

Connection in Disconnection

**Restructuring Mental Healthcare Institutions as Integrated
Healing Environments**



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Abstract

Historically, mental healthcare institutions in the Netherlands have been developed as isolated and monofunctional environments, often located on large estates far away from cities. Although the contemporary mental healthcare increasingly focuses on recovery, autonomy, and social inclusion, still many care sites reflect spatial structures of separation and institutionalisation. This creates a tension between the ambition to support recovery and reintegration, and the physical environments in which this care takes place.

This graduation project explores how mental healthcare sites can function as integrated healing environments for care residents, visitors and neighbourhood users, while maintaining the safety, autonomy and comfort for care residents. The focus in this project is on bipolar disorder as a specific viewpoint, because of the interesting aspect of fluctuating needs in relation to stimulation and social interaction that individuals with this disorder often experience. At the same time, within this project this perspective gets broadened towards overall mental wellbeing, arguing that environments designed for vulnerable users can also support the mental wellbeing of a wider group of users.

This research combines the methods literature review, personal observations, research through design, and feedback from experts through brainstorming sessions. The insights from these methods are translated into a pattern language that identifies spatial principles for healing environments. These patterns are organised into the three categories of Spatial Structure, Social Interaction, and Sensory Comfort. Together, they address themes such as walking, safety, orientation, seating, nature, social gradients, sensory regulation, and public-private transitions.

Keywords

Mental healthcare institutions, Healing environment, Bipolar disorder, Recovery and Mental wellbeing, Spatial structure, Social interaction, Sensory comfort.

Eventually, patterns from the pattern language are applied to create a vision for the case study location Park Bloemendaal in The Hague. Through this design process, the concept of the Always Home Route emerges as a main spatial strategy. This is a continuous and legible walking route that creates a connection across the site between care functions, green spaces, amenities, and a new neighbourhood. While this route enhances the autonomy, predictability, and flexibility for care residents, it allows them to move independently and always return to a familiar point.

The project concludes that mental healthcare sites can become integrated healing environments when openness and inclusion are carefully balanced with spatial, social and sensory conditions. In this way, urban design can contribute to the recovery of care residents and a broader mental wellbeing.

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Part 1

Introduction

1.1 Introduction

Mental health is a fundamental component of human wellbeing, shaping emotional, social, and psychological functioning. It influences how people feel, think, act, relate to others, and participate in everyday life. When the mental health of a person severely deteriorates, due to a mental health disorder such as a mood disorder, psychotic disorder, personality disorder, anxiety disorder, or complex trauma, professional mental healthcare may be required (World Health Organization, 2022). Usually the treatment begins within the community, through general practitioners, or ambulant care teams. However, when symptoms escalate to the point where a person can no longer function independently or safely, admission to a mental healthcare institution becomes necessary. These mental healthcare institutions provide treatment, stability, protection, and structure.

In the nineteenth and twentieth centuries in the Netherlands, these mental healthcare institutions were deliberately located on large, peripheral estates, far away from urban and social life (Boschma, 2003; Oosterhuis, 2004). This can be understood as a form of spatial and social segregation, in which people with a mental disorder are separated from the wider population. These institutions were often used to isolate people with a mental disorder, because they were perceived as abnormal, dangerous, or unable to fit within dominant social norms. Therefore, segregation served here both a physical and symbolic function, separating care residents from society while reinforcing stigma, fear, and misunderstanding around mental illness.

However, in recent decades mental healthcare have undergone some transformations. Through the shift towards more community-based, decentralised, and ambulant forms of care, large care institutions require less space. This transition is part of a broader movement of deinstitutionalisation, accompanied by policies encouraging participation, autonomy, and recovery-oriented care (Ravelli, 2026; Schene et al., 2001). This project positions itself within this transition by focusing on the spatial transformation of mental healthcare sites into integrated healing environments. Rather than looking at care sites only as places of treatment, this research explores how these sites can also become environments that support recovery, social inclusion, and overall mental wellbeing.

Within the project there is a specific focus on bipolar disorder, this condition is characterised by recurring fluctuations in mood, energy, social needs, and stimulation tolerances. It involves recurring phases of depression, (hypo)mania, and stable phases, which means that the same environment can feel supportive at one moment and overwhelming at another (Yatham et al., 2018). This makes bipolar disorder an interesting and valuable perspective for researching how spatial design can have a positive influence on the recovery and mental wellbeing of care residents.

The duration of the stay of care residents in a mental healthcare institution varies, it depends on the diagnosis, severity, and safety risk. In the case of bipolar disorder, the admission of someone usually occurs during a phase of severe depression, psychosis, suicidality, or situations in which their safety is at risk. Their stay in a care institution often ranges from several days to several weeks, and in more complex cases it may last months. With bipolar disorder there is a high change of relapse, this means some care residents do not live permanently within an institution, but they move between care environments and everyday society over time.

This temporary and episodic relationship with care environments has important spatial and social consequences. Short or interrupted admissions can make it difficult to form stable social connections, while isolated and monofunctional care sites can also weaken existing relationships with family, friends, work, and neighbourhood life. This can lead to a disruption in their sense of belonging, and reintegration can become more difficult if the transition between institution and society is too abrupt. Therefore, mental healthcare sites should not only provide treatment and protection, but also gradual participation, and low-pressure social encounters.

As mental healthcare institutions continue to transform from isolated sites into more inclusive environments, an urgent spatial question emerges: How can mental healthcare institutions function as integrated healing environments for residents, visitors, and neighbours, while maintaining safety, autonomy, and comfort for care residents? The project addresses this main research question through the development of a pattern language and a site specific vision for Park Bloemendaal in The Hague.

1.2 Personal Motivation

The choice of this specific topic is based on my interest with psychology and human behaviour. I have always been interested by the way people think, feel, act, and respond to the environments around them. This interest guided me during my bachelor Bouwkunde, where I chose to follow a minor in Psychology. This provided me new insights, it allows me now to look beyond the technical and physical aspects of urbanism, and to understand more of the social and behavioural dimensions that shape how people use and experience space.

This specific interest guided me to the company STAAT, where I am doing an internship for this project. They specialise in construction management and area development of mental healthcare sites. In combination with my interest this is a very relevant topic, because in recent years mental health has become an urgent and visible societal challenge in the Netherlands. The amount of people experiencing mental health issues continues to rise, this can also be seen particularly in my generation. Despite this growing issue, there is still a stigma surrounding mental illness. Many people still struggle to speak openly about their mental wellbeing, and misunderstandings about mental illness still persist these days. This raised important questions for me: Where did this stigma originate from? How has it been shaped by history, spatial thinking and the distribution of mental healthcare institutions? Furthermore, how do spatial interventions influence mental health, recovery, and social inclusion?

These questions bring together my interest in psychology, urbanism, and social justice. This motivates me to do research on the effect of the spatial configuration of our urban environments and mental healthcare institutions to individuals with a mental disorder, and how it shapes their opportunities for autonomy, participation, and recovery. However, also their presence, visibility, and everyday activities influence neighbourhoods and communities. With this project I am particularly motivated by the idea that urban design holds the potential to reduce stigma, foster social inclusion, and creates environments that support recovery, rather than reinforce separation. By choosing this topic, I hope to contribute to a better understanding of how urban design can play a meaningful role in improving the recovery and mental wellbeing of individuals with a mental disorder.

1.3 Problem Field

1.3.1 Historical Context

Spatial Distribution

In the Netherlands the spatial distribution of mental healthcare has been shaped by more than a century of institutional practices and policy decisions. From the nineteenth century to the late twentieth century, psychiatric care was organised around centralised, institutional asylums. These institutions were located deliberately outside urban centres, as illustrated in Figure 1, they were often built on large estates, surrounded by forests, farmland, or water structures, as shown in Figure 2. The sites functioned as self-sufficient environments, intentionally separated from daily urban life. The location at the urban periphery was justified by the belief that calm, rural nature environments supported therapeutic goals and protected both care residents and society from perceived danger or disorder (Oosterhuis, 2004; Boschma, 2003).

This not only justified the spatial distribution of care locations in the Netherlands, but also in a lot of other European countries. However the spatial organisation of these institutions varied in some ways between countries. As documented in the European Encyclopedia of National Histories (EHNE), European psychiatric care institutions were generally located on the urban periphery and structured around principles of isolation, surveillance, and moral treatment, but national models differed in scale, architectural expression, and degrees of separation from society (Le bonhomme et al., 2021). France and Germany developed large, state-planned, monumental care sites with strongly hierarchical spatial layouts, as shown in Figure 3. Whereas the United Kingdom constructed massive county care institutions that often functioned as self-sufficient “asylum villages”. Dutch institutions were generally smaller in scale, and more influenced by religious and charitable organisations than those in centrally governed systems like France or Germany, as shown in Figure 2 (Oosterhuis, 2004; Coldefy et al., 2010). Belgium presents a notable exception through the community-based model of Geel, where patients lived distributed among families rather than within a bounded estate. On the other hand, Scandinavian countries leaned toward smaller, landscape-integrated campuses aligned with early welfare-state philosophies. These spatial differences demonstrate that while the general care estate ideal existed in a lot of European countries, the physical form and cultural embeddedness of mental healthcare institutions were shaped by

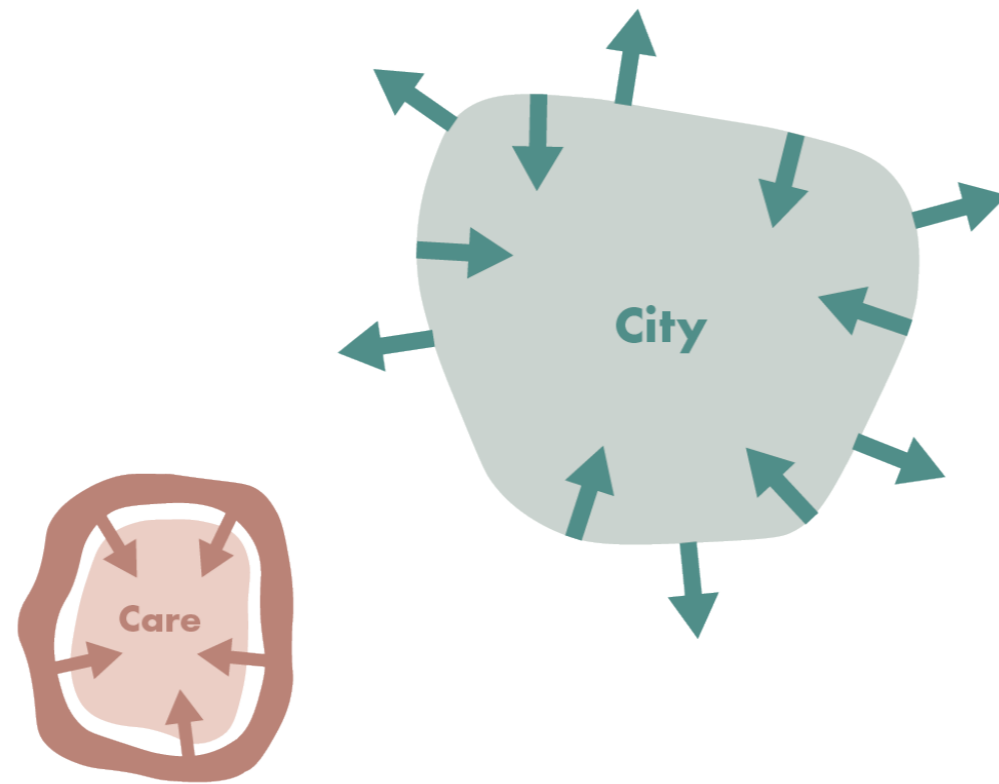


Figure 1: Spatial Distribution

national governance, social attitudes, and the evolving relationship between mental illness and urban society.

Policies reinforced the spatial logic of distribution of care institutions in the Netherlands. Legislation governing mandatory psychiatric admission, was eventually formalised in the Wet Bijzondere Opnemingen in Psychiatrische Ziekenhuizen (BOPZ). This requires designated institutional facilities for involuntary treatment, which further reinforced care within isolated institutions (Ravelli, 2006). The institutional form of care institutions is characterised by hierarchical organisation, controlled boundaries, and large-scale buildings. This reproduced and reflected a model of care based on, containment, separation, and professional oversight. Therefore, spatial isolation became an embedded feature of the Dutch mental healthcare infrastructure.



Figure 2: Mental healthcare institution Maasoord, Rotterdam 1924-1928 (Archieven.nl, n.d.)

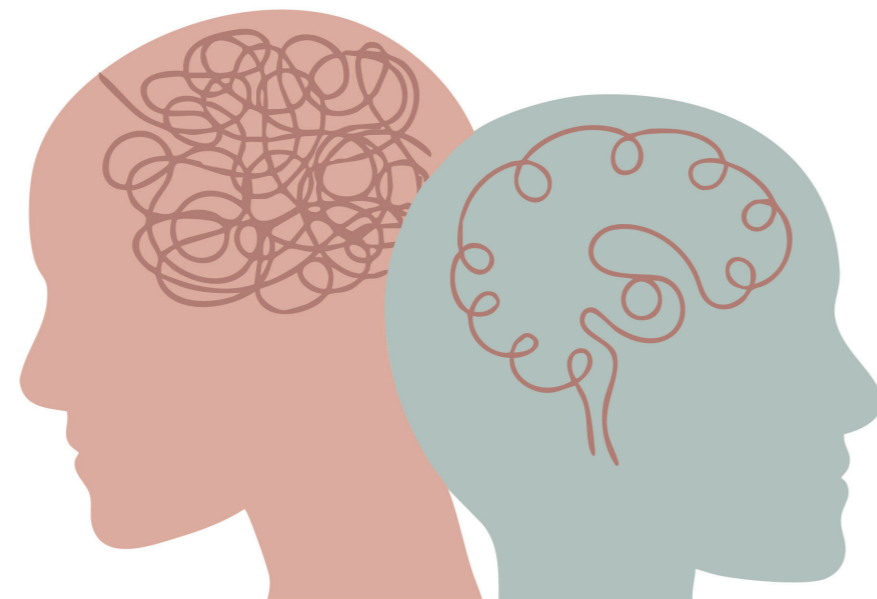


Figure 3: Mental healthcare institution The Sainte-Anne, Paris (Questel, 1877)

Stigma

The historically spatial separation of people with a mental disorder was closely tied to stigma. In the nineteenth and early twentieth centuries, mental illness was widely associated with abnormality, danger, or irrationality, this led to strong societal pressure to confine “madness” to concealed or remote environments (Oosterhuis, 2004). Asylums became physical manifestations of this stigma, they became places to hide those who did not fit dominant social norms. Pinfold (2000) shows that these long-standing cultural attitudes have continued to shape public perceptions of mental illness into present, with many people still associating mental healthcare facilities, or care residents, with fear and unpredictability.

Through this stigma contemporary discussions about care environments are still being affected. Although currently the treatment philosophies have shifted toward community-based recovery, the societal memory of mental healthcare institutions as sites of abnormality and danger persists. This directly influences the neighbourhood acceptance of mental healthcare institutions, often leading to resistance, moral distancing, or misconceptions (Pinfold, 2000; Liu et al., 2024). Therefore, the spatial separation of the past continues to shape the mental, social, and symbolic boundaries of the present.



Mental and Physical Borders

There are different levels of care within the mental healthcare system, ranging from open to closed facilities, each associated with varying degrees of supervision, treatment intensity, and security. These facilities are organised into graded security levels, the higher the level of security, the more severe the individual's mental disorder tends to be, the more intensive the care requirements become, and the more restricted or closed the facility is (Ministerie van Justitie en Veiligheid, 2024). These different types of care were often clustered within the same care site, where open and closed facilities, are spatially separated but still co-located on large institutional grounds. This clustering reflected the hierarchical organisation of treatment at the time, in which care residents were spatially distributed according to the severity of their condition. Across the Netherlands there are certain care sites that contain several of these facilities within a site, the location of these care sites is shown in Figure 4.

These institutions were mostly very isolated and separated from the society, they were surrounded by clear borders. The historical model of isolating mental healthcare institutions shows that they not only created physical borders but also mental and symbolic borders. Many care sites were enclosed by water bodies, forest belts, fences, or infrastructural edges, elements intentionally or unintentionally reinforcing exclusion and limiting connection with the society (Boschma, 2003). Some of these borders can still be seen today, as shown in Figure 5, 6, and 7. This is the location of Parnassia along the Monsterseweg, The Hague.

Mental borders emerged alongside physical ones. Since care institutions were physically isolated, society perceived mental illness as something to be kept apart. This created the perception that mental healthcare belonged outside everyday social life, which reinforced stigma and shaped expectations about behaviour, and treatment (Oosterhuis, 2004). The combination of physical isolation and negative associations produced environments where care residents could not easily participate and integrate back in urban life, and where the surrounding community rarely interacted with or understood the received care. Even today, care institutions retain these physical and mental borders, influencing how care residents still experience their environment and how society perceives them.



Figure 4: Locations of mental healthcare institutions in the Netherlands (Based on Forensische zorg, 2023)



Figure 5: Nature border



Figure 6: Water border



Figure 7: Infrastructure border

1.3.2 Current Issues

Spatial Distribution

A factor shaping current spatial challenges in the Netherlands is the changing geography of cities. Historically, mental healthcare institutions were deliberately placed on large, rural estates removed far away from urban life (Oosterhuis, 2004; Boschma, 2003). However, through urban expansion and demographic growth this spatial relationship has gradually changed. Since the cities in the Netherlands have expanded, often through post-war extensions and continuous urban densification, the urban fabric has gradually expanded towards formerly isolated care sites (Beenackers et al., 2024). Figure 8 illustrates this, care locations that were once remote locations surrounded by agricultural land or forests, now sit at the edge, or fully within, the now existing city. In some cases, residential neighbourhoods directly border the historical institutional estate, sometimes blurring parts of the once clear separation between the city and the care institution.

At the same time, a broader movement within the Dutch mental healthcare has led to deinstitutionalisation and a shift towards community-based care models, by following policy reforms such as the *Wet maatschappelijke ondersteuning (Wmo)* and *Wet langdurige zorg (Wlz)*. Nevertheless, many care institutions still occupy as historic, spatially isolated sites (Ravelli, 2006; Pijl et al., 2001). These sites continue to reflect the physical structures of the past, such as large plots of land, clear edges, inward-facing buildings, and limited permeability.

These sites remain segregated, a form of segregation can be seen here as the spatial, social, and institutional separation of groups within society, produced through planning decisions, organisational structures, and cultural attitudes. In the context of mental healthcare, segregation historically manifested in the deliberate placement of care institutions on isolated estates far away from daily urban life. This spatial distribution was reinforced by stigma, and the belief that people with a mental disorder needed to be kept away for reasons of control and safety. This still continues to shape contemporary care environments, because many care institutions remain physically and socially disconnected from surrounding neighbourhoods, despite the policy shifts towards community-based inclusive care.

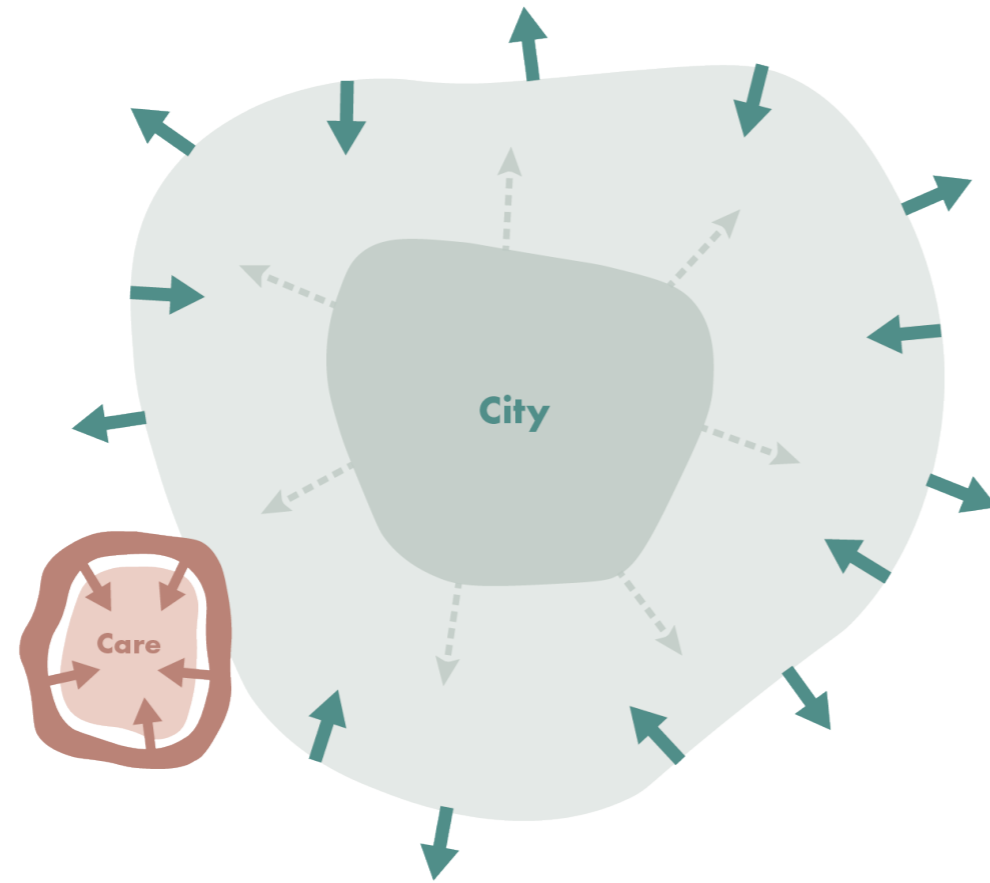


Figure 8 : Spatial Distribution and City Expansion

Monofunctional Area

Another persistent issue is the monofunctionality of many existing mental healthcare institutions. Historically these care sites were developed as self-contained systems consisting almost entirely of care buildings, support structures, and internal circulation. As these sites continue to be used for only intensive mental healthcare, they maintain a mono-programmatic character with limited integration of housing, culture, or public amenities (Boschma, 2003).

This mono-programmatic character reinforces the idea that mental illness does not fit the norms of society, and reduces opportunities for care residents to interact with non-care related functions and communities. In contrary, research shows that mixed-used environments where care facilities are embedded within everyday programmatic diversity can enhance the mental wellbeing, autonomy, and social interaction options for care residents (de Heer-Wunderink et al., 2012). Therefore, the integration of other programs on care sites support the potential for social inclusion, recovery, and reintegration.

Participation

A central element of the recovery and reintegration process is participation, this is fundamental for the long-term mental wellbeing. The recovery process can be divided into clinical recovery, personal recovery, and societal recovery (Castelein et al., 2024). In this project the societal recovery is emphasised, since this is the healing process through relationships, community integration, and support networks. The focus here is on feeling like a valued member of society again, this depends on access to everyday amenities, opportunities for spontaneous interaction, and the ability to contribute to society.

However, through the monofunctional and spatially segregated care environments this recovery process gets hindered. When care settings lack public functions or shared spaces, care residents have fewer opportunities to build a social network or develop a sense of belonging. Studies show that for individuals with a mental disorder community participation is significantly influenced by the structure of their living environment, including the quality of public space, the permeability of edges, and the presence of everyday urban life (Liu et al., 2024; de Heer-Wunderink et al., 2012).

For care residents with bipolar disorder this is especially important, because of their duration of stay in mental healthcare institutions. The duration differs strongly per individual, this differs from a few weeks to even months inside a care institution (Zorgstandaard Bipolaire Stoorissen, 2024; Yatham et al., 2018). The chance of relapse is also very high with bipolar disorder, this means that many care residents with this disorder move a lot between protected care environments and everyday society over time.

This episodic and temporary character of admission has important social and spatial consequences. It can be difficult to build stable social relationships during a short or interrupted stay in a care environment, however, a spatially isolated institution can also weaken existing connections with friends, family, and neighbourhood life. This leads to care residents who may experience a disruption in their sense of belonging. The transition back into society also becomes more abrupt and could increase feelings

of isolation, when a care environment is disconnected from everyday urban life. Therefore, care sites should not only provide protection and treatment, but also support gradual participation, low-pressure encounters, and cohesion between care and daily life.

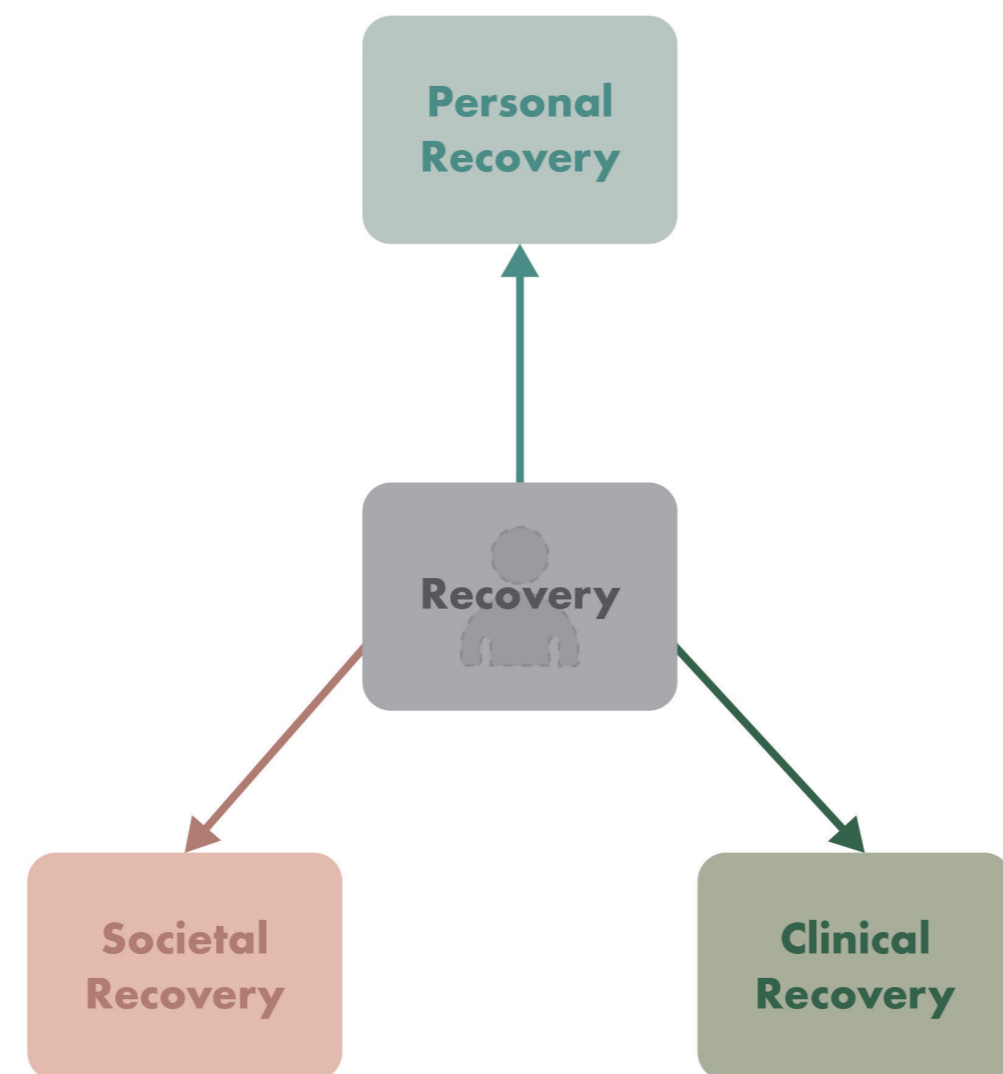


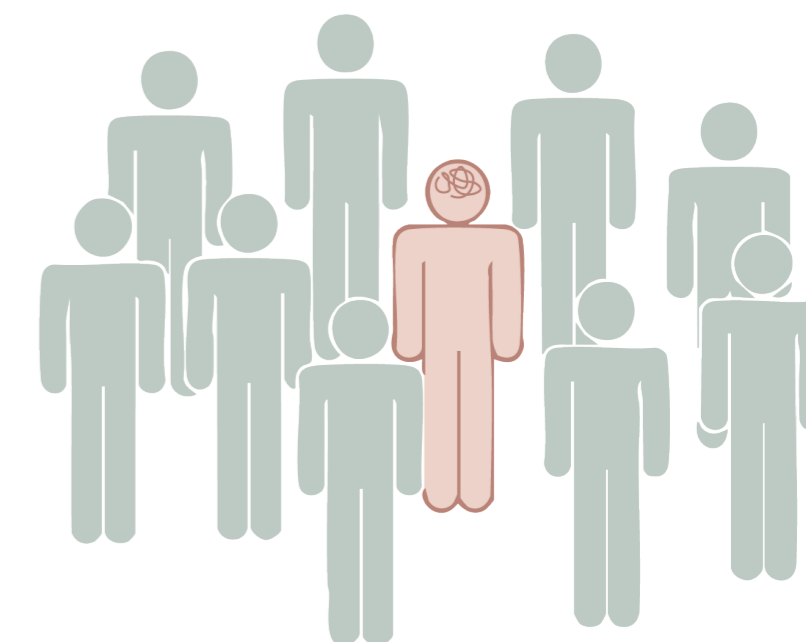
Figure 9 : Types of Recovery for a person with a mental illness (Based on Akwa GGZ, 2020)

Not In My Back Yard (NIMBY)

Creating integrated healing environments, where care residents and neighbourhood residents are living together, can support recovery and enhance social participation. However, the presence of care residents may also trigger resistance within surrounding neighbourhoods. Research on the phenomenon Not In My Backyard (NIMBY) shows that residents in the surrounding neighbourhoods and communities often express concerns when mental healthcare facilities are introduced, these concerns are about perceived safety risks, disruptions to the neighbourhood identity, or declining property values (Veiligheidscoalitie, 2025; Corrigan et al., 2005). This reflects the persistent stigma and misconceptions surrounding mental healthcare, it is still the most strongly resisted community service, despite the limited empirical evidence supporting these fears.

The attitude of people towards care institutions have played a determined role in shaping these responses. Research demonstrates that there is a desire for social distance among people towards individuals with a mental disorder, especially when the disorder is framed as dangerous or unpredictable (Jorm et al., 2009). Through these attitudes social exclusion get reinforced, and it limits opportunities for interaction, while positive contact and familiarity reduces stigma and increases acceptance. Therefore, participation functions as a reciprocal process, inclusion can support visibility and eventually the recovery process of care residents, while community perceptions strongly influences their ability to navigate through public spaces and engage in everyday social life.

Stigma and NIMBY are closely interconnected, and are reinforced by media reports that unreasonably associate mental illness with negativity and violence. Despite the evidence that people with a mental disorder are more often victims than perpetrators of violence (Stuart, 2003; Klin et al., 2008). Another fact is that mental health problems are affecting around one in four adults over the life course, and still it is not a highly discussed subject among society (World Health Organization, 2013). Therefore, to reduce these assumptions and address these dynamics, it requires not only clinical interventions, but also inclusive urban design. This can be achieved through the creation of spaces that facilitate meaningful everyday interactions between care residents and a wider community.



Care Transformations

The last few years there is spatial and organisational shift occurring within Dutch mental-healthcare institutions, driven by policy reforms, financial pressure, decentralisation, and changing treatment models (Ter Heegde, 2024). Historically, mental healthcare institutions occupied extensive estates designed for self-sufficiency, and the accommodation of large numbers of care residents. These large landholdings are no longer required. As mental healthcare increasingly transitions toward decentralised, community-based forms of treatment, many clinical functions that once needed to be concentrated on these estates have moved into the urban fabric. This shift reduces the need for on-site residential facilities and, in line with national trends, has contributed to a significant decline in the number of psychiatric beds that are required, this can be seen in Figure 11. Additionally, many of the original institutional buildings on these estates are outdated, energy-inefficient, or no longer compliant with contemporary care standards. This is the reason new facilities are constructed, they are often built more compactly and with more floors, allowing institutions to decrease their spatial footprint while modernising their care environment.

