

From Parking to Place

An architectural study on transforming car-dominated woonerven in Houtwijk, The Hague, into healthier spaces for everyday public life

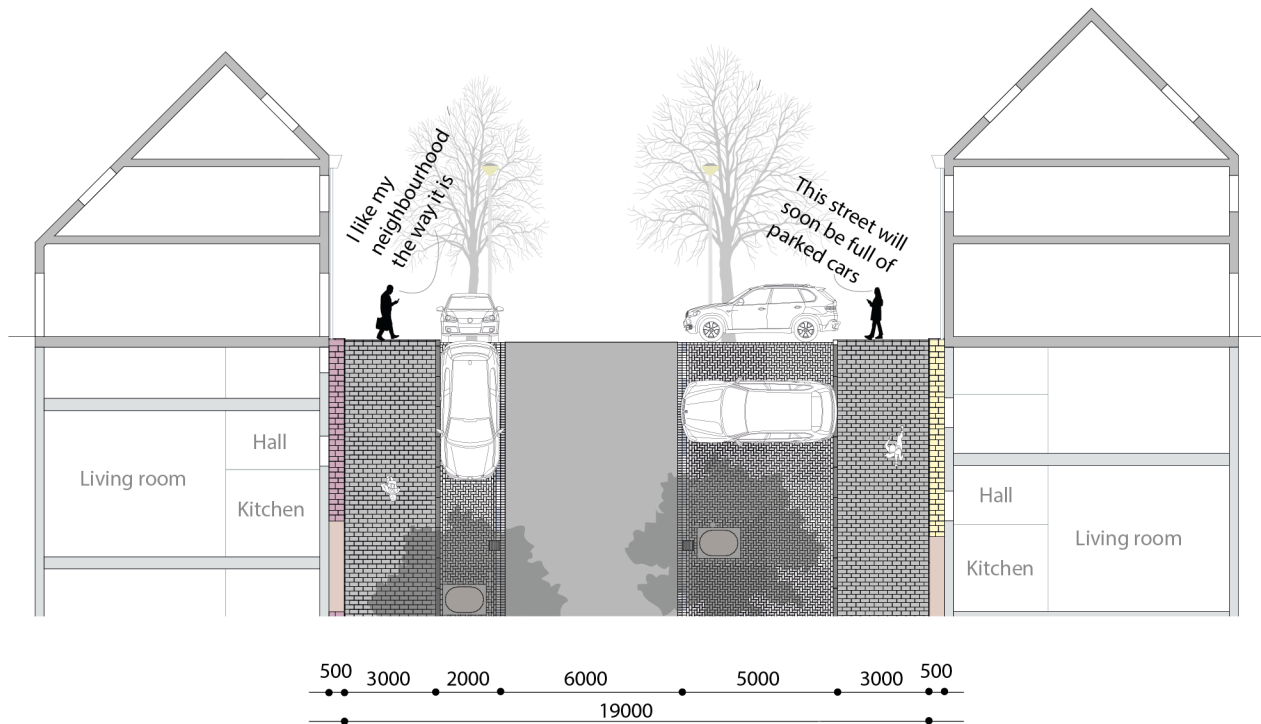




Figure 1. Showing cars on the sidewalk affecting the walkability and accessibility of public space (photograph by author, 2025).

From Parking to Place

An architectural study on transforming car-dominated woonerven in Houtwijk, The Hague, into healthier spaces for everyday public life



Scale: 1:250

Figure 1b: Showing a typical streetprofile of Houtwijk being influenced by car accessibility (source author, 2025).

Colophon

University: Technical University Delft

Studio name: Designing for Health & Care

Studio code: AR4AD300

Year: 2025/26

Supervisors: Birgit Jürgehake
Kobe Macco

Student: Yoeri Wolffenbuttel
studentcode: 6108822

Date: 07-06-2026

Table of contents

Abstract	p. 5
Introduction	p. 6
Health & demographic pressure	p. 6
Field observations and everyday use	p. 6
Car pressure and spatial conflict	p. 6
Problemstatement	p. 7
Research aim & question	p. 7
Scope	p. 10
Method	p. 12
Theoretical Framework	p. 12
Public space as a health determinant	p. 12
Walking first mobility	p. 12
Outdoor use	p. 14
The transition between dwelling and public space	p. 14
Synthesis: from theory to design principle	p. 14
Results: Healthy movements	p. 16
Theory	p. 16
Context	p. 16
Design	p. 16
Answer	p. 16
Results: Outdoor use	p. 22
Theory	p. 22
Context	p. 22
Design	p. 22
Answer	p. 22
Results: Active thresholds	p. 34
Theory	p. 34
Context	p. 34
Design	p. 34
Answer	p. 34
Conclusion	p. 38
Implication	p. 40
Reflection	p. 42
References	p. 44
Appendix	
Data Management Checklist	
Drawing set -> Site plan, floor plan, section, Fragment, detail, climate & construction diagram	

Abstract

This research investigates how car-dominated woonerven in Houtwijk, The Hague, can be architecturally transformed into healthier public spaces while maintaining essential car access and parking. Although Houtwijk contains substantial green space and retains the spatial structure of a post-war bloemkoolwijk, many of its woonerven no longer perform as collective residential environments. Parking pressure, vehicular circulation, fragmented green space and inactive residential edges limit everyday movement, outdoor use and informal social contact.

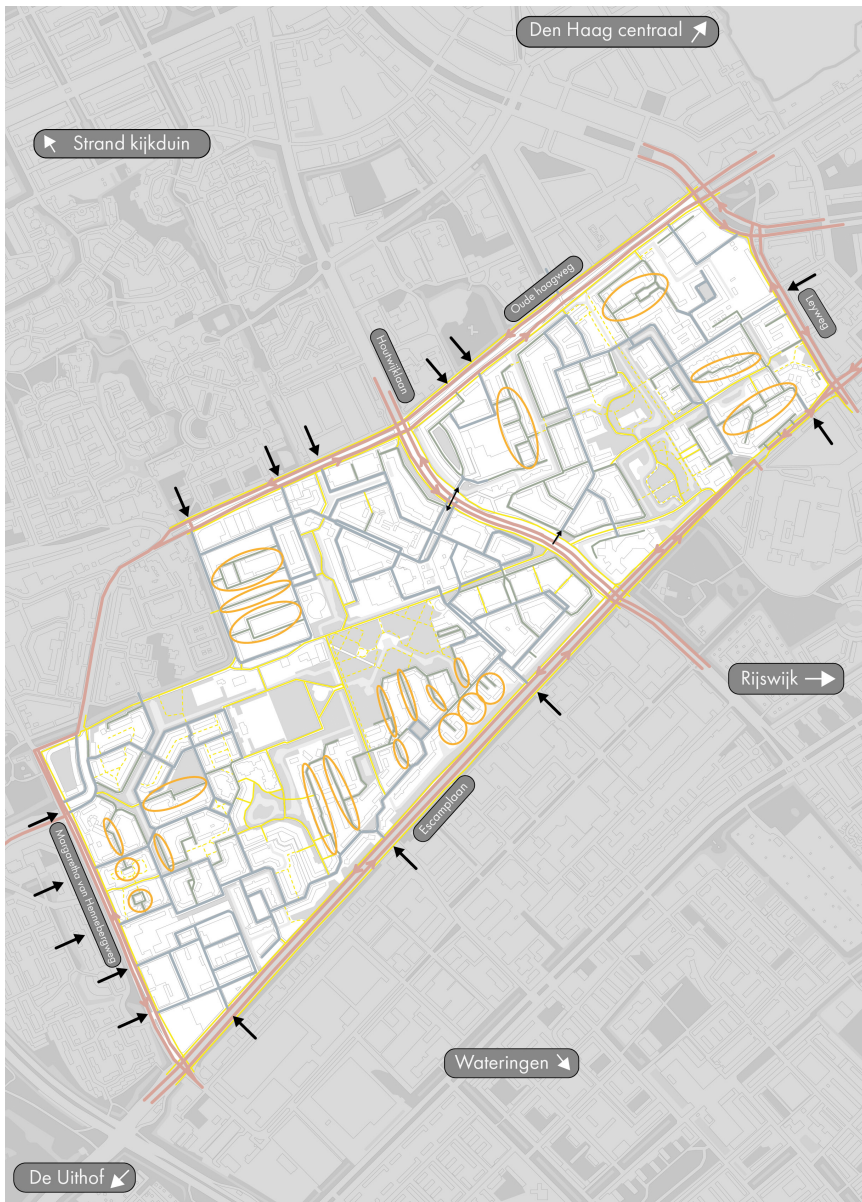
The study adopts a research-by-design methodology. Literature research establishes how public space can support health through walking, staying and social interaction, while field observations, photographic documentation, spatial measurements and archival analysis examine how these conditions are currently limited in one courtyard woonerf along the Dr. J. Presserstraat. The research findings show that the main issue is not simply the presence of cars or the absence of green space, but the way collective space is organised: cars dominate the spatial layout, green areas remain residual or inaccessible, and the relationship between dwellings and public space is weak.

These findings are translated into three design principles. First, mobility should be reorganised towards walking-first access without excluding residents who depend on the car. Second, residual and parking-dominated space should be transformed into usable outdoor rooms that invite everyday activity, rest and encounter. Third, hard residential edges should be replaced by layered threshold zones that create a more active relationship between private dwellings and collective public life.

The design proposal demonstrates how these principles can be applied spatially. The Dr. J. Presserstraat is transformed into a pedestrian-priority axis, while car circulation and parking are subordinated through mobility hubs and underground parking. Within the courtyard, released surface space is redesigned as a sequence of outdoor rooms for sitting, play, sport, gardening and communal use, supported by green-blue interventions that improve microclimatic comfort. At the architectural scale, verandas, planted buffers, active ground-floor rooms, increased façade transparency and greater dwelling diversity strengthen everyday use around the courtyard.

The research concludes that the health-supporting potential of the woonerf lies in the interaction between movement, staying and social contact. By reducing car dominance without denying car dependency, existing post-war residential environments can be transformed from parking-oriented spaces into everyday places for healthier public life.

Keywords: health, public space, woonerf



- Legend**
- Ring road 50 km/h
 - Branch road 30 km/h
 - Woonerf 15 km/h
 - Bike Lane
 - Walking Lane
 - ← Neighbourhood entrance
 - Woonerf Highlight



Figure 3: A “woonerf” entrance, also known as a liveable street, which should be full of greenery and promote social interaction. However, this photo is a typical example of a street in Houtwijk, where there is no room for greenery, social interaction or play due to cars taking up the collective space (photograph by author, 2025).

Figure 2: Houtwijk surrounded by a main road which branches into the neighbourhood connecting different woonerven (source: analysis by author, 2025).

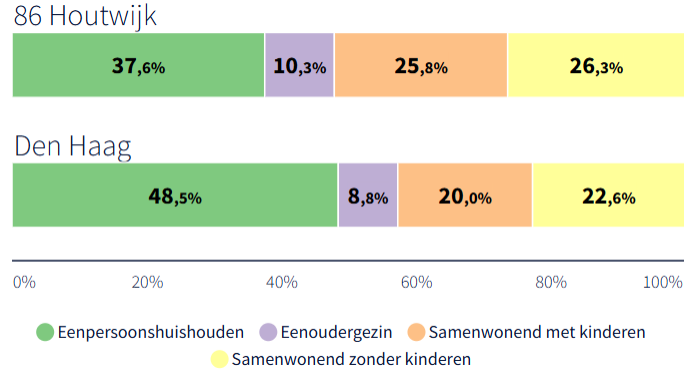
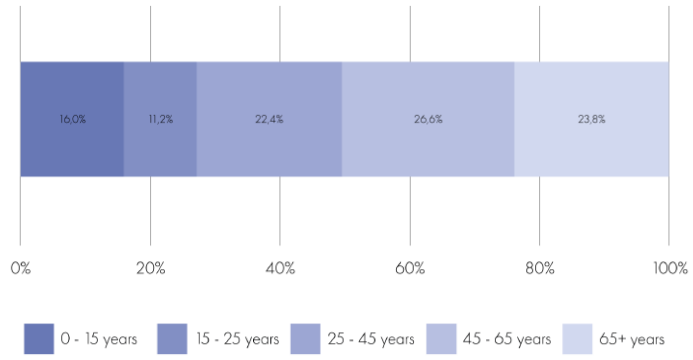


Figure 4: Population by age group, Houtwijk. (source: AlleCijfers, 2025).

