The Human City: The Development of an Easy-to-Use Assessment Method Calibrated to Swedish Conditions

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The Human City: The Development of an Easy-to-Use Assessment Method Calibrated to Swedish Conditions

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Abstract: Sustainability encompasses three dimensions: environmental, economic, and social. Among these dimensions, social sustainability presents the most challenging definition and measurement, leading to its frequent neglect. There is therefore a need to increase the measurability of social sustainability. There are several methods for measuring social sustainability, but we can broadly categorize them into two groups: those that are simple and easy to use, and those that are more comprehensive but more challenging to use. Furthermore, there can be a case for increasing the local adaptation of assessment methods regarding social sustainability. In this study, a new easy-to-use assessment method is developed and calibrated to Swedish conditions. We created a total of 40 questions, evenly distributed across 8 categories: architecture and aesthetics, places to meet, social infrastructure, accessibility, traffic, security, senses and experience, and development. The new method strives to be evidence-based and adapted to Swedish conditions. The study resulted in an easy-to-use assessment method adapted to local conditions that can be suitable for simple evaluations of social sustainability in the design of public places. It can be particularly useful when laymen need to understand where the place's strengths and weaknesses lie in a social context. Since the method is based on subjective assessments, an interesting future study could investigate whether different people can achieve the same results with the developed assessment method.

Keywords: social sustainability; matrix for social sustainability; on-site assessments

Citation: Woxnerud, W.; Najar, K.; Nylander, O. The Human City: The Development of an Easy-to-Use Assessment Method Calibrated to Swedish Conditions. *Sustainability* **2024**, *16*, 5702. https://doi.org/10.3390/su16135702

Academic Editor: Manuel Duarte Pinheiro

Received: 23 April 2024
Revised: 21 June 2024
Accepted: 24 June 2024
Published: 3 July 2024

1. Introduction

Social sustainability is a concept that is increasingly gaining traction in the media and society. Simultaneously, numerous studies demonstrate that sustainable projects often overlook social sustainability, treating it as a mere afterthought [1–3]. This could be due to a variety of factors. One possible explanation is that, in contrast to ecological sustainability and economic sustainability, there are no clear measurement values [4,5]. According to most explanatory models [5–7], the lack of emission limit values and budget sums leads to the social dimension of sustainability not being given the same status as the ecological and economic dimensions, even though sustainability cannot be achieved without the social dimension.

The methods for assessing social sustainability have also undergone a change. The methods have gone from quite simplified but easy to use to more comprehensive but more difficult to use with concepts such as "social mixing" and "happiness" [2]. Many easy-to-use methods suffer from a lack of scientific basis, relying instead on professional experiences, while more scientifically based methods become more ambiguous and challenging to measure [2,8]. Simultaneously, quantifying sustainability is crucial for its practical implementation, so that it is not just a meaningless buzzword [9].

Most assessment methods are universal and not adapted to local conditions. Local conditions affect the cityscape, not only through climate but also through culture. When developing communities, it is crucial to consider the local culture [10], and the social context of the place significantly shapes the local identity, which plays a crucial role in fostering a sense of community [11]. Therefore, there is a compelling argument for incorporating a stronger local connection into the methods used to assess social sustainability. This work aims to develop a new assessment method for social sustainability.

The goal is to develop an easy-to-use and research-based assessment method that is calibrated to Swedish conditions. The aim is to quantify research-based qualities concerning social sustainability and to find a method that increases their measurability and usability, as well as to find ways to increase the local connection in assessment methods for social sustainability. The researchable question for the study is: How can an easy-to-use research-based assessment method calibrated to local conditions in Sweden be developed?

2. Method

We will conduct the study using the five steps outlined in Figure 1. After the figure, there is a more detailed explanation of what each part entails.

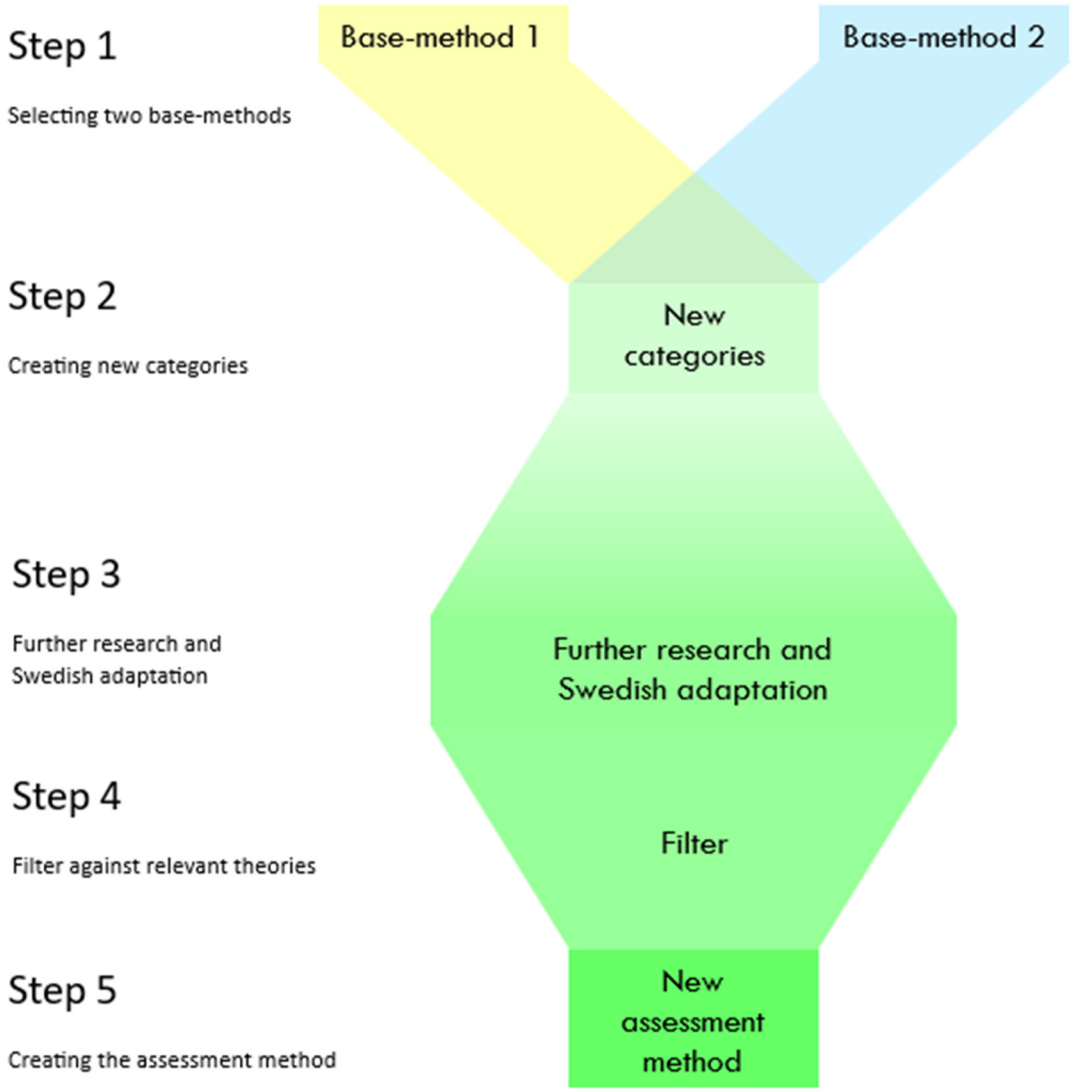


Figure 1. Simplified flow chart of the study.

2.1. Step 1—Selecting Two Base Methods

The first stage of the model requires the selection of two base methods. We sought an "easy-to-use" method and an evidence-based method in this study. We sought this combination to address the two main themes of social sustainability methods, as highlighted by [2].

