Healing Architecture in Women's Shelters

SPACES FOR RECOVERY

Shenaya Rocha-Dalger
4777735

Shenaya Rocha-Dalger
shenaya.dalger@gmail.com
4777735

TU Delft
MSc Architecture
Advanced Housing Design
June 2024

Mentors
Olv Klijn
Ruurd Kuijlenburg
Alejandro Campos Uribe

Examiner
Marjolein van Esch

PREFACE

This report presents the results of the research conducted and the proposed design for my graduation assignment in the Advanced Housing Design studio at TU Delft, with a specialization in Architecture.

I would like to express my gratitude to Olv Klijn for the diverse discussions over the past year. Your constant emphasis on the 'Why', 'How' and 'What' has been instrumental in helping me formulate my goals, vision, and ambitions during the design process. Additionally, I am grateful to Ruurd Kuijlenburg for your insights and expertise in building technology, which guided me toward more conscious design decisions. I also extend my thanks to Alejandro Campos Uribe for your unwavering support with literature and studies whenever I needed it, and to Marjolein van Esch for your encouragement during P2 and your motivational words.

Furthermore, I would like to thank Jolanda Vader for the interview and for providing me with the book "Van huis en haard," which was invaluable during the early stages of my research, offering a wealth of information and insights.

A warm thanks to my closest friends and family for their support and belief in me, making the past year possible.

Lastly, I want to thank the Lord Jesus, my husband Emanuel, my son Micha, and my mother Cidia for their love, continuous support, encouragement, and trust in me. Without you, I would not be where I am today. I am forever grateful.

With great pleasure, I present this report as a thorough and insightful exploration of the potential for designing women's shelters in the Netherlands within a healing environment. I hope that this work will contribute to our understanding of creating spaces that aid in the recovery of their users.

Shenaya Rocha-Dalger
Delft, June 2024

CONTENTS

1
OVERVIEW AND RESEARCH FRAMEWORK

1.1 Introduction

Around 45% of the people in The Netherlands between 18 and 70 years have encountered some form of domestic violence. Domestic violence can have a physical, sexual and psychological nature and can vary greatly in severity and duration. Every year there are around 200,000 victims of domestic violence, of which 56% is committed by the partner or ex-partner. This makes it the most extensive form of violence in our society and the second leading cause of non-natural deaths. This undermines the identity of houses as homes, which should be sanctuaries of protection, seclusion, and intimacy, instead becoming sites of fear, threats, and abuse. This leads to the fact that 13.000 to 16.500 victims in the Netherlands use a women's shelter annually.

Violence against women has long been a critical issue, first addressed comprehensively in the spring of 1981 when social workers, police, scientists, and experienced professionals convened for the first time. The socio-economic and biological dependence of women on men perpetuated a power differential, rendering women vulnerable to violence. To mitigate this, women's resilience needed to be strengthened through economic independence and an acknowledgment that the family unit was not universally safe. This led to the publication of the Violence Against Women and Girls Memorandum and the establishment of government-subsidized refuges such as Blijf-van-mijn-lijf houses, alongside support from churches, charitable organizations, and feminist activists during times of extreme need.

Despite the significant progress in the healthcare sector, little has changed in the design and concept of shelters for abused women and their children over the past decades. The healthcare sector has recognized and adopted the idea of healing environments, understanding that the design of buildings can positively influence the healing process. However, this concept has not been applied to women's shelters, which often remain unwelcoming, cold, and blandly decorated. Through healing architecture, environments that provide comfort and solace to women and their children after trauma can be designed. Additionally, innovative approaches to these spaces can be developed to prioritize their well-being and recovery.

1.2 Problem Statement

There is an urgent need for high-quality and comprehensive care and housing for victims of domestic violence in women's shelters. This research aims to address these challenges by exploring how architectural design and spatial organization can transform women's shelters into healing environments, enhancing the safety, well-being, and integration of vulnerable women and children into society. Therefore, the following question is raised:

"How can architectural design and natural environments be optimized to enhance the recovery and well-being of victims in women's shelters?".

By exploring this question, the research aims to provide insight into the multifaceted principles of healing architecture and how they can help overcome challenges in designing women's shelters. Ultimately, the goal is to shed light on how innovative design strategies in healthcare architecture can be effectively implemented to reintegrate a vulnerable group into society. This will address the pressing need for change in existing shelters.

1.3 Theoretical Framework

The research will be done through an ecologic way of thinking in the way American feminist and science philosopher Donna Haraway emphasizes. An ecologic way of thinking encourages a deep understanding of the relations of organisms to one another and to their physical environment. Haraway states that nothing is connected to everything, but everything is connected to something (figure 1). Therefore, it is crucial to acknowledge the entanglement of various entities, and acknowledge the complex relationships and interdependencies between humans, non-human beings, and the environment (Van Dooren, 2014). Through this approach, I aim to clarify the multitude of interrelationships among the different elements in a healing built environment.
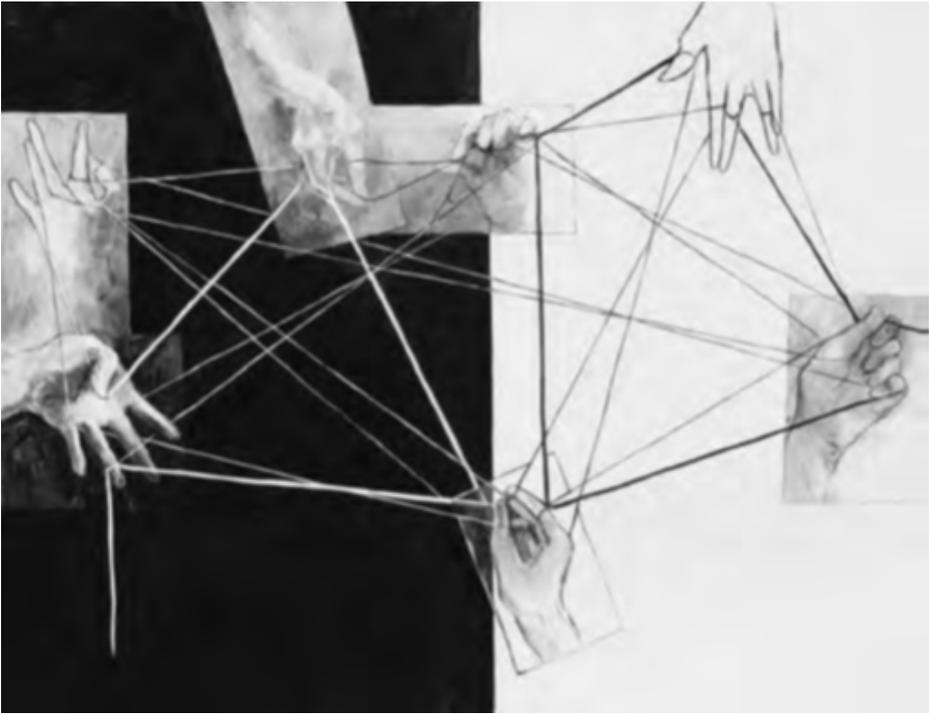
Figure 1: Cat's Cradle / String Theory (Baila Goldenthal, 2008. Oil on canvas, 36 x 48 in. Courtesy of Maurya Simon and Tamara Ambroson.)

To gain a deeper understanding of the influence of shelters and their environments on their occupants, I will use storytelling as a tool to clarify the effects. Storytelling or Donna Haraway's Speculative Fabulation is a 'mode of attention, a theory of history and a practice of worlding' (Haraway, 2016). We need Science Facts, but also Speculative Fabulations – fabulations to help us build theory and make a different future. This framework investigates the entanglement between women in the shelters, the shelters as a sanctuary and the outdoor area as a healing environment.

1.3 Methodology

The urgent need for innovative design strategies that holistically integrate environmental, social, cultural, and economic elements in healing architecture, requires various interconnected methods. The methodology will be conducted through the following methods:

- Literature Review
- Qualitative Analysis
- Case Study Analysis
- Storytelling.

The literature review will focus on the Netherlands and will form the foundation for further investigation. Obstacles, challenges, knowledge deficiencies and successful approaches in women's shelters will be analyzed. In order to bridge the gap between theoretical frameworks and practical performances, the report will capture experiential aspects of living in a shelter. The findings from the interview with the manager of a current shelter contribute to this. This human-centric perspective will gather valuable insights into women's perspectives, and comfort levels within the shelter. Through this, I aim to ascertain whether the new approach to shelters effectively encourages the reintegration of women into society and I aim to identify potential areas for improvement.

The report employs a variety of mediums, including images and sketches. Through this approach, my goal is to offer a perspective on the impact of shelters on their inhabitants in the past, nowadays and a vision on potential future innovations within shelters. By constructing scenarios through storytelling, I aspire to inspire architects to proactively engage in shaping a healing built environment through thinking, writing, and researching. Furthermore, municipalities can use the information from this report in the development and evaluation of policies addressing domestic violence.

2
HISTORICAL CONTEXT OF
WOMEN'S SHELTERS IN THE NETHERLANDS

2.1 Domestic Violence

Domestic violence encompasses acts of violence committed by individuals within a domestic or familial setting. The term "domestic" refers to the nature of the relationships among those involved. This can include violence among family members, between (former) partners, or between a parent and child.

Domestic violence manifests in various forms, such as physical or psychological abuse, sexual assault, neglect, humiliation, or excessive control (figure 2). It can also arise from harmful traditional practices, including female genital mutilation, child marriage, and marital coercion (Stichting Blijf Groep, 2020).

Domestic violence is a complex and multifaceted issue (Dijkstra et al., 2019). It often entails a combination of chronic problems, such as financial and housing instability, psychiatric disorders, addiction, relational difficulties, intellectual disabilities, post-traumatic stress symptoms, and parenting challenges. Children affected by domestic violence often have behavioral, learning, and emotional issues that affect their development.

Addressing these problems necessitates an integrated approach tailored to individual needs, considering the entire family and their respective issues.