These transformations, illustrated in Figure 10, result in substantial parts of land that are left unused, costly to maintain, and they are no longer programmatically necessary. As a result, a growing movement has emerged in which institutions divest or redevelop parts of their estates, particularly when doing so, it provides financial stability to support broader spatial transitions on the site. Several Dutch care institutions have already begun to sell or repurpose land for mainly housing development (Poortmolen, n.d.; Hof Van Poortugaal, 2025).

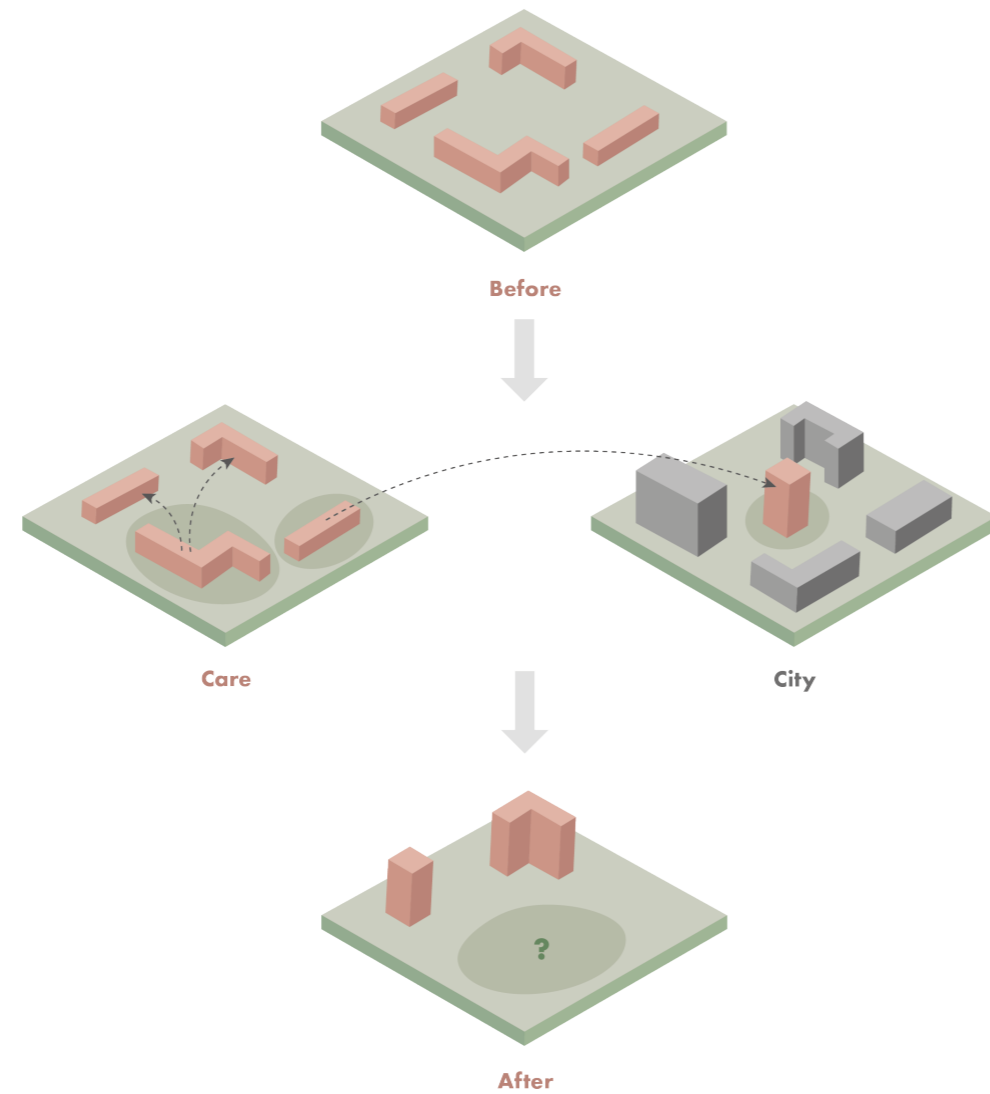


Figure 10: The transformation of care institutions

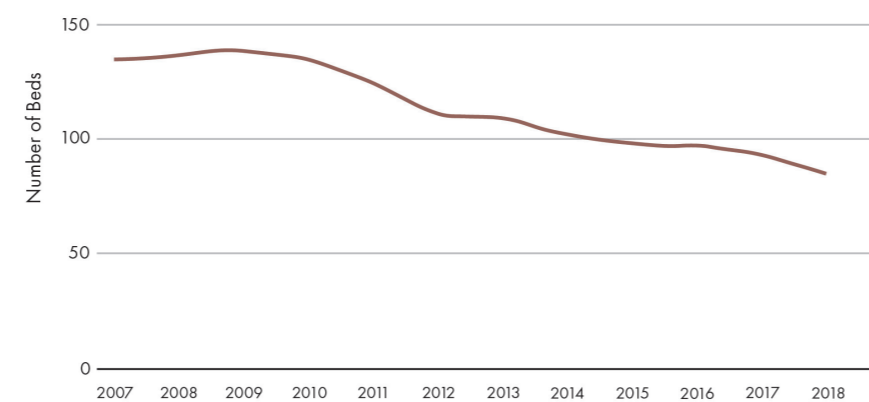


Figure 11: Number of Psychiatric Beds per 100.000 Inhabitants in the Netherlands (Based on Eurostat, 2020)

In the Netherlands mental healthcare policies has shifted toward community-based and recovery oriented models, however many care institutions still remain spatially isolated, monofunctional, and separated from everyday urban life. These care environments still reflect historical institutional aspects, such as physical borders and persistent stigma, this limits care residents' autonomy, comfort, and opportunities for social participation (Oosterhuis, 2004; Boschma, 2003). With this, the spatial distribution of care institutions often hinder, rather than support, the recovery process, mental wellbeing and reintegration of care residents. Despite the evidence that social interaction and community belonging are essential components of reintegration, recovery and overall mental wellbeing (Castelein et al., 2024; Liu et al., 2024).

This creates a gap between the goals of contemporary mental healthcare and the spatial reality in which it takes place. The main problem is that the current mental healthcare environments do not provide the social and spatial conditions that are necessary for inclusion, everyday participation and comfort for care residents. As a result, there is a urgent need to explore how urban design can transform these isolated environments into integrated healing environments that actively promote the recovery process, reintegration and mental wellbeing.

1.5 Relevance

1.5.1 Scientific Relevance

This project contributes to academic knowledge by addressing a significant gap between urban design and planning, environmental psychology, and mental healthcare studies. There is extensive literature on psychiatric recovery processes, treatment models, and supported care housing (de Heer-Wunderink et al., 2012; Castelein et al., 2024), while there is far less known about how the built environment and public space itself directly affects the mental wellbeing, recovery process, daily routines, social participation and sensory experiences of individuals with a mental disorder. Research in environmental psychology shows that access to public space, opportunities for meaningful interaction, and autonomy are critical components of mental wellbeing (Vallée et al., 2011). However, these insights are rarely translated into spatial frameworks that guide the urban design of care environments.

Creating healing environments that supports integration of different user groups, such as care residents, visitors, new residents and neighbourhood users, can support social inclusion, recovery and mental wellbeing. At the same time, empirical studies demonstrate that public attitudes towards mental disorders, often expressed as a desire for social distance, continues to shape how communities respond to the integration of care residents in daily structures (Jorm et al., 2009). These reciprocal dynamics highlight a scientific knowledge gap, while environmental psychology and mental health research emphasise the benefits of participation of care residents, less is understood about how spatial design can mitigate stigma, and foster positive contact. Researching these influences contributes to advancing theory on social integration, stigma reduction and inclusive urban design.

This project aims to strengthen the theoretical connection between healing environments, recovery models, and inclusive urbanism. It expands current debates on community-based care, deinstitutionalisation, and spatial justice by exploring how environments can support or hinder recovery (Ravelli, 2006; Lui et al., 2024). Therefore, the project contributes new knowledge to an underdeveloped area of research: the role of urban design in influencing and shaping the recovery process and mental wellbeing of care residents, by the creation of healing environments.

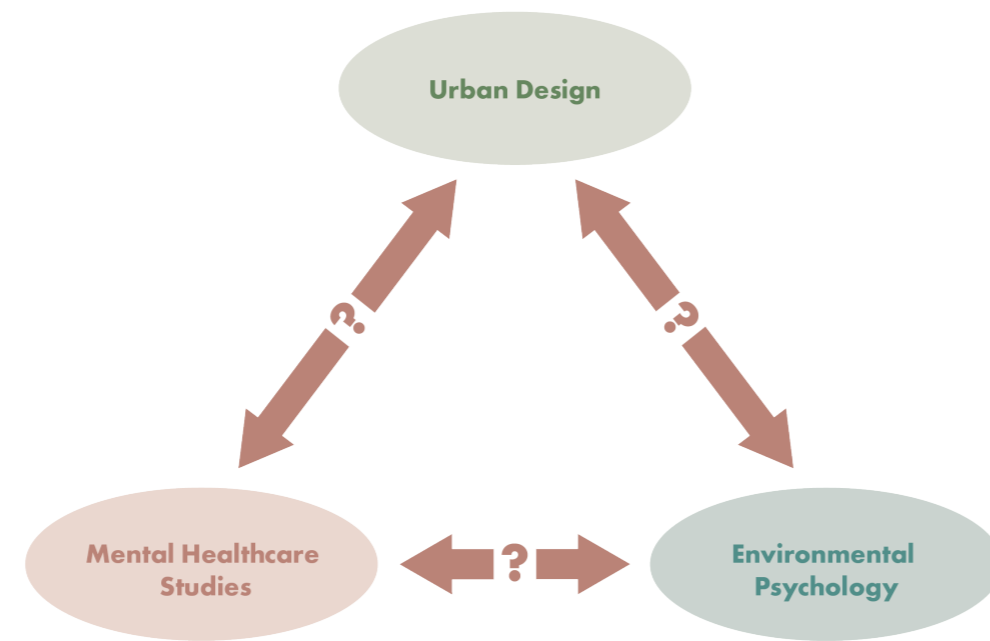


Figure 12: Disconnection between different fields

1.5.2 Societal Relevance

A growing societal challenge in the Netherlands is the increase of severe mental health issues, while many also struggle to access appropriate care, supported housing, or opportunities for reintegration. As shown in Figure 14, approximately one in four adults, 26 percent, had one or more mental disorders in 2022. This corresponds to nearly 3.3 million Dutch adults, aged 18 to 75 (Sgroters, 2022). People with severe mental illness remain among the most socially excluded groups in society, often facing stigma, isolation, and limited participation in public life. Numerous people, as illustrated in Figure 13, are struggling with mental health issues, still it is not a highly discussed subject among society (Pinfold, 2000; Liu et al., 2024).

Cities, such as The Hague, experience severe challenges related to the integration of intensive mental healthcare into residential areas, this can lead to fragmented reintegration processes, and limited cross-sector collaboration (Berkhout et al., 2022). This project addresses these pressing societal issues by investigating how feeling part of society can support recovery and mental wellbeing. The case study location for this project, Park Bloemendaal in The Hague, is a perfect example location that deals with these issues. Therefore, by proposing spatial interventions for integrated healing environments, the project contributes to broader societal aims of inclusion, and social cohesion.

Furthermore, recovery and reintegration is not only a societal or clinical challenge, it is also a spatial challenge. This project aims to show how neighbourhood structures, accessibility, new programs, infrastructure, sensory stimuli, and land-use influence the ability of care residents to rebuild connections, regain autonomy, and participate in everyday life. These findings reveal insights for housing associations, municipalities, and mental healthcare institutions seeking to create integrated healing environments.

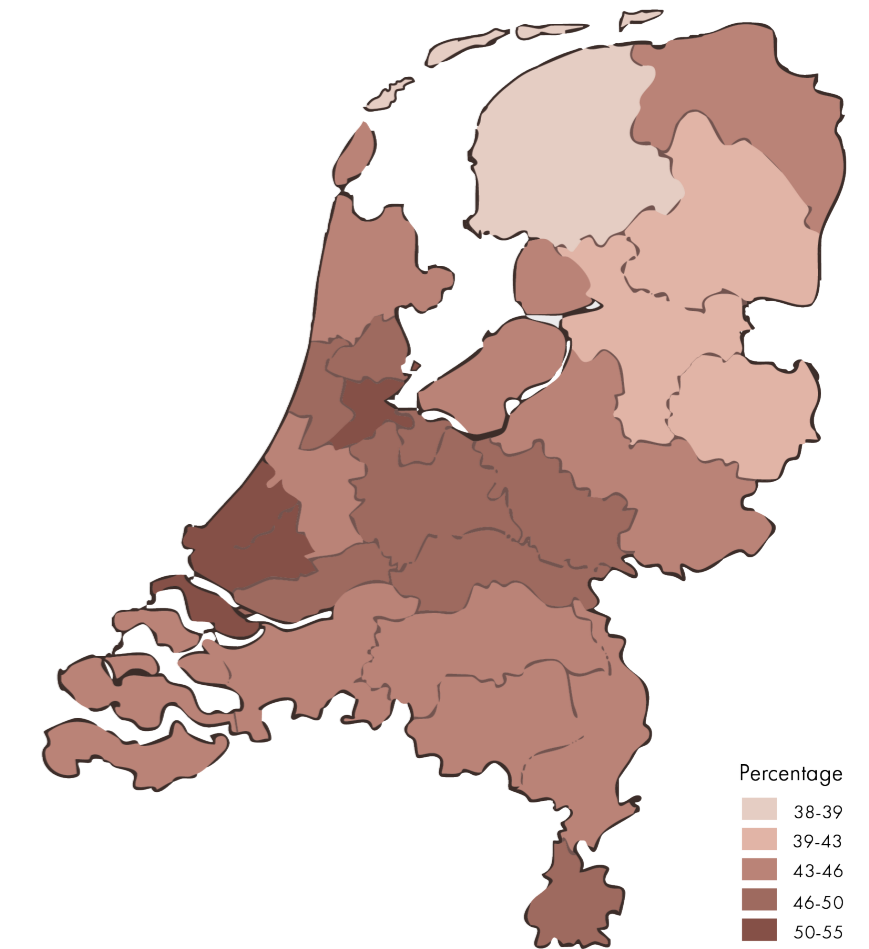


Figure 13: Adults' feelings of anxiety or depression per GGD region in 2024 (Based on Volksgezondheid En Zorg, 2024)

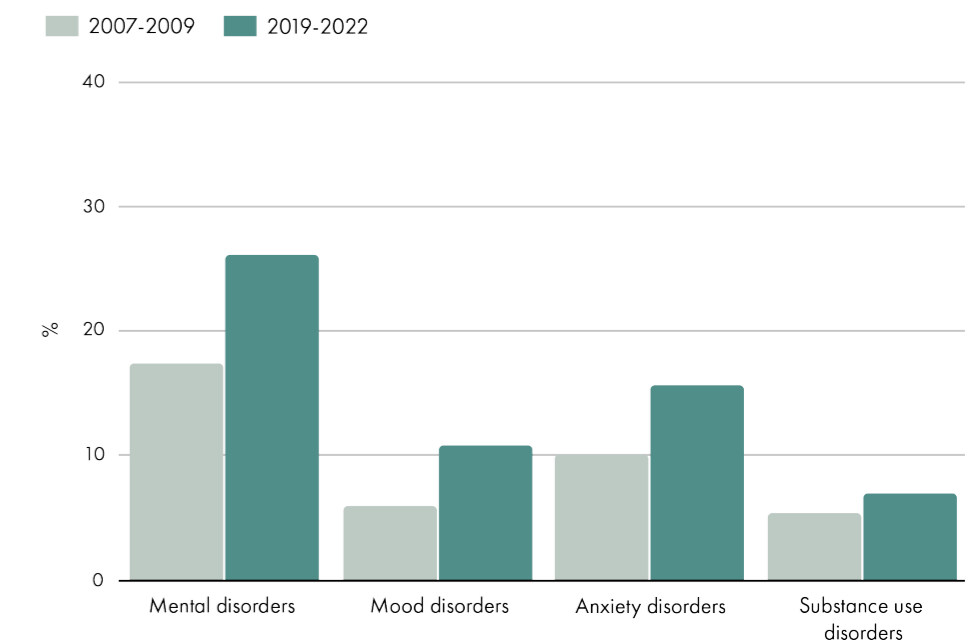


Figure 14: The increase of percentage of adults in the Netherlands with a mental disorder (Based on Sgroters, 2022)

1.6 Research aim

1.5.3 Ethical Perspective

The ethical foundation of this project is the recognition that people with a mental disorder are full citizens, equally entitled to participate in societal activities, to experience a sense of belonging, autonomy and dignity in their everyday environment. This perspective aligns with the mere-difference view of disability described by Elizabeth Barnes, this argues that disability, including mental illness, is not essentially something that makes a person worse off, but rather a difference that becomes harmful through social responses, such as stigma, exclusion and isolation (Barnes, 2014). From this standpoint, the disadvantages associated with mental disorders are not by means of the condition itself, but are produced and intensified by social structures and environments that treat difference as deficiency.

The presence of care residents in urban life is therefore not simply a matter of care provision, but rather one of social justice. People with mental health conditions both influence, and are influenced by the communities in which they live. Barnes' analysis highlights how intuitions about disability are often shaped by assumptions, rather than by the lived realities of disabled people. Similarly, stigma surrounding mental health is reinforced when urban design interventions frame mental illness as something to be hidden from everyday public life. Therefore, creating healing environments that actively challenges these assumptions is very important, this requires careful ethical consideration of how spatial design is used.

Urban design interventions can reinforce stigma by isolating and segregating individuals with a mental disorder, because of the assumption that difference must be eliminated rather than accommodated (Barnes, 2014). On the other hand, spatial design can also reduce stigma by recognising mental illness as part of human diversity. This can be achieved by creating environments that support interaction and shared use of space. Therefore, important is that spatial interventions must avoid enabling separation, isolation or negative symbolic associations. Instead fostering meaningful encounters, accessibility, visibility, and a sense of mutual safety for both care residents and all other users leads to inclusive environments.

It is also important to acknowledge the ethical constraints that are involved in studying mental illness and designing for vulnerable populations.

Individuals with a mental disorder, such as bipolar disorder, may experience stigma, phases of emotional instability, or social vulnerability. This requires a careful and respectful research approach, therefore the project avoids making assumptions about individual experiences and instead focusing on broader spatial and environmental conditions that may support recovery and mental wellbeing. Personal observations are approached with sensitivity, while respecting the dignity of care residents.

Another important ethical constrain within this research is privacy and confidentiality. While personal observations of care environments contribute to the understanding of behaviour and spatial use, the project does not collect or discloses personal or identifiable information about participants. Any insights derived from observations, or the conducted brainstorming sessions are treated anonymously and are only used to inform broader spatial principles and design strategies. In this way, the project aims to balance the need for insight information with the ethical responsibility, to protect the wellbeing and privacy of participants.

Mental healthcare transitions from institutional models towards decentralised and community-based forms of living, this leads to a environment that carries clear ethical responsibilities. Especially the distinction between being disabled and becoming disabled is relevant here. While transitions can be difficult and require support, the aim should not be to erase difference, but to create conditions in which people can live well with it. The environment must support autonomy without compromising dignity or privacy, and must enable recovering care residents to engage with society on their own terms, rather than forcing adaptation. Therefore, the interaction between public and private spaces becomes a crucial aspect in creating healing environments.

Therefore the project supports the idea that designing environments should enable inclusion while recognising vulnerability, and everyday lived experiences. In line with the mere-difference perspective (Barnes, 2014), It rejects the notion that mental illness justifies exclusion, and instead frames stigma as an ethical failure of social and spatial systems, one that thoughtful, inclusive urban design has the influence and responsibility to address.

The aim of this project is to explore how the recovery and mental wellbeing of care residents with bipolar disorder can be enhanced through the creation of healing environments on mental healthcare institutions. This project is especially relevant in the current Dutch context, where mental health is increasingly under pressure, as seen in news headlines from December 9th, 2025 in Figure 15. A growing number of individuals experiences mental health problems, such as mood and anxiety disorders, so this leads to a rising demand for mental healthcare. With this, the project seeks to develop a deeper understanding of the lived experience of care residents, specifically individuals with bipolar disorder.

Through extensive literature review, the project aims to understand the lived experience and fluctuating spatial needs of individuals with bipolar disorder. Historically care institutions were simply designed to isolate and hide the mentally ill, this project refutes this approach and tries to design environments through the view of care residents to create comfortable and safe environments for them. These healing environments should have a positive influence on their mental wellbeing and recovery process, which places their needs at the center of the project. Rather than designing from an abstract or purely institutional viewpoint, the aim is to design from a empathetic bipolar viewpoint.

The projects outcomes are intended to contribute directly to both research and practice. The design outcomes of this project will be a pattern language, this presents spatial interventions that are applicable on care institutions to create healing environments. These interventions address themes such as social inclusion, autonomy, safety, flexibility, shared use, and the relationship between care institutions and their surroundings. Based on this pattern language, a vision for a specific care site will be created, that translates research insight into a concrete, site specific proposal.



Figure 15: Dutch news headlines on December 9, 2025 (ANP, 2025; Haanstra, 2025; RTL.nl, 2025)

1.7 Scope

1.7.1 Bipolar Disorder

Relevance for this Project

Bipolar disorder is a very relevant disorder to study in relation to the creating of healing environments and the recovery process of this disorder. It is a chronic mood disorder characterised by recurring phases of depression, mania or hypomania, and stable phases (Figure 16). Because of these fluctuations, individuals have changing needs in terms of stimulation and social interaction. Another interesting aspect is their sensitivity to stimuli such as noise, light, crowding, and unpredictability. Because of this sensitivity, these stimuli can trigger phases of depression or (hypo)mania, therefore the possibility to relapse is very high. This means that spatial design can play an important role in the stabilisation and recovery process of individuals with this disorder (Yatham et al., 2018).

Unlike some other mental disorders that require years long institutionalisation, bipolar disorder is characterised by phases in which individuals move in and out of care over time (Yatham et al., 2018). This makes the transition between protected care environments and everyday urban life a crucial aspect of the recovery process. The treatment process of this disorder follows a phased and long-term structure, first the acute phase, then the continuation phase and lastly the maintenance phase (Zorgstandaard Bipolaire Stoornissen, 2024). The acute treatment phase lasts from several weeks to several months, during this phase individuals may require admission to a mental healthcare institution, especially in cases of severe mania, depression, or risk of harm to themselves or others. Therefore, their stay in an institution typically varies from several days to several weeks, and in complex situations sometimes several months. After the stabilisation, individuals may transition back to a more open facility on the care institution or back to outpatient care. Here the recovery process focusses on rebuilding daily routines, social participation, and functional independence (Yatham et al., 2018; Zorgstandaard Bipolaire Stoornissen, 2024).

Since individuals with bipolar disorder constantly move between care settings and society, their recovery is strongly influenced by the quality of both environments and the transition between them. Recovery is in this case not only about symptom reduction, but also about participation in everyday life, developing a sense of belonging, and the possibility to

choose between different gradients of stimulation (Snyder et al., 2019). This makes it a highly relevant disorder for this project, as it emphasises the need for healing environments that provide a sense of belonging, and a gradual transition between care environments and full urban exposure. Healing environments can play a crucial role in supporting long-term recovery, by providing safety, flexibility, comfort, and a better connection to society.

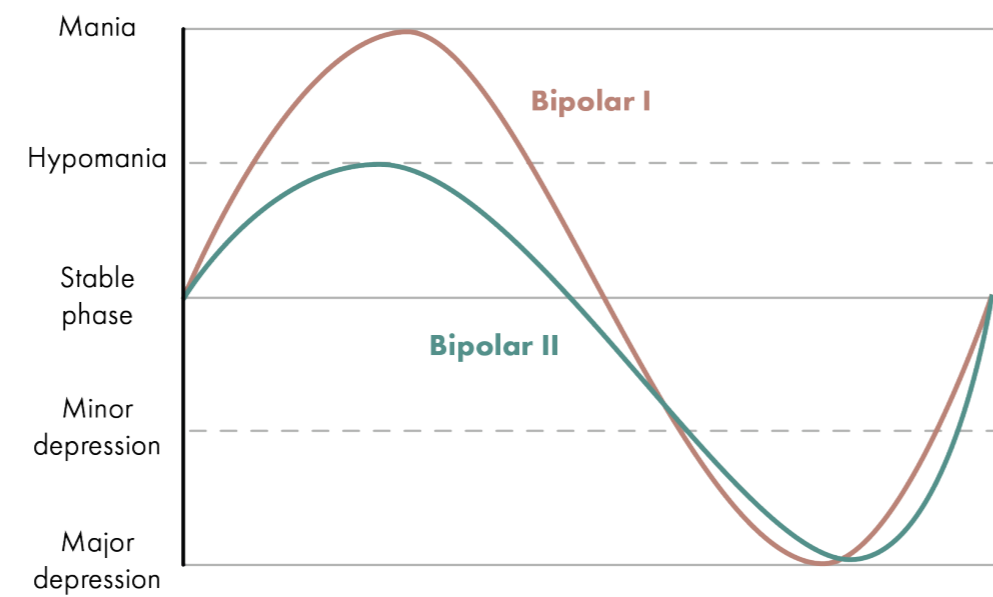


Figure 16: Phases of Bipolar Disorder (Based on Koon, 2024)

Characteristics and Spatial Needs

Bipolar disorder is a mood disorder characterised by recurring shifts between different phases. Depressive phases are characterised by reduced motivation, low energy, feelings of hopelessness, and the need for withdrawal. In contrast, (hypo)mania phases are characterised by increased energy, elevated mood, impulsive behaviour, and reduced need for sleep. This phase can lead to overstimulation and loss of control. The shifting emotional states result in fluctuating needs in terms of social interaction, stimulation, and environmental control (Yatham et al., 2018).

A fundamental characteristic of bipolar disorder is heightened sensitivity to environmental stimuli. Individuals experience noise, light, unpredictability, crowd density, and social pressure more intensely. This means that social and spatial environments directly influence their mental wellbeing and recovery process. Environments that are overstimulating, disorientating, or unpredictable could contribute to relapse and reduce stress. While environments that offer legibility, flexibility, and structure support emotional regulation (Michalak et al., 2006).

Therefore, healing environments must balance flexibility and structure. Predictable routines, a clear spatial organisation, and legible environments can support care residents to maintain autonomy, stability, and orientation. At the same time, flexibility is essential, since sensitivity to stimulation and social interaction varies during the different mood phases. This means that environments should provide different levels of sensory and social engagement, allowing individuals to choose between retreat and interaction based on their mood.

Social interaction also plays a fundamental role in the recovery process of bipolar disorder. Participation in everyday life and meaningful relationships support forming identity and a sense of belonging. However, excessive social pressure can negatively impact the mental wellbeing and recovery (Owen et al., 2016; Veseth et al., 2017).

Overall, bipolar disorder reveals the importance of designing healing environments that support predictability, autonomy, and orientation, while also allowing flexibility and variation in sensory and social experiences.

Therefore, healing environments should provide a balance between openness and protection, enabling care residents to gradually engage with their surroundings in a way that supports their mental wellbeing and long-term recovery.



1.7.2 Future Stakeholders

Many healthcare institutions face financial pressure and are no longer able to maintain their extensive landholdings, these locations are undergoing transformations through the sale of land to external developers (Poortmolen, n.d.; Hof Van Poortugaal, 2025; Park Bloemendaal, n.d.). Regular housing development is often the most economically feasible option for these plots of land, this also creates opportunities to reconsider how these sites function socially and spatially. Therefore, care institutions can evolve into mixed-used, shared environments that actively support the recovery process of care residents and the overall mental wellbeing, rather than only developing monofunctional housing developments (Centre of Expertise Veiligheid & Veerkracht, 2025).

Through this transformation, the group of users and stakeholders of the site could expand significantly. Care residents must still remain the central users of the site, but they will no longer be the only ones shaping its daily life. Research shows that feeling part of a broader social network and maintaining meaningful relationships positively influences the recovery process by supporting emotional stability, and a sense of belonging (Veseth et al., 2017). Therefore it will be beneficial if family members and friends become frequent visitors, since this reinforces social bonds and creates a more lively environment that reduces the stigma surrounding mental healthcare. The design of attractive outdoor environments is therefore essential.

Reverse integration, the introduction of regular housing on care sites, brings permanent residents without a care background onto the site, contributing to the transformation of an isolated institutional site to an inclusive healing environment. These new residents, together with care staff, visitors and neighbourhood residents, become everyday users of shared public spaces, routes, and amenities. Complementary programmes, such as community facilities, workspaces, and activity-oriented functions can further enhance the diversity of user groups, increasing the number of people who move through, work in, and socially engage within the area.

At the same time, the project recognises that social interaction and inclusion must not result in overstimulated environments for care residents.

Therefore, creating integrated healing environments requires a careful spatial balance between openness and retreat. Shared spaces enable interaction and participation, while quieter and more protected areas remain essential for care residents to withdraw from stimuli when needed (Huisman et al., 2012). This means that the design ambition of this project is to create spatial interventions that support flexibility, ensuring that healing environments can accommodate diverse stakeholders while mainly supporting the recovery process and mental wellbeing of care residents.



Figure 17: Ambition for care environments

1.7.3 Case Study Location

The case study location selected for this project is the Parnassia mental healthcare site Bloemendaal along the Monsterseweg in The Hague. This location is examined in depth, it serves as a testing ground for the pattern language, and a vision for this site will be developed. The selection of this site is directly connected to the author's internship at STAAT Bouwmanagement, a construction management and urban development firm involved in the ongoing area development of the site of Parnassia. Through this professional involvement, a broader access is gained to site-specific knowledge, and current transformation ambitions. Importantly, the location already has formal approval for the development of new regular housing, making it a relevant and realistic context for exploring future-oriented healing environments.

Historically, the Parnassia site was situated far away from the daily life of The Hague, following a broader European and Dutch tradition of locating mental healthcare institutions in isolation. The first foundation stone of the psychiatric hospital Bloemendaal was laid in 1884, over time the site evolved into a large estate dedicated to the care of individuals with mental disorders (Park Bloemedaal, n.d.). The historical map from 1900 shows a clear spatial structure of lanes perpendicular to the Monsterseweg, with land houses and farms positioned at this road. By 1935, this structure had intensified through densification along the existing lane pattern. Around 1980, the site underwent a significant reorganisation, replacing much of the original layout with a more scattered pavilion structure, while the surrounding landscape became increasingly dominated by greenhouse horticulture.



Figure 18: Case study location, 1900 (Topotijdreis, n.d.)

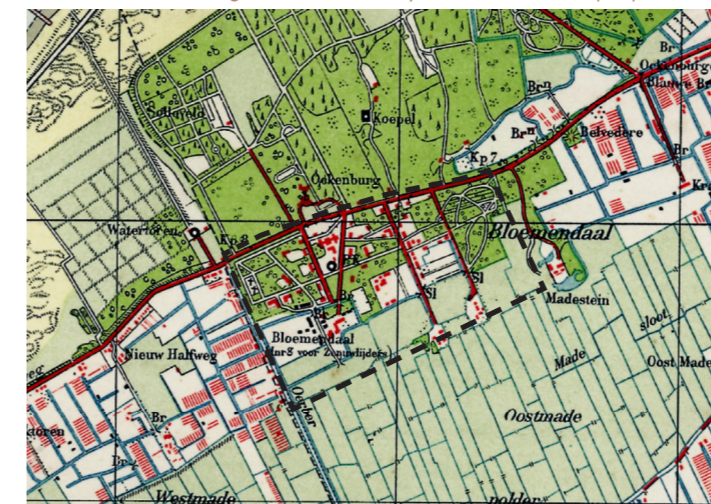


Figure 19: Case study location, 1935 (Topotijdreis, n.d.)



Figure 20: Case study location, 1980 (Topotijdreis, n.d.)

