations of the space along with maps, where we noted the male dominant spaces and the potentially dangerous spots. Subsequently, we counted men and women on, or passing by, the square in order to evaluate our argument of male dominance. The counting took place during five different hours of the same day. Finally, we interviewed an indicative sample of area residents about their own opinions for the square. Making people open up and share their experiences was difficult, thus the amount of gathered interviews was limited. However, we opted for a varied spectrum of opinions and users, concerning their sex, age and ethnicity. A total of five interviews were conducted. Furthermore, we asked them to pinpoint on a map of the square the places where they may experience fear of crime, as well as those that may feel safer within the square. Combining all of the findings, we gained invaluable insights about the actual situation on Rinkeby square and were able to validate our research proposal. An attempt for quantitative research through surveys failed, due to reluctance, suspiciousness or even indifference of people to participate. Hence, our sample would not be sufficient in order to extract solid results, threatening the reliability and validity of such a research.

RESULTS

Through our primary data investigation we came to the conclusion that Sweden, even though it ranks high on the lists about gender equality, still faces major gender issues concerning the labor force. Women are less in number and earn less than their male co-workers within the same sector. Notably, only 1 out of 10 CEOs in Sweden is female. Furthermore, parental leave is mostly taken by women, although Sweden makes substantial efforts to change this norm. This fact has a direct effect on how and by whom public spaces are being used, especially when they include children activities. It should also be taken into account that public transportation is not equally used by men and women, fact that also has a major effect on the usage of public spaces. More specifically, women more rarely have a driver’s license and is 2 times less common for a woman to own a car than a man. Women have more complex traveling patterns than men, as they make more stops and travel by several types of transportation. Their travels are more often tied to errands which could be explained by that they conduct the lion share of the unpaid house work. Traveling with children makes women more dependent on reliable secondary entrances to public transportation, and the proximity and ease to the home.

Concerning fear of crime and feeling of unsafety, statistics indicate major gaps between the two sexes. According to the studied reports women tend to feel more unsafe in public and are more vulnerable to acts of crime like harassment and sexual assaults. The statistics about the feeling of unsafety at night are staggering. The percentages of women that feels unsafe in their own area are more than double of those for men. Additionally, women’s quality of life is more affected by crime and fear of crime as they have been presenting larger worry about crime in society.


ALL CRIMES IN STOCKHOLM
All reported crimes per 100 000 inhabitants., 2008-2015 Source: Reported crimes
30 000
25 000
20 000
15 000
10 000
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2008 2009 2010 2011 2012 2013 2014 2015
CRIME AGAINST PEOPLE IN STOCKHOLM
6 000
5 000
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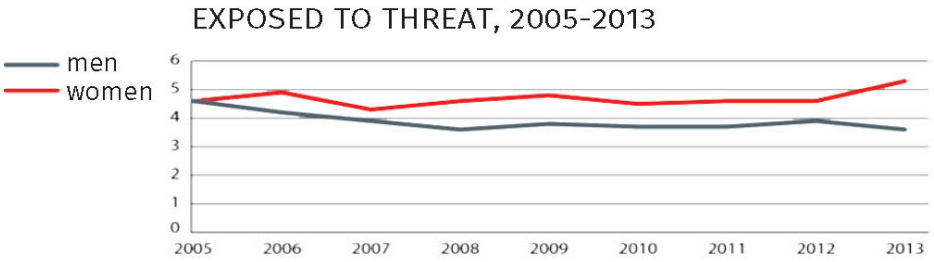
Rinkeby
Tensta
Stockholm municipality
Stockholm region
throughout the country


EXPOSED TO THREAT, 2005-2013
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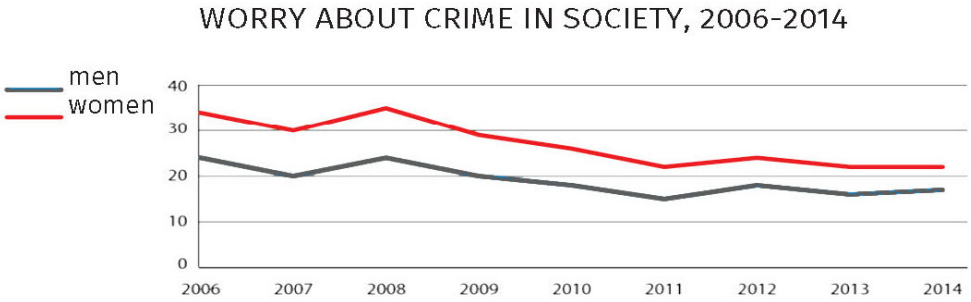
WORRY ABOUT CRIME IN SOCIETY, 2006-2014
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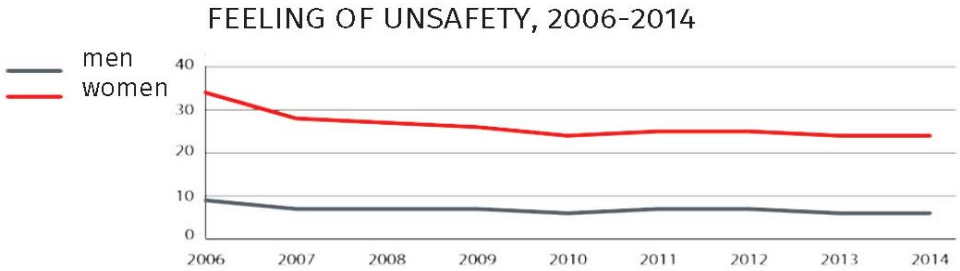
FEELING OF UNSAFETY, 2006-2014
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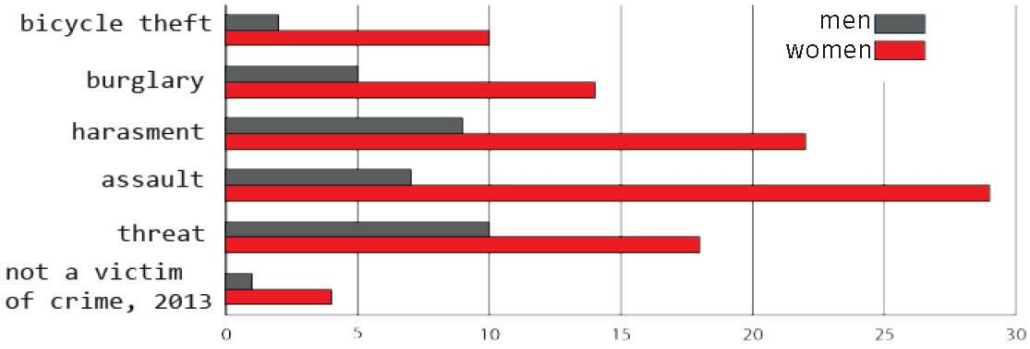
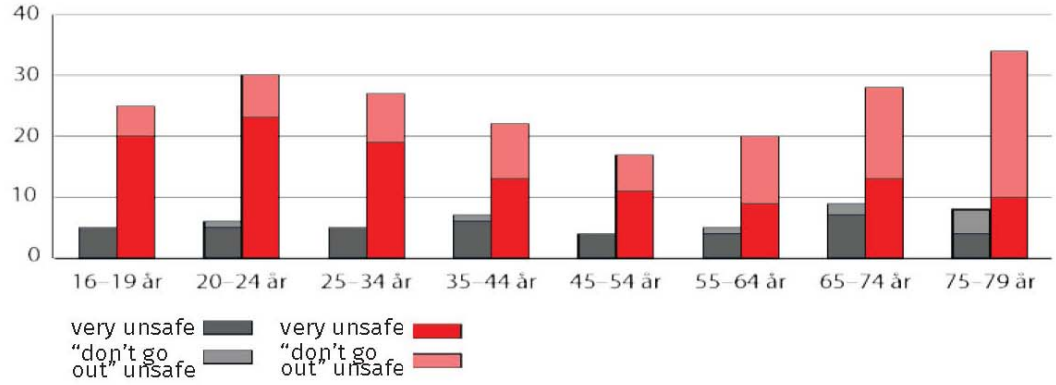
INSECURE AFTER EXPOSED TO CRIMES

