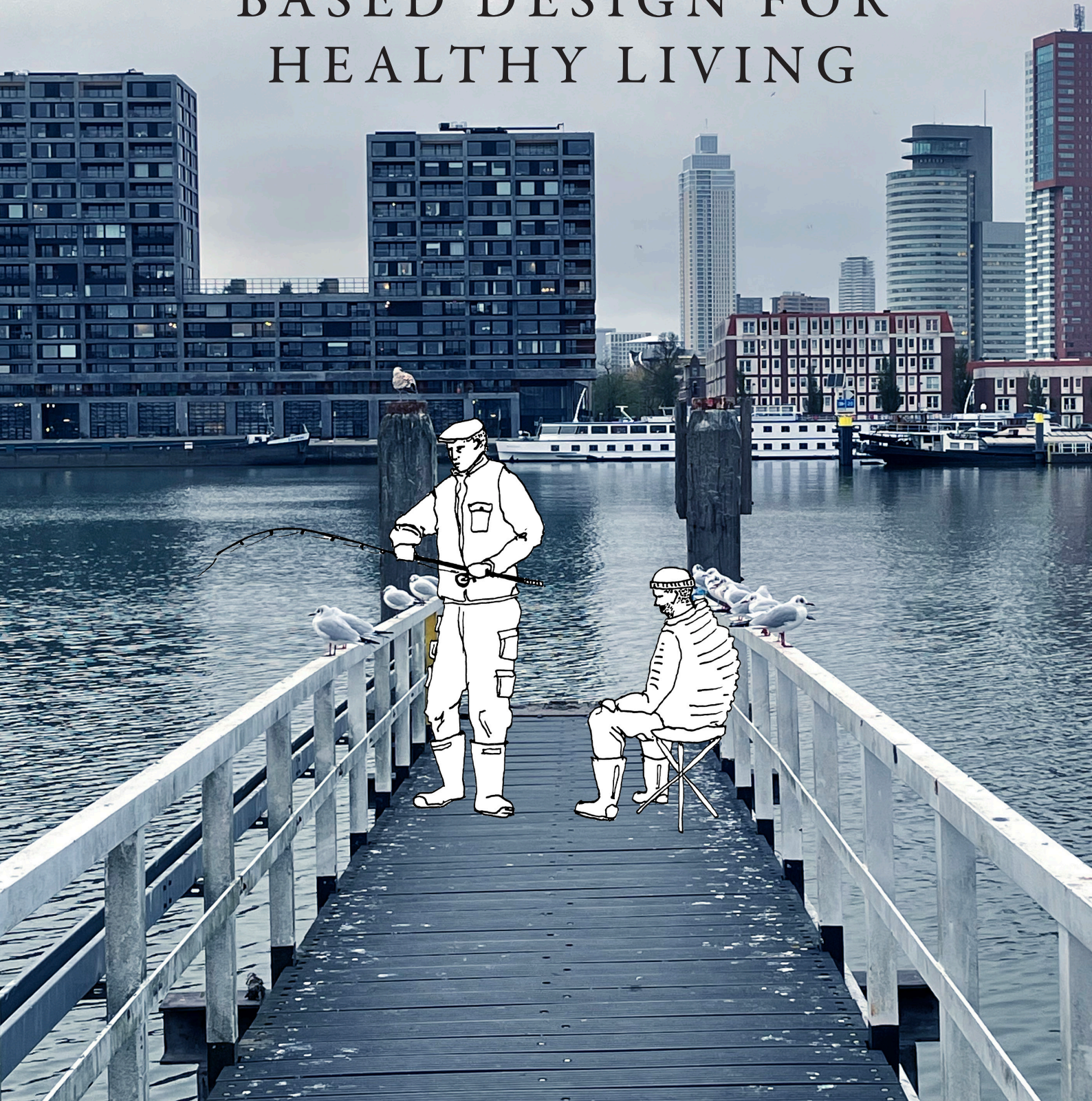


A HABIT

BASED DESIGN FOR HEALTHY LIVING



JAREMA KOZIELEWSKI

TU Delft, Faculty of Architecture

2025

MASTER THESIS

Jarema Kozielski, 6050034

TU Delft, Faculty of Architecture and the Built
Environment, Dwelling Department

AR3AD110 Dwelling Graduation Studio: Designing for
Care in an Inclusive Environment 2024/2025

Birgit Jurgenhake, Kobe Macco, Birgitte Hansen, Leo
Oorschot

20.01.2025

RESEARCH

Content Research

1. Introduction	8	3.3. Architectural means – analysis in the neighbourhood	39
1.1. Problem statement	11	4. Conclusions	46
1.2. Theoretical framework	13	What is “a habit-based design for a healthy living”?	48
1.3. Research gap	15	5. Discussion	50
1.4. Research goal	15	5.1. Policy	52
1.5. Site description and assigned building function	16	5.2. “Architecture without architects”	54
1.6. Research questions	17	5.3. The knowledge gap	54
1.7. Research methods	18	6. Design guidelines	56
1.8. Ethical concerns	20	6.1. Address existing habitual behaviours in the program	58
1.9. Research structure	20	6.2. Address noncommunicable diseases risk factors in the program	59
2. Theory	23	6.3. Ensuring participation	62
2.1. Architecture addressing habits	24	Bibliography	66
2.2. Architecture addressing health	25		
2.3. Architectural means prevalent in literature addressing health issues	27		
3. Data	34		
3.1. The role of the fieldwork in the research	36		
3.2. Existing and missing habits – a base for the program	36		

ABSTRACT

Habits profoundly physical and mental health, shaping behaviours such as exercise, diet, and social interaction. Noncommunicable diseases (NCDs), responsible for 70% of global deaths, are closely linked to unhealthy lifestyle factors, including inactivity, poor diet, and social isolation. Tarwewijk, a neighbourhood in Rotterdam, shows elevated rates of obesity, limited healthy food options, and challenges related to mental resilience and social interaction, making it an ideal context for exploring architectural strategies to promote healthy habits.

This research investigates the role of architectural design in fostering health-oriented behaviours, bridging gaps in the interdisciplinary understanding of habits, health, and architecture. Drawing from environmental psychology and anthropology, the study integrates theoretical insights from scholars like Jane Jacobs and Jan Gehl with the concept of “nudging” to subtly encourage healthier choices while addressing ethical considerations.

Fieldwork, case studies, and literature

reviews form the methodological backbone, uncovering existing and missing habits in Tarwewijk and assessing architectural influences on behaviour. Key findings highlight the significance of multifunctional spaces, accessibility, visibility, and the integration of transit and destination roles in designing for health. Case studies reveal the potential of adaptive spaces and spontaneous activity programming to promote participation.

The study culminates in design guidelines tailored to Tarwewijk, emphasizing:

1. Integration of local habits into programming.
2. Addressing NCD risk factors through the program
3. Ensuring participation by enhancing multifunctionality, transit-destination synergy, programming spontaneous activities and spatial visibility.

The research contributes to understanding how architecture can influence habitual behaviours, offering actionable design principles to reduce NCD risks and foster healthier communities.

Keywords

Habits, health, architecture, noncommunicable diseases, habitual behaviours, use, users, inhabitants, neighbourhood, Tarwewijk, Rotterdam, physical activity, social interactions, diet, nudge, ethnography, urbanism, inhabitants, participation, program.

To inhabit - to occupy as a place of settled residence or habitat; to live in DEFINITION OF INHABIT, 2024

A habit - a learned action that is performed with minimal cognitive effort LALLY & GARDNER, 2013, *a process by which a stimulus automatically generates an impulse towards action, based on learned stimulus-response associations* GARDNER, 2015, P. 280 .

The etymon for the word “habit” is the French “habiter”, which means “to inhabit”. The ties date back to the 12th century HABIT, V, 2023

1. Introduction





INTRODUCTION

Habits make up most of our lives, and their role cannot be overstated, which was a major psychological concern already in the XIX century (James, 1899). Research from the Department of Psychology, University of California, Berkeley show that habits influence all aspects of our physical and mental health - the frequency and intensity of our exercise, the timing and quality of our sleep, our dietary choices, and the nature and structure of our thoughts (Harvey et al., 2022). Behavioural scientists state that shifting habits frequently proves to be the best way of transforming unhealthy patterns into healthy ones (Wood & Neal, 2016).

1.1. Problem statement

1.1.1. NONCOMMUNICABLE DISEASES

According to recent research (Balwan & Kour, 2021; Senapati et al., 2015; Tabish, 2017), conducted amongst others by the Sher-i-Kashmir Institute of Medical Sciences in India, lifestyle diseases, also called noncommunicable diseases (NCD's), are responsible for over 70% of deaths worldwide recently (over 40 million people per year). The most popular are: cardiovascular disease (CVD), cancer, diabetes type two (D2T) and chronic respiratory disease (CRD). Typically, besides non-modifiable risk factors such as age or genetic predisposition and family history, they are caused by unhealthy habitual behaviour, maintained over long periods of time – years or sometimes decades. The main primary causes are: physical inactivity, unhealthy diet, smoking and alcohol abuse. In the Dutch context, the Centraal Bureau voor de Statistiek (CBS) and the Rijksinstituut voor Volksgezondheid en Milieu (National Institute for Public Health and the Environment, RIVM), established health indicators for each neighbourhood, characterizing the health level of the area (RIVM, 2022, 2024c). In the Lifestyle and Habits category (originally in Dutch *Leefstijl en Gewoonten*), two subcategories are additionally included – mental resilience and loneliness factors, relating to the social interactions or the lack thereof, and possibly resulting in such

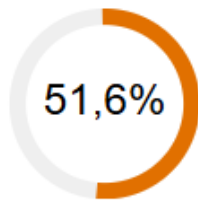
diseases as Alzheimer and dementia (Ren et al., 2023).

Summarizing, the modifiable causes of the above mentioned NCDs are mostly connected to habitual behaviour, the major risk factors being: physical inactivity, lack of social interactions, smoking, alcohol abuse and an unhealthy diet.

1.1.2. UNHEALTHY LIFESTYLE IN TARWEWIJK, ROTTERDAM

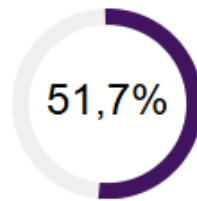
In Tarwewijk, Rotterdam South, where the research is conducted, statistics highlight that overweight and obesity are more prevalent than the Dutch and Rotterdam average. Although the level of physical activity in the area is comparable to the national average (RIVM, 2024c), there remains considerable room for improvement, with approximately half of the population not meeting recommended activity guidelines (Ministerie van Volksgezondheid, 2014; RIVM, 2024c). Furthermore, the prevalence of cycling as a mode of commuting is notably lower compared to other neighbourhoods.

The Netherlands



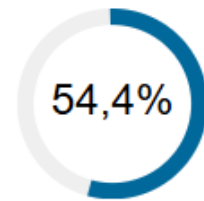
The Netherlands
Number of inhabitants
17,590,672

Local authority



Rotterdam
Number of inhabitants
655,468

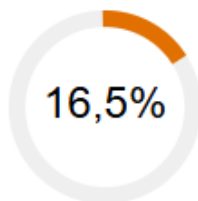
Neighbourhood



Wheat district
Number of inhabitants
12,400

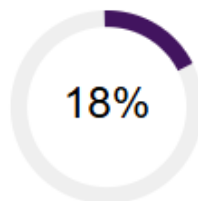
Obesity in Tarwewijk (blue, marked as Wheat district), as of 2022, 18 years and older (Overgewicht | Buurtatlas, 2024)

The Netherlands



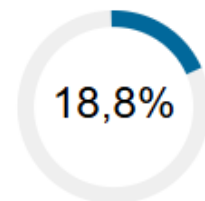
The Netherlands
Number of inhabitants
17,590,672

Local authority



Rotterdam
Number of inhabitants
655,468

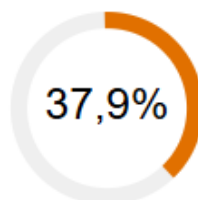
Neighbourhood



Wheat district
Number of inhabitants
12,400

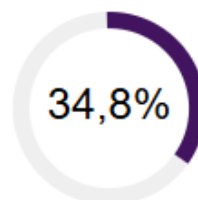
Severe obesity in Tarwewijk (blue, marked as Wheat district), as of 2022, 18 years and older (RIVM, 2024a)

The Netherlands



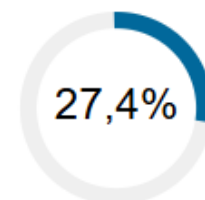
The Netherlands
Number of inhabitants
17,590,672

Local authority



Rotterdam
Number of inhabitants
655,468

Neighbourhood



Wheat district
Number of inhabitants
12,400

Cycling as commute in Tarwewijk (blue, marked as Wheat district), as of 2022, 18 years and older (RIVM, 2024b)

Statistics indicate challenges with mental resilience and loneliness in the neighbourhood (RIVM, 2022), highlighting a deficiency in social interactions. Preliminary interviews conducted by the members of the AR3AD110 Dwelling Graduation Studio: Designing for Care in an Inclusive Environment 2024/2025 with residents of the neighbourhood, revealed a lack of connectivity in specific areas and among certain groups (Jürgenhake et al., 2024, chapters 3.2. and 3.3.).

Although dietetic factors are not directly addressed by statistical data, the combination of higher-than-average obesity and overweight rates, alongside physical activity levels comparable to the Dutch average, suggests that dietary issues may be problematic in Tarwewijk (RIVM, 2024c). Currently, the neighbourhood offers limited food purchasing options, with only one supermarket, a few smaller shops, and a low number of restaurants (Jürgenhake et al., 2024, p. 96).

1.2. Theoretical framework

The central theme of this research is how the built environment affects the habitual behaviour. Consequently, it intersects not only with the fields of architecture and urbanism but also with healthcare, psychology, sociology, anthropology, and economics. The presented literature is serving as a foundational reference and as a context for positioning the findings.

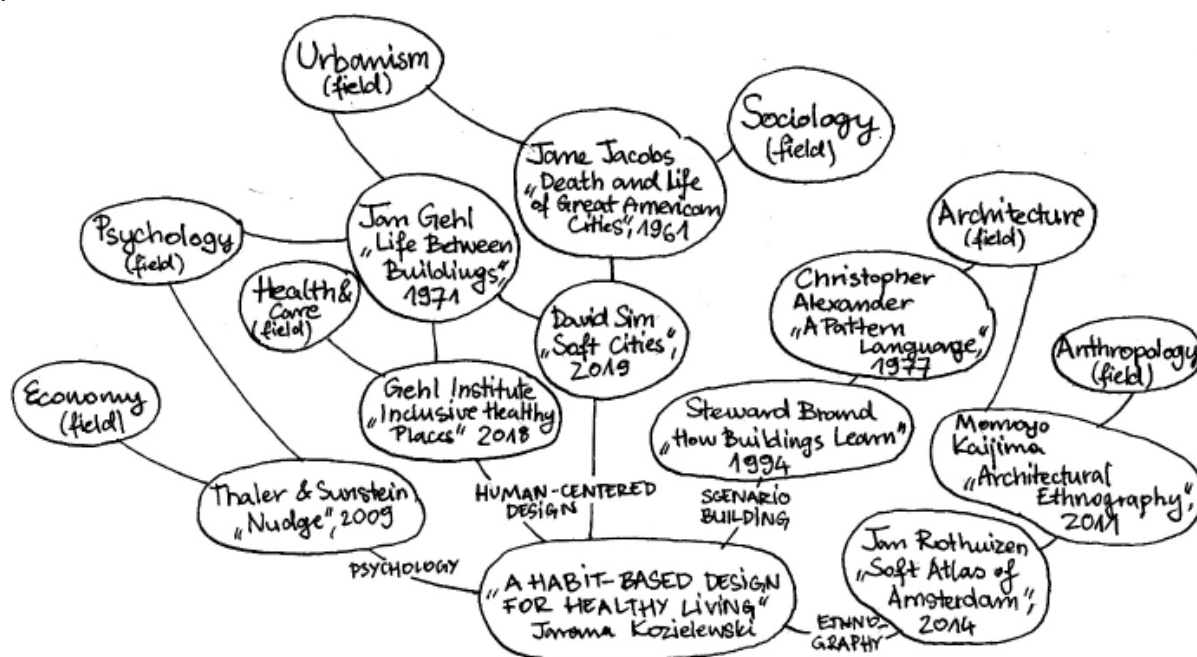


Figure 4. The academic context of the research

The connection between architecture and habitual behaviour has its origins in the study of vernacular architecture. Vienna modernist Adolf Loos, in essays such as "Ornament and Crime" (1913) and "Architecture" (1910), argued that architects should step back and allow greater emphasis on craftsmanship, as it more accurately reflects the practical needs of building users. This focus was later extended by Austrian American architect Bernard Rudofsky in "Architecture Without Architects" (1964) which explored untrained architectural practices worldwide. Subsequently, Amos Rapoport in "The Meaning of the Built environment" (1980) adopted an anthropological lens to examine how architecture reflects societal customs, emphasizing the meanings attributed to buildings by individuals and societies. More recently, Japan architect Momoyo Kaijima, currently based in ETH, Zurich, introduced the term "architectural ethnography" (2018), highlighting the interplay between architecture and ethnographic research, further bridging these fields of knowledge.

Scholars such as Jane Jacobs, an American urban activist and journalist, and Jan Gehl, a Danish architect and urbanist from the Royal Academy of fine arts, have emphasized enhancing the quality of urban spaces, making it support healthier communities (Gehl, 1971; Jacobs, 1961). Drawing from environmental psychology and sociology, they advocated for human centred design, staying in strong opposition to modernist urban planning, popular at the time. Their research was drawn further by the Gehl Institute (J. Gardner et al., 2018) establishing a framework for "Inclusive Healthy Places", an assessment of

quality of the urban tissue. In parallel David Sim, an architect working at the Gehl institute (2019) forms guidelines for urban planners, advocating "softening" the city, tailoring it to people's needs. The criticism from an architectural perspective is arguing whether the decision making processes discussed in these books are more related to policymaking than to architecture.

From the non-architectural perspective, economists drawing from environmental psychology Richard Thaler and Cass Sunstein introduced the term Nudging – favouring one of the presented options without restricting the freedom of choice (2008) which is something architects (here acting as choice architects) do unwillingly while creating alternatives for space use. The authors argue that this theory should be applied to influence users into making healthy choices. However, "Libertarian Paternalism" connected to nudging raise ethical questions about imposing the designer's will on users.

Influencing health and habits by architecture is a process that requires a multidisciplinary approach. It can be successful, if it centralizes the human experience and takes into account societal customs and existing habitual behaviours. However, the role of designers is debatable, as they may not be trained to answer raised questions, and policy making often proves to be more efficient.

1.3. Research gap

Although widely spoken of in various contexts, the theme of habitual behaviour is rarely mentioned directly in any of the publications constituting the spine of this thesis. Jane Jacobs speak about the “uses of neighbourhoods” (Jacobs, 1961) and Jan Gehl about the “public space and public life” interrelation (Gehl & Svarre, 2013). These are in many cases descriptions of regularly performed actions, which in this thesis are address to as “habitual behaviours” or “habits”. These terms are related to each other, and the interrelation is explored further in appendix 1 – definitions. Furthermore, the research introduces locality, as it focuses on Tarwewijk.

1.4. Research goal

This research aims to investigate how architectural objects, understood as stimuli in the habit formation process, influence the actions performed within their context. Furthermore, the research seeks to develop architectural scenarios that encourage healthy habit formation, fostering practices that lower the risk of developing non-communicable diseases at relatively early stages of life.

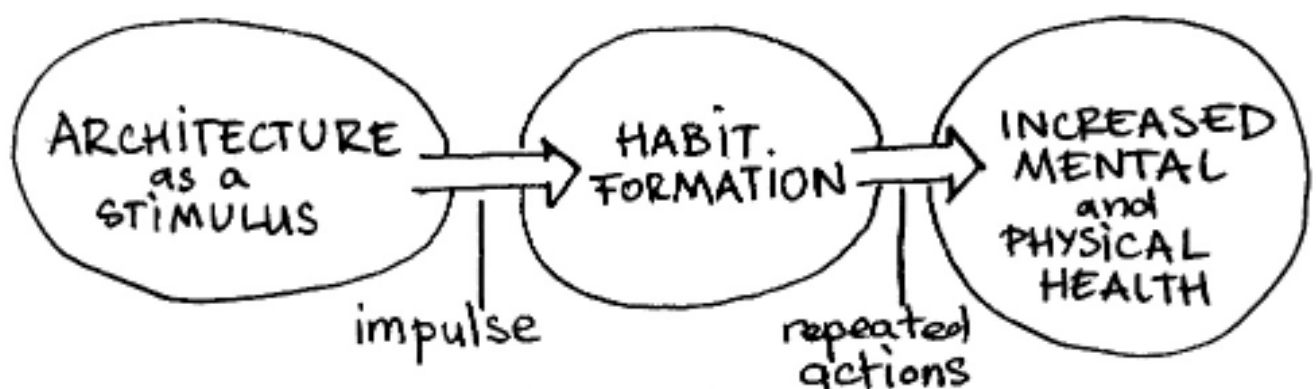


Figure 5. Architectural objects as stimuli

1.5. Site description and assigned building function

The exact site is currently occupied by an industrial building, on a harbour waterfront, and located near the Balkon aan de Maashaven park. A pedestrian bridge will most probably join Tarwewijk and Katendrecht in the future (Mecanoo, 2024; van de Velde, 2024), and the place will constitute an entrance to the neighbourhood, perfect for observing and shaping habitual urban behaviours. A more extended site analysis is provided in appendix (nr).

The specific assignment is to design a building addressing the needs of Tarwewijk related to health or care. The building resulting from this research will be mainly residential, with additional functions on the ground floor and the rooftop. It will accommodate a social mix, including current residents of the neighbourhood and newcomers. It will not be specifically designed for any particular demographic related to age or social and health status.



The site on a map of Tarwewijk.

1.6. Research questions

1.6.1. MAIN QUESTION:

How can an architectural design approach informed by frequent local habits and potential post occupancy habitual scenarios support the mental and physical health of the Tarwewijk inhabitants?

1.6.2. SUBQUESTIONS:

1. What is the relation between habitual behaviours and health?
2. What major health and care challenges in Tarwewijk can be addressed through architectural interventions?
3. What habits frequently practiced in Tarwewijk and around the Balkon aan de Maashaven are influenced by architecture and could significantly impact residents' health?
4. Following Jane Jacobs, Jan Gehl, the Gehl Institute and David Sim, what elements and characteristics of an urban environment foster healthy habits?
5. How can architectural nudging influence health habits responsibly?
6. What is the relation between the meaning attributed to architectural elements and the perceived circumstances in which a habitual action is performed?
7. How does layouts of dwellings and access system of a building affect habitual actions performed in it?



Photo (nr). Eye level view of the Balkon aan de Maashaven and the project site

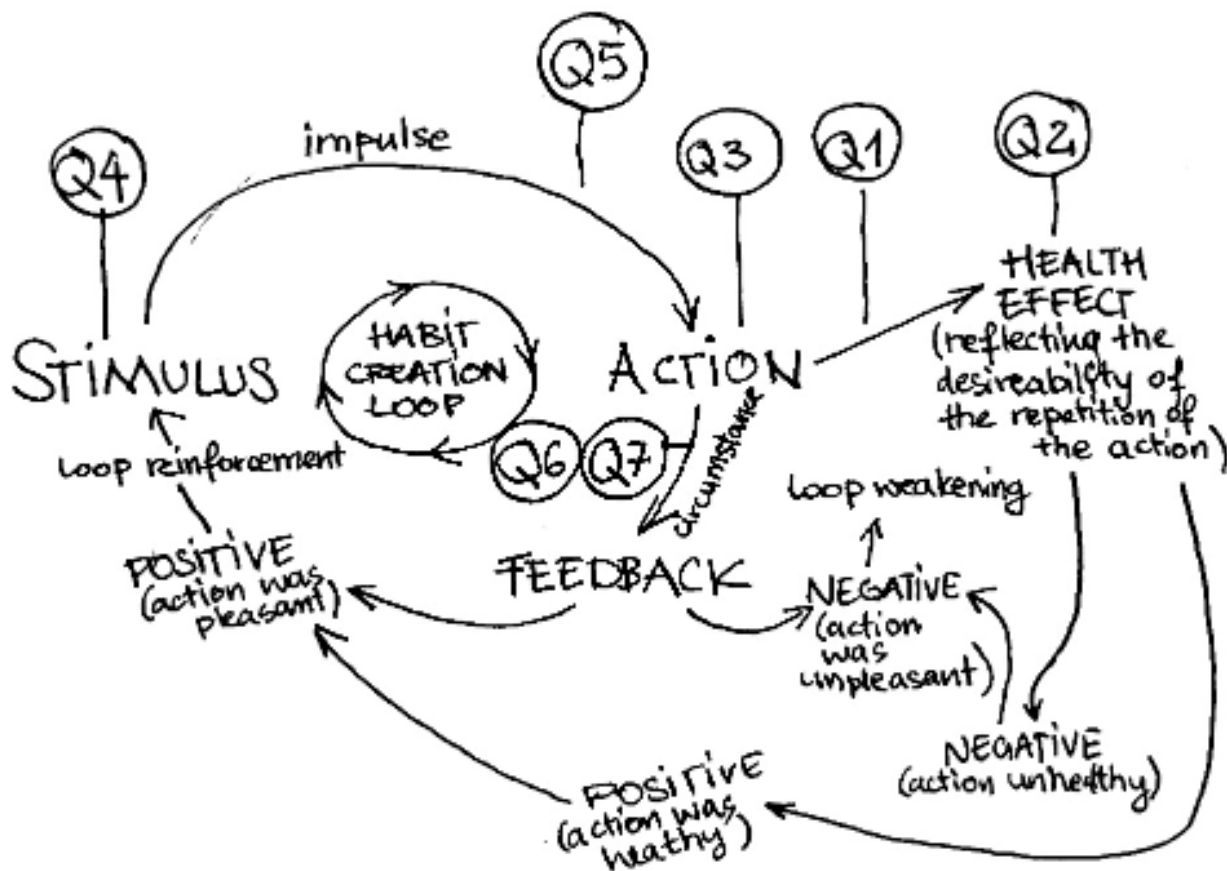


Figure 8. The relation of subquestions to the process of habit formation

1.7. Research methods

1.7.1. LITERATURE STUDIES - THEORY

The core of the literature studies come from the Theoretical Framework – crucially important to position this research in architectural academic knowledge. It serves as a reference point for the fieldwork – indicating which data is crucial for architectural design, how to collect it and how to organise it. It speaks directly

about the architectural means, especially those proposed to make places healthy and inclusive by Jan Gehl and David Sim, of which the relevance to the neighbourhood will be later evaluated during fieldwork in Tarwewijk. It serves to explore the connections between architecture and other fields of knowledge.

Additionally, literature provide recent

knowledge in healthcare and psychology, exploring the relation between health and habits. It also supply quantitative data about the neighbourhood, collected by government institutions (Gemeente Rotterdam, CBS).

1.7.2. DRAWING, MINDFUL PHYSICAL PRESENCE, MAPPING - FIELDWORK

Drawing is used to depict the use of space – both existing and designed – by architectural ethnographers such as Momoyo Kaijima (Kaijima et al., 2014), Jan Rothuizen (2014), or Nadia Nena (2023). Drawing along with mindful physical presence, permits to spend enough time at some place to experience it fully and start seeing repetitive patterns. As said by Featherstone, (1998) “the stroller is constantly invaded by new streams of experience and develops new perceptions as he moves through the urban landscape and crowds”. Such a psychogeographic approach (Ivry, 2023) is also advocated by Laurie Olin in “Sitting Still” (Angelone & Olin, 2024). A method complementary to the aforementioned ones is conducting a fieldwork diary, collecting all the raw observations in chronological order.

1.7.3. INTERVIEWS - FIELDWORK

Interviews are advocated by ethnographers as a method to see how interviewees – here Tarwewijk residents – are perceiving themselves (Lucas, 2016, chapter 6). During fieldwork in Tarwewijk they are partially conducted with the users of the places visited while drawing and observing. Information obtained this way is about health-related habits directly connected to the area closest project location. The character

of these encounters is spontaneous. Other interviews are conducted in a community centre in Tarwewijk – Take a Way, and in interviews at a stand near the Dirk van den Broek supermarket on Hellevoetstraat.



Conducting interviews at Hellevoetstraat

1.7.4. MAPPING - THEORY AND FIELDWORK

Mapping allows to join together information from interviews and drawing and create spatial relations to the performed habitual behaviours. It acts as a summary for the information obtained with during both theoretical, literature studies and fieldwork.

1.7.5. CASE STUDIES

Case studies will examine the typological aspects of selected elements, primarily in the private domain, to explore how architecture influences habits and health in both private and communal contexts, and complementing knowledge harder to obtain during fieldwork.