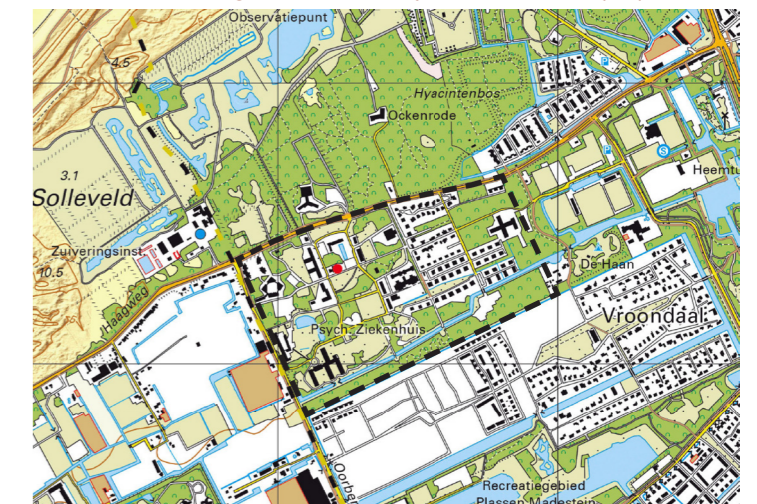


Figure 21: Case study location, 2021 (Topotijdreis, n.d.)

By 2021, the site entered a new phase of transformation, characterised by a reorganisation into three distinct spatial principles that reflect both historical layers and contemporary demands. However, due to urban expansion and population growth, the context of the site has changed fundamentally. The surrounding municipalities of The Hague and Westland have gradually grown toward the site, resulting in the Parnassia estate now being embedded within a broader inhabited urban landscape (Figure 24). What once was a remote care environment, has become directly surrounded by residential neighbourhoods.

The spatial layout of the site is strongly defined by the historic landscape structure. The Monsterseweg forms a longitudinal axis that historically connected The Hague with 's-Gravenzande and remains a key infrastructural and spatial element. Perpendicular to this road, a series of lanes structure the site and connect it to the Madesteinvaart at the southern edge, visualised in Figure 22. This waterway forms a strong physical boundary, together with the Monsterseweg and the intervening lanes this creates a spatial grid.

The current organisation of the Parnassia site can be understood through a clear spatial tripartition that has emerged over more than a century of development, visualised in Figure 23. The western part of the estate is predominantly occupied by clinical care facilities, reflecting the more intensive and inward-oriented functions of the institution. The central zone contains special and collective buildings, such as the church and former main buildings. The eastern part of the estate is characterised by care-related housing, representing a more domestic and outward-oriented environment.

The landscape itself is one of the site's most distinctive qualities. The Parnassia site is bordered by dune landscapes, on the north and a parcelled polder landscape on the south. As part of The Hague's main green structure (Figure 25), the site offers a rich natural environment that has long served as a healing landscape for care residents and can also provide ecological and recreational value for visitors and nearby residents.

Today, the Parnassia site stands at a critical moment of transition. Due to vacancy and the poor technical condition of several buildings, large parts of the former care facilities have been demolished, freeing up space for new development (Park Bloemendaal, n.d.). This transformation creates an opportunity to rethink the relationship between mental healthcare, landscape, and urban life. The combination of a historically layered layout, a strong green framework, and an increasingly urban context makes the Parnassia site an exemplary case for exploring how former isolated care estates can evolve into integrated, inclusive healing environments that support recovery, safety, shared use, and comfort.

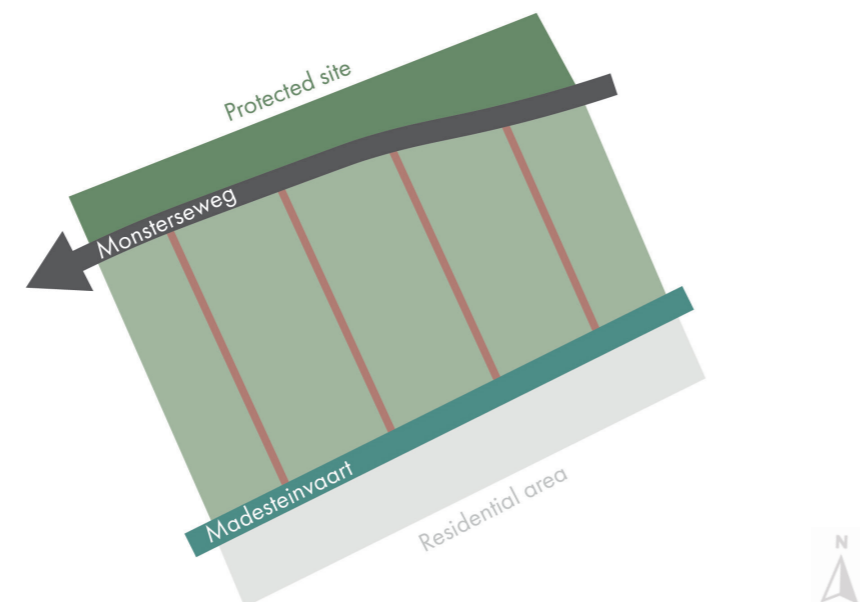


Figure 22: Spatial layout Case study location Parnassia

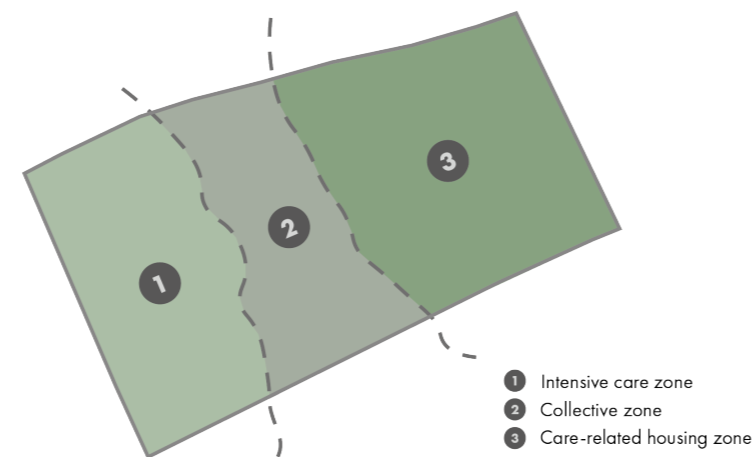


Figure 23: Tripartition of the site



Figure 24: Location and surrounding of the site Bloemendaal in The Hague (Based on PDOK, n.d.)



Figure 25: The Hague's main green structure (Based on PDOK, n.d.)

Part 2

Approach

2.1 Research Question

How can mental healthcare institutions function as **Integrated Healing Environments** for residents, visitors, and neighbours, while maintaining **Safety**, **Autonomy**, and **Comfort** for care residents?

Approach

This project addresses the main research question through interconnected sub-research questions that structure the research and design process. A design-driven research approach is used that combines multiple methods, with a continuous interaction between literature, personal observations, design and analysis.

The process starts with a literature and reference review. This provides a theoretical understanding of bipolar disorder, the requirements of a healing environment for this disorder, and the relationship between spatial environments and mental wellbeing. In this phase key principles are identified, they are related to orientation, recovery, physical activity, sensory experience, and social interaction. Corresponding to the entire process, a bipolar viewpoint is implemented, to support the designer in the understanding of a care resident with bipolar disorder, recognising how mood fluctuations influence spatial perception and the needs.

Building on the theoretical foundation, personal observations and spatial analysis of existing care sites are conducted. These methods provide insights into how care environments are actually being used, and how these environments are structured. The results reveal both spatial qualities and shortcomings, such as the fragmentation of amenities and use of green structures.

In addition to these observations, brainstorming sessions with care experts are conducted to get a better understanding of real-life experiences and daily routines on care sites. This method is furthermore used to evaluate and reflect on the process and design proposals, validating or challenging the identified patterns. In the sessions new insights from care professionals emerge, these support the refinement of the design proposals and strengthens the connection between theoretical insights and real-life implementation.

Throughout the project research through design is used as an exploratory method. New insights emerge through spatial exploration and iterative testing, that leads to the identification of a key spatial pattern and the development of a central design concept.

Finally, all insights are combined into a pattern language catalogue that support safety, autonomy and comfort for care residents. These patterns are derived from all the used methods and are organised in different categories and scales. The pattern language provides a flexible framework that can be applied to various care sites, rather than proposing a fixed solution. After this a vision is created for the care site Park Bloemendaal, this demonstrates an improved version of the spatial structure, social interaction possibilities, and sensory comfort on the site.

Sub-Research Questions

1. What scientific insights into bipolar disorder inform which spatial and sensory conditions support emotional regulation, orientation, and recovery?
2. How can the theoretical and observational insights be combined into spatial principles for designing healing environments?
3. How can these principles be translated into a set of spatial patterns, and be transformed into a vision for a care site?

2.2 Methods

In this project a mixed-method approach is used to study the spatial and social conditions that support safety, autonomy, and comfort within healing environments. Therefore, the methodology connects insights from environmental psychology, urban design, and mental healthcare. The selected methods, described on this page, are combined in an iterative process. Together, the methods facilitate an in-dept understanding of both the perceived experiences of care residents with bipolar disorder, and the spatial and social systems that shape their daily environments. These methods continuously reinforce and inform each other, rather than functioning as separate phases. They provide a base for the analysis of existing environments, identification of spatial challenges and opportunities, and translating these insights into design strategies. Eventually, the process leads to the development of a pattern language, and a spatial proposal that demonstrates the requirements of a healing environment in practice. General and site specific spatial principles are defined and structured into patterns, and form a bridge between research and design.

Literature Review

This method forms the theoretical foundation of this project, it involves a systematic review of academic literature, scientific papers, reference projects, and empirical studies related to bipolar disorder, social inclusion, recovery-oriented care, safety, mental wellbeing, and the relationship between these elements and the spatial environment. Insights emerge about the sensory experience of individuals with bipolar disorder, the preferred social interaction, the influence of the spatial structure, institutional character, and walkability of healing environments. The results entail evidence based principles and conceptual insights that are turned into initial patterns, and inform the design outcome.

Bipolar Viewpoint

This method emphasises the lived experience of an individual with bipolar disorder, it functions as an empathy-driven research and design method. Based on literature studies this method attempts to obtain a viewpoint of how individuals with this disorder respond to stimuli, perceive space, and navigate through environments. While acknowledging that a complete understanding of the lived experience is impossible, without having the disorder, the ambition is to approach this perspective as closely as possible. Throughout the research and design process, this viewpoint is consistently applied, and reinsures that the design outcome is evaluated from a user-centred perspective.

Personal Observations

In this project personal observations are used to obtain insights into daily routines, movement patterns, and everyday functioning of care residents and other users on care sites. Since the lived experience and spatial use of the site cannot be fully understood through theoretical insights alone. At the same time spatial analysis are used to analyse the spatial and physical characteristics of existing care sites. Results from the personal observations and spatial analysis reveal insights of boundaries, accessibility, land use, environmental qualities, and the connectivity to their urban surroundings. By analysing, observing, and comparing different types of care sites, location specific patterns can be identified.

Research Through Design

This is used as an exploratory method where design functions as a tool for investigation. Spatial design ideas are tested and refined through iterative design processes, allowing new insight to develop beyond theoretical and observational analysis. In this way, design proposals act as hypotheses, supporting the exploration of the influence of spatial configurations on movement, social interaction, and sensory experiences. Research through design is essential in developing new design concepts, and in identifying the importance and relations between patterns.

Brainstorming Sessions

The objective of brainstorming sessions is to have reflective and exploratory conversations between the designer and care experts. These sessions enable an inside view and knowledge exchange about daily routines and challenges within mental healthcare settings. Furthermore, it creates space to discuss design proposals, providing feedback to support the feasibility and creates the opportunity for a reality check. The brainstorming sessions enrich the understanding of care practices and contribute to the design proposals, by incorporating professional perspectives. This supports to translate abstract research findings into spatial patterns that are socially and institutionally grounded.

	Literature Review	Bipolar Viewpoint	Personal Observations	Research through Design	Brainstorming Sessions
1. What scientific insights into bipolar disorder inform which spatial and sensory conditions support emotional regulation, orientation, and recovery?	×	×			
2. How can the theoretical and observational insights be combined into spatial principles for designing healing environments?	×	×	×	×	
3. How can these principles be translated into a set of spatial patterns, and be transformed into a vision for a care site?		×	×	×	×

Pattern Language

The insights gained through these methods are then translated into a pattern language, which follows the conceptual structure introduced by Christopher Alexander (1978). Pattern language is used as a design-research tool, to form a bridge between spatial design and analytical findings. This allows complex psychological, social, and spatial relationships to be articulated in a structured and transferable way.

Within this project, the pattern language functions as an intermediate design output, that translates abstract research findings into spatial principles. These spatial principles can be divided into generic identified patterns, and location specific identified patterns. Literature review provides generic spatial patterns from a bipolar viewpoint, related to recovery-oriented care, social inclusion, and mental wellbeing. The personal observations and spatial analysis contextualise these theoretical pattern proposals, and reveal new insight and characteristics of mental healthcare environments. This leads to site specific patterns, these patterns reflect both site specific conditions and general principles. This project positions itself within a research through design approach, since spatial design itself plays an active role in generating knowledge. Throughout the process, spatial design is used to test, evaluate, and refine patterns through drawings and diagrams for site specific locations. To get a realistic view of the feasibility of the identified patterns, brainstorming sessions are conducted. The design proposals are discussed with experts and care professionals of different care locations, this leads to some new insights. This means that the patterns form a flexible framework, which supports critical reflection and adaptation across different care contexts.

The patterns are documented in a catalogue, in which each pattern describes a recurring spatial problem, the theoretical back-up, and the design response. This catalogue serves as a toolkit for the creation of healing environments on care sites. Each care site has its own shortcomings, and needs different design responses for transition. In the concluding design phase, a vision will be developed for the care site Park Bloemendaal, where insights from the pattern language will be applied, to demonstrate site specific requirements for a healing environment that supports the safety, autonomy, and comfort of care residents.

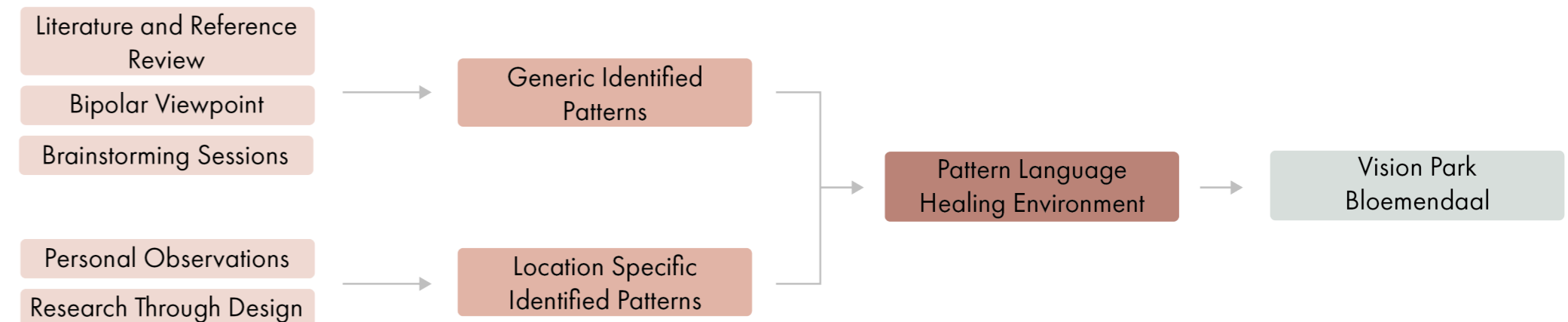


Figure 26: Process towards a Pattern Language

2.3 Schedule

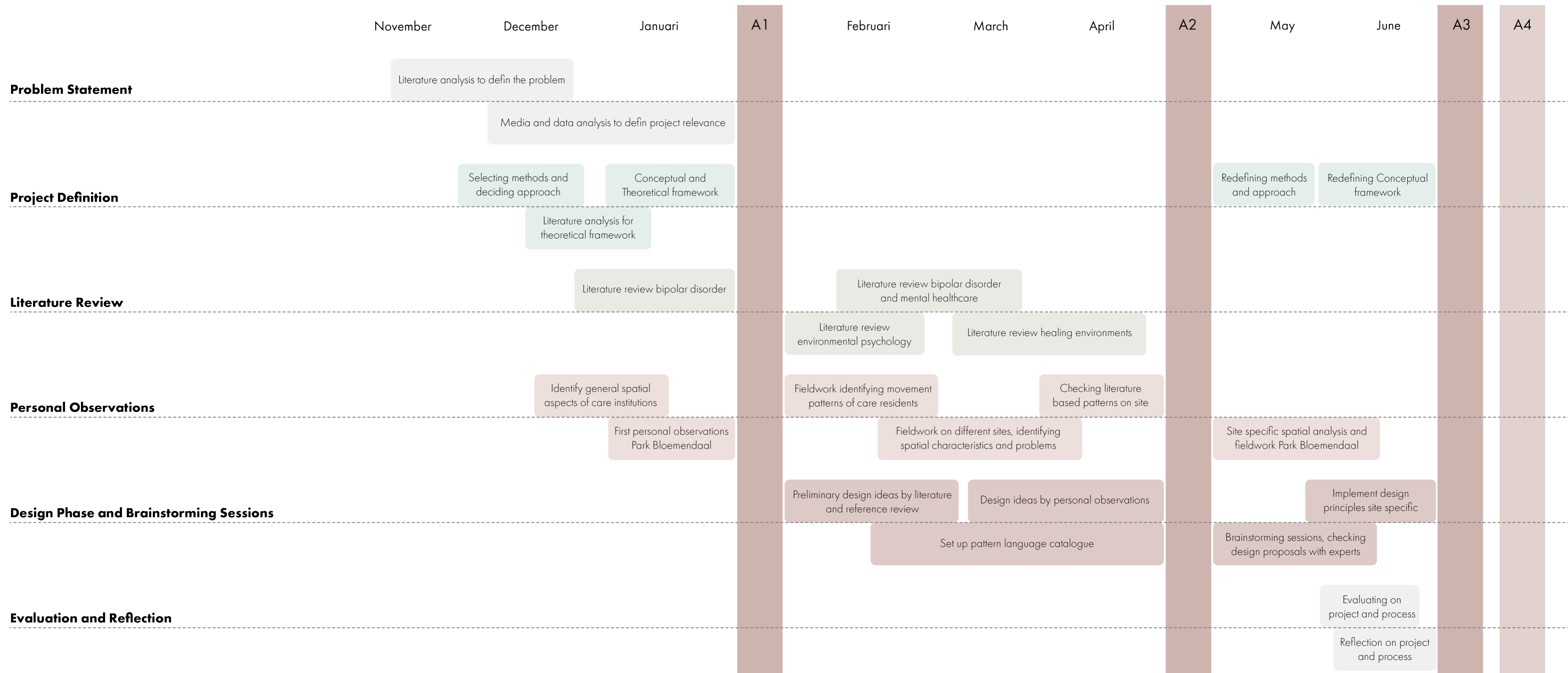


Figure 27: Schedule Project

2.4 Theoretical Framework

Recovery Model William Anthony

The Recovery Model, by William Anthony, represents a fundamental shift in mental healthcare theory, a shift from an entirely clinical understanding of mental illness toward a more person-centred and socially oriented concept of recovery. Rather than defining recovery as the elimination of symptoms, Anthony describes it as an unique and personal process of changing someone's attitudes, feelings, values, goals, skills and roles. This enables individuals to live meaningful and fulfilling lives despite ongoing mental health challenges (Anthony, 1993). Central to this model are principles of autonomy and self-determination, personal recovery, community integration, supportive environments and strength-based approach. This concept positions recovery as a process that develops primarily within community contexts and everyday life, rather than within only isolated institutional settings.

This perspective is especially relevant to support the aim of this project, as it reconsiders mental healthcare environments as spatial conditions that can either enable or constrain recovery processes, rather than perceiving these environments purely as places of treatment. The model emphasises that a sense of belonging, meaningful social connections, and access to everyday urban life are essential components of mental wellbeing. This indicates, from a spatial perspective, that healing environments must balance autonomy and safety, facilitate social interaction with a broader community, and reduce the form of segregation.

Anthony's Recovery Model informs the design approach of this project by highlighting the lived experience, and the need for dignity and participation of care residents in everyday urban environments. The aim of the project is to translate recovery principles of bipolar disorder into spatial design criteria, accessibility, permeability, and opportunities for social interaction, to create healing environments. Therefore, the model provides a theoretical foundation for the transformation of traditional, isolated care environments into more inclusive, community-integrated environments that support not only clinical stability, but also the integration, comfort, and autonomy of care residents.

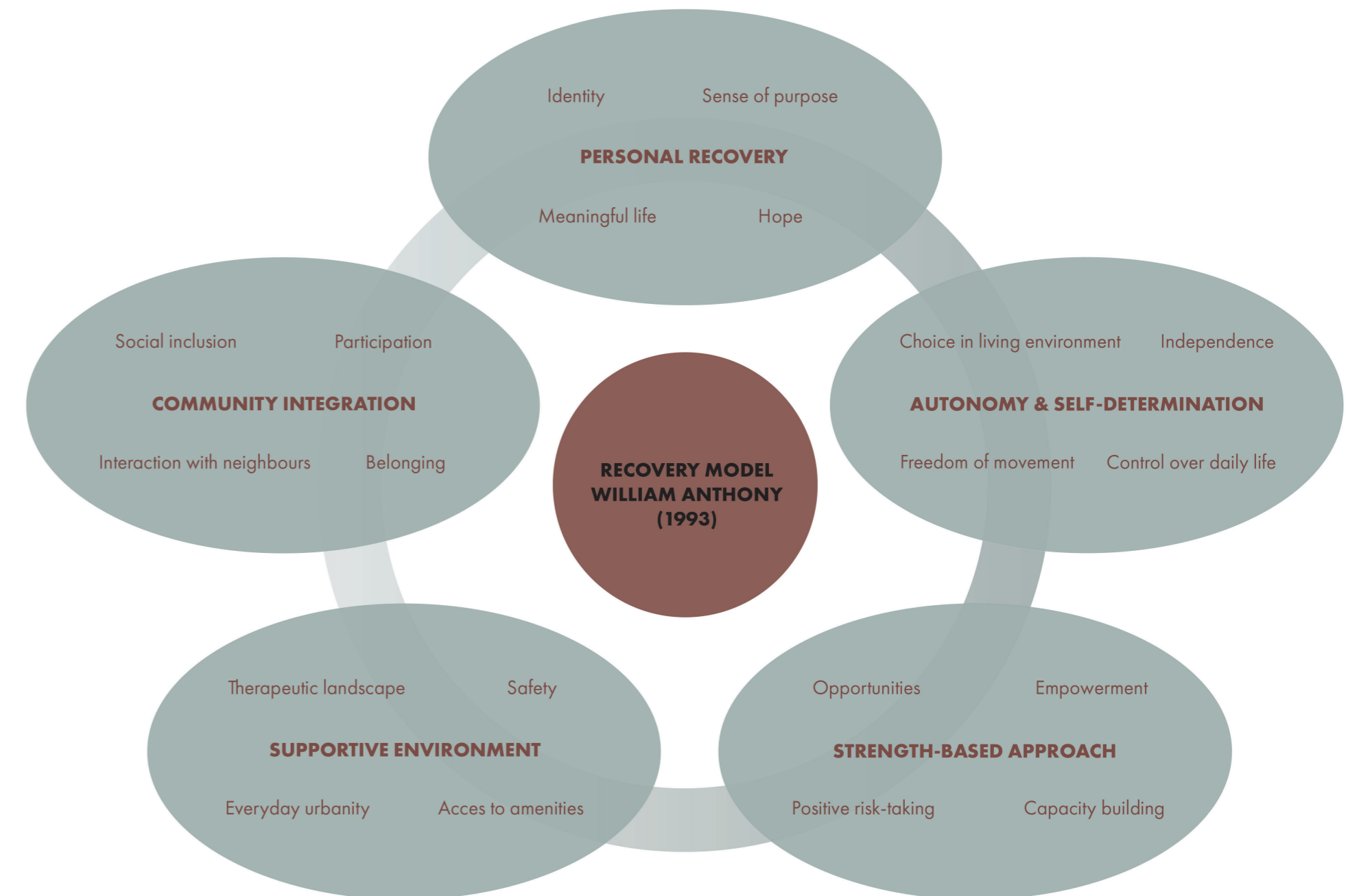


Figure 28: Principles Recovery Model William Anthony (Based on Anthony, 1993)

2.5 Conceptual Framework

Integrated Healing Environments

The core ambition of this project is the creation of a healing environment on care sites, that supports both the recovery of care residents and the overall mental wellbeing. In the conceptual framework, shown in Figure 29, the healing environment represents the spatial outcome in which recovery, stability, and everyday life are supported through design.

Surrounding this core ambition, three interrelated domains are identified: People, Mental health, and Spatial atmosphere. These domains emphasise that recovery is not only a clinical process, but also a social and spatial one. Mental wellbeing is directly influenced by, the way people interact with others, move through space, and how they experience their environment.

The outer layers of this framework emphasise the key values and objectives of this project. The design aims to support recovery-oriented care, enabling long-term recovery and stimulating mental wellbeing. On the other hand, it focuses on shared spatial use and inclusivity, aiming to reduce stigma and support social cohesion between care residents and other users. To achieve this, requirements and spatial factors are identified. This includes creating environments that support orientation, autonomy, social interaction, and provide access to restorative qualities such as nature and movement. Together, all these elements support the design of healing environments that are both open and protective, structured and flexible.

The circular structure of this diagram highlights that the components are not independent, they continuously influence each other. A healing environment emerges through the interaction between individual experiences, social dynamics, and spatial design. Therefore, the framework guides the transition of theoretical principles and observations into spatial patterns, and eventually a design proposal that supports safety, autonomy and comfort.

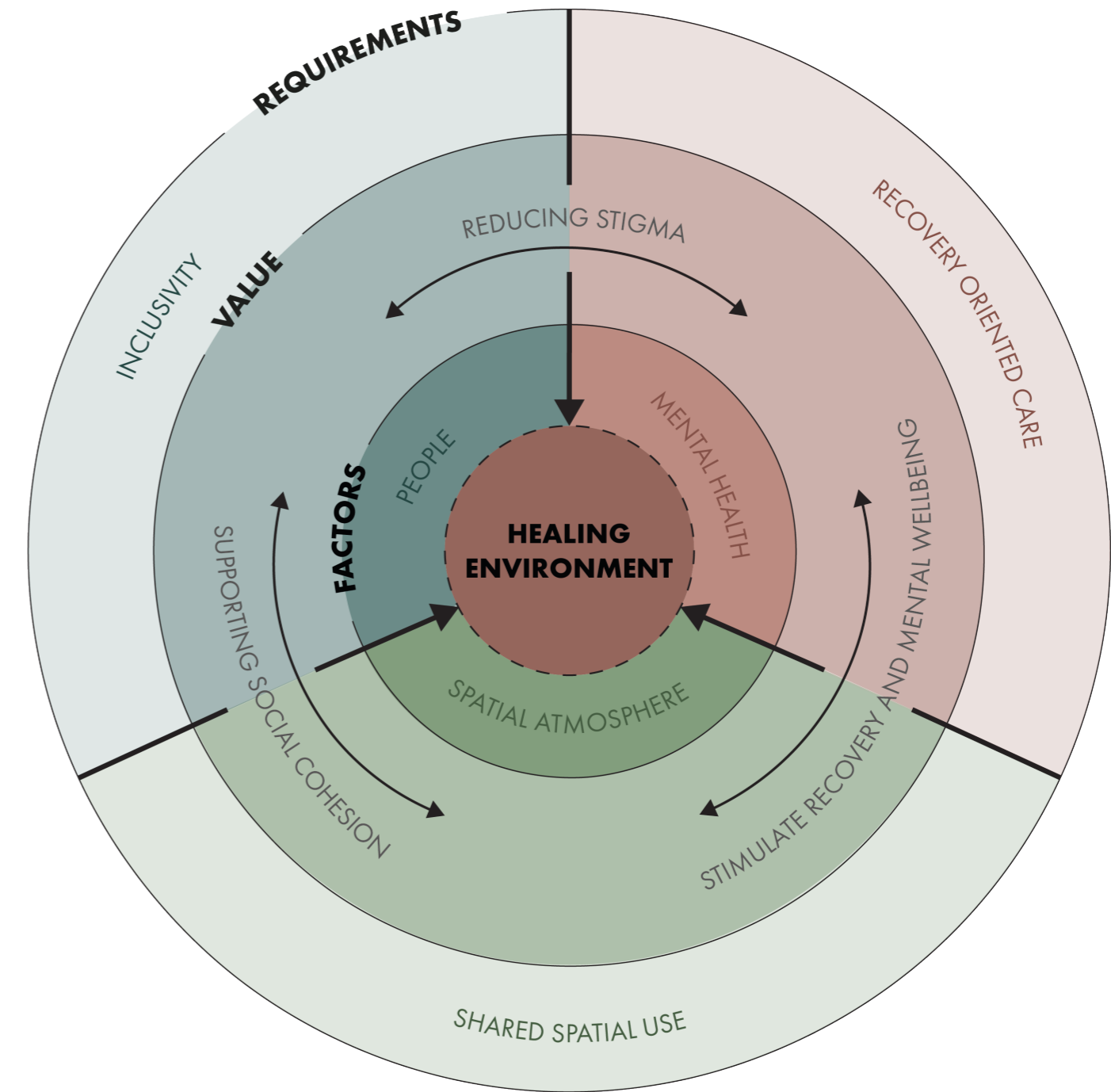


Figure 29: Conceptual Framework Integrated Healing Environments

Part 3

Results

Introduction

This chapter presents the results of the research and design process. It is structured through analytical, observational and design-based steps, these lead together to the development of a pattern language for healing environments.

The process begins with a theoretical foundation, key principles from environmental psychology, healthcare and urban design are explored through a literature and reference review. To form an understanding of how spatial environments influence mental health and recovery. These theoretical insight form the basis for identifying initial patterns that support healing environments, especially for individuals with bipolar disorder.

To further expand and refine these patterns, spatial analysis and personal on site observations of existing care locations are conducted. By studying how outdoor spaces are currently used, and where spatial shortcomings or opportunities occurs, additional patterns are identified that respond directly to everyday conditions and user behaviour.

In parallel, the design process itself becomes an important source of knowledge. Through iterative design exploration, new insights emerge and relations between patterns are identified. This leads to the identification of a key design-driven pattern, which forms the conceptual backbone of the vision of Park Bloemendaal, where a continuous and legible route evolves into the "Always Home Route".

All identified patterns are systematically organised into a coherent structure. They are categorised, related to one another, and compiled into a pattern catalogue. This catalogue demonstrates how individuals patterns function as part of an interconnected system across different scales and themes. After all this, brainstorming sessions are conducted to check the feasibility of the identified patterns with experts in the care domain.

Finally, a vision developed that translates patterns into a spatial strategy for the case study location Park Bloemendaal in the Hague. Showing how theoretical principles, observations, and design concepts can come together in a context specific proposal.