Figure 5: Households in Houtwijk in comparison with The Hague. (source: Gemeente Den Haag, 2025).

Problem statement

The problem in Houtwijk, therefore, is not a lack of green space or liveability potential, but the weakened performance of its post-war woonerven as collective living environments. Organised around parking and car access, they offer limited support for everyday behaviours that contribute to health, such as movement, outdoor use and informal social contact. The architectural design challenge is not to remove the car or restore the original woonerf concept, since many residents still depend on car access. Instead, it is to transform car-dominated woonerven into healthier public spaces in which essential car access and parking remain possible, but no longer dominate spatial organisation. This requires reorganising mobility, reclaiming outdoor space, improving accessibility, strengthening dwelling–public space transitions and making daily outdoor use more inviting.

Research aim

This research investigates how architecture can improve existing woonerven in Houtwijk as healthier living environments. The objective is to develop a design proposal that connects public health, mobility, outdoor use and architectural quality at the scale of everyday life, focusing on the spaces around the dwelling where spatial decisions influence routines, social contact, physical movement and time spent outdoors

To address this architectural design challenge, the following research question is formulated:

How can car-dominated woonerven in Houtwijk be architecturally transformed into healthier public spaces through design strategies that support greater outdoor use through physical movement and social interaction, while maintaining essential car access and parking?

To answer this question, the following sub-questions are asked:

1. How can woonerven in Houtwijk be designed to support walkability while retaining essential car access and parking?
2. How can public space within the woonerf be designed to support outdoor use through social interaction and everyday physical activity?
3. How can ground-floor design, building frontages, and transitional spaces be designed to activate public space and increase everyday use within the woonerf?

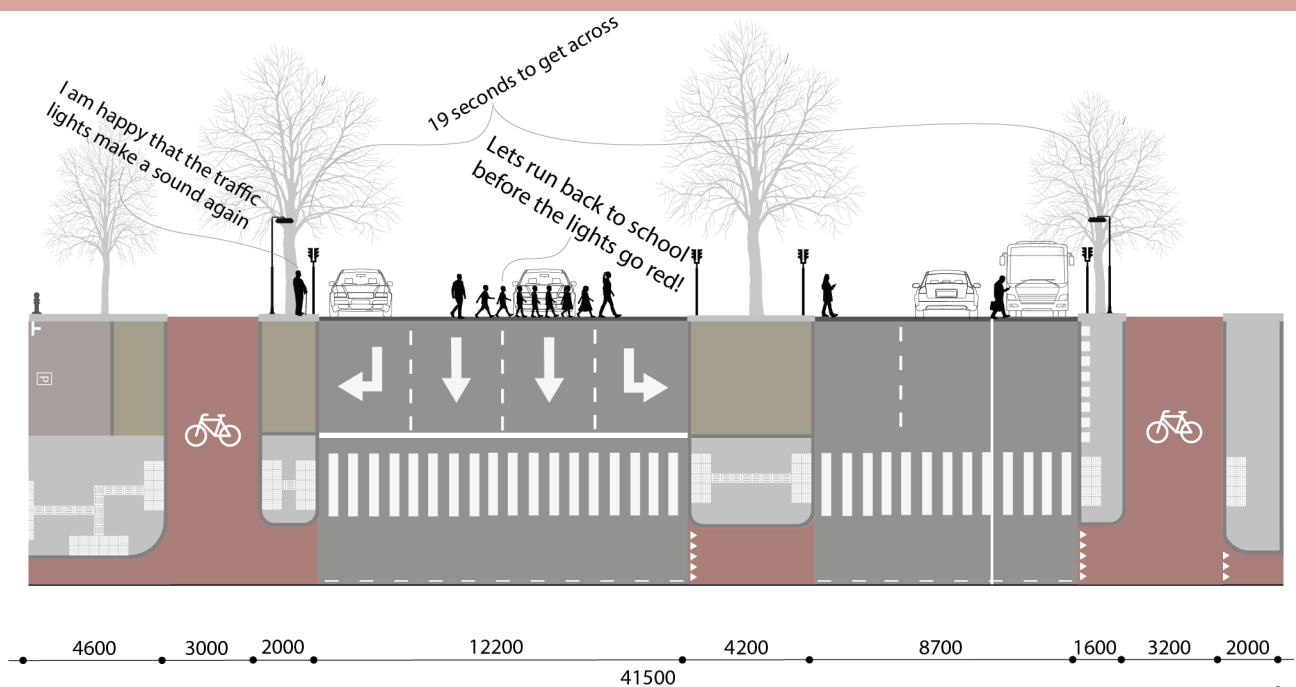


Figure 6: A digital section of the Houtwijklijn showing comments from people (image by author, 2025).



Figure 7: The collective public space of a woonerf in Houtwijk that should stimulate and invite to social interaction, playing children and live should happen (photograph by author, 2025).



Figure 8: Houses which are only accessible by stairs (photograph by author, 2025).



Figure 9: Shared scooters parked on the sidewalk (photograph by author, 2025).



Figure 10: Raised threshold seems fine, but makes it less accessible for people who are less mobile (photograph by author, 2025).



Figure 11: Cars parked during the day on the side walk affecting the quality of the sidewalk, indicating that there is a parking problem that also affects people who choose to walk (photograph by author, 2025).



Figure 12: People with less mobility have a difficult time when they try to use the side walk during the day in Houtwijk (photograph by author, 2025).

Scope

This research focuses on one courtyard woonerf along the Dr. J. Presserstraat in the Historicbuurt, where Houtwijk's woonerf typology is most concentrated, rather than the whole neighbourhood (figure 13, 14 & 15). This case is selected because it exemplifies the main issues addressed in the research: car-dominated public space, residual green, weak dwelling–public space transitions and limited everyday use.

The intervention is architectural, but operates across three scales. At the neighbourhood scale, the Dr. J. Presserstraat is positioned as a walking-first connection. At the woonerf scale, mobility, parking, accessibility and collective outdoor space are reorganised. At the architectural scale, the design focuses on thresholds, ground-floor frontages and the transformation of parking structures into shared neighbourhood facilities. The final outcome is an integrated design proposal for a healthier woonerf, supported by transferable principles for comparable post-war cauliflower neighbourhoods.



Figure 13: Photographs of one of the woonerven along the Dr. J. Presserstraat (Houtwijk), source: pictures by author, 2026.



Legend:

- | | | | |
|---------------------|-----------------------|--------------------------|---------------------|
| 1. Vredestein | 3. Mensenrechtenbuurt | 5. Verzetsheldenbuurt | 7. Kunstenaarsbuurt |
| 2. Architectenbuurt | 4. Burgermeesterbuurt | 6. <u>Historicibuurt</u> | 8. Raadsledenbuurt |

Figure 14: Houtwijk neighbourhood structure (Gemeente Den Haag, n.d.)

Design location main focus

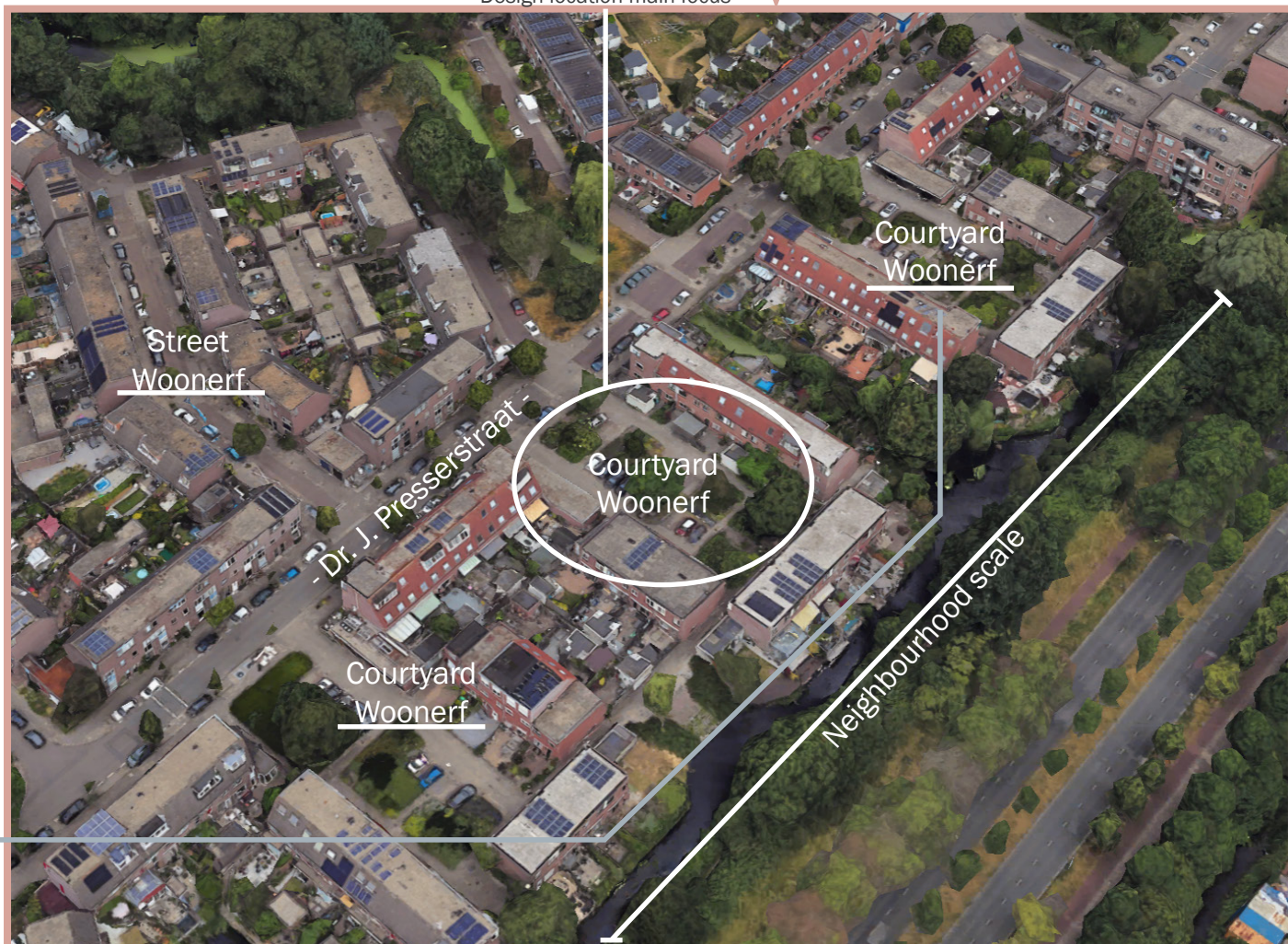


Figure 15: Axometric view of Dr. J. Presserstraat (Houtwijk) showing the research location and design area (picture by google earth)

Method

This study uses a research-by-design approach, combining literature research, fieldwork and design. The literature research establishes the theoretical framework around three themes: walking-first mobility, outdoor use, and the transition between dwelling and public space. These themes are translated into spatial design principles for a healthier woonerf.

Fieldwork in Houtwijk consists of site observations, photographic documentation and spatial measurements of the Dr. J. Presserstraat and the adjoining woonerven (figures 16 & 17). This is complemented by archival research to understand the existing building dimensions and spatial structure.

Design-based research is then used to test how the design principles can be applied spatially. The final proposal synthesises the findings into an integrated design for a healthier woonerf, represented through drawings at multiple scales: urban embedding at 1:1000, the woonerf layout at 1:500, public-space and building-edge organisation at 1:200, significant sections and façade fragments at 1:20, and key details at 1:5. These are supported by diagrams of the load-bearing structure and climate concept.

Theoretical Framework

The street is not a mere traffic corridor, but a place where everyday life exists (Jacobs, 1992, p. 29; Gehl, 2010, pp. 6–25). A woonerf functions similar, it is an outdoor environment in which movement, social interaction and daily routines coincide. Although it is usually described as collective space, it can however, equally be approached as public space, since residents use it for the same everyday use and recreational purposes (UN-Habitat, 2018, pp. 9–10; De Solà-Morales, 1992/2008). Theory on public space and health therefore is necessary for designing a healthier woonerf.

Public space as a health determinant

The outdoor spaces where people move, meet and spend time are part of how health is produced, as health includes not only the absence of disease but also physical, mental and social well-being (World Health Organization, 1948, p. 100). Public space, in particular, supports health through opportunities for leisure, social interaction and physical activity (UN-Habitat, 2025, p. 5). Its influence is substantial: the built environment may account for up to 80% of health outcomes (Rundle et al., 2013, pp. 262–269). In car-dominated woonerven such as those in Houtwijk, the design of public space is therefore especially consequential. Three dimensions recur in the literature — walking-first mobility, outdoor use, and the threshold between dwelling and street — and each translates differently within a car-dominated woonerf.