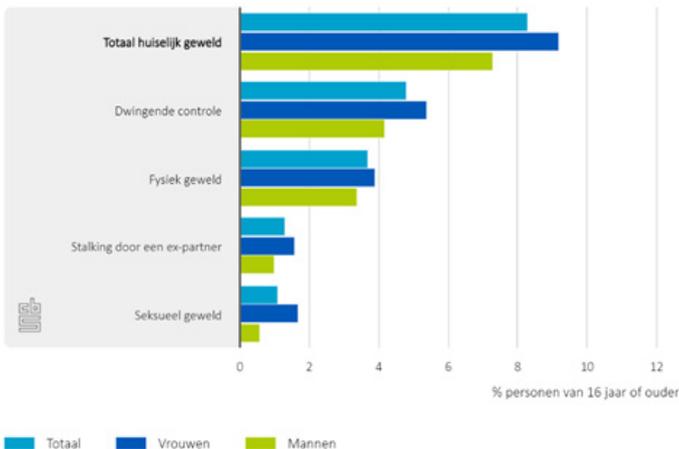Slachtoffers huiselijk geweld, april 2019-april 2020

Figure 2: Victims of domestic violence (CBS & WODS, 2020).

2.2 The role of Architecture in Women's Shelter

Every house serves as an axis mundi, the central axis around which the world revolves (Welten, 1995). Houses provide roofs and walls for protection, places to sleep, eat, and store possessions, and openings for entry and exit. A home anchors an individual in space and time (de Martelaere, 1993), influencing how they feel at home in the world throughout their life.

Annually, approximately 12,000 women who are victims of domestic violence seek refuge in women's shelters. Beginning in 1974, women's shelters, 'Blijf-van-mijn-lijf houses', emerged in the Netherlands in response to feminist critiques of the religious and philanthropic patronization that characterized traditional shelters. These early shelters sought to provide women with a space outside societal norms, enabling them to establish their own boundaries in an environment that could support this process. However, the architecture of these shelters, often marked by cramped living conditions and pervasive patronization,

made it challenging for residents to maintain a sense of self and clear personal boundaries. This led to many women struggling to regain control over their time and space, which is crucial for establishing a personal sphere and setting clear boundaries (Buitelaar, 1994).

Despite the intentions behind the shelters, many women find the process of reclaiming their lives difficult. As a result, some women return prematurely to their previous situation, others, despite completing the shelter program, continue to live in an intermediate phase, balancing on the threshold of reintegration into society (Van Bekkum, 1996). Additionally, 45% of women admitted due to domestic violence have previously stayed in a women's shelter (Wolf et al., 2006).

Understanding a woman's stay in a shelter as a rite of passage - an interim period outside the conventional social framework - can aid in their transition back to daily life, emphasizing the need for safe and supportive environments. Recognizing the historical context and evolving needs of women's shelters underscores the importance of creating spaces that support well-

being and recovery. It is crucial to develop innovative shelter that prioritize comfort, safety, and personal empowerment to help women reclaim their lives post-trauma.

2.3 Assistance and Architectural Design

As Walter Gropius stated, "Building means shaping processes of life" (Nickl-Weller and Nickl., 2020). This idea is particularly relevant when constructing supportive and healing environments for women's shelters, where life's processes are especially fragile, in need of special attention, and where people have been disrupted from their usual routines. The operational framework of support and the architectural configuration of women's shelters are intricately interlinked. For instance, within settings designated as 'living groups,' communal living serves as an integral facet of the support provided to residents. Conversely, in facilities featuring individual housing units, assistance is tailored to women in a distinct manner. This underscores the significance of harmonizing the spatial arrangement of the

shelter with the specific necessities and goals of the support program, thereby ensuring that residents receive tailored and effective support.

Tasks commonly encountered in women's shelters can be classified into three primary categories:

1. Management responsibilities, comprising administrative duties and reception tasks.

2. Relief work, which encompasses social welfare, childcare, and systemic functions. In numerous shelters, there exists a shortage of workstations, resulting in cramped conditions for social workers. Furthermore, inadequate storage space is available at these workstations for archives and supplies.

3. Domestic tasks pertaining to the maintenance of housing facilities. These services include emergency accommodation for immediate needs, short-term crisis shelters for protection, supported living arrangements for ongoing assistance, and post-stay aftercare to ensure sustained support.

Figure 3 & 4: Victims of domestic violence in a shelter (Van Manen, 1980).

2.4 Living in an Institution

2.4.1 Blijf-van-mijn-lijf house

Women's shelters, such as the "Blijf-van-mijn-lijf" houses, serve as critical spaces for victims of domestic violence, providing both refuge and a transitional environment. A "Blijf-van-mijn-lijf" house is a unique institution with specific characteristics. The addresses are kept confidential, which causes the issue of domestic violence to be 'hidden' and remain invisible (van Dijk, 2008). From the door of the private room to the front door of the institute, all spaces are considered internal public spaces. This concept is comparable to a hotel, where guests have their private quarters, but corridors, stairs, and elevators are part of the internal public domain. The internal public domain in a "Blijf-van-mijn-lijf" house allows women to practice transitioning from the private to the public domain. However, only a limited number of shelters provide facilities that offer both private and collective spaces.

2.4.2 Living Conditions and Challenges

The predominant living arrangement in shelters for women and children involved some form of group setting, often comprising living groups. The living group model, rooted in therapeutic principles, posits that communal living fosters valuable experiences and support exchange among women. These groups typically feature a shared kitchen and living room, alongside individual rooms devoid of communal living spaces. The integration of housing and care underscores the interconnectedness of these elements.

While women in living groups derive recognition and support from one another, residing in such close quarters with other traumatized individuals, can aggravate stress levels (Wolf et al., 2006). The model emphasizes a horizontal structure where participants are considered relatively equal, yet the presence of children disrupts this dynamic. Living in such groups places an additional burden on women and children, given their compromised physical and psychological states, compounding the stress experienced due to violence, poverty, and social exclusion.

Figure 5 & 6: Victims of domestic violence in a shelter (Van Manen, 1980).

2.5 Communal Spaces and Necessities

The communal areas in women's shelters serve as essential spaces for meaningful activities and interactions among residents. These spaces typically include libraries, play areas, computer rooms, gyms, and clothing depots. Given that many women and children arrive at shelters with limited belongings, these depots provide access to essential clothing items. Additionally, group activity rooms facilitate socializing, engaging in crafts, attending courses and participating in therapy sessions.

Since the 1980s, healthcare institutions have increasingly emphasized the individual needs of those seeking assistance. Consequently, there has been a growing demand for privacy and physical separation between communal and private areas within shelters.

This trend has resulted in larger, self-contained housing units with in-house facilities, reducing the number of shared living spaces and group activities. Expanding housing units with in-house facilities reduces the number of available units per accommodation. Furthermore, the inclusion of offices, consulting rooms, or counseling areas further diminishes the available housing units. Consequently, the design of communal facilities and internal public areas has become increasingly critical. These areas include corridors, stairs, portals and landings, which serve as pathways for movement within the shelter. Despite often being narrow, these traffic spaces accommodate various activities and functions. A double routing system between the front door and private spaces offers residents the option to encounter or avoid others, contributing to their sense of autonomy and privacy. This shift fosters a transition from forced interactions to informal, voluntary contacts, thereby enhancing the supportive community environment among residents and caregivers within shelters. Although the living group model is gradually being phased out, it still persists in shelters.

Besides private areas within the shelter, women desire amenities in the surrounding area including access to daily necessities such as stores, supermarkets, bakeries, butchers and markets, as well as essential services like general practitioners, schools, daycare facilities and police stations.

Additionally, they seek an environment conducive to stress relief, knowledge sharing, collaboration, empathy, financial clarity and guaranteed safety.

For staff members, a supportive work environment offering coaching, education, training, and collaboration within a cohesive team is crucial for effectively meeting the needs of shelter residents. Recognizing this, the national "Women's Shelter Improvement Plan" prioritizes enhancements to shelter housing as part of its professionalization efforts. The design of shelter accommodations plays a crucial role in delivering assistance to abused women and their children, warranting inclusion as a fundamental aspect of the primary assistance process.

3
THE NEW CONCEPT OF WOMEN'S SHELTERS IN THE NETHERLANDS

3.1 Oranje Huis Approach

The research "Maat en baat van de vrouwenopvang" revealed that extremely vulnerable women with significant societal disadvantages and severe psychological issues seek refuge in shelters (Wolf et al., 2006). However, there is often a mismatch between their needs and the services provided. To address this, the Blijf Groep organisation developed the innovative Oranje Huis Approach (Orange House Approach), first implemented in Alkmaar in 2010. Furthermore, the Blijf Groep operates two Oranje Huizen in Almere and Amsterdam, with additional locations in Haarlem and Zaanstreek.

The name refers to the colors of a traffic light: green means no violence, red indicates an escalated situation requiring a strictly confidential shelter, and orange signifies that domestic violence is present but can still be addressed.

The primary goal of the Oranje Huis Approach is to break the isolation caused by shelters at a secret address, which can lead to social disconnection as clients cannot share their location or receive visitors. Characterized by openness, visibility, and collaborative safety, the Oranje Huis Approach aims to stop domestic violence without necessarily ending relationships. Unlike traditional secret shelters, the Oranje Huizen are designed to be visible and accessible, integrating crisis shelter, supported living and outpatient assistance, all tailored to the needs of each family member in one location. This method reduces social isolation by maintaining a safe, yet open environment where all family members, including the perpetrator if safe, are involved in the intervention towards an integrated family plan (Stichting Blijf Groep, 2024).

The Oranje Huis Approach seeks to create safety collaboratively, challenging the stigma of domestic violence and ensuring a comprehensive, systemic response that includes a secure and well-designed facility with constant staff presence, risk assessments, and strong cooperation with the police (van Dijk, 2008). Clients are empowered to identify their strengths and leverage community resources to regain autonomy and envision a violence-free future.

Figure 7: Oranje Huis in Amsterdam (Arcam, 2023).