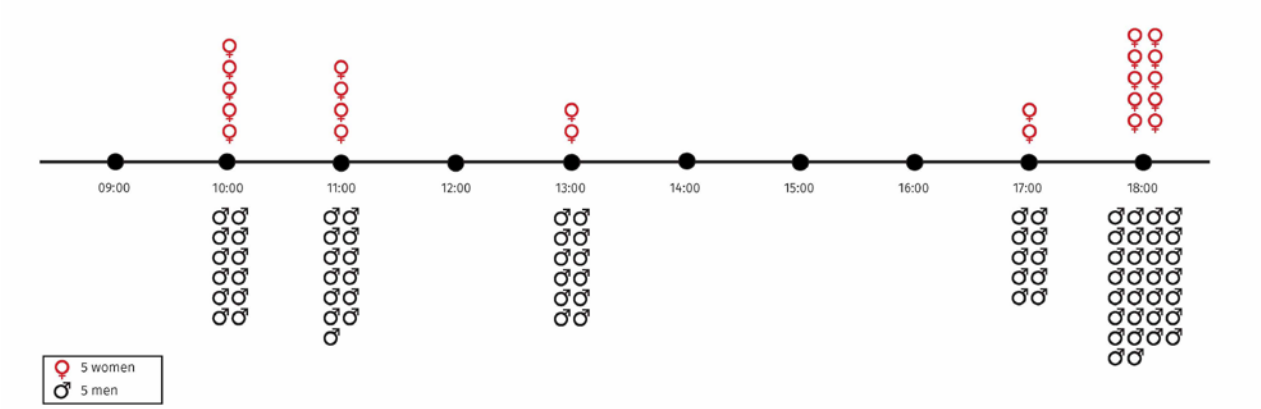


UNSAFE AT NIGHT IN THEIR AREA



In Rinkeby context, figures highlight the huge social gap between suburbs' and the whole Stockholm's residents. 90.7% of Rinkeby's population is of foreign origins, compared to the 31.1% of the Stockholm total. Spatial segregation in Stockholm becomes apparent through statistics about unemployment and average income. Women in Rinkeby earn approximately half as much than women in the whole area of Stockholm. This increases their dependency on their families, spouses and social bonds. It ties them geographically and in terms of activities.

Our qualitative analysis revealed a huge inequality concerning the usage of the public space. The measurements of people using the square indicate that men on the square are twice as much than women during day time, while in the evening the gap is even more exacerbated in favor of male users.



The conducted interviews validated the aforementioned conclusion, while underlining its potential causes. We posed four main questions to the area residents:

- How often do you visit Rinkeby torget?
- Do you feel safe when being at the square?
- Do you perceive Rinkeby square as a male dominant space?
- What potential improvements would you suggest?

People answered as follows:

"I meet my friends in Kista. The entertainment options in Rinkeby are limited, thus I do not prefer this place for going out. I think that male presence is dominant in the square, especially at the corners of the square where men hang out the most. I feel observed and uneasy when passing by and I avoid being on the square. I would like to have more places where I can hang out, like a cafe."

- Female, 21 years old

"I do not come to the square often. When I have to, I always pass by quickly. There are groups of men everywhere and they always stare at women and calling them names. I am scared to walk here in the evenings and I think the situation is getting worse. There is no respect for women. I would like the square to be suitable for women and children, a place where everybody can meet."

- Female, 26 years old

"I hang out a lot at Rinkeby square. This is where I meet my friends the most. I would say that there are more men than women on the square, although I do not think it is a dangerous place. The way media are portraying it creates fear to people. I would like to have more trees or a park here."

- Male, 28 years old

"I pass by the square every day to catch the tunnelbana. I believe that men hang out the most on the square and women avoid it. Personally, I do not mind walking there but if I was younger maybe I would avoid it too. I think the square needs more lighting and more options for women to sit without feeling observed."

- Female, 54 years old

“I come to the square almost every day to shop or meet someone. I always see more men than women on the square and the cafe. I do not think that this place is dangerous but it is maybe uncomfortable for a woman. I do not allow my daughter to come to the square alone. Too many men hang out here. It will be good to have places that only women can go.”

- Male, 57 years old

Finally, the map, where we asked people to pinpoint most and least safe places, indicated a concentration of the latter in certain areas, suggesting the possible intervention points. More specifically, the area outside the metro exit was the place where they felt mostly uncomfortable due to male groups that were standing there and were staring at them. The parking lot, right outside of the square was perceived as the most unsafe place.

The results of the analysis of our findings can be summarized in the following key points:

- Male predominance is apparent in Rinkeby square.
- Women feel insecure and uncomfortable due to judgmental male gaze and verbal attacks.
- Older women often feel less bothered by the male dominance, while younger women tend to avoid the area.
- Rinkeby torg does not constitute an attraction point for women, neither does it provide any opportunity for entertainment.

