



CHALMERS
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Contractors role in creating safe urban areas

A case study of Skanska's safety efforts in Kvibergs Ängar

Master's thesis in Design and Construction Project Management

NEVENA COTRA & DIANA KAREM SHWAN

MASTER'S THESIS 2020

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Gothenburg, Sweden 2020

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Abstract

The City of Gothenburg is facing big challenges in terms of urban development as it is growing rapidly. This creates pressure on contractors to build more socially sustainable in order to help produce a shift toward a more inclusive, connected and less fragmented city. A district which has been undergoing extensive urban development in recent years is Kviberg. Kviberg has for a long time been characterized as an unattractive district due to its reputation of being unsafe. Skanska is one of several actors who have been involved in trying to develop Kviberg into a more attractive and safe residential district with their pilot project called Kvibergs Ängar where a particular focus has been placed on increasing neighbourhood safety.

The aim of this master thesis is to investigate how contractors can contribute to social sustainability in urban development by creating safe urban areas. By studying Skanska's safety efforts in Kvibergs Ängar, an analysis has been made on what the opportunities and challenges are for contractors when trying to create safer urban areas. An abductive research methodology was applied, starting with a case study of Skanska's safety efforts in Kvibergs Ängar. This was followed by a literature review, observations, interviews and a questionnaire to form an understanding of how safety is perceived in Kviberg.

In conclusion, this study argues that "sense of community" and "feeling of safety in the built environment" are two fundamental elements of social sustainability. In the context of Kviberg, results show that place qualities in the built environment are important for how people perceive and use space and that they can either increase or decrease the feeling of safety. By creating urban areas with certain place qualities, contractors can contribute to social sustainability. In the context of Kvibergs Ängar, contractors could only do so much, as the responsibility to create inclusive and safe urban areas does not lie entirely on contractors. Further, a prerequisite for creating safe urban areas is local collaboration, such as BID-inspired collaborations. By collaborating locally, different actors can mutually decide what they want to achieve and how to achieve it, in a particular area. The findings also show that detailed development plans can be a restricting factor for contractors as they do not allow flexibility to meet changing needs. Lastly, the findings show that project developers, in general, weigh different interest against each other. As a consequence, safety is sometimes overshadowed by other interests.

Keywords: Social sustainability, Safety, Kvibergs Ängar, Skanska, Business Improvement District (BID)

Byggaktörers roll i att skapa trygga stadsmiljöer
En fallstudie om Skanskas trygghetssatsningar i Kvibergs Ängar
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Sammanfattning

Göteborgs stad står inför stora utmaningar när det gäller stadsutveckling eftersom staden växer snabbt. Det här sätter press på byggaktörer att bygga mer socialt hållbart för att stadsutvecklingen ska vara integrerad och socialt hållbar. En stadsdel som har genomgått en omfattande stadsutveckling de senaste åren är Kviberg. Kviberg har under lång tid haft ett rykte av att vara oattraktivt och otryggt att vistas i. Skanska är en av flera aktörer som har varit med och utvecklat Kviberg till en mer attraktiv och trygg stadsdel med sitt projekt Kvibergs Ängar där ett särskilt fokus har riktats på att bygga ett tryggt bostadskvarter.

Syftet med det här examensarbetet är att undersöka hur byggaktörer kan bidra till en socialt hållbar stadsutveckling genom att bygga trygga bostadsområden. Genom att studera Skanskas trygghetssatsningar i Kvibergs Ängar, har en analys gjorts av de potentiella utmaningar och möjligheter som byggaktörer möts av i arbetet med att skapa trygga trygga stadsdelar och bostadsområden. En abduktiv ansats har tillämpats, med utgångspunkt i en fallstudie av projektet Kvibergs Ängar och i form av en övergripande litteraturstudie, intervjuer, observationer samt en enkätundersökning för att fånga den lokala trygghetsbilden i Kviberg.

Resultaten i den här studien visar att "känslan av gemenskap" och "känslan av trygghet i den fysiska miljön" är två grundläggande förutsättningar för social hållbarhet. I Kviberg visar resultaten att utformningen av den byggda miljön är viktig för hur människor uppfattar och använder den fysiska miljön och att den antingen bidrar till en ökad eller minskad känsla av trygghet. Genom att skapa stadsdelar med vissa platsegenskaper kan byggaktörer bidra till social hållbarhet. I Kvibergs Ängar visar resultaten att det finns en gräns för vad byggaktörer kan göra vad gäller stadsutveckling eftersom ansvaret för att skapa inkluderande och trygga stadsdelar är delat mellan många aktörer. En förutsättning för att skapa trygga stadsdelar är lokalt samarbete, till exempel BID-inspirerade samarbeten. Genom att samarbeta lokalt, kan aktörer i samråd bestämma hur ett specifikt område ska utvecklas. Resultaten visar också att detaljplanen kan vara en begränsande faktor för byggaktörer eftersom den inte ger utrymme för flexibilitet. Slutligen visar resultaten att projektutvecklare väger olika intressen mot varandra vilket leder till att trygghet ibland överskuggas av andra intressen.

Nyckelord: Social hållbarhet, Trygghet, Kvibergs Ängar, Skanska, Business Improvement District (BID)

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Nevena Cotra & Diana Karem Shwan, Gothenburg, June 2020

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1

Introduction

This chapter presents the background that forms the basis of this study, followed by the purpose and aim, limitations, research question and the main contribution of this study.

1.1 Background

The City of Gothenburg is faced with big challenges relating to urban development. By 2035, the city is estimated to grow with 120 000 inhabitants, putting great pressure on space and housing (Göteborgs Stad, 2020d). To deal with these challenges, Gothenburg is growing through densification of the existing city core (Göteborgs Stad, 2019). In this context, making urban development socially sustainable is critical in order to manage urban growth. Social sustainability in an urban context means creating inclusive, safe and healthy communities, which are well-integrated into wider urban systems (United Nations, 2020).

Through densification, the City of Gothenburg is making use of previously under-exploited districts and spaces for additional housing instead (Göteborgs Stad, 2019). Areas that were once in the outskirts of the city are now becoming a part of the urban core of Gothenburg (Göteborgs Stad, 2019). However, some of these districts are associated with a variety of social and economic problems as a result of unemployment, segregation and criminality, among other things (Swedish National Police Board, 2017). This creates pressure on contractors to build more socially sustainable in order to help produce a shift toward a more inclusive, connected and less fragmented city. One way of achieving a more socially sustainable development is by creating inclusive and safe urban areas (Dempsey et al., 2009).

A district which has been undergoing extensive urban development in recent years is Kviberg. Although centrally located with good connections to public transport, Kviberg has for a long time been thought to be unattractive for urban development because of its reputation of being unsafe (Skanska, 2019). Today, however, several contractors are building in Kviberg with the aim of making it a more attractive and safe residential district.

Skanska is one of the contractors who has been involved in trying to develop Kviberg into a more attractive and safe residential district with their completed project Kvibergs Entré and now their latest project called Kvibergs Ängar. Skanska, which

is one of the largest Swedish construction companies, understands the importance of social value creation in urban development and construction. The construction sector has a great impact on the shape of cities and can thereby lead the way to a more socially sustainable urban development (Skanska, 2020e). Thus, together with other actors, safety efforts have been made in Kviberg Ängar through new construction.

Though it is important to take advantage of such a central location, development of Kviberg is not just about building houses. It is also about creating a safe urban environment for those who stay, reside and work there. So, how does one transform an unsafe area into a safer one? What are the challenges and opportunities to do so?

1.2 Purpose and Aim

The aim of this master thesis is to investigate how contractors can contribute to social sustainability in urban development by creating safe urban areas. By studying Skanska's safety efforts in their pilot project Kvibergs Ängar, an analysis will be made on what the challenges and opportunities are for contractors when trying to create safe urban areas.

1.3 Limitations

The term social sustainability is a variously defined term that generally refers to the social dimensions of sustainability. Two fundamental elements of social sustainability are 'sense of community' and 'feeling of safety in the built environment'. In this study, the focus will be on these two aspects of social sustainability where the term 'safety' refers to the Swedish term "trygghet".

It is important to note that safety can be distinguished into two different categories: safety and perceived safety. Safety refers to the actual risk of falling victim to crime and public disturbance whereas perceived safety refers to an individual's subjective experience of that risk.

1.4 Research Question

1. How can contractors contribute to social sustainability in urban development?
 - (a) What safety efforts have been made by contractors in Kvibergs Ängar?
 - (b) What are the outcomes of these safety efforts for residents?
 - (c) What are the challenges and opportunities for contractors to increase safety in urban areas?

1.5 Contribution

As future civil engineers, it is important to engage in questions related to sustainability, as the construction sector has a large impact on the development of the built environment. The social dimension is one aspect of sustainability which has previously not been paid attention to in construction.

Creating safe urban areas, as part of social sustainability, is an important aspect that has not been taking into consideration as much as it should when developing new urban areas, due to limited knowledge and experience amongst actors within the construction sector. The main contribution of this thesis is therefore that it identifies challenges and opportunities that contractors face when trying to create safe urban areas and work with social sustainability. This thesis also aims to encourage contractors, as well as other actors within the construction sector, to collaborate towards achieving a more socially sustainable urban development.

This master thesis has been conducted in a joint effort between the two authors of the thesis and the workload has been divided equally.

2

Methodology

In this chapter the methodology of the thesis is presented. To summarize this chapter briefly, the methodology used in this study in order to answer the set out research questions was an abductive reasoning with a mix-method approach based on semi-structured interviews combined with observations of the Kviberg area, as well as a questionnaire that was sent to residents in Kviberg.

2.1 Research approach

In this study, a systematic combining approach was used, which is grounded in an abductive reasoning. A systematic combining approach can be described as a nonlinear, path-dependent process of combining efforts with the ultimate goal of matching theory and reality (see figure 2.1). As a part of a combined approach, the theory is built from case studies and a frequent overlap of data analysis and data collection (Dubois and Gadde, 2002).

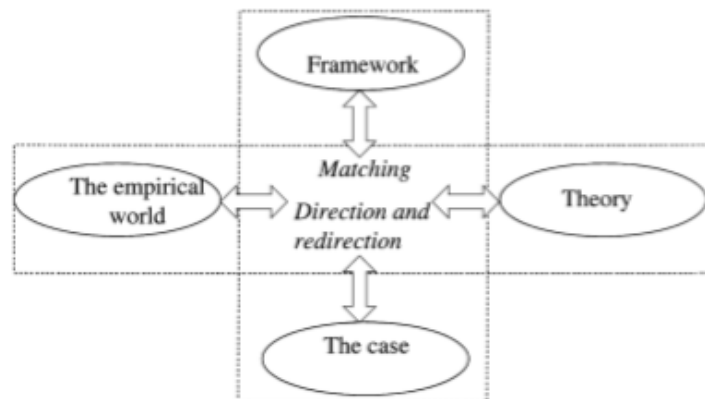


Figure 2.1: *Systematic combining (Dubois and Gadde, 2002).*

This thesis was based on the interest to conduct a study within social sustainability, with focus on urban safety. Followed by this was an overview of the empirical information as well as the existing theory within the subject. Apart from this, an analysis of Skanska's pilot project Kvibergs Ängar in Kviberg was conducted by using a mix-method approach. A mix-method approach refers to the use of both a qualitative and quantitative method (Dunning et al., 2008).

The difference between quantitative and qualitative research is in the way of viewing and measuring reality. With a qualitative research method, the focus lies on understanding people's perspectives and this could be by for example conducting interviews where the researcher is involved. In a quantitative research approach, the focus can be on measuring the occurrence of a phenomena. A quantitative method could for example be surveys, where a consensus or a "norm" is sought (Bell et al., 2018).

As the goal of the study is to document the case study, a mix-method approach was chosen. By using a mix-method approach it allows for a comparison as well as brings together both the methods which allows for a more detailed and comprehensive understanding of the data and the study (Dunning et al., 2008).

2.2 Literature review

A literature review was conducted early on in the study before executing the interviews, observations and the questionnaire. However, the literature review was an ongoing process throughout the study as new information arose during the interviews which helped with the process of finding relevant theories and empirical data connected to the study. With the help of supervisors, important literature was found that helped to review the safety efforts made in Kviberg as well as understand the concept of social sustainability and the complexity of the safety aspect connected to it.

Search engines that were mostly used, apart from literature that was provided by supervisors at Skanska and at Chalmers, were Google Scholar and the Chalmers library. However other sources were used as well that were provided by some of the interviewees, but these sources were used to a smaller extent. All material was critically reviewed before being used in order to assure its trustworthiness when using it to strengthen our statements.

In order to review the literature and identify its trustworthiness, a checklist was used. Some of the steps in the checklist include: making sure the references are up-to-date, noting what literature searching has been made and taking notes on what has been read. The checklist was a helpful guideline and was used throughout the literature review (Bell et al., 2018).

2.3 Case study

This case study was conducted for Skanska Nya Hem Sydväst, in Gothenburg, during the spring of 2020. The reason why this company was chosen for the case study is because they have shown a great amount of interest and commitment in developing their social sustainability work, especially as regards to urban safety. During a meeting with two representatives from the company, we expressed our interest in doing a study regarding social sustainability, with focus on the safety aspect. As a

result of this, Skanska's project Kvibergs Ängar was presented to us. The project Kvibergs Ängar is Skanska's so called 'pilot project' in terms of developing a new working process that ensures safe neighborhoods (Skanska, 2020b).

As this project is connected with two other neighborhoods, constructed by Peab and JM, a workshop with these contractors was initiated by Skanska in order to discuss and collaborate on different safety efforts. In order to receive an overall perspective of Kvibergs Ängar and the safety efforts that were made there, representatives from Peab and JM were interviewed, as well as other companies and organisations that were identified as relevant for the study. Together with Skanska, the subject of the thesis was decided and thereafter the aim and research questions were established.

2.4 Data collection

When collecting data for the study, this consisted of interviews, observations and questionnaire which is presented below. In order to measure how people value and perceive the built environment, different methods of acquiring information and knowledge are needed. Information about an area can be obtained through observations, questionnaires, statistical data and interviews (Boverket, 2020c).

2.4.1 Interviews

This study is based on a qualitative research approach and therefore the interviews conducted in this study are an important part of the method (Bell et al., 2018). A total of 19 interviews were conducted with actors from 11 different companies and organisations. In order to identify which actors to interview for the study, a substantial literature review was made in order to map out which actors are a part of the social sustainability work in Kvibergs Ängar as well as to be able to identify which organisations that work with social sustainability and urban safety on a more national level.

The interviews were of qualitative form with semi-structured interviewing, as opposed to structured form. In qualitative interviewing, one can depart from any interview guide or schedule made, meaning follow-up questions could be asked during the interview and the order and wording of questions could be changed as well. As a result of this, qualitative interviewing tends to be flexible and respond more to the direction in which the interviewers lead the interview. More rich, in-depth answers can be obtained as it has a flexible structure, welcoming follow up questions (Bell et al., 2018).

The questions were prepared beforehand and adapted to each interviewee, depending on their role, knowledge and expertise. Each interview was recorded with the consent of the interviewee and was later on transcribed and analysed. Throughout the interview process, there was a 'snowball effect' occurring, as interviewees recommended other actors to interview for the study. Due to a substantial literature study

and early mapping of relevant actors, most actors that were recommended to be interviewed had already been identified and contacted. When the same information started to occur and become repetitive throughout the different interviews, a conclusion could be drawn, that no more actors needed to be contacted and interviewed. To avoid inconvenience for the interviewees, their names will not be presented in the thesis. Instead, each person has been given a reference name which is presented in table 2.1. To read more about the companies and organisations, see table C in Appendix C.

Table 2.1: *List of actors who were interviewed.*

Companies/ organisa- tions	Reference in report	Position
Skanska	Skanska A Skanska B Skanska C Skanska D	Development leader Project developer Project developer Business developer
Peab	Peab A	Project manager
JM	JM A	Project manager
Police Department	Police A Police B	Municipal police officer Superintendent
City of Gothenburg	City of Gothenburg A City of Gothenburg B City of Gothenburg C City of Gothenburg D	Planning architect Planning architect Activity coordinator Planning Architect
BID-Gamlestaden	BID-Gamlestaden A BID-Gamlestaden B	Top management Safety coordinator
Serneke	Serneke A	Operator
Svenska Stads kärnor	Svenska Stads kärnor A	Top management
Urban Utveckling	Urban Utveckling A	Top management
Tryggare Sverige	Tryggare Sverige A	Top management
White	White A	Urban development strate- gist

2.4.2 Observations

Observation is a so called ethnographic method which refers to the fact that an observer or ethnographer involves oneself in a group for a longer period of time and observes different types of behaviour. This is typically complemented with the participant observers and ethnographers gathering further information through interviews and data collection. In this study a so called micro-ethnography was carried out, meaning a smaller scale of ethnography was made because of the limited time period of the study (Bell et al., 2018).

Observations were conducted in Kviberg on three different occasions and during different times of the day. The purpose behind the observations was to receive an understanding of the built environment in Kviberg and how this affects the way people feel and move in Kviberg. The first observation was conducted early on in the study, before the interviews and questionnaire took place, to avoid being colored by any opinions or perceptions from actors active in Kviberg, as well as from residents living in Kviberg. The second observation took place after some interviews had been conducted and more information arose, and was compared with the first observation to see if there were any similarities or differences in what was observed. The third and last observation was conducted after all interviews were executed. For the final observation, a checklist was made as a guideline to use when observing the area in more detail (see table A.1 in Appendix A). The checklist was based on information given during the interviews, as well as answers from the questionnaire that was sent to residents living in Kviberg.

There are several roles that an ethnographer can adopt depending on classification of the participant observer roles. This can be illustrated in Gold's scheme which describes classification of participant observer roles, described with four different roles, that are arranged on a continuum of degrees of involvement with and detachment from members of the social setting that is studied (Bell et al., 2018).

During the observations, the role of complete observers were taken on, meaning no interaction with people was made to avoid attracting any sort of attention (Bell et al., 2018). The reason for this was because the purpose behind the observations was to see how people move in Kviberg. Having someone observing you could cause discomfort and disruption in people's moving patterns and therefore taking on this observation role was seen as the most suitable.

The three observations were conducted with different purposes. The purpose of the first observation was to get familiarized with the entire district by walking around the entire area while taking notes and pictures. A first impression of Kviberg was formed during the first observation. The purpose of the second observation was to receive further understanding of the district, as well as to divide the district into different areas to see if there are significant differences between the different areas. The final observation took place towards the final stages of the study as all the interviews had been conducted and answers from the questionnaires were gathered. The purpose of the final observation was to study certain criteria, which formed

the basis of a checklist that was created for the third observation. In the checklist, information from the interviews as well as from the questionnaire was taken into consideration. The structure of the checklist was formed with inspiration from previous checklists that have been conducted by the City of Gothenburg (Boverket, 2020b). The criteria which were used for the observations are illustrated in figure 5.4 which is presented in chapter 5.

