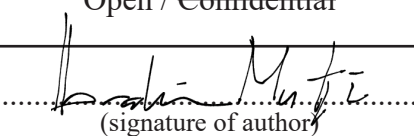




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FACULTY OF SCIENCE AND TECHNOLOGY

MASTER'S THESIS

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For my master's thesis, I was inspired to explore the topic of families with children in city centers. The work with the thesis was very interesting, and I have gained more knowledge about how to better plan for attractive city centers with regards to families with children. In collaboration with Mad Architects Stavanger, I was encouraged to work with the topic in the context of Sandnes, Norway, as the firm had several urban transformations and development projects in Sandnes city center.

I want to thank my supervisors Ana Llopis Alvarez, PhD candidate from the Department of Security, Economics and Planning (ISØP) at the University of Stavanger, as well as Kirsten Welschemeyer, guest lecturer at the University of Stavanger, and architect and partner at Mad Architects Stavanger for guidance, advice, and words of encouragement throughout the work with thesis.

During this thesis, I experimented with an online map-based surveying tool called Maptionnaire, which was made available to me thanks to Bengt M. S. Carlson in Nomad (a branch of Mad Architects that specializes in planning and citizen participation). Many thanks to all the survey respondents who have taken their time to respond to the online survey and thank you to all heads of kindergartens in Sandnes who have helped with distributing the survey. I also thank all the informants who have been generous in sharing their time, thoughts, and opinions in our conversations during interviews. You have given valuable insights into what residential qualities are experienced and perceived as attractive among families with children.

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Stavanger, 15.07.2020
Ibrahim Mufti Pradityo

ABSTRACT

In recent years, Sandnes and its city region have experienced tremendous population growth. However, this growth has been accommodated by a more suburban development pattern where the growth is mainly taking place outside the existing urban mass. In combination with shopping center development, and economic growth in business districts outside the city center, these development trends weaken the livability and attractiveness of the city center. To try to counter this development path, current policies have progressively put more focus on facilitating the city center for families with children, but little is known about what makes a place attractive to live in for families with children.

As an attempt to answer the problem, this thesis explores the preferences of this target group and the qualities that they perceive as attractive, in the context of Sandnes, Norway. Four supporting questions were developed to answer the main research questions: "How can Sandnes city center be made more attractive to live in for families with children?". The empirical findings were generated through a survey of families with children in Sandnes, as well as in-depth interviews of planning, development, and real estate surveyionals.

SAMMENDRAG

De siste årene har Sandnes og byregionen opplevd en enorm befolkningsvekst. Imidlertid har denne veksten foregått gjennom et mer spredt byutviklingsmønster der veksten hovedsakelig finner sted utenfor den eksisterende bymassen. I kombinasjon med kjøpesenterutvikling og økonomisk vekst i besøksintensive næringsparker utenfor sentrum, svekker disse utviklingstrendene sentrums levbarhet og attraktivitet. For å prøve å motvirke denne utviklingstrenden har dagens politikk gradvis satt mer fokus på å tilrettelegge sentrum for barnefamilier, men lite er kjent om hva som gjør et sted attraktivt å bo i for barnefamilier.

Som et forsøk på å svare på problemet, vil oppgaven undersøke preferansene til denne målgruppen og kvalitetene de oppfatter som attraktive, i kontekst av Sandnes, Norge. Fire delspørsmål ble utviklet for å svare på de hoved forskningsspørsmålet: "Hvordan kan Sandnes sentrum gjøres mer attraktivt å bo i for barnefamilier?". De empiriske funnene ble generert gjennom en spørreundersøkelse av barnefamilier i Sandnes, samt dybdeintervjuer av fagpersoner innen planlegging, eiendomsutvikling og eiendomsmegling.

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1 INTRODUCTION

The current chapter presents the background and relevance of the study. Furthermore, the objective of the research and an overview of the research design are given.

1.1 BACKGROUND

Overall trends indicate that the future landscape will be increasingly urbanized as the world population continues to grow. One example of the cost of urbanization in Norway is that agricultural land is increasingly being converted into new housing areas, roads, industrial areas, and other land use. For example, in the period between 2004 -2015, around 1700 hectares of farmland in Rogaland county were converted into non-agricultural purposes (Gundersen, Steinnes & Frydenlund, 2017), equivalent to an average reduction of 1,5 square kilometers of farmland every year. Urbanization processes put nature and agriculture under heavy pressure, which calls for the shift towards a more sustainable urban development.

For the past 50 years, however, urban development in Sandnes and the surrounding region has predominantly been heavily car-based. While the region has experienced a tremendous growth, most of this growth has taken place in areas outside of the urban core, through suburbanization and sprawl (Spigseth, Grimnes & Jacobsen, 2016). There are relatively few housings in Sandnes city center, and a large share of the population live in the typical low-rise and low-density suburbs outside the city center. Business and industrial park and shopping center development outside the city center also creates new places of attraction. Together, these factors result in large distances between the home, the workplace and the different places for shopping and commerce. It also challenges the livability of Sandnes city center, who must compete with the suburbs and other sub-centers in the city districts for residents, workplaces, and activities.

While working towards creating dense and livable urban areas, a question that is often raised is what are the qualities that a place should have to be perceived as attractive. A prerequisite for an attractive place is public life and that there are people living there. Consequently, there needs to be housing in the city center in order for people to live there.

1.2 IMPORTANCE OF FAMILIES AND CHILDREN IN THE CITY

There are many reasons why it is important to create a family-friendly city. First, it is a fact that families and children are already a part of the city center. Second, ensuring diversity is important to create a vibrant urban life. Third, strategies and policies to ensure qualities that are attractive for families in development projects is an important component of a city's or region's growth policy. Policies for the city center should therefore not ignore this segment of the population.

While only a small percentage of the population lives in Sandnes city center today, many families, children, and young people visit and use the city center every day. Children in the kindergarten may organize field trips in the city, youths who attend Vågen upper secondary school move through the city every day, and families attend cultural events in the city center. The city center also offers facilities that are used by children and parents, including shops, restaurants, public services, cultural facilities, and more. Therefore, the city center benefits from having families with children living there, by generating life and activities in the public environment. Whether it is for the existing families and children living in the city center or for the families and children who spend time in the city center, creating a more family-friendly city center now will help attract more families in the future.

Diversity is an important aspect of vibrant urban life, and families and children are a part of that diversity. The current situation in Sandnes, however, reveals that the city center contains a large share of young adults (21-30 years) and elderly (67+ years) (Sandnes municipality, 2019b). In her book *The Death and Life of Great American Cities*, Jane Jacobs (1961) argues that a city, a neighborhood, or a block simply cannot succeed without diversity, whether it is a matter of land use, race, socioeconomic status, modes of transport, public and private institutions, or architectural style.

The importance of planning for families with children also has other implications for growth management. In Oslo, the housing development in the post-war period resulted in large-scale development of many 'satellite towns' (Barlindhaug, 2005). Residential areas in the inner-city were often associated with low standards and heavy strains from noise and traffic. It was considered unsafe, dirty, cramped, and unsuitable for children. One of the goals of the housing policy was therefore to offer families in inner-city an alternative with larger and better housing in the city's hinterland. As a result, the extensive housing development contributed to a strong increase of the population outside of Oslo's inner-city. At the same time, the population of the inner-city dropped significantly. This diminished the inner-city's stock of experienced workers. Silverman et al. (2005) argued that if cities are going to thrive, they must better at attracting and retaining working parents who will choose inner-city neighborhoods as places to raise their children.

1.3 OBJECTIVE AND PROBLEM STATEMENT

The purpose of this thesis is to gain a deeper understanding of the housing preferences of families with children in Sandnes, and the qualities of the living environment that this target group value, in order to suggest recommendations for how Sandnes city center can better attract and retain families with children. Sandnes city center has a major opportunity for incorporating family-friendly development because many of the areas in the city center will be redeveloped in the coming years. This study seeks to explore:

"How can Sandnes city center be made more attractive to live in for families with children?"

Sub-questions to support the support the main research question are:

Q1: What are the qualities of the living environment in which families with children in Sandnes find attractive?

Q2: What are the residential preferences of families with children in Sandnes?

Q3: What do families with children in Sandnes think is necessary to make Sandnes city center more attractive to live in?

Q4: What do planning, development, and real estate surveyionals think is necessary to attract families with children to live in Sandnes city center?

1.4 DEFINITIONS

Besides the main concepts that will be explored more in-depth in the literature review, some basic concepts of families, children and city center are defined here.

1.4.1 Families

According to the definition used by Statistics Norway (2000), a family can be understood as a group of people living in the same housing unit or household who are related to each other as spouses, cohabitants, registered partners, and/or as parents and unmarried children.

1.4.2 Children

Based on the classification used by Statistics Norway (2000), children are defined as people below the age of 18 years, which is also the same definition given in the first article of the United Nations Convention on the Rights of the Child (United Nations, 1989).

1.4.3 Age-classification of children

Children can further be defined in many ways, depending on their level of independence. Children of different ages have different needs and capabilities, and they will generally gain a higher level of independence as they grow older.

To provide some nuances to the definition of a child, younger children usually require extra care and attention compared to older children, and younger children are highly dependent on their parents or other adults. They are still in the process of growing, learning, and developing their own identity. When a child enters the school age, they will gain independence quite quickly.

Statistics Norway (2000) works with two age-classification of children, namely children aged 0-5 years (young children) and children aged 6-17 (older children and adolescents). This can be understood as a functional age-classification of children based on the typical age when most children begin at school. This thesis will continue to use the following classification to distinguish between young children and older children.

1.4.4 City center

In the Norwegian context, understanding of the city center often coincides with the "historical area" of the city (Ministry of Local Government and Modernisation, 2000). The city center can be the geographic center of the city, but it is more commonly understood as the commercial, cultural, and often the historical and political heart of a city. In the planning context, there is often a need to define clear boundaries for the city center as it will be used as a framework for the planning work. In this study, Sandnes city center refers to the area that is defined in the Municipal Sub Plan for Sandnes city center (Sandnes municipality, 2019a).

1.5 RESEARCH DESIGN

The figure below shows an overview of the research design. The study is divided into four parts. First, the field of research is introduced. Second, Sandnes is introduced as the study case and a review of the literature is provided to use as an input for the qualitative and quantitative research. Third, the research methodology is explained, and the collected data is presented and analyzed. Finally, conclusions from the research are drawn and a reflection on the study is made.



Figure 1: Research design

This thesis is subdivided into six chapters that together answer the defined objective and problem statement:

Chapter 1: Introduction

The current chapter presents the background and relevance of the study. Furthermore, the objective of the research and an overview of the research design are given.

Chapter 2: Empirical context

This chapter presents Sandnes as a case for the study. It provides a better insight about the existing situation and helps to place further research into context.

Chapter 3: Literature review

This chapter explores the existing literature regarding attractiveness, residential quality, and residential preferences.

Chapter 4: Methodology

Key concepts from the literature review are further adapted as input for the survey questions and in-depth interviews, which will be explained in this chapter. The chapter further describes how data is processed, what tools are used, and the background for these choices.

Chapter 5: Analyses and results

In this chapter, the survey results are presented and interpreted. Answers to the first three supporting questions are provided in the survey findings, while the answer to the last supporting question is provided from the interview findings.

Chapter 6: Conclusion and discussion

The final chapter summarizes all findings from the literature study and data analysis, and answers the main research question. Furthermore, the chapter provides a critical reflection of the findings and overall study and suggests topics for future research.

2 EMPIRICAL CONTEXT

This chapter presents Sandnes as a case for the study. It provides a better insight about the existing situation and helps to place further research into context.



Satellite photo of the Jæren region. Source: Kartverket (2020).

2.1 SANDNES MUNICIPALITY

Sandnes municipality is the main study area for this thesis, a municipality that is located on the west coast of Norway. With a population of around 79 000 people, it is currently the 11th most populated municipality in Norway (Statistics Norway, 2020a), and second most populated in Rogaland county after Stavanger municipality. Over the past 50 years, the city has grown together with the cities of Stavanger, Randaberg, and Sola to form a conurbation along the Gandsfjord.

Sandnes is primarily a part of the Jæren region. While the landscape in large parts of the region can be characterized as flat, the landscape in Sandnes municipality contains a variety of plains and small mountain peaks, especially towards the east. On January 1st, 2020, Forsand merged with Sandnes, thereby expanding its municipal territory further east into the mountains and fjords of the Ryfylke region.

When the two municipalities merged, Forsand was a sparsely populated municipality with only around 1 000 inhabitants. Today, Forsand is one of the 14 municipal districts (bydeler) within Sandnes municipality.



Figure 2: Location of Sandnes municipality

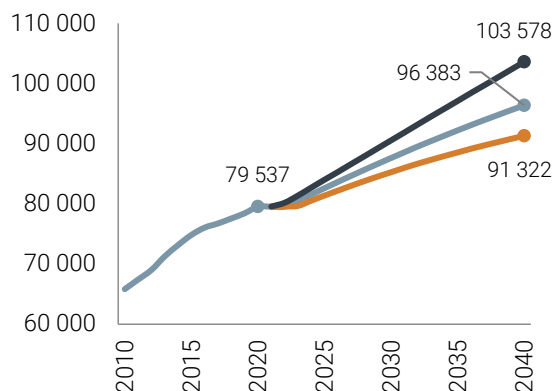


Figure 3: Municipal districts in Sandnes, excluding Forsand, and location of Sandnes city center

Sandnes city center is located at the very south end of the Gandsfjord, and it serves as the main city center in Sandnes. The area comprises of a mixture of urban, suburban, and industrial areas. For planning purposes, the city center is delineated by a legal boundary.

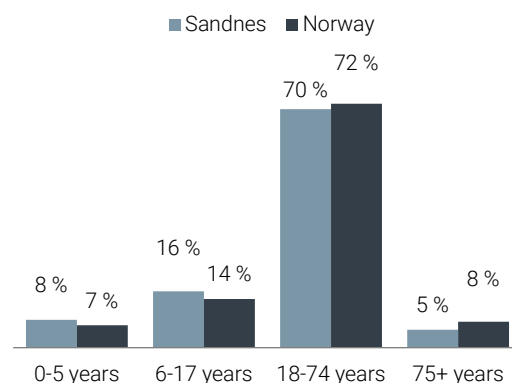


Figure 4: Sandnes city center



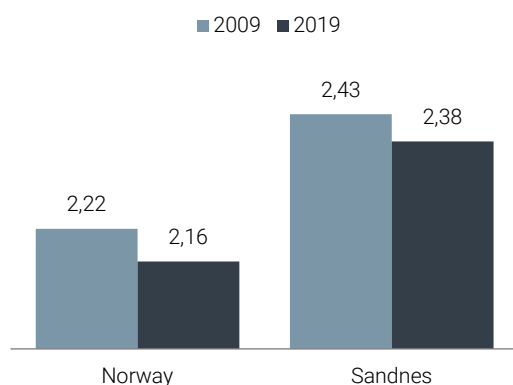
Population growth

Between 2010-2020, Norway had a population growth of about 12 %. During the same period, the population in Sandnes had increased by 20 %. According to the main estimate, the population in Sandnes will continue to increase by about 1 % annually towards 2040.



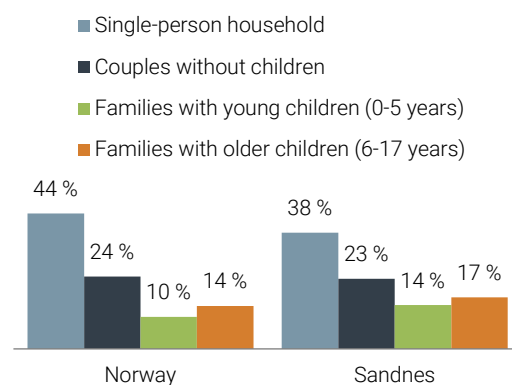
Age distribution

The population in Sandnes is relatively “young”, with an average age of 36,5 years. In comparison, the average in Norway is 44,3 years. As seen in the age distribution, Sandnes has a larger percentage of the younger population compared to the age distribution in the whole country.



Household size

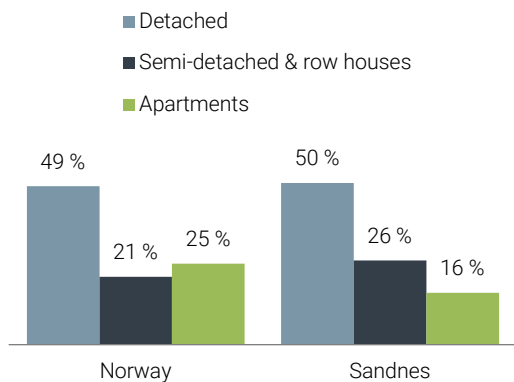
Development of household size between 2009-2019 indicate that the number of people living in a household are decreasing. Recent trends show that single-person households are becoming more common, and couples tend to have less kids than before.



Household type

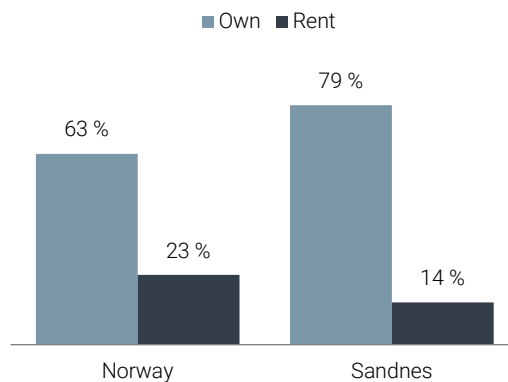
The household distribution in 2019 shows that about 1/3 of all household in Sandnes are family households, slightly more compared to the average in Norway (about 1/4). There are also less single-person households, which explains the higher number of persons per household in Sandnes, as seen in the previous graph.

All data are retrieved from Statistics Norway (2020).



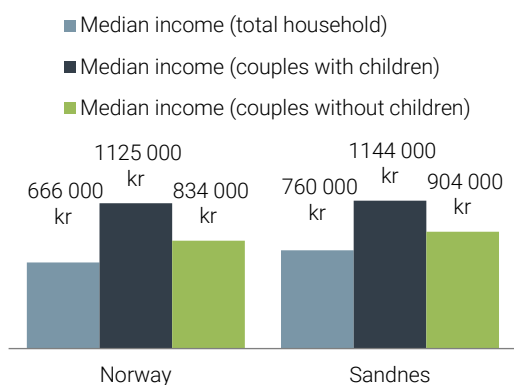
Housing

Similar to the country average, most residents in Sandnes live in detached houses. However, there are fewer apartment-dwellers and more people who live in semi-detached and row houses, compared to the country average.



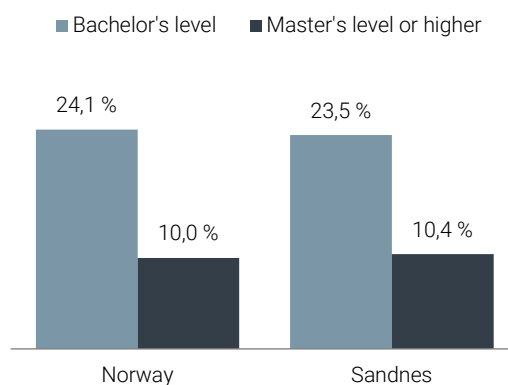
Home ownership

It is more common in Sandnes to be a homeowner compared to the country average. A larger share of households in Sandnes that can afford to own their home may correlate with higher household income than the country average.



Income level (gross)

The median income level in Sandnes in 2019 is slightly higher compared to the national level. Couples with children have a higher median income level than couples without children.



Education level

Above are the education level in 2018 given as a share of the population above 16 years old. The education level in Sandnes is similar as the average for the country. Larger municipalities often have larger share of people with higher education, due to work opportunities.

All data are retrieved from Statistics Norway (2020).

2.2 HISTORICAL DEVELOPMENT

Sandnes grew forward as a harbor settlement around the 1600s, where people lived from fishing and water transport across the fjord (Jonasen, 1964). At that time, Sandnes also served as a harbor port and trading post for the local farms (Sandnes municipality, 2019b). The place name "Sandnes" is assumed to derive from a small cape (nes in Norwegian) by the fjord (Jonasen, 1964).

Around 100 years later, Sandnes started to grow as an industrial town, with the establishment of Sandnes Teglværk in 1784 (Jonasen, 1964). The existing soil conditions provided easy access to raw materials, and traces of previous clay pits for the brick and pottery industry can still be recognized in the landscape today. Some of the clay pits were eventually filled which provided new building sites for the industry to further expand.

In 1878, the railroad was constructed between Stavanger and Egersund (Mæhlum, 2018). Due to the ground conditions however, the railroad had to be constructed in an elevation, which divided the city in two.

Production of textile products and bicycles later became an important part of the industry in Sandnes. The establishment of Øglænd Cycklelager gave birth to one of Sandnes' most well-known brands, namely Den Beste Sykkel (DBS), alongside the famous Norwegian clothing chain Cubus. The settlement by the fjord continued to be developed for the industry as it continued to flourish.

From the post-war period, Sandnes continued to expand with a suburban development. The settlement gradually grew beyond the municipal boundaries of that time (Sandnes municipality, 2019b). In the city center, the harbor area was significantly expanded along the western part of the Gandsfjord. At the same time, the surrounding region also experienced population growth. Sandnes city center therefore started to gain importance as a center for shopping and services for the surrounding region.

Towards the end of the 1900s, the industry in Norway faced competition from other countries who could provide lower production costs. Both the textile and bicycle production in Sandnes faced a sharp downturn, which gradually led to empty factory buildings all over the city center.

With the discovery of the oil, a new industrial adventure emerged. However, instead of repurposing the empty industrial buildings in the city center into offices, the new business and industry were more attracted to new office buildings in business areas outside the city center, such as Forus. The shopping mall, Kvadrat, also established a significant competition with the commerce in Sandnes city center.

In recent years, the city center has gradually grown through individual projects in smaller plots. Several housing projects have been built, especially alongside the Gandsfjord (Sandnes municipality, 2019b). Many recognizes the huge potential for new development of both housing and commercial buildings in Sandnes city center. However, most plans and projects in Sandnes have had to wait for the completion of the new Busway before being further developed.

2.3 SURVEY ON LIVING CONDITIONS

In 2015, Sandnes municipality published a report from a survey on living conditions in Sandnes. In the survey, the municipality is divided into 48 smaller zones. The different zones are ranked against each other based on 21 different indicators (Sandnes municipality, 2015). The set of indicators used for measuring living conditions are provided by Statistics Norway (2017), and they were made in cooperation with other municipalities in Norway. The selected indicators cover five major topics: 1) Population, 2) housing and migration, 3) education, 4) income and debt, as well as 5) health and social conditions.

Sandnes city center consists of the following zones: Sentrum øst, Sentrum vest, Sentrum sør, Langgata, Austrått vest, Gravarlia, and Nedre Hana. The most recent survey on living conditions from 2016 revealed that many zones in the city center are ranked poorly after all indicator values are aggregated.

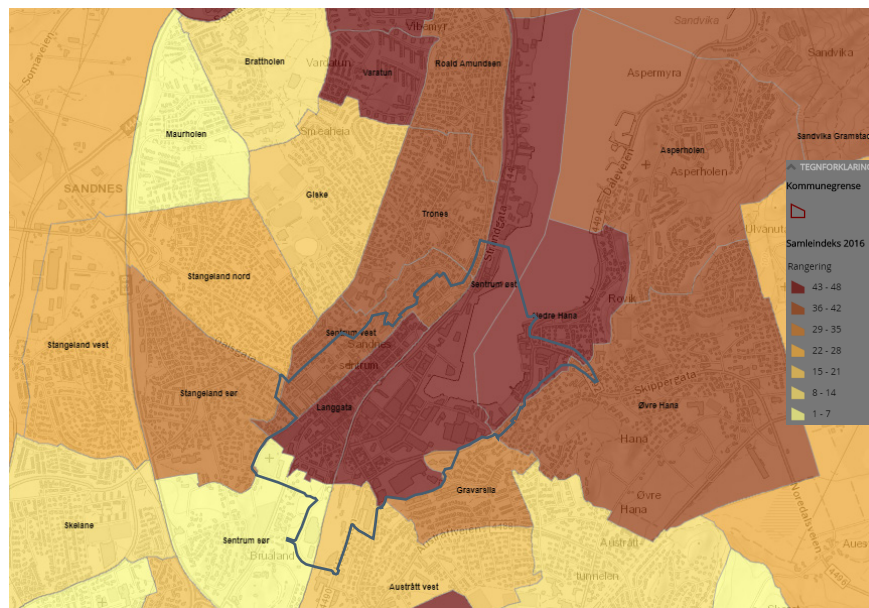


Figure 5: Survey on living conditions

The survey on living conditions is primarily meant to uncover the differences in different geographical areas. It provides better knowledge towards the work on equalizing differences and through planning and prioritization (Sandnes municipality, 2015). However, it is important to highlight that the survey on living conditions is not made to characterize areas in the municipality as “good” or “bad”, nor is it made to indicate which areas of the municipality are a “better” or “worse” place to live in (Sandnes municipality, 2015). The knowledge presented in the survey on living conditions is rather meant to shed a light on the challenges that architects, planners, and developers can influence in a more positive direction in future development.