This approach helps women and their children stay connected to the community, facilitating a smoother reintegration process. Furthermore, a long-term study conducted by the Verwey-Jonker Instituut in 2021 affirmed the effectiveness of this method in enhancing safety, trauma recovery and overall well-being of clients.

3.2 Interview

This approach piqued my interest, prompting me to interview the former manager of Blijf Groep, Jolanda Vader, to delve deeper into its implementation and impact. The insights gained from this interview provided valuable perspectives on how the Oranje Huis Approach addresses the complex dynamics of domestic violence and how vulnerable individuals and their families are supported. Understanding its innovative strategies has enriched my understanding of effective interventions in architectural responses to social issues.

Some insights that emerged from the interview include:
- The Netherlands falls short of the standard for providing shelters, showing notable differences between regions.

- Previously, women's shelters were frequently located in buildings not originally designated for this purpose, such as squatted properties. Today, housing corporations are developing shelter locations through social rental housing initiatives. This transition results in a new shelter environment where each household has its own entrance and facilities. Enhanced floorplan designs enable flexible building configurations that can adjust to evolving needs.

- Shelter facilities have improved in quality, shifting away from previous emphasis on communal spaces with limited individual areas. This improvement has reduced women's inclination to return to their former situations.

- From the beginning, the emphasis is on promoting recovery and maintaining communication. Safety assessments are conducted and established right from the start, and maintaining contact helps establish a sense of normalcy.

- On average, women bring 1 to 2 children of all ages with them to the shelter.

- Due to victims' loss of boundaries, unsafe situations arise among neighbors.

- The shelter environment allows women to explore the possibility of reconciling with the perpetrator, with the shelter providing a safety net as needed.

- Clients stay in the shelter for 9 to 12 months and make financial contributions determined by municipal criteria. These consider factors such as the number of children, income levels, and rental arrangements.

- The housing units typically range from 50 to 80 square meters in size, with safety measures adjusted according to the unit's size.

- The green design of the building, garden, balcony, and rooftop terrace is funded by the Kinderpostzegels Foundation through the "Huisje, Boompje, Beestje" project. This green environment fosters social interaction among the women and children.

Figure 8: Oranje Huis logo (Arcam, 2023).

4
HEALING ARCHITECTURE

4.1 The Concept of Healing Architecture

To ensure that architecture remains relevant and continues to aid societal development in the future, it is essential to merge the themes of health and urbanity, which are central to society. This integration aims to create added value that transcends spatial boundaries and meets cultural and societal needs.

The word 'heal' is derived from an Anglo-Saxon word 'haelon', which means wholeness (Gharipour, 2021). Healing involves a holistic process that requires attention to a patient's physical, biological state as well as to his or her psychological one, which entails spiritual, mental, emotional and social needs. 'Healing Architecture' based on the term 'Healing Environment' deals with design principles of the constructed environment and its effect on the processing of illness with patients, as well as on efficiency and satisfaction of personnel and family members (Nickl-Weller, 2017). The overarching goal is the improvement of the quality of healthcare buildings through architecture that is based on the needs of people and support their recovery.

4.2 Key Elements of Healing Architecture

Healing architecture refers to the design of buildings and spaces that promote the physical, mental, and emotional well-being of their occupants. Since essential elements of healthcare and human well-being relate to women's shelters, these will be addressed.

Spaces influence physical and mental well-being, affecting stress, behavior, and health. Factors such as spatial proportions, lighting, climate, floorplan organization, access to nature, and interior design can positively impact people's well-being (Nickl-Weller, 2017). Roger S. Ulrich's 1984 study 'View Through a Window May Influence Recovery from Surgery' proved that giving patients a room with a view of nature enhances the healing process. Incorporating access to nature helps create a calming and restorative environment. Additionally, safety measures should be subtle and non-intrusive to maintain a positive atmosphere, as overt security features can trigger distress and be counterproductive.

4.2.1 Mental aspects

Mental aspects of healing architecture that enhance the experience of shelter environments include:

1.   Placebo—Expectation Effects

When we meet a person for the first time, we get an idea of their personality. We judge what we believe we can expect from the relationship in the future, positive or negative. Our first meeting with a building works in a similar way. Is the physical appearance warm and welcoming, cold and dismissive or sloppy instead of orderly?

2.   Attractiveness

One of the ideas of healing architecture tries to use attractiveness of the physical environment as a unifying concept. Research has shown that the way we assess a business correlates with the way we assess the building in which it is housed, despite the fact that we have no more extensive knowledge about the true quality of the housed activity (Ulrich, 2012). It has also, however, been pointed out that the concept of attractiveness is used without identifying which particular physical features contribute to that attractiveness (Becker et al., 2008).

3.   The Status Syndrome

Women's shelters are generally not seen as one of the higher-rated social services. Historically, women's shelters have often been housed in older and less functional premises that were not designed for this specific purpose due to limited funding, which makes it difficult to secure newer or purpose-built facilities. However, with the construction of the new sustainable shelter, a major financial investment would be made—an investment that symbolically communicates: 'You are important, and important to invest in!'

Our social status predicts, to a very high degree, one's present and future health (Marmot, 2006). I would argue that the introduction of my design will significantly raise the social status and lift the self-esteem of both staff and the women. It is that well-being, that may contribute to a safer environment for staff, women, and the civil society.

4.2.2 Physical aspects

In addition to these mental aspects are physical aspects of healing architecture. These elements can be designed and manipulated to create spaces that promote well-being and healing.

1.   Light

Maximizing natural light and providing views of nature can significantly improve mood and reduce stress, contributing to faster recovery times and enhanced well-being.

2.   Air

Ensuring good air quality through effective ventilation systems, improves comfort and well-being and helps reduce the spread of infections.

3.   Sound

Designing spaces with sound-absorbing materials and controlling noise levels can create a peaceful and restful environment, which is particularly important during the healing process.

4.   Materials

Using non-toxic, sustainable materials and calming color palettes can enhance comfort and safety, contributing to a healing environment.

5.   Movement

Designing intuitive and easy-to-navigate spaces reduces stress and anxiety. Clear wayfinding and logically arranged spaces help occupants feel more at ease.

6.   Access to nature

Incorporating elements such as gardens, green roofs and indoor plants can create a calming and restorative environment. This biophilic design principle connects occupants with nature, which has been shown to have therapeutic effects.

7.   Privacy and social interaction

Balancing the need for privacy with opportunities for social interaction can support mental health. Providing private spaces for reflection, along with communal areas for socialization, can cater to different needs.

4.3 Application to Women's Shelter

As previously mentioned, women in shelters experience significant stress due to the layout and environmezkey elements of healing architecture contribute to stress reduction on various levels.

1.   Reduction of crowding stress
- Single units with private bathrooms
- Communal areas with movable seating and ample space to regulate relationships
- Design for low social density

2.   Reduction of environmental stress
- Noise-reducing design
- Design for control within units

3.   Stress-reducing positive distractions
- Garden accessible to the women
- Window views of nature
- Daylight exposure

4.   Design for observation
- Communal spaces and housing units observable from the care facilities.

Reduced patient stress leads to improved staff outcomes.

4.4 Flexible Design Strategies for Children and Women

Children and adolescents present a heterogeneous user group (Nick-Weller, 2017). As they mature, their reliance on parental contact diminishes while their need for privacy intensifies. Consequently, the design of women's shelters for women and their children demands a high degree of adaptability. Spatial layouts must cater to fluctuating requirements for communal interaction and privacy, offering a range of room types that prioritize varying levels of openness and seclusion.

The architectural response should prioritize environments that foster trust and alleviate stress and anxiety among children. To achieve this, it is crucial to avoid disorienting or monotonous corridors and instead promote spatial clarity and recognition of familiar elements. Moreover, the design should integrate features that encourage movement and provide opportunities for play, addressing the need for physical activity in this user group.

4.5 Designing for Employees

The healthcare sector is currently experiencing a paradigm shift in how its workplaces are conceptualized (Nickl & Nickl-Weller, 2020). The greatest challenge is to create a pleasant working environment for its employees. Several studies, like the Office 21 research project the Fraunhofer Institute for Industrial Engineering, have shown that the design of a workplace and therefore satisfaction with a working environment has a positive effect on employees' ellbeing, performance and motivation. As seen in the corporate sector, healthcare facilities are increasingly adopting flexible workplace models that integrate elements like hot-desking, fixed desks, and flexible desks. These spaces are complemented by amenities resembling leisure and relaxation areas such as lounges, cafes, and fitness zones (figure 10). This approach empowers employees to choose their work settings dynamically, fostering spontaneous collaboration and enhancing the overall organizational identity.