Walking-first mobility

Walking is the most fundamental of these three because physical inactivity is a major contributor to chronic disease, while pedestrian-prioritised environments encourage daily movement as part of everyday routines (Gehl Institute, 2018, p. 30; Mantingh et al., 2021, p. 12; UN-Habitat, 2018, p. 6). For walking to become a genuine alternative to the car, however, routes must connect to daily destinations, feel safe, and offer spatial comfort and visual interest (Speck, 2013, p. 10). Narrower building units, mixed ground-floor uses, and frequent doors contribute to this by making distances feel shorter and routes more pleasant (Gehl, 2010, pp. 76–79; Sim, 2019, pp. 55, 158, 220–221).

In Houtwijk, however, simply removing cars is not a realistic option, since many residents remain car-dependent (figures 14 & 15; Aumann et al., 2023, p. 85). The strategy should therefore be reorganisation rather than elimination. Mobility hubs are a promising instrument, as they improve the accessibility and reliability of carsharing and increase residents' willingness to use it (Czarnetzki et al., 2025, pp. 12–13). At the neighbourhood scale, this is already plausible: a Houtwijk resident has initiated a local carsharing scheme precisely to ease parking pressure (Minks, 2021, p. 15).

Total rainy day



Figure 16: Measurement of movement on a rainy day towards Houtwijk centre, noticing car usage (source: author, 2025)



Figure 17: A fully filled parking space on a sunny day, showing people still need or prefer car usage (source: author, 2025)

Outdoor use

Reorganising street space can create opportunities for outdoor activities that counteract social isolation (Gehl Institute, 2018, p. 30; UN-Habitat, 2018, p. 6). Space alone, however, does not produce use (figure 16). People linger only where the design invites them to do so (Gehl, 2010, pp. 19–21), and even inviting spaces remain empty without the surrounding density and diversity that generate pedestrian activity (Gehl, 2010, pp. 68–69; Sim, 2019, pp. 11–13). Because gathering follows movement, sitting and pausing should be possible along everyday routes rather than only at fixed destinations (Mehta, 2013, pp. 182–185).

The shape of the space matters too. Larger areas work best when subdivided into smaller, programmatically diverse places (Gehl, 2010, pp. 65–67; Sim, 2019, pp. 28–29) and when they include recognisable community gathering points (Mehta, 2013, pp. 196–197). Comfort is decisive: shelter from wind, sun and rain, together with greenery and water, often determines whether people stay (Sim, 2019, pp. 174–176, 188–191; Whyte, 1980, pp. 46–49).

The transition between dwelling and public space

If outdoor use depends on inviting collective space, social contact depends on the threshold where that space meets the dwelling. Approximately 80% of informal contacts between neighbours originate in this “drempeelzone” (Karssenberg et al., 2016, p. 144; Mantingh et al., 2021, p. 37). It is also where the active edges that produce natural surveillance — and with it a sense of safety and liveliness — take shape (Jacobs, 1961, p. 35). The zone needs three things at once: enough depth for residents to claim it as their own (Sim, 2019, p. 164); a lively room behind the façade (Mantingh et al., 2021, pp. 37–40); and a workable relationship with building height, since increasing elevation erodes the connection between indoor and outdoor life (Gehl, 2010, pp. 38–41; Karssenberg et al., 2016, pp. 20–23; Sim, 2019, p. 158).

Synthesis: from theory to design principles

Three insights follow for the design of Houtwijk’s car-dominated woonerven (figure 18). Firstly, the woonerf can only function as health-supportive public space when car access is reorganised rather than removed. Secondly, outdoor use does not arise from open space alone, but from a sequence of small, comfortable and well-programmed places that connect movement and rest. Lastly, the threshold space between dwelling and public space is a key driver for everyday social contact and its performance depends on its measurements, façade design and floorplan activity.

Together, these insights form the basis for the three design principles developed in the following chapters: walking-first mobility, usable outdoor space, and residential edges (figure 19).



Figure 18: A street type woonerf showing the importance of thresholds between infrastructure & movement (source: author, 2025)

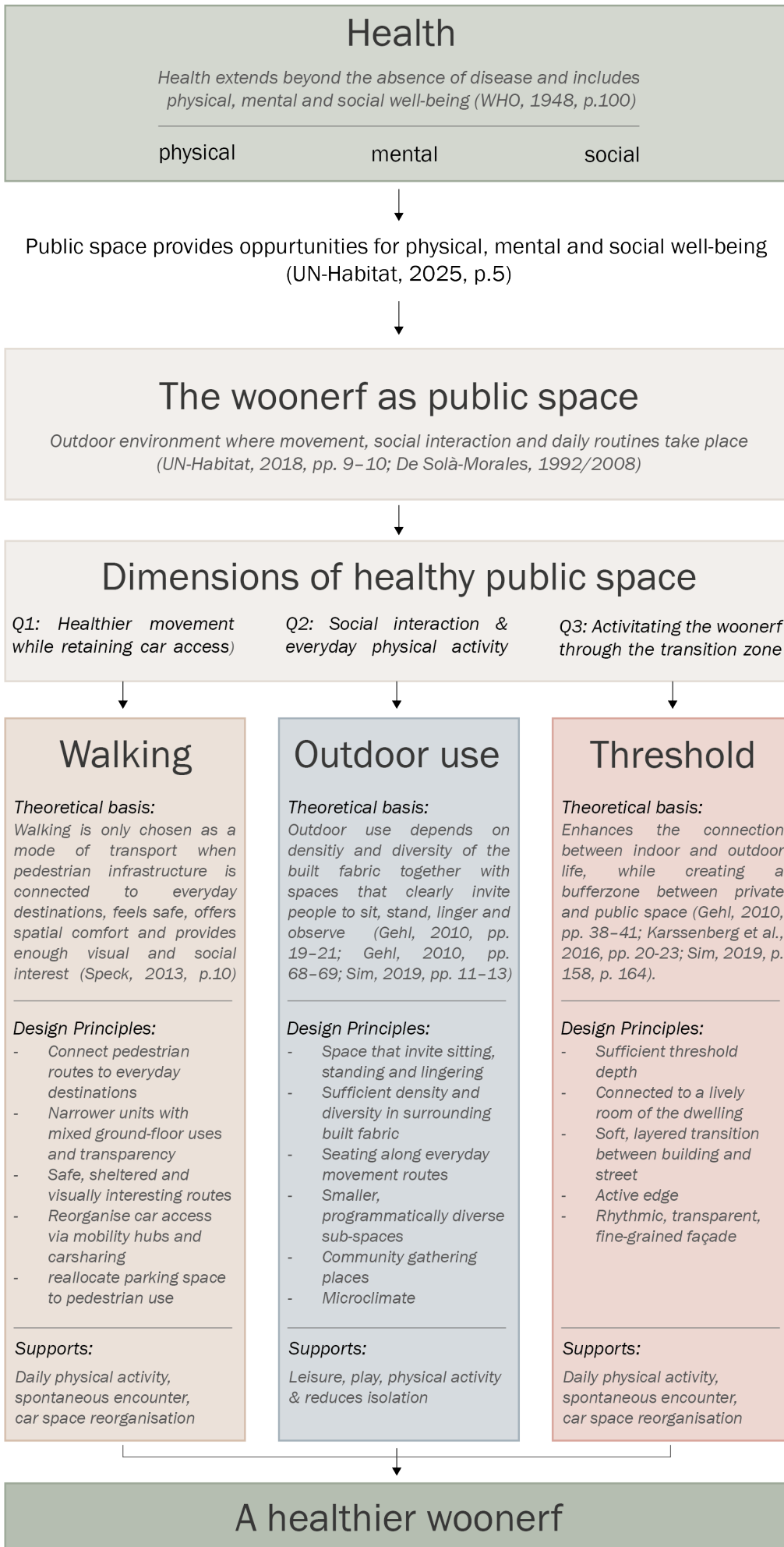


Figure 19: Framework to understanding health design approach.



Figure 20: pictures of current site showing that the Dr. J. Presserstraat has many sheltered or closed off carparking spaces that could be transformed into a HUB



Figure 21: picture of current site showing the Dr. J. Presserstraat that is uninviting to walk.



Figure 22: Artist impression of mobility HUB and new Dr. J. Presserstraat

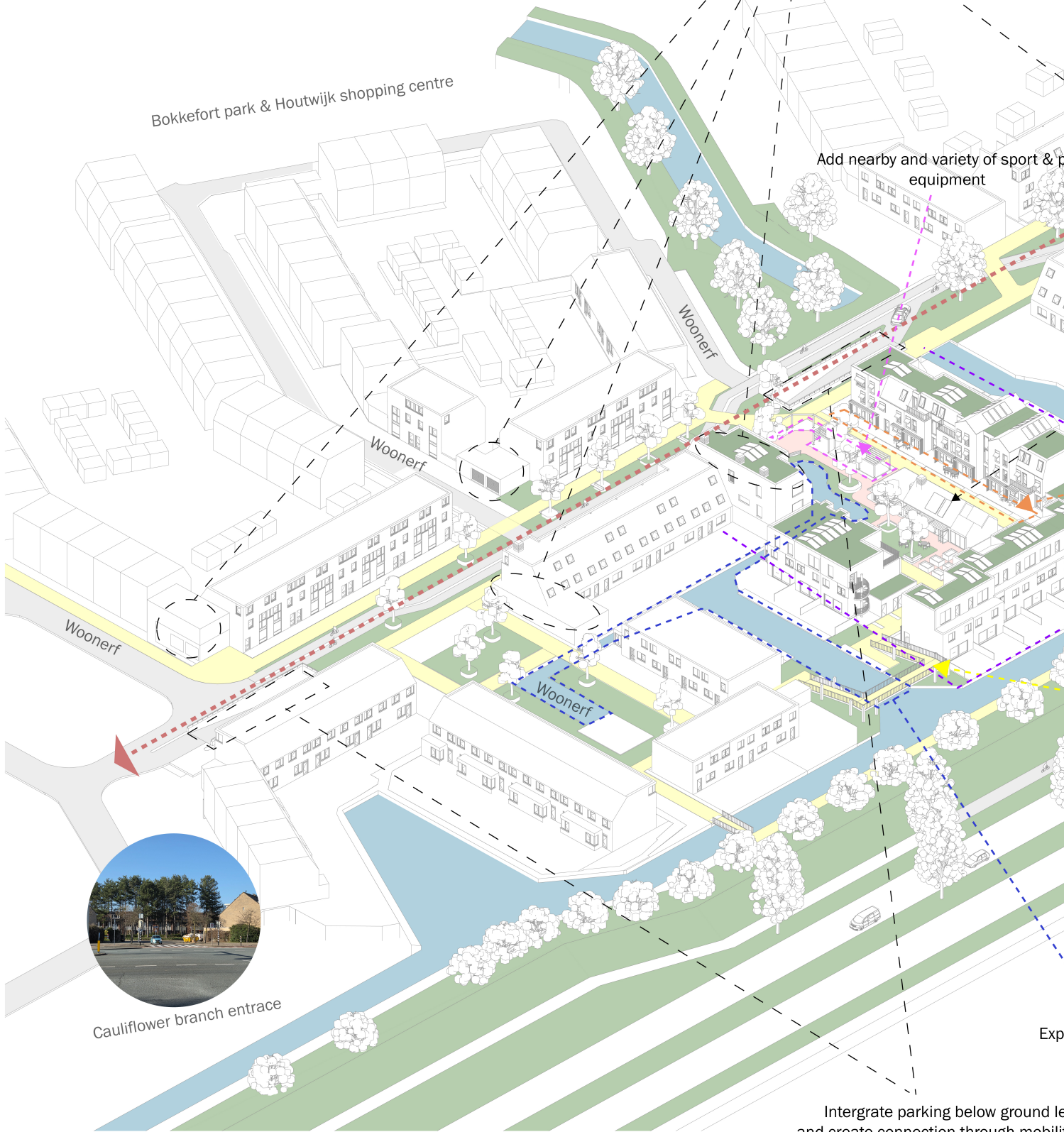
Transform parking places into shared mobility hubs and combine this with public facilities/ local programme