3 LITERATURE REVIEW

This chapter explores the existing literature regarding attractiveness, residential quality, and residential preferences.

3.1 ATTRACTIVENESS

Many factors determine whether a place is considered desirable or attractive to live in. Ruud et al. (2014) suggest that what makes a place attractive varies from person to person, depending on life-phase, life situation, and other socio-economic background factors. In this study, a place is understood as a bounded geographical location of an area. A place may, therefore, refer to city regions, cities, city districts, or neighborhoods.

Many Norwegian municipalities aim to have a vibrant and attractive city center. To achieve this goal, the municipalities have understood that a city center needs to provide good and varied retail and services, in addition to workplaces, housing, and other cultural attractions. In a study of four Norwegian cities, Tennøy et al. (2014) explored what can be done to make city centers more attractive as a location for retail and service. They found that the main challenges are related to strong housing and workplace development outside the city center, as well as competition from retail situated outside the city center. These development tendencies weaken the opportunity to strengthen the city center as an attractive arena to establish retail and service.

Housing and retail development are related to population growth. In the literature, some researchers use population growth as an indicator of the attractiveness of a place (Rérat, 2012; Romão et al., 2018; Vareide, 2018). There are many reasons why places experience population growth. It may be caused by a high birth rate, immigration, or due to strong growth in the number of jobs which further causes in-migration from other places. However, these are said to be structural conditions that a place cannot influence (Vareide, 2018).

However, the attractiveness of a place is also determined by certain conditions related to the qualities of the place, which are qualities that the place itself can influence. According to Vareide (2018), factors that influence the attractiveness of a place to live in are for example good public services, good schools, vibrant public life, many recreational activities, a good reputation, accessibility to public transport, or low housing prices. Places that have these qualities may therefore be perceived as more attractive.

3.2 RESIDENTIAL QUALITY

Literature suggests that certain qualities of a place contribute to making places more attractive to live in. To find the qualities of a place that families with children find attractive, it is important to establish an understanding of the term "quality". Guttu (2003) defines "bokvalitet" as characteristics of the home and the living environment that is added value. To simplify, the term bokvalitet will hereby be referred to as residential quality. What represents an attractive residential quality varies depending on individual needs and preferences, as well as the person's life phase (Asker municipality, 2012). Ultimately it is a subjective term, and it is essential to understand it through the context of people who live in a specific environment.

Barlindhaug et al. (2017) describe that some qualities are place-dependent, such as factors related to the housing typology, quality of public spaces, or proximity to a variety of amenities. Place dependent qualities, also referred to as "neighborhood qualities", differ from the place-independent qualities, which are more related to the housing unit itself. Barlindhaug et al. (2017) also refer to empirical studies that show the importance of qualities related to the physical and social environment, and how they are essential for the attractiveness of a place.

Based on the conceptualizations elaborated by Barlindhaug et al (2012), Schmidt (2014) and Barlindhaug et al. (2018), the determinants of residential quality can be found at these three following urban scales:

1. The housing or dwelling unit:
Factors related to the home or dwelling unit itself, such as design, size, number of rooms, floor plan, floor, balcony, sunlight, view transparency from the outside.
2. The immediate surroundings of the home:
Factors related to the immediate surroundings of the home, such as perceived density, garden or green spaces, playgrounds, shared outdoor spaces, parking, noise and traffic, and social environment.
3. The larger area:
Factors related to the larger area in which the home is situated, such as proximity to school, kindergarten, recreational areas, public services, shops, cultural facilities, center for employment, access to public transport and city structure.

3.2.1 The housing or dwelling unit

The dwelling is a vital component of the built environment, which serves one of the basic human needs for shelter. Therefore, it plays a large role in the perceived residential quality. Many people view apartments and high-density living as either not appealing or not appropriate (Kotulla et al., 2019). The main challenge is that the dense city rests on limited living space, and residents are reduced to live in much fewer square meters compared to the spacious detached house. In many Western cultures, the suburban detached house remains the ultimate dream. For this reason, apartments and high-density living are seen as less attractive (Kotulla et al., 2019).

In a study of new housing projects in the city center of four Norwegian cities, Schmidt (2014) found that the qualities of the dwelling unit most valued by the residents are related to having a functional floor plan, good sun conditions, limited transparency from the outside, and protection from noise and pollution.

3.2.2 The larger area

This urban scale is about the relationship between the home and the larger area in which the home is situated. In a study of compact city development in four case municipalities, Schmidt (2014) found that the residential qualities that were considered as most important are proximity to shops, services, and public transport. These are factors that are often referred to as typical “urban qualities”. Other important qualities that are mentioned were pleasant streets and public spaces. Regarding the latter, the study highlighted access to new recreational areas along the waterfront as a highly valued quality.

Living in a compact urban environment generally means that children are less likely to have a private garden to play in. Therefore, they will rely more on the public realm. For families with children, the quality of the neighborhood is important.

To live in a central location is a desirable quality for many. Working parents may have several destinations to visit outside their daily commute between home and work, for example, the kindergarten, school, shop, café, gym, or other private or public services (Meinert & Thomassen, 2018). To make everyday life easier, living close to the workplace, kindergarten, school, shop, and other amenities is equally as important as living close to or in the city center. For families with young children, proximity to kindergarten is very important (Barlindhaug, Ruud & Nygaard, 2017).

3.2.3 Outdoor spaces

The functions of an outdoor space are many, but most importantly is that it serves as a place where people across different target groups meet and interact throughout different times of the day. Outdoor spaces can accommodate different types of uses, and they can either be a hardscape, softscape, or transitional space between the hard and softscape (Ministry of Local Government and Modernisation, 2017). Outdoor spaces can also be categorized into different ownership structures, such as private, semi-private, or public. Private outdoor spaces are typically in the form of private gardens for housing units on the ground floor, but balconies and

rooftop terraces are more commonly found in high-density housing areas (Milanović & Vasilevska, 2018). While private outdoor spaces ensure the individual need for privacy, they typically offer limited opportunities for social interaction. Besides private outdoor spaces, Tennøy et al. (2017) distinguish between six different types of outdoor spaces that are important to facilitate physical activity, outdoor play, recreation, and social interaction. These are summarized in the table below:

Type of outdoor spaces	Example of functions or activities
Large natural- and outdoor areas outside the city <ul style="list-style-type: none"> • Forest areas • Mountains • Beach • Lake 	Experience nature, silence, and tranquility, hike, ski, mountain climb, exercise, swim, fish, etc.
Parks and waterfronts <ul style="list-style-type: none"> • Neighborhood parks • City parks • Ponds • Rivers and canals 	Experience green surroundings, relax, recreation, socialize, play, exercise, walk, jog, swim, fish, venue for public events, gathering space
Activity areas and playgrounds <ul style="list-style-type: none"> • Activity parks • Playgrounds • School grounds • Kindergartens • Temporary activity zones 	Play in a sandbox, climbing wall, basketball, football, volleyball, ta-ble tennis, exercise, parkour, skateboard
Sports facilities <ul style="list-style-type: none"> • Football fields • Basketball courts 	Organized and non-organized sports and other activities
Streets, plazas, and squares <ul style="list-style-type: none"> • Sidewalks • Street corners • Seating areas • Public spaces in the city 	Recreation, socialize, dine, gathering space, venue for a public event, window shopping, experience urban surroundings
Activity areas and play-grounds <ul style="list-style-type: none"> • Courtyards • Backyards • Shared outdoor spaces 	Everyday relaxation, physical activity, play, socialize with neighbors, gardening, mainly for local residents

Table 1: Different types of outdoor spaces and functions

How often public outdoor spaces are used or to what extent people perceive them as attractive depends on the qualities of the space, such as location, size, what type of activities it facilitates, accessibility, whether they are public or private, and the degree of maintenance. Perception of safety is also an important factor that affects the use of outdoor space. In a study of the relationship between density and social sustainability in a different neighborhood of five UK cities, Dempsey et al. (2012) found that people were less likely to feel comfortable using public open spaces if not well-maintained or if they perceive them as unsafe. They also found that the use of open space was lower in city centers compared to lower-density neighborhoods (Dempsey et al., 2012).

In relation to semi-private outdoor spaces, Guttu & Schmidt (2008) empirically assessed the quality of outdoor spaces of 27 new and centrally located housing projects in four different Norwegian cities. Many of the criteria were related to the suitability of the place for children's play. They concluded that only three of the outdoor spaces that were assessed were of satisfactory quality. The reason was that the outdoor spaces were too cramped, had poor design and layout, and were poorly connected to the rest of the city. It was highlighted that many outdoor spaces did not consider children's limited freedom of movement and the need for more space-demanding activities.

3.3 RESIDENTIAL PREFERENCES

While it is critical to understand the needs of children in urban environments, it is ultimately the parents who will decide where children will live. There are different definitions of residential preference in literature. Beamish et al. (2001) concluded that a common understanding of the term is what is ideal or most desired by a person or household. In this way, residential preference may be understood as wishes and dreams about how one wishes to live, but without them necessarily being realized. Another understanding of residential preference is the actual practice of where and how people live (Ruud et al., 2014).

Within the research of residential preferences, a distinction is made between revealed and stated residential preferences. Besides, some researchers have also addressed the importance of life course and family events on residential choice (e.g. Rossi, 1980), while other researchers have looked at it from a lifestyle perspective (Ærø, 2006; Karsten, 2007).

Traditional housing studies usually regard socio-economic and demographic factors as the most important considerations for residential choice. However, Karsten (2007) argues that this traditional view isolates housing studies from the wider context of life and changing needs over time. Ærø (2006) suggests that the concept of lifestyle helps to explain how people wish to live by including aspects such as subjective patterns of orientation, preferences, and cultural affiliation.

3.3.1 Revealed versus stated preference

According to the revealed preference approach, the general assumption is that a household's residential preference is revealed through what kind of residential environment they prefer when they choose where to reside (Vasanen, 2012). In other words, the actual housing choice of a household is assumed to reflect the household's residential preference.

The revealed preference approach, however, has been criticized for not being adequate in explaining what the household truly prefers. Recent studies have therefore utilized a stated preference approach, which seeks to ask what kind of residential environment they actually prefer (Vasanen, 2012). For example, due to economical constraints or limited options available in the housing market, a household may remain living in the same location even though it does not reflect their true preference over time (Kadasia, 2019).

3.3.2 Residential preference and the built environment

Residential preferences are very much related to the built environment and the available housing options in the market at any given time. Because cities are built over a long period of time, the urban structure of a city at any point in time is an accumulation of past preferences (Storper & Manville,

2006). Whether these have been the preferences of residents, urban planners, politicians, or property developers, they largely determine what kind of housing will be available for the residents to choose from. As the number of new housing projects is much smaller relative to the amount of existing housing, future preferences can therefore only be revealed marginally (Vasanen, 2012). The existing urban structure, however, cannot be changed every time new residential preferences appear. Therefore, there may be a potential mismatch between the general residential preference and the existing housing supply.

3.3.3 Residential preference from a life course perspective

When studying moving patterns in the USA, Rossi (1980) discovered that residential preferences are influenced by the changing needs of the household throughout different life phases. During the life course, the size and composition of a household will change, for example through marriage or cohabitation, family establishment, the birth of another child, divorce or separation, and death. As a response, households will adapt to their changing needs by adjusting their housing situation.

In relation to the life cycle perspective, Rossi (1980) found that households are more likely to move in the family-establishment phase. During this life phase, families tend to leave the city for a more spacious dwelling in a child-friendly environment. When the family stops growing, their mobility starts to become more stable. Later, when the children move out, some people may return to the city and stay there throughout the childless phase of their lives.

Barlindhaug et al. (2018) studied the housing pattern and mobility of families with children living in Oslo. They found that families who live in the city center are mainly families with young children under school age. An important reason for why families moved was the desire for a larger home, often in combination with reasons involving an increase in the number of children. Other factors for why families did not want to stay in the inner-city was related to personal economy and the desire for living in a detached house, semi-detached house, or low-rise flat.

3.3.4 Residential preference from a lifestyle perspective

According to the lifestyle approach, households would choose a residential environment that suits their lifestyle (Ærø, 2006). In the context of urban planning, Ge & Hokao (2006, p. 167) define residential lifestyle as “the way of life related to residence associated with the consumption of time, space and money”.

Previous research show that people move to cities for the purpose of work or education (Barlindhaug et al., 2018). A common practice is that people who have obtained an education in the city tend to stay there for work before settling down in the suburbs to establish family life. However, when addressing the residential choice of some middle-class families with children in Rotterdam, Karsten (2007) found that families would prefer to remain in the inner city if they can afford it. This group’s preference towards inner city living could be explained by their lifestyle orientation. They utilized the advantage of the infrastructure in the inner city and valued short commuting distance to the workplace and proximity to leisure opportunities.

Kährik et al. (2015) suggests that an individual's lifestyle is influenced by factors such as their sense of belonging in society and social position. In a longitudinal study of Uppsala in Sweden, Bergström et al. (2010) found that families with one or more children are most likely to move to a neighborhood with a high share of households with children. This is partly because that is where suitable housing for families can be found, and partly because they prefer to live where there is a community of families with children.

When studying the cases of two inner city neighborhoods in the cities Tartu and České Budějovice, in Estonia and the Czech Republic, Kährik et al. (2015) discovered that family households in their 30s tend to attach greater value to neighborhood characteristics. They also showed more willingness to contribute to the physical and social qualities of their neighborhood. In contrast, the younger generation tend to attach most value to the characteristics of the dwelling and its location in terms of proximity to the city center. Neighborhood choice can therefore be interpreted as a

statement of a person's willingness to belong to a group, suggesting that residents may place more value on the neighborhood rather than the dwelling itself (Hasu et al., 2017).

3.4 GOALS AND POLICIES ON PLANNING FOR FAMILIES AND CHILDREN

In the following sections, different planning policies on the topic of families and children are assessed. The section follows the Norwegian policy framework and assesses the policies that apply to Sandnes.

3.4.1 Global goals

Guided by the United Nations' 17 Sustainable Development Goals, many governments all over the world work to ensure environmentally, socially, and economically sustainable development in their respective communities through planning and policymaking. Sustainable Development Goal 11 specifically calls for more inclusive, safe, resilient, and sustainable cities (United Nations, 2015), where special attention is put to the needs of the most vulnerable groups in society, such as children, people with disabilities, and the elderly. Among other societal factors, the goal involves providing access to sustainable transport systems, improving traffic safety, and providing universal access to safe and inclusive green and public spaces.

3.4.2 National policies

Important planning topics are specified in the Norwegian planning guidelines. The guidelines are made to clarify the overarching goals and values which the planning is to be based upon. They shall also clarify how different interests and considerations should be taken into account and balanced.

The Norwegian National planning guidelines for coordinated housing, land-use, and transport planning is one of the most important policy guidelines for more efficient and sustainable planning. One of the goals is to help develop sustainable cities, facilitate business development, and promote

health, environment, and quality of life (Ministry of Local Government and Modernisation, 2014). Essentially, the policy guideline aims to coordinate housing, land-use, and transport to promote the development of compact cities, reduce transportation needs, and facilitate environmentally friendly modes of transport.

Concerning children and youth in planning, the most significant policy guideline is found in the Norwegian National political guidelines for promoting the interests of children and young people in planning. It is considered a public responsibility to ensure children and young people access to different opportunities and to have a meaningful upbringing. An important national in the policy guideline is therefore to ensure a childhood environment that has the physical, social, and cultural qualities that match any existing knowledge about the needs of children and youth (Ministry of Local Government and Modernisation, 1995).

3.4.3 Regional policies

Regional plans are made to promote cooperation between municipalities, and they are built upon the national policy guidelines for the coordination of housing, land-use, and transport. Sandnes municipality is covered by the Regional plan for Jæren 2050, which was adopted in June 2019. Although a compact city development has been the ideal for the development of the Jæren region for the last two decades, the region has continued with a spread-out development of single-family housing. Some of the main goals of the Plan are to facilitate simpler everyday life and to create livable neighborhoods and vibrant downtown areas (Rogaland county council, 2019). The Plan claims that density and the compact city can contribute to achieving these goals.

Rogaland county council (2019) suggests that livable neighborhoods are where residents easily can meet their everyday needs. They further suggest that livable neighborhoods imply a variety of housing options for a reasonable price, access to a varied regional job market, good and varied outdoor spaces, and social meeting places. Besides creating livable

neighborhoods, it is a goal to ensure the attractiveness of city centers and downtown areas in the Region. Rogaland county council (2019) suggests that attractive public spaces, identity, social interaction, culture, and experience make downtown areas an attractive place to live in. A vibrant downtown area, however, requires a critical mass of people and functions. Density and variety of people and functions are important to create activities and public life throughout the day, which makes the area vibrant.

In relation to housing, the Regional plan emphasizes the need to provide increased housing variety that is more adapted to the people's needs and preferences. A comparison between the existing housing stock and household composition in Sandnes and the region suggests that there is a deficit of apartments and a surplus of "family housing". A strategy to meet future housing needs involves stimulating circulation in the existing housing market and to densify in central areas of cities and suburbs according to people's needs and stated preferences (Rogaland county council, 2019).

3.4.4 Local policies

Planning policies of many local governments in Norway have progressively put more focus on facilitating families with children in the city. This ambition is often tied to ensure population growth, create a diverse local environment, and develop a city center that appeals to different groups of the population (Norsk Form, 2012).

The Municipal Plan is the most important strategic development tool for local governments in Norway. The latest Municipal plan for Sandnes was adopted in March 2019 and it sets the long-term goals for the community development in Sandnes municipality for the next 15-year period.

The first long-term goal is to ensure an inclusive and diverse society. This implies ensuring equal opportunities for good living conditions regardless of social background, place of residence, age, economy, and abilities (Sandnes municipality, 2019a). The second long-term goal is to make Sandnes become an attractive municipality. According to the plan, housing development is to be prioritized in Sandnes city center, and the Municipality

wishes to develop Sandnes city center as a livable and attractive main center for Sandnes and the region. To ensure residential quality and attractive local environment, the Plan has developed six quality considerations for new housing projects. New housing projects shall (Sandnes municipality, 2019a):

- Promote urban qualities
- Ensure accessibility to environmentally friendly public transport
- Guarantee green qualities and recreation in the immediate surroundings
- Build on local character and the history of the place
- Build on existing landscape features
- Ensure variety in housing size and typology

Built upon the Municipal plan for Sandnes is the Municipal sub-plan for Sandnes city center, adopted in December 2019. Municipal sub-plans are made to further elaborate and specify the long-term goals, strategies, and guidelines set in the Municipal Plan.

The overarching vision for Sandnes city center is to become “En liten storby ved fjorden”, loosely translated to “A small metropolis by the fjord” (Sandnes municipality, 2019b). The vision will guide the future development of the city center area, which revolves around emphasizing the spatial qualities and the nature of Sandnes.

The Municipal Sub-plan further works with ten focus areas in the development of Sandnes city center, one of which specifically works towards developing Sandnes city center to be a good place to live and to be in for children and youths. A justification for this focus area is that there are currently very few recreational activities, such as sports facilities or activity clubs, in the city center that are attractive for this target group (Sandnes municipality, 2019b).

Another focus area is to create diversity in the city center which facilitates a good living environment and rich commercial activity. In recent years, Sandnes has had a strong development of housing in the city center. However, analyses have shown that the city center consists of older demography compared to the rest of the municipality. To ensure diversity in the city center, new housing development needs to become more attractive, also for other target groups such as families with children.

3.5 CHAPTER SUMMARY

Attractiveness: The attractiveness of a place to live in is influenced by the qualities of a place. To be attractive, a city center needs to provide good and varied retail and services, in addition to workplaces, housing, and other cultural attractions. The attractiveness of a place is further influenced by good public services, vibrant public life, recreational activities, access to public transport, and low housing prices.

Residential quality: Residential quality is, in sum, factors related to the home and the larger area that is added value. Factors related to the dwelling unit, such as size, number of rooms, or floor plan are said to be place-independent, while factors related to the larger area, such as proximity and access to public transport are dependent on where the home is situated. Outdoor spaces are important to facilitate physical activity, outdoor play, recreation, and social interaction.

Residential preferences: Stated preferences indicate how people truly prefer to live. However, the existing situation does not necessarily reflect their preference over time. Housing supply in the existing built environment may not match the general residential preference. Families adjust their housing situation by moving and tend to prefer spacious dwellings in a child-friendly environment. The lifestyle perspective is used to explain why some families prefer to remain in the city. The urban preference seems to be prevalent among the young generation.

4 METHODOLOGY

This chapter describes how data is processed, what tools are used, and the background for these choices.

4.1 INTRODUCTION

In this chapter, the methodology of the thesis is explained. The chapter aims to describe the decisions made regarding the methods of collecting data and information. The chapter then describes how the data was processed, what tools were used, and discusses the background for these choices.

In order to answer the research questions, both quantitative and qualitative methods were selected. Firstly, in-depth interviews with surveyionals within the housing market were held to complement, confirm, and confront the topics identified in the literature review regarding attractiveness, residential quality, and residential preferences. Secondly, a survey was distributed among families with children living in Sandnes municipality, which consisted of both open-ended and close-ended questions.

Initially, the intention was to conduct interviews among families with children. However, due to time limitations and strict regulations caused by the ongoing pandemic of COVID19, the attempt to interview families were aborted.

4.2 SURVEY

Surveys were used as the preferred method to answer the questions regarding (Q1) the qualities of the living environment in which families with children in Sandnes find attractive, (Q2) the residential preferences of families with children in Sandnes and (Q3) what families with children in Sandnes think is necessary to make Sandnes city center more attractive to live in.

At the time of writing, Sandnes municipality was also in the early phase of conducting a new survey on housing and location preference, which is planned to be used as a basis for the municipal plan of the new Sandnes municipality.

4.1.1 Distribution

The current circumstances at the time of writing put some limitations on data collection by being out in the field. An electronic survey was created, which allowed it to be distributed online. Another reason to choose the electronic survey is the ease of data processing after the collection period.

The intention was to distribute the survey to as many family households as possible. An informant from one of the interviews suggested distributing the survey to parents with children in the kindergarten. In total, 14 kindergartens within Sandnes municipality were contacted. The administrative head of each kindergarten was asked to distribute the survey among the parents electronically.

Kindergarten	Number of recipients
Trones barnehage	65 parents
Langgata barnehage	90 parents
Austrått barnehage	70 parents
Kleivane barnehage	Did not confirm/ no capacity
Varatun barnehage	Did not confirm/ no capacity
Sørbø & Ganddal barnehage	Did not confirm/ no capacity
Sandvedhaugen barnehage	Did not confirm/ no capacity
Myklaberget barnehage	Did not confirm/ no capacity
Porsholen barnehage	Did not confirm/ no capacity
Stangelandsforen barnehage	Did not confirm/ no capacity
Brueland barnehage	Did not confirm/ no capacity
Rissebærstraen barnehage	57 parents
Hans og Grete barnehage	Did not confirm/ no capacity
Buggeland barnehage	50 parents

Table 2: Overview of survey recipients

The online survey was made available to collect data between 5 May 2020 and 20 May 2020. In total, parents of around 332 children received a request to participate in the survey. Unfortunately, the exact total number of persons that has been reached is unknown. If the kindergarten agreed to

share the survey, they were asked to provide the number of recipients that the survey was sent out to. Some kindergartens did not confirm the number of recipients, and others replied by explaining that they did not have the capacity to follow up on the author's request.

4.1.2 Survey selection

Although there are many online surveying tools to choose from, the author was given the opportunity to use a GIS-based (geographic information system) tool for public participation called Maptionnaire. The tool was made available to the author by Mad. In addition to the traditional survey items such as open-ended questions, multiple-choice questions, and dropdown menus, the advantage of using a GIS-based survey is that it allows the researcher to collect, analyze and visualize map-based data.