1.8. Ethical concerns

The research will adhere to the TU Delft Code of Conduct (Roeser & Copeland, 2020) and the guidelines of the TU Delft Human Research Ethics Committee (2024). Photographs taken will ensure anonymity. Participants credentials will not be collected during interviews. Informed consent will be obtained from all interview participants. Additionally, processing all data will ensure that participant identities remain untraceable.

1.9. Research structure

The research is divided into four main phases – preliminary research conducted by the whole group, summarized in a book entitled “Health and Care in the Tarwewijk” (Jürgehake et al., 2024) before design, and about design. These phases overlap methodologically and in time frames – as the results often mutually influence each other. The presented diagram organises the research in a chain of subsequent interdependent findings (figure 9.). The “Q” symbolises points where research questions are answered.



Figure 9. Research structure diagram

2. Theory





2.1. Architecture addressing habits

In this part, the research aims to explore how scholars from the architectural field of knowledge addressed the notion of habits in their work. As mentioned earlier, the word “habit” rarely appears, but words such as “use of space” and “users” is employed to speak about the same issues. The interrelation is further explained in appendix 1 – definitions.

2.1.1. THE IMPORTANCE OF ANALYSING EXISTING AND MISSING BEHAVIOURS

In the essay titled “Architectural Ethnography”, introducing the Japan exhibition at the 16. Biennale di Venezia, Momoyo Kaijima writes about her experience after the 2011 Tsunami in Japan. “We talked to village residents about the ways of life and the landscapes that had been washed away by the tsunami, and used the fragments of information collected in the interviews to make drawings that reconstituted these spaces”. The knowledge about habits of local communities was therefore used to match the architectural intervention to the needs of the residents.

Furthermore, analysing existing behaviours provides insight into how users engage with the current architectural context. Jan Gehl widely advocated to evaluate whether a space offers sufficient opportunities for activities fostering social interaction and the strengthening of communal ties, and proposes to repeat the analysis post-intervention to assess

the design’s effectiveness (J. Gardner et al., 2018; Gehl & Svarre, 2013) – which unfortunately in this research cannot be conducted as the project is hypothetical. Additionally, Jan Gehl and Birgitte Svarre argue that reflecting on the quality of performance, rather than solely its occurrence, is essential, and key aspects include whether activities were conducted freely or under constraints, out of obligation or by choice, as programmed or spontaneous, individually or collectively, and by whom (2013).

However, the existence of health guidelines of various type imply that not only it is important to analyse existing habitual behaviour, but also what is missing. In example - WHO recommends 75 to 150 minutes of intense physical activity or 150 minutes to 300 minutes moderate activity per week (WHO Guidelines on Physical Activity and Sedentary Behaviour, 2020), which implies that if someone is not meeting the requirements, we can speak about a missing habit of physical activity. Jane Jacobs also highlights it speaking about social safety and the “eyes on the street” phenomenon – where there is a lack of people maintaining contact with the street, safety drops, indicating a missing behaviour.

2.1.2. THE IMPORTANCE AND ROLE OF A PROGRAM

This relationship between program and behaviour is explored in the works of Jan Gehl, Jane Jacobs, and David Sim, who emphasize

the creation of environments that present opportunities for specific behaviours. Examples of quantitative studies show that these opportunities are directly affecting the use of a space – whether desirable or not:

- Jan Gehl, writing about public interactions, wonders if “the number of seats is doubled, do more people sit?” (Gehl & Svarre, 2013, p. 111), and conducting an experiment in which the number of people increased accordingly to the number of seats

- The inclusive healthy places framework proposes evaluate the “Presence of basic public space features and amenities that encourage lingering and physical activity, including: – children’s playground and/or features for play – seating, formal or informal – picnic tables – shade or sheltering structures – barbecues, etc..” (J. Gardner et al., 2018 p. 50).

- In car traffic – extra road capacity results in a greater overall volume of traffic, says study conducted by Transport Studies Unit, University of Oxford (Goodwin, 1996)

2.1.3. CONCLUSION

The analysis of existing and missing behaviours is essential to designing environments that align with community needs and promote desired activities. By studying how spaces are currently used and identifying gaps in behaviour, architects and planners can create interventions that encourage desired, healthier, habitual behaviours. Incorporating information about existing and missing behaviours in the architectural program can be a powerful tool for this.

2.2. Architecture addressing health

In this part, the research aims to explore how scholars from the architectural field of knowledge addressed the topic of health within the built environment.

2.2.1. INCREASING PUBLIC PARTICIPATION AS A GOAL

In the works of Jane Jacobs, Jan Gehl and David Sim, the importance of increasing participation in activities conducted in public and semi-public spaces to support societal health is considered of highest priority. The issue is often addressed in highly quantitative terms. The same principles seem to be guiding the CBS while reporting about the health situation in the neighbourhoods:

- “Transitory activities can be recorded simply by using a counter to count the number of pedestrians who walk selected stretches.” (Gehl & Svarre, 2013, p. 84)

- “Number of diverse groups hosting programs or events in the space over a defined period of time” – while analysing flexibility of spaces, (J. Gardner et al., 2018 p. 52)

- The CBS Buurtatlas in Rotterdam highlights health indicators (related to NCD’s) such as “number of people cycling to school or work” or “number of athletes” (RIVM, 2024c).

- “And third, the sidewalk must have users on it fairly continuously, both to add to the number of effective eyes on the street and to induce the people in buildings along the street to watch the sidewalks in sufficient numbers.” (Jacobs, 1961, p. 35)

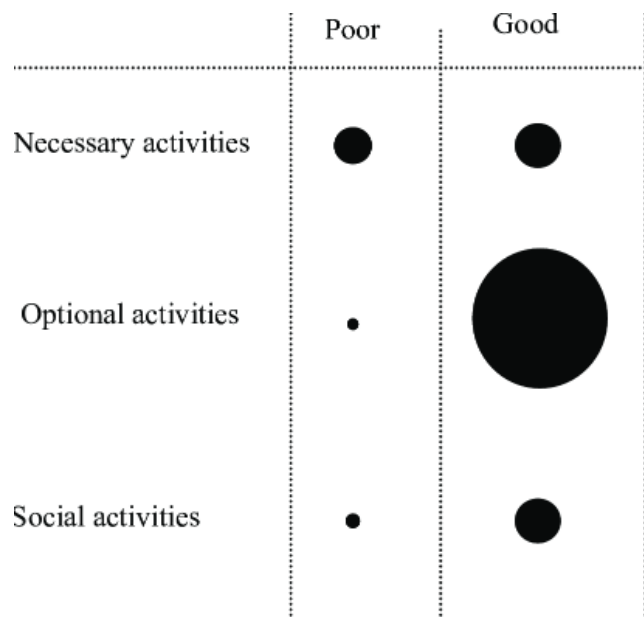
2.2.2. INCREASING THE DIVERSITY AND QUALITY OF PUBLIC AND COMMON SPACES AS A MEAN

The theoretical framework highlights that fostering greater public participation requires designing spaces that better accommodate the needs of the community, by creating opportunities and eliminating constraints. The needs for diversity and quality of certain architectural elements are often addressed quite directly in literature:

- "Walking speed and the amount of time spent staying can provide information about the quality of physical frameworks. It is often the case that people walk slower and stay longer in places relative to the qualities and pleasures offered." (Gehl & Svarre, 2013, p. 19), related in this research to the contrary of mentioned risk factors – physical activity and social interactions
- "Walkability and quality of the sidewalk and street experience" (J. Gardner et al., 2018, p. 51) – relating to physical activity.
- "The more successfully a city mingles everyday diversity of uses and users in its everyday streets, the more successfully, casually (and economically) its people thereby enliven and support well-located parks that can thus give back grace and delight to their neighbourhoods instead of vacuity." (Jacobs, 1961, p. 111) – about diversity, relating to social interactions.
- "At the same time, the new development can generate revenue to invest in improving the streetscape: higher quality paving to make for better pedestrian conditions" (Sim & Gehl, 2019, p. 131) – relating to physical activity.

Additionally, research suggest that a better quality of outdoor spaces fosters greater

engagement, including spontaneous social interactions unrelated to the necessary activities. This phenomenon is well-illustrated in Jan Gehl's "Life Between Buildings" (Gehl, 1971) chart.



Jan Gehl, "Life Between Buildings" (1971)

The notion of addressing dietary issues with architectural interventions is rooted in a similar principle – greater availability and variety of food options typically lead to better health outcomes, says research from the dietary field of knowledge (Drescher et al., 2007). In addition to diversity, there is an emphasis on the quality of available food, rather than solely its quantity. For instance, economists notice that fast food consumption is widely recognized as detrimental to health, necessitating efforts to reduce its prevalence (Currie et al., 2009). Conversely, researchers addressing obesity issues remark that full-service restaurants are generally reinforcing dietary diversity (Jia et al., 2021) and can promote social interactions, underscoring the need for their presence and growth.

2.2.3. CONCLUSIONS

The success of healthy places is measured often by the number of participants, and in order to increase it, architects are looking for diversity and quality of the designed place. An increase in quality of an element repeatedly proves to enhance the number of users and positively affect potential health outcomes. The health outcomes are related to habitual behaviours, such as cycling as a commute mode, lingering in parks or enriching the diet. However, the themes of quality and diversity of public and common spaces is quite a complicated one, as architectural means usually address it implicitly. Quality and diversity can be enhanced by employing various strategies.

2.3. Architectural means prevalent in literature addressing health issues

While the previous chapters addressed what to design (existing and missing habits, and their connection to a well developed program), and what are the main goals from the perspective of architecture addressing health – increasing public participation by enhancing the diversity and quality of spaces – this chapter explores architectural means employed to do so. The selection of topics is based on prevalence in literature and fieldwork observations.

2.3.1. MULTIFUNCTIONALITY

As David Sim says in “Soft City” (2019, p. 12) “The thesis of this book comes down to a simple equation: Density x Diversity = Proximity. The idea is that the fusion of density and diversity increases the likelihood or the possibility of useful things, places, and people being closer to you.” – thus increasing chance for social interactions and walkability, directly influencing physical movement.

At the dwelling level, multifunctionality can be exemplified by the integration of the living room and kitchen. As shown by Sal Moslehian et al. (2023), a small opening in the wall separating the two, or even combining them into a single area, encourages interactions between the person cooking and the one relaxing nearby. The

research suggests, although without conclusive evidence, that such designs may contribute to a greater number of healthy meals being prepared at home.

2.3.2. ACCESSIBILITY AND VISIBILITY

The notion of accessibility is prevalent throughout the literature, appearing not only in guidelines for the creation of public spaces but also in those concerning universal design and inclusivity (Buckner et al., 2019; Goldsmith, 2007; Kowalski, 2018). It is also a key element in the works of Jan Gehl (J. Gardner et al., 2018; Gehl & Svarre, 2013) and David Sim (2019). Accessibility has become so widely accepted as important that it now represents both an academic and practical consensus, regarded as a fundamental principle in design.

Referring to the nudge theory (Thaler & Sunstein, 2008), both accessibility and visibility are critical factors in facilitating healthy choices. In the introduction to "Nudge", it is exemplified by a situation where the display of products in a school setting influences the choices children make. Research conducted by dietitians highlight that similar principles applies broadly to product placement in supermarkets (Shaw et al., 2020).



Bellagio, shops at eye level despite constraints (Town - Stairs - Picture of Bellagio, Lake Como - Tripadvisor, 2024)

In architecture, similar principles apply – David Sim (Sim & Gehl, 2019, p. 55) showcases shop owners in Bellagio, Italy, keeping their expositions at eye level despite constraints, knowing that it will increase their income.

Thaler and Sunstein (2008, part I) contrasts human behaviour with the rational "Econ" model, emphasizing that individuals are more likely to choose options with immediate, visible benefits and minimal short-term costs, even if the alternative offers greater long-term rewards. This suggests that whenever the goal is to encourage participation – whether in private or public spaces – efforts must focus not only on reducing actual costs by enhancing accessibility but also on clearly highlighting the immediate benefits. The activity must appear simple and convenient to perform.

Finally, visibility in architecture aligns with nudge theory through the demonstration effect—showing someone engaging in a particular activity can effectively encourage others to follow suit. This concept is exemplified by the case of Texas residents beginning to collect litter after the state's primary football team endorsed the initiative in a commercial – by portraying litter collection as desirable and performed by others, participation increased (Thaler & Sunstein, 2008). Architecture can expose certain behaviour, making it visible to others and nudging them to follow.

2.3.3. TRANSIT AND DESTINATION

A model in which the street, naturally acting as a transit space is hosting functions letting it be a destination as well, is proposed in the literature, notably by David Sim in "Soft City" (2019). The housing block with public functions on the ground floor directly addresses these issues. This dual function enables users to accomplish multiple tasks without having to travel far, aligning with the goal outlined in the "Getting About and Getting On" chapter. He argues: "In this way, there is a direct and dynamic connection between buildings and infrastructure, between the static world and the mobile world, between the private world and the public, between individual households and the larger urban population," where the "static" represents destinations, and the "dynamic" – transit functions.

While describing the importance of the multifunctionality of neighbourhoods, Jane Jacobs cites Joseph Guess (1961 p. 96) , describing a public park's daily ballet, in which the mentioned uses are indeed a mix of transit and destination.



A corner bar facing a busy street in Rotterdam, Nieuwe Westen, illustrating David Sim's principle

"First, a few early-bird walkers who live beside the park take brisk strolls [destination]. They are shortly joined, and followed, by residents who cross the park on their way to work out of the district [transit]. Next come people from outside the district, crossing the park on their way to work within the neighbourhood [transit]. Soon after these people have left the square the errand-goers start to come through [transit], many of them lingering [destination], and in mid-morning mothers and small children come in [destination], along with an increasing number of shoppers [destination]." The context of this observation in the book is that the buildings around the park have functions diverse enough to host the social mix of workers, errand-goers and residents, which shows that the principle of transit and destination is working best in a multifunctional environment.

2.3.4. PROGRAMMING SPONTANEOUS BEHAVIOUR

David Sim suggests that leaving room for the spontaneous adaptations and behaviours in buildings is of primary importance. An opportunity for providing such spaces within a building lies at the ground floor level, such as in an inner courtyard, a similarly enclosed, private space, or a place at the front (2019, p. 165). The crucial aspect is to ensure that the human scale is either preserved or at least made possible – through features like sheds, outdoor furniture, or shaping the façade to facilitate everyday life. This approach is showcased in the Bo01 housing exposition in Malmö in Sweden, designed by Renzo Piano Building Workshop and Kohlbecker, where building blocks are designed to accommodate a variety of semi-enclosed spaces, the character of which depends entirely on the residents. The key elements here include the enclosure, which

offers privacy and protection from the weather, and the appropriate scale, which creates a sense of intimacy (Sim & Gehl, 2019, p. 180).

A comparable example from practice can be found in typical Dutch housing blocks from the early 20th century. In this case, the courtyard is divided into small private spaces, yet the principle remains as though it were public, with the choice of activities in each private garden left entirely to the residents. Furthermore, as noted in “Soft City”, rooftops offer similar opportunities to courtyards, and hallways and staircases also can play a vital role. In the Dutch architectural practice, context it is also visible that such spaces were left at the fronts of houses, directly on the street, which also aligns with Sim’s observations.



Bo01, spaces ensuring a variety of options for adaptations. RPBW, Kohlbecker. (Urbanitarian, n.d.)



10-15 cm (4-6 inches)

In as little as 10-15 cm (approximately 4-6 inches) along the edge of a building, there is space for a row of plant pots, an ashtray to be left out, or a place for a cat to perch undisturbed.



15-50 cm (6-20 inches)

With 15-50 cm (approximately 6-20 inches), there is room for bigger potted plants, a parked bike, and perhaps a narrow bench.



50-90 cm (20-35 inches)

At 50-90 cm (20-35 inches), there may be space for a little awning or small overhang. This offers protection from the elements and gives you a little buffer while coming and going. This edge zone might be enough that you leave the door ajar, and perhaps you leave a little chair outside.



90-150 cm (35-60 inches)

At 90-150 cm (35-60 inches), you can have a planting zone, a small table and a couple of chairs, space to park the pram or stroller sideways, or a couple of bikes.



150-180 cm (60-70 inches)

At 150-180 cm (60-70 inches), you may be able to have a table that you can sit fully around, or a chaise lounge. The more supports to comfort you can fit in, the more likely you are to spend time outdoors and socialize with your neighbors.

David Sim's scheme illustrating space for spontaneous adaptations at the front along with possibilities it creates. (Sim & Gehl, 2019, p. 165)



At the dwelling level, Sophie Delhaye proposes a plan for social housing apartments based on five identical rooms. The building is constructed using a module of 3.6 x 3.6 meters, with each room designed to these dimensions. As demonstrated by the architect, there are numerous possibilities for organising the layout and character of the rooms, allowing residents to choose how they want to use and inhabit the space, thus enabling them to shape their own behaviours within the apartment.

Inside of an early 20th century Dutch housing block, The Hague. The space between buildings is adapted in a bottom-up manner.

The adaptable dwelling model proposed by Sophie Delhaye.
(Gallery of Unité(s) Experimental Housing / Sophie Delhay Architecture - 40, n.d.)

Exemples d'appropriation possibles



An
exemplification
of the
above from
Katendrecht



3. Data





3.1. The role of the fieldwork in the research

The data collected through fieldwork and desk research serves two distinct purposes, each corresponding to specific findings from theory.

The first purpose relates to chapter 2.1. Raw data derived from observations, interviews, and statistical analysis is utilized to identify existing and absent habitual behaviours in the neighbourhood. This component, termed “Existing and Missing Habits – A Base for the Program” ensures the program effectively supports desirable behaviours and aligns with the community’s current needs. Insights into missing habits, which cannot be observed directly, are derived from interviews and statistical data.

The second purpose focuses on architectural strategies identified in chapters 2.2. and 2.3. that can enhance participation and encourage healthy behaviours—whether related to diet, physical activity, or social interactions. The neighbourhood serves as an experimental setting to assess the applicability of these strategies. This component is referred to as “Architectural Means – Analysis in the Neighbourhood,”.

3.2. Existing and missing habits – a base for the program

The habits prevalent in the neighbourhood are: Feeding birds (BadM); Fishing (BadM); Watching the view (BadM); Exercising at an outdoor gym (BadM); Linger in café in the restaurants; Shopping for groceries; Chatting on the sidewalk; Helping with legal matters; Cooking together (in community); Cycling; Playing basketball or football; Playground playtime; Dog walking; Casual meetings; Community meetings; Strolling or walking. More information about them can be found in appendix two.



Example of illustration of habitual behaviour in the neighbourhood – chatting on the sidewalk (Appendix 2)

The first four habitual behaviours (denoted as BadM in the list above) are directly linked to the project's site and were observed in the Balkon aan de Maashaven park. The park is primarily used by people seeking a place to unwind, with some visitors traveling significant distances (up to 20 minutes on foot) specifically to reach it. This includes visitors from neighbouring areas such as Katendrecht. Additionally, some people displayed emotional attachment to the park, evidenced by their repeated visits. However, interviewees noted that during summer nights, the park becomes a gathering space for people consuming drugs and alcohol, raising concerns about safety. (Appendix 2, Fieldwork Diary)

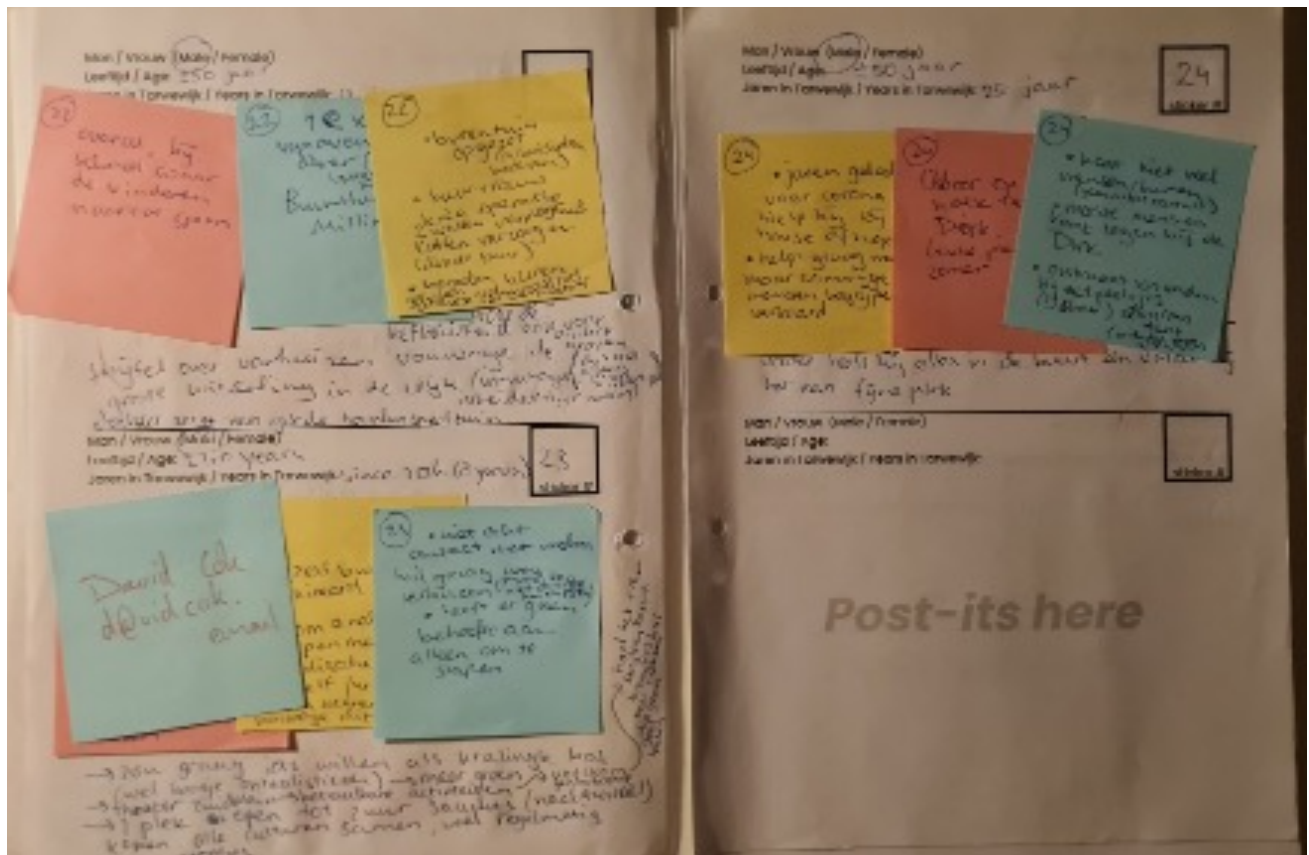


A person unwinding at the Balkon aan de Maashaven

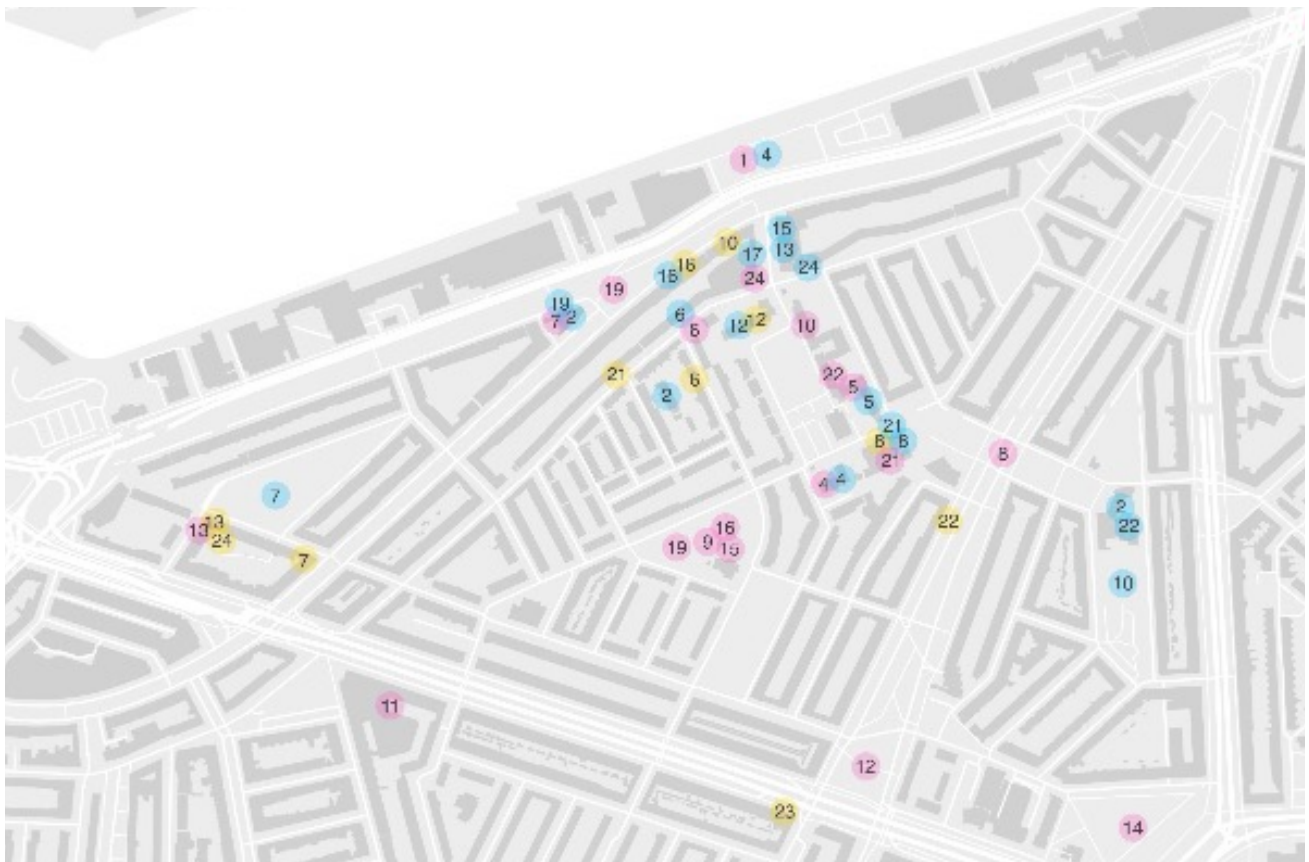
The interviews conducted at Hellevoetstraat were answering three questions - Where do you feel at home? - Where do you help people? - Where do you meet people? - respectively marked with colours red, yellow and blue. The answers, along with qualitative assessments, highlighted areas in the neighbourhood with most social activities - although the results might be biased because they correlate with the place we conducted interviews. The most mentioned were: Hellevoetstraat, a school on Gaesbeekstraat, a playground at Blankenburgstraat, a Turkish community Centre at Wolphaertsbocht, and a Christian organisation House of Hope.

The activities that were present, but still underrepresented in the neighbourhood were (RIVM, 2024c, appendix two): cycling (especially as a commute mode); Eating in restaurants or café; Interactions with strangers.

In addition to the absence of certain behaviours, interviewees frequently expressed a lack of emotional connection to the neighbourhood, accompanied by concerns regarding safety. With limited opportunities to linger or gather, residents often lack spaces where they can feel "at home." This issue is particularly pronounced among high school and early university-aged youth. While the needs of children are addressed through various playgrounds located throughout the area, there is a significant shortage of indoor cultural facilities or distinctive outdoor meeting spaces for other age groups. Besides outdoor sports facilities, the neighbourhood lacks spaces that can accommodate spontaneous activities or foster a sense of community. (Appendix 2)



Categorising information from interviews



The mapped answers, highlighting areas of activity in the neighbourhood.

3.3. Architectural means – analysis in the neighbourhood

3.3.1. MULTIFUNCTIONALITY

The dog park at Zwartewaalsestraat despite its aesthetic appeal – featuring old, almost monumental trees and a sunlit clearing – remained largely unused (15.11.2024, 16:50, Zwartewaalsestraat). The park was observed being used exclusively for its intended purpose—allowing dogs to roam freely without a leash. The presence of a small perimeter fence, absence of seating, and lack of accessible pathways discouraged alternative uses. Although situated in a location where people frequently pass by while engaging in various activities, such as shopping at Dirk or picking up children from school, the park's limited function appeared to contribute to its lack of use.



Photo (unnumbered) The Dog Park at Zwartewaalsestraat

Conversely, areas such as the Hellevoetstraat near the Dirk van den Broek supermarket demonstrate a greater diversity of functions. This space accommodates a supermarket, residential dwellings, eateries, smaller grocery stores, and workspaces, including garages. Additionally, it borders a school front yard and serves as a transit route. The area remains consistently active throughout the day, standing in stark contrast to the quieter parts of the neighbourhood (12.11.2024, 11:39; 14:44; 14.11.2024, 16:35; 15.11.2024, 17:37, Hellevoetstraat).

Photo (nr) Hellevoetstraat in the evening, the well-lit supermarket topped by housing, presenting at least medium levels of activity throughout the day





Photo (nr) Hellevoetstraat in the evening, the commerce strip and gallery housing building forming a functional diversity

As not all parts of the neighbourhood can be designated as commercial areas, a balanced example is the Kaappark, a park with a playground in Katendrecht, offering diverse functions. The space includes sports facilities frequently used by school-aged children, areas suitable for strolling, and sections of greenery spacious enough to allow dogs to roam without concern (14.11.2024, 12:27, Kaappark in Katendrecht). The observed flow of people was low, but constant.