- Men may underestimate the situation, as they experience no problem being on the square. Nevertheless, when it comes to their own female relatives they tend to be more protective or even submissive.
- Media plays a huge role in the perception of the place and therefore, the experienced fear of crime.

CONCLUSIONS – SUGGESTIONS

Rinkeby square is a male dominated space, where women feel uncomfortable. Also from the crime reports, we can conclude that is less safe than the rest of the city. Although in planning contexts, safety is often discussed from a feministic point of view and women's fear of crime in public spaces is being taken more seriously in Sweden (Sandberg and Rönnblom, 2015), there are a lot that could be done in problematic areas in order to make women feel and be safer.

CPTED strategies would help to elevate the safety feeling in the square:

1. Natural Surveillance: Improve the visibility in the areas right outside the square, where the parking lots are.

2. Natural Access Control: Improve the entrances of the square as well as the areas right outside of the square.

3. Maintenance: Probably the most important aspect of improving the safety feeling in the area. There are many signs of neglect in the buildings and the public space.

It is obvious that the safety issue in Rinkeby and other Stockholm areas is an expression of more complicated social issues, that they should be addressed in a national level. The feminist approach in Rinkeby helps women feel empowered and also helps to provide a sense of community and a sense of place. There are already some initiatives that take action, but they should be reinforced, so their evolvement with the community to become permanent.

Finally, a platform like *safecity.in* could help with crime prevention. Reporting crimes could help with taking action against it. For example creating events that could inform people about the law against sexual harassment in Sweden as well as painting murals to remind men, especially, that they could make women feel uncomfortable. In order to create safe places men and women have to come together.

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Crime prevention in urban parks: A case of Humlegården

Introduction

Sweden is considered to be one of the world's safest countries, with relatively low crime rate even when compared with other developed countries. According to the annual official crime survey, in 2016, 81% of swedes felt safe to walk outside their house late at night.
Stockholm city center have several hot spots where higher crimes rates are in place. Those areas are usually associated with leisure activities, bars, clubs and restaurants with the vast majority of crimes are assault incidents. From this data, it is easy to conclude that crime in Stockholm is strongly connected to alcohol consumption and night life culture in the city's central districts. (Brå report 2017)

Urban parks are often difficult to police. Compared with streets and buildings, their boundaries are complex and ill-defined. During night time, when visibility and natural surveillance in urban parks is relatively low, they become an attractive place for criminals from different types, and restrain citizens who feel unsafe in such environment. Studies conducted on this topic clearly demonstrates that many neighborhood park environs play the role of crime generators. Such researches also point out characteristics of parks and their environs associated with higher crime. But those two findings do not tell the whole story. Some studies found that crime is not distributed evenly across parks within the urban landscape. Some park environs have many crimes while others have few or none. Thus, while increased crime is generally associated with the presence of neighborhood parks, the relationship between parks and crime is not uniform across places. (Groff and McCord, 2011)

Urban parks are an integral part of the city providing a space for rest and refuge. As a space which might attract crime, CPTED principles are implemented in the structure and design of the park, sometime to the extent where the qualities of the park are lost.
We wish to explore good usage of those principles to show that such landscaping can still keep park as a pleasant space for the urban dwellers, where they feel safe and relaxed.

Aim and objectives

Aim: To examine a successful case of CPTED in an urban park in Stockholm and discuss the design elements which make it relatively safe.

Objectives:

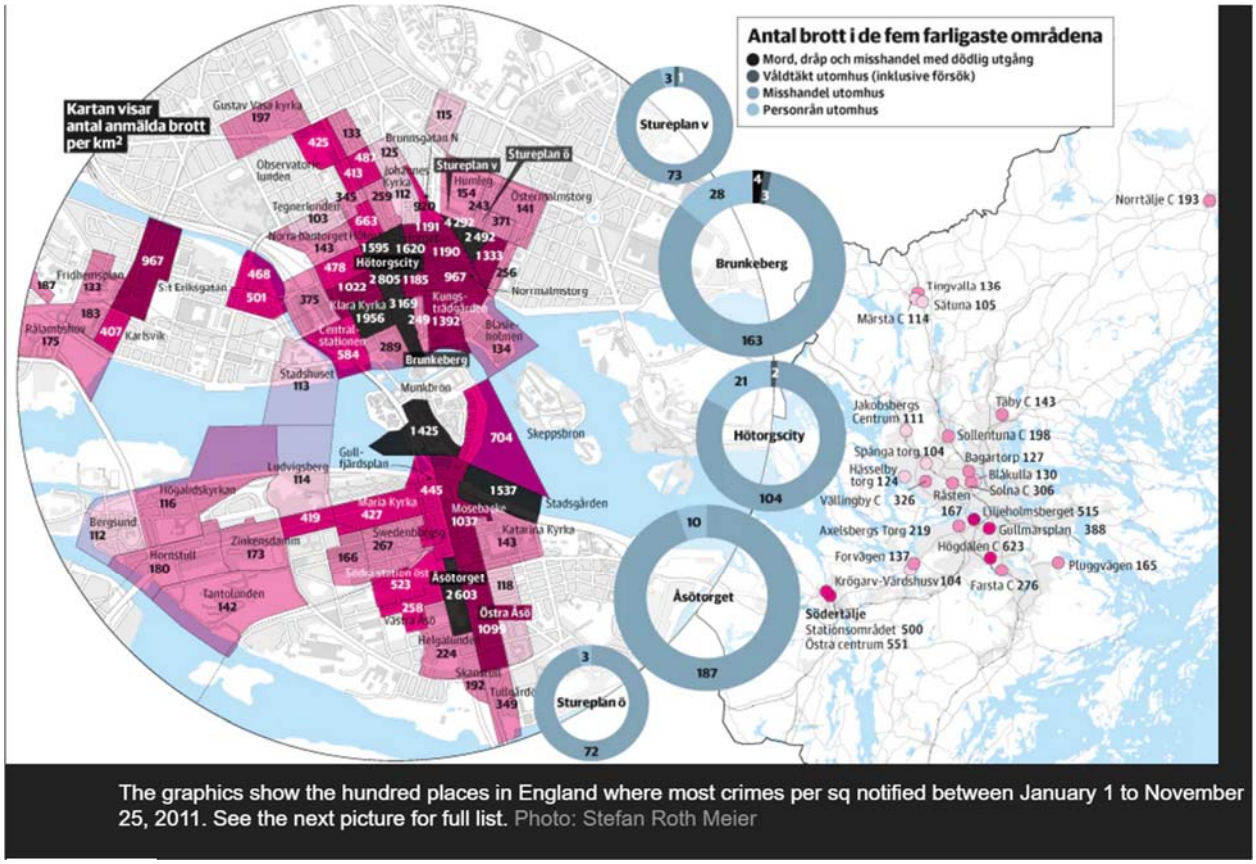
- To assess park usages during light and darkness conditions
- Examine different design elements and their contribution to sense of safety
- To investigate if there any weak spots in the design of the park and offer potential solutions
- Use CPTED as the base principles of our inspection and show their correlation with the park's design and structure.