2.4.3 Questionnaire

A questionnaire was conducted and sent out to three housing associations in Kviberg in order to receive feedback from residents (see table A.1 in Appendix B). The questionnaire was sent through an online link, where everyone with access to the link could anonymously answer the questions. The housing associations in Kviberg sent out the questionnaire in their weekly email to all their residents. The main purpose of the questionnaire was to form an understanding of how residents in Kviberg perceive safety and also, what aspects of the built environment that affect the feeling of safety, well-being and spatial behaviour of people.

The questions for the questionnaire were formed throughout the working process, meaning, during the literature review, the interview process and when executing the first two observations. The questions were formed throughout the process as new information and new perspective arose. In this way, as much information as possible about Kviberg was collected before sending out the questionnaire which helped to form a good understanding and ask relevant questions for the study.

The main challenges with creating the questions was in the limitation of the amount of questions. Some of the concerns were that with too many questions, few people would take the time to answer the questionnaire, at the same time as having too few questions could lead to unclear and vague answers so that no conclusion could be drawn. To manage these concerns, the questions were a mixture of multiple-choice and open-ended questions.

When finalizing the questions for the questionnaire, it was sent to the supervisors at Chalmers and at Skanska for feedback and further input. Some adjustments were made and thereafter the questionnaire was sent as a trial to classmates, friends and family that were impartial to the study. The questionnaire was then sent to residents before the third and last observation was conducted. The reason for this was to get an understanding of how residents perceive Kviberg and use this information to create the checklist for the third and final observation.

2.5 Data analysis

The process of analysing data is more than just analyzing text and image data. Analysing data is conducted through different steps, which are all interconnected and can be illustrated as forming a spiral which contains all of the activities related to the representation and analysis of data. These steps are: organizing the

data, conducting a read-through of the database, coding and organizing themes, representing the data and forming an interpretation of them (Creswell and Poth, 2017).

In order to process the collected data and analyse it, each interview was recorded and later on transcribed to facilitate the analysis of such an extensive interview study. When listening to the recordings, each interview was transcribed and a summary of the main points from each interview was made.

Another part of the data analysis was to summarize and categorize results from the questionnaire in tables and figures to clearly illustrate the findings. However, some questions required more elaborate answers, so these were also summarized and main pointers from the answers were discussed.

When compiling the notes from the observations that had been made, these were compared with answers received from the interviews as well as from the questionnaire. The main purpose of the comparison between the three data collections was to see if there were any similarities and differences in how Kviberg is perceived. This was later on used as a basis for the discussion part.

2.6 Ethical concerns

As a part of the engineering profession, it is expected to exhibit the highest standard of integrity and honesty. Engineering has an important impact on the quality of life for people in the society and therefore engineers must perform in a professional manner which entails committing to the highest principle of ethical conduct (NSPE, 2020).

In the beginning of the study, a confidentiality agreement was signed with Skanska, ensuring the company that the material provided for the study would remain internal and not shared with others. With permission from the company, information that was seen as important for the study could be used in the thesis.

Because the study had an semi-method approach, it consisted of several interviews with actors from Skanska, as well as other companies and organisations that were seen as important for the study. When conducting the interviews, it was assured that the interviewee was aware of the purpose of the study and the reason why the person was asked to be interviewed. This was to ensure that the interviewee felt comfortable and aware of the purpose of the interview. Each interviewee was given the possibility to see the questions beforehand, if they wished to, in order to avoid answering questions that would make them feel uncomfortable and thus hinder the flow of the interview. It was also assured, during each interview, that permission was given from the interviewee to record the interview.

When conducting the observations, some photographs were taken of the district in order to use them in the questionnaire to differentiate the different areas. To avoid intruding on anyone's privacy, the photos were taken from a distance, making

sure no one was in the photo. When observing the district, an effort was made to “melt in” when walking around and taking pictures and notes, especially during the evening, to make sure residents would not feel uncomfortable.

2.7 Reliability

As part of the study, it is important to review the results and analyse the reliability of the findings (Bell et al., 2018). This study was conducted during the spring of 2020, the same period as a pandemic outbreak of the virus referred to as COVID-19, spread around the world (WHO, 2020).

As a part of the study, observations were made with the purpose of studying people’s moving patterns in Kviberg. Due to recommendations from The Public Health Agency of Sweden to avoid larger group settings as well as close contact with other people, this might have affected the results obtained from the observations in terms of people’s moving patterns. However, three observations were conducted, the first in February, the second one in March and the final one in April. The recommendations by The Public Health Agency of Sweden were officially announced in March and therefore had no impact on the first observation that was conducted in February.

A limitation can also be found in the questionnaire that was sent to residents in Kviberg. Only 15 residents from Kvibergs Ängar responded. This is a very small proportion in relation to the number of residents who live there now and in relation to how many residents will live there when construction is finished. This gives an incomplete view of how residents in Kvibergs Ängar in general perceive safety in their neighbourhood and Kviberg. However, among the residents who did respond, there is a very broad consensus in terms of how residents perceive safety in Kviberg and Kvibergs Ängar.

3

Theoretical Framework

The following chapter provides an overview of how social sustainability is defined, how it can be integrated within the design of the built environment and the interrelationship between the built environment and safety.

3.1 How safety fits with social sustainability

The term social sustainability is a variously defined term that generally refers to the social dimensions of sustainability. Social sustainability has been a relatively neglected dimension of sustainable development but has developed over a number of years in response to the lack of progress in tackling social issues in cities such as liveability and inequality (Woodcraft, 2015).

In 2015, the United Nations set 17 global sustainable development goals designed to be a blueprint for achieving a better and more sustainable future for the world population. Goal 11 recognizes that cities and communities enable people to advance socially and economically and that it is therefore essential to make cities socially sustainable (United Nations, 2020). Social sustainability within the urban context aims to combine both social and physical design in the built environment in order to support social life and create inclusive, safe, resilient and sustainable cities (Melis et al., 2020).

The importance of the construction industry for a sustainable development cannot be disregarded. For example, recent statistics made by Boverket show that the construction and real estate sector still accounts for a substantial share of the environmental impact in Swedish production (Boverket, 2020d). Thus, as sustainable development is a global concern (Stenudd, 2015), the construction sector plays a vital role worldwide towards achieving the goal of sustainable development.

The focus of sustainability in built environment disciplines has for long remained centred on the environmental dimension and little attention has been given to the definition of social sustainability (Dempsey et al., 2009). However, a survey executed by the consulting firm Ramboll in 2019 shows that the social aspect of sustainability is become increasingly important in the construction and real estate sector (Ramboll, 2019). In the survey, social sustainability refers to aspects such as the indoor environment, opportunities for physical activity and meeting places in the built environment. The growing interest is dependant on the fact that there is a growing

recognition that social sustainability is beneficial both economically and socially (Ramboll, 2019). However, while a social dimension to sustainability is becoming more widely accepted, exactly what this means has not been clearly defined or agreed upon (Baldwin and King, 2018). One explanation for this is that social sustainability has to be considered as a dynamic concept, which will change over time in a place as social needs of present as well as future generations change over time (Dempsey et al., 2009). However, two fundamental elements of social sustainability are "sense of community" and "feeling of safety in the built environment" (Dempsey et al., 2009). Sense of community involves social interaction and cohesion between community members while feeling of safety refers to an individual's perception of the risk of falling victim to crime (Dempsey et al., 2009). Surveys also show that the built environment is not only significantly related to walking behaviour, as previous research has identified, but also correlated with people's perception of safety (Chen and Hong, 2014). Consequently, the feeling of safe is a vital part of social sustainability in the built environment.

3.2 Association between perceived safety and the built environment

There are several categories to determine the quality and attractiveness of the built environment, one of them being safety. It is first necessary to distinguish between safety and perceived safety as these are two different things. Safety refers to the actual risk of falling victim to crime and public disturbance whereas perceived safety refers to an individual's subjective experience of that risk (Boomsma and Steg, 2014). Consequently, actual safety may not always result in perceived safety, that is, people may not feel safe although no real dangers are present (Boomsma and Steg, 2014).

Several studies point to the fact that there is a strong association between perceived safety and the quality and design of the built environment and public spaces (Crowe, 2000; Machielse, 2015; Boverket, 2019a; Raue et al., 2019). In addition, an individual's perceived safety has a strong influence in the decision by the individual to make use of a space or to avoid it (Mehta, 2008; Pol et al., 2006). In the short term, safety perception can change spatial behaviour of people, such as a change in transportation, shopping or recreation behaviour (Pol et al., 2006). In the long term, when people perceive their environment as unsafe and have no possibility to change this, they will move to another place (Pol et al., 2006). In other words, the importance of the design of our built environment goes far beyond aesthetics. However, opinions differ in regards to how to design the built environment to increase urban safety.

There are mainly two types of urban design strategies: territorial surveillance and natural surveillance. Territorial surveillance is a design strategy that is directed at creating spaces that encourage perceptions of territorial protection, i.e. the design

of space enhances the feeling of legitimate ownership by reinforcing existing space with symbolic barriers such as signs, gates, fences and security cameras (American Institute of Architects, 2017). Natural surveillance is a design strategy that is directed at keeping users under observation and decreasing crime opportunity with 'natural' forms of access such as activity of people, mixed-land use, positioning of buildings and community-shared facilities (American Institute of Architects, 2017).

In urban planning, these two design strategies form the foundation of what is known as 'Crime prevention through environmental design' (CPTED). The CPTED concept expands on the assumption that the proper design and effective use of the built environment can lead to an increased feeling of safety and to an improvement in the quality of life (Crowe, 2000). However, opinion is very divided as to which one of these two strategies is more effective for creating safer urban areas. On one hand there is the idea that surveillance in the form of territorial surveillance increases the feeling of safety as it suggests there is someone present who has responsibility for the space and may observe criminal activity (Crowe, 2000). On the other hand, there is the idea that territorial surveillance only adds to the feeling of being unsafe as it gives people an impression of the area being high-risk for crime (Uittenbogaard, 2020).

However, research shows that there is a strong positive association between place value and some place qualities (Carmona, 2019). These are illustrated in table 3.1. Place value refers to the link between the quality of the built environment and its value in health, social, economic and environmental terms (Carmona, 2019). In addition, some aspects of territorial surveillance have also been shown to create place value. One is defined property lines and a distinction of private spaces from public spaces because this offers feelings of privacy and a sense of personal identity which is a prerequisite for feeling safe (Göteborgs Stad, 2016; Vassilaki and Ekim, 2015).

Table 3.1: *Place qualities of the built environment that create place value.*

Top priority place qualities	High priority place qualities
Greenery in the built the environment	Presence of attractive public spaces
A mix of uses	Sense of place
Low levels of traffic and traffic speeds	Façade continuity
Walkability and bikeability of a place	Natural surveillance in the form of sociable public/private threshold features
Compact forms of urban development	Presence of street level activity
Convenient connection to a public transport network	Good street lighting

On the contrary, there are some place qualities which are associated with a strong negative association in terms of place value and should be avoided in the built environment (Carmona, 2019). These qualities are: car dependent urban forms, absence of local green space, the presence of segregated areas and poor maintenance.

3.3 Integrating safety through urban planning

Studies show that there is a divide between what people value and what is actually built (Boverket, 2017b). At the same time, a Swedish crime survey conducted in 2019 reveals that a total of 28 per cent of the population (aged 16–84) state that they feel very unsafe or quite unsafe when going outdoors alone at night in their own neighbourhood or that, as a consequence of feeling unsafe, they avoid going out alone at night (Brottsförebyggande Rådet, 2019a). It is also significantly more common for women to feel unsafe than for men (Brottsförebyggande Rådet, 2019a). In addition to this, the latest data from the European Union Statistics on income and living conditions shows that Sweden is one of the countries in Europe where the largest proportion of the population experience problems with crime, violence or vandalism in their neighbourhood (Statistiska Centralbyrån, 2019). So, when adding these facts together, it becomes obvious that there is a need for safer urban areas. Combined research suggests that the built environment and its maintenance can have an impact on crime and perceived safety (Boverket, 2019a). Thus, there are good reasons to assume that the built environment can be planned and designed so that opportunities for crime decrease and/or that perceived safety increases (Boverket, 2019a).

In Sweden, traditional town and country planning is mainly a municipal responsibility and The Planning and Building Act (PBL) is the primary piece of legislation that applies to construction and planning in Sweden (Boverket, 2018). It outlines the legal obligations of local municipalities when issuing building permits, what type of constructions require a permit and which do not, binding definitions of key concepts, citations for illegal construction activity and how the interests of the general public should be protected. Boverket is the national authority that has the task of guiding, investigating and analysing issues that concern urban planning, building and housing (Boverket, 2018).

In May 2018, there was a clear shift in Swedish urban policy. A historic decision was taken by the Swedish parliament to make Sweden one of only a handful of countries in the world to adopt a new policy, the Policy for Designed Living Environment (Ministry of Culture, 2018). This new policy is closely associated with the UN's 17 global goals for sustainable development, including the goal of making cities and human settlements safe, and has a clear objective: architecture does more than just provide a sensory experience – it can also be used as an instrument to make urban environment more inclusive and less segregated (Ministry of Culture, 2018). Physical separation between people or between activities has an obvious direct relationship to how cities are shaped and structured by built form (Legeby, 2010) and thus, with careful planning, the built environment can contribute to a sustainable, equitable and less segregated society (Ministry of Culture, 2018).

In the Policy for Designed Living Environment, the Swedish parliament recognizes

that the physical environment today often is a limiting factor for many people due to absence of safety, among other things (Ministry of Culture, 2018). Additionally, the role of the public sector to lead the way and encourage everyone else to follow suit is highlighted. Despite this, the term "safety" in relation to the physical environment does not exist in PBL (Boverket, 2019a). In addition, a survey conducted by KTH Royal Institute of Technology for Boverket shows that the international level of knowledge is considerably higher than it is in Sweden when it comes to questions about crime prevention and security measures in physical environments (Boverket, 2019a). Thus, practitioners' knowledge needs to be increased in order to make it possible to develop national guidelines or propose amendments to PBL (Boverket, 2019a). However, Boverket takes the view that contractors and other parties such as property owners and municipalities can help to improve the quality of the built environment (Boverket, 2019b). In order to support the work in preventing crime and creating safe urban areas, Boverket has established a definition for safety in relation to the built environment. This definition is as follows: "Safety is the feeling that is triggered when an individual interprets the design and use of a physical environment by combining sensory impressions with personal experiences as well as with other individuals or media's descriptions of the risk of being exposed to crime or threatening situations" (Boverket, 2019a).

3.4 Social sustainability and safety: challenge for urban development in Gothenburg

Throughout the nineteenth and twentieth century, cities and municipalities in Sweden have grown rapidly due to a growing population (Statistiska Centralbyrån, 2020). As a consequence, cities and municipalities are faced with big challenges related to social sustainability (Boverket, 2010). The City of Gothenburg, in particular, is faced with several different but related issues as a result of rapid urban growth (Gothenburg & Co, 2020). By 2035, Gothenburg is estimated to grow with almost 120 000 inhabitants which is placing great pressure on space and housing ((Göteborgs Stad, 2020d); Boverket, 2010). In addition, the city faces new challenges of interconnecting the entire city (Gothenburg & Co, 2020).

To solve the housing crisis and interconnect the city, Gothenburg is growing through densification of the existing city-centre as well as through the addition of new urban areas to the existing city (Göteborgs Stad, 2019). The reason why the City of Gothenburg is growing through densification is that it is considered as something good for social sustainability, as it increases access to different activities and the likelihood of spontaneous encounters (Boverket, 2017b). In comprehensive plans, the plan for how the built environment is to be used, developed and preserved, densification is framed as a means by which to connect different parts of the city, to reduce segregation and increase security (Boverket, 2017b). It must be noted, however, that a qualitative dense urban environment does not mean having buildings placed closely together but rather it is about creating proximity to social and physical activities (Göteborgs Stad, 2019; Kungliga Ingenjörsvetenskapsakademien,

2017).

In the context of densification, the city is becoming denser by utilizing industrial areas in the city centre and in peripheral regions for housing (Göteborgs Stad, 2019). With plenty of vacant land, there is enormous potential for urban development in these areas. However, there are also challenges that come along with this. Studies show that there is an increased concern for crime in Gothenburg which has a negative impact on residents feeling of safety (Göteborgs Stad, 2017). At the same time, Gothenburg has become an increasingly socially polarized city and social problems in society have become clearer (Boverket, 2017a). Given these challenges, urban density needs to be well-planned and carefully realized in order to support social sustainability, i.e. enhance the feeling of safety and sense of community among residents (Boverket, 2017b). This raises questions about the role of different actors in ensuring that this happens.

3.4.1 How the City of Gothenburg can contribute to social sustainability

To address social issues, the city of Gothenburg has put more focus on social sustainability in physical planning in recent years (Boverket, 2017a). Physical planning is important as the physical environment influences people's moving patterns to a large extent (Göteborgs Stad, 2016). This in turn has great significance for the development of social life and people's perceived safety in an area (Göteborgs Stad, 2016). In order to meet the goals of a socially sustainable city, an analysis model has been developed within the municipality called Social Impact Assessment (SIA) (Boverket, 2017a). SIA is used to gain an overview of an area and identify important social aspects that need to be addressed in the planning and development stage. The following four social aspects are included in an SIA: cohesive city, interaction, daily life and identity. Cohesive city is about strengthening connections and bridging barriers to make the city more cohesive, interaction is about creating populated urban areas with well-defined spaces to improve interaction among residents, daily life is about having residents everyday routines and activities as a starting point for the urban planning and identity is about strengthening the local self-identity. The purpose of the tool is to ensure that social issues are taken as seriously as economic and environmental issues in urban planning at the municipal level (Boverket, 2017a).

As for the social issues in Gothenburg, the City of Gothenburg and the police are cooperating on the basis of a model called 'Safe in Gothenburg' (Göteborgs Stad, 2018). The aim of this cooperation is to increase the feeling of safety by taking collective and concrete local measures to address problems that have been identified in different areas (Göteborgs Stad, 2018). However, to continue the work of making Gothenburg a safer city and increase residents feeling of safety, further actions are needed as this problem is a collective responsibility, where a large number of actors need to participate (Justitiedepartementet, 2020). The measures taken must also be characterized by a long-term perspective and be based on knowledge of proven practices (Justitiedepartementet, 2020).

3.4.2 How contractors can contribute to social sustainability

In connection with the regeneration of deprived suburbs and neighbourhoods in Sweden, the scope of attention of Swedish contractors has been widened to also include social sustainability aspects (Buser and Koch, 2014). The reason for this is that deprived suburbs are associated with social issues such as unemployment and criminality (Buser and Koch, 2014; Swedish National Police Board, 2017). This raises some challenges for contractors engaging in social sustainability to help solve problems linked to the built environment.

