Living Together, Living Differently

Exploring housing diversity and shared spaces

for healthy living in Houtwijk

Graduation Report

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FOREWORD

Architecture is often seen as a way to build permanent structures, yet our lives are frequently defined by change. Whether it is a young person starting their first job, an older adult looking for a more manageable home, or a parent navigating a new family dynamic after a separation, we all experience “transitional” moments. In Houtwijk, these moments are often met with a built environment that feels rigid and unchanging. This report is the result of my graduation journey within the Designing for Health & Care studio at TU Delft. My goal was to move beyond the numbers of the housing crisis and look at the actual people behind the waiting lists. By studying how different groups can share space effectively, I have tried to design a place that supports both privacy and community. I would like to thank my mentors, Birgit Jurgenhake,Kobe Macco and Jasmina Campochiaro for their guidance and for pushing me to think deeply about how “living differently” can lead to “living better”. This project is not just about buildings; it is about creating a space where everyone, no matter their stage in life, can feel at home.

Prapti Gupta
Delft, 2026

ABSTRACT

The Dutch housing market is under sustained pressure, limiting access to suitable and affordable housing for both long-term residents and people in vulnerable or transitional living situations. In neighbourhoods with a relatively homogeneous housing stock, such as Houtwijk in the Loosduinen district of The Hague, these pressures are intensified. Limited housing diversity restricts residential mobility, blocks generational flow, and inadequately accommodates small households and changing living situations.This graduation project investigates how housing diversity can be architecturally deployed to respond to shared spatial needs across different users, including starters, ageing residents, labour migrants, and people in transitional circumstances. By treating temporary and transitional residence as a recurring condition within the housing system, the project explores how varied dwelling typologies and shared spaces can support healthy living environments.

01 INTRODUCTION

PROBLEM STATEMENT

The current Dutch housing market operates within a state of spatial mismatch between a homogenous housing stock and the ever evolving requirements of modern household structures (Dekker, p.7, 2024). Having been designed for the permenance of the nuclear family, post-war suburban neighbourhoods are unable to accommodate the diversity of current residential life stages (Czischke et al., 2025). In fact, Houtwijk, a suburban neighbourhood in The Hague, represents this mismatch through its housing stock consisting mainly of 1970s single-family row houses and apartments (of which 52.8% apartments) (Gebiedsanalyse Stadsdeel Loosduinen, n.d.).

This homogeneous stock is partly responsible for the blockage in the chain of moves; ageing residents remain in the larger single-family dwellings they can no longer use effectively caused by the lack of suitable alternatives (Gebiedsanalyse Stadsdeel Loosduinen, n.d.) (Czischke et al., 2025). The blockage results in larger dwellings remaining occupied by households that no longer need them, while smaller, accessible units that would enable the move are absent. This leaves the chain at a standstill at both ends (Glocker & Gonne, 2025).

At the same time, vulnerable groups including ageing population, starters, labour migrants, and recentrly seperated individuals face difficulties securing adequare housing (Balster & Ziya Joemmanbaks, 2024). Moreover, the shortage of approximately 10,000 homes and the wait time for social housing being more than six years in The Hague, forces these vulnerable groups into inadequate or overcrowded housing conditions. (Balster & Ziya Joemmanbaks, 2024) ; Buys, 2024 ; Jelle,2026 ; Woningtekort Nederland, n.d.).

On the other hand, spatial isolation present in suburban planning also results from a focus on the private domestic sphere at the expense of communal infrastructure. Having been organised around the self-contained family unit, the current built environment in Houtwijk lacks the shared and public spatial arrangements which are necessary for collective wellbeing (Group research report, 2025) (Gardner et al., 2018). This deficieny contributes to living environments that fail to support physical or mental health (Gardner et al., 2018).

For vulnerable groups, a homogeneous stock and lack of public spaces therefore is most limiting, as their needs faill outside what it offers.

Houtwijk's classification as a kantelwijk, combined with The Hague's 2040 vision for densification and diversification of ageing suburban areas, make it a justified location for this intervention (Balster & Ziya Joemmanbaks, 2024; DenkWerk, 2023). At the regional scale, it als offers an opportunity to relieve pressure on over concentrated neighbourhoods and distribute social challenges more evenly across the city's districts (social worker, personal communication, 2025).

1.1 RESEARCH QUESTIONS

Main research question

How can housing diversity and shared spatial arrangememnts support healthy living conditions for small and transitional households in Houtwijk

Sub-question 1

What are the current living conditions of the target groups?

Sub-question 2

Which spatial factors directly influence physical, mental, and social health in residential environments?

Sub-question 3

What spatial needs do small and transitional households share?

Sub-question 4

How can diverse dwelling types and shared spaces be combined in a housing strategy for Houtwijk?

OBJECTIVE

This research project aims to develop a housing strategy for Houtwijk that addresses the spatial needs of small and transitional households (vulnerable groups) through the architectural design of diverse dwelling typologies and shared spatial arrangements. The strategy is oriented toward a residential environment in which the relationship between private and collective space is designed to support social contact, dometic adequacy, and physical accessibility. The hypothesis is that diversity in dwelling type and the organisation of shared space can function as an instrument for creating a healthier living environment for households.

MOTIVE

Behind the numbers on housing shortages and waiting lists are actual people navigating daily life in conditions that were not designed for them. These are increasingly common residential realities in todays age. In Houtwijk, this is compounded by a spatial environment that offers little beyond the private dwelling: public and leisure spaces are limited, and the layout of the neighbourhood produces isolation rather than encounter, with residents largely confined to their own domestic sphere. Introducing more diversity in households alongside qualitative shared and public spaces could therefore benefit not only the incoming residents but the neighbourhood, making it a more active and socially varied place to live. This project proceeds from the position that these conditions are spatial in nature and therefore spatial in their solution.

APPROACH

02

METHODOLOGY

To answer the research questions, this study will use a combination of literature review, policy analysis, case study research, and design exploration. Subquestion 1, which investigates existing housing models and approaches to shared living, will be addressed through a review of academic literature, relevant policy documents, and the analysis of realised housing projects that implement collective or shared spatial strategies. Subquestion 2, focusing on the relationship between housing environments and health, will be examined primarily through literature from the World Health Organization (WHO) and other studies on healthy living environments. Subquestion 3, which explores spatial strategies and design principles for shared living environments, will be investigated through a selection of case studies combined with supporting literature. Finally, Subquestion 4 will be addressed through the design process itself. Iterative design development, including the testing of spatial configurations and the organisation of shared spaces across different scales, will translate the theoretical insights from the earlier research into a concrete architectural proposal.

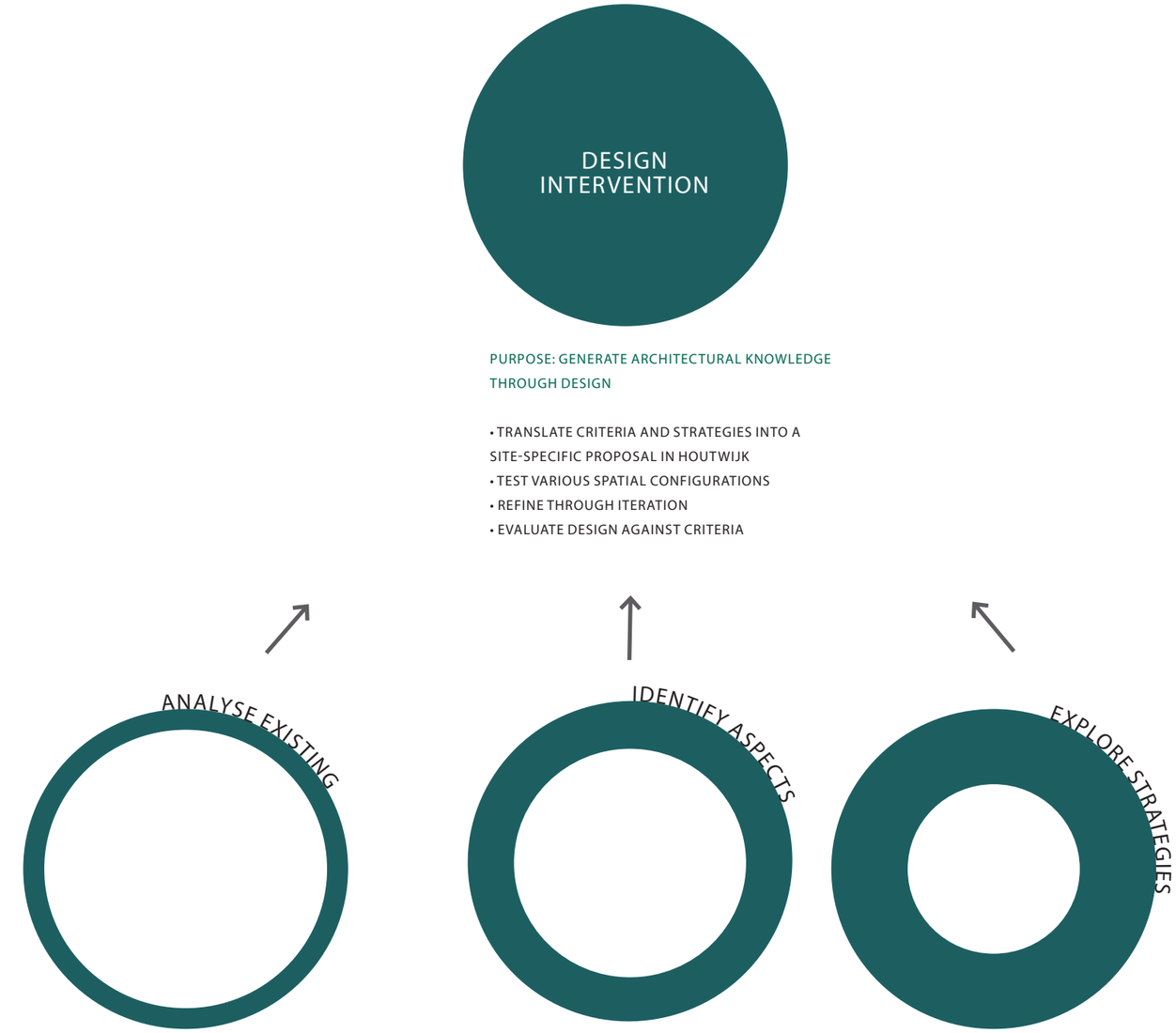
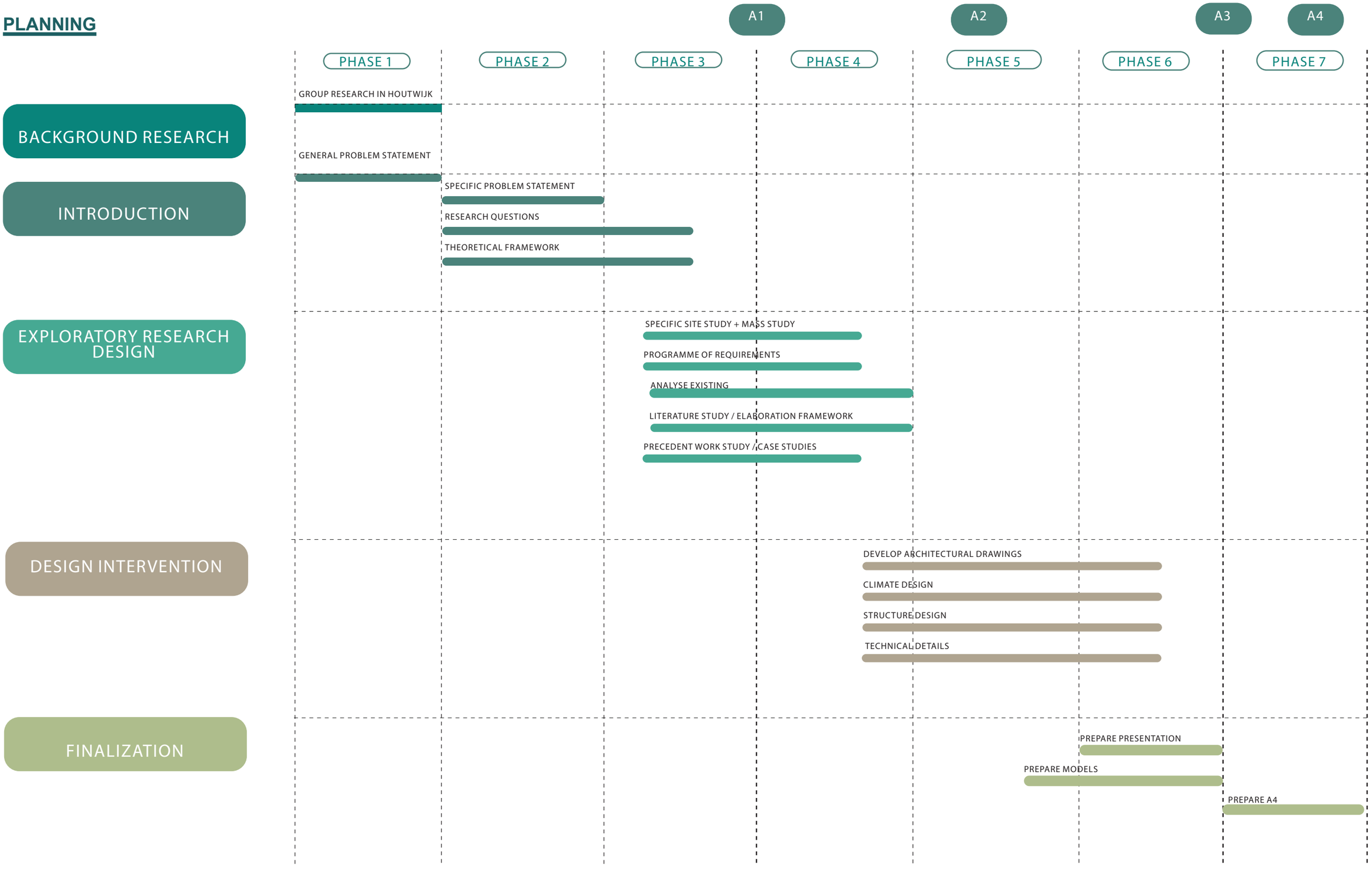