Theoretical background

Our study case will focus on Humlegården, one of Stockholm's biggest urban parks within the city center. The park, located next to Sturepan in Östermalm, was established already in the 16th century, and is completely open to the public since 1869. It is a popular recreational area for locals, hosting a small soccer ground, skateboard ramp, children's playground and lawns.

Stureplan, a busy commercial district which lays on the southern border of the park, is one of Stockholm's most well-known shopping and nightlife areas, attracting visitors from all over the city as well as tourist from around the world.
The square is perceived as quite exclusive with many luxurious boutiques, shopping malls, restaurants, bars and clubs, making it one of the busiest sections of the city during weekends.

Stureplan is also Stockholm's worst hotspot when it comes to crime with about 7000 cases a year (according to police reports from 2011). (see image 1.1 and 1.2)



The graphics show the hundred places in England where most crimes per sq notified between January 1 to November 25, 2011. See the next picture for full list. Photo: Stefan Roth Meier

Image 1.1

For comparison, it is about twice as much as the next on the list – Brunkeberg, Stockholm's main transport intersection and the center of the CBD. (see image 1.2)

Topp 100-lista: Här begås flest brott per kvadratkilometer

1	Stureplan V	4292	26	Södertälje östra C	551	51	Västra Åsö	258	76	Tingvalla	136
2	Brunkeberg	3169	27	Södra station öst	523	52	Dramatiska teatern	256	77	Blasieholmen	134
3	Hötorgscity	2805	28	Liljeholmsberget	515	53	Gallerian	249	78	Betlehemskyrkan	133
4	Åsötorget	2603	29	Kungsbroplan	501	54	Humlegården Ö	243	79	Fridhemsplan	133
5	Stureplan Ö	2492	30	Södertälje station	500	55	Helgalunden	224	80	Blåkulla	130
6	Klara Kyrka	1956	31	Sjökatten	487	56	Axelsbergs torg	219	81	Bagartorp	127
7	Oxtorget	1620	32	Oscarsteatern	478	57	Sollentuna centrum	198	82	Skärholmens centrum	126
8	Hötorget	1595	33	Tekniska Nämndhuset	468	58	Gustav Vasa kyrka	197	83	Elverket	125
9	Stadsgården	1537	34	Gullfjärdsplan	445	59	Norrtälje centrum	193	84	Hässelby torg	124
10	Munkbron	1425	35	Maria kyrka	427	60	Skanstull	192	85	Bjurholmsplan	118
11	Kungsträdgården	1392	36	Observatorielunden	425	61	Lindhagensplan	187	86	Högalidskyrkan	116
12	Östermalmshallen	1333	37	Bysistäppan	419	62	Hemmet	183	87	Danderydsplan V	115
13	Brunnsgatan S	1191	38	Saltmätargatan	413	63	Hornstull	180	88	Märsta centrum	114
14	Norrlandsgatan	1190	39	Karlsvik	407	64	Rålambshov	175	89	Ludvigsberg	114
15	Sergels torg	1185	40	Gullmarsplan	388	65	Zinkensdamm	173	90	Stadshuset	113
16	Östra Åsö	1099	41	Centralstationen N	375	66	Råsten	167	91	Johannes kyrka	112
17	Mosebacke	1037	42	Skvalberget	371	67	Södra Station Väst	166	92	Bergsund	112
18	Centralposten	1022	43	Tullgården	349	68	Pluggvägen	165	93	Jakobsbergs centrum	111
19	S:t Eriksgatan	967	44	Tandläkarhögskolan	345	69	Humlegården V	154	94	Sätuna	105
20	Norrmalmstorg	967	45	Vällingby centrum	326	70	Norra Bantorget Ö	143	95	Krögarv-Värdshusv	104
21	Brunnsgatan N	920	46	Solna centrum	306	71	Täby centrum	143	96	Spånga torg	104
22	Skeppsbron	704	47	Tegelbacken	289	72	Katarina Kyrka	143	97	Tegnerlunden	103
23	Adolf Fredriks Kyrka	663	48	Farsta centrum	276	73	Tantolunden	142	98	Kungsklippan	101
24	Högdalens centrum	623	49	Swedenborgsgatan	267	74	Östermalmstorg	141	99	Värdsholmen	101
25	Centralstationen S	584	50	Skandiahuset	259	75	Forvägen	137	100	Lilla Alby	101

crimes in the statistics: murder, manslaughter, assault with a fatal outcome, rape outdoors (including attempts), beatings outdoors, muggings outdoors. Photo: Stefan Roth Meier

Image 1.2

The high rate of crime is made mainly from incidents characterized as assault, and police assume it is due to the abundance of late night venues who sell alcohol in the area. (see image 1.3)

Misshandel

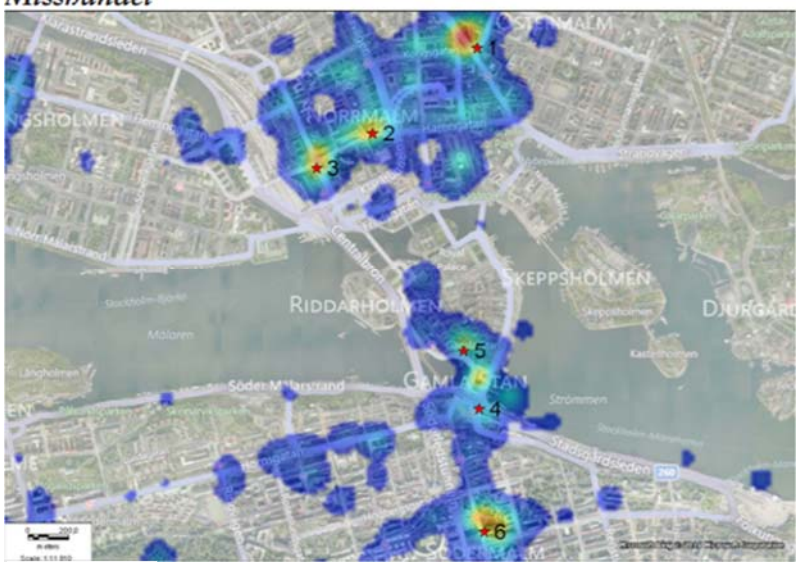


Image 1.3

Despite those findings and the findings of researches examine crime in urban parks, when we look at Stockholm's parks crime data from 2015, Humlegården appeared to be one of the city's safest parks, with less than 100 incidents a year! (See image 1.4)

Image 1.4

In our work, we would like to explain why, in contradiction to different researches and studies on crime in urban parks and in proximity to recreational late night venues, Humlegården remains a safe place.

