Exploring Naturmolnet's qualities that promote well-being in the public place

– Pocket parks for a better urban life?

Rebeca Paolini Madrid

Independent project • 30 hp
Swedish University of Agricultural Sciences, SLU
Department of People and Society
Outdoor Environments for Health and Well-being Master's Program
Alnarp 2022

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Credits: 30 hp
Level: A2E
Course title: Independent Project in Landscape Architecture – Outdoor Environments for Health and Well-being – Master's program
Course code: EX0858
Program/education: Outdoor Environments for Health and Well-being master's program
Course coordinating dept: Department of People and Society

Place of publication: Alnarp
Year of publication: 2022
Cover picture: Rebeca Paolini Madrid

Keywords: Pocket parks, public place, well-being, restorative environments, perceived sensory dimensions, social connection, culture, community garden, urban green spaces.

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Abstract

Green public places are in constant threat due to city development and densification. For the benefit of the urban dwellers and the environment, it is important to the development, accessibility, and quality design of public places. Pocket parks are an urban phenomenon, a type of small public place in between buildings, that represents a restorative escape from the roughness of everyday city life. This thesis explored and investigated how Naturmolnet, a pocket park in Malmö, contributes to the restoration and improvement of urban life. The methodology used in this project was an expert observation landscape analysis which was assisted by a protocol tool developed from an initial review of the scientific literature on both pocket parks and the Perceived Sensory Dimensions model (PSD). This protocol was used to evaluate the characteristics and qualities in Naturmolnet that fosters restoration and promotes well-being. With a 5-point Likert scale and a checklist, the eight PSDs and pocket parks characteristics were evaluated. The results of this study suggested that Naturmolnet included most of the pocket park characteristics and restorative elements from different PSD qualities. The PSDs *Cultural, diverse,* and *social* scored the highest (5 points). *Sheltered* and *open* scored in the middle (3 points). *Natural, cohesive,* and *serene* scored the lowest (1 point). Overall, the results indicated that even though Naturmolnet was not considered a *natural* and *serene* environment, it had other elements equally important like *social* and *cultural* that classify it as a restorative urban place that promotes well-being. In conclusion, Naturmolnet is a high-quality pocket park that functions as a dynamic environment, with a balance between natural, cultural, and social aspects. Naturmolnet is a community-driven place in Malmö that works as an inspiration for the development of future pocket parks and as a solution for the recovery, reclaiming of the public place, the right to the city, and the improvement of a better urban life.

Keywords: pocket parks, public place, well-being, restorative environments, perceived sensory dimensions, social connection, culture, community garden, urban green spaces.

Preface

This thesis is my final project for the Outdoor Environments for Health and Well-being master program at SLU, Alnarp. The scope of the program is Environmental Psychology, a field study that has its roots between architecture and psychology. It focuses on the interaction between people and the built and natural environment, by exploring experiences and behavior connected to the role those environments have in the promotion of health and well-being. Acknowledging SLU for providing this master's program, allowed me to learn about Environmental Psychology and to understand the importance and relationship it has with the architectural design process. The topic and methodology of the thesis work as an example of how important it is that scientific research in Environmental Psychology is learned, understood, analyzed, considered, and applied before designing, planning, and developing architectural and urbanistic projects. All for the benefit of people's health and well-being and the improvement of cities to be greener and better for society.

I come from Caracas, a dense, fast, and stressful city. The city is bordered on its north side by El Ávila, a large green mountain (approx. 2700m high). Knowing I was surrounded by that much nature always gave me relief. However, besides the mountain and the great number of tall trees, a few city parks, and some playgrounds in Caracas, I have always felt that there was a lack of the real and accessible, public, and restorative that every dense city needs. I got my bachelor's in architecture at the Universidad Central de Venezuela. The faculty's social and environmental values and my experience growing up in Caracas, helped me to direct my attention to urbanism, green architecture, and sustainability. Moving later to Malmö and living in Sweden for more than ten years, I was finally introduced to SLU in Alnarp, where I found what I was lacking to become the kind of architect I always wanted to be. My mission as an architect is to, through nature, art, culture, and social integration, contribute to the improvement of our cities and public places.

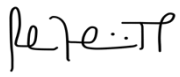
To date, this work is my highest academic achievement, it would have never been possible without the contribution of some special people.

First and foremost, I am profoundly grateful to my supervisor, Caroline Hägerhäll, for her dedicated guidance and advice, continue support, and patience during this process. Her knowledge, experience, and support encouraged and inspired me into the creation of this master thesis.

I would like to express my sincere gratitude to Naturmolnet's project leader Johan Nordström from Växtvärket, for all the important information he provided, his friendly and welcoming collaboration, gave more meaning to Naturmolnet as an important place to study.

For their insightful comments, suggestions, and support throughout the thesis process, I would like to offer my special thanks to a group of SLU academic staff, Anna Bengtsson, Märit Jansson, Fredrika Mårtensson, Jonathan Stoltz, Elisabeth Von Essen, and Mark Wales. Thank you for the inspiration you provided me since I started my adventure in Alnarp.

Finally, this thesis would have never come together without the support I got from my husband Henrik, my son Hans, my family, and friends. The experience of writing a master thesis was new to me, and a big challenge. Having loving and supportive people close to me was very important and made my days much brighter, for this, I am forever grateful.



Rebeca Paolini Madrid
Alnarp, May 2022

Because between nature, culture, and people we can heal…

To the memory of my parents

Elsita and Juan

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Abbreviations

PPP	Person-Place-Process framework
SRT	Stress Recovery Theory
ART	Attention Restoration Theory
SET	Supportive Environment Theory
PSD	Perceived Sensory Dimensions
SLU	Sveriges Lantbruksuniversitet

1. Introduction

As a result of industrialization, the need for green spaces in the urban setting became an important issue in the nineteenth century. To be able to provide people the contact with nature and fresh air, city parks started to be developed around the world. Later at the beginning of the twentieth century, the need for open green spaces increased due to the expansion of cities and towns, however, the space for green areas was limited, having negative impacts on people's health and the environment. During the post-war period in the mid-century, city planners started to implement green spaces in different areas of cities to be able to recover and restore the urban landscape from what the war left behind. Small parks, called pocket parks, started to be developed in urban empty spaces around Europe, to give the communities space for recreation, and social encounters, and to improve the quality of life of the people in dense neighborhoods. Later, in the 1960s, the United States inspired by the European post-war pocket park phenomena started to develop a variety of these parks. One of the best known is the Paley Park in New York (1967), which represents an escape from the busy city life (Bruce, 2017).

As an architect and city dweller, I found the establishment of pocket parks a fascinating and necessary alternative for the development of new public areas to promote the general well-being of people. There are some previous studies made in Scandinavia about people's perception, use, health benefits, and the components a pocket park should have to promote health and well-being to the users. However, this master thesis intends to be able to contribute better with the general scientific knowledge about pocket parks and to understand better how they function. To be able to achieve that it is relevant to explore the subject in more depth with an analysis of a specific case study. The case chosen to be explored and analyzed as a pocket park is the urban community garden **Naturmolnet** located in Malmö-Sweden.

2. Aim

Considering the benefits green spaces provide in the urban setting, and the need cities like Malmö could have for more and better health and well-being by promoting outdoor environments, the aim of this study is then, to explore and examine the way **Naturmolnet's** physical qualities promote restoration, well-being, and the improvement of the urban life.

Research questions:

- Are there any physical characteristics that foster restoration in Naturmolnet? And if there are, what are those characteristics?

- How do these physical characteristics work in promoting restoration, well-being, and the improvement of urban life?

3. Background

3.1. City development, public realm, and public space

Cities and urban areas are in constant growth and development, becoming larger, taller, and denser. It is estimated that by 2050, around 68% of the world's population will live in cities (United Nations, 2019). Cities are complex and dynamic; they have changed and evolved through history adapting to their habitants' needs and evolution. Migration, urbanization, and urban development are inevitable, however, the impact of growth and how it will affect people's well-being, and the city landscape are important factors to consider while planning and developing urban areas.

Cities are made by people for people. While there are places for exclusion, chaos, conflict, and uncertainty there is also space for the manifestation of social ideals, liberation, and equal opportunities (Manzo L, 2018). The city is a product of human intellect and could be considered humans' greatest achievement (Hollis, 2013). The urban setting is mainly considered a chaotic and stressful place to live. In a polarized discourse about if cities are good or bad, it is our job as designers and planners to improve the experience of city life. One of the most important aspects of city design that affects the human experience of place and well-being in the public space is the public realm (Manzo L, 2018).

The public realm is what connects the city with its habitants, and it has a highly valuable role in society, and it is fundamental for democracy (Carr, Francis, Rivlin & Stone, 1992; Francis, 2016). It comprehends the space for interaction between the citizens and empowers people to exploit their rights and freedoms (Kohn 2004; Mitchell, 2003; Shiffman, Bell, Brown & Elizabeth, 2012). It is a common good, fundamental to creating a sense of belonging and citizenship, and an essential aspect of the city configuration, for both individual and collective well-being (Manzo L, 2018). Cause of densification and in some cases because of lack of or poor planification, the public realm and public spaces are being threatened. An

example of this is how urban green areas and the quality of public places are changing because of the constant risk of being transformed into new infrastructures which densify the cities even more. The cities are left with less green outdoor environments, which are necessary for physical activity and mental restoration (Grahn & Stigsdotter, 2010). Due to this, outdoor green spaces are more limited, harming the environment and people's general health. The threat to public space compromises the public realm, the right to the city, and public health and well-being.

3.2. Life in the urban setting and stress

As we have already stated, most people in the world live in urban areas, and how cities are designed and managed is important for the well-being of the citizens and to be able to promote sustainable development for a better future. Living in an urban setting could be challenging and stressful. It is known how much stress, people can suffer during adult work-life, with the everyday life activities, like going to work, going to school, being in traffic, or just being around the city.

Spending too much time indoors and being separated from nature, raises the chances of having different kinds of sicknesses like stress-related illnesses such as mental fatigue and depression (Martinez-Gonzalez, 2001). Stress could be defined as how an individual responds physiologically, psychologically, and with different behaviors to a situation that challenges or threatens our well-being (Baum, et al., 1985). The incapability to fulfill general demands from our environment, including society, could end up producing stress. Stress is also considered one of the most important factors of ill-health in modern society (Nygren et al., 2002). Humans can generally manage moderate stress levels well for a limited period, however, there must be opportunities for recovery and restoration (Grahn & Stigsdotter, 2003).

It is important to re-evaluate how public places in cities are functioning in consideration of the stress levels people might develop. In the next section, it will be explained how crucial public urban green spaces are to promote public health and well-being. We need better cities for a healthier society, but we also need healthier citizens to maintain a prosperous city.

3.3. Green space and well-being

A considerable body of research shows that the health and well-being of urban dwellers can be promoted through nature experiences and being close to nature. Benefits from the incentive of physical activity, reduction, and restoration from stress, better air quality, and support of social cohesion are directly associated with the relationship between nature and health (De Vries, 2010).

According to Grahn & Stigsdotter (2003), the more time people spend outdoors in urban open spaces, the less they are affected by stress. However, it is also found that for being able to be out in these outdoor environments they should be close to home and accessible. There is a correlation between how much time people spend outdoors and how much stress people experience. Distance and accessibility are very important factors for the use of urban green spaces, and these factors are related to good planning and design.

Apart from the possibility of experiencing greenery, being outdoors has other additional benefits that can be provided by daylight and aesthetics. Natural daylight is beneficial for human well-being, considering that it decreases anxiety and depression (Kuller & Lindsten 1992, Kuller & Wetterberg 1996). Daylight increases the levels of serotonin, cortisol, and melatonin, which are hormones that affect people's mood states that could produce stress. Another aspect important to consider inside an urban city is the aesthetic experience, how culture and beauty have a positive effect on stress (Rapp 1999; Dilani 2001). There are many benefits of being outdoors but what does being outdoors look like in a city?

3.4. Streetscapes and outdoor city life

We have described that being outdoor can have many benefits, but what does it mean then to be outdoors in a city? Being outdoors in the city often means moving through a streetscape. Streetscapes are all the features, like sidewalks, that comprises the city landscape in the public realm between buildings, however, they are constantly affected by traffic creating air pollution, noise, and a sense of insecurity among the citizens (Manzo L, 2018). People walk through the streets every day and because of the fast city movement with all kinds of motor transportation, it could create discomfort. Those public spaces for people to be and feel free can be damaged by the problem of traffic and can thus affect the regular activities people choose to do every day and then their quality of life.