At Hellevoetstraat, in addition to engaging in activities directly related to the provided functions, people were frequently observed standing and conversing – whether in front of the school, garages, or local shops especially in the area near Hellevoetstraat and the Dirk van den Broek supermarket (14.11.2024, 14:49, Zwartewaalstraat).



Kaappark, Katendrecht



Photo (unnumbered) People chatting as a result of public functions concentration



Photo (unnumbered) People sitting at an ice cream parlour in Hellevoetstraat



Photo (unnumbered) Fence around a park at Blankenburgstraat

3.3.2. ACCESSIBILITY, VISIBILITY

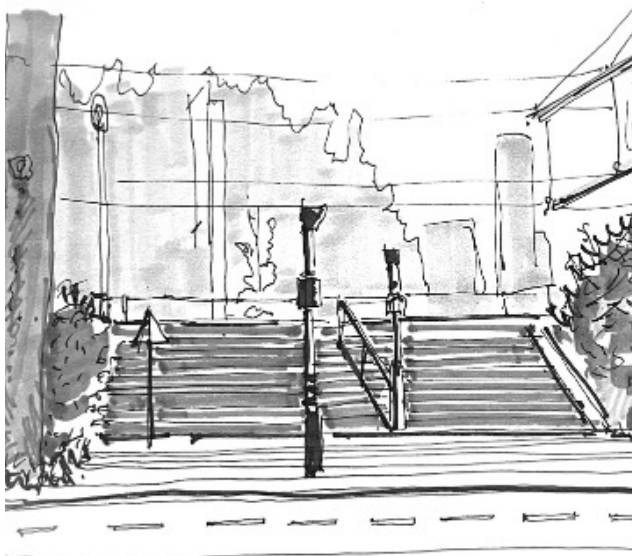
In Tarwewijk, accessibility remains obstructed in several areas, sometimes significantly. A primary example is the Balkon aan de Maashaven, where accessing the space from nearby residences often requires crossing two roads, a tramline, and navigating stairs along the dike. For residents of Hellevoetstraat, the closest wheelchair-accessible ramp is several hundred meters away, rendering the space nearly unusable for some. Another example is the playground at Blankenburgstraat, which is frequently closed to residents. Surrounded by fencing with a single entry point, the park becomes effectively distant for those living on the opposite side. As a result, the participation in public life in the playground is low, similarly to Balkon aan de Maashaven.



Photo (unnumbered) Road separating the Balkon aan de Maashaven from the rest of the neighbourhood (accessibility, visibility)

The concept of visibility is crucial, as illustrated by two stories from interviews during our research. In one, a man was unaware of a nearby gym due to an obstructed view. In another, a community kitchen in Millinxbuurt remained underused because its presence and location were poorly communicated. This highlights how limited visibility and information can hinder

9/12/11, 14
near Dijk

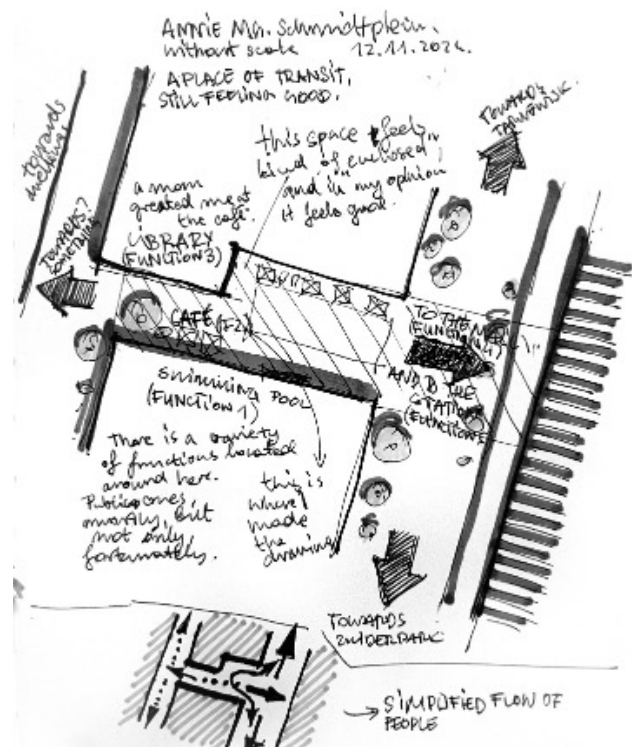


Drawing (unnumbered) The dijk from the perspective of Hellevoetstraat

participation in public life.

3.3.3. MIXING TRANSIT AND DESTINATION

A representative transit space is Annie M.G. Schmidtplein, near Zuidplein. "There's always a lot of people there – pedestrian passing by broadly from the bus station and the nearby mall" (observation, 12.11.2024). The square works like a transit space because the large majority of the flow of people is not headed there but to the near Zuidplein mall, and to the public communication node located nearby. When I was there I always observed a lot of people, but very few lingering. The flow of people was very defined with clear directions.

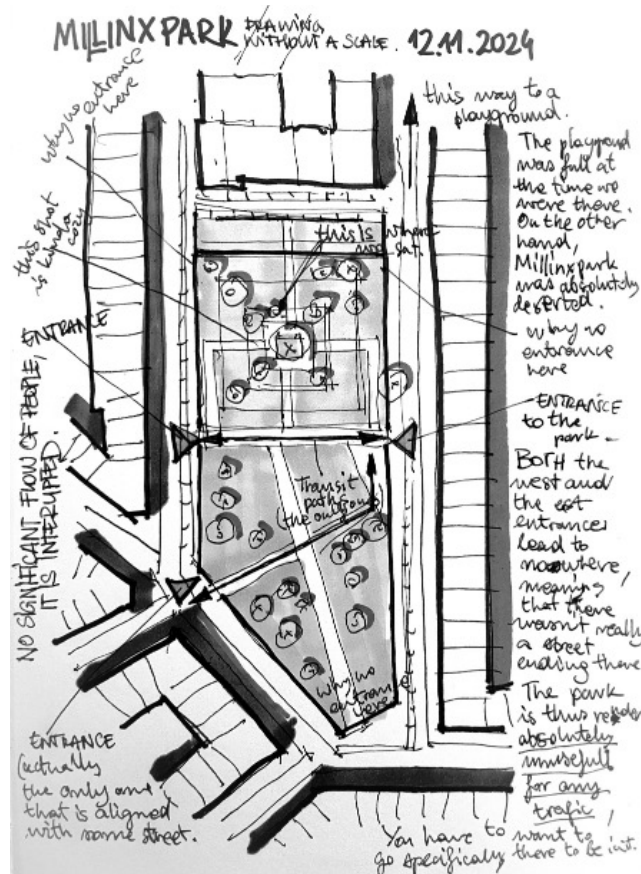


Map (nr) Annie M.G. Schmidtplein, functioning as a transit space between the mall and station and the neighbourhood



Drawing (nr) Annie M.G. Schmidtplein, view from a café table. Besides us, other people came there occasionally as well

A representative space fulfilling only destination roles is the Millinpark. Transit was rendered very hard there by the fences around the park. There are only 3 entrances, placed in a way that does not facilitate anyone's commuting route. This results in a situation where only the people who wanted to linger in the park and not just go through it are invited to use it.



Map (number) Millinpark, a space where traffic is restricted due to misplaced entrances and fences



Drawing (number) Millinpark, perspective. Very pleasant, much underused – rarely anyone there

A place in the neighbourhood which mixes both the qualities of transit and destination is the Hellevoetstraat near the Dirk van den Broek area, where a substantial part of all commerce activities in the neighbourhood is located. It serves as a destination for those who want to make use of these amenities - the supermarkets, the hairdresser, the fish parlour, the ice cream parlour, a more local groceries shop etc.. Simultaneously, it is a street and as such it facilitates transit.

This results in a situation where the Annie M.G. Schmidtplein is frequently used, but few people stay, the Millinpark and the Balkon aan de Maashaven are underused despite their potential, and the seemingly unremarkable Hellevoetstraat is always full of people.



One of the most interesting features in the park is the landing bridge for boats navigating the harbour. While its primary function is to accommodate boats, which is a “programmed” behaviour (12.11.2024, 12:16, Balkon aan de Maashaven), during my observations, it was also used for spontaneous activities like fishing (15.11.2024, 16:40, Balkon aan de Maashaven). Additionally, in another part of the neighbourhood, a ping-pong table that was frequently used as a meeting spot for local youth led to disturbances reported by residents. When the table was removed, the gatherings shifted to other areas. (Jürgenhake et al., 2024).



Photo (nr) and (nr) The outdoor gym in the Balkon aan de Maashaven park, with very programmed ways of use

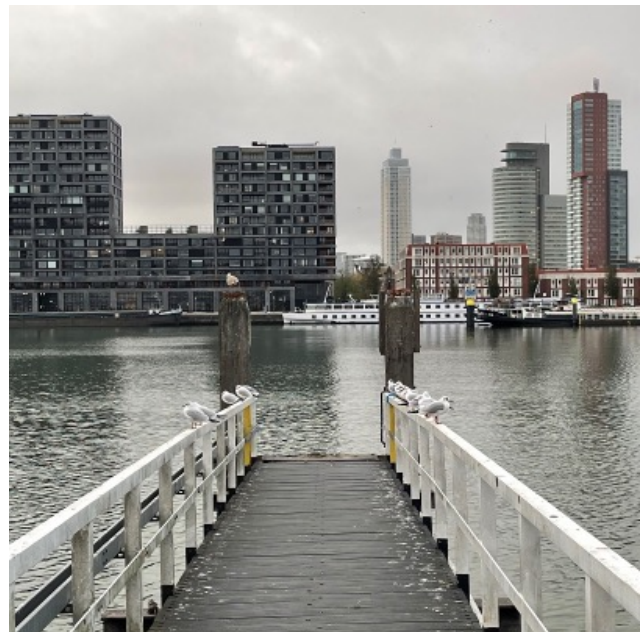


Photo nr Landing bridge at the Balkon aan de Maashaven, also used for fishing

4. Conclusions





What is “a habit-based design for a healthy living”?

The interplay between habits, health, and architecture forms a dynamic system that necessitates a multidisciplinary approach for comprehensive examination. As highlighted in the theoretical section of this research, these elements, while interconnected, have rarely been analysed in conjunction. Instead, the architecture-habits relation has often been explored through an anthropological perspective. The architecture-health relation, typically oriented toward the needs of communities rather than individuals, frequently incorporates insights from environmental psychology and sociology.

Based on the findings of the research, the process can be conceptualized and structured as illustrated in the accompanying schematic representation.

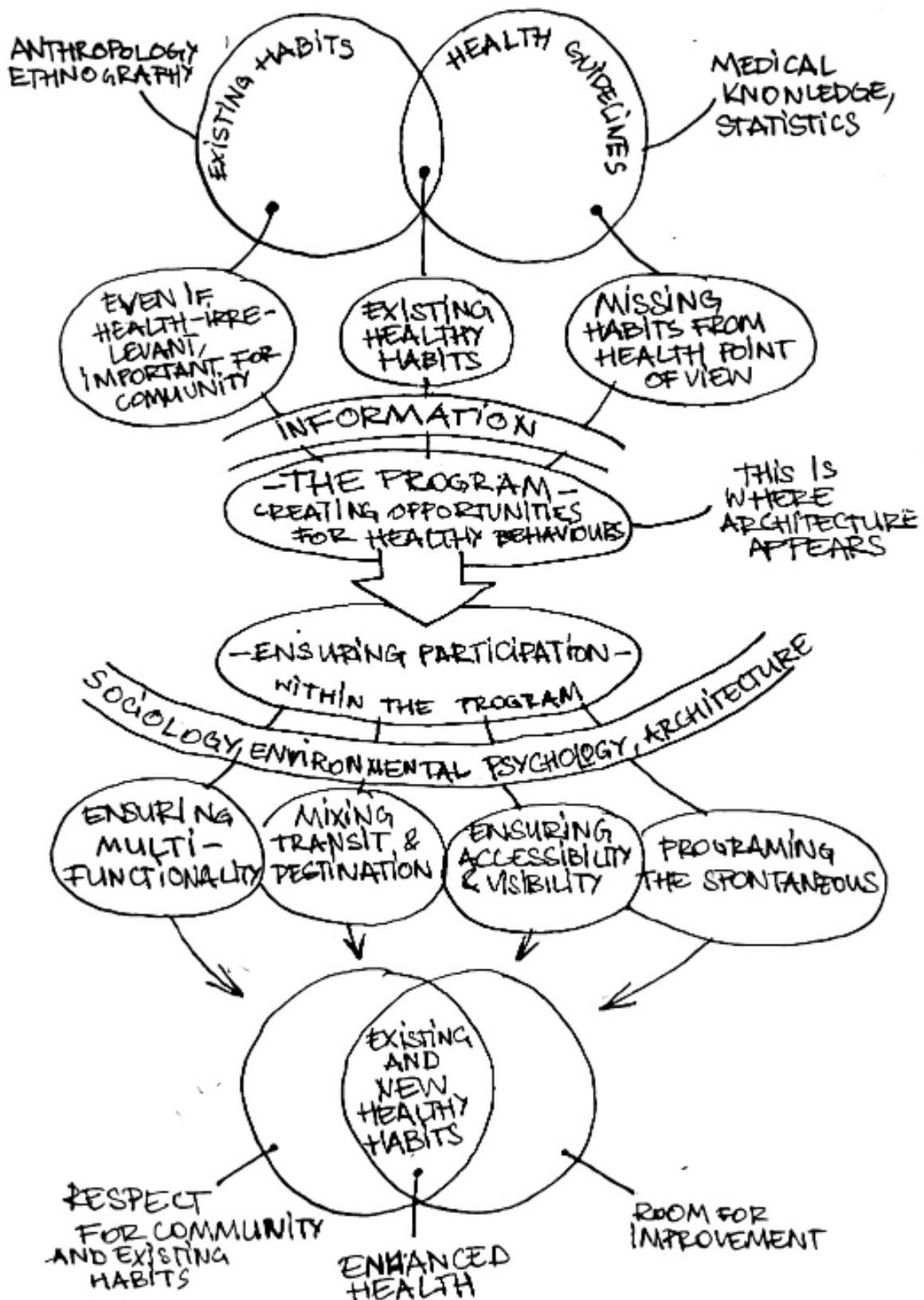
As a starting point, it is essential to analyse existing habits – using methods developed by anthropologists and ethnographers – and health guidelines that the project aims to address – in this research, those related to enhancing social interactions, promoting physical activity, and improving dietary quality. Understanding existing habits not only provides a greater knowledge about habitual behaviours in the addressed community – in this research, Tarwewijk, but also enables a comparison with established guidelines, thereby identifying gaps and areas for

improvement. This information is then utilized to develop a program that fundamentally facilitates specific behaviours. It is crucial that the program is tailored to align with both the community's characteristics and its health-related needs.

Subsequently, it is essential to ensure active participation in the program. Higher participation encourages more physical activity, foster social interactions, and positively influence dietary habits, particularly when diet-related elements are integrated into the program. Drawing on insights from environmental psychology and sociology, architects can enhance participation by improving the quality and diversity of spaces. This involves fostering multifunctionality, ensuring accessibility and visibility, integrating transit with destination spaces, and accommodating spontaneous activities unrelated directly to the program. The research confirms that these architectural strategies are applicable in Tarwewijk.

The supposed outcome is a space tailored to the community, that effectively encourages healthy habitual behaviours through thoughtful design, that nudges users toward healthier choices, while achieving high participation rates.

A HABIT-BASED DESIGN FOR HEALTHY LIVING



A Habit-Based Design for Healthy Living – conceptual scheme

5. Discussion





While the primary focus of this research has been on how architects can leverage tools and insights from other disciplines to address habits and health in their designs, this section aims to present a critical discussion of that approach.

5.1. Policy

Examples from the theoretical framework reveal that habitual behaviour and associated health outcomes are often more effectively addressed by policymakers than by architects. For instance, Jane Jacobs, in “The Death and Life of Great American Cities”, introduced the principle that buildings within a block should be constructed at different times to ensure a mix of affordability and to prevent simultaneous degradation of the entire area. However, such decisions typically lie outside the purview of architects. When architects receive a commission, the timing of a building’s construction is rarely within their control.

The significance of policy is also evident in the “Inclusive Healthy Places” Framework developed by the Gehl Institute. Subcategories, such as “Ongoing Investments in Public Spaces”, are explicitly aimed at municipalities and policymakers rather than architects. Similarly,

when attempting to construct our own framework for analysing health conditions in Tarwewijk, aspects like the “Representation of Local Stakeholders” proved difficult to conceptualize or measure effectively. Consequently, such considerations were absent from the framework we created.

Policy also encompasses a broader range of topics than architecture can address. For instance, as published by the Annals of Agricultural and Environmental Medicine in Poland, the reduction in tobacco use – a decline observed over the past few years due to targeted campaigns and regulations – is a clear example of mitigating unhealthy habitual behaviour with policy (Zatoński et al., 2012). This success, however, is largely attributed to policy interventions, with architecture playing a minimal, if any, role in this change.



Figure (number). Inclusive Healthy Places framework (J. Gardner et al., 2018)

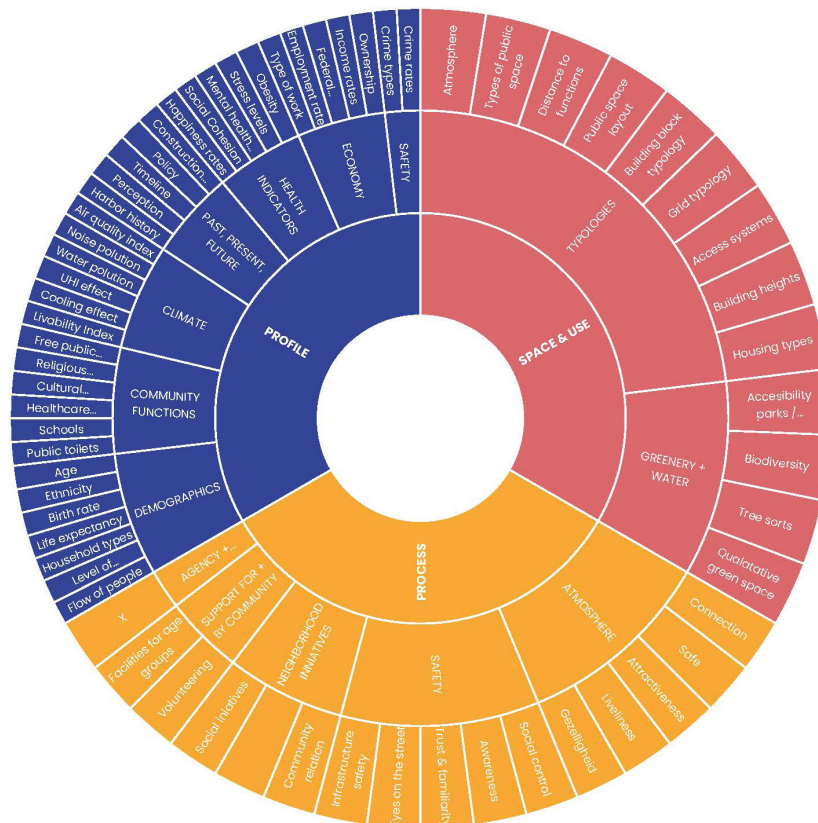


Figure (number). Framework established by the Studio

5.2. “Architecture without architects”

The theoretical framework also highlights voices advocating for self-made, vernacular or non-pedigreed architecture, emphasizing that craftsmen are often better equipped to address the everyday needs of users. Adolf Loos in the “Architecture” (1910) essay writes “His intention was to erect a house for himself and his family, or for his animals, and that is what he has done. Just as his neighbour or his great-great-grandfather did. Just as every animal does when it is guided by instinct. Is the house beautiful? Yes, just as beautiful as a rose or a thistle, as a horse or a cow.” Rudofsky, over fifty years later, continues - “The beauty of this architecture has long been dismissed as accidental, but today we should be able to recognize it as the result of rare good sense in the handling of practical problems. The shapes of the houses, sometimes transmitted through a hundred generations, seem eternally valid, like those of their tools.” (Rudofsky, 1964, Preface chapter). The sense of both statements is the same – the craftsman is a person with higher qualification to address the building process, especially because they will better reflect the habitual use in the shape of the object.

5.3. The knowledge gap

Finally, from my perspective as the researcher conducting this study, I can assert that I am not sufficiently equipped to resolve such complex interdisciplinary issues fully. Even establishing a satisfactory definition of how habits and health could be meaningfully connected to architecture proved to be a significant challenge.

Moreover, while frameworks such as “How to Study Public Life” (Gehl & Svarre, 2013) or “Inclusive, Healthy Places” (J. Gardner et al., 2018) offer guidance, measuring outcomes in terms of specific risk factors for noncommunicable diseases remains exceedingly difficult. Such studies often require years of data collection, and assessing how much architecture specifically contributes to change becomes almost impossible. This complexity likely explains why health is rarely addressed in a concrete or quantitative manner in such guides.

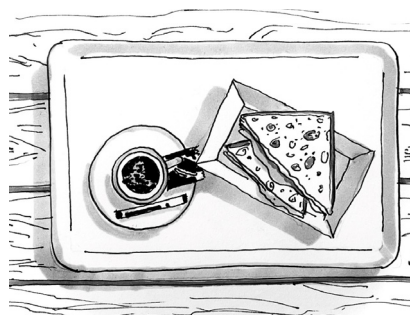
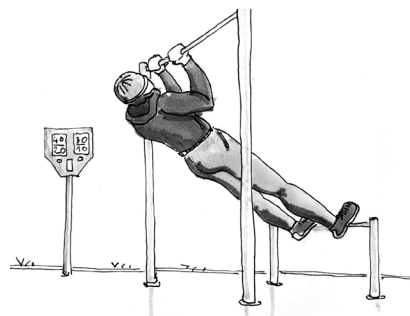
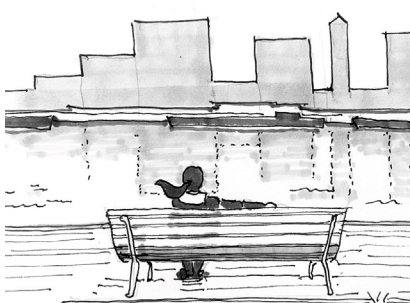
6. Design guidelines





6.1. Address existing habitual behaviours in the program

Incorporate all existing habits prevalent in the neighbourhood in the program



6.2. Address noncommunicable diseases risk factors in the program

6.2.1. SOCIAL INTERACTIONS

Places to linger in the park



Places to linger In courtyards



Places to linger next to dwelling access

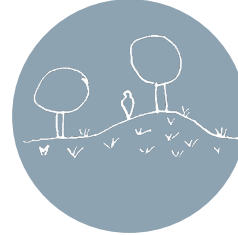


6.2.2. PHYSICAL ACTIVITY

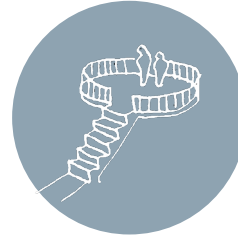
Stairs



Terrain Topography



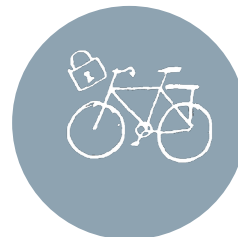
Elevated viewpoints



Accessible rooftops



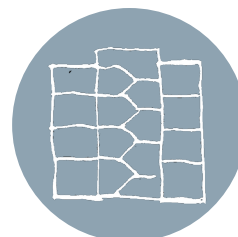
Convenient bike storage



Destinations to walk to



Walk up buildings

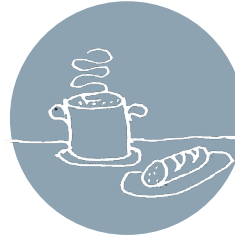


6.2.3. DIET

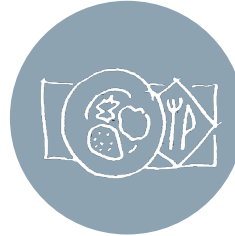
Communal gardens



Community kitchen



Gastronomic commercial Spaces



Market



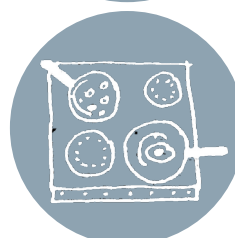
Picnic tables



A rooftop greenhouse



Convenient apartments kitchens



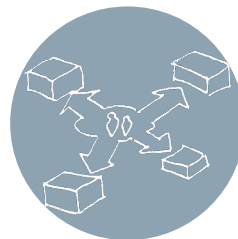
6.3. Ensuring participation

6.3.1. MULTI FUNCTIONALITY

Mixing functions of rooms- living room, dining room, kitchen

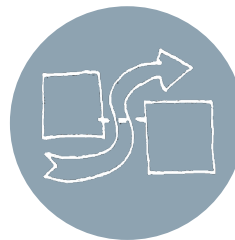


Many functions accessible from each outside space

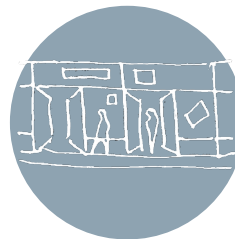


6.3.2. MIXING TRANSIT AND DESTINATION

Avoiding dead ends



Open building fronts



Communal functions in access systems

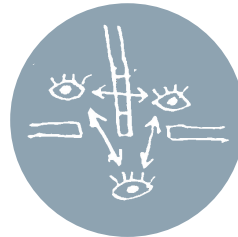


Including transit roles in the park and courtyards



6.3.3. ACCESSIBILITY, VISIBILITY

Visual connections between rooms in dwellings



Visual connections between dwellings and public spaces



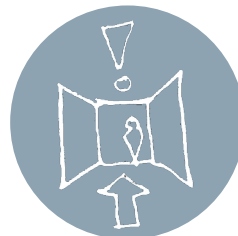
Public Functions put on display



Eliminating barriers – the dijk and street



Ensuring clarity of access

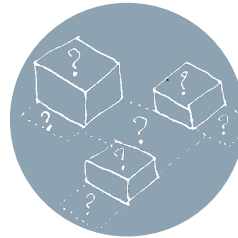


6.3.4. PROGRAMMING, SPONTANEOUS ACTIVITIES

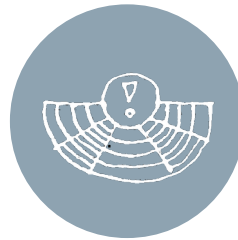
Flexibility of use of rooms



Adaptable outside space, in front of buildings, courtyards, rooftops



Provide semi programmed space, podiums, amphitheatres, shades



Bibliography

Angelone, G. M., & Olin, L. (2024). SITTING STILL. SITTING STILL. <https://www.sittingstillmovie.com>

Balwan, W. K., & Kour, S. (2021). Lifestyle Diseases: The Link between Modern Lifestyle and Threat to Public Health. *Saudi Journal of Medical and Pharmaceutical Sciences*, 7(4), 179–184. <https://doi.org/10.36348/sjmps.2021.v07i04.003>

Buckner, S., Pope, D., Mattocks, C., Lafortune, L., Dherani, M., & Bruce, N. (2019). Developing Age-Friendly Cities: An Evidence-Based Evaluation Tool. *Journal of Population Ageing*, 12(2), 203–223. <https://doi.org/10.1007/s12062-017-9206-2>

Currie, J., DellaVigna, S., Moretti, E., & Pathania, V. (2009). THE EFFECT OF FAST FOOD RESTAURANTS ON OBESITY.

Definition of INHABIT. (2024, October 16). Merriam Webster. <https://www.merriam-webster.com/dictionary/inhabit>

Drescher, L. S., Thiele, S., & Mensink, G. B. M. (2007). A New Index to Measure Healthy Food Diversity Better Reflects a Healthy Diet Than Traditional Measures ,2. *The Journal of Nutrition*, 137(3), 647–651. <https://doi.org/10.1093/jn/137.3.647>

Featherstone, M. (1998). The ‘Flâneur’, the City and Virtual Public Life. *Urban Studies*, 35(5/6), 909–925. JSTOR.

Gallery of Unité(s) Experimental Housing / Sophie Delhay architecture—40. (n.d.). ArchDaily. Retrieved 20 January 2025, from <https://www.archdaily.com/929995/unite-s-experimental-housing-sophie-delhay-architecture/5df036963312fd1679000544-unite-s-experimental-housing-sophie-delhay-architecture-ground-floor-plan>

Gardner, B. (2015). A review and analysis of the use of ‘habit’ in understanding, predicting and influencing health-related behaviour. *Health Psychology Review*, 9(3), 277–295. <https://doi.org/10.1080/17437199.2013.876238>

Gardner, J., Andrea Marpillero-Colomina, & Larissa Begault. (2018, June). Inclusive Healthy Places: A Guide to Inclusion & Health in Public Space:

Learning Globally to Transform Locally. Gehl Institute.