We chose Jan Gehl's twelve quality criteria as the "easy-to-use" method. Jan Gehl, a renowned urban design theorist, has applied his theories globally [12,13]. Melbourne, among other places, has implemented these theories, demonstrating their impact and enhancing human interaction with the city [14]. Many of Gehl's theories are based on his own research; however, there seems to be no scientific background to some of the criteria presented [15]. The method involves observing a place and then evaluating its design according to twelve criteria [15]. The fact that you do not need to involve outsiders meant that, as judged by the authors of this article, the method was one of the easiest to use. The selection of the twelve quality criteria partially stemmed from the extensive testing of Jan Gehl's theories in Scandinavia [16]. The authors of the article concluded that this should establish the criteria as a solid foundation for a Swedish-adapted assessment method.

We chose the "building blocks" of "social life" from the report "Design for social sustainability: A framework for creating thriving new communities" [11] as our evidence-based method. The building blocks are based on lessons from "English New Towns" [11] and a compilation of previously known theoretical and practical knowledge about social sustainability [17]. The report breaks down into four distinct chapters: The first chapter, Amenities and Social Infrastructure, delves into how the past has shaped the place through design. The second chapter, Social and Cultural Life, explores how people experience and influence society. The third chapter, Voice and Influence, explores the potential of inhabitants to influence society. Finally, the fourth chapter, Space to Grow, focuses on the flexibility and development of the area [11,17,18]. Three subcategories, namely built environment and public space, social architects and supports, and social practices, divide each chapter into a number of theoretical and practical building blocks [11]. Architects and urban planners find the built environment and public space most relevant, given their close relationship to the site's physical design [18].

To use the building blocks, resident interviews and census data are required [17]. The building blocks, according to the authors of the article, take a broader view of social sustainability than Jan Gehl by introducing inhabitants' social life and social institutions. However, the authors judge them to be more challenging to use due to their reliance on interviews with outsiders and data that may not always be readily available. The more research-based background of the building blocks, combined with its perceived greater focus on the inhabitants, meant that the authors of the article judged that they complemented Gehl's quality criteria in a satisfactory way and formed a satisfactory basis for further work. To facilitate the creation of the method, the authors only used the building blocks that fell under the built environment and public space subcategory, as these were the most closely connected to the place's design and were thus the most compatible with Gehl's quality criteria.

2.2. Step 2—Creating New Categories

In the second step of the study, we combined the building blocks from the built environment and public space categories with Jan Gehl's twelve quality criteria using an associative work process. We sought an even distribution with roughly equivalent building blocks and quality criteria to avoid distorting the importance of the categories and making one "more important" than another.

2.3. Step 3—Expansion of the Categories with Further Research

In step three, we expanded the categories by incorporating more research and calibrating them based on Swedish conditions. We expanded the original 31 provisional questions (building blocks and quality criteria) to a total of approximately 50 questions. We achieved

this by dividing some of the existing questions and incorporating new ones, informed by further research.

We carried out the expansion by searching research databases such as Google Scholar and One Search for words associated with the various categories. This was carried out in two stages, i.e., searches were also conducted on words associated with the search results from the first search. We used the same two-step strategy in three different dimensions to calibrate the results according to Swedish conditions.

- Physical conditions: In what way do the Swedish climate and geography affect the different categories?
- State conditions: What do Swedish laws and reports from authorities and municipalities say?
- What are the recommendations from relevant interest groups? For example, what does the Swedish Association of the Visually Impaired think about lighting in urban environments?

The completion of these two sub-steps created a substantial knowledge base for the ongoing work. They formed provisional questions as the basis for the continued work.

2.4. Step 4—Filter against Relevant Theories

To ensure that the questions formulated were relevant, the authors validated them all against a three-part filter (see Table 1) containing recognized methods. The authors carried this out by associating the developed questions with the parts of the filter that they deemed applicable. In this step, we reformulated many of the provisional questions and discarded some (about 10–15), and we divided some questions into multiples because they matched so many parts of the filter. At the end of this process, 40 "filtered" questions, evenly distributed over the 8 categories, remained.

Social sustainability can be defined in many ways. One way uses the definition of sustainable development from the 1987 report "Our Common Future". According to the report, sustainable development is defined as a situation in which everyone has the right to self-fulfillment [19]. Before achieving self-fulfillment, psychologist Abraham H. Maslow's hierarchy of needs dictates the need to meet a number of basic needs, including physiological needs, safety needs, belongingness and love needs, and esteem needs [20]. Therefore, we must first meet these basic needs to achieve social sustainability. As a result, a socially sustainable society can seek out qualities that ensure the fulfillment of these basic needs. Therefore, one part of the filter corresponds to a component of Maslow's hierarchy of needs.

This definition of basic needs as the basis for social sustainability is applied by many [21], but it has some critics. Scholars highlight, among other things, that most people in developed countries already meet their basic needs, making this a low bar to meet [2]. Instead, scholars argue that values such as place attachment and sense of place are important for social sustainability [2,12]. To incorporate these qualities into the assessment method, we tested all the questions against six evidence-based critical theories from [12]'s book *Creating Great Places: Evidence-Based Urban Design for Health and Wellbeing*.

Today, the world faces unique challenges for our time. The ongoing climate crisis might be the most prominent example of this. The book by [12] above tests the six critical theories against four identified global priorities: salutogenic, child-friendly, age-friendly and inclusive, and sustainable design. This study also tests all the developed questions against these priorities to ensure they effectively address the challenges of our era. Table 1 presents the filter in a concise format. We assign a color to each filter quality to facilitate the visualization of the study's results.

Table 1. The three-part filter used to ensure the quality of the developed questions. Each filter quality comes with a simplified explanation. Sources: [12,20,22].

Filter Quality		Assigned Color	Simplified Explanation	Source
Six critical theories	Affordance		Does the layout of the place give cues as to how it should/can, and should not/cannot, be used?	[12]
	Prospect-refuge		People feel safer when they can observe without being observed. Does the design of the place make this possible?	
	Personal space		Each culture has a built in "distance scale" in which personal, social, and public distances differ. Does the design consider this?	
	Sense of place		Some places have a special unique characteristic. Are the special values of the place brought forward through design?	
	Place attachment		Place attachment features all the elements which help people to develop emotional bonds with the place.	
	Biophilic design		Humans have a need for connection with nature. Studies have shown that nature has a healing effect. Does the design consider this?	
Global priorities	Salutogenic design		People in general need to live healthier lifestyles. Does the place enable this?	
	Child-friendly design		Games and playing are very important for children's development. It is therefore important that the place enables this.	
	Age-friendly and inclusive design		The world's population is getting older, and it is therefore increasingly important that places are accessible for everyone.	
	Sustainable design		To combat the ongoing climate change there is a need to rethink the design of public places and enable green transportation, etc.	
Maslow's hierarchy of needs	Physiological needs		Physical needs include the things that humans need to survive, e.g., sleep, warmth, food, and water.	[20,22]
	Safety needs		When the physical needs are satisfied, humans need safety. This means protection from violence and criminality.	
	Belongingness and love needs		Humans are herd animals and need social contacts to prosper. The place needs to be designed with this in mind.	
	Esteem needs		People need respect and to be able to assert themselves.	
	Self-fulfilment needs		Self-fulfilment can be explained as the opportunity to enact ideas and dreams.	

2.5. Step 5—Creating the Assessment Method

We chose to use a radar diagram to facilitate the assessment and clearly illustrate the site's strengths and weaknesses. For instance, the Scottish assessment tool for social sustainability, the "Place Standard Tool" [23], employs this approach. The tool works by assessing the improvement potential of 14 points on a scale from 1 to 7, where 1 means great improvement possibilities and 7 means little room for improvement [24].

We deemed it not reasonable to "plot" out each question in the radar diagram, given that the study yielded 40 questions evenly distributed across 8 categories. It would make the method more difficult to use and the results less intelligible. Instead, it was decided that each question would be graded from 1 to 5, where 1 is very bad and 5 is very good. When all the questions in a category have been graded, an average value for the category is calculated, and it is this value that is plotted in the radar chart. This way, whoever reads

the results can still clearly see which category has the greatest potential for improvement, and from there, they can go in and study the results in detail.