3.1 Healing Environment

3.1.1 Characteristics

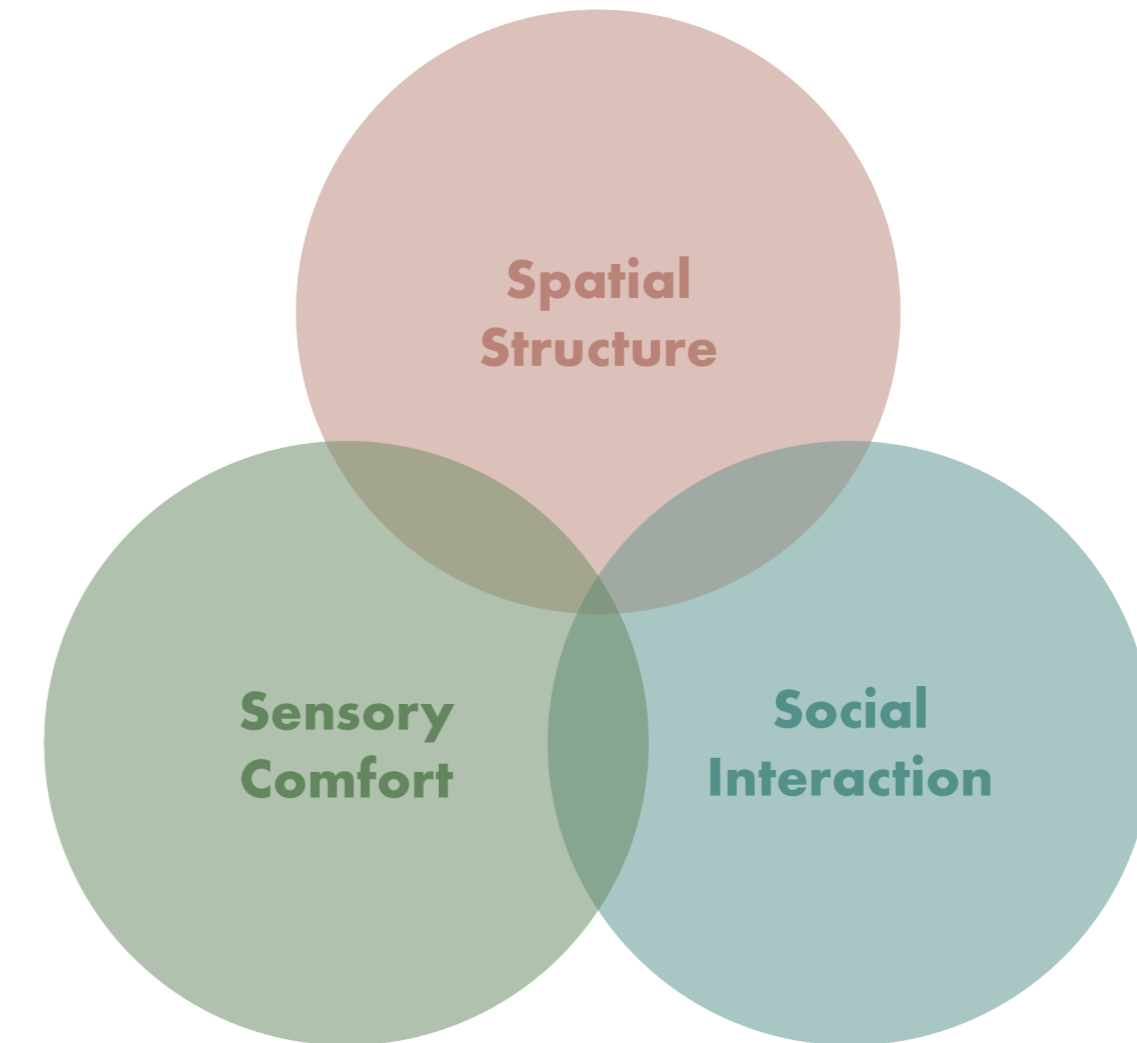
For care residents with bipolar disorder a well-designed healing environment is very important. A healing environment refers to a physical setting designed to support the recovery, wellbeing, and emotional regulation of its users. The concept originates from environmental psychology and healthcare design research, which show that the built environment can significantly influence stress levels, cognitive functioning, and emotional fluctuations. Typically a healing environment integrates spatial qualities such as access to natural elements, this contributes to the reduction of stress, improving mood, and enhancing the overall experience of a care site (Ulrich, 2023). The environment needs to become an active component of treatment in healthcare settings, alongside medical and psychological interventions, it needs to support the recovery processes. Several spatial aspects are commonly associated with healing environments, in this project specifically for individuals with bipolar disorder, but in general they have a positive influence on the mental wellbeing of all people.

First, a legible **Spatial Structure** plays an important role. The theory of environmental legibility explains that people experience less stress when they can easily understand and navigate their surroundings (Lynch, 1960). Logical spatial sequences, clear routes and recognition points help users to orient themselves on site and develop a mental map of the environment. This is essential for individuals living in care environments, because the sense of spatial clarity can increase feelings of autonomy and safety.

Second, a healing environment needs to provide a balance between **Social Interaction** and retreat. Spaces such as edge seating, semi-private outdoor spaces, or small gathering areas allow people to observe others without being forced into interaction. This can support social participation while maintaining personal comfort (Whyte, 1980).

Third, it is crucial to create **Sensory Comfort** in a healing environment. Different aspects influence how calming or stimulating a space feels, such as acoustics, temperature, light conditions, and materiality. Therefore shielded outdoor spaces, natural materials and soft lighting can reduce sensory overload and stress.

The influence of a healing environment can be important especially for individuals with a mental health disorder. Environments that are calm, predictable and supportive can reduce stress and anxiety, which are known triggers of many psychiatric symptoms. Spatial conditions that promote stability, routine, and mood regulation are particularly beneficial for care residents with bipolar disorder. Since regular outdoor activity, access to nature, and environments offer controlled levels of stimulation that help to stabilise mood and improve mental wellbeing, in this way the physical environment becomes an important support system that complements therapeutic care (Roe et al., 2021).



Nature

In a well-designed healing environment nature plays a central role. Research in environmental psychology demonstrates that exposure to natural settings can improve mood, and reduce stress. The Stress Reduction Theory of Ulrich (2023), suggests that natural landscapes stimulate positive emotional responses, physiological relaxation, and enhance cognitive functioning. This results in reduced stress levels, lower blood pressure, and improved overall wellbeing.

Empirical studies confirm these positive effects of nature on mental health and the recovery process of a disorder. For example, findings show that individuals with depression experienced significant improvements in cognitive functioning and mood regulation after walking in a natural environment in comparison to an urban environment (Berman et al., 2012). Similarly, there has been found that spending time in nature can reduce rumination, this is a pattern of repetitive negative thinking that is often associated with depression and anxiety (Bratman et al., 2015). These findings emphasise the importance of integrating natural elements as fundamental spatial components within healing environments, rather than only using them as aesthetic features.

An important aspect of integrating natural elements on a care site is the continuous presence of green structures. Green structures should be embedded within public spaces, streets and paths, rather than being concentrated only at the edges. It strengthens the integration of care sites within the surrounding urban context, and creates visual continuity. This leads to the identification of the pattern *green streetscapes*, where greenery is used to connect different parts of the site and it enhances the everyday spatial experience.

The use of natural elements can also support sensory comfort and environmental diversity (Kaplan et al., 1989). Throughout the year seasonal changes in vegetation, such as variations in texture and colour, introduce subtle differences that encourage repeated outdoor use without overwhelming stimuli. This principle can be observed in the reference of the Philosopher's Path in Kyoto, where the changing seasons create varietal landscape experiences, while the path still remains familiar and legible.

This encourages the repeated use, experience and orientation on the site, which leads to the pattern *seasonal planting provides diversity*.

In addition, to increase the use of the site and support longer stays outdoors, comfortable microclimates are necessary. Sheltered seating options, and semi-covered structures can provide a selection of conditions that allow care residents to choose between sun or shade spaces, or between an open or protected space. However, beyond the visual experience, natural landscapes influence a broader range of sensory experiences. The use of natural materials, such as stone, wood, and vegetation can contribute to a warmer and less institutional character. While natural soundscapes, such as water, birds, or leaves can reduce stress and enhance feelings of calmness. To further reduce visual overstimulation, and create a gradual transition between different spatial conditions, filtering daylight through trees, or pergolas, is an important element.

These sensory qualities can be clearly observed in the Mien Ruys Garden. In this garden different rooms are designed to stimulate multiple senses in a subtle and controlled manner. Through the careful use of spatial composition, planting and materiality variations in sounds, texture, and light can be created. This allows visitors to experience a sequence of sensory environments, and this example leads to several identified patterns (Guidolin et al., 2024). The use of structures to modulate light form the basis of the pattern *accessible and filtered daylight zones*, because the transitions between light and shadow create visual comfort. The pattern *soft soundscapes* contributes to the integration of natural elements that produce calming sounds, where relaxation gets supported by auditory stimuli. In addition, carefully composed forms and the use of natural materials lead to the pattern *natural materiality and form*. Visual and tactile qualities enhance here the overall experience of the environment.

These strategies demonstrate together that nature in healing environments can operate on multiple levels. It supports both psychological restoration and everyday use, and shapes the sensory experience. This shows that natural environments can become active components in supporting autonomy, mental wellbeing, and emotional regulation.



Figure 30: Philosopher's Path, Kyoto (Philosopher's Path, n.d.)

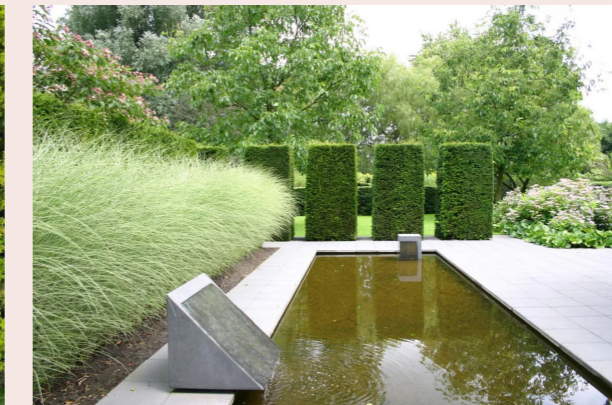
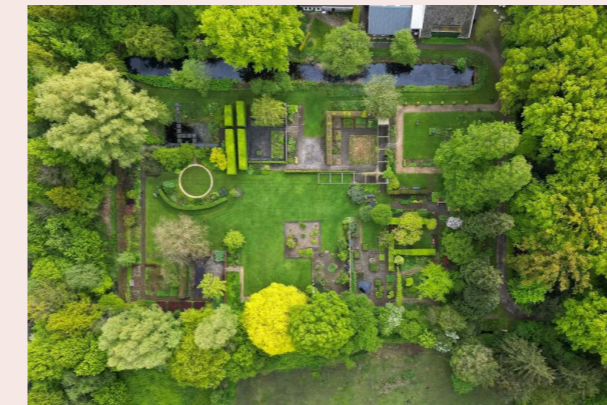


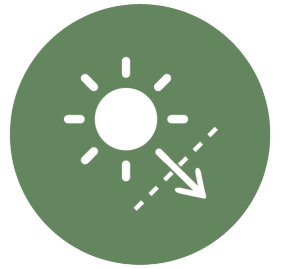
Figure 31: Mien Ruys tuin, Dedemsvaart (Tuinen Mien Ruys - Vechtdal Overijssel, n.d.; Carlo, 2025)



C.2 Seasonal Planting Provides Diversity



C.5 Green Streetscapes



C.4 Accessible and Filtered Daylight Zones



C.7 Soft Soundscapes



C.8 Natural Materiality and Form

Walking

The walkability within a healing environment can play an important role, especially in the recovery process of care residents, and the overall mental health. Research shows that symptoms of depression, (hypo)mania, and anxiety can be reduced while improving cognitive functioning and emotional regulation, by physical activity such as walking (Noetel et al., 2024). The production of neurotransmitters, such as serotonin and dopamine, gets stimulated by walking. These neurotransmitters are associated with mood regulation and emotional stability, so walking can be recognised as a valuable complement to traditional therapeutic treatments.

These benefits can be enhanced when walking takes place in natural environments. Studies suggest that walking in green environments can reduce stress, while improving cognitive functioning and positive emotional states (Berman et al., 2012; Bratman et al., 2015). Attractive and safe walking routes through greenery can therefore support daily routines, encourage outdoor exposure, movement, and social interaction.

This validates the importance that walking should be prioritised within the spatial structure of an healing environment. An example of prioritising walking is the project Luchtsingel in Rotterdam, here a pedestrian route was introduced to give priority to slow mobility and reconnect urban areas. A similar concept can be observed at The 606 in Chicago, where a linear park creates a constant pedestrian route that prioritises slow mobility through the city and connects different neighbourhoods. These examples show how a well-designed spatial structure can actively prioritise walking as a primary form of movement. This principle forms the basis for the pattern *prioritising walking*, where pedestrian routes can be the main structuring element of a healing environment, that supports both movement and mental wellbeing.

In enabling these positive walking experiences, the spatial design plays an important role. For care residents that experience cognitive challenges, orientation within an environment can be difficult. A clear and legible spatial structure can help to orientate themselves. Lynch (1960) proved in his studies that people rely on recognisable spatial elements, such as landmarks, nodes, paths, edges, and districts to create a mental map of

their surroundings. Therefore recognisable spatial elements and clearly defined walking routes can strengthen orientation and supports autonomy by allowing care residents to move independently with less feelings of disorientation or insecurity.

To further support everyday movement, walking routes should connect important elements across the site. Strategic points along these walking routes, such as nodes, squares or gathering places, can function as recognisable reference points that help care residents to navigate and remember their surroundings. This leads to the pattern *nodes as recognition points*, where nodes are designed as identification points along the route.

Small variations between different areas on the site can also support spatial recognition and orientation. Distinct neighbourhood identities can allow residents to recognise where they are within the site, this could be achieved through the use of different materials, building typologies, or landscape design. These variations between different areas can be observed in the reference project The 606, different parts of the route are characterised by distinct surroundings and atmospheres. This forms the basis for the pattern *identifiable neighbourhoods*, where spatial differentiations support the creation of a mental map and enhances the legibility of the environment.

In addition, walking can also directly be integrated into therapeutic practices. A valuable example is walk-and-talk therapy, this is a therapeutic approach in which the patient and therapist can conduct sessions while walking together outdoors, rather than sitting in a traditional consultation room. Research suggests that this form of therapy reduces social pressure, creates a more relaxed conversational atmosphere and encourages openness (Dickmeyer et al., 2025). Walking side by side with a therapist allows for more informal communication, and helps individuals regulate emotions through movement and exposure to outdoor environments.

By integrating recognisable elements, creating a legible spatial structure and clear routes, walking becomes a structured and supportive experience that contributes to daily routines and therapeutic processes.



Figure 32: Luchtsingel, Rotterdam (Van Duivenbode, 2022)



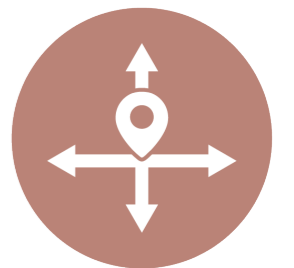
Figure 33: The 606 Trail, Chicago (Greene & Lee, 2019; McAllister, 2024)



S.8 Prioritising Walking



S.11 Identifiable Neighbourhoods



S.14 Nodes as Recognition Points

Safety

A fundamental component of healing environments is safety. In the context of care sites, safety extends beyond physical security measures and also includes psychological safety. It is crucial to create a sense of control over someone's surroundings, by designing environments that are legible, and have a clear structure (Schreuder et al., 2016). This allows care residents to move with confidence and reduce feelings of uncertainty and stress. According to Lynch (1960), spatial legibility can be achieved through visual clarity and recognisable elements. This plays an crucial role in the orientation ability of individuals within an environment.

Another key factor in creating safe healing environments is spatial visibility. To allow users to maintain visual clarity of their surroundings, and create an understanding of how different areas are connected, clear sightlines between spaces are necessary. This principle can be observed in the reference project Madrid Río. Carefully structured spaces and open visual connections enhance here both the perceived safety and orientation. These findings lead to the pattern *sightlines as orientation*, where visual stability helps care residents to navigate within an environment intuitively.

Related to this is the importance of avoiding hidden or isolated spaces. Spaces that are difficult to oversee or visually disconnected reduce the likelihood that they will be used, because they create feelings of insecurity. In the project Madrid Río, the spaces in the environment are designed to remain connected and visible, increasing the overall usability and minimizing hidden corners. This forms the basis for the pattern *no hidden corners*, where spatial design promotes openness and visual control, and prevents the creation of enclosed or isolated areas.

Safety is strongly connected to dignity and autonomy in mental healthcare environments (Huisman et al., 2012). Protective measures are necessary, however overly restrictive measures and institutional design, such as closed of areas and fences, negatively influence feelings of belonging and independence (Liu et al., 2026). The aim of a healing environment therefore is to balance protection with openness on a site. A resolution can be to use landscape elements, such as hedges, trees, planting or subtle level differences, to define boundaries without creating a strict or

institutional environment. This principle forms the basis for the pattern *soft bounded safety*, where safety can be achieved, in the most feasible way, by the use of natural elements to create transition zones rather than rigid barriers.

In maintaining safety lighting plays an important role, especially during evening hours. Weakly lit environments feel unsafe and discourage use, while overly bright or harsh lighting can lead to overstimulation, particularly for individuals with bipolar disorder. The reference project Queens Plaza in New York City, demonstrates how both the safety and spatial experience can be enhanced by carefully designed lighting. This project shows how the visibility can be improved while maintaining a comfortable atmosphere, through the use of warm and evenly distributed lighting that follows the paths and highlights key areas. This leads to the identification of the pattern *safe evening lighting*, where lighting is used to enhance safety, comfort and orientation without causing sensory overload.

Physical and psychological safety in healing environments can both be supported by combining a clear spatial structure, soft boundaries, open sightlines, and carefully designed lighting. These patterns can ensure that care residents can move freely and independently, while maintaining a continuous sense of security. Therefore, safety is embedded within the spatial and sensory qualities of the environment, rather than imposed through restriction. This reinforces dignity, autonomy, and mental well-being for all users, especially for individuals with bipolar disorder.



Figure 34: Madrid Río, Madrid (Madrid Río - West 8, 2024)

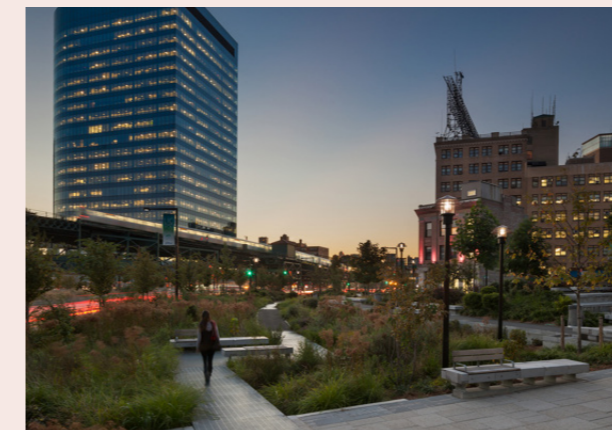
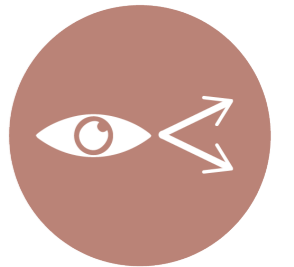


Figure 35: Queens Plaza Streetscape & Park, New York City (Orberter, 2014)



S.12 Sightlines as Orientation



I.4 No Hidden Corners



C.1 Soft Bounded Safety



C.9 Safe Evening Lighting

Interaction

The need for social interaction and environmental stimulation fluctuates over time for individuals with bipolar disorder, this means that flexible environments can play an important role in supporting emotional self-regulation. During (hypo)manic phases there is an increased desire for social engagement, but these stimulations need to be regulated. While during depressive phases individuals experience reduced energy and the need to withdraw. This results in the need for environments that offer different levels of engagement and a range of social opportunities, to support emotional regulation and accommodate the changing needs (Owen et al., 2016; Veseth et al., 2017).

Valuable insights from research on public space show how environments for these changing needs can be designed. Studies of Whyte (1980) demonstrated that successful public spaces are defined by their ability to support everyday human behaviour, rather than by monumental architecture. Whyte observed that people are naturally attracted to a place where others are present, and where simple amenities encourage informal interaction. The important element he identified, that support successful public spaces, was seating. This is especially relevant for care sites since comfortable and flexible seating options enable individuals to choose whether they want to withdraw temporarily, observe others, or engage socially. This leads to the pattern *seating is everything*, where seating is highlighted as an important spatial tool to support flexibility by providing options for both social interaction and withdrawal.

Actively used public spaces need more than only seating options, Whyte highlighted the importance of food-related amenities. Small food facilities, cafés or restaurants attract people and create opportunities for social interaction, this forms the basis for the pattern *food brings people together*. Especially in care environments such amenities can have a important and dual function, they function as social stimuli and a shared space, but also contribute to a sense of belonging. These shared amenities create an opportunity for meaningful participation, by offering care residents opportunities to engage in daily activities or work-related tasks.

However, it is important to recognise that effective social environments do

not require constant interaction. There is a need for retreat options, especially during depressive phases for individuals with bipolar disorder, while still maintaining a sense of connection to others. To support this balance, there is a need of spaces that allow care residents to sit quietly near others, described as being “alone together”. These environments support interaction without obligation, leading to the pattern *alone together spaces*. With the purpose to replace direct interaction by visual connection.

Including these different social interaction options on a care site requires a clear spatial structure. One that provides a variety of social settings, quiet areas, transitional zones, and more active social nodes. This principle forms the basis for the pattern *gradients of social intensity*, at any moment allowing care residents to choose the level of engagement that suits their emotional state. Directly related to this is the organisation of space based on sensory input. Enabling care residents to regulate both social and sensory exposure according to their needs, by differentiating areas in terms of activity, noise and visual stimulation, environments can support *sensory zoning*. The principle of these patterns can be observed in contemporary landscape projects such as Parc de la Villette and Park am Gleisdreieck. Both parks demonstrate how diverse zones, varying in levels of sensory intensity and activity, can coexist within an coherent environment and spatial framework. Areas, such as active spaces, open fields, and retreat spaces are carefully arranged to allow care residents to navigate between different environments, to prevent overstimulation and support social interaction.

In addition to internal variation, the relationship between care, neighbourhood and new residents is equally important. To support this interaction and create an inclusive environment, publicly accessible green spaces are essential. Increasing usability of the site and creating a shared space where all users can interact in a natural and inclusive way, leads to the pattern *public park for shared use*.

These insights demonstrate that social interaction in healing environments cannot be defined by a single intervention, but by a system of interconnected spatial conditions.



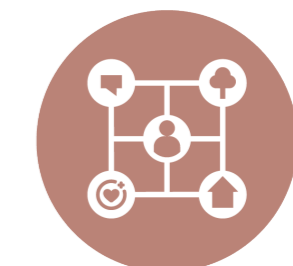
Figure 36: Park am Gleisdreieck, Berlin (Gleisdreieck Park / Atelier LOIDL, 2015; Lanoo, 2021)



Figure 37: Parc de la villette, Paris (Interactive map - La Villette, 2026; Pixlr, n.d.)



S.4 Gradients of Social Intensity



S.5 Sensory Zoning



I.2 Seating is Everything



I.3 Alone Together Spaces



I.5 Public Park for Shared Use



I.6 Food Brings People Together

3.2 Generations of Care sites

3.2.1 Historical large Care sites

Park Bloemendaal

The spatial characteristics of care sites differ from conventional urban environments. Historically, care institutions were developed as large institutional estates, located far away from the city and surrounded by large amounts of green landscapes. This leads to a positive spatial characteristic of these sites, the presence of extensive green structures. Research has shown that direct access to nature can have significant healing effects on mental health conditions by reducing stress, improving mood, and supporting cognitive recovery (Berman et al., 2012; Bratman et al., 2015). This means that the large quantity of green structures provide a strong foundation for the development of healing environments on care sites.

In addition to the restorative qualities of green structures, they can also play an important role in the spatial structure and orientation on the site. According to Lynch (1960), edges are one of the key elements through which individuals navigate and understand their environment. Edges help organise space, define boundaries, and help individuals to position themselves within a spatial system. On care sites existing green structures can function as these orienting edges, such as forest belts or tree lines. These insights lead to the pattern *green edges*, where green elements are used as spatial aspects that support orientation and legibility across the site, instead of only an ecological or aesthetic value.

Observations of how these care sites are currently being used by care residents reveal insights into additional spatial needs. Some residents can be seen wandering around on the site during pleasant weather conditions. However, for individuals with bipolar disorder or other mental health conditions experience cognitive or emotional challenges in relation to navigation. For this reason orientation can be difficult, therefore recognisable elements and a clear spatial structure is essential. According to Lynch (1960), elements such as edges, nodes, landmarks, and paths help individuals to improve their ability to orient themselves and help to create mental maps of their environment. Existing elements on care sites can serve as orientation points, such as sculptures, distinctive buildings, or recognisable landscape features. This leads to the identification of the pattern *recognisable landmarks*, where specific elements are intentionally used to support autonomy, spatial recognition, and navigation.

Another spatial shortcoming is the recurring issue of lack of spatial coherence and fragmented distribution of amenities across the care sites. At the location of Parnassia Park Bloemendaal for example, several amenities are present, but they are distributed across the site rather than concentrated in a central location. This leads to a spatial fragmentation, and negatively affect the accessibility and use of these amenities. The isolated locations limit visibility and connectivity, which likely attracts less users. In contrary, research in urban design suggests that clustering functions and creating recognisable activity centres, can significantly increase the use and vibrance of public spaces (Whyte, 1980).



Figure 38: Care location park Bloemendaal, The Hague (Scale 1:4000)

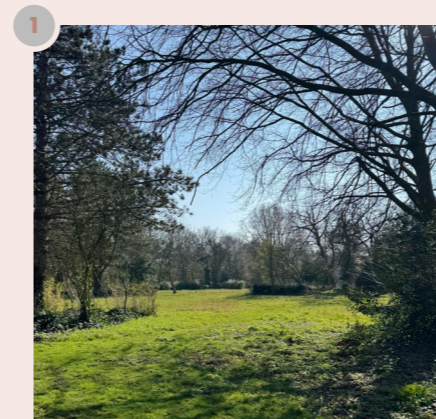


Figure 39: Existing green structures



Figure 40: Sculpture as a landmark

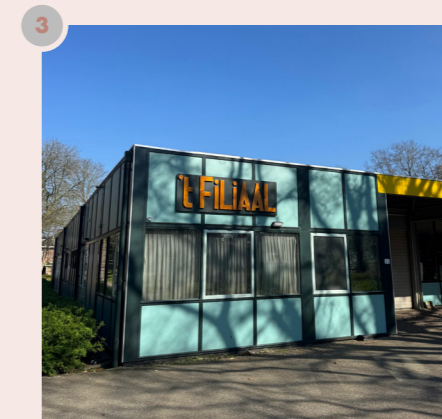


Figure 41: Amenity/shop



S.9 Green Edges



S.13 Recognisable Landmarks

GGZ Delfland Delft

A similar condition of fragmented and dispersed amenities can be observed at the GGZ Delfland site in Delft, where facilities such as a farm are located in relatively isolated areas, at the edges of the site. Due to this hidden position and limited visibility, the amenities are not easily accessible and are therefore used less frequently. This issue is closely related to a broader spatial problem, concerning the mobility and circulation within care environments. Walking is often not prioritized in the spatial organization of these sites. For example at the GGZ Delfland location, the existing infrastructure is primarily designed for cars, and there are relatively few clearly defined pedestrian routes. As a result, pedestrians often share the same road with vehicular traffic, which creates unsafe and uncomfortable environments.

Prioritising walking is particularly important in healthcare environments, as walking has been a shown movement that has a positive effect on mental health and emotional regulation for individuals with bipolar disorder (Noetel et al., 2024). Clear and safe walking routes that connect central places on the site, can encourage movement, enhance the overall spatial use, and supports daily routines. It is essential to reduce the presence of fast mobility traffic within the care environment to achieve this, and instead organize vehicular traffic centred at the periphery of the site. This lead to the identification of the pattern *fast mobility stream outside care area*, where fast mobility is positioned outside the core care area, allowing the internal environment to function as a walkable and safe space. In addition to movement, seating options are crucial in supporting the use of outdoor spaces. Well-designed seating areas can encourage social interaction, but can also create spaces to retreat and reflect. Observations on care sites have shown that the use of seating options is strongly influenced by the microclimate conditions. For example, at the beginning of the spring when the sun was shining at the GGZ location in Delft, benches that received sunlight from behind and offered wind protection were used most frequently. This highlights that comfortable microclimates are a key factor for the design of healing environments and their usability.

This leads to the pattern *microclimate comfort*, where spatial design can shape environmental conditions to support increased and longer stays in outdoor spaces. Creating comfortable microclimates implies offering options of environmental conditions, such as areas with wind protection, sun and shade options, and locations that respond to seasonal changes. Another reoccurring element on care sites is large open spaces, these outdoor spaces are being left unused. This spatial issue leaves potential to create environments that facilitate interaction, activities or options to retreat.

Safety remains a fundamental principle across all these spatial interventions. Healing environments must be designed to allow residents to move freely and independently, while maintaining a strong sense of safety. By combining clear walking routes, comfortable microclimates, and well-positioned amenities, the site can become both recovery supportive and accessible, encouraging everyday use while reinforcing autonomy and mental wellbeing.

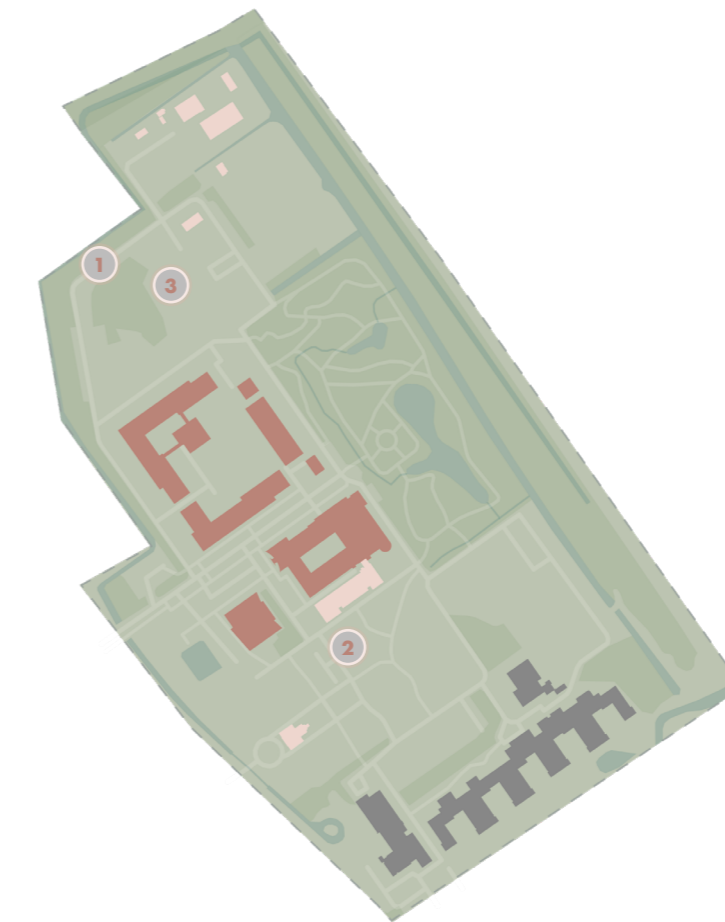


Figure 42: Care location GGZ Delfland, Delft (Scale 1:4000)

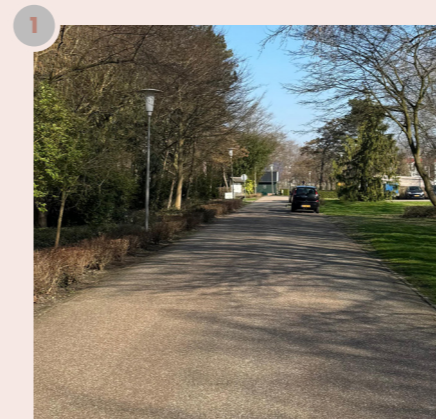


Figure 43: Car roads, without pedestrian paths

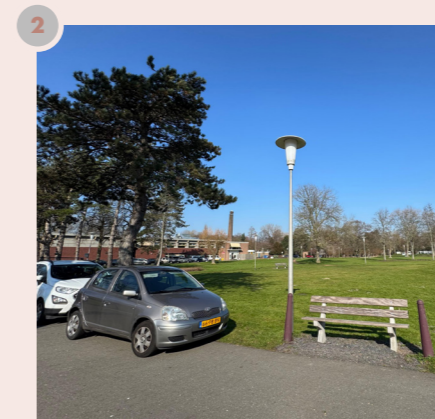


Figure 44: Seating right next to car traffic

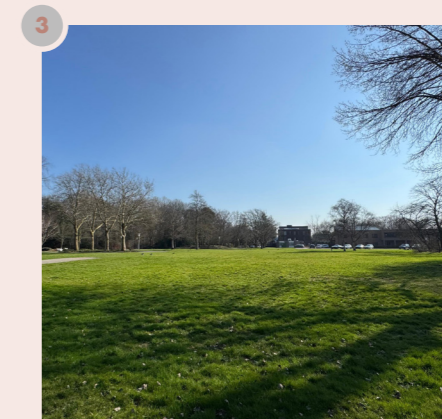
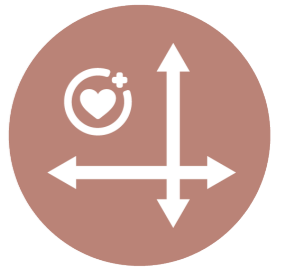


Figure 45: A lot of open unused green space



S.7 Fast Mobility stream outside Care area



C.6 Microclimate Comfort

3.2.2 New smaller Care sites

Poortmolen and GGZ Delfland Schiedam

Observing newer and smaller care sites revealed significantly different spatial characteristics in comparison to traditional large mental healthcare institutions. Historical care sites were developed as expansive estates with extensive green structures, while many newer facilities are more compact and embedded within existing urban environments. This shift in spatial conditions creates challenges and opportunities for the design of healing environments.