One of the challenges is to bridge the gap between focusing on financial benefits today and a social approach aiming at long-term results (Buser and Koch, 2014). So far, the approach of contractors to contribute to social sustainability has been to make upgrades to the physically and social qualities in the built environment. However, these types of upgrades are often expensive and thus there is a risk that these types of dwellings will only benefit people who can afford them. Another challenge is to move away from the 'single intervention' approach to a broader local area approach. In general, contractors tend to do single interventions in a closed and secluded space which makes it difficult to connect different areas in a suburb to each other as well as to the rest of the city. As 'single intervention' projects are usually limited in time, contractors tend to have a long term approach to social sustainability goals which does not help to promote a socially sustainable urban development.

Nonetheless, if contractors are able to meet these challenges, there is a possibility for contractors to succeed in their aim to contribute to social sustainability (Buser and Koch, 2014). The idea that there are concrete measures which can be taken to help solve problems linked to the built environment is nothing new. Two important dimensions of a socially sustainable urban area are: the social dimension and the spatial dimension (Buser and Koch, 2014). The social dimension encompasses safety and community attachment, among other things. The spatial dimension encompasses the neighbourhood's quality of design and construction, and the extent of connections between the centre and the periphery. However, the difficulty lies in knowing what choices to make in order to improve the built environment (Tryggare Sverige, 2020; Boverket, 2019a). To help contractors and property owners make conscious choices when designing new residential areas and refurbishing old, a handbook has been developed, BoTryggt2005, with guidelines on how to plan and design safe urban areas in 2005 (Tryggare Sverige, 2020). Since then, BoTryggt2005 has evolved into BoTryggt2030 which now has a draft of guidelines and checklist points that help both contractors and property owners to make choices that can promote safety and enhance attractiveness in the urban environment.

Guidelines and checklists in BoTryggt2030 have been designed in association with several Swedish municipalities, property owners and business organisations such as

Skanska, JM, Riksbyggen and Boverket (Tryggare Sverige, 2020). The checklists in BoTryggt2030 are linked to the four planning stages determined in PBL; from comprehensive planning to the building permit phase, as well as management after the planning process. BoTryggt2030 describes principles and guidelines for how the physical design should be taken into account at different stages and at different levels. An important starting point, according to the guidelines, is to look at crime prevention and safety from a holistic perspective (Tryggare Sverige, 2020). This means first taking cross-cutting measures on a district-level to improve an entire district and thereafter extending progressively to more targeted actions to improve public spaces followed by individual properties and dwellings (Tryggare Sverige, 2020). Some concrete measures that be done in order to make an urban area more safe, according to BoTryggt2030, is to include functions in the public space such as social meeting places, make clear distinctions between private and public spaces to increase the flow of people and thus social control, add pedestrian lighting and have a mix of functions in order to attract different target groups (Uittenbogaard, 2020).

3.4.3 How public and private actors collectively can contribute to social sustainability

There are models to reverse the trend in neighborhoods characterized as unsafe. One of these models is Business Improvement District (BID). BID is a way of organising and gathering different actors to collaborate on increasing the safety within an area or an entire district. The model originates from Canada where it was developed during the 1970s with the purpose of increasing business and service in suburbs (Boverket, 2020a). Today the model is established in countries like England, Germany, United States and Scotland and it is seen as a great collaboration method for managing and developing urban areas (Urban Utveckling, 2020). In Sweden there are several organisations that work with achieving safe, secure and more attractive urban areas and promote the BID-model as a good way of working towards developing safe urban areas. Some of these organisations are: Svenska Stadskärnor, Tryggare Sverige, Urban utveckling and BID-Gamlestaden.

As described by the government office, the BID-model is internationally built on enforced legislation, however in Sweden the BID-model is based on voluntary collaboration. The model is newly introduced in Sweden and not many are familiar with it. Representatives from the government office however believe that the model is a good way of taking into account the safety and security aspects when planning new neighborhoods and are promoting the BID-model as good complement to public commitment, such as the police department (Regeringskansliet, 2020).

The way the BID-model works is that the model aims to gather actors under a certain period of time, were the parties which are voluntarily involved, jointly finance certain measures to improve the situation in an clearly defined geographical area. This can for example be done through increased trade, various attractions and physical measures such as building new residences and outdoor spaces. The purpose of these measures is to create safe and attractive residences and public spaces. In

Sweden, the collaboration is based on voluntary participation and is often executed execution by the form of a non-profit association. When joining a BID-collaboration, all members have to pay a fee, which is based on the size of the area as well as on the property holdings for the area. The actors that are normally involved in a BID-model are property owners, trade and industry, municipalities and the police department (Boverket, 2020a).

Long-term collaborations, such as BID is also an example of how contractors, as well as other actors, can extend the duration of their involvement in projects and redistribute operations and responsibilities aimed at improving safety and social attainability in urban areas (Urban Utveckling, 2020).

4

Case study: Kvibergs Ängar

4.1 Area description - Kviberg

Kviberg is a district that is a part of northeastern Gothenburg. The district has a lot of military history and great building- historical value (Göteborgs Stad, 2020g). Kvibergs most historical building is called 'Kvibergs Kaserner' and was built in 1805 and mainly used for military purposes (see figure 4.1). 'Kvibergs Kaserner' was designed with inspiration from a gothic and medieval bourgeois architecture, with a red brick façade and black metal rooftops (Higab, 2020). During 1971, a part of 'Kvibergs Kaserner' was declared as a state building monument. Surrounding 'Kvibergs Kaserner' was a lot of unused land, closely located to the centre of Gothenburg (Göteborgs Stad, 2020g).



Figure 4.1: *Kvibergs Kaserner (geocatching, 2020)*

As the city of Gothenburg is growing, there is an increased demand for new residential areas close to the city core. Kviberg is located about 5 km from the centre of Gothenburg and with plenty of vacant land, there was enormous potential for urban development in the area (Göteborgs Stad, 2020g).

Today, Kviberg is undergoing great development. Several actors have started building in the district and apart from residential areas, Kviberg consists of schools, a kindergarten, a retirement home and a large multi-sport arena which includes a school, restaurant, gym and hotel. Kviberg has in recent years been transformed from a remote area with limited activity and development, to a growing urban district (Göteborgs Stad, 2020g).

Another important aspect of Kviberg is that the district has a central location and is surrounded by four other big districts: Kortedala, Utby, Bellevue and Bergsjön. All these districts are a part of eastern Gothenburg. These districts differ in terms of population size, however, what they all have in common is a culturally diverse population. In addition, the average income and educational level of people living in the eastern part of Gothenburg is lower than the average level of the entire city (Göteborgs Stad, 2020a). In Kviberg, 57 % of the population are men and 42 % are women. The average age of the population in Kviberg is 39 years and the average income is 19 146 SEK, which is 29 % lower than the average income in Sweden (Hitta, 2020).

Between 2015-2017, safety evaluations in form of three surveys and over 30000 interviews, were conducted by the City of Gothenburg in the eastern part of Gothenburg, in order to receive a situational awareness about perceived safety in the area (Göteborgs Stad, 2020h). The safety evaluations are the product of a long-term collaboration between the police department and the eastern part of Gothenburg. By increasing collaboration between the city and the police department and by having dialogues with residents, the aim is to increase urban safety in the area as well as to increase residents trust for the city's administration and police department (Göteborgs Stad, 2020h). In short, the results from the surveys show that the majority of residents feel safe where they live, as well as in their neighborhood. However, perceived safety decreases tremendously during nighttime. Problems that were expressed by residents were litter, graffiti, drug-and alcohol addicts and traffic issues. However, during the three years that the surveys were conducted, results show that residents feeling of safety increased by each year (Göteborgs Stad, 2020i). However, according to Brås National Security Survey (NTU 2017-2018), the eastern part of Gothenburg is the district that generally has the highest proportion of people who feel unsafe in their neighbourhood (BrottsförebyggandeRådet, 2019b).

4.1.1 Comprehensive plan and detailed development plan for Kviberg

The comprehensive plan for the eastern part of Gothenburg, which also includes Kviberg, was conducted in 2003 by the City of Gothenburg. In the comprehensive plan, Kviberg is described as a future resource that could connect all the districts in eastern Gothenburg to the centre of Gothenburg. The plane area for Kvibergs Ängar, which is described in the comprehensive plan, concerns mostly the part that is connected to the regimental area around Kvibergs Kaserner. Because this area was mainly used for military purposes during 1890, it was closed off for the public for almost 100 years. Therefore, the area consisted of a lot of unexploited land. So, when the comprehensive plan was conducted for the eastern part of Gothenburg, Kviberg was seen as a district with great developing potential that could link together the districts Utby, Gamlestaden, Kortedala and Bergsjön (see figure 4.2). As part of the development of Kviberg, building new residences was seen as important for the development of Kviberg. Large areas of Kviberg have also been set aside for sports and recreation, which has resulted in a large outdoors exercising park called 'Kvibergs park' (Göteborgs Stad, 2020e).



Figure 4.2: *Districts within the eastern part of Gothenburg (Göteborgs Stad, 2020f).*

The detailed development plan for Kvibergs Ängar was conducted in 2005 by the City of Gothenburg. Between 'Kvibergs Kaserner' and the river 'Söveån' is an area of approximately 20 hectare which is primarily owned by Skanska Mark & Exploatering Nya Hem AB and JM AB. The eastern part of this area is owned by the municipality, which has allocated the land to Peab Sverige AB. When the military was in full operation in Kviberg, this area was primarily used as a sports field, military exercise field and as a paddock. Hence the plane area is historically characterized by great military history (Göteborgs Stad, 2020b).

The plane area is currently under great development with approximately 550 new residences with attributes of business and service as well. The plane area has been divided into four sections referred to as “enclaves” where each enclave is separated by green passages (see figure 4.3). Each enclave contains suggestions of mixtures of apartments and semi-detached houses (Göteborgs Stad, 2020b).

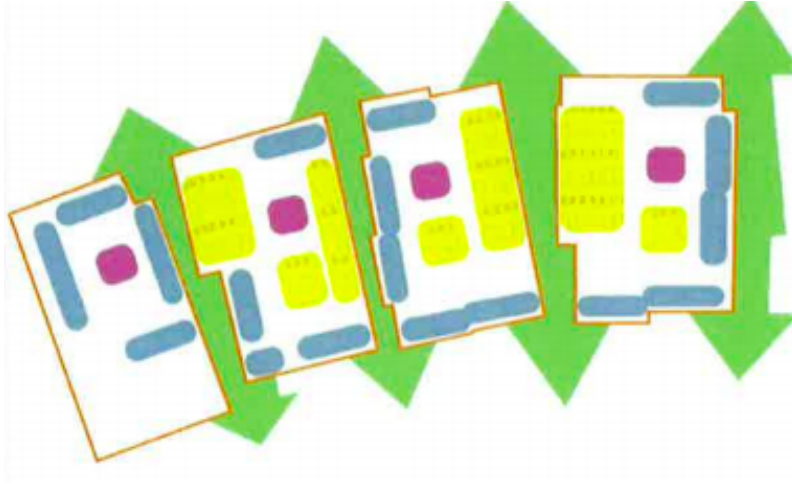


Figure 4.3: *Illustration of the enclaves (Göteborgs Stad, 2020c)*

This suggestion, presented in the detailed development plan for Kviberg, has been adopted to preserve the areas nature- and cultural value alongside the river Sävån and to not disrupt the cultural environment around Kvibergsnäs, that still has a lot of preserved historical buildings. Therefore, the placing of the enclaves were predetermined, as well as the design of the buildings façades that are supposed to blend in with Kvibergs Kaserner as well as the newly constructed part, east of Bellevue. The semi-detached houses are described to be of “lighter character” and resemble the Utby area. The exterior of the enclaves, facing Kvibergs Kaserner, has a more rough edge with red-brown brick. The interior of the enclaves is of a lighter character and reflects the light (Göteborgs Stad, 2020b).

In the detailed development plan for Kvibergs Ängar, the social consequences of the plan are only described with five lines. They are described as follows: ‘because a lot of vacant land is being developed with new residential buildings and to some extent new services with a close location to public transport, this will lead to a linkage between the different neighborhoods in the area which will in turn increase people’s feeling of safety. Also, the new walking- and cycle-path will contribute to an increased feeling of safety (Göteborgs Stad, 2020b).

4.2 Skanska & Kvibergs Ängar

As previously mentioned, there are currently three construction companies building in Kvibergs Ängar; Skanska, JM and Peab (see figure 4.4). Skanska, together with JM, have a trading company and they have distributed the building rights in Kvibergs Ängar. Peab however, has received land allocation from the municipality (Skanska, 2020c).

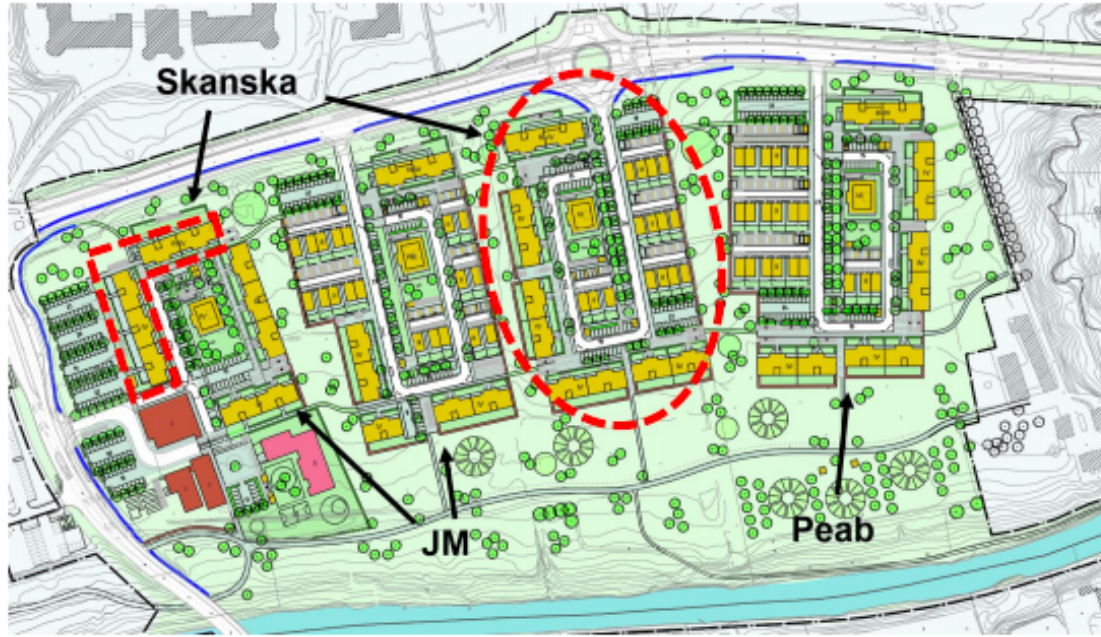


Figure 4.4: *Plane area of Kvibergs Ängar (white, 2020)*

Skanska has a previous history of building in Kviberg. Between 2012-2017, the company built four housing cooperatives with over 350 apartments called Kvibergs Entré (Skanska, 2020c). Currently, Skanska is has a project in Kvibergs Ängar which is referred to as a pilot project in terms of developing a new process that ensures safe neighborhoods. . In figure 4.5 is an overview of Kvibergs Entré and Kvibergs Ängar. To create a safe neighbourhood in Kvibergs Ängar, Skanska collaborated with experts within urban safety as well as with contractors Peab and JM. This resulted in a thought out placing of vegetation, windows and lighting. Apart from this, an activity park and walking path around Kvibergs Ängar was created with the purpose of creating a flow of people to increase the feeling of safety. As a result of the safety efforts that were made, Skanska aspires to create guidelines that can be used for future projects to ensure that future neighborhoods built by Skanska are safe (Skanska, 2020c).



Figure 4.5: *Overall view of Kvibergs Ängar (JM, 2020)*

Kvibergs Ängar is still under construction so some parts are not yet finished. However, when finished, Skanska's enclave will consist of 250 new residences in total, divided between seven so called "lamellhus", one tower-block and 19 semi-detached houses (see figure 4.6). Information on the residences is seen in table 4.1.

Table 4.1: *Information on Skanska's housing in Kvibergs Ängar.*

Apartments	Semi-detached houses
Rooms: 1-4	Rooms: 4 + kitchen
Size: 38.5-97 sqm	Size: 111 sqm + 3 sqm storehouse
Price: 1 990 000-4 200 000 SEK	Price: -
Monthly cost: 2 529-5 451 SEK	Monthly cost: -



Figure 4.6: *Illustration of Kvibergs Ängar (Skanska, 2020d)*

4.2.1 Skanska and social sustainability

For the project Kvibergs Ängar, Skanska has conducted a sustainability plan with focus on urban safety, security and social involvement. The sustainability plan was conducted in 2016 and revised in 2018. In the sustainability plan, Skanska describes Kviberg as an area that has historically been perceived as unattractive with an unsafe reputation as well as with occurring criminality. Due to this, they have chosen to focus on creating a neighborhood that makes residents and visitors feel more safe.

With the project Kvibergs Ängar, Skanska wanted to develop their social sustainability work, but this time with focus on urban safety, security and social involvement. Skanska's overall goal, when it comes to the safety aspect, is to make sure that Kvibergs Ängar is perceived as safe and secure by its residents. To reach this goal, they reviewed the project from a safety perspective and identified possible safety promoting solutions (Skanska, 2020a). This was done based on a so called "safety model" that is divided into eight parts:

1. Information
2. Clarity
3. Exterior protection
4. Social control
5. Mix of functions
6. People
7. Management
8. Lighting

Information means that residents should be updated when changes are made to an area in order to avoid confusion. Clarity is about clear orientation with cycling and walking paths and a clear distinction between what is public and private. Exterior protection is about having high security doors, windows and common spaces. The protection should be of high quality but not visible. Social control is about having open public spaces with good lighting and well thought out placing of vegetation that ensures clear visibility. Social control is seen as one of the factors to minimize the probability of different types of criminal activities. Mix of functions is about mixing residents, shops and other common public spaces to create movement and activity in an area. The part about people is about creating natural meeting locations with accessibility and activity where people want to reside. Management is about keeping the environment under good conditions without litter and clutter. Lastly, lighting is about making sure that the neighborhood is well-equipped with lighting, both inside and outside. Concerning Skanska's enclave, one of the safety efforts that was made was narrowing the traffic lanes entering the neighbourhood in order to ensure that drivers slow down their speed. Other safety measures discussed was making sure that the area is equipped with a lot of lighting as well as making vegetation fit with the landscape and not blocking the view of entrances. Other considerations that were discussed was creating meeting places such as an outdoor gym or somewhere you can have a barbeque in order to increase the presence of people and activity in the area (Skanska, 2020c).