3. Results

The developed assessment form and the radar diagram are featured in Appendix A. The eight categories are presented in Tables 2 and 3. We then further expand these categories, along with the developed questions, into text form.

Table 2. In step 2, Jan Gehl's twelve quality standards and social life building blocks were used to make new categories. Categories 1–4 are shown below; categories 5–8 are shown in Table 3.

New Category	Corresponding Quality Criteria	Corresponding Building Blocks
Architecture and aesthetics	Experience of aesthetic qualities and positive sensory experiences Is the public space beautiful? Is it evident that there is good design both in terms of how things are shaped and in their durability? [25]	Distinctive architecture/landscaping (Social and cultural life) [11]
	Scale Is the public space and the building that surrounds it at a human scale? If people are at the edges of the space, can we still relate to them as people or are they lost in their surroundings? [25]	
	Options for seeing Are seating options placed so there are interesting things to look at? [25]	
Places to meet	Options for talking and listening/hearing Is it possible to have a conversation here? Is it evident that you have the option to sit together and have a conversation? [25]	Public and congregational spaces (Social and cultural life) [11]
	Options for sitting Are there good primary seating options, such as benches or chairs? Or is there only secondary seating, such as a stair, seat wall, or the edge of a fountain? Are there adequate non-commercial seating options so that sitting does not require spending money? [25]	
	Options to stand and linger Does the place have features you can stay by and lean on, like a façade that invites one to spend time next to it, a bus stop, a bench, a tree, or a small ledge or niche? [25]	
Social infrastructure	Options for play, exercise, and activities Are there options to be active at multiple times of the day and year? [25]	Early provision of basic community infrastructure (Amenities and social life) [11]
		Early provision of schools, nurseries, and childcare (Amenities and social life) [11]
		Third spaces (Social and cultural life) [11]
Accessibility	Options for mobility Is this space accessible? Are there physical elements that might limit or enhance personal mobility in the forms of walking, using a wheelchair, or pushing a stroller? Is it evident how to move through the space without having to take an illogical detour? [25]	-

Sources: [25] Gehl Institute n.d.; [11] Woodcraft et al., 2011.

Table 3. Categories 5–8.

New Category	Corresponding Quality Criteria	Corresponding Building Blocks
Traffic	Protection against traffic and accidents Do groups across age and ability experience traffic safety in the public space? Can one safely bike and walk without fear of being hit by a driver? [25]	Good transport and communications/connections (Amenities and social life) [11]
		Low-carbon infrastructure (Amenities and social life) [11]
		Connections to neighboring communities (Social and cultural life) [11]
Security	Protection against harm by others Is the public space perceived to be safe both day and night? Are there people and activities at all hours of the day because the area has, for example, both residents and offices? Does the lighting provide safety at night as well as a good atmosphere? [25]	People-friendly layouts (Social and cultural life) [11]

Table 3. *Cont.*

New Category	Corresponding Quality Criteria	Corresponding Building Blocks
Senses and experience	Protection against unpleasant sensory experience Are there noises, dust, smells, or other pollution? Does the public space function well when it is windy? Is there shelter from strong sun, rain, or minor flooding? [25]	-
	Opportunities to enjoy the positive aspects of climate Are local climatic aspects such as wind and sun taken into account? Are there varied conditions for spending time in public spaces at different times of year? With this in mind, where are the seating options placed? Are they located entirely in the shadows or the sun? And how are they oriented/placed in relation to wind? Are they protected? [25]	
Development	-	Meanwhile spaces (Amenities and social life) [11]
		Flexible working spaces to encourage home working and local enterprise (Social and cultural life) [11]
		Community advocate for future residents (Voice and influence) [11]
		Community action planning (Voice and influence) [11]
		Identify physical spaces and places residents can influence (Voice and influence) [11]
		Urban acupuncture-intensive public consultation on built environment proposals (Voice and influence) [11]
		Influencing public service delivery at the neighborhood level (Voice and influence) [11]
		Flexible and adaptable housing (Space to grow) [11]
		Flexible and adaptable community bases and buildings (Space to grow) [11]
		Flexible master planning (Space to grow) [11]

Sources: [25] Gehl Institute n.d.; [11] Woodcraft et al., 2011.

3.1. Architecture and Aesthetics

The five questions of this category are presented in Table 4.

When tourists visit new cities, they often visit the same buildings as many others. What makes these buildings tourist attractions? Either the building's popularity stems from its historical and sociological context or its unique design sets it apart from other buildings. Upon broadening one's perspective, one can also consider natural beauty as a significant factor in determining a place's attraction to tourists.

Local distinctiveness, regardless of its invocation, plays a crucial role for the city as it enhances people's ability to connect with the place [26]. Distinct features create or reinforce local identity, which is an important factor for a sense of community in the area [11], as well as a sense of place or genius loci for the particular site [12]. Research links a higher sense of community to improved self-reported health [27], improved academic results [28], and reduced crime [29]. This sense of community is also important to fulfill the basic needs of belongingness and love [20,22]. A good way to create a local distinctiveness is to preserve the historical values of the place by preserving the design of existing buildings and developing the area carefully by bringing in new buildings and functions without causing the loss of the local identity [30]. Another recommendation for creating local distinctiveness is to strengthen the natural landscape conditions, such as height differences, green structure, and watercourses [31].

The design of buildings and places affects the inhabitants in another way: scale. The scale of the city has increased in the last century, but the richness of detail has decreased. This has been an adaptation for the motorist, who cannot distinguish between small signs and highly detailed facades due to their higher speed [31]. Many modern facades lack a

high degree of detail at the pedestrian level [32]. The number of details (doors, windows, niches, etc.) a pedestrian encounters along the facade influences their experience of the city [33]. The human scale also shapes the discernible distance between people. The greatest distance from spectator to performer in large arenas is rarely greater than 100 m. This is due to the fact that human movements are discernible at this maximum distance [31]. The ability to discern human movements is an important evolutionary factor. Humans feel safer when they can see other people's movements [12,31]. The "occupancy" of seats in the city further illustrates this point. Studies conducted in Stockholm during the 1990s provided evidence of this phenomenon. The places with interesting views, i.e., art, beautiful architecture, greenery, and human movement, were the most frequently occupied [31]. Seating, which allows the sitter to observe the place as a whole, is an important part of the "Prospect-Refuge" theory [12]. Greenery has proven to have a healing and calming effect, making seating and observing green areas especially desirable [12].

Table 4. The five questions in "Architecture and aesthetics" compared with the filter. Sources: [31] Gehl (2010); [33] Jacobs (1993); [11] Woodcraft et al. (2011); [30] Yilmaz & Maz (2006). [34] Swedish Housing Agency (2023).

Question	Source [s]	Filter Quality			Special Swedish Consideration
		Six Critical Theories	Global Priorities	Maslow's Hierarchy	
Does the place look beautiful? Does the place appear well designed in terms of both aesthetics and sustainability?	[31]				
Do the place and the buildings surrounding it fit the human scale?	[31,33]				
Are people on the outskirts of the place recognizable as people?	[31]				
Do the seats have interesting views?	[31]				
Is there a distinctive profile created by architecture and design in the area? Can nearby areas be distinguished by their architecture and design?	[11,30,34]				

Legend:

Prospect-refuge	Sense of place	Place attachment	Biophilic design	Belongingness- and love needs

3.2. *Places to Meet*

The five questions of this category are presented in Table 5.