From the four year study data reports in 2007, Humlegården sited the following: 20 pick pocketing; 20 assaults and violence; 16 drug and narcotics; 12 rape or molestation, 25 muggings.

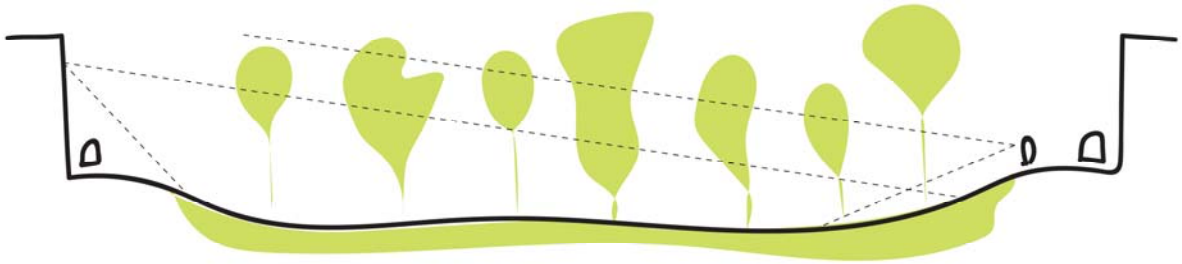
This presents Humlegården as relatively safe park in regards to crime and safety compared to other parks within the city. Unusually high however is the incident of rape at 12, which places it 3rd highest within the subgroup with the highest being Royal Garden with 44 incidents and Tantluden with 32 incidents.

We will explore the park through the methods of CPTED, breaking into each element and examine its strengths and weaknesses in the context of its surroundings. We will also sample behavioral elements, activities and natural surveillance in the park itself during day time and night time.

Results

Natural surveillance

The park has many activities during day time which brings an abundance of natural surveillance. Among the activities there is a kindergarten, playground, the royal library of Stockholm, soccer field, and in the summertime an outdoors cafe and bar.
However, during night time, those venues are closed and only few visiting or crossing the park. During those hours, the area of Stureplan is most active, but from our observations this activity is not “leaking” to the park.
The northern part of the area is elevated, allowing a view of the whole park until the library in the southern part. Additionally, the topography of the entire park forms a bowl shape, creating maximum visibility through the park by pedestrians walking along the periphery. This may contribute to elevated levels of natural surveillance in terms of “seeing and being seen” and be a mitigating factor in criminal activity within the park.



Territorial reinforcement

Humlegården is well defined from all sides by roads and pavements, making it very distinctive in the urban landscape. Once getting into the park area, the recreational areas are surrounded by low railing which clarify their purpose and define them from walking paths. In the western edge of the park, the border is defined by bushes and some low trees which “close” the space a bit. In the south of the park lays the royal library with spaces for visitors to enjoy the sun and in the north, lays a big playground and a kindergarten. All of these making the place a great example of a successful public space with access to all. The presence of the kindergarten itself may also influence territorial reinforcement by adding a sense of increased vigilance for pedestrians and families using the park.

The major flows within the park are extremely exposed and visible to multiple vantage points. Additionally, in the evening major thoroughfares have been illuminated via artificial lighting. A closer analysis of the lighting layout suggests that the major routes have been provided with artificial illumination and reinforce primary pathways through the park, limiting alternative routes and potentially hazardous shortcutting.

Access control

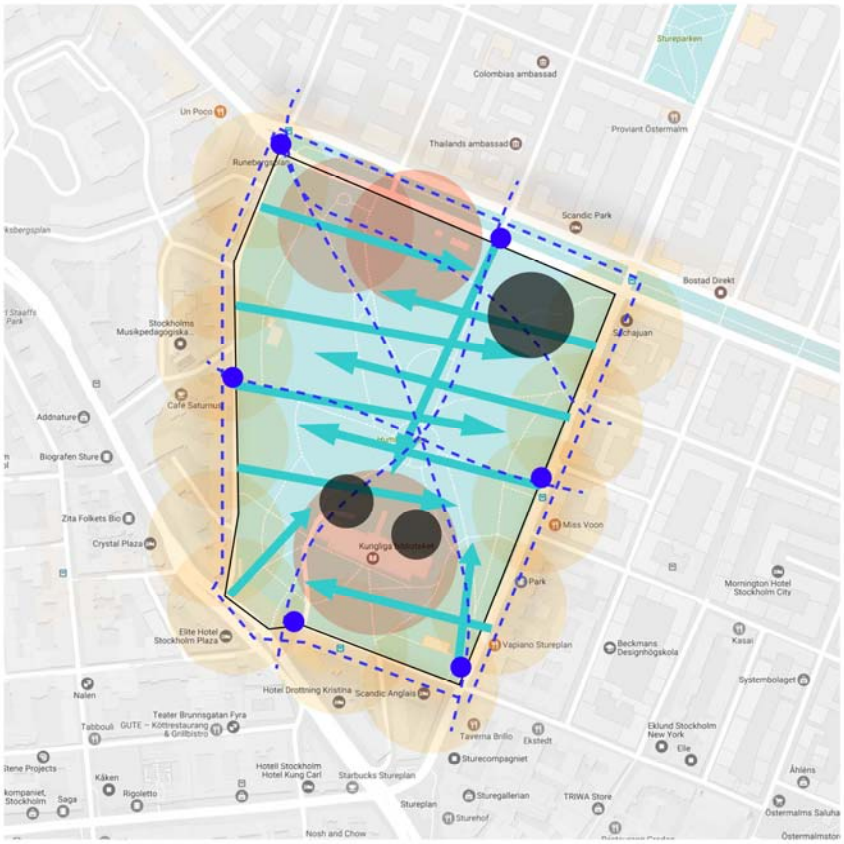
Many paths run through the park, making it possible to cross it from different directions. However, some main routes are defining the flows of movement. No gates are positioned in any entrance making the park highly accessible and inclusive. While there are no large gates, it is still understood the clear and identifiable points of entry into the park which is seen to comply with CPTED principles. Additionally very low level fences have been deployed along the edge of parks to control flows and pathways.
There is no sign for CCTV or presence of guards, which lead to the assumption that the space perceived safe by locals.
lighting during the dark hours is spread across the whole area, mostly on walking paths but not just, preventing any blind spots or confusion regarding the recommended routes.