A limitation of Maptionnaire is that it is not a free solution, and it was only made available for the author to use for a limited period.

4.1.3 Survey design

The survey consisted of both open-ended and close-ended questions. Socio-demographic and economic information was asked in the very beginning. It was assumed that the "easy" questions should come first so respondents feel a sense of progress.

The GIS-based features were utilized when respondents were asked to place on a map the place where they live, places they often visit when together with children, and places they find attractive to live in. The survey also asked the respondents to draw a rough boundary of the area they would consider as Sandnes city center. Feedback from one respondent was that this particular exercise was difficult to execute from a mobile device.

The survey was made in both English and Norwegian languages, and the respondents were free to choose between the two languages at the beginning of the survey. The electronic survey can be found in the Appendix.

4.3 IN-DEPTH INTERVIEWS

Interviews were chosen as a method of data collection to answer the last question regarding (Q4). The interviews aimed to complement, confirm, and confront the topics identified in the literature review regarding attractiveness, residential quality, and residential preferences. Interviews were also chosen as a method of data collection because the informants may provide first-hand knowledge based on their situation.

Farthing (2016) suggests that the interview is in itself a “family of methods” which can vary in depth and structure. For this thesis, the intention was to adopt semi-structured interviews. This type of interview gives the informants more freedom to talk further in-depth about the topics that interest them. However, while an interview guide was developed beforehand, the interview guide was rather short and contained very few questions. As a result, the interviews focused more on the main research question as a point of departure, and additional questions were formulated along the way.

4.3.1 Selection of informants

Informants were selected based on relevance for the problem statement and the empirical context. It was important for the thesis to cover a wide range of people who represent different sectors and surveyional fields. The main criteria set for the selection of informants were that they were practitioners with experience and knowledge about urban planning, housing development, housing policies, or the housing market within the context of Sandnes.

It was also an intention to include a political representative in the selection of informants. The aim was to obtain the opinions and views of the topic from a decision maker’s perspective. However, due to time limitations and situational constraints, the author was not successful in getting in touch with a local politician.

The recruitment process resulted in a total of seven informants:

Informant	Company or organization	Office location	Role
A	Municipal property developer	Sandnes	Managing director
B	Private property developer	Stavanger	Sales and marketing director
C	Real estate company	Sandnes	Managing director and real estate agent
D	Municipal planning department	Sandnes	Advisor, background in architecture
E	Municipal planning department	Sandnes	Advisor, background in architecture
F	Municipal planning department	Sandnes	Advisor, background in architecture
G	Private property developer	Stavanger	Regional director

Table 3: Overview of informants for interview

The informants were recruited by contacting them personally through e-mail or by phone. Contact information of the selected informants was available online from the website of the respective organization they represent.

Prior to the interviews, informants were given an information brief that outlined the purpose of the study, implications of participation as well as the purpose of audio recording and transcription. The brief also defined how the data from the interviews should be stored and used in the study. The information brief can be found in Appendix.

4.3.2 Conducting the interviews

Opportunities to arrange face-to-face interviews were limited as strict regulations regarding social distancing were implemented due to the ongoing pandemic. Three interviews were conducted in person while the remaining were conducted remotely, either over the phone or through an online video conferencing platform. Microsoft Teams was primarily used for having the online interviews, as it was the platform which the informants were most familiar with.

All the interviews were audio-recorded using a dictation machine with no external communications feature, such as an internet connection. This

allowed for more focus on the conversation with the informant and less time on taking notes. At the beginning of each interview, the informant was asked for consent to audio record the interview for transcription and note-taking purposes.

Each interview took about 25-50 minutes, and they were all conducted in Norwegian. Audio recording from each interview was transcribed manually after all the interviews were conducted. Transcriptions allowed for a more thorough analysis of the information gathered through the interviews, in addition to making it easier to extract citations if needed.

Transcription of the interviews was done by the author and the process took around four to five times longer than the duration of the interview itself. When transcribing, vocal pauses and filler sounds such as “eh, uh, hm, etc.” were ignored. Otherwise, it was important, as far as possible, transcribe every word and sentence exactly as how they were being said. In total, all seven interviews resulted in about 35 pages of conversation.

4.3.3 Ethical considerations

For confidentiality purposes, names of informants and the organization they work in were anonymized. As the goal of the qualitative method is to acquire in-depth knowledge, some informants would share personal experiences and information which could potentially reveal their real identity. During the transcription process, it was therefore important not to refer to, for example, the informant’s workplace or home address, or to refer to the real names of persons.

Transcriptions of the audio recordings were stored in a password-protected document. To ensure the anonymity of the data during the retention period, the transcripts did not include any names of the informants, and the coding for each transcript are stored in a separate password-protected document. After all the interviews were conducted, the recordings were first transcribed and later deleted from the dictation machine.

4.4 COLLECTION AND PROCESSING OF PERSONAL DATA

A research project that involves the collection and processing of personal data needs to be notified to the Norwegian Center for Research Data (NSD). Collection and/or processing of the following data triggered the necessity to notify NSD (Norwegian Center for Research Data, n.d.):

- Audio recordings of informants during interviews (recording voices are considered processing of personal data)
- The collection of background information (for example, a combination of information such as place of residence, place of work, age, gender, position)
- Geospatial information (in the survey, respondents were asked to geographically locate various places, including the place of residence and places often visited near the home and in Sandnes city center)

Methods of data collection and processing for the project have been approved by NSD (see Appendix). Approval of the research project obliges the researcher to obtain informed consent from the study participants and to ensure the anonymity of the informants. Consent from survey respondents was collected through the form, while consent from interview respondents was collected through audio recording.

5 ANALYSES AND RESULTS

In this chapter, the survey results are presented and interpreted. Answers to the first three supporting questions are provided in the survey findings, while the answer to the last supporting question is provided from the interview findings.

5.1 INTRODUCTION

Summary of the survey findings can be found in 5.2, while summary of the interview findings can be found in 5.4 Due to time constraints, not all findings from the survey are analyzed in-depth.

5.2 SURVEY FINDINGS

In this section, the results from the survey will be presented. The survey was conducted in May 2020, and an online survey was sent out to families with children living in Sandnes municipality. The aim of the survey was to identify which residential qualities this target group find attractive, and to understand their perception of Sandnes city center as a place to raise children.

By the end of the data collection period, the online survey had a total number of 196 unique visits and 96 unique responses. Of all the responses that were collected, ten responses were removed as they were either left blank or the respondent did not provide consent to participate in the survey. In total, the survey returned a total of 86 completed responses.

Results from the survey have been divided into the following topics:

- Socio-demographics
- Household characteristics
- Housing situation
- Residential location
- Understanding of Sandnes city center
- Satisfaction levels of current housing situation
- Living environment for children
- Positive and negative qualities about own neighborhood
- Places near the home which families enjoy visiting
- Positive and negative qualities about Sandnes city center
- Places in Sandnes city center which families enjoy visiting
- Attractiveness of Sandnes city center to live in for families

5.2.1 Socio-demographics

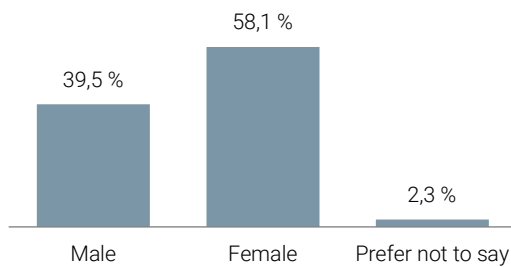


Figure 6: Gender (N=86)

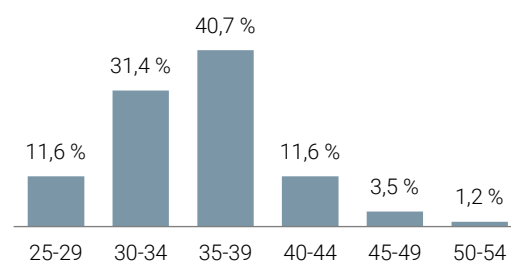


Figure 7: Age group (N=86)

Of all the respondents who participated in the survey, about 58 % is male and 40 % is female. The number of females is slightly overrepresented in the sample. The respondents are aged between 25-54 years, and the majority belong to the age group of 35-39 years. It is not an unexpected result to see a large share of younger adults in the sample, since the survey was distributed among parents with children in the kindergarten. It is common in Norway for people to have the first child in their 30s (Statistics Norway, 2020b).

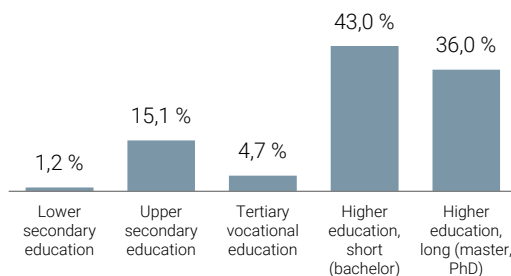


Figure 8: Education level (N=86)

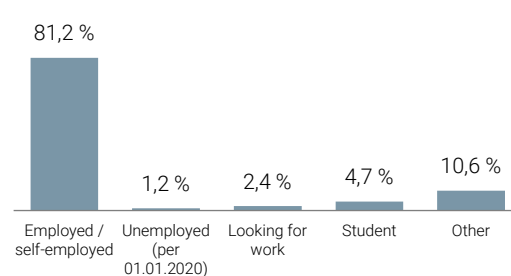


Figure 9: Employment status (N=85)

About 79 % of all respondents are highly educated (bachelor's degree or higher), where the majority of all respondents indicate that they have attained a bachelor's degree. About 81 % of all the respondents are currently employed. The data show that the majority of the parents in the sample are highly educated workers.

5.2.2 Household characteristics

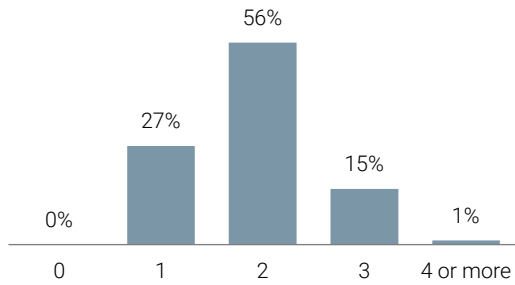


Figure 10: Number of children in the household (N=84)

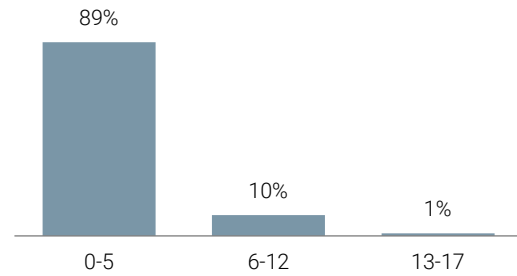


Figure 11: Age of the youngest child in the household (N=84)

The majority of the family households in the sample consist of two children. It is expected that the families in the sample consist of young children (aged 0-5 years), as the survey was distributed through the kindergarten.

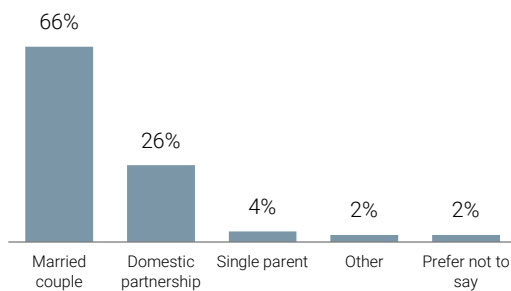


Figure 12: Household type (N=85)

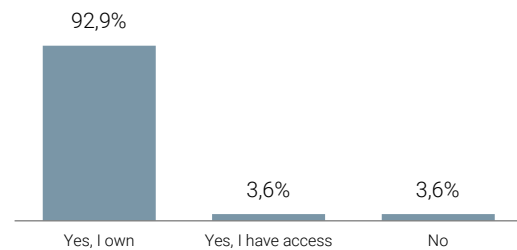


Figure 13: Car ownership (N=84)

Of all the respondents in the sample, only 4% (N=3) do not have access to a car.

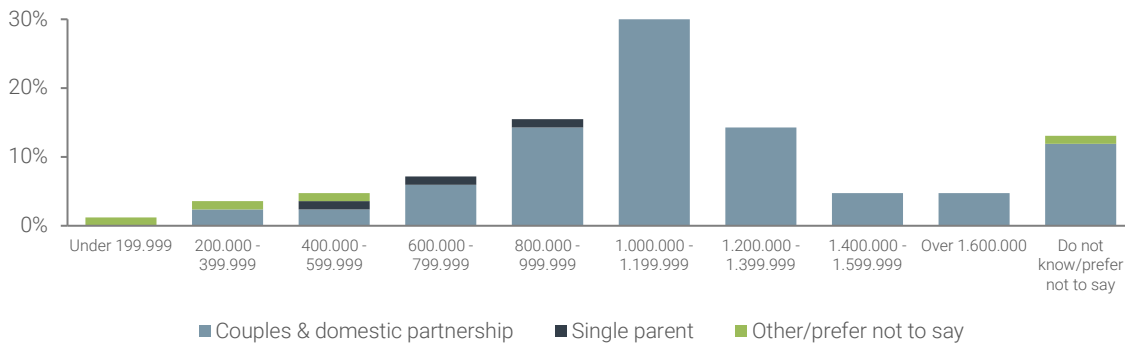


Figure 14: Total household income by household type (N=84)

One-third of the respondents earn a gross monthly income between 1.000.000 - 1.199.999 NOK.

5.2.3 Housing situation

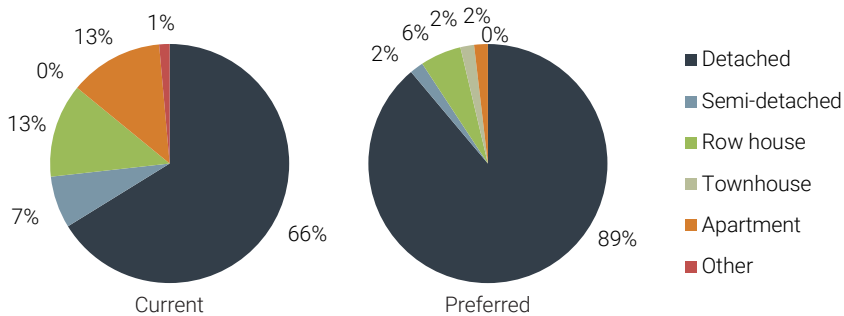


Figure 15: Current housing situation (N=71) vs. preferred housing type (N=54)

There is a noticeable difference between the preferred type of housing and the current housing situation. Most of the households currently live in detached house, followed by row house and apartment. While only 66% of the respondents currently live in a detached house, almost 90% prefer to live in a detached.

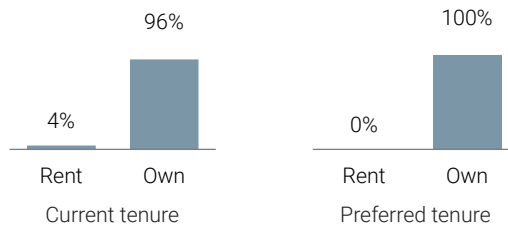


Figure 16: Current tenure (N=71) vs. preferred tenure (N=54)

A clear majority of the households in the sample are homeowners. All the respondents prefer to own.

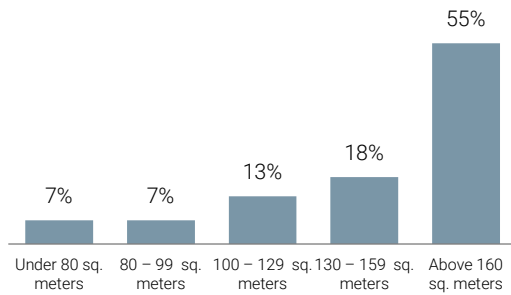


Figure 17: Size of current dwelling (N=76)

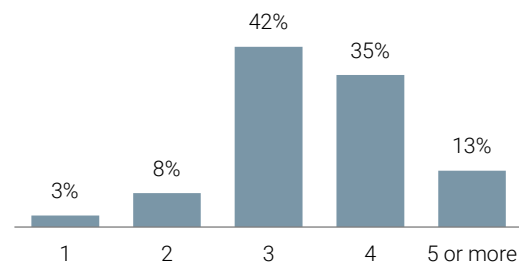


Figure 18: Number of bedrooms in current dwelling (N=77)

Most households live quite spaciously, as the majority live in single-family homes. The number of bedrooms reflects the number of people in the household.

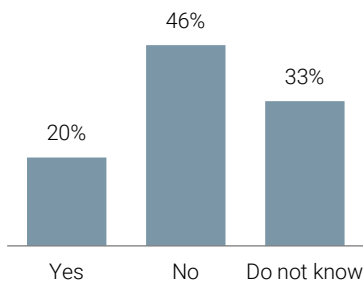


Figure 19: Is the existing housing availability in Sandnes city center making it less attractive to live there? (N=54)

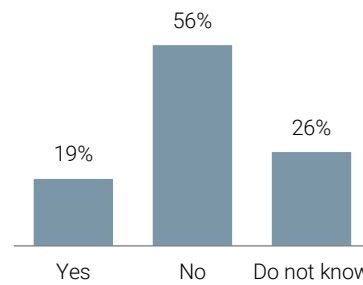


Figure 20: Are the existing housing prices in Sandnes city center making it less attractive to live there? (N=54)

When asked whether the housing availability or the housing prices make Sandnes city center less attractive to live in, most respondents answered no. Although the majority of the respondents said no, there is a large share who said that they do not know. This could either mean that many did not fully understand the way that the question was formulated, or they truly do not know.

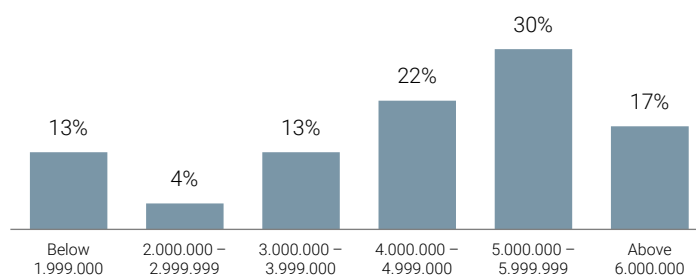


Figure 21: Acceptable price for city center housing (N=46)

When asked to name a price for a housing in the city center, about one-third were willing to pay an amount between 5-6 million NOK.

5.2.4 Residential location

The households are located in various districts. Some are located close to Sandnes city center. Three of the respondents located their place of residence outside Sandnes municipality. Show map somehow.

City district	% of respondents (N=68)	% of total population (N=79 537)
Austrått	16%	12%
Bogafjell	19%	9%
Hana	1%	8%
Lura	24%	11%
Sandved	4%	8%
Sentrum and Trones	24%	11%
Stangeland	12%	10%

Table 4: Representation of each city district

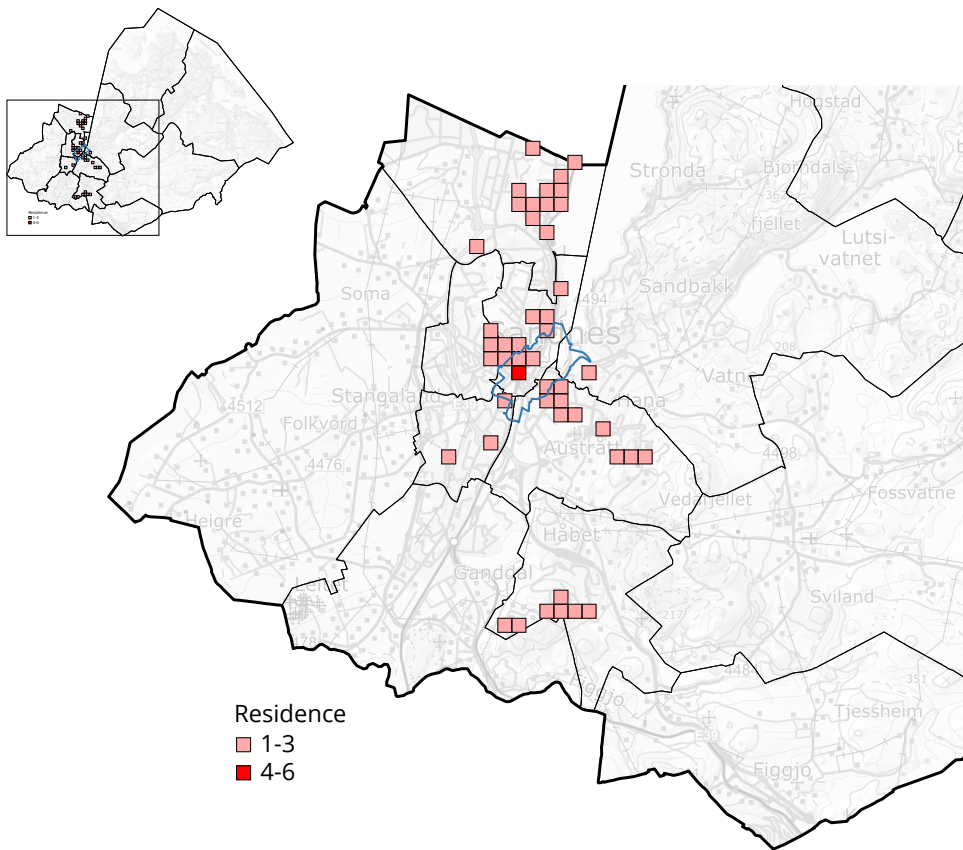


Figure 22: Residential location of the respondents (squares represent an area of 250x250 m²)

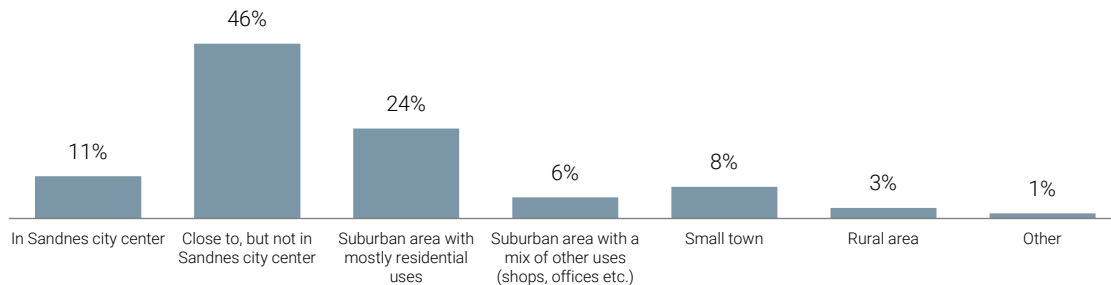


Figure 23: Best description of current residential location (N=71)

When asked to describe their residential location, almost half of the respondents would describe it as close to, but not in Sandnes city center. About one third of the total sample would describe their location as a suburban area, although 25 % of them would say that it has a mix of other functions.

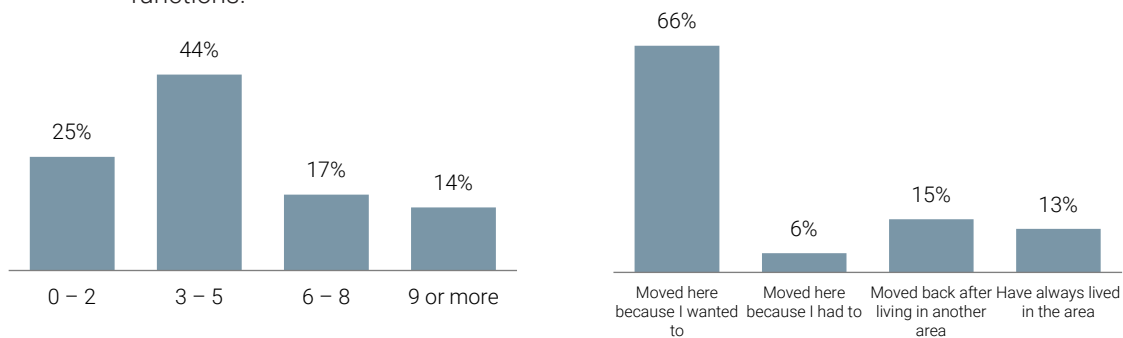


Figure 24: Number of years lived in current home (N=71)

Figure 25: Relation to the area (N=71)

On average, the households in the sample have lived in their current residence for five years. This number ranges between 0-15 years.

When asked to describe their relation to the area, a majority of the respondents would describe that they chose to move the location of their current residence because they wanted to. About one-third of the respondents describe a relation to the current area as they state that either have always lived in the area, or that they decided to move back after living in another area.