Two functions are required for people to stay in a place: places to sit and stand. These are part of one of the most basic human needs: places to rest (which is a physiological need) [20,22]. Standing places mostly mean things to lean against. We can divide this activity into two subcategories: long-term standing and short-term standing [31]. Short-term standing, for example, means stopping to receive a phone call. Other than a good, sound environment, no special functions are required for this [31]. Prolonged standing can include situations such as waiting for an acquaintance or standing in the sun during a work break. For this purpose, the location should be more inviting and clearly indicate that it is a suitable place for leaning [31]. For this, bus stops, trees, or walls can work well. Above all, however, facades with niches serve as important places to stand. These are particularly beneficial because they allow you to survey the site without having to turn around, which is a natural evolutionary instinct. People do not like having others moving behind them, which is the basic thesis of the theory of refuge in the prospect-refuge [12]. We can also consider clear, inviting standing places as affordances, as they unambiguously indicate the appropriate standing area. Similarly, we can strategically arrange seats to leave

"the back free". When it comes to seating, we can categorize it into two types: primary seating, such as benches and chairs, which are primarily designed for sitting, and secondary seating, such as steps, gradients, facade details, or fountain edges and walls, which can serve as seating but are not primarily designed for this purpose [31]. Secondary places serve as effective fillers when the primary seating areas are full. Older people will generally gravitate toward primary seating, while younger people are less discerning and may use secondary seating even though primary seating is available [31]. As a result, an appropriate amount of primary seating is an important consideration in terms of age-friendly and inclusive design.

It is important to think about the distribution between the locations. If there are too many primary seats, the place may appear desolate, and if there are too few primary seats, fewer people may be able to stay there. However, the location becomes exclusive. Another feature of the design is its exclusionary nature. When it comes to seating, exclusionary design primarily involves designing the seats to deter vagrants and homeless individuals from sleeping at the site [35]. One way to achieve this is by incorporating an armrest into benches. Often, the homeless person's negative perception of the place drives exclusionary design, leading to an overall exclusionary impression for all [36]. We can say that the place does not offer any incentives for people to stay there. There may also be a prohibition on resting. As previously mentioned, the placement of standing and sitting areas should consider both potential refuge and noise levels. These locations can, at no cost, provide a meeting place and increase the sense of community in the area [37]. Residents must make contact with each other in order to feel a sense of belonging and connection to a place [11]. They are also important for the basic human needs of belongingness and love [20,22]. For the place to function well as a meeting place, it needs to be a location where it is possible to hold a conversation. Conversations typically occur at a sound level of approximately 60 dB; so, it is crucial that the background noise does not surpass this level [31]. Many cities fail to meet this standard; for instance, in Gothenburg, an estimated 53,000 inhabitants experience noise levels exceeding 60 dBA outside their homes [38].

Overall, noise levels significantly impact the well-being of city residents. High noise levels not only reduce the possibility of having conversations, they also increase the risk of heart disease through sleep deprivation [39]. Sleep is, as mentioned before, one of our most important physiological needs [20,22]. Therefore, avoiding high noise levels is also an important factor for salutogenic design. In a Swedish context, different noise levels in summer and winter should be considered. Studded tires, which are common in winter, create a higher noise level than summer tires [40]. In Sweden, the law permits the use of these tires from October 15 to April 15 (and beyond if winter road conditions are reasonable) [41]. This means that winter tires are also present during large parts of the spring, which can affect the noise level on spring days.

Local events like markets, festivals, and celebrations, among others, must be able to take place in the vicinity of the place for it to serve as a gathering spot and provide residents with the chance to achieve self-actualization. These events are important for local cohesion and, consequently, the residents' place attachment [11]. It is therefore important that there are places that offer the opportunity to host these events. In the Swedish context, we can also offer indoor venues, as the winter climate can pose challenges for outdoor event organization.

Table 5. The five questions in "Places to meet" compared with the filter. Sources: [31] Gehl (2010); [11,36] Woodcraft et al. (2011); de Fine Licht (2017); [35] Rosenberger (2020).

Question	Source [s]	Filter Quality			Special Swedish Consideration
		Six Critical Theories	Global Priorities	Maslow's Hierarchy	
How is the sound environment of the place? For example, is it possible to have a conversation, or is the noise too loud?	[31]				Are the noise levels different in the winter season due to spiked tires?
Are there good "primary seats" such as benches or are there only "secondary seats" such as, e.g., stairs, facades, or fountain edges?	[31]				
Does the place have details that make it possible to stop and lean against? (e.g., bus shelters, benches, facades, trees, niches, or ledges)	[31]				
Is there access to places in the vicinity of the site that enable larger events? (e.g., squares, parks, or wide sidewalks)	[11]				Are there any indoor spaces available for winter use?
Is the site free from hostile architecture such as benches that are difficult to sit on?	[35,36]				

Legend

Affordance | Prospect-refuge | Place attachment | Salutogenic design | Age-friendly and inclusive design | Physiological needs | Belongingness- and love needs | Self-fulfilment needs

3.3. Social Infrastructure

The five questions of this category are presented in Table 6.

Basic social infrastructure, such as shops, gyms, common areas, and more, is an important factor for the residents' well-being. England created a large number of new communities and towns after World War II. Bombing during the Second World War exacerbated an underlying housing shortage, prompting the creation of the new towns, often collectively referred to as "English new towns" [42]. One lesson learned from these communities and towns was that newly settled residents can manage for a while without basic infrastructure such as shops and community facilities. This is because of the "pioneer feeling" that arises when moving to a new society. After a while, however, the residents began to question their housing situation. They felt increasingly socially isolated and were no longer content only with a functional home and proximity to work [11]. It is therefore important to ensure that new and existing communities receive or have the infrastructure that their residents need.

Social infrastructure has many different definitions, but in this work, it is defined as places where people meet and make social connections. The term "third place" describes all places that are not home (first place) or work (second place), where people meet on "neutral" ground [5,11,43]. These social contact surfaces are critical for creating a sense of community in the area [11] and increasing residents' place attachment. Research has demonstrated that living close to third places positively impacts an individual's perception of their own quality of life [44]. Social contacts are also a vital part of our basic need for belongingness and love [20,22].

In this work, we divided third places into three categories: basic social infrastructure, schools, and "children's areas", as well as "third places". In this work, the term "third places" refers only to cafes, outdoor dining areas, and pubs. We did this to underscore the unique significance of the social functions that schools, cafes, and other similar establishments foster. [43] We specifically highlight pubs, cafes, and other serving places as particularly illustrative examples of third places, as these are the places where most people gather primarily to socialize with each other.

Schools have a strong and unique ability to create meetings across socio-economic class differences, which is important for creating a sense of community [11]. People from different classes often live in different parts of the city and do not necessarily socialize in the same social context. However, in Swedish schools, the social mixing is relatively

good [45], which makes the school an important social contact area for meetings between people of different socio-economic statuses. However, residential segregation and the free choice of schools in Sweden have somewhat reduced social mixing in recent years [46].

All places where children gather serve as crucial contact surfaces that foster a sense of community. For instance, ref. [47] posits that the play surface is crucial for parents, as it facilitates parent–child meetings and provides a space for class-building activities. In the past, people used the entire city as a playground, without creating any specific play areas [48]. According to [31], planners should use this as a source of inspiration and a goal. It is desirable to design the entire city as a large, dynamic activity area for all ages. However, [49] asserts that, despite the city's play-friendly design, the necessity for dedicated play areas persists. Either way, places to play are an important part of child-friendly design [12]. The Planning and Building Act governs playground design in Sweden. The main requirements are for the playground to meet certain safety requirements and for regular maintenance [34].

Table 6. The five questions in "Social infrastructure" compared with the filter. Sources: [31] Gehl (2010); [11] Woodcraft et al., 2011; [43] Oldenburg & Brissett (1982); [49] Cunningham & Jones (1998).

Question	Source [s]	Filter Quality			Special Swedish Consideration
		Six Critical Theories	Global Priorities	Maslow's Hierarchy	
Can the whole place be used for activities and play? Are there major obstacles to this?	[31]				
Is there access to basic social infrastructure in the vicinity of the location? (e.g., shops, gyms, community facilities, and green spaces)	[11]				
Are there schools, leisure centers, and preschools in the vicinity of the site?	[11]				In Sweden, schools often offer a good "social mix", which makes them good for cross-socioeconomical meetings.
Are there "third places", such as cafes, adjacent to the site?	[11,43]				
Are there dedicated playgrounds in the vicinity of the site?	[49]				
Legend:					
Place attachment		Salutogenic design		Child-friendly design	Belongingness- and love needs

3.4. Accessibility

The five questions of this category are presented in Table 7.