Maintenance

The area is well maintained, clean and trimmed throughout the year. Most of the trees in the garden are old and tall with the leaves covering only the tree tops, providing visibility for long distance. Many sculptures decorating the garden, surrounded with attractive landscaping. Some public furniture seems a bit old and occasionally is marked with graffiti (not a pretty one)

We have spotted two weak spots in Humlegården which are not fully lighted and are not visible from the main park area. These are two underground access points for vehicles which are sunk into the ground, creating blind spots which can be used for dealing with narcotics or assault.

Spatial Analysis of of Humlegården: A – Access Control, B – Natural Surveillance, C – Territoriality, D – Zones of Potential Threat



A

B

C

D

Discussion

The result of our survey show that many thoughts have been put into the design of Humlegården, and to make it as safe as possible despite the context of its surroundings. There are almost no hidden spots in the entire park, and its location within the city center makes it difficult for criminals to avoid exposure.

The main element which makes natural surveillance easy is the landscaping of the park and the fact that the green area is made mostly out of lawns and high trees with the entire park in a bowl formation with maximum visibility within. Such landscaping is highly designed and not providing a sense of natural green. Perhaps for the context of the park this is a wise choice, but many will argue that an urban refuge in the midst of the concrete jungle should provide a natural relaxing environment, not as artificial as Humlegården.

Conclusions

Humlegården contains many desirable features within CPTED literature for parks that could account for its high levels of safety despite being directly adjacent to a “problem” zone in Stureplan. One might imagine due to the high level of assault and crime in Stureplan there may be some spill-over crime into Humlegården, including incidents of rape, theft, or assault. The data suggests this does not occur. Several key features in line with CPTED principles may account for this level of safety. Principally, the high level of natural surveillance, due to bowl shape topography, eyes on the street from flanking buildings; territorial reinforcement; clear access control points and legible flow zones; high level of maintenance.

Suggestions

All together the design of Humlegården is working well, however it will be interesting to investigate a more natural design of the park without harming the visibility and safety of the current design. Much of the Scandinavian natural flora and fauna can fit those standards and provide not just beauty but also some educational value for the park’s visitors.

Additionally, while there is currently low levels of crime within the park, we noticed despite being illuminated at night and containing many features in line with CPTED safety there is still very little pedestrian flow. Were people avoiding the park use at night, why? While the data suggests that the park is very safe, it was not determined if those using the park perceived it to be safe and during what hours. Further research into perception may reveal discrepancies between actual and perceived crime of this park.

Furthermore, a certain upgrade to the low railings and public furniture is needed with fresh paint and perhaps a more interesting and engaging design. Such an upgrade can add more social capital to the park, and if designed for different purposes, can also add activity during dark hours.

We would suggest some structural changes to the weak spots we recognized, adding lighting, and perhaps lowering the edges of the entrance so the walls are not so distinctive.
This will expose those weak spots to natural surveillance and make them less threatening.

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Images source

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The role of neighborhood parks as crime generators

Haninge kommun

ENTRÉ HANINGE STAD

Ulrica Berglöf Lilja

Safety in the making

KTH 2017

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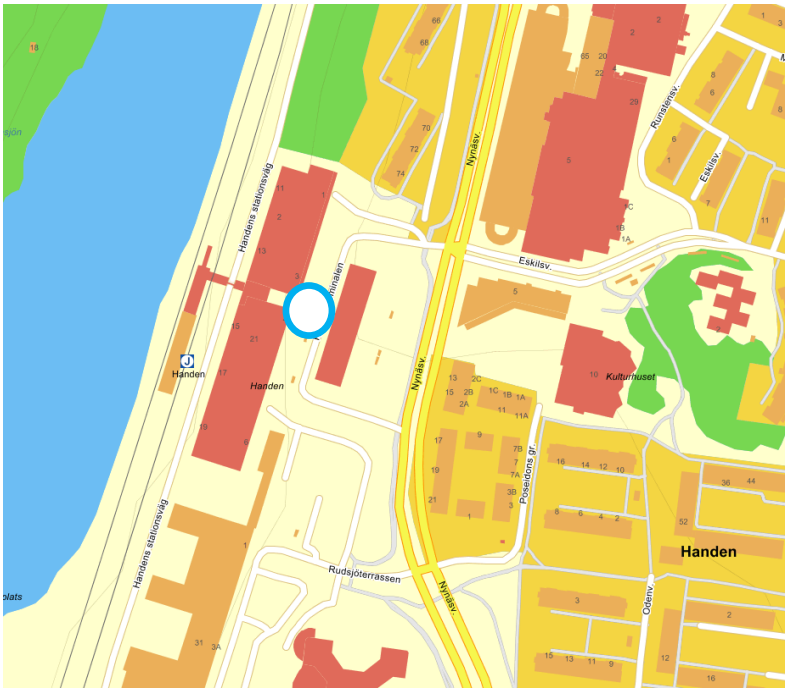
1.Introduction

The area chosen for this report is an area in the municipality of Haninge considered as rather unsafe among several inhabitants. The area is the north entrance of the commuter train and also a nod for bus traffic in Haninge and neighbouring municipalities. Several hundred passes through this area every day to and from work, visiting friends and family or travelling further in the region. Since some years, you arrive to a construction site when arriving to Handen in Haninge. 600 new apartments will be built, shops and restaurants.

How the locations look like today will change throughout the process and will not be any wear similar when finished as planned in 2023. Hence, the appearance of the area is today a construction site with fences, no signs of directions where to locate oneself, graffiti, poor lightning, several temporary solutions and mainly just an area of concrete welcoming you to Haninge. To focus on this area is of importance as the perceived safety is lacking and to see what one can do to improve this throughout cooperation. Part of the project is to address architects to come up with innovatory actions and measures in the interface between temporary architecture and situational prevention. To change the perception of this area will be a project running for two years, initiated by Haninge municipality and mainly funded by Brottsförebyggande Rådet (BRÅ). Taking part in this project are several actors such as building companies, housing companies, the police, public transport and representatives from several departments of the municipality.



View of the construction site from the right

The entrance to the commuter train

The tunnel leading to Poseidon’s Square and the local shopping mall

View to the right at the entrance to the commuter train

View to the right at the entrance to the commuter train

An overview of how it will look like once ready and the white circle marks the chosen location for the project

2. Aim and objectives

Aim:

· To create a location who are perceived as available, safe and welcoming regardless of gender, age or disabilities.