The most notable observation within these care sites itself, is the relative lack of green structures. Surrounding areas may consist of vegetation or other landscape elements, the direct visual and physical access to greenery on care sites itself is often limited. Research in environmental psychology has shown that access to greenery and views of nature have a positive influence on the recovery from a mental health disorder and mental health in general, by improving emotional wellbeing and reducing stress (Ulrich, 1984; Guidolin et al., 2024).. However, in several small care sites, such as the Antes location Poortmolen in Cappelle aan den IJssel, and the GGZ Delfland location in Schiedam, green structures are primarily located along the edges of the site. Rather than integrated greenery throughout the spatial structure, with the result that care residents have limited opportunities every day to move through green environments and experience views of vegetation. This observation leads to the identification of the pattern *view on green structures*, which emphasizes the importance of green elements throughout the site and ensuring constant visual and physical access to these elements.

On these smaller care sites the spatial configuration is often dominated by relatively large buildings within a limited footprint. This limits the availability of outdoor space for social interaction, and daily outdoor activities. This leads to restricted opportunities for outdoor recreation, walking and informal gatherings. Furthermore, large landscape structures such as water bodies are often present at the edges of the site, as seen at the location Poortmolen, functioning as a boundary between the care environment and the surrounding neighbourhood. These elements can be important in defining the spatial identity of a site and supporting orientation of care residents. This leads to the pattern *blue edges*, where water structures are

used not only as boundaries, but also as orientation elements within the spatial system.

Another characteristic of smaller care sites is their integration within urban areas. Contrasting with historically isolated care institutions, these sites are often fully surrounded by residential neighbourhoods. The close proximity to everyday urban life offers opportunities for social interaction and acceptance, this reduces the stigma surrounding mental health institutions. However, it requires careful spatial design to ensure that care environments remain openly accessible, rather than isolated or institutional. This shows that the relationship between the care site and its surrounding urban areas is very important, rather than creating hard boundaries, gradual transitions between care environments and the city can support inclusion and reduces stigma. This leads to the pattern of *soft edges to the city*, where boundaries become permeable and inviting rather than institutional and restrictive. Observations on the GGZ Delfland location in Schiedam, shows a example of soft edged. There are no hard boundaries and green structures are used for transitional zones between care and the city.

On the other hand observations of the location Poortmolen provide a clear example of the issue that the accessibility of care sites can still be improved. Public transport connections are not always clearly integrated, and entrances often seem institutional rather than open and inviting. This accessibility can be improved through open entrances and access, and clearer connections to public transport can help to transform these care sites into environments that feel more integrated into their urban surroundings. This forms the basis for the pattern of *accessible site*, where connectivity, openness, and visibility are key principles in reducing the institutional character and enhancing social inclusion. By introducing greener environments within the site, improving accessibility and inclusion, and strengthening visual connections to green structures on the site, smaller care sites can better function as healing environments.



Figure 46: Care location Poortmolen, Capelle aan den IJssel (Scale 1:4000)



Figure 47: Care location GGZ Delfland, Schiedam (Scale 1:4000)

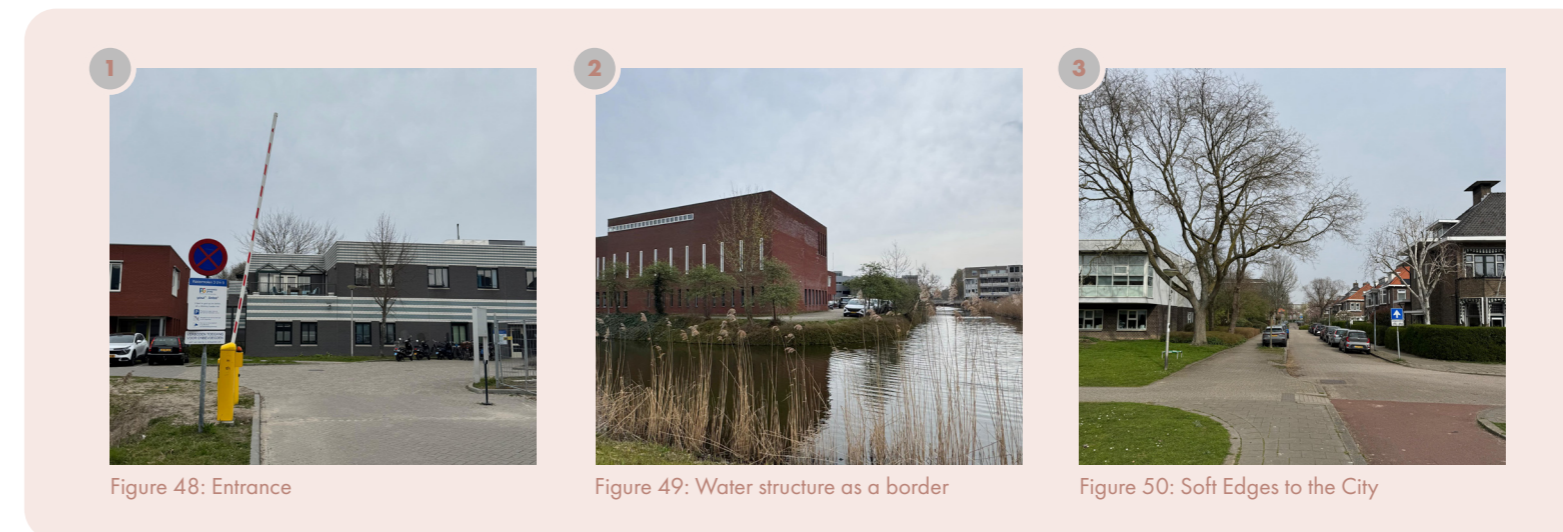


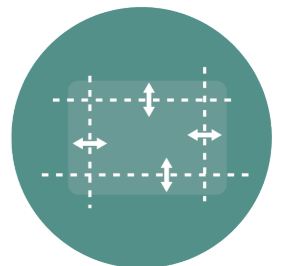
Figure 48: Entrance

Figure 49: Water structure as a border

Figure 50: Soft Edges to the City



C.3 View on Green Structures



I.1 Soft Edges to the City



S.1 Accessible Site



S.10 Blue Edges

3.2.3 Innovative generation of Care sites

Duin en Bosch Castricum

Many mental healthcare institutions are currently undergoing spatial and institutional transformations. Existing care facilities often require redevelopment, buildings do not longer meet contemporary standards or facilities need to expand their services. Redevelopment is frequently financed through the sale of parts of the care sites to private developers, who then build regular housing on these sites. This process introduces new stakeholders into formerly mono-functional care institutions, and leads to reverse integration, where urban living environments are introduced into healthcare settings.

Within this transformation there is a key spatial principle, this is the clustering of care and regular housing. Care environments need to be integrated with residential areas, while still maintaining a degree of separation that allows care residents to retreat when they need it. There should not be a complete separation between these functions, but a balance between proximity and privacy. This forms the basis for the pattern *clusters of care and housing*, where different stakeholders coexist within a shared environment, while preserving distinct spatial identities.

The dynamics of care sites will fundamentally change through the introduction of regular housing. There will be opportunities for creating more vibrant and socially integrated environments, because of the new residents who become additional users of the site's spaces and facilities. However, this transformation requires careful spatial planning. It becomes particularly important to create a central heart of the site, this space can function as a shared place for interaction between care residents, visitors, care staff, and new residents. Clustering amenities at this central heart, such as a restaurant, café, bakery, or small shops help to create a lively environment that attracts a diverse group of users. Providing opportunities for care residents to participate in work or community activities at such places, can positively influence their sense of identity and belonging. Research emphasizes that participation in everyday social environments and attending meaningful activities can contribute significantly to mental health recovery (Roe et al., 2021). This forms the basis for the identified pattern *the heart of the site*, where a central and shared space acts as a social and functional connector within the care environment.

An example of this approach can be found at the care location of Parnassia, Duin en Bosch in Castricum. A central area on this site functions as a shared heart of the community, where care residents, visitors, and residents of new regular housing come together. Amenities such as a restaurant, bakery, small shops, a bike repair and woodworking space create opportunities for interaction and everyday activity. These environments inform the pattern of *flexible spaces for making*, where care residents can engage in meaningful activities without rigid schedules, supporting a sense of belonging and a daily rhythm. Similarly, community gardens allow individuals to participate in shared activities while maintaining personal autonomy and flexibility. Gardening activities also support the recovery process by creating routine, providing a sense of belonging and purpose, and enabling low-pressure social interaction. This forms the basis for the pattern *community gardening*.

The presence of animals can further enhance the positive impact of a healing environment. Interaction with or the observation of animals, such as small farm, has been shown to reduce stress and stimulate positive emotional responses (Fine, 2019). This leads to the pattern *therapeutic farm*, where interaction with or observation of animals support mental wellbeing, while also functioning as a social connector within the site.

In addition, social integration and shared spaces help reduce stigma around mental health and care institutions, because it creates environments where different groups interact naturally. Nevertheless, the presence of new residents introduces additional spatial needs and expectations. They typically expect accessible public spaces, safe mobility options, and green structures for recreation. This means designing environments that respond to these needs while also supporting the recovery of care residents requires a careful balance, with calm, legible, and safe spaces while still allowing for a certain level of activity and social interaction.

By creating clear walking routes, restorative landscapes, and well-located social amenities, mental healthcare sites can develop into inclusive healing environments that support both everyday urban life and the recovery processes of care residents.



3.3 Pattern based Concept

Always Home Route

Most of the patterns are identified through literature and reference review, spatial analysis, and personal observations, however some emerge directly from the design process. The main idea that has been developed is the concept of a *continuous path*, that structures the movement across the site and from the basis of the "Always Home route".

Individuals with bipolar disorder need a balance between flexibility, autonomy, and predictability. Environments should allow both retreat and high stimulation options, because of the mood fluctuations. However, too much variation can lead to disorientation and stress, so a clear spatial structure is needed. Therefore the challenge is to create environments that offer diversity, while maintaining a continuous sense of orientation and safety. The continuous path addresses this, by introducing a recognisable and constant pathway. This path connects different spaces across the site, with the key principle to explore the site freely while always being able to intuitively return to a familiar point for the care resident. In this way, the pathway will both support independence and safety.

To function effectively, the continuous path needs to be clearly legible. The work of Kevin A. Lynch (1960) shows that people navigate in environments through elements such as paths, nodes, edges, landmarks, and districts. These elements together create imageability, it enables individuals to form clear mental maps. When applying these elements the path becomes more than a pathway alone, it is structured through recognisable landmarks, nodes, edges, and areas that support orientation.

The continuous path is also closely related to other patterns. Spatial structure patterns ensure clarity and continuity, social interaction patterns can activate the pathway and create flexibility through spaces for interaction or retreat, and sensory comfort patterns shape the experience of the path through the use of materiality, microclimate, and light.

By the implementation of other patterns the continuous path gets transformed into a sequence of supportive environments. It functions therefore as a stabilizing spatial framework, by enabling movement, exploration, and social engagement, while maintaining a continuous sense of orientation and safety. This pattern will be further developed and visualised in a vision for the case study location, Park Bloemendaal in The Hague. It forms the backbone of the spatial strategy for this care site.



S.6 Continuous Path

3.4 Pattern Language

3.4.1 Categories Catalogue

The identified patterns are the result of a combination of the methods literature review, spatial analysis, personal observations, and research through design. To get a better understanding of how these patterns work and are structured, they are clustered into three overarching categories: Spatial structure, Social interaction, and Sensory comfort. Each of these categories represents a different factor of how environments are experienced and used. Together they form an inclusive framework for the design of healing environments. The division of the patterns across the categories is demonstrated in a diagram in Figure 55.

Spatial structure is the category that focusses on the legibility and spatial organization of the environment. It demonstrates how spaces can be connected, understood, and arranged by users. In this category patterns relate to accessibility, orientation and movement. The patterns define how individuals navigate on the site, how different functions can be clustered, and how elements such as landmarks, nodes, and a structured route contribute to a legible mental map. This is particularly important for individuals with bipolar disorder, because a clear and understandable spatial structure can enhance autonomy and reduces stress related to disorientation. Therefore the patterns in this category establish the underlying framework for a care site, enabling care residents and other users to move through the environment with confidence.

The category social interaction concerns the way in which environments support encounters between people, and the ability to withdraw from social environments. The patterns in this category emphasize flexibility and the autonomy to choose between different environments, rather than stimulating constant interaction. The different environments should accommodate different levels of social engagement, varying from high-stimulus shared spaces to more low-stimulus private spaces. This is particularly relevant for individuals with bipolar disorder, because their need for social interaction varies depending on their mood, therefore the patterns focus on creating environments that allow participation without demand.

The last category, sensory comfort, focusses on how the environment is perceived through senses and how this influences mental wellbeing. In

this category the patterns focus on elements such as, sound, microclimate, light and vegetation. With the aim to reduce overstimulation, through the creation of predictable and restorative environments. These qualities are essential for mood regulation, especially for individuals with bipolar disorder, because they have a heightened sensitivity to sensory stimuli. Sensory comfort is however equally important for all users, it contributes to the overall experience of the site. Through carefully designed sensory conditions, the patterns in this category focus on creating environments that feel comfortable, safe, and inviting.

The patterns are grouped into these three categories, but they are also organised according to different spatial scales, as demonstrated in the diagram in Figure 55. These scales range from the city scale, where the relation between the broader urban context and the care site is addressed, to the object scale, this relates to specific elements such as material details, seating, and lighting. This approach through different scales ensures that the patterns will not operate as only isolated interventions, but as interconnected strategies that have an influence on the environment at different levels.



CITY SCALE



NEIGHBOURHOOD SCALE



STREET SCALE



OBJECT SCALE

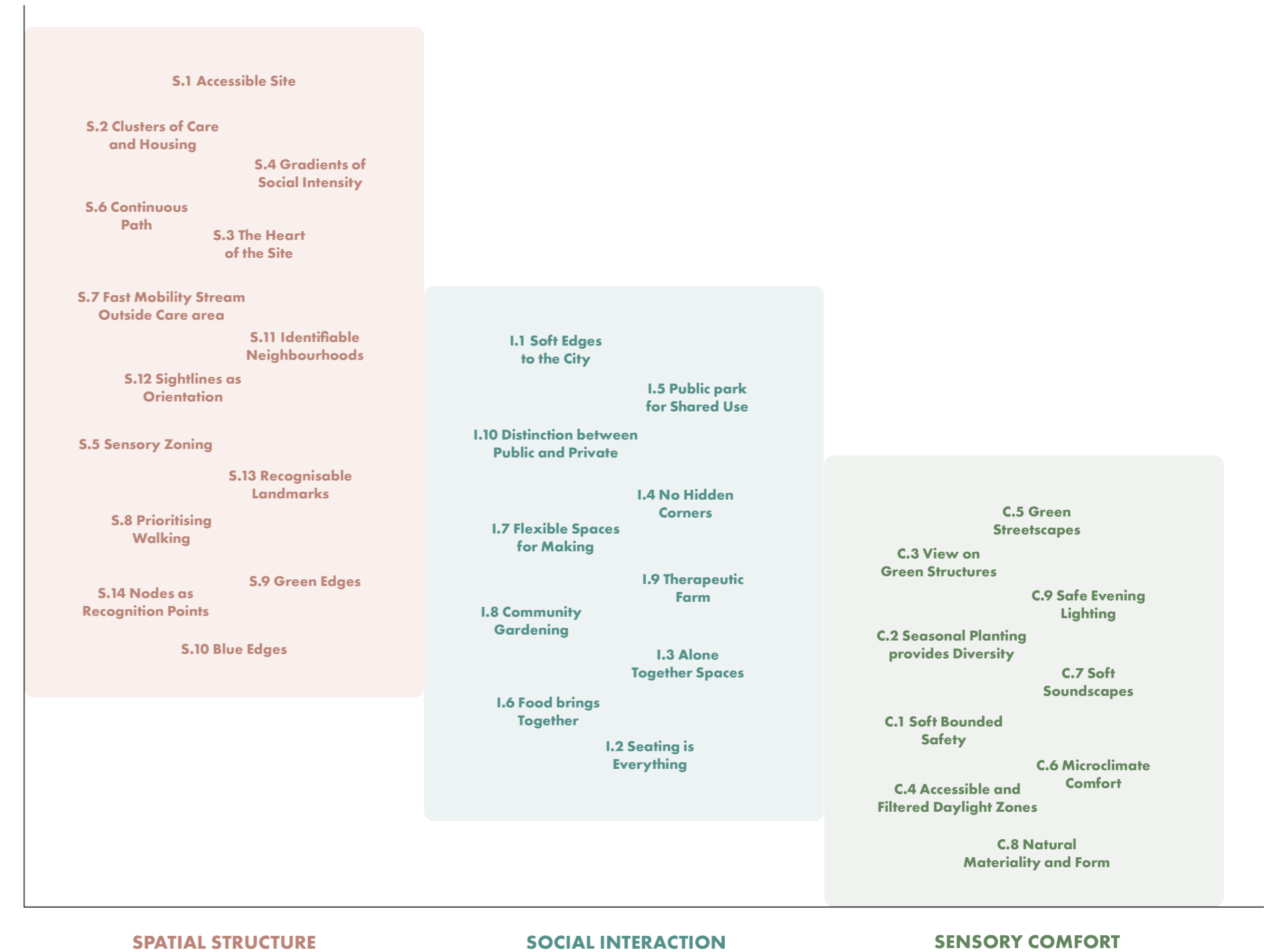


Figure 55: Categories patterns

3.4.2 Relation between Patterns

The division in categories and scales provide a clear framework, it demonstrates that the design of healing environments is not based on a single intervention, but on the interaction between spatial organization, social interaction, and sensory comfort. Therefore the patterns do not function as single solutions, but as an connected system in which patterns reinforce and support each other.

The relationship between form a network, as illustrated in the diagram in Figure 56. Within this network certain patterns act as foundational elements, they form the basis where other patterns build on. These foundational patterns are mostly related to the spatial structure of the site, such as the legibility of the site, movement on the site, and the presence of a collective central heart of the site. They have a more central or influential role, and have a broader impact on the overall functioning of the site. The effectiveness of other patterns, such as the ones related to sensory stimuli and recognition points, depends on the underlying spatial conditions. For instance, environments that aim to support social interaction, rely on clear accessibility and legible routes. The foundational patterns are highlighted in Figure 56 and in the pattern language catalogue.

The diagram shows at the same time that patterns from different categories are closely connected. The spatial structure of a care site influences how and where social interaction takes place, while the sensory conditions shape how these environments are experienced. A central meeting area on the site becomes more effective when combined with a comfortable microclimate, and seating options. This demonstrates that the three different categories should not be observed as separate layers, but as an overlapping system that together defines the quality of the healing environment.

It is important to mention that these relationships between the patterns do not imply that all patterns must be applied in every situation. Since every care locations has its own spatial characteristics, shortcomings and existing structures. The application of patterns should also be understood as a adaptive and selective process, rather than a fixed solution. This depends on the specific challenges and qualities of a care site, particular patterns

may be more relevant or necessary than others. Therefore the diagram in Figure 56 can be read as a supporting tool to understand potential relationships and dependencies, helping to identify which patterns are the most suitable for a specific context and how they can be combined to create a healing environment.

This network of patterns supports in this way a flexible design approach, depending on specific conditions of each care site, interventions are carefully chosen and combined. Instead of applying a fixed solution, the aim of this design strategy is to develop healing environments in which spatial structure, social interaction, and sensory comfort work together to support the safety, autonomy, and comfort of mainly care residents, and other users.



Figure 56: Related patterns

3.4.3 Broader Urban Context

The identified patterns work in complementary levels of bipolar specific needs and overall mental wellbeing. These levels are not separated as independent systems, but they are interconnected and reinforce each other, as demonstrated in the diagram in Figure 57. The patterns describes as bipolar specific, are specifically derived from the characteristics of bipolar disorder. These patterns respond to the mood fluctuations of this disorder, and the changing needs in terms of social interaction, stimulation, and orientation. Patterns such as the continuous path, gradients of social intensity, and sensory zoning address the need for predictability, autonomy and flexibility. Patterns based on orientation further support autonomy by guiding individuals through the environment with confidence, especially during phases of instability. This has a positive effect on the recovery process of care residents with bipolar disorder.

The patterns that contribute to overall mental wellbeing are not only beneficial for care residents with a bipolar disorder, but for a broader group of users, such as visitors, residents, and neighbourhood users. These patterns focus on spatial qualities such as walkability, shared use of the space, and accessibility. These elements enhance the everyday usability of the environment and create inclusive environments that encourage social participation and mental wellbeing of all users.

The two levels of patterns are not isolated, but they are strongly connected. Patterns derived from the perspective of bipolar disorder can also improve the wellbeing of all users, while generic patterns become more meaningful when they are adapted to the specific needs on different care locations. For instance, prioritising walking supports both the overall use of the site and the recovery process of care residents, the implementation of this pattern is also location specific.

The integration of both levels is the strength of this approach. By embedding bipolar specific patterns within a broader framework of overall wellbeing, the design contributes to inclusive, shared spaces and avoids creating isolated environments. Therefore this project focusses on designing healing environments that support diverse users, while addressing specific needs for the recovery process of individuals with bipolar disorder.



Figure 57: Broader context of the Patterns

S.1 Accessible Site

Care sites should be easily accessible through clear infrastructure and public transport connections so that the site feels open and integrated, rather than isolated.



Theoretical back-up

Historically, mental healthcare institutions were located far away from cities and daily life, resulting in spatial and social isolation. Contemporary mental healthcare research emphasizes integration with the urban fabric, as accessibility reduces stigma and allows care residents to remain connected to everyday society (Roe et al., 2021). Additionally, accessible environments improve independence and participation for care residents.

Practical implication

Care sites should be connected to public transport networks and bicycle routes, entrances should be visible and welcoming, and pedestrian access points should be clearly identifiable. The site should avoid gated or closed appearances that discourage entry, support the institutional character and stigma.

Related patterns

S.7 Fast mobility outside Care area, C.1 Soft Bounded Safety, I.1 Soft edges to the City.

S.2 Clusters of Care and Housing

Care and regular housing should be spatially clustered to maintain privacy for care residents, while still allowing interaction with everyday urban life.



Theoretical back-up

Research on deinstitutionalisation emphasises that people with bipolar disorder benefit from living environments that are integrated into society, rather than being fully isolated (Owen et al., 2016; Veseth et al., 2017). At the same time, individuals with mental health disorders often require spaces where they can retreat and recover from overstimulation.

Practical implication

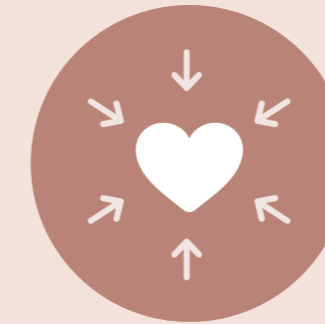
Housing typologies for care residents should be grouped together to provide a sense of safety and familiarity, while regular housing can be located nearby. Shared public spaces between these clusters can create opportunities for interaction without forcing constant social exposure.

Related patterns

S.3 The Heart of the Site, S.4 Gradients of Social Intensity, S.7 Fast Mobility Stream outside Care area, C.1 Soft Bounded Safety, I.10 Distinction between Public and Private.

S.3 The Heart of the Site

Every care site should have a central collective space where amenities and social interaction come together, forming the recognisable heart of the community.



Theoretical back-up

Research in public spaces shows that clustering activities increases the likelihood that people will gather, interact, and use the space. According to Whyte (1980), vibrant public spaces emerge when multiple functions are concentrated in one location, creating a natural attractor for social life.

Practical implication

Facilities such as cafés, restaurants, shops, community centres, and small services should be clustered on a central location. This central area should be easily accessible from all parts of the site and connected to main walking routes.

Related patterns

S.2 Clusters of Care and Housing, S.4 Gradients of Social Intensity, S.6 Continuous Path, I.6 Food brings Together, I.7 Flexible Spaces for Making, I.8 Community Gardening, I.9 Therapeutic farm.

S.4 Gradients of Social Intensity

Care environments should provide a range of spaces with different levels of social intensity so residents can choose their level of engagement based on their emotional state.



Theoretical back-up

People with mood disorders, such as bipolar disorder, often experience fluctuating energy levels and social needs. Environments that allow individuals to control their level of social exposure, can support emotional regulation and reduce stress (Owen et al., 2016; Veseth et al., 2017).

Practical implication

The spatial layout should include active social interaction spaces, semi-social transitional areas, and quiet retreat spaces. These zones should be connected through a walking route that allows residents to move between them easily.

Related patterns

S.3 The Heart of the Site, S.5 Sensory Zoning, I.5 Public park for Shared use, I.2 Seating is Everything, I.3 Alone Together Spaces, I.6 Food brings Together, I.7 Flexible Spaces for Making, I.8 Community Gardening, I.9 Therapeutic Farm.

S.5 Sensory Zoning

Care sites should be organized into zones with different sensory intensities to accommodate varying levels of stimulus tolerance.



Theoretical back-up

Mental healthcare environments must address sensory sensitivity, as excessive stimuli can increase stress or anxiety for some individuals. Healing environments research highlights the importance of calm, low-stimulus spaces that allow psychological recovery (Huisman et al., 2012; Roe et al., 2021)..

Practical implication

Design the site with quiet zones, transitional zones, and active zones. Quiet zones can include gardens or small courtyards, while active zones may contain social amenities or community activities, each zone has its own sensory experience.

Related patterns

S.4 Gradients of Social Intensity, I.3 Alone Together Spaces, C.5 Green Streetscapes, C.3 View on Green Structures, C.6 Microclimate Comfort, C.4 Accessible and Filtered Daylight Zones, C.7 Soft Soundscapes, C.9 Safe Evening Lighting.

S.6 Continuous Path

A continuous walking route should structure the site and help residents orient themselves while allowing them to move around more independently.



Theoretical back-up

Clear paths are a fundamental element of spatial orientation. Lynch (1960) demonstrated that recognisable routes help people create mental maps of their environment, increasing their confidence and autonomy.

Practical implication

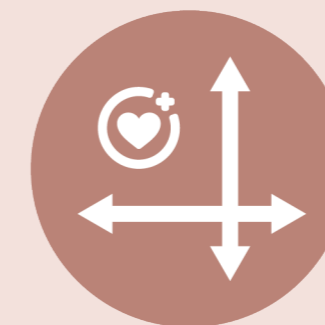
Design a looped walking path that connects important destinations across the site. The route should be continuous, clearly marked, and easy to follow so residents can always find their way back to their starting point.

Related patterns

S.3 The Heart of the Site, S.8 Prioritising Walking, S.12 Sightlines as Orientation, S.13 Recognisable Landmarks, S.11 Identifiable Neighbourhoods, S.14 Nodes as Recognition points, S.9 Green Edges, S.10 Blue Edges.

S.7 Fast Mobility Stream Outside Care area

Fast mobility routes such as car traffic should be kept outside the primary care environment to reduce noise and improve safety.



Theoretical back-up

Traffic noise and vehicular dominance can increase stress and discourage outdoor activity by care residents. Creating pedestrian-oriented environments improves both safety and mental wellbeing (Noetel et al., 2024, Huisman et al., 2012).

Practical implication

Locate main vehicular roads along the outer edges of the site, while keeping the central care environment primarily pedestrian-oriented.

Related patterns

S.1 Accessible Site, S.2 Clusters of Care and Housing, C.7 Soft Soundscapes, C.9 Safe Evening Lighting.

S.8 Prioritising Walking

Walking should be the primary mode of movement within care sites to support both safety and mental health.



Theoretical back-up

Research shows that moderate physical activity, such as walking, can reduce symptoms of depression and improve emotional wellbeing (Noetel et al., 2024). Walking environments also encourage social encounters and daily movement routines.

Practical implication

Design the site with pedestrian priority at crossings and intersections. Walking paths should be comfortable, well lit, and clearly separated from vehicular traffic.

Related patterns

S.6 Continuous Path, S.14 Nodes as Recognition points, C.2 Seasonal Planting provides Diversity, C.9 Safe Evening Lighting.

S.9 Green Edges

Green landscape structures can function as natural edges that define spaces and support orientation.



Theoretical back-up

Edges help people understand spatial boundaries and organise their mental map of an environment (Lynch, 1960). Green edges can work as natural orientation points on care sites.

Practical implication

Use hedges, tree lines, or planted buffers to define spatial boundaries. Usually on historical care institutions these green structures already exist.

Related patterns

S.6 Continuous Path, S.10 Blue Edges, S.12 Sightlines as Orientation, I.1 Soft Edges to the City, I.10 Distinction between Public and Private, C.1 Soft Bounded Safety.

S.10 Blue Edges

Water structures can act as natural spatial edges while also providing restorative landscape qualities.



Theoretical back-up

Water elements contribute to restorative environments and can improve mental well-being. Blue edges help to understand spatial boundaries and the creation of a mental map of the environment, and works as a natural orientation point. (Lynch, 1960; Roe et al., 2021).

Practical implication

Integrate canals, ponds, or other water structures as spatial boundaries and orientation elements. On historical care institutions these water structures usually already exist.

Related patterns

S.6 Continuous Path, S.9 Green Edges, S.12 Sightlines as Orientation, I.1 Soft Edges to the City.

S.11 Identifiable Neighbourhoods

Different neighbourhood identities within a care site can strengthen spatial recognition and create a sense of place.



Theoretical back-up

Distinct neighbourhood identities help individuals to organize spatial information and navigate through environments more easily (Lynch, 1960). It helps to create orientation points and mental maps of the environment.

Practical implication

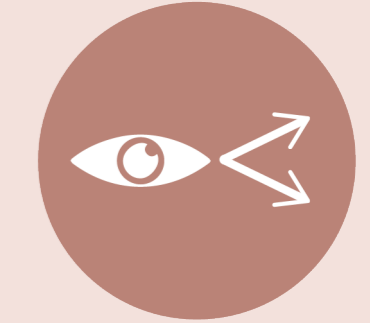
Use different building typologies, materials, or landscape styles to distinguish neighbourhoods.

Related patterns

S.6 Continuous Path, S.13 Recognisable Landmarks, I.10 Distinction between Public and Private, C.2 Seasonal Planting provides Diversity, C.8 Natural Materiality and Form.

S.12 Sightlines as Orientation

Alternating open and sheltered spaces can improve spatial orientation by creating clear visual connections between different parts of the site.



Theoretical back-up

Visual clarity helps individuals understand spatial relationships and navigate through environments more confidently. Additionally, it supports the safety on the site by a clear overview (Lynch, 1960; Huisman et al., 2012).

Practical implication

Design landscapes with controlled sightlines where landmarks or destinations remain partially visible from key points along the route. Create open viewpoints, where necessary, as safety measurements.

Related patterns

S.6 Continuous Path, S.9 Green Edges, S.10 Blue Edges, I.1 Soft Edges to the City.

S.13 Recognisable Landmarks

Distinct buildings, sculptures, or landscape elements can function as landmarks that support spatial recognition and orientation.



Theoretical back-up

Landmarks are essential elements in the creation of a mental map and helps individuals remember locations and routes within complex environments (Lynch, 1960).