The world's population is growing older [50]. According to estimates, the average life expectancy and large age groups from the 1940s will lead to a 50% increase in the Swedish population over 80 between 2018 and 2028 [51]. As a result, accessibility is increasingly gaining attention, both in Sweden and around the world. The ability to access a place is key to age-friendly and inclusive design [12], and it is a sign of respect. Feeling respected is key to self-assertion, one of our basic needs [20,22].

The eighth chapter, twelfth section, of the Plan and Building Act in Sweden regulates the accessibility requirements for new public places. "The Swedish Housing Agency's regulations and general advice on accessibility and usability for people with reduced mobility or orientation in public places and in areas for facilities other than buildings (ALM)" [34] present the application requirements under this paragraph sequentially. Addressing easily remedied obstacles in existing public places is imperative. "The Housing Authority's regulations and general advice on the removal of easily remedied obstacles to and in premises to which the public has access and in public places (HIN)" [34] present

the application requirements for this. Examination determines what constitutes a simply rectified obstacle [52].

Uneven walking surfaces and high edges are a common problem. Cobblestone streets provide a beautiful aesthetic, but in the worst case, their uneven surface can prevent people from staying at the site due to the risk of tripping [31]. In [53], the authors recommend designing new walking surfaces that are smooth, non-slip, and devoid of level differences, while [52] suggests replacing existing uneven surfaces with smoother ground coverings where necessary to establish an even line. If there are no alternatives to stairs or landings, even minor level differences can pose a significant challenge for individuals with mobility difficulties [31]. People with reduced mobility, for example, should address level differences with ramps [52]. If a place requires stairs, it must supplement them with ramps [53]. If space permits, supplement existing stairs with a ramp [52].

According to Swedish legislation, bus stops and pedestrian crossings must have contrasting ground markings to make them visible to the visually impaired. Plates with a deviating structure, for example, can accomplish this [52,53]. We can use so-called tactile plates to facilitate orientation for the visually impaired. If other supports like walls and handrails are absent, you can use the plates [54].

Adequate lighting is another important parameter for accessibility. In many Swedish cities, so-called polar nights occur, which means that the sun does not rise throughout the day. Lighting is, therefore, particularly important in Swedish cities. According to [53], the lighting needs to be strong enough for the deaf and hard of hearing to be able to read sign language, and for the visually impaired to be able to determine the ground surface. However, the lighting must not be such that it dazzles [53]. Since lighting is considered an easily rectified obstacle, we must rectify existing lighting that does not meet the requirements [52].

In order to create accessible public places, it is important to create clarity in the area's design. In order for people to be able to easily move and orient themselves in an area, it is important that it is clear which is the fastest route through the area. It must be difficult to take unnecessary detours [55]. The cue on how to move around the place is an important affordance [12]. The clarity of the design is important for everyone staying at the site, but it becomes an accessibility issue for people with dementia. Research has demonstrated that regular outdoor activities slow down individuals with dementia. Research [56] has demonstrated that a place that is unclear and difficult to navigate can lead to stress and confusion, making it unsuitable for individuals with dementia.

Table 7. The five questions in "Accessibility" compared with the filter. Sources: [52] BFS 2013:9; [53] BFS 2011:5; [54] Swedish Association of the Visually Impaired (2016); [31] Gehl (2010); [56] Blackman et al., 2003.

Question	Source [s]	Filter Quality			Special Swedish Consideration
		Six Critical Theories	Global Priorities	Maslow's Hierarchy	
Is the location accessible? Are there physical elements that limit the site's accessibility?	[52–54]				Swedish accessibility legislation
Is the fastest route through the area clear or is there a risk of detours? Is there a risk of disorientation?	[31,56]				
Is the walking surface relatively flat? Are there ramps at stairs?	[31,52,53]				Swedish accessibility legislation
Is the location's lighting sufficient for it to be possible to read sign language when it is dark outside?	[52,53]				Swedish accessibility legislation

Table 7. *Cont.*

Question	Source [s]	Filter Quality			Special Swedish Consideration
		Six Critical Theories	Global Priorities	Maslow's Hierarchy	
Is there guidance for the visually impaired through, for example, tactile walking boards or handrails?	[52–54]				Swedish accessibility legislation
Legend:					
Affordance		Age-friendly and inclusive design		Esteem needs	

3.5. Traffic

The five questions of this category are presented in Table 8.

In order to counteract global warming, the city's inhabitants need to switch to environmentally friendly means of transport to a greater extent. Many cities find this challenging, as traffic planning has prioritized cars over the last century [31]. If the commute route becomes too long or difficult, it negatively affects the possibility of staying in the area [57]. The link between place attachment and the remaining residents [11] makes it important to ensure that there is a well-developed network of bicycle and pedestrian paths, as well as public transport. The possibility of cycling and walking is especially important because they are an important key to a more salutogenic and sustainable city [12].

An important part of achieving an excellent cycle infrastructure is continuous cycle paths without unnecessary interruptions, such as crossing roads and parking pockets. Having said that, the shortest path is not always the best path. A cyclist can usually imagine going a longer distance if he goes via quieter streets with lots of greenery [58].

A method for the increased prioritization of bicycles is the so-called "shared space" principle. It means that pedestrians, cyclists, and motorists share the same space and that interaction between these parties is required for it to work. Research has demonstrated that implementing these areas without priority rules enhances safety [31]. According to [31], this may be because unprotected road users, such as cyclists and pedestrians, become much more cautious, knowing that they could suffer the most severe injuries in an accident. This is hardly a motivating environment for increasing walking and cycling. Therefore, it is crucial to prioritize unprotected road users, particularly pedestrians, in these areas [31]. In Sweden, there are so-called "pedestrian areas". These areas apply the shared space principle, prioritizing pedestrians and limiting vehicle speed to walking velocity [41]. These areas are thus a viable method for converting existing car-friendly streets into a bicycle- and pedestrian-friendly environment.

In order for environmentally friendly transport to be possible, this fact must be true year-round. In Sweden, road conditions change drastically between seasons. The national cycling accounts for 2019 showed that the proportion of cyclists on an average day is approximately 14%, while during the winter months it decreases to approximately 9%. Of the cyclists surveyed, 70% reduced their cycling during the winter months [59]. Therefore, enabling cycling during the winter months is crucial for increasing cycling rates. A well-developed and well-maintained bicycle network serves as a solid foundation [60]. From a Swedish perspective, maintenance largely entails snow removal and anti-skid control. Research [61] has demonstrated that insufficient snow removal and anti-slip measures significantly contribute to people choosing not to cycle. Friction from snow adversely affects rider comfort and steering ability, which makes this understandable [62].

Effective snow removal is crucial from an accessibility perspective. A walking or cycling path can have a completely different appearance and width in winter than in summer due to high snowbanks [63]. This could complicate the task of distinguishing the city's components from one another, thereby hindering its intended use. Lines, signs, and street markings are often less visible in winter than in summer because snow can cover them [63]. Being able to use the city in the way "it is intended" is an important affordance [12]. Therefore, an important consideration when assessing a city is to see

how different roof shapes affect the street's snow cover. Does the site appear to be easily accessible for snow removal?

Table 8. The five questions in "Traffic" compared with the filter. Sources: [31] Gehl (2010); [11] Woodcraft et al. (2011); [57] Deding et al. (2009); [58] Marquart et al. (2020); [60] Nahal & Mitra (2018); [63] Chapman & Larsson (2019).

Question	Source [s]	Filter Quality			Special Swedish Consideration
		Six Critical Theories	Global Priorities	Maslow's Hierarchy	
Is it possible to cycle and walk safely without the risk of accidents?	[31]				Are there any pedestrian areas? Can snow be easily cleared?
Does the area offer good communications through regular public transport?	[11,57]				
Is the area well connected to nearby areas by roads and shared surfaces?	[11,57]				
Is environmentally friendly transport made possible via foot and bicycle? Are pedestrian and bicycle networks well developed?	[31,58,60]				Are snow and ice cleared in winter?
How does the streetscape change in winter? Do the roof shapes look like they cause snowfall on the street?	[63]				Especially important due to Swedish winters.
Legend:					
Affordance		Place attachment		Salutogenic design	Sustainable design

3.6. Security

The five questions of this category are presented in Table 9.