Our experience of being outdoors is not only affected by where we are but why we are outside. The purpose of our activities affects the experiences as explained by Jan Gehl. According to Gehl (2011), there are three different types of outdoor activities people do in public places in between buildings. ***Necessary activities***, like going to work or school, shopping, and everyday tasks; ***optional activities*** which are the activities people do in their free time like going for a walk, looking for relaxation and enjoyment of life, and ***social (resultant) activities***, where more people are needed for community gatherings or children playing, etc.

Gehl explains the relationship between the three types of activities and how this connection is important concerning the physical planning and the quality of the physical environment. According to Gehl, when the quality of the environment is good, optional activities increase considerably and the social activities usually escalate as well, as is seen in *figure 1*.

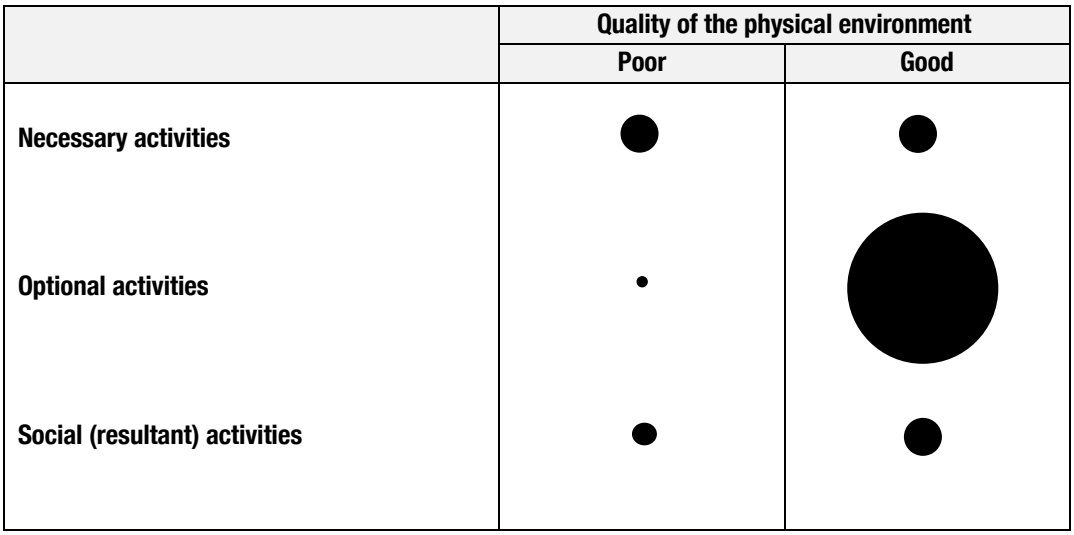


Figure 1. Jan Gehl's (2011) representation of the relationship between the quality of the physical environment and the estimated occurrence of outdoor activities.

When public spaces are well designed, considering people's needs and preferences, and thus allowing the different types of activities like *social* and *optional*, in streetscapes like sidewalks, front porches, and pocket parks, it might fulfill basic human needs as the contact with other people, and sense of community.

3.5. Innovative ways of creating pocket parks in Malmö

Malmö is Sweden's third-biggest city with more than 350.000 inhabitants (Statistikmyndigheten, 2021). It is a city that is growing fast in size and population. It is popularly known as the "city of parks"; however, it might be considered that the few big parks and some other green areas and playgrounds around the city, might not be so well distributed, not having enough space and accessibility across different parts of the city.

There is, however, summer streets, a temporary initiative by Malmö municipality since 2017. These solutions want to promote the use of the public space during the seasons when people in Sweden are outside most and for a longer period, like spring and summer. The summer streets are installed between April and October each year. A few streets in the city center are closed for traffic and some features are installed like sitting areas and greenery to create a pocket park-like space to promote the use of the street space, create a better urban environment, and increase urban social life. I strongly believe this is an excellent initiative that must continue, however, could it be beneficial also to have, permanent places in empty spaces -in more different areas of the city- that can be found in between buildings? Places like Naturmolnet are an example of what a smart and friendly city like Malmö could have all around.

4. Theoretical Framework

4.1. Landscape preferences theories

The effect nature has on health and well-being is related to human environmental preference, which is why it is essential for the aim of this master thesis, to understand how people perceive and prefer the landscape. The landscape is an important aspect of our everyday lives, where the interactions between human activities and the natural environment occur (Antrop, 1998; Council of Europe, 2003). Landscape preferences scientific research from the environmental psychology field explains two types of theories, evolutionary theories (innate preferences) and cultural theories (learned preferences).

Evolutionary theories suggest that people's preferences for nature are innate, considering evolutionary origins and the qualities of the environment that favored human survival. According to the *biophilia hypothesis* (Wilson, 1984), humans have an innate affinity for life and lifelike processes, which inspires them to look for contact with plants, animals, and landscapes. There is another evolutionary theory presented by Orians (1980) the *savannah hypothesis,* that says humans prefer savannah-like environments, such as semi-open, open spaces with shrubs and trees because of the similar characteristics of the landscapes where we evolved and for that reason, people would have innate preferences for a similar modern type of landscape structures. A third evolutionary theory is presented by Appleton (1975), the *prospect-refuge theory,* where people prefer open spaces and vistas to be able to see (prospect) and the desire for places where it is possible to hide from enemies and wild animals (refuge), the need *to see without being seen*. Later, Rachel and Stephen Kaplan developed *the preference matrix* (Kaplan & Kaplan, 1989) inspired by the prospect-refuge theory and how people process information. The matrix describes the human needs for exploration and understanding of the landscape considering its characteristic on different levels, is defined by the terms of coherence, complexity, legibility, and mystery (see *figure 2*).

Level of interpretation	Informational needs	
	Understanding	**Exploration**
Immediate (2-dimensional)	**Coherence** Immediate understanding of how elements in the environment fit together	**Complexity** Visual richness that can be immediately explored
Inferred (3-dimensional)	**Legibility** Understanding of what lies ahead and how you could find your way and not get lost	**Mystery** The promise of new things to explore in moving further into the landscape

Figure 2. The preference matrix. Adapted from Kaplan & Kaplan (1989).

In their book The Experience of Nature (1989), Rachel and Stephen Kaplan claim,

> *"A preferred environment is thus more likely to be a restorative environment. And since nature plays such a powerful role in what is preferred, in general terms, there is a theoretical basis for expecting natural environments to be restorative" (Kaplan & Kaplan, 1989, p.189).*

There is then, a different approach to what the evolutionary theories explain regarding human preference for landscapes. ***Cultural theories*** describe how those human preferences are shaped and learned by cultural, social, and personal characteristics (Tveit et al, 2013). *Topophilia* (Tuan, 1974) mentions that people bond with familiarity, with what we know very well and have experience with. Other culturally related theories are first, *ecological aesthetics,* where knowledge about ecological functions is an important factor for preference (Carlson, 2009; Gobster, 1999; Nassauer, 1992). *Landscape heritage approaches* where are elements of cultural heritage (e.g., Fairclough, Lambrick & McNab, 1999). *Aesthetics of care*, where the landscape must be taken care of (Nassauer, 1995, 1997). And *genius loci*, a theory about the uniqueness and spirit of places (Bell, 1999; Norberg-Schulz, 1980). Cosgrove (1998) suggests that preferences on landscapes are transformed into symbols and ideas because of cultural influences. Furthermore, preferences for some qualities in gardens and urban parks can change with time due to the relation to the cultural evolution of society (Egbert, 2000).

It is important to understand the principal evolutionary and cultural theories regarding landscape preferences, to be able to develop new theories and assessment tools that should adapt and help with the evolution of the physical environments where people live in the present era.

However, most researchers agree that preferences for landscapes might function as a mix of both innate and learned behaviors and those could be controlled by *place attachment*, the strong bond people can develop for places.

4.2. Place attachment, personal factors, and the social context.

According to Scannell & Gifford (2010), the concept of place attachment refers to the emotional and cognitive connection with places that people could develop. To better understand and analyze this concept it is divided into three dimensions to consider: *person* (who is attached?), *process* (how is their attachment expressed?), and *place* (what are they attached to?). This person-process-place framework or PPP model is presented in *figure 3*.

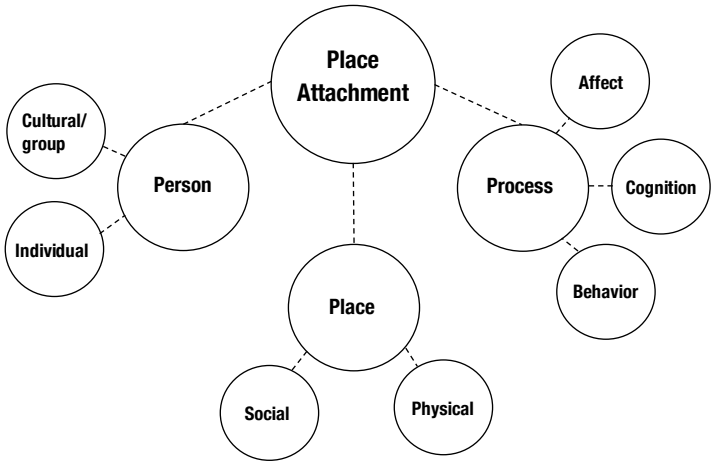


Figure 3. The person-place-process framework of place attachment based on Gifford & Scannell (2010).

The ***person*** dimension, which specifies the person who is attached, is divided in two functions, individual and collective (cultural/group). The individual is about the meaning of personal experiences and realizations, and the collective refers to when the attachment is chaired with a group of people with a cultural or/and religious meaning.

The second dimension is about the ***process***, i.e., how people (individuals and groups or people) express their attachment to places, why those places are important to them. This could be measured by affect, cognition, and behavior. Sometimes people attach to places through affection or emotional bonds like the feeling of happiness,

love, or pride; the way we express the quality of the experience realizing how we feel about the place. However, the feelings are not always positive. They could sometimes be negative as well, when they are connected to some trouble or traumatic memory, for example when the place has drastically changed or disappeared because of a natural catastrophe (earthquake or fire). Relationships with place can represent an array of emotions from love and contentment to fear, hatred, and ambivalence (Manzo, 2005). Another way to connect with places is through cognition, this shows the motivation of why we interact with the environment. The cognitive aspects, such as memories, beliefs, and knowledge about the place, help people to bond with places and give meaning. Knowledge is important regarding how people attach to places because it helps to create a mental representation of the place, to organize the information people have about the place like history, physical characteristics, and affordances of the place for example, that help to connect with the place and their own self. This is related with place identity, that it's about one's incorporation of a place into the larger concept of self (Gifford & Scannell, 2010). Another factor from the second dimension on how people express place attachment is in different forms of behavior. This could be shown by visiting the place often when it´s not where they live.

The third dimension is about the ***place*** to which people are attached. It is divided into two levels that describe the qualities of the important place: the physical (like the appearance of the landscape) and social (e.g., Riger & Lavrakas, 1981). These levels were measured by Hidalgo & Hernández (2001) defining the spatial levels: home, neighborhood, and city. They found that is more common to attach more to the home and the city levels than the neighborhood, and social level was more important than the physical, however, both levels are influential to place attachment. People are also attached to places that facilitate social relationships and group identity (Gifford & Scannell, 2010).

Personal factors

According to Gifford & Scannell (2010), place attachment is influenced by personal factors that are related to the individual. Some of those factors are, *time, mobility and ownership*.

Time depends on the amount of time people spend in the place and how this shapes the attachment experience. Shorter periods of time are called superficial sense of place and occurs when the person has lived a significant although fleeting experience in a certain place. Here the person has no personal connection, or previous individual attachment, memory, historical or cultural connection etc. It is normally very specific and related to an event rather than the place itself. Longer time spend in the place could strengthen the bond through memories. It could develop a bond called personal sense of place, where residents have more local

knowledge, larger social networks, and greater community involvement (Gifford & Scannell, 2010).

Mobility, when people are attached to place, they are less likely to move, on the contrary, people who tend to move often are less probable to attach to places. Mobility is important to the influence on place attachment, sometimes people when they move away can generate strong bonds and homesickness for places (Gifford & Scannell, 2010).

Ownership, sometimes, when people own their own place, this could influence place attachment, but it is not always like that. When the person chooses to own a place because he or she liked it, it could give identity and create a special bond with that place (Gifford & Scannell, 2010).