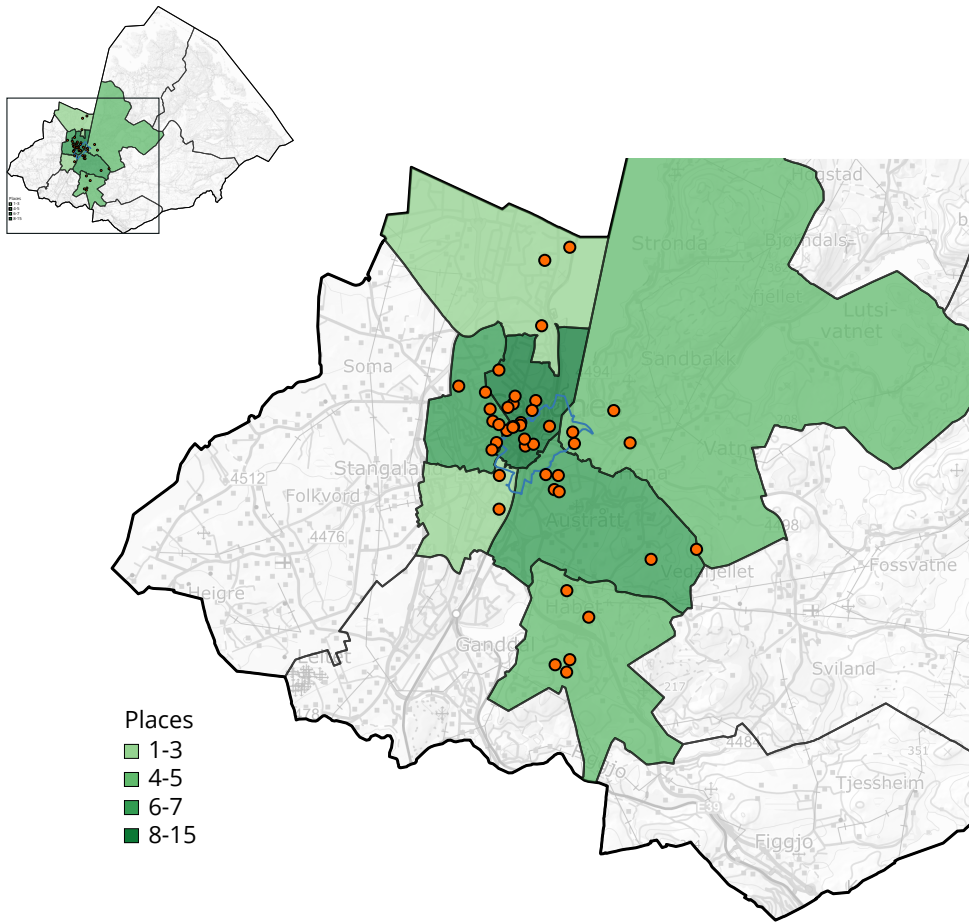


Figure 26: Preferred place to live in

5.2.5 Satisfaction of current housing situation

(1 – very dissatisfied, 3 – Neutral, 5 – very satisfied, N/A – Not applicable)

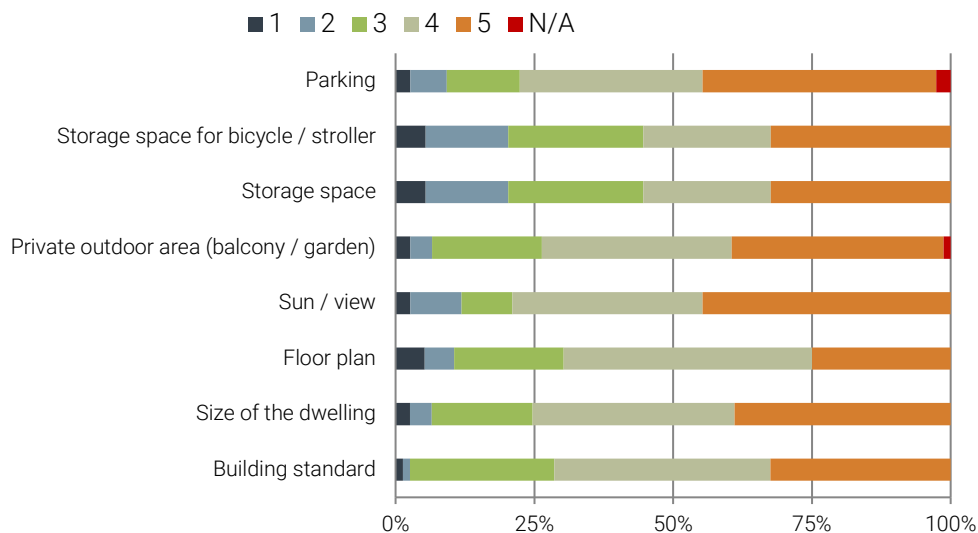


Figure 27: Satisfaction regarding qualities of the current dwelling

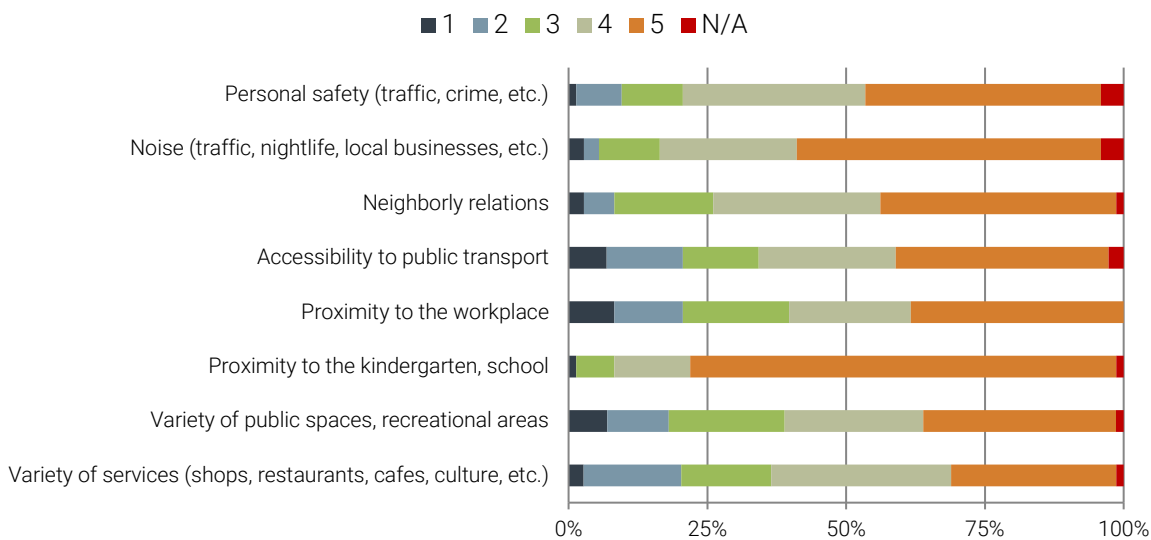


Figure 28: Satisfaction regarding qualities of the larger area

Qualities of the current dwelling which the respondents are most satisfied with:

1. Sun / view (79 % rated 4 or more, 45 % are very satisfied)
2. Parking (75 % rated 4 or more, 42 % are very satisfied)
3. Size of the dwelling (75 % rated 4 or more, 39 % are very satisfied)

Qualities of the area which the respondents are most satisfied with:

1. Proximity to the kindergarten, school (90 % rated 4 or more, 77 % are very satisfied)
2. Lack of noise (from traffic, nightlife, local business etc.) (79 % rated 4 or more, 56 % are very satisfied)
3. Personal safety (75 % rated 4 or more, 43 % are very satisfied)

5.2.6 Understanding of Sandnes city center

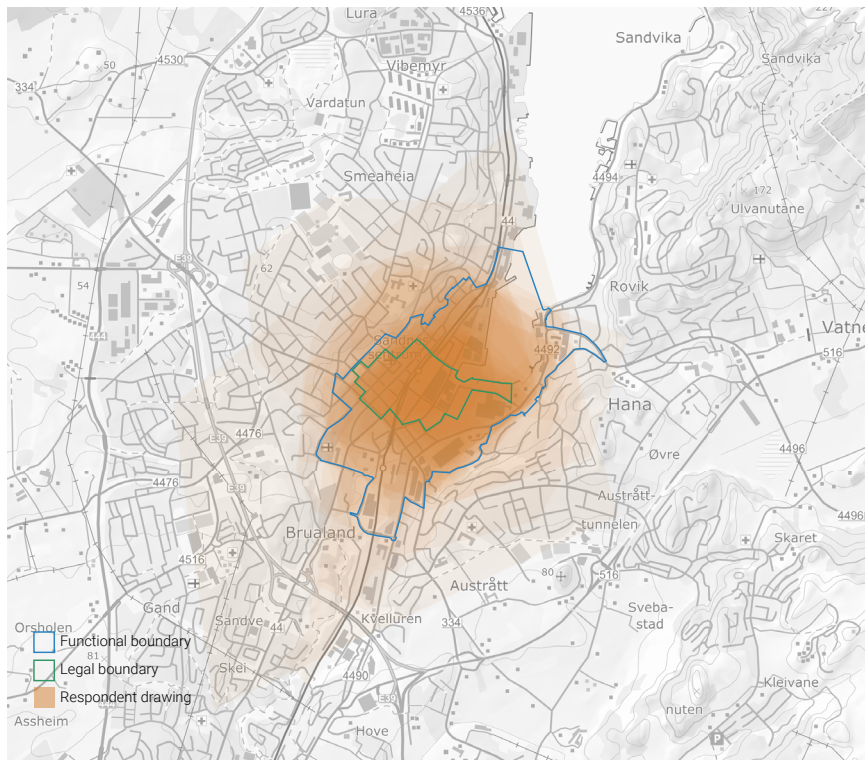


Figure 29: Perceived area of Sandnes city center

The respondents were asked to map a boundary of what they would consider as Sandnes city center. Darker colors indicate more overlaps. Green boundary indicates the "functional boundary", or what is subjectively experienced as the city center, after an evaluation done by Rogaland County Council (2015). Blue boundary indicates the legal boundary, as defined in the Municipal Sub-Plan for Sandnes city center. The project area, according to the legal boundary of the city center, is about 1040 decares (Sandnes municipality, 2019b).

The "heatmap" shows some variation in the understanding of the extent of Sandnes city center. Based on the heatmap, the common understanding of the majority of respondents seem to coincide with the legal boundary. The core of the city center matches with the functional boundary. As seen in the heatmap, respondents consider the neighborhoods adjacent to the city center boundary as a part of Sandnes city center.

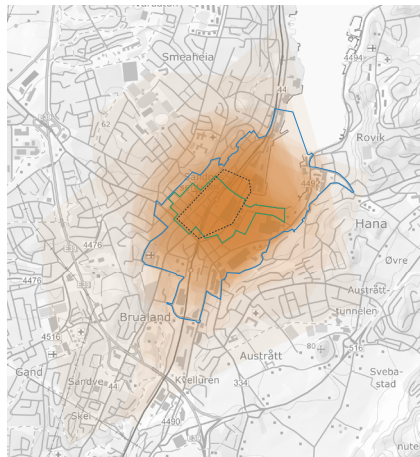


Figure 30: Boundary, small

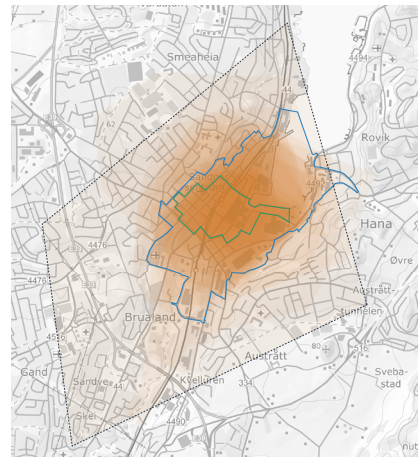


Figure 31: Boundary, large

Marked in black is one of the most compact boundaries drawn by one of the respondents and demarcates an area of about 200 decares. It comprises of the Langgata-area, Ruten public space and Amfi shopping center. The largest boundary offers a very general interpretation of the extent of Sandnes city center that spans over an area of more than 5000 decares. It extends well beyond the legal boundary of the city center set by Sandnes municipality.

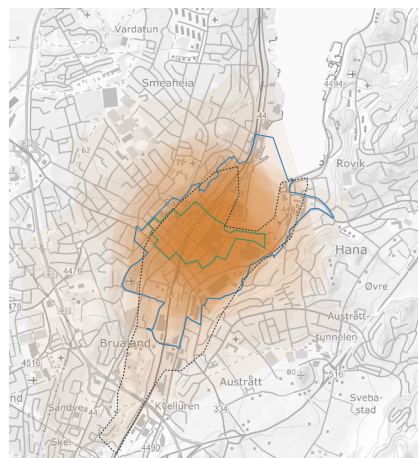


Figure 32: Boundary, Brueland

Although the respondents were asked to roughly draw an approximate boundary, one of the sketches in particular paid close attention to the natural and urban features. In the sketch above, one respondent carefully demarcated a boundary that followed the railroad, topographic features, and the contours of the water. More interestingly, this demarcation included Sandvedparken, which is situated south of the city center. It can be assumed that the respondent considered Sandvedparken as a significant part and a natural extension of the city center. This boundary has an area of about 1400 decares.

5.2.7 Living environment for children

Respondents were asked to what extent they considered the area they live in as a good living environment for children. They were asked to provide a rating between 1-100, where 1 signifies a small extent, and 100 signifies a large extent. Later, they were asked to do the same evaluation, but for Sandnes city center.

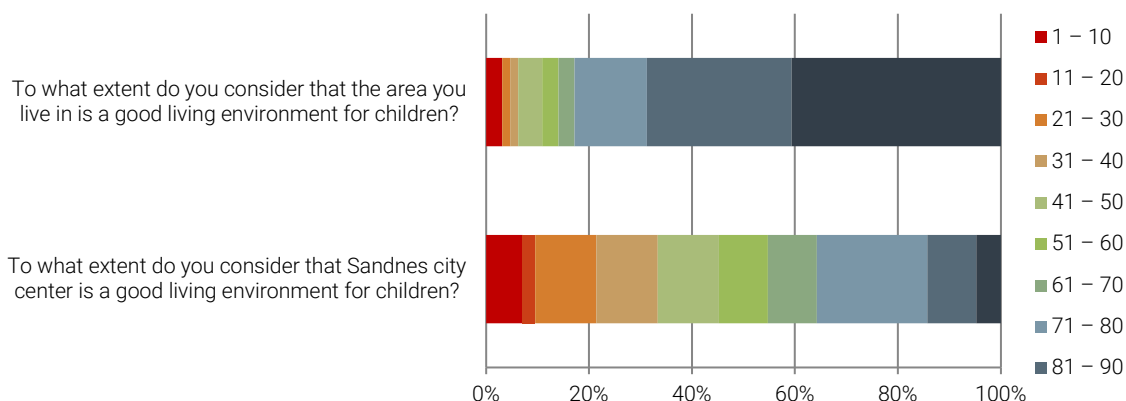


Figure 33: Rating of the area they live in (N=64) vs. Sandnes city center (N=41) as a good living environment for children

In total, the average rating for the area they live in was 82,8, with values ranging between 1 and 100. On the other hand, Sandnes city center had an average rating of 55,9, with values ranging between 6 and 95.

To a large extent, the majority of respondents perceive that the area they live in offer a good living environment for children. For the respondents who already live in or close to the city center, the city center naturally becomes a part of their living environment. However, when considering the evaluation of all respondents, the city center is not considered as a good living environment for children to the same extent as their own living environment. As a follow-up, respondents were asked to elaborate on why they consider their own living environment as a good childhood environment. These findings are presented in the next chapter.

However, there seems to be no clear agreement among the respondents on whether Sandnes city center is a good or not good living environment for children. For the respondents who live in the city center, it may be difficult to distinguish between the two questions, as the city center will become a part of their living environment.

5.2.8 Positive and negative qualities about own neighborhood

Respondents are asked to elaborate on why they consider the area they live in as a good living environment for children. The comments varied in terms of detail. Where some only provided short keywords, others were more elaborate on why they perceived certain aspects of their surroundings as a positive or negative quality.

As an attempt to create an overview of the different qualities that have been mentioned, the comments and keywords are sorted out thematically after how many times they are mentioned.

Of all the different qualities described, the most frequent themes were that it was considered safe and that they had proximity to a playground.

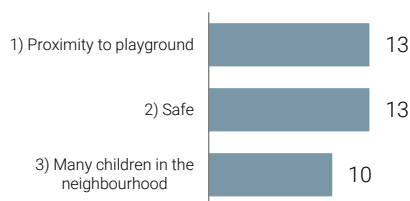


Figure 34: "What makes the area you live in a good living environment for children?"

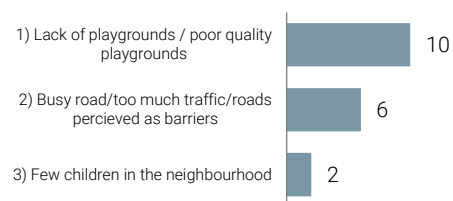


Figure 35: "What makes the area you live in not a good living environment for children?"

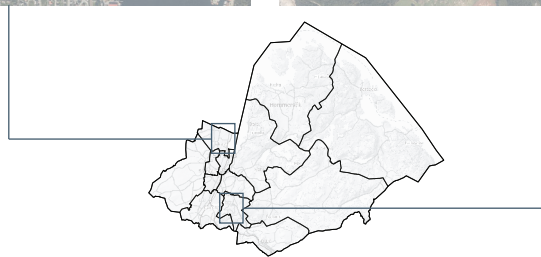
5.2.9 Places near the home which families enjoy visiting

The respondents were then asked to mark places which they would enjoy visiting together with their children near the home. In total, 97 places were marked out on the map.

Figure 36: Places near the home (Lura)



Figure 37: Places near the home (Bogafjell)



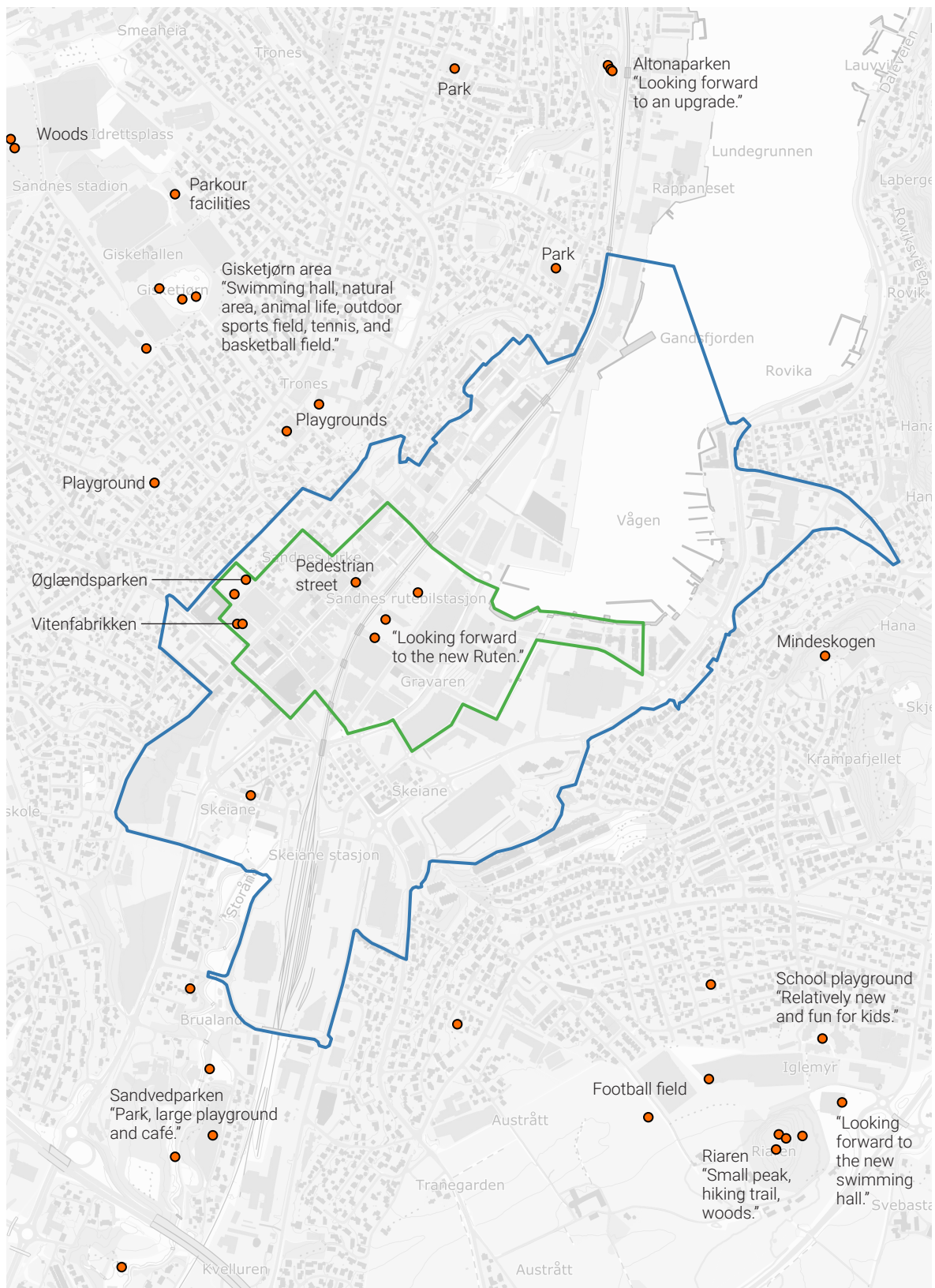


Figure 38: Places near the home (Austrått, Sentrum and Trones)

5.2.10 Positive and negative qualities about Sandnes city center

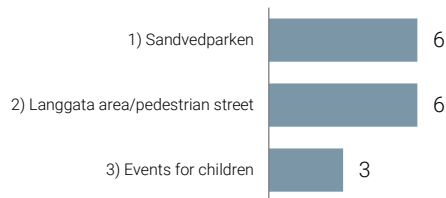


Figure 39: "What makes Sandnes city center a good living environment for children?"

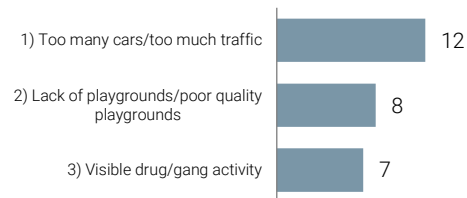


Figure 40: "What makes Sandnes city center not a good living environment for children?"

5.2.11 Places in the city center families with children enjoy visiting

The respondents were asked to mark on the map places in the city center which they would enjoy visiting together with their children. They were also asked to briefly describe what kind of place it is or how they would use the place. In total, 46 places were marked out on the map. Most of the places were briefly described by the respondents with the name of the place or function. Some places were given more elaborate comments.

In total, 36 of the places marked on the map were placed within the legal boundary. 33 places were concentrated within the functional boundary, with Vitenfabrikken (science center) being the place that is marked the most. Place markers outside the legal boundary mainly concentrate around Sandvedparken. Two place markers are located outside the map extent.