Existing car park structures

Bokkefort park & Houtwijk shopping centre

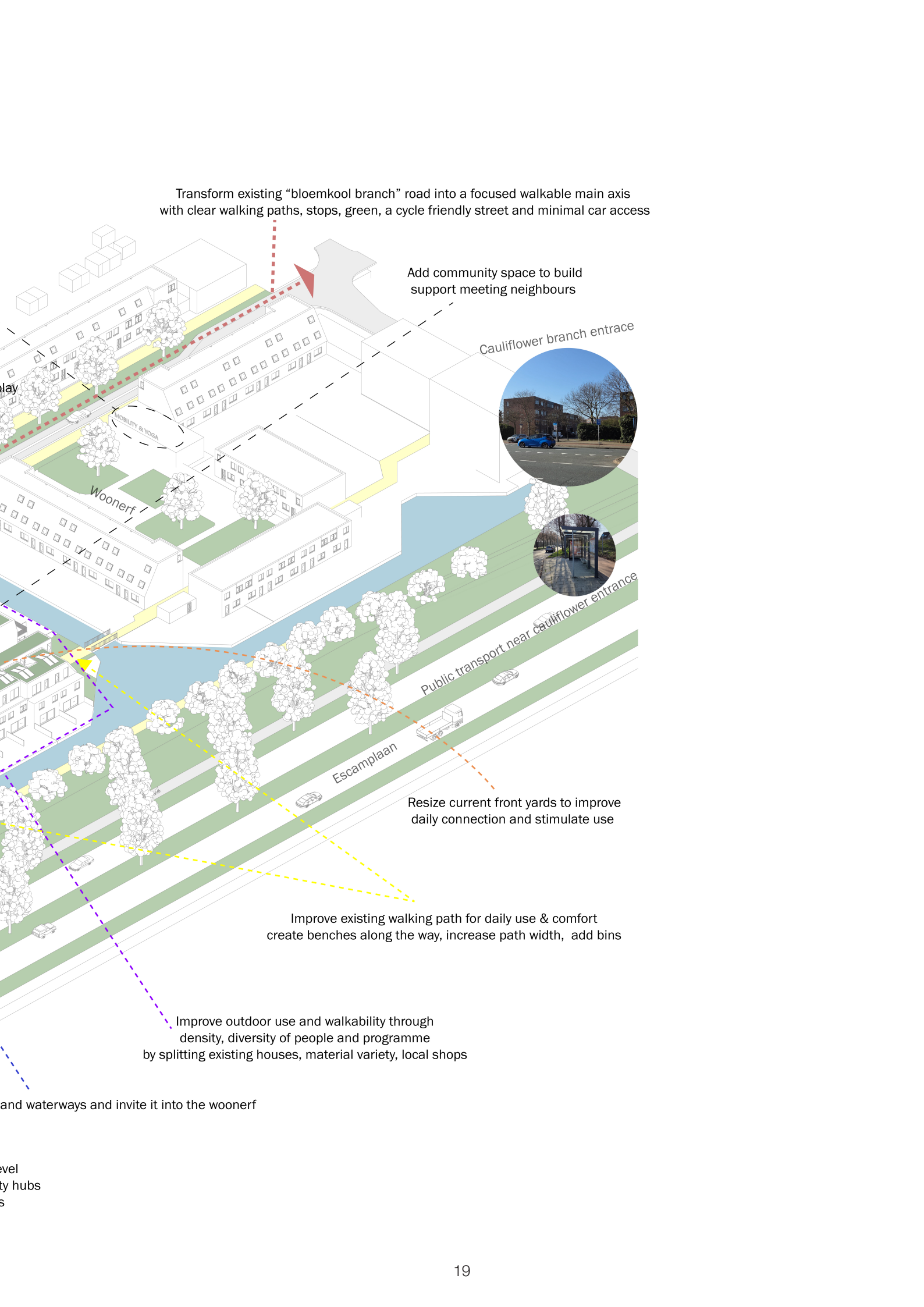
Add nearby and variety of sport & p equipment



Cauliflower branch entrance

Intergrate parking below ground level and create connection through mobility and reduce car-traffic emissions

Figure 23: Axonometric showing proposed conceptual masterplan design for a human centered healthy woonerf



Transform existing "bloemkool branch" road into a focused walkable main axis with clear walking paths, stops, green, a cycle friendly street and minimal car access

Add community space to build support meeting neighbours

Cauliflower branch entrance



Public transport near cauliflower entrance

Escampleaan

Resize current front yards to improve daily connection and stimulate use

Improve existing walking path for daily use & comfort create benches along the way, increase path width, add bins

Improve outdoor use and walkability through density, diversity of people and programme by splitting existing houses, material variety, local shops

and waterways and invite it into the woonerf

level
ty hubs
s



Figure 24: Section G-G, looking from the Dr. J. Presserstraat (main axis) to the courtyards/ woonerven, showing the newly built garage connection



Repurposing parking structures into multimodal hubs with integrated community facilities

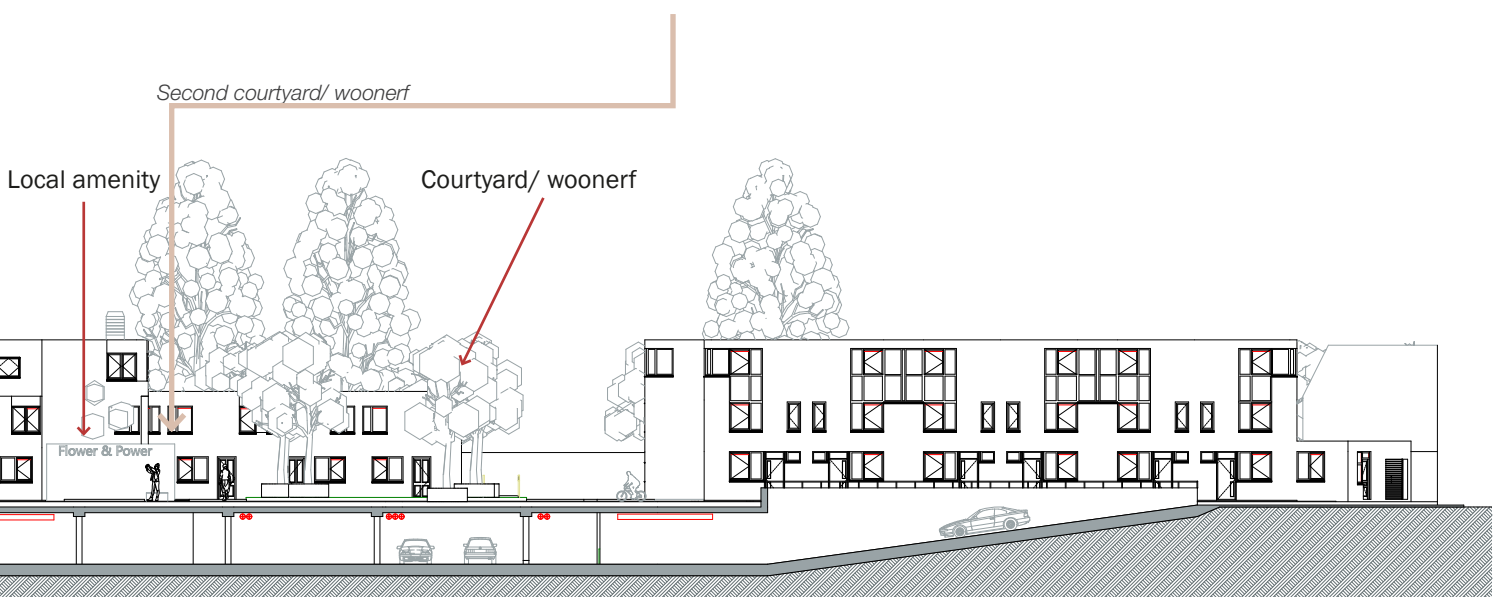




Figure 25: picture of current site showing that the woonerf is designed for car-mobility rather than human daily use, which results in a lot of pavement



Figure 26: picture of current site showing that people want to use the green, but are not able to due to bushes.



Figure 27: artist impression at eye level of a proposed design atmosphere for community building connected to outdoor use of the woonerf/ courtyard