The social context

The social context describes, when some *social interactions* have an influence on place attachment, for example when people become close friends with their neighbor(s), this could create a strong bond between the people and the place because this place is associated with that friendship. This situation could have a negative effect also, if, for example, those friends move away, the meaning of the place will change and have a negative impact to the person attached. Equally for some persons the isolation from social interaction could have the same effect and the change from positive to negative could come from the social landscape changing with people moving in close by or other changes that lead to less solitude. *Social capital* can have a positive influence on place attachment in the way that supports the communal needs. This term refers to when people live in a neighborhood where the community is willing to help each other in different aspects, like in emergencies, security, informational and emotional support, this could create a positive meaning and impact for the place attachment. These characteristics could also help to create the feeling of belonging to the place. Another aspect that could have a positive impact in place attachment is the *homogeneity* of the place, in how similar are people to their neighbors (Gifford & Scannell, 2010).

Neighborhood attachment tends to be stronger when individuals perceive those others are like themselves (Gifford & Scannell, 2010). For example, when an immigrant lives in a new country, in an area where there are another people from the same culture, religion or nationality, this could contribute to the feeling of belonging to the new place. However, diversity could also be beneficial, it is suggested that adjusting to a new way of life, develops the experience of place attachment (Gifford & Scannell, 2010).

4.3. Restorative environments in the urban setting

In modern society, where most people live in urban areas, the need for survival to the everyday challenges of life has always been crucial. Although the threats and stressors to humans are partly different today, the physiological stress responses to them are the same as our ancestors used to have. As we learned before, one of the most important problems of living in cities, is the level of stress people are exposed to. Due to this, the need for psychological and physiological restoration arises. According to Hartig (2004), restoration is "*the process of renewing, recovering, or re-establishing physical, psychological and social resources and capabilities diminished in ongoing efforts to meet adaptive demands*" (Hartig, 2004, p. 273). According to a lecture dictated by Caroline Hägerhäll (2021), a restorative environment is not just a place that allows restoration but also one that promotes restoration processes. Research on restorative effects from nature is mainly explained by two principal theories, the *Stress Recovery Theory,* SRT, (Ulrich et al., 1991; Ulrich, 1983)*,* and the *Attention Restoration Theory,* ART, (Kaplan, 1995; Kaplan & Kaplan, 1989)*.*

The Stress Recovery Theory (SRT) focuses on how natural environments can reduce levels of psychophysiological stress. Using responsive affective emotions related with the environment when it is considered demanding to the well-being. It is considered as a fast affect-driven process.

The Attention Restoration Theory (ART) describes two types of attention, the *voluntary or directed attention,* and the *involuntary or fascination.* The voluntary or directed, refers when the focus is on a demanding task, like playing in instrument for example. The *involuntary or fascination* type of attention requires no effort, and it is not demanding. It is just a reaction to something, like suddenly an animal passing by, it does not only catch the attention but also can hold the attention. The capacity for directed attention is limited while involuntary attention is limitless. This theory is a cognitive approach that focuses on restoration from directed attention fatigue by changing and directing the attention when it is experienced fascination. Both theories, SRT and ART states that people can concentrate better by spending time in nature or even looking at scenes of nature.

Considering the SRT and ART theories, it has then been developed a new theory with a more therapeutic focus, **The Supportive Environments Theory, SET** (Grahn et al., 2010). This theory presents how the person in a restoration process goes through different stages, where different qualities of places are needed depending on peoples mental and physical capacity or a *scope of meaning.*

This refers to the existence of a scope in which nature, culture and people can change meaning depending on the mental and physical effects (Grahn, 1991; Grahn et al., 2010). To be able to succeed as a supportive environment, people try to find places that feel safe and secure to be able to evolve from *directed inwards involvement* to *outgoing involvement* as is represented in *figure 4.*

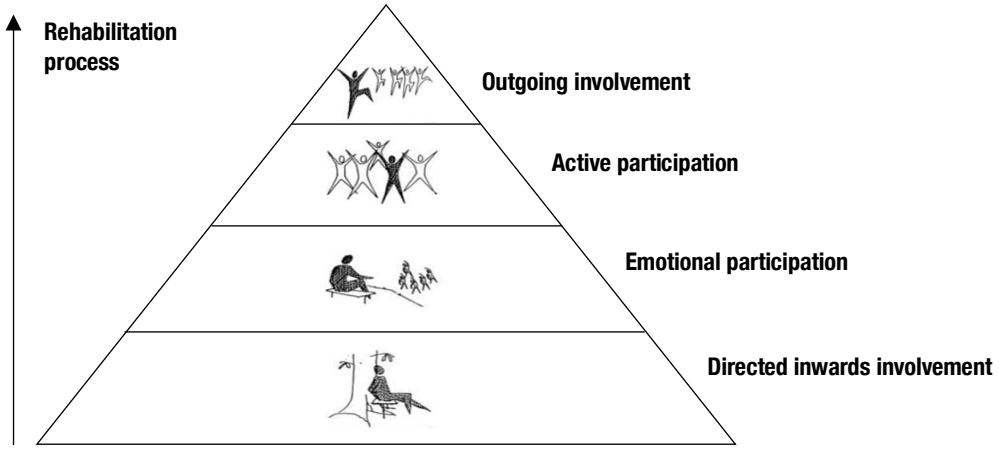


Figure 4. The Supportive Environment Theory (SET) pyramid, based on Grahn et al. (2010). The SET pyramid represents the four executive functions. From a private, inward involvements that needs a supportive environment in a higher degree. On the contrary, on top of the pyramid, when there is a social involvement, the supportive environment is less necessary (Grahn et al., 2010).

4.4. Perceived Sensory Dimensions

To be able to describe a supportive environment, there are eight qualities called the **Perceived Sensory Dimensions**, **PSD** (Grahn et al., 2005; Grahn & Stigsdotter, 2010; Stoltz & Grahn, 2021a, b). According to a lecture dictated by Patrik Grahn (2019), these qualities are mainly directed to assist in creating or building urban public spaces. For the aim of this study, it was important to have a previous understanding about the theories of landscape preferences and restorative environments before studying the PSD model.

The PSD, after a great number of studies and research for more than three decades, summarizes the most important characteristics that urban green spaces could provide. This model highlights eight qualities that supports people's needs and preferences for urban green spaces. These dimensions or key qualities, describe the most important aspects people perceive in the physical environment as preferred and necessary for their health and well-being benefits considering stress restoration.

The PSD model states eight characteristics and four axes. Each axis are opposite qualities, and there is a close association in between them (Stoltz & Grahn, 2021a). For example, Natural and Cultural are opposites qualities, it is considered that when a place is characterized as being natural or untouched by humans is the antithesis to a cultural place where is mainly offering evidence of people's experiences. Natural, Serene and Shelter relate together as it is shown in *figure 5*.

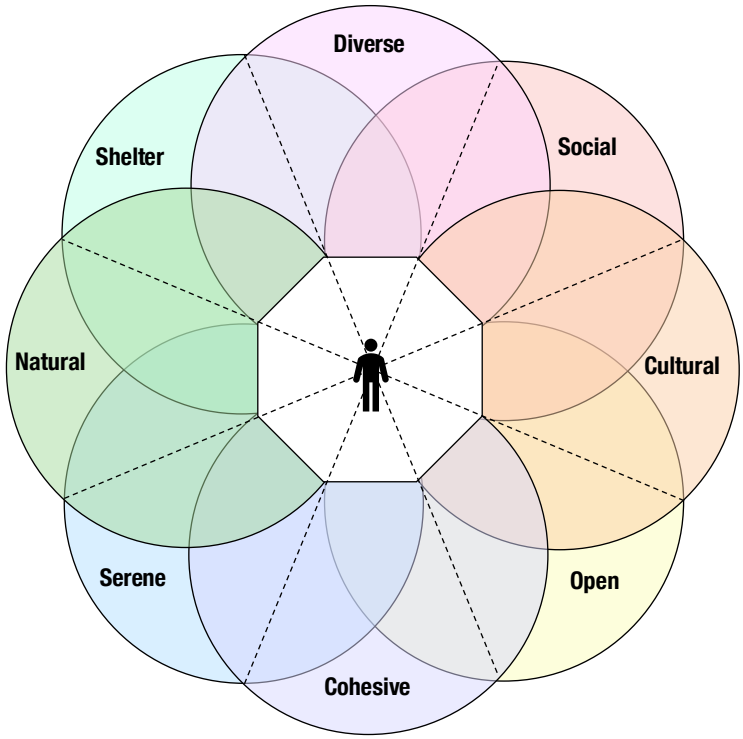


Figure 5. Eight Perceived Sensory Dimensions model based on Stoltz & Grahn (2021a). It is shown the basic relations between the PSD´s and their opposite quality in four axes, as well as their closest association in between them. For example, Natural and Cultural are opposites, but Natural and Serene and Shelter relate together.

Generally, the evidence shows, that when a place is mainly natural, it is also a place where the serene and shelter qualities are present. On the contrary, when a place is characterized for being mainly cultural, there is a relationship with the social and open qualities.

The eight perceive sensory dimensions are described in *table 1*.

Opposite Axis	PSD	Description
N-C	Natural	A place of fascination with nature. The inherent force and power of nature designed and manifested on nature's own terms. Untouched. Spontaneously. No human influence.
	Cultural	A place offering fascination through evidence of people's values, beliefs, efforts, or toils, and perhaps with the passage of time. An essence of human culture.
C-D	Cohesive	Entering another world, a sublime feeling. A coherent whole. Keeping a model of this world in one's head, without the thoughts being disturbed by, for example, a road cutting through the area. Large enough. Feeling of freedom. Not too much variation.
	Diverse	Offers a lot of variety, many kinds of aspects, manifold and varied. A diversity of animals and plants. A place rich in species. Presence of water. Preferably native plants. A feeling of exuberance and of being in a place with such greenery.
S-O	Sheltered	A sanctuary, an enclosed, safe, secret, and secluded place, where you can relax and be yourself, experiment, and play. A perfect prospect-refuge, a hideaway. Richness in trees and bushes. Possibilities to flee or dodge people. Nobody surprises you. You have full control, a safe heaven. A place for children, play equipment. A place where you can rest, with tables, benches.
	Open	Space for restful views, but also for different types of activities, not least social. A green open place allowing vistas and stays. An open character. Possibilities for activities, ball games, sun-bathing, picnic. Possibilities to view. A savannah. Well-cut grass.
S-S	Serene	A place of peace. Undisturbed. Silence, calm. Sounds of nature, of wind, water, birds, and insects. Signs of care. No rubbish, no weeds. A place to nurture and care for. A holy place. A retreat; no disturbing people, safe and secure.
	Social	A meeting place for social interaction and joy. To enjoy seeing other people. Equipped for social activities. Plenty of people and movements.

Table 1. Eight Perceived Sensory Dimensions description table based on Grahn & Stigsdotter (2010) and Stoltz & Grahn (2021a).

4.5. Pocket parks to restore the public place

We have earlier in the text talked about how important it is with close distance to green space for increasing the use and thereby the possibility of health effects. To bring green space closer to more urban dwellers and thereby increase the number of urban outdoor activities, pocket parks establishments for urban landscape development, could be one possibly effective solution. A pocket park is defined as a small park, about 10 m^2 and 2000 m^2, located in high density urban areas (Bruce, 2017). However, Peschdart (2014) describes the pocket park maximum area of 5000 m^2. Pocket parks works as a combination between an urban park and an urban square. A place that is created between buildings, on unused corners, abandoned lots, leftovers sidewalks and forgotten spaces. These parks have the ability of surprising people who walk around and from them it's possible to watch the city rush from a distance but being in the middle of the city life at the same time. It is a place that could stimulate the senses and gives the opportunity for refuge from the urban life, rest and relaxation, recreation, and social encounters. Many pocket parks are the result of community groups, organizations and foundations that claim those empty unused spaces for the benefit of the neighborhood (Blake, n.d). Such parks create accessible green small public places in between buildings all around the city that could promote health and well-being to the city dwellers. They should be located no more than 300 meters from people's residences and workplaces (Peschardt, 2014).