Gehl, J. (1971). *Life Between Buildings*.

Gehl, J., & Svarre, B. (Eds.). (2013). *How to study public life*. Island Press.

Goldsmith, S. (2007). *Universal Design* (0 ed.). Routledge. <https://doi.org/10.4324/9780080520209>

Goodwin, PhilB. (1996). Empirical evidence on induced traffic: A review and synthesis. *Transportation*, 23(1). <https://doi.org/10.1007/BF00166218>

Habit, v. (2023). In *Oxford English Dictionary* (3rd ed.). Oxford University Press. <https://doi.org/10.1093/OED/6935048381>

Harvey, A. G., Callaway, C. A., Zieve, G. G., Gumport, N. B., & Armstrong, C. C. (2022). Applying the Science of Habit Formation to Evidence-Based Psychological Treatments for Mental Illness. *Perspectives on Psychological Science*, 17(2), 572–589. <https://doi.org/10.1177/1745691621995752>

Human Research Ethics. (2024). TU Delft. <https://www.tudelft.nl/over-tu-delft/strategie/integriteitsbeleid/human-research-ethics>

Ivry, S. (2023, October 4). Walkers in the City—And Everywhere. JSTOR Daily. <https://daily.jstor.org/walkers-in-the-city-and-everywhere/>

Jacobs, J. (1961). *Death and Life of Great American Cities*. VINTAGE BOOKS A DIVISION OF RANDOM HOUSE, INC.

James, W. (1899). Talks to teachers on psychology: And to students on some of life’s ideals. H. Holt and Company.

Jia, P., Yang, H., Cao, X., Yuan, C., Xiao, Q., Yang, S., & Wang, Y. (2021). Association between access to full-service restaurants and childhood obesity. *Obesity Reviews*, 22(S1), e13076. <https://doi.org/10.1111/obr.13076>

Jürgenhake, B., Macco, K., Hansen, B., Oorschot, L., Presură, A., Kuiper, B., Veen, B. van der, Simson, D., Verlaan, D., Vermeulen, E., Teunen, G., Bosma, H., Kozielski, J., Holtus, J., Savonije, J., Vermeer, L., Popescu, M., Veen, M. van der, Burcksen, M., ...

- Hesen, Z. (2024). Health and Care in Tarwewijk—A Neighborhood Analysis. TU Delft Bouwkunde.
- Kaijima, M., Stalder, L., & Iseki, Y. (2018). Architectural ethnography. Mostra internazionale di architettura, Tokyo. Toto Publishing.
- Kaijima, M., Tsukamoto, Y., & Atelier Bow-Wow. (2014). Graphic anatomy 2 Atelier Bow-Wow. TOTO Shuppan; WorldCat.
- Kowalski, K. (2018). Włącznik—Projektowanie bez granic. Fundacja Integracja, Warszawa.
- Lally, P., & Gardner, B. (2013). Promoting habit formation. *Health Psychology Review*, 7(sup1), S137–S158. <https://doi.org/10.1080/17437199.2011.603640>
- Loos, A. (1910). Architecture.
- Loos, A. (1913). Ornament and Crime. Cahiers d'aujourd'hui.
- Lucas, R. (2016). Research methods for architecture. Laurence King Publishing.
- Mecanoo. (2024). A New Perspective for Rotterdam South. <https://www.mecanoo.nl/Projects/project/249/A-New-Perspective-for-Rotterdam-South?d=0&t=13%20b>
- Ministerie van Volksgezondheid, W. en S. (2014, December 1). Physical activity and health—Sports and physical activity—Government.nl [Onderwerp]. Ministerie van Algemene Zaken. <https://www.government.nl/topics/sports/physical-activity-and-health>
- Murphy, T. F. (2022, July 30). Feedback Loops. Psychology Fanatic. <https://psychologyfanatic.com/feedback-loops/>
- Nadia Nena. (2023). The Shopping Centre of the West. NADIANENA. <https://nadianena.com/kadewe/>
- Norman, P., & Conner, M. (1996). The role of social cognition models in predicting health behaviours: Future directions. In *Predicting health behaviour: Research and practice with social cognition models*. (pp. 197–225). Open University Press.
- Overgewicht | Buurtatlas. (2024). <https://buurtatlas.vzinfo.nl/#overgewicht>
- Rapoport, A. (1980). The meaning of the built environment: A nonverbal communication approach (Reprint.). Univ. of Arizona Press.
- Ren, Y., Savadlou, A., Park, S., Siska, P., Epp, J. R., & Sargin, D. (2023). The impact of loneliness and social isolation on the development of cognitive decline and Alzheimer's Disease. *Frontiers in Neuroendocrinology*, 69, 101061. <https://doi.org/10.1016/j.yfrne.2023.101061>
- RIVM. (2022). StatLine—Health by district and neighbourhood; Buurtatlas. <https://statline.rivm.nl/#/RIVM/nl/dataset/50120NED/table?ts=1732030444010>
- RIVM. (2024a). Ernstig overgewicht | Buurtatlas. https://buurtatlas.vzinfo.nl/#ernstig_overgewicht
- RIVM. (2024b). Fietsen naar school of werk | Buurtatlas. https://buurtatlas.vzinfo.nl/#fietsen_naar_school_of_werk
- RIVM. (2024c). Home | Buurtatlas. <https://buurtatlas.vzinfo.nl/#home>
- Roeser, S., & Copeland, S. M. (2020). TU Delft Code of Conduct: Why What Who How. Delft University of Technology. <https://doi.org/10.4233/UUID:704E72B8-6B14-4CF1-A931-9C0F93C50152>
- Rothuizen, J. (2014). The soft atlas of Amsterdam. Nieuw Amsterdam Uitgevers; WorldCat.
- Rudofsky, B. (1964). Architecture without architects, an introduction to nonpedigreed architecture. The Museum of Modern Art: Distributed by Doubleday, Garden City, N.Y. www.moma.org/calendar/exhibitions/3459
- Sal Moslehian, A., Warner, E., & Andrews, F. (2023). The impacts of kitchen and dining spatial design on cooking and eating experience in residential buildings: A scoping review. *Journal of Housing and the Built Environment*, 38(3), 1983–2003. <https://doi.org/10.1007/s10901-023-10027-z>
- Senapati, S., Bharti, N., & Bhattacharya, A. (2015). Modern Lifestyle Diseases: Chronic Diseases, Awareness and Prevention.
- Shaw, S. C., Ntani, G., Baird, J., & Vogel, C. A. (2020). A systematic review of the influences of food store product placement on dietary-related outcomes. *Nutrition Reviews*, nuaa024. <https://doi.org/10.1093/nutrit/nuaa024>
- Sim, D., & Gehl, J. (2019). Soft city: Building density for everyday life. Island Press; WorldCat.
- Stimulus. (2024). Oxford Reference. <https://doi.org/10.1093/oi/authority.20110803100533216>

Stimulus definition | Psychology Glossary | AlleyDog.com. (2024). <https://www.alleydog.com/glossary/definition.php?term=Stimulus>

Tabish, S. A. (2017). Lifestyle Diseases: Consequences, Characteristics, Causes and Control. *Journal of Cardiology & Current Research*, 9(3). <https://doi.org/10.15406/jccr.2017.09.00326>

Thaler, R. H., & Sunstein, C. R. (2008). *Nudge: Improving decisions about health, wealth, and happiness*. Yale University Press.

Town—Stairs—Picture of Bellagio, Lake Como—Tripadvisor. (2024). https://www.tripadvisor.com/LocationPhotoDirectLink-g187834-i19347891-Bellagio_Lake_Como_Lombardy.html

Urbanitarian. (n.d.). Retrieved 20 January 2025, from https://www.urbanitarian.com/masterplans_post?id=468

van de Velde, E. (2024, March 6). Vier ‘muren’ scheiden de Tarwewijk van de rest van de stad en daar moet nodig iets aan gedaan worden. <https://www.dehavenloods.nl/nieuws/algemeen/51898/vier-muren-scheiden-de-tarwewijk-van-de-rest-van-de-stad-en-d>

WHO. (1946). Constitution of the World Health Organization. <https://www.who.int/about/governance/constitution>

WHO Guidelines on Physical Activity and Sedentary Behaviour (1st ed). (2020). World Health Organization.

Wood, W., & Neal, D. T. (2016). Healthy through Habit: Interventions for Initiating & Maintaining Health Behavior Change. *Behavioral Science & Policy*, 2(1), 71–83. <https://doi.org/10.1177/237946151600200109>

DEFINITIONS

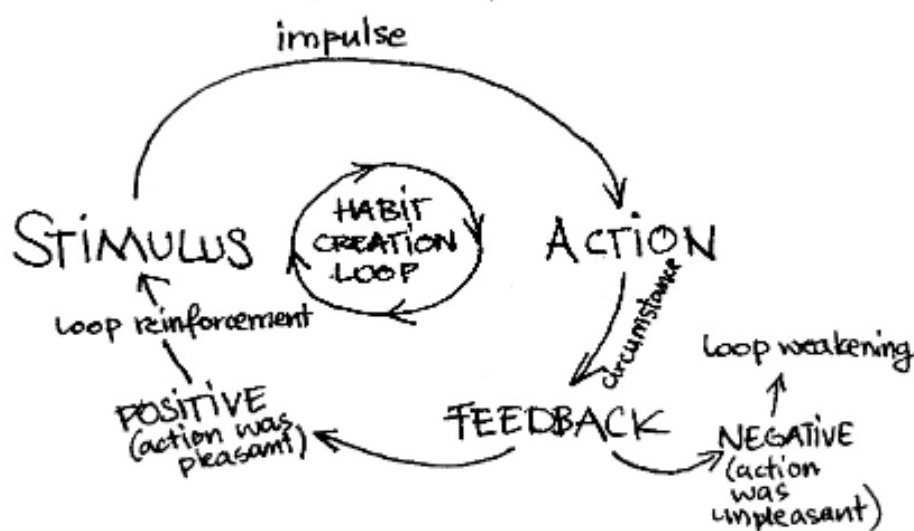
A habit and a stimulus

A habit is a process by which a stimulus automatically generates an impulse towards action, based on learned stimulus-response associations (Gardner, 2015, p. 280). A stimulus is any change in the external or internal environment of an organism that provokes a physiological or behavioural response in the organism, or any object or event that elicits a response (Stimulus, 2024; Stimulus Definition | Psychology Glossary 2024).

A feedback loop

This process – and its creation and reinforcement over time – is a feedback loop, which is a self-regulating process of change, involving a behavioural change, consequence of change, and adjustment or continuance of new behaviour based on the consequence (Murphy, 2022), as illustrated by the diagram bellow (figure 1).

Figure 1. The habit feedback loop



Health – general definition, NCD's and relation to habits

As defined by WHO (1946), health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. This state can be maintained and strengthened by health behaviours - any activity undertaken for the purpose of preventing or detecting disease or for improving health and well-being (Norman & Conner, 1996). According to recent research (Balwan & Kour, 2021; Senapati et al., 2015; Tabish, 2017), lifestyle diseases, also called noncommunicable diseases (NCD's), are responsible for over 70% of deaths worldwide recently (over 40 million people per year). The most popular are: cardiovascular disease (CVD), cancer, diabetes type two (D2T) and chronic respiratory disease (CRD). Typically, besides non-modifiable risk factors such as age or genetic predisposition and family history, they are caused by unhealthy habitual behaviour, maintained over long periods of time – years or sometimes decades. The main primary causes are: physical inactivity, unhealthy diet, smoking (including second-hand smoking) and alcohol abuse, which result in high blood pressure, high cholesterol, obesity and stress. In the Dutch context, the CBS and the Ministry of Welfare and Sports of the Netherlands (RIVM, 2022, 2024c), established health indicators for each neighbourhood, key guidelines characterizing the health level of the area. In the category relevant to this study – Lifestyle and Habits (translated, originally in Dutch *Leefstijl en Gewoonten*), besides the already mentioned causes for NCDs two other subcategories are included – mental resilience and loneliness factors, relating to the social interactions or the lack thereof, and possibly resulting in such diseases as Alzheimer and dementia (Ren et al., 2023).

Summarizing, the modifiable causes of the above mentioned NCDs are mostly connected to habitual behaviour, the major risk factors being: physical inactivity, lack of social interactions, smoking, alcohol abuse and an unhealthy diet.

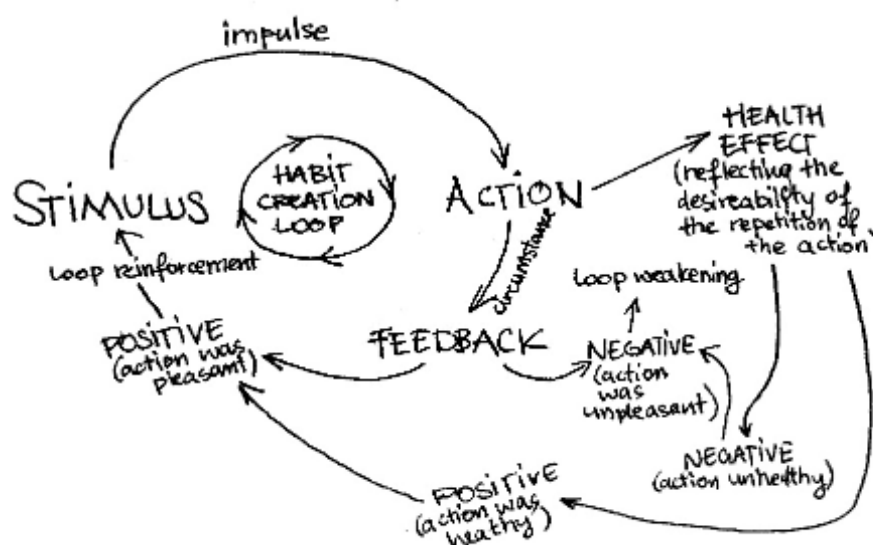


Figure 2. Habit feedback loop in relation to health

FIELDWORK

Content Fieldwork

Individual observation diary 74

Day one – Tuesday 12.11.2024	76
Day two – Thursday 14.11.2024	89
Day three – Friday 15.11.2024	100

Interview transcripts 106

Day one – Monday 25.11.2024	110
Day two – Friday 29.11.2024	114

Existing habits 118

Photo series 136

Individual observation



on diary



Day one – Tuesday 12.11.2024

A method is conducting a fieldwork diary, collecting all the raw observations in chronological order.

**11:39 , 12:03 – NEAR DIRK VAN DEN BROEK
(HELLEVOETSTRAAT)**

I'm sitting near Dirk and watching the flow of people. I did a drawing of the Dyke. The 20 minutes I'm sitting here about six or seven people cross the stairs and the tramline. The majority of the movements is going on through Brielselaan. There is quite a lot of movements in Dirk, both pedestrian and in cars. The bicycle flow is rather poor. I think it's rather concentrated in Brielselaan. Some people waved at me when they saw me drawing, but not a lot. The movement on the parallel street is rather concentrated on the side of Dirk. There are a few people on this side of the street, but not a lot.



Hellevoetstraat, 12:01

Balkon aan de Maashaven, 12:10



12:16 – BALKON AAN DE MAASHAVEN

There's a ship parked at the bay, with STC written on it. When I arrived here, one woman was walking a dog and there were two other people sitting on benches near the ship. Both were smoking cigarettes. One of them was a man in his late 40s. The other one was a woman – an Uber eats driver. they were both chilling on a break. There was a seagull and a pigeon as well. The streets didn't really bother me when I sat with my back to it.

Balkon
aan de
Maashaven,
12:13



12:36 - INTERVIEW WITH A WOMAN IN HER LATE 20S

The interview was a bit awkward, but it went well. The girl was smoking a joint when I went to talk to her. I asked her does she come here often? She responded that she is from near Zuidplein. She's coming here for a smoke because she cannot do it at home. She says she likes returning here because there's a kind of community. She says she saw quite a lot of guys doing workouts at the gym. She really likes the view. She thinks that the waterfront is better than at Katendrecht. It is more separated from the street. On the other side, there's only a sidewalk. The boats are restricting the view a lot. She mentioned that there could be more trees and more shades to make it more cozy.



Balkon aan de Maashaven, 12:50

13:00 - PLAYGROUND NEAR THE TR STOP (WOLPHAERTSBOCHT)

Three youngsters (two girls and one boy) came and did a little chat for a while. There is not a lot of movements on the tr stop. The street in contrary is very lively – there are cyclists, a lot of car passing and quite a lot of pedestrians too. The weather is nice, but it's cloudy sometimes and then it becomes a little cold.

14:00 - PLAYGROUND NEAR THE TR STOP (WOLPHAERTSBOCHT)

I've been sitting here for a while and on the playground itself there wasn't too much movement. A father and daughter came just for five minutes.

Otherwise, at some point, there was a wave of movement. A lot of people in cars, and there was a class moving. For half an hour it was very, very lively, and it returned back to like a state of calmness. I felt that again not a lot of people were crossing the dijk. Actually, the movement was more like along Brielselaan, the street that finishes there, and the one along the dijk.

14:26 - INTERVIEW WITH A MAN FROM IRAQ, 55 Y.O.

He called me to help him moving a cart full of metal to a recycling facility, we were walking along Brielselaan. He lives in the neighbourhood around 30 years. There was a lot of Dutch people now there isn't. He engages in voluntary activities in a in the church and groups help newcomers find jobs, etc. because he speaks Arabic and Dutch. He also helped with legal matters. Now he is making money from side jobs but earlier he was working full-time.

14:30 - NEAR ZUIDPLEIN (ANNIE M.G. SHMIDTPLEIN)

There's something with this café that's makes us always come back there, and I came back there today as well. Despite the cold, I sat on a table outside all the restaurants had some tables outside and some of them were occupied. There's always a lot of people there - pedestrian passing by broadly from the bus station and the nearby mall. A man greeted me when I was eating. I don't know what's going on today but it's already the fourth or fifth person that's greets me one way or the other. I don't know if it's about the fact that I'm just not having a phone with me, I don't look into it. Near Dirk there's only an ice salon, almost no other restaurants. I think the functions are lacking a lot. I can also see on the example of Zuidplein, how the transit of people affects their number.

14:44 - NEAR DIRK VAN DEN BROEK (HELLEVOETSTRAAT)

There is still a lot of people going to the supermarket.



Hellevoetstraat, 14:45



Brielselaan, 14:39



Annie M.G. Schmidtplein, 14:59



Moerkerkeplein

15:36



Millinxstraat, 15:37



Millinxbuurt, 15:46

16:00 - MILLINXBUURT

I went to meet Bo in the park on the east side of the neighbourhood. The park was very well designed in my opinion, meaning that when I sat

there, it was cozy I would say. There was no people in it though. It was again fenced. This on the other hand, and in my opinion, only was making it suitable only for one group of users - people who wanted to sit there and without kids because there was no playground. Plus the playground was elsewhere (just behind the corner) and it was full of people already.

SUMMARY DAY ONE

The first conclusion is that if there is a very strong attractor in someplace given the constraints and obstacles that can be found on the way people are willing to come from quite far away to them. an example of such an attractor is the view on Balkon aan de Maashaven. The place is absolutely separated from anything else and still I saw at least four people enjoying the view and the interviewed girl mentioned she comes for it specifically from near Zuidplein, which is like a 20 minute walk.

The second conclusion is that (and that may not be objective observation or one without judgment) places cannot cater for only one type of people. That was kind of the problem with Millinxbuurt. It's only catered for the people who want to sit in a park. The gates were placed in such a way that either there was a barrier because there was no gates or there was a barrier because the gate led to nowhere. It didn't lead to any streets to some continuation of the square. There was no possibility that people who wanted just to pass by from their bus stop to their apartments would use the park to pass by. The Balkon aan de Maashaven had an advantage here because at least it could be used both for the view and users of the outside gym, plus dog owners.

DRAWINGS

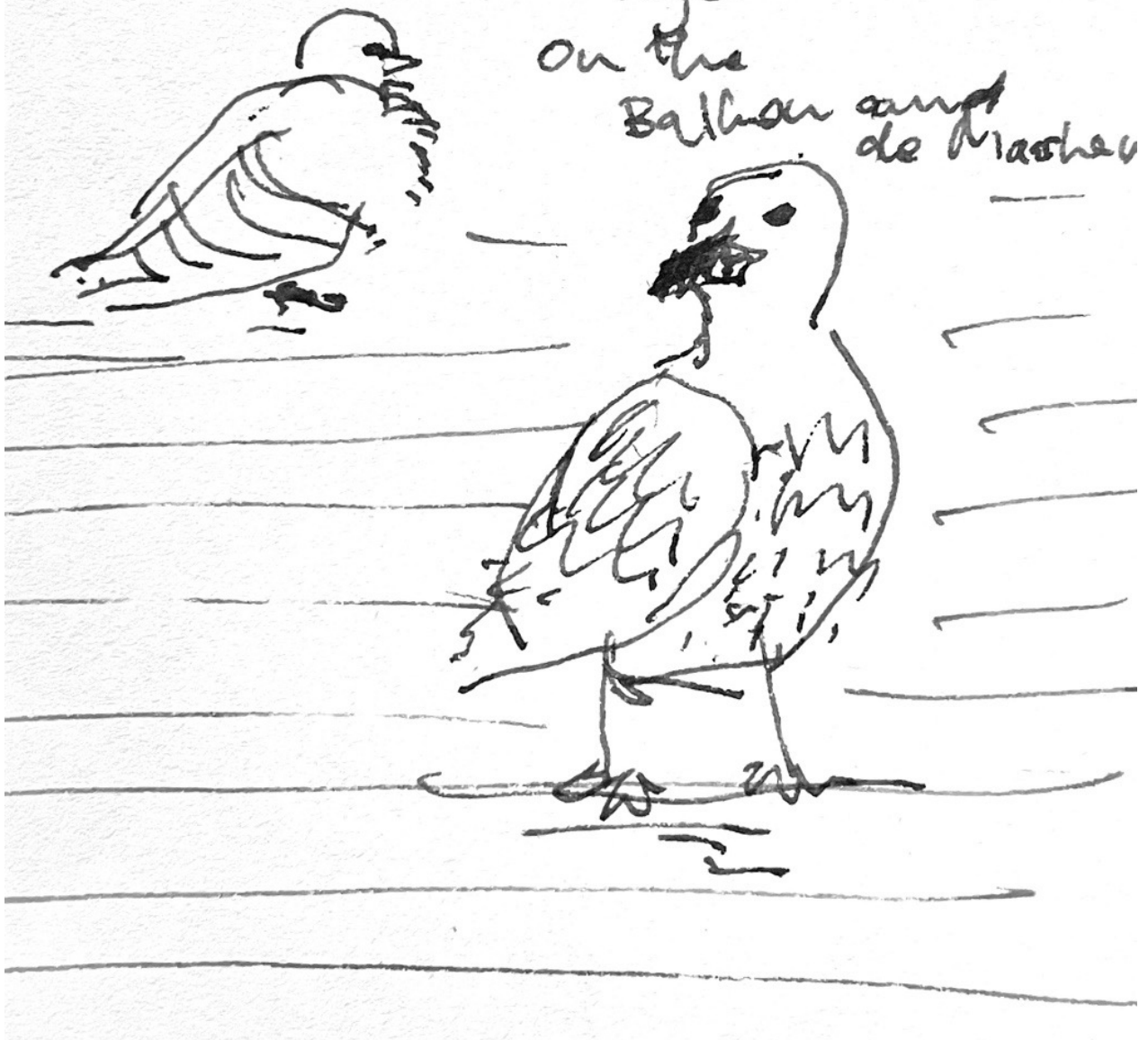
DAY ONE

Drawing along with mindful physical presence, permits to spend enough time at some place to experience it fully and start seeing repetitive patterns.

12:05.