4.2.2 Collaboration between actors in Kviberg

As part of the safety efforts in Kvibergs Ängar, Skanska initiated a workshop and gathered actors to discuss the topic safety and together agree on common objectives for the area. Representatives from Skanska Nya Hem, White, Peab, JM, Tengbom and Landskapsgruppen attended the workshop. During the workshop, different perspectives and aspects of safety were discussed. The differences between how people perceive safety depending on if being female, elderly or young was one of the discussed topics. Some of the conclusions that were drawn during the workshop was that as an elderly person, what increases the feeling of safety is accessibility to activity, such as exercising and walking, as well as accessibility to public transport and public spaces that allows interaction with other people. As a female some of the safety aspects that are of importance is to have a clear overview of the environment, meaning being able to have a clear overview of the space as well as the feeling of being seen by others. Other important factors are having populated environments with a lot of activity. For younger people, important aspects are having an environment that encourages activity and socialising, as well as accessibility to public transportation. Other safety aspects that are of importance are non-hidden and non-crowded environments, a well-maintained environment, traffic safety for children, interactions with neighbors, social flow, outdoor activity and a clear distinction between public and private space. After these discussions, a summary was made regarding which aspects that are needed in order for an urban environment to be perceived as safe for each population group (White, 2020).

As a result of the workshop, different safety efforts were made. One of these was narrowing the driving lanes within the enclaves in order to slow down the speed limit for drivers. Windows were also added in the storage for bicycles and recycling. Lighting was placed above the entryways, as well as around the entire neighborhood. Vegetation was placed with caution to prevent it from blocking the view. However, the main safety efforts that were made were the so called “Kvibergsrundan”, a walking path around the entire neighborhood, and an activity park which was partially financed with funding from Boverket. The activity park includes a dog park, benches, sunbeds, a ping pong table, a playground and an outdoor grill. The main purpose of the activity park was to create a mutual space for residents in Kvibergs Ängar to reside in (Skanska, 2020c).

Apart from the workshop with other actors, Skanska also initiated a dialogue with residents moving to Kvibergs Ängar, as well as residents already living in the area, to receive further input. During this meeting, 17 men and 16 women attended with a age range between 20 to 65+. During the dialogue, residents expressed that they wanted the contractors to add more benches, lightning and garbage bins in the activity park. Apart from these suggestions, the residents attending the workshop expressed that they would like for the activity park to be private, meaning only to be used by residents living in Kvibergs Ängar.

5

Results

This chapter presents the results from the observations, the questionnaire and the interviews that were conducted for this study.

5.1 Observations

In this section the observations that were conducted in Kviberg and Kvibergs Ängar are presented. In total, three observations were conducted. The first observation took place early on in the study, Thursday 13 February 2020 during 12 am to 15 pm. The second observation took place Wednesday 11 Mars 2020 during 15 pm to 18 pm and the final observation took place Saturday 11 April 2020 from 12 am to 23 pm.

As particular safety efforts have been made in the Kvibergs Ängar, the main focus of this section will be on the results from the observations in this area. Results from the three observations are therefore divided into two sections; Kviberg and Kvibergs Ängar.

5.1.1 Kviberg

During the first observation, a walk through the entire district was made, in order to get acquainted with the area. No preparations were made beforehand as the purpose of the first observation was to get an overall impression of the area. Some remarks that were made during the first observation were that the district has a wide range of outdoor activities, such as an outdoor gym, playgrounds and large football fields. The district also has different types of schools such as a kindergarten, a middle-school and a high-school. A good attribute that stands out is the Prioritet Serneke Arena which consists of a gym, hotel, restaurant, school, sports halls and an indoor ski-hall. This gives residents the possibility to participate in different sport and recreational physical activities. Another remark that was made was that there is limited activity around Kvibergs Kaserne and that the lighting around the housing unit is poor. Furthermore, the district lacks grocery stores, cafes and retail stores. A centre or a square would have been a valuable addition to the district as it would connect the different areas of the district that today seem somewhat disconnected. There is also a lack of housing diversity as Kviberg mostly consists of apartment blocks.

During the second observation, more pictures were taken and the district was divided into different areas on a map, in order to distinguish residential areas from public spaces, see figure 5.1.



Figure 5.1: Map of Kviberg, divided into 9 different areas. Area 1, 2, 7 and 8 are residential areas whereas areas 3, 4, 5, 6 and 9 are public spaces.

Area 1, Beväringsgatan, consists of two buildings with owner-occupied apartments and rental apartments, closely located to each other. The housing association that owns the owner-occupied apartments has placed wire fences around their apartment block and playground to prevent residents living in the rental apartments from entering (see figure 5.2 and 5.3). The reason why the wire fences were placed there was because residents in the owner-occupied apartments felt that the playground was being vandalised by residents living in the rental apartments (SVT, 2020). This was very concerning to see when walking around the area as the wire fences created discomfort and a feeling of insecurity. It was very disturbing to see a playground, which is supposed to be a place for children to play and interact with each other, be closed off by fences like those in prisons. To send young children the message that people of different social class should not interact with each other is saddening.



Figure 5.2: *Wire fence, area 1.*



Figure 5.3: *Wire fence, area 1.*

Area 2 consists of SGS student accommodations. The housing unit is closely located to public transport, as well as Kvibergs Kaserne and some facilities which are located in area 3. The student accommodations seem disconnected from the rest of Kviberg as they are foreclosed from the surrounding areas by area 3 which is pretty much deserted. Area 4 consist of a large parking lot which is situated next to Kvibergs Kaserne and opposite the Prioritet Serneke Arena, which is located in area 5. In area 5 there are many opportunities to pursue outdoor activities, for example in Kvibergs Park. Area 6 is a school area which is located close to the main road Kvibergsvägen. Some parts of the school area are gated to protect pupils from crossing the road. Area 7 consist of newly built housing units, including Kvibergs Entré which was built by Skanska. This area is closely located to public transport as well as to a health center. Though it is very unclear where the "centre" of Kviberg is, area 7 resembles a centre the most as the few stores that exist in Kviberg are located in this area. Results from the observations in area 8 and 9, Kvibergs Ängar and the activity park, are presented in section 5.1.2.

When conducting the third and final observation in Kviberg, the district was assessed based on 11 criteria which formed the basis of the checklist that was used to record the observations (see figure 5.4). The criteria that were observed and used for the checklist were inspired by Skanska's safety model, findings from the literature study and by previous checklists conducted by the City of Gothenburg. Each criteria was then observed in Kviberg and Kvibergs Ängar. The remarks that were made during the third observation were that the district has a mix of uses such as different types of schools and outdoor and indoor sports activities. However, the district does not have a wide range of stores. There is also a lack of public spaces for meeting and socialising such as cafes and restaurants. However the outdoor and indoor sports activities, as well as the range of playgrounds, still gives the possibility for residents to gather within the district. The walkability of the district is poor, with long distances between the different areas and a big road, Kvibergsvägen, passing straight through the district. Kvibergsvägen has a rather high speed limit and few crossing points which requires caution when crossing the road. As it stands, the district has a lack of housing diversity, with only apartments and no houses or semi-detached houses but there is however a mix of people living within the district in terms of age, gender and ethnicity. The outdoor activity areas, such as Kvibergs Park, are well-



Figure 5.4: *Criteria of observation.*

used by people in different age groups. During the evening, the activity and flow of people in Kviberg decreases substantially. The district is well-lighted in certain places, however around Kvibergs Park, SGS student accomodations and Kvibergs Kaserner, lighting needs to be added as it gets too dark during the evening. In general, Kviberg is well maintained as limited vandalism, clutter or litter was spotted. However, alongside the river S  ve  n, some litter was spotted.

As the third observation was conducted from 12 am to 23 pm, an observation was made regarding how the district changes throughout the day and how it is perceived when it gets dark. What was observed during the evening was that the lighting in the district in general is poor which makes the district feel unsafe. In addition, the district is desolate, especially in area 3 and area 4, Kvibergs Kaserner and the large parking lot. During daytime a lot of outdoor sports activities take place in area 5 which creates a flow of people, making the district feel safe. However, as these outdoor spaces are not used to the same extent during the evening, there is a limited flow of people in these areas, making them feel more unsafe.

5.1.2 Kvibergs   ngar

Area 8 consists of Kvibergs   ngar and certain parts of the area are still under construction. However, the activity park which is marked as area 9 on the map, is finished (see figure 5.1). The remarks that were made when conducting the observations in Kvibergs   ngar are presented in this section.

The walking path 'Kvibergsrundan', which is 1.5 km long, surrounds the four enclaves in Kvibergs Ängar. The apartments in Skanska's enclave have windows and balconies facing the walking path which creates a feeling of always being seen by others. This form of natural surveillance helps to create a safe environment, especially when it gets dark. In addition, 'Kvibergsrundan' is well-equipped with lighting, which gives a clear sight during daytime and nighttime. The balconies facing the inner courtyard and the main road, Kvibergsvägen, are transparent which contributes to the feeling of natural surveillance. Some remarks that were made regarding the ground floor apartments is that they have terraces with a lot of insight and limited privacy (see figure 5.5). However, the terraces are facing the inside of the neighborhood instead of towards the open road and walking path, which gives more privacy. Another remark that was made during the observation was that the main road, which has a rather high speed limit, is closely located to Kvibergs Ängar. Therefore, caution needs to be taken when driving in and out of the neighborhood since the overview of the road is limited. Because the other side of the road consists of a kindergarten and a middle school, the road could be of danger for young children crossing the road unsupervised. The inner courtyard is designed to give the possibility for car traffic which does not create an inviting atmosphere. In addition, there is lack of meeting places for socializing which does not encourage neighbours to interact with each other. However, the inner courtyard is well-equipped with lightning, especially the entryways which helps to increase the feeling of safety during nighttime.

Between Kvibergs Ängar and the river Säveån is the activity park which was one of the safety efforts made by the contractors. The activity park consists of a dog park, a ping-pong table, benches, a grill, an obstacle course, a pond and sunbeds. However, the grill was filled with litter and used as a garbage-bin, rather than for barbeque (see figure 5.6). Litter was spotted all around the activity area as well as in the pond, so the activity area requires more garbage-bins as well as more maintenance. The activity area had limited flow of people and the outdoor children's playground was disappointing as it was not especially creative or ascetically pleasing. As the activity park is closely located to Säveån, caution needs to be taken if children are left unsupervised. Overall, more lightning is needed as the activity park gets too dark during the evening which makes it feel unsafe.



Figure 5.5: *Terrace on bottom floor apartment.*



Figure 5.6: *Illustration of the garbage filled outdoor grill.*

Overall the activity park seemed limited in the diversity of functions. The activity park seems to be aimed more towards residents with dogs, rather than for residents with young children. It seems as if more attention has been given to creating the dog park than creating a playground suited for a wide age range. The grill, sunbeds and benches are probably not going to be used all year around. This is something that should have been taken into consideration when designing the park in order to keep a continuous flow of people all year around (see activity park in figure 5.7).



Figure 5.7: *The activity park in Kvibergs Ängar.*

A good attribute however to Kvibergs Ängar, as well as the district as a whole, is the new grocery store Lidl. Up until now, the closest grocery store has been located in Bellevue in Gamlestaden, which is too far of a walk from Kviberg and requires transportation to get there. Also, the new gym in Kvibergs Ängar creates a constant flow of people within the area.

5.2 Questionnaire

This chapter presents the results of the questionnaire that was sent to 3 housing associations in Kviberg: Kvibergs Entré, Kvibergs Ängar and SGS Studentbostäder. Quantitative results are presented in graphical form and qualitative data is used to help understand those results. The questions in the questionnaire are arranged from general to specific questions and are grouped according to their content, as follows: 'General questions', 'Your neighborhood' and 'Kviberg area'. The results from the questionnaire are presented in the same format. For further details on the design of

the questionnaire, see Appendix B.

As particular safety efforts have been implemented in the neighbourhood 'Kvibergs Ängar', the main focus of this chapter will be on the results from respondents from the housing association 'Kvibergs Ängar'. The reason for this is to be able to fully examine the influence that the contractors safety efforts have on neighbourhood safety.

5.2.1 General questions

The total number of respondents were 88. Of these, 38 live in Area 1 and 2 in the SGS student accommodations. Almost as many (35 respondents) live in Area 7 in the neighbourhood 'Kvibergs Entré'. The rest of the respondents (15 respondents) live in Area 8 in the neighbourhood 'Kvibergs Ängar' (see figure 5.8).

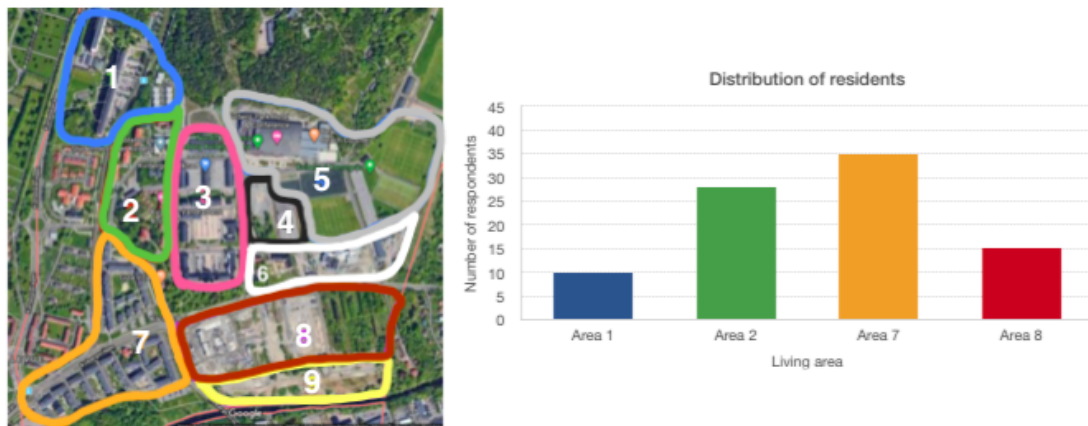


Figure 5.8: Map of Kviberg, divided into 9 different areas. Respondents live in Areas 1, 2, 7 and 8 as shown in the bar chart on the right.

Figure 5.9 illustrates the age and gender distribution among all respondents. Females are over-represented in this questionnaire. Total of female are 55 which equals to 63% while total of male are 30 which only equals to 34%. A small percentage of respondents, 3%, corresponds to the category 'Other' which in this questionnaire represents those who identify as neither male nor female. A substantial part of respondents are young adults which are people ranging in age from their late teens to their early twenties, i.e. age group 18-25. The majority of respondents, however, are adults in the age group 26-35. Seniors are widely underrepresented as only 5 respondents are 66 years or older.

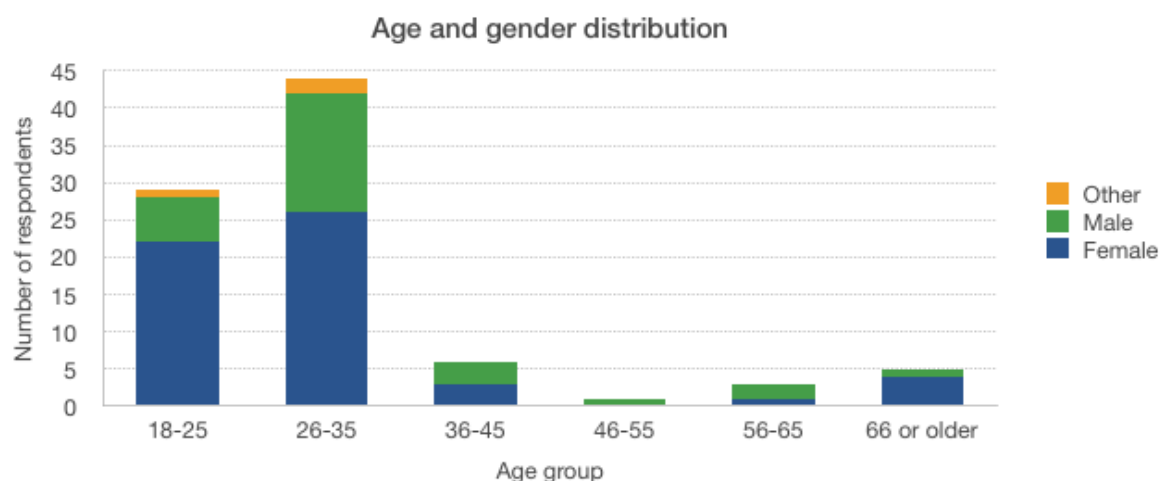


Figure 5.9: *Age and gender distribution among respondents.*

A comparison of these figures with the total population of Kviberg, shows that the figures give a fair view of the population in terms of age and gender. Young students make up the largest proportion of residents in Kviberg. 57% of residents are women and 42% are men. The proportion of seniors (2%) is low, which explains why seniors are underrepresented.

Interestingly, the gender distribution among respondents from the housing association 'Kvibergs Ängar' is much more balanced than in the other two housing associations. As women and men perceive safety differently, a balanced gender distribution provides a more comprehensive understanding of how safety is perceived in an area. The majority of respondents fall into the age group 26-35. Only 1 senior, among 5 senior respondents in total, lives in this area.

The size of apartments in 'Kvibergs Entré' and 'Kvibergs Ängar' varies greatly from SGS student accommodations. Number of rooms per apartment in 'Kvibergs Ängar' varies from 1-4 with a floor space of 38,5-97 square metres. Number of rooms per apartment in 'Kvibergs Entré' is 1-5 with a floor space of 33,5-199 square metres. Number of rooms per student apartment is 1-3 with a floor space of 18-56 square metres. This information explains why almost half of total respondents reported that they live in a Single-person household. As for the rest of the respondents, a large number live in pairs without children. 2 respondents are senior and live in pair and 2 live alone. Among respondents who live in 'Kvibergs Ängar', just over half of respondents are single and live either alone or in pairs with children (see figure 5.10).