The integration of healing architecture principles into women's shelters is necessary to effectively improve the well-being of residents, staff, and visitors. By focusing on light, air, sound, materials, movement, access to nature, and balancing privacy with social interaction, environments can be created that support recovery and enhance the quality of life for all users. The shift towards flexible, adaptable designs acknowledges the diverse needs of occupants and underscores the importance of creating spaces that promote holistic well-being.
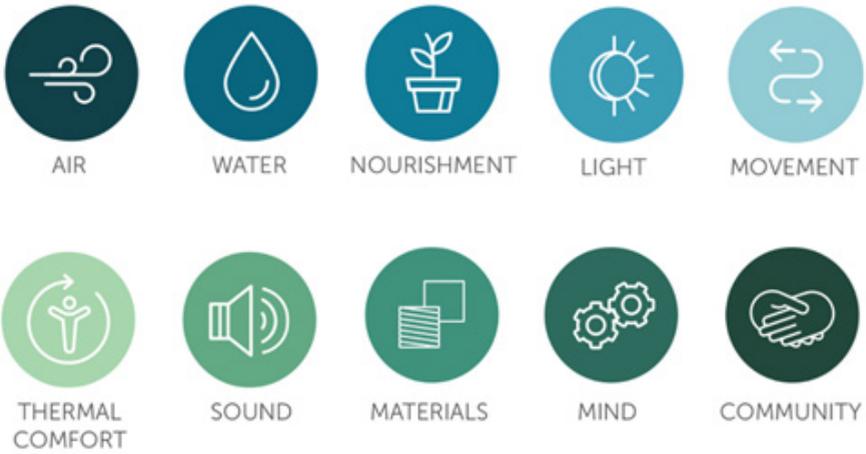
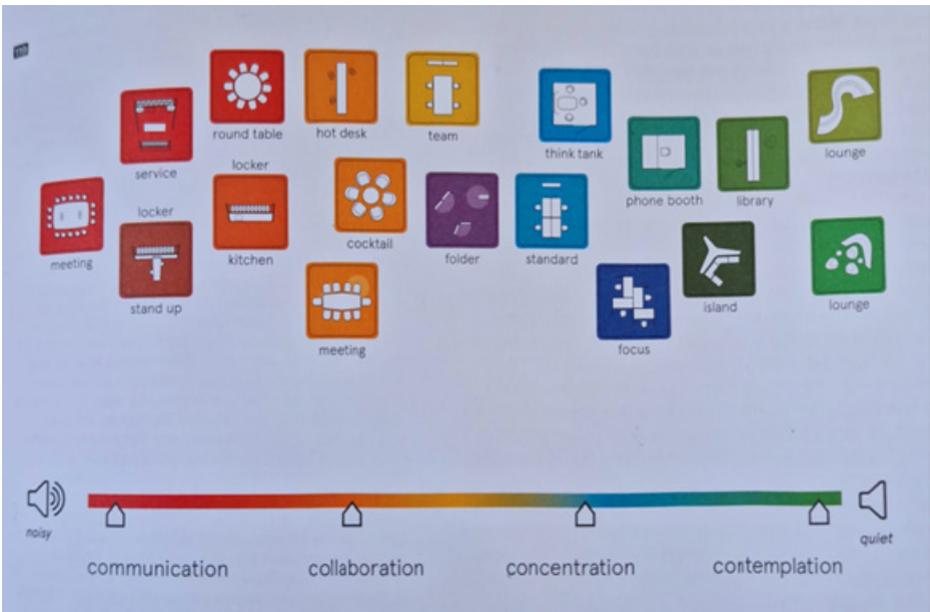*Figure 9: Ten Concepts (Internationall WELL Building Institute PBC, n.d.).*

Figure 10: For every activity there are multiple different spaces, CC-model developed by KINZO (Architecture for Health, 2020).

5
CASE STUDY: HUBERTUSHUIS

5.1 The Hubertushuis by Aldo van Eyck

For the case study, the design of the Hubertushuis in Amsterdam was chosen, primarily attributed to architect Aldo van Eyck. It was built to provide temporary shelter for families led by a single parent and is therefore also known as the Mother House. The analysis of the Hubertushuis will be approached through storytelling. The book 'Aldo van Eyck, Hubertushuis/ Hubertus House' by Herman Hertzberger, Addie van Roijen-Wortmann, and Francis Strauven has been a key source for understanding the building's development and the institution itself.

Aldo van Eyck's buildings resemble poetry, not merely due to their poetic nature, but primarily because of the precision with which they are assembled down to the smallest details. This precision can be described as sentences where every word and its exact placement are crucial, as even the slightest alteration can significantly alter the whole meaning.

The Hubertushuis is van Eyck's most transparent and most vulnerable building with which he contributed to the image of the 20th-century mechanism of architecture. It deviates from typical Van Eyck forms because he collaborated closely with all staff and clients involved in its design process.

5.2 History

The Hubertus association, originally founded in the late 19th-century through Christian charity, evolved in the early 1960s into a residential facility. Initially serving as a boarding house aiming to accommodate as many unmarried mothers and their children as possible by providing long-term shelter, its role evolved shifted with the implementation of the Social Assistance Act in 1965. Around 1968, the Housing Service classified unmarried mothers as seperate households. This transition redefined the association as a temporary shelter and guidance center for single parents in challenging circumstances. Since then, the facility has offered temporary residence averaging six months for a limited number of parents and their children who occasionally stay up to two or three years. Specialized support is provided to children to address their specific needs during their stay.

Figure 11 & 12: Impressions Hubertushuis   *Figure 13: Urban context*
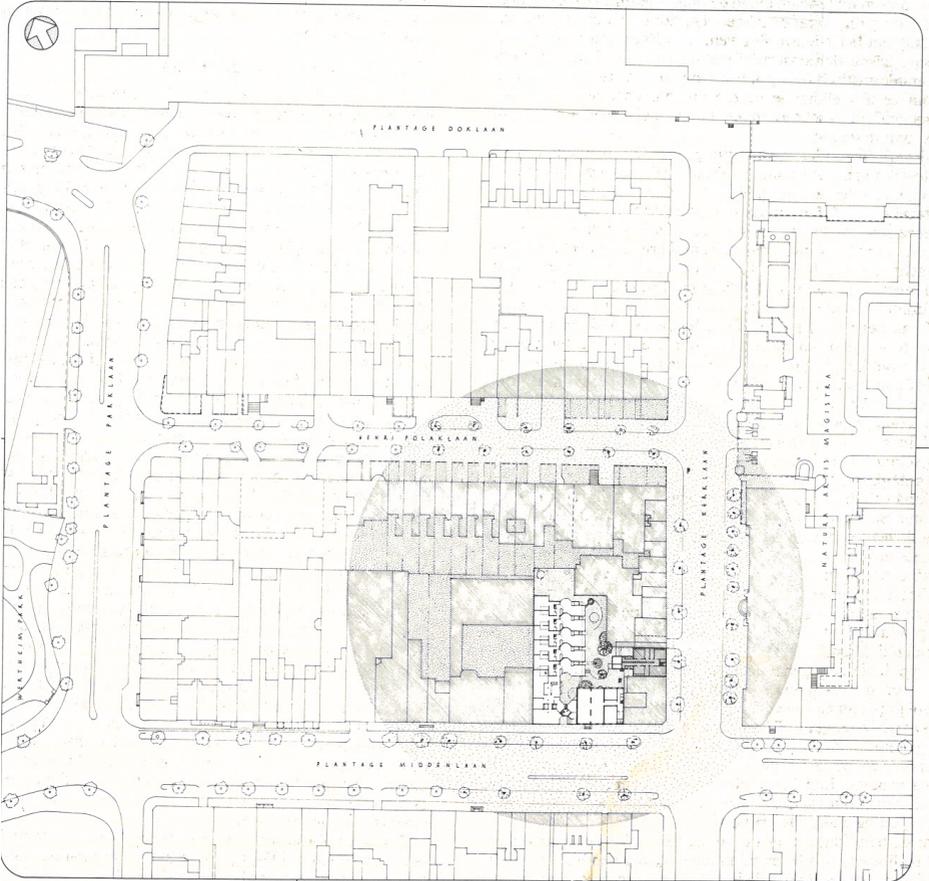
5.3 Location and Composition

Plantage Middenlaan 33-35 comprises two historic buildings from the 19th century: a postwar pseudo-functionalistic structure originally housing a pedagogical academy, and a 19th-century eclectic house which has been home to the Hubertus associations since 1926. The newly constructed section of the Hubertus House serves as an infill between the 19th-century buildings, occupying a 15-meter-wide plot.

The addition of the new building creates a disruption in the façade alignment (figure 11). There is significant focus on the individual characteristics of the two existing building sections and the dynamic space between them. With its fresh forms and colors, the new building permeates even the smallest details. It integrates the existing structures through a glass stairwell, linking the old ''main building'' to the new ''extension''. Achieving this involved cutting through the solid and formidable walls of the main building to establish the main entrance.

Through upward carving and volume manipulation, the design invites sunlight, outdoor spaces, and views from multiple directions into the building (figure 12).

It features a complex outline on both front and sides, with interiors intricately interconnected across different floors. This integration ensures that the building remains visually present as part of its surroundings. Additionally, its presence within the urban context fosters feelings of security, engagement, and enclosure (figure 13). To get closer to the meaning of enclosure and openness, emphasis was placed on light - and thus transparency.