Figure 5. Methodology. Source: Author's own work, 2026.

PLANNING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THEORETICAL FRAMEWORK

Housing diversity

Housing diversity is the provision of multiple housing types, sizes, and price points within a community so that residents with different needs, incomes, and life stages can access suitable and affordable homes. A varied housing stock is an essential part of a socially inclusive and resilient neighbourhood (Rural Development Network, 2024).

According to the Rural Development Network housing diversity is needed because of lack in the range of housing types required to meet current household needs, especially where singly-family homes are dominant. The research also explicitly identifies the need for smaller, single-level, and accessible homes such as accessible apartments and age-friendly units to support ageing population and people with disabilities. It further explains that offering a broader mix of dwelling types enables residents to remain within their community as their needs evolve which supports movement within the local housing market (Rural Development Network, 2024).

Moreaver, Kleeman et al. (n.d) discusses that housing diversity plays an important role in public health because higher-density, mixed-use neighbourhoods support more walking, cycling, and public transport use, which reduces sedentary behaviour, improves cardiovascular health, and lowers obesity rates. It also enhances air quality, traffic safety, access to green space, and opportunities for social wellbeing accross the community.
For this project, housing diversity is therefore understood as the architectural integration of varied dwelling typologies, collective spaces, and public interfaces within a coherent spatial framework.

Healthy living conditions

Healthy living conditions refer to environments that provide access to safe, inclusive, and qualitative spaces that support physical activity, social connection and mental wellbeing (Gardner et al., 2018).

At the same time, the World Health Organization's Housing and Health Guidelines (2018) recognise poor housing condition as a direct risk factor for physical and mental health. Overcrowding, dampness, poor ventilation, thermal discomfort, and hazardous materials are linked to negative health outcomes.

However, the Gardner et al., (2018) argue that health is not produced by the private dwelling alone. Wellbeing also depends on the relationship between housing, shared spaces, public space, mobility routes, green areas, and neighbourhood services. The surrounding environment influences whether residents can move safely, meet others, access resources, and experience their neighbourhood as supportive rather than stressful.

In this research, healthy living conditions frame housing as both a domestic and neighbourhood issue. They help assess whether the design of housing supports thermal comfort, safety, accessibility, social contact and overall wellbeing. This leads to shared spatial arrangements, which focus on the spaces between the private dwelling and the wider neighbourhood.

Shared spatial arrangements

Shared spaces are areas within residential environments which are collectively used by multiple households rather than belonging to a single dwelling. In cohousing and shared housing models, these spaces can include kitchens, living rooms, workspaces, laundry facilities, gardens and outdoor areas that complement relatively compact private units. By distributing certain domestic functions across shared environments, housing developments can reduce the area required per private unit and maintain access to a full range of domestic activities (Cho et al., 2018).

Other than funtional efficiency, shared spaces can also support social health within residential communities. When used collectively, they create conditions for informal encounter and shared activity, which in turn contribute to stronger social relationships, a sense of belonging, and mutual support networks (Kuyper, 2025).

In this research, shared spatial arrangements are used to test which collective spaces Houtwijk can benefit from to make smaller and more diverse dwellings workable, especially for ageing population, starters, labour migrants, and recently seperated individuals. They help define where private space can be reduced, which functions should be shared, and how communal spaces can support social contact.

Conclusion

Each dimension of this theoretical framework sets a base for the design parameters: housing diversity sets the requirement for a mixed typological programme; healthy living conditions define the spatial and social standards and quality that programme must meet; and the shared spatial arrangement provides the overall organisational principle of the programme.

Theoretical framework

Housing diversity and healthy living for Houtwijk

01 Housing diversity

Definition

A mix of types, sizes and prices, so varied needs, incomes and life stages each find a suitable home.

Key drivers

- Types for all households
- Smaller accessible units
- Stay as needs change
- Density aids health

Rural Development Network, 2024; Kleeman et al.

Design role

Mixed typological programme

02 Healthy living conditions

Definition

Safe, inclusive spaces that support physical activity, social contact and mental wellbeing.

Key drivers

- Poor housing harms health
- Damp, cold, crowding
- Beyond the dwelling alone
- Routes, green, services

Gehl, 2018; WHO, 2018

Design role

Spatial and social standards

03 Shared spatial arrangements

Definition

Spaces used by several households, not one dwelling: kitchens, living, work, gardens.

Key drivers

- Shared use shrinks units
- Full domestic access kept
- Encounter builds bonds
- Mutual support networks

Cho et al., 2018; Kuyper, 2025

Design role

Organising principle of the programme

Design parameters

From housing diversity

Mixed typological programme

From healthy living

Comfort, safety and social contact

From shared space

Graded shared-space organisation

- Fig. 1: Theoretical Framework, own illustration

03 RESULTS

1. WHAT ARE THE CURRENT LIVING CONDITIONS OF THETARGET GROUPS?

Labour migrants, young households, older adults, and recently divorced people and single parents are recognised amongst vulnerable groups within the housing market. They are disproportionately affected by the ongoing housing shortage and most likely to end up in precarious or inadequate housing situations (Rijksoverheid, 2024). They form the target groups of this design project. The four target groups differ in age, income, household stability, and length of stay, but they share several spatial characteristics. Most are small households or households in transition, often consisting of one adult, a couple, temporary co-residents, or one adult with children present part-time. Their living conditions are therefore not well served by conventional family housing alone.

labour migrants

Housing for labour migrants is typically high-density and temporary, organised around corridor-access rooms of 10 – 60 m2 with centralised shared facilities (Knappers, 2022). The core problems are overcrowding, poor maintenance and insufficient privacy. In older rented properties, poor indoor environmental quality such as mould and insufficient ventilation compounds this and contributes directly to deterioration of health (Goorts et al., 2022; Onderzoeksraad voor Veiligheid, 2025).

Young housing seekers / starters

Young housing seekers have, to a degree, adapted compactness as a norm. Units under 50 m2 are increasingly standard, and co-living has become an accepted model that combines compact private space with shared kitchens, workspaces, and outdoor areas (Groot et al., 2024; CBSrenovation, 2026). The spatial problem here is mainly about the systemic inadequacy of older housing stock, which continues to impose poor indoor conditions on those who cannot access newer units (Ministerie van VRO, 2025).

Ageing population

Ageing residents face a stock that was not designed for good accessibility. Most Dutch dwellings, built between 1950s and 1980s, include multi-storey layouts, narrow staircases, small bathrooms and limited accessibility (De Jong et al., n.d.). With only around 25% of the stock considered fully accessible, most older adults lack step-free entrances, elevators or accessible sanitary spaces (Groot,2025). The spatial tension is between scale and suitability: dwellings are often over-dimensioned for a single or two-person household simultaneously being difficult to access. Specialised typologies such as Humanitas Deventer or Knarrenhof offer co-living models that combine self-contained units with shared support structures.

people in transitional situations

People in transitional situations such as recently separated or single parents require compact, self-contained and affordable dwellings that can absorb temporary change in household composition, including co-parenting arrangements (Kooiman, 2021; Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2025). The phenomenon of woonscheiding reflects the consequence: households adapting in-situ to a shortage of appropriate alternatives with outcomes that can compromise privacy, autonomy and stability (Nationale Echtscheidingsmonitor, 2025; Staat van de Volkshuisvesting, 2025).