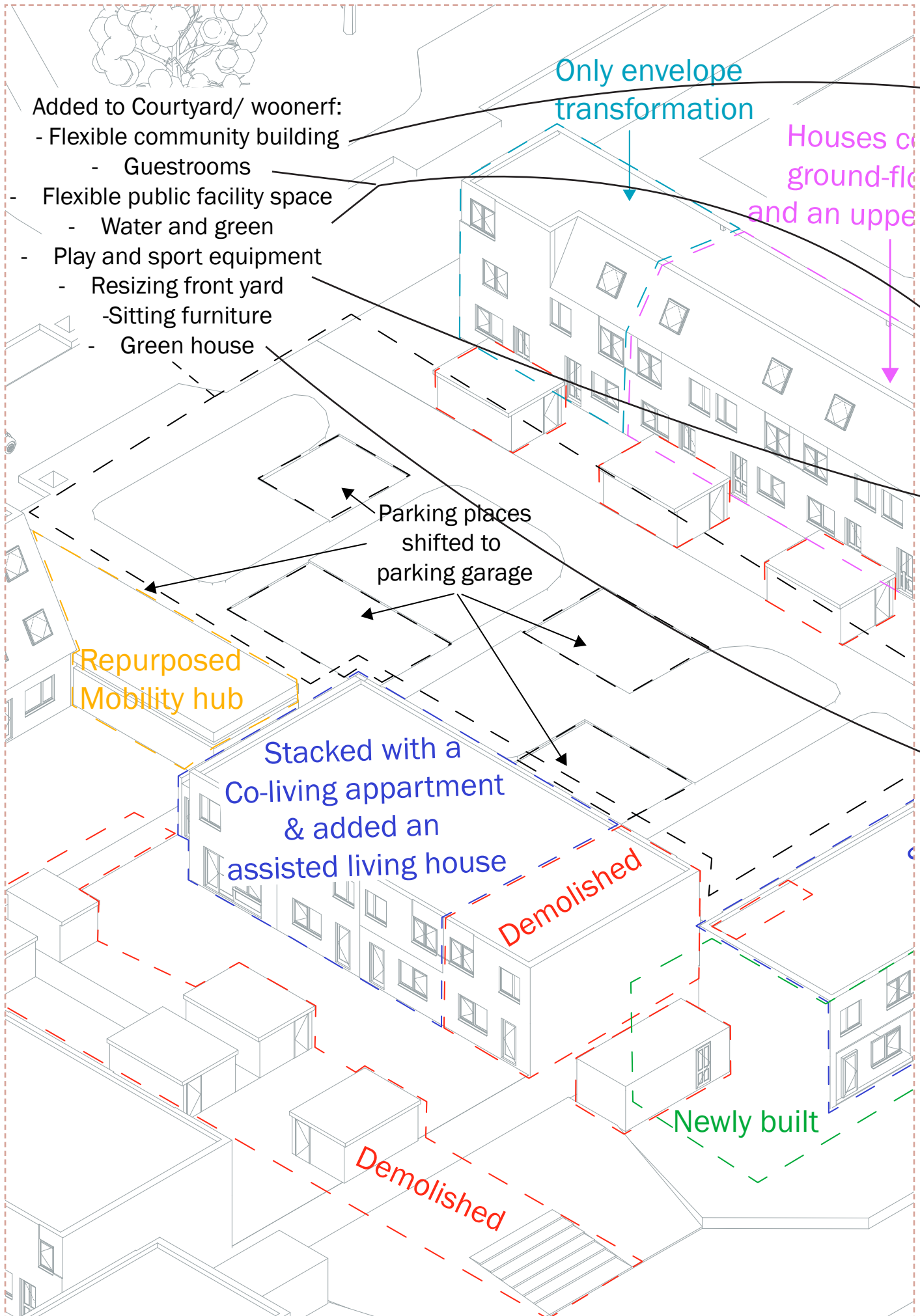


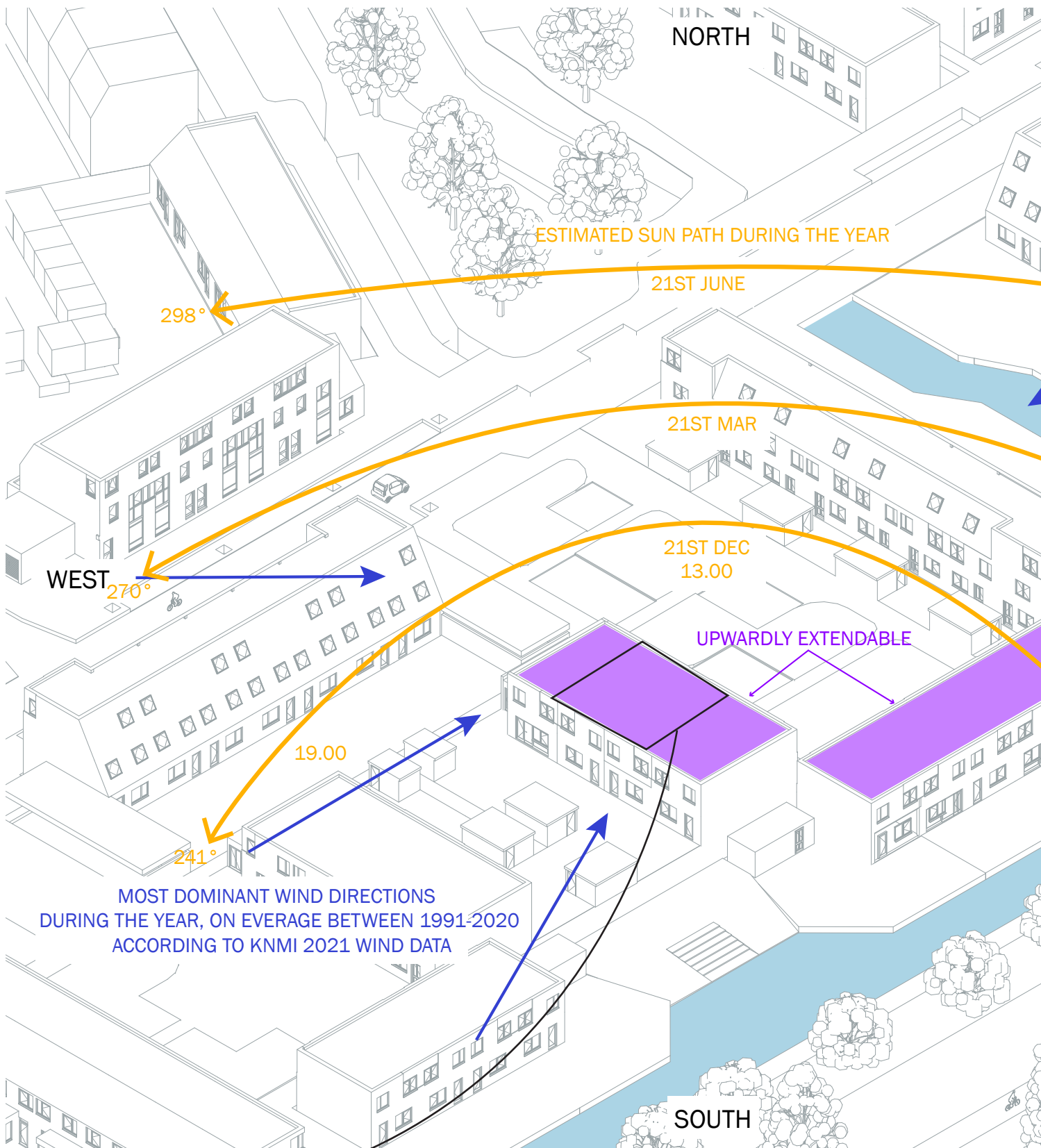
Figure 28: On left side: showing current courtyard/ woonerf with design interventions; on right side: design results





Figure 29: Isometric view showing courtyard/ woonerf transformation to a more healthier outdoor environment





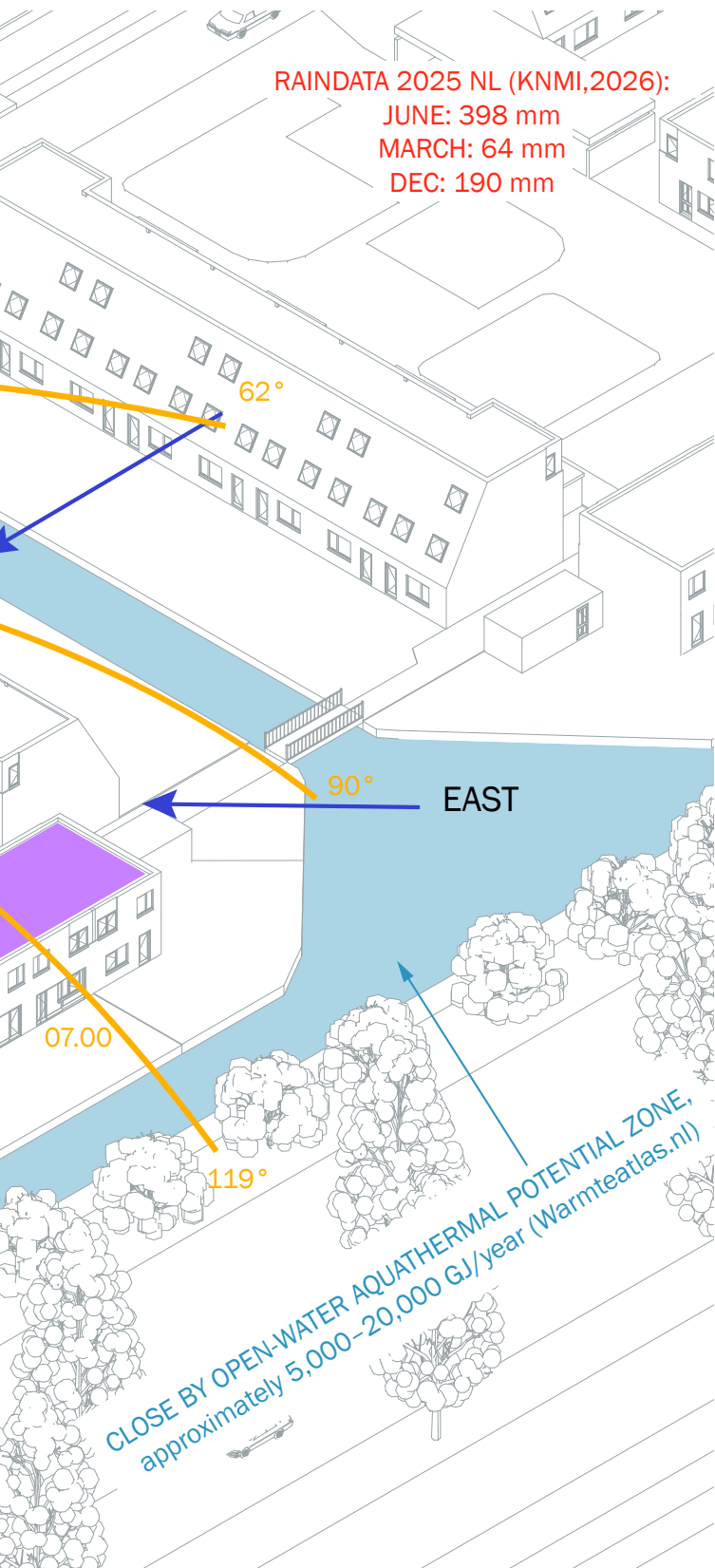
(Source: own photo, 2025)

Potential upwardly extendable construction

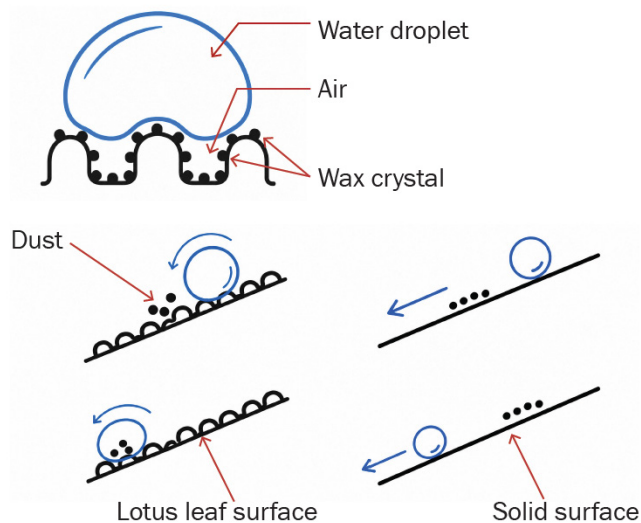


(Source: own photo taken from archive report, 2025)

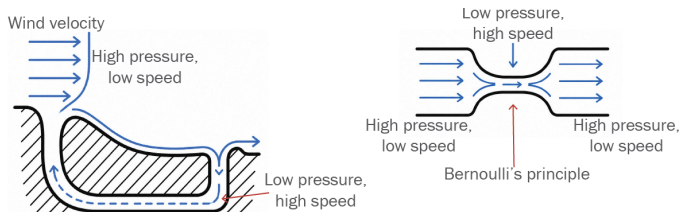
Figure 30: Climatic and construction site analysis



Potential method for quickly drying facade and keeping it clean/ dirt free (Source: Biomimicry Institute, 2020)

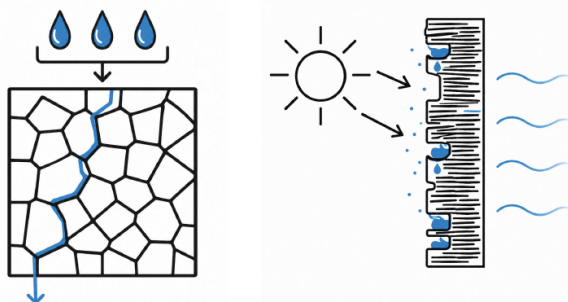
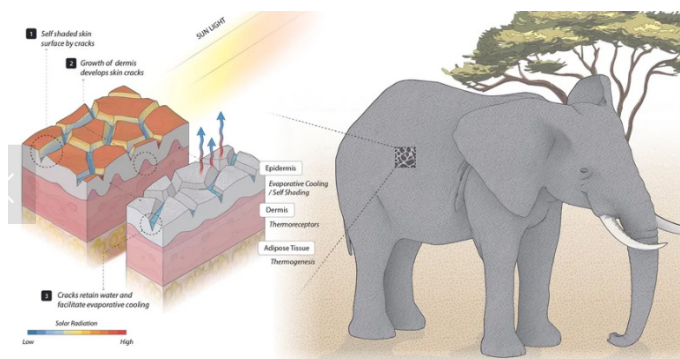


Potential passive ventilation strategy (Source: Biomimicry Institute, 2022)

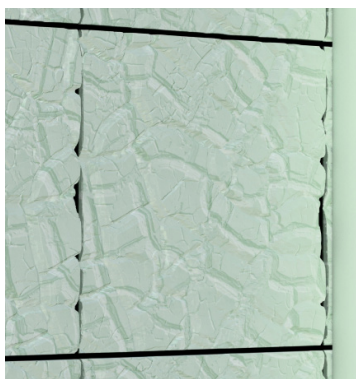
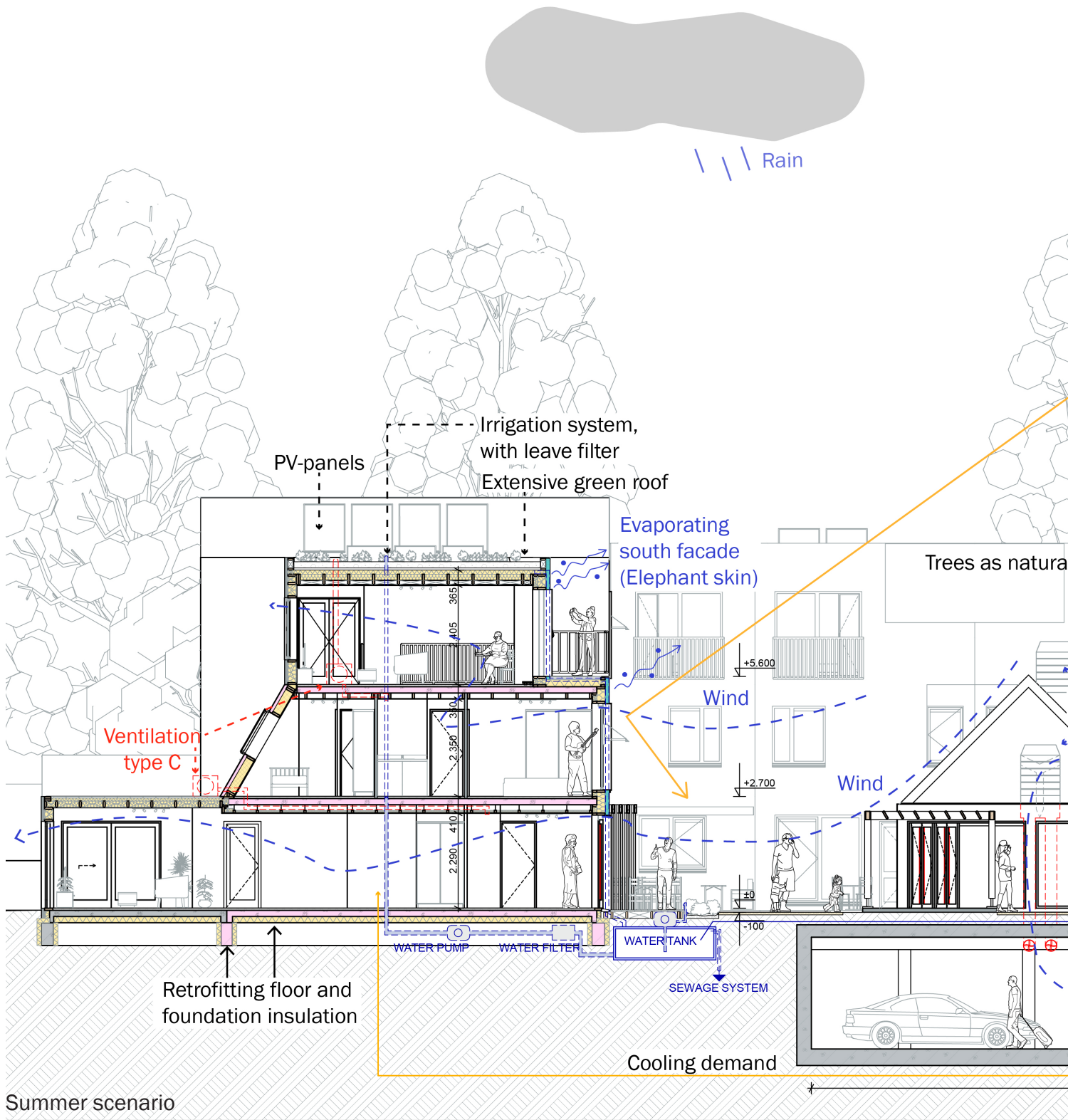