It features a load-bearing structure of concrete columns and floor slabs around a fixed core of toilets and elevators, allowing for flexible floor plans. The non-load-bearing walls are mostly glazed, creating a transparent space that fulfills the Rogerian ideal of openness and accessibility. This transparency dissolves the Art Nouveau influences, with the curves in the metal facades gaining the perceptual significance that Van Eyck intended. The building exemplifies how modern architecture can become a contextual language, enhancing the urban environment while staying true to itself.
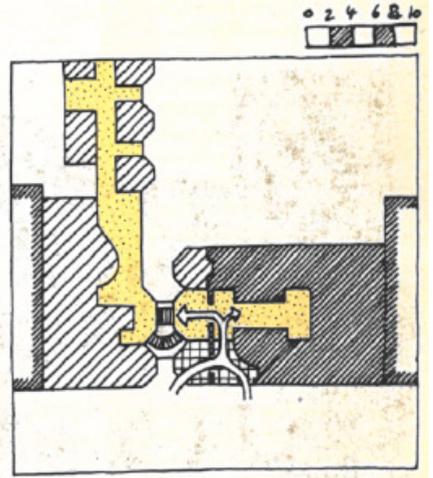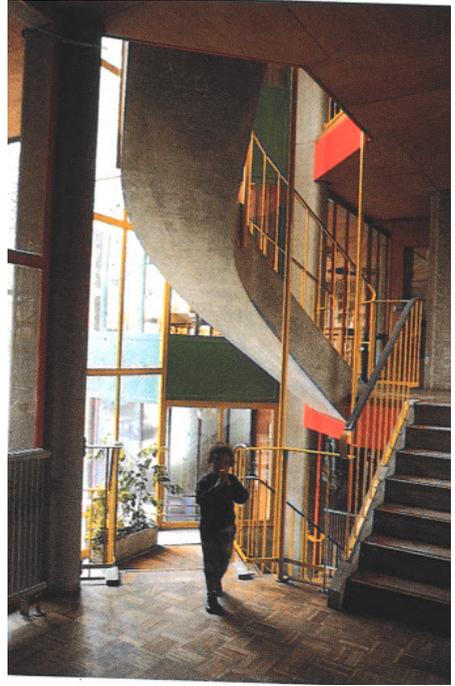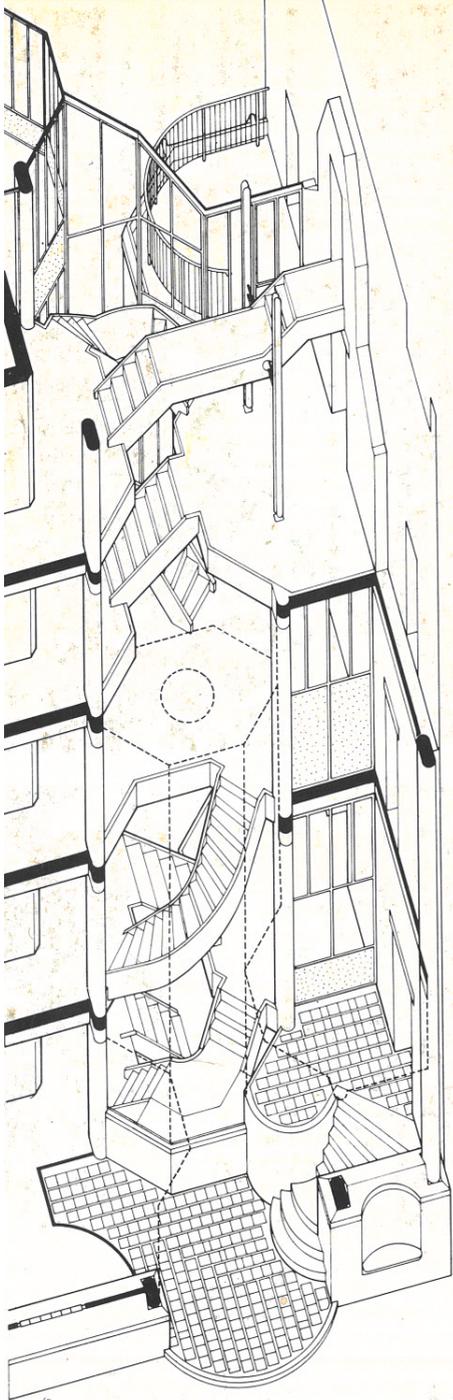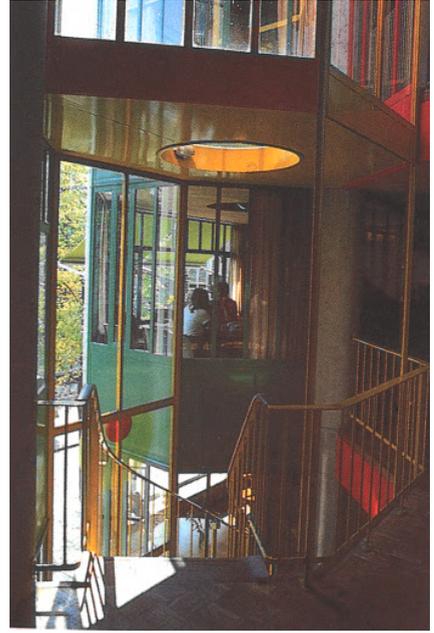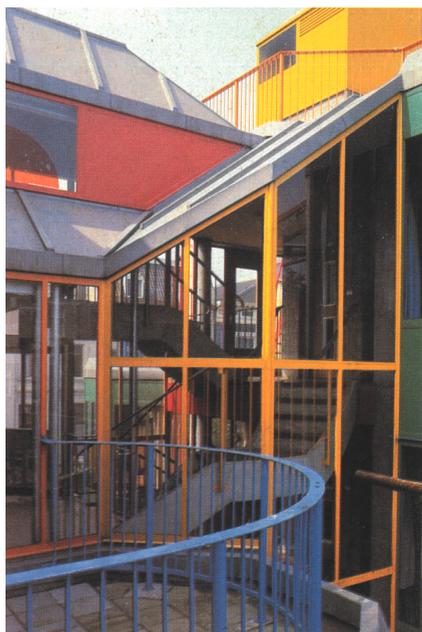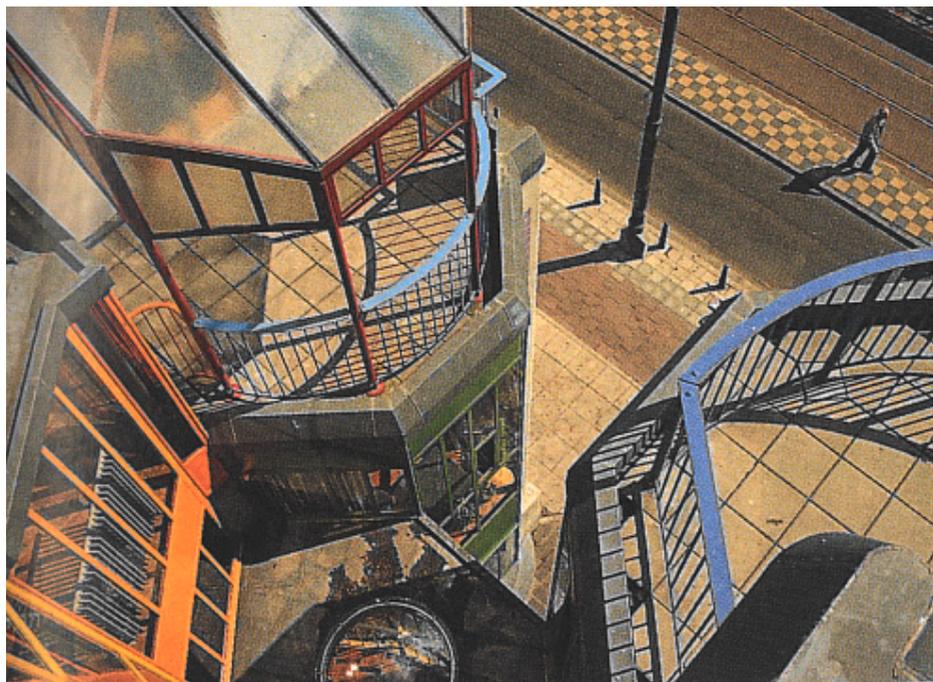
Although the building gives an open and almost transparent impression, with its inward-facing walls, the inviting entrance that draws the outside in, the deep blue colors that seem even more transparent than the reflective glass in between, the gentle window forms, and the terraces that open onto the street, it is still not a publicly accessible building.

5.3 Target Group

The Hubertushuis offers a temporary home to a dynamic group of 89 individuals: 16 mothers and around 73 children, including those with single parents who live and work outside. The group comprises 15 babies, 50 children between 1.5 and 6 years old, and 8 children aged 6-12 who attend external schools. About 65 staff members guide, administer, and care for these groups, enabling day-to-day supervision. The building in the back accommodates the 'total nursery', where children aged one to six are cared for.

Resident mothers are only required to participate in household tasks to a minimal degree. Rather than patronizing them, Hubertus aims to fulfill the role of a missing partner, treating them with res-

pect and individuality. Influenced by Carl Rogers' 'client-centered therapy', this approach is executed through 'client-oriented' team discussions. Each resident mother is assigned an individual counselor and is encouraged, through both formal and informal conversations, to understand their unique issues and find their own solutions. This helps them learn how to take control of their lives and regain independence and resilience in society.

5.4 Facade

Key aspects observable from the facade include:
- Columns that do not rest directly on the street, with a solid base supporting the upper steel and glass structure.

- Four concrete wall elements with vibrant tile fields bordered by mirror strips, partially offsetting the intended massiveness.

- High rooms in the old buildings extending into the new building as bay spaces perpendicular to the road.

- The first floor of both the old and new sections being on the same level.

15/15 wit

spiegels

HUBERTUS

1 Sept 78

11 1 2 3 4 5 6 7 8 9 10

11 Kleuren!

Kleuren reeks als Regenboog

voor
Jan
Jansen
van
Aldo
van Eyck

10 8 7 6 3 2 1

idee 2 voor kleuren lijt wschaljt 11

3e

2e

1e

BG GF

sout.

9 °F10

Externally, the building prominently displays its colors, with the parapets of its exterior facades made of painted metal panels rather than plywood. Dominant blues, greens of the bay windows, the yellow of the staircase and elevator, and the orange, red, and purple of the internal facades visible on the terraces form a complete color spectrum spiraling through the recessed center. This makes the building a vibrant element in the urban kaleidoscope of the Plantage area, which mainly features natural greens, browns, beiges, and grays.

5.5 The gift of color

Color activates space both in the front and back house, forming a distinct layer of meaning. The architecture of the new building returns to the original intentions of the concept of 'het Nieuwe Bouwen'. It presents a new, urban interpretation of the architectural ideal: atypological, formless yet defined, elementarily constructed and functional. The Hubertushuis is 'open', representing the unity of space and time, 'anti-cubic,' showcasing a balanced relationship between unequal parts, and actively employs vibrant primary and secondary colors.

Colors outside the six spectral ones are not used. To ensure the color gradient from red to purple was neither too smooth nor too abrupt, the entire range was divided into eleven intervals – twelve colors: two purples, three blues, two greens, two yellows, one orange, and two reds.