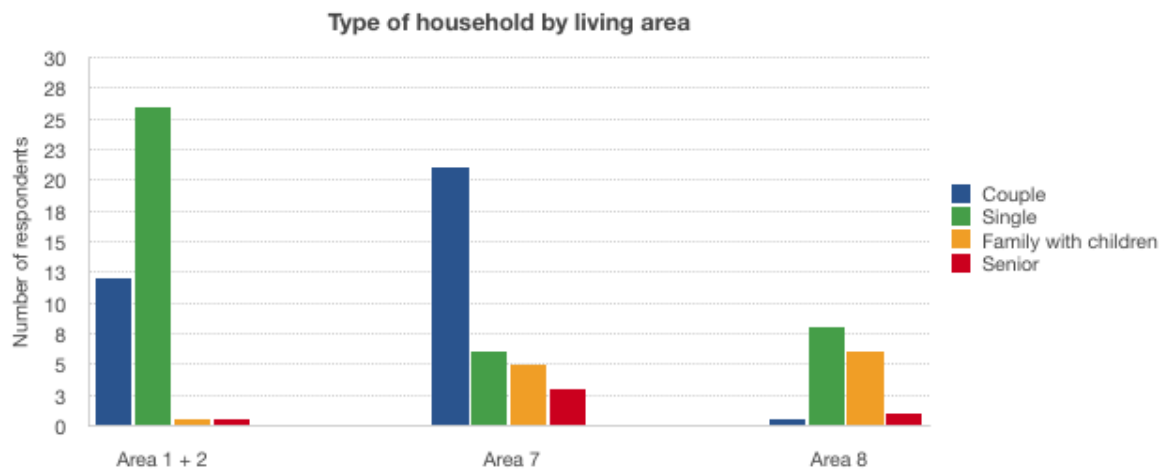


Figure 5.10: *Type of household among respondents, by living area.*

In order to get an overview of residents daily moving patterns, respondents were asked questions about their employment and main mode of transport. Figure 5.11 and Figure 5.12 show the preferred mode of transport and the current employment situation among respondents. As can be seen in Figure 5.11, public transport is by far the most common way to get around. When asked an open-ended question on why respondents choose this particular mode of transport, most respondents answered that it is the easiest and most efficient way to get around in Kviberg as there are good transport links in the area. Students who live in Area 1 and 2 account for the largest part of those who use public transport. However, this mode of transport is popular among residents in 'Kvibergs Entré' as well. Only 15 respondents travel by car. Among these, as many as 10 respondents live in 'Kvibergs Ängar' and use car on the ground that it is more comfortable.

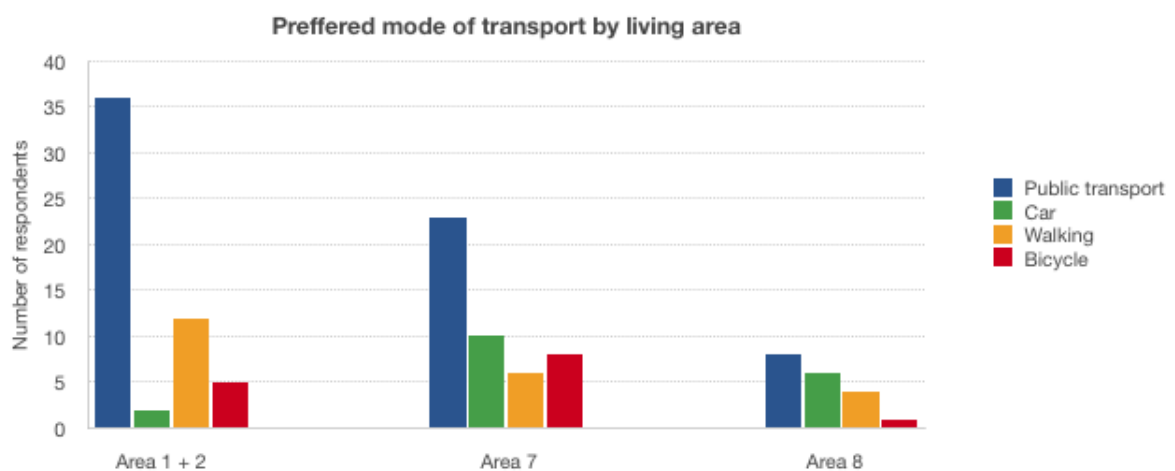


Figure 5.11: *Preferred mode of transport among respondents, by living area.*

Putting respondents commuting patterns in relation to their current employment situation, gives an overview of in which areas respondents move around at a daily basis and at which time of the day. figure 5.12 shows the current employment situation among respondents. Among respondents who live in Area 1, 2 and 7, public transport is the main daily mode of transportation and the majority either study or work full time in the city centre. As tram and bus stops are located in all 3 areas, respondents are mostly active in these areas, especially in the morning and afternoon when going to and back from school or work. At the same time, public transport in these areas generates around-the-clock flows of pedestrians and people who stay in the area while waiting for the bus or tram. Among respondents who live in area 8, the majority travel by car and work full time, thus most activity in the area takes place during the morning and afternoon when respondents go to and from work.

An explanation on why respondents commuting patterns differ so greatly between Area 8 and Areas 1, 2 and 7 might be that Area 8 is located much further away from public transport links than the 3 other areas. Another explanation might be that there are differences in social class between residents in the different areas. Apartments in Area 1 and 2 are rentals whereas apartments in Area 7 and 8 are owner-occupied, where those in Area 8 are more expensive per square metre than those in Area 7.

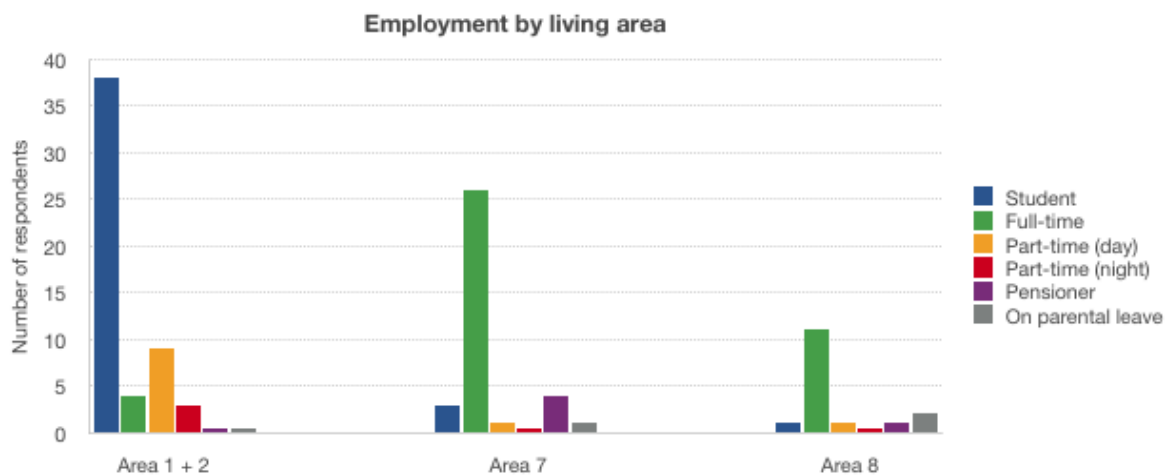


Figure 5.12: *Current employment situation among respondents, by living area.*

5.2.2 Your neighbourhood

In the second part of the questionnaire, respondents were asked open-ended and multiple-choice questions on how they perceive safety in their own neighbourhood and which physical, social and functional aspects they like and do not like about it. The results are presented below in the form of 'question-and-answer'.

5.2.2.1 What area do you live in and why?

To better understand why people choose to live where they do, and how these preferences differ between places and people, respondents were asked to specify why they chose to live in their neighbourhood. They were given a multiple choice question with 8 alternatives. The results show that people have strong preferences that underpin their residential decisions.

As shown in figure 5.13, 'central location' was one of the most commonly selected reason for why residents in Area 7 and Area 8 chose to live in their neighbourhood. Among students in Area 1 and Area 2, the main reason was that it was the only housing option available. 'Affordable' was second and 'Good public transport' was third. Only 6 respondents answered that 'Safe neighbourhood' is a reason why they chose to live in their neighbourhood.

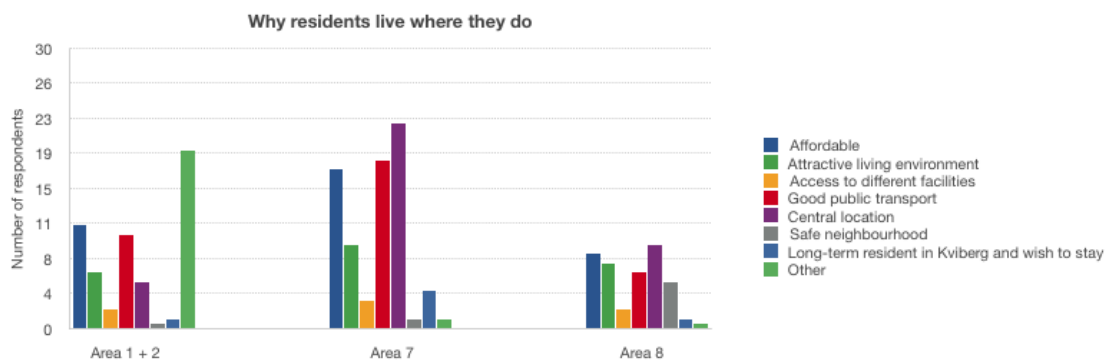


Figure 5.13: *Reasons why respondents live in their neighbourhood, by living area.*

In addition, respondents were asked an open-ended question about how long they think they will stay in their neighbourhood. The 2 most frequent answers were '1-3 years' and '5-10 years'. Those who responded '1-3 years' plan to stay in their home for a short time period for different reasons. The three main reasons are as follows: 'neighbourhood feels unsafe', 'student and have to move out when I finish my studies' and 'too small living space for a growing family'. Among those who responded '5-10 years', all respondents enjoy living in the area but do not see it as a permanent residence as it is not possible to buy houses in the area. Only 7 respondents see their neighbourhood as a permanent residence.

Among respondents who live in 'Kvibergs Ängar', 'central location' was also one of the most commonly selected reason for why residents chose to live in this neighbourhood. 'Attractive environment' and 'affordable' share second place. Among the 6 respondents in total who answered 'Safe neighbourhood' in the questionnaire, 5 live in 'Kvibergs Ängar'. A majority of respondents do not see their home in

'Kvibergs Ängar' as a permanent residence although they enjoy living in the area. The main reason for this is that the size of housing is too small for a growing family.

5.2.2.2 How safe do you feel in your neighbourhood daytime versus nighttime?

Respondents were required to rate the perceived safety of their neighbourhood using a 5-point rating scale (1 = very unsafe; 2 = somewhat unsafe; 3 = neutral; 4 = somewhat safe; 5 = very safe). As shown in figure 5.14, most respondents reported feeling safe during the day, while just under one-seventh (12 respondents) feel safe at night. Only one-eighth (11 respondents) feel neutral or somewhat unsafe during daytime. There are no major differences in how respondents perceive safety in the different neighbourhoods during daytime.

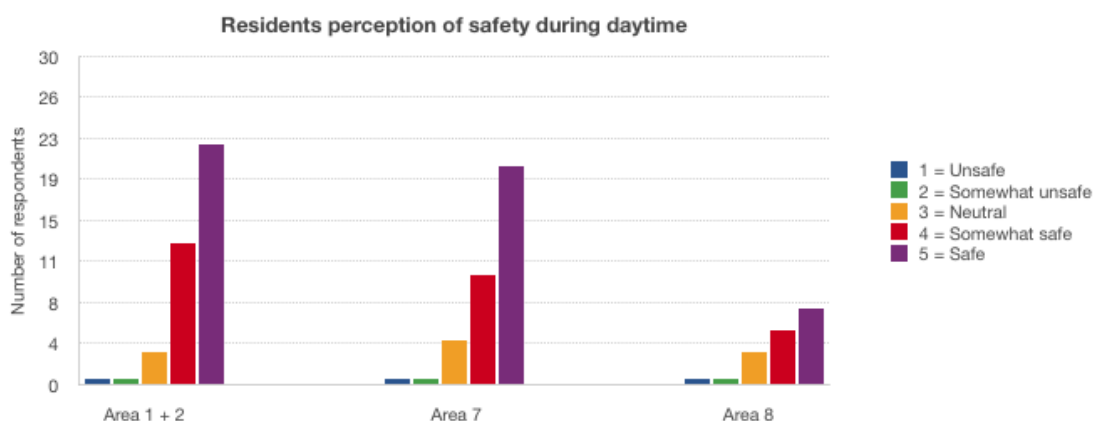


Figure 5.14: *How respondents perceive neighbourhood safety during daytime.*

This contrasts with respondents perception of safety at night as illustrated in figure 5.15. Although just under half of respondents (38 respondents) feel safe or somewhat safe at nighttime, almost as many feel somewhat unsafe or very unsafe (32 respondents). Respondents who live in Area 1 and Area 2 in general feel much more unsafe than residents in Area 7 and Area 8.

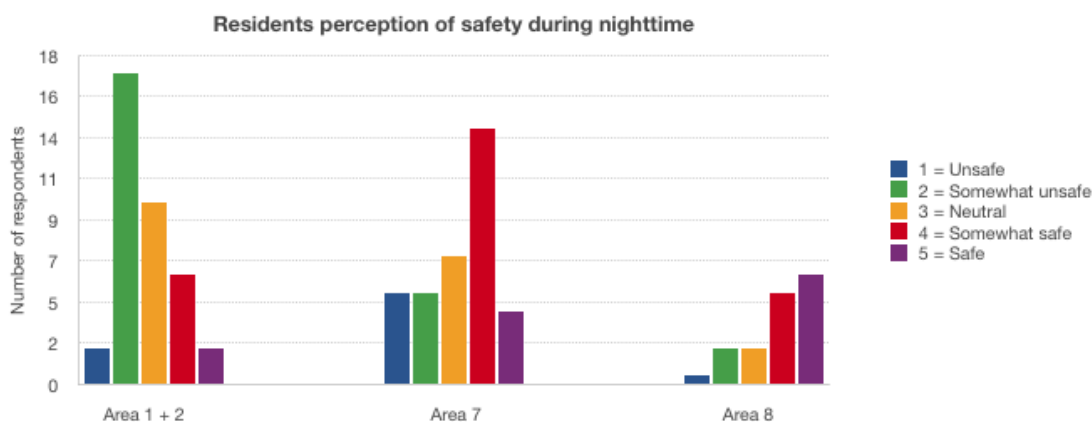


Figure 5.15: *How respondents perceive neighbourhood safety during nighttime.*

There is also a clear correlation between perceived neighbourhood safety and gender (see figure 5.16). Not a single respondent feels somewhat unsafe or very unsafe during the daytime. Among respondents who answered that they feel somewhat unsafe or very unsafe at nighttime, a majority are female (20 out of 29 respondents). This indicates that women in general are much more likely to feel unsafe in their neighbourhood than men, especially younger women in the age group 18-25 and adults in the age group 26-35.

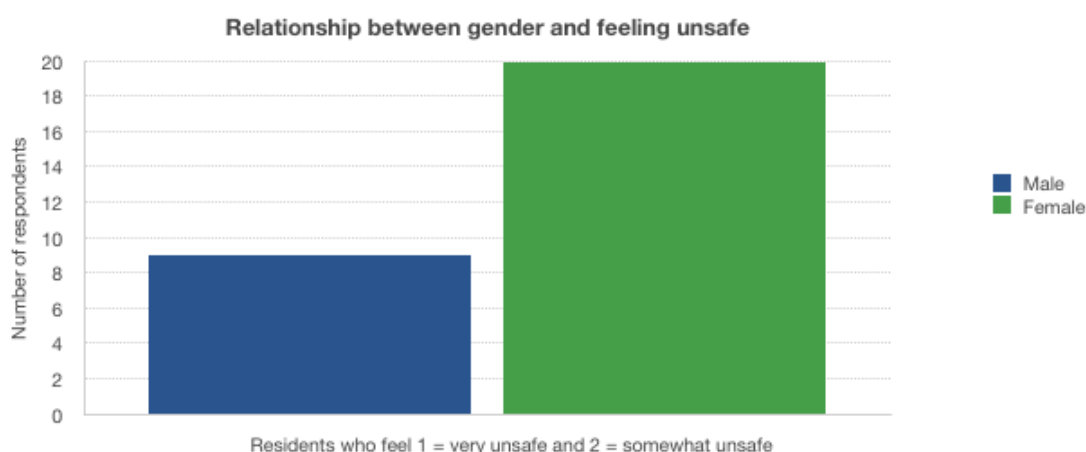


Figure 5.16: *Gender differences in perceived safety during nighttime.*

Among respondents from 'Kvibergs Ängar', almost all respondents reported feeling very safe or somewhat safe during the day (12 out of 15) and almost equally as many (11 out of 15) feel very safe or somewhat safe at night. No respondents reported

feeling unsafe during daytime and only 2 reported feeling somewhat unsafe at night. As mentioned previously, the results from the questionnaire show that women in general are much more likely to feel unsafe in their neighbourhood than men. This is also the case with those living in 'Kvibergs Ängar'. Only women reported feeling somewhat unsafe in their neighbourhood at nighttime, both of them in the age group 26-35.

5.2.2.3 What are your favorite and least favorite aspects of your neighbourhood?

To get an overview of which aspects within the built environment are value-adding and which may adversely affect on well-being, respondents were asked for their favourite and least favorite aspects of their neighbourhood. Respondents were able to choose answers from a list of choices as well as pick the alternative 'Other' and write their own answer in an additional open-ended text format.

Respondents 3 favourite aspects of their neighbourhood are: 'Access to public transport', 'Access to different facilities' and 'Physical layout' (see figure 5.17). Approximately one-fifth of respondents (18 respondents) answered 'Other' and answered that they especially appreciate the closeness to natural areas, areas of greenery and facilities intended for sports and recreation.

In general, residents in all areas mostly appreciate the access to public transport' however, interestingly, residents in 'Kvibergs Ängar' live further away from public transport links in comparison to the other respondents and also tend to choose car over public transport. In addition, residents in 'Kvibergs Ängar' seem to appreciate the 'physical layout and design' to a larger extent than other respondents do.

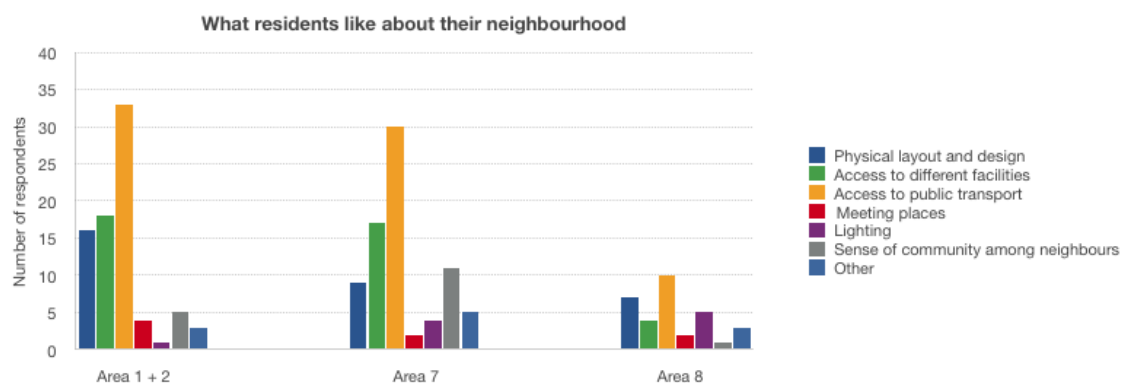


Figure 5.17: *Favorite aspects of neighbourhood.*

When it comes to respondents least favourite aspects of their neighbourhood, a majority picked the alternative 'Other' and mentioned several things, including: 'drug trafficking', 'crime', 'people who come to disturb' and 'Kvibergs market'. Other less appreciated aspects are: 'Poor lighting', 'Lack of social meeting places' and

'Physical barriers to surrounding areas' (see figure 5.18).