Black-tailed prairie dogs and leafcutter ants use narrow underground tunnels to create wind-pressure differences, drawing fresh air through their burrows without mechanical energy. This strategy is mimicked to passively ventilate the project.

Potential elephant skin theory about "cooling" (Source: Soh et al., 2024; Bae, 2026)



Elephant skin wrinkles retain and channel water for evaporative cooling; this strategy is mimicked to passively cool the building.



Elephant tile pattern

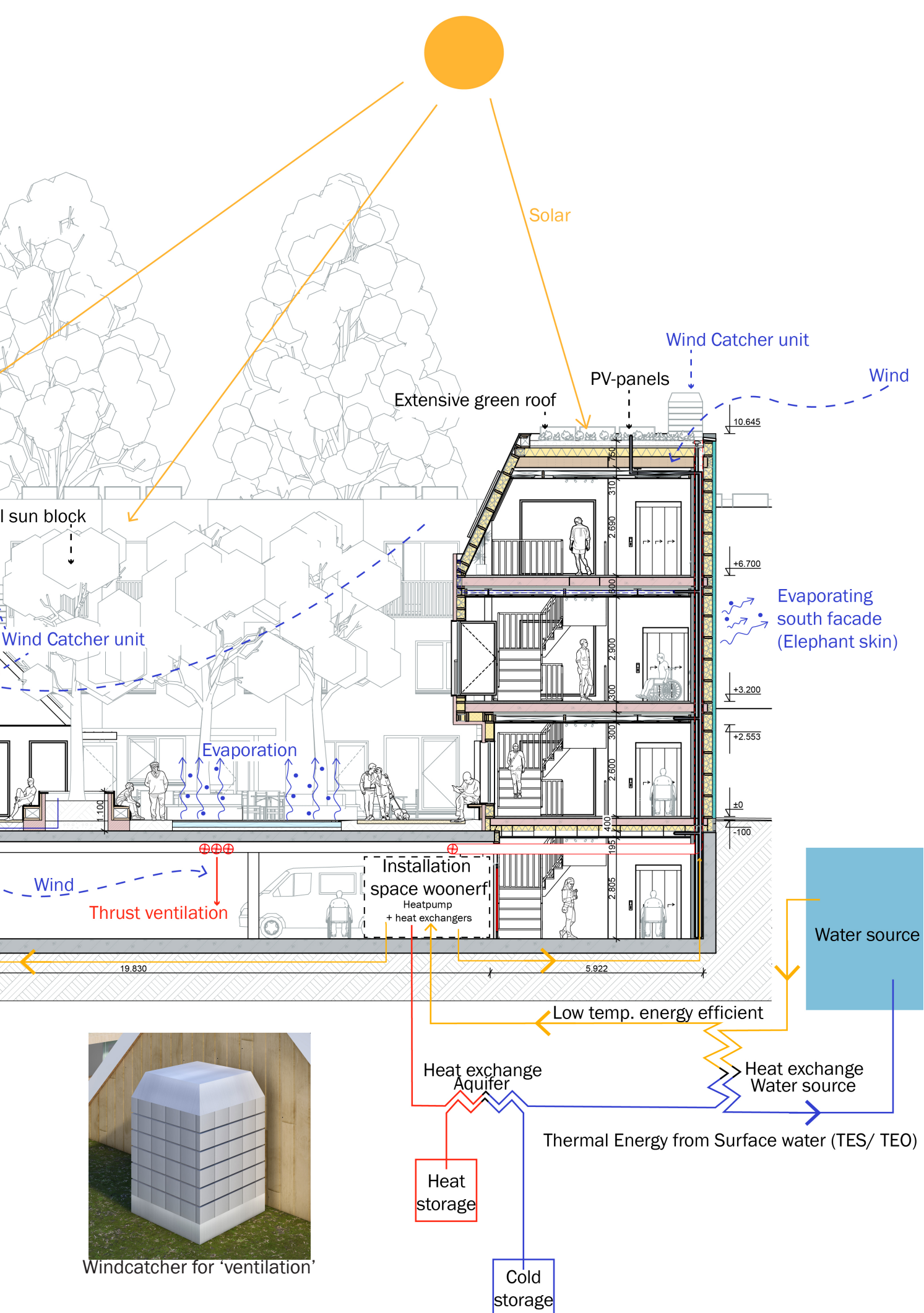


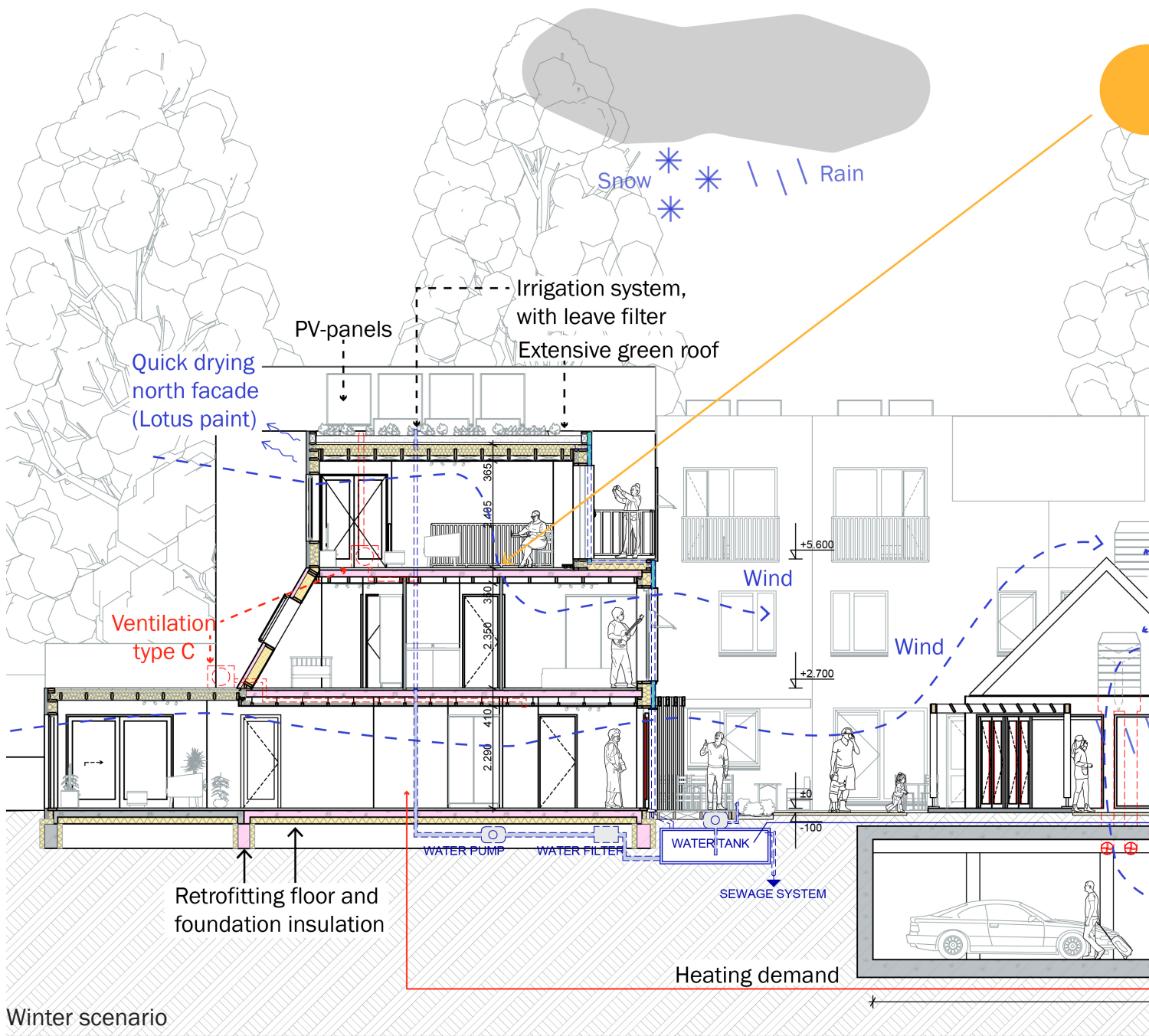
Sunscreen - shading



Pond for cooling through evaporation

Figure 31: Section showing the climate principles to improve the microclimate out- and indoors in summer

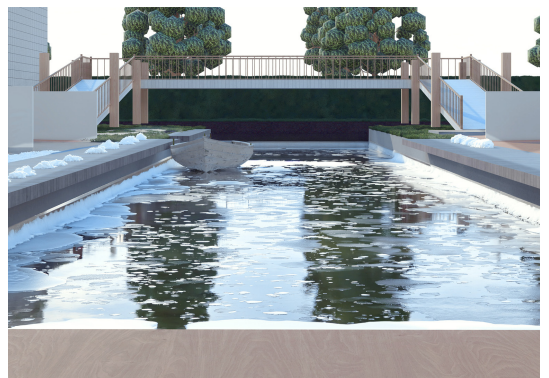




Lotus paint/ coating



vertical window for light



Ice forming, aquathermal result

Figure 32: Section showing the climate principles to improve the microclimate out- and indoors in summer



Figure 33: picture of current site showing a large private front garden generating maximum privacy buffer and disconnection with daily outdoor life