One of our basic needs is to feel safe and secure [20]. A place's design has a significant impact on perceived security. People generally perceive places with a lot of lights as safer [64], and they commit less crime in well-lit areas [65]. This is especially important in countries with a lot of darkness, like Sweden, where some cities experience polar nights in the winter. (i.e., that the sun never rises.) In terms of design, there are a number of factors that affect the lighting. Steel shutters, often drawn over shop windows for crime prevention, are one such factor. This implies that the lack of light from shop windows largely darkens the street-level urban space. Therefore, it is a beneficial design principle to avoid steel shutters as much as possible [31].

Darkened streets with closed shops at night are undesirable for a variety of reasons. We perceive them as less secure, in part due to the reasons previously mentioned. Closed shops contribute to a decrease in activity at the site at night. When there is less activity at the site, so-called "eyes on the street" monitor it less closely. Jane Jacobs introduced the term "eyes on the street" in her 1961 book *The life and death of the American city*, implying that a place with constant life and movement naturally attracts the attention of all its visitors [31]. This is a clear example of situational crime prevention, where the goal is to reduce the number of crime opportunities through, for example, the design of the place [66]. However, it is critical to exercise caution when applying situational prevention. Steel shutters are another useful example of situational prevention. Introducing situational crime prevention measures can thus have the opposite effect and cause the place to be perceived as less safe [67,68]. Steel bars or shutters on windows can, for example, cause the place to be perceived as unsafe [31].

"Eyes above the street" can achieve the same level of natural surveillance as "eyes on the street". Having many residential windows facing the site is a beneficial design principle. Residential windows facing the site provide surveillance and lighting, even during office and shop closures [31,67]. However, it is crucial to consider the site's connection to the street. From the fifth floor upwards, social contact with the street diminishes due to the difficulty in distinguishing individuals at this distance [69]. Therefore, a building that has numerous residential windows on its lower floors is considered good for nighttime

surveillance. Shops and clubs open at night, which provide surveillance at the street level, can advantageously supplement this.

Table 9. The five questions in "Security" compared with the filter. Sources: [31] Gehl (2010); [64] Loewen et al. (1993); [70] BRÅ (2023); [67] BRÅ (2002); [68] Cozens & Davies (2013).

Question	Source [s]	Filter Quality			Special Swedish Consideration
		Six Critical Theories	Global Priorities	Maslow's Hierarchy	
Is the location safe both day and night?	[31]				
Is there movement at the site at all hours of the day?	[31]				
Does lighting create security and a good atmosphere?	[31,64,70]				Extra important in cities with "polar nights" in winter.
Is there a natural surveillance of the site with many windows overlooking it?	[31,67]				
Does the design of the place give the appearance of security or are there, for example, iron bars and steel shutters for windows?	[31,67,68]				
Legend:					
				Belongingness- and love needs	

3.7. Senses and Experience

The five questions of this category are presented in Table 10.

People's senses have a significant impact on whether they want to stay in a place or not. Comfortable benches and beautiful views do not matter if the rain whips in the face and howling winds come at regular intervals; the place will not be pleasant. Some of the most basic human needs include the senses and the ability to stay warm [22]. The smell is one sense that can easily make people avoid places. Overfilled garbage cans [31] are a particularly common odor in the city. Therefore, it is crucial to regularly empty these garbage cans. Overfilled garbage cans are also an eyesore, contributing to the rundown appearance of the area. Emissions and pollution produce a slightly more serious odor. According to estimates, exposure to fine particles and nitrogen oxide in Sweden causes approximately 7600 premature deaths annually [71]. Limiting pollution, therefore, is an important part of salutogenic design. One factor that affects the city's air quality in Sweden is the use of studded tires. Sweden allows the use of studded tires between 1 October and 15 April, and at other times if winter road conditions prevail [41]. Studded tires provide better grip in winter road conditions and reduce the risk of accidents [72,73]. However, the tires remove harmful particles from the road surface, and this, combined with the production of raw materials, has shown that the tires have a negative net health impact during their lifetime [74]. Sweden does not recommend a universal ban on studded tires for traffic safety reasons [40]. However, cities have introduced studded tire bans on individual streets, leading to improved air quality [75]. Another sense, feeling, plays a crucial role in shaping the experience and sense of place. Warm spring days in Sweden serve as a clear example of this, as almost everyone chooses to sit in the sun, avoiding areas in the shade. In this scenario, the sun creates a more pleasant microclimate. In addition to the overall weather conditions at the site, areas that provide sun exposure or wind shelter are highly sought-after [31]. The wind, in particular, has a special significance for the perceived climate. Even with moderate wind, the perceived temperature can be more than 5 degrees colder than the actual temperature [76,77]. The city pattern is an important factor that affects wind exposure at the site. A low, dense building often directs the strongest gusts of wind "above the city", whereas tall, spread-out buildings, like those of modernism's building ideal, catch these winds [31]. Low-density settlements typically have a more

pleasant microclimate, allowing the growth of plants typically found in more southerly latitudes [31]. In the Swedish context, it may be worth noting that westerly winds are the most common wind direction [77]. Trees often improve the city's microclimate through shading and wind capture [78,79]. The trees also have more positive salutogenic health effects. Trees, for example, are excellent air purifiers. In 1994, a study by [80] estimated that trees in New York purified approximately 1800 tons of pollutants. Another positive health benefit of green spaces and trees is their calming and stress-reducing ability [81]. Older trees generally do more beneficial things than younger trees. A clear example of this is that older trees provide more shade through their larger crowns, and thicker trunks provide more shelter. Biodiversity also benefits more from older trees because they shelter fungi, lichens, insects, and birds [82]. Older trees can also link to history and be important for creating place attachments [83]. In the winter, the Swedish city can dramatically change its appearance. Therefore, in a Swedish context, an important consideration is how urban space changes in winter. For example, are there enough well-maintained seats, or are they covered in snow? Research has demonstrated that locations with effective urban design for winter conditions receive significant foot traffic throughout the year [84]. Perhaps this occurs because the city's inhabitants have more opportunities to interact with these places throughout the year than with snow-covered ones.

Table 10. The five questions in "Senses and experience" compared with the filter. Sources: [31] Gehl (2010); [78] Balogun & Daramola (2019); [79] Priya & Senthil (2021); [80] Nowak (2002); [81] Tyrväinen et al. (2014); [82] Swedish Housing Agency (2019); [83] Bow & Buys (2003).

Question	Source [s]	Filter Quality			Special Swedish Consideration
		Six Critical Theories	Global Priorities	Maslow's Hierarchy	
Are there noises, dust, smells, or other pollution?	[31]				Are studded tires allowed on adjacent streets?
Does the character of the place change when it is windy or stormy?	[31]				The most common wind direction in Sweden is western winds.
Does the location offer a good microclimate all year round?	[31,78,79]				Are there places which provide good microclimates in winter?
Where are the seats located? Full sun or shade? How are seats positioned in relation to the wind? Do they offer protection?	[31,78,79]				
Are there many trees adjacent to the site? Are there big trees?	[80–83]				

Legend:

Sense of place | Place attachment | Biophilic design | Salutogenic design | Physiological needs | Belongingness- and love needs

3.8. Development

The five questions of this category are presented in Table 11.

Over time, a society will inevitably evolve as its inhabitants evolve and change. Therefore, the design of the area must allow flexibility and avoid excessive detail. Lessons from "English New Towns" reveal that overly detailed planning in many areas led to unadaptable premises [11]. Because the cities had not yet formed, it was impossible to consult the residents on these projects, leading to difficulties as the newcomers had to adjust to the intricately planned spaces instead of the other way around [11].