According to a study made by Nord et al. (2009), the possibilities of restoration it is not only dependent on size of the park (generally people prefer parks in bigger sizes) but also depends on the components used for the design. Components like grass, bushes and trees, the *natural* elements, appear to be crucial for the *likelihood restoration*. Another study, made by Peschardt et al. (2016), states that *rest and restitution* are related with enclosed spaces and *green ground covers*, on the other hand, *disturbing features* like views outside the park and playground are not good for restoration. According to Peschardt (2014), the characteristics that are related with *rest and restitution* varies from green covers, like bushes and seating in enclosed areas for privacy and security, a variety in vegetation, the possibility to sit in sun and shade, and a variety of the use of materials to be able to *simulate fascination*. Grass, flowers, plants, and water features are some of the components people prefer to be present in pocket parks. On the contrary, hard surfaces, traffic and areas *poorly shielded from the surroundings* are important to avoid, thus, it is important to design urban parks protected from the noise and disruption of the surroundings (Nordh et al., 2013). As restorative environments, pocket parks have the possibility of becoming more important in the urban setting (Nordh et al., 2009). The findings of Nordh's study confirm Kaplan's (1995) affirmation on regarding

the greener or more 'natural' the outdoor environment, the better it is likely to be for restoration (Kaplan, 1995). There are other aspects apart from restoration when it comes to pocket parks, like that they promote socializing when there are areas that invites gathering (Peschardt et al., 2016). Social activities are strongly connected with the use of pocket parks, and research tell us how important spaces for sitting and meetings could be to promote social encounters. Tables, benches, and closeness to coffee places, are some of the features that promote social encounters (Peschardt, 2014). It is also recommended to add aesthetic elements into the design of pocket parks, like different shapes, colors, artworks, patterns to make it more attractive for people and this could create a strong connection and contribute to the neighborhood identity (Bruce, 2017). For the aim of this master thesis, it was important to understand and list some of the characteristics of pocket parks that foster restoration. Based on previous scientific research made by Nordh et al. (2009, 2013), Peschardt et al. (2014, 2016) and Bruce (2017), these characteristics are presented in *table 2*.

Pocket parks general and restorative characteristics. **Based on previous scientific research.**	
	Located in high density urban areas
	Used of abandoned or underused lots in between buildings
	Small size, between 10m^2 and 2000m^2
	Located no more than 300m distance from people's home or workplace
	Accessible for everybody
	A variety of natural elements like trees, grass, bushes, flowers
	Attractive aesthetical elements. Gives character and identity
	Provide enclose spaces for rest and relaxation. Sun and shade
	The possibility to be protected by noise and not being disturbed
	Provides safe and comfortable spaces for social meetings
	Strong connection to the neighborhood

Table 2. Pocket Parks general and restorative characteristics. Based on the literature review (indicated by colors circles) of previous research made by:
Bruce (2017) *Nordh et al (2013)* *Peschardt et al (2016)*
Nordh et al (2009) *Peschardt et al (2014)*

5. Method

5.1. Research design

The methodological process used in this study it is described in *figure 5*. Effort was put onto the choice of the theoretical framework and the application of the PSD model to be able to explore the benefits Naturmolnet's has for the promotion of health and well-being. Also, the possibility to contact the project leader was particularly valuable, he gave important general information that helped to analyze Naturmolnet in a more accurate way.

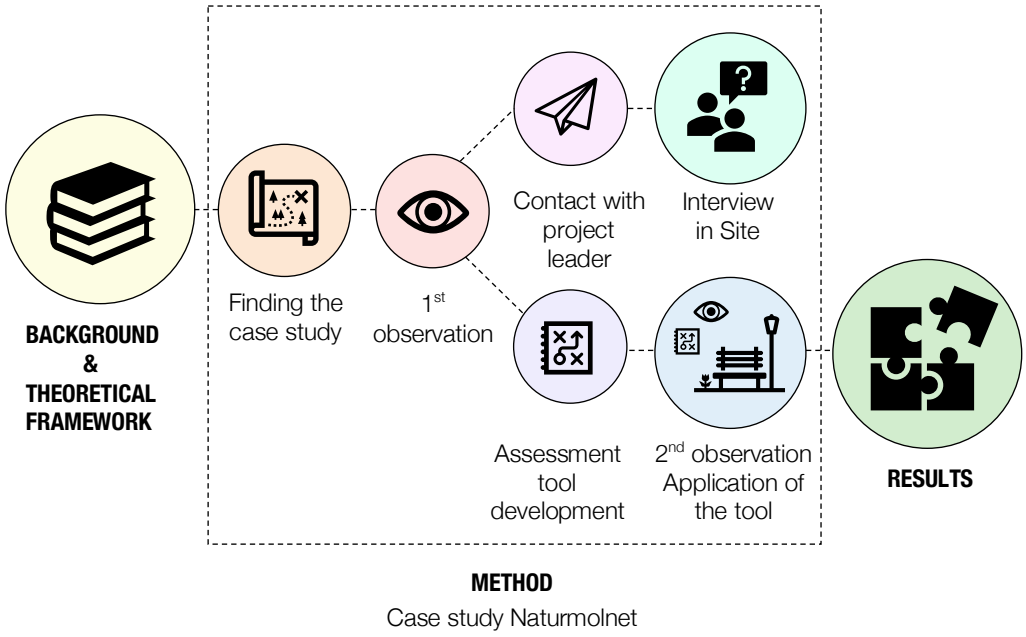


Figure 6. Graphic representation of the methodological process. Started with a theoretical base, a preliminary observation of the site followed by contact and interview with the project leader. Later, the development of the assessment tool, followed by a second observation and the application of the tool to be able to assist the analysis of Naturmolnet.

For the aim of this study, it was selected as a case study the urban public garden **Naturmolnet**. This place has a useful combination of characteristics that qualifies it as a valid case of study and an example of a pocket park. Considering aspects like the central urban location, the small size (less than 2000 m^2), the accessibility, the connection to the neighborhood, social interactions opportunities, fostering a sense of community, the natural elements, aesthetics, and the possibility of using it for relaxation and escape from the everyday life. Taking also into consideration how Naturmolnet was initiated, as a community right of giving use and purpose to a forgotten lot, gives even more meaning to do the following landscape analysis and to achieve the goal of this master thesis.

After the selection of the case study, a first expert recognition observation was made, by the author of this thesis who has a bachelor's degree in architecture. This was followed by taking contact with the project leader of the pocket park. A meeting was schedule to be done on a few days later in December 2021. The interview was made on site with the goal to learn general information on the project. The following information section on the Case Naturmolnet, is based on the answers that the project leader, **Johan Nordström** from **Växtvärket** provided.

After recognizing the potential of the place found, the method chosen was then an expert assessment landscape analysis made by the author of this thesis. The assessment tool used, was design based on the *Perceive Sensory Dimensions* or PSD´s (Grahn & Stigsdotter, 2010; Stoltz & Grahn, 2021a, b) and the pocket parks characteristics that foster restoration summarized in the previous section 4.5 (*table 2*). Considering that the PSD is an evidence-based approach to assess urban green spaces and highly tested and evaluated, due to it helps to measure the criteria like social interactions, nature, and culture, it has been chosen to be used as an assessment tool for the landscape analysis of this master thesis. The expert observation landscape analysis was made on site, supported by sketches, photographs, and maps.

5.2. Case Naturmolnet

Naturmolnet is a small community public garden located in the heart of Sofielund, in the middle of Malmö – Sweden. The garden which covers 700 m^2 approximately, is placed in the corner of *Palmgatan* and *Rolfgatan*. It was inaugurated in September 2020 with activities, games, and meetings. When Naturmolnet took over the lot, it had been laying abandoned for about 25 years due to disputes between two city gangs. The house located on the lot where the garden is, was destroyed by a fire. Since then, it was functioning as a parking place, and a place for criminal

activities and trash deposit. The last couple of years, people from the area had contacted the landlord and Malmö municipality raising the problem and asking them to do something about it. Malmö municipality then, contacted the organization/association Växtvärket to take care of the project. Växtvärket is a non-profit association that works for the creation of sustainable cities, and together with children, they create outdoor environments with, cultivation, construction, and play. Växtvärket has the *Case Sofielund 2030* in their agenda together with BID Malmö (accommodation -from the Swedish "boende"-, integration, and dialog), where the case is about the feeling of safety and green solutions for the city environment. They developed and co-designed the project Naturmolnet together with the children and adults from the community.

Naturmolnet is characterized by being a place that combines activities, social interactions, nature, and culture. Considering the needs and accessibility for the community, it is design organically, the designs are coming with the needs and the experience of using the place. The garden is frequently used by many user groups, from children to elderly people, however, appears to be particularly used more frequently by children and parents. Considering that Sofielund is a mixed and complex residential area, there are different types of people with different incomes, ethnicities, and backgrounds. Naturmolnet has a variety of different green solutions, like plants on walls and green roofs in a terrace. This initiative it is to show people that it is possible to have those green solutions in their own homes. An edible garden with fruit trees takes up part of the space. The garden has some trees that don't grow naturally in Sweden, like apricots, pomegranate, olive trees and others, however, they are growing very well. It's possible to walk around the garden. This aspect was made with the idea that kids should be able to walk around and explore. There are also some steppingstones that the children have been painting themselves and writing their names on.

The garden is well used by children from ages 3 to 12. Together with some organizations and local artists, the children have been able to learn in workshops and help to develop the area, painting murals together with the artists. Some schools from the area, with children from 5 to 10 years old, schedule with Växtvärket to go and use the park as a construction playground, where the children build themselves obstacle courses. Outside school hours, children also frequent the place. It has become a place where the children go to show their parents everything they have done. According to Johan Nordström, adolescents also use the place but not so regularly. He says, they might feel the place is not for them because a lot of small children have been working on projects. However, they visit sometimes in couples or in small groups.

Naturmolnet is also a place where many social activities occur. People from 20 years old to the elderly make parties and meetings there frequently. Activities like concerts, barbecues, workshops, and special events, like Halloween and Christmas parties, are always scheduled by Växtvärket for “Thursday nights”. All the planned events are directed to the neighborhood; however, everybody is welcome.

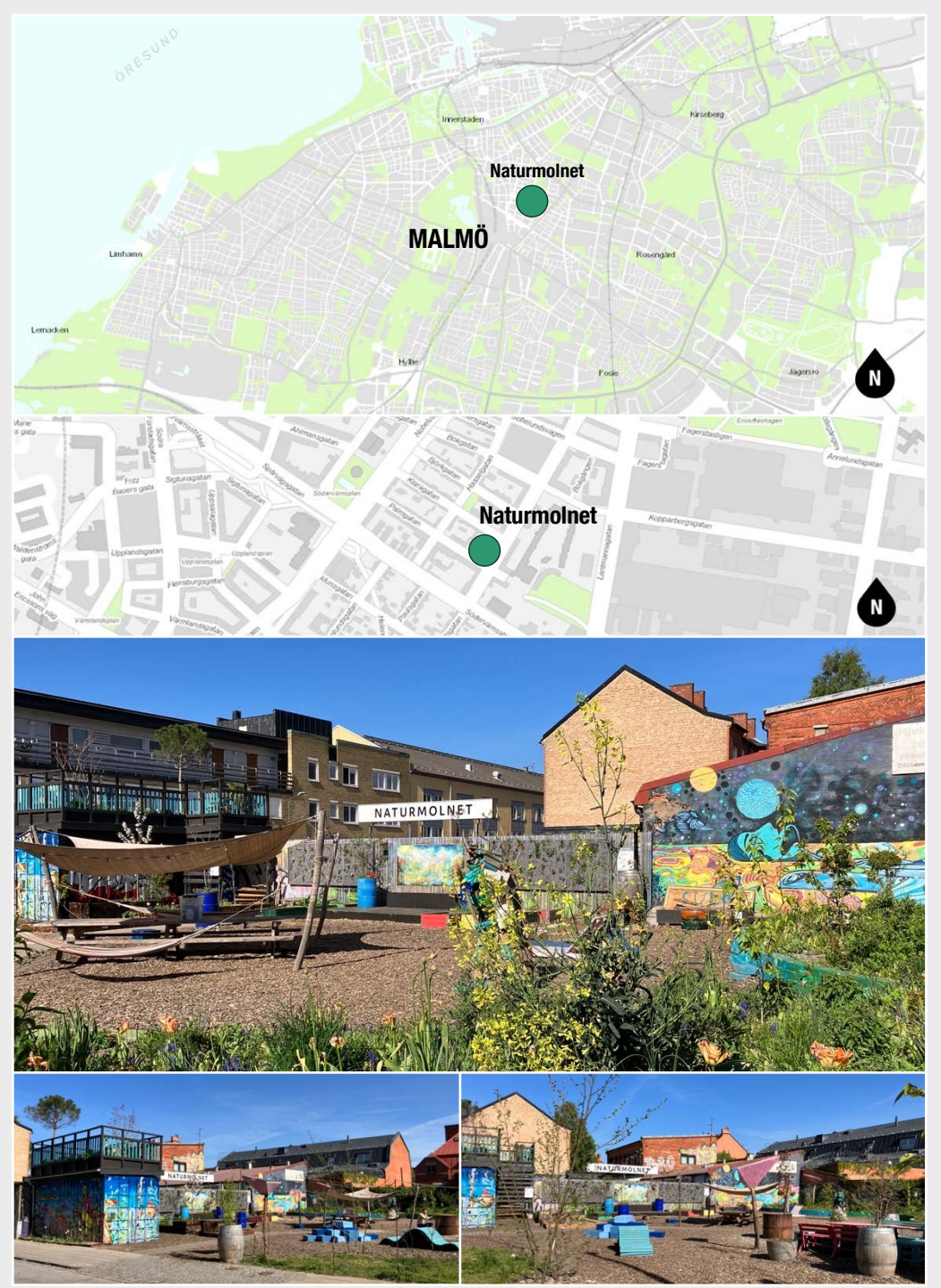


Figure 7. Naturmolnet’s location maps and general images. All the photographs are taken by the author of this thesis. The maps are from Malmö Stadatlas and are edited by the author of this thesis.