a Seagull and
a Pigeon
on the

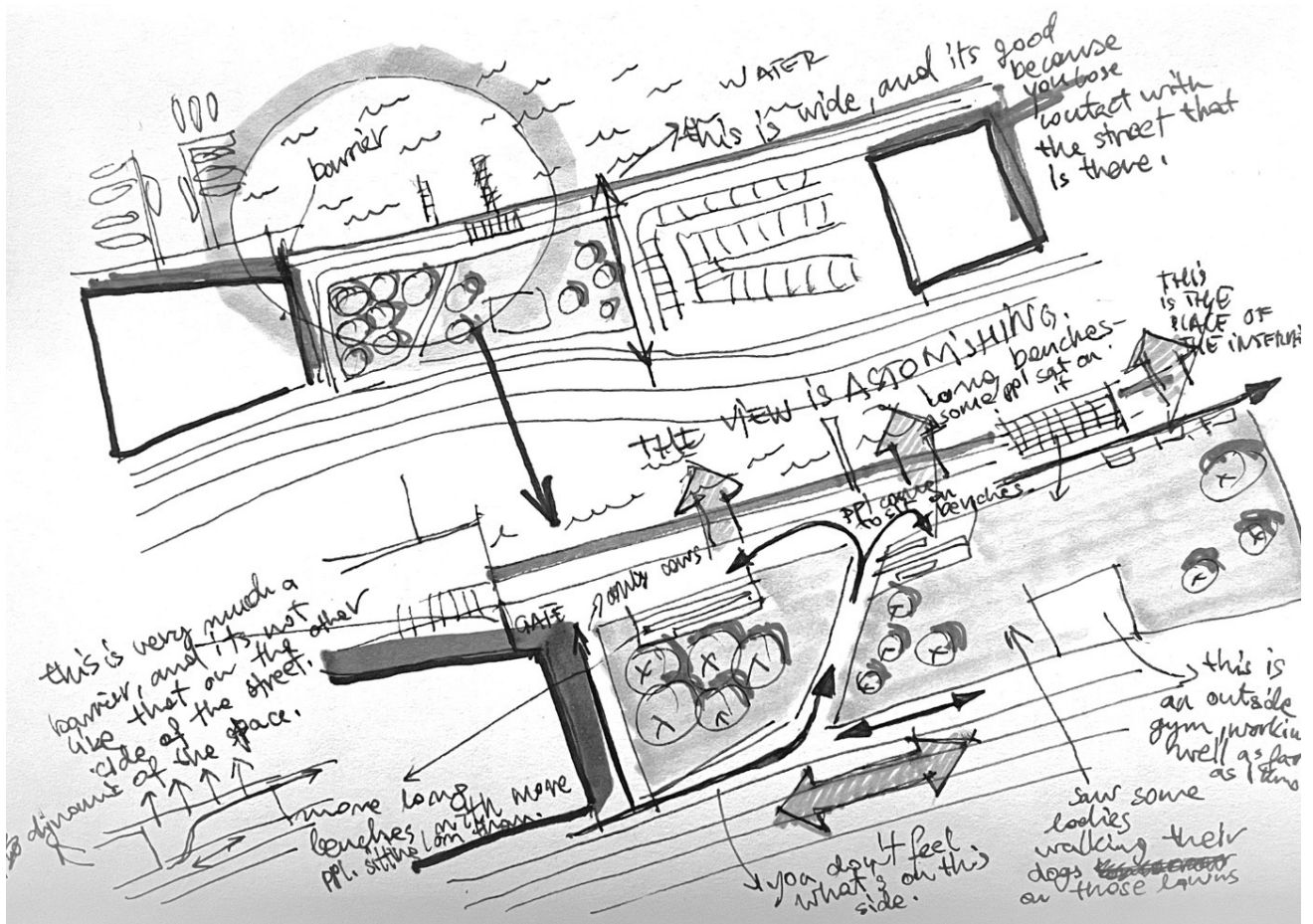
Balkon and
de Mascheu



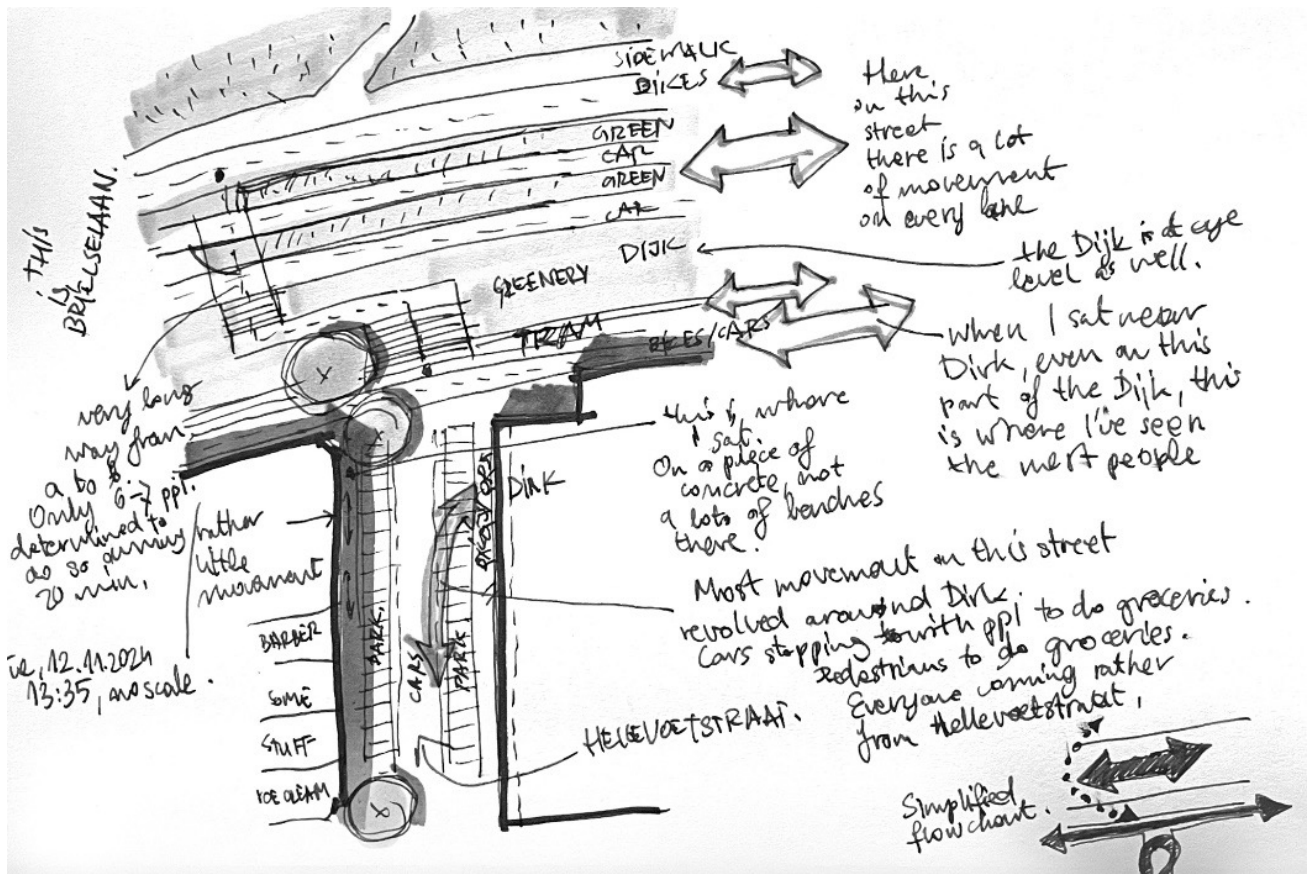
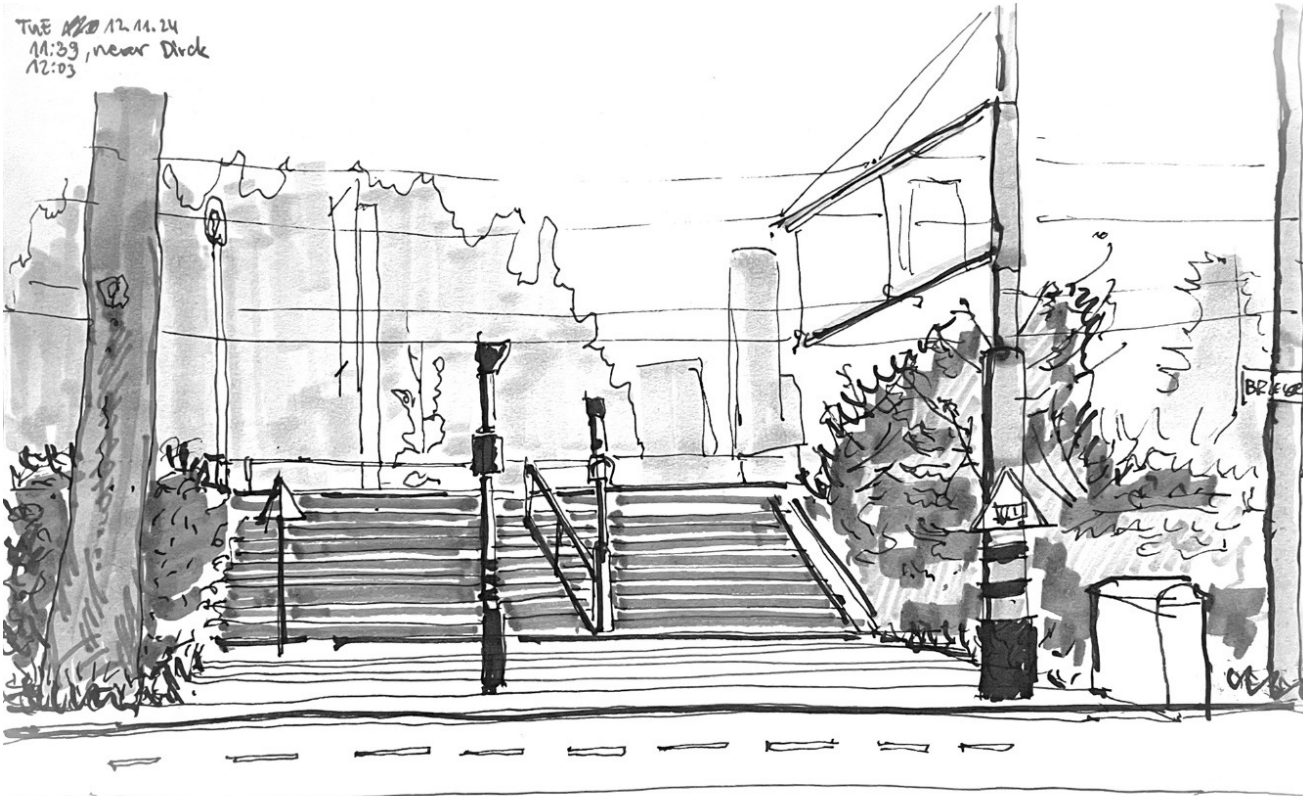


12:16

Uber Eats driver Smoking a cigarette.



Tue 12.11.24
11:39, near Dirk
12:03



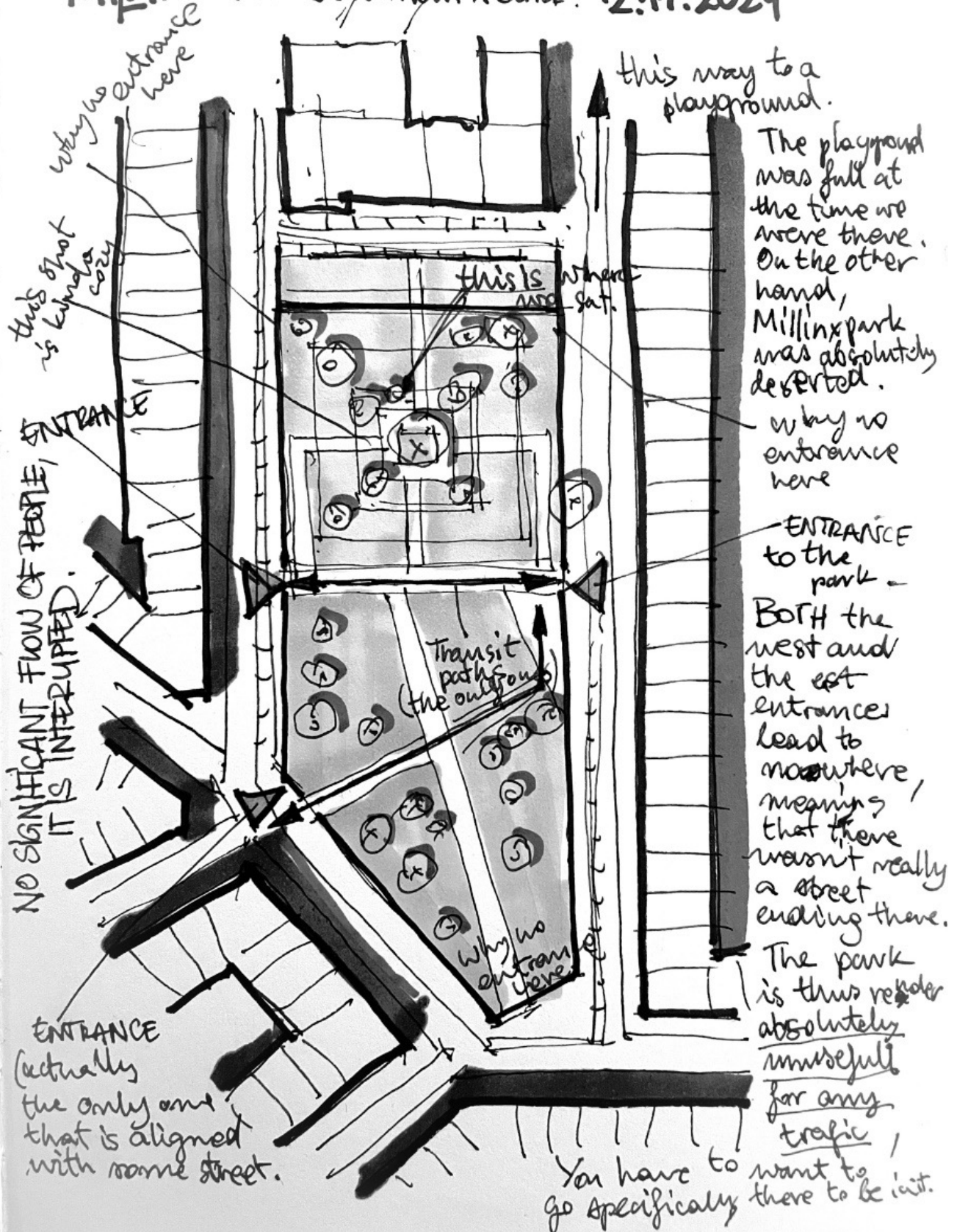


COFFEE AT ZUIDPLEIN?
 SOME REASONS, THIS IS THE SPOT WHERE WE ALWAYS FINISH
 TRIPS TO THE TARWEMJIC (MEANING GUGS, EMMY AND I AND
 TA)

MILINX PARK

~~DRAWING~~
~~WITHOUT~~

12.11.2024



A PLACE OF TRANSIT,
STILL FEELING GOOD.

12.11.2024.

A PLACE OF TRANSIT,
STILL FEELING GOOD.

this space feels
kind of enclosed,
and in my opinion
it feels good.

a mom
greeted me at
the cafe.

LIBRARY
(FUNCTION 3)

~~CAFÉ (F2)~~

Swimming Pool

There is a variety of functions located around here. Public comes, morally, but not only, fortunately. This where made the draw

this is
where
made
the
drawing

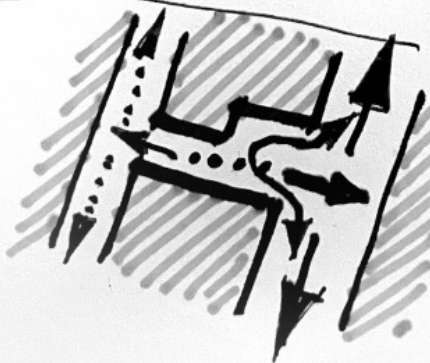
TOUAKOZ
TANWIZIK

TO THE
(FUNG)

NO 8 THE
STATIONS
(FUNCTIONS)

TOWARDS
ZINDER PARK

SIMPLIFIED FLOW OF PEOPLE



Day two – Thursday 14.11.2024

A method is conducting a fieldwork diary, collecting all the raw observations in chronological order.

Brede Hilledijk, 11:51



Silostraat, 12:05



12:00 – BREDE HILLEDIJK, KATENDRECHT

I'm walking on something that seems to be the main street and of Katendrecht and there's not many restaurants, shops or anything to make it possible to interact with the buildings. There's not anything that would be in human scale, some people are walking, but not many sitting. There aren't many places to sit either.

12:11 – NORTH SIDE OF KATENDRECHT (NICO KOOMANSKADE)

I was walking through the northside of Katendrecht. The waterfront here is occupied mostly by industry as well. I am one of the very few people passing by. There is a couple sitting on the bench and kissing. I think that the view is nicer indeed from Tarwewijk to Katendrecht then from here to Kop van Zuid. There is however, quite a lot of people that are using the pedestrian bridge.



Nico Koomanskade, 12:10



Nico Koomanskade, view on pedestrian bridge, 12:16



Nico Koomanskade, 12:16

12:27 - KAAPPARK IN KATENDRECHT

I'm arriving to a park in the neighbourhood and there seems to be a school or something having sports classes. A lot of people are strolling there was one person on an electric wheelchair. The kids play football on the terrain made of concrete. There is another group on the skate park nearby. People walking out with children, dogs, and sometimes looking like business partners. Buildings from north seem to be entailed in the park. There is not as strong border between one and the other. On the south side there's a street but it's not wide. The houses are rather different one from the other - I don't know if it's a developers idea and it's a single investments or it's just like that because it was built overtime.

It was just one side of the park that was lively. The other is deserted because I don't feel that there's any reason to go to it. There's just a big

football field and a lot of grass around. Maybe it's more used in the summer when there's more sun. Otherwise I feel that for strolling and kids playing the skate park and the concrete football field might be more interesting. Maybe because of that there's also a lot of people with dogs walking around.

I asked the volunteers of the park what they were doing there. Turns out it's part of their college education – they said they study at The Hague, apparently Thursday they come here and try to encourage people to go and play football, mostly kids obviously they do sports, etc. etc. Volunteering there is not new, there was someone doing it already before, and they left their stuff there, meaning balls for football for basketball skateboards all sorts of things to use the skate park as well. It's for kids that do their PE lesson and go back on their way to school.



Maashaven Noordzijde, 12:55



Maashaven Noordzijde, 12:56

12:59 – NORTH SIDE OF MAASHAVEN HARBOUR (MAASHAVEN NOORDZIJDE)

I'm standing just on the other side of the harbour than the Balkon aan de Maashaven. What interviewees said feels true, there is not a lot of people here at all, maybe a few passing by and one couple running. There aren't really places to sit, and if they are they face boats that stand just on the other side of the sidewalk, and which are not attractive. The view isn't astonishing either – it's mainly industry. It is quieter than on the other side of the harbour, though.



Maashaven
Noordzijde,
13:01



Maashaven Oostzijde 13:23

**13:11 - EAST SIDE OF MAASHAVEN HARBOUR
(MAASHAVEN OOSTZIJDE)**

In the whole of the two neighbourhoods I didn't see a single public toilets.

**13:25 - EAST SIDE OF MAASHAVEN HARBOUR
(MAASHAVEN OOSTZIJDE)**

I'm walking through the east side of the Harbour (from Katendrecht to Tarwewijk). It's loud - I hear the metro, the cars, ambulance. Some people are still hanging out, but most of



Maashaven Oostzijde 13:21

them are just passing by bikes. The whole place is covered in litter, which of course indicates that there are people here at sometimes, but it's not type of place that would be taken care of.

14:12 - BALKON AAN DE MAASHAVEN

I sat there for about 20 - 30 minutes drawing and not much happened. I looked closer at the outside gym and there is a kind of timer that tells you how many seconds are you doing in interval and then how many seconds do you need to stop the entrance of the building that I want to replace. STC ship came after about 15 minutes and is currently there as well. Earlier I saw it circling back-and-forth in the area of the harbour. A woman passed by back and forth to do a walk. She stopped for a bit for the view and to smoke a cigarette. Around the same time when the ship came a man on the moped came and sat and started feeding the birds. There were a lot of them. I tried interviewing him, but I don't think he was speaking English. I think the woman I saw on the first day of the fieldwork was sitting there as well today. When crossing the street to go to Dirk, I had to wait like a full minute in the middle of the road because there was a constant stream of cars.



Balkon aan de Maashaven, 13:40



14:49 - THE DOG PARK (ZWARTEWAALSTRAAT)

I made some groceries at Dirk and later stood there a bit to observe the crossroads from the side of Tarwewijk. 2:30 is apparently the time when kids go out of school. Near the sports hall on the southern part of the dog park there was a gathering of parents waiting for their children. The crossroads itself is very lively. There is a lot of people of all ages, both men and women. Some dudes were hanging out in front of a garage service. There is a woman at the dog park. In front of the school on the concrete terrain children were playing football. One woman was going to Dirk with her child in her stroller and she had it just a bit of a struggle to get in over a step. Two women and two men were hanging out in front of the school. I think that there's some kind of workshop maybe there. A man was smoking a cigarette there as well. People were going all ways. Also in all sorts of transport modes (pedestrians, cyclists, drivers).



Zwartewaalstraat, 14:46



Zwartewaalstraat, 14:48

15:00 - INTERVIEW WITH A WOMAN WITH A CHILD IN A STROLLER AT THE DOG PARK (ZWARTEWAALSTRAAT)

She comes there often – usually when she wants her child to have a nap. She goes there when it's quiet and she says it's usually rather loud, because there are a lot of children at school and motors and cars, etc. She chooses this place because she mentioned it's one of the few that has benches. Once she tried to sit on a bench that was in front of a house and that people forced her to move, which is to be honest, quite surprising for me because it's a mother with a child, maybe people should be more kind to one another. When I asked her about her daily routine, she says she is a mom and she looks after her child and that's like a full time job to her.

15:04 - THE TRIANGLE PARK (IN THE MIDDLE OF TARWEWIJK)

It seems closed for semi close despite the

time being just after school hours. There are not a lot of people in it. Ironically of course just when I was saying it and I turned back some of them entered the park. So maybe that's when it opens – just after school. I still don't see a lot of people in it. By the way, around 3 is the time when the neighbourhood is very active parents with children are getting back home.

15:11 - SOUTHERN PART OF THE CONSTRUCTION SITE

I have seen to women speaking at the front door of one of them. It wasn't a Haagse Portiek, just a regular entrance from the street level. This probably wouldn't as easy if it was any other typology.

16:11 - ZUIDPLEIN, THE MALL

I went to Zuidplein (Annie M.G. Shmidtplein) to have a coffee. I decided to enter the mall. It was as every well designed mall - extremely labyrinthic and before I could find what I was looking for, I was already deep and lost. Of course one shop – Action grabbed my attention because I needed a notebook. Ironically, I was just thinking that the shopping mall is really swallowing all the public life that there should be in this neighbourhood imagine spreading all these shops all over the neighbourhood, there would be plenty for everyone and of course the mall was not crowded full of people at least.

Later I met a man who was doing an art project painting all over the building that is located nearby. He was doing a graduation project about it about safety in the area of Zuidplein so I found that interesting and I asked him a bit if he could send



Zuidplein, 15:31

me his paper, he said yes (by the way he never send it to me), and he came to some conclusions that colours and colourful building might help with this and he found one that is going to be destroyed by a developer. He invited an artist and now everyone's painting it. It's nice to know that these things happen in neighbourhood as well.

By the way, the streets that are separating Tarwewijk from Zuidplein are enormous and very annoying to cross.

16:30 - AT THE TRAM STATION (WOLPHAERTSBOCHT)

Two trams stopped, first one towards Charlois, second to Keizerswaard. In total around 15 people came out of the trams and only 3 entered. That would suggest that the neighbourhood is primarily residential as more people come in after work, then go home. One of the guys came was wearing an orange jumper suggesting he was working at the factory.



Gooilansingel, 16:03

16:35 - NEAR DIRK VAN DEN BROEK (HELLEVOETSTRAAT)

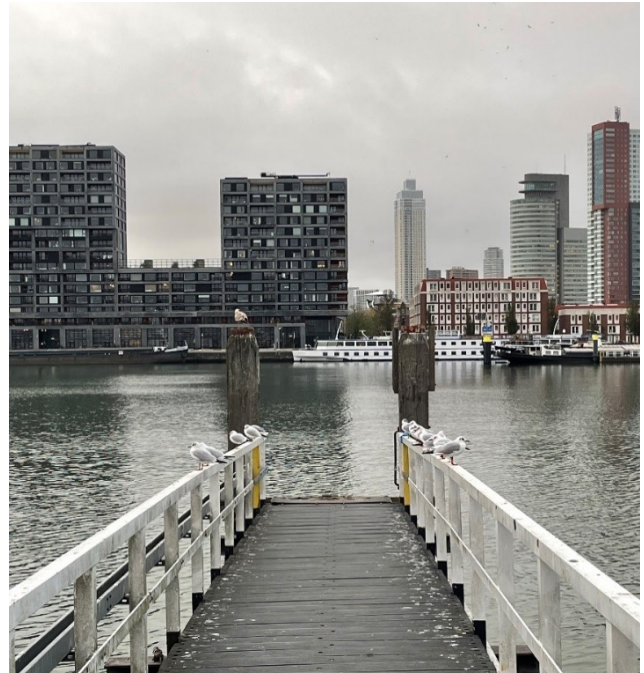
Dirk is very busy at the moment.

17:00 - BALKON AAN DE MAASHAVEN

I went to Balkon aan de Maashaven once more, and I must admit that after working hours, there were definitely more people sitting there. I observed two guys at the outdoor gym – one about thirty, the other, both working out quite intensely. Apart from that, sitting and looking towards the shore on the left was a man with a bike, about 30 years old, who left after 15 minutes, a woman about thirty smoking a cigarette, and a girl about 20-25 years old, as well as a Polish guy I later interviewed, Paweł, around 30 years old. A woman with a child also came by for a walk. It was sunset, and at some point, it started raining, so I ended the interview.



Wolphaartsbocht, 16:29



Balkon aan de Maashaven, 16:39

17:00 , BALKON AAN DE MAASHAVEN, INTERVIEW WITH POLISH MAN, 30 Y.O.

He told me that he comes there quite often to take a breather. He has been living in the neighbourhood for about three or four years, previously closer to Maashaven, now closer to Zuidplein. He works in Gouda, wakes up early in the morning, and is a foreman who acts as an intermediary between the supervisors and – as he put it – ‘the guys.’ He’s here (in the Netherlands) for work, though he seems to prefer Poland, especially since he has a wife and child. He often rides his bike, in the Netherlands to Hoek van Holland, which he really values, and in Poland more through forests. He hasn’t noticed any issues with biking out of the neighbourhood. He shops at Plus near Zuidplein. He’s rather reluctant to go to Dirk – he says the clientele doesn’t know how to behave, it’s dirty and disorganized. He links this

to income levels – Dirk is more of a budget store. When I asked him about Polish stores, he said he likes Groszek (about 500 meters from there), because it’s pleasant, and the products are fresh. Freshness of products is very important to him, as he comes from a rural area in Poland.

When I asked him about the park and whether many people come there, he said that in the summer it’s not really a good place for contemplation. He mentioned that it’s the kind of place where, for example, the police know not to come. As a result, people drink and use drugs there. In the summer, he prefers going to Zuiderpark, because there are many people from various countries (he mentioned Central European ones) who barbecue, have fun, and smile. But at Balkon aan de Maashaven, there are ‘Dantean scenes’ taking place.

DRAWINGS DAY TWO

KATENDRECHT.
x 14.11.2024
20 12:48.

Kaappark, Katendrecht



Balkon aan de Maashaven



Day three – Friday 15.11.2024

A method is conducting a fieldwork diary, collecting all the raw observations in chronological order.

10:00 – SCHOOL ON GAESBEEKSTRAAT

Children had a break at school near the Take a Way. They were in primary school. It was lively and loud.

10:00 – 13:00 – THE TAKE A WAY

Today we were doing collages again. I spoke a bit with the woman from Singapore. She told me that she came to the Netherlands 40 years ago and then after that, she went to China for five years and after she came back from China, they wouldn't renew her permits of staying, so now she's got a big problem because she lives here theoretically illegally, and despite being there 40 years. The city of Rotterdam doesn't want to self-finance the "Bed Bad Brood" policy that was recently changed by the government, despite all the other cities doing it. She went to a protest about that on Saturday, Guus was there as well.

The collages we did were about pink tea. That's one of the community members that brought it from Kashmir and taught the rest how to make it. I spoke to her as well a little bit and she seems to be living here for quite a long time and I think that's a rather family thing that she brought, than her own experience (she moved to the Netherlands as a child).

Gaesbeekstraat



Besides that Emmy was speaking to two women that were saying that they often go to a market that is in the neighbourhood nearby and that it's kind of a hobby. They don't go there only to do groceries but also to just be there just to spend her time.

14:00 - ON THE WAY TO ZUIDPLEIN FOR A COFFEE

Walking by the neighbourhood, we've seen lots of movement near Dirk, as always. People were talking on their phones, standing in front of garages, chatting near the school, two women were sitting at a table near school as a lot of people were going to Dirk back-and-forth. We were having a bit of discussion if it would work better as a square and not as street crossing. I think that's similar to what I've seen last time and being there at all times during the day – even when the rest of the neighbourhood is very deserted. I still think that it's the most lively place that there is in the neighbourhood. There are a few more shops commerce activities – there's a barbershop, garages, another shop and a fish parlour, a kapsalon, and an ice parlour open only during summer months. Every time I was there (alone or with someone) it was the most occupied



Zuidplein, 15:25

area in the neighbourhood.

15:00 - 16:00 - WALKING BACK FROM ZUIDPLEIN

We were walking back from Zuidplein. We went to the mall, and then we went on the pedestrian bridge to the backside of this post-war multi storey building. On the way back, a lot of groups of men, mostly young, passing by, some of their were very actively, very present, although I wouldn't say they were aggressive. We've seen three groups at least before the triangle park and then we went to Polslandstraat and it was totally empty. At some point it was so quiet one could actually forget that we were in the city. The street was like that as well. We went to some kind of backyards to see an old building that is located there, but it's unused. I think it was a school, but it might have been turned into a mosque. It was deserted as well. Then we went through Dirk again and the garage were closing, and there were a lot of man staying in front of the garage. I think they just finished work because it was 16:00.



Polslandstraat, 15:46

16:00 – 16:40 – BALKON AAN DE MAASHAVEN

We went to the Balkon aan de Maashaven, and sat there for a while and talked about how the housing market is horrible. When we came to the Balkon aan de Maashaven four men were fishing and one of them went away after a while. They were fishing at the end of the plank. The man on the red vespa came at some point to feed the birds and then went away as well. There was one guy at the gym and he was exercising for like 30 minutes. There is one man sitting on a bench right now and earlier there was a woman waiting for someone for a bit, and she went away after like five minutes, but the interesting thing was that she wasn't looking at the water. She was turned the other way around, to me the other time as a very hard thing and I ended up like to the side so that was quite unexpected. There were a few people walking through the park.

16:50 – THE DOG PARK (ZWARTEWAALSTRAAT)

There's one person with the dog. It's rarely more than one person.

I have just interviewed three people. Two women were looking for an apartment in the neighbourhood and came to the balcony to unwind after the interview. One of them is working on the other side of the harbour and she knows because of that that's on the side of the border there is some place to sit and have a chill. They were there the first time.

The other interviewee was with a man in his 20s. He is studying at the business school of Rotterdam. He says it used to be on the other side of the harbour now it's in the Tarwewijk. He lives across the harbour and he sometimes comes to

the balcony to unwind and have a cigarette as well.

Another thing is that today is Friday and I can definitely tell that I smell a lot more marihuana in the air that I smelt in the past days. The activities that are happening on the street are more stationary that I usually observe them. There are also more men on the street.

17:00 – THE TRIANGLE PARK

I can also definitely see that there is more traffic at this time of the day here than it was usually at the school and working hours. There is a lot of mothers with children going home. I've seen some people walking their dogs. Cars are everywhere. The triangle park is empty at this time.

17:14 – PLEINWEG

I taking right now a walk around the neighbourhood – on the fringes there is a lot of traffic and also as the sun came down, he can see more clearly. What is well functioning shop or commerce point and what is not. I have to tell though that the border of the neighbourhood looks way more activated than what is happening inside. When I went near the place, where we conducted primary interviews (the westernmost park in Tarwewijk) I could see that there was a gathering of man just as was mentioned in the interview before. In the street I just crossed someone discharged fireworks.

17:19 – BRIELSELAAN

The street facing the dock is rather dark. The lights are dim and there is nothing active

on the ground floor. There are some people sitting though. Two kids playing on their phone doorstep. The family packing their things into a car (on this side of the street there is really a lot of cars parked). The factories still seems to be working. By the way, it is a long housing block. The westernmost park from the perspective of its farthest corner seems to be rather deserted.

17:26 - THE TRAM STOP (WOLPHAERTSBOCHT)

There is a meeting happening at the Turkish community centre near the tr stop. I will count the people from the trams again. The playground near the tr stop is very deserted – it's dark and there is absolutely no one there. Four people came out of the tr. No one got in. On the side of the stop there is a beer bottle. There are two men speaking on the phone. There is a lot of cars going on the joint car and cycling lane. There is a man passing by on a bicycle. A man in an orange jumper in a car call took groceries out and went home 15 m away from the car. Only one person came out from the tr the other way around.

17:34 - BRIELSELAAN

I'm hearing a lot of languages in the streets. with three children were speaking English. Earlier I heard a couple in 50s speaking Polish. I definitely heard. And Dutch of course.

17:37 - NEAR DIRK SUPERMARKET (HELLEVOETSTRAAT)

The commerce places are looking much better after dark. It's all lit up.

Kids are throwing fireworks again. There is not as many people near the garage is and Dirk as there was earlier again throw fireworks.



Hellevoetstraat, 17:38



Hellevoetstraat, 17:39

17:44 - BALKON AAN DE MAASHAVEN

The view is still beautiful perhaps even more than it was. There are four people sitting. One man with a stroller to other men on benches – one smoking a joint and a woman near the fake roof.