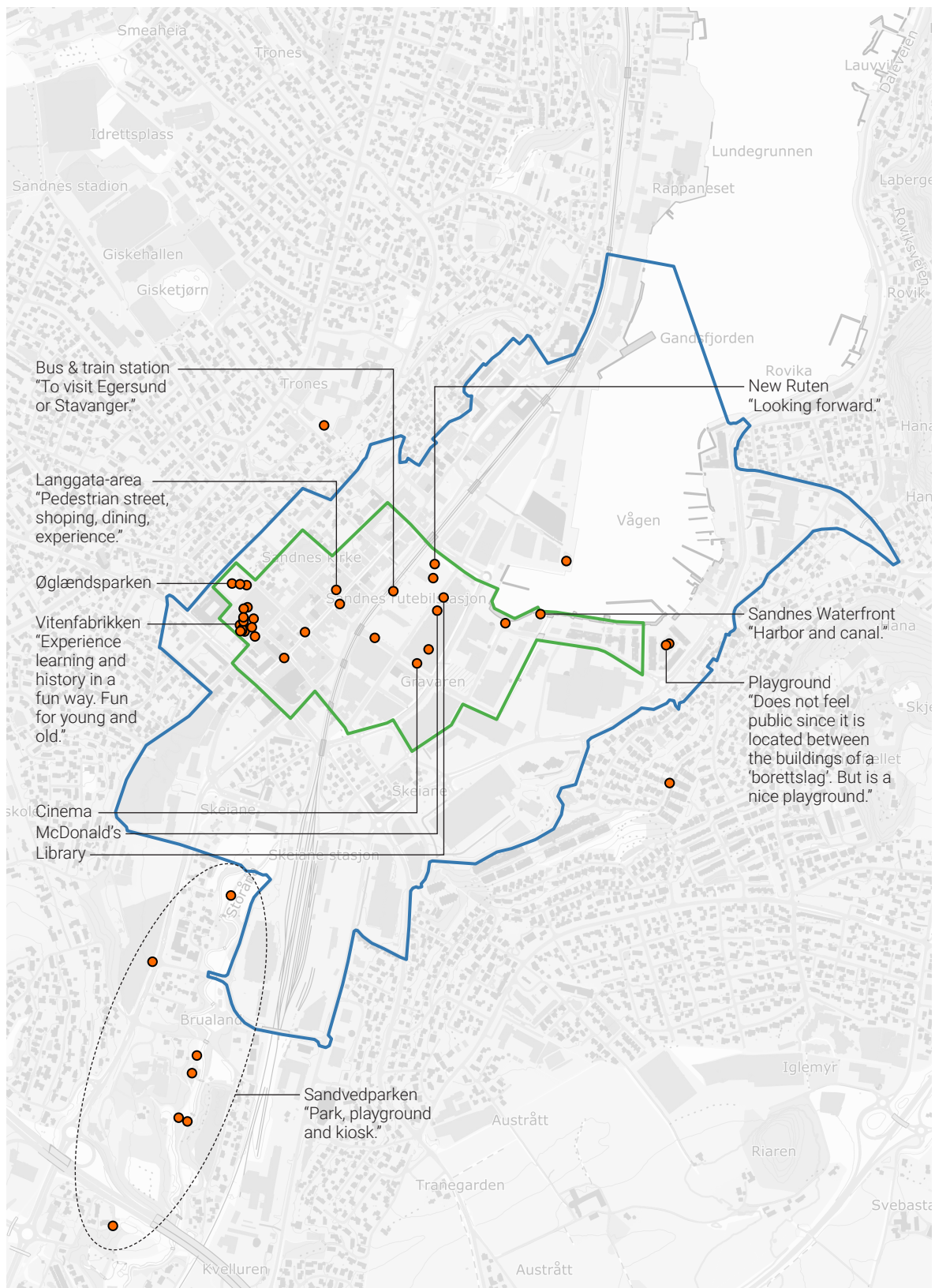


Figure 41: Places in the city center

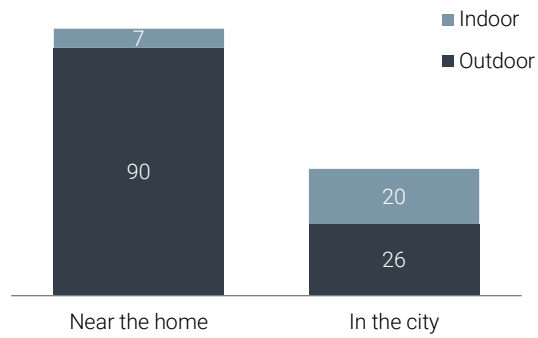


Figure 42: Type of spaces most visited in the city vs. near the home

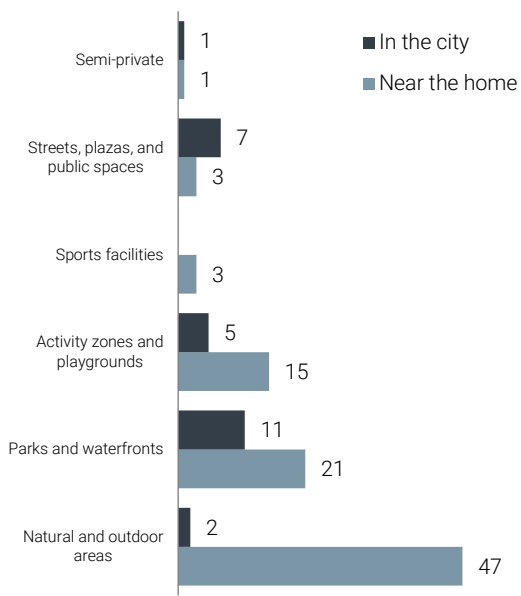


Figure 43: Types of outdoor spaces most visited

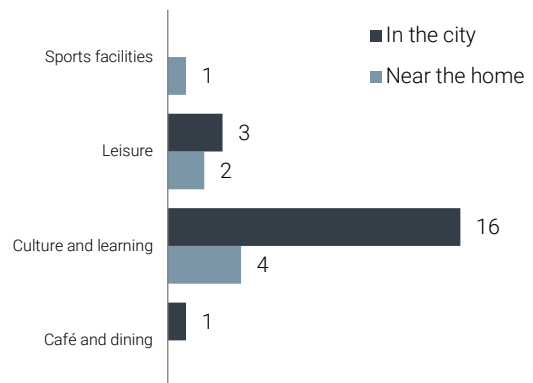


Figure 44: Type of indoor spaces most visited

5.2.12 Attractiveness of Sandnes city center as a place to live in

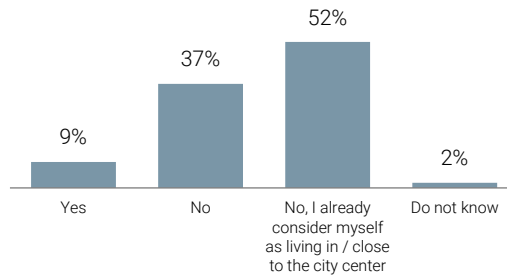


Figure 45: "Ever considered moving to Sandnes city center?" (N=54)

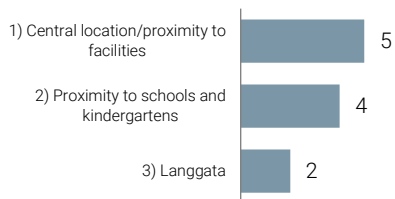


Figure 46: Attractive qualities



Figure 47: Missing qualities

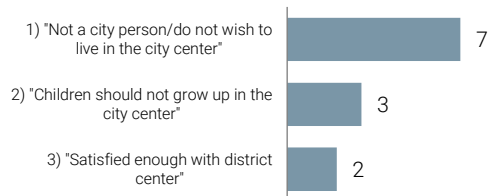


Figure 48: Attitudes toward the city center

5.3 SUMMARY OF SURVEY FINDINGS

Theme	Key findings
Socio-demographics and household characteristics	<ul style="list-style-type: none"> • The number of females is slightly overrepresented in the sample • The sample consists of working parents that are highly educated • Most households are young families, where the parents are in their 30s and their youngest children are between 0-5 years • Most households consist of couples with two children • Less than 1/10 of the household do not have access to a car
Housing situation	<ul style="list-style-type: none"> • Currently, about 2/3 of the family households live in a detached house, but 9/10 prefer to live in a detached house • Almost all of the respondents in the sample are homeowners, and all of the respondents prefer to own their home
Residential location and satisfaction	<ul style="list-style-type: none"> • Most of the respondents in the sample live in the city districts of Sentrum and Trones and Lura. • Sentrum and Trones is the city district that most families would prefer to live in with children, followed by Stangeland • They describe their residential location as close to, but not in Sandnes city center
Understanding of Sandnes city center	<ul style="list-style-type: none"> • Most of the respondents' understanding of Sandnes city center varies, but it mostly coincides with the legal definition of the city center
Living environment for children	<ul style="list-style-type: none"> • Most families perceive the current area they live in as a good living environment for children to a large extent. Meanwhile, the perception of Sandnes city center largely varies
Positive and negative qualities about own neighborhood	<ul style="list-style-type: none"> • 3 of the positive qualities most mentioned: Proximity to playground, safe, many children in the neighborhood • 3 of the negative qualities most mentioned: Lack of/poor quality playgrounds, busy road/too much traffic, few children in the neighborhood • Type of place most visited near the area where people live: Natural/outdoor areas
Positive and negative qualities about Sandnes city center	<ul style="list-style-type: none"> • 3 of the positive qualities most mentioned: Sandvedparken, Langgata, events for children • 3 of the negative qualities most mentioned: Too many cars/too much traffic, proximity to the kindergarten/school, visible drug environment/criminal activities • Type of place most visited near the area where people live: Culture and learning

Table 5: Summary of chapter 5.2

Table 5 continued

Theme	Key findings
Attractiveness of Sandnes city center	<ul style="list-style-type: none"> • 3 of the factors most mentioned that made it attractive to live in the city center: Central location/Proximity to facilities • 3 of the factors most mentioned that would make it attractive to live in the city center: Playgrounds/better quality playgrounds, large homes with larger plots/garden, and parks and natural areas • 3 perceptions of living in Sandnes city center: "Not a city person/do not wish to live in the city center", "Children should not grow up in the city center", "Satisfied enough with the city district"

5.4 INTERVIEW FINDINGS

This chapter presents the findings from the interviews. The themes were analyzed based on the topic that was most mentioned.

Citations that highlight certain topics are extracted and presented. To align with the language of the thesis, citations that are extracted have been translated from Norwegian to English. Terms that may have a special attraction to the readers of the original language have been kept.

Altogether, the factors that planning, urban development, and real estate surveyionals considered vital for making Sandnes city center more attractive to live in for families with children were categorized into 8 themes. They are sorted out after the number of times that the topic was brought up and discussed more in-depth across all the interviews.

- What is needed in order to make the city center more attractive to live in for families with children:
 - Facilitate everyday life (7)
 - Sense of safety (7)
 - Affordable price (6)
 - Public outdoor spaces (6)
 - Leisure and after school activities (5)
 - Adequate size and adaptable floor plan (4)
 - Semi-private outdoor spaces (3)
 - Existing ideal and preferences (3)

5.4.1 Facilitate everyday life

(Topic discussed in all the interviews)

The essential focus that could be deduced from all the interviews, in order to make Sandnes city center more attractive to live in for families with children, was the importance of facilitating everyday life. All of the informants, if not explicitly, have mentioned factors that are related to this topic.

People who prefer the urban lifestyle appreciate living in close to proximity to the workplace, grocery store, leisure facilities, and other functions that they need to visit every day. Many informants mention that living close to functions such as are kindergarten, school, and leisure and after school activities that children typically attend to are attractive among families with children. Young children in particular are dependent on their parents to be taken to kindergarten. Furthermore, if any leisure and after school activities are located far from the home, children would also have to rely on being driven to these destinations. Therefore, the everyday life can be quite resource intensive for working parents, involving many other trips besides between the home and the workplace. Informant F claims that a key benefit of living in a city center should be that one gets a better everyday life:

Informant F: You see people, you have good surroundings, and you do not have to drive to the grocery store. You can have your food delivered to your home whenever you want. There are a lot of advantages to the urban lifestyle. A lot. My partner and I would like to move in (to Sandnes city center), but currently, we think that it is not well enough facilitated.

Informant F acknowledges the many advantages to the urban lifestyle but believes that Sandnes city center is currently not well-enough facilitated for such lifestyle. In order to facilitate for families in Sandnes city center, Informant C suggests looking at the everyday life of a typical family. As parents, the everyday life of a typical family usually revolves around their responsibility to care for the children's needs. As Informant C illustrates it, the everyday life of a typical family starts with going to work between 08:00 and 15:30 and continues with picking up the children from the kindergarten after work:

Informant C: Where is the kindergarten? Obviously, they are located in many places, but there are a few in the city center and there are many in and around the city districts. And you often choose a kindergarten near where you live. Then you come home, you need to grab yourself something to eat, and then you go out for leisure activities. And where are they located? Well, they are also located in the city districts. So, you have to get in the car and drive up there. If the kids are about 10-12 years old, then you would want to wait there during practice. You then have to get home, and the kids may have to do some homework, they have to eat in the evening, and finally they can go to bed. So, that is the usual day for most people with kids. And that is why, I think, that most people prefer to live in the city districts for the time being. Because all the facilities for leisure activities, may it be swimming, soccer, handball, tennis, you name it, are in the city districts. There is nothing in the city center.

Informant C's narrative of the everyday life of a typical family essentially describe what Informant G refers to as a logistics problem. The immediate benefit of urban living, as Informant E puts it, should be a reduced need for transport. One should be able to reach their destination by foot or bike, and in a less resource intensive way. Mobility is a key word, according to Informant F, in that it should be easy to get around without car, and that there are alternatives to the car:

Informant F: But the alternatives must also be attractive, it should not be that you have to walk across large parking lots to get to the train station.

Informant F continues by referring to examples from projects in other cities. One of them was a housing project named Cyckelhuset in Malmö, a project the Informant praised due to its concept of creating full accessibility for bikes so that, even when you have a large cargo bike, you are able to take it all the way up to your apartment unit.

In one way or another, all Informants implied that Sandnes is very car-dependent and the city center have a lot of potential in facilitating for everyday life. Informant D believes that one of the reasons for why people choose to live in the city center is indeed that you can do everything there without needing to drive or travel out of the city. To achieve this, Informant D suggest that it is necessary to increase the critical mass of housing, workplaces and all the services and facilities that allows people to be able to live their everyday life in the city center.

After having experience from living in other larger cities, Informant E have come to appreciate the quality of having walking distance to everything. For Informant E, proximity was an important criterion when choosing a home.

Informant E: I really like having proximity to the various functions that I need to visit every day, such as the workplace, grocery store, the kindergarten and so on.

In Informant E's opinion, proximity to a kindergarten, school, and similar functions, are typically attractive for families. Informant E emphasized the needs of families with young children in particular by pointing out that there is currently only one kindergarten and no elementary school within the legal boundary of Sandnes city center. While there is a good coverage of high schools in and around the city center, children in high school are, as Informant E puts it, usually in the age where they are more independent, and they are free to decide which school they want to be enrolled in. In addition to proximity, Informant D list several qualities that are important to ensure, when facilitating the everyday life for children in city centers:

Informant D: [...] if you are planning for a family or children in the city, then it is all about providing short distances, avoiding traffic, providing sunlight and good air quality, some greeneries, not having noise pollution, and providing accessibility to everything. It is about ensuring every little thing that makes the everyday life of a child comfortable and inspiring.

5.4.2 Sense of safety

(Topic discussed in all the interviews)

Safety was also significant keyword across all the interviews. Informants highlighted the importance of perception of safety. Some respondents believe that attracting families to the city center is more than just about the dwelling unit itself. In order to make families with children want to live in the city center, it must feel safe for them to live there:

Informant C: If you want to get families with children to live in the center, then safety and a safe environment are important.

Informant A: [...] we like to be able to open the door and let the children out into safe outdoor spaces and not into a busy street for example, and to have access to good and organized spaces for outdoor play.

When talking about safety, Informants mainly refers to the term as a quality of the neighborhood and the immediate surroundings. A safe and child-friendly environment are qualities that Informant B consider attractive:

Informant B: Of course, what I consider attractive is that it is child-friendly, that it is safe for the kids. That the kids can go out and play without us having to look after them all the time.

Furthermore, Informant B believes that families with children prefer to have contact with ground level and have the opportunity to let the kids in and out safely. It is as much a matter of safety as it is a matter of practicality to have access to the dwelling from ground level. It describes a quality that is often associated with the detached house or row house, something that is limited in dense urban environments such as the city center.

Informant C and G believes that people who wish to establish family life are concerned with living in a well-established child-friendly environment, and having many families with children living in the area helps in creating the sense of safety:

Informant C: So, safety is a significant keyword in all this. And it is about having many playmates around, so you get this environment. "Like barn leker best", I think there is a lot in that, because when you can meet with somebody who is in the same situation as you, and who is interested in the same things as you, then that will have an influence.

Informant G: In my experience, families with children look for a well-established environment. Schools, social infrastructure, leisure activities for children and a safe childhood environment are what I believe are important for families with children. And the whole community in Sandnes is built upon the fact that people should live in the city districts.

Several informants signify the negative influence that car traffic has on the perception of safety. They believe that walking in Sandnes city center can be very challenging and Informant E is specifically concerned with the children's route to school:

Informant E: One thing is of course having a long school route; another thing is whether it is perceived as safe and good. The more populated it gets, the more traffic will there be. [...] It is very challenging to walk in the city center because of a large proportion of car traffic. After all, there is only one street that is designated for pedestrians only, and that is Langgata.

Informant D: I think it is quite important, if you go from A to B, that you can walk in a relaxed, safe, and good environment.

In terms of mobility, pedestrian safety is considered important by all the informants. Informant F suggested that there needs to be strict regulations for urban development projects, in terms of differentiating between soft and hard mobility:

Informant F: The car traffic obviously needs to be controlled, both in terms of the maximum number of parking spaces, but also in terms of where within the project area the car is allowed to access.

Furthermore, Informant F promotes smart solutions that can solve the problems of parking in dense areas. The Informant refers to a housing project called Asheimtunet, in a city district west of Sandnes city center, that have incorporated a compact parking solution with an automatized parking system:

Informant F: It is a project which I thought turned out pretty good. In the project, they declared that cars should not be allowed access all the way to the home and they created a car free courtyard. And then they utilized parking solutions that did not require you to drive the car in yourself. Instead, you just drive up a ramp, and then a robot will assist you in parking the car in place. This also makes the overall parking solution more compact.

Perception of safety also concerns the social environment in the public spaces close to where you live. Informant G's perception is that, in the past, people had some concerns about the environment near Ruten public space:

Informant G: In Sandnes, Ruten is comparable to Plata in Oslo. It is kind of scary for families with children that you have such environments in your neighborhood. And it is not very good for establishing families with children near such environments.

Here, Informant G referred to the reputation that Plata has, a public space located close the Central Station in Oslo, for being a common gathering place for drug users.

5.4.3 Public outdoor spaces

(Topic discussed in interviews with Informant A, B, D, E, F, and G)

When asked about what is needed to better facilitate families with children in Sandnes city center, seven informants suggested that there is a lack of variety and high-quality outdoor spaces. Informant E suggested that high-quality public outdoor spaces are a prerequisite:

Informant E: I think there are some parks and playgrounds, but not so much. Obviously, it is a prerequisite for people that want to live and stay in the city center, that there is a network of those outdoor spaces with good connections in between.

Regarding children, Informant A emphasized the importance of providing access to high-quality and organized areas for play. It is also important to provide variety and content adapted to the different age groups:

Informant A: A two-year-old has different needs than an eight-year-old, and an eight-year-old has different needs than a twelve-year-old.

Informant A further reflected on the experience that Ålgård gained recently, with its city center development. The intervention in Ålgård city center consisted of a series of parks that utilized the natural qualities and heritage of the site. An old parking lot and football field by the river was transformed into a new river park, an activity park for children, and a new plaza. An old locomotive shed was also repurposed to facilitate outdoor serving (Thomsen, 2019). Informant A had learned, from talking with other people, that more families with children are attracted to Ålgård city center during the day after the project was completed. In 2019, the intervention was awarded the Government's award for building quality (Norwegian Building Authority, 2019).

Some Informants did not think that Sandnes city center was currently attractive enough for families, but many acknowledged the municipality's efforts in trying to improve the situation by focusing on the quality of the public outdoor spaces:

Informant A: I think Sandnes is doing many things right. I hope we get a good effect from what is currently going on in Ruten public space so it can be a magnet for families with children.

Informant D: The municipality is relatively active on that front. After the municipality finishes the transformation of Ruten, the next big project that Sandnes will be committing to is Elveparken. So, there is a very big political awareness of the qualities of parks and outdoor spaces.

Informant E: I think that a lot is coming along in the city center. For example, Ruten, and the ambition to have a continuous promenade along the sea, opening up Storåna creek, and so on. As to how the situation is right now, I do not think it is very attractive for families with children to move here (to the city center). But I believe that in existing plans there are many good proposals

that, if realized, will make it more attractive. But it requires that you all the time have that as a focus. Even if you develop housing in the center, I do not think you can take it for granted that families with children would want to move here. [...] There are many grey areas in the city center.

Informant G: Sandnes do not have the qualities that make it attractive now, I think. But they are trying to do something about it now, starting with the renovation of the waterfront in Vågen and Ruten. I do hope they succeed with that development.

Besides walking or staying in Langgata, Informant G believed that not many people seek out Sandnes city center to be outdoors and stay in the public spaces:

Informant G: I am thinking of outdoor activities of being in parks, walking and strolling. [...] I think that very much is about the living environment in a broader sense. If you look at many other major cities around the world, New York, for example. There, the heart of the city is Central Park. Another example is Hyde Park in London. After all, the green lungs, the waterfront, all these facilities are wonderful to have one day when the sun is shining, and you can take a walk outside. Sandvedparken is a treasure in Sandnes. And there will be a hiking trail through Brueland, Elveparken and down to Vågen. That is obviously an amazing quality, that you can go in green surroundings from Vågen all the way up to Melsheia.

While Informant F believed it to be positive that Sandnes municipality is conscious about the value of outdoor spaces in the city center, the informant was still skeptical about the realization and quality of the outdoor spaces related to individual housing projects:

Informant F: A small playground with rocking animals is not good enough, because it must not be just for a limited age group. Here, the sun requirement is very important. I like to say that in Norway we have autumn all-year-round, so at least it must be sunny.

Informant F referred to the importance of the municipality's planning regulations that are made to ensure the quality of outdoor spaces in new housing projects. Among other things, the regulations set requirements regarding the minimum size that certain types of outdoor space should have. Furthermore, the sun requirement states that there should be

sunlight, during spring equinox at 15:00 and summer solstice at 18:00, on at least 50% of the outdoor space (Sandnes municipality, 2019c).

5.4.4 Affordable price

(Topic discussed in interviews with Informant A, C, D, E, F, and G)

A majority of the informants mentioned factors related to price. The informants pointed out that price is arguably an important factor when choosing a home. Informant C believed that price often decides whether people would even consider the thought of living in the city center.

Informant C: Because when you establish a family life and have children, then the economy is usually not ... you are on your way up, right, and there are loads of expenses you have to spend on all sorts of weird things. [...] For new housing projects, the price per square meter in the city center is typically about 55-60 000 versus 30 000 outside the city center. So, imagine when families are looking for a new home, "What do I get, say, for 5.5 million?". Outside the city center, maybe you get a detached home with two or three stories, maybe a garden and a garage. Then you turn to the city center, and you get maybe about 80-90 square meters of living space with two bedrooms. [...] When you search for an apartment unit with 120 square meters, most housing units in the city center for that size are around 7-8 million NOK. And most families with children cannot afford that.

Informant D: It is typically the most affluent segment of the population who can afford to buy housing in the city center, and this is often not families with children.

Most informants agreed that a part of the challenge with pricing is the price difference between the city center and the periphery. In order to make the city center more attractive and more competitive towards housing outside the city center, housing prices in the city center needed to be more affordable.

Informant G believed that there is a need to achieve a price balance in the housing market. However, it is difficult to achieve that balance when there is such a shortage of housing in the city center and an abundance of housing in the city districts.

Informant E: How you choose a home has something to do with something you cannot decide, i.e. price. If you look at new housing projects, then clearly the price for the plot and everything in the city center is much higher, so they have a completely different starting price. Price is obviously an important criterion when it comes to choosing where to live. And regarding owning or renting, the ownership culture is much stronger here in Norway.

As for how Informant E explained it, the reason for strong ownership culture among families has something to do with the relations you build up with other parents and children through kindergarten and school, which you often do not wish to give up by moving. As the family grows, the more important it becomes to have the predictability of living and staying exactly here.

Informant F also believed that the reason why most of the population growth in the region has taken place in Sandnes municipality is that Sandnes has been able to provide housing that matches the price range and ideal of Norwegians. However, to make this ideal affordable for most, it needed to be built outside the city center where the price for plots was much cheaper.

5.4.5 Leisure and after school activities

(Topic discussed in interviews with informant A, C, E, F, and G)

Many informants emphasized the importance of having attractive public spaces and meeting places in the city. Especially for children, informants agreed that there is a lack of facilities for leisure activities in Sandnes city center.

While many are skeptical towards the environment in Ruten, Informant A believed that it is important in providing an alternative to those who are not a part of organized leisure activity:

Informant A: And I think that in the city center one should have more ambition to offer a higher variety of leisure activities, compared to the city districts. There, you are more into those traditional sports teams.