In particular, resident influence is an extremely important part of remodeling or new construction. One of the basic human needs is the possibility of receiving respect and having one's voice heard [20,22]. There are also financial incentives for resident influence. The residents of the area usually know better what they lack and want than the planners, which can prevent costly mis-investments. Research also demonstrates that when residents participate in the design process, their sense of place improves and their

attachment to the place intensifies [11]. This connection to the place is crucial in fostering a sense of community within the area [11], which in turn fulfills the fundamental needs of belongingness and love. If the residents have a say in the place's design, it should also showcase the distinct sense of place they have cultivated. The detailed planning process in Sweden achieves a certain level of citizen dialogue [85]. In interviews with [23], however, several representatives from municipalities, county boards, and authorities have raised the need for further citizen dialogue in the planning stage. As previously stated, it is critical to have flexibility in the design of the area's premises. We should offer premises of various sizes and rental levels to accommodate changing needs and to facilitate investment in new businesses. Self-actualization, the top part of Maslow's hierarchy of needs, includes the possibility of "betting" and establishing a new business or career [22]. A trend that can be seen in society is increased flexibility in where we work, which is largely due to the COVID-19 pandemic. During this period, the transition to home work was extensive. To some extent, the number of EU citizens who worked from home increased from 11% in 2019 to 39% in 2020 [86]. Furthermore, it is important to note that many countries had even higher figures; Finland, for instance, had approximately 59% of its workforce working from home [86]. In Sweden, the corresponding figure in the spring of 2021 was approximately 40% [87], and a survey by [88] revealed that approximately 93% of home workers expressed a desire to continue working from home to some extent. It is still too early to draw any clear conclusions about the impact of the pandemic on the workplace. However, it is possible to see clear tendencies showing that flexibility in the workplace will continue to be greater than before the pandemic [89,90]. During the COVID-19 pandemic, the flexible workplace was, naturally, most often the home. In infection-free times, however, a flexible workplace can just as well be a public place such as a library or café [11]. Residents' needs change over time, as do the demands placed on the home. An elderly couple does not need as much space as they did when the house was full of children. The possibility of adaptability in housing is important because it affects self-actualization [1]. People usually do not want to move away from their established contacts; the majority of those who move do so within the same urban area, city, or municipality [91,92]. If people can stay in the same place for a longer period of time, the chance of place attachment and belongingness also increases [11]. It is therefore important that the area has a mixed housing stock with housing sizes for all living situations that enable people to stay in their community.

Table 11. The five questions in "Development" compared with the filter. Sources: [11] Woodcraft et al. (2011); [89] Babapour Chafi et al. (2022); [90] Barrero et al. (2021); [23] Swedish Ministry of Finance (2021).

Question	Source [s]	Filter Quality			Special Swedish Consideration
		Six Critical Theories	Global Priorities	Maslow's Hierarchy	
Does the location and area offer flexible workplaces? (e.g., cafes and libraries)	[11,89,90]				
Does the area of the site have varying housing sizes or is there little variation?	[11]				
Does the site have premises for varying needs? (e.g., shop premises in different sizes)	[11]				
Does the area seem to be developing?	[11]				
Is it clear that the area's residents have had influence over the area's design?	[11,23]				Swedish planning process.

Legend

Sense of place | Place attachment | Belongingness- and love needs | Esteem needs | Self-fulfilment needs

Research Limitation and Future Research

We view this research as a follow-up to future investigations where we can test the reliability and validity of this developed assessment. However, we will not proceed until we verify whether the assessors can reach a consensus using this easy-to-use assessment and compare it with other assessments to determine its suitability for a diverse range of site assessments. Given the broad spectrum of research and its various objectives, it is necessary to conduct separate research to test this method and address its objectives. The future research plan envisioned four types of assessors, including authors and groups of students from the university's engineering program with similar scientific expertise, evaluating Kronoparken, a suburb in Karlstad, Sweden.

A possible weakness in the study is the limitations that a five-point Likert scale entails. One could argue that the scale lacks sufficient strength for the study's arithmetic mean calculations. However, we must balance this against the perceived advantages of the scale. The authors believe that a five-point scale is appropriate because it facilitates assessment for laypeople. Each step on the scale has a clear meaning. Even though one could argue that a five-point Likert scale is not strong enough for this, the use of averaging also serves to facilitate assessment. Rather than assigning a numerical value to the rather diffuse and broad concept of "architecture and aesthetics", we assess the category using five directly asked questions. To give a clear result (radar chart), average values must be used. This is because an octagon-shaped diagram is much easier to read than one that is tetracontagon-shaped.

3.9. The Developed Method

The study led to the development of an assessment method consisting of three steps. Please see Appendix A.

3.9.1. Step 1:

There are 40 developed questions, evenly distributed over 8 categories. Rate all the questions with a grade between 1 and 5, where 1 is very bad and 5 is very good.

3.9.2. Step 2:

Calculate the "mean grade" of each category.

3.9.3. Step 3:

Plot the mean grades of each category in an octagonal radar diagram. Draw lines between the plots and fill in the area between these lines. This area represents the location's assessment. We created a "checklist-like" document to ease assessments. This is shown in Appendix A.

4. Discussion

The study led to the development of an assessment method consisting of 8 categories and 40 questions. The method calculates average values for each category and then incorporates them into a radar diagram, creating an area that clearly illustrates the site's improvement potential. This is because a perfect location would get top marks on all questions, top marks on average, and thus an area that covers the entire radar chart. The method has advantages and disadvantages. The method's advantage lies in its perceived ease of use and its ability to provide clear results, even for those without prior knowledge in the field. It is comparable to the "Place Standard Tool" [23], which is for professionals only since it examines quantitative and qualitative data to understand residents' perspectives and suggestions for improvement. This means that the method can, for example, be suitable for simple evaluations of social sustainability in the design of public places. Presenting the results of this kind of evaluation to individuals who lack prior knowledge of social sustainability could be a potential use case for the method. This is because the

radar diagram clearly visualizes where the location's strengths and weaknesses lie in a social context.

The chosen method may have the disadvantage of using average values. Hypothetically, receiving a top rating on one of the questions could "rescue" a category that performs poorly on four out of five questions. However, we can discuss the likelihood of this happening; typically, the grades within the categories should be reasonably similar due to their numerous connections. We do not judge the risk associated with these "outliers" to outweigh the profit, especially when we clearly visualize the result using the average value.

All assessments conducted using the developed method will be subjective, as they are based on the assessor's own assessments and ratings of the 40 developed questions. This could hypothetically lead to two different people getting completely different results when assessing the same location. The study's goal was to quantify important factors in the design of public places that affect social sustainability. This is due to the challenging nature of measuring social sustainability. The result was 40 questions, which the article authors feel is quite clear and concise. An intriguing question to investigate, however, may be precisely the clarity of the questions produced. Can different people achieve the same results with the developed assessment method?

Another aim of the study was to develop a method adapted to local conditions, in this case Swedish conditions. The study achieved this by sourcing a significant portion of its knowledge material from Swedish authorities, municipalities, and legislation, and incorporating specific Swedish considerations into numerous questions. However, it is important to acknowledge that many issues lack clear local connections. This may indicate that many factors regarding the socially sustainable design of public places are universal. However, the fact that several questions have a clear local connection (legislation, weather conditions, etc.) can justify the effort to adapt the assessment method to Swedish conditions. Neglecting the local conditions could potentially lead to the omission of important knowledge. The method used to develop the assessment method is therefore felt to be suitable for increasing local anchoring in the development of assessment methods for social sustainability in the design of public places.

5. Conclusions

The study resulted in an easy-to-use assessment method adapted to local conditions that can be suitable for simple evaluations of social sustainability in the design of public places. This method is particularly useful when laymen need to understand the strengths and weaknesses of a place from a social perspective. Since the method is based on subjective assessments, an interesting future study could investigate whether different people can achieve the same results with the developed assessment method and compare it with other assessments to determine its suitability for a diverse range of site evaluations.

Author Contributions: Conceptualization, K.N.; data curation, W.W.; investigation, W.W. and K.N.; methodology, K.N.; resources, W.W.; supervision, K.N.; visualization, W.W.; writing—original draft, W.W. and K.N.; writing—review and editing, W.W., K.N. and O.N. supported the whole research process, provided various insightful opinions, and oversaw the study. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Data Availability Statement: The data used to support the findings of this study are included within the paper.