Balkon
aan de
Maashaven,
17:42





Interview transcripts

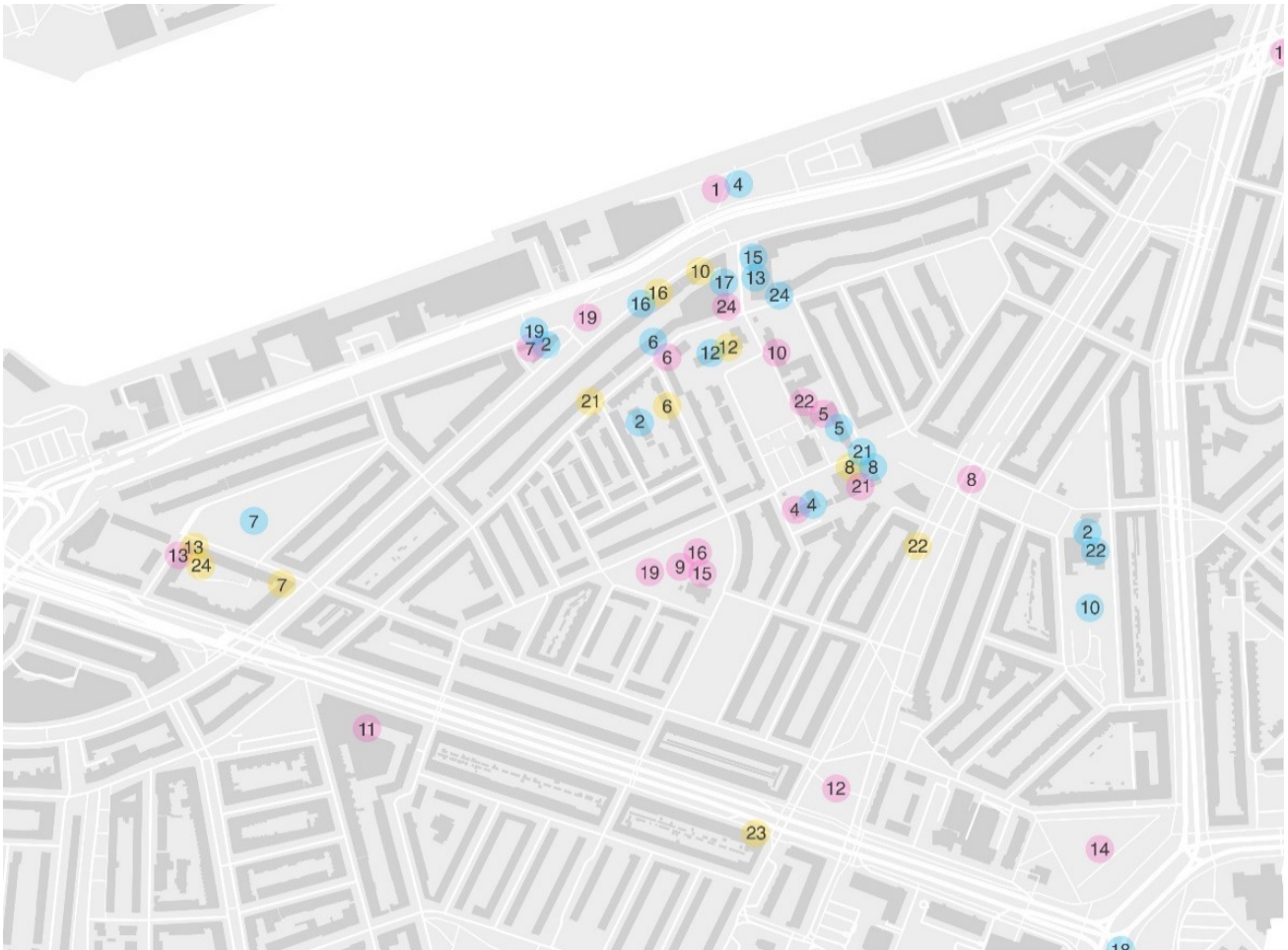




INTERVIEWS

are advocated by ethnographers as a method to see how interviewees – here Tarwewijk residents – are perceiving themselves (Lucas, 2016, chapter 6). During fieldwork in Tarwewijk they are partially conducted with the users of the places visited while drawing and observing. Information obtained this way is about health-related habits directly connected to the area closest project location.

The interviews were conducted outside the Dirk van den Broek supermarket in Hellevoetstraat, Tarwewijk, Rotterdam South, by Emmy Vermeulen, Guus Teunen, Quinta Hoeneveld and Jarema Kozielski.



The map above is a spatial representation of the answers of the interviewees. The blue represents where people meet in the neighbourhood, the red where are they feeling safe, and the yellow where did they help someone. The numbers corresponds to the ones associated to each interviewee bellow. The concentration of the dots corresponds approximately to the areas where most public functions in the neighbourhood

are located – which is in Hellevoetstraat, the school and Zwartewaalstraat, the area near the House of Hope church, a Turkish community centre at Brielselaan and a playground at Blankenburgstraat. The concentration may also be resulting from the location where interviews were conducted, but on the other hand it was hard to conduct the anywhere else due to lack of people to interview in the majority of the neighbourhood.

Day one – Monday 25.11.2024

1. STUDENTS COUPLE, 20 TO 25 YEARS OLD APPROXIMATELY.

How do you meet people in the neighbourhood?

- Well rarely in the neighbourhood mostly if we see friends, it's in the city and so we don't know maybe some of our neighbours. The one person in the street was a friend moved away so now it's no one.

Where do you feel safe in the neighbourhood?

- Nowhere, Tarwewijk is not pretty, if it's nice weather we go to the centre or maybe another park. Sometimes we walk along the Maashaven because of the view

What was the last time you helped someone?

- Couple weeks ago we called the police because our elderly neighbour didn't open his windows and his curtains for three days. She heard his dog crying so she called.

2. Interviewee not profiled

It was very hard to speak with him

How do you meet people in the neighbourhood?

- In the mosque in the neighbourhood (Wolphaertsbocht 500)
- I drink tea with friends and I have grandchildren and they go to school and I meet people there also

3. WOMAN I THINK AROUND 40 YEARS OLD

She lives 16 years in the Tarwewijk

How and where do you meet others?

She doesn't meet people in the neighbourhoods, but she knows direct neighbours

Where do you feel safe in the neighbourhood? Where do you help people?

She doesn't help people and she doesn't feel at home anywhere

Her children's play playgrounds in the neighbourhood, and sometimes she sees people there

4. MAN, AROUND 40 TO 50 YEARS OLD

Lives 29 years in Tarwewijk

How and where do you meet others?

At home mostly but sometimes also church, not precise about what church was it is.

He uses the Maashaven park to sports sometimes for jogging

Where do you feel safe in the neighbourhood?

He said on the streets when he was young but now he is on a pension and he doesn't really go on the street anymore, so nowhere in the neighbourhood.

5. FEMALE AROUND 30 YEARS OLD, DIDN'T LIVE IN TARWEWIJK

She worked at the school building because she lives in it also neighbourhood to them and when we ask her

How do you meet other people?

They have a neighbourhood WhatsApp group, but it's mostly direct neighbours

How do you help people in the neighbourhood?

Sometimes she brings out the garbage cans and then other neighbours bring it back, but only with closest neighbours

Where do you feel at ease?

- My workplace so my school.

6. MAN, AROUND 50 Y.O.

He was thinking that we were from the architects that they're planning to demolish the buildings in the neighbourhood.

He lived in this building across from the new plans and he was very concerned about the building that is planned to be built across from him. It's going to be six or seven levels and he was afraid of what it will be for his building, because of sun issues and related heating costs.

How do you meet other people?

He sits outside of his home when it's nice weather and the sun shines, and he talks to his neighbours because, and neighbours do the se. He became friends with his neighbours but he says it really depends on the street, and sometimes peoples aren't nice – i.e. on Brielselaan. He

mentions the people are very closed to.

Where, or when you help your neighbours (for the last time)?

In Polslandstraat lives an elderly man that has cancer, and he asked him to help him with the move furniture because he had to move away from a rented apartment.

7. MAN IN ELECTRIC STROLLER – TURKISH/ MIDDLE EASTERN ETHNICITY

Very nice to us.

Lives in the triangle on the west of Tarwewijk

Very happy about the neighbourhood

Where do you meet other people?

There are meetings in the park over there to discuss neighbourly affairs, but he never goes because he doesn't really like talking to people

Maybe he would go if he was younger, but not now. He has grandchildren so maybe he would go with his grandchildren.

He's been living there for 30-40 years, and he said that the neighbourhood has changed, there is not as much respect as there was back then

Says that maybe the mosque and also this markets in

Afrikaanderwijk

How do you help people in the neighbourhood?

Lends work equipment mostly to direct neighbours

8. MALE AROUND 30 YEARS OLD

Lives here and in Tarwewijk for five months

He lives in the church, he said he was safe by Christians

Where do you meet other people?

It was mostly in the Church (victory outreach) and it's also where he helps other people there spreading words. They give him food.

Where do you feel most at home

This gym under the metro because he really like to do sports.

9. FEMALE I THINK AROUND 30 TO 35 YEARS OLD

Liives four years in the neighbourhood. She was with her two small children

Where do you feel at home in the neighbourhood?

Nowhere, she doesn't really like the neighbourhoods. She was saying that when she was looking for houses to live, she didn't really want to live in Rotterdam Zuid because of reputation, and at some point she found this house and now she's OK with it.

She thinks that her street is OK but if you go more to the West, it gets more ghetto-like. She thinks it's because in her street people pay for their houses and do not get them as social housing like more on the west.

Do you meet other people?

Maybe some neighbours, but she's rather not going anywhere

She goes to playgrounds with her children, mentioned not paying for the fenced one in the middle of Tarwewijk. She then sometimes bring a friend, otherwise she doesn't speak to neighbours.

How do you help people in the neighbourhood?

She doesn't really help people, but one time was helped by someone when she locked herself out of her house

There's a handyman in her street

She's friendly, she says hi and people say hi back

10. 12 YEAR-OLD GIRLS

She was with another friend, it was dark outside but it was still 5

Where do you meet?

At school and also they mostly hang on the street

Mostly around dirk, when it gets darker closer to home, sometimes on the playgrounds.

Where do you feel most at home?

She goes to this dancing school house for urban arts so it's next to her school, she has a dancing group there but sometimes she also goes to Millinpark.

Do you help other people?

There was one situation when she or her parents helped someone hang on a TV.

11. MAN AROUND 30 YEARS OLD, with Irish accent

He came biking to the dirk and he spoke English and he lived in the Tarwewijk for one year.

Where do you feel at home?

He was saying he goes to this café / bar near the place, with beer and music, other places feels at home is mostly out of the centre.

Do you meet in the neighbourhood?

He said, speaks to neighbours sometimes, very little, he doesn't know people personally and he became friends with a couple in his streets, but they moved away last year so he doesn't speak to them anymore

Do you help others?

Rather rarely, but one time he helped a kid fixing his bike



Conducting interviews at Hellevoetstraat



Day two – Friday 29.11.2024

12. MALE 40 YEARS OLD

Lives in the Tarwewijk since 1997 (27 years)

Lives in the flat next to Dirk

Where do you feel at home in the neighbourhood?

Close to the police station, it feels more safe there so he feels more at ease

Where do you meet other people?

Nobody, but he does know his direct neighbours

How do you help people in the neighbourhood?

Used to but not anymore, did help people from the flat before with using computers, ... ??can't read the post-it and don't remember??

13. MALE (I THINK) AROUND ?? YEARS OLD (IF I REMEMBER RIGHT HE WAS AROUND +/- 40 YEARS OLD? FORGOT TO WRITE IT DOWN)

Lives in the Tarwewijk for 10 years

Where do you feel at home in the neighbourhood?

He feels most at home at House of Hope, where you can have free (evening) meals with people who, among other things, struggle with issues like loneliness. According to him, this place truly provides a family feeling.

Where do you meet other people?

At Dirk, he meets many neighbours, but of course, he also gets to know a lot of people through House of Hope.

How do you help people in the neighbourhood?

Through House of Hope, he meets other people by helping out with cooking and occasionally having a chat with them.

He is convinced that kindness and having conversations with people are what they need, and he hopes this will improve the atmosphere in the neighbourhood.

14. MALE I THINK AROUND 30 YEARS OLD

Lives in the Tarwewijk for 4 years

He also studied architecture and has been working for himself for some time now.

He mentions that the streets are too narrow, which sometimes leads to inconvenient situations. However, he thinks the housing in the neighbourhood is good.

Where do you feel at home in the neighbourhood?

At the soccer field on the edge of Tarwewijk.

Where do you meet other people?

He mainly meets his friends at Zuidplein, which he thinks is fine, and therefore, in his opinion, Tarwewijk doesn't really need anything.

He doesn't have much contact with the neighbours; sometimes he says hello, but sometimes he doesn't.

How do you help people in the neighbourhood?

He doesn't.

15. FEMALE I THINK AROUND 55 YEARS OLD

She has lived in Tarwewijk for 7 years; before that, she lived in Charlois for 20 years.

Where do you feel at home in the neighbourhood?

She feels most at home at the playground in Tarwewijk, where she sometimes goes with the children who come to visit. She can also have a cup of coffee there.

Where do you meet other people?

She knows three Turkish women in the block, but there is a language barrier.

How do you help people in the neighbourhood?

Not really in Tarwewijk, but in Charlois, yes. But not anymore now.

16. MALE

Where do you feel at home in the neighbourhood?

Overall it's "HIS" neighbourhood

When the weather is nice, he goes to the playground/parks.

Where do you meet other people?

He knows the direct neighbours and people on the street.

How do you help people in the neighbourhood?

He helps direct neighbours when they ask for assistance, as well as people on the street. In fact, he tries to help wherever possible.

17. MALE AROUND 45 YEARS OLD

Lives 27 years in the Tarwewijk

He particularly shared a lot about the experience of the neighbourhood from the perspective of his children. He has, among other things, a son with a disability (not sure what kind of disability).

Where do you meet other people?

He was hanging out with some friends around a store across from Dirk.

How do you help people in the neighbourhood?

He has been volunteering at a soccer club for 11 years, specifically for young children/youth with disabilities.

He has helped many young people off the streets by getting them interested in the soccer club.

He mentions that there are problems with young people hanging around on the streets, but that it's also understandable because there is no place for them once they reach a certain age (there are plenty of playgrounds/activities for younger children in the neighbourhood). This issue doesn't apply to older children/youth, but also young adults. Many young people, for example, are into music (playing instruments, rapping, etc.), but there is nowhere to support those activities and creativity. There are still opportunities for sports, but there is a gap when it comes to 'culture.'

Children/youth with disabilities also struggle in the neighbourhood. Often, parents keep their children at home out of fear, which makes it even harder for them to integrate into society. By "disabilities," he also refers to learning delays, which are common in the neighbourhood. He believes something should be actively done about this.

18. FEMALE 26 YEARS OLD

Lives 2 years in the Tarwewijk

Where do you feel at home in the neighbourhood?

At the market in the Afrikaanderbuurt.

When asked if she enjoys taking a walk around the neighbourhood, she immediately replies, "Oh no, I never walk here, there's nothing interesting to see."

Where do you meet other people?

She mentions that she doesn't find Tarwewijk a pleasant neighbourhood, and therefore, she doesn't really meet people there. She has the impression that there are many groups in the neighbourhood. You either belong, or you're left out. That's why she prefers to go somewhere else to meet people.

She mentions that she would like to see something for her age group to do in Tarwewijk. If only something "interesting" could be organized that is suitable for young adults, such as a place for social activities. She also reacts positively when she hears about the idea of possibly organizing musical/dance activities in the neighbourhood. When it comes to the idea of community gardens/gardening, she mentions that she knows of a place where this is possible, namely the Cultuurwerkplaats. However, she says that it's not very appealing to her age group, as it mainly attracts older people.

She mentions that she doesn't know her neighbours.

How do you help people in the neighbourhood?

Not really, although she has been to 'BuurtBuik' twice. It's an initiative in the neighbourhood where leftover food from the market can be taken for free, and a meal is cooked for people in the neighbourhood. She mentions that it mainly attracts older people.

19. TWO BOYS AND GIRL AROUND 12 YEARS OLD

They have been living in Tarwewijk for 12 years, around the corner from Dirk, near a small playground.

They attend to the school OBS the Globe

Where do you feel at home in the neighbourhood?

They feel most at home at the playground association and the playground near their house. They say, "The neighborhood is fun and dangerous."

When we ask further, they mention that a lot of illegal fireworks are being set off by other kids in the neighbourhood, and they find that scary. They themselves say they are not involved with fireworks, except for one of the boys, but only on New Year's Eve.

Where do you meet other people?

They meet people outside of school at the mosque (Wolveartsbocht?) and at Maashaven.

20. MALE I THINK AROUND 20 YEARS OLD

They have lived in Tarwewijk for 3 years, along the metro line, near Maashaven.

He goes to school at Olympia College, behind the Feyenoord training cp.

Where do you feel at home in the neighbourhood?

He feels most at home in Rijnhaven, on the street with his friends.

Where do you meet other people?

He mainly meets his friends from Tarwewijk at the schoolyard.

He occasionally has contact with the neighbours, mainly just saying hello.

How do you help people in the neighbourhood?

Mainly through small gestures, such as holding the door open for older people (neighbours).

21. FEMALE I THINK AROUND 50 YEARS OLD

The woman only spoke English. She lived in Tarwewijk for 20 years, but in 2005, she moved to Dublin for 20 years. Now, she has recently returned to Tarwewijk and plans to stay. She mentions that she enjoys living in the Netherlands and in Tarwewijk. She also notes that the neighbourhood is in better condition since her return.

Where do you feel at home in the neighbourhood?

She feels most at home at the church.

Where do you meet other people?

She knows many people in the neighbourhood and has mainly met people at the church in the past; this was her main social network in the area. The church is no longer in the neighbourhood.

How do you help people in the neighbourhood?

She mainly helps her neighbours, for example, by doing groceries for them sometimes.

22. MALE I THINK AROUND 50 YEARS OLD

Lives 12 years in the Tarwewijk

Where do you feel at home in the neighbourhood?

He feels at home everywhere, especially at the school where his children go.

Where do you meet other people?

He participated for the first time in a dinner for people from the neighbourhood (Wevershoek).

He also goes to the community centre at Millinxpark.

How do you help people in the neighbourhood?

He has taken an active role in the neighbourhood himself. He has been working on a social plan at Mijnerenslaan for 3 years. There, he set up a "neighbourhood garden" near his house with picnic benches, a water point, and more.

He tries to help his neighbours wherever he can. For example, a neighbour of his had knee surgery and ended up in a nursing home for two weeks. Her son was supposed to take care of her cats, but due to circumstances, he couldn't, so he temporarily took over the care of his neighbour's five cats.

He also once helped a downstairs neighbour with administrative matters.

What do you think that the neighbourhood lacks?

When we ask what he thinks is missing in the neighbourhood, he answers that there is a lack of greenery.

For example, recently, housing was built in a certain area where he would have preferred to see a park instead. He says that greenery makes a big difference to the liveability of the neighbourhood, especially for older groups of people (not just for young children).

He himself is unsure about moving. According to him, there is a lot of turnover in the neighbourhood because many migrant workers live there.

His daughter also likes to share her opinion about this place: according to her, there is a lack of a proper dog park in the neighbourhood, one that is specifically designed for walking and playing with dogs.

23. MALE I THINK AROUND 50 YEARS OLD

In the Tarwewijk 8 years (since 2016)

Where do you feel at home in the neighbourhood?

Nowhere. He mentions that this is partly due to the lack of greenery; it's so grey and dull that it makes people feel hopeless, he says. In the past, he lived in a much greener environment in The Hague. He would love to see Kralingse Bos in Rotterdam again, but he also understands that it's unrealistic.

He complains about the poor maintenance of the green public spaces (both parks and playgrounds) that do exist.

Where do you meet other people?

He doesn't have much contact with others in the neighbourhood. That's why he often says he would like to move, but it's difficult at the moment due to housing prices. However, he also mentions that he has no desire to get to know others in the neighbourhood; he only uses his home to "sleep."

How do you help people in the neighbourhood?

He himself initiated a neighbourhood chat.

He has also helped people in the neighbourhood with legal matters for a while. He is a lawyer himself and mentions that people sometimes seek him out through others when they need help. In that sense, he is somewhat "known" in the neighbourhood.

What do you think that the neighbourhood lacks?

He suggests that places like the theatre at Zuidplein, or similar meeting spots, could be good for the neighbourhood, as long as gentrification is prevented. It must still be accessible to people with limited means. He

gave an example of a community space where they had a punch card system, where people could order an extra "broodje ambal" (meatball sandwich) to be given for free to those who couldn't afford it.

He also mentioned that he noticed there is a night shop in the neighbourhood that stays open until 2 a.m., where various groups of people come together. He finds this remarkable, especially since there are many groups in the neighbourhood of people who either "don't trust each other" or are very focused on their own networks. He does say, however, that there are often disturbances around the night shop. He encouraged us to check out what happens around that time (we decided not to do so).

24. MALE I THINK AROUND 50 YEARS OLD

Lives 25 years in the Tarwewijk

Where do you feel at home in the neighbourhood?

He feels most at home at the Ice Cre shop on the corner across from Dirk. It's closed in the winter, but in the summer, when the weather is nice, he enjoys going there.

Where do you meet other people?

He doesn't know many people in the neighbourhood. He doesn't have active contact with the neighbours.

He meets his friends mainly at food spots in the neighbourhood, including the Ice Cre shop, but also at the shawarma place nearby, as he is friends with the owner.

How do you help people in the neighbourhood?

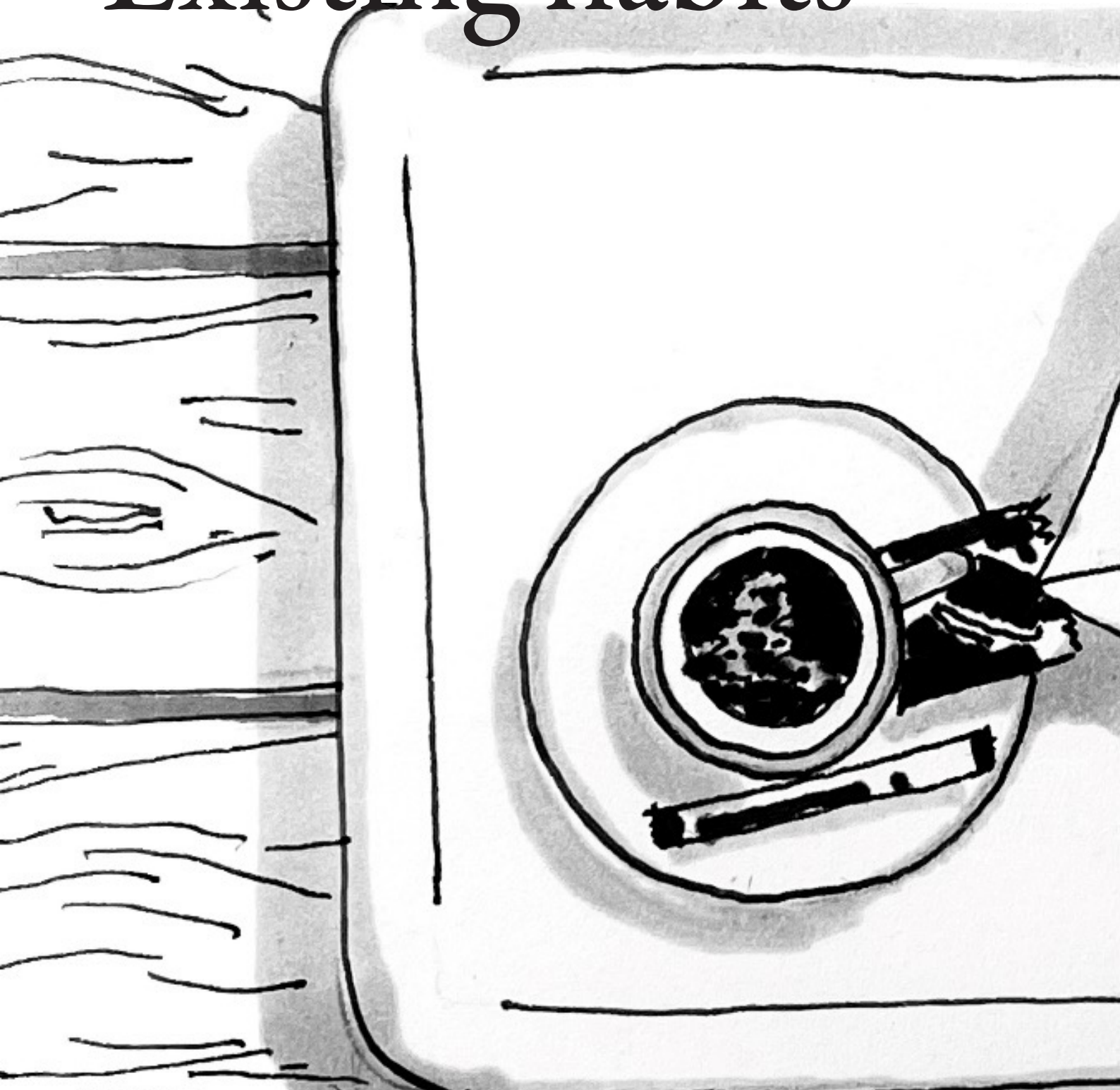
Years ago, before the pandemic, he helped at House of Hope.

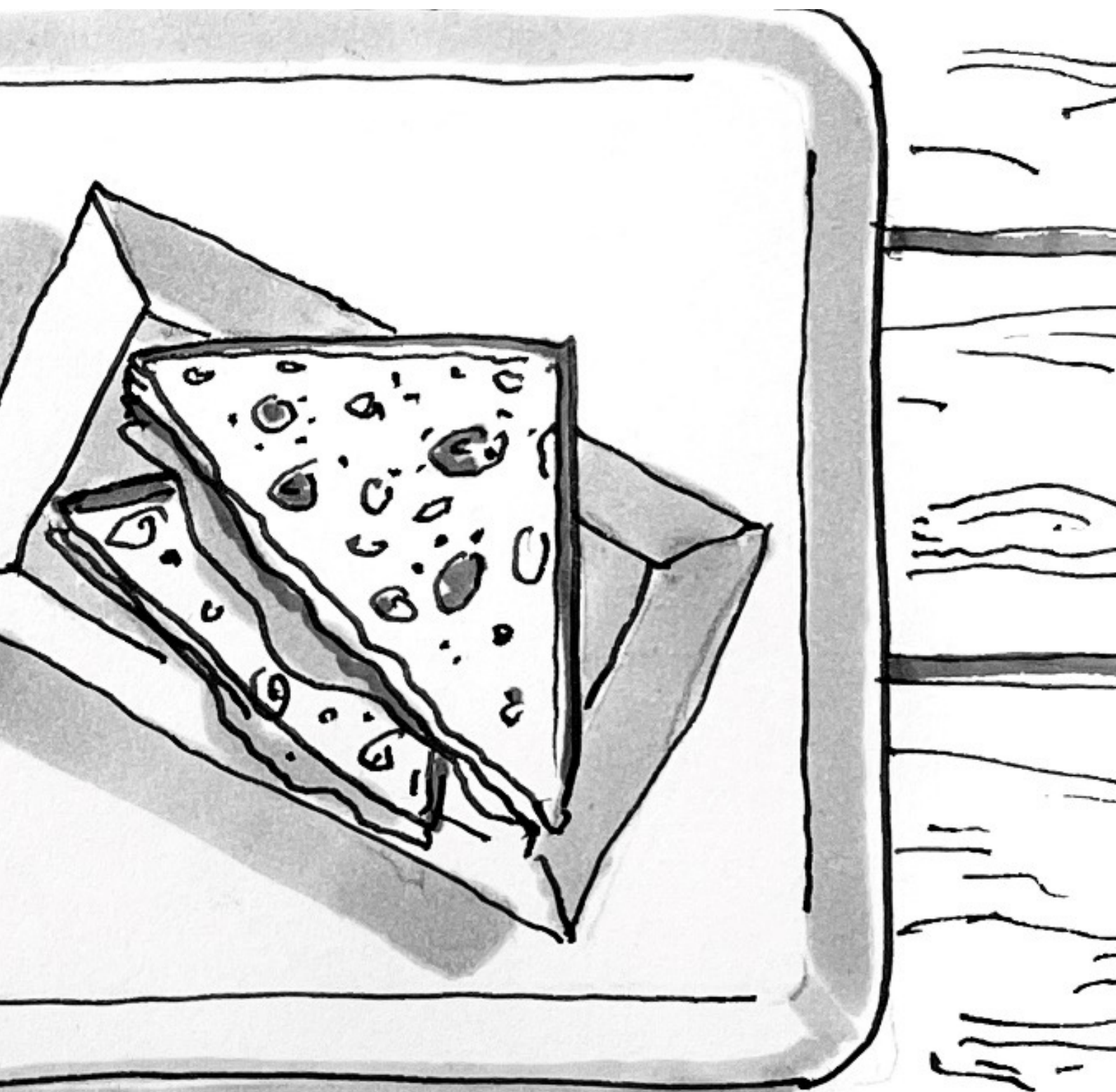
He likes to help others, but mentioned that some people misunderstand him.