Figure 8. Naturmolnet's panoramic views from different angles and directions. All the photographs are taken by the author of this thesis.

5.3. Elements to consider for the landscape analysis

To be able to do an accurate landscape analysis, it was first important to understand the elements to consider before applying the method. According to a lecture dictated by Anna Bengtsson (2019), these elements, showed in *figure 9* are, physical environment, topic on focus for the study, and user group.

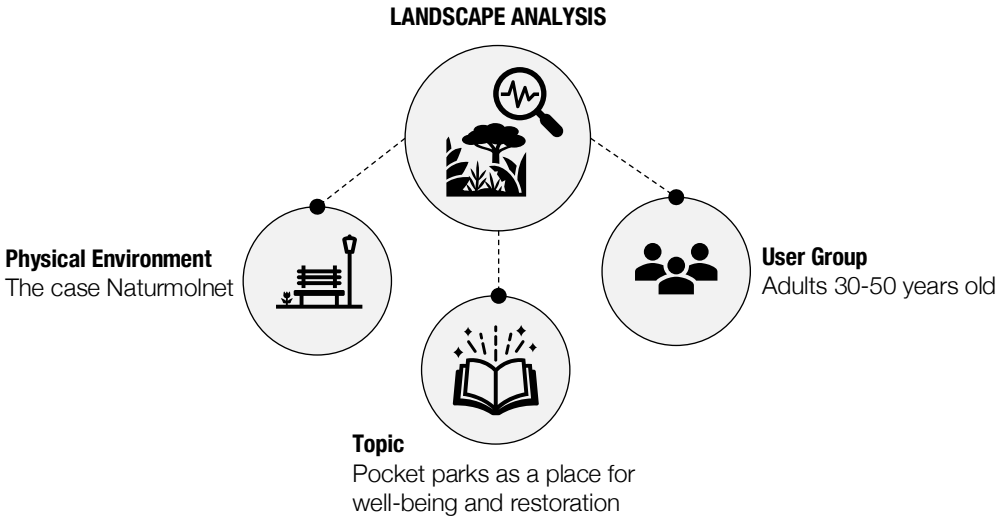


Figure 9. Graphic representation of the landscape analysis aspects to consider. Physical environment: the case Naturmolnet; topic: pocket parks as a place for well-being and restoration; user group: adults from 30 to 50 years old.

On the case of this master thesis, the physical environment to study is the area of Naturmolnet and its characteristics, in relation with the topic of pocket parks as a solution that promotes mental well-being in the urban setting. It was taken into consideration for the analysis the chosen user group of adults between 30 and 50 years old. The relationship between this group and the topic of this master thesis, pocket parks as places for mental well-being and restoration. Considering that adults in this age range might be more exposed to stress related illness while living in the urban setting, it was important for the aim of this thesis to consider this group as users while the expert observation landscape analysis took place.

5.4. Assessment tool for the landscape analysis

To be able to use the PSD model as a tool for the expert observation landscape analysis in Naturmolnet, it was important to consider a few specific aspects, conditions, and to have a protocol to follow.

To evaluate the degree of these eight qualities in a public place a Likert scale from 1 to 5 and a checklist was used, considering the relationship between the eight PSD's and the pocket park characteristics found important for restoration in the scientific literature. It was designed a field assessment protocol tool that combines the pocket parks aspects previously listed in *table 2* (section 4.5) and the PSD qualities listed in *table 1* (section 4.4). Some of the pocket parks characteristics coincide with the description of most of the PSD, and this it was used for the developing of a unique tool that combines the parameter considered for the analysis of Naturmolnet. These parameters are described in *table 3.*

Pocket Park's analysis assessment tool **Based on previous scientific research**							
Pocket park's general characteristics checklist							
Pocket Park's general characteristics		**Checklist**					
		Yes		**No**			
Located in high density urban areas							
Used of abandoned or underused lots in between buildings							
Small size, between 10m^2 and 2000m^2							
Located no more than 300m distance from home or workplace							
Accessible for everybody							
Relationship between pocket park characteristics and the PSD evaluation with a Likert Scale							
Pocket Park's characteristics that foster restoration	**PSD**	**Likert Scale**					
		1	**2**	**3**	**4**	**5**	
(No present)	Natural						
Attractive aesthetical elements. Gives character and identity	Cultural						
(No present)	Cohesive						
A variety of natural elements like trees, grass, bushes, flowers	Diverse						
Provide enclose spaces for rest and relaxation. Sun and shade	Sheltered						
(No present)	Open						
The possibility to be protected by noise and not being disturbed	Serene						
Provides safe and comfortable spaces for social meetings	Social						
Strong connection to the neighborhood							

Table 3. The field assessment protocol developed by the author. It is based on the combination between the selected items for the pocket parks general and restorative characteristics and the PSD qualities. These pocket parks items overlap with most of the description of the PSD qualities, however, in three cases (natural, cohesive, and open) this overlap is not present. For the assessment it is used a checklist and a Likert scale to evaluate the PSD.

Environmental conditions such as weather, time of the week, time of the day and duration of the observation, were also noted for better reference and understanding of the use of the place. The expert observation landscape analysis took place on a sunny Monday afternoon in February for about one and a half hour. The site was documented with photos and sketches.

5.5. Ethical considerations

When performing the landscape analysis on site, care was taken to being open while moving around the place taking photos, measurements and making sketches. Identification in clothes form (a sweater) from the university SLU (Sverige's Lantbruksuniversitet) was used. Photographs were taken in a manner that ensured that no one's identity was revealed. However, not so many people were around during the assessment. Good consideration in using just the space necessary to do the analysis and give the possibility to the users to use the place as normal was taken. That is to say, the responsible, good behavior and transparency while being in the public place was considered (Pimple, 2002). The project leader of Naturmolnet was contacted by e-mail, describing the aim and purpose of the master thesis with full disclosure. He then, gladly accepted to participate. He was also informed that his participation was voluntary and confidential. However, as the material provided by him was general information about the case study, he is considered as a source and not as a subject of study. For this reason, he agreed to use his full name to being published as a source for this master thesis.

5.6. Method limitations

In the literature on the PSD model there are not so many direct suggestions of how to use then in different cases and what assessment protocols to use. Hence also in this study it was necessary to first decide on an assessment method. Contact was made with one of the PSD model researchers for feedback, and we agreed that a 5-point Likert scale would be an appropriate method to use for someone with my architectural background. When combining the PSD and the pocket parks characteristics summary list it became much clearer how to apply the method, it helped me to evaluate much better the dimensions present in Naturmolnet. When performing the analysis, I did not perceive any difficulties in doing the scoring in this way. Considering the qualities of the photographs taken during the evaluation in February I decided to go back the 8th of May and take new ones. This because, to use in the thesis for presentation purposes. I believe using the images of springtime views would help the reader to better understand the meaning and value of the place. This change didn't affect the results of this study in any way. The same ethical considerations were applied like the first time. Some of the photographs taken in February can be seen in *appendix 1.*

6. Results

6.1. Naturmolnet general aspects

Looking back to the aim of this master thesis, regarding the way Naturmolnet promotes restoration, well-being, and the improvement of the urban life, the research questions in focus were the following:

- Are there any physical characteristics that foster restoration in Naturmolnet? And if there are, what are those characteristics?
- How do these physical characteristics work in promoting restoration, well-being, and the improvement of the urban life?

According to the on-site assessment, using the protocol developed by the author of this thesis, Naturmolnet possess most of the pocket park physical characteristics that foster restoration. There are presented in *table 2* (section 4.5). It meets most of the general qualities, from the small size, the location, accessibility, different natural and aesthetics elements, different furniture and equipment for social activities and possibility of relaxation as well as it is having a strong connection with the neighborhood and the community around. However, Naturmolnet lacks the important qualities of being protected from noise and disturbance. Considering it is located by streets where cars pass by frequently and the park itself it is not surrounded by a protective wall which could be done with high bushes. Nonetheless, to foster restoration and well-being, Naturmolnet is then a favorable pocket park example located in Sofielund, Malmö which is open and accessible to the public. To be able to answer how Naturmolnet promotes well-being to the users, a Likert scale for measurement of the Perceived Sensory Dimensions was used. Considering the observation made on site, the relevant and highly present PSD qualities in Naturmolnet were *cultural*, *diverse,* and *social*. On the contrary, the qualities in their opposite axis *natural, cohesive,* and *serene* were assessed to be present to a lower degree. There is an interesting balance between the qualities *sheltered* and *open* that are also present but both in a medium degree.

The Likert scale (from 1 to 5, being 1 less present and 5 highest presence) and checklist ("yes" and "no" answers about presence) results indicating the degree of qualities are showed in *table 4* and *figure 10.*

Pocket Park's analysis assessment tool **Based on previous scientific research**						
Pocket park's general characteristics checklist						
Pocket Park's general characteristics		**Checklist**				
		Yes		**No**		
Located in high density urban areas		x				
Used of abandoned or underused lots in between buildings		x				
Small size, between $10m^2$ and $2000m^2$		x				
Located no more than 300m distance from home or workplace		x				
Accessible for everybody		x				
Relationship between pocket park characteristics and the PSD evaluation with a Likert Scale						
Pocket Park's characteristics that foster restoration	**PSD**	**Likert Scale**				
		1	**2**	**3**	**4**	**5**
(No present)	Natural	x				
Attractive aesthetical elements. Gives character and identity	Cultural					x
(No present)	Cohesive	x				
A variety of natural elements like trees, grass, bushes, flowers	Diverse					x
Provide enclose spaces for rest and relaxation. Sun and shade	Sheltered			x		
(No present)	Open			x		
The possibility to be protected by noise and not being disturbed	Serene	x				
Provides safe and comfortable spaces for social meetings	Social					x
Strong connection to the neighborhood						

Table 4. Results of Naturmolnet landscape analysis. Pocket parks characteristics that foster restoration, being" yes" the result for all the items on the checklist. The Perceived Sensory Dimensions qualities that describe the place using a Likert scale from 1 to 5, where 1 defines a low presence and 5 a high presence of the quality.

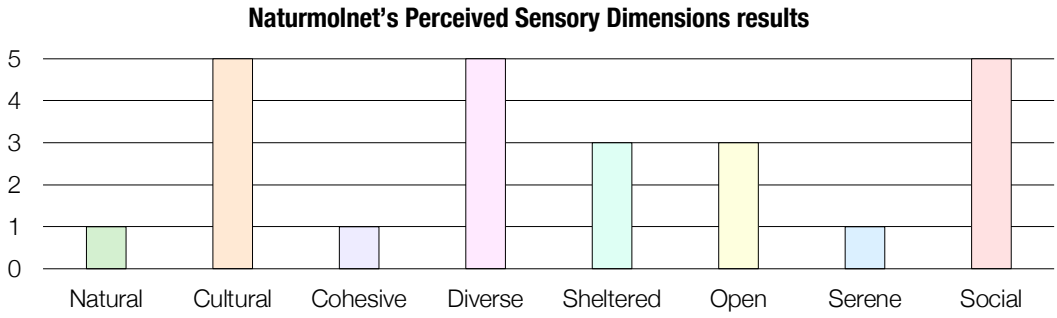


Figure 10. Bar chart showing the assessment scores for the eight perceived sensory dimensions, evaluated on site at Naturmolnet. On the x-axis are listed the eight qualities from natural to social. The y-axis represents the Likert scale points from 1 to 5. Were 1 is the lowest and 5 the highest value. Cultural, diverse, and social are the highest with 5 points. However, their contrary axes, natural, cohesive, and serene are the lowest. There is a balanced result between sheltered and open being in a medium degree.

6.2. Naturmolnet's PSD qualities dynamic

According to the perceived sensory dimensions model, the results indicate that Naturmolnet is characterized by being a *social, cultural* and a *diverse* place, while at the same time having some elements of being *sheltered* and *open.* These results are illustrated in *figure 11* and explained in the following subsections.

