Här och nu

A space for living in the moment when memories fade

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2026

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CHALMERS
UNIVERSITY OF TECHNOLOGY

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Morgan Andersson and Marie Strid for your guidence during our tutoring sessions, pushing me when you think I can go further and pulling me back when I have gotten ahead of myself.

Madeleine Liljegren for our interesting conversations, bringing in new perspectives and ideas.

Friends and family for always supporting and believing in me.

I am forever grateful.

Dedicated to my grandmother, Karin.
Tillägnad min mormor, Karin.

ABSTRACT

What kind of spaces allow us to live well and fully in the present moment when the past begins to fade?

As Sweden faces a growing elderly population, the need for dementia-friendly housing becomes increasingly urgent. For those living with dementia, the experience of time often shifts, memories blur, and the present moment becomes the most tangible reality. Still, many care environments remain rooted in institutional models that neglect the emotional and spatial needs of their residents.

This project explores how architecture can support well-being in dementia housing by creating spaces that nurture presence, dignity, and connection. Drawing on the zone model, which emphasizes layered transitions between indoor and outdoor environments, and evidence-based design principles, this project investigates how spatial strategies can be tailored to the Swedish context to enhance quality of life for individuals living with dementia.

The proposal takes shape in Näsby Park, Täby, approximately 15 km north from the city center of Stockholm. This location was deliberately selected to highlight the importance of integrating these type of facilities in contexts where development potential aligns with the zone model and evidence-based design principles. Through a combination of literature reviews, case studies, and spatial analysis, the research identifies key design elements that promote orientation, autonomy, and sensory engagement. The project also integrates insights from interviews with caregivers and other professionals to ensure a human-centered approach. The outcome is a design proposal for a dementia housing facility and environment that applies principles from the zone model, through zones one to four, and evidence-based design, offering spatial strategies that support well-being and foster meaningful experiences in the present moment.

Keywords: biophilic design, dementia housing, evidence-based design, residential healthcare, well-being, zone model

CONTENTS

Window detail.

CHAPTER I. THE SEEDLING

The booklet is divided into four chapters that follow the development of a plant.

INTRODUCTION

BACKGROUND

Sweden, like many other countries, is experiencing a demographic shift with a growing elderly population (SCB, 2025). In the year 2023, between 130 000 - 150 000 people were living with dementia in Sweden, a number that will only continue to increase as the population grows older (Karolinska Institutet, 2025). This will also mean that the demand for care environments that support both physical and emotional well-being will become more urgent. Traditional dementia housing often prioritizes safety and efficiency, but may neglect the spatial and sensory needs of residents, particularly their connection to nature and autonomy. In Sweden, elderly care housing is formally referred to as *särskilt boende*, and may also be called *vård- och omsorgsboende* (Äldreguiden, 2025). These facilities are intended for both individuals with somatic care needs and dementia. The care provided should be tailored to the individual's needs for safety, community, and self-determination. Residents have access to care staff around the clock, and the housing is considered their private home (Äldreguiden, 2025). However, the national guidelines recommend that municipalities establish dedicated housing designed specifically for dementia patients, since such specialised environments have been shown to offer a higher quality of life compared to mixed elderly care housing (Demenscentrum, 2018).

This project addresses the need for more holistic and human-centered design strategies in dementia care environments. It contributes to the architectural profession by bridging theory and practice. Theoretically, it draws on the zone model (Liljegren et al., 2024), which emphasizes spatial transitions and access to the outdoors, and evidence-based design (Centre for Healthcare Architecture, 2023), which uses research to inform design decisions that promote health and well-being. Practically, the project translates these frameworks into a design proposal that responds to the lived experiences of people with dementia in Sweden.

Despite a growing awareness of dementia-friendly design, there remains a knowledge gap in how spatial strategies can be systematically applied to enhance well-being. This is especially the case in the Swedish context, where climate, culture, and care models present unique challenges and opportunities. The integration of outdoor access, sensory stimulation, and spatial orientation is often underdeveloped in existing housing models, leaving room for innovation and deeper understanding.

On a personal level, this subject holds deep meaning for me. My grandmother is currently living with Alzheimer's, and witnessing her journey has made me acutely aware of the emotional and spatial challenges that come with the disease. I also know from my own experience how essential daily access to nature and greenery is for my own well-being. I can only imagine how vital this connection becomes when one is elderly, vulnerable, and less able to seek it out independently.

AIM AND PURPOSE

The aim of this master thesis project is to develop a design proposal for a dementia housing facility in Sweden that enhances well-being through spatial strategies based on the zone model and evidence-based design principles.

This is motivated by the demographic projections indicating an increase in the number of individuals living with dementia in the coming years (Karolinska Institutet, 2025), in combination with the current shortage of special housing for elderly (Boverket, 2025). Although research has established the importance of outdoor access, homelike environments, intuitive wayfinding, appropriate use of color and materials, and opportunities for social participation (Marquardt, 2011), these insights are not consistently reflected in contemporary Swedish care facilities.

Current national guidelines (Demenscentrum, 2018), recommend only housing residents with dementia in the same facility, rather than the current mixed facilities that are housing residents with somatic needs and individuals with dementia. The guidelines also emphasize the benefits of small-scale environments, however they do not specify this in any numbers, which therefore can be interpreted at the level of the unit, shared spaces, apartments, but also the overall scale of the actual facility. In practice, however, Swedish elderly care homes often accomodate more than 60 residents, which may cause difficulties when striving for achieving a human-scaled and homelike setting. Against this background, the thesis explores whether a small-scale dementia facility, although not yet common in Sweden, may offer significant benefits that justify reconsidering current norms. To investigate this potential the design proposal intentionally adopts a smaller scale than what is typically found in existing facilities, allowing the project to more effectively examine and focus on how the spatial strategies can support well-being, autonomy, and everyday life for residents with dementia.

RESEARCH QUESTIONS

I. What spatial strategies can be implemented in dementia housing in Sweden to balance well-being for residents?

I.I. In what ways can the zone model guide the creation of supportive environments for people with dementia?

I.II. How can evidence-based design principles be translated into architectural strategies that foster well-being in dementia care settings?

METHODOLOGY

To investigate the research questions and fulfill the aim of the master thesis, a qualitative research approach has been used. In addition to this Microsoft Copilot has also been used throughout the process for language refinement to support the clarity and professionalism of the written material, including editing and improving the formulation of research questions, project descriptions, and explanatory texts. This tool has helped ensure that the communication of ideas remains precise, accessible, and aligned with academic standards. This is further explained and detailed in the ai appendix. Furthermore, the primary methods of the master thesis has been:

Literature reviews
To establish a theoretical foundation in dementia care, evidence-based design, and the zone model, studies of different types of literature has been done. *Scopus* and the *Chalmers Library* served as the primary search platforms in order to find relevant sources, both in digital and printed forms, that could be used to create a broad and genuine understanding of the background of the thesis.

Case studies
Analysis of existing dementia housing environments to identify successful spatial strategies and design principles. Swedish elderly care homes are designed for a more general and broader elderly population, and not directly for dementia care needs. For this reason, international case studies have been selected. The concequence of this, however, is that the international examples often resemble larger dementia village models rather than small-scale dementia housing, meaning that the findings from this mainly focus on practical design features and logistical arrangements.

Interviews
Conversations with professionals in dementia care and caregivers has provided insights into lived experiences, practical challenges, and design needs. These qualitative interviews deepened the understanding of how spatial environments impact well-being and daily life for individuals with dementia, as well as put the theory back in relation to the Swedish context again.

Site visit and analysis
To situate the project appropriately, the site's physical, social, and environmental context was analysed, with attention to natural features, zoning, and material characteristics. This included detailed contextual mappings and a SWOT analysis, which highlighted key advantages and disadvantages that in turn shaped the design.

Design exploration
In order to answer the research question as a design proposal, a development of a conceptual architectural proposal was made using tools such as digital- and hand-drawing, digital modeling, and diagramming to test and visualize spatial strategies.

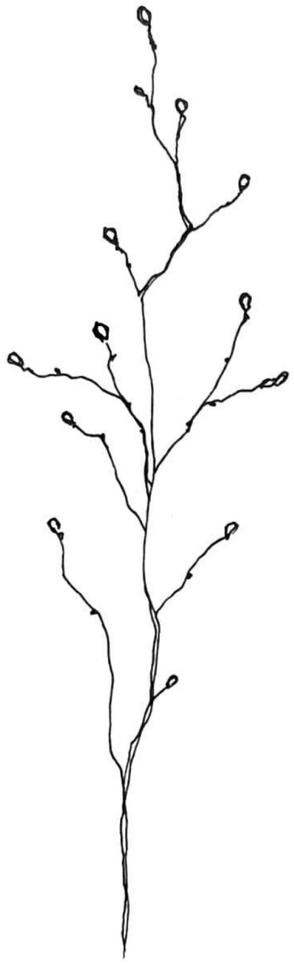
These methods were chosen to allow a deep understanding of both theory and practice, a combination that enabled a holistic approach to addressing the complex needs of people living with dementia.

DELIMITATIONS

This thesis is developed as a hypothetical design project and will not take existing building plans or zoning regulations into account. Furthermore, economic feasibility and budget constraints are excluded from the scope of the study. Rather, the focus is placed on conceptual and spatial strategies for dementia care.

SUSTAINABILITY

This master thesis project primarily contributes to social sustainability by promoting inclusive and dignified living environments for people with dementia, which is an often overlooked and vulnerable group in society. By designing spaces that support well-being, autonomy, and daily access to nature, the project also touches on environmental sustainability, encouraging integration of greenery and outdoor access in urban care settings. Throughout the design process, material and construction choices were made with environmental sustainability considerations in mind, including the use of a wooden construction, integration of natural materials and the decision to avoid constructing a basement.



THEORY

DEMENTIA

Dementia is caused by damage to the brain and can manifest in different ways depending on which regions of the brain are affected (Svenskt demenscentrum, 2021). Typically, memory and the ability to plan and carry out everyday tasks depriciate over time. Dementia is increasingly referred to as a cognitive disease, as it primarily affects cognition which is about how we receive, process and interpret information. When a person is diagnosed with dementia, their cognitive functions gradually worsen. Some cognitive functions that may be negatively affected include time perception, language, and spatial orientation. It is also common to see anxiety, depression and behavioral changes among individuals with dementia (Svenskt demenscentrum, 2021).

The cognitive functions are generally divided into six main categories, known as *cognitive domains*. They are *learning and memory functions, executive functions, verbal functions, visuospatial functions, attention functions, and social cognition.* These domains will be briefly described below and all information regarding the domains is from Svenskt demenscentrum (2021).

Learning and memory functions enable individuals to retain information, acquire new knowledge, and adapt based on past experiences. A person with dementia may show signs of decline in this domain by having difficulty remembering recent events, repeating previously stated information, and losing track of time and dates.

Executive functions involve initiating, planning, and carrying out tasks effectively. Individuals with dementia may display reduced initiative, difficulty following instructions, or challenges in using everyday objects such as household appliances or a debit card.

Verbal functions are essential for communication. This includes both expressing oneself and understanding others. However, a person with dementia may struggle to find the right words, have difficulty understanding spoken language, or experiences problems with reading or writing.

Visuospatial functions relate to the ability to perceive and understand spatial relationships and navigate environments. A person with dementia can experience disorientation, which may cause them to become lost both in unfamiliar places or even in their own neighborhood, and to have difficulty positioning their bodies in relation to their surroundings.

Attention functions refers to the ability to focus, sustain concentration, and manage multiple tasks. With dementia, impairments in attention may appear as a difficulty following conversations, performing mental calculations, or remembering phone numbers and addresses.

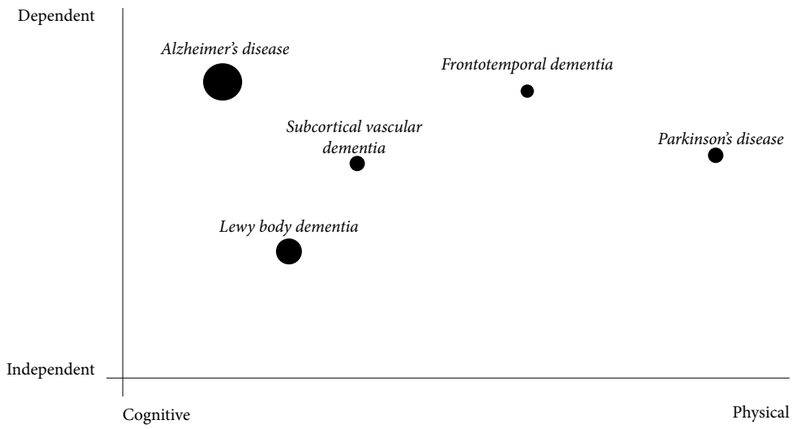
Lastly, *social cognition* involves understanding social cues, regulating behavior, and responding appropriately in social contexts. Impairments in this domain may lead to personality changes, reduced judgement, difficulty interpreting

facial expressions, and in some cases even increased aggression, depression, or apathy.

In Sweden, Alzheimer's disease is the most common form of dementia, accounting for approximately 60-70% of the Swedish dementia cases, according to Svenskt demenscentrum (2021). Alzheimer's disease causes the braincells to gradually degenerate and eventually die (Svenskt demenscentrum, 2021).

The brain consists of several lobes, each responsible for different functions, such as memory, learning and speech (Svenskt demenscentrum, 2024). In dementia, the nerve cells are damaged in specific regions of the brain and the symptoms vary depending on which areas are damaged. In Alzheimer's disease, for example, the parietal and temporal lobes are particularly affected. This damage leads to memory impairment as well as difficulties with thinking, planning, and performing everyday tasks such as grocery shopping (Svenskt demenscentrum, 2024).

It is therefore clear that most forms of dementia primarily impair cognitve functions, rather than a person's physical abilities. However, because dementia often occurs in older adults, they may also experience physical difficulties, although, not due to the dementia itself, but as a natural concequence of for example aging.



Comparison of common dementia diseases in relation to cognitive/physical impairment and level of independence.

THE ZONE MODEL

Contact with the outdoors, views of nature, and daily outdoor stays have well-documented health benefits for older adults in residential care facilities, a fact that has become increasingly recognized (Nordin et al, 2024). However, despite this growing awareness, outdoor environments designed to support person-centered care and rehabilitation remain limited and often inadequate. To meet the diverse physical and cognitive needs of residents, thoughtful and inclusive design is essential. In response to this need, a Swedish framework called *The Zone Model* has been developed to guide the design of outdoor environments in care settings. The model identifies four zones of contact with nature, each offering distinct health-promoting potential (Nordin et al, 2024). Zone one has to do with green views through windows, providing passive contact with nature (Liljegren et al, 2024). Zone two is about transitional spaces like conservatories, patios or balconies. These can be both private and communal, however, it is important that residents have access to both. Zone three is about the garden, offering opportunities for sensory stimulation, movement, and social interaction, and zone four concerns the surrounding context. The model highlights that all four zones should be present in the residential care facility and that residents should be able to move actively or passively between zones and have contact with the outdoors, regardless of their body position. This means that it should also be applicable for individuals that are eg. wheelchair bound or bedridden. (Liljegren et al, 2024).

During semi-structured walking interviews with twelve older adults from three different Swedish residential care facilities conducted by the authors of *Older Adults' Needs and Wishes for Contact With the Outdoors at Residential Care Facilities* (Liljegren et al, 2024), some environmental and design-related barriers that hindered outdoor access were revealed. Some key obstacles included long distances between apartments and outdoor areas, cramped balconies with high railings that blocked views, and poorly designed transitions, such as uneven thresholds and complex systems, that increased the risk of falls and feelings of being locked out. Unclear orientation and lack of information about outdoor areas contributed to uncertainty and reduced use. Some residents struggled with opening doors or navigating back to their apartments. Shared gardens between residents with and without cognitive decline sometimes led to discomfort, which in turn led to discouraging use (Liljegren et al, 2024).

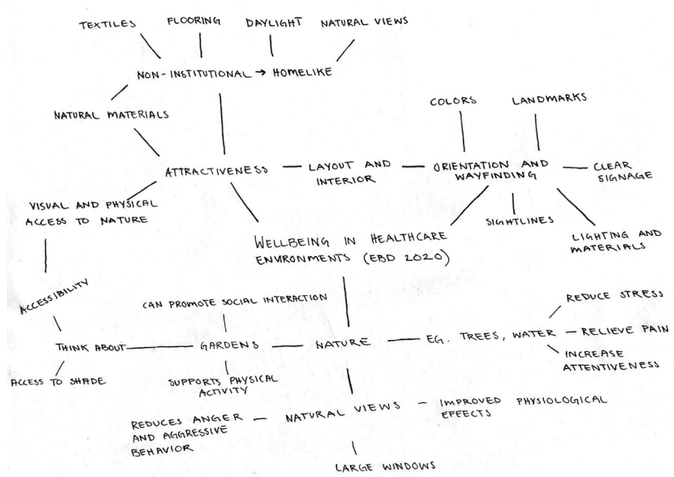
Furthermore, the research developed by Liljegren et al (2024) shows that 120 minutes of nature exposure per week is asssociated with improved health and well-being for older adults and individuals with long-term health conditions, regardless of how the time is distributed. This hightlights the importance of offering regular outdoor stays throughout the year, in all seasons and weather conditions. Such access not only supports physical health but also contributes to a sense of normality, which is especially valuable for individuals living with dementia.

EVIDENCE-BASED DESIGN

While access to nature and outdoor environments is an important component of well being, as well as a part of evidence-based design, it is only one aspect of a broader design strategy. The research *EBD 2020 - Evidence-based design* by Centre for Healthcare Architecture (2023) considers the entire physical environment.

Evidence-based design is an approach that uses research and empirical data to inform architectural decisions, with the goal of improving health outcomes, well-being, and quality of life (Centre for Healthcare Architecture, 2023). In the context of elderly care, and in turn also dementia care, *EBD* emphasizes the importance of designing environments that reduce stress and worry, support orientation, encourage autonomy, and foster meaningful social interaction. Some key principles, that according to *EBD 2020 - Evidence-based design* should be taken into consideration, are creating clear spatial orientation through intuitive layouts and visual cues, minimizing overstimulation, supporting independence through accessible pathways and safe transitions, as well as creating emotional comfort by incorporating familiar materials, homelike settings, and opportunities for personalization (Centre for Healthcare Architecture, 2023).

When combined with the zone model, evidence-based design provides a comprehensive framework for creating environments that are not only safe and functional, but also emotionally supportive and



Mindmap of what well-being could entail in a healthcare environment based on EBD - 2020.

health-promoting. Together, these approaches advocate for environments where older adults, regardless of cognitive or physical ability, can experience dignity, autonomy, and connection.

WELL-BEING

According to the World Health Organization (2021), well-being is defined as a "positive state experienced by individuals and societies. Similiar to health, it is a resource for daily life and is determined by social, economic, and environmental conditions. Well-being encompasses quality of life and the ability of people and socities to contribute to the world with a sense of meaning and purpose.". This defintion highlights well-being as not just an individual experience, but as a collective and contextual condition shaped by the environments we inhabit.

Thus, well-being extends beyond physical health, especially in the context of dementia care. In this context it is mostly about the emotional, social, and relational dimensions. For individuals living with dementia, the decline of cognitive and social abilities can significantly impact their capacity to engage meaningfully with others and their environment (Maki et al, 2019). Dementia is a life-changing diagnosis that affects all aspects of a person's life, like human relationships, which are often central to one's sense of belonging and identity.

A dementia-friendly community is one that actively supports the social adaptation of individuals with dementia, recognizing their need for empowerment and opportunities to lead active and meningful lives. This involves flexible, tailored support systems that respond to individual needs, while also adressing broader questions like those regarding social sustainability (Maki et al, 2019).

In the context of my thesis, which explores spatial strategies for well-being in dementia housing, these insights underscore the importance of designing environments that nurture human relationships and social engagement.

DESIGNING FOR DEMENTIA

Sensory experiences are crucial for those diagnosed with dementia, particularly in terms of how we perceive a space (Feddersen, 2014). In line with the overall cognitive decline and that the recollection of recent events fade, direct sensations are what is left. Therefore, the essential elements of our spaces must be taken into account when designing for individuals with dementia (Feddersen, 2014).

An open layout is an essential part of designing for residents with dementia, especially in terms of the communal spaces like the kitchen and livingroom. This enables and promotes active participation in everyday activities that contribute to a more normal lifestyle (Feddersen & Lüdtke, 2014). It is also important to use spatial zoning when designing for dementia, both inside the personal dwelling, and common and outdoor areas. Individuals with dementia require a sense of safety, yet not a feeling of confinement, marking the importance of zones that are open for a variety of uses or atmospheres (Lüdtke, 2014). This can be, for example, a winter garden, which can also be described as an indoor-outdoor space, or a multi-purpose room that can serve as a gym, church service or for other activities during different times of the day or week.

For individuals living with dementia, wandering is a common behavior and is necessary to consider when designing for dementia (Regnier, 2002). For instance, coming to an end of a corridor can for some wanderers be confusing, seemingly lost. This can be avoided by creating "destination rooms" or sensory cues (Regnier, 2002), like for example visual landmarks. Zoning in dementia housing is also particularly important due to the scale of the dwelling (Lüdtke, 2014). While a reduction of the spaces can be beneficial for individuals with dementia, it also comes with challenges, especially when striving to maintain a homelike atmosphere. A single room can accomodate multiple functions such as dining, sleeping, living and working. Therefore, it is essential to clearly define these areas architecturally in order to support independance and help residents maintain routines and spatial cues that feel familiar (Lüdtke, 2014).

This also underscores the importance of allowing residents to personalize the dwelling. Through the act of shaping and decorating our spaces with meaningful objects, our identities become embedded in the places we inhabit. These parts become important when supporting our repository memories, serving as points of reference that reinforce our sense of self (Lüdtke, 2014).

Our sight is central when identifying spatial features and transforming them into a feeling of space (Feddersen, 2014). Designing spaces with a composition that is comprehendable at first glance and suitable to its purpose is thus imperative when designing for individulas with dementia. For example, large glass surfaces may brighten up corridors or common areas, but may result in people feeling uneasy or exposed if thoughtlessly used in the dwelling area (Feddersen, 2014).

Figure 1. Different materials and colors affecting the space in terms of acoustics and contrast, but also concealment. From *Lost in Space* [Image], by Feddersen Architeketen, 2006. © Birkhäuser. Reproduced for educational, non-commercial purposes.

Architectural settings in a dementia housing should also apply contrast in order to minimise confusion, such as differentiating the tone of walls and floors (McNair, 2014). This can also be used when attempting to conceal certain areas from residents, for example staff or logistic areas for waste and deliveries. See the different effects of using different or similiar colors and materials in figure 1.

The use of lighting can also play an important role for the same purpose. Since most people diagnosed with dementia are older, their eyes may require twice the amount of light than normally in order to provide the same visual reaction. Insufficient lighting can therefore in combination with the disease cause disorientation and anxiety (McNair, 2014). However, it is also important to note the value of exposure to natural daylight, and therefore designers should consequently incorporate terraces, conservatories, and pavillions to maximize natural daylight and promote outdoor stays while simultaneously offering shade (McNair, 2014).

Furthermore, good acoustic conditions also play a part in a well-designed dementia facility. Not only has it shown health benefits like improved sleep quality and reduced intake of pain medications, but it is also important for dementia patients when being able to engage and communicate (Pollock, 2014). Although, as many elderly individuals experience reduced hearing, they may also rely more heavily on visual cues for communication and orientation (Pollock, R., 2014).

In relation to this, the outdoor spaces should also communicate as being meaningful, comprehensive, protected and allow for socialising and activities, but also relaxation (Pollock, A., 2014). Some architectural design elements worth thinking about here is to create a variety of outdoor spaces that is sheltered from wind, which can be particularly bothersome for older people, but still allow for sunlight and shade. For example, indoor-outdoor areas can serve as shade or shelter when the weather is unpleasant (Pollock, A., 2014). This is something that may be particularly appropriate to think about considering the Swedish context. The outdoor spaces should also be safe and barrier-free. When furnishing the outdoor spaces, wood is considered to be a good material beacuse of its warm and natural appearance, as well as its quick drying properties (Pollock, A., 2014).

When it comes to the plants and greenery, raising them up at varying heights to support cultivating and engaging with the plants from both a sitting or standing position is beneficial (Pollock, A., 2014). These plants should not be toxic or harmful, instead, edible vegetation is preferable and can even be linked to stimulating meaningful memories. Apples, herbs and berries, but also other safe plants with a distinct smell like lavender or mint, are mentioned to be able to trigger such memories (Pollock, A., 2014).

Figure 2. Senior housing in Berlin, Germany with accessible raised plantbeds. From *Lost in Space* [Photography], by Harms Wulf Landschaftsarchitekten, 2005. © Birkhäuser. Reproduced for educational, non-commercial purposes.

CASE STUDIES

Three architectural case studies have been selected for their relevance to dementia care across different scales and contexts. These include Marlin and Doris Thomas Memory Care Center by NORD Architects, the Alzheimer's Village in Dax, also by NORD Architects, and DemensX 2.0 by Karlsson Arkitekter. Each project has been analyzed through architectural plans, photographs, and conceptual frameworks. The zone model was briefly applied to assess how each case incorporates the four zones of outdoor contact. This method helped identify spatial patterns and design strategies that support well-being and autonomy for individuals with dementia.

MARLIN AND DORIS THOMAS MEMORY CENTER, 2025, NORD ARCHITECTS

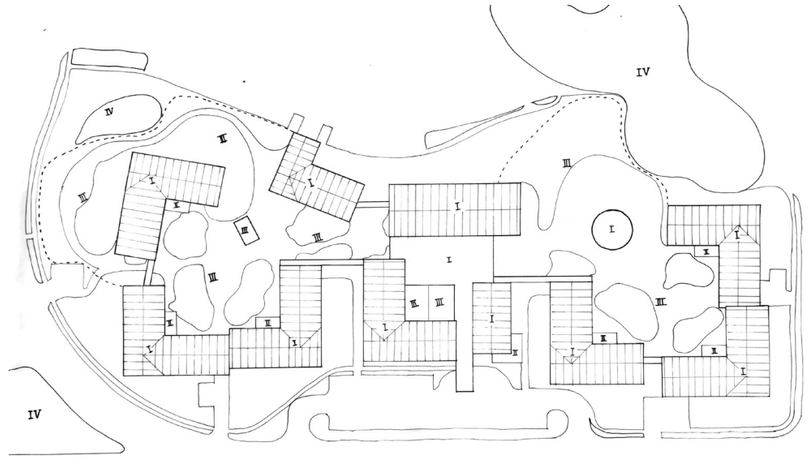
Located in Pennsylvania, USA, the Marlin and Doris Thomas Memory Center is NORD Architects first American project. Drawing on their experience with European dementia villages, the center is designed as a person-centered, assisted living community that supports residents through all stages of their dementia. The architecture is meant to emphasize adaptability, recognisability, and sensory engagement to slow cognitive decline and enhance quality of life, according to NORD Architects (n.d).

According to the commissioner of the project, Willow Valley Communities, the campus includes 14 households arranged around a common building, with amenities such as a grocery store, greenhouse, salon, etc. Wayfinding is supported through differentiated facade colors and personal items placed outside each resident's room. Materials like timber and clay plaster create a warm, homelike atmosphere while minimizing environmental impact. The landscape design features looped paths, native plantings, and sensory gardens that encourage exploration and connection to nature (Willow Valley Communities, 2024).

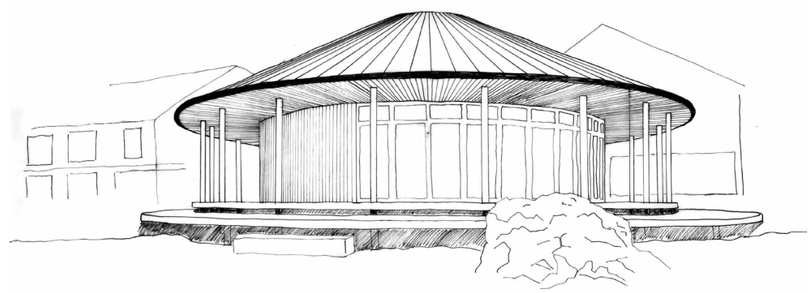
When analyzing the layout of Marlin and Doris Thomas Memory Center, it becomes evident that the design is quite extensive, resulting in long distances. This is, however, common in dementia village typologies considering the scale that they are working with. Nevertheless, these distcances can become problematic for the intended user, who are not only elderly, they also have cognitive difficulties. The large and wide layout may therefore cause problems with wayfinding and spatial comprehensibility.

On the other hand, it is clear that the architect has been working with trying to orient the design toward the inner gardens by organizing the buildings around what can be intrepreted as two main outdoor spaces. Within these gardens, variations in scale and building form have likely been used to create differentitation and visual interest. These elements may therefore function as visual landmarks, supporting orientation and navigation. As Kevin Lynch describes in *The Image of the City* (1960), landmarks serve as "clues of identity and [...] structure, and [...] increasingly relied upon as a journey becomes more and more familiar.". This concept is particularly relevant in this typology, given the specific needs and capabilities of its users.

My main takeaway from this project is the principle of differentiation like using varied building shapes, materials, and colors depending on function. This supports cognitive mapping, stimulates the senses and emotions, and reinforces autonomy.



Analysis of Marlin and Doris Thomas Memory Center by Nord Architects in relation to the zone model, looking at how the architectural layout relates to zones I-IV and the transitions in between them.



Sketch, Marlin and Doris Thomas Memory Center, showing differentiation in architectural expression and building form that can be useful in a dementia setting to promote wayfinding and interest.

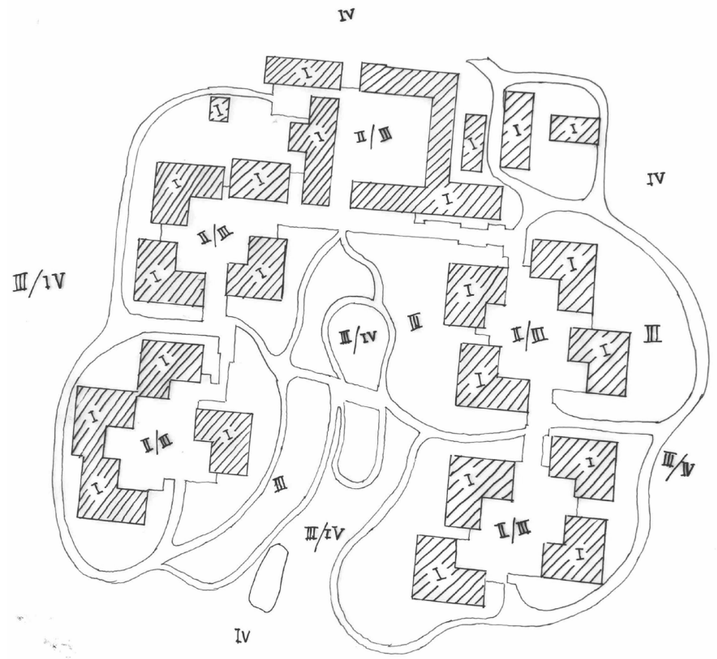
ALZHEIMERS VILLAGE DAX, 2020, NORD ARCHITECTS

The Alzheimer's Village in Dax, France, also designed by NORD Architects, redefines dementia care by creating a familiar, village-like environment. The layout includes a central plaza surrounded by everyday amenities such as a grocery store, hairdresser, restaurant, and cultural center. These recognisable elements foster a sense of continuity and belonging, which is essential for individuals with dementia (NORD Architects, n.d).

The village is divided into four residential clusters, each with its own courtyard and identity, connected by looping paths through nature. These paths are designed to stimulate the senses and encourage movement, offering residents safe and varied contact with the outdoors. The integration of local materials and architectural motifs further enhances the feeling of home, supporting cognitive stability and emotional well-being. The project also includes a research center, reinforcing its role as a model for innovative, evidence-based dementia care (NORD Architects, n.d).

This project mostly works with a gradient of outdoor spaces that transition from more private or public, mostly in regards to zone III of the zone model. However, within the dementia village typology, incoporating the fourth zone proves challenging. While elements of the wider natural landscape of the site can be integrated, the social and more "everyday" part of the context seems often minimal or excluded completely, as these environments tend to be more or less isolated from typical urban or community surroundings. Considering the intended user suffers from cognitive decline, elements of normalcy are particularly important. Therefore the absence of an "everyday and social context" connected to the wider community, can be seen as a significant limitation within the dementia village typology. Thus, while the integration of zone I-III are present and clearly articulated, zone IV is harder to identify and express within this typology.

My main takeaway from this project is the emphasis on low building volumes and extensive walking paths in natural surroundings. This approach not only enhances safety and orientation but also supports well-being by encouraging gentle physical activity and sensory engagement in a calming landscape.



Analysis of Alzheimers Village, Dax by Nord Architects in relation to the zone model, looking at how the architectural layout relates to zones I-IV and the transitions in between them.

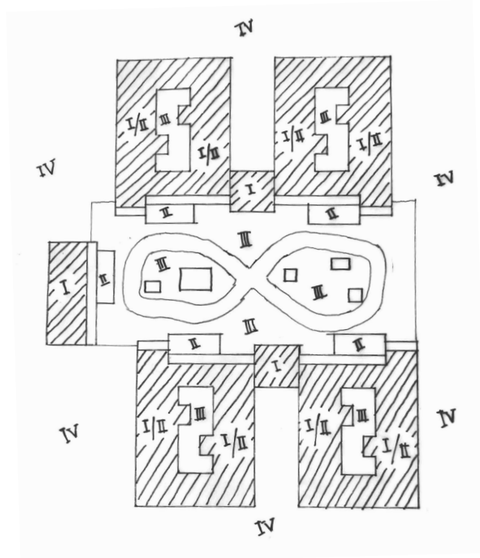
DEMENSX 2.0, 2021, KARLSSON ARKITEKTER

DemensX 2.0 is a visionary pilot project by Karlsson Arkitekter and developed in collaboration with the University of Copenhagen's Center for Life. The concept emphasizes the integration of architecture and nature and is described as "a house in the garden, a garden in the house". The design promotes intuitive access to outdoor areas, looped pathways, and biodiversity, creating environments that are both stimulating and calming (Karlsson Arkitekter, 2021).

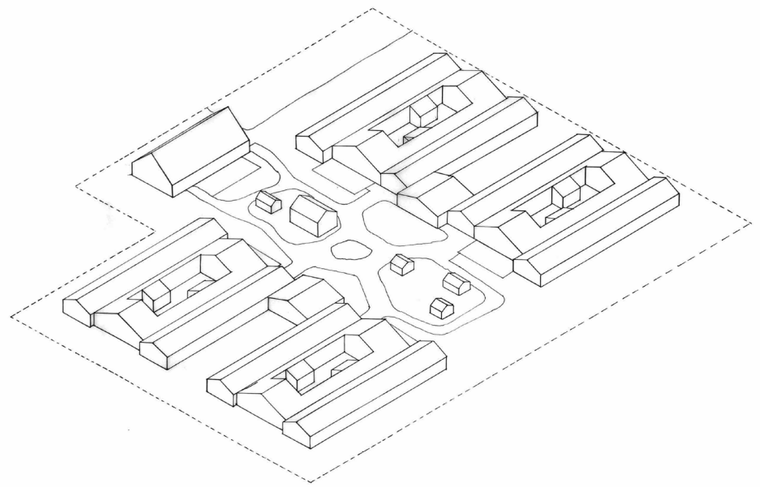
The project also focuses on light, rhythm, and seasonal variation, using daylight and artificial lighting to support circadian rhythms and emotional well-being (Karlsson Arkitekter, 2021). Flexible layouts encourage visibility between private and communal spaces, enhancing social interaction and reducing isolation.

Because this project is a pilot project, the social dimension of zone IV can be excluded completely, since it does not exist within a real contextual setting. Instead, the project is set in an idealized, polished environment, where one might aspire this typology to be located. Yet, similar to the other case studies, this project makes a clear effort to direct attention toward the central garden and inner courtyards. Beyond supporting wayfinding, this emphasis also functions as a safety measure. As previously discussed, individuals living with dementia often exhibit wandering tendencies (Regnier, 2002). The looped layout combined with sensory cues within the gardens, outdoor areas, and the transitions between them, helps reduce stress levels and enables safe wandering, potentially decreasing the risk of running away.

My main takeaways from DemensX 2.0 center around the importance of scale and spatial continuity in dementia care environments. A smaller architectural scale helps residents with dementia better organize their surroundings and navigate them more intuitively, while still allowing for the inclusion of all four zones of outdoor contact, ranging from visual access to engaging nature experiences. Equally important is the absence of dead ends in the design. Continuous looped pathways enhance safety, support orientation, and create seamless transitions between indoor and outdoor spaces. This spatial strategy not only reduces confusion but also encourages movement and engagement with the environment, contributing to a sense of autonomy and well-being.



Analysis of DemensX 2.0 by Karlsson Arkitekter in relation to the zone model, looking at how the architectural layout relates to zones I-IV and the transitions in between them.



Sketch, DemensX 2.0, showing the low scale and the oragnisation and attention towards the central garden with walking paths.

The chart below summarizes the main characteristics of the selected case studies in relation to the zone model. The table shows that the three case studies captures a variation of sizes, settings and access to the outdoors.

* Zone I: windows and glazed doors (daylight and with views of nature)
* Zone II: entrances, balconies, patios and conservatories (indoor-outdoor)
* Zone III: gardens and courtyards
* Zone IV: parks, squares, forests etc.

Residential Care Facility	Marlin and Doris Thomas Memory Care Center	Alzheimers Village, Dax	DemensX 2.0
Context, Floors, & Residents	Lancaster, USA 1-2 floors 140 residents	Dax, France 1-2 floors 120 residents	- 1 floor 35-40 residents
Zone I *	Exists	Exists	Exists
Zone II*	Common patios Balconies	Common patios Conservatory	Common patios Private french balconies Conservatory
Zone III*	Common garden Courtyard Greenhouse	Common garden Ponds Animals	Common garden Courtyards Greenhouse Animals
Zone IV*	Centrally located in residential area with greenery and ponds	Located by a wild forest and a smaller residential area	Wild nature surrounding the building

Summary of main characteristics of three chosen case studies in relation to the zone model.

INTERVIEW REFLECTIONS

Näsby Slottspark Vård- och Omsorgsboende, Täby, and Sandarna Vård- och Omsorgsboende, Gothenburg.

A concise summary of the main takeaways from both visits and conversations with the managers is presented below, however the full interview transcripts are included in the appendix.

Both elderly care facilities that were visited accomodate residents with somatic care needs and residents diagnosed with dementia in varying stages. The units are formally seperated depending on care category, however, both managers note that many somatic care residents also show milder signs of cognitve decline. The apartment units range between 32-35 m^2, and the units house 9-10 residents each. The buildings are eight and four stories high, respectively.

While the apartments were generally well proportioned, both facilities featured more square apartment floorplans which made it challenging to establish a clear separation between functional zones such as sleeping, dining, and living. In both cases, the entrance to the accessible toilet was positioned directly off the bedroom rather than from the hallway. This configuration reduces the amount of furnishable space within the main room and creates inefficiencies for both residents and staff. This design choice may be to ensure that the resident can see all essential functions directly from a single vantage point, connecting to the struggles of living with dementia. However, this comes with the expense of reduced flexibility, diminsihed privacy, and possibly less desirable aesthetics, as residents may not actually want a direct line of sight into the bathroom.

A recurring challenge in both facilities concerns access to adequate outdoor environments in relation to the zone model. Neither of them provide private balconies for residentes, however, one of them includes french balconies connected to some of the apartments. Generally, common terraces are instead offered, but not on every floor. This arrangement limits more spontaneous access to the outdoors. In addition to this, the exisiting outdoor spaces lack satisfactory protection from weather conditions such as wind, precipitation, and strong sunlight. This is an issue that becomes most tangible during the winter months, when it is already hard to motivate residents to go outside.

Several common areas appeared overly dimensioned and sparsely furnished, which made it difficult for them to feel welcoming or homelike. The approach to color and materiality also differed between the two facilities, where in one case the palette felt more intentionally coordinated and contributed to a more comfortable space.

The corridors leading from the shared areas to the private apartment allowed for minimal to no personalization. This lack of visual cues can be particularly challenging for residents with dementia, who often rely on recognizable objects, colors or features to orient themselves.

TRANSLATING THE INPUT

	Input (theory)	**Output** (my proposal)
National guidelines	*Small scale* *Only dementia patients in same facility*	52 residents, 10-11 in each unit Only dementia patients
Zone model	*Green views and daylight* *Variety of outdoor areas* *Indoor-oudoor areas* *Transitional spaces*	All apartments have green views Mix of courtyard, balconies (private and common), conservatory, and gardens Promenade paths of varying lengths around the area
Evidence-based design	*Supporting independency and wayfinding* *Homeliness and personalization*	Clear layout, sightlines and sensory cues Nooks outside each apartment where residents can personalize their entrance
Designing for dementia & well-being	*Spatial zoning* *Contrast* *Sheltered outdoor spaces* *Accessibility* *Sensory garden*	Separating functions in the dwelling Colors and materials Semi recessed balconies and trees, courtyard and winter garden Accessible indoor and outdoor areas Edible and non-toxic plants, gardens activating many senses
Case studies	*Low volumes* *No dead ends* *Colors and materials* *Variety of functions*	Variety in heights, 1-3 floors Circulation and sensory cues Warm colors and natural materials Hairdresser/chiropody/ massage, yoga/gym, etc.
Interviews	*Activities and social spaces* *Small apartments (32-35 m^2)*	Common areas in each unit More common areas for all on groundfloor Apartments, 35 m^2

Warm colors and natural materials in the entrance area.

PROGRAM

This program is compiled based on the scope of the thesis, theory, references, site visits, and interviews.

Private	
Apartment	35 m²
Balcony	4 m²
Entry nook	2.5 m²
Unit	
Common room	140-160 m²
Terrace	40-100 m²
Small Office	3-4 m²
Storage	3 m²
Staff WC	2-3 m²
Staff & logistics	
Staff room	46 m²
Resting space	16 m²
Changing rooms	27 m²
Laundry & linen storage	19 m²
Storage goods	23 m²
Sprinkler room	14 m²
Waste	15 m²
General storage	51 m²
*Ventilation**	150 m²
*Technical room**	60 m²
Facility & community*	
Common room	135 m²
Hairdresser/chiropody	26 m²
Multipurpose room (gym)	65 m²
Visitors area	215 m²
Kraftens hus for dementia	65 m²
Group/therapy rooms	14 m²
Creative group room	41 m²
Conservatory	165m²
Total BTA	**5580 m²**

**Ventilation & technical room*

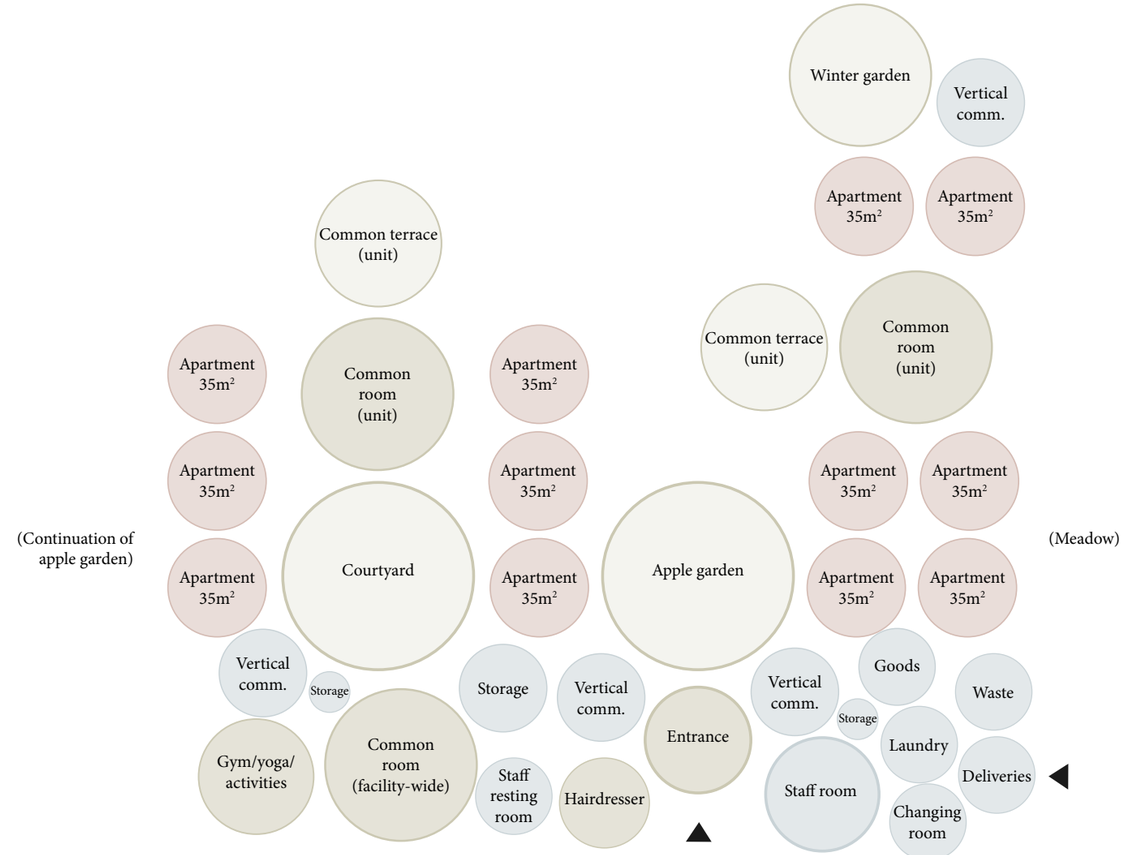
Will be placed in the attic to avoid the need for a basement.

**Community*

The entrance is dedicated to a visitor-oriented communal space and functions as an open, social threshold to the building. Conceived as an inviting visitors' area, this space is designed to encourage informal social interaction between residents, staff, and visitors. Here, people can meet over a cup of coffee, sit down for conversation, read, play games such as bridge, or take part in informal and organised activities. By positioning the social space directly at the entrance, it becomes both a point of arrival and a shared everyday meeting place, strengthening social continuity between the care environment and the surrounding community.

The programme also accommodates a "Kraftens Hus for dementia", primarily intended for therapeutic and group-based activities. These spaces are designed to support both people living with dementia but also, in particular, their relatives. This area includes a living-room-like space alongside smaller group and therapy rooms, drawing inspiration from the philosophies of Kraftens Hus and Maggie's Centres. The emphasis here is on conversation, guidance, and structured support in a non-institutional, calm, and dignified environment, offering relief, knowledge, and social connection for those surrounding the person with dementia.

ORGANIZATION DIAGRAM



Organizing the program around a central garden, creating sensory cues and distractions towards the green spaces.

CHAPTER III. THE BLOOMING

DESIGN PROPOSAL

CHOOSING THE SITE

Due to dementia being an increasingly prevalent cognitive condition across all of Sweden, the programme could theoretheically be placed in many different locations. However, for reasons related to homeliness, staffing, and visitation, it is important that the site is situated within a broader and recognisable community context. This not only supports practical matters such as transportation and staffing, but also helps residents feel anchored in a real and familiar environment, despite not having previously lived in the immediate area.

The site must be situated within a familiar and homelike context, preferably characterized by low rise, residential-scale buildings in the area. Proximity to large institutional environments, such as hospitals, is deliberately avoided, as these settings risk reinforcing associations with illness or hospitalization and may negatively impact the residents sense of dignity and well-being. Instead, the surrounding context should be calm and legible, with limited sensory disturbance from, for example, traffic or large-scale infrastructure. This supports orientation and cognitive ease for people living with dementia.

A strong relationship to nature is considered essential. The site should either already have an existing natural character or clear potential to establish a close and varied relationship with the surrounding greenery, which goes in line with the principles of the zone model. The possibility for safe and accessible outdoor movement, such as level or gently sloped terrain allowing for walking paths and enclosed gardens, is also an important factor that will play into the choice of site. This would in turn support everyday physical activity and autonomy.

Accessibility in plays a key role in the site selection. The site should be well connected to public transport in order to accommodate visitors and staff.

When combined, these factors has provided a framework for choosing a location that facilitates both daily living and specialized care. The location is selected for its ability to offer serenity, familiarity, accessibility, and meaningful interaction with nature rather than visibility or institutional efficiency. This method represents the idea that dementia care takes place in familiar, everyday settings where spatial features can help with direction, reduce stress, and foster a feeling of community. As a result, the chosen location actively promotes wellbeing and serve as a basis for the project's architectural strategies.

NÄSBY SLOTTSPARK, TÄBY

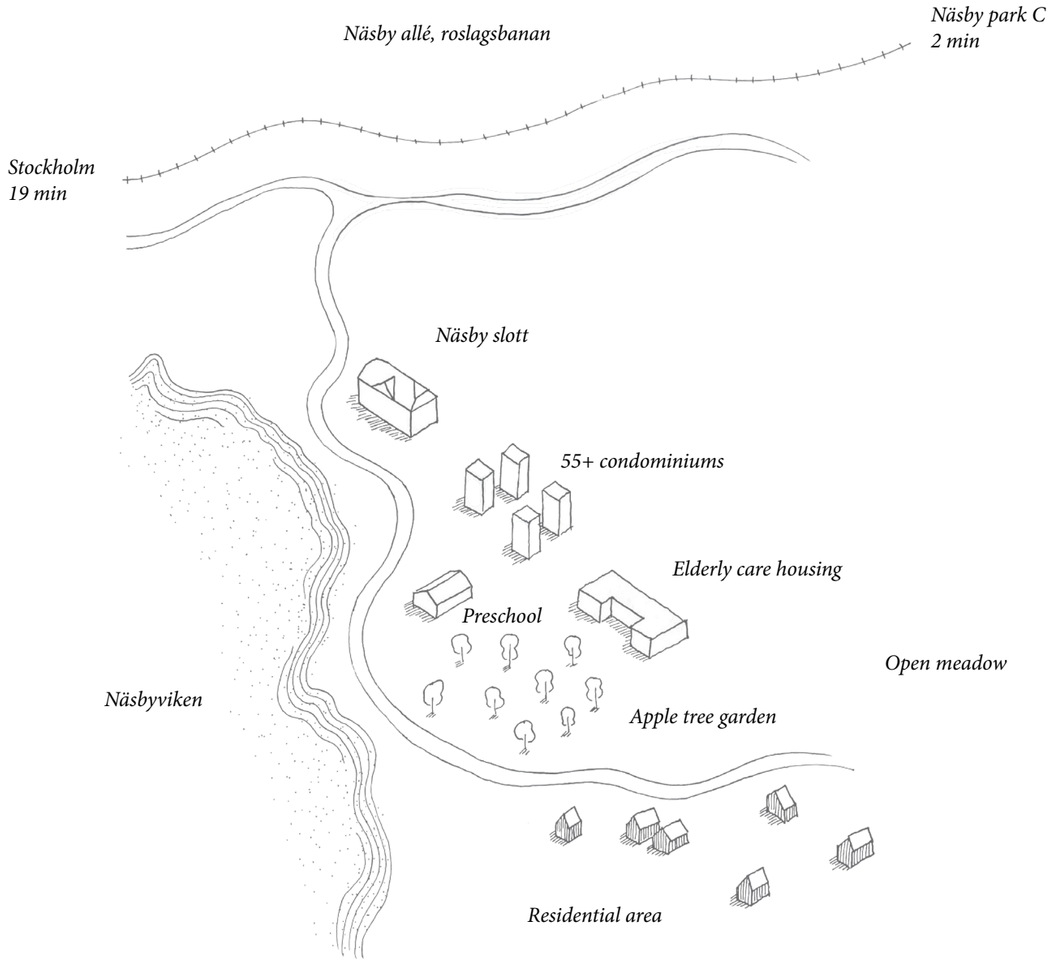
Täby, population: 77 800 (SCB, 2024)

The chosen site for the dementia care facility is located on Slottsvägen in Näsby Park, Täby, approximately 15 km from the city center of Stockholm. It is situated between an existing elderly care home and a preschool, placed within a socially diverse and age-integrated neighborhood. Adjacent to the site are condominiums reserved for individuals ages 55 and older. As residents in these condominiums grow older, many may eventually require more specialized care, including dementia support. Situating the dementia care facility within walking distance of these allows for an eventual natural transition within the same neighborhood, helping individuals remain in familiar surroundings. This continuity is especially valuable for people with dementia.

In addition to its social and demographic context, the site is surrounded by natural features like a meadow, fully grown trees, an apple tree garden, and close access to a bay. The presence of these natural assets align closely with the zone model, which emphasizes the importance of access to the surrounding natural environment. The site's existing greenery offers opportunities for seasonal variation, sensory stimulation, and safe outdoor movement, all of which are central to the project's evidence based approach. The natural surroundings are carefully integrated into the architectural concept to ensure that residents can experience nature in a way that is both accessible and meaningful, regardless of their physical and cognitive limitations.

However, while the zone model is more importantly about the transition between and access to outdoor and natural areas, rather than the mere existance of them, the setting and its extensive variety of natural surroundings provides an essential foundation for designing a meaningful dementia care facility that supports these transitions and ensures accessible contact with nature.

Figure 3. Näsby Park located on a Swedish map divided into the regions that govern Swedish healthcare. Adapted from Lantmäteriet, 2026. © Lantmäteriet, used for educational purposes.



General mapping of important landmarks in the immediate area, including public transportation, the main road, natural features, and the surrounding built area of varying function and size.

View of the existing apple tree garden on site.

View from site toward the 55+ condominiums and the existing elderly care housing.

Old residency owned by the castle, currently rented by an artist using it as their studio.

Avenue with old and fully grown trees lining the road between the residential area on one side, and the site and preschool on the other side.

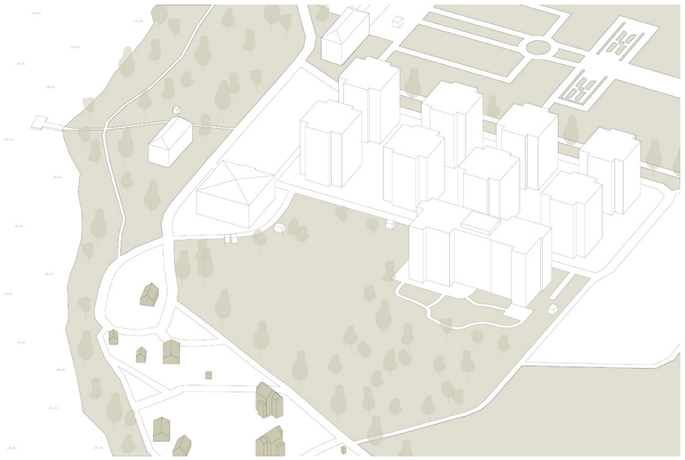
Strengths

Green area

Existing apple tree garden

Lowrise residential context nearby

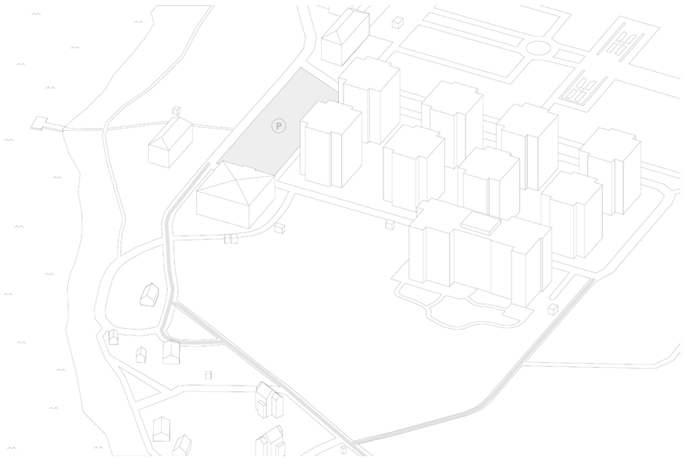
Good daylight conditions



Weaknesses

Limited parking space

Limited passability



Opportunities

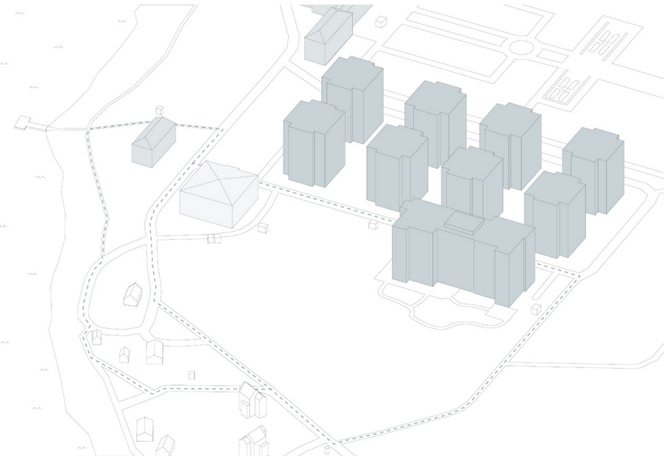
Community integration

Architectural variety in the area

Collaboration and sharing functions with existing nursing home

Intergenerational site (preschool, family villas, senior housing)

Close to existing walking paths that could be used by residents and staff as well



Threats

Seasonal challenges (nature during winter)

Open and windy

COGNITIVE SUPPORT

Zoning

Wayfinding

Clarity & scale

WELL-BEING

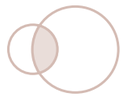
Biophilic design

Daylight

Homeliness

EVERYDAY LIFE

Gradients



Serendipity

Autonomy

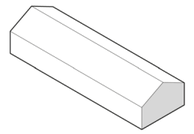
DESIGN STRATEGIES

Cognitive support is divided into zoning, wayfinding, and clarity & scale. These strategies focus on legible spatial organization in both the private dwelling as well as in the common areas. It is also about enabling intuitive navigation through sensory cues, clear sightlines, axiality, and destination rooms.

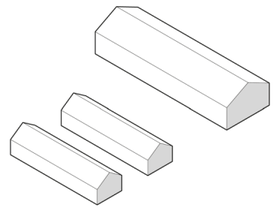
Well-being is divided into biophilic design, daylight, and homeliness as design strategies. These design strategies focus on strengthening the relationship to nature, supporting circadian rhythms, and through colors, materials, and layout creating a homelike atmosphere and contributing to the well-being of both residents and staff alike.

Everyday life is divided into gradients, serendipity and autonomy. These strategies support daily rhythms and meaningful activity by offering varying degrees of privacy and social interaction, encouraging spontaneous encounters while still allowing residents to make independent choices in their everyday routine. This is also connected to enabling a sense of normalcy.

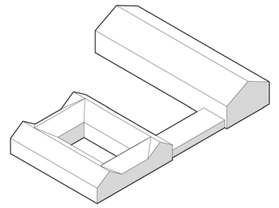
EVOLUTION OF MASSING



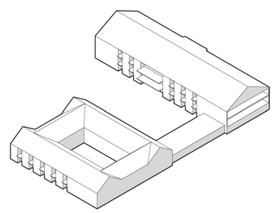
1. Starting off with a classic building shape that feels familiar and connects to the nearby residential area but in a bigger scale.



2. Multiplying the shape in order to fit the programme, however in a different scale to create some spatial and visual variation.



3. Connecting the volumes and shifting the low middle part back to highlight it as the main entrance, giving some more space for an entry garden and adding some more variation to the building.



4. Pushing and pulling of the building in order to create small nooks that result in more or less daylight intake where it is needed. This also creates a wider variation of outdoor stays within the building.

SITE PLAN

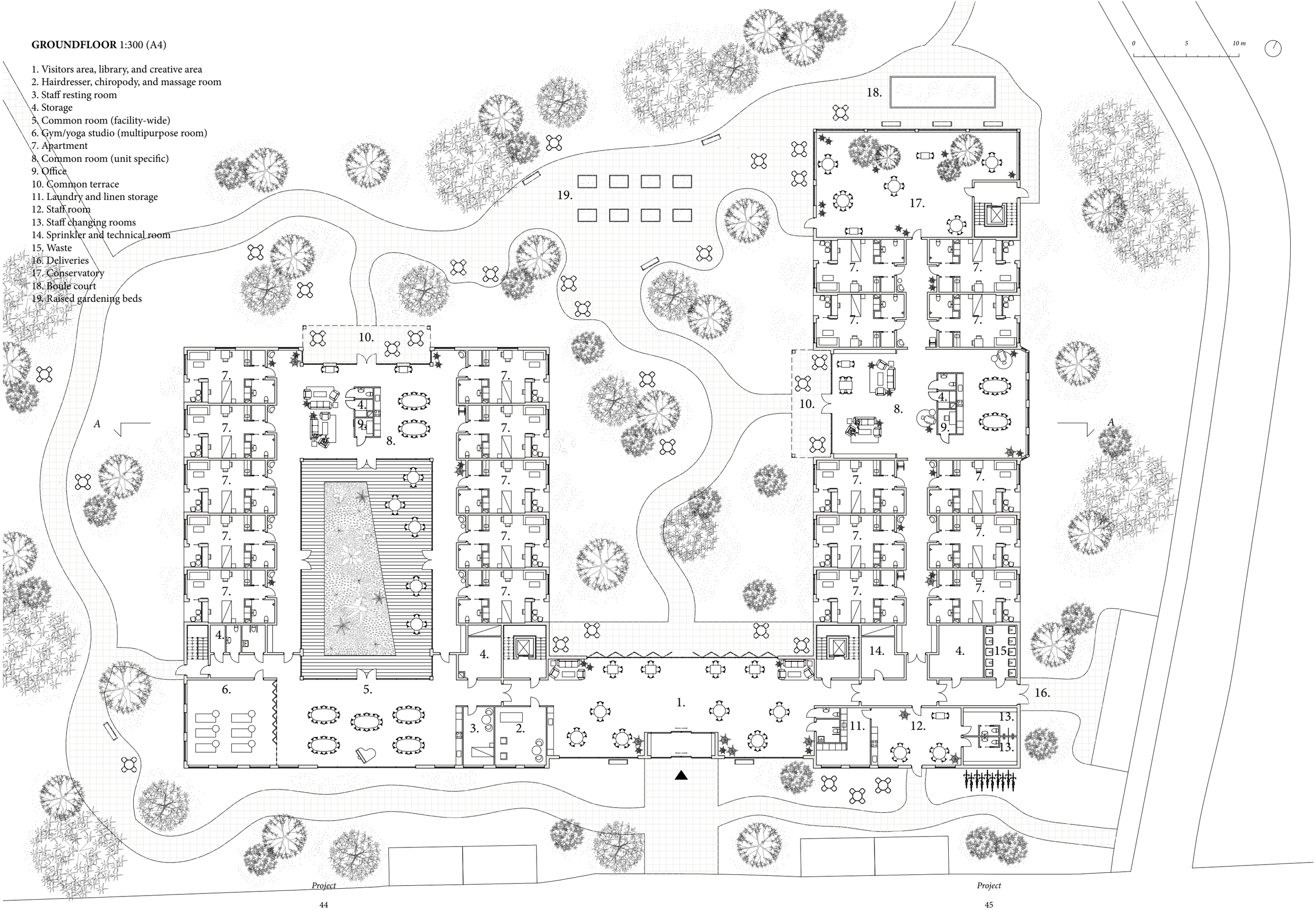
The road east of the building has been widened to improve deliveries and access. In addition to accessible parking at the entrance, a shared parking space with the existing care home is located in the northeast, minimizing impact on the meadow by using a previously disturbed site.

Site plan 1:10000 (A4)

Site plan 1:2500 (A4)

GROUNDFLOOR 1:300 (A4)

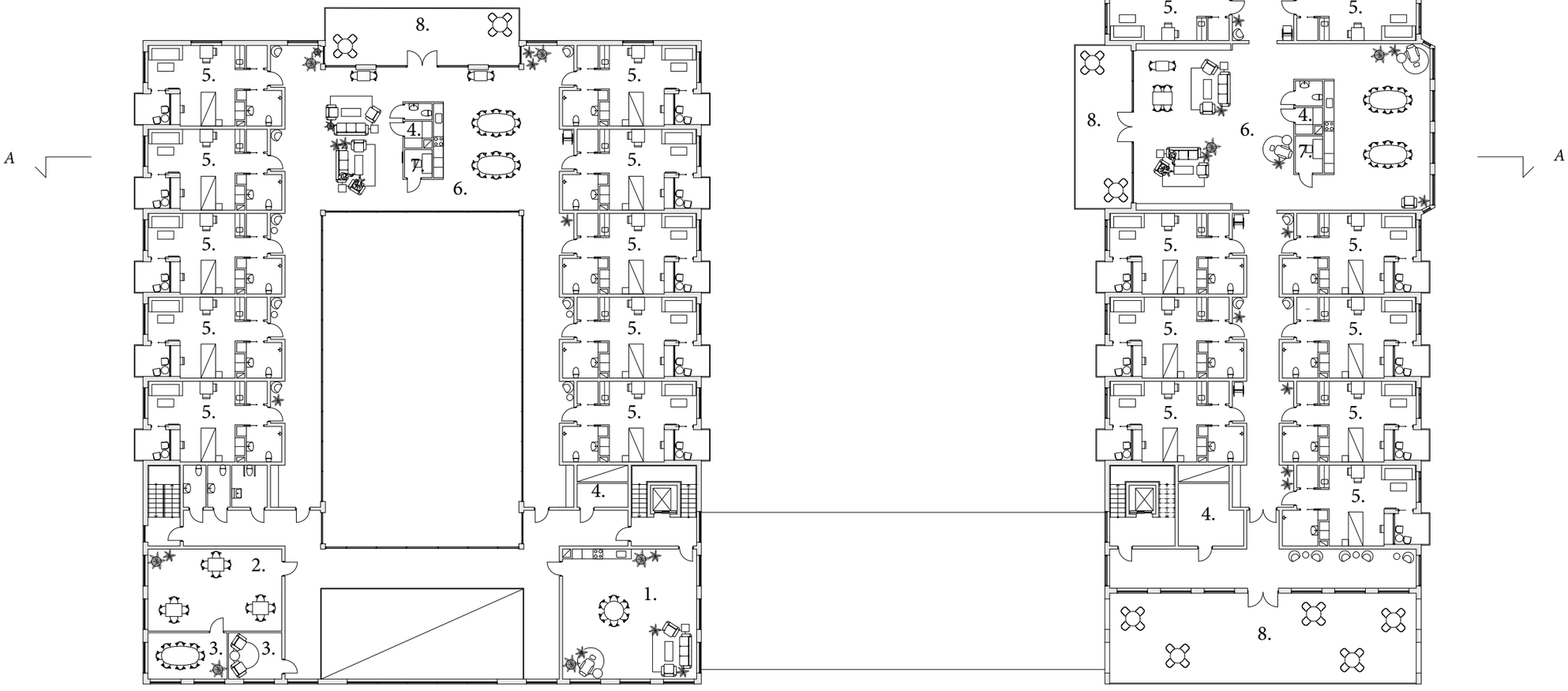
1. Visitors area, library, and creative area
2. Hairdresser, chiropody, and massage room
3. Staff resting room
4. Storage
5. Common room (facility-wide)
6. Gym/yoga studio (multipurpose room)
7. Apartment
8. Common room (unit specific)
9. Office
10. Common terrace
11. Laundry and linen storage
12. Staff room
13. Staff changing rooms
14. Sprinkler and technical room
15. Waste
16. Deliveries
17. Conservatory
18. Boule court
19. Raised gardening beds



FIRST FLOOR 1:300 (A4)

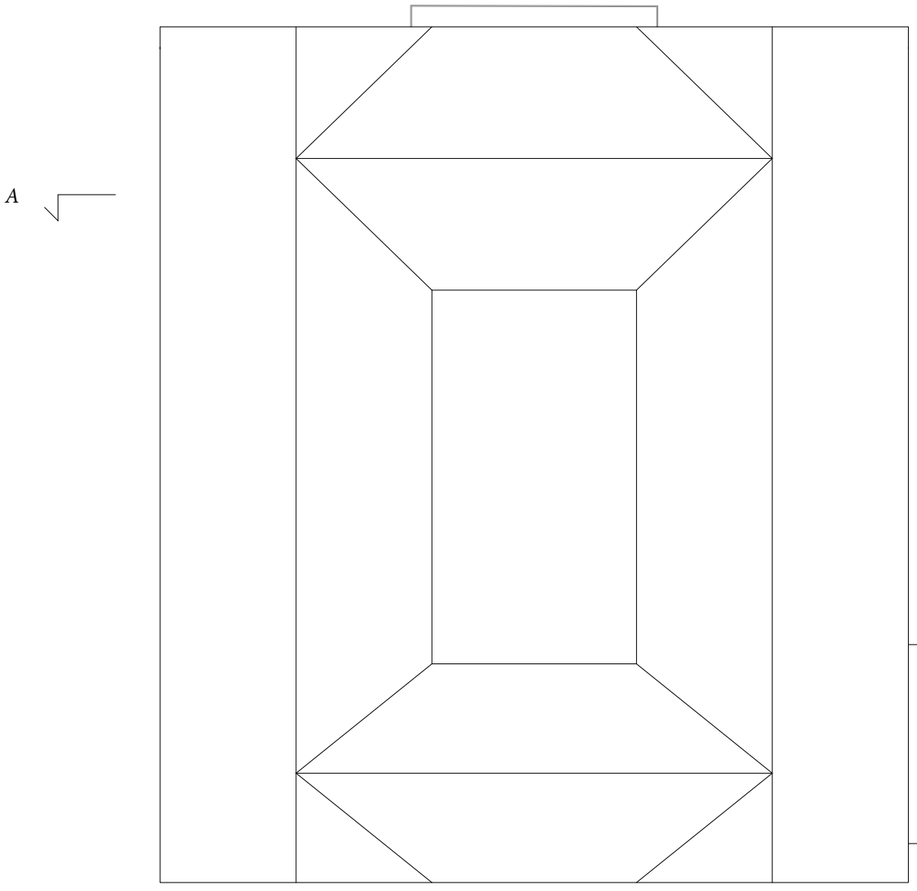
1. *"Kraftens hus"* for Dementia
2. Creative room *(kraftens hus)*
3. Group/therapy room *(kraftens hus)*
4. Storage
5. Apartment
6. Common room (unit specific)
7. Office
8. Common terrace
9. Conservatory

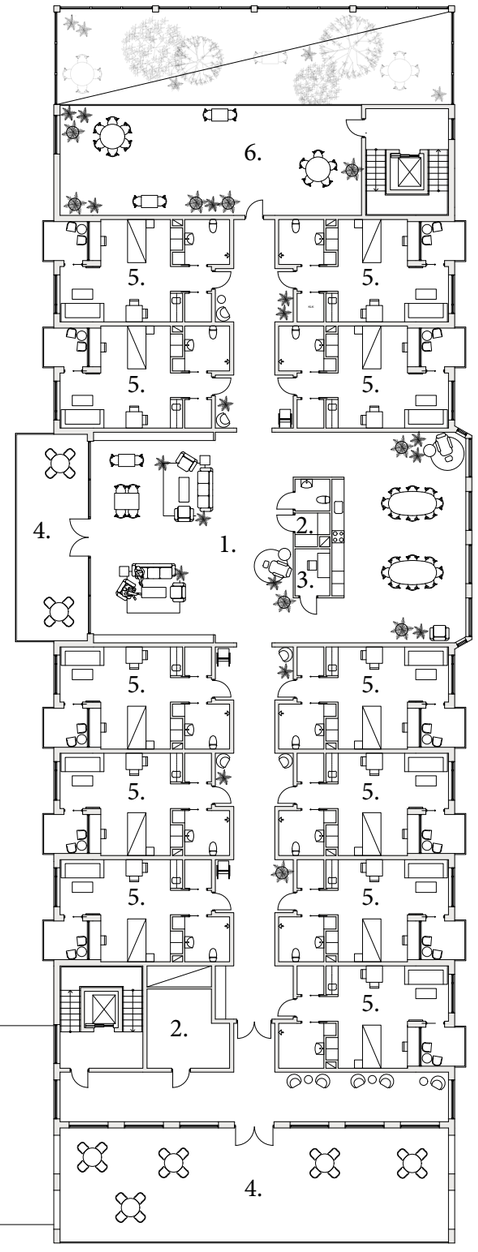
0 5 10 m



SECOND FLOOR 1:300 (A4)

1. Common room (unit specific)
2. Storage
3. Office
4. Common terrace
5. Apartment
6. Conservatory





CONTEXT, EXTERIOR MATERIALITY

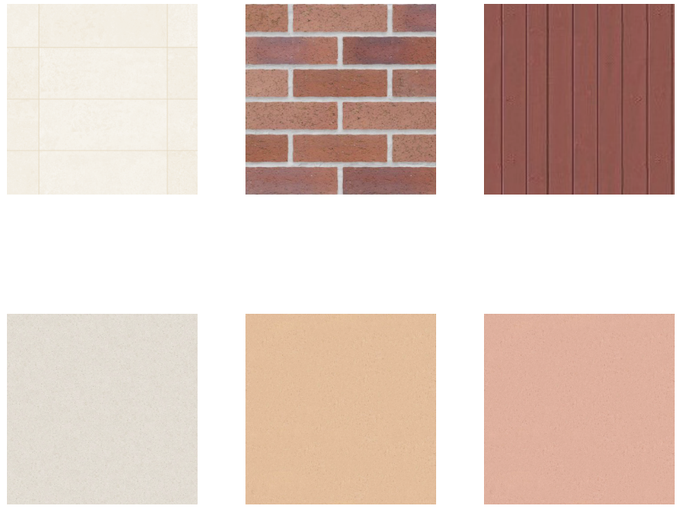


Figure 4. Collection of material samples of the surrounding area. Adapted from *Seamless textures* [images], by Architextures, 2026. © Architextures, used for educational purposes.

PROPOSAL, EXTERIOR MATERIALITY

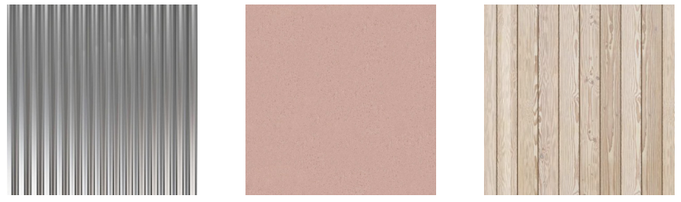


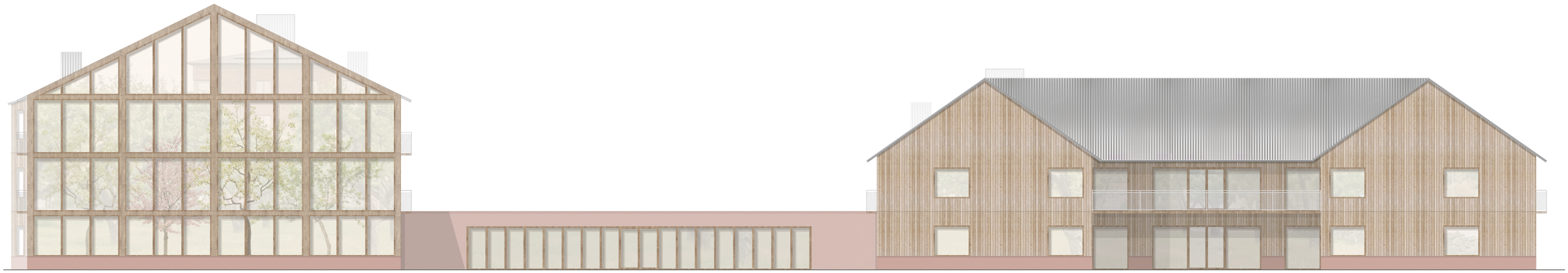
Figure 5. Collection of material samples for the project proposal. Adapted from *Seamless textures* [images], by Architextures, 2026. © Architextures, used for educational purposes.

Meeting of exterior materials in corner.

FACADES 1:200 (A4)

0 5 10 m

South facade 1:200

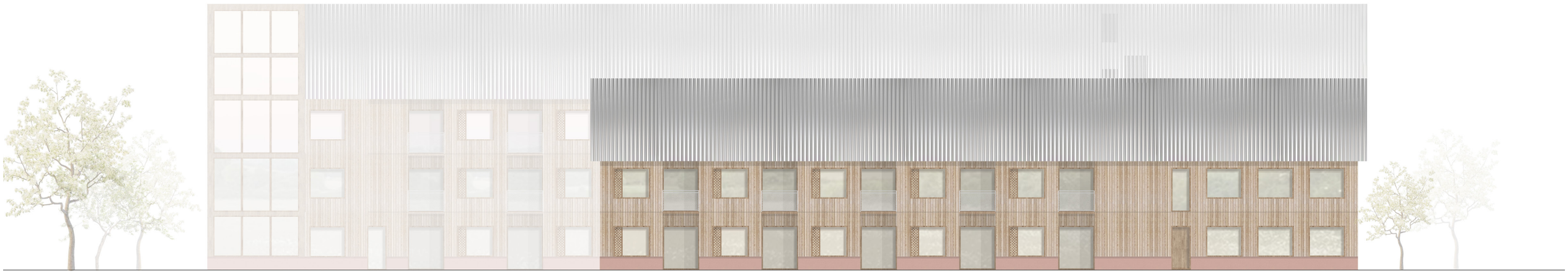


North facade 1:200

FACADES 1:200 (A4)

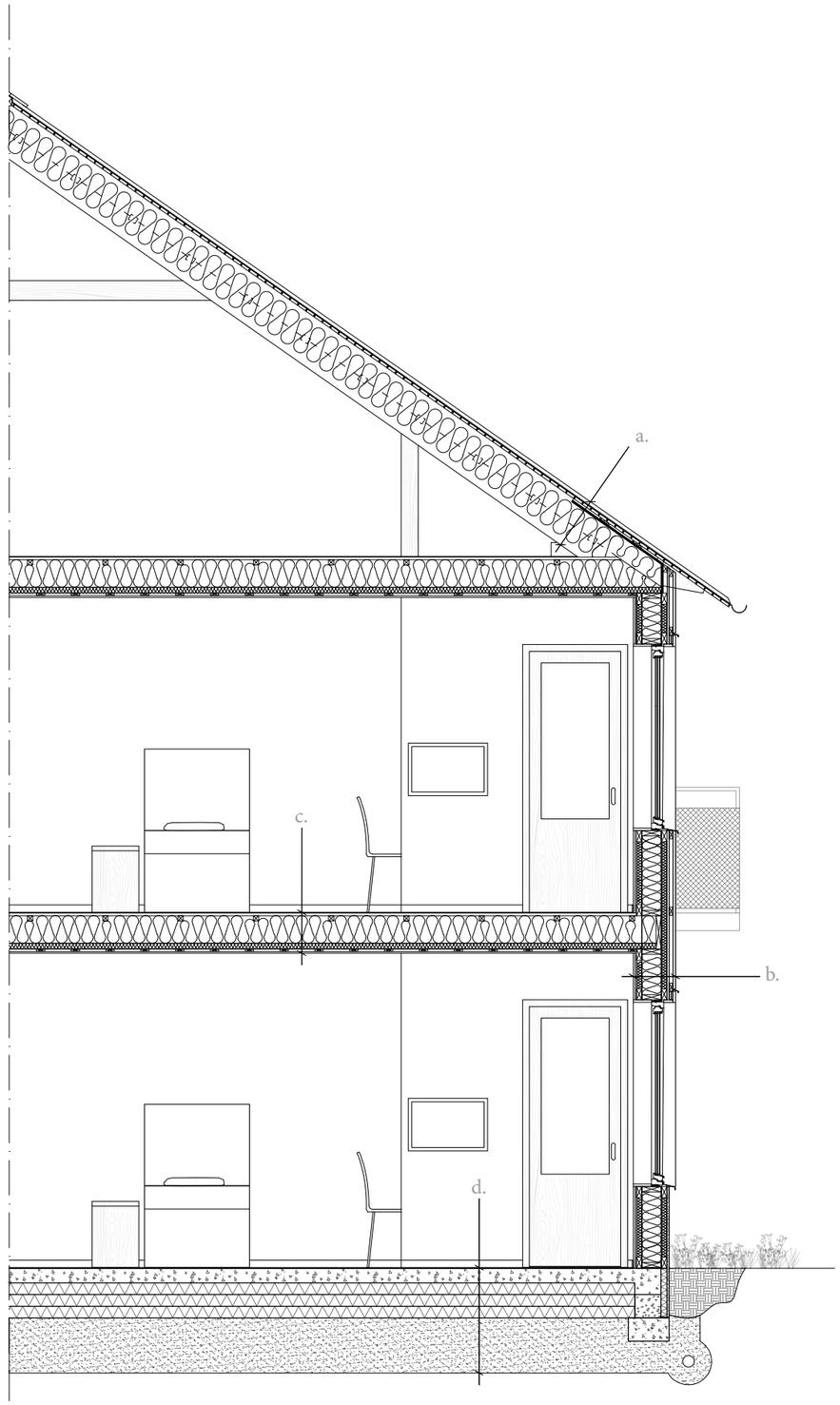
0 5 10 m

East facade 1:200



West facade 1:200

FACADE DETAIL 1:50 (A4)



0 1 2 m

a. Roof

0.6 Corrugated sheet metal
Roofing felt
23 Tounge and groove panel
2x195 roof beams cc 1200/45 air gap, 555 insulation

b. Wall

Oak paneling
Windbarrier
170 Insulation
Vapor barrier
45 Installation layer
13 Gypsum board

c. Intermediate floor

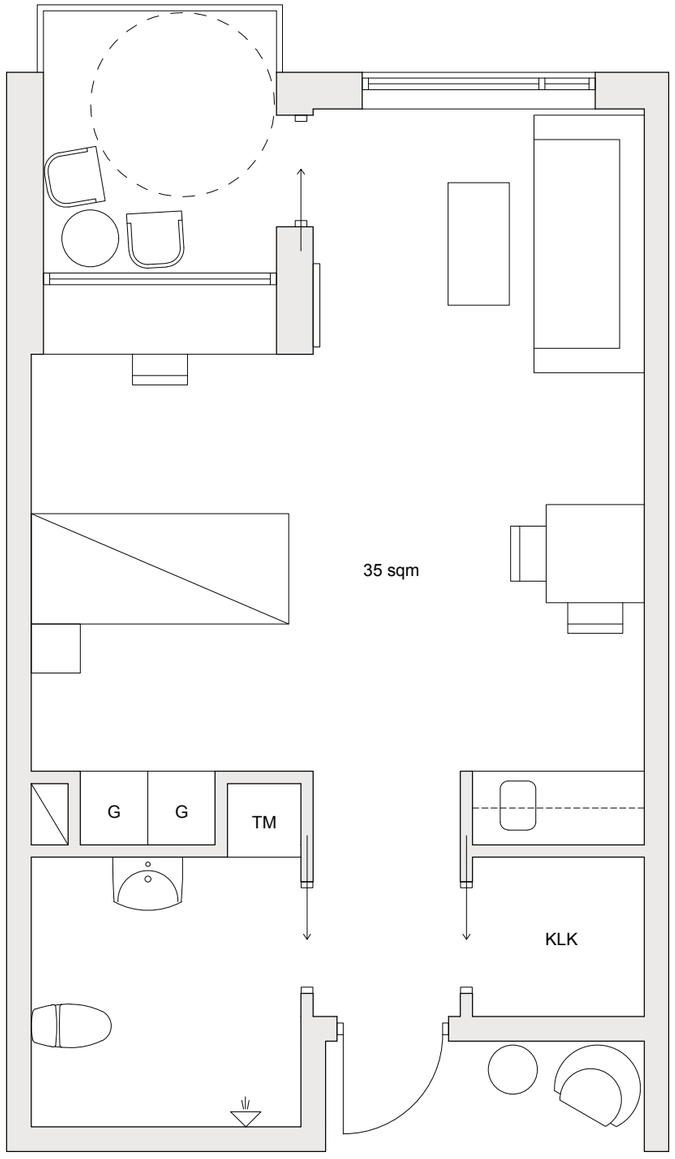
6 Vinyl flooring
22 Plywood
290 Glulam beam cc 600/ insulation
22 Sparse panel
13 Gypsum board

d. Floor joist

6 Vinyl flooring
120 Concrete
300 Insulation
300 Macadam
Geotextile

0 1 2 m

APARTMENT, 35 m²



IMPORTANT FEATURES

Private nook outside of apartment with possibility for personalization or storing walker/wheelchair

Axiality and sightlines

Sliding doors

Large closet space

Accessible bathroom

Washing machine

Kitchenette with ribbed glazed cabinets

Wardrobes with rattan-clad fronts

Desk

Floor to ceiling window with view from bed

Semi-recessed balcony

Zoning of functions

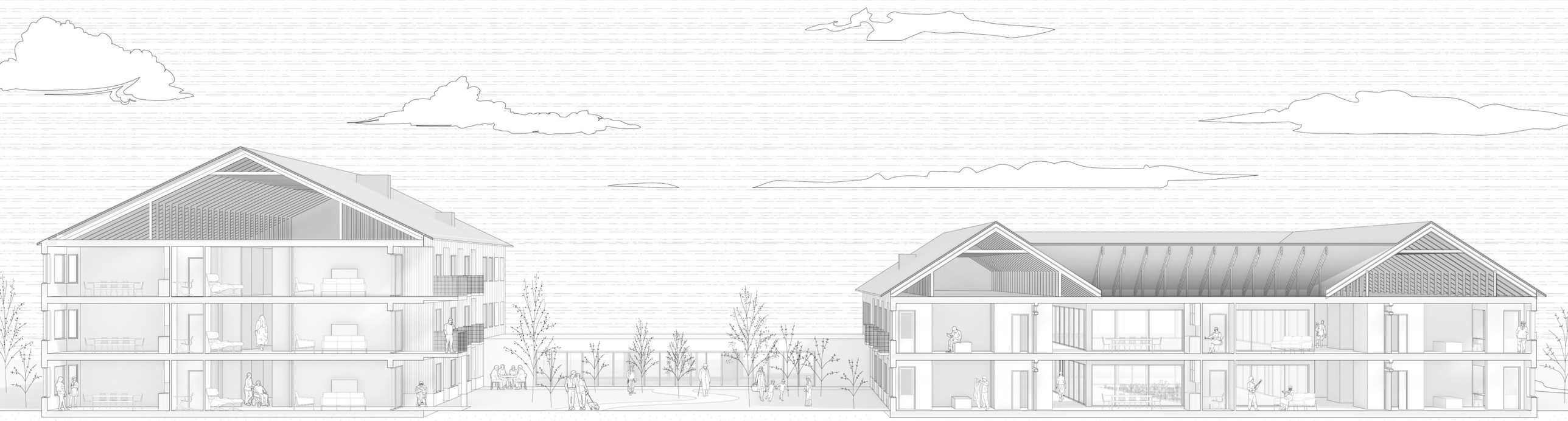
Natural materials

Apartment equipped with a warm wooden kitchenette and stainless steel countertop for warmth and durability. Ribbed glass kitchen cabinets and rattan wardrobe cabinets allow for visual orientation.

Daylight conditions and warm colors and materials in the sleeping nook, creating a homelike atmosphere. Window reach from floor level almost up to the ceiling to allow visual connection with the outdoors for bedridden residents.

PERSPECTIVE SECTION A-A 1:200 (A4)

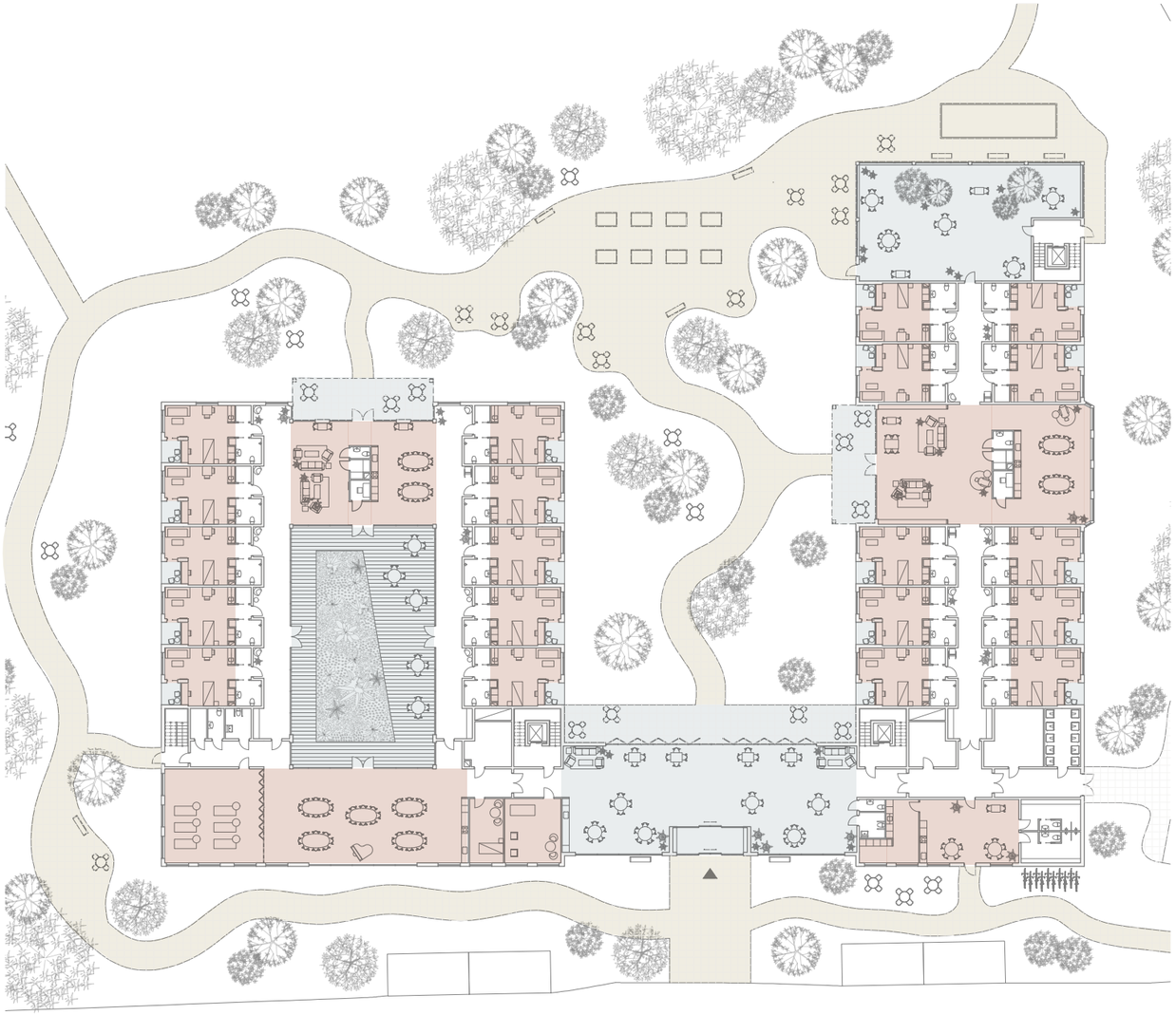
0 5 10 m



Entrance as a social, transitional space where residents, staff, and visitors alike can meet in groups or alone.

Glazed corridor and private apartment nooks on groundfloor with view over the courtyard.

Common room from the second floor.

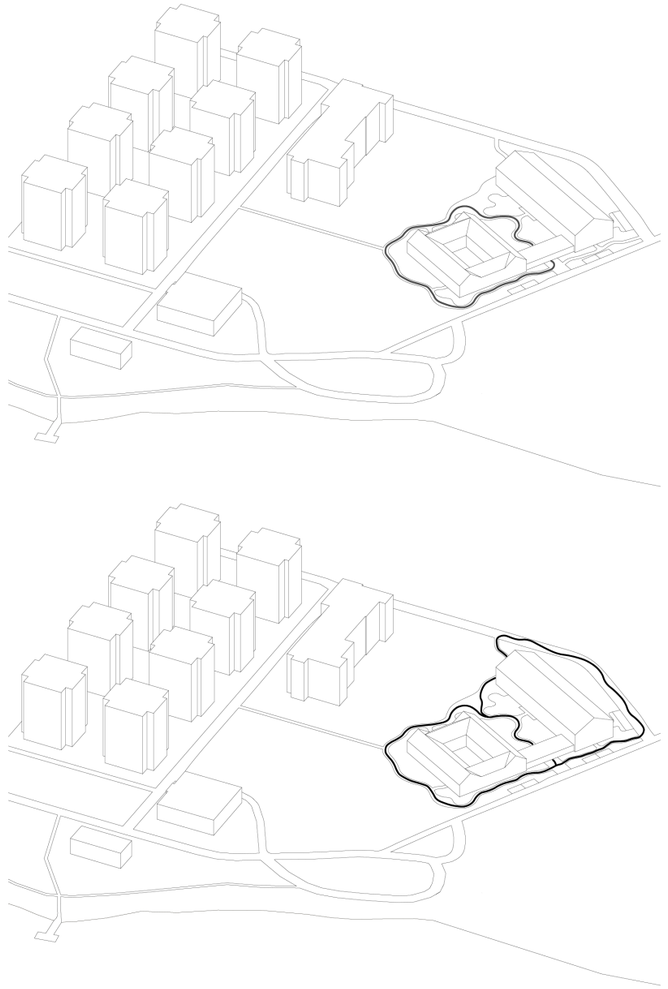


Zone one: All apartments, common rooms and most of the staff area have views toward greenery.

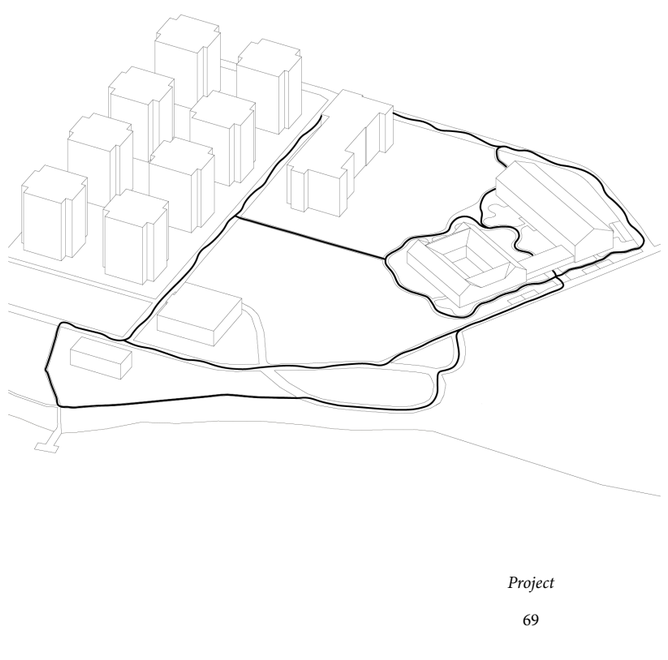
Zone two: The transtitional spaces (indoor-outdoor) like balconies, patios, courtyards, wintergarden, and in this case, the entrance area all relate to this zone.

Zone three: Garden designed especially for indviduals living with dementia offering seating arrangements and activities along a tiled pathway.

Zone four: Connecting garden path to the wider community.



1. Shorter path with multiple opportunities to make it even shorter or longer depending on the individuals' prerequisits and wishes. Fully grown trees and seating arrangements are scattered along the path, encouraging spontaneous meetings or places for rest.



2. Using the existing sidewalk in the east to extend the promenade path while still remaining in close proximity of the building since some residents may feel anxious moving too far from their home.

3. Showing multiple pathways that combine the garden path with other existing paths in the surrounding area for indviduals wanting to go for longer walks or stays in the natural environment. The promenade paths slither along different types of contexts, like the residential areas and elderly care housing, the preschool, the old building connected to the castle, as well as natural areas like the bay, meadow and tree alleys.

Trees

Rowan, amelanchier, and katsura create seasonal orientation. They provide interest, scent and strong seasonal changes in color.

Fruit/berries

Apple trees, strawberries, and currants for example are known to trigger memories of cooking, gardening, and childhood experiences.

Evergreen

Juniper and dwarf pine are visually attractive and lush even during winter, encouraging residents to visit the garden during colder months as well.

Tactile plants

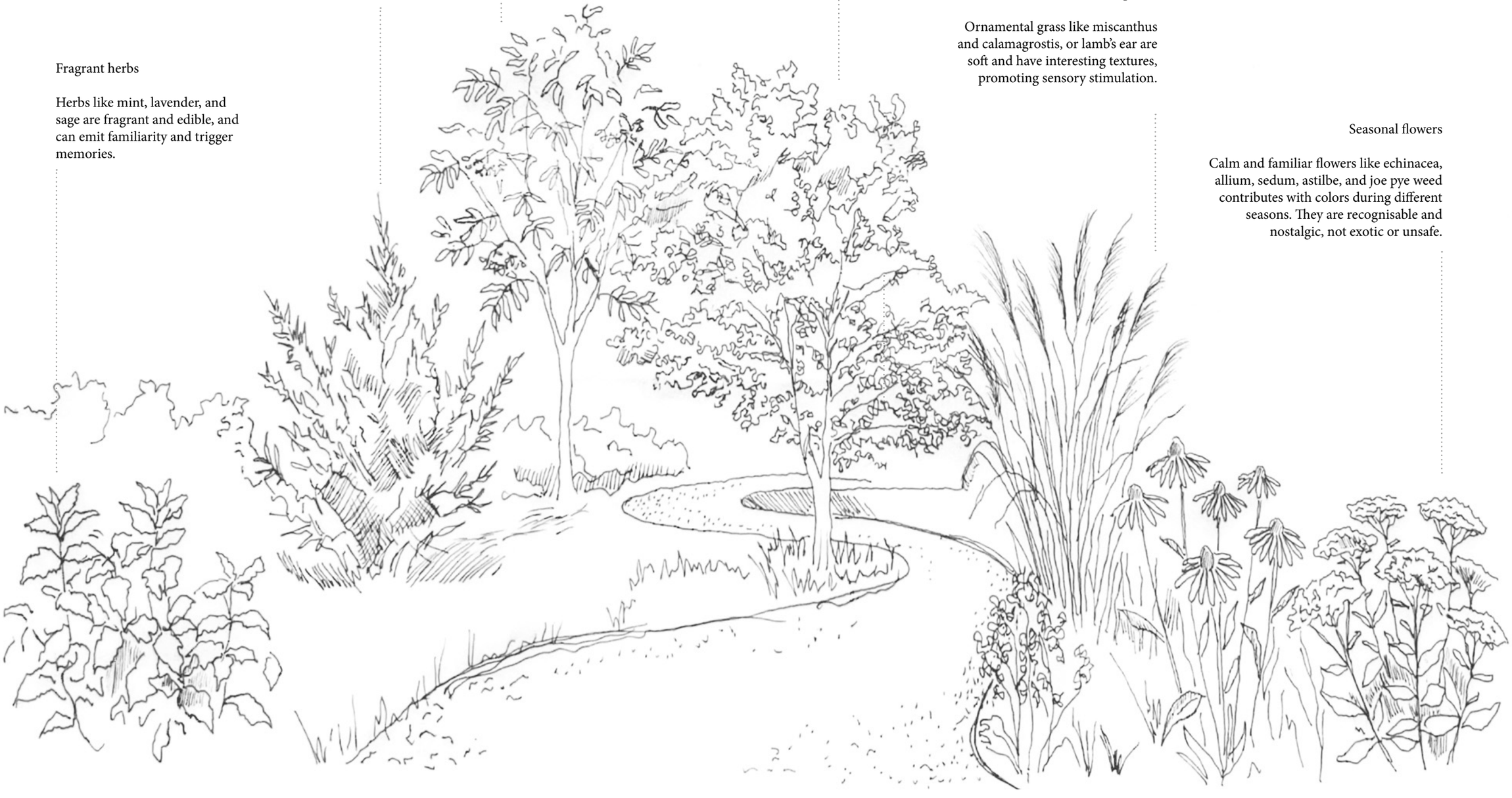
Ornamental grass like miscanthus and calamagrostis, or lamb's ear are soft and have interesting textures, promoting sensory stimulation.

Fragrant herbs

Herbs like mint, lavender, and sage are fragrant and edible, and can emit familiarity and trigger memories.

Seasonal flowers

Calm and familiar flowers like echinacea, allium, sedum, astilbe, and joe pye weed contributes with colors during different seasons. They are recognisable and nostalgic, not exotic or unsafe.



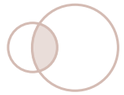
A slithering tiled path circulating the building with different activities or seating along the way.

Wayfinding

Biophilic design

Homeliness

Gradients



Serendipity

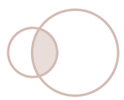
Outdoor access connected to the private apartments.

Wayfinding

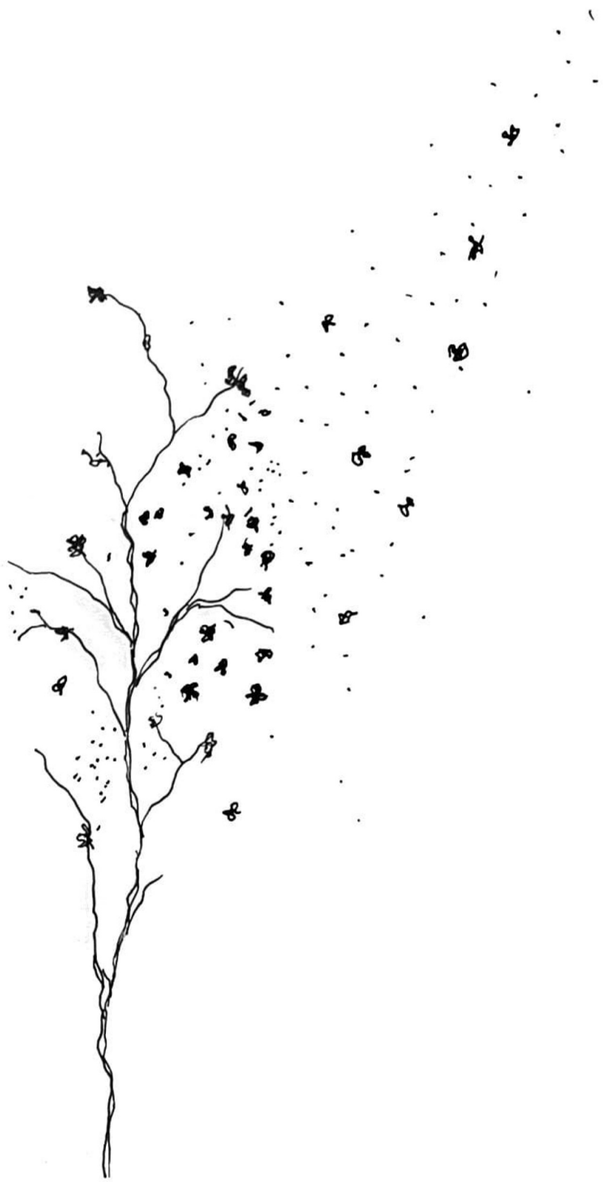
Biophilic design

Homeliness

Gradients



Serendipity



DISCUSSION

The project investigates what spatial strategies can be implemented in a dementia housing facility in Sweden to balance well-being for the residents, with a focus on integrating the zone model and translating evidence-based design principles in order to achieve a supportive environment. Through literature reviews, case studies, interviews, site visits and analysis, and a design exploration, a proposal for a dementia housing facility in Näsby Park, Sweden, emerged, with the aim to enhance well-being. This discussion considers how the findings collectively inform spatial strategies for dementia housing facility, and how theory, evidence, and architectural design-decisions intersect in the proposal.

I. What spatial strategies can be implemented in dementia housing in Sweden to balance well-being for residents?

The theory reviewed along with the proposal suggest a number of different spatial strategies that can be implemented in a dementia housing facility in order to balance well-being. The findings suggest that orientation and wayfinding through clear visual connections and legible circulation function as a spatial strategy that supports autonomy and minimizes stress. The absense of dead ends support safe wandering, a common behaviour among individuals with dementia, and can be replaced with sensory cues like views to the outdoors, colors and materiality, as well as "destination rooms". In the proposal, the winter garden is an example of this, which also functions as a landmark.

Another important finding is that of scale. Organizing the dementia housing facility into small-scale units functions as a spatial strategy that support a sense of familiarity and personal identity which more closely resembles a home, rather than an institutional care setting. This was implemented in both the private and common settings throughout the proposal. Since the apartments in elderly care settings in Sweden are relatively small, and in the proposal 35 m^2, zoning became an important spatial strategy related to this. Through the organization of different functions in for example the apartment, the proposal aims to reflect a layout that relates to a more homelike setting despite the small scale and open room. This is done through creating nooks and clustering functions for a more logical but still homelike layout.

Additionally, the findings also suggest that access to the outdoors functions as a spatial strategy that supports emotional well-being and reduces stress by allowing residents to access the outdoors safely and independently. In the proposal, this is addressed through a range of accessibility-oriented design strategies, which will be further discussed when answering the next research question. Notably, the proposal does not suggest a locked facility or enclosed boundaries. This is an intentional, yet compex and potentially controversial, design decision that relates to the understanding of that maintaining autonomy and freedom of movement may be more effective in reducing escape behavior rather than physical confinement. Con-

finement and restrictive environments can instead heighten anxiety and restlessness. However, there is no singular right or wrong answer to this dilemma, and multiple different strategies can be argued for depending on context, user needs, and care philosophy.

I.I. In what ways can the zone model guide the creation of supportive environments for people with dementia?

The zone model is a framework that guides the design of outdoor environments in care settings, identifying four zones of contact with the outdoors. In this proposal the zone model has informed the overall design by incoporating the four zones throughout the building. It has been an important model when designing various types of outdoor stays but also the transitions between zones, with focus on inclusivity and accessibility.

Zone one, which relates to visual contact with greenery through windows, has been implemented into the proposal in almost all rooms and circulation spaces, with the exception of certain logistical rooms. The small staff offices in each unit lack direct exterior windows, aside from a high-level window above the door that provides indirect daylight. While an exterior facing office would have been preferable, priority was given to allocating window access to the coomon room, as the offices are only intended for short periods of administrative use. In the apartments, the window with view directly from the bed is designed from floor level almost up to the ceiling, ensuring visual access to the outdoors for bedridden residents as well. The balcony railing design consist of a light, steel mesh, allowing views to remain unobstructed. A variation of window sizes have been deliberatly used to support a more homelike character, with larger openings placed in north, east and west to reduce the risk of overheating.

Zone two addresses transitional spaces between indoor and outdoor environments. In the proposal, this zone is represented through a range of elements like a conservatory, a courtyard, patios and balconies, both private and communal ones. Each apartment is provided with a semi-recessed balcony or, at groundlevel, a patio with direct access to the garden, supporting autonomy, privacy and a comfortable outdoor stay. The shared zone two spaces are distributed across all cardinal directions to allow comfortable outdoor stays throughout the day. These spaces vary in degree of enclosure, ranging from semi-recessed and fully recessed balconies, to a fully glazed winter garden, a sheltered courtyard open to the sky, and an entrance area that can be opened using folding doors.

Zone three focuses on the garden, as a space for sensory stimulation, moevemnt and social interaction, while zone four is related to the surrounding context. These zones are addressed in the proposal through a tiled pathway that circulates through the garden and connects to the surrounding public sidewalks, enabling walks of varying lengths. The garden is equipped with trees and planting adapted for people with dementia, as well as raised cultivation beds, seating areas, and a boule court, providing opportunities for activity, rest, and social engagement within a supportive and legible outdoor environment.

I.II. How can evidence-based design principles be translated into architectural strategies that foster well-being in dementia care settings?

There are a growing body of evidence-based design principles, serveral of which have been translated into architectural strategies within this proposal. These strategies primarily address wayfinding, attractiveness, and the incorporation of natural environments. Particular care has been taken to create spaces that feel warm and homelike, despite the necessity of meeting functional requirements through materials such as vinyl flooring, which can risk appearing institutional if not carefully combined with natural materials, textures, and color palettes.

However, since attractiveness is a subjective topic, the integration of spaces that residents can personalize was very important throughout the design. For instance, the idea of the private nooks outside each apartment which can be personalized are informed by evidence-based design principles and serve multiple purposes beyond visual appeal. These spaces contribute to a sense of homeliness and personal identity, while also functioning as recognizable landmarks that support wayfinding. This illustrates how evidence-based deign principles, while often introduced to address a specific need, may simultaneously support multiple spatail strategies. The project therefore demonstrates the importance of applying a range of complementary evidence-based design principles in an integrated manner in order to achieve a cohesive and supportive care environment.

CONCLUDING THOUGHTS

To conclude, the discussion demonstrates that well-being is supported not by a single solution, but rather by a range of spatial strategies that are layered and interconnected. This proposal is thus one of many suggestions of how one could design a dementia housing facility in Sweden that balances well-being for residents, but implementing the zone model as a structuring tool, rather than a rigid system, as well as using and combining evidence-based design principles, has proven to be beneficial in order to reach a feasible solution of how the future dementia housing facilities could be designed.

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FIGURES

Figure 1. Feddersen Architekten. (2006). [Image]. In E. Feddersen & I. Lüdtke (Eds.), *Lost in Space*. Birkhäusser.

Figure 2. Harms Wulf Landschaftsarchitekten. (2005). [Photograph]. In E. Feddersen & I. Lüdtke (Eds.), *Lost in Space*. Birkhäusser.

Figure 3. Lantmäteriet. (2026). [Map]. https://minkarta.lantmateriet.se/

Figure 4-5. Architextures. (2026). [Material textures]. https://architextures.org/

All images are produced and owned by the author if not otherwise stated.

APPENDIX

AI

Microsoft Copilot has been used throughout the process for language refinement and structural suggestions to support the clarity and professionalism of the written materials, including editing and improving the formulation of research questions, project descriptions and explanatory texts.

Examples of the prompts that I have used:

"*Can you help refine the language of this paragraph "..." for my master thesis*?"

"*Can you suggest a structural layout for the discussion*?"

Furthermore, Visoid, an AI generated rendering tool for architects and designers, has been used for all perspective images. The Rhino model including location, light and material settings have been inserted into Visoid where using different prompts, the AI tool can generate different materials, interiors, greenery and humans into the perspectives.

Examples of the prompts that I have used:

"*Do not change or alter any of the proportions or angles of the view. Photorealistic exterior architectural detail shot, very zoomed in composition focusing on the meeting between materials, textures, and light. The wall on the left side is fully finished in pinkish terracotta plaster with a soft handcrafted texture and warm earthy tones. The wall on the right side features a 700 mm high plinth in the same pinkish terracotta plaster, above which vertical light wood panels begin, creating a refined contrast between mineral and natural materials. The wooden panels should have a soft matte finish with subtle grain and Scandinavian detailing.*

The flooring consists of pinkish terracotta tiles with slight tonal variation and a matte surface, continuing the warm earthy palette throughout the scene. Soft natural sunlight creates gentle atmospheric shadows, including the shadow of a nearby tree cast across the walls and floor, the tree itself is never visible, only the organic shadow patterns moving across the architecture. The left wall and the plinth should be the same color."

"*Change selection to an apple tree.*"

All perspectives were produced using a Rhino model as a base. Depending on the workflow, the model was either rendered in Vray and subsequently enhanced and detailed with Visoid, or directly imported into Visoid, where prompts were used to generate rendered visuals. All perspectives were then post-processed in Photoshop to refine details and apply some finishing touches.

INTERVIEW Q AND A

This walking interview during a site visit was conducted on the 16th of October, 2025 at Näsby Slottspark Vård- och Omsorgsboende, Täby, with Elisabeth Sandberg, Acting Operations Manager.

I. How big is the facility and the apartments, and how many live in each unit?

There are three living floors, two of which cater to residents with dementia and the top one for residents with somatic needs. The apartments are 32 m². Each floor is divided into two seperate units with 9 residents in each unit.

II. How does the facility respond to current research and best practice?

We have put a lot of focus on arranging different kinds of activities, even outdoors as well. We also have our own chef that puts a lot of effort into the food.

III. What types of different outdoor environments do you provide?

Two of the floors have a common terrace with views toward the apple garden, however not the top floor. Some of the apartments have their private french balconies, but again, not all of them. We arrange some activites outdoors in our garden as well. In the summer, we even have hen here. We also sow some of our own herbs.

What works and what does not work here?

Our residents are very happy here and a lot of people with these kinds of needs want to live here. However, it is a shame that the top floor which is designated for residents with somatic needs do not have a terrace. It takes a lot of time to get them into the elevator in order to help them all to get outside from the top to the groundfloor. We can't fit all of them into the elevator at once so we have to go several times. We also experience that mixing residents that suffer from dementia with residents that have somatic needs can be difficult during activities or eg. dinners, despite many of the somatic residents showing signs of cognitive decline as well. During winter, we struggle to motivate our residents to go outside. We are in a very beautiful neighborhood, but the weather is at times a hinder. Lastly, the space for deliveries is much too small, maybe double the size would be sufficient.

MY OWN REFLECTIONS

I personally experienced the spaces to be quite beige and not very colorful. The apartments were well proportioned, however, they were missing a space to put a wheelchair or a walker. Many apartments were toward the street outside instead of the surrounding green areas. Excercise equipment was placed in the middle of a corridor, but otherwise the proportions of most common areas felt logical. The garden had a lot of potential but was missing some more shaded areas.

INTERVIEW Q AND A

This walking interview during a site visit was conducted on the 18th of February, 2026 at Sandarna Vård- och Omsorgsboende, Gothenburg with Peter Olsson, Unit Manager.

I. How big is the facility and the apartments, and how many live in each unit?

While the building itself is eight stories high, there are five living floors with two wards on each floor. There are 40 apartments for individuals with dementia divided on two floors with 10 in each ward, and 60 apartments for residents with somatic needs. Each apartment is around 34-35 m².

II. How does the facility respond to current research and best practice?

The colors on each floor are based on the current research. We offer a lot of activites in order to promote socialising. The apartments are on the smaller scale in order to give more space to the common areas.

III. What types of different outdoor environments do you provide?

We have a roof terrace that is very appreciated during warmer months, however, it is quite exposed to winds, snow, and rain so we are looking into installing some kind of weather protection here. Otherwise, we are situated in a slope which causes some difficulties, but we do offer walks around in the neighborhood for those who want and are able. We also have what we call a winter garden up on the eighth floor.

IV. What kind of activities are generally appreciated? What works and what does not work here?

It varies a lot. This week we will have Bingo, a music quiz, church service, indoor boule, a pub afternoon with music, yoga and sitting excercises and another general quiz. We also have a restaurant in the facility which provides food for the school/kindergarten as well, which is very appreciated. Our residents like it here and the overall response is positive. However, the building is maybe not perfectly suited for this type of operation, the building is very tall and situated in a slope. The family's of the residents likes to have their loved ones close to them here in the city, but it comes with a cost like for example limited access to greenery.

MY OWN REFLECTIONS

The building felt very big, with some common rooms feeling overly dimensioned and underutilized. In relation to the zone model, it was missing a lot of qualities. However, the use of color felt homelike and intentional. Apartments did not have a clear distinction between functions, instead it felt more like just one open room. Overall, easy to navigate, but there were a few dead ends. The roof terrace felt very exposed to harsch weather and the site is not best suited for these type of users.

PHYSICAL MODEL 1:200

PHYSICAL MODEL 1:200

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Här och nu.
A space for living in the moment when memories fade.

Karolina Palmqvist.

2026.

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