Comparing these four situations, the analysis identifies four recurring spatial problems:

Overcrowding
Most visible among labour migrants, where rooms and facilities are shared by too many residents.

Lack of privacy
Affects labour migrants in shared facilities and people in transitional situations who may have to share a bedroom.

Dependence on shared facilities
Becomes problematic when kitchens, bathrooms, workspaces, or outdoor areas are insufficient, poorly maintained, or not designed for everyday use or many people.

Lack of accessibility
Most critical for ageing residents, especially in homes without step-free access, lifts, or accessible sanitary spaces

2. WHAT SPATIAL NEEDS DO SMALL AND TRANSITIONAL HOUSEHOLDS SHARE?

The gradient of sharing

In this project housing extends beyond the private dwelling into collective spaces and shared daily life. The gradient of sharing serves as a spatial organization of a residential environment from fully private spaces to public ones. These are arranged as a gradual tranition: private dwellings, shared cluster spaces, collective facilities and public neighbourhood spaces. The principle continues a longer line of thought, where each function sits at the scale that matches its required privacy (Kuyper, 2025). This chapter adopts that gradient as its analyticla lens and puts one question to it: what spatial needs do small and transitional households share?

Who shares, and what they need

Ageing population

As established previously, older residents want an accessible dwelling: single level layout, lift access, smaller and lower-maintenance with daily supplies and care within walking deistance and good public transport (de Jong et al.; Jaspers, 2017). They keep the private dwelling fully their own, yet they share readily once that is secured: a collective living room, a shared kitchen, guest rooms, activity rooms, gardens and courtyards, common laundry and toold, and shared meals and social programmes, together with a say in how those spaces are run (Czischke, 2026). Tolerance for collectivity is moderate and conditional on privacy and quiet.

Yound households

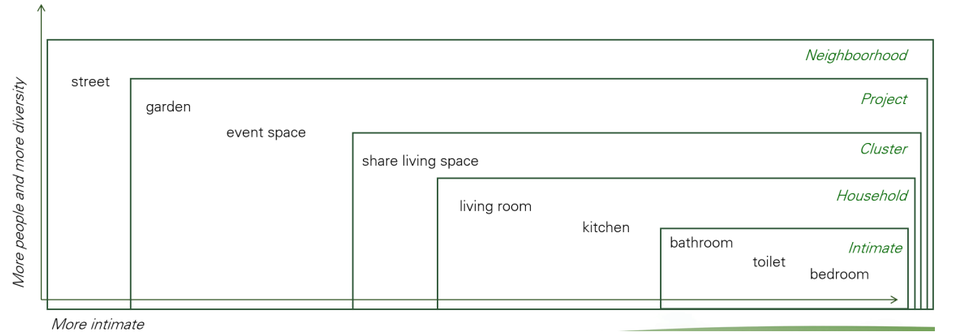
Young single-person households are willing to settle for less place, given the prices are low (Kleinegris, 2017). They share for a tangible benefit, not for its own sake: bike parking, laundry, kitchen and dining, study and coworking, bulk storage, garden or terrace, guest room, and gym or hobby space are all shareable; the bedroom, bathroom, toilet and personal storage are not (Mullem, 2017, in Kleinegris, 2017; Nanova, 2021). Tolerance for collectivity is high, but instrumentally so.

Labour migrants

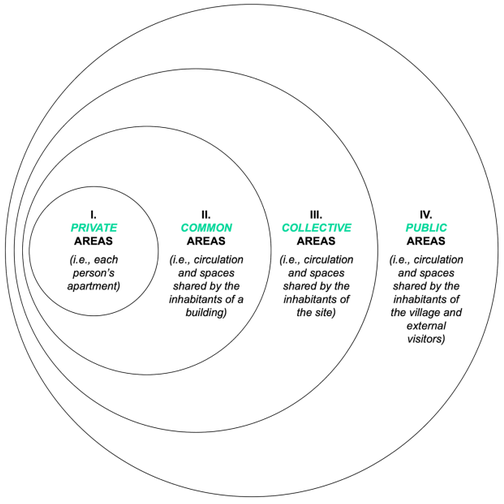
A short-stay, location-bound group that seeks practical and affordable housing at speed (PBL, 2025). For short stays privacy matters less and shared kitchen, sanitary and living space are accepted; the protected minimum is an own lockacble bedroom, at least 15 m2 of living space per person and all facilities under one roof (Aanjaagteam Bescherming Arbeidsmigranten, 2020; SNF, 2024). The position shifts with length of stay: those who remain past a year, whose household situation changes, want more privacy, a smaller self-contained unit with their own kitchen and sanitary, and more security of tenure (PBL, 2025). Mobility matters, since peripheral sites cut residents off from amenities and social life. Tolerance for collectivity is high for short stays and falls as the stay lengthens.

Recently divorced and single parents

The private core of this group depends on children: a single parent needs a bedroom for the child even under part-time custody. Above that core they can share laundry, outdoor and social space, mobility and above all childcare where mutual support among parents is the recurring benefit of a shared model. A pooled guest room covers the custody week and the visiting relative without a permanent spare room (Kuyper, 2025). Tolerance for collectivity is moderate, conditional on quiet and on support with children.



- Fig.2: Gradient organization. Source: Architecture for Community, a cohousing pattern language, Kuyper, 2026



- Fig. 3: Gradient organization. Source: Architecture for Community, a cohousing pattern language, Kuyper, 2026

Spatial needs by group

Ageing residents	
Private core	dwelling, sanitary, kitchen
Readily shared	living room, kitchen, guest room, activity rooms, garden, laundry
Distinct need	accessibility (lift, single level), care and amenities within walking distance, quiet
Collectivity	moderate
Stay	long
Young households	
Private core	bedroom, bathroom, toilet, personal storage
Readily shared	bicycle parking, laundry, kitchen and dining, study and coworking, storage, garden, gym and hobby
Distinct need	affordability with central location, workspace, social contact
Collectivity	high
Stay	short to medium
Labour migrants	
Private core	own lockable bedroom, personal storage
Readily shared	kitchen, sanitary, living, laundry, social, outdoor
Distinct need	speed and affordability, mobility and transport, own unit as stay lengthens
Collectivity	high for short-stay, low for long-stay
Stay	short to long
Divorced / single parents	
Private core	own and child's bedroom, bathroom, kitchen
Readily shared	laundry, childcare and play, outdoor, social, guest room, mobility
Distinct need	child's room including custody, childcare support, quiet, proximity to schools
Collectivity	moderate
Stay	medium to long

• Fig 4.: Spatial needs per group. Source: own illustration

Which groups cluster together?

Two axes seperate the groups: tolerance for collectivity and the daily rhythm of the cluster, meaning lively against quiet. Stay length and the need for accessibilty run alongside them. The groups do not divide by demographic label but by these two axes and they fall into two archetypes.

The first pairs the groups that accept collective daily life and share for tangible gain. The second pairs the group that secure privacy first and share more selectively, and that benefit from quiet and from accessibility.

One tension sits inside the calm cluster and the design has to answer it: older adults want quiet and the children bring noise. The solution is to place childcare and louder activity in the common layer, away from the common cluster so that intergenerational contact happens in the shared courtyard and community spaces. This matches the older adult preference for a mixed setting at community / public scale alongside calm at the dwelling / building scale (de Jong et al.; Czischke, 2026)

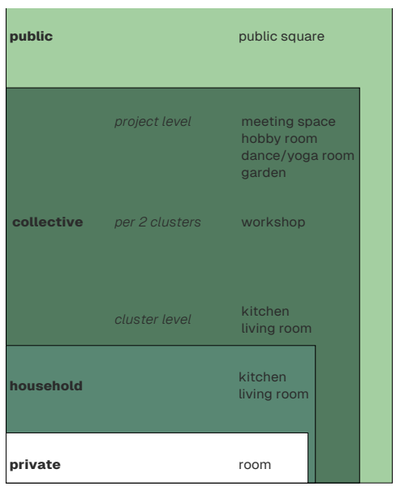
Cluster archetypes

Collective area	
Grouped residents	young households + short-stay labour migrants
Character	lively, social, short-stay tolerant, urban
Cluster-scale shared functions	a large shared kitchen and dining as the social heart, shared laundry, a study and coworking nook, social and relax space, bulk storage, bicycles
Calm area	
Grouped residents	older adults + divorced or single parents (and mid-stay migrants)
Character	quiet, accessible, long-stay, privacy-led
Cluster-scale shared functions	a smaller shared living room and kitchen used by choice, guest rooms tuned to family visits and custody, accessible circulation, a quiet courtyard

• Fig. 5.: Cluster archetypes. Source: own illustration

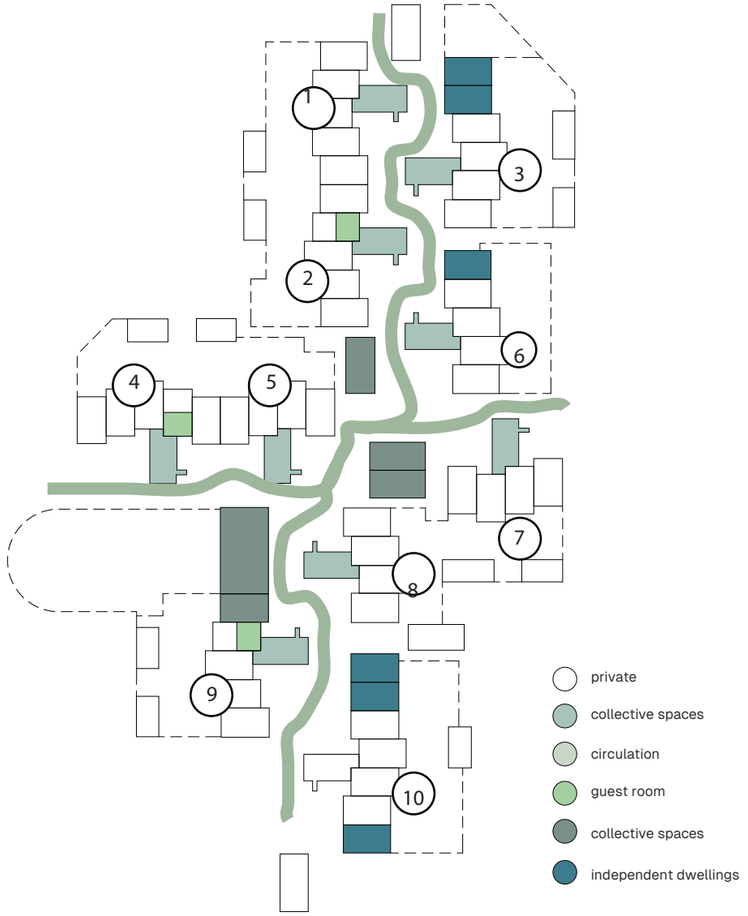
Case study: Centraal Wonen, Delft

- Fig 6.: CW Delft programme distribution. Source: own illustration via Kuyper (2026)



Centraal Wonen Delft distributes functions across four scales: the private room, the small group of two to four households who share a kitchen and dining area, the cluster that holds laundry, storage, workshops and a garden and the project that holds the meeting room, cafe and activity spaces. The lesson this project takes is which function attaches to which scale: kitchens to the small group, services to the cluster, social amenities to the collective level. Privacy follows from gradual transition between these domains, not from seperation. The four clusters each carry a distinct colour, and residents still identify with their colour and lifestyle attached to it (Kuyper, 2025).