Acknowledgments: This article is an enhanced version of the bachelor thesis of the first author, William Woxnerud, which was completed in 2022 [93] under the supervision of the second author, Karim Najar, at the "Department of Engineering and Chemical Sciences, Karlstad University, Karlstad, Sweden".

Conflicts of Interest: No conflicts of interest have been made known by the authors.

Appendix A. The Developed Framework for Assessments

Assessment of social sustainability

Place:

Name:

Enter a score between 1-5
(1 = worst, 5 = best)

Architecture and aesthetics

Does the place look beautiful? Does the place appear well-designed in terms of both aesthetics and sustainability?	
Do the place and the buildings surrounding it fit the human scale?	
Are people on the outskirts of the place recognizable as people?	
Do the seats have interesting views?	
Is there a distinctive profile created by architecture and design in the area? Can nearby areas be distinguished by their architecture and design?	
Average score	

Places to meet

How is the sound environment of the place? For example, is it possible to have a conversation, or is the noise too loud?	
Are there good "primary seats" such as benches or are there only "secondary seats" such as e.g. stairs, facades, or fountain edges?	
Does the place have details that make it possible to stop and lean against? (e.g. bus shelters, benches, facades, trees, niches, or ledges)	
Is there access to places in the vicinity of the site that enable larger events? (e.g. squares, parks, wide sidewalks)	
Is the site free from hostile architecture such as benches that are difficult to sit on?	
Average score	

Social infrastructure

Can the whole place be used for activities and play? Are there major obstacles to this?	
Is there access to basic social infrastructure in the vicinity of the location? (e.g., shops, gyms, community facilities, and green spaces)	
Are there schools, leisure centres, and preschools in the vicinity of the site?	
Are there "third places" such as cafes adjacent to the site?	
Are there dedicated playgrounds in the vicinity of the site?	
Average score	

Accessibility

Is the location accessible? Are there physical elements that limit the site's accessibility?	
Is the fastest route through the area clear or is there a risk of detours? Is there a risk of disorientation?	
Is the walking surface relatively flat? Are there ramps at stairs?	
Is the location's lighting sufficient for it to be possible to read sign language when it is dark outside?	
Is there guidance for the visually impaired through, for example, tactile walking boards or handrails?	
Average score	

Traffic

Is it possible to cycle and walk safely without the risk of accidents?	
Does the area offer good communications through regular public transport?	
Is the area well connected to nearby areas by roads and shared surfaces?	
Is environmentally friendly transport made possible via foot and bicycle? Are pedestrian and bicycle networks well developed?	
How does the streetscape change in winter? Do the roof shapes look like they cause snowfall on the street?	
Average score	

Security

Is the location safe both day and night?	
Is there movement on the site at all hours of the day?	
Does lighting create security and a good atmosphere?	
Is there a natural surveillance of the site with many windows overlooking it?	
Does the design of the place give the appearance of security or are there, for example, iron bars and steel shutters for windows?	
Average score	

Senses and experience

Are there noises, dust, smells, or other pollution?	
Does the character of the place change when it is windy or stormy?	
Does the location offer a good microclimate all year round?	
Where are the seats located? Full sun or shade? How are seats positioned in relation to the wind? Do they offer protection?	
Are there many trees adjacent to the site? Are there big trees?	
Average score	

Development

Does the location and area offer flexible workplaces? (e.g., cafes and libraries)	
Does the area of the site have varying housing sizes or is there little variation?	
Does the site have premises for varying needs? (e.g. shop premises in different sizes)	
Does the area seem to be developing?	
Is it clear that the area's residents have had influence over the area's design?	
Average score	

Scores

5 = Very good

4 = Good

3 = Neither bad nor good

2 = Bad

1 = Very bad

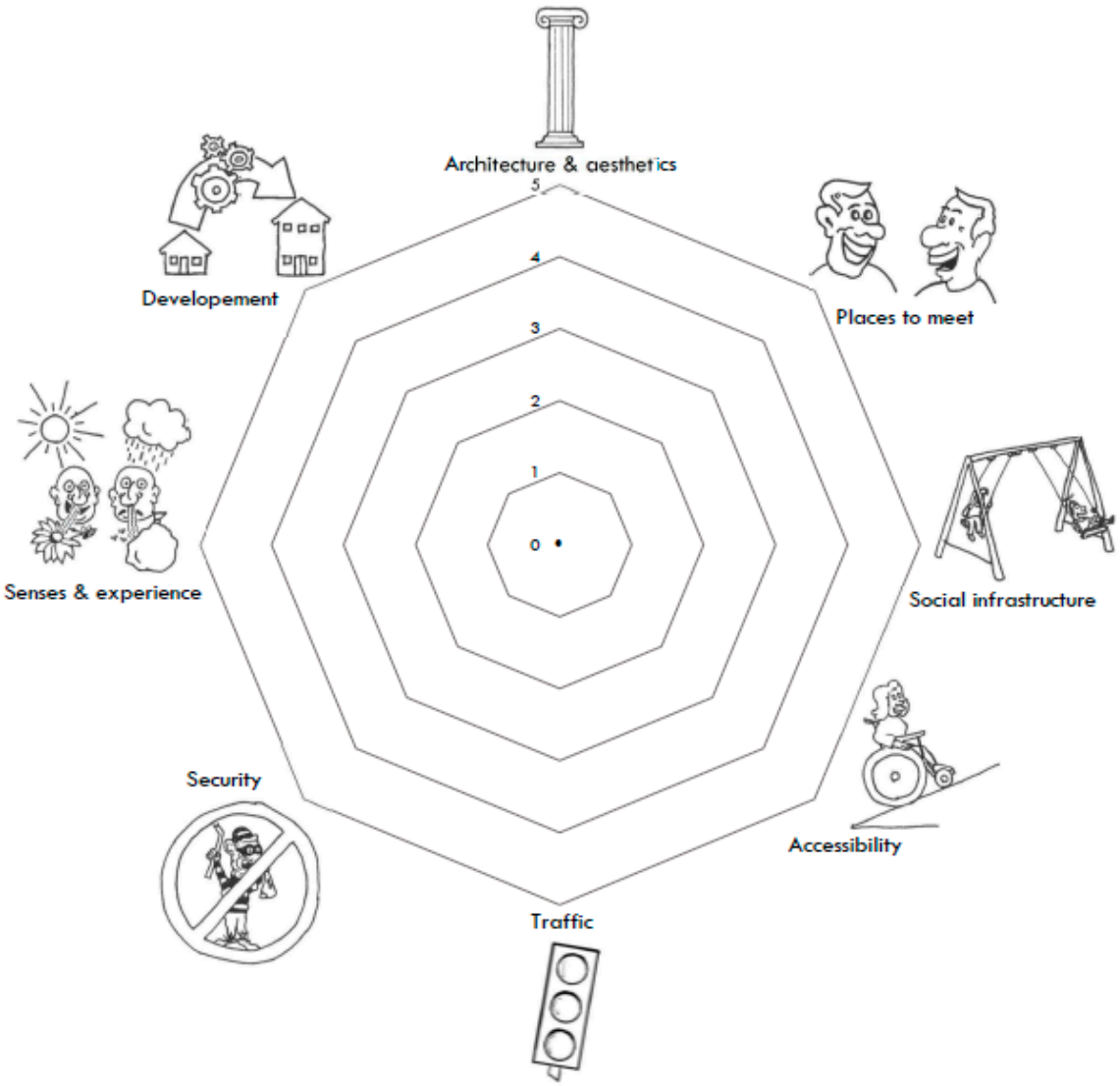
Conditions

Date:

Time:

Weekday:

Weather:



How to use

1. Calculate the average score of each category
2. Place the average score in the chart. For example, if the average score is 4.5, place the point between the line for 5 and the line for 4 at the current category.
3. Draw lines between the points.
4. The assessment is done! Now you can see where the site has room for improvement.

Top tip!
Use a ruler to draw the lines

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