Each section relies on a partial spectral sequence of three colors, with one color as the section's main color: blue-green-yellow, green-yellow-orange, yellow-orange-red, orange-red-purple, and red-purple-blue. Starting with three blues for the large facade areas along the road, it transitions inward to the green of the bay windows, then to the yellow in the hollow far back, from bottom to top. Via the orange and red of the other recessed facades, the purple joins the blue of the facade. Red and orange, mainly used inside, appear as red and orange exterior walls high above and at street level where the facade recedes. Fences at various levels add further color accents, completing the overall picture. The back essentially mirrors the front, with different facade plasticity and a different spectral color gradient. Closing the spectrum opens the building.
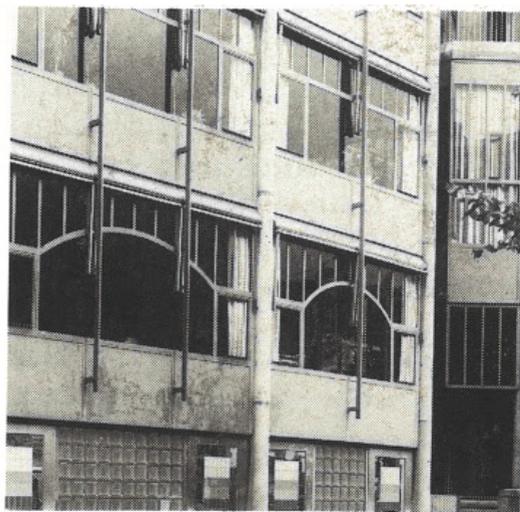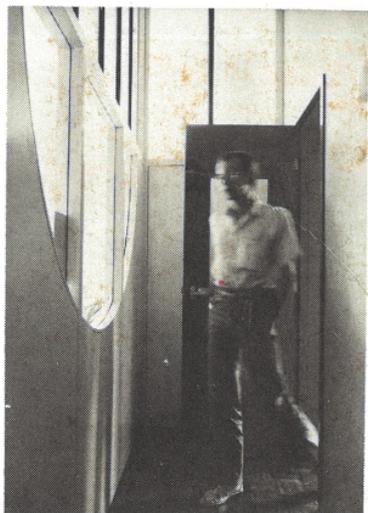
5.6 Program

The Hubertushuis can be divided into the front house and back house.

The back house contrasts the front house in many ways: it is low, with only two levels, a masonry base, a soft wooden upper structure, and a roof garden. The remaining floors, both the low new and high old ones, are vertically offset (split-level) and connected by short inter-axis stairs.

The program of requirements, translated by Aldo van Eyck in the Hubertushuis, was developed with the client and collaborators.

5.6.1 The Front House

-   The curved main staircases offer views of the road and downtown in the front, while in the back, they provide views of the courtyard and children's area.

-   The kitchen and canteen are centrally located at the end of the glass street where the living units are situated, next to the open stairwell. The kitchen's curved glass wall flexibly follows your path. It is organized as a service area, excluded from the residents' daily lives. One notable detail is the external

arches above the large central windows of the mezzanine canteen, designed to provide an unobstructed view that keeps individuals fully visible without cutting through their heads or bodies. This ensures that everyone, regardless of height or whether they are sitting or standing, has a clear view outside. Additionally, the light green awnings are divided into short sections, allowing for air circulation and partial sunlight penetration.

-   Residents have access to both communal living spaces and private rooms where they can stay with their children and receive visitors. The living rooms on the third floor of the original building are designed to be universally accessible, benefiting from their positioning between the central hall and sleeping areas, as well as their connection to two roof terraces. These terraces, incorporated into the new building as covered loggias, are only accessible from the living rooms. Similarly, access to the bay rooms below is facilitated through the original building, creating deliberate pathways that offer tranquility and security.
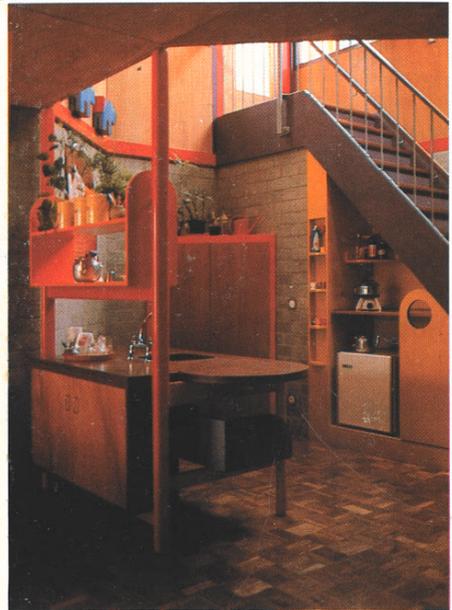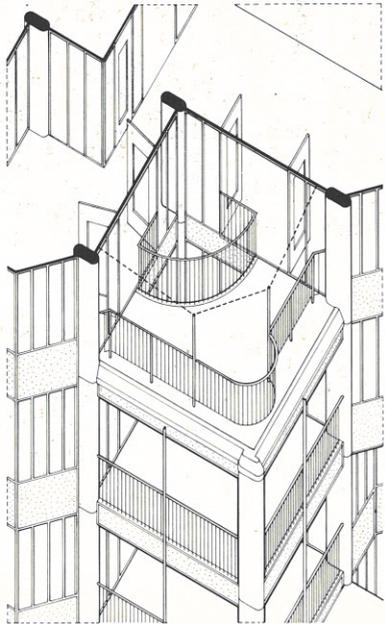
- Sixteen rooms for mothers are situated on the top floor and attic of one of the 19th-century buildings.

- Next to these rooms are the expansive living areas for women located in the central building, stretching across the entire depth and width above the street. This area connects the urban environment at the front with the realm dedicated to infants and children at the back.

- To ensure rest and hygiene, the baby sections are strategically positioned at upper levels within the new building. They are grouped closely together with spacious covered loggias and equipped with modern facilities for efficient care. The duplex design of these areas serves dual purposes: one side is designated for sleeping and bathing, while the other side functions as day rooms for mothers and babies. These L-shaped rooms open out onto expansive covered terraces through double doors. Additionally, five cradles are suspended from the curved balustrade encircling the atrium, enabling infants to experience the outdoors.

- In the new building, facilities for the institution's care and guidance activities include consultation rooms, training spaces, and meeting areas. These rooms are strategically positioned between the living quarters of parents and children. A design element in these spaces features a horizontal rod at 1.70 meters height, creating a boundary that subtly directs attention inward. This element incorporates downward curves that gradually obscure views of passing individuals, enhancing privacy and focus within the training rooms.
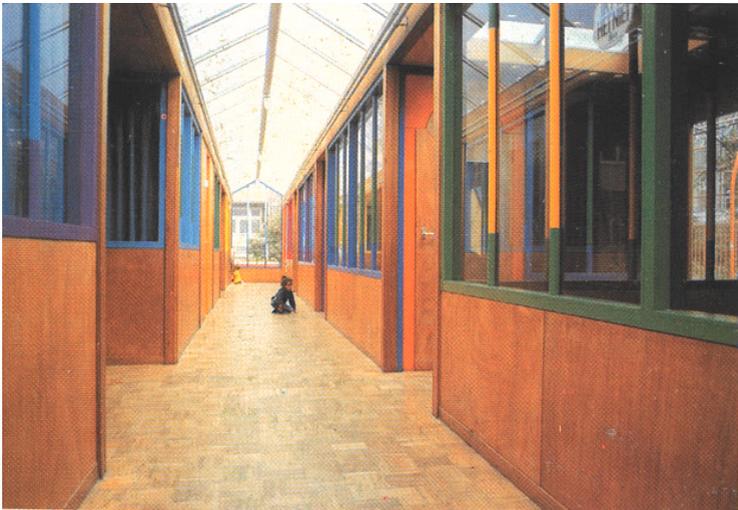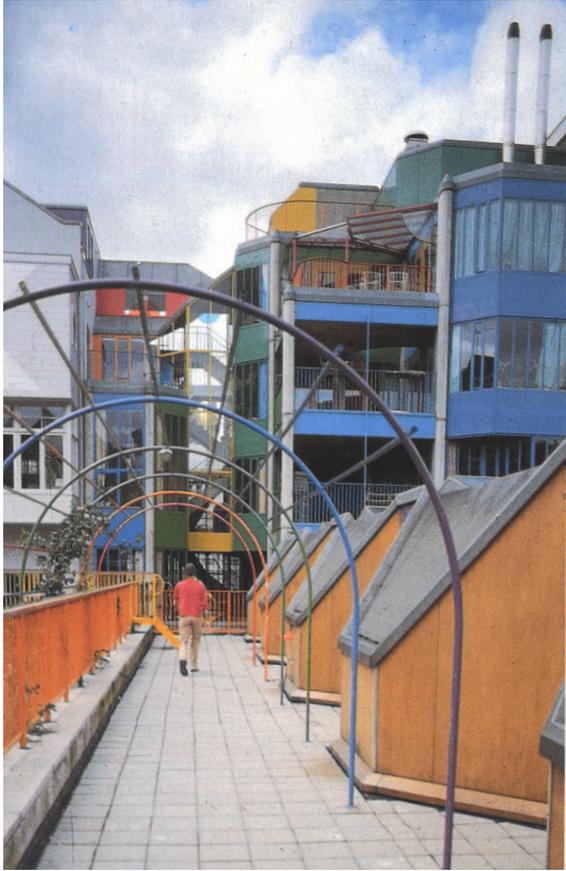
5.6.2 The Back House

- The five children's sections are located on the ground floor adjacent to the courtyard, separated by substantial partition walls punctuated only by required fire doors. Each section accommodates ten children and features a double-height staircase that also functions as a kitchen, a living room with a veranda, a bathroom with a toilet, and a bedroom. Access to these sections is provided from the first floor of the front building. The spatial layout is characterized by varying curves in the partition walls and contrasts between light and dark, concealed and open areas. Glass-in-steel verandas allow the houses to overlook the courtyard, contrasting with the relatively darker living rooms where the kitchen stands out brightly under the staircase's natural light. The level of openness varies with the intensity of light directed inward, as seen in the enclosed connecting play street above the day rooms and the outdoor playground.

In the Hubertushuis, similar to Van Eyck's overall approach, there is a consistent focus on shifting emphasis and adding attention beyond the ordinary, which enriches the architectural perspective.

- The precise sizing of window arrangements on the street side naturally draws one's gaze to the activities below on the street, subtly shifting focus away from the neighboring houses.

- The bay windows in the day-rooms create a sense of intimacy through their carefully considered dimensions.