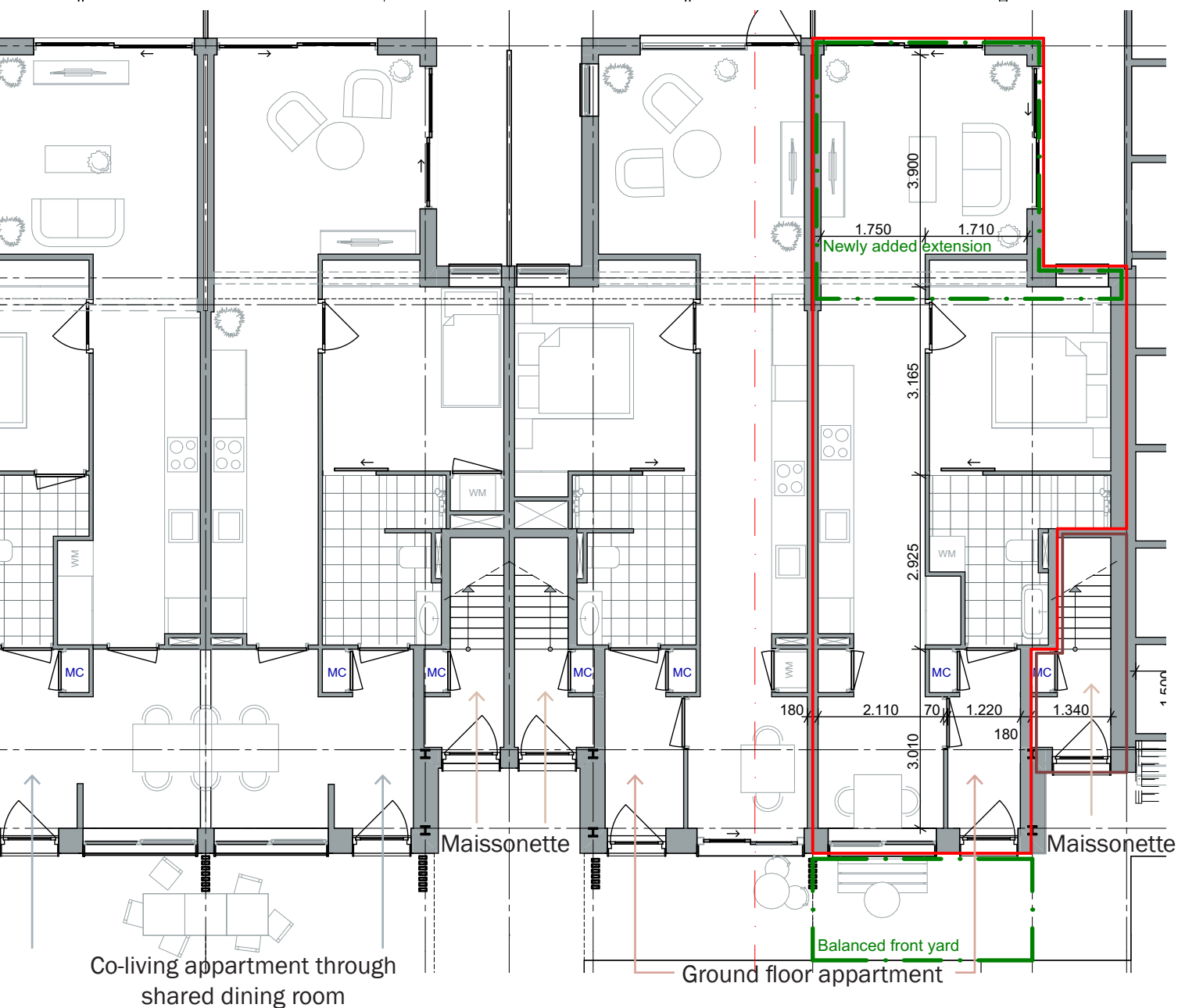
Figure 34: picture of current site showing a weak to no bufferzone between private and daily outdoor life



Figure 35: artist impression of a proposed usable threshold with an active connection to daily outdoor life while remaining privacy



Figure 36: Elevation of Blok A (south facing facade) showing proposed material variation, combined with converted houses, resized front gardens, resulting in a private, but domestic active/ soft edge.



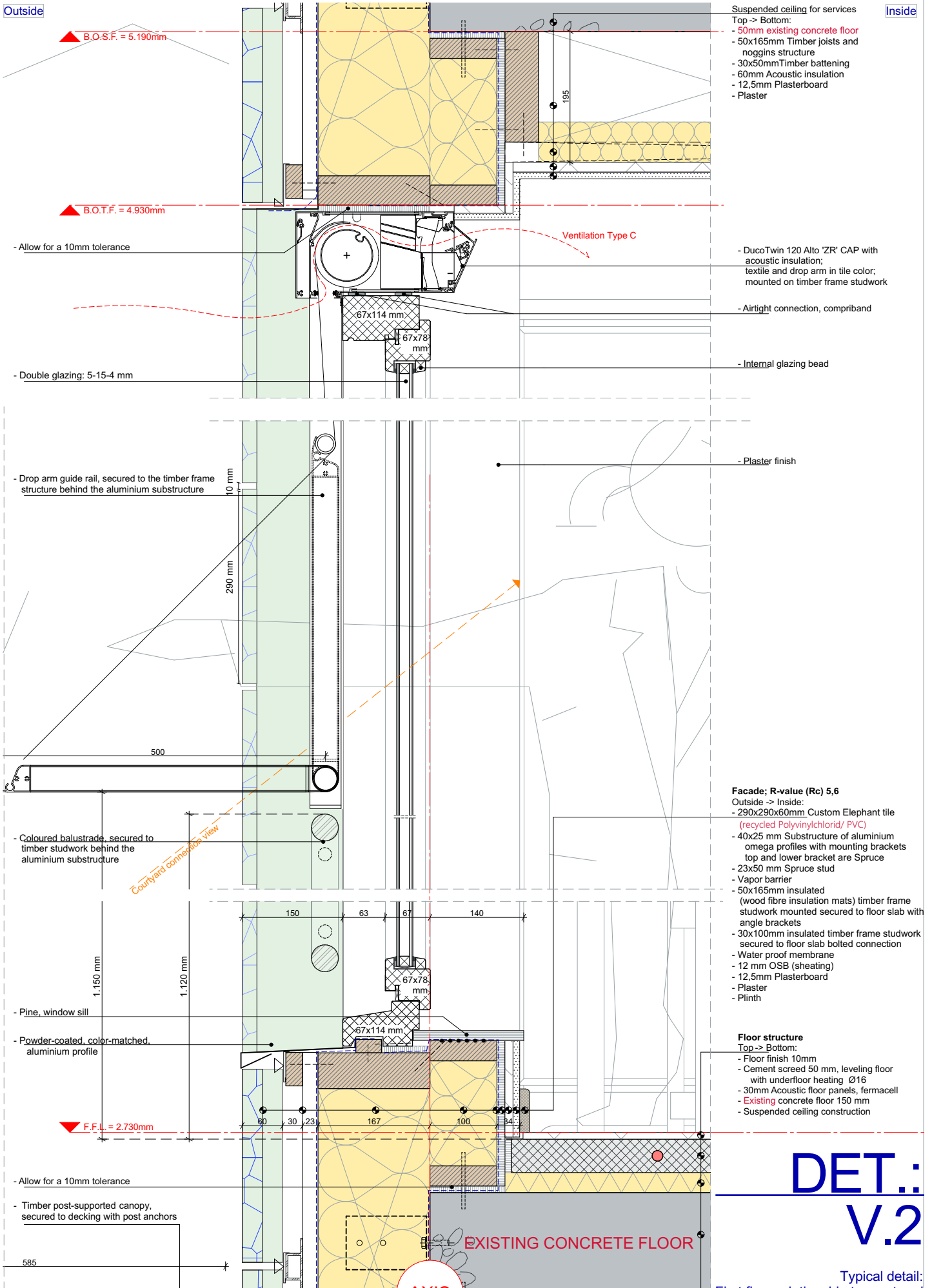


Figure 38: Showing the detail of Blok A's threshold zone - connection between in-and outdoors and material change + climate and construction principle.

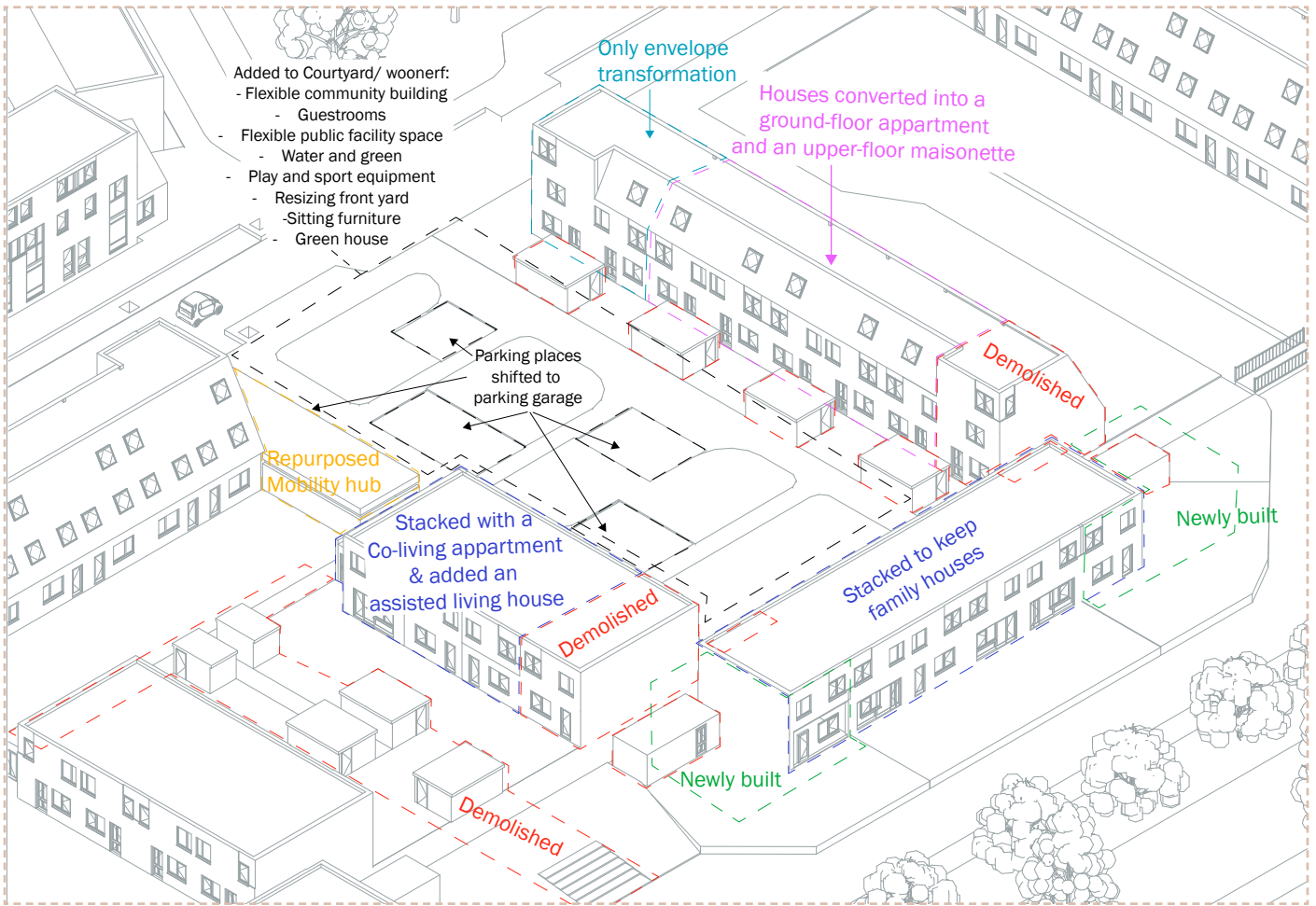


Figure 39: On the top: the existing "unhealthy" woonerf; on the bottom: the proposed design result for a healthier woonerf