· To create a location which, throughout the construction period, are welcoming, interesting and inviting hence the work taking place in the area.

Objectives:

· To initiate cooperation with several actors within the municipality and external actors such as construction companies, housing- and public transport companies to see what we all can do together for the chosen location.

3. Theoretical background

Crime Prevention Through Environmental Design

For this report, the chosen theoretical background is the method of Crime Prevention Through Environmental Design (CPTED) as this is a theoretical framework applicable on the work to be done in Handen and the chosen location. CPTED is based on the same theories as many other within the field of situational prevention, that of a specific location or situation can affect a person to commit a crime. By constructing in a smart way, preferably from the very beginning of planning or by changing the physical surroundings through different measures, one can obstruct for a potential crime offender to prevent a crime and in such ways prevent crime overall in the area (Armitage. R, 2017; www.bra.se, 2017).

CPTED is constructed on five principles and they are as follow;

1. Limiting through movement

This principle focuses on less access and escape routes as well as fewer opportunities to access the house An example of this would be to use codes to access a house (Armitage. R, 2017)

2. Maximising surveillance

An area, location or house is under surveillance in different ways to improve safety and to obstruct for individuals who has got the intention to commit crime. Surveillance can be active rooms in a building, facing a parking lot or improvements of street lightning and crop trees and bushes (www.bra.se, 2017). Several things can be done, both in buildings and in the environment but surveillance can also be based on guards, police patrols or CCTV.

3. Physical security

Target hardening such as locks and fences, steel barriers in front of windows making it harder to get in for a burglar and making the feeling of security stronger for the individual (Armitage. R, 2017)

4. Defensible space

Use of design to create symbolic barriers (Armitage. R, 2017). Territoriality can be improved by both physical and symbolic barriers such as well marked entrances which makes a difference between private, public and semi-public surroundings but also to invite to social gatherings. By keeping the area clean from litter, graffiti and other indications on social disturbance, signals are sent out that this is an area where there are individuals who takes responsibility of the area and with that, social control is present, which can lead to less attempts of crime and other unwanted activities (www.bra.se; 2017).

5. Management and Maintenance

To maintain ones house or area gives the impression that people care and would challenge the observer if needed (Armitage. R,(2017).

Application of CPTED in the project of Entré Haninge Stad

To apply CPTED in the project of Entré Haninge Stad, each principle will in this paragraph be translated into what Haninge municipality and the external actors would address the architects to take into considerations when planning innovatory actions and measures in the interface between temporary architecture and situational prevention.

1. Limiting through movement
   When planning the actions of the location, since it is a part of a bigger area mainly consisting of a big construction site during some years ahead, the access to the construction area needs to be safe and only for intended. As an example, access to the construction site can only be done through entrances with surveillance.

2. Maximising surveillance
   To create a location where people want to meet, greet friends arriving to Haninge so more people uses the location and with that comes social control. To enable shop owners around the location to keep open longer if wanted. Trees and flowers are appreciated elements in the environment, but cannot serve as something to hide behind.

3. Physical security
   Physical security around and on the location would not be recommended to focus on fences or steel barriers as the municipality and the external actors are aiming to turn the location into a welcoming and accessible area for everybody. Hence for the shop owners some designed initiatives for physical security would be welcome.

4. Defensible space
   As this is a public area and the first impression of Haninge when arriving by commuter train, much focus needs to be put on reducing possibilities to do graffiti, to have several litter bins easy accessible and to put up signs so visitors can orientate in the municipality.

5. Management and Maintenance
   To work with the ambition that this location is a place where all the involved actors care and want to contribute with their own ideas. With several shops around the location and people passing by, a tidy and well looked after location will encourage more to jointly look after the location.

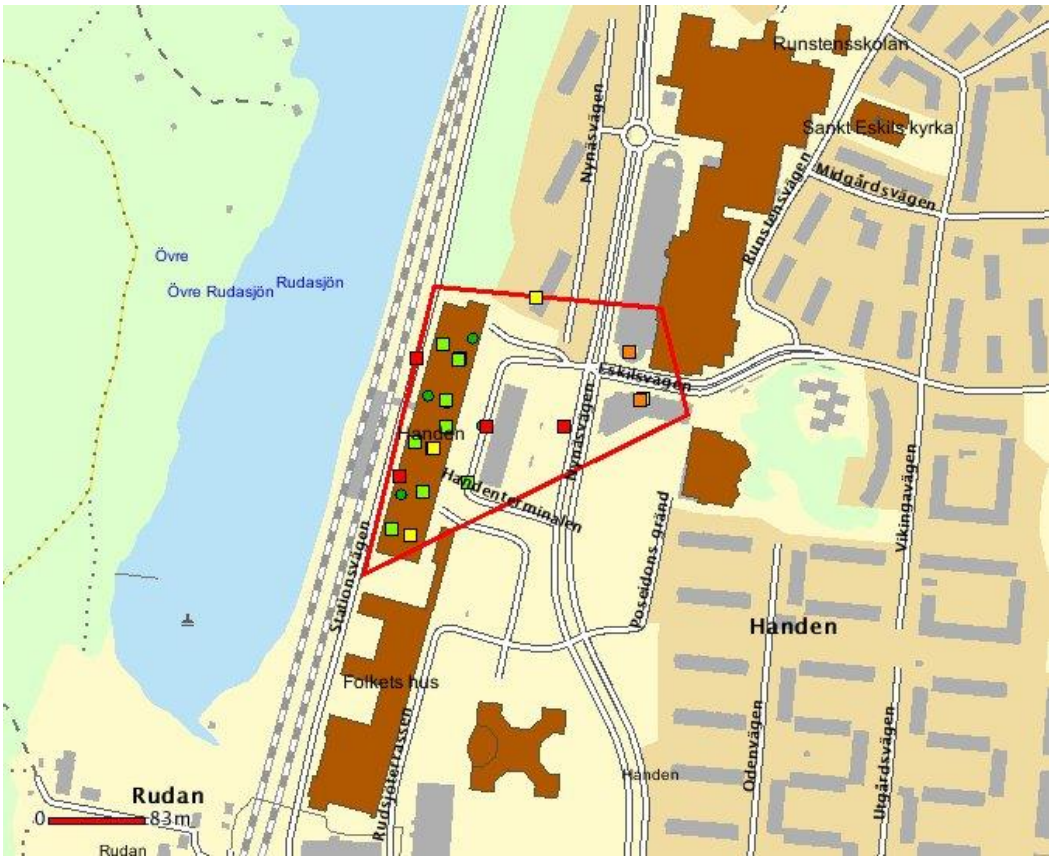
This project is running for two years with the intention to make the location more welcoming, attractive and safe. There are scarcely any frames of what can be done as this is seen as a new approach of what can be done while building a new area of the city.