Practical implication

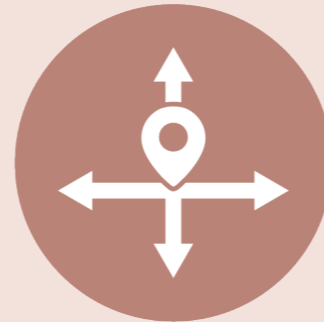
Place recognisable elements such as sculptures, unique buildings, or large trees along main walking paths to support orientation.

Related patterns

S.6 Continuous Path, S.11 Identifiable Neighbourhoods, S.14 Nodes as Recognition Points.

S.14 Nodes as Recognition points

Different types of nodes can act as spatial reference points that structure movement across the site.



Theoretical back-up

Nodes are strategic points where paths intersect, and where social or functional activities occur. These different types of nodes can stimulate the orientation ability of care residents, especially for individuals with bipolar disorder, and also other users (Lynch, 1960).

Practical implication

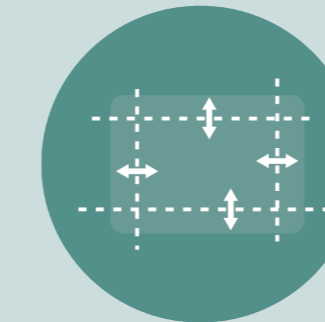
Design nodes such as squares, garden intersections, road crossings, or activity spaces at key connections to walking routes.

Related patterns

S.6 Continuous Path, S.8 Prioritising Walking, S.13 Recognisable Landmarks.

I.1 Soft Edges to the City

Care sites should have gradual transitions to the surrounding city, rather than hard physical boundaries in order to support integration, and reduce social isolation and stigma.



Theoretical back-up

Historically, many mental healthcare sites were designed as isolated institutions separated from urban life. Contemporary mental healthcare research emphasizes the importance of integration and social inclusion, as participation in everyday urban environments can reduce stigma and improve recovery outcomes (Roe et al., 2021).

Practical implication

Use landscape elements, gradual spatial transitions, and shared public spaces instead of big water bodies, fences or walls to reconnect the care site to surrounding neighbourhoods.

Related patterns

S.1 Accessible Site, S.9 Green Edges, S.10 Blue Edges, S.12 Sightlines as Orientation, I.10 Distinction between Public and Private.

I.2 Seating is Everything

Providing diverse seating options is essential, because seating supports social interaction, observation, and individual retreat.



Theoretical back-up

Observations of successful public spaces show that seating is one of the most important factors determining whether people stay in a space. According to Whyte (1980), people are more likely to use spaces where they can comfortably sit and observe others.

Practical implication

Provide a variety of seating types, including benches, edge seating, and sheltered seating areas. These different seating options need to provide different levels of social exposure.

Related patterns

S.4 Gradients of Social Intensity, I.4 Public park for Shared use, I.3 Alone Together Spaces, I.4 No Hidden Corners.

I.3 Alone Together Spaces

Spaces that allow individuals to be present near others without direct interaction are essential to support participation without social pressure.



Theoretical back-up

Whyte (1980) observed that people often prefer to sit near others, even when they are not directly interacting. This allows care residents to feel socially connected to a broader community, while maintaining personal space (Owen et al., 2016).

Practical implication

Create spaces such as terraces, gardens, or seating edges where individuals can observe social life without actively participating. A place to retreat, but still a visible place, because of safety measurements.

Related patterns

S.4 Gradients of Social Intensity, S.5 Sensory Zoning, I.2 Seating is Everything, I.4 No Hidden Corners.

I.4 No Hidden Corners

Care environments should avoid isolated or hidden spaces in order to maintain safety and a sense of spatial overview.



Theoretical back-up

Clear sightlines and visible spaces improve perceived safety and encourage people to use public areas more confidently. Especially on care sites safety is very important, care residents should not be able to hide away (Huisman et al., 2012).

Practical implication

Design open spaces with clear visibility and avoid dark or isolated areas that may create feelings of insecurity.

Related patterns

C.6 Microclimate Comfort, I.2 Seating is Everything, I.3 Alone Together Spaces.

I.5 Public Park for Shared use

A shared public park can function as a communal space where care residents, local residents, staff, and visitors can interact and participate in everyday activities.



Theoretical back-up

Public spaces that allow informal social interaction help to create inclusive communities and reduce social stigma. Access to shared green spaces also supports mental well-being and social participation (Owen et al., 2016; Berman et al., 2012).

Practical implication

Design a central park that is accessible for all stakeholders while still maintaining safe and comfortable areas for care residents.

Related patterns

S.4 Gradients of Social Intensity, I.2 Seating is Everything, I.6 Food brings Together.

I.6 Food Brings Together

Food-related spaces can function as strong social attractors that bring care residents, visitors, and local residents together.



Theoretical back-up

Whyte (1980) observed that food vendors and cafés significantly increase the use and liveliness of public spaces because food naturally attracts people and encourages informal interaction.

Practical implication

Introduce small restaurants, bakeries, or cafés in the central area of the site where both care residents and other users can meet and interact.

Related patterns

S.3 The Heart of the site, S.4 Gradients of Social Intensity, I.5 Public park for Shared use.

I.7 Flexible Spaces for Making

Spaces for creative or productive activities allow care residents to participate in meaningful work without rigid schedules.



Theoretical back-up

Participation in meaningful activities can strengthen identity, self-esteem, and daily structure for people with mental health disorders. It can create a sense of belonging for care residents, this has a positive influence on the recovery process (Veseth et al., 2017; Roe et al., 2021).

Practical implication

Provide workshop spaces such as woodworking studios, bike repair shops, or creative ateliers where residents can work at their own pace.

Related patterns

S.3 The Heart of the Site, S.4 Gradients of Social intensity.

I.8 Community Gardening

Community gardens allow individuals to participate in shared activities while maintaining personal autonomy.



Theoretical back-up

Gardening activities can support recovery processes and the overall mental health by creating a daily routine, providing a sense of purpose and belonging, and allowing social interaction in a low-pressure setting (Veseth et al., 2017; Roe et al., 2021).

Practical implication

Create garden plots where residents can garden individually while still being part of a shared environment, where social interaction is possible but not mandatory.

Related patterns

S.3 The Heart of the Site, S.4 Gradients of Social intensity.

I.9 Therapeutic Farm

Interaction with animals can support emotional well-being and provide opportunities for social interaction and meaningful activity.



Theoretical back-up

Animal-assisted interventions have been shown to reduce stress and improve mood among individuals with mental health conditions, such as bipolar disorder, by fostering emotional connections and responsibility (Fine, 2019).

Practical implication

Introduce a small therapeutic farm or animal area where residents can observe or participate in caring for animals.

Related patterns

S.3 The Heart of the Site, S.4 Gradients of Social intensity.

C.1 Soft Bounded Safety

Soft landscape boundaries are essential to create safety without reinforcing an institutional or restrictive atmosphere.



Theoretical back-up

Institutional environments can negatively affect mental wellbeing and increase stigma. Healing environments aim to provide safety while maintaining a welcoming and natural character (Liu et al., 2026; Ulrich et al., 2008).

Practical implication

Use hedges, trees, or landscape features instead of fences, wherever possible, to define boundaries on the site. For safety measures fences are sometimes required, natural elements can be used to hide them, this reduces the institutional character from the outside view on care environments.

Related patterns

S.1 Accessible Site, S.2 Clusters of Care and Housing, S.9 Green Edges, I.10 Distinction between Public and Private, C.2 Seasonal Planting provides Diversity, C.8 Natural Materiality and Form.

C.2 Seasonal Planting provides Diversity

Seasonal planting should introduce subtle variation throughout the year, encouraging people to experience the outdoor environment repeatedly.



Theoretical back-up

Natural variation and seasonal change can stimulate interest in the outdoor environment, while maintaining a calm and restorative atmosphere on the site (Kaplan & Kaplan, 1989).

Practical implication

Use diverse planting schemes with trees, bushes, plants, and flowers that change across seasons.

Related patterns

S.8 Prioritising Walking, S.11 Identifiable Neighbourhoods, C.1 Soft Bounded Safety, C.5 Green Streetscapes, C.8 Natural Materiality and Form.

C.3 View on Green Structures

Visual access to greenery is essential to support recovery from mental health disorders and improves mental wellbeing.



Theoretical back-up

Studies show that views of natural landscapes can reduce stress and support emotional recovery (Ulrich, 1984; Guidolin et al., 2024). This is especially relevant for the recovery process of individuals with bipolar disorder.

Practical implication

Ensure that buildings, paths, and seating areas provide views toward trees, gardens, or natural landscapes.

Related patterns

S.5 Sensory Zoning, C.5 Green Streetscapes.

C.4 Accessible and Filtered Daylight Zones

Accessible and filtered daylight should ensure a comfortable visual experience of natural light, while preventing overstimulation caused by direct and intense sunlight.



Theoretical back-up

Soft and natural lighting conditions contribute to restorative environments by reducing sensory stress and overstimulation. In addition, the circadian rhythm is supported by accessible exposure to daylight, this is essential for emotional regulation (Guidolin et al., 2024; Ulrich et al., 2008).

Practical implication

Design spaces where daylight is both present and easily accessible. Use trees, pergolas, or shading structures to filter and soften direct sunlight, and create transitional zones between direct sunlight and shade.

Related patterns

S.5 Sensory Zoning, C.6 Microclimate Comfort, C.7 Soft Soundscapes.

C.5 Green Streetscapes

Green streetscapes can create a visual and ecological connection between care areas and residential areas.



Theoretical back-up

Green urban environments have been shown to improve mental health and reduce stress among urban and care residents (Roe et al., 2021).

Practical implication

Plant trees and vegetation along streets and pathways to create continuous green corridors.

Related patterns

S.5 Sensory Zoning, C.2 Seasonal Planting provides Diversity, C.3 View on Green Structures.

C.6 Microclimate Comfort

Comfortable microclimates encourage people to spend time outdoors and interact with their surroundings.



Theoretical back-up

Environmental comfort strongly influences how public spaces are used, particularly in terms of sunlight, wind, and temperature (Roe et al., 2021; Guidolin et al., 2024).

Practical implication

Provide seating and amenities with different environmental conditions, such as sun exposure, shade, and wind protection.

Related patterns

S.5 Sensory Zoning, C.4 Accessible and Filtered Daylight Zones, I.4 No Hidden Corners.

C.7 Soft Soundscapes

Natural sound environments can reduce stress and enhance the calming qualities of outdoor environments.



Theoretical back-up

Natural sounds, such as water or rustling leaves, can reduce stress levels and improve emotional wellbeing (Guidolin et al., 2024; Roe et al., 2021).

Practical implication

Introduce water features, vegetation, and quiet zones that buffer traffic noise and provide calming environments.

Related patterns

S.5 Sensory Zoning, S.7 Fast Mobility Stream outside Care area, C.4 Accessible and Filtered Daylight Zones.

C.8 Natural Materiality and Form

Natural materials create a comforting and less institutional atmosphere compared to artificial materials.



Theoretical back-up

Healing environments often use natural materials because they are perceived as more comforting, calming and familiar. Organic forms can calm down the mind of individuals, a lot more than linear shapes (Guidolin et al., 2024; Ulrich et al., 2008).

Practical implication

Use organic forms and wood, natural stone, or other tactile natural materials in outdoor spaces and buildings.

Related patterns

S.11 Identifiable Neighbourhoods, I.10 Distinction between Public and Private, C.1 Soft bounded Safety, C.2 Seasonal Planting provides Diversity.

C.9 Safe Evening Lighting

Soft, warm lighting improves safety and comfort without creating visual overstimulation.



Theoretical back-up

Proper lighting improves perceived safety and allows outdoor spaces to remain usable during evening hours. Low-intensity lighting reduces overstimulation (Ulrich et al., 2008).

Practical implication

Install warm, low-intensity lighting along paths, nodes, and seating areas, to reduce dark and hidden spaces.

Related patterns

S.5 Sensory Zoning, S.7 Fast Mobility Stream Outside Care area, S.8 Prioritising Walking.

3.5 Additional Insights

Brainstorming Sessions

During the research and design process, I conducted brainstorming sessions with experts, which provided an essential moment of reflection and validation. The experts work in different domains, I have spoken to an urban designer/landscape architect who is specialised in care sites, project managers, a walking coach, and care workers from different care sites. They have provided validating feedback and a new insight that provides a realistic view on this project.

I have experienced the real life situation of care workers through an internship day on a care site. Walking here through open and closed facilities uncovered interesting findings, it showed the different perspectives of how care residents perceive environments, their daily routines, and the different spatial needs they have. Some care residents are allowed to walk around the site by themselves, some under supervision, and others are not allowed to leave the closed facility for safety reasons. This led to the topic of safety in relation to public and private spaces, because there is still a lot of nuisance on care locations. Care residents or visitors hang around in spaces where they are not allowed to be, for example in private spaces or hidden locations on the site. Because of these hidden locations, nuisance such as drug dealing is still a problem on care sites. This confirms the importance of the pattern no hidden corners.

In addition, discussions with the urban designer and walking coach confirmed the importance of walking within the recovery process, walking not only supports physical activity, but also creates moments for social interaction, emotional regulation, and therapeutic conversations. Walking routes should be spaces where care residents can temporarily escape indoor environments, regulate stress and experience a sense of autonomy. These findings strongly support the development the patterns prioritising walking and continuous path, with eventually the concept of the Always Home Route. It reinforces the importance of designing environments that encourage safe movement.

Overall, the brainstorming sessions functioned as feedback sessions, provided inspirational insights and a critical reality check within the project. Through this method the theoretical and observational findings were

validated, however also a practical challenge was revealed that did not emerge from literature study alone.

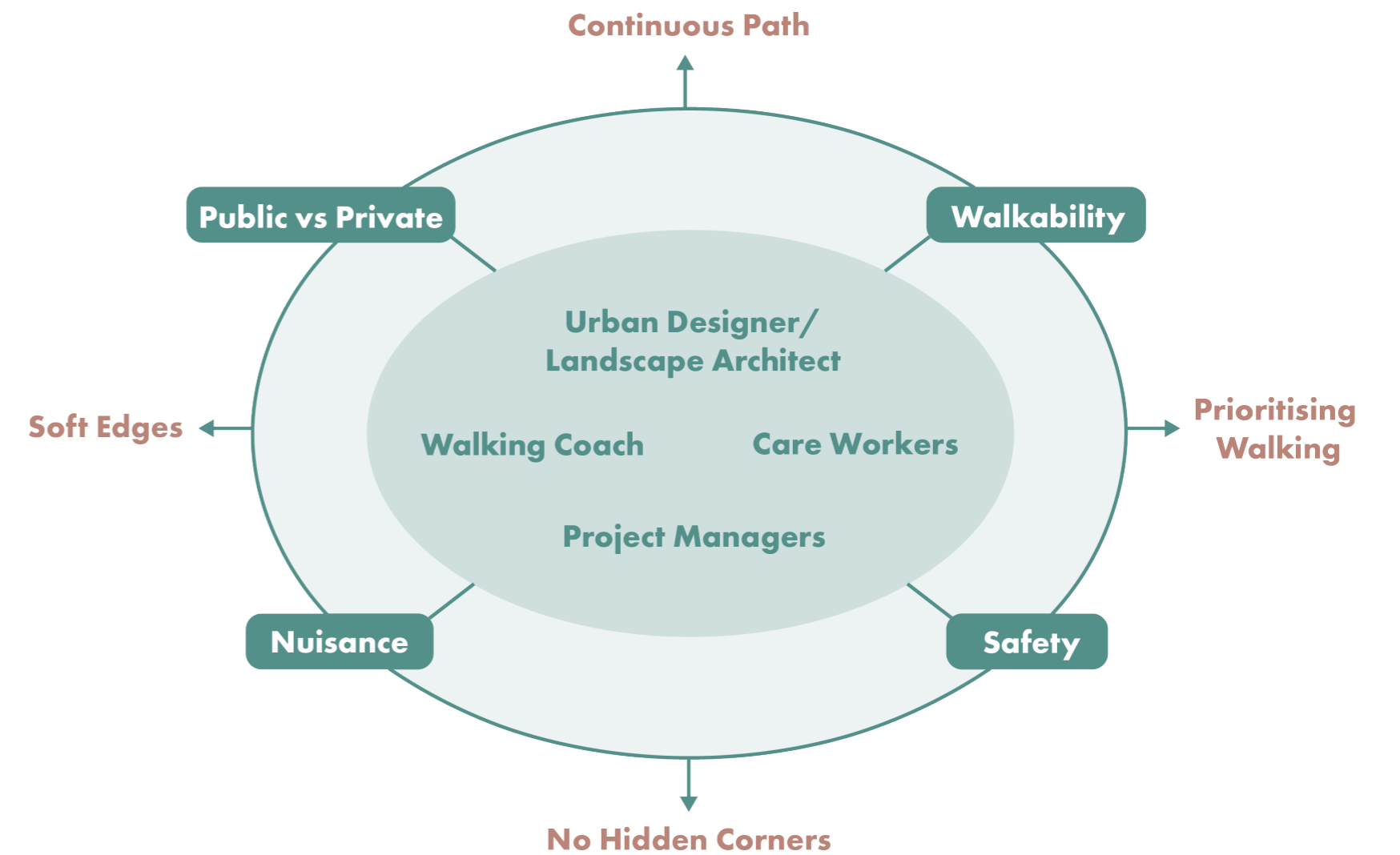


Figure 58: Insights Brainstorming Sessions

Reality Check

The discussions with experts revealed a challenge that had been overlooked in this project. While many of the identified patterns focus on inclusivity, openness, and shared use, the discussions led to the identification of a critical tension between integration and safety within existing care sites. The experts emphasise that encouraging social interaction and reducing stigma are important goals, however there must always be a clear distinction between public and private spaces. This is needed to ensure safety, clarity, appropriate use of the site, and reduce nuisance. This new insight works as a necessary reality check within the project, and led to the development of the pattern *Distinction between Public and Private*.

In this context, public spaces are defined as areas that are openly accessible to a wide range of users, including care residents, neighbourhood residents, and visitors. These spaces include, walking routes, parks, shared amenities, and social environments where interaction is encouraged. On the contrary, private spaces are primarily intended for a specific user group. Examples of these private spaces are therapeutic environments, staff-related zones, closed facilities, and residential clusters. Between public and private spaces, semi-public spaces can function as transitional areas that allow controlled interaction. It is important to maintain a sense of safety and belonging in these transitional areas.

The distinction between public and private spaces is also closely related to the concept of open and closed care facilities on care sites. Historically, many mental healthcare institutions were designed as closed and private environments, with strong physical and mental boundaries that limited the accessibility and reinforced isolation from society. Contemporary approaches aim for more open, accessible, and integrated environments, where care sites become part of the urban context. Complete openness of the site however, can lead to challenges, such as overstimulation, unclear boundaries, or unintended occupation of spaces by the wrong user groups. This means that the design must carefully balance openness with protection.

In practice, this pattern will not encourage full separation, but indicates a clear and legible spatial hierarchy. Public areas should be accessible

and inviting, supporting shared use and inclusion. Private areas should provide a sense of control, safety, and retreat for care residents. Regular housing neighbourhoods should not attract care residents, to provide a sense of safety and comfort in these neighbourhoods. Rather than using fences, distinction can be achieved through subtle spatial transitions that support orientation, such as changes in material, spatial layout, or landscape elements. Therefore, movement is guided in a non-institutional way, users intuitively understand where they are allowed to go and where not.

By integrating this pattern, the design acknowledges that a healing environment must not only be inclusive, but also safe, structured, and respectful to the different needs of all users. It ensures that the ambition of openness does not compromise the wellbeing of care residents and aims to decrease the nuisance on the site, it supports a balanced and sustainable integration with everyday urban life. With this identified pattern, and the validating function of the brainstorming sessions, the connection between theory, everyday realities, and design proposals is strengthened.

I.10 Distinction between Public and Private

A clear spatial distinction between public and private areas reduces conflict, nuisance, guarantees safety, and supports appropriate use of space by different user groups.



Theoretical back-up

Clear spatial hierarchies between public and private areas supports orientation, safety, and a sense of control and autonomy. This helps to prevent unwanted interactions between different user groups and reduces nuisance on care sites. It is essential to balance openness and protection, to support recovery, mental wellbeing, and inclusion.

Practical implication

Ensure that public spaces are accessible, while private spaces, such as residential zones, remain clearly defined. Create a gradual transition between public, semi-public, and private spaces, by using landscape materials, elements, or spatial layout.

Related patterns

S.1 Accessible Site, S.2 Clusters of Care and Housing, S.11 Identifiable Neighbourhoods, I.1 Soft Edges to the City, C.1 Soft Bounded Safety, C.8 Natural Materiality and Form.

3.6 Vision Park Bloemendaal

3.6.1 General Problems on Care sites

In the previous chapters the principles and patterns are identified, the vision for Park Bloemendaal builds upon these. Theoretical insights and observations are translated into spatial interventions. Rather than functioning as a passive background to care, research on healing environments has shown that spatial design plays an important role in supporting recovery processes, emotional regulation, and long-term mental wellbeing (Huisman et al., 2012; Schreuder et al., 2016). Recurring spatial problems can be identified across multiple care locations, these are strongly related to a lack of autonomy, predictability, and flexibility.

For care residents many existing care environments offer limited opportunities for autonomy, they have little control over how and where they engage with space. This lack of autonomy can increase stress and negatively affect emotional stability (Schreuder et al., 2016; Roe et al., 2021). Similarly, spatial structures are often unclear or fragmented, this results in environments that are difficult to navigate. The lack of predictability reduces the ability to orientate and can trigger anxiety, especially for individuals with bipolar disorder and other mental health disorders (Husada et al., 2022). Many mental healthcare environments also lack flexibility, offering limited variation in social and sensory conditions. As a result, the environments fail to respond to the changing needs in stimulation and interaction, which is essential to support the recovery process and for the creation of healing environments (Huisman et al., 2012; Roe et al., 2021).

Together, these generic problems reveal a gap between the reality of existing care sites and the theoretical principles. While the defined patterns provide a framework to address these issues, the implementation of the patterns must respond to specific spatial conditions of a care site. In this project, the care site Park Bloemendaal, in The Hague, serves as the case study location in which these principles are translated into a vision for a healing environment on this site. The following sections demonstrate how general patterns can be applied to a specific context, resulting in a spatial vision that supports flexibility, autonomy and predictability.

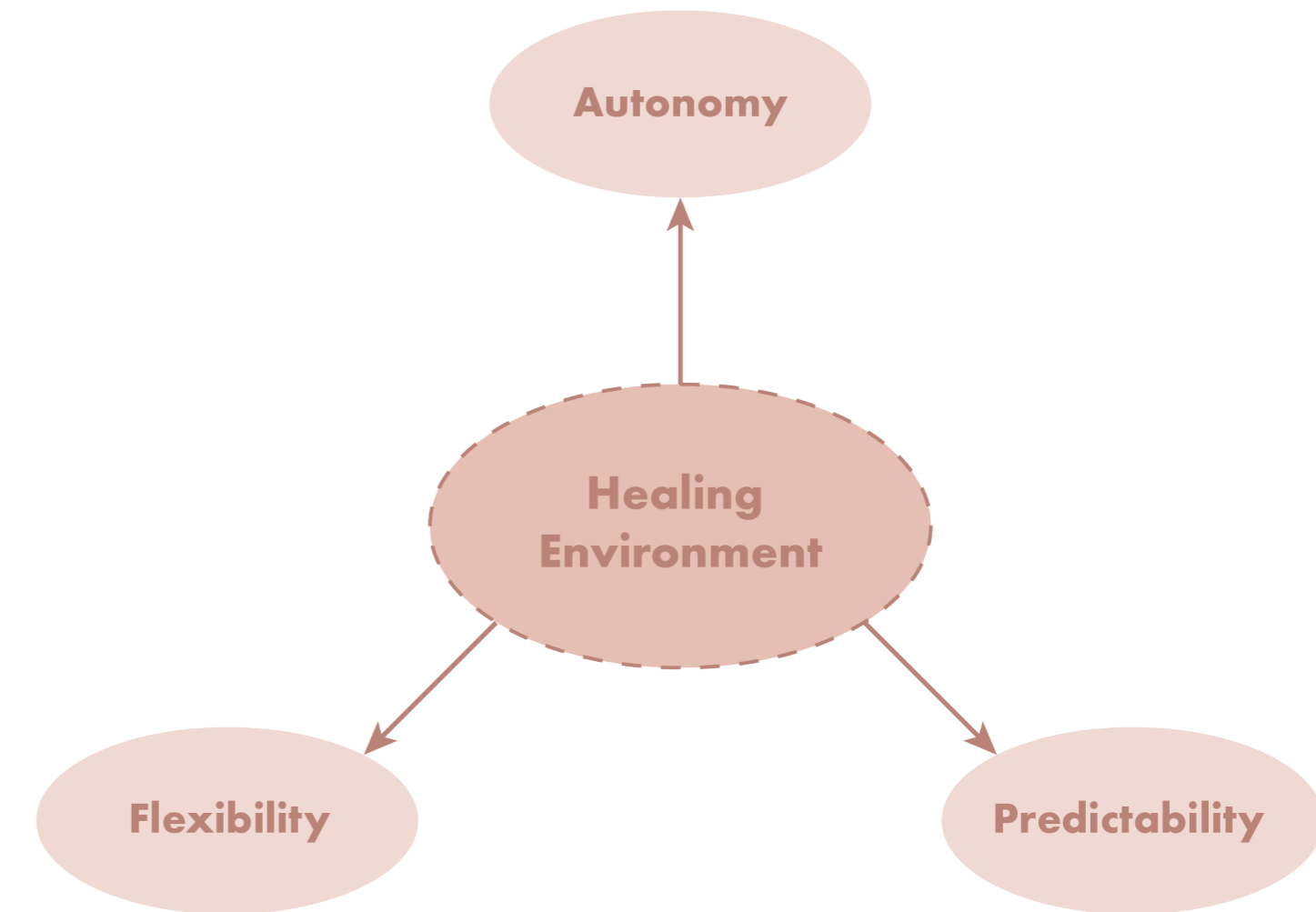


Figure 59: General problems on Care sites

3.6.2 Site Specific Aspects

Strengths

Park Bloemendaal already contains several spatial qualities that can form a strong foundation for the development of a healing environments. One of the most valuable strengths of the site is the presence of extensive green structures. These existing landscape elements have restorative qualities and create opportunities for retreat, walking, and sensory comfort. Another positive element of the site is that it already contains several recognisable elements, such as the historic main building by the entrance and various sculptures spread across the site. These elements function as landmarks and support the overall orientation across the site.

In addition, there are already several amenities present at this care site. These existing amenities have the potential to support social interaction and shared use. However, their impact is currently limited, because they lack a connection to one another. A similar issue can be observed with the existing walking paths, there are a few decent walking paths present, but they do not form a clear and connecting route across the site. As a result, both the amenities and the walking infrastructure remains underused. This means that the site already contains valuable elements, however these need to be better connected and structured to contribute to daily use and recovery.



Weaknesses

Despite these existing qualities, Park Bloemendaal has also several spatial weaknesses that limit its existing potential as a healing environment. The main issue is the lack of clear and safe walking paths. In several places pedestrians have to share the road with cars, which creates unsafe situations and does not encourage residents, staff, or visitors to walk through the site. This limits the role of walking as a daily activity and reduces opportunities for movement, and informal encounters.

The fragmented position of amenities is another important weakness. These facilities are not clearly connected, visible, or clustered. This results in amenities that are underused, because users may not know where these amenities are located or whether they are allowed to use them. This limits the social life and reduces the potential for shared use on the site. Another limiting aspect is the institutional character of the site, such as fences, closed boundaries, and unclear entrances, this makes the area feel less inviting, limits the accessibility and can reinforce stigma surrounding mental healthcare.

The green structures on this site have also a double role, while they are one of the main strengths of the site, some areas are also too dense grown. This creates hidden or poorly visible spaces, which is from a safety perspective undesirable. Since it can lead to places where people can hide or where nuisance, such as drug dealing, can occur. Finally, the site also contains many empty or underused spaces, including open grass field and parking areas. These spaces do not contribute to the everyday usability, comfort, or social life of the site, however they could have potential.



Figure 61: Weaknesses Park Bloemendaal

3.6.3 Main Concepts

The vision for Park Bloemendaal builds on the existing qualities of the site while addressing its current spatial weaknesses. The main ambition is to transform the site into a more accessible, legible, comfortable, and inclusive healing environment, where care residents, visitors, staff, new residents, and surrounding neighbourhood users can coexist in a balanced way.

A first concept is to strengthen the connection with the surrounding neighbourhoods. Instead of functioning as an isolated care estate, Park Bloemendaal should become more open and better connected to its urban context. A second concept is the creation of clear clusters of care and housing. The more intensive care facilities are positioned within a care zone on the left side of the site, while care-related housing is organised on the right side, with a central heart on the site that connects care with the new neighbourhoods on the bottom of the site. This supports integration while still allowing care residents to retreat when needed. A third concept is to improve the accessibility by strengthening the slow mobility infrastructure and creating clear main routes through the site. These routes make the site easier to enter, understand, and use. Finally, the vision proposes the creation of a heart of the site, by connecting existing and new amenities. This can be archived by introducing clear walking routes, which can transform the site to a more coherent and socially active environment.