- A quarter-circle opening in one of the numerous loggias at the back offers a view downwards through double doors, when they are open.
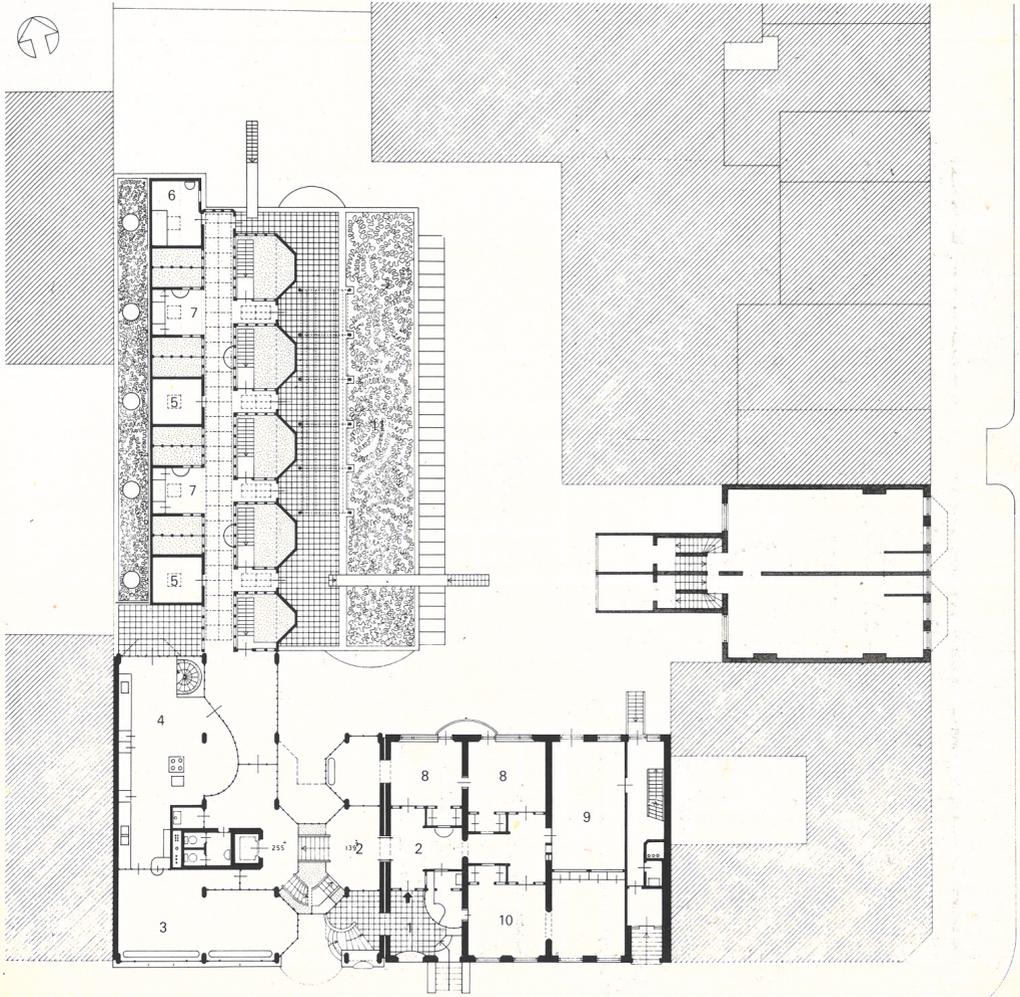
In conclusion, the Hubertushuis is a successful building. The vibrant colors and unique shapes of the building create a comforting atmosphere akin to home. Babies explore the loggias like in a play area, children ride bikes on the rooftop terrace, while mothers sunbathe on the balconies. With dedicated spaces, children can freely express themselves without constant adult supervision, navigating their surroundings with ease through walkways and staircases. This nurturing environment provides a transformative home for a community often marginalized in society.
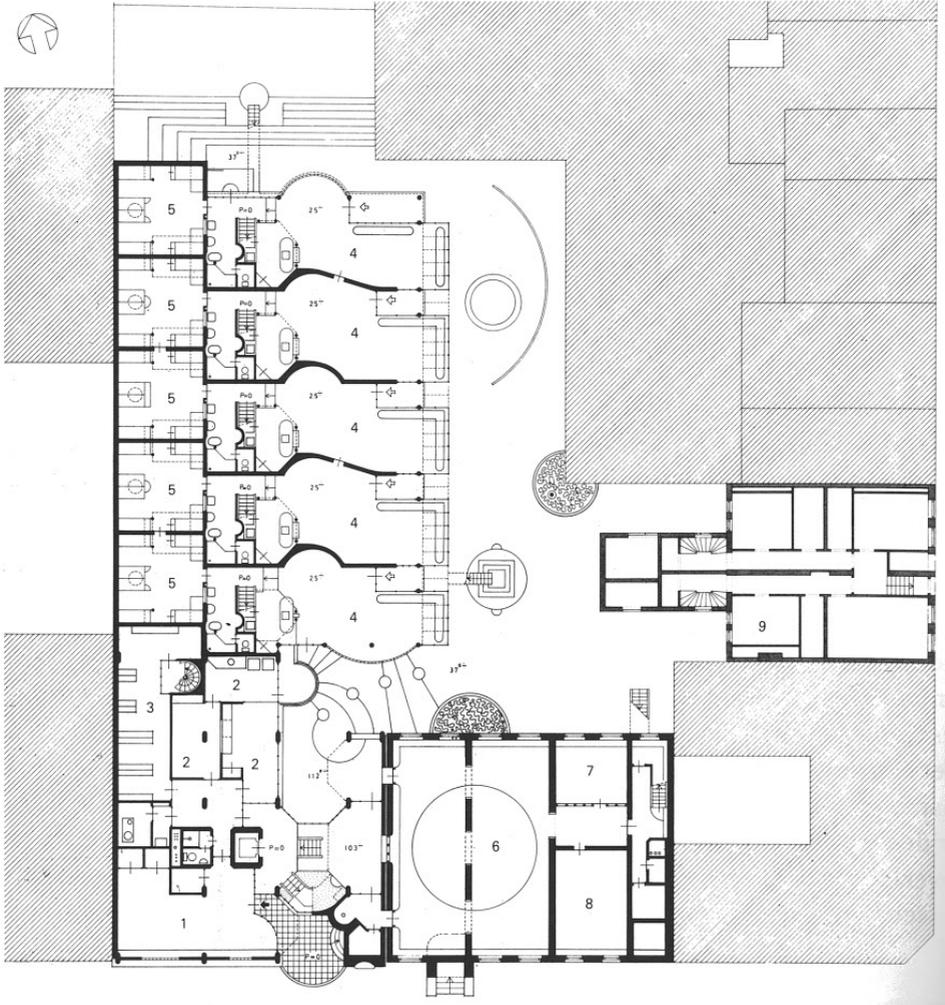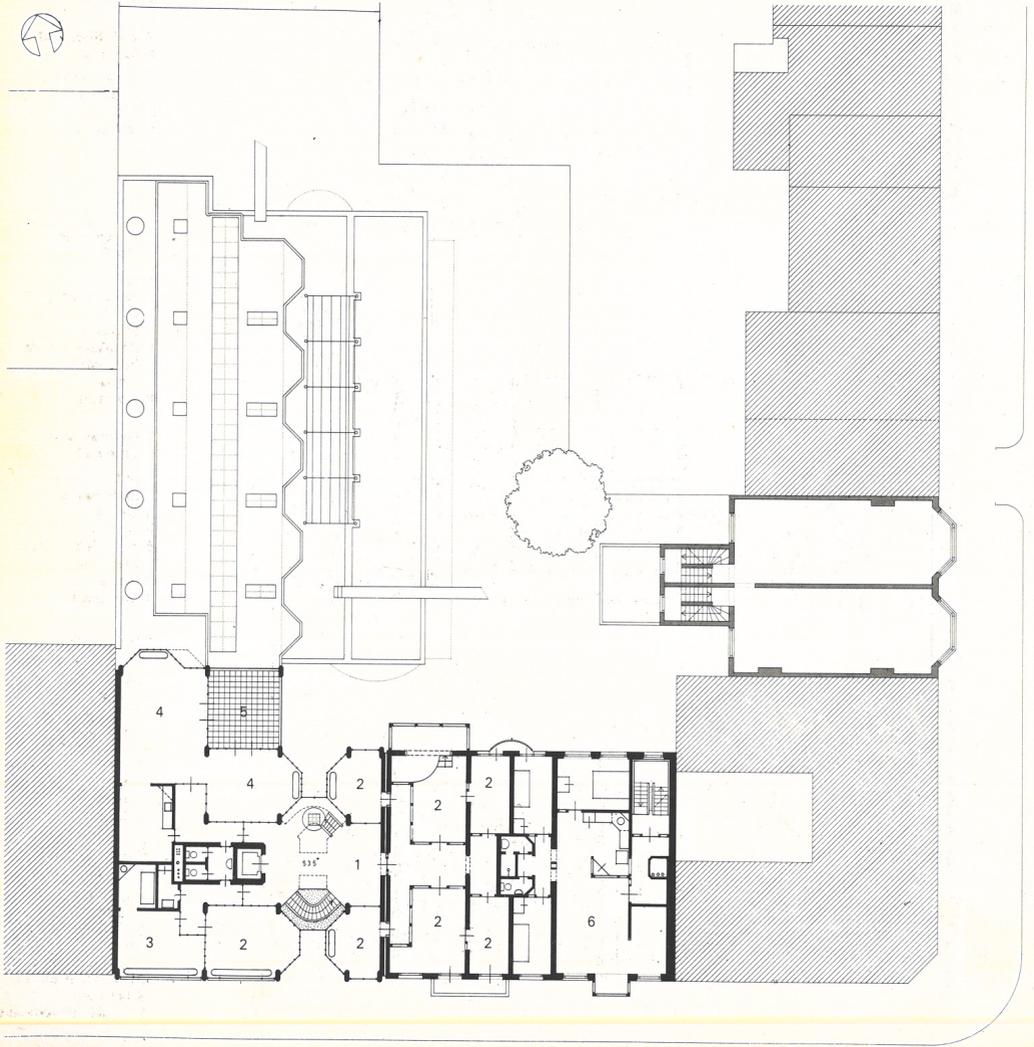
Mezzanine