4. Data & methods

Questionnaire regarding perceived safety

Every two years the municipality send out a questionnaire regarding perceived safety and fear of crime to 3000 inhabitants with the ambition of picturing the perceived safety in nine areas of the municipality, to people age 16 to 85. The questionnaire covers questions regarding fear of crime, risk of crime, the feeling of perceived safety and how the police acts when it comes to above mentioned problems. The questionnaire is based on an index with six levels where six is defined as 'Severly wrong, requires action now' to one which is defined as 'No problems recorded'. In this specific area, Handen, one can see indications of a general perception of perceived unsafety, both among the elderly and the younger, hence one can see a difference in gender. Several are fearing to be attacked, beaten and a victim of crime. In the area, one can see people being under the influence of both drugs and/or alcohol, and their appearance can also send out a feeling of being unsafe in the area among people passing through. Among women in the area, a majority are fearing to be sexually harassed and are avoiding the area late nights, which causes freedom of movement. Both respondents aged 65 and above as well as respondents between 16 and 19, are all sensing a fear of crime, abstract as well as concrete. Among the male respondents, speeding with mopeds and the risk of women being sexually assaulted are the main causes of feeling unsafe in this particular area (Scandinfo, 2016).

Statistics from the Police



The picture above shows reported crimes to the Police in this specific area (within the red lines) during 2016, which is a total of 233 reported crimes during a year(Police, 2017).

Perceived safety in Haninge from the perspective of the youths

During summer 2015, 450 youths between 13-24, got interviewed on different locations in Haninge municipality regarding perceived safety. Handen was an area that came up several times and so did the area where this project is taken place, where the majority felt unsafe, which is also the area where several passes by throughout the day as this is a major hub of public transport. Several mentioned that if the area was populated, one felt safer compared to areas where no one was about. The importance of the work of planners was brought up several times, to plan the city with open spaces and well-lit walking paths which would encourage walking more. Whether the streets should be more populated with the Police or security guards were not a joint opinion, as some felt more unsafe among the Police and security guards and preferred local networks of adults and some felt the other way around. To arrive to a littered and/or broken location, this could add to the feeling of being scared and feeling unsafe compared to a neat and tidy location with no graffiti and litter bins as an example.

To be able to make this location safe, welcoming and available during the years of construction work, networking is of big importance. The first meeting with representatives from the construction companies, housing companies and the municipality has taken place where the focus was on what do

we want to do with this area in the meanwhile as this is the entrance to Handen and Haninge. What we already know from this area through several questionnaires and interviews was presented, to give the whole perspective and to lead the work. Many ideas were brought up and each participant took the responsibility to continuing brainstorming of what one could do from their own perspective.

As this is an ongoing project, the outcome of the first result was not of a concrete character but more of an indication what need to be done and what can each participant add to the location (Haninge municipality, 2015).

5. Results

Based on data through questionnaires and interviews together with networking with several departments of the municipality as well as with external actors, it is a strong indicator that actions need to be taken. People are feeling unsafe in the area and some are avoiding using public transport, in order to avoid Handen, mainly in the evenings. No one has taken the lead of working on improvements, no one seems to take main responsibility and this has led to a location in the center of Haninge that looks like an abandoned word of concrete. After the first workshop with representatives from the municipality, building companies and housing companies, several ideas was presented of what each one can do but also several challenges the project are facing.

Some of the main challenges were how do we make the public space safe, how do we create venues for all ages which also adds social control, how do the project tackle the school kids attending schools located in the nearby area who uses the location as a schoolyard, if building something, how to avoid building nooks which reduces long term lines and how do the city planners look upon this. Pedestrian should be able to use the location around the clock and throughout the years the location will change as the construction site will change. This needs to be taken into consideration and to be ready to follow the changes and help with and improve orientability. The project needs to create welcoming environments in short term as spring lay ahead and the data gathered indicates something needs to be done now.

What all participants could agree upon was that everybody need to see the project as a joint cooperation and to think both short and long term. Hence problems arouse regarding budgets and who takes responsibility of what, but all are encouraged to ‘think outside the box’.

The main funder of this project is Brottsförebyggande Rådet (BRÅ) and when the project was presented, the focus on doing improvements to improve the perceived safety and availability throughout the years of construction work, was a new way of tackling situational prevention. The project was granted money as one can see many new situations such as this one as Stockholm is a city where much is being built or re-done. An ambition of the project is to give a new framework for municipalities facing the same situation as Haninge has done. One way of doing this is to addresse the architects to take considerations when planning innovatory actions and measures in the interface between temporary architecture and situational prevention.

6. Discussion of the results

As this is an ongoing project and a first workshop has just been performed, results are difficult to discuss at the time. The workshop was held to gather all participants to create a joint picture of the project and to brainstorm what the project could do for the chosen location. This is also this reports limitations, no results are to be presented as the project has just been initiated and is running for two years. Hence, changes are due to take place in the very near future as spring and summer is coming and with that, more people tend to be out and about.

7. Conclusion

A project with very big ambitions both when it comes to situational prevention and cooperation between several actors, the municipality as well as many private actors as well as the police. All see the need of actions taken but what actions should be taken needs to be sorted out to improve the perception among the inhabitants of Haninge. Limitations of the project are many as this is a new perspective to work for Haninge and to map who is responsible of what. Trying to get all involved participants to see outside their own box and see what we all are gaining in working together is a challenge for the project. Much more work will be done throughout the coming year and a half as this report only describes the very first steps of the project and due to shortage of time, not the whole extent of the project has been described as there are several parts playing a role in this work.

8. Suggestions

As this project partly was granted funding based on new perspectives on how to work with situational prevention while the chosen area is a construction site and will remain so for years to come, the project aims to help other municipalities, construction companies, housing companies and others to see what they can do if facing the same as Haninge is.

As houses are being built at the moment on the location, the first residents are to move in during 2018 and to make them feel safe, we all need to see this project and the cooperation as highly valuable to make them feel safe and welcomed to our municipality.

Applying Crime Prevention Through Environmental Design (CPTED) mainly when most planning has already been done, gives the assigned architect a challenge since the requirements for the job is to apply the five principles of CPTED to their work. This can also been as a lesson to be learned as CPTED needs to be applied in the very beginning of the process of planning a new area.

9. References

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