Informant C was asked to share their opinion on the municipality's recent efforts in making Sandnes city center to be more attractive for families with children in Sandnes city center. The informant was critical and questioned the municipality's disposition of facilities for leisure activities:

Informant C: What everyone says, in a way, is that, after 16:00, Sandnes city center is "dead". They can do as much as they want with cafés and bars, but that is not what makes families want to establish themselves in the city center. There must be something else. There must be some activities. And what they are doing now with Ruten is about time. And I think they have to improve the facilities for leisure activities. For me, it is a mystery that they placed the new football stadium on Trones. [...] I know that they have discussed its location for a long time, but now it is there. Imagine that they could arrange, well, not just football games, but there can be concerts, fairs, and other events that is typically associated with that type of venue. They have talked about a swimming hall in the city center, but now they have placed that in Austrått, which what I think is ... well, very strange dispositions. If they want people to move to the city center, then you should not place facilities for leisure activities in the city districts.

Informant E agreed in that opinion:

Informant E: When you look at the city districts outside Sandnes city center, most people have some kind of "district center" with a sports facility such as football field, handball court, or sports hall. Such facilities do not exist in Sandnes city center. Those facilities are attractive to seek out in your spare time. It is difficult to imagine such facilities in the city center because they take up a lot of space. But still, the city center should be able to offer something else that people will seek out in their spare time. Around Vågen videregående skole, there is Kulturskolen and the gymnastics hall.

In addition to public outdoor spaces, Informant E suggested that a city center should have public indoor spaces that are inviting and easily accessible:

Informant E: And I think that one thing is activities that you can do outside, but it is also important to provide meeting spaces where you can be indoors, and preferably non-commercial. An immediate example that I can think of is a kind of extended libraries. Some cities call it a multimedia house or multimedia center. In Oslo, there is Deichmanske bibliotek, that now has

everything. [...] There is also a library in the city center, but you have to expand that library function and make it more like a social meeting place. Also in terms of accessibility, in Stavanger you have a good example with Sølvsberget which is very accessible, but with the library in Sandnes you must first locate the entrance, then you go in, and when you enter there is a staircase, and if you have a stroller then you must enter through a hallway and then walk into an elevator. So, you feel like you are coming in from the back door. While in Stavanger you just walk straight in from the street and it all opens up to the various functions of the building.

5.4.6 Adequate size and adaptable floor plan

(Topic discussed in interviews with informant A, C, E, and G)

Informants that mentioned factors related to the housing unit itself suggested that it needs to be big enough to accommodate families with children. According to Informant A and B, there may not be any apartment units in Sandnes city center that are suitable for families with children. Informant C explained that it is important to have the right number of bedrooms and a sufficient amount of space. Most families would prefer to provide one bedroom for each child. Meanwhile, most apartment units that are available in Sandnes city center today, according to Informant C, are built with only two bedrooms. This makes it harder for larger families to consider the city center as a possible alternative:

Informant C: It is very rare to see an apartment unit with three bedrooms. In the floor plan, there is usually, this dotted line in the living room, and there is where the third bedroom can be built. [...] but then, of course, the living space will be smaller. And you do not want that. So, it has something to do about the floor plan because what does a family need? Of course, they need a living room and a kitchen, but then they also need another zone.

Informant G: It is about creating different zones inside the home which allows separating the children's activities from the parents, that the family does not need to be around each other throughout the day, but you have an opportunity to retreat. For example, you can have a quiet zone, a zone for play and activities, or a zone where the parents can do something else.

Some informants described the importance of having zones in the home which can accommodate the various needs of different family members.

According to Informant E, what is missing in the market today are apartments built across multiple floors. Units with multiple floors make it possible to separate the different functions of the home to a greater extent:

Informant E: So, as you and the kids eventually grow with the home, then your kids can make use of larger parts of the home against, for example, that you get an open kitchen and living room solution and slightly smaller bedrooms. [...] It does not necessarily mean that every housing unit needs to have multiple floors but having a mix of housing typology is important to be able to provide a variety of spaciousness and size.

5.4.7 Semi-private outdoor spaces

(Topic discussed in interviews with informant B, D, and E)

Informant D suggested that there needs to be a hierarchy of outdoor spaces. Besides the private outdoor space that is facilitated in the form of a private balcony or a small terrace, there should be some semi-private outdoor space where a small group of residents can meet and interact with each other:

Informant D: It does not have to take up much space, but there is something about providing that close contact with the people you live with. So, it is not about creating gigantic public spaces or very large courtyards. But maybe something smaller shared for those residents who live there and around that particular area. Beyond that, there are public spaces. So, you can have spaces that are bigger and more public because there you can do other types of activities, and you offer something for those who do not have such a large outdoor space.

Informant B: Even though you do not have a decare of land, which you usually have with a typical detached house and which you do not get in the city center, you should at least have good and nice shared outdoor spaces.

Informant B further explained that, when they were working on an urban development project in Lervig Brygge, Stavanger, they were very much focused on creating outdoor spaces that were inviting:

Informant B: There are nice areas to play in there. It is an area that invites you to show some love for taking care of your own local environment. Also, there are a lot of people living in the same

life situation who have to sit in the playground to look after the kids. It is organized for that. There are benches and other things that adults can use as well. It is not only about focusing on the children to have a good time, but also that the adults could have a good time.

Informant E believed in the dynamics across the different types of outdoor spaces. In particular, the Informant believed that the courtyard structure found in city blocks with slightly older buildings, such as in Oslo, could be quite interesting for families with children:

Informant E: There, you get an enclosed space, an inner courtyard, in which everyone can have more sense of belonging. The courtyard space then becomes an extended part of your home and the boundary of what is "your outdoor space" and what is "shared" floats a little bit into one another. I have lived in Oslo without having a balcony or a garden, with a child of about one year of age. I think that if you do not have that private space, then the building structure must be arranged so that you find a sense of belonging in something that is shared. Then, I think it does not matter much about how big it is. In Sandnes city center there is a requirement for 6 square meters of private outdoor space. But if the 6 square meters, for example, faces the wrong direction (relative to the sun), faces a source of noise and is designed quite poorly, then you might as well just have a French balcony.

5.4.8 Change in the existing ideal

(Topic discussed in interviews with Informant A, B, and C)

Informants A, B, and C believed that Sandnes and the surrounding region do not have a strong tradition for living densely. What has long been an attractive housing typology is something which Informant A described as "small houses", such as row houses, duplexes, or smaller detached houses, preferably with a smaller rental part. Informant A suggested that this makes financing easier, so they have a source of income from their own home.

The informants suggested that the existing ideal is still prevailing for the strong preference towards low-rise and low-density housing. They doubted that families of the current generation would want to live in the city center if they must live in apartments. Informant B believed that, so long as families have the opportunity to buy either a detached house or a row house, then that is what most families would prefer.

Informant B: Very much of what is built in Sandnes city center today are apartment blocks. And this is not something we here in the western part of Norway are ... in a way, we have not come quite as far as Oslo, when we think about whether it is OK to live in an apartment with children. [...] Oslo is ahead of us. It is a lot more people there, much more pressure on the housing market. There, you must live in an apartment with children. While here, we are probably a bit insistent, so for someone in a situation where money is not an issue, a detached house is not so unattainable.

Informant C: Well, I think everyone who wishes to establish family life at some point has a dream of getting a house with a garden. I think that is simply just deeply rooted in the mentality of people. At least if you look at Sandnes, where there are really few people living in the city center, and everyone lives in the city districts.

According to Informant C, the dream of the detached house with a garden is still deeply incorporated in the mindset of many, especially those who wish to establish family life. Furthermore, the informant believed that for people to be willing to give up on the dream of the detached house is something that has to go over time. However, parks and green spaces become more important if people do not have access to a private outdoor space or garden, especially in dense areas:

Informant C: You really do not have to look that far; you can just look to Oslo. I have lived there myself. And there, it is quite normal that people meet in the parks. I have lived there for two or three years and it was kind of like, "Wow, what's going on here?". It was incredibly pleasant. But that is because people do not have space at home. So, they do not have that garden, they do not have that balcony. Many apartments in Oslo do not have a balcony. If the weather is nice, then you must go out. And the backyard, of course, some backyards are nice, while others are typically bicycle parking. But that is more or less how things are built up. Many people around an area and with a large park tying everything together.

5.5 SUMMARY OF INTERVIEW FINDINGS

Theme	Perceived situation	Specific suggestions from informants
Facilitating everyday life	<ul style="list-style-type: none"> • Not well-enough facilitated for everyday life • Car-dependent • Lack of kindergarten and elementary school was stressed 	<ul style="list-style-type: none"> • Increase the critical mass of housing, workplaces, and public services • Provide functions that accommodate the everyday needs of families • Improve pedestrian mobility and provide better walking and biking experience in the city center
Sense of safety	<ul style="list-style-type: none"> • When choosing a where to live, family households are most concerned with the safety of children • Many families and children living in an area help in creating a sense of safety • Car traffic has a negative influence on the perception of safety • The unsafe social environment in the public spaces near the home that is not desirable 	*
Public outdoor spaces	<ul style="list-style-type: none"> • Public outdoor spaces offer an alternative to the private outdoor space and are a prerequisite for the acceptance of living densely • Besides Langgata, not many people visit the city center to stay in its public spaces • While the city center is currently perceived as not attractive by some, they acknowledge the municipality's efforts in improving the quality of the public outdoor spaces 	<ul style="list-style-type: none"> • Playgrounds should offer variety and content for children of different ages

Table 6: Summary of chapter 5.4

Table 6 continued

Theme	Perceived situation	Specific suggestions from informants
Affordable price	<ul style="list-style-type: none"> • Price is arguably an important factor when choosing a home • Shortage of housing in the city center and abundance of housing outside the center creates imbalance in the housing prices 	<ul style="list-style-type: none"> • In order for housing in the city center to be more attractive, they must be made more affordable
Leisure and after school activities	<ul style="list-style-type: none"> • There is lack of facilities for leisure activities in Sandnes city center 	<ul style="list-style-type: none"> • Increase the variety of leisure activities for children who are not a part of an organized sport • Indoor meeting spaces with multiple functions, such as Sølvsberget in Stavanger or Deichmanske in Oslo
Adequate size and adaptable floor plan	<ul style="list-style-type: none"> • Most apartment units that have been built in Sandnes are mainly two-bedroom apartments that are not suitable for larger families • Need to provide different zones within the home 	<ul style="list-style-type: none"> • Large apartment units with multiple floors
Semi-private outdoor spaces	<ul style="list-style-type: none"> • Semi-private outdoor spaces provide a place for informal meetings with neighbors and a sense of belonging 	<ul style="list-style-type: none"> • There should be a hierarchy of outdoor spaces
Change in the existing ideal	<ul style="list-style-type: none"> • The dream of single-family housing is still deeply rooted in the mentality of many • As long as families with children afford to live in a detached house or a row house, then that is what most would prefer 	<ul style="list-style-type: none"> • *

* Informants did not come up with specific suggestions

6 CONCLUSION AND DISCUSSION

This is the final chapter which seeks to provide an answer to the main research question. Furthermore, the chapter provides a critical reflection of the findings and overall study and suggests topics for future research.

6.1 CONCLUSION

This chapter will summarize the findings of the thesis and answer the research question and supporting sub-questions.

The purpose of this thesis was to gain a deeper understanding of the housing preferences of families with children in Sandnes, and the qualities of the living environment that this target group value, in order to suggest recommendations for how the main city center of Sandnes can better attract and retain families with children. The main research question posed was:

“How can Sandnes city center be made more attractive to live in for families with children?”

In order to answer the main research question, four sub-questions were formulated. To answer the research questions, a survey was used to collect data from families with children and interviews of surveyionals within planning, development, and real estate surveyionals.

Findings from the literature suggest that what makes places attractive to live in is influenced by certain qualities related to a place. Besides the qualities of the home, the term residential quality also refers to the qualities of the living environment. By asking for the qualities that are attractive to families, the thesis reveals the qualities that are necessary to attract families with children to the city center.

Q1: What are the qualities of the living environment which families with children in Sandnes find attractive?

The majority of respondents that participated in the survey live in the city districts of Sentrum and Trones and Lura. A majority of the respondents are quite satisfied with their existing living environment. When asked to elaborate on why they consider the area they live in as a good living environment for children, the qualities about their living environment that were most mentioned are 1) proximity to playground, 2) safe, and 3) many

children in the neighborhood. When comparing to the negative qualities, busy road and too much traffic are among the factors most mentioned by the families. A living environment that is perceived as safe is a quiet place with low traffic. Natural areas and outdoor areas, such as the woods, are the type of place near the home that is most often visited, suggesting that natural places are highly valued by families with children. People living in Sandnes city center consider that a central location and proximity to facilities are the qualities that make it attractive to live there.

Q2: What are the residential preferences of families with children in Sandnes?

The literature suggests that residential preferences change through different life phases and changing lifestyles. Currently, about 2/3 of the family households live in a detached house, but 9/10 prefer to live in a detached house. When asked to place on a map the places they prefer to live in, Sentrum and Trones city district was indeed marked most often. This is also the city district that most of the respondents currently live in. The literature suggests that families prefer spacious dwellings in a child-friendly environment

Q3: What do families with children in Sandnes think is necessary to make Sandnes city center more attractive for them to live in?

As a living environment for children, the three negative factors most mentioned by the respondents were 1) too many cars/too much traffic, 2) lack of/poor quality playgrounds, and 3) visible drug environment/criminal activities. Consistently, more playgrounds or better quality playgrounds were among the factors that the respondents believe would make the area more attractive to live in.

Q4: What do planners and real estate surveyionals think is necessary to attract families with children to live in Sandnes city center?

Eight topics were discovered from the interviews.

First, the informants perceive that Sandnes city center is currently not well enough facilitated for the everyday life of families. To make the city center more attractive to live in, surveyionals suggest that there is a need to increase the critical mass of housing, workplaces, and public services and amenities that allow families to meet their everyday needs in the city center. They also suggest improving the mobility for pedestrians.

Second, surveyionals believe that family households are most concerned with the safety of the children when they choose a place to live. While car traffic has a negative influence on the perception of safety, many families and children living in an area help in creating a sense of safety.

Third, surveyionals believe that a high quality of public outdoor spaces is a prerequisite for the acceptance of living densely.

Fourth, affordability was discussed to be an important factor for attractiveness, and the development imbalances of houses inside and outside of the city center lead to an imbalance in the housing prices.

Fifth, the lack of facilities for leisure activities within the city center impacts the choice in location. To solve this, surveyionals suggest that several indoor meeting places should be facilitated.

The sixth issue that the informants addressed was regarding the quality of the housing unit. Many find the size of existing apartment units in Sandnes city center unsuitable for families. The existing types are mainly for smaller households, while larger families prefer apartment units with several bedrooms, distinguishable zones, and preferably across multiple floors.

The seventh issue that was pointed out was the semi-private outdoor spaces in the city center that provide rather perceived as private and open for the neighbors only. The surveyionals suggest a hierarchy of outdoor spaces that clear the difference between public and private outdoor spaces.

Lastly, the traditional single-family housing preference that still lives through the mentality of the current generation. Surveyionals highlighted that, as long as families with children can afford detached houses or row houses, those are the options that will be a prior choice for them.

6.2 STUDY LIMITATIONS

This study has many limitations. First, the mixed selection of methods was not used to complement each other. Instead, the way that the surveys and interviews were used could have resulted in two separate studies; one that is a study of the residential preferences among families with children, and another that is a study that explores the different approaches that different surveyionals have when planning for families with children.

Furthermore, the selection of methods was built upon a loose theoretical framework that tried to include many concepts. This made it very challenging to analyze and interpret data and to connect the results with the theory.

In practice, only a limited number of questions from the survey were relevant for answering Q1, Q2, and Q3, causing a lot of the remaining data to be uninterpreted or analyzed more thoroughly.

Regardless, statements and perceptions of both families and planners do coincide with each other, that, with better structure and time management could have been better linked to theory.

Another limitation of the study is the selection of informants and the geographical context. The informants were recruited among surveyionals within, urban planning, property development and real estate in Sandnes, Norway, and the surrounding region. The results should therefore first and foremost be interpreted within this cultural and regional setting.

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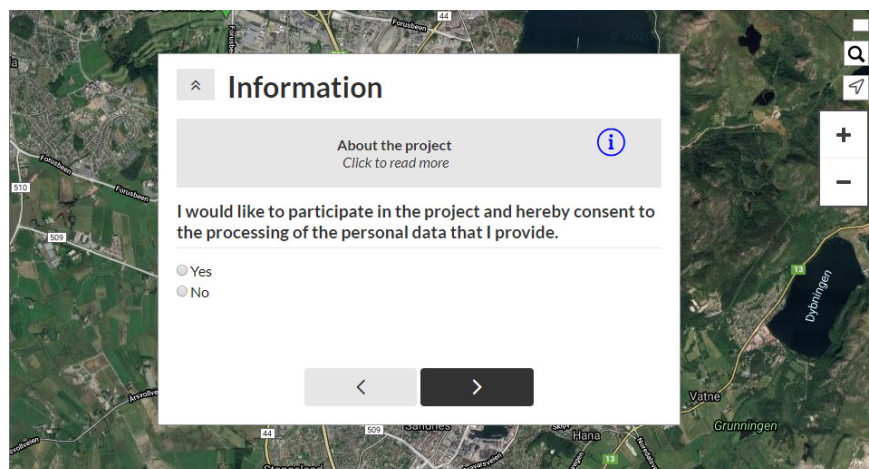
9 APPENDIX

MAPTIONNAIRE SURVEY FORM

Landing page. The survey was titled “Residential attractiveness and preferences for families with children in Sandnes” and it was made available in both English and Norwegian. The Norwegian title was “Boattraktivitet og bopreferanser for barnefamilier i Sandnes”. Link to the survey: <https://app.maptionnaire.com/en/8392/>

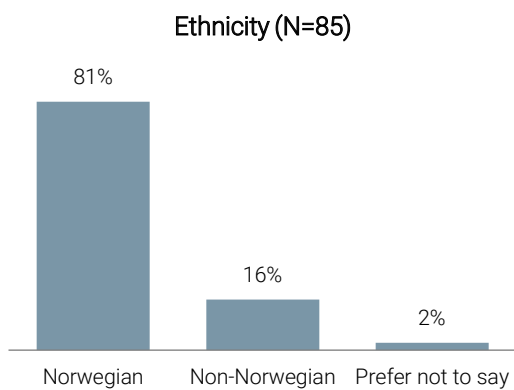
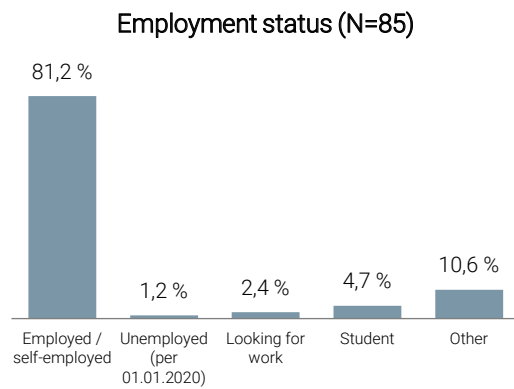
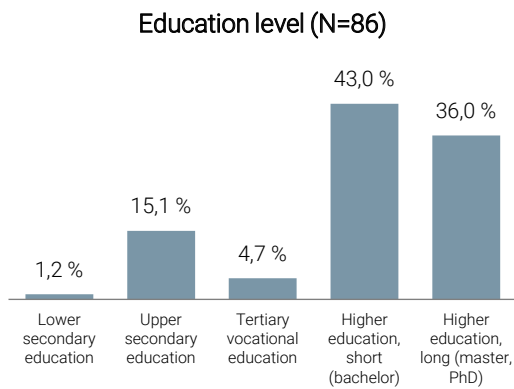
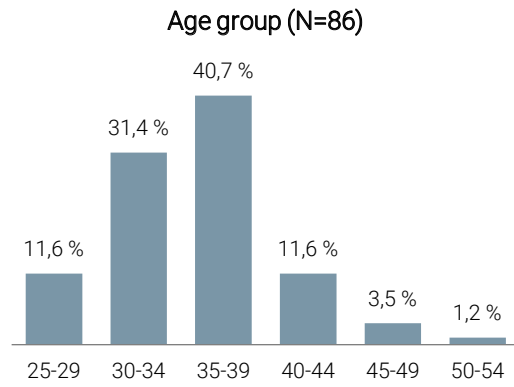
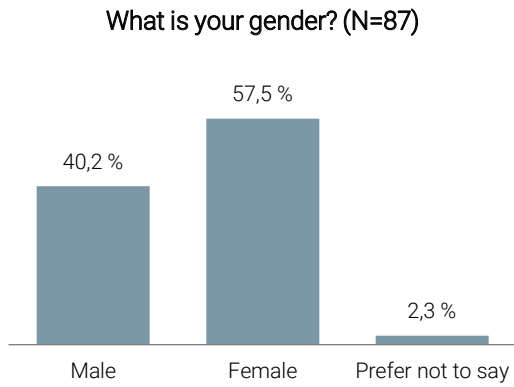


Information page (see own Appendix). The information about the project was given in a pop-up window within Maptionnaire.