1 entrance
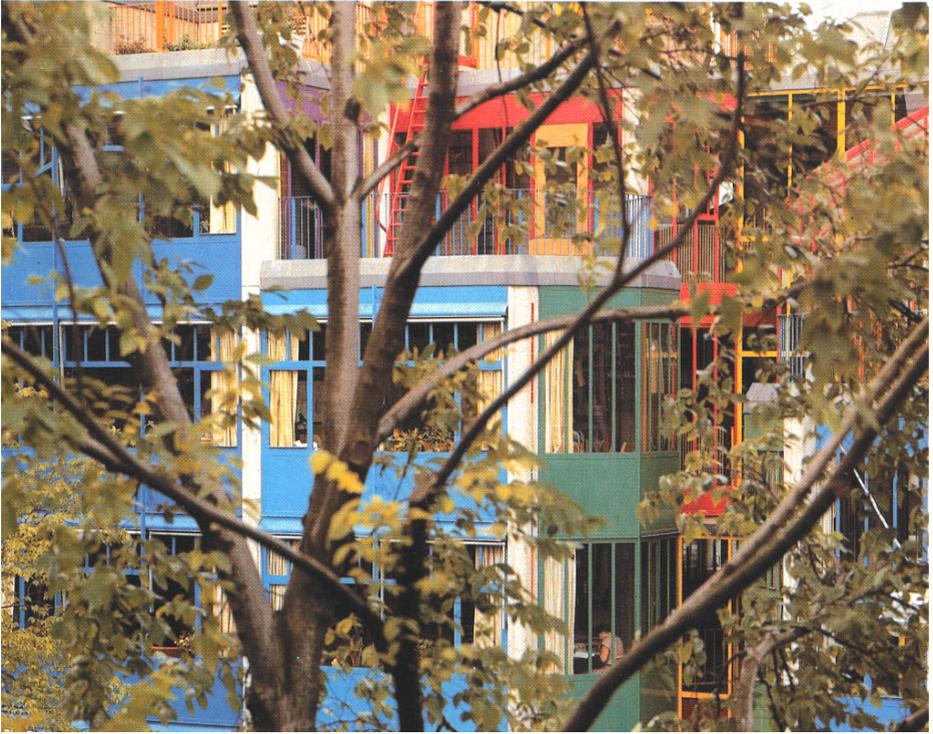2 hall
3 cafetaria
4 kitchen
5 guest-room
6 night assistant
7 play corners
8 head
9 meeting room
10 administration
11 roof-garden

First floor
1 hall
2 workrooms
3 doctor
4 children 1 to 6
5 loggia
6 janitor's lodge

Second floor

1 hall
2 workrooms
3 babies
4 kitchen
5 laundry
6 parent's rooms
7 parent's bedrooms
8 bathroom
9 loggia 10 roof-garden

Third floor and attic no 35

1 hall
2 meeting room
3 babies
4 kitchen
5 parent's bedrooms
6 bathroom
7 loggia
8 roof-garden

Fourth floor and attic no 35

1 heating system
2 terrace
3 bedrooms
4 bathroom
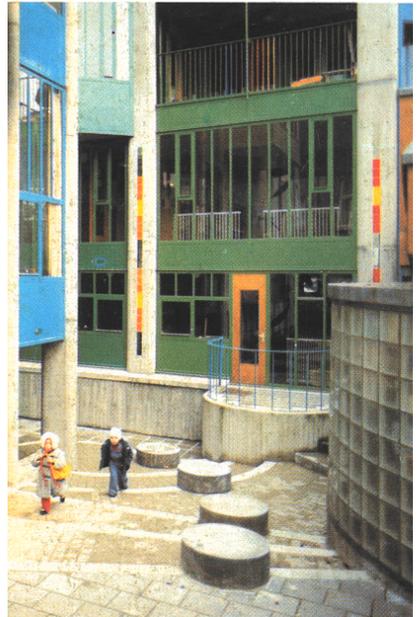
6
CONCLUSION

6.1 Research Question

From the research on domestic violence, women's shelters, healing architecture, and the case study analysis, the following question can be answered:

"How can architectural design and natural environments be optimized to enhance the recovery and well-being of victims in women's shelters?".

Architectural design and natural environments in women's shelters can be optimized by fostering a sense of home, balancing personal and communal spaces, and ensuring visibility and connectivity. The design should be flexible to adapt to changing needs, incorporating areas for activities and support. It is also crucial to promote autonomy and empowerment among residents. Additionally, the integration of accessible green spaces and the enhancement of indoor environments through natural light and ventilation are essential. By incorporating these strategies, architectural design and natural environments in women's shelters can create a healing, supportive, and empowering environment that significantly enhances the recovery and well-being of victims.

6.2 Design Proposal

In my design proposal for the area of Midden-Delfland, I emphasized the role of architectural design and a healing built environment in aiding the recovery of women in a shelter. This approach allows staff to focus more effectively on providing care and rehabilitation, ultimately benefiting the women. Additionally, I considered the urban context and its residents, as well as the relationship between the interior and exterior spaces, to positively influence the patients' healing process.

Under the theme of sustainable thinking, I addressed sustainability across four domains: ecological, social, technical, and economic. This comprehensive approach guides sustainable strategies throughout the building's entire lifespan, from site selection and respectful treatment of existing conditions and surrounding structures, to considerations of building volume, envelope design, and material choices. The sustainable design includes green spaces in the immediate surroundings, creating a natural oasis within the urban environment.

BIBLIOGRAPHY

Becker F., Sweeney B., Parsons K. (2008). Ambulatory facility design and patients' perceptions of healthcare quality. Health Environments Research & Design Journal, 1(4), 35–54. https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.979.8496&rep=rep1&type=pdf

Bekkum van, D., Marcel van den Ende M., Heezen S., & Hijmans van den Bergh, A. (1996). 'Migratie als transitie. De liminele kwetsbaarheid van migratnten en implicaties voor de hulpverlening', in: Joop de Jong en Margo van de Berg (red.), Handboek transculturele psychiatrie en psychotherapie, Lisse.

Buitelaar, M. (1994). 'Door baden herboren. De hammambezoek als rite de passage', in: Henk Driessen en Huib de Jonge (red.), In de ban van betekenis. Proeven van symbolische antropologie, Nijmegen,.

Cooper Marcus C., Sachs N. A. (2014). Therapeutic landscapes: An evidence-based approach to designing healing gardens and restorative outdoor spaces. John Wiley and Sons.

Dijk, Pieter van (2008). Het oranje huis: blijf van m'n lijf nieuwe stijl. Blijf Groep

Dijkstra, S., Lünnemann, M., Boer, A., Lünnemann, K., Moors, H., WODC Utrecht, Bureau Dijkstra, Verwey-Jonker Instituut, & EMMA, Experts in Media en Maatschappij. (2019). Huiselijk geweld en geweld in de publieke ruimte. In P. Nieuwbeerta, L. Van Stuijvenberg-Adelerhof, & G. Haverkamp, WODC Utrecht, Bureau Dijkstra, in Samenwerking met Verwey-Jonker Instituut en EMMA, Experts in Media en Maatschappij. https://repository.wodc.nl/bitstream/handle/20.500.12832/2407/2931_Volledige_Tekst_tcm28-382666.pdf?sequence=2&isAllowed=y

Dooren van, T. (2014). Flight Ways: Life at the Edge of Extinction (New York: Columbia University Press.

Gharipour, M. (2021). Health and Architecture: The History of Spaces of Healing and Care in the Pre-Modern Era

Haraway, D. J. (2016). Staying with the trouble. Duke University Press.

Herman Hertzberger,H., Roijen-Wortmann van, A., & Strauven , F. (1982). 'Aldo van Eyck, Hubertushuis/ Hubertus House'

Hubertushuis — Arcam. (2023, 3 oktober). Arcam. https://arcam.nl/architectuur-gids/moederhuis-en-hubertushuis/

Nickl-Weller, C. (2017) Healing Architecture 2004–2017. BRAUN

Nickl-Weller, C., Nickl, H. (2020) Architecture for Health. BRAUN

Marmot M. (2006). Statussyndromet. Hur vår sociala position påverkar hälsan och livslängden [Status syndrome: How social standing affects our health and longevity]. Natur & Kultur.

Martelaere de, P. (1993). 'Thuis. Een plaats om beu te worden', in:Dietsche Warande en Belfort.

Smit, P.r. & Nieuwbeerta, P. (2007). Moord en doodslag in Nederland 1998 & 2002-2004 , cahier 2007-15, Nederlands studiecentrum criminaliteit en rechtshandhaving (NSCR) en het Wetenschappelijk Onderzoek-en Dofumentatiecentrum (WORC), Den Haag.

Stichting Blijf Groep. (2024, 16 mei). Oranje Huis aanpak - Blijf groep. Blijf Groep. https://www.blijfgroep.nl/artikelen/oranje-huis-aanpak/

Ulrich, R. S. (1984). View Through a Window May Influence Recovery from Surgery. Science, 224(4647), 420–421. https://doi.org/10.1126/science.6143402

Ulrich R.S., Bogren L., Lundin S. (2012, November 12–14). Toward a design theory for reducing aggression in psychiatric facilities [Paper].

ARCH 12, Chalmers University of Technology. http://conferences.
chalmers.se/index.php/ARCH/arch12/paper/view/426/67A%20Cen-
trum%20f%C3%B6r%20V%C3%A5rdens%20Arkitektur/publikatio-
ner/Evidensbas%20f%C3%B6r%20v%C3%A5rdens%20arkitektur%20
1.0%2012_05_02_low.pdf

'Veiligheid maak je samen' - Verwey-Jonker Instituut. (2021, 21 april).
Verwey-Jonker Instituut. https://www.verwey-jonker.nl/artikel/veilig-
heid-maak-je-samen/

Wagenaar, M. (2008). Van huis en haard. THOTH

Welten, R. (1995). Het open huis. Emmanuel Levinas aan het wonen.

Wolf, J. et al. (2006). Maat en baat van de vrouwenopvang. Onderzoek
naar vraag en aanbod, uitgeverij SWP, Amsterdam.