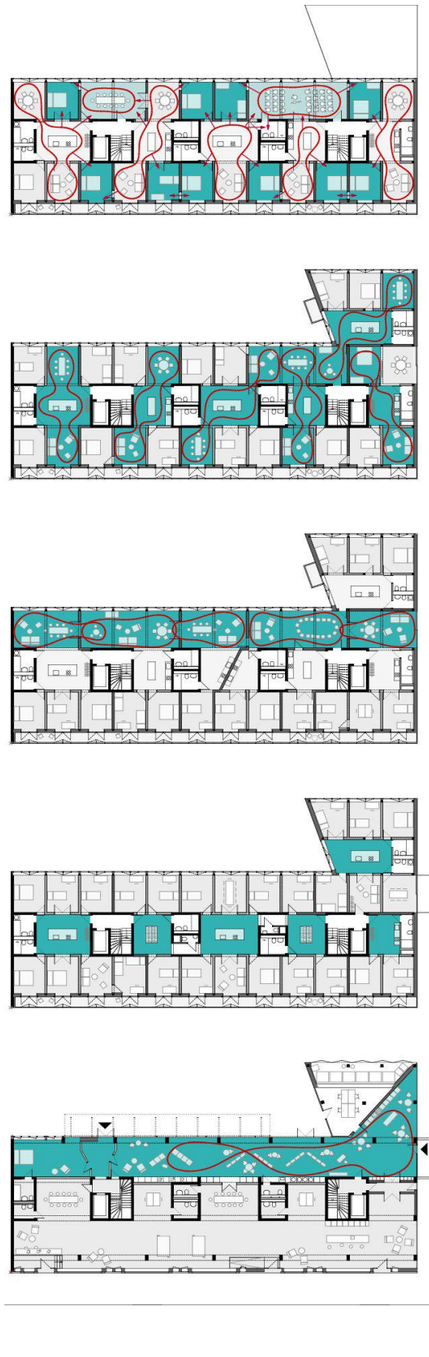
Case study: Centraal Wonen, Hilversum



Centraal Wonen Hilversum locates its lesson in circulation. Clusters of four to five units sit along intersectiong pedestrian routes, with shared spaces placed on the route and wrapped in windows so that the residents can see activity and join it. Hence the design treats circulation as the carrier of encounter, and visibility as the condition that turns a shared room into a used one.

- Fig 7.: CW Delft programme distribution. Source: own illustration via Kuyper (2026)

Case study: Centraal Wonen, Hilversum



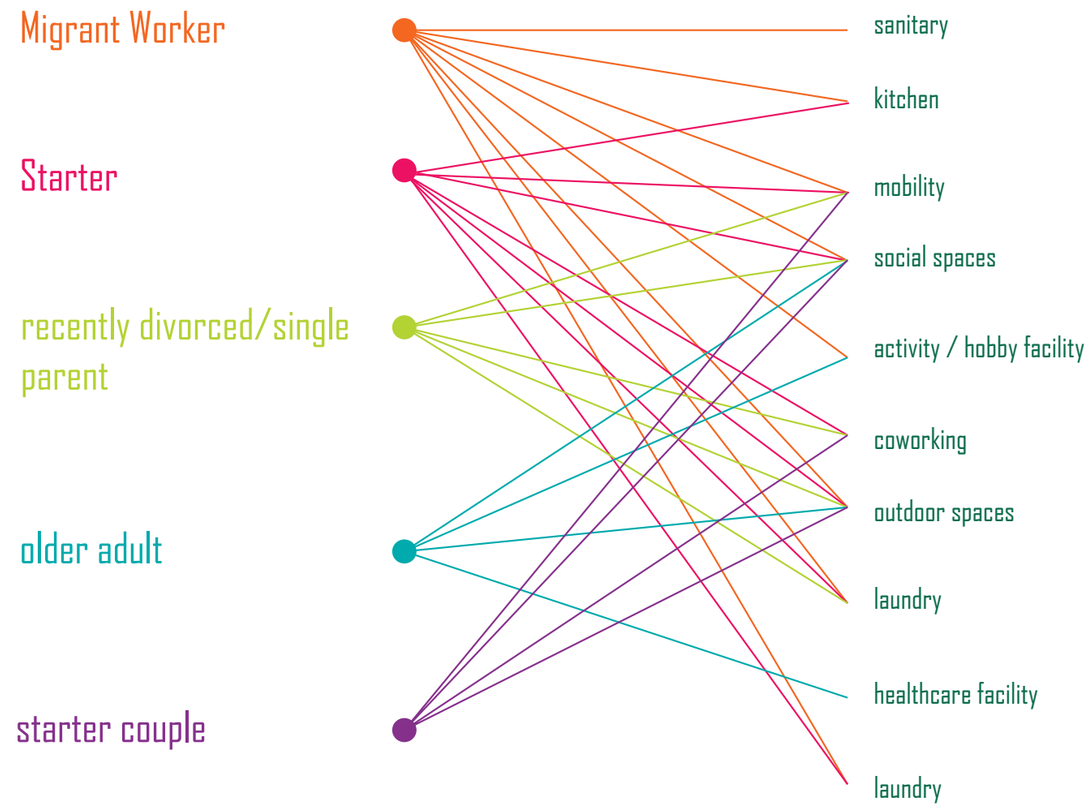
San Riemo in Munich supplies the third lesson through its layout. Different floors hold different cluster types, it ranges from compact rooms around one shared kitchen to standard apartments with optional shared space, stacked so that degrees of collectivity vary vertically yet stay joined by one circulation system. This project borrows the principle to house groups of differing privacy needs within a single building without a uniform model imposed on all.

Conclusion

The three case studies show 1. which function sits at which scale 2. How circulation and visibility activate the shared layer 3. How collective intensity can be varied to suit groups that would otherwise sit uneasily together

Moreover, the research first brings the conclusion that every household needs a small private core for sleep, storage or sanitary and above that core the strongest overlap falls in a set of function common to all groups, namely laundry, social spaces, outdoor space and mobility. These form a shared backbone that the whole project can hold in common. Second, the groups separate by their tolerance for collectivity. Third, circulation can serve as a social connector: shared spaces sit on the route and stay visible.

- Fig. 8.: San Riemo Layout structure. Source: Divisare.com



- Fig. 9.: Overlap diagram target groups. Source: own illustration

3. WHICH SPATIAL FACTORS DIRECTLY INFLUENCE PHYSICAL, MENTAL, AND SOCIAL HEALTH IN RESIDENTIAL ENVIRONMENTS?

spatial factors affecting physical health in residential environments

The residential built environment shapes physical health through several pathways. Within the home, adequate living space, good indoor environmental quality (including ventilation, thermal comfort, non-toxic materials and protection from pollutants), access to safe water and sanitation and structural soundness form the base conditions for good health (WHO, n.d.; Gardner et al., 2018).

Ath the neighbourhood scale, connected street networks, destination diversity and pedestrian focussed infrastructure support active travel across age groups (Gupta et al., 2024; Tan et al., 2023; Zijlema et al., 2019; Sarkar, 2017; Gunn et al., 2017). Access to open space, parks and sport facilities equally reinforce physical activity (Sarkar, 2017; Kondo et al., 2018). Green space exposure adds a further layer with documented associations with lower mortality, reduced heart rate and higher physical activity (Peterson et al., 2021; Ochodo et al., 2014; Faiz, 2021). Beyond these, environmental quality at the neighbourhood scale including clean air, low traffic noise and absence of hazardous materials reduces chronic disease risk (WHO; Gardner et al., 2018).

spatial factors affecting mental health in residential environments

Mental health in residential environments is shaped by conditions at the dwelling, building and neighbourhood scale. Within and immediately around the dwelling, poor structural quality (including poor walling materials, roofing, doors and windows) alongside lack of space within the dwelling and absence of social space outside it, function as chronic psychosocial stressors associated with higher risks of mental health disorders. External building condition and dwelling unit density carry the same association (Marshall et al., 2009). At the neighbourhood scale, green space exposure supports attention and mood, and residential greenness is associated with stress reduction in urban contexts.

spatial factors affecting social health in residential environments

Social health in residential environments is shaped by green space allocation, spatial access to destinations and the provision of space for interaction. Green space is linked to higher levels of social contact and sense of community influencing social cohesion and community safety (Peterson et al., 2021; Ochodo et al., 2014). Access to destinations and services operates as a parallel determinant: walkable neighbourhoods with connected street networks and diverse destinations align spatial opportunity with daily social participation, tying access to essential services directly to social wellbeing (Gupta et al., 2024; Holliday et al., 2017). Moreover, lack of social space for interaction outside the home and lack of space within the home are associated with deterioration of mental health.

Conclusion

The literature points to four spatial factors that are most relevant for the design project in Houtwijk: walkability, green space, social space and environmental quality.

First, walkability should guide the neighbourhood structure. Connected streets, safe pedestrian and cycling routes and proximity to daily destinations can support physical activity and social participation.

Second, accessible green space is essential. Green areas should be close to homes, easy to reach and designed for different uses. This makes green space relevant for physical health, mental recovery and social cohesion.