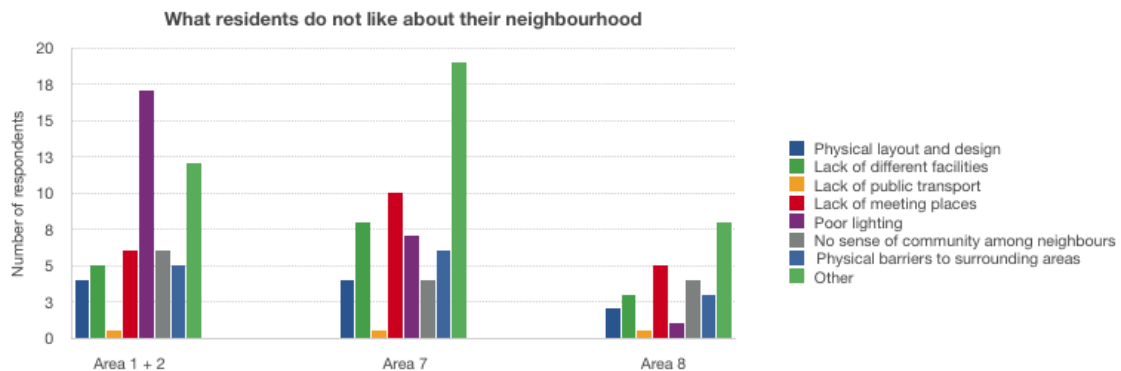


Figure 5.18: *Least favorite aspects of neighbourhood.*

Among respondents from 'Kvibergs Ängar', the 2 best aspects of their neighbourhood, besides 'Access to public transport', are: 'Physical layout and design' and 'Lighting'. Among some of the least favorite aspects are: 'Lack of social meeting places' and 'No sense of community among neighbours'. 9 out of 15 respondents also chose the alternative 'Other' and several of them mentioned that they are dissatisfied with their courtyard as it does not encourage social interaction among neighbours, it lacks a children's play area and is designed to encourage cars to enter.

5.2.2.4 If you feel unsafe, why?

Respondents who reported feeling somewhat unsafe or very unsafe in their neighbourhood, either at daytime or nighttime, do not feel safe for a number of reasons. Two factors stand out as being the reason why respondents feel unsafe: 'People who come to disturb' and 'Vandalism' (see figure 5.19). Examples of disturbance include theft, robbery and people who sell narcotics.

As for respondents who live in 'Kvibergs Ängar', not a single respondent feels unsafe during daytime. However, respondents answered that they feel somewhat unsafe during nighttime, mostly because their neighbourhood is desolate, non-residents come to their neighbourhood to disturb and that there is no sense of community among neighbours.

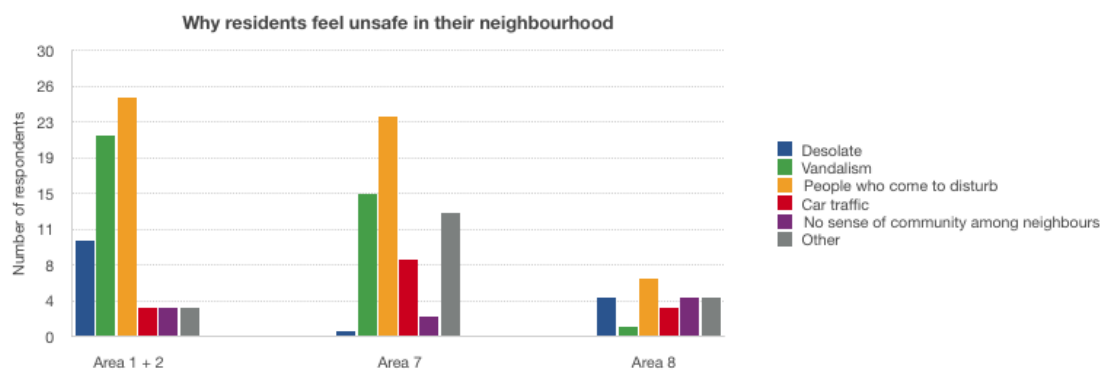


Figure 5.19: *Reasons why residents feel somewhat unsafe or very unsafe in their neighbourhood.*

5.2.2.5 What would you add in your neighbourhood to make it feel more safe and attractive?

There are many neighborhood characteristics that can be improved in order to increase the sense of safety and enhance the overall appearance in all 4 neighbourhoods. Respondents were given the opportunity to clarify what improvements and changes could be made in their neighbourhood, in open text format, such that they could answer based on their own knowledge, feeling, and understanding. Table 5.1 shows which place qualities respondents would like to add or remove.

Table 5.1: *Place qualities requested to be added or removed in order to make neighbourhoods in Kviberg feel more safe and attractive.*

Place qualities for increased safety	Place qualities for enhanced attractiveness
Lighting in public spaces	Shops, cafes and restaurants
Surveillance by police or guards at night	Common areas for socializing
Camera monitoring at entrances and public spaces	Plants and greenery
Gates/roadblocks into residential area	Playgrounds
Remove 'Kvibergs market'	Garbage bins
Activity and motion, especially at evenings and nighttime	Activity areas and pedestrian paths

The majority of respondents stated that the current lighting is poor, especially in public spaces such as parking lots, courtyards and streets. Spaces like these are usually much more desolate at evenings and night than at day. Therefore, residents

would like more lighting to make their neighbourhood feel more safe during night-time. In addition, several respondents expressed a desire for more surveillance at night, either by adding camera monitoring at entrances and public spaces or having police surveillance and security guards. The reason for this is there is very little sign of any human activity at night. At the same time, drug trafficking takes place daily and openly and at weekends, the 'Kviberg market' attracts people who cause disturbance. To prevent non-residents like these to enter residential areas, the majority of respondents expressed a desire to have gates into their residential areas or fences around it.

Respondents also express a dissatisfaction with the overall appearance and practicality of their neighbourhoods. For example, as shown in table 5.1, adding more seating areas, playgrounds and activity areas would help in the socialisation of neighbours whereas adding shops, cafes and restaurants would create much more movement throughout the day. To make the neighbourhoods more inviting, a majority of respondents suggest adding more plants and greenery and garbage bins.

Only 14 respondents stated that they would not want to add or remove anything to make their neighbourhood feel more safe. Only 6 respondents stated that they are satisfied with their neighbourhood as it is and do not think that anything needs to be changed to make it more attractive.

Residents who live in 'Kvibergs Ängar' answered that in order to feel more safe in their neighbourhood, they would like to add gates or roadblocks into their residential area to prevent undesirable traffic and to stop non-residents from entering, largely due to fear of crime or people causing disturbance. 5 residents stated that they would not want to add or remove anything to make their neighbourhood feel more safe. To make the area more attractive, the majority of respondents stated that they would like to add shops, cafes and restaurants, more plants and greenery and a playground with seating areas. Only 3 residents answered that they are satisfied with their neighbourhood as it is and do not think that anything needs to be changed to make it more attractive.

5.2.3 Kviberg area

In the third part of the questionnaire, respondents were asked open-ended and multiple-choice questions on how they perceive safety in Kviberg and the different areas in the district. They were also asked to specify which physical, social and functional aspects they would like to add, remove or change in order to make Kviberg feel more safe, inviting and attractive. The results are presented below in the form of 'question-and-answer'.

5.2.3.1 Do you deliberately avoid any area (s) and if so, why?

The way people perceive space determines the way space is used. One of the major factors that influences people's behavior is the sense of safety. If people feel unsafe in an area, the behavior of people and sense of comfort is changed. This is clearly

displayed by the answers in this question as a total of 44 respondent, one-half of total respondents, stated that they intentionally avoid some areas of Kviberg, especially at night, because they are desolate and thus feel unsafe. In general, respondents feel much more safe in their own neighbourhood than in other areas of Kviberg.

The 3 main areas that respondents avoid are Area 1, 2 and 4 (see map in figure 5.8 for reference). As shown in figure 5.20, the main reasons for this are unknown as respondents, in this case, did not chose to exemplify why. Two other reasons are that they are desolate and attract people who come to disturb. This explains why so many residents express the desire to have more social areas such as restaurants, shops and cafes as well as more lighting.

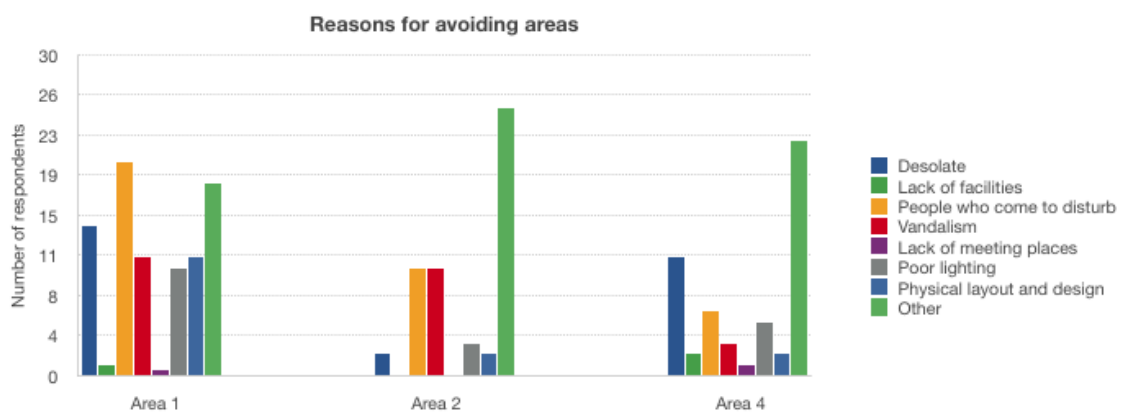


Figure 5.20: *Illustration of what areas residents avoid and why.*

5.2.3.2 What would you add in Kviberg to make it feel more safe and attractive?

Respondents answers to this question are in line with their answers to the same question applied to their own neighbourhood, both in terms of measures to increase safety and measures to enhance urban attractiveness. Only 13 respondents answered that they feel safe as it is and 7 respondents answered that enhancing the attractiveness and quality of the urban is not needed as Kviberg is fine as it is. table 5.1 shows which place qualities respondents would like to add or remove.

Table 5.2: *Place qualities requested to be added or removed in order to make Kviberg feel more safe and attractive.*

Place qualities for increased safety	Place qualities for enhanced attractiveness
Lighting in public spaces	Shops, cafes and restaurants
Surveillance by police or guards at night	Common areas for socializing
Camera monitoring at entrances and public spaces	Plants and greenery
Gates/roadblocks into residential area	Playgrounds
Remove 'Kvibergs market'	Trashcans
Activity and motion, especially at evenings and nighttime	Activity areas and pedestrian paths

5.3 Interviews

5.3.1 An overview of actors interviewed

Figure 5.21 illustrates the companies and organisations that were interviewed for this study. In the left circle are the actors which are active in Kviberg and Kvibergs Ängar. In the right circle are the organisations that in general work with safety in urban areas. The results from the interviews with the different actors are presented in the sections below. For more detailed information on companies and organisations, see table C in Appendix A.

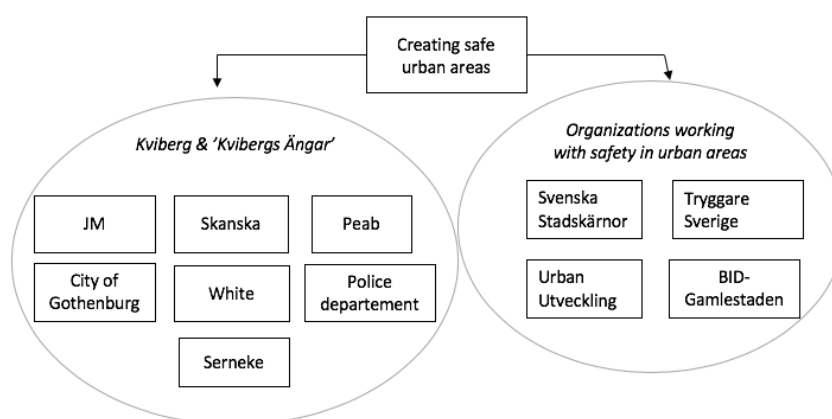


Figure 5.21: *Overview of the companies/organisations that were interviewed*

5.3.2 Creating safe urban areas

As described by ‘White A’ (personal communication, 17 Mars, 2020), safety is connected to many sociocultural structures and related to gender, age and background. Understanding the sociocultural aspects is of great importance in order to create a safe environment for people to reside in. However, there is no recipe to follow for how to make urban areas safe as each individual has their own perception of safety. One’s own experience and perception of safety shapes how the environment is perceived. However, the planning and design process does not take into account different needs and interests, resulting in safety solutions that are not suitable for everyone. It is therefore important to challenge this type of approach when new construction is to be carried out.

The importance of integrating safety within the built environment is also highlighted by ‘Tryggare Sverige A’ (personal communication, 3 Mars, 2020). ‘Tryggare Sverige A’ argues that the architecture of streets, neighbourhoods and buildings in Sweden contributes to criminal activity as it creates segregation and does not encourage social interaction. When the Million Program was implemented in Sweden, small scale suburbs were replaced by activity based suburbs, known as ABC-cities. These acted almost as a city, designed to offer its residents everything they needed. However, the enclosed design of the complexes has led to social segregation, crime and poor quality of urban environment. This has over time led to an increased fear of crime amongst residents, which in turn explains why recent Swedish crime surveys show an upward trend of the proportion of people who feel unsafe in the urban environment. At the same time, polarization between people is getting even stronger as living areas characterized as safe are getting even more safe and living areas characterized as unsafe are getting even more unsafe. For this reason, safety has become an important aspect of urban design. However, ‘Tryggare Sverige A’ stresses that contractors and other infrastructural planners do not have enough experience and knowledge and therefore need clear directions for how to create safer urban areas.

In contrast to ‘Tryggare Sverige A’, ‘BID-Gamlestaden A’ (personal communication, 13 Mars, 2020) argues that enclosed neighbourhoods are good and generate feelings of safety. ‘BID-Gamlestaden A’ is currently hired by the City of Gothenburg to help reverse the negative development in the district Gamlestaden, which has for a long time been characterized by high levels of crime and unsafety. According to ‘BID-Gamlestaden A’, enclosed neighbourhoods encourage people to use spaces more and to be more active which in turn has a positive impact on the feeling of safety. In addition, there is an increased demand for enclosed living spaces today. This is in line with what ‘Tryggare Sverige A’ mentioned as well, that contractors see an increasing trend where home buyers desire gated community living.

According to ‘BID-Gamlestaden A’ (personal communication, 13 Mars, 2020), to prevent the direction towards building gated communities, it would be better to build more to imitate the variety of city life. This can be done by for example building enclosed neighbourhoods close together and adding shops and restaurants

at street level in order to create more movement and natural surveillance. Also, it is important to make a more clear distinction between public and private space. Generally, in Swedish urban planning, it is not always clear whether a place is private or public which leads to people not using it at all or people claiming the area as their own. This in combination with poor maintenance of outdoor spaces, affects the feeling of safety negatively.

Both ‘Police A’ and ‘Police B’, who work with safety and crime issues in the eastern part of Gothenburg, consider that a typical mistake that is made when designing new construction is adding features that create entrapment spaces (personal communication, 18 Mars, 2020). Typical entrapment spaces are walls, bushes, tunnels, dark entrances and parking lots isolated from surrounding areas. Creating physical barriers such as gates and fences as a means to increase safety is not advocated by any of the police officers. The logic is simple: the more people in the streets, the safer they become. “Eyes on the street” provide informal surveillance of the urban environment. For residents to move safely through the streets, other people need to be present, contributing to an atmosphere of safety.

According to ‘Tryggare Sverige A’ (personal communication, 3 Mars 2020), precondition for creating safe urban areas is to explore how collaboration between different actors can improve public safety and wellness within communities. ‘Tryggare Sverige A’ stresses the importance of comprehensive strategies and community engagement in tackling social and safety issues and is a huge advocate for BIDs as a means for actors to collaborate. One of the biggest reasons why BIDs are important is that they allow actors to take concrete measures. As ‘Tryggare Sverige A’ sees it, Sweden has reached a point today where everyone agrees that there are major challenges related to safety and social sustainability. However, facing up to challenges can be so overwhelming that people become incapacitated. That is why collaboration within a defined area is so interesting because it enables collaboration between local actors such as property owners, the municipality, the police and traders. ‘BID-Gamlestaden A’ is in agreement with ‘Tryggare Sverige A’ and also highlights the benefits of collaboration models for urban development such as BID (personal communication, 13 Mars 2020). This platform provides the opportunity to do something concrete and work based on a holistic view of an area. Examples of concrete measures include to upgrade existing buildings and develop new ones, improving local management and encouraging local traders to make a genuine contribution to local development. ‘Tryggare Sverige A’ does not believe that dialogue with residents is the way to go to approach urban safety issues (personal communication, 3 Mars 2020). Although citizen involvement and dialogue is needed to understand local needs and wishes when developing urban areas, a belief that ordinary people in the suburbs know how to solve societal challenges is naive. Instead, the effects of the dialogues often end up fizzling out and do not lead to any concrete measures. Instead, city planners, contractors and other community building actors must have the courage to try new things and take risks when planning and designing urban areas and need to overcome the fear of failure.

5.3.3 Safety status in Kviberg

The perception of safety in Kviberg varies amongst the police officers that were interviewed. On one hand, if you were to ask ‘Police A’ (personal communication 18 Mars, 2020), Kviberg is described as a neighborhood where robbery and drug trafficking is a part of everyday life. On the other hand, the description given by ‘Police B’ (personal communication 18 Mars, 2020), is that Kviberg is not at all characterized by much crime. However, both police officers agree that it is primarily the lack of human activity that has been a contributing factor to Kviberg being perceived as unsafe. In area 1, Beväringsgatan, residents have put up wire fences in response to vandalism. Based on the high crime statistics in this area, there is a shared understanding of why steps are being taken in this direction. However, ‘Police B’ points out that a fence does not solve any problems. Therefore, one of the most important steps in creating safe neighborhoods is to integrate design features within the built environment that encourage human activity and socialization. Another important step, according to ‘Police B’, is neighbourhood diversity, meaning a mix of residents with different backgrounds and of different income levels.

Historically, Kviberg has been characterized by a high concentration of social issues but through new construction, a greater diversity of people has been achieved which helps to increase safety (personal communication 18 Mars, 2020). Also, as ‘BID-Gamlestaden A’ (personal communication, 13 Mars, 2020) points out, Kviberg has long been perceived as a bit peripheral and has not been paid much attention to until now. In the context of Kviberg, ‘BID-Gamlestaden A’ considers that residential density is extremely low in the district which creates a disconnection between the different areas in Kviberg.