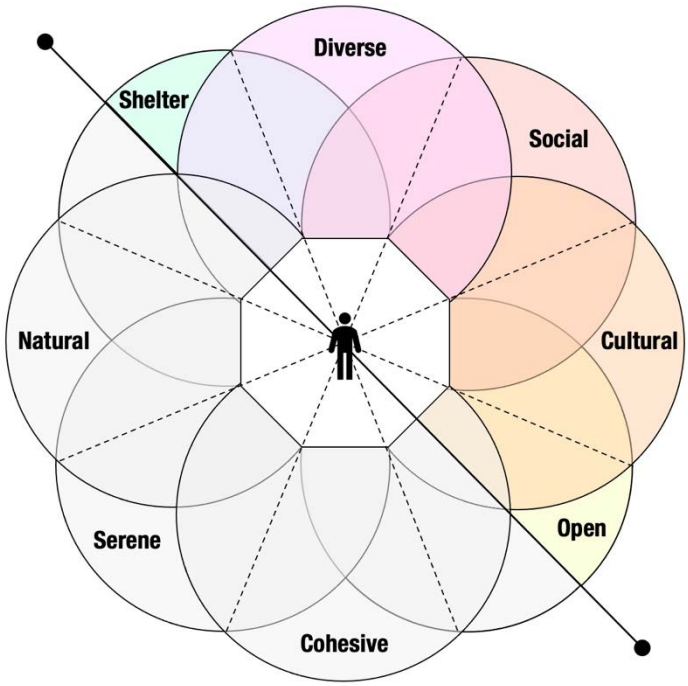


Figure 11. Graphic representation of the principal PSD qualities present at Naturmolnet, in color. Based in the PSD model previously showed (figure 5).

6.2.1. Natural and cultural

The *natural* quality has a low presence at Naturmolnet, considering this PSD represents a place *untouched by humans, a place for fascination with nature*. Even though there is a great amount of greenery and natural elements, there are all there by human work and effort. Furthermore, the *cultural* quality has a high presence, where the fascination that it offers is through *people's values, beliefs, and efforts*. There is a *cultural* value seen with the greenery installations and plantations, like the green walls, the terrace, the edible garden, and aesthetical attractive elements that give character and identity like the murals, the wooden sculpture, the sculptural play elements, the painted stones on the ground and the stage where concerts are performed. The results shows then that Naturmolnet is more *cultural* that *natural.*

6.2.2. Cohesive and diverse

The second quality that has a low presence is *cohesive*, as it is a park located in the middle of a neighborhood surrounded by buildings, the feeling of freedom in a large area does not apply in this case, however, *entering in another world* might have an effect considering the uniqueness of Naturmolnet in its characteristics. *Diverse* is then a quality present in a high degree in this park. The amount of variation in greenery it is considerably large. From different types of trees, flowers, edibles. Water is another natural feature present. The results shows then that Naturmolnet is more *diverse* than *cohesive.*

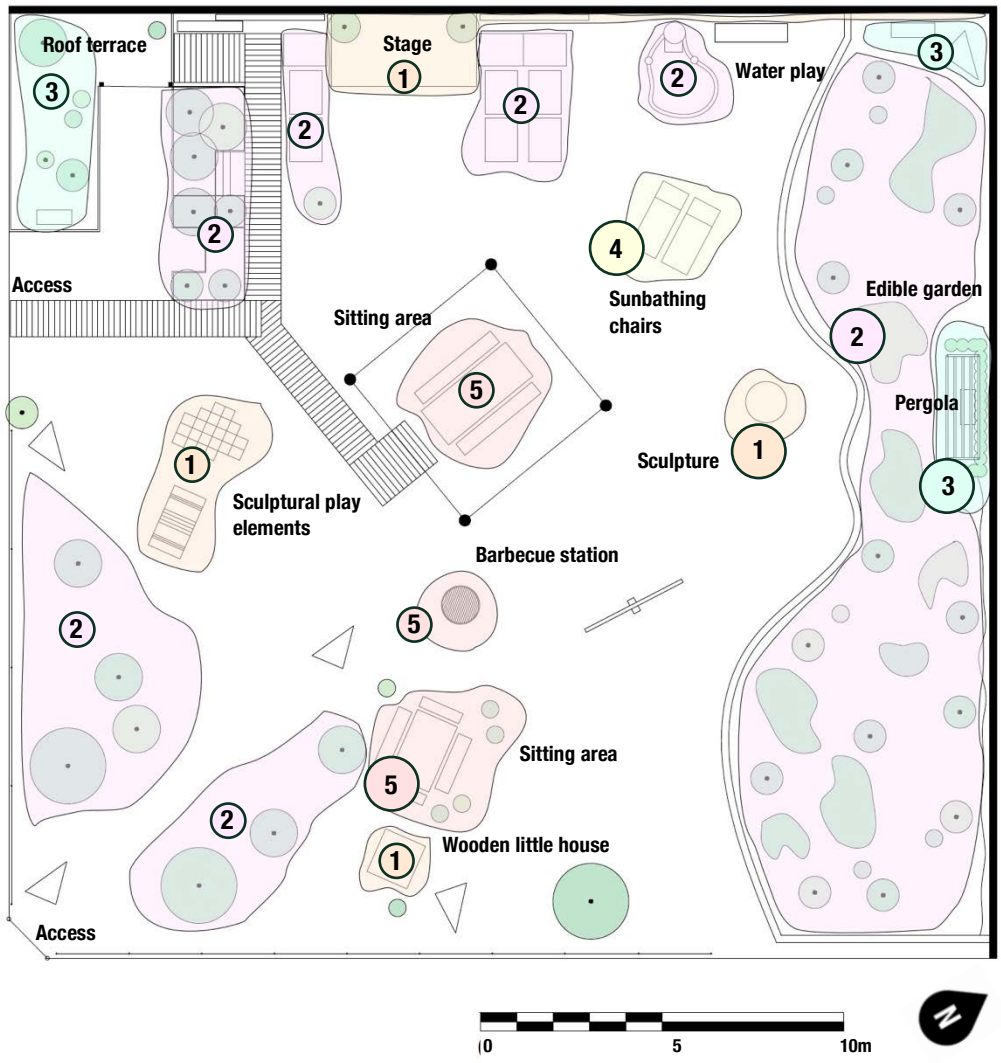
6.2.3. Sheltered and open

These qualities are the only ones in the PSD assessment of Naturmolnet where the results between them are balanced. It is considered equally *sheltered* and *open* with a medium degree, thus there is not enough elements to represent a complete sheltered or open space. As a *sheltered* space, the place offers a secluded corner, as well as places for relaxation, however, it is not considered a "secret sanctuary". At the same time, it is an *open* space, open in views but not in great space. Here it is possible to do some activities, like picnics and sunbathing. Some sheltered spaces at Naturmolnet are the roof terrace and the pergola.

6.2.4. Serene and social

The third PSD quality that is low in presence at Naturmolnet is *serene*. Although the place has *signs of care, no rubbish, no weed,* there is no sounds of nature, no silence, and no calmness around. Furthermore, Naturmolnet represents a highly *social* place. A meeting place with the opportunity of social encounters and activities. The use of benches, tables, and the way they are located around the pocket park, invites people to sit and enjoy the place. As well as the existence of a barbecue station, this invites for social gathering. The results shows then that Naturmolnet is more *social* than *serene.*

To be able to understand better the value of these characteristics present at Naturmolnet from an architectural point of view, the results with the five PSD qualities, *cultural, diverse, sheltered, open* and *social*, are displayed and illustrated in the following figures. The fist representation (*figure 12*) illustrates an informal architectural blueprint from Naturmolnet (made just for this purpose) indicating the spatial distribution of the PSDs qualities identified around the pocket park. Using the same color code from the PSD model (*figure 11*) to differentiate between them.



1 **Cultural –** Wooden sculpture. Murals, playful elements, little wooden house, the stage.

2 **Diverse –** Edible Garden. A variety of plants around, as well as the water play element.

3 **Sheltered –** The pergola. Also secluded corner with a bench and the roof terrace.

4 **Open –** The sunbathing chairs.

5 **Social –** The sitting areas. Tables, benches, and the barbecue station.

Figure 12. Plan of Naturmolnet's showing the spatial distribution of the PSDs resulting from the field assessment. The location on the different PSDs marked out by the respective identity colors (from the color wheel at figure 11). The numbers represent the location of the spots showed in figure 13. The drawing was made by the author of this thesis.

The next illustration (*figure 13*) displays the five PSD's present at Naturmolnet with a photograph example of each one. A sculpture, mural, pergola, variety of vegetation, benches, tables, and a barbecue station are some of the physical elements that describes this pocket park.

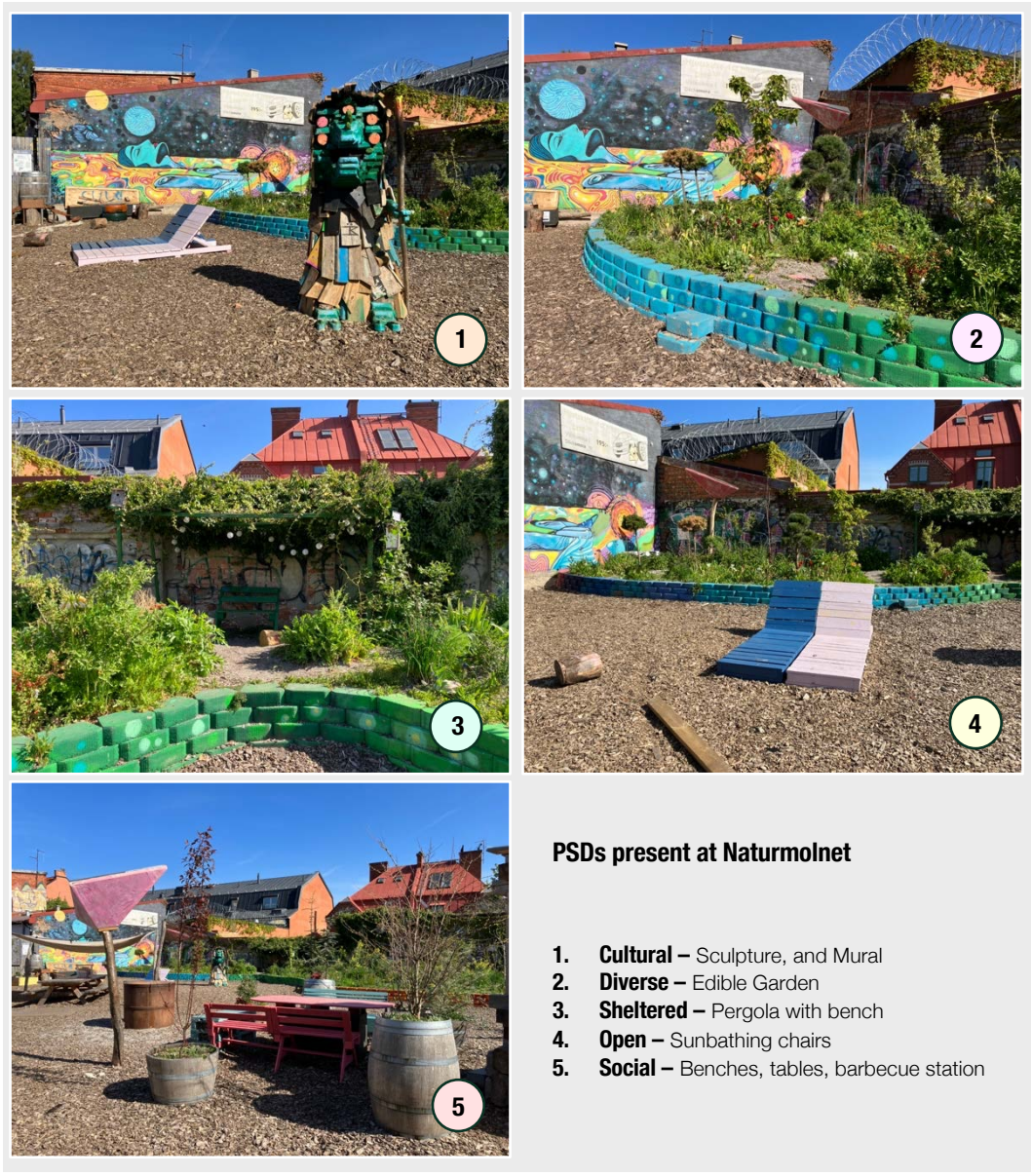


Figure 13. Images of the PSDs present at Naturmolnet. (1) Cultural: view of a mural and a wooden sculpture. (2) Diverse: view of edible garden with different types of plants and trees. (3) Sheltered: view of a bench under a pergola surrounded by vegetation. (4) Open: view of a couple of reclined wooden chairs for sunbathing. (5) Social: view of tables, benches, and a barbecue station. All the photographs are taken by the author of this thesis.