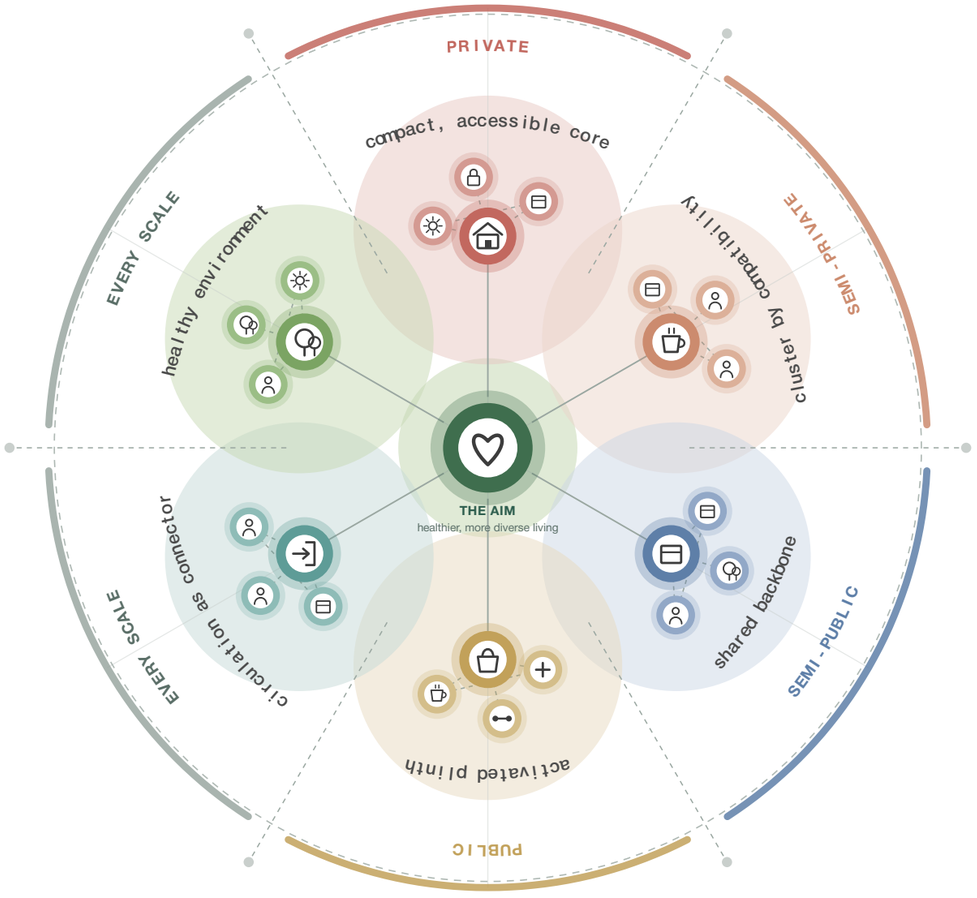
Third, collective and semi-public spaces are important for social health. Courtyards, shared gardens, seating areas, entrance zones, shared spaces can create informal contact between residents. These spaces help prevent isolation and strengthen the sense of community.

Fourth, environmental quality and housing conditions form the basic health foundation. Good ventilation, daylight, thermal comfort, enough living space, low noise exposure and clean air should be designing priorities.

For Houtwijk this translates into: creating an environment that is easy to walk through, rich in usable green space, supportive of everyday social contact and protected from environmental stress.

04 DESIGN

DESIGN PRINCIPLES



Design principles

- **Compact, accessible core** — small private core, privacy kept, step-free and daylit
- **Activated plinth** — cafe, retail, gym and care that face the neighbourhood
- **Cluster by compatibility** — a lively and a calm cluster, grouped by who shares well
- **Circulation as connector** — shared visible spaces on the route
- **Shared backbone** — shared facilities provided once for all
- **Healthy environment** — walkable, green, daylit, ventilated and quiet

Gradient of sharing (the ring): each function sits at the scale that matches its required privacy, from private to public.

PROGRAMME OF REQUIREMENTS

PROGRAMME ITEM		AREA (m²)
Neighbourhood · public plinth		**total 8,250 m²**
Parking space		4,500
Horeca		800
Retail		750
Coworking		525
Community centre / Event hall		530
Gym		650
Healthcare services		220
Daycare		275
Shared spaces · per building		**total 1,389 m²**
Building A · fully shared		530 m²
Outdoor terraces		105
Shared kitchen		140
Shared sanitary		184
Storage		48
Shared living room		53
Building B · semi-shared		614 m²
Outdoor terraces		80
Guest rooms (×4)		140
Shared kitchen		164
Storage		120
Laundry		30
Shared living room		80
Building C · independent		245 m²
Outdoor		200
Guest apartment		45
Private · dwellings		**total 4,840 m²**
Building A · fully shared	40 units	560
Building B · semi-shared	57 units	2,335
Building C · independent	24 units	1,945
Total programme		**≈ 14,479 m² BVO**

Dwelling typology mix

TYPOLOGY	SIZE	UNITS
T1 Micro	15–25 m²	40
T2 Compact studio	25–40 m²	55
T3 Larger unit	40–100 m²	32
Total		127

DESIGN LOCATION

The selected site is the former nursing home location in Houtwijk, The Hague. This plot was chosen due to its strategic position within a diverse residential context and its capacity to accommodate a variety of housing typologies and shared spaces. The surrounding neighbourhood contains a mix of population groups and housing types, including areas with a higher concentration of elderly residents as well as mixed residential blocks with varying building heights. This demographic and spatial diversity creates opportunities to introduce new housing models that respond to different life stages and household compositions.

In addition, the site benefits from its proximity to extensive green areas, which provide opportunities for outdoor activities, well-being, and connections to nature. The location is well integrated within the neighbourhood through several surrounding mobility routes, ensuring good accessibility by public transport, car, and pedestrian networks. Nearby amenities and healthcare facilities further strengthen the suitability of the site for housing that addresses changing care and living needs. Combined with its relatively large size, the plot offers the spatial flexibility required to explore diverse housing types and the integration of shared and public spaces within the neighbourhood.

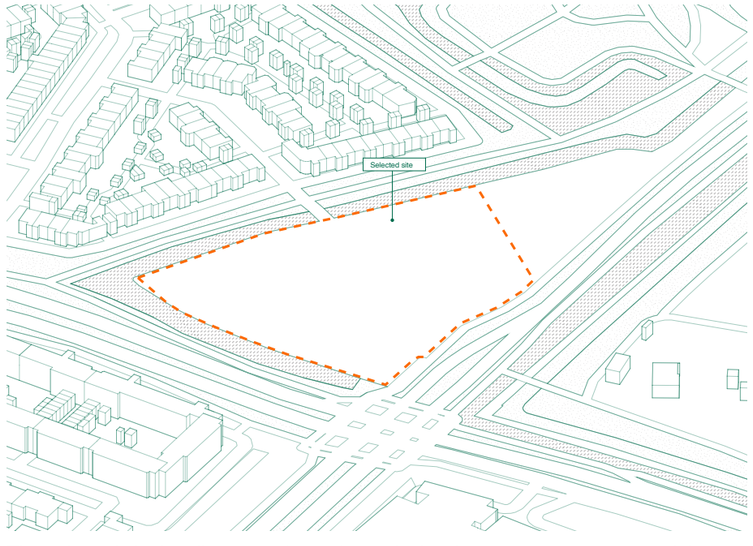
URBAN SITUATION

The site sits within a dense public transport network, with a tram line running directly along it and a bus stop just a minute away. Several tram and bus routes intersect nearby, making the area well connected to the rest of the city. Daily amenities and medical care are reachable within an 8–10 minute walk, which supports everyday independence, especially for more vulnerable user groups. Together, this level of accessibility reduces reliance on cars and makes the location suitable for a mixed and inclusive residential community.

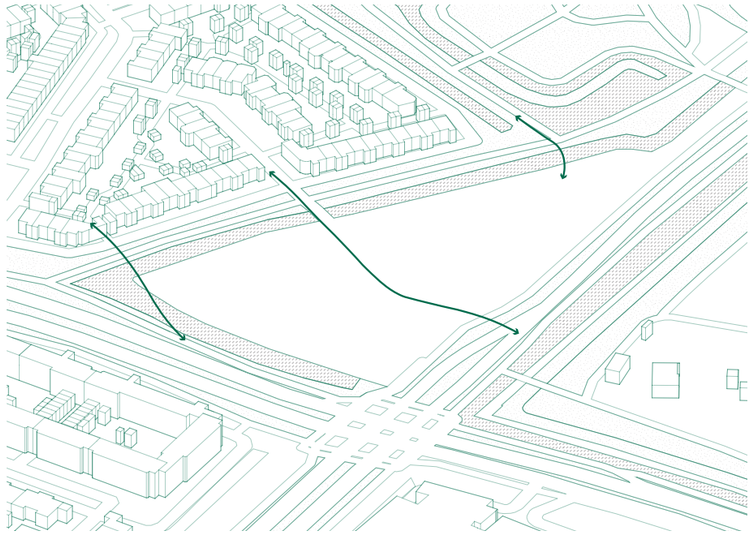
Circulation as connector
shared visible spaces on the route

Healthy environment
walkable, green, daylit, ventilated and quiet

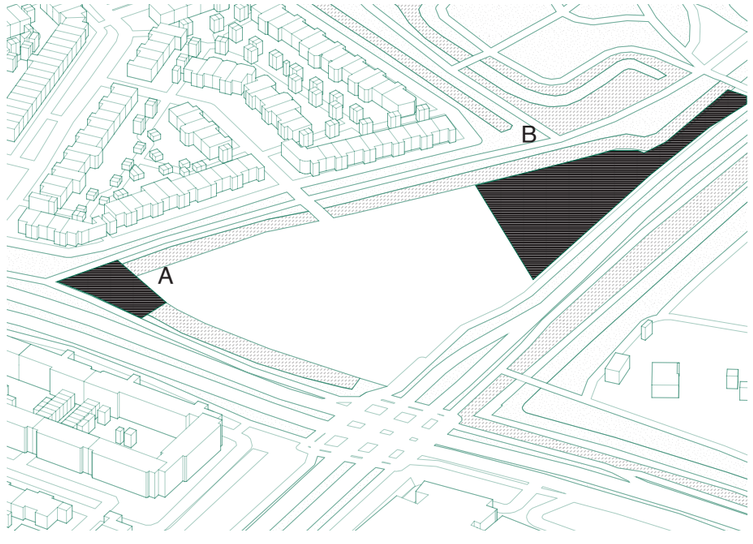
URBAN INTERVENTIONS



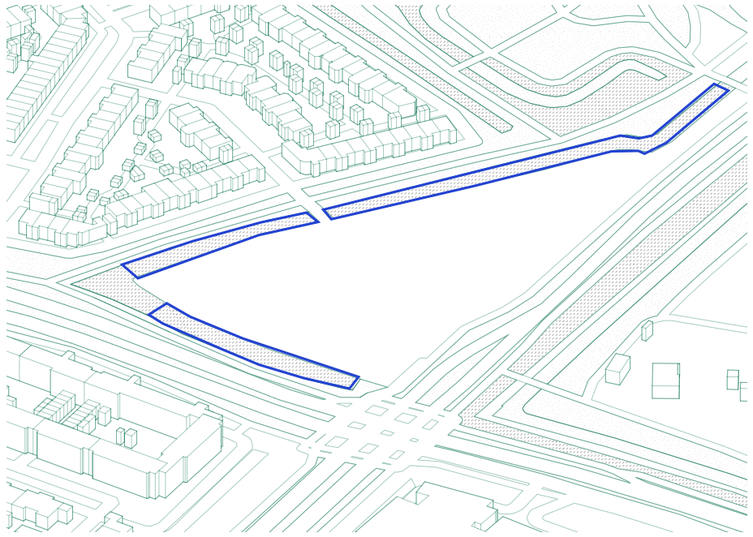
The selected site is adjacent to the main roads, leaving some space to extend the park ‘t Kleine Hout.