What do you think that the neighbourhood lacks?

When we ask what he thinks is missing in the neighbourhood, he answers "the shoemaker." Apart from that, he believes the neighbourhood has everything: "a butcher, a supermarket, a tailor, hairdressers, etc." He finds the neighbourhood a pleasant place to live.

Existing habits





Bird feeding, fishing

Exercising, socializing, spontaneous behaviour linked to lingering in public spaces

"When we came to the Balkon aan de Maashaven four men were fishing and one of them went away after a while. They were fishing at the end of the plank." (15.11.2024, between 16:00 and 16:40 Balkon aan de Maashaven)

"Around the se time when the ship came a men on the moped came and sat and started

feeding the birds." (14.11.2024, 14:12, Balkon aan de Maashaven)

"The man on the red vespa came at some point to feed the birds and then went away as well." (15.11.2024, between 16:00 and 16:40 Balkon aan de Maashaven)



Watching the view

Exercising, socialising, programmed behaviour linked to lingering in public spaces

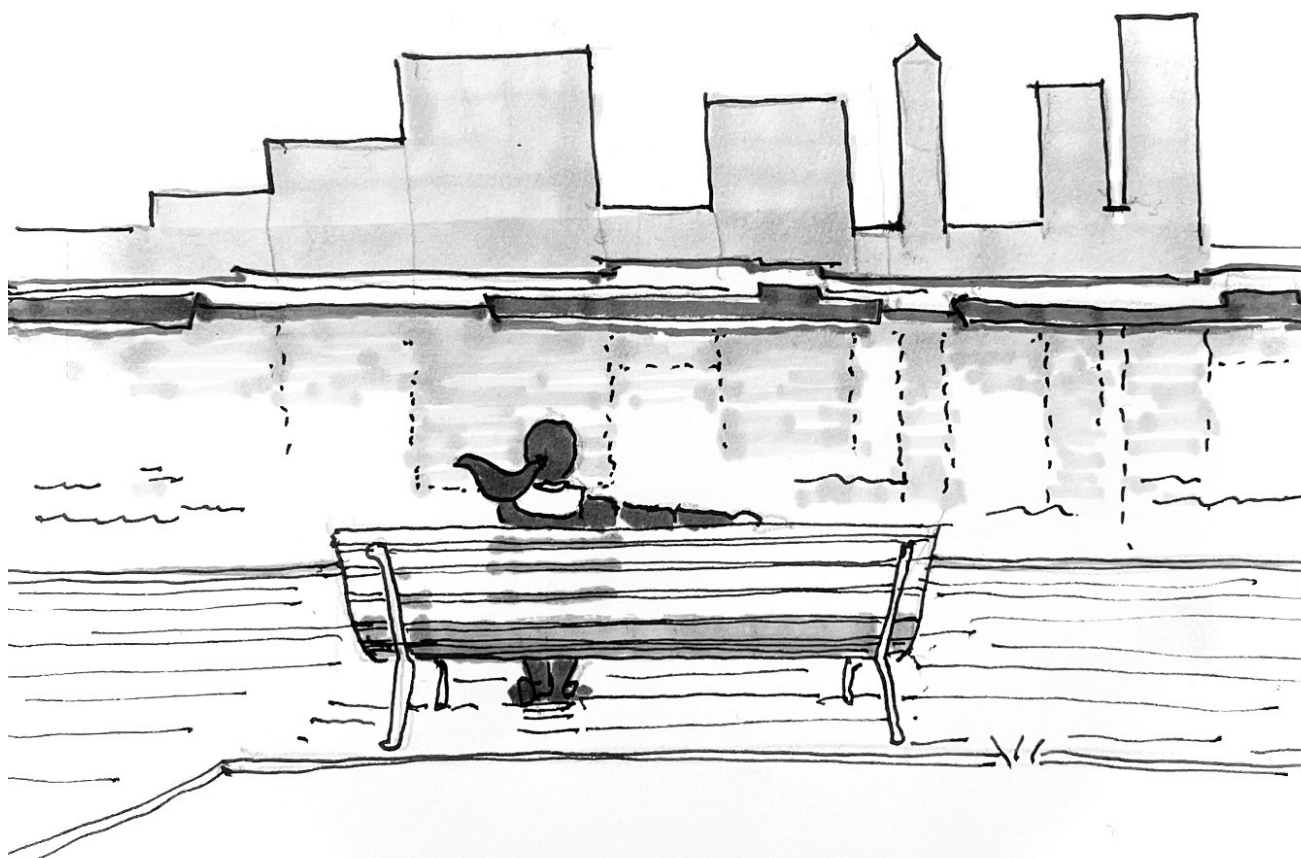
"She responded that she is from near Zuidplein. She really likes the view. She thinks that the waterfront is better than at Katendrecht, where the boats are restricting the view." (takeaways from an interview with woman 25-30 y.o., 12:36, 12.11.2024, Balkon aan de Maashaven)

"The view [from Katendrecht to the Tarwewijk] isn't astonishing [...] – it's mainly industry." (own observation, comparison of situations between two neighbourhoods, 12:59, 14.11.2024, north side

of Maashaven Harbour)

"A woman passed by back and forth to do a walk. She stopped for a bit for the view and to smoke a cigarette." (14.11.2024, 14:12, Balkon aan de Maashaven)

"Where do you feel safe in the neighbourhood? – [...] Sometimes we walk along the Maashaven because of the view" (joint fieldwork interview, student couple 20-25 y.o., 25.11.2024)



Exercising at an outdoor gym

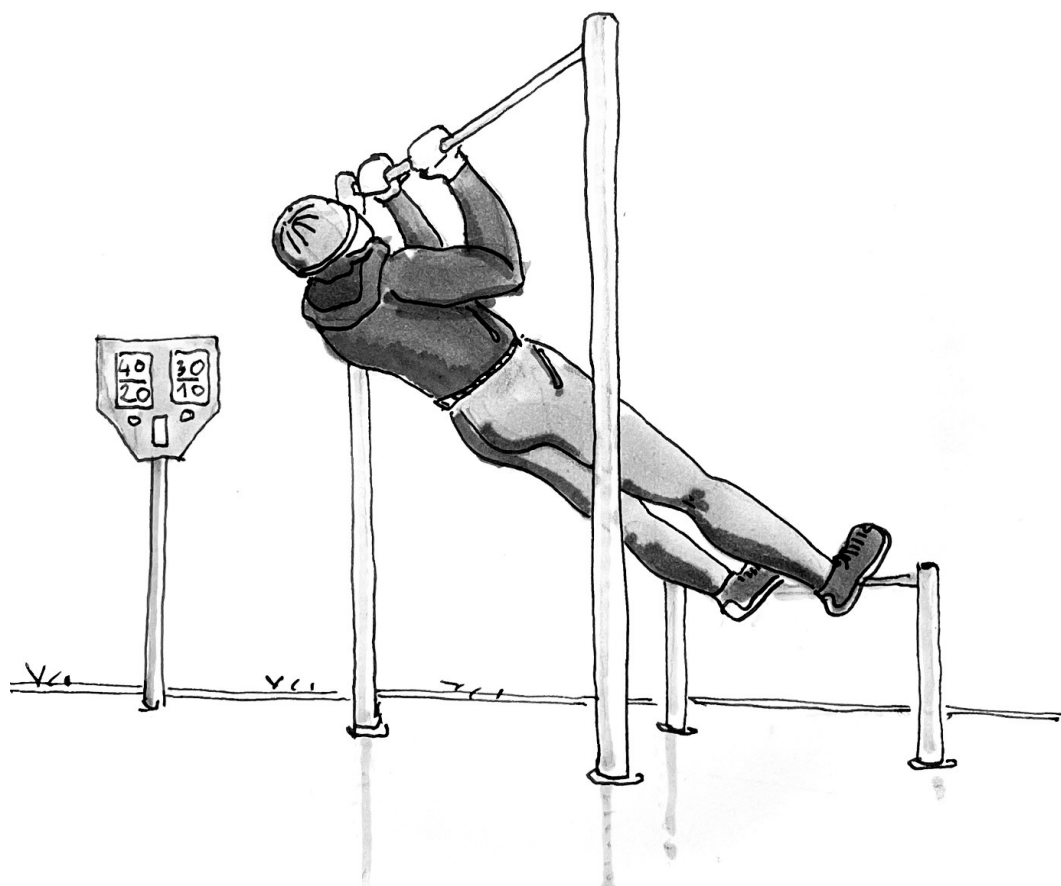
Exercising, programmed behaviour linked to physical activity

"She says she saw quite a lot of guys doing workouts at the gym." (takeaways from an interview with woman 25-30 y.o., 12:36, 12.11.2024, Balkon aan de Maashaven)

"There was one guy at the gym and he was exercising a for like 30 minutes." (15.11.2024, 16:00

– 16:40, Balkon aan de Maashaven)

"Where do you feel most at home? - This gym under the metro because I like to do sports." (25.11.2024, joint fieldwork interview, man appr. 30 y.o.)



Strolling, walking

Exercising, socialising, programmed behaviour linked to social and physical activity

"One woman was walking a dog and there were two other people sitting on benches near the ship" (12.11.2024, 12:16, Balkon aan de Maashaven)

"A woman passed by back and forth to do a walk. She stopped for a bit for the view and to smoke a cigarette." (14.11.2024, 14:12, Balkon aan de Maashaven)

"There were a few people walking through the park." (15.11.2024, 16:00 – 16:40, Balkon aan de Maashaven)

"Where do you feel at home in the neighbourhood? – [...] Oh no, I never walk here, there's nothing interesting to see." (29.11.2024, joint fieldwork interview, man approximately 30 y.o.)

"She comes there often – usually when she wants her child to have a nap. [...] She chooses this place because she mentioned it's one of the few that has benches. Once she tried to sit on a bench that was in front of a house and that people forced her to move." (interview with a woman with a baby at the dog park, 14.11.2024, 15:00, Zwartewaalstraat)



Walking dogs

Exercising, socialising, programmed and/or spontaneous behaviour (depending on the place) linked to social and physical activity

"When I arrived here, one woman was walking a dog and there were two other people sitting on benches near the ship." (12.11.2024, 12:16, Balkon aan de Maashaven)

"The kids play football on the terrain made of concrete. There is another group on the skate park nearby. People walking out with children, dogs, and sometimes looking like business partners." (14.11.2024, 12:27, park in Katendrecht)

"There's one person with the dog. It's rarely more than one person." (15.11.2024, 16:50, The Dog Park, Zwartewaalstraat)

"There is a lot of mothers with children going home. I've seen some people walking their dogs. Cars are everywhere." (own observation about all of the neighbourhood at 17:00, 15.11.2024)

"According to her, there is a lack of a proper dog park in the neighbourhood, one that is specifically designed for walking and playing with dogs." (daughter of man around 50, 29.11.2024, joint fieldwork interview)



Cycling, commute and recreational

Exercising, commuting, programmed behaviour linked to physical activity

"There is quite a lot of movements in Dirk, both pedestrian and in cars. The bicycle flow is rather poor." (12.11.2024, 11:39, near Dirk van den Broek, Hellevoetstraat)

"There is not a lot of movements on the tr stop. The street in contrary is very lively – there are cyclists, a lot of car passing and quite a lot of pedestrians too." (12.11.2024, 13:00, Wolphaertsbocht)

"2:30 is apparently the time when kids go out of school. [...] People were going all ways. Also in all sorts of transport modes (pedestrians, cyclists,

drivers)." (14.11.2024, 14:49, Zwartewaalstraat)

"There are two men speaking on the phone. There is a lot of cars going on the joint car and cycling lane. There is a man passing by on a bicycle." (15.11.2024, 17:26, Wolphaertsbocht)

"He often rides his bike, in the Netherlands to Hoek van Holland, which he really values, and in Poland more through forests. He hasn't noticed any issues with biking out of the neighbourhood." (interview with Polish man in his 30's 14.11.2024, 17:00, Balkon aan de Maashaven)



Playground playtime

Exercising, socialising, programmed behaviour linked to social and physical activity.

"A father and daughter came just for five minutes." (12.11.2024, 14:00, Wolphaertsbocht)

"This on the other hand, and in my opinion, only was making it suitable only for one group of users - people who wanted to sit there and without kids because there was no playground. Plus the playground was elsewhere (just behind the corner) and it was full of people already." (12.11.2024, 16:00, Millinxbark)

"Her children's play playgrounds in the neighbourhood, and sometimes she sees people

there." (interview, group work, woman in her 40's, 25.11.2024)

"She goes to playgrounds with her children, mentioned not paying for the fenced one in the middle of Tarwewijk. She then sometimes bring a friend, otherwise she doesn't speak to neighbours." (interview, group work, woman 30-35 y.o., 25.11.2024)

"Mostly around dirk, when it gets darker closer to home, sometimes on the playgrounds" (interview, group work, girl 12 y.o., 25.11.2024)



Helping with legal matters

Socialising, spontaneous behaviour linked to social activity.

A polish woman mentioned that "she helped people with legal matters, but after a while she stopped cause there was no gratitude and people just wanted more and more help" (preliminary research, 09-10.2024, Tarwewijk, not transcribed)

"He has also helped people in the neighbourhood with legal matters for a while. He is a lawyer himself and mentions that people sometimes seek him out through others when they need help." (interview, group work, man 40 y.o., 29.11.2024)

"He engages in voluntary activities in a in the church and groups help newcomers find jobs, etc. because he speaks Arabic and Dutch. He also helped with legal matters." (Interview with a man from Iraq, 55 y.o., 12.11.2024, Brielselaan)

We also observed one such situation while at the Take A Way – a woman was not understanding some papers, and she needed, as we understood the situation, some kind of guarantors. Marielle wanted to give it to her.



Cooking together

Socialising, eating, mostly spontaneous behaviour linked to social activity and diet.

Observed every time we were at the takeaway.

At the takeaway they also mentioned that there is another community centre specialising in that but most of the people participating in the conversation did not have a clue about it because it was not visibly announced.

Cooking together was emphasised as an important activity for the health of the residents during a meeting in which we showed them our work. It was also I mean to express the cultural

diversity of the residents.

"Not really, although she has been to 'BuurtBuik' twice. It's an initiative in the neighbourhood where leftover food from the market can be taken for free, and a meal is cooked for people in the neighbourhood. She mentions that it mainly attracts older people. (when asked about helping people in the neighbourhood)" (interview, group work, woman 26 y.o., 29.11.2024)



Speaking and chatting standing on the sidewalk

Socialising, mostly spontaneous behaviour linked to social activity.

"Walking by the neighbourhood, we've seen lots of movement near Dirk, as always. People were talking on their phones, standing in front of garages, chatting near the school, two women were sitting at a table near school as a lot of people were going to Dirk back-and-forth." (15.11.2024, 14:00, near Dirk van den Broek, Hellevoetstraat)

"I have seen to women speaking at the front door of one of them. It wasn't a Haagse Portiek,

just a regular entrance from the street level." (14.11.2024, 15:11 south side of Tarwewijk)

"Some dudes were hanging out in front of a garage service" (14.11.2024, 14:49, Hellevoetstraat)

Observed regularly in Hellevoetstraat, where there is a lot of commerce and other public functions, as well as on playgrounds, where parents came with children and chatted, and in front of schools where the se happened.



Doing groceries and shopping

Diet, socialising, programmed behaviour.

Observed regularly in Hellevoetstraat, where there is a Dirk van den Broek supermarket (the biggest one in the neighbourhood), as well as other commercial parlours.

"He's rather reluctant to go to Dirk – he says the clientele doesn't know how to behave, it's dirty and disorganized. He links this to income levels – Dirk is more of a budget store." (interview with a 30 y.o. man, 14.11.2024 Balkon aan de Maashaven)

"Two women that were saying that they often go to a market in Afrikaanderwijk that it's kind of

a hobby. They don't go there only to do groceries but also to just be there just to spend their time" (15.11.2024, 10:00-13:00, interview with two women conducted by Emmy at the Take A Way)

"[...] says that maybe the mosque and also this markets in Afrikaanderwijk (when asked about meeting people)" (interview, group work, man in stroller, 25.11.2024)

"At the market in the Afrikaanderbuurt. (when asked about feeling at home in the Tarwewijk)" (interview, group work, woman 26 y.o., 29.11.2024)



Eating out in cafés and restaurants

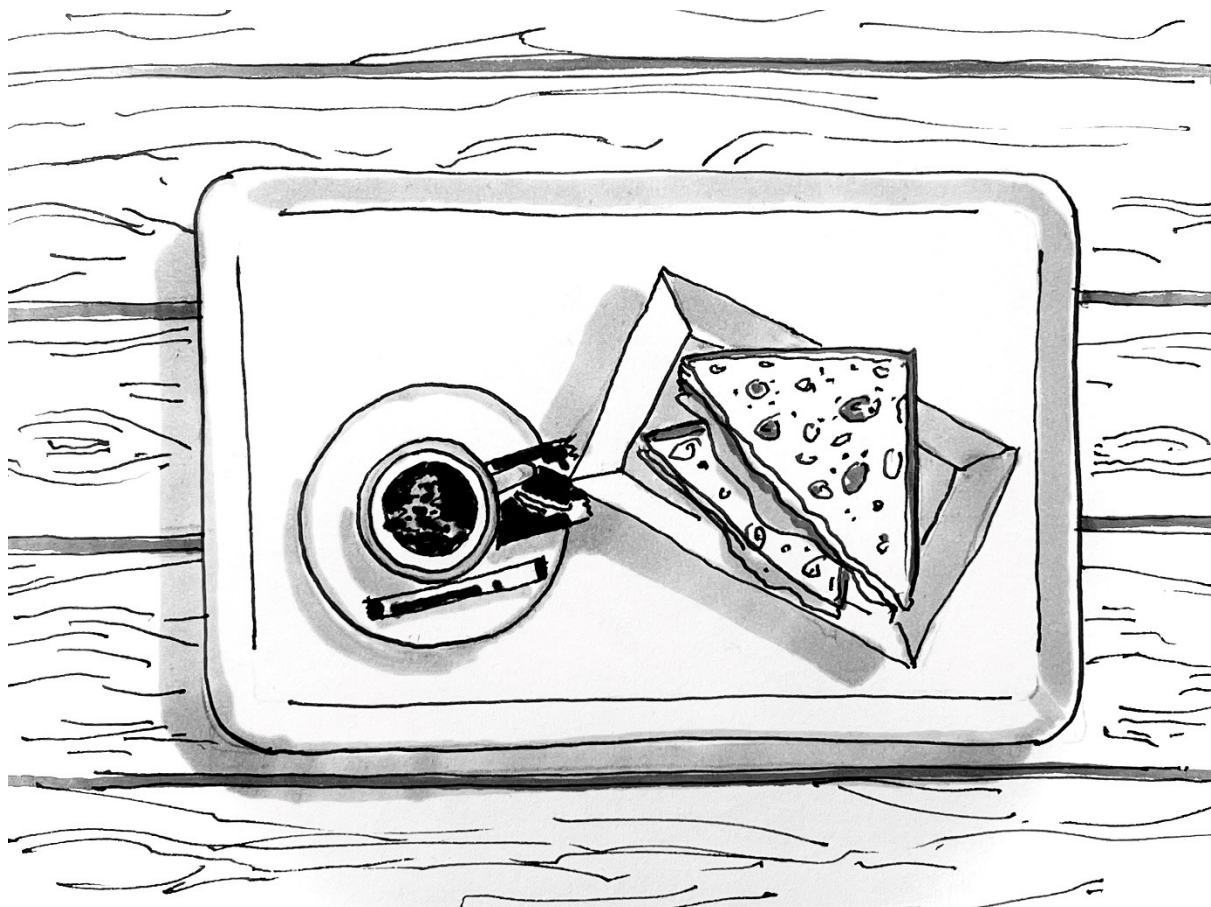
Diet, socialising, programmed behaviour.

During the preliminary research, in September, when the Ice Cre Parlour at the Hellevoetstraat was open, it was one of the most active places in the neighbourhood. (preliminary research, not transcribed)

"There's always a lot of people there – pedestrian passing by broadly from the bus station and the nearby mall. A man greeted me when I was eating." (about myself, while having

a coffee at Annie M.G. Shmidtplein, 12.11.2024, 15:30)

"He meets his friends mainly at food spots in the neighbourhood, including the Ice Cre shop, but also at the shawarma place nearby, as he is friends with the owner." (interview, group work, man 50 y.o., 29.11.2024)



Playing football or basketball

Exercising, socialising, programmed behaviour.

"I'm arriving to a park in the neighbourhood and there seems to be a school or something having sports classes. [...] [the volunteers] study at The Hague, apparently Thursday they come here and try to encourage people to go and play football, mostly kids obviously they do sports, etc. Volunteering there is not new." (about Kaappark in Katendrecht, 14.11.2024, 12:27)

"Many young people, for example, are into music (playing instruments, rapping, etc.), but there is nowhere to support those activities and creativity. There are still opportunities for sports, but there is a gap when it comes to 'culture.'" (interview, group work, woman 45 y.o., 29.11.2024)

Regularly observed at the sport fields on Mijnsheerenplein and Bas Jungeriusstraat.



Participating in community meetings

Socialising, programmed and spontaneous behaviour, sometimes linked with diet.

Observed regularly on Fridays and Mondays at the Take A Way community centre.

"Where do you meet others? - At home mostly but sometimes also church" (interview, group work, man 40-50 y.o., 25.11.2024).

"It was mostly in the Church (Victory Outreach) and it's also where he helps other people there spreading words. They give him food" (interview, group work, man 30 y.o., 25.11.2024).

"She feels most at home at the church." (interview, group work, woman 50 y.o., 29.11.2024).

"There is a meeting happening at the Turkish community centre near the tr stop."

(15.11.2024, 17:26, Wolphaertsbocht)

"There are meetings in the park over there to discuss neighbourly affairs, but he never goes because he doesn't really like talking to people" (interview, group work, man in stroller., 25.11.2024).

"They have a neighbourhood WhatsApp group, but it's mostly direct neighbours" (interview, group work, woman 30 y.o., 25.11.2024)

"In the mosque in the neighbourhood (Wolphaertsbocht 500)" (about meeting people in the neighbourhood) (interview, group work, man, 25.11.2024)



Casual meetings

Socialising, programmed and spontaneous behaviour

"Well rarely in the neighbourhood mostly if we see friends, it's in the city and so we don't know maybe some of our neighbours. The one person in the street was a friend moved away so now it's no one." (interview, group work, student couple 20-25 y.o., 25.11.2024)

"I drink tea with friends and I have grandchildren and they go to school and I meet people there also" (interview, group work, man, 25.11.2024)

"Hesits outside of his home when it's nice weather and the sun shines, and he talks to his neighbours"

(interview, group work, man 50 y.o., 25.11.2024)

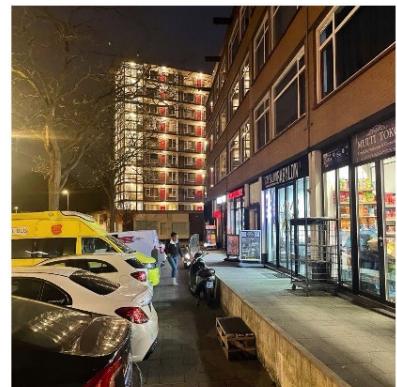
"At school and also they mostly hang on the street, and mostly around dirk, when it gets darker closer to home, sometimes on the playgrounds" (interview, group work, girl 12 y.o., 25.11.2024)

"He mainly meets his friends at Zuidplein, which he thinks is fine, and therefore, in his opinion, Tarwewijk doesn't really need anything. He doesn't have much contact with the neighbours; sometimes he says hello, but sometimes he doesn't." (interview, groupwork, man 30 y.o. 29.11.2024)

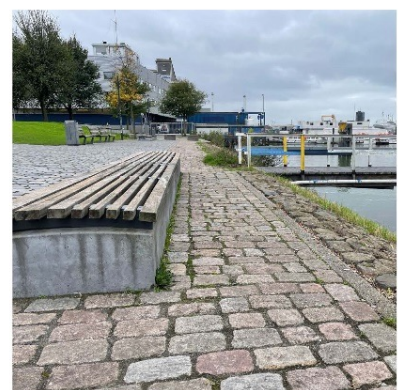
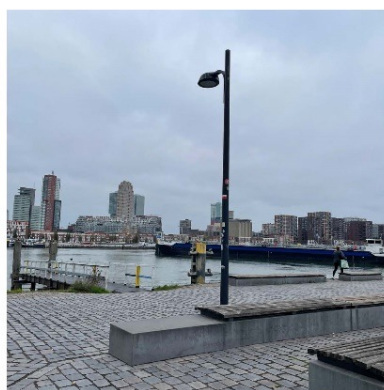
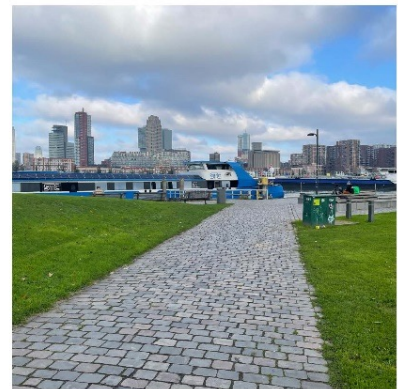
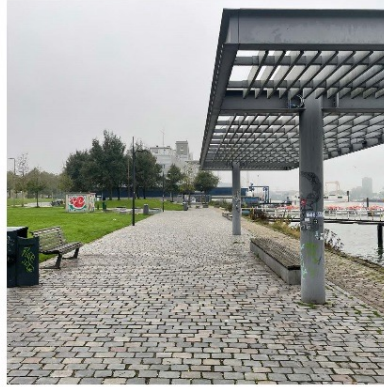


Photo series

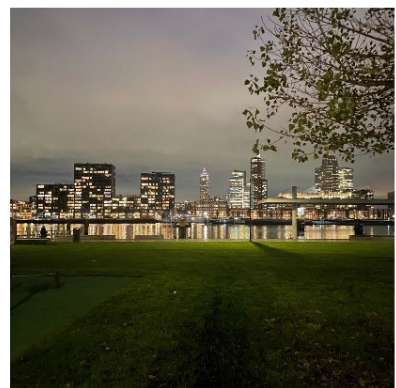
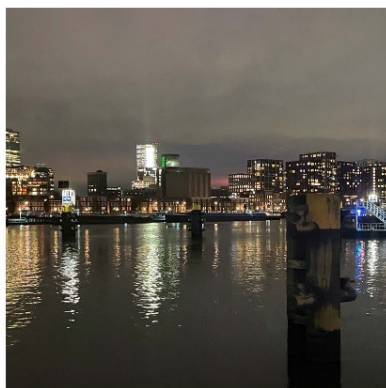
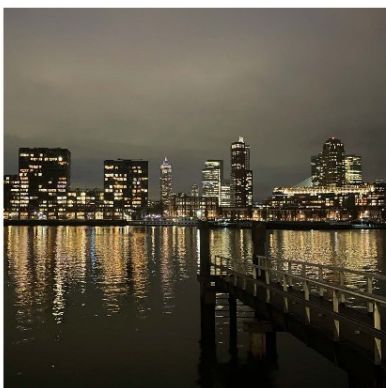
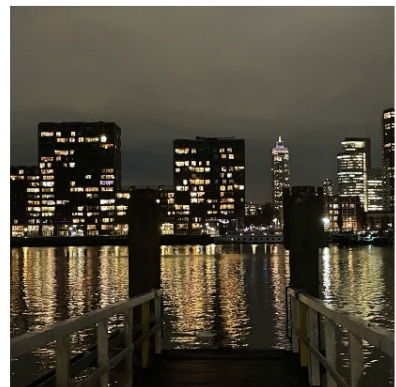
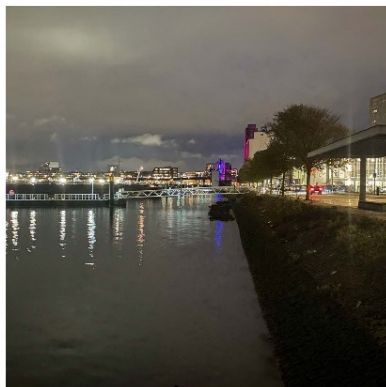
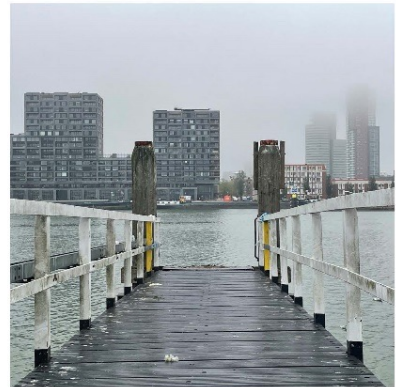
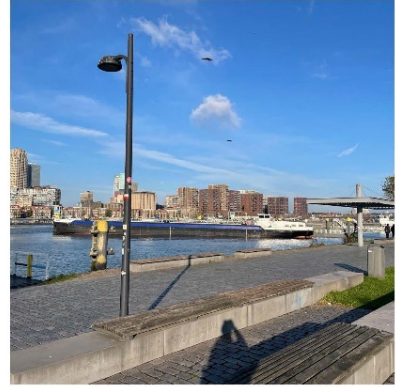
Hellevoetstraat



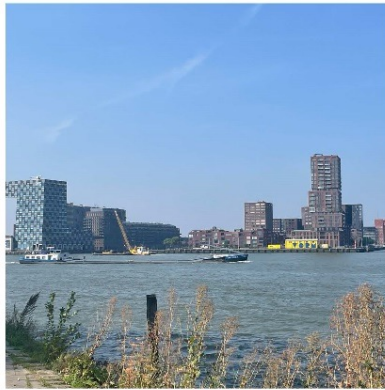
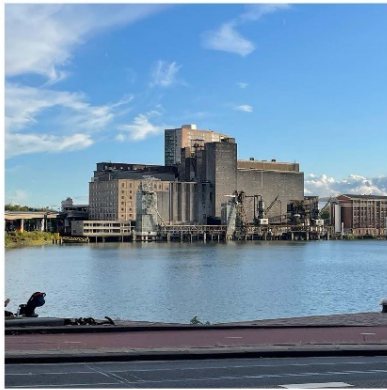
Balkon aan de Maashaven



The view from Balkon aan de Maashaven



Alternatives for the view from Balkon aan de Maashaven



House fronts



SITE ANALYSIS

ContentSite analysis

INTRODUCTION	109
SUN ANALYSIS & WIND DIRECTION	112
ACCESSIBILITY, SIGHT LINES & ROUTING	113
BUILDING HEIGHT	114
INFRASTRUCTURE	115
PUBLIC FUNCTIONS	116
NATURAL INFLUENCES	117
ARCHITECTURAL INFLUENCES	118
FUTURE PLANS	119
INFORMATION FROM FIELDWORK	120
CONCLUSIONS	122
BIBLIOGRAPHY	124

Introduction

BALKON AAN DE MAASHAVEN

This booklet serves as support regarding the chosen design location for the MSC3/4 Designing for Health & Care Studio 2024/2025 at the Architecture faculty of TU Delft. This booklet provides an analysis of this design location 'Balkon aan de Maashaven' [Balcony at the Maashaven] (surrounded by dashed lines in the image on the next page).