MAPTIONNAIRE SURVEY RESULTS

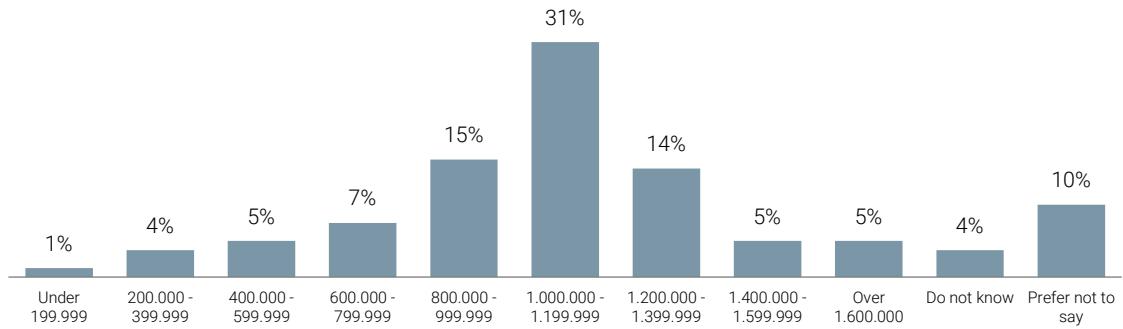
Background information



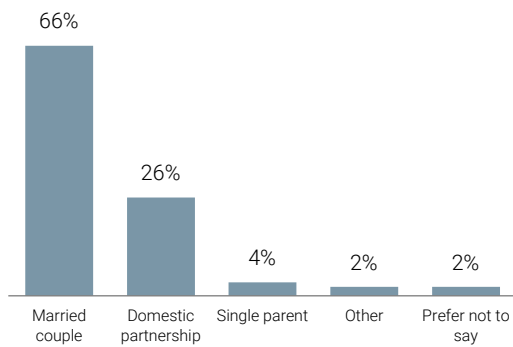
MAPTIONNAIRE SURVEY RESULTS

Household information

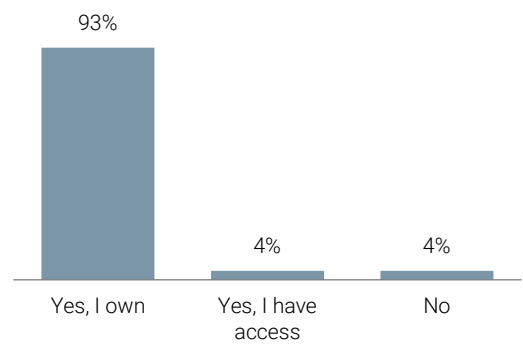
Total household income, gross (N=84)



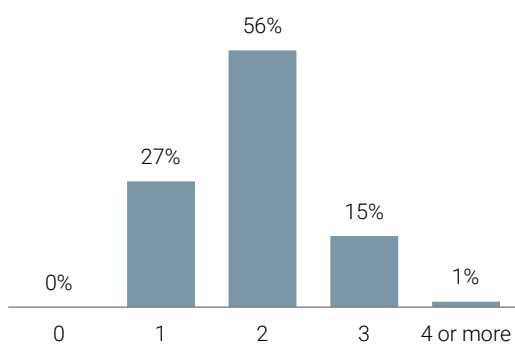
Household type (N=85)



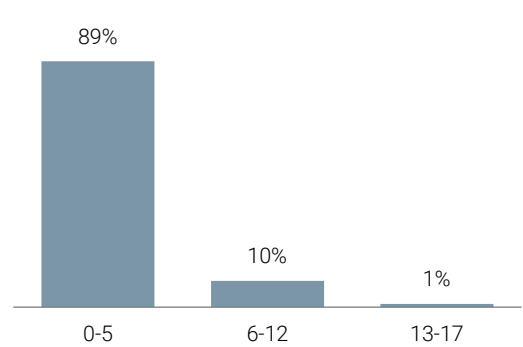
Car ownership (N=84)



Number of children (N=84)

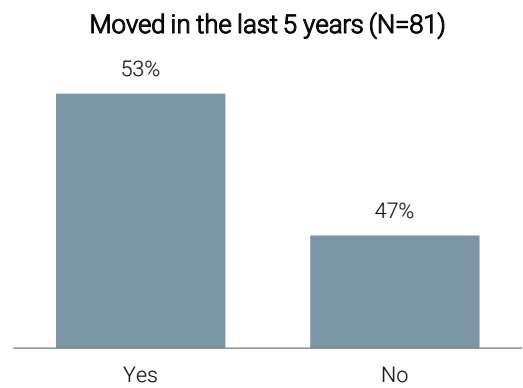
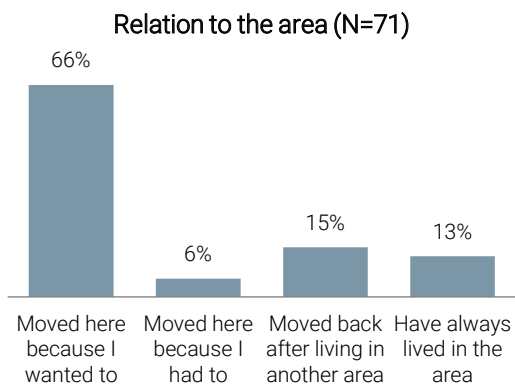
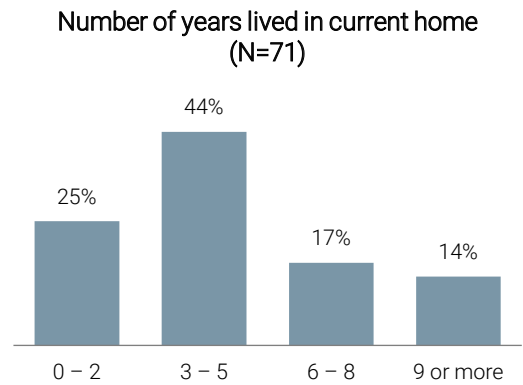
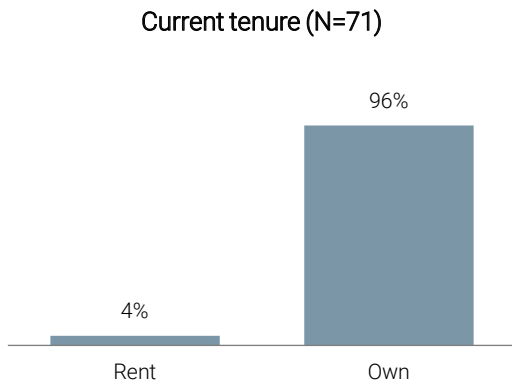
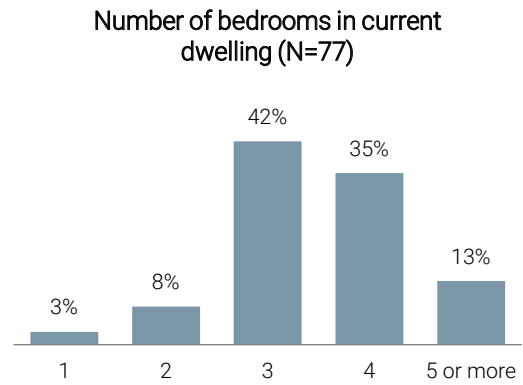
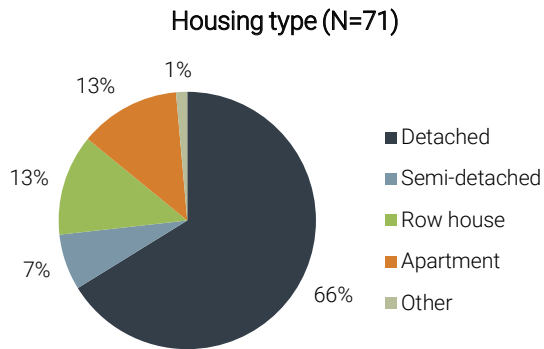


Age of youngest child (N=84)



MAPTIONNAIRE SURVEY RESULTS

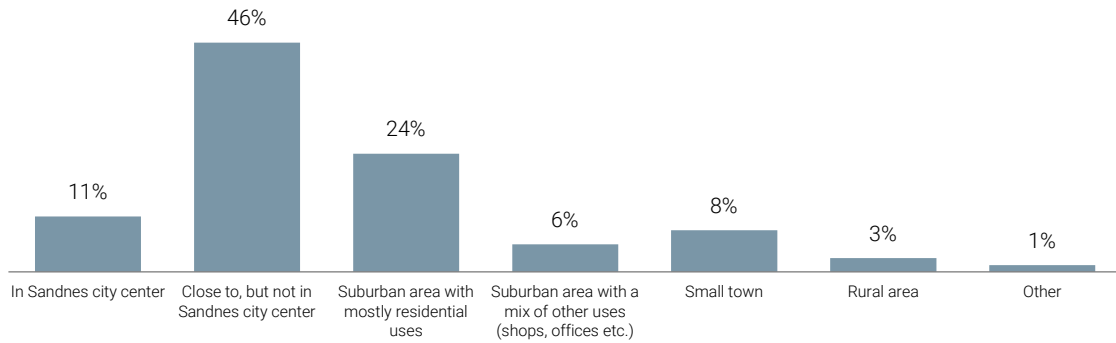
Current residence



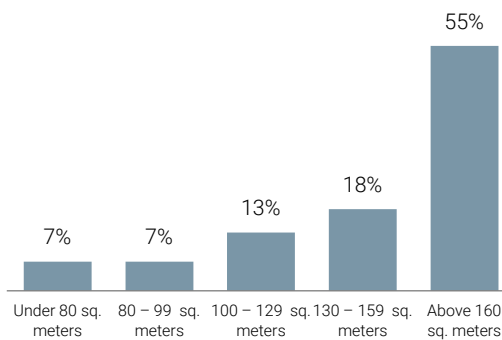
MAPTIONNAIRE SURVEY RESULTS

Current residence

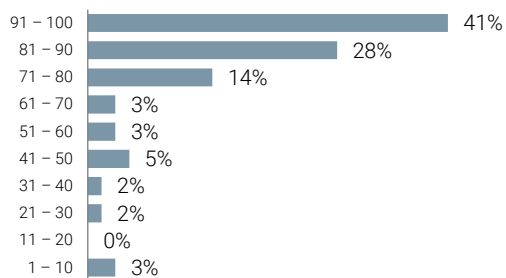
Best description of residential location (N=71)



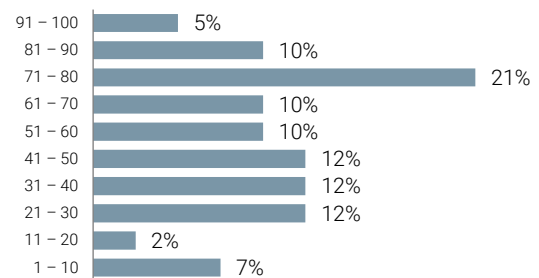
Size of current dwelling unit (N=76)



Quality of own neighbourhood as a living environment for children (N=64)



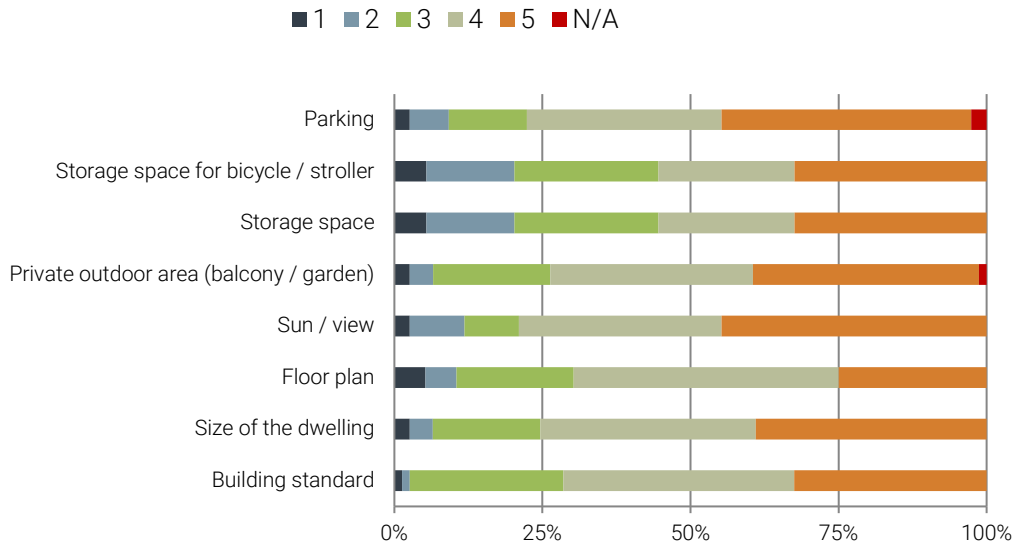
Quality of own Sandnes city center as a living environment for children (N=42)



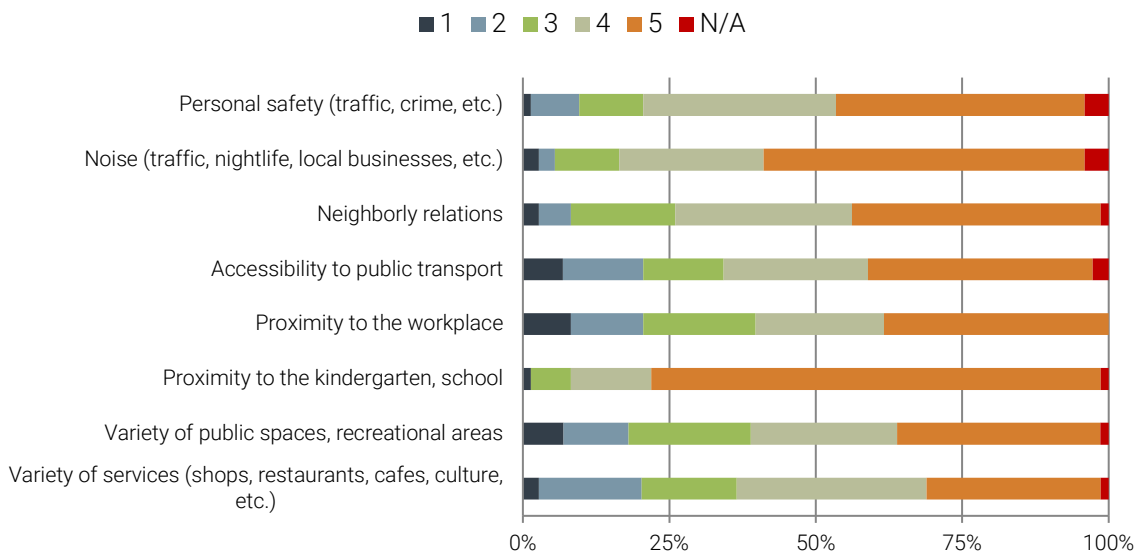
MAPTIONNAIRE SURVEY RESULTS

Residential satisfaction

Satisfaction level of qualities in the current dwelling

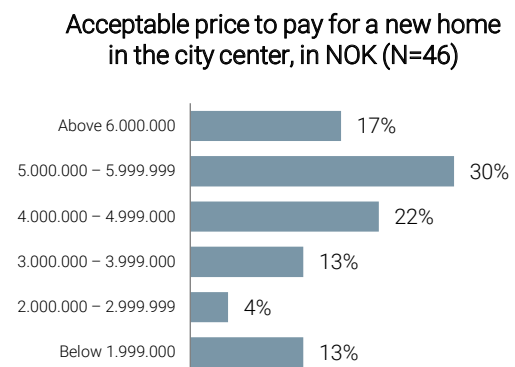
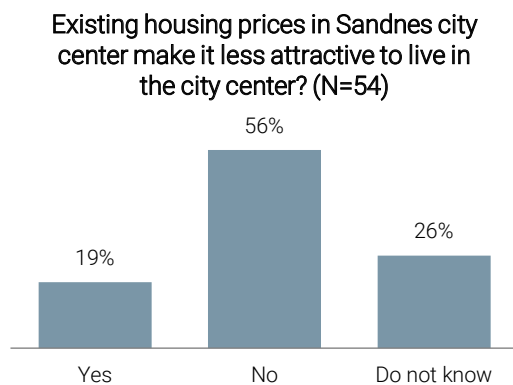
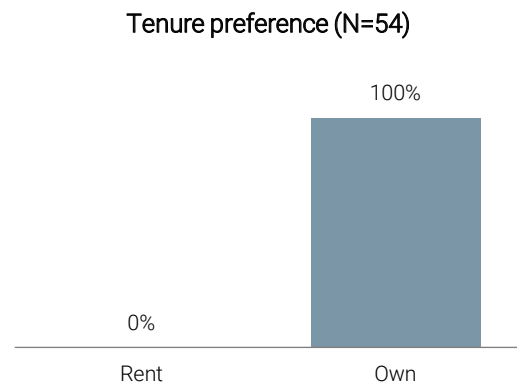
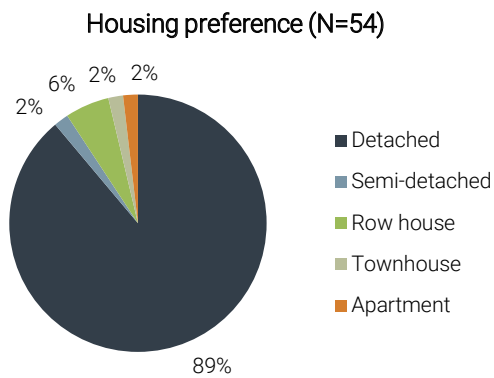
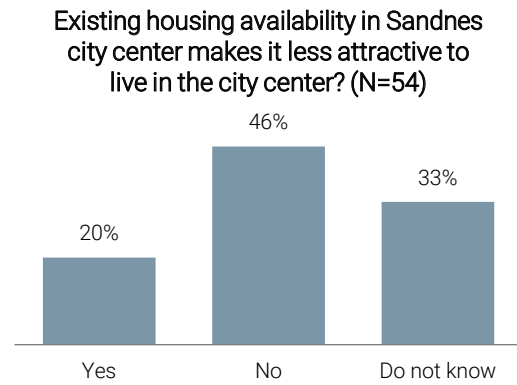
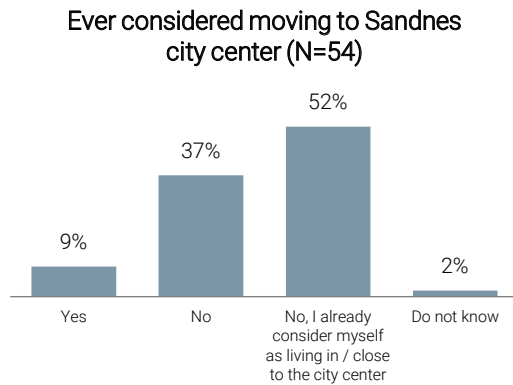


Satisfaction level of qualities in the surrounding area



MAPTIONNAIRE SURVEY RESULTS

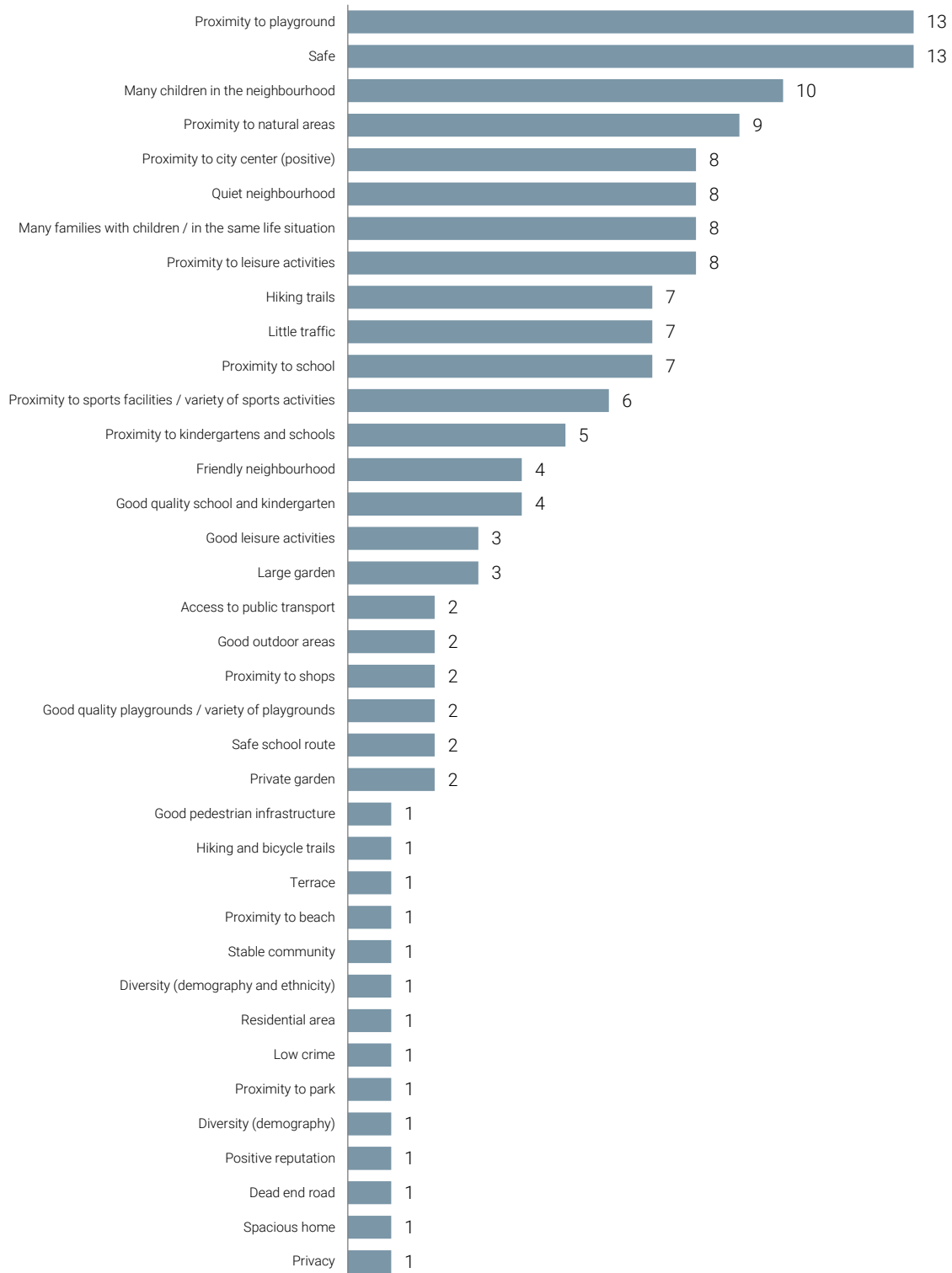
Housing preference



MAPTIONNAIRE SURVEY RESULTS

Positive qualities in the area as a living environment for children

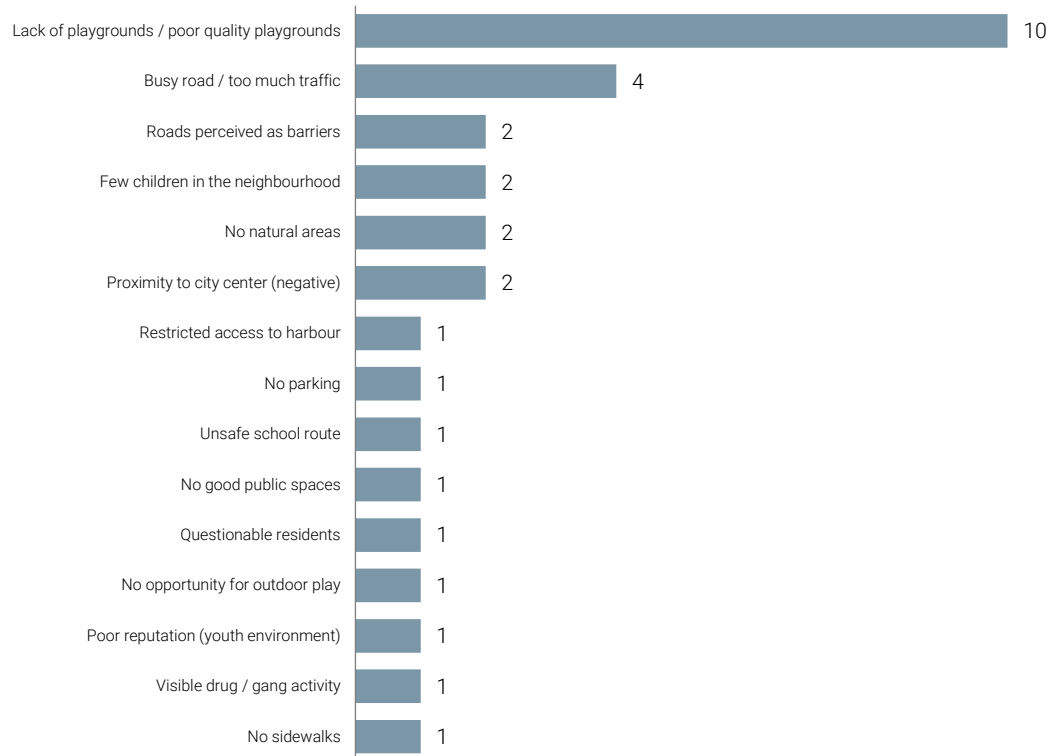
What makes the area you live in a good living environment for children?



MAPTIONNAIRE SURVEY RESULTS

Negative qualities in the area as a living environment for children

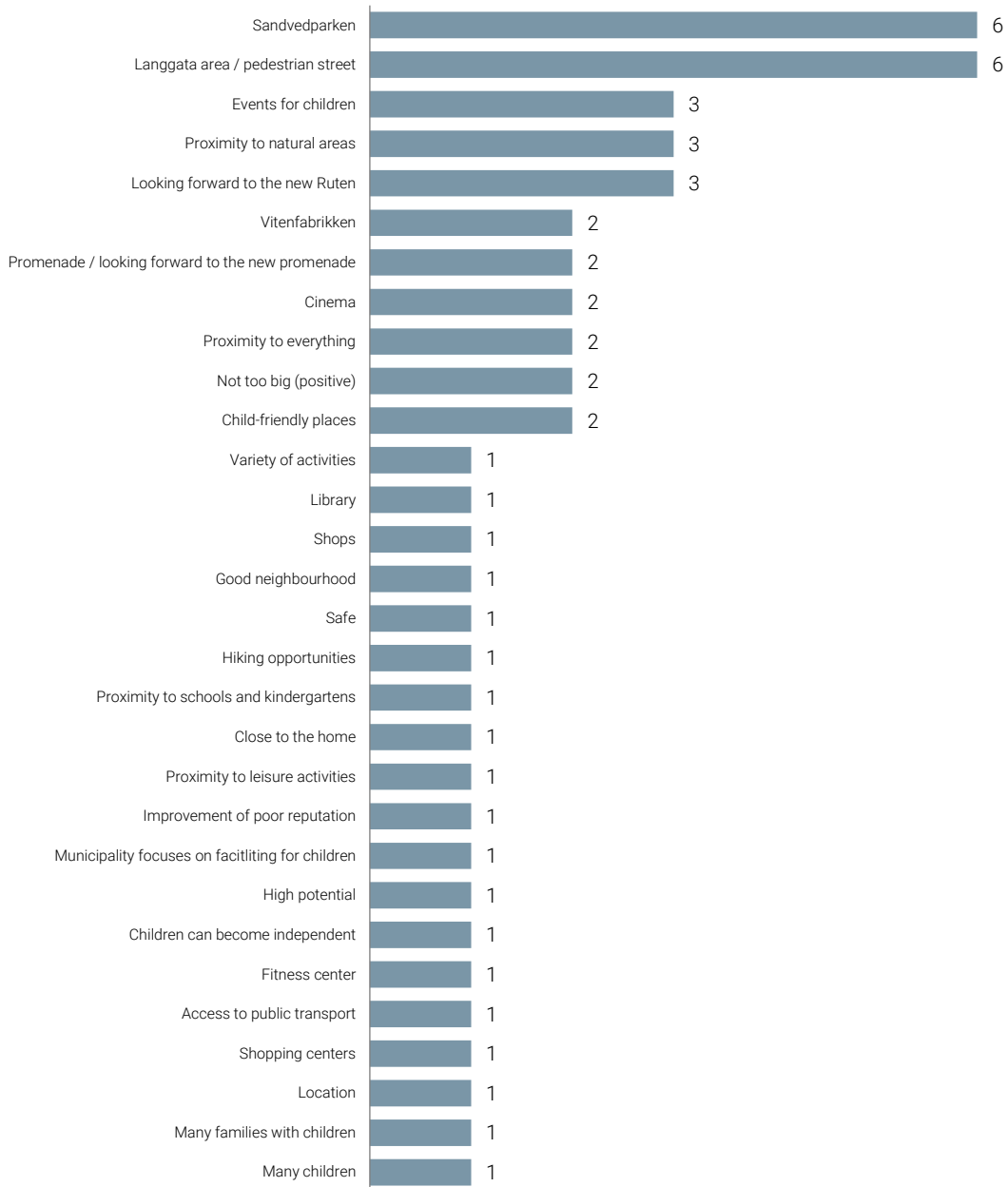
What makes the area you live in not a good living environment for children?