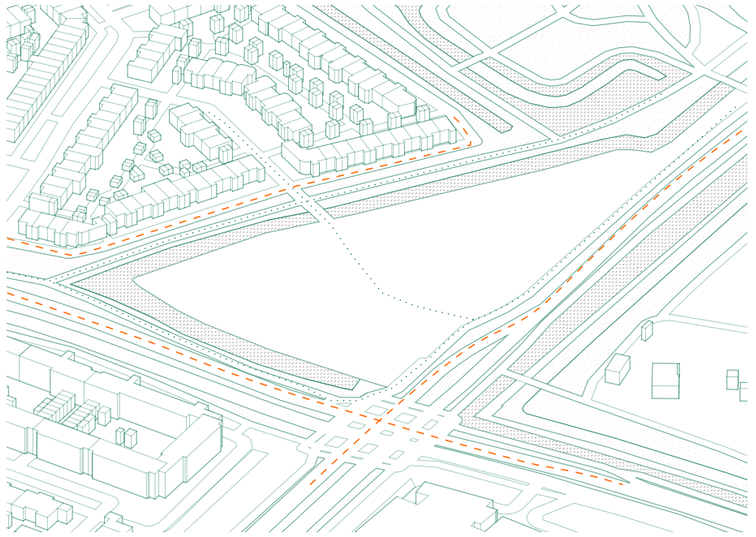
The site connects to the neighbourhood through extending existing infrastructure.



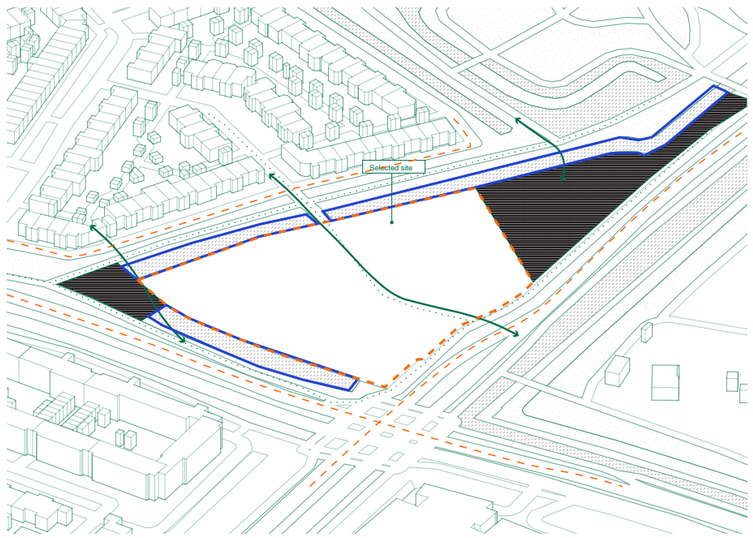
A. A public square is placed at the junction of roads to create a public sightline / entrance to the project
B. Green structure is added to serve as green buffer between the project and park.



Existing water structure is largely preserved

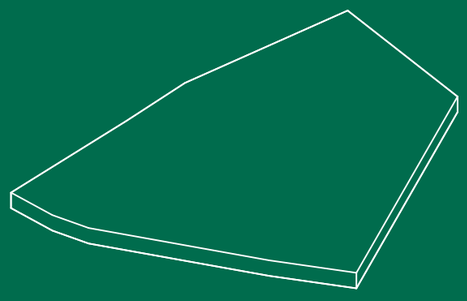


Car / Pedestrian routes are kept seperate. Car routes go around the site with only possibility to enter the parking on site.

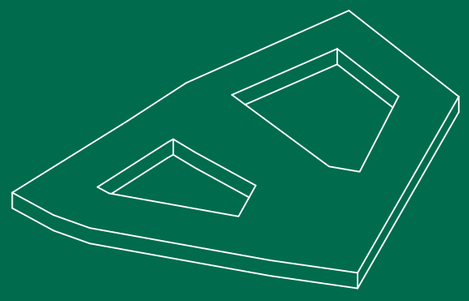


This modified infrastructure sets the base for building mass and landscape.

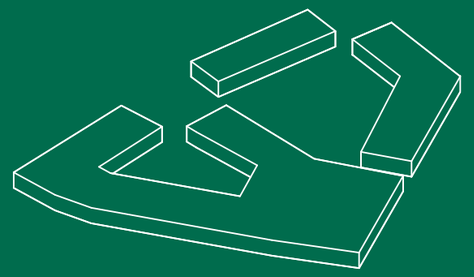
MASSING LOGIC



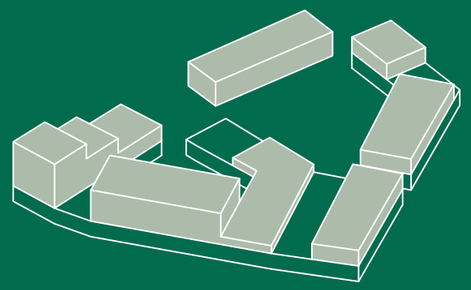
Site boundary is traced and extruded resulting in a ‘supermass’.



Centers are cut out from the supermass to create two courtyards for lively and collective character



Further fragmentation of the supermass is done by following the extension lines of the existing infrastructure.

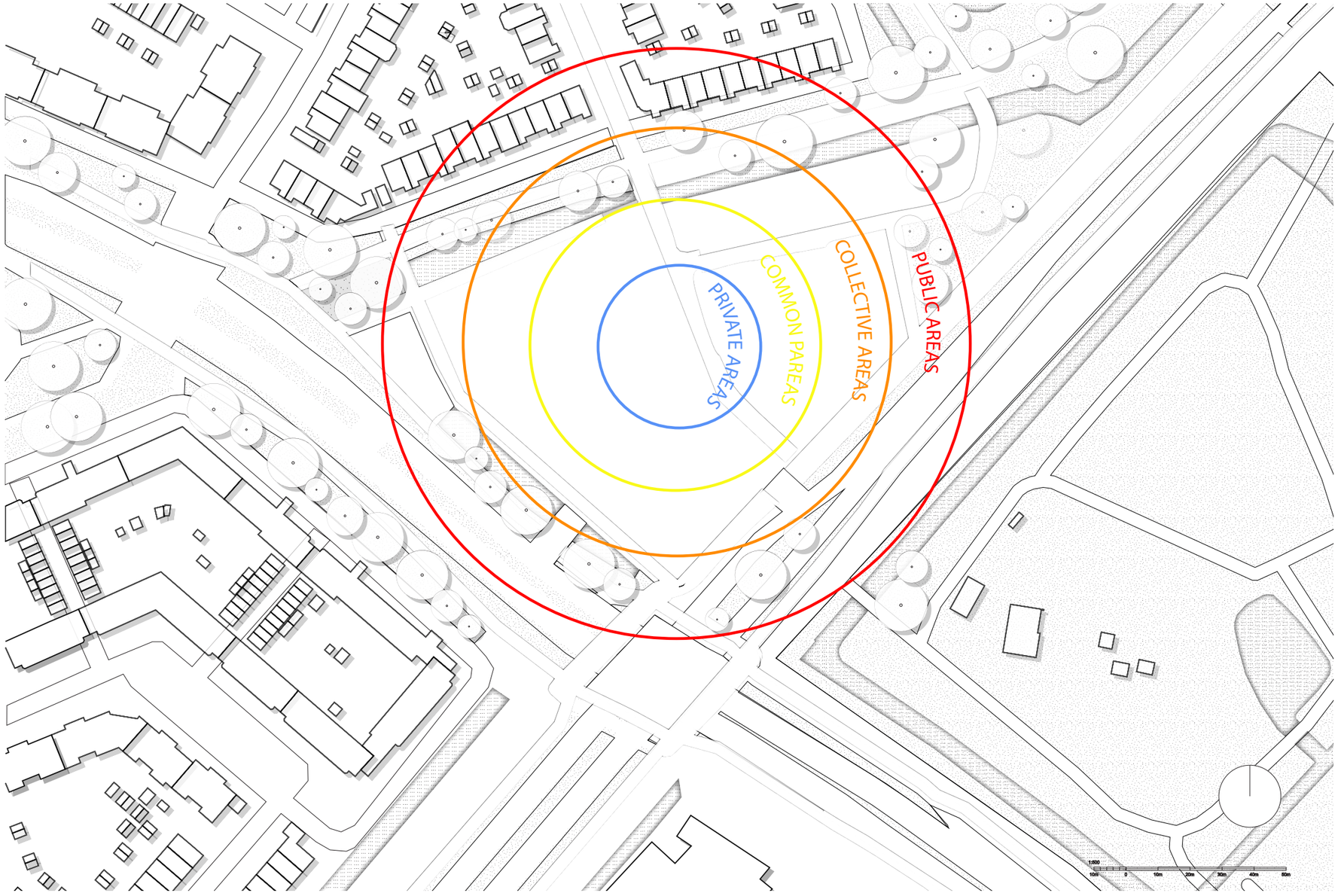


Buildings emerge by extruding the fragmented masses vertically. The building height of the surrounding buildings serve as a reference for the height.