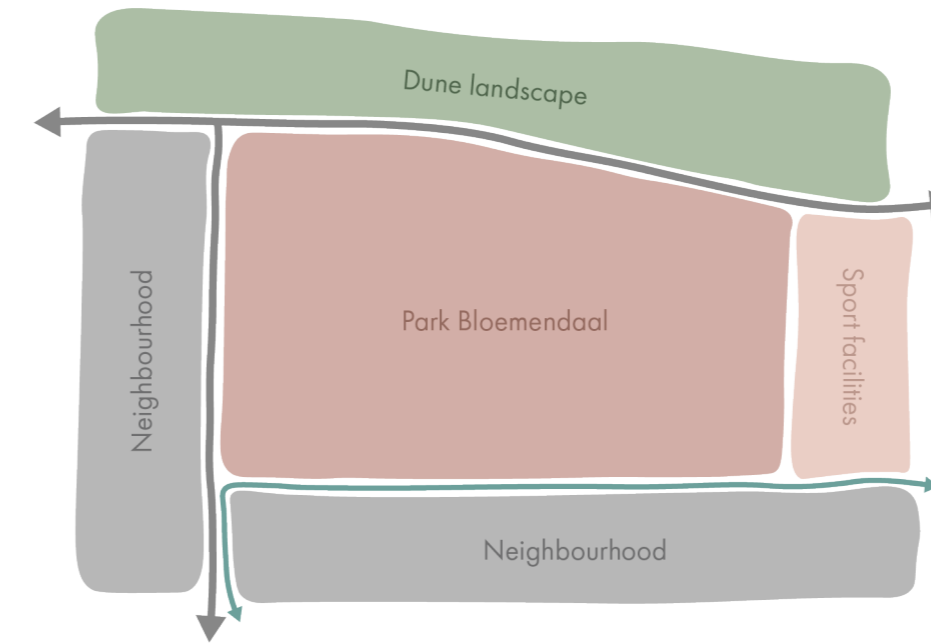


Figure 62: Functions surrounding areas

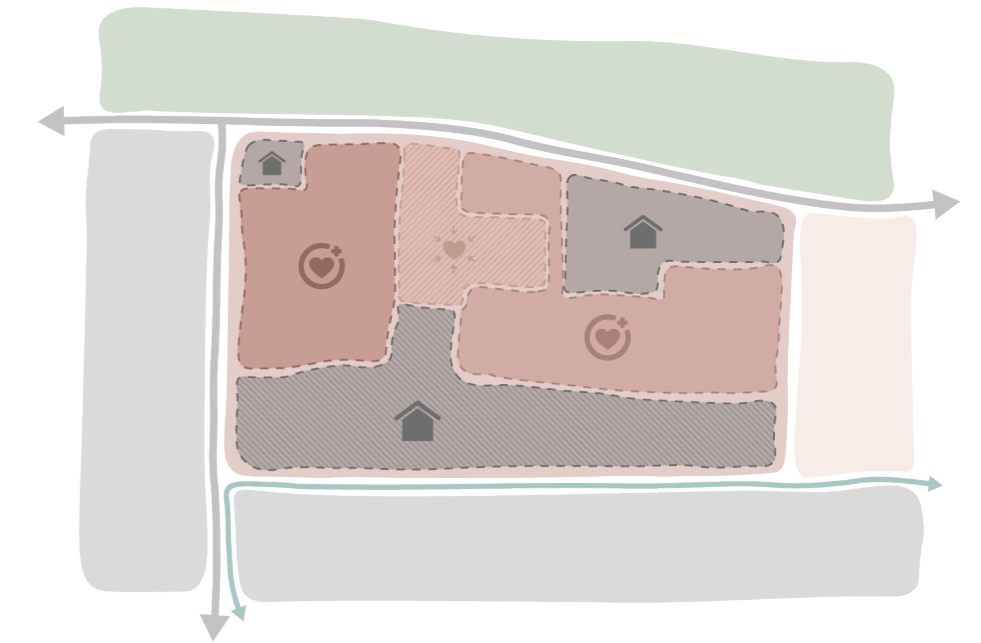


Figure 63: Zoning Park Bloemendaal

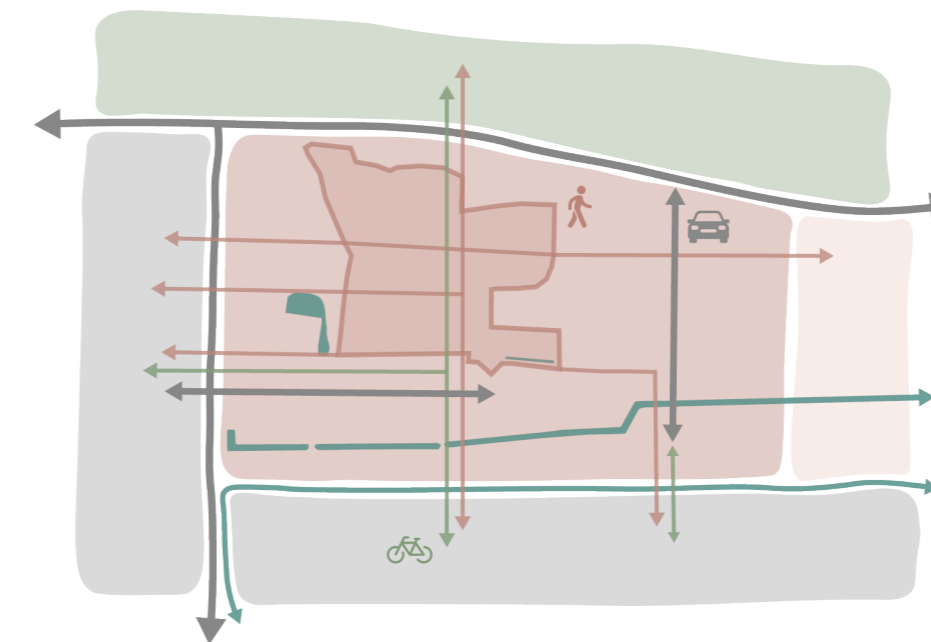


Figure 64: Main connecting infrastructure

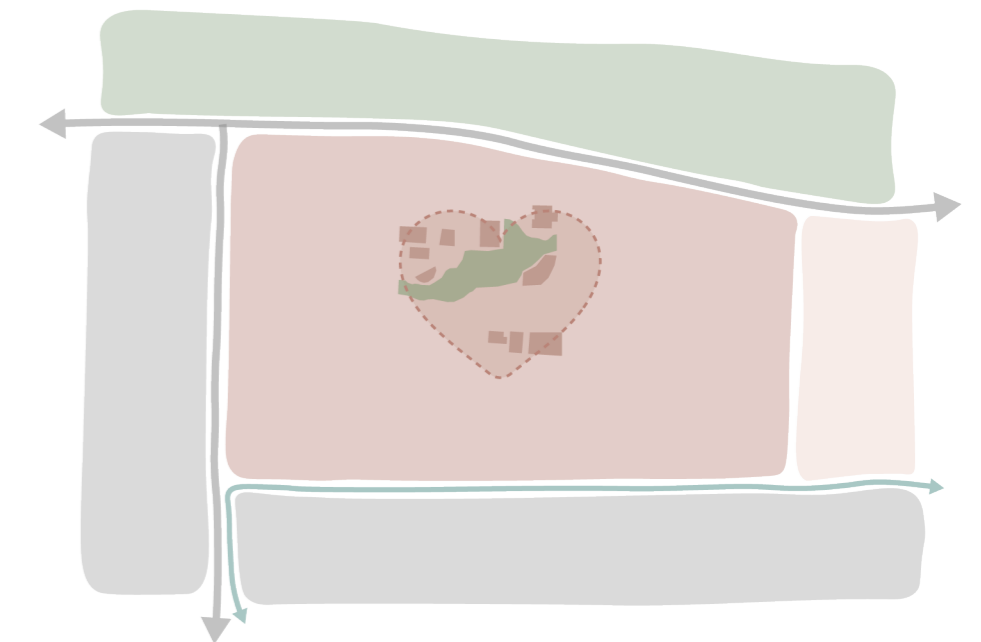


Figure 65: Shared heart of the site

3.6.4 Vision Explained in Layers

Connection

The first layer of the vision focuses on the connection. The aim is to enhance the usability of the site, attract people outside, and create a stronger spatial structure that focusses on a good walkability. Central to this layer is the concept of the pattern *Continuous Path*, which is translated into the concept of the *Always Home Route*. This route creates a clear and recognisable walking structure across the site, allowing care residents to move more independently while always being able to return to a familiar point.

The *Always Home Route* connects important places on the site and gives walking a central role in the spatial structure. This relates to the pattern of *Prioritising Walking*, where pedestrian movements become the main organising principle rather than a secondary layer next to the care infrastructure. To make this possible, fast mobility is moved out of the main care area as much as possible. The central care zone becomes primarily accessible for pedestrians and cyclists, while maintenance and emergency vehicles remain possible where necessary. This supports the pattern *Fast Mobility Stream outside Care area*, reducing noise, traffic conflicts, and unsafe situations.

Along this route, important intersections and activity points are designed that function as recognition points, this supports the pattern *Nodes as Recognition points*. These nodes help users understand where they are and provide moments of decision making, and possible interaction. Existing sculptures and the main building function as *Recognisable Landmarks* along the route, supporting the creation of a mental map for care residents. To make the route attractive throughout the year there needs to be some diversity, this can be achieved by placing seasonal planting along the route, relating to the pattern *Seasonal Planting provides Diversity*. Seasonal changes create subtle variation and encourage repeated use, while still maintain predictability and calmness.



Figure 67: Removing the car out of main care area



Figure 68: Seasonal planting support diversity (Snoek Puur Groen, 2026)



Figure 69: Prioritising Walking

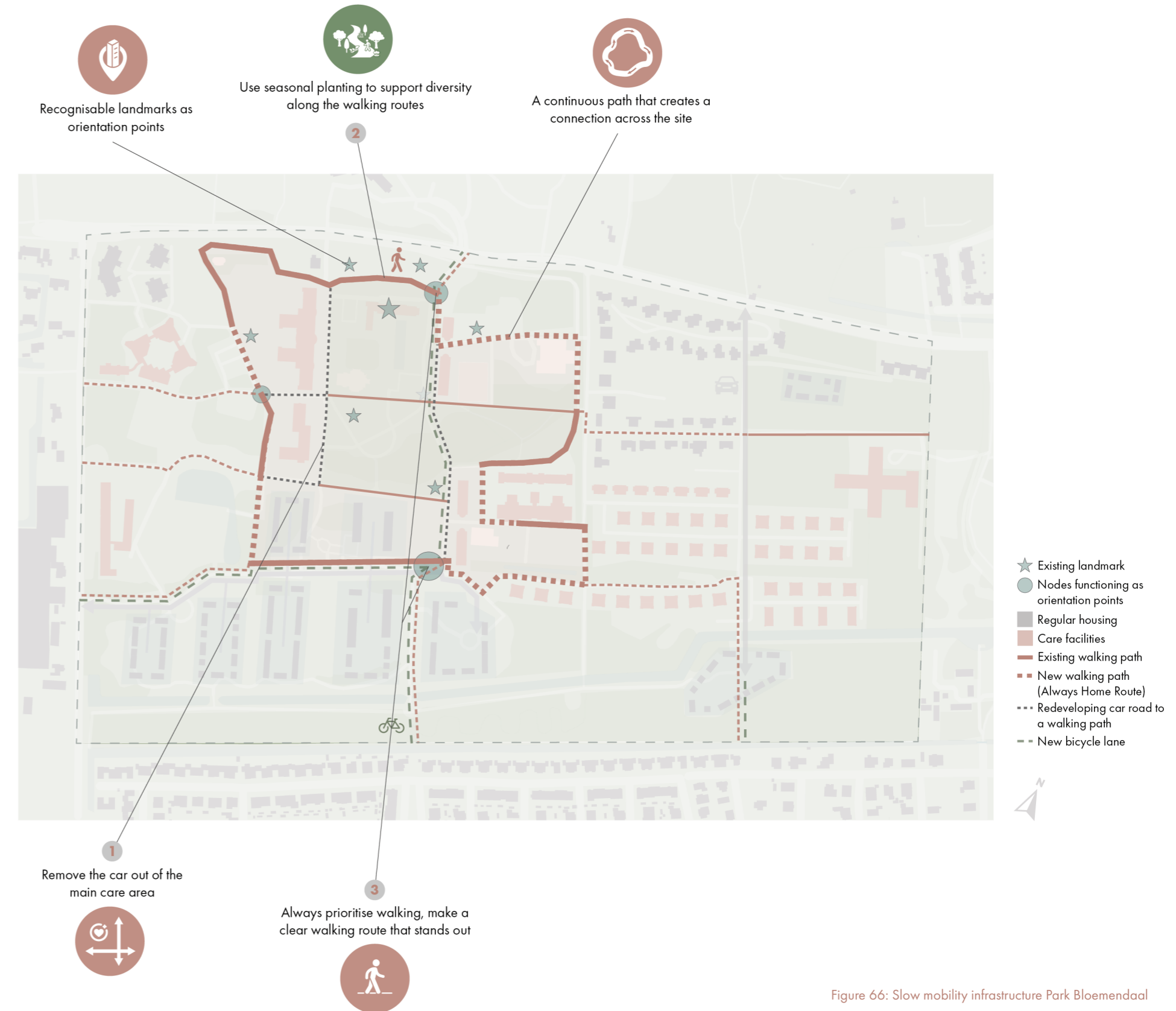


Figure 66: Slow mobility infrastructure Park Bloemendaal

New Neighbourhood

The second layer focuses on the development of a new neighbourhood and the spatial relationship between care and housing. Many care institutions do not have the financial resources to redevelop their sites independently. Therefore, parts of the land can be sold for housing developments, this income can help finance new spatial structures, public spaces, amenities, and landscape improvements on the care sites.

The introduction of new housing also creates new mobility flows in and out of the site. This requires careful organisation of infrastructure to avoid disturbance from the new traffic in the care environment. The pattern *Fast Mobility stream outside Care area* becomes here again important, as car traffic related to the new neighbourhoods should be kept away from the main care zone as much as possible.

The new neighbourhood should have a recognisable spatial identity, this relates to the pattern *Identifiable Neighbourhoods*. Small differences between housing plots, such as building typologies, material use, landscape character, or public space design, can help users recognise where they are on the site. Through this, a housing plot in a neighbourhood becomes an orientation point within the larger spatial structure.

The pattern *Clusters of Care and Housing* is also central in this layer. Care functions and regular housing should be close enough to allow integration, but not fully mixed in a way that creates confusion or nuisance. This is where the pattern *Distinction between Public and Private* becomes essential, because public, semi-public, and private zones must be clearly defined and legible. The new neighbourhoods should be part of the care site, but also clearly recognisable as residential areas for new residents. Soft transitions, material changes, planting, and spatial layout can define these boundaries without creating hard or institutional separations.



Figure 71: Identifiable Housing plots (Schouwenberg, 2020)

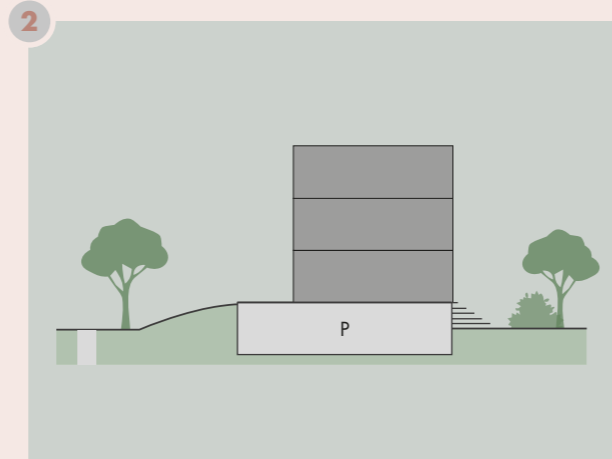


Figure 72: Soft landscape and green boundaries



Figure 73: Expanding the road for car traffic

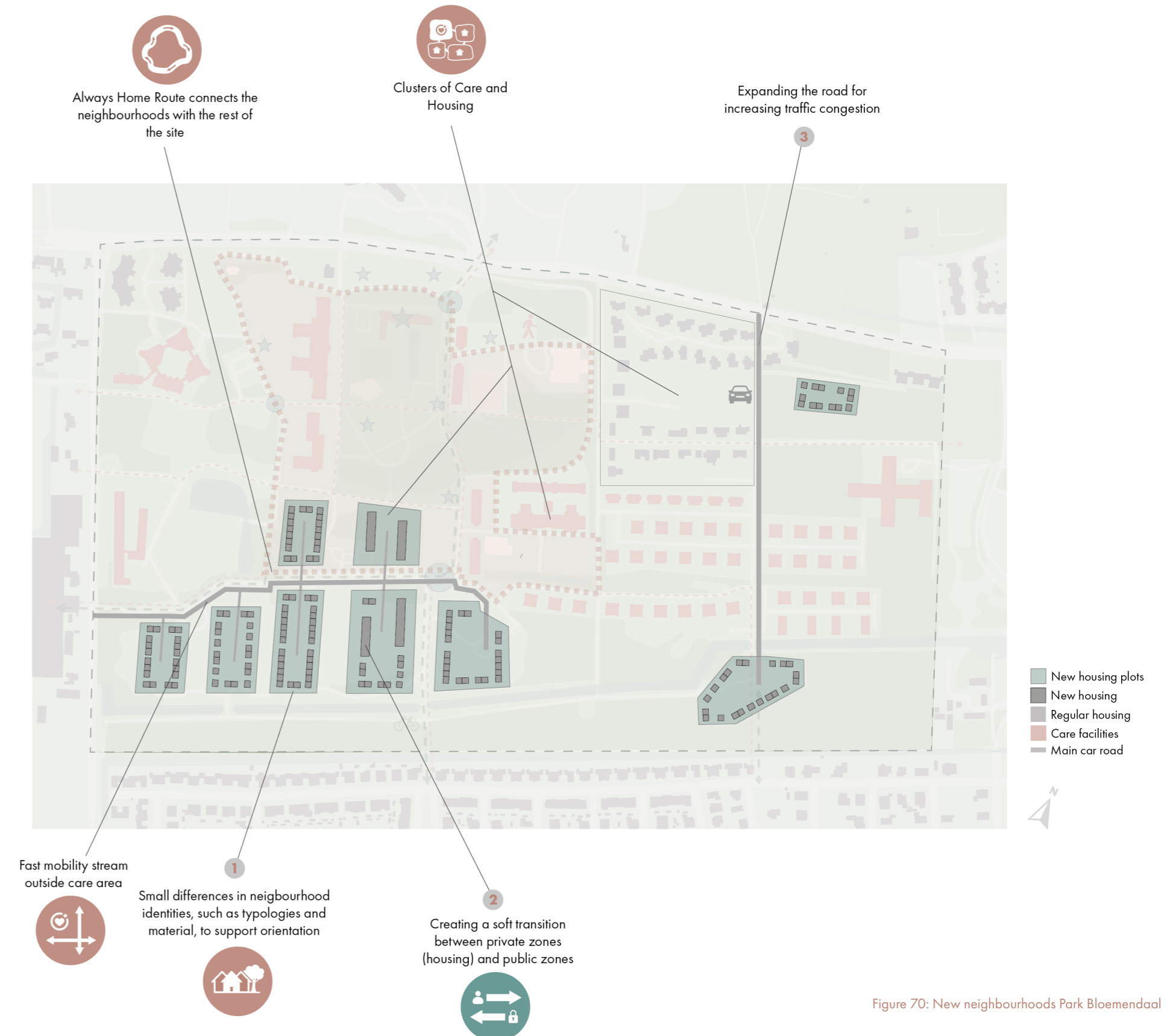


Figure 70: New neighbourhoods Park Bloemendaal

Shared Use

The third layer focuses on shared use, social activation, and retreat options. The aim is to create a site where different user groups can meet, withdraw, or participate depending on their mood and needs. This is especially important for a individual with bipolar disorder, since their tolerance for social interaction and stimulation changes over time.

The design therefore introduces *Gradients of Social Intensity*. There are high stimulus spaces, these are active and social, while there are also low-stimulus spaces for retreat. This allows residents to choose where they want to be based on their mood, need for contact, and energy level. Low-stimulus areas include *Alone Together Spaces*, where care residents can be near each other without direct interaction. More active areas include public spaces, shared amenities, and meeting places.

In this layer the Always Home Route also plays an important role, it connects the different amenities and activities with different levels of stimulation. Existing amenities are currently underused, partly because they are not clearly connected or visible. By placing a recognisable walking route along these amenities, they become more inviting and easier to find. For retreat or interaction options along these route seating is important, this relates to the pattern *Seating is Everything*. Seating areas along this route provide opportunities for observing, retreat, rest, or interaction. This leads to the pattern of *Alone Together Spaces*, where seating option should be created that support the option to withdraw.

There are also meaningful programmes added to support daily rhythm and participation on the site. *Flexible Spaces for Making*, such as repair spaces or workshop areas, allow care residents to engage in productive activities without obligations. It creates a sense of belonging and purpose for them, by supporting a daily routine. With the already other existing programmes, the site can be activated without forcing participation.



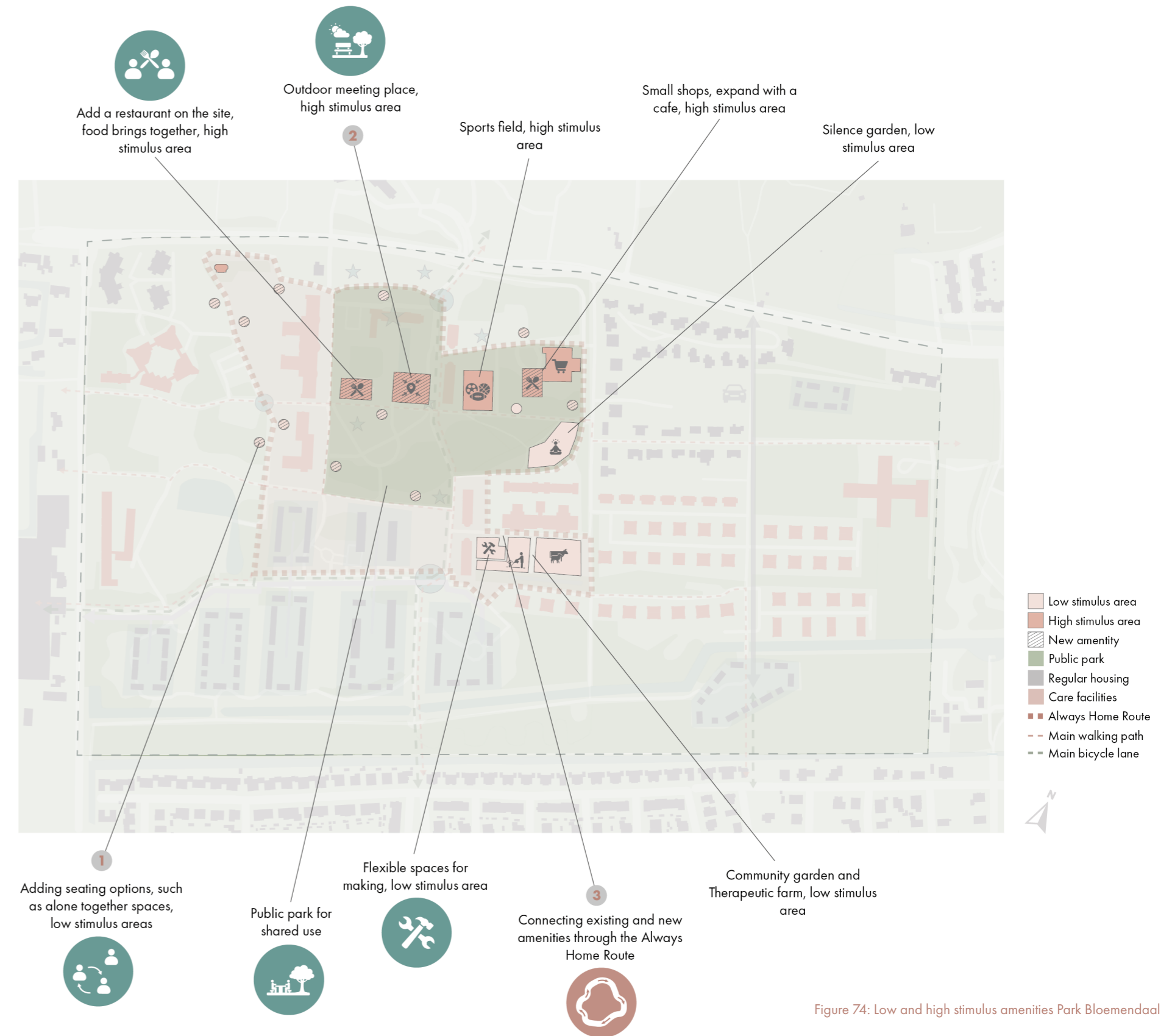
Figure 75: Alone together spaces (Snoek Puur Groen, 2026)



Figure 76: Outdoor meeting place (Falco, n.d.)



Figure 77: Connecting existing amenities through walking paths



All Combined

Combining all the layers shows the complete vision of Park Bloemendaal, it highlights the Always Home Route as the main connector of the site. It connects new neighbourhoods, care zones, green spaces, amenities and other social programmes into one coherent spatial system. The accessibility will be improved by creating clearer entrances, this supports the open and inviting character of the site. This relates to the pattern *Accessible Site*, reducing the institutional character and making the area easier to understand and enter.

At the same time, the design must carefully balance openness with safety. For example, fences and hard boundaries that remain necessary for safety measures, need to be softened or hidden through planting. This supports the pattern *Soft Bounded Safety*, where green structures create protection without reinforcing the institutional character of the site. To further support this, the pattern *Soft Edges to the City*, focuses on the importance of transforming the boundary between the care site and its surroundings into a more gradual and inviting transition.

Another important aspect is the safety within the site. Dense green structures are opened up where necessary to improve visibility and reduce hidden spaces. This relates to the pattern *No Hidden Corners*, ensuring that public spaces feel safe and legible. At the same time, the creation of a central heart strengthens the social and functional structure of the site. The pattern *The Heart of the Site* brings amenities, shared spaces, and social activity together in one recognisable place that can be used by different user groups.

Together, this vision transforms Park Bloemendaal from a fragmented and inward-oriented care environment into a more legible, accessible, and recovery-oriented healing environment. In the vision the need for safety or privacy are still emphasised, these qualities are integrated within a spatial structure that also supports openness, movement, social interaction, and long-term comfort.



Figure 79: Removing fences and enhance accessibility



Figure 80: Soft Bounded Safety

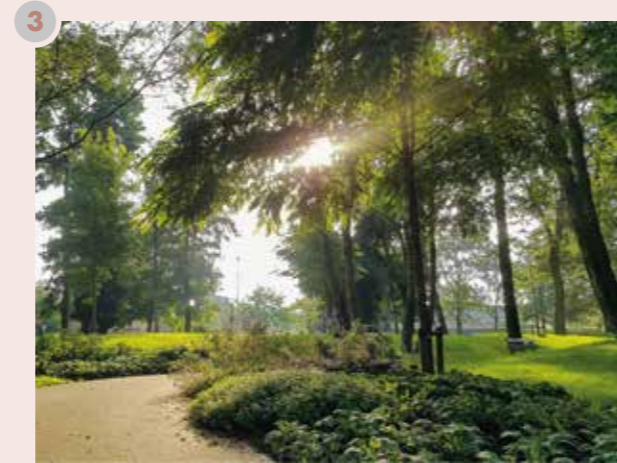


Figure 81: Open green structures (Snoek Puur Groen, 2026)

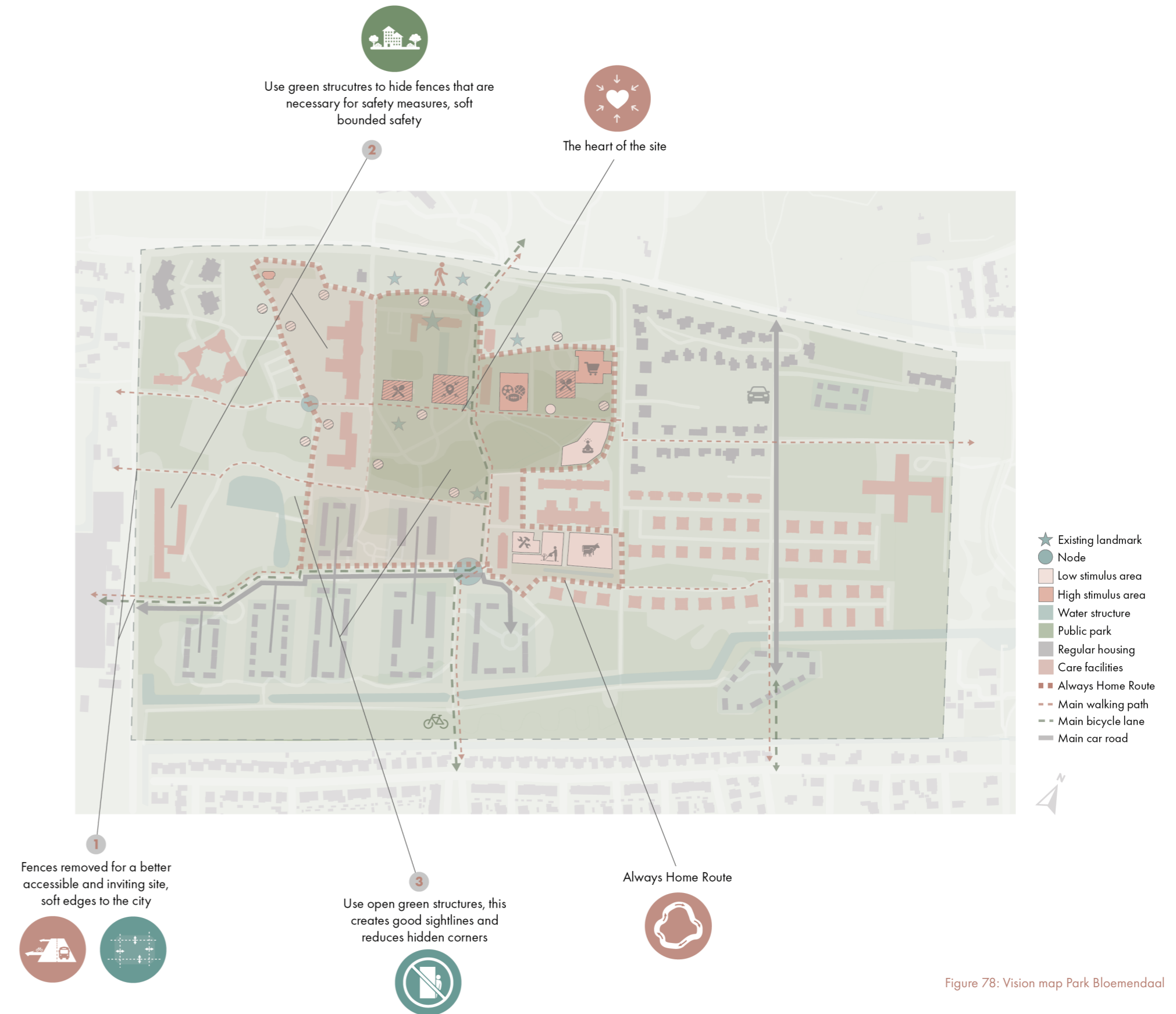


Figure 78: Vision map Park Bloemendaal

3.6.5 Guidelines

Connection

1. The Always Home Route is the spatial backbone of the site. Therefore, the route should be highlighted across the site, by the use of a different material. This emphasises the importance of the route, by prioritising walking and stimulating orientation.

2. Clear open sightlines along walking routes are essential, this should be achieved by creating open green structures. Because too dense green structures create hidden spaces, this reduces the safety on the site.

3. Orientation is very important to enhance the autonomy of care residents. Create enough orientation point along the walking routes, such as nodes, landmarks, nature edges, and neighbourhoods.

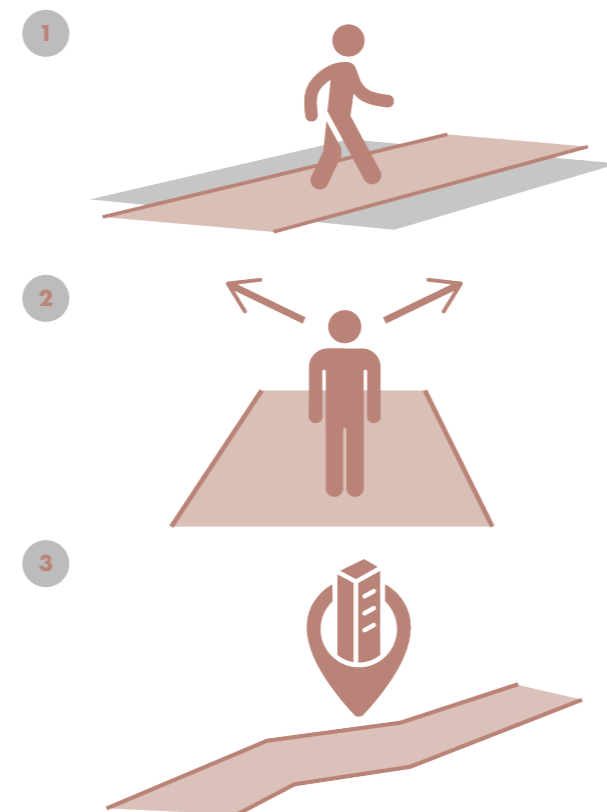


Figure 82: Guidelines Connection

New Neighbourhood

1. The building typology of the new neighbourhood should enhance the distinction between public and private areas. This can be achieved by small nature borders and the creation an inner space in the housing plots, used by the housing owners only. This also creates a great solution to hide parking on the site.

2. The neighbourhood should contain different housing options. There is a demand in the municipality of The Hague for social housing, such as apartments. Single-family housing typologies, such as terraced houses, semi-detached houses, and detached houses, offer an opportunity to attract couples and families to the site. This would introduce a broader and more diverse group of users, contributing to activity and everyday life on the care site, but it should not be too overwhelming for care residents.

3. Use high rise buildings only in the middle of the neighbourhood, this creates a fluent transition from greenery into the neighbourhood. Building complexes should be maximum 5 floors high, to prevent overstimulation.

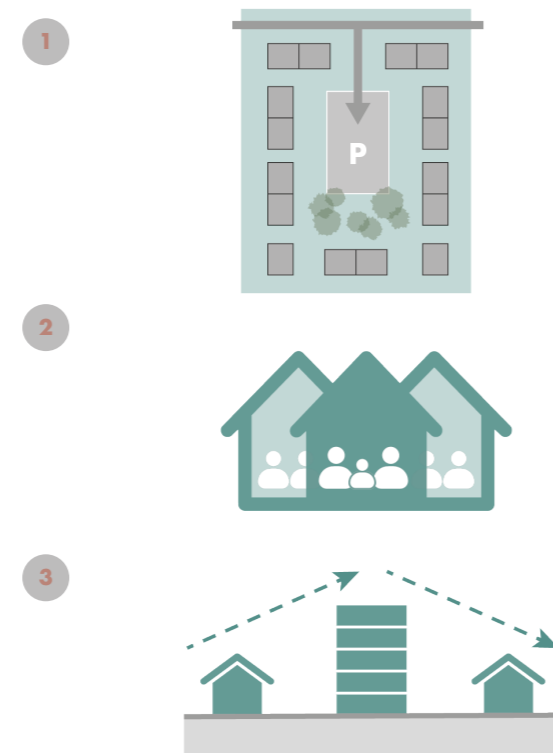


Figure 83: Guidelines New Neighbourhood

Shared Use

1. High and low stimulus spaces should not be directly connected to each other. Use walking routes to connected these spaces, without direct interaction between them to reduce overstimulation in low stimulus zones.