MAPTIONNAIRE SURVEY RESULTS

Positive qualities in Sandnes city center as a living environment for children

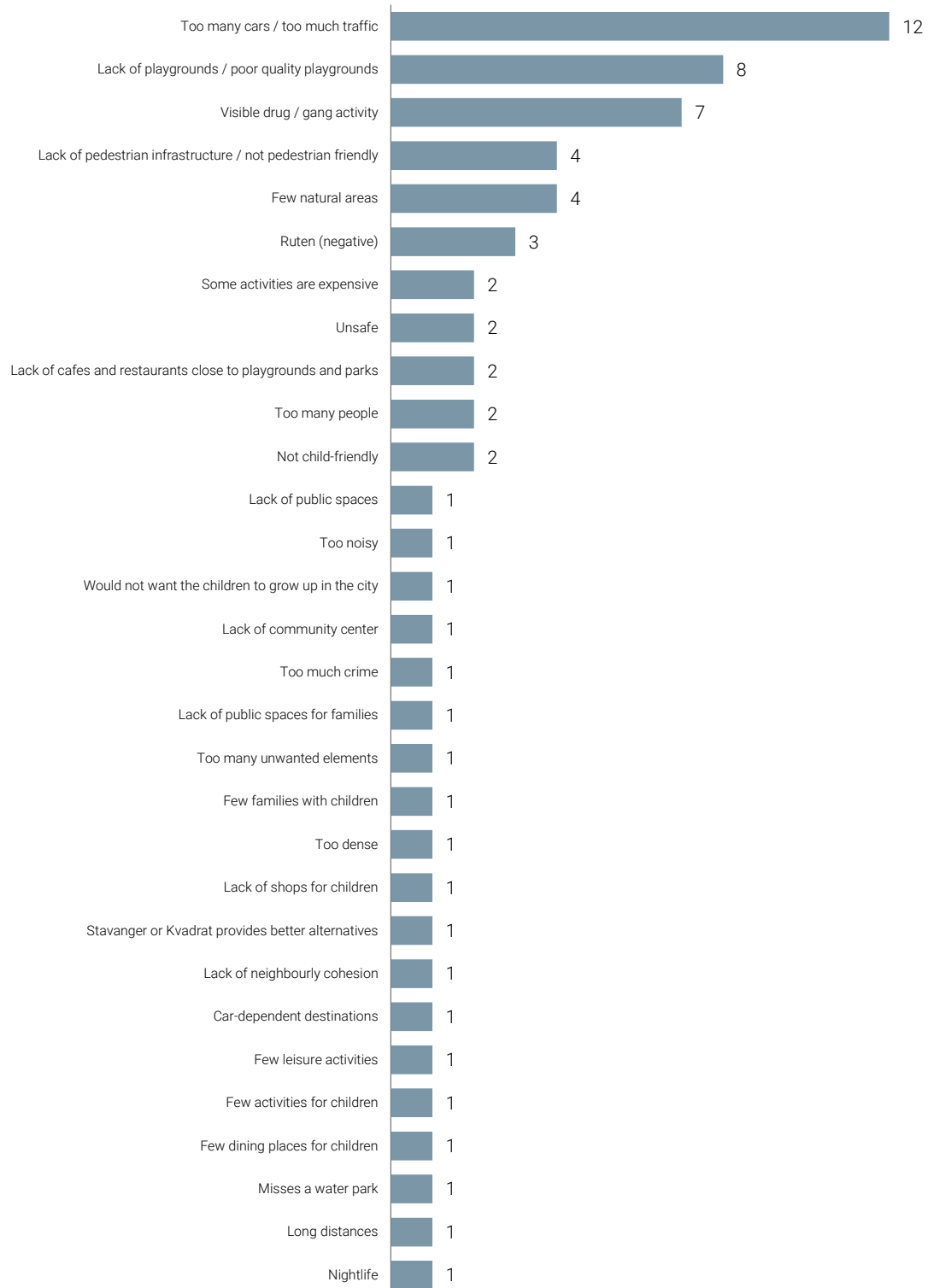
What makes Sandnes city center a good living environment for children?



MAPTIONNAIRE SURVEY RESULTS

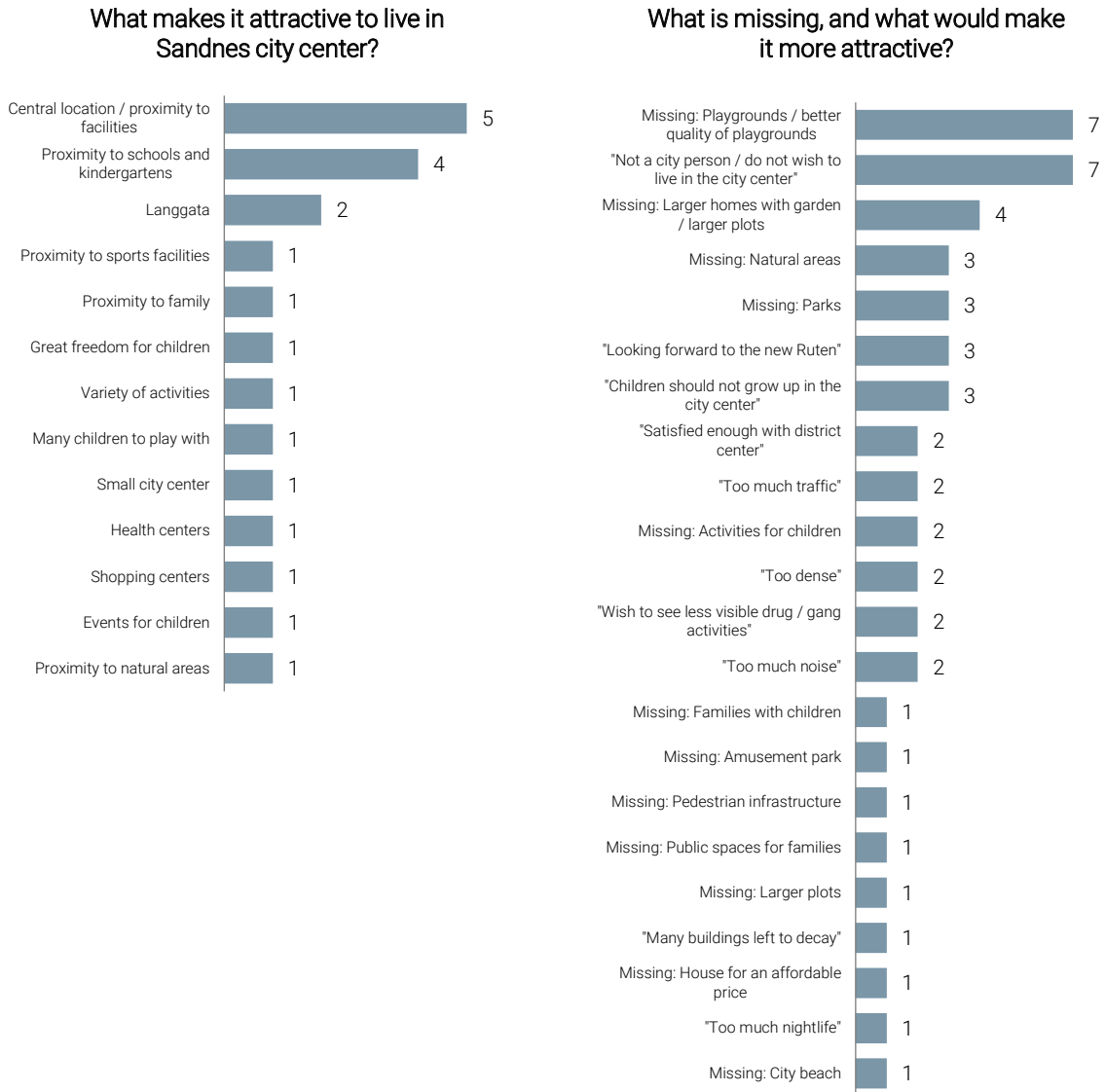
Negative qualities in Sandnes city center as a living environment for children

What makes Sandnes city center a good living environment for children?



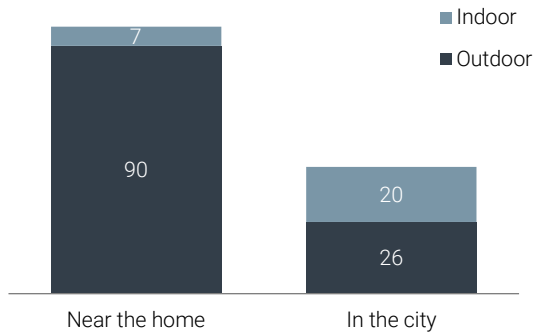
MAPTIONNAIRE SURVEY RESULTS

Attractive qualities and poor or missing qualities in Sandnes city center

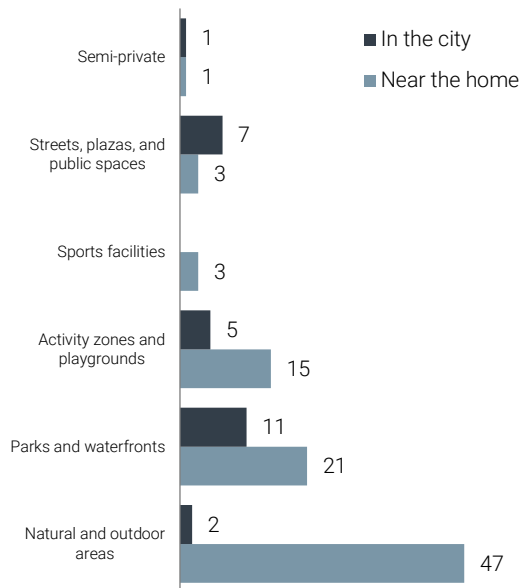


MAPTIONNAIRE SURVEY RESULTS

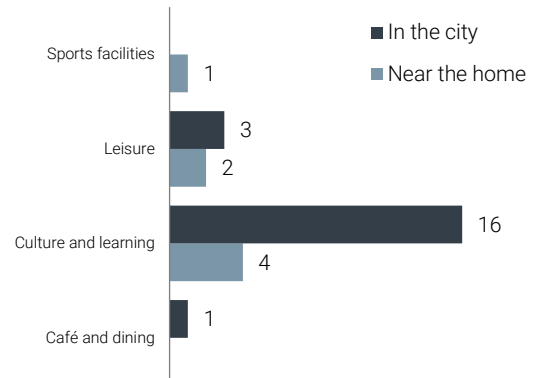
Characteristics of the places most visited



Outdoor places



Indoor places



NSD NORSK SENTER FOR FORSKNINGSDATA

NSD sin vurdering

Prosjekttittel

Boprefranser og boattraktivitet for barnefamilier i Sandnes

Referansenummer

776276

Registrert

23.04.2020 av Ibrahim Mufti Pradityo - im.pradityo@stud.uis.no

Behandlingsansvarlig institusjon

Universitetet i Stavanger / Det teknisk- naturvitenskapelige fakultet / Institutt for sikkerhet, økonomi og planlegging

Prosjektansvarlig (vitenskapelig ansatt/veileder eller stipendiat)

Ana Llopis Alvarez, ana.l.alvarez@uis.no, tlf: 92506115

Type prosjekt

Studentprosjekt, masterstudium

Kontaktinformasjon, student

Ibrahim Mufti Pradityo, im.pradityo@stud.uis.no, tlf: 45464618

Prosjektperiode

01.02.2020 - 15.07.2020

Status

04.05.2020 - Vurdert

Vurdering (1)

04.05.2020 - Vurdert

Det er vår vurdering at behandlingen av personopplysninger i prosjektet vil være i samsvar med personvernlovgivningen så fremt den gjennomføres i tråd med det som er dokumentert i meldeskjemaet den 04.05.2020 med vedlegg, samt i meldingsdialogen mellom innmelder og NSD. Behandlingen kan starte.

MELD VESENTLIGE ENDRINGER

Dersom det skjer vesentlige endringer i behandlingen av personopplysninger, kan det være nødvendig å melde dette til NSD ved å oppdatere meldeskjemaet. For du melder inn en endring, oppfordrer vi deg til å lese om hvilke type endringer det er nødvendig å melde: https://nsd.no/personvernombud/meld_prosjekt/meld_endringer.html

NSD EVALUATION FORM

(2 sheets)

Du må vente på svar fra NSD før endringen gjennomføres.

TYPE OPPLYSNINGER OG VARIGHET

Prosjektet vil behandle alminnelige kategorier av personopplysninger frem til 15.07.2020.

LOVLIG GRUNNLAG

Prosjektet vil imhinne samtykke fra de registrerte til behandlingen av personopplysninger. Vår vurdering er at prosjektet legger opp til et samtykke i samsvar med kravene i art. 4 og 7, ved at det er en frivillig, spesifikk, informert og utvetydig bekreftelse som kan dokumenteres, og som den registrerte kan trekke tilbake. Lovlig grunnlag for behandlingen vil dermed være den registrertes samtykke, jf. personvernforordningen art. 6 nr. 1 bokstav a.

PERSONVERNPRINSIPPER

NSD vurderer at den planlagte behandlingen av personopplysninger vil følge prinsippene i personvernforordningen om:

- lovlighet, rettferdighet og åpenhet (art. 5.1 a), ved at de registrerte får tilfredsstillende informasjon om og samtykker til behandlingen
- formålsbegrensning (art. 5.1 b), ved at personopplysninger samles inn for spesifikke, uttrykkelig angitte og berettigede formål, og ikke viderebehandles til nye uforenlige formål
- dataminimering (art. 5.1 c), ved at det kun behandles opplysninger som er adekvate, relevante og nødvendige for formålet med prosjektet
- lagringsbegrensning (art. 5.1 e), ved at personopplysningene ikke lagres lengre enn nødvendig for å oppfylle formålet

DE REGISTRERTES RETTIGHETER

Så lenge de registrerte kan identifiseres i datamaterialet vil de ha følgende rettigheter: åpenhet (art. 12), informasjon (art. 13), innsyn (art. 15), retting (art. 16), sletting (art. 17), begrensning (art. 18), underretning (art. 19), dataportabilitet (art. 20).

NSD vurderer at informasjonen som de registrerte vil motta oppfyller lovens krav til form og innhold, jf. art. 12.1 og art. 13.

Vi minner om at hvis en registrert tar kontakt om sine rettigheter, har behandlingsansvarlig institusjon plikt til å svare innen en måned.

FØLG DIN INSTITUSJONS RETNINGSLINJER

NSD legger til grunn at behandlingen oppfyller kravene i personvernforordningen om riktighet (art. 5.1 d), integritet og konfidensialitet (art. 5.1. f) og sikkerhet (art. 32).

Mapionnaire ved Mapita er databehandler i prosjektet. NSD legger til grunn at behandlingen oppfyller kravene til bruk av databehandler, jf. art 28 og 29.

For å forsikre dere om at kravene oppfylles, må dere følge interne retningslinjer og eventuelt rådføre dere med behandlingsansvarlig institusjon.

OPPFØLGING AV PROSJEKTET

NSD vil følge opp ved planlagt avslutning for å avklare om behandlingen av personopplysningene er avsluttet.

Lykke til med prosjektet!

Kontaktperson hos NSD: Simon Gøgl

Tlf. Personvernjenester: 55 58 21 17 (tast 1)

INFORMATION BRIEF FOR THE ONLINE SURVEY

(2 sheets)

Your rights

As long as you can be identified in the data material, you have the right to access, view and have your personal information corrected. You also have the right to have your personal data deleted as well as to send a complaint to the Norwegian Data Protection Authority about the processing of your personal data.

How can I find out more?

If you have questions about the study or wish to use your rights, please contact:

Ibrahim Mufit Pradiyo, master's student at the University of Stavanger
E-mail: im.pradiyo@stud.uis.no

Ana Lipis Alvarez, internal supervisor, University of Stavanger
E-mail: ana.l.alvarez@uis.no

Kristen Weischemeyer, external supervisor, Mac Architects
E-mail: kw@mac.no

Data Protection Officer at the University of Stavanger
E-mail: personvernombud@uis.no

NSD - Norwegian Center for Research Data AS
E-mail: personvernjenester@nsd.no
Telephone: 55 58 21 17

Request to participate in research project

"Residential preferences and attractiveness for families with children in Sandnes"

This is a request for you to participate in a research project with the purpose of studying residential attractiveness for families with children in the city center. More information about the goals of the project and what participation will mean for you can be found below.

Purpose

I am currently working towards completing my master's degree in City and Regional planning at the University of Stavanger, and I am writing my master's thesis in collaboration with Mac Architects in Stavanger. The problem statement is "how can we make Sandnes city center more attractive to live in for families with children". As part of the project, this survey is used to examine the residential patterns and motives of families with children, which residential qualities this target group find attractive, and whether they perceive Sandnes center is a suitable or unsuitable childhood environment.

Who is responsible for the research project?

The Department of Security, Economics and Planning (ISOP) at the University of Stavanger is the responsible institute for the research project, in collaboration with Mac Architects Stavanger.

Target group

This survey is aimed for the target group families with children and is intended for people over the age of 18 who are currently living in Sandnes kommune.

What does participation mean to you?

Participation in the project means that you answer an electronic questionnaire created on Maptionnaire. This takes approx. 15 minutes to complete. The questionnaire contains questions about how you live, your connection to the area you live in, how you use the neighborhood with children as well as how satisfied you are with the home and the area you live in. There will also be questions related to whether you think Sandnes center is an attractive place to live in with children and why. Some questions in the questionnaire are related to specific places, and geographical information will therefore be collected.

Participation is voluntary

Participation in the project is voluntary. If you choose to participate, you may withdraw your consent at any time without giving any reason. All your personal information will then be deleted. It will not have any negative consequences for you if you do not want to participate or later choose to withdraw.

Your privacy – how we store and use your information

Information gathered through this survey will only be used for the purpose mentioned above. Background information (such as place of residence, age, gender, level of education, employment status, total household income and nationality) will be collected to understand the representativeness of the data.

All answers provided will be treated confidentially and in accordance with the Privacy Policy. The results, including any geographical information, will be anonymized when the final thesis report is submitted, by 15.07.2020. It is not the intention to publish data that makes it possible to identify individual respondents.

Data that has been collected will be retained from the date of collection until the date of submission, within 15.07.2020. After the data retention period is over, all collected data will be deleted.

Information about you will be processed based on your consent. You can exit the questionnaire and withdraw your consent at any time. This study has been reported to the Norwegian Center for Research Data (NSD).

Forespørsel om å delta i forskningsprosjekt "Attraktivitet for barnefamilier i sentrum"

Dette er et spørsmål til deg om å delta i et forskningsprosjekt hvor formålet er å studere hva som kan gjøre det mer attraktivt for barnefamilier å bo i sentrum. Under skriver jeg informasjon om målene for prosjektet og hva deltakelse vil innebære for deg.

Formål:

Jeg jobber for øyeblikket mot å fullføre min mastergrad i Byutvikling ved Universitetet i Stavanger, og skriver en masteroppgave i samarbeid med Mad Arkitekter i Stavanger. Problemstillingen er "hvordan kan vi gjøre Sandnes sentrum mer attraktivt å bo i for barnefamilier". I prosjektet ønsker jeg å gjennomføre intervju av profesjonelle fagpersoner innen by- og stedsutvikling samt politikere i Sandnes. Formålet med intervjuene er å undersøke hva som påvirker attraktiviteten til sentrum for barnefamilier, og hvilke kvaliteter er viktige å sikre for å tilrettelegge for barnefamilier i sentrum.

Hvem er ansvarlig for forskningsprosjektet?

Institutt for sikkerhet, økonomi og planlegging (ISØP) ved Universitetet i Stavanger er ansvarlig institutt for forskningsprosjektet, i samarbeid med Mad Arkitekter Stavanger.

Hvorfor får du spørsmål om å delta?

Du er blitt utvalgt som respondent på grunn av din stilling i den sektoren eller faget vi ønsker informasjon fra. Vi ønsker et variert utvalg av respondenter som jobber innenfor feltet arkitektur, planlegging, eiendomsutvikling og eiendomsregulering i enten offentlig eller privat sektor.

Hva innebærer deltakelse for deg?

Deltakelse i prosjektet innebærer at du deltar i et intervju som varer ca. 30-45 minutter. Jeg har valgt å sette opp semi-strukturerte intervjuer, som gir deg større frihet til å snakke rundt de temaene som du synes er viktige å få frem. Jeg har på forhånd forberedt en intervjuguide med noen temaer jeg ønsker å få beyst. For å sikre at jeg får med meg all ønsker jeg å ta lydopptak av intervjuet. Opptakene vil bli slettet etter at prosjektet er ferdig, og ingen andre enn meg vil ha tilgang til dataene.

Det er frivillig å delta

Det er frivillig å delta i prosjektet. Hvis du velger å delta, kan du når som helst trekke samtykket tilbake uten å oppgi noen grunn. Alle dine personopplysninger vil da bli slettet. Det vil ikke ha noen negative konsekvenser for deg hvis du ikke vil delta eller senere velger å trekke deg.

Ditt personvern – hvordan vi oppbevarer og bruker dine opplysninger

Informasjon samlet gjennom intervjuet vil kun benyttes til det formålet som er beskrevet over. Bakgrunnsinformasjon (utdanning, yrke/stilling og tidligere erfaring) vil bli innsamlet for å sikre at informanten besitter relevant kunnskap og erfaring. Jeg behandler opplysningene konfidensielt og i samsvar med personvernerverket. Svar fra informantene vil bli anonymisert når den endelige oppgaven leveres inn, innen 15.07.2020. Det er ikke en hensikt å publisere data som gjør det mulig å identifisere individuelle informanter.

Data (lydopptak) som er innsamlet vil bli bevart fra intervjuidspunktet frem til prosjektet avsluttes, innen 15.07.2020.

Opplysninger om deg vil bli behandlet basert på ditt samtykke. Denne studien er meldt inn til Norsk Senter for Forskningsdata (NSD).

Dine rettigheter

Så lenge du kan identifiseres i datamaterialet, har du rett til tilgang, insyn og til å få rettet personopplysningene om deg. Du har også rett til å få slettet personopplysningene om deg samt sende en klage til Dataatilsynet om behandlingen av dine personopplysninger.

Hvor kan jeg finne ut mer?

Hvis du har spørsmål til studien, eller ønsker å benytte deg av dine rettigheter, ta kontakt med:

Ibrahim Mufti Pradityo, masterstudent ved Universitetet i Stavanger

E-mail: im.pradityo@stud.uis.no

Ana Llopis Alvarez, intern veileder, Universitetet i Stavanger

E-mail: ana.l.alvarez@uis.no

Kirsten Welschemeyer, ekstern veileder, Mad Arkitekter

E-mail: kw@mad.no

Personvernombudet ved Universitetet i Stavanger

E-mail: personvernombud@uis.no

NSD - Norsk senter for forskningsdata AS

E-mail: personvernombud@uis.no

Telefon: 55 58 21 17

INFORMATION BRIEF FOR THE INTERVIEWS

(2 sheets)