Cluster by compatibility
a lively and a calm cluster, grouped by who shares well

Shared backbone
shared facilities provided once for all

ORGANIZING PRINCIPLE



The research settles on one organising principle: each function should sit at the scale that matches the privacy it requires, from the private dwelling out to the public neighbourhood (Kuyper, 2025). Projected onto the site, this principle becomes a question of position, and the answer follows from the exposure each layer can carry. The public layer carries the most: the café, retail and health services of the plinth depend on visibility and footfall and are meant to draw the neighbourhood as much as the residents, which is also the project's answer to the isolation of the surrounding stock. For this reason I set it on the outer edge, where the site meets the existing streets and the movement they bring. The collective layer asks for the reverse, since shared gardens, the community hall and social rooms serve contact among residents rather than the passer-by, so they gather on the inner edge, around a courtyard held back from the street. The cluster and private layers demand quiet and protection, the very conditions the calmer groups depend on, and are too intimate to claim a zone across the site; hence they are carried within the buildings.

Cluster by compatibility
a lively and a calm cluster, grouped by who shares well

Healthy environment
walkable, green, daylit, ventilated and quiet

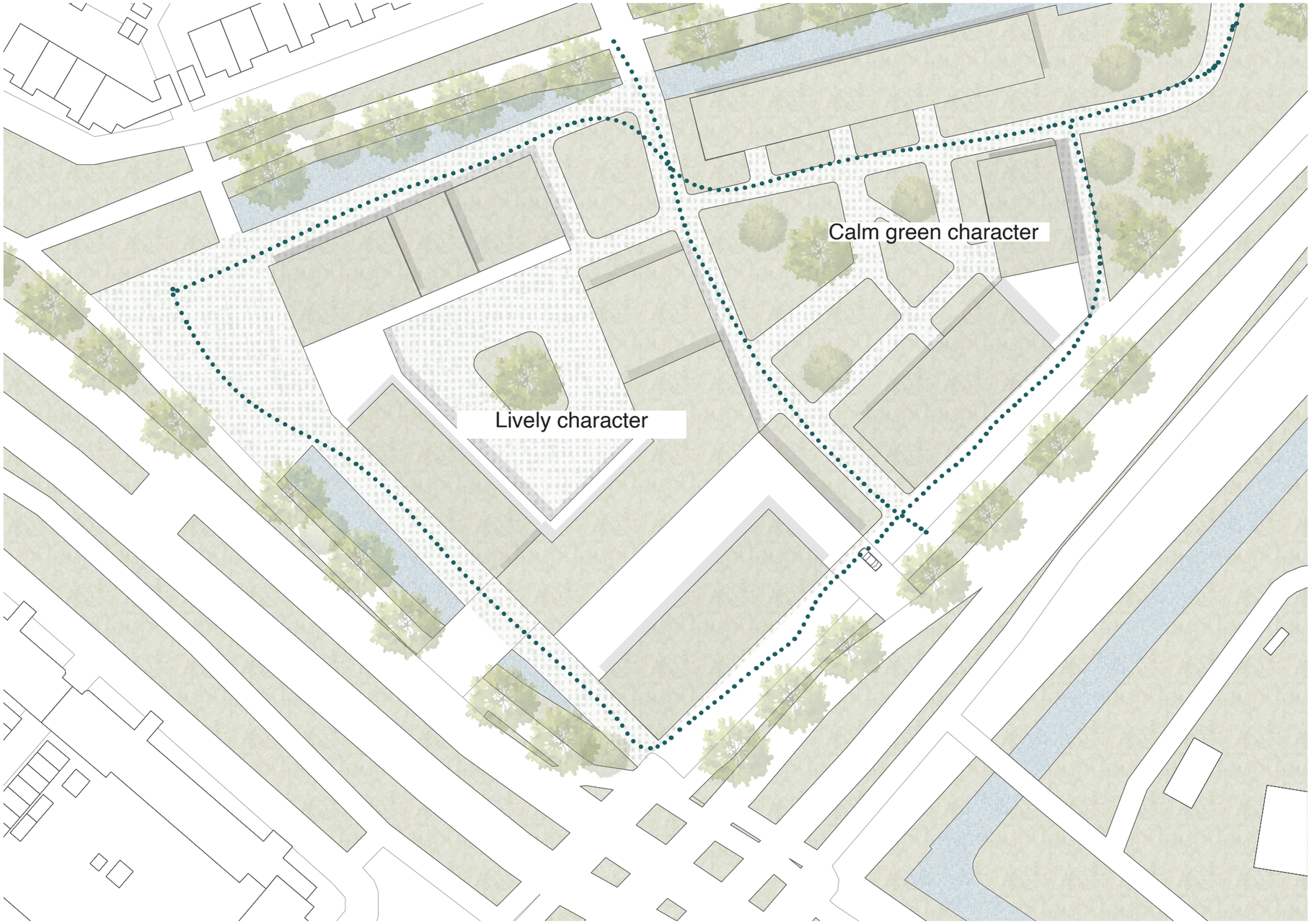
Circulation as connector
shared visible spaces on the route

ORGANIZING PRINCIPLE

The gradient within the project moves horizontally across the site.

Starting from the street, the public square acts as the most open and active space, connected to the surrounding neighbourhood and public functions in the plinth. From there, the transition becomes more gradual, moving into a semi-public courtyard that still allows for movement, gathering, and shared activity between residents and visitors.

Deeper into the site, the spaces become calmer, greener, and more protected, creating a quieter environment mainly intended for residents.
This spatial gradient also relates to the positioning of the different user groups. Residents who benefit from more interaction and urban activity, such as starters or migrant workers, are placed closer to the more active and collective areas. User groups that require more privacy, stability, or quieter surroundings, such as ageing residents or single parents, are positioned closer to the more intimate courtyards. In this way, the organisation of the site responds not only to levels of publicness, but also to different living patterns and social needs.



Cluster by compatibility
a lively and a calm cluster, grouped by who shares well

Shared backbone
shared facilities provided once for all

Activated plinth
cafe, retail, gym and care that face the neighbourhood

PROGRAMME DISTRIBUTION

The programme sets a public plinth beneath the dwellings: horeca, retail, coworking, a community hall, a gym, healthcare, daycare and parking. Above it, the 160 dwellings (8,970 m²) are sorted by how much each home shares, into three groups: fully shared, semi-shared and independent. Placement follows one rule from the research: the more a home shares, the more it wants the lively side. Hence I place the fully shared homes, for the short-stay migrants, students and young households who share readily, on the lively side by the café, retail and coworking; the independent homes, for the older adults, single parents and couples who keep their privacy and need quiet, on the calm side by healthcare; and the semi-shared homes between the two. The four unit typologies run within these three groups, the micro and compact studios weighting the shared homes and the one-bedroom and two-room units the independent ones, so that size and degree of sharing read together

Public Spaces

220 m2 — Healthcare Services 8

Daycare 7 — 275 m2

Coworking 6 — 525 m2

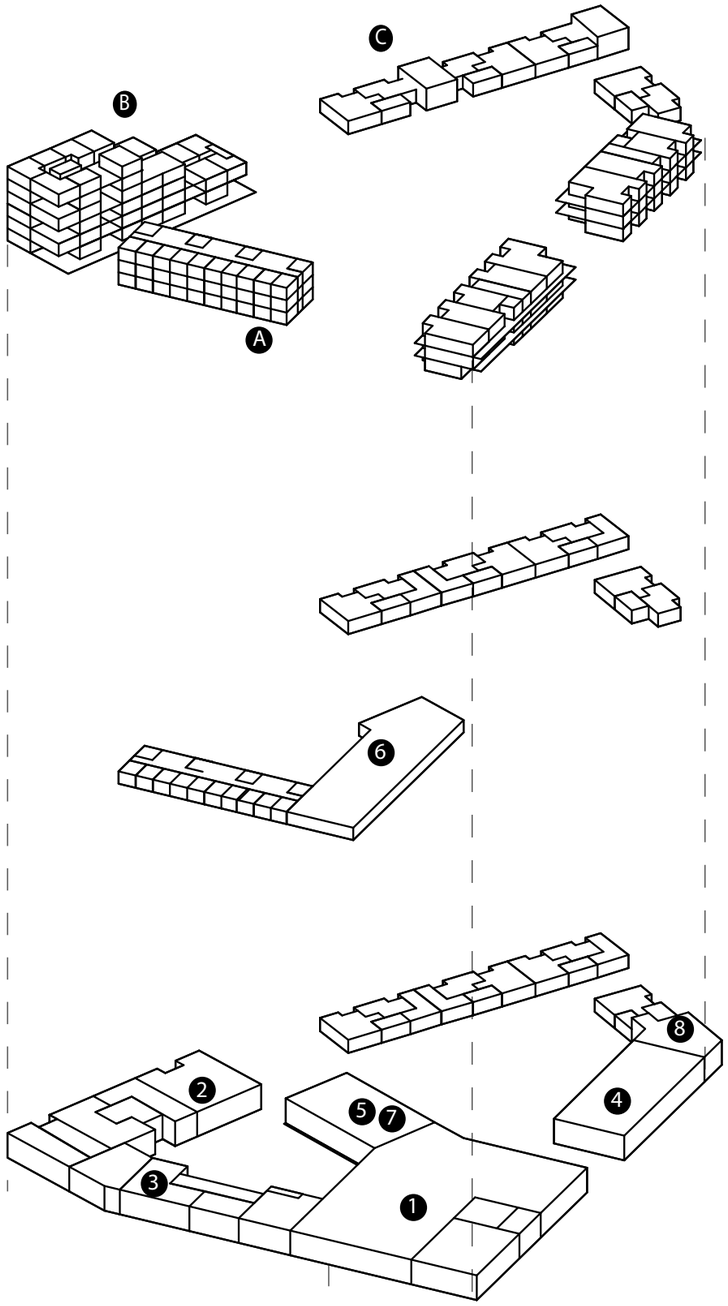
Community centre / Event hall 5 — 530 m2