Conducted by
Jarema Kozielski, 6050034
& Quinta Hoeneveld, 5085381



The site is situated on the northern side of the neighbourhood. To the south, it faces Brielselaan, one of the main streets in the area. To the west, industrial buildings are located, including one housing the architectural studio Nauta. On the east lies a park, Balkon aan de Maashaven, while to the north, the plot directly faces the neighbourhood's waterfront. Currently, the site is occupied by a scientific institution (name here), housed in a building constructed in (place, approximate years here). The perimeter of the site is fenced, limiting access. The building lacks historical significance (Jürgenhake et al., 2024) and does not appear to be integral to the neighbourhood – it is a highly specialized facility, seldom mentioned in interviews, and rarely frequented by visitors.

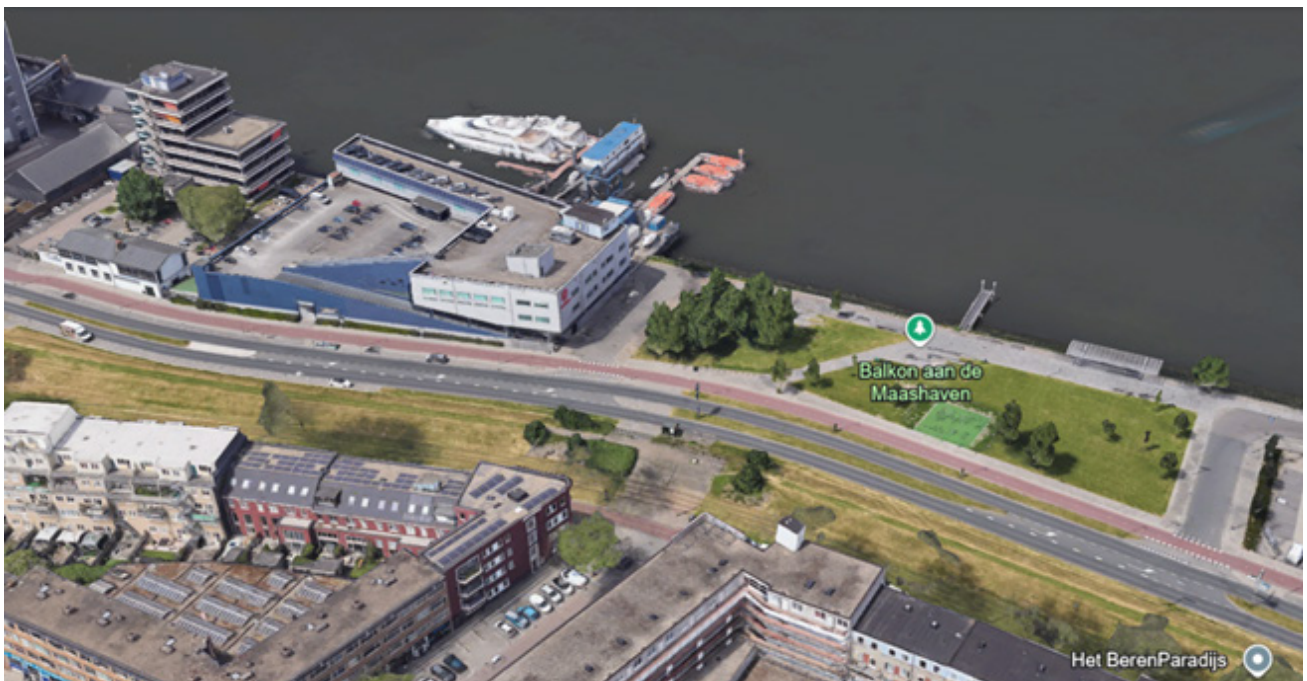
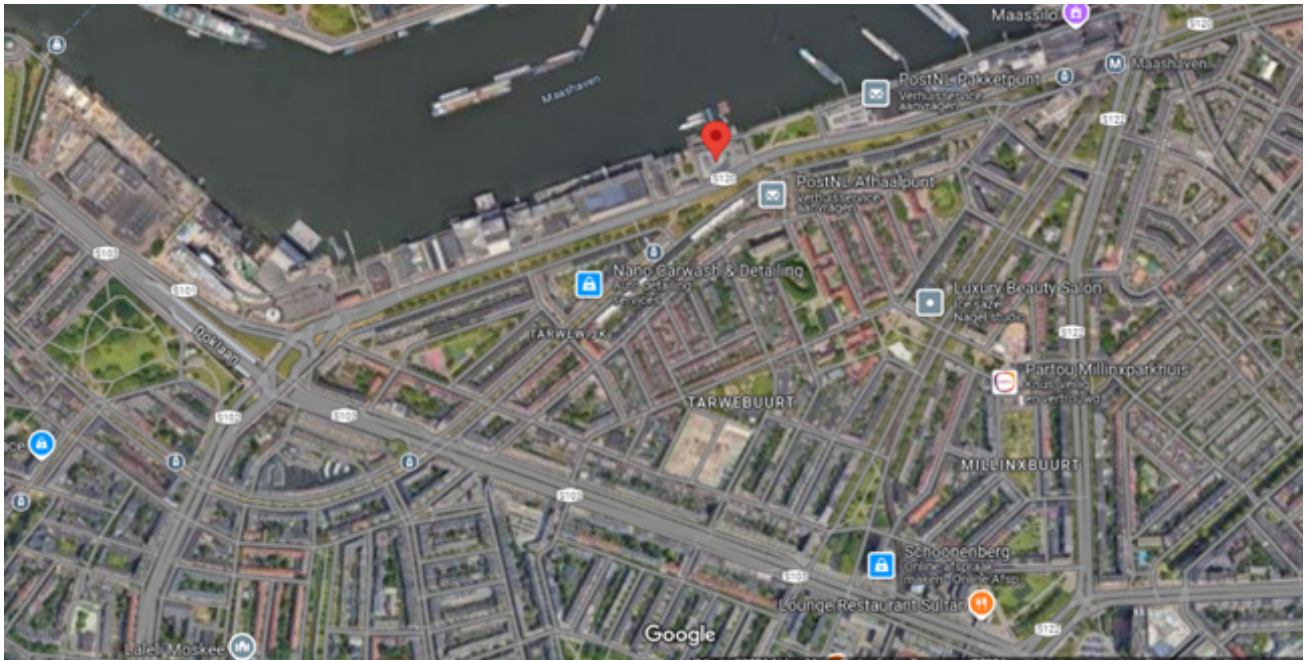


Image on the top: Plot location on the map of the neighbourhood (Google Maps, 2025)

Image on the bottom: Aerial view of the site (Google Maps, 2025) 25)

Sun Analysis & Wind Direction

This map shows an analysis of the position of the sun and the direction of the wind in the months of January and July.

The position of the sun has consequences for the shadow on the plot especially because of the adjacent buildings on the left side. These buildings can provide shade on the plot during the end of the afternoon and evening. In the morning and afternoon the plot catches a relatively large amount of light from the south. However, a (new) building on the plot will provide shade during the day on the side of the quay, which may have consequences for the use of the plot, especially on the waterfront.

The wind directions are based on the long-term

average (1991-2020) of the KNMI main station in Rotterdam in the months of January and July (KNMI - Windrozen Van De Nederlandse Hoofdstations, 2021). The wind roses shows that almost all year round the wind comes mainly from the southwest. However, the physical situation of the immediate environment can cause different outcomes on the plot in question (microclimate). Since the plot is located adjacent to the Maas and is surrounded by some high buildings in the area, the microclimate here may differ from the indicated wind rose. It would be valuable to study the microclimate at this location and how a new building mass would influence the microclimate positively or negatively.



Accessibility, Sight Lines & Routing

The purpose of this map is to provide insight from which directions people can reach or see the location in question. Two important public transport stops are shown on the map and the dashed line shows the most logical slow traffic routes to the location. The connection with the sight lines on the map has also been made clear. The cross implicates a lack in sight from one of

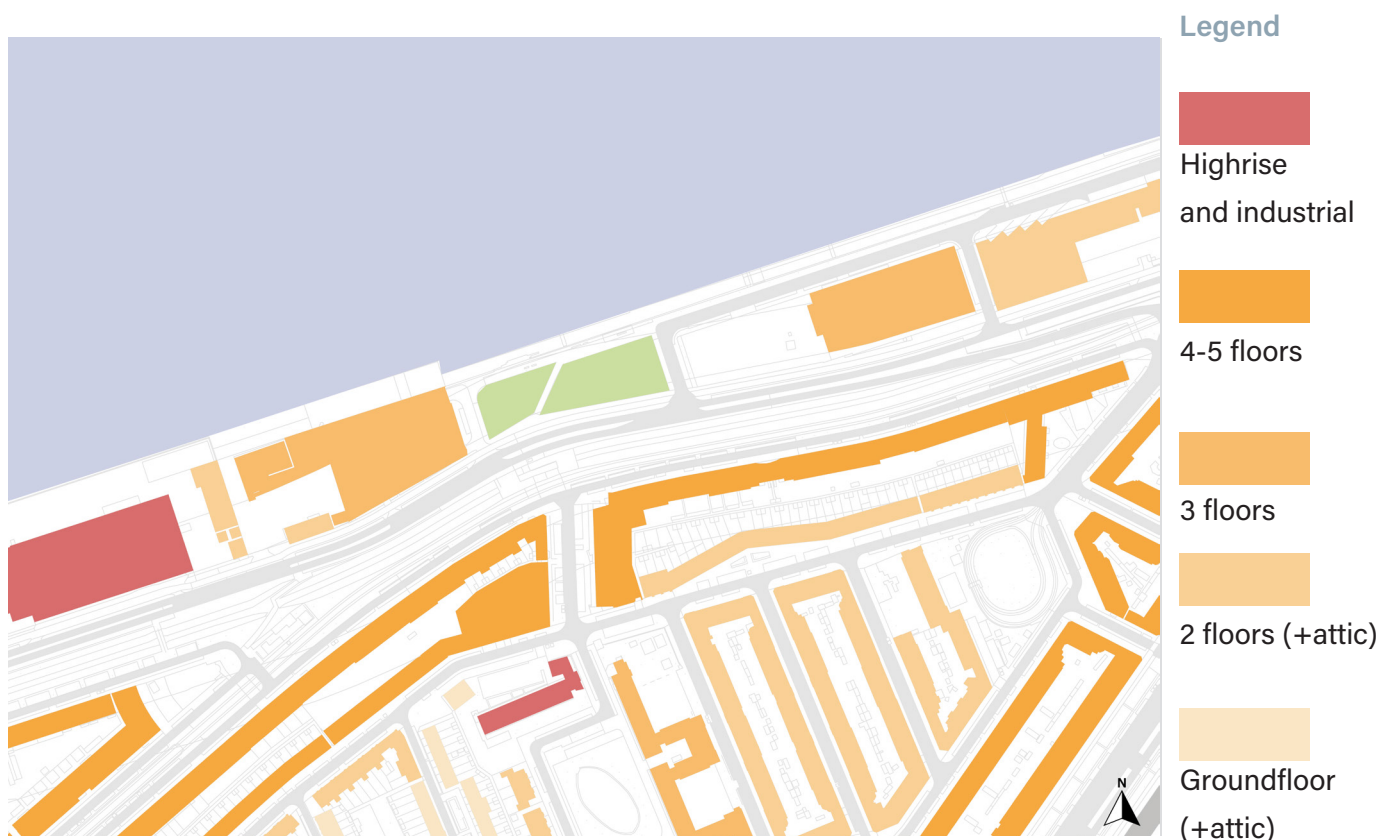
the routes, which is caused by a dike. Being aware of the sight lines is very important for attracting people to the location. Making use of this in the design can therefore be beneficial for the use of the location. The most important walking/cycling routes towards the plot can influence the locations or degree of accessibility of the building and open spaces in the design.



Building Height

This map gives an impression of the heights of the buildings around the plot. The data is based on the Tarwewijk Analysis Booklet also created in collaboration with all students from the MSC 3/4 Health & Care Studio at the Architecture faculty TU Delft (AR3AD110 Dwelling Graduation Studio: Designing for Care in an Inclusive Environment (2024/25 Q1), 2024).

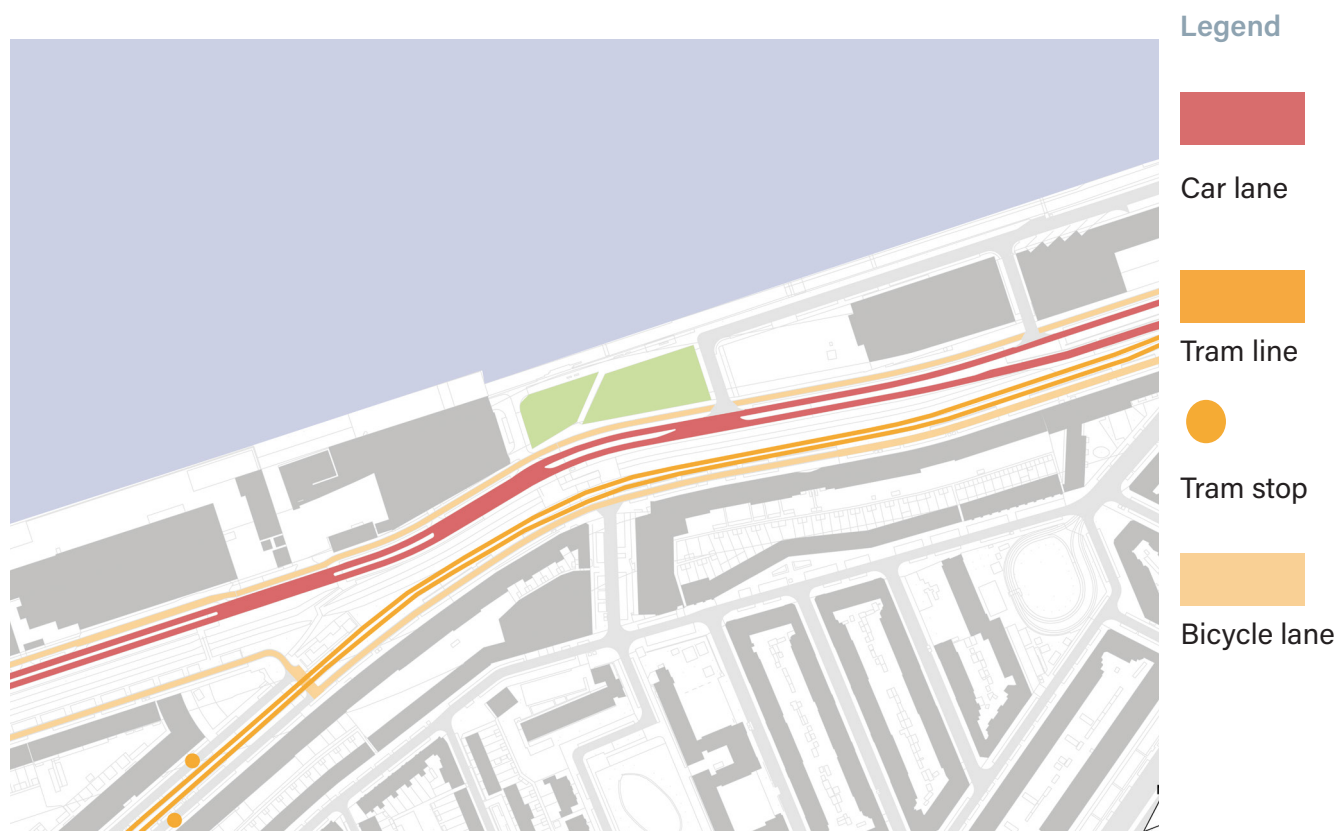
As previously indicated in paragraph 02 about the position of the sun and wind direction, the adjacent buildings on the quay (in red and orange) may cause shadows on the plot. The heights of the masses can also have consequences for the shape and size of the masses of the new design. When designing the shape of the building volume, consideration will also be given to how it fits proportionally within the physical environment.



Infrastructure

This map gives an impression of how what types of infrastructure are located around the plot. The map shows that the plot is located next to a bicycle lane, car lane (S-road) and tram line.

Although the plot is easily accessible via various means of transport, this can also cause a nuisance and a less pleasant atmosphere along the plot



Public functions

The public functions nearest to the plot are:

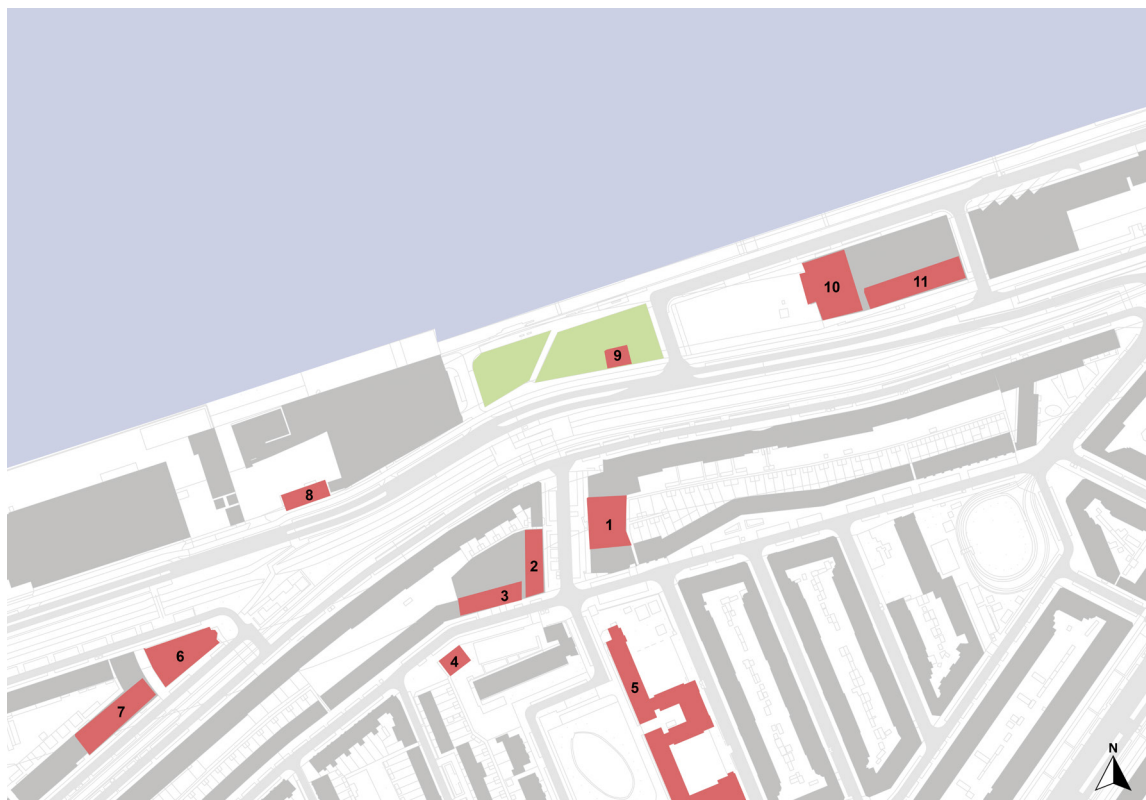
1. A Dirk van den Broek supermarket on Hellevoetstraat
2. A mix of commerce function on the ground floor on Hellevoetstraat, including an ice cream parlour, two hairdressers, a Toko groceries shop, a fish restaurant and a meat shop.
3. Car repair facilities on Wolphaertsbocht and Katendrechtse Lagedijk
4. Supermarket Livio Sklep
5. A primary school on Hoogvlietstraat, with an adjacent playground
6. A Turkish Islamic culture centre on Wolphaertsbocht - Vereniging Versaar

10. A Karwei furniture and house maintenance store

11. An indoor gym on Brielselaan and an outdoor gym in the Balkon aan de Maashaven

The commute and transport infrastructure connected to the area is:

- Brielselaan, a major transit car street in the neighbourhood
- A tram stop on Wolphaertsbocht connecting the area to a metro station, Charlois and the city centre (tram nr 2)
- A bicycle lane on Brielselaan

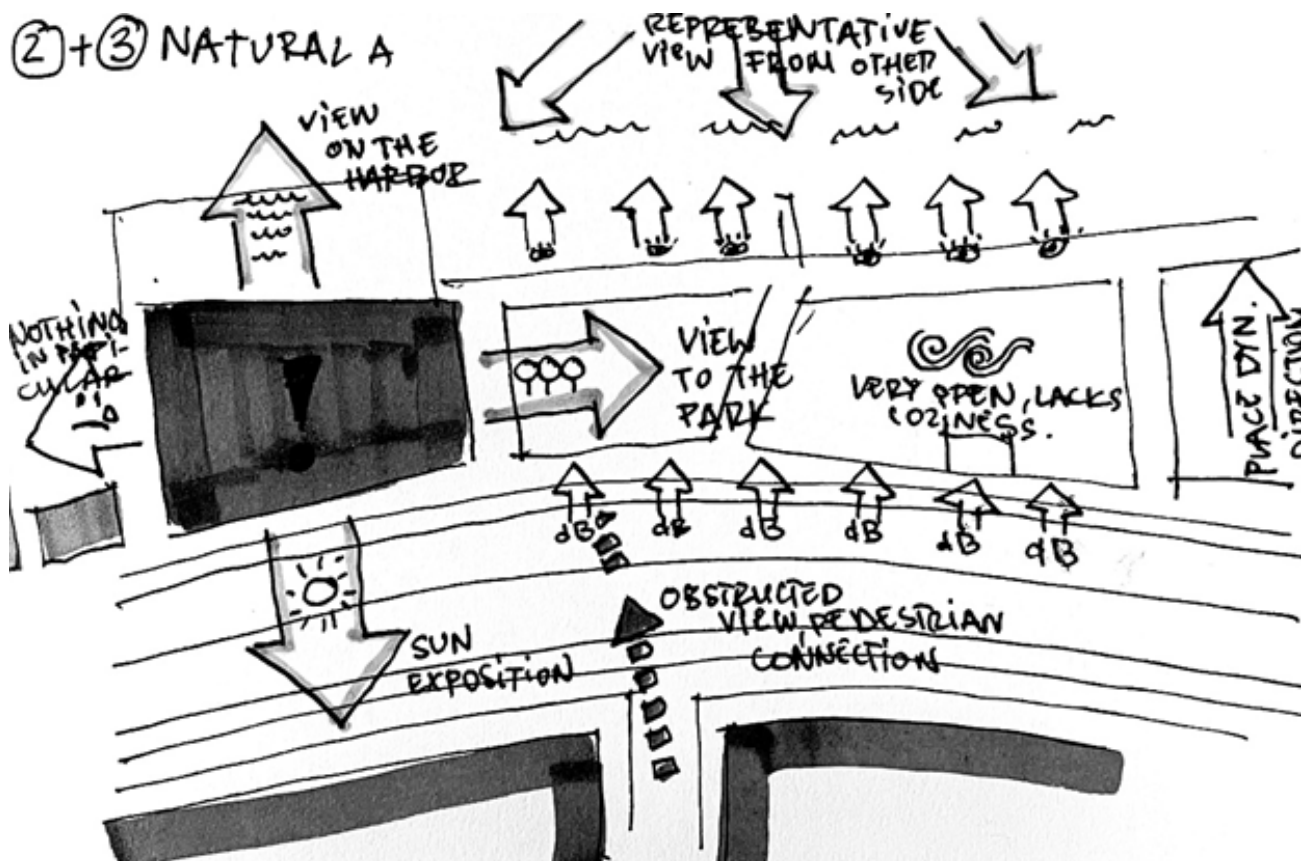


Natural Influences

The plot is situated in one of the most open areas of the neighbourhood, facing the harbour. This positioning provides favourable sun exposure, as there are no adjacent buildings to obstruct sunlight. As shown in a group analysis done with the group – “Health and Care in Tarwewijk” – despite being located in the city centre of Rotterdam, where the Urban Heat Island effect is noticeable, the plot benefits from

significant cooling due to its proximity to the water. Additionally, the site experiences stronger winds compared to other parts of the neighbourhood, enhancing natural ventilation. The park currently lacks sufficient vegetation, with only a few trees located on the west side, while the east side is predominantly covered with grass and minimal plant diversity (Jürgenhake et al., 2024).

Image: Visual representation of natural and architectural influences on the building



Architectural Influences

The proposed building is situated at a considerable distance from the nearest residential units. On its eastern side, it will neighbour an industrial facility. Its northern side holds potential as a prominent, representative element due to its visibility from the northern part of the harbour. Similarly, its western side gains value by facing the park (Jürgenhake et al., 2024). However, the visibility of both the building and, more critically, the park from within the neighbourhood requires

improvement, as it is currently obstructed by the dike.

Currently, the area adjacent to the plot feels unwelcoming, primarily due to the sequence of road, dike, tramline, and road. There are no nearby spaces that can be perceived on a more intimate scale; everything is experienced from a broader perspective. As a result, there is a noticeable absence of coziness and a sense of safety in the park and its surroundings



Future Plans

The primary plan for the area was developed by Mecanoo Architects (Mecanoo, 2024) in collaboration with the Municipality of Rotterdam. The vision is to integrate part of the Rotterdam campus of Delft University of Technology near the waterfront. The entire dyke area is slated for transformation into a linear park. Additionally, a

pedestrian and cycling bridge connecting to the opposite side of the harbour is planned, visible in some of the drawings. Proposed buildings are shown in locations currently occupied by water. However, the plans remain at an early stage, with limited precision, due to the large scale of the proposed investments.

Image: "A new perspective for Rotterdam South" – masterplan by Mecanoo, including Tarwewijk (Mecanoo, 2024)



Information From Fieldwork

Interviews conducted in Week 2.1 reveal that the primary users of the Balkon aan de Maashaven are individuals who visit specifically to relax. (interview nr) The majority of respondents identified the view as the park's primary draw. (interview nr) Some visitors expressed a willingness to walk considerable distances (20 minutes was mentioned as a reference point during one interview) to enjoy the park during the day or after work. (interview nr) Most interviewees reside in Tarwewijk or Katendrecht, the two neighbourhoods with direct visual connections to the park.

Complementary observations conducted in Week 2.1 identified various activities taking place in the park, including bird feeding, sitting on benches, fishing, exercising in the outdoor gym, strolling, running, cycling (along the path adjacent to the street), eating lunch, walking dogs, and smoking cigarettes or marijuana. (Appendix 2) While the park was generally not crowded, it consistently had some visitors. Peak usage was observed during post-work hours.

The gender distribution among park users was relatively balanced, suggesting that the park felt safe during the day. However, two interviewees noted that during summer nights, the park becomes a "grey space" where the police are vaguely aware

of potential illegal activities but opt not to intervene. The absence of natural surveillance in the area facilitates such behaviour (interview nr).