References

- AlleCijfers. (2025, November 17). AlleCijfers.nl. <https://allecijfers.nl/buurt/houtwijk-den-haag/#:~:text=Er%20zijn%206.164%20adressen%20en,van%20gemiddeld%20%2C2%20personen.>
- Askarizad, R., & Safari, H. (2020, June). *The influence of social interactions on the behavioral patterns of the people in urban spaces (case study: The pedestrian zone of Rasht Municipality Square, Iran)*. Science Direct. Retrieved December 28, 2025, from <https://www.sciencedirect.com.tudelft.idm.oclc.org/science/article/pii/S0264275119302732>
- Aumann, S., Kinigadner, J., Duran-Rodas, D., & Büttner, B. (2023). *Driving towards Car-Independent Neighborhoods in Europe: A Typology and Systematic Literature review*. *Urban Planning*, 8(3), 84–85. <https://doi.org/10.17645/up.v8i3.6552>
- Bach, B. (1983). *Development in planning and design of dutch “woonerven.”* T.H. Delft.
- Bae, J. Y. (2026). *Elephant Skin — Thermal Architecture Lab*. Thermal Architecture Lab. <https://www.thermalarchitecture.org/elephantskin>
- Biomimicry Institute. (2022). *Asymmetric Burrow Openings Create Passive Ventilation*. AskNature. https://ask-nature.sfo3.digitaloceanspaces.com/wp-content/uploads/2020/07/31104322/AN-Prairie_Dog_Ventilation_Final_05-2022.pdf
- Biomimicry Institute. (2020). *Surface allows Self-Cleaning — Biological Strategy*. AskNature. <https://asknature.org/strategy/surface-allows-self-cleaning/>
- Boersma, M. (2012, January 24). Vuil, graffiti en niksig groen in bloemkoolwijk. *Nederlands Dagblad*. <https://www.nd.nl/nieuws/nederland/790331/vuil-graffiti-en-niksig-groen-in-bloemkoolwijk>
- BZK. (2024). Kaarten | Atlas Leefomgeving. <https://www.atlasleefomgeving.nl/kaarten?config=3ef897de-127f-471a-959b-93b7597de188&activateOnStart=layermanager&gm-x=157419.19999999984&gm-y=461756.51254033&gm-z=3&gm-b=1544180834512,true,1;1623134591534,true,0.8>
- CBS. (2025, January 1). Hoeveel personenauto's zijn er in Nederland? Centraal Bureau Voor De Statistiek. Retrieved December 28, 2025, from <https://www.cbs.nl/nl-nl/visualisaties/verkeer-en-vervoer/vervoermiddelen-en-infrastructuur/personenautos>
- CROW. (2023). *Verkenning Woonerven 2.0 - afwegingskader Woonstraten zonder voetpaden*. In Fietsberaad CROW. Retrieved December 14, 2025, from <https://www.fietsberaad.nl/Kennisbank/Verkenning-woonerven-2-0>
- Czarnetzki, F., Freude, M. P., & Gertz, C. (2025). *Do mobility hubs boost the adoption and impact of carsharing in the urban periphery? Insights from a mixed-methods case study*. *Transportation Research Interdisciplinary Perspectives*, 34, 101682. <https://doi.org/10.1016/j.trip.2025.101682>
- De Solà-Morales, M. (2008). *A matter of Things*. Nai Publishers. (Original work published 1992)

Gehl Institute. (2018). *A Guide to Inclusion and Health in Public Spaces*. In <https://www.gehlpeople.com/>. <https://www.gehlpeople.com/knowledge-hub/publications/a-guide-to-inclusion-and-health-in-public-spaces/>

Gehl, J. (2010). *Cities for People*. Island Press.

Gehl, J. (1978/ 2011). *Life between buildings*. In *Using Public Space* (pp. 1–201) [Book]. Island Press.

Gemeente Den Haag. (n.d.). *2.3 Ruimtelijke structuur*. Planviewer. Retrieved January 12, 2026, from https://www.planviewer.nl/imro/files/NL.IMRO.0518.BP0234AHoutwijk-50VA/t_NL.IMRO.0518.BP0234AHoutwijk-50VA_2.3.html

Gemeente Den Haag. (n.d.-b). *Wijkprofielen - Leefbaarheid en Veiligheid - 14 Bohemen, Meer en Bos*. <https://denhaag.incijfers.nl/mosaic/en-us/wijkprofielen/leefbaarheid-en-veiligheid>

Gemeente Den Haag. (2025, January). *Den Haag in cijfers: Houtwijk ten opzichte van Den Haag*. RAVEL Applicatie Den Haag in Cijfers. <https://denhaag.incijfers.nl/ravel>

Goudappel BV & Ipsos I&O. (2025). *Landelijk Reizigersonderzoek 2024*. In Rijksoverheid (018419.20250217.R1.02). Ministerie van Infrastructuur en Waterstaat. <https://open.overheid.nl/documenten/2bab9bb1-5a00-4182-93da-7c1e76a737e2/file>

Kärmeniemi, M., Lankila, T., Ikäheimo, T., Koivumaa-Honkanen, H., & Korpelainen, R. (2018). *The built environment as a determinant of physical activity: A systematic review of longitudinal studies and natural experiments*. In Research Gate. The Society of Behavioral Medicine. <https://doi.org/10.1093/abm/kax043>

Karssenbergh, H., Laven, J., Glaser, M., & Van 't Hoff, M. (2016). *The city at eye level: Lessons for street plinths* (Second and Extended version). Eburon Academic Publishers.

KiM. (2017, June 30). *Stedelijke transitie: uitdagingen vanuit mobiliteit | Kennisinstituut voor Mobiliteitsbeleid*. Kennisinstituut Voor Mobiliteitsbeleid. <https://www.kimnet.nl/documenten/2017/06/30/stedelijke-transitie-uitdagingen-vanuit-mobiliteit>

KNMI. (2026). *Maand- en jaarwaarden*. knmi.nl. <https://www.knmi.nl/nederland-nu/klimatologie/maandgegevens>

Mantingh, L., & Duivenvoorden, A. (2021). *Ontwerp voor ontmoeten: Hoe de gebouwde omgeving kan uitnodigen tot contact*. In www.platform31.nl. Platform 31.

Mehaffy, M., Porta, S., Rofe, Y., & Salingaros, N. (2010). *Urban nuclei and the geometry of streets: The 'emergent neighborhoods' model*. URBAN DESIGN International, Vol. 15, 1, 22–46.

Mehta, V. (2013). *The street: A quintessential Social Public Space*. Routledge.

Mekers, P. (2025, June 12). *D66 krijgt meer dan 300 meldingen binnen over onveilige straten: "30 km/u en handhaving zijn keihard nodig."* D66 Den Haag. Retrieved December 28, 2025, from <https://d66.nl/denhaag/nieuws/d66-krijgt-meer-dan-300-meldingen-binnen-over-onveilige-straten-30-km-u-en-handhaving-zijn-keihard-nodig/>

Ministerie van Infrastructuur en Waterstaat. (2025, December 2). *Factsheet: Autodelen*. <https://www.rijkswaterstaat.nl/zakelijk/zakendoen-met-rijkswaterstaat/werkwijzen/werkwijze-in-gww/nederland-bereikbaar-hinderaanpak/toolbox/factsheet-autodelen>

Minks, M. (2021). *Houtwijkblad*. Bestuursinformatie, 1(Jaargang 40), 15. <https://wijkberaadhoutwijk.nl/wp-content/uploads/2025/01/maart-21.pdf>

Molnár-in 'T Veld, H. (2019, December 18). *De groei van het Nederlandse personenauto-park*. Centraal Bureau Voor De Statistiek. <https://www.cbs.nl/nl-nl/longread/statistische-trends/2019/de-groei-van-het-nederlandse-personenautopark?onepage=true>

Oorschot, L. M. (2014). *Conflicten over Haagse stadsbeelden*. Van Willemspark tot Spuiforum. (deel 1 en 2). A+BE | Architecture and the Built Environment.

Perdue, W. C., Stone, L. A., & Gostin, L. O. (2003). *The built environment and its relationship to the public's health: the legal framework*. *American Journal of Public Health*, 93(9), 1390–1394. <https://doi.org/10.2105/ajph.93.9.1390>

Platform31. (2023, November 15). *Impact van de leefomgeving op gezondheidsverschillen en stress* - Platform31 | Kennis en netwerk voor stad en regio. Platform31 | Kennis En Netwerk Voor Stad En Regio. <https://www.platform31.nl/artikelen/impact-van-de-leefomgeving-op-gezondheidsverschillen-en-stress/>

RIVM. (2024). *Gezonde Generaties 2050*. In RIVM-rapport 2024-0046 (pp. 2–63) [Report]. Rijksinstituut voor Volksgezondheid en Milieu. <https://doi.org/10.21945/RIVM-2024-0046>

Rundle, A., Quinn, J. W., Lovasi, G. S., Bader, M. D. M., Yousefzadeh, P., Weiss, C. C., & Neckerman, K. M. (2013). *Associations between Body Mass Index and Park Proximity, Size, Cleanliness, and Recreational Facilities* (*American Journal of Health Promotion* 27, nos. 4, 262–269). <https://doi.org/10.4278/ajhp.110809-quan-304>

Sim, D. (2019). *Soft City: Building Density for Everyday Life*. Island Press. Copyright Gehl Architects Finance & Administration ApS

Soh, E., Loh, N., Teoh, J. H., Jain, A., & Ferrand, H. L. (2024). *Biodegradable mycelium tiles with elephant skin inspired texture for thermal regulation of buildings*. *Energy and Buildings*, 328, 115187. <https://doi.org/10.1016/j.enbuild.2024.115187>

Speck, J. (2013). *WALKABLE CITY: How downtown can save america, one step at a time*. North Point Press. <https://www.petkovstudio.com/bg/wp-content/uploads/2017/03/Walkable-City.pdf>

Stimuleringsfonds voor Architectuur, Van der Leun, A., Jutten, N., & Lofvers, W. (2009). *Studie Woonerven: Focus op kwaliteiten*. Lay-out, 08, 1–24.

Thaler, R. H., & Sunstein, C. R. (2008). *Nudge: Improving Decisions about Health, Wealth, and Happiness*. Yale University Press.

UN-Habitat. (2018). *SDG Indicator 11.7.1 Training Module: Public Space*. United Nations Human Settlement Programme (UN-Habitat). <https://unhabitat.org/sites/default/files/2019/02/>

Indicator-11.7.1-Training-Module_Public-spaces_Jan_2019.pdf

Un-Habitat. (2025). *Healthier Cities and Communities through Public Spaces: A guidance paper*. In Un-Habitat. United Nations Human Settlements Programme. <https://unhabitat.org/healthier-cities-and-communities-through-public-spaces>

Urhahn. (2025). *Handreiking Woonwijken van de Toekomst: vormgeven aan de naoorlogse wijken in transitie*. In Ministerie Van Volkshuisvesting En Ruimtelijke Ordening. Uitgave van Ministerie van Volkshuisvesting en Ruimtelijke ordening, programma MooiNL. Retrieved December 14, 2025, from <https://www.ruimtelijkeordering.nl/documenten/2024/05/08/handreiking-woonwijken-van-de-toekomst>

Van Den Berg, L. (2020). *Mobiliteitshubs in Nederland* (By Prof. Dr. Ir. Dick Ettema & Marije Hamersma) [Master Thesis, Utrecht University]. <https://deelmobiliteitnederland.nl/wp-content/uploads/2021/09/Masterthesis-Mobiliteitshubs-Laura-van-den-Berg-6530907.pdf>

Van der Maas, M. (2025). *De stad en de auto: Op weg naar een auto-afhankelijke mens*. In Trancity. [trancityxvaliz. https://www.trancity.nl/publicaties/de-stad-en-de-au-to#:~:text=Op%20weg%20naar%20een%20auto%2Donafhankelijke%20mens&text=De%20mens%2C%20de%20auto%20en,%2C%20groen%2C%20ontspanning%2C%20klimaatadaptatie](https://www.trancity.nl/publicaties/de-stad-en-de-au-to#:~:text=Op%20weg%20naar%20een%20auto%2Donafhankelijke%20mens&text=De%20mens%2C%20de%20auto%20en,%2C%20groen%2C%20ontspanning%2C%20klimaatadaptatie).

Van Gameren, D., Van den Heuvel, D., Mooij, H., Van der Putt, P., Klijn, O., & Van Andel, F. (2010). *DASH, Delft Architectural Studies on Housing: The Woonerft Today - Het woonerf leeft*. NAI Publishers.

Warmteatlas. (n.d.). <https://www.warmteatlas.nl/viewer/app/Warmteatlas/v2?debug=false>

Wijkberaad. (2025, November 5). *Video waarin de resultaten van de veiligheidsenquête Houtwijk worden besproken* [Video]. Facebook. Retrieved December 28, 2025, from <https://www.facebook.com/Houtwijkinfo/videos/815413521456900>

Wijkberaad Houtwijk. (2025). *Houtwijk verbeterpunten volgens bewoners*. In wijkberaadhoutwijk.nl. Retrieved December 28, 2025, from <https://wijkberaadhoutwijk.nl/wp-content/uploads/2025/06/Verbeterpunten.pdf>

World Health Organization. (1948). *Summary report on proceedings, minutes and final acts of the International Health Conference held in New York from 19 June to 22 July 1946*. In Iris Institutional Repository for Information Sharing. Official records of the World Health Organization. <https://iris.who.int/handle/10665/85573>

Zwikker, R., Revier, E., Shachaf, T., Agliati, S., Scholten, B., Van Langevelde, C., APPM, Van De Wall, R., Gerretsen, P., Soret, L., Adema, A., De Vries, M., Huijts, C., Nijhof, N., Raijmakers, K., Zwegers, A., Buitendijk-Campo, M., Dijkzeul, D., Van Der Hijden, S., & Verbeet, M. (2021). *Verkennd onderzoek naar ruimtelijke inpassing en impact Hubs in bestaande wijken* [Report]. <https://www.deltametropool.nl>