‘BID-Gamlestaden B’ (personal communication, 18 Mars, 2020) has conducted a walk-through in Kviberg to identify issues that need to be addressed in order to increase neighbourhood safety. Lack of pedestrian safety structures such as lighted walkways as well as poor maintenance of public spaces were identified as factors which contribute to feelings of unsafety in Kviberg. As described by ‘BID-Gamlestaden B’, the crime rate in Kviberg is nothing out of the ordinary. However, as confirmed by ‘Serneka A’ (personal communication, 18 Mars, 2020), as well as ‘City of Gothenburg C’ (personal communication, 5 Mars, 2020), there have been several threats made against the staff working at the hotel and gym in Prioritet Serneke Arena. Other issues surrounding the arena are young people vandalising the arena, which has resulted in cameras being installed around and inside the building.

‘City of gothenburg C’ (personal communication, 5 Mars, 2020) describes that a lot of actors in Kviberg are having to deal with the safety issues by themselves as residents have expressed a lot of concerns about the safety issues in different Facebook groups. Some of the concerns amongst residents include that the City of Gothenburg as well as the police department is not doing enough to solve safety problems in Kviberg. A lot of residents are especially having issues with the weekly flea market that occurs on Saturdays in Kvibergs Kaserne. When the flea market is open, the traffic is chaotic with people driving carelessly to and from the market.

5.3.4 Integrating safety in Kvibergs Ängar

As ‘Skanska D’ (personal communication, 30 Mars, 2020) points out, when integrating safety in the built environment there is a need for a so called “shared value” in order for the private sector to take on the responsibility of building in areas or districts that are characterized with a “bad” or “unsafe” reputation. By having a “shared value”, value can be created for the construction company from a business strategy point of view as well as for the society in terms of contributing to social sustainability. As stated by ‘Skanska D’, building in Kviberg was initially a business strategy as Skanska had already purchased the property there and the project Kvibergs Ängar would have happened regardless. However the focus on social sustainability and safety was strictly an own initiative from Skanska’s part as they wanted to create social value.

There are several tools that can be used when working with safety in urban development, one of them being SIA. However, based on Skanska D’s experience (personal communication, 30 Mars, 2020), a lot of this work ends up as “paper products” and does not lead to anything concrete. As stated by ‘City of Gothenburg D’ (personal communication, 30 Mars, 2020), demands are put on contractors to make an SIA for a project. However, as pointed out by ‘Skanska D’, it is unclear how the make sense of the outcomes of an SIA. Therefore Skanska has developed their own social sustainability model that was used in Kvibergs Ängar called “designing for societal benefit”. The way Skanska works with this model is that they create a sustainability plan that follows the project from start to finish. Aim and goals are set out, often consisting of one overall goal, followed by three focus areas, which are easier to follow, rather than setting up 18 goals with hundreds of pages where nothing gets dealt with. As a result of this model, social sustainability and value creation gets a central role in project development and the construction process.

As described by ‘Skanska D’ (personal communication, 30 Mars, 2020), Kvibergs Ängar is Skanska’s second construction project in Kviberg, the company has previous experience of building in the district. Some of the learning outcomes from previous projects was that more efforts should be put on the outdoor surroundings of the buildings such as the inner courtyards, as it contributes to safer and a more pleasant environment. The outcomes of this was an initiative from Skanska’s part to collaborate with different actors to improve the building environment in Kvibergs Ängar. Peab and JM were contacted to collaborate as they are building alongside Skanska’s project. Other actors that were also contacted by Skanska were police officers, architects and the City of Gothenburg, as Skanska believed it was important to gather a wide range of expertise to help them in their work with integrating safety in Kvibergs Ängar.

As ‘Skanska A’ points out (personal communication, 26 February, 2020), as part of creating a safe urban area it is important to have dialogues with residents in order to get an understanding of challenges and needs in the area. Skanska therefore invited residents to participate in the dialogues regarding what safety efforts could be done in Kvibergs Ängar. As confirmed by ‘City of Gothenburg C’ (personal com-

munication, 3 Mars, 2020), Skanska's focus on safety in Kvibergs Ängar has been exemplary. They have also been good at reaching out to other actors within the district and invited them to collaborate.

5.3.5 Safety efforts made in Kvibergs Ängar

The actors who attended the workshop were Skanska, Peab, JM, White, sporting associations, "parks and recreation" and residents currently living in Kviberg, as well as residents who are planning to move there. However as confirmed by Skanska, there was barely any response from the housing associations in Kviberg to join any type of dialogue or workshop to discuss potential safety measures in Kvibergs Ängar. Speculations from Skanska's part is that perhaps the housing associations felt like Kvibergs Ängar is located separately from the other parts of the district and therefore that it was not relevant to participate. As confirmed by Skanska, JM and Peab were however responsive and open to the ideas that were presented by Skanska and willing to collaborate as well as representatives from White and Parks and recreation.

As described by 'Skanska B' (personal communication, 3 Mars, 2020), safety efforts that were made as a result of the workshop and dialogues, were 'Kvibergsrundan' and the activity area by the river Säveån, which was equally financed by the three contractors as well as by funding from Boverket. As 'Skanska A' mentioned (personal communication, 26 February, 2020), in order to receive funding from Boverket, the contractors were required to have a dialogue with each other as well as with residents. 'Skanska A' believes that these types of demands are good as it moves the sustainability work forward and motivates contractors to contribute to social sustainability. In general, Kviberg has a long history of problems regarding drug trafficking, especially alongside the river Säveån by Kvibergs Ängar that has poor lighting and sight which has created a possibility for criminal activity to take place. This was the main purpose to why 'Kvibergsrundan' was created around the entire neighborhood in order to create continuous activity and flow of people around Kvibergs Ängar, both during daytime and nighttime.

As for the activity area, the impressions that were gathered from Skanska's dialogues with residents, was that residents desire more garbage bins and more seating areas. The problem with adding more seating areas according to 'Skanska A' (personal communication, 26 February, 2020) is that this allows the possibility for alcoholics to reside within the area. Another concern is that residents want the activity area to only be used by people living in Kvibergs Ängar. Some of the requests that were made by the residents moving to Kvibergs Ängar was to not put up signs which guide others to the activity area. However 'Skanska A' made it clear for the residents in Kvibergs Ängar that this is a public space that will be used by everyone that wishes to. However a concern from Skanska's part is that the housing associations in Kvibergs Ängar will not comply with these terms and be hostile towards non-residents using the activity area. The whole purpose of the activity area according to 'Skanska A' is to create a new meeting place for people in Kviberg were

neighbours can have a cup of coffee with each other and socialize in an environment that is safe for everyone regardless of age or gender.

'Skanska A' (personal communication, 26 February, 2020) also mentioned that the bottom floors were initially designed to be used for retail stores in order to create an increased flow of people in Kvibergs Ängar. However as expressed by 'Skanska B' and 'Skanska C' (personal communication, 3 Mars, 2020), there was no direct path leading up to Kvibergs Ängar and therefore it was decided to keep the bottom floors as residential apartments instead, but still with the possibility to change them in the future.

5.3.6 Challenges for creating socially sustainable and safe urban areas

One of the key barriers that hinder contractors to incorporate and consider social sustainability aspects to a greater extent when creating new urban areas is the detailed development plan. In the context of new construction in Kviberg, all contractors describe that the municipality did not leave much room for flexibility in Kviberg since they provided a strict detailed plan of the area. In Sweden, the municipalities have the main responsibility for physical planning, meaning they decide how land areas are to be used. The detailed development plan enables the municipality to regulate what the built environment is to look like in a particular area, for example how it is to be used and designed. As described by 'Peab A' (personal communication 10 Mars, 2020), in Kviberg, the detailed development plan regulates the development in great detail. So, placement of buildings, size and height, the location of parking lots and design of streets is beyond contractors power.

This barrier became clear during Skanska's workshop as the actors who attended the workshop felt that they were limited to make suggestions on how to increase safety in Kvibergs Ängar due to the detailed development plan where everything was pretty much decided. 'White A' (personal communication, 17 Mars, 2020) mentioned that actors from the workshop would have wanted to "go back in time" and make changes in the detailed development plan. Some of the changes would have been the design and placement of the buildings and putting more focus on the intermediate areas between each enclave to connected them. In order for Kvibergs Ängar to feel safe, the intermediate areas need to be connected to allow people, especially young children, to move around safely in the area. Therefore the enclaves should not have been designed to be so divided. 'Peab A' (personal communication, 10 Mars, 2020) considers that the detailed development plan for Kviberg is not very good as it does not allow for densification in the future. As it looks today, Kvibergs Ängar is divided into four enclaves which does not allow for additional buildings and this lack of flexibility to build more has been criticized. Both 'Peab A' and 'JM A' (personal communication, 6 Mars, 2020) mention that, based on market demand, there was a desire to add pavements and additional semi-detached houses but this was not possible due to the development detailed plan being too restrictive. Another issue discussed during the workshop was the traffic situation in the district.

Actors in Kvibergs Ängar all felt that the speed limit on the main road Kvibergsvägen is too high which makes it dangerous to enter and exit Kvibergs Ängar, as the entry and exit points lead up to the main road. This road is especially of concern as it is closely located to a school area across from Kvibergs Ängar. For residents living in Kvibergs Ängar, caution needs to be taken for young children to not cross the road unattended. 'Skanska B' (personal communication, 3 Mars, 2020) also mentioned that there is too much traffic activity within the enclaves which is also of danger for young children moving around the neighborhood unattended. The traffic within the district is something that they believe needs to be handled by the City of Gothenburg. Other challenges facing contractors today is that socially sustainable construction projects often involve more expenses. For example, not everyone agrees on adding extra safety features such as extra windows in storages for bicycles or adding more outdoor lighting, as it becomes an extra expense. Another matter of concern for all the contractors is that residents desire gated communities which is not in line with the principles of social sustainability.

Apart from safety issues in Kviberg, there are also problems with diversity. As 'JM A' (personal communication, 6 Mars, 2020) points out, when looking at the price trends in Kviberg, the price of new builds has doubled just in a couple of years as Kviberg is expanding. Even if the price of housing is high, more and more people are choosing to live in Kviberg. However, the majority of buyers are people who already live in Kviberg and want to upgrade their living conditions by moving from rental apartments to owner-occupied apartments. 'JM A' means that, although it is important to attract more people to Kviberg in general, it is also important to have a mix of people from different parts of the city in order to create more diversity and contribute to social sustainability. However, removing a dark corner of Gothenburg and building a nice residential area instead, is a contribution to social sustainability in itself. 'Skanska B' (personal communication, 3 Mars, 2020) also agrees that a mix of residents is of great importance within the district. Also, to mix rental apartments with owner-occupied apartments is a good thing, and gives people the possibility to upgrade their living conditions within the same area.

According to 'White A' (personal communication, 17 Mars, 2020), one of the learning outcomes from the workshop was the realization that these types of dialogues and workshops should have been conducted earlier in the process in order to have more impact on the outcomes. From the experience of 'Skanska D' (personal communication, 30 Mars, 2020), these types of collaborations and dialogues are rare within construction projects. 'Skanska D' expresses that less talk and more action is required. There are often good ambitions and desires when working with social sustainability but during collaborations with other actors it can become too complex and lead to loss of focus.

The City of Gothenburg had little part in the safety efforts in Kvibergs Ängar. According to 'Skanska B' (personal communication, 3 Mars, 2020), the City of Gothenburg has not had any focus regarding safety in Kviberg and has put no demands regarding social sustainability on the contractors. Instead, this was all

conducted on the contractors own initiative. However ‘Skanska B’ points out that this is not necessarily a negative thing as Peab, JM and Skanska have the same vision regarding safety. For the municipality it is all about negotiating for the lowest price and not prioritising the same things as the contractors and what the municipality is building is right below Skanska’s standards. According to ‘City of Gothenburg D’ (personal communication, 30 Mars, 2020), when the comprehensive and detailed development plan was conducted for Kvibergs Ängar the term or concept social sustainability did not even exist at the time and therefore the safety aspect was not taken into consideration. This has made it difficult for contractors to integrate safety measures in Kvibergs Ängar, due to the limitation and lack of flexibility in the detailed development plan. From the perspective of ‘JM A’ (personal communication, 6 Mars, 2020), the municipality still up to this day needs to become better at placing demands on social sustainability when new construction is to be carried out. However, just like Skanska B, ‘JM A’ argues that it is in contractors best interest to support social sustainability. However, social sustainability entails so many different aspects and this makes it difficult for contractors to measure and assess the outcomes of social sustainability efforts. Therefore, the municipality needs to place more demands in order to facilitate contractors work with social sustainability.

‘BID-Gamlestaden A’ (personal communication, 13 Mars, 2020) believes that there is a lot of ignorance in the matter of how to actually prevent the establishment of unsafe environments, both among municipalities and contractors. Further, it would be of great help if it was clearer in PBL how to incorporate safety measures into the built environment. However, an overlooked factor behind why places do not work is that nobody knows who is responsible for what in the in-between spaces. Improving social sustainability requires joint action, that is, finding common solutions. The municipality has an important role in this but it is important to clarify that it is not the municipality that should provide all the tools. The main responsibility lies with legislators to define common requirements at system level. There is only so much contractors, as well as other actors, can do.

From the perspective of ‘Tryggare Sverige A’ (personal communication, 3 Mars, 2020), Swedish municipalities have no legal responsibility today to work with crime prevention or take safety-enhancing measures in urban areas. In addition to this, municipalities lack the proper knowledge on how to work with these matters. Although municipalities are aware of the fact that Sweden faces big challenges related to social sustainability and safety, no concrete measures are taken. Much of the debate today is about solving safety-related problems with more territorial surveillance. In other words, issues are solved with quick-fixes and no one ever bothers to address the root of the problem. Therefore, ‘Tryggare Sverige A’ argues that the time has come to replace words with action and put legal responsibility on municipalities to ensure a socially sustainable urban development.

6

Discussion and analysis

6.1 How contractors can contribute to social sustainability by creating safe urban areas

The empirical findings demonstrate two things. First, social and built environment factors in urban design can affect residents feeling of safety and well-being, either in a positive or a negative way. Second, the design of an urban area and neighbourhood can favour inclusion or exclusion. These findings are directly in line with previous findings (Chen and Hong, 2014; Legeby, 2010) which show that the built environment is significantly correlated with people's perception of safety and that physical separation between people has a direct relationship to how cities are shaped and structured by built form. Further, as results from the questionnaire show, "sense of community" and "feeling of safety in the built environment" are two factors that influence well-being for residents. This is also in line with what has been argued in previous research (Dempsey et al., 2009). These findings, together with the notion that contractors have the opportunity to influence urban development, bring to light an interesting fact - contractors can promote social sustainability by building safe urban areas.

In the context of Kviberg, results from the questionnaire clearly show that place qualities in the built environment are important for how people perceive and use space. Place qualities such as access to different facilities, the layout and design of buildings, lighting and meeting places for socialization, add value to a neighbourhood and increase the feeling of safety as they encourage the use of outdoor space. In contrast, a lack of these place qualities leads to the exact opposite. These results are in line with previous findings (Carmona, 2019) which also suggest that place qualities, such as those mentioned, are associated with a strong positive association in terms of place value. Interestingly, residents perception of areas surrounding their neighbourhood does not seem to be influenced by how they perceive their own neighbourhood. This is clearly demonstrated by the results from the questionnaire which show that residents in Kvibergs Ängar feel safe in their own neighbourhood but not as safe in the rest of Kviberg and therefore intentionally avoid some areas.

Another finding from the questionnaire is that residents in Kvibergs Ängar, who in general feel much more safe than other residents in Kviberg, express a strong desire to keep out non-residents from their neighbourhood. For example, exclusionary measures such as gates, fences and roadblocks were suggested to be added to the

enclaves to isolate them from the surrounding areas - all similar measures to those in gated communities. In addition, residents expressed that they did not want to have visible signs leading to the activity area. In the context of creating safe and socially sustainable urban areas, residential enclaves appear as contrary to social sustainability since they seem to create separation between residents. Furthermore, as confirmed by results from the interviews and observations, the different areas in Kviberg are poorly connected. There are several reasons for this. First, housing developments in Kviberg have been designed in such a way as to fit into a system designed for cars. Housing developments have been laid out around the main road, Kvibergsvägen, without consideration of the spaces that are created between the individual housing units. This road creates a barrier effect between the neighborhoods on either side of it and makes it difficult for other modes of transport to fit into the system. In addition, due to low densification, the connectivity between neighborhoods is reduced as there are long distances between them. Although important to note that Kviberg is still under construction, there appears to be no intention to change the way it is to be developed given the strict detailed development plan. As illustrated by the results from the questionnaire as well as by previous findings (Pol et al., 2006), physical barriers have a negative effect on the feeling of safety and this has an impact on people's moving patterns, such as avoiding certain areas, which is also the case in Kviberg.

This also raises a concern about whether Kviberg reflects the character and values of social sustainability. If going back to the two fundamental elements of social sustainability, "sense of community" and "feeling of safety in the built environment" (Dempsey et al., 2009), these are obviously lacking in Kviberg. From this standpoint, safety efforts like those made by contractors in Kviberg, seem to be successful in terms of increasing safety in a single neighbourhood but not enough to change an entire district into a safer and more socially sustainable urban area.

These findings cast light on several interesting things. First, it is clearly important for different areas in a district to be connected and urban design must reflect this in order for people to feel safe and engage with each other. This can be done by for example densification which has been highlighted by several interviewees as well as by previous studies (Boverket, 2017b) wherein densification is presented as something good for social sustainability as it increases access to different activities and the likelihood of spontaneous encounters, thus connecting different parts and people. Another interesting finding is that a socially sustainable urban development cannot be achieved by doing a single intervention. In the context of Kvibergs Ängar, although contractors were able to increase neighbourhood safety as a result of the safety efforts that were made, the overall design of the urban environment in Kviberg does not help to create a safe urban area or promote social sustainability. It is not enough to do a single intervention in a secluded place in order to make an entire urban area feel more safe. In other words, contractors can only do so much and cannot address issues related to social sustainability alone.

6.2 The outcomes of the contractors safety efforts in Kvibergs Ängar

The results from the study demonstrate that the contractors safety efforts in Kvibergs Ängar were good in theory, but in reality did not meet the expectations of the residents in Kvibergs Ängar. Considering that the contractors had several workshops with different actors, as well as with residents in Kvibergs Ängar, one would have hoped for a better outcome. Based on the results, it is clear that the contractors embraced the suggestions made by the residents and were willing to add certain elements to the neighborhood to meet the needs of the people moving there. Having dialogues was a good way for the contractors to create cohesion amongst the people moving to Kvibergs Ängar. However, the results show that residents in Kvibergs Ängar still lack a sense of community and that the feeling of safety varies tremendously amongst residents from different areas within Kviberg. As for the collaboration between the different actors in Kvibergs Ängar, this was a good initiative from Skanska's part to gather actors to work together towards the same goal. It is invigorating to see contractors, that are typically "rivals", come together and work together. This type of collaboration amongst contractors does not seem to be common in the construction industry.