2. Sensory comfort needs to be part of every intervention. Light, sound, planting, materiality, and microclimate should be considered from the beginning of every design decision. Spaces should reduce overstimulation, while still offering subtle variation, comfort, and engagement.

3. Design seating as a system, not as separate objects. Seating should be placed in different social and sensory conditions, such as quiet seating for retreat, edge seating for observation, and clustered seating for interaction. These different seating options should be connected by walking routes to enhance the usability and visibility.

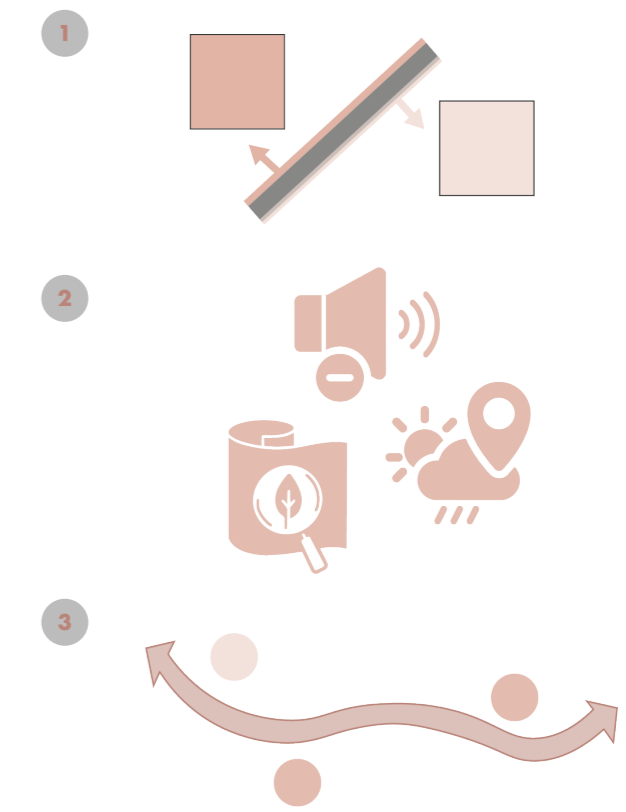


Figure 84: Guidelines Shared Use

3.6.6 Redevelopment Strategy

Interconnected Phasing

The development of this vision can be divided into three different phases, however, these phases do not form a linear step-by-step process, but a layered development strategy. This strategy shows the connections between the phases, the relations between the different design interventions, and shows a connection to the categories in with the patterns are divided. The three different phases are: Clear Spatial Framework, Activate the Site, and Long-Term Comfort.

Clear Spatial Framework is the supporting structure for creating a healing environment at Park Bloemendaal. This phase should be established first, because accessibility, orientation, safety, and public-private boundaries determine whether the rest of the design can function effectively. This includes creating good pedestrian paths that ensure overall connectivity across the site and attract people from outside into the area. Creating orientation points is also essential, as these provide care residents with the autonomy to move around the site independently. In addition, clear clusters should be created that define which zones are public and which are private. The location of the new neighbourhoods will also be established in this phase, as the sale of these land parcels can generate financial resources for further redevelopment of the site.

Activate the Site builds upon this spatial framework. Amenities, meeting places, and shared functions can only function well when they are accessible, visible, and logically positioned within the overall spatial structure. It is important to create zones with different levels of stimulation, including high-stimulus and low-stimulus areas. Through the walking routes, the different amenities are connected, allowing users to stop along the route at a specific activity or facility depending on their mood that day. For this to work, a clear spatial structure is needed that supports both the connection and visibility of these amenities.

Long-Term Comfort partly runs parallel to the other two phases. Green structures, lighting, microclimates, and materials should be considered from the beginning, but their full effect will develop over time. Planting, shade, sound buffering, and landscape identity in particular gradually mature. In this phase, reducing the institutional character of the

site is important, for example, by using green structures as boundaries or to soften and hide fences. Through small interventions, a significant impact can be achieved in creating sensory comfort and making optimal use of the existing green structures.

To summarise, the redevelopment of Park Bloemendaal should be structured around these three interconnected phases. The clear spatial framework creates the conditions for safe movement and orientation. The activation of the site introduces social and programmatic life into this framework. The long-term comfort layer ensures that both movement and interaction take place within a restorative, sensory-balanced healing environment.

Dependency in Interventions - Walking

Although the redevelopment strategy is structured into three phases, the interventions should not be understood as separate or strictly chronological actions. Several patterns depend on each other and need to be implemented in combination to function effectively. Some interventions from the Clear Spatial Framework must therefore be directly connected to interventions from Activate the Site and Long-Term Comfort, since they create stronger spatial, social, and sensory conditions together.

An example is the combination of the patterns *Continuous Path*, *Safe Evening Lighting*, and *No Hidden Corners*. The continuous path creates a clear walking structure that connects different parts of the site and supports orientation. It helps care residents understand where they are, where they can go, and how they can return to a familiar point. Therefore, the path becomes more than a continuous route, it becomes the spatial framework that supports autonomy, predictability, and confidence in movement.

However, this route can only function effectively as an attractive and safe walking environment when it is supported by good visibility along the route and carefully designed lighting. The route should not contain hidden corners, this could be through too dense vegetation, or unclear sightlines. Care residents and other users may feel unsafe or disoriented, which can discourage them from using the path independently. Therefore, the route becomes easier to understand and more comfortable to use, by opening up sightlines and avoiding hidden or isolated spaces.

Safe evening lighting further strengthens this experience, by using soft, continuous, and warm lighting along the path. Through this the path remains legible and usable during evening hours, without creating overstimulation through harsh or excessive light. Lighting can also be used to emphasise important nodes, landmarks, and entrances, helping care residents to recognise where they are on the site.

This example shows that these patterns together enhance the walkability of the site. The route becomes safe, predictable, and visible throughout the day. This strengthens the autonomy of care residents, by allowing to move across the site while maintaining a sense of security and orientation.



Figure 85: Dependency of patterns Walking



Figure 86: Dependency of patterns Walking

Dependency in Interventions - Seating

An additional example is the combination of the patterns *Seating is Everything*, *Gradients of Social Intensity*, and *Microclimate Comfort*. In healing environments seating only becomes successful when it is placed in the right environmental and social conditions. By positioning seating areas within different gradients of social intensity, care residents and other users can choose between quiet places for retreat, transitional zones, or active social spaces. To enhance the usability of these spaces even more, microclimate comfort is very important. Because it ensures that these seating areas are pleasant to use, by creating options for sun, shade, wind protection, and views. Therefore, these patterns enhance together both the usability and flexibility of the site, by allowing care residents, visitors, staff, and neighbourhood residents to use the site in different ways depending on their mood, needs, and comfort level.

This means that seating is not designed as one uniform element, but as a range of spatial conditions. Seating should support retreat, calmness, and low stimulation in quiet zones. These areas are surrounded by greenery or positioned with views towards nature, and are located away from main activity zones. Seating should feel protected and comfortable in these zones, with low levels of visual and social exposure, wind shelter, and shade options. These spaces allow care residents to withdraw, without being completely disconnected from the environment.

In transitional zones, seating can function as an intermediate condition between retreat and interaction zones. In these spaces users can pause, observe, or decide whether they want to participate in interaction. In these areas seating should be positioned along walking routes or near the edges of social spaces, this allows care residents to be present without being in the centre of activity. Residents can remain visually connected to others while still maintaining personal distance, this supports the concept of participation without obligation.

Seating should encourage conversations, shared use, and encounters in active social zones. These areas should be located in the heart of the site, near amenities, or in the public park. The seating area is here more open, clustered, and allows different user groups to meet. In the active zones

microclimate comfort still remains important, because a pleasant sensory environment ensures that interaction does not become overwhelming or uncomfortable.

This example shows that the value of seating depends on its relationship to both social intensity and environmental comfort. The same patterns can therefore have different spatial expressions depending on its location within the site. In quiet zones seating supports retreat, in transitional zones it supports observation and choice, and in active zones seating supports interaction and shared use. This demonstrates that the strength of the design lies not in individual interventions, but in the way patterns are combined. A route becomes meaningful when it is safe and visible, boundaries become supportive when they are clear but soft, and social spaces become usable when they offer both choice and comfort. Therefore, the phases in the redevelopment strategy operate as overlapping layers that reinforce each other, and together contribute to the creation of a healing environment on care sites.

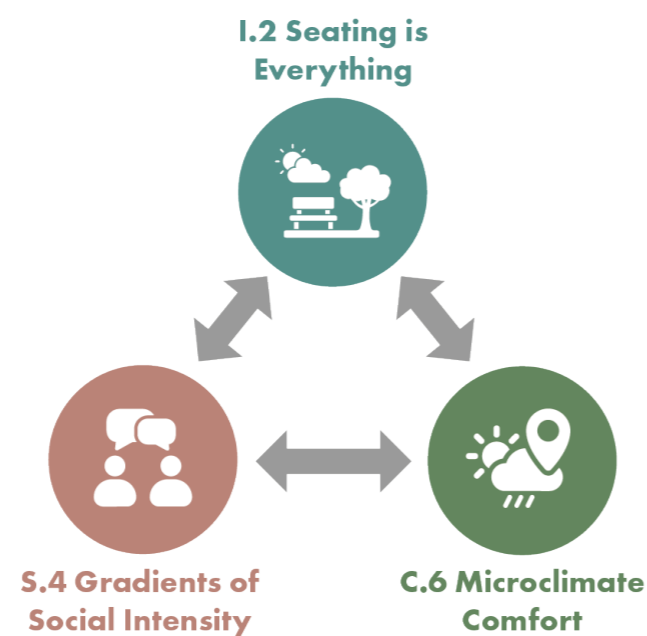


Figure 87: Dependency of patterns Seating

Quiet Zones

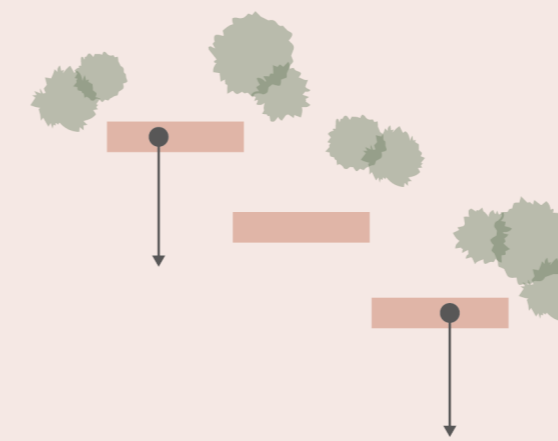


Figure 88: On your own, without interaction



Figure 89: Reference Quiet Zone (Falco, n.d.)

Transitional Zones

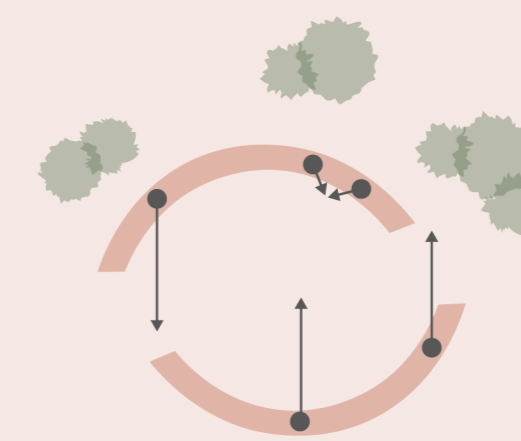


Figure 90: Possibility for interaction



Figure 91: Reference Transitional Zone (Falco, n.d.)

Active Zones

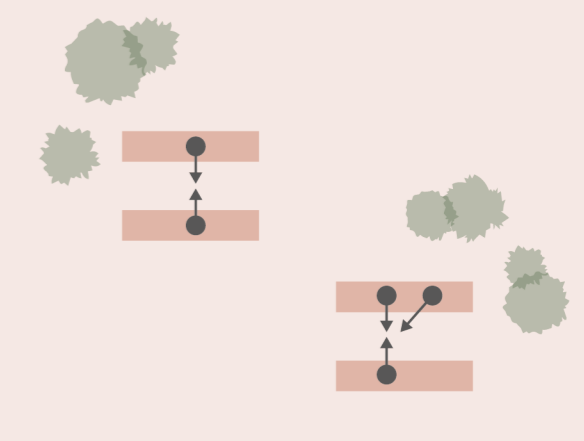


Figure 92: Direct interaction



Figure 93: Reference Active Zone (Falco, n.d.)

Part 4

Conclusion & Discussion

4.1 Conclusion

This project explored how mental healthcare sites can function as integrated healing environments for care residents, visitors and neighbourhood residents, while maintaining safety, autonomy, and comfort for care residents. The starting point of this project was the observation that many mental healthcare institutions in the Netherlands are still shaped by a historical spatial organisation of separation, isolation, and physical and mental boundaries. While contemporary mental healthcare ambitions increasingly focus on social inclusion, recovery, and autonomy, the spatial organisation of these care sites still does not fully support these ambitions. Therefore, the aim of this project was to argue that the transformation of care sites is not only a matter of adding housing developments or public functions. However, it is a matter of carefully designing healing environments that support spatial, social, and sensory conditions that allows different users to coexist, with the focus on care residents with bipolar disorder. How this is achieved will be explained by answering the research questions.

What scientific insights into bipolar disorder inform which spatial and sensory conditions support emotional regulation, orientation, and recovery?

The first sub-question led to scientific insights into bipolar disorder that shows how care residents with this condition have changing needs in terms of social interaction, stimulation, and environmental control. Bipolar disorder is characterised by fluctuations between (hypo)manic, depressive and stable phases, which means that the same environment can be experienced differently depending on their mood and energy levels. Especially spatial conditions such as, sensory regulation, predictability, orientation, autonomy, and flexibility are therefore very important. Furthermore, literature review on healing environments and restorative cities supports the importance of the accessibility to nature, daylight, social flexibility, walkable environments, and soft soundscapes in supporting emotional regulation and the recovery process. This results in a healing environment that should not be overly controlled or overstimulating for care residents with this disorder, but should provide a balance between protection and openness, structure and choice, retreat and participation.

How can the theoretical and observational insights be combined into spatial principles for designing healing environments?

Literature review enabled the identification of the three main categories Spatial Structure, Social Interaction, and Sensory Comfort. Spatial structure supports here the orientation and autonomy of care residents through clear routes, landmarks, nodes, and recognisable edges. Social interaction should here be understood as a flexible gradient where care residents can choose between active participation, observation, or withdrawal. Lastly, sensory comfort addresses the importance of how light, sound, greenery, materiality, and microclimates shape the emotional experience. Therefore, these principles show together that healing environments are not created by one intervention, but through a coherent system of spatial conditions that support recovery and overall mental wellbeing.

After the literature review, the personal observations of existing care sites confirmed that many of these principles are not yet sufficiently present in practice, and it also highlighted new insights. Historically large care sites often contain valuable green structures, but they lack clear walking routes, visible connections between amenities, and a coherent spatial organisation. In comparison, smaller urban care sites are often more connected to the city, but they lack internal greenery and outdoor space on the site. Innovative care locations instead show that shared amenities, a central heart, and community functions can support interaction between care residents and other users. The theoretical and observational insights demonstrate that care sites need both restorative qualities and social interaction, they must remain safe and calm, but also accessible, active and connected to everyday life.

How can these principles be translated into a set of spatial patterns, and be applied on mental healthcare environments?

The developed pattern language provides this translation. The identified patterns are grouped into the categories of Spatial Structure, Social Interaction, and Sensory Comfort, and they operate across different scales, from the city scale to the object scale. The patterns are not fixed solutions, but adaptable principles that can be combined depending on the site specific context. Several patterns are more bipolar specific, such as

Sensory Zoning, Gradients of Social Intensity, and Alone Together Spaces. Other patterns support the broader mental wellbeing, such as safe evening lighting, green streetscapes, and microclimate comfort. The strength of this pattern language lies in combining both, responding to specific vulnerabilities, and also creating environments that are beneficial for a wider group of users.

The most important pattern that emerged within the design process is the Continuous Path, which developed into the concept of the Always Home Route. This route functions as the spatial backbone of the vision for Park Bloemendaal. It allows care residents to experience varying levels of social and sensory stimulations, by moving through different environments, and still being able to orient themselves and return to a familiar point. The route combined essential conditions for individuals with bipolar disorder, these conditions are autonomy, predictability, and flexibility. At the same time it also connects amenities, social nodes, green spaces, and the new neighbourhood, this makes it relevant for not only care residents but also for new neighbourhood residents and visitors.

The vision for Park Bloemendaal shows how patterns can be applied on a specific location. The redevelopment strategy for the site is structured around three interconnected phases, a Clear Spatial Framework, Activate the Site, and Long Term Comfort. In the phase of a Clear Spatial Framework the foundation for accessibility, safety, orientation, and public-private clarity. The phase of Activate the Site focusses on activating the site through shared amenities, meaningful programmes, and social spaces. The phase of Long Term Comfort strengthens the healing environment through greenery, materials, light, sound, and microclimate. However, these phases do not function separately, they overlap and reinforce one another.

How can mental healthcare sites function as integrated healing environments for residents, visitors, and neighbours, while maintaining safety, autonomy, and comfort for care residents?

In response to the main research question, mental healthcare sites can function as integrated healing environments when they are designed as

layered environments that combine inclusion with protection. The environment must be accessible and connected to surrounding neighbourhoods, but not completely open without structure. It must support social interaction, but never force participation. The environment must reduce the institutional character, but it still needs to maintain safety and clear boundaries. Most importantly, it must offer care residents the autonomy to choose how they move, where they stay, and how much stimulation or interaction they want to engage with based on their mood.

Therefore, this research concludes that the future of mental healthcare environments depends on a careful balance between care specific support and shared environments. Through a pattern language and the Always Home Route, care sites such as Park Bloemendaal can be transformed from fragmented and inward oriented institutions into legible, and inclusive healing environments. This means that spatial design can actively contribute to recovery, social inclusion, and the overall mental wellbeing, not only for care residents with bipolar disorder, but for everyone who uses the site.

4.2 Discussion

Broader implications for Mental Healthcare Environments

This project shows that mental healthcare institutions should not only be understood as places of treatment, but as environments that actively influence recovery and mental wellbeing. The findings suggest that the redevelopment of care sites should focus on creating environments that are legible, safe, inclusive and sensory balanced, rather than simply adding housing or public amenities. A key aspect is that care environments need to support both specific care needs and general mental wellbeing. The patterns such as gradients of social intensity, and sensory zoning respond specifically to the fluctuating needs of care residents with bipolar disorder. However, many principles are also beneficial for visitors, staff, neighbours, and future users, such as access to greenery, walkability, and microclimate comfort. This means that in this designing for a vulnerable user group can lead to environments that are more inclusive and supportive for everyone.

Implications for Urbanism

The project highlights that mental healthcare redevelopment is not only a healthcare issue, but also an urban design issue. Currently many care sites are located on large estates that are being transformed due to financial pressure, outdated buildings, and changing care ambitions. These transformations lead to new opportunities, to rethink the relationship between care, housing, public space, and neighbourhood life. For urbanism in general, this means that care sites should not be treated as isolated areas or purely as development locations for housing. Instead, they should be approached as healing environments where spatial integration is carefully balanced with safety and privacy. The findings of this project suggest that future area developments should include clear public-private gradients, shared amenities, green walking networks, and socially meaningful programmes from the beginning of the planning process.

Relevance of the Pattern Language approach

The developed pattern language demonstrates a useful method for translating complex spatial, social, and psychological insights into practical design principles. Since the patterns are not fixed solutions, they can be

adapted to different care locations and contexts, this makes the catalogue valuable beyond Park Bloemendaal.

The strength of the pattern language lies in the relationships between the patterns. Individuals patterns are useful, but their real impact emerges when they are combined. For example, a continuous walking route only supports autonomy when it is connected to landmarks, safe lighting, and no hidden corners.

The role of the Bipolar Viewpoint

In this project the bipolar viewpoint functions as an empathetic design lens. Fully representing the lived experience of an individual with bipolar disorder is not possible, but it helps to evaluate spatial conditions from the perspective of fluctuating needs related to mood, orientation, stimulation, and social interaction. This perspective shows that a healing environment cannot be designed as one fixed condition. A space that feels supportive during a stable phase may become overwhelming during a manic or hypomanic phase, or too activating during a depressive phase. Therefore, the environment needs to offer flexibility and a choice between different levels of stimulation, retreat, and interaction.

The bipolar viewpoint directly informed patterns such as sensory zoning, gradients of social intensity, and alone together spaces. However, many of these principles also support general mental wellbeing. This means that in this case designing from a bipolar viewpoint does not limit the project, but it strengthens the inclusivity by creating environments that are more flexible, responsive, and supportive for a broader group of users.

Limitations of the Project

Within this project there are several limitations that should be acknowledged. First, the focus in the project is primarily on the outdoor environment of mental healthcare sites. The identified patterns and design interventions are mainly addressing public spaces, green structures, walking routes, and the relationship between care environments and their urban surroundings. However, the recovery process and mental wellbeing are also strongly influenced by indoor environments, such as treatment rooms, bedrooms, communal areas, and the transition between inside and outside. These indoor conditions fall outside the main scope of this project, but

they are highly relevant for the overall experience of care residents on the site.

Second, the research is limited by the lack of direct access to the outdoor environment by care residents. Some care residents, especially those who stay in closed facilities, are not allowed to leave their building or move freely across the site for safety reasons. This means that the personal observations of outdoor use only provide a partial understanding of how care residents experience the environment. The findings are therefore based on a combination of literature review, personal observations, expert feedback, and the bipolar viewpoint, rather than direct engagement with all user groups.

This leads to a third limitation, the ethical constraint. Individuals with bipolar disorder are considered a vulnerable research group, therefore direct interviews or feedback sessions with these care residents were not conducted within this project. As a result, it was not possible to directly test whether the proposed design interventions would be experienced as effective, supportive, or useful by individuals with bipolar disorder themselves. This limits the extent to which the design can claim to represent the lived experience. Instead, the bipolar viewpoint is approached as an empathetic and research-informed design lens, supported by scientific literature.

These limitations show that the project should be understood as a design-research exploration, rather than a final design. Future research could strengthen the findings by including participatory methods with care residents, and studying how indoor and outdoor healing environments can work together.

Recommendations for Park Bloemendaal

The most important recommendation for the redevelopment of Park Bloemendaal is to use the Always Home Route as the spatial backbone of the site. This route connects existing and new amenities, green structures, housing and care clusters into one coherent system. The redevelopment of this site should specifically focus on three interconnected phases, Clear Spatial Framework, Activate the Site, and Long-Term Comfort. The first phase should improve walking routes, access, orientation, safety, and public-private clarity. The second phase should activate the site through a

central heart, seating areas, shared amenities, community gardens, and other meaningful programmes. The third phase should strengthen the healing quality and sensory comfort of the site through planting, soft soundscapes, microclimates, natural materials, and filtered daylight. However, it is important to understand that these phases should not be treated separately, some interventions must be designed together. For example, seating areas should be designed together with microclimate comfort and gradients of social intensity. Public-private distinctions should be combined with soft bounded safety and clear housing and care clusters.

Recommendations for Similar Care sites

Based on the findings of this project, similar mental healthcare sites should first identify their existing spatial qualities and weaknesses. Many of these sites already contain valuable elements, such as green structures, landmarks, or amenities, but these are often underused or fragmented. The main recommendation for these care sites is to first strengthen the spatial framework before adding new programmes. Recommended priorities for these sites are:

- Create a clear and continuous walking structure where possible, walking should be a main movement on the site.
- Improve the accessibility and reduce the institutional entrances or boundaries.
- Clearly define public, semi-public, and private zones through soft bounded safety.
- Cluster and connect amenities around a recognisable heart of the site.
- Use existing green and blue structures for soft boundaries and orientation points.
- Design social interaction spaces that provide different levels of stimulation.
- Integrate sensory comfort as much as possible through light, sound and materiality.

Therefore, the recommendation is to redevelop these site through the same phased approach as Park Bloemendaal: first structure, then activation, then long-term comfort.

Critical Discussion on Openness and Protection

A main discussion point in this project is the tension between openness and protection, because the aim is to reduce isolation and stigma by opening up the care site to shared use. However, brainstorming sessions provided insights which showed that complete openness is not always realistic or desirable. This is because of the nuisance on care sites, such as drug dealing.

Furthermore, care residents have different levels of independence, and some may require supervision or protected environments. Therefore, the project does not argue for removing all the boundaries, but for redesigning boundaries in a more nature integrated and less institutional way. Public, semi-public, and private spaces must be clearly defined, while hard institutional barriers should be softened where possible. This balance is essential to prevent nuisance, protect the privacy of care residents, and still allow meaningful interaction with other users.

Contribution to the Field

This research and design project contributes to urbanism by showing that mental healthcare environments can be approached as part of the city, rather than a fully separated institutional zones. It demonstrates that recovery oriented design requires more than only healthcare architecture, it requires thinking about public space, mobility, landscape, social and urban integration. The broader contribution is that spatial design can help intervene between vulnerability and participation. This can be achieved by designing environments that are predictable, flexible, and support autonomy. In this way, urbanism can support not only individuals with a mental health disorder, such as bipolar disorder, but also the mental wellbeing of a broader community.

To conclude, the findings of this project are relevant beyond Park Bloemendaal. The project provides a framework for rethinking mental healthcare sites as integrated healing environments, where recovery, safety, inclusion, comfort, and everyday urban life can coexist. The main recommendation is to design care sites as interconnected systems in which Spatial Structure, Social Interaction, and Sensory Comfort reinforce one another.

4.3 Reflection

Reflection on the Graduation Project

My research and design process developed overall in a very productive way, although the focus of the project changed throughout the process. At the beginning of my graduation project, the bipolar viewpoint was positioned very strongly at the foreground. The initial intention was to base the entire project on the perspective of a care resident with bipolar disorder. However, during the research process it became clear that this viewpoint could not fully function as the only basis of the project. Although literature review provided important insight into how individuals with bipolar disorder may experience their environment, it is impossible within the scope of the project to fully understand or represent the lived experience of someone with this condition. Bipolar disorder is highly personal, and experiences differ between individuals, phases and contexts. Therefore, the bipolar viewpoint became more of an empathetic and critical design lens, instead of a direct representation.

This shift helped to make the project more ethically careful and realistic. Instead of claiming to design entirely from the perspective of a person with bipolar disorder, the project uses this perspective to sharpen spatial attention toward autonomy, flexibility, predictability, sensory sensitivity, and social regulation. This allowed the design to remain grounded in the needs of a specific vulnerable user group, while avoiding the assumption that these needs can be fully understood from an external position.

Another important shift occurred in the overall ambition of the project. At the beginning, the project focused mainly on improving the recovery process of care residents with bipolar disorder. Over time, this focus broadened from recovery alone toward overall mental wellbeing. This shift was important because a healing environment does not only influence recovery of a mental disorder, but also contributes to everyday emotional stability, comfort, and quality of life. The recovery process is positively influenced when the environment supports mental wellbeing through structure, nature, movement, sensory comfort, and social flexibility. Eventually, this broader focus also made the project more inclusive, because many of the proposed patterns and design interventions are not only beneficial for care residents with bipolar disorder, but also for a broader user group, such as visitors, staff, neighbours, and future residents of the site.

Reflection on Methodology: Relation between Research and Design

In this project research and design are strongly connected, they both continuously informed each other. The literature and reference review provided the theoretical foundation for understanding healing environments, bipolar disorder, and restorative landscapes. These insights led to the identification of a first set of spatial principles and patterns. Through personal observations and spatial analysis I tested these theoretical patterns in real life care environments, it helped to refine the pattern language and to identify new patterns. Design also influenced the research process. Spatial ideas were tested and developed iteratively, through the method research through design. The design process helped me to identify relationships between patterns and showed which spatial principles needed to work together. For example, the concept of the Always Home Route emerged through design explorations as a way to combine walking, autonomy, orientation, and safety. The brainstorming sessions with experts were also very relevant for this project. It provided me a realistic view on my design proposals and revealed some new insights. The feedback from the experts strengthened the project by connecting design ambitions to everyday care practice.

Main Value and Limitations of the Project

The main value of this project lies in its attempt to bridge mental healthcare, urbanism, and environmental psychology. It shows that mental healthcare sites should not only be approached as institutional environments, but as healing environments that can actively support mental wellbeing, recovery and social inclusion. Through the development of a pattern language, the project translates complex psychological, social, and spatial insights into concrete design principles that can be applied and adapted in different care environments.

Another value of this project is the combination of care specific and more generic mental wellbeing principles. Some patterns respond directly to the need of care residents with bipolar disorder, other patterns support mental wellbeing more broadly. This combination makes the project relevant not only for one specific user group, but also for the design of integrated healing environments in general.

At the same time, the project has several limitations. These limitations are

described in the discussion, but another limitation is that the site specific vision remains conceptual and exploratory. The vision provides spatial principles, design directions and guidelines, but the actual impact would depend on feedback from care residents, care policies, management, implementation and long-term use. For example, shared spaces, walking routes, and public-private transitions can only function successfully if they are supported by appropriate supervision, maintenance, an organisational agreements between care institutions, residents, municipalities, and future stakeholders.

Reflection on the Approach and Academic, Societal, and Ethical value

The approach of combining literature review, personal observations, brainstorming sessions, research through design, and the bipolar viewpoint proved valuable for this project. Each method contributed a different type of knowledge. The literature provided theoretical grounding, the observations revealed real spatial conditions, the brainstorming sessions introduced practical knowledge, and the design process tested how these insights could be translated into a spatial form. Together, these methods created a layered understanding of the problem.

Academically, the project contributes to the relatively underdeveloped field between urban design, mental healthcare, and environmental psychology. While much research exists on mental health treatment, recovery models, and supported housing, less attention is given to the spatial design of care sites as healing environments that influence recovery, and mental wellbeing. The pattern language offers a way to structure this knowledge and translate it into spatial design principles.

The project has an important societal value, since mental health is an increasingly important issue, while the stigma around mental illness still remains. Many mental healthcare sites are currently being transformed due to changing care ambitions and financial pressure. This creates an opportunity to redevelop these sites as integrated healing environments, rather than isolated institutions. This contributes to reducing stigma, supporting participation, and creating healing environments that are beneficial for care residents as well as a broader community.

Ethically, the project emphasises important questions about designing for vulnerable users. It recognises that individuals with mental health conditions have the right to autonomy, dignity and participation in society. At the same time, this project acknowledges that inclusion should not mean complete openness without protection, because safety and the public-private distinction remains essential. Therefore, the project argues for a carefully balanced environment that supports openness and retreat, shared use and protection, visibility and privacy. This ethical balance is central to creating healing environments that do not reproduce a form of segregation, but also do not ignore the real vulnerabilities and needs for care residents.

Reflection on Internship

Combining this graduation project with an internship added an important practical dimension to the research and design process. It allowed me to work closer to the real context of area development in care environments, where spatial ambitions, financial feasibility, and care-related requirements all influence the design process.

Through this internship I got access to site specific knowledge, professional perspectives, and ongoing discussions around the redevelopment of Park Bloemendaal and other care sites. This helped me to create more realistic and feasible design proposals, and helped me to test these proposals with experts in the care domain. At the same time, it challenged me to balance academic research and design exploration, with the constraints of practice. For me this was very valuable, because it strengthened the relevance of the project and helped me develop a more grounded understanding of how urban design can contribute to complex care environments.

Part 5

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