7. Discussion

7.1. Naturmolnet, a restorative pocket park

A pocket park is a small public place located in the urban setting that provides free and functional space to the users in the public realm. The general characteristics of a pocket park define it as an accessible place with different equipment for sitting and natural elements of greenery (e.g., trees, bushes, plants) where people have the possibility to rest and recover from the rush of a demanding everyday city life. However, unlike urban green spaces, -where sitting equipment and elements of greenery might be present-, aesthetical elements, cultural values, and a strong connection to the neighborhood are important aspects that define a pocket park. These cultural aspects in relation to the neighborhood help to define the form, design, and meaning of a pocket park. Every pocket park might be different, they adapt to the space, location, use, and necessities of their surroundings.

The result of this study suggests that Naturmolnet is a pocket park that beyond the general characteristics present, includes social activities, defining it as a dynamic environment, where there is a balance between natural elements of greenery, cultural and social aspects. According to the assessment based on the *Perceived Sensory Dimensions* and considering Naturmolnet as a pocket park located in the urban setting, Naturmolnet is characterized by being mainly *diverse, social,* and *cultural.* It is a place with *diverse* natural elements of greenery, like different cultivated types of plants, trees, flowers, and herbs. It is a place that provides the accommodation for *social* encounters with a variety of sitting and play opportunities; and it is surrounded by color, art through murals, sculptures, and other elements that give evidence of people's values, beliefs, and *culture*.

The opposite PSD qualities *cohesive, serene,* and *natural,* were expected to be the lowest characteristics present in Naturmolnet's physical environment. As this pocket park is completely man-made in an empty, abandoned lot in a public place, the possibilities for it to be *natural*, *serene,* and *cohesive* are low. Although

Naturmolnet has a variety of natural elements (planted by people) it is not recognized as a *natural* environment, considering that *natural* from the PSD perspective, refers to an untouched place where nature has been manifested on its own terms. Naturmolnet is not then *natural* but a green place instead. There is a similar result between *diverse* and *cohesive*, Naturmolnet offers a variety of elements, meaning it is not so much cohesive or coherent. An interesting result, regarding the eight qualities that help to describe a supportive environment, is the balance between *sheltered* and *open*. Naturmolnet is a relatively *open* place with the possibility of sunbathing and some activities, however, not enough open space to provide restful views, like in a *savannah*-like environment. At the same time, because of the variation of green elements and sitting areas, Naturmolnet offers a relatively *sheltered* environment. In Naturmolnet there is the possibility to find some private and relaxing secluded corners. However, because of the closeness to driving lanes, there is noise, air pollution, and great disturbance of the visual aesthetics.

Naturmolnet however, possesses specific restorative characteristics from a natural to a social perspective. According to empirical studies (Stigsdotter et al., 2017; Pálsdóttir et al., 2018), the qualities of *shelter, natural, serene,* and *cohesive* are considered important for restoration, while their contraries *open, cultural, social,* and *diverse* are perceived as stimulating but less restorative. Considering these empirical studies, I just mentioned, Naturmolnet then wouldn't be considered as a place that fosters restoration. However, I would disagree in this case. Although the *social* quality is usually considered less important for the improvement of well-being by people with high-stress levels and the *serene* quality surface is the most restorative (Stigsdotter et al., 2017; Pálsdóttir et al., 2018), I would argue that there are other aspects to acknowledge regarding social values and well-being.

A restorative environment must provide space for relaxation, as a peaceful, silent, calm, and safe place. However, as the *Supportive Environments Theory* (SET) explains, restoration is a process with different stages, and it depends on the mental state of everyone to move up the stages of the pyramid (previously shown in *figure 4*). Going from a necessary *directed inwards involvement, where* people need to be private and by themselves on their terms, passing by an *emotional* followed by an *active* step, to an o*utgoing involvement* where social encounters apply. Humans are social creatures, it is in our nature, that we need to cooperate to be able to survive and develop. Referring specifically to the intention of this master thesis, being part of a community, to being able to create a strong connection with our neighborhood, are important social factors that help us develop a bond, an attachment to a place, and thus the feeling of identity and belonging. Those factors are connected to an individual's well-being. When we feel we belong, we develop place attachment, and this gives meaning and value to a place.

The *natural, social,* and *cultural* aspects of Naturmolnet are connected, they rely on each other. For example, different artistic expressions are made not just by one artist but by a group of people from the community. Also, the work of cultivating the garden has been a communal activity. Together, people created that place, this action enhances the value of the place for the people from the community and fosters well-being. The pocket park Naturmolnet provides the opportunity to the users for a complete restoration process explained by the SET, i.e., from being private to being socially active with the community. Naturmolnet functions then, as a restorative place, that promotes well-being by being a dynamic environment balanced between natural, cultural, and social elements and opportunities.

7.2. Pocket parks, an alternative for better cities

The architect and urban designer Jan Gehl has for many decades been studying and working for the improvement of the quality of urban life, by giving importance to the pedestrian needs and rights to the city. In his book *Life Between Buildings* (2011), as we refer to it previously in the background section of this master thesis, we learned that to be able to fulfill basic humans needs, besides the everyday routines like going to work *(necessary activities),* we require the contact with people, a sense of community *(social activities)* and the opportunity of using the free time by looking for relaxation and enjoyment of life by going for a walk in a park for example *(optional activities).* Gehl explains that the relationship between these activities and their connection with the quality of the physical environment are important for people's improvement of quality of life. The result of this study suggests that Naturmolnet works as an example of a public place where *social* and *optional* activities can be improved. The good planning, design, and qualities of the public place like Naturmolnet are crucial to promoting the use of outdoor environments and thus for people to benefit from it. Urban dwellers have a right to the public place and to the benefits that being outside provided.

The actual problem of densification and industrialization that the cities of the world are facing as well as climate change consequences with the high temperatures for example are important issues to fight for a better life. Considering these issues as well as the health benefits the connection with nature provides urban green public spaces have a great potential for mitigating the negative effects on our society. According to the results of this master thesis, a well-designed pocket park-like Naturmolnet could function as a restorative place that promotes well-being and could be valuable as a solution for a better urban life.

The Global Goals for Sustainable Development is a plan agreed to by all world leaders to build a *greener, fairer, better* world by 2030 (United Nations, 2015). Acknowledging the results of this study, I consider that the implementation of pocket parks around empty and forgotten spaces in between buildings, could be an example of how to promote and achieve at least three of the Global Goals and three Targets (see *figure 14*).

Figure 14. The 17 Global Goals and the applicable Global Goals and targets in Naturmolnet. Global Goal number 3 Good Health and Well-being and target 3-4, 11 Sustainable Cities and Communities and target 11-7, and 13 Climate Action and target 13-3. Figure made by the author of this thesis by using the free public icons and logos shared by the United Nations.

As an example of a pocket park that might advocate for some of the Global Goals, Naturmolnet is a place that promotes *good health and well-being* by reducing mental illnesses like stress, works for a *sustainable city and communities* providing access to safe and inclusive green and public spaces, and takes *climate action* by building knowledge about climate change through participatory activities with the community and the non-profit organization Växtvärket. Contrary to regular city parks, the development of pocket parks doesn't require too much space and can be placed in empty, unused, forgotten spaces in between buildings. The development of pocket parks around cities could function as an alternative solution for the regeneration of the green public place, that promotes health and well-being to the citizens and cooperates for *greener, fairer,* and *better* cities.

7.3. Method discussion and future research

The method used for this study worked interestingly. After I did the analyses in both pocket park characteristics and the Perceived Sensory Dimensions, I realized that most of the descriptive characteristics overlapped with a PSD dimension (*table 3*, section 5.4). However, it was a challenge to develop the assessment tool when some of the PSD and the pocket park aspects didn't have a direct relationship to their definition, e.g., the PSD *Natural* quality and the *natural elements of greenery,* a pocket park characteristic that foster restoration. Although they might seem similar, they are not referring to the same values, *Natural* according to the PSD refers to an untouched natural environment, while natural elements of greenery might be anything from flowers, bushes, and trees, and it relates to the *diverse* quality of the PSD. Even though the challenges presented during the development of the tool, the merge of information helped to develop a solid field assessment protocol that served the intentions of this master thesis on analyzing Naturmolnet's physical characteristics, with a combination of an architectural and environmental psychology point of view.

Considering the study was made by an expert observation, to be able to avoid any problem with subjectivity while performing the landscape analysis, the solid and detailed assessment protocol developed related to the topic, helped to evaluate Naturmolnet objectively, also considering the professional experience, capacity, and knowledge of the author of this thesis. The Perceived Sensory Dimensions model is a useful tool to use while studying the relationship between a physical environment and people. It helps to understand the importance of the qualities needed to fulfill human needs and preferences that promotes well-being and restoration. However, the PSD model might be too wide open in the description of the qualities, and to make it more useful for planners and designers in the design process.

For future research on public places expert analysis, I recommend conducting a literature review about the specific topic to study the previous implementation of the PSD model. The combination of the PSD and a checklist of the design parameters and limitations of the specific place to assess might give a better, more specific, and accurate result, like the example of my work in Naturmolnet, combining the PSD and the pocket parks characteristics for restoration found in another research.

8. Conclusion

The overall results of this thesis suggest that to be able to recover from a stressful adult city life it is important to direct the attention to natural and cultural elements that provide fascination as well as to the importance of social connections that can be found at the urban context. Accessible public places of good quality and value are important and necessary. In my opinion, it is a human right and represents freedom for both the individual and the collective. Naturmolnet is a community-driven place in Malmö, and pocket parks like this might function as an important example of the positive impact on the well-being of the city dwellers as well as a clever solution for the regeneration and reclaiming of the public place. When everyday life is too stressful and we need a place to stop and escape, Naturmolnet works as a restorative place. It has enough restorative elements needed in the urban context and gives the opportunity and freedom to choose from doing nothing to doing something. It will depend on our needs and our recovery process. I am an optimistic believer that all the learned aspects and qualities Naturmolnet provides, would function as an inspiration for the development of future pocket parks around Malmö and other cities and contribute to society's sustainable development and the improvement of a better urban life.

References

Antrop, M. (1998). *Landscape change: Plan or chaos?* Landscape and Urban Planning, 41 (3-4), 155-161

Appleton, J. (1975). *The experience of landscape.* New York: John Wiley and Sons.

Baum, A., Fleming, R., & Singer, J. E. (1985). Understanding environmental stress: strategies for conceptual and methodological integration, In Baum, A. & Singer, J. E. (Eds.) *Advances in Environmental Psychology*. Hillsdale, NJ: Lawrence Erlbaum Associates, Vol. 5, Methods, and Environmental Psychology, 185-205.

Bell, S. (1999). *Landscape: Pattern, perception, and process*. London: E & FN Spon.

Blake, A. (n.d.). *Pocket Parks. The* University of Washington. Recovered from: https://depts.washington.edu/open2100/Resources/2_OpenSpaceTypes/Open_Space_Types/pocket_parks.pdf. (2022-05-04)

Bruce, A. (2017). *Pocket Park Design: Solutions for the Regenerations of Public Space in High-Density Cities.* Images Publishing. ISBN: 9781864706598

Carlson, A. (2009). *Nature and Landscape: An introduction to environmental aesthetics.* New York: Columbia University Press.

Carr, S., Francis, M., Rivlin, L., & Stone, A. (1992). *Public space, environment, and behavior series.* Cambridge, MA: Cambridge University Press.

Cosgrove, D.E. (1998). *Social Formation and Symbolic Landscape.* Madison: University of Wisconsin Press.

Council of Europe (2003). *Presentation of the European Landscape Convention*. Strasbourg: Council of Europe.

De Vries, S. (2010). Nearby nature and human health: looking at the mechanism and their implications. In C. Ward Thompson, P. Aspinall, & S. Bell (Eds.), *Open space: People space 2, innovative approaches to researching landscape and health* (pp. 75-94). Abingdon: Routledge.

Dilani, A. (Ed.). (2001). *Design and health. The therapeutic benefits of design.* Svensk Byggtjänst, Stockholm.

Egbert, M-L. (2000). *The English landscape garden and the romantic-era novel: Changing concepts of space.* Cardiff Corvey: Reading the Romantic Text, Issue 5, November.

Fairclough, G., Lambrick, G., & McNab, A. (Eds.). (1999). *Yesterday's world, tomorrow's landscape. The English Heritage Historic Landscape Project 1992-94*. London: English Heritage.

Francis, M. (2016). *The making of democratic streets.* Contesti: Cittá, Territori, Progetti, 1-2. 192-213. Available from https://doi.org/10.13128/contesti-20378

Gehl, J. (2011). *Life Between Buildings: Using public space.* Washington, D.C.: Island Press.

Gobster, P. H. (1999*). An ecological aesthetic for forest landscape management*. Öandscape Journal, 18(1), 54-64.

Grahn, P. (1991*). Landscape in our minds: people's choice of recreative places in towns.* Landscape Research, 16, 11-19.

Grahn, P., Stigsdotter, U. (2003). *Landscape planning and stress*. Urban Forestry & Urban Greening 2, 1-18

Grahn, P., Stigsdotter, U., Berggren-Bärring, A-M. (2005). *A planning model for designing sustainable and healthy cities. The importance of people's needs for recreational environments in an urban context*. Post-conference proceedings, NAEP, Alexandria.

Grahn, P., Stigsdotter, U. (2010). T*he relation between perceived sensory dimensions of urban green space and stress restoration*. Landscape and Urban Planning 94 (3-4), 264-275

Grahn, P., Ivarsson, C. T., Stigsdotter, U., & Bengtsson, I-L. (2010). Using affordances as a health-promoting tool in the therapeutic garden. In C. Ward Thompson, P. Aspinall, & S. Bell (Eds.), *Open space: People space 2, innovative approaches to researching landscape and health* (pp. 116-154). Abingdon: Routledge.

Hartig, T. (2004). Restorative Environments. In: Spielberger, C. (Eds.). *Encyclopedia of applied psychology*, vol 3. Academic Press, San Diego, CA, pp 273-279.

Hidalgo, M. C. & Hernández, B. (2001). *Place attachment: Conceptual and empirical questions.* Journal of Environmental Psychology, 21, 273-381.

Hollis, L. (2013). *Cities are good for you: the genius of the metropolis.* New York: Bloomsbury Press.

Kaplan, R. & Kaplan, S. (1989). *The experience of nature: A psychological perspective.* New York: Cambridge University Press.

Kaplan, S. (1995). *The restorative benefits of nature: Towards an integrative framework*. Journal of Environmental Psychology, 15, 169-182.

Kohn, M. (2004). *Brave new neighborhoods: The privatization of public space.* New York: Routledge

Küller, R., Lindsten, C. (1992). *Health and behavior of children in classrooms with and without windows*. Journal of Environmental Psychology 12:33-52

Küller, R., Wetterberg, L. (1996). *The subterranean work environment: Impact on well-being and health.* Environment International 22:33-52

Manzo, L. C. (2005). *For better or worse: Exploring multiple dimensions of place meaning.* Journal of Environmental Psychology, 25, 67-86.

Manzo, L. C. (2018). City Life and Well-Being. In: Devlin, A. S. (Eds.). Environmental Psychology and Human Well-Being. Effects of Built and Natural Settings. Academic Press: Elsevier, pp. 107-133.

Martinez-Gonzalez, M-A., Varo, JJ., Santos, JL, De Irala, J., Gibney, Kearney, J., et al. (2001). *Prevalence of physical activity during leisure time in the European Union.* Med Sci Sports Exerc; 33(7):1142-6.

Mitchell, D. (2003). *The right to the city: Social justice and the fight for public space.* New York, NY: Guilford Press.

Nassauer, J. I. (1992). *The appearance of ecological systems as a matter of policy*. Landscape Ecology, 6(4), 239-250.

Nassauer, J. I. (1995). *Messy ecosystems, orderly frames*. Landscape Journal, 14, 161-170.

Nassauer, J. I. (1997). Cultural sustainability: aligning aesthetics and ecology. In: Nassauer, J.I. (Ed.), *Placing Nature: Culture and landscape ecology* (pp. 67-83). Washington, DC: Island Press.

Norberg-Schulz, C. (1980). *Genius loci: Toward a phenomenology of architecture*. New York: Rizzoli.

Nord, H., Hartig, T., Hägerhäll, C.M., Fry, G. (2009). *Components of small urban parks predict the possibility for restoration*. Urban Forestry & Urban Greening, 8, 225-235.

Nord, H. & Østby, K. (2013). *Pocket Parks for people – A study of park design and use.* Urban Forestry & Urban Greening, 12, 12-17.

Nygren, Å., Åsberg, M., Jensen, I., Vingård, E., Nathell, L., Lisspers, J., Eriksson, S., & Magnusson, S. (2002). *Vetenskaplig utvärdering av prevention och rehabilitering vid långvarig ohälsa* (Scientific evaluation of prevention and rehabilitation concerning long term ill-health) [In Swedish]. Attachment 2:8, Handlingsplan för ökad hälsa i arbetslivet, SOU 2002:5, Stockholm

Orians, G. H. (1980). Habitat selection: General theory and applications to human behavior. In J. S. Lockard (Ed.), *The evolution of human social behavior*. Chicago: Elsevier.

Pálsdóttir, A. M., Stigsdotter, U. K., Perqsson, D., Thorpert, P., Grahn, P. (2018). *The qualities of natural environments that support the rehabilitation process of individuals with a stress-related mental disorder in nature-based rehabilitation.* Urban Forestry & Urban Greening, Vol 29, pp 312-321.

Peschdart, K. K. (2014). *Health Promoting Pocket Parks in a Landscape Architectural Perspective.* IGN Ph.D. Thesis May 2014. Department of Geosciences and Natural resources Management, University of Copenhagen, Frederiksberg. 172 pp.

Peschdart, K., Stigsdotter, U., Schipperrijn, J. (2016). *Identifying features of pocket parks that may be related to health-promoting use.* Landscape Research Group, 41 (1), 79-94.

Pimple, K. D. (2002). *Six domains of research ethics. A heuristic framework for the responsible conduct of research*. Science and Engineering Ethics, 8, 191-205.

Rapp, B. (1999). *Kultur i vården visavi som kultur* (Culture in health care vis-á-vis health care as culture) [In Swedish]. Stockholms Läns Museum, Stockholm.

Riger, S., & Lavrakas, P. J. (1981). *Community ties: patterns of attachment and social interaction in urban neighborhoods*. American Journal of Community Psychology, 9, 55–66.

Scannell, L. & Gifford, R. (2010). *Defining place attachment. A tripartite organizing framework.* Journal of Environmental Psychology, 30(1), 1-10.

Shiffman, R. Bell, R., Brown, L. J., & Elizabeth, L. (Eds.). (2012). *Beyond Zuccotti Park: Freedom of assembly and the occupation of public space*. Oakland, CA: New Village Press.

Statistikmyndigheten SCB (2021). Kommuner i siffror: Malmö. Recovered from: https://kommunsiffror.scb.se/?id1=1280&id2=null (2022-05-04)

Stigsdotter, U. K., Corazon, S. S., Sidenius, U., Refshauge, A. D., Grahn, P. (2017). *Forest design for mental health and promotion – using perceived sensory dimensions to elicit restorative responses*. Landscape and Urban Planning, 160, 1-15.

Stoltz, J., & Grahn, P. (2021a). *Perceived sensory dimensions: An evidence-based approach to greenspace aesthetics.* Urban Forestry & Urban Greening, 59, 1-9.

Stoltz, J., & Grahn, P. (2021b). *Perceived sensory dimensions: Key aesthetic qualities for health-promoting urban green spaces*. Journal of Biomed Research 2(1): 22-29.

Tuan, Y. (1974). *Topophilia*. Englewood Cliffs, NJ: Prentice-Hall.

Tveit, M. S., Sang, Å. O., Hägerhäll, C. M. (2013). Scenic beauty: Visual landscape assessment and human landscape perception. In: Steg, L., Van Den Berg, A. E., De Groot, J.I.M. (Eds.). *Environmental Psychology. An Introduction*. The British Psychological Society and John Miley & Sons, pp. 37-46.

Ulrich, R. S. (1983). Aesthetic and affective response to natural environment. In I. Altman & J. F. Wohlwill (Eds.), *Human behavior and environment: Advances in theory and research* (Vol. 6, pp- 85-125. New York: Plenum Press.

Ulrich, R. S., Simmons, R. F., Losito, B. D., Fiorito, E., Miles, M.A., & Zelson, M. (1991). *Stress recovery during exposure to natural and urban environments.* Journal of Environmental Psychology, 11(3), 201-230

United Nations, General Assembly (2015). *Transforming our world: the 2030 Agenda for Sustainable Development.* The resolution was adopted by the General Assembly on 25 September 2015. A/RES/70/1. New York: United Nations.

United Nations, Department of Economic and Social Affairs, Population Division (2019). *World Urbanization Prospects: The 2018 Revision.* ST/ESA/SER.A/420. New York: United Nations.

Wilson, E. O. (1984). *Biophilia.* Cambridge, MA: Harvard University Press.

Appendix 1

Some of Naturmolnet's photographs were taken by the author of this thesis during the assessment in February.

Pocket Parks for a better urban life

Exploring **Naturmolnet's** contribution to people's well-being

BACKGROUND

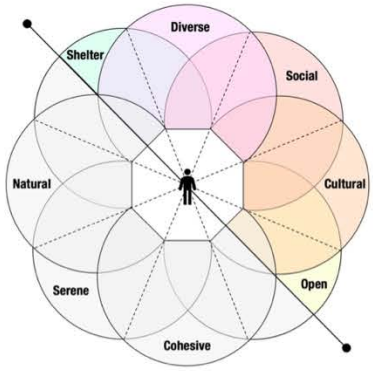
Green public places are in constant threat due to city growth and densification. For the benefit of the urban dwellers and the environment, it is important to the development, accessibility, and quality design of public places. **Pocket parks** are an urban phenomenon, a type of small public place that can be located in between buildings and represents a restorative escape from the roughness of everyday city life.

AIM & RESEARCH QUESTIONS

Explore the way **Naturmolnet** (pocket park in Malmö) works as a solution that promotes well-being in the public place. What are its physical features that promotes well-being? And how do they work?

METHOD

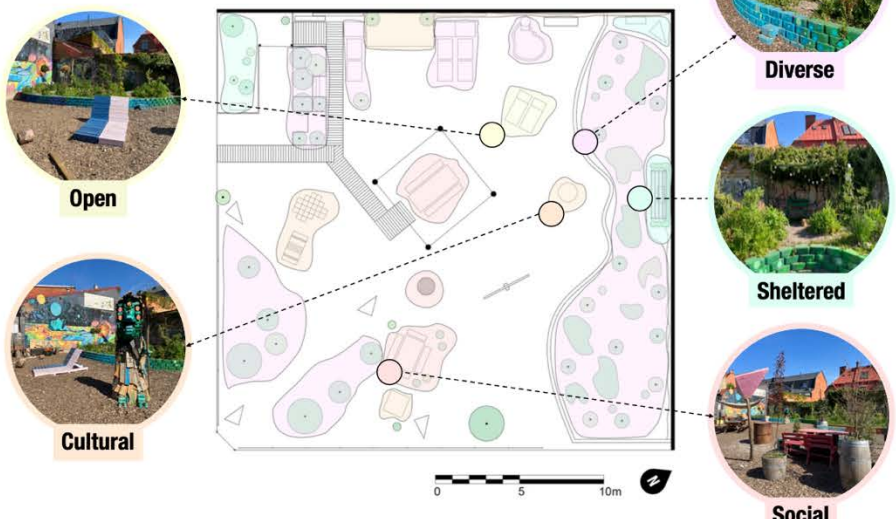
A landscape analysis assisted by a protocol tool developed from an initial review of the scientific literature on both pocket parks and the Perceived Sensory Dimensions (PSD).*



Representation of the PSD qualities present at Naturmolnet, in color. Based in the Perceived Sensory Dimensions model (Grahn et al., 2005; Grahn & Stigsdotter, 2010; Stoltz & Grahn, 2021a,b)*

RESULTS

Naturmolnet, a dynamic environment with qualities that foster restoration.



Qualities like small size, accessibility, location, natural and aesthetical elements, furniture and equipment for social activities, possibility of relaxation, and strong connection with the neighborhood. A restorative environment principally **social, cultural** and **diverse**, with some **sheltered** and **open** elements.

CONCLUSION

Cultural and social aspects are important as nature for a restorative environment. Naturmolnet is a community-driven place that promotes well-being and functions as an inspiration for the development of future pocket parks. This would function as an alternative solution for the regeneration of the green public place, that might promote health and well-being to the citizens and cooperates for greener and fairer cities and a better urban life.

Pocket parks as a contribution to society's sustainable development

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SCIENCE AND EDUCATION FOR SUSTAINABLE LIFE