In theory, the activity park was a great attribute to the area as it enables residents to have a mutual space to use in their neighborhood. However, the enclosed enclaves limit residents from interacting with people outside of the enclaves. The activity area is therefore a way of giving residents the opportunity to share a common space, which contributes to more cohesion amongst neighbors. However, the results from the observations show that the activity park, as well as 'Kvibergsrundan' were barely used. This is also confirmed in the results from the survey which show that residents in Kvibergs Ängar still desire a mutual space to share with others. So, even if the initial purpose of the activity park was to give residents a mutual space to reside in, this does not seem to be the outcome.

The results from the observations also show that the activity park is not targeted to be used by a wide range of people, which is also shown in the results from the survey, as residents desire more playgrounds, which was supposedly one of the elements added to the activity park. This leads to one questioning the success of the dialogues between the residents and the contractors. Residents clearly still desire a lot of qualities to the area, which were supposedly taken into consideration by the contractors during the dialogues. However, even though the activity park is finished, residents are still lacking a lot of qualities within the area.

As was seen from the observations of the activity park, the lack of maintenance could also be a contributing factor to why it is not being used to a greater extent. The contractors have not maintained the area, which for example has resulted in the barbecue grill being used as a garbage bin instead. In order for residents to appreciate and want to use the activity park, contractors need to take their responsibility and maintain the area after it is finished as well as make sure that the safety

efforts live up to the residents expectations. As a consequence of the activity park not being used, there is a lack of sense of community in Kvibergs Ängar. As this is one of the fundamental elements of social sustainability, it is important to assure that residents feel a sense of community in their neighbourhood.

However, the overall results from the questionnaire confirm that residents living in Kvibergs Ängar feel safer within their neighborhood compared to other parts of Kviberg, which is an indication that the contractors safety efforts, to some extent, are successful in terms of increasing urban safety in Kvibergs Ängar.

When comparing the safety outcomes in Kvibergs Ängar to Skanska's safety model, some aspects of the model have been successfully achieved. For example, there is to some extent a mix of functions within Kvibergs Ängar, with a new grocery store, outdoor spaces as well as a gym. As for the lighting aspect, the inner courtyard is well-equipped with lighting but the activity park still requires more lighting. The aspect of the model that has not been successfully achieved is the part of creating natural meeting places with activity where people want to reside in. As the results from the questionnaire show, residents still lack mutual meeting places within their neighborhood. Another aspect of the safety model that has not been achieved is the maintenance part. As could be see from observing the area, there was a lot of debris in the activity park, thus giving a very poor overall impression of the activity park.

6.3 Challenges for contractors in Kvibergs Ängar

The results from the interviews show that one of the main challenges that contractors faced in Kvibergs Ängar was related to the detailed development plan. As mentioned previously, the detailed development plan was perceived as being to restrictive as it did not take into consideration the impact of the built environment on residents feeling of safety. Considering Kvibergs history of social issues, one might argue that it is essential to integrate more positive place qualities in the built environment in Kviberg. This view seems to be shared by contractors in Kvibergs Ängar as well. However, given the low residential density and the negligent attitude towards the intermediate spaces between neighbourhoods, safety has been an overlooked aspect in Kviberg.

In order to better understand and assess the underlying thought processes behind the development of Kviberg, there was an attempt to contact responsible parties from the City of Gothenburg. This proved to be very difficult as municipality representatives kept passing the responsibility back and forth between each other. Eventually, an interesting finding came to light which goes a long way to explaining the concerns and shortcomings with the development plan. As confirmed by 'The City of Gothenburg D' (personal communication 30 mars, 2020), at the time when the development plan for Kviberg was developed, the concept of social sustainability did not exist and tools such as SIA were not developed yet. This explains why the safety aspect was not a priority for urban planners in Kviberg. This finding also brings to attention one of the main deficiencies in the Swedish planning system, namely that by the

time the detailed development plan is finalized, it may not necessarily deal with the needs of the population destined to use the area. As the planning process goes on for some time, in Kviberg for as long as 20 years, society will inevitably change and with that, also residents social needs. In addition, the process of changing a detailed development plan is long which prolongs the process even further.

In the context of Kviberg and Kvibergs Ängar, contractors clearly expressed that they would have wanted to make alterations but were unable to make deviations from the detailed development plan. Skanska together with JM and Peab, consider, amongst other things, that the enclosed enclaves create a division between residents in Kvibergs Ängar. This was also confirmed by residents who expressed that there is no sense of community among neighbours and that the physical design and layout does not encourage socialization among neighbours. As for Kviberg in general, the entire district is divided and the residential areas are far too separated from each other, resulting in people not using the outdoor spaces as intended, which in turn leads to people feeling more unsafe. This, in combination with the crime rates in Kviberg, makes safety an important aspect of urban design. Likewise, what is a priority today may not have been a priority at the time that the development plan was compiled. From this standpoint, contractors should be given greater flexibility to make changes to the detailed development plan and adapt it to new conditions. Hopefully, this can help to encourage efforts to bring about change for the better in urban areas. In addition, it can help contractors shed light on urban issues which would otherwise have gone unnoticed. Although contractors were able to make the activity park on their own initiative, contractors are obviously given little room to act independently. It is also interesting to note that had it not been for the financial support that was given by Boverket, the activity park probably would not have been what it is today. This leads to another challenge that contractors face.

Representatives working with social sustainability at Skanska expressed that in general, a challenge of working with social sustainability is convincing project developers to add more features in the built environment as a means to, for example, add value to a neighbourhood or increase the feeling of safety. Different interests must be weighed against each other and, even though most are aware that for example adding more lightning contributes to residents feeling more safe, it is not always that such measures are taken as they add to the expense of the project. As a consequence, safety is overshadowed by other interests. This for example is clearly visible in Kvibergs Ängar where contractors decided to keep the bottom floors of the buildings as apartments instead of turning them into retail stores. Even though it was encouraged in the detailed development plan to have the bottom floors as retail stores to create more activity and flow of people within the enclaves, the contractors choose not to do so. In the questionnaire residents even expressed that they would have wanted retail stores in their neighborhood as it would add to the feeling of safety and attractiveness of their neighbourhood as well as the entire district. The way the bottom floor apartments are designed now, people who are passing by can see into the windows which gives residents no privacy and adds to the feeling of not feeling safe. In addition, as the results from the interviews show, Skanska was the

driving force behind the activity park and initiated the safety efforts for Kvibergs Ängar. Even though Peab and JM were open for all suggestions and participated equally in creating the activity park, as well as ‘Kvibergsrundan’, it was clear during the interviews with Peab and JM that they in general do not work as actively with social sustainability as Skanska does. It is not surprising that the social aspect such as safety tends to get relegated to the background considering that the concept has only recently started to get any serious attention in the sector. That does not mean, however, that contractors necessarily lack knowledge in social sustainability but that it quite simply has not been a top priority so far. This could have affected the outcomes of the efforts made, as Skanska was the driving force and Peab and JM “tagged along”. Another aspect however that needs to be taken into consideration is that Kvibergs Ängar is still under construction. It is therefore difficult to predict to what extent the activity park will be used in the future and if it will fulfill the needs of residents.

6.4 Opportunities for contractors to address social sustainability in construction projects

There are several opportunities for promoting social sustainability in urban development. As the empirical findings show, BID-inspired collaborations are a perfect example of how actors can collaborate locally and take concrete measures to improve an urban area. Local collaborations help actors to agree on collective goals and how to tackle problems associated with a specific area. They also help to connect different actors and encourage them to work together. By collaborating together, actors can mutually decide what they want to achieve and how to achieve it. A common agreement amongst the actors who join is set out where it is decided who is responsible for what, and who pays for what. This is important as results from the interviews, as well as the empirical data, made it very clear that actors in general have diverse opinions on how to increase urban safety and promote social sustainability. An additional advantage of local collaboration such as BID, is that it is not as limited in time as single projects usually are. Long-term collaboration like this extend the duration of contractors, as well as other actors, involvement in projects and forces them to adapt a more long-term approach to social sustainability.

Unfortunately, BID-collaborations are not legislated in Sweden. They can only be executed if actors mutually agree on entering collaborative agreements. Therefore, in order for a BID to work, each actor must be motivated to join it. Perhaps if more actors become familiarised with the term social sustainability and realise the importance and value of it, this could motivate more actors to work together and prioritize social aspects, such as urban safety, to a larger extent. Because, ultimately, everyone benefits from having a safe and more socially sustainable society.

In the context of the contractors collaboration in Kvibergs Ängar, it was not long-term which can have a negative impact in the sense that contractors may not be motivated to follow up their projects and measure the outcomes of their safety ef-

forts. As mentioned previously, contractors should also be given greater flexibility to make changes and alterations to the detailed development plan as it would hopefully help to encourage contractors to make more efforts to bring about change for the better in urban areas. In this context, the municipality plays an important role - not only by offering more flexibility but also by awarding a contract to the best bidder, instead of the lowest bidder. It is important to highlight the fact that there has to be an obligation on both parties, contractors and municipalities, to work actively to improve safety and social sustainability in urban areas. As results from this study suggest, this does not appear to be the case in Kviberg. Thus, one might argue that in order for contractors to be able to promote social sustainability to a greater extent, the quality of the relationship between contractors and the municipality needs to improve. For a successful collaboration, above all, a common picture of objectives is required, which could be obtained if the parties attempt to increase their understanding of each other's roles and driving forces.

7

Conclusions & Further research

7.1 Concluding remarks

In conclusion, this study argues that “sense of community” and “feeling of safety in the built environment” are two fundamental elements of social sustainability. In the context of Kviberg, results clearly show that place qualities in the built environment are important for how people perceive and use space and that they can either increase or reduce the feeling of safety.

Place qualities such as access to different facilities, the design and layout of buildings, lighting and meeting places add value to a neighbourhood and increase the feeling of safety as they encourage the use of outdoor space and socialization. On the other hand, enclosed neighbourhoods surrounded by physical barriers such as roads, parking lots and wide empty spaces, have a negative impact on residents feeling of safety and sense of community. By creating urban areas with positive place qualities like those mentioned, contractors can contribute to social sustainability. However, a prerequisite for safe and socially sustainable urban areas is connectivity between different areas within a district. In the context of Kvibergs Ängar, contractors could only do so much. Contractors cannot address issues related to social sustainability alone. Creating safe and inclusive urban areas requires shared responsibility and contribution of different actor.

The findings in this study show that one of the main challenges that contractors faced in Kvibergs Ängar was related to the detailed development plan. The detailed development plan was perceived as too restrictive as it did not give room for changes and did not take into consideration the impact of the built environment on residents feeling of safety. However, there are several opportunities for promoting social sustainability in urban development. BID-inspired collaborations are a perfect example of how actors can collaborate locally and take concrete measures to improve an urban area. Local collaborations help actors to agree on collective goals and how to tackle problems associated with a specific area.

Lastly, the findings show that project developers, in general, weigh different interest against each other and that not all measures that can contribute to urban safety are prioritized as they add to the expense of the project. As a consequence, safety is sometimes overshadowed by other interests.

7.2 Suggestions for further research

In this master thesis, the main focus has been on contractors role in creating safe urban areas as part of promoting a more socially sustainable urban development. However, there are other actors which also have an important role in promoting social sustainability. These are for example municipalities, which have the possibility to put social sustainability demands on contractors in the procurement process. Therefore, it would be interesting to look into the topic of social procurement and investigate how municipalities can impose more social demands on contractors and what these demands should be. It would also be interesting to further investigate how different collaboration models such as BID can encourage different actors to collaborate more and prioritize social sustainability to a greater extent.

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A

Appendix Checklist

Table A.1: *Checklist for observation.*

Qualities	Kviberg	Kvibergs Ängar
1. Mix of uses		
2. Density		
3. Connection to public transport		
4. Physical barriers		
5. Recreation		
6. Walkability		
7. Meeting places		
8. Type of buildings and residences		
9. Traffic		
10. Lighting		
11. Vandalism		
12. Flow of people		
13. Maintenance		
14. Built environment		

B

Appendix Questionnaire

ALLMÄNNA FRÅGOR:

1. Kön:
 - (a) Kvinna
 - (b) Man
 - (c) Annat
2. Ålder:
3. Hushåll (går att välja flera alternativ, ex om du är senior och bor i par, välj senior + par):
 - (a) Par
 - (b) Singel
 - (c) Barnfamilj
 - (d) Senior
4. Sysselsättning (går att välja flera alternativ):
 - (a) Studerar
 - (b) Arbetar heltid (dag)
 - (c) Arbetar deltid (kväll)
 - (d) Förädraledig
 - (e) Pensionär
5. Vilket transportsätt använder du dig främst av i din vardag?
 - (a) Bil
 - (b) Kollektivt
 - (c) Cykel
 - (d) Promenerar
6. Varför väljer du just detta transportsätt?

DITT BOSTADSOMRÅDE:

1. Vilket område bor du i? (se karta)
 - (a) 1
 - (b) 2
 - (c) 7
 - (d) 8
 - (e) Övrigt
2. Varför valde du att bo i just detta området?
 - (a) Bosatt sedan tidigare och vill bo kvar
 - (b) Tillgång till olika faciliteter
 - (c) Centralt läge
 - (d) Prisvärt
 - (e) Bra kollektivtrafik
 - (f) Tryggheten i bostadsområdet
 - (g) Attraktiv miljö
 - (h) Annat
3. Om du valde 'annat' i föregående fråga, ange vad:
4. Hur länge tror du att du kommer bo kvar i ditt bostadsområde? Motivera gärna varför.
5. Hur trygg känner du dig i ditt bostadsområde dagtid?
 - (a) 1 = väldigt otrygg
 - (b) 2 = otrygg
 - (c) 3 = neutral
 - (d) 4 = trygg
 - (e) 5 = väldigt trygg
6. Hur trygg känner du dig i ditt bostadsområde kvällstid?
 - (a) 1 = väldigt otrygg
 - (b) 2 = otrygg
 - (c) 3 = neutral
 - (d) 4 = trygg
 - (e) 5 = väldigt trygg
7. Vilka aspekter av ditt bostadsområde gör att du trivs? (går att välja flera alternativ)
 - (a) Mötesplatser
 - (b) Tillgång till olika faciliteter
 - (c) Granngemenskap
 - (d) Fysisk utformning (ex. placering av fönster)
 - (e) Tillgång till kollektivtrafik
 - (f) Belysning

(g) Annat

8. Om du svarade 'Annat' i föregående fråga, ange vad:

9. Vilka aspekter av ditt bostadsområde gör att du inte trivs? (går att välja flera alternativ)

- (a) Brist på mötesplatser
- (b) Brist på olika faciliteter
- (c) Ingen granngemenskap
- (d) Fysisk utformning (ex. placering av fönster)
- (e) Brist på kollektivtrafik
- (f) Dålig belysning
- (g) Fysiska barriärer till närområden
- (h) Annat

10. Om du svarade 'Annat' i föregående fråga, ange vad:

11. Om du känner dig otrygg, vad beror det på? (går att välja flera alternativ):

- (a) Ödsligt (lite aktivitet/rörelse i området)
- (b) Skadegörelse
- (c) Personer som stör ordningen
- (d) Trafikfara
- (e) Ingen granngemenskap
- (f) Annat

12. Om du svarade 'Annat' i föregående fråga, kan du nämna andra anledningar till att du känner dig otrygg?

13. Vad skulle du vilja addera för att känna dig tryggare i ditt bostadsområde?

14. Vad skulle du vilja addera för att göra ditt bostadsområde mer attraktivt?

KVIBERGSOMRÅDET:

1. Finns det något/några områden du medvetet undviker? Se karta (går att välja flera alternativ)

- (a) 1
- (b) 2
- (c) 3
- (d) 4
- (e) 5
- (f) 6
- (g) 7
- (h) 8
- (i) 9

2. Om du medvetet undviker område/områden, vad beror det på? (går att välja flera alternativ)
 - (a) Ödsligt
 - (b) Brist på faciliteter
 - (c) Personer som stör ordningen
 - (d) Skadegörelse
 - (e) Brist på mötesplatser
 - (f) Bristande belysning
 - (g) Fysisk utformning (ex. dålig sikt, instängda passager)
 - (h) Annat
3. Om du svarade 'Annat' på ett område/områden i föregående fråga, ange vad:
4. Vad skulle du vilja addera för att känna dig tryggare i Kviberg?
5. Vad skulle du vilja addera i Kviberg för att göra området mer attraktivt?

C

Appendix List of interviewees

Table C.1: *List of companies and organisations that were interviewed.*

Companies/ organisations	Description of interviewees
Skanska	Interviewees 'Skanska A', 'Skanska B', Skanska C' and 'Skanska D' have been involved in Skanska's project Kvibergs Ängar in Kviberg.
JM	A construction company that is currently planning and building several projects in Kviberg, including Kvibergs Boulevard in Kvibergs Ängar. Interviewee 'JM A' is the project manager for the project.
Peab	A construction company that is currently planning and building several projects in Kviberg, including Kvibergs Trädgård in Kvibergs Ängar. Interviewee 'Peab A' is the project manager and project developer for the project.
Serneke	A construction company that has built the Prioritet Serneke Arena in Kviberg. Interviewee 'Skanska A' is responsible for the operation and maintenance of the arena.
The City of Gothenburg	Interviewees 'City of Gothenburg A', City of Gothenburg B' and 'City of Gothenburg D' are planning architects at the city planning office in Gothenburg. Interviewee 'City of Gothenburg C' is as an activity coordinator for Kvibergs Park in Kviberg.
Tryggare Sverige	An independent foundation that works on issues related to safety and security in public spaces. Interviewee 'Tryggare Sverige A' is one of the top managers.
Urban utveckling	A company that helps municipalities, property owners and housing associations to renew and develop deprived suburbs. Interviewee 'Urban utveckling A' is on of the top managers.
Svenska stadskärnor	An association that brings together companies, organizations and municipalities that have the ambition to develop cities to become more attractive and safe. interviewee 'Svenska Stadskärnor A' is one of the top managers.

BID-Gamlestaden	A non-profit association and agreement between eight administrations and companies within the City of Gothenburg, with the aim to develop the district Gamlestaden into a more attractive and safer district. The association is inspired by BID.
Police Department	Interviewee 'Police A' is a municipal police officer in the eastern part of Gothenburg, including Kviberg. Interviewee 'Police B' is a superintendent and has taken part in Skanska's workshop in Kvibergs Ängar.
White	An architectural firm based in Gothenburg. Interviewee 'White A' is an urban development strategist and has taken part in Skanska's workshop in Kvibergs Ängar.