Gym 4 — 650 m2

Retail 3 — 750 m2

Horeca 2 — 800 m2

Parking space 1 — 4500 m2



Dwellings

Fully Shared units A

Semi-Shared Units B

Independent Units C

Shared Space

160 units

8970 m2

Cluster by compatibility
a lively and a calm cluster, grouped by who shares well

Shared backbone
shared facilities provided once for all

Compact, accessible core
small private core, privacy kept, step-free and daylit

DWELLING DISTRIBUTION

circulation

common areas

T1 UNITS 15 - 25 m2

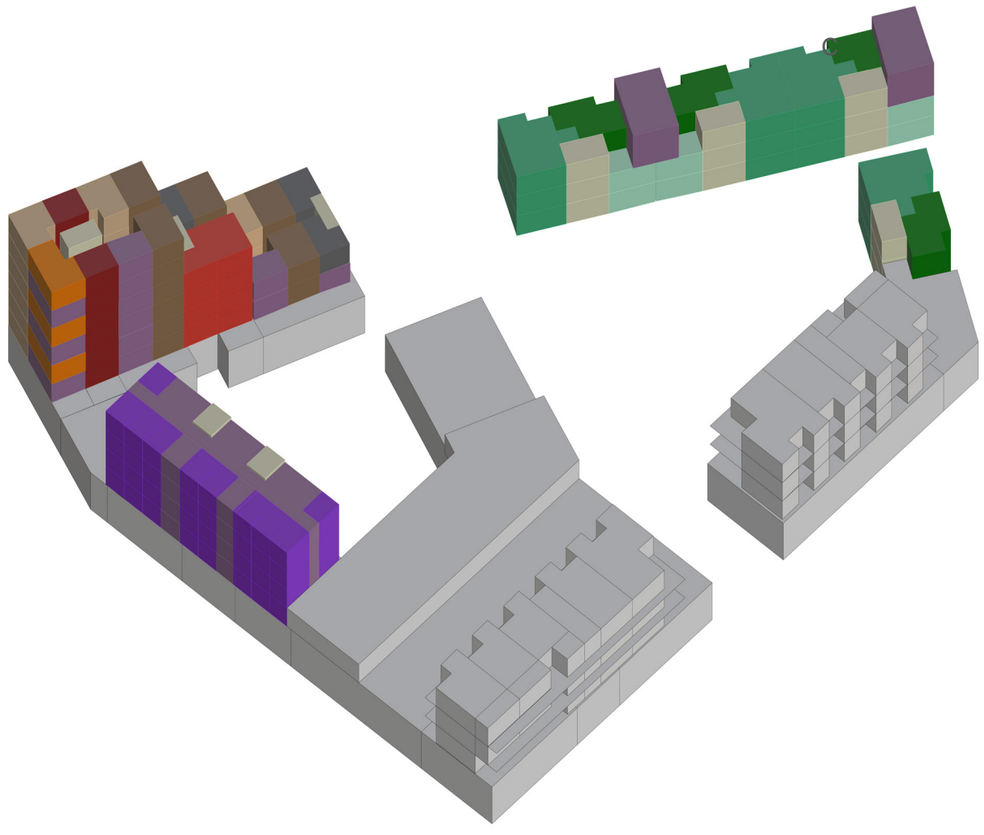
40 units

T2 UNITS 25-40 m2

55 units

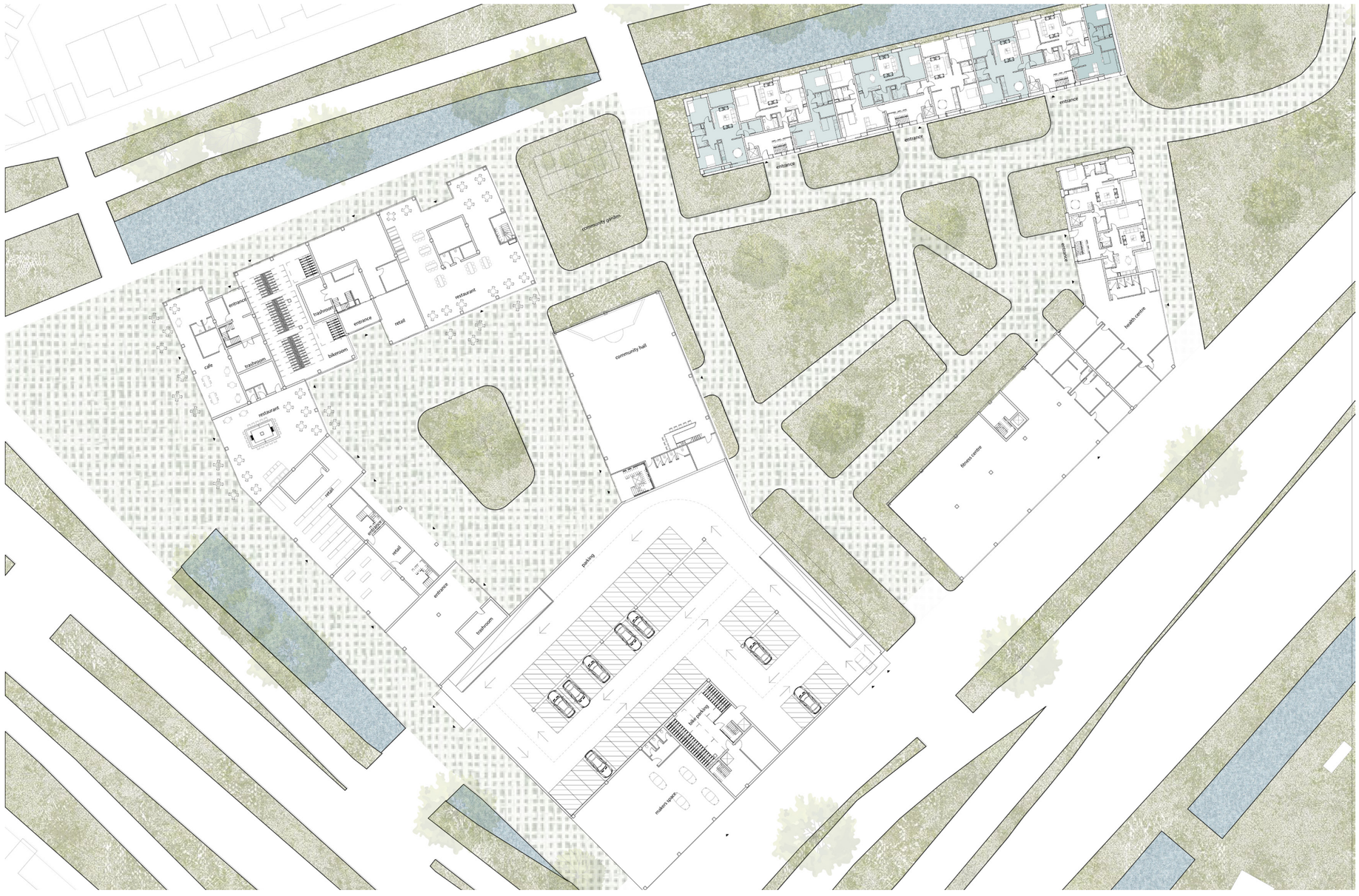
T3 UNITS 40-100m2

32 units



The three buildings step down a gradient of sharing, each keeping a larger private core than the last. Building A shares everything but the bedroom, which holds to the research finding that the bedroom is the one space no household gives up, even the most collective; it suits the short-stay residents whose protected minimum is an own room, with the rest held in common. Building B keeps both bedroom and bathroom private and shares the kitchen, living room and outdoor space, the arrangement the research attaches to starters and young households, who give up the social rooms for a clear gain but hold their own sanitary. Building C is self-contained and shares only the outdoor space, for the older adults, single parents and couples who keep the dwelling their own and share readily once privacy is secured. Guest accommodation sits in all three: a pooled guest room covers the visiting relative and the custody week, so every unit stays compact without a permanent spare room.

MASTERPLAN PLINTH LEVEL



drawing to be updated 18/05/2026

MASTERPLAN DWELLING LEVEL

CONCLUSION

05

Conclusion

This graduation project asked how housing diversity and shared spatial arrangements can support healthy living conditions for small and transitional households in Houtwijk. The answer is: Diversity and shared space support health when they are organised as one gradient of sharing, a calibrated sequence from the private dwelling to the public neighbourhood, in which three decisions are taken together: how much each household shares, the scale at which each function sits, and the exposure each space can carry.

This principle turns the relationship between private and collective space into a set of concrete positions, on the site and through the section. On the former nursing-home plot the principle takes built form. The strategy places 130 compact dwellings in four typologies and sorts them by how much each shares into three building types. These are distributed along a lively-to-calm gradient across the site. The fully shared homes, for the short-stay migrants, students and young households who share readily, sit on the active edge beside the café, retail and coworking; the independent homes, for the older adults, single parents and couples who keep the dwelling their own and depend on quiet, take the calmer green interior beside the care functions; the semi-shared homes hold the transition.

The four typologies run within these three groups rather than beside them, so that size and degree of sharing read together: the micro and compact studios weight the shared and semi-shared homes, the larger one-bedroom and two-room units the independent ones. A public plinth of horeca, retail, coworking, a community hall, a gym, healthcare and daycare addresses the surrounding streets and draws the neighbourhood in, and a shared backbone of laundry, social space, outdoor space and mobility, with pooled guest rooms in every building, lets the private units stay small without the loss of a full domestic range.

This arrangement answers the three terms of healthy living the research set out. Physical health follows from accessible, daylit units in a walkable, green setting reachable on foot; mental health from quiet, protected interiors and adequate space within the home; social health from visible circulation, shared courtyards and the community hall, which holds intergenerational contact away from the calmer dwellings so that encounter and quiet can both occur. The gradient is read twice: horizontally across the site, from the public square through the semi-public courtyard to the protected interior, and vertically within the buildings, where the cluster and private layers stack through the section.

The scheme also answers the condition that opened the project. Houtwijk's homogeneous 1970s stock blocks the chain of moves and offers little beyond the private dwelling. By adding the small, accessible units the area lacks, together with the shared and public space its suburban layout never held, the design lets ageing residents move on from oversized family homes and gives the four groups a setting matched to their stay and their tolerance for collectivity. In short, the answer to the main question is: healthy living for these households rests on a graded relationship between private, shared and public space, set per group and per site, rather than on any single dwelling type.

Significance

The value of the project lies in showing that shared living need not be a single model handed to every resident. Housing here is set to fit the way people actually live rather than the household it was once drawn for, and the gradient of sharing gives that intention a workable form. Read more widely, the method offers the ageing Dutch suburbs a way to grow more diverse from within, and it lets transitional residents enter ordinary housing with a protected room of their own rather than a place at the margins. That, more than any single drawing, is what the work contributes.

Process

The project did not run from research to design in a straight line. The design developed early, the research grew alongside, and for a long stretch the two pulled against each other. The turning point came when they stopped being separate tasks and one idea, the gradient of sharing, was allowed to carry both. The diagrams did the testing: a claim that refused to be drawn at the right scale was usually the one that needed revising, so they served to check the argument rather than only to present it.

Limitations

The clearest limitation lies in the range of dwelling types explored. More typologies could have been developed and set in different configurations, with the relationships between them tested further. Across the floors in particular, more could have been done to stack the types and their shared layouts differently, varying the degree of collectivity from one level to the next in the way the case studies suggested. The set arrived at here works, yet it marks a starting point for that variation rather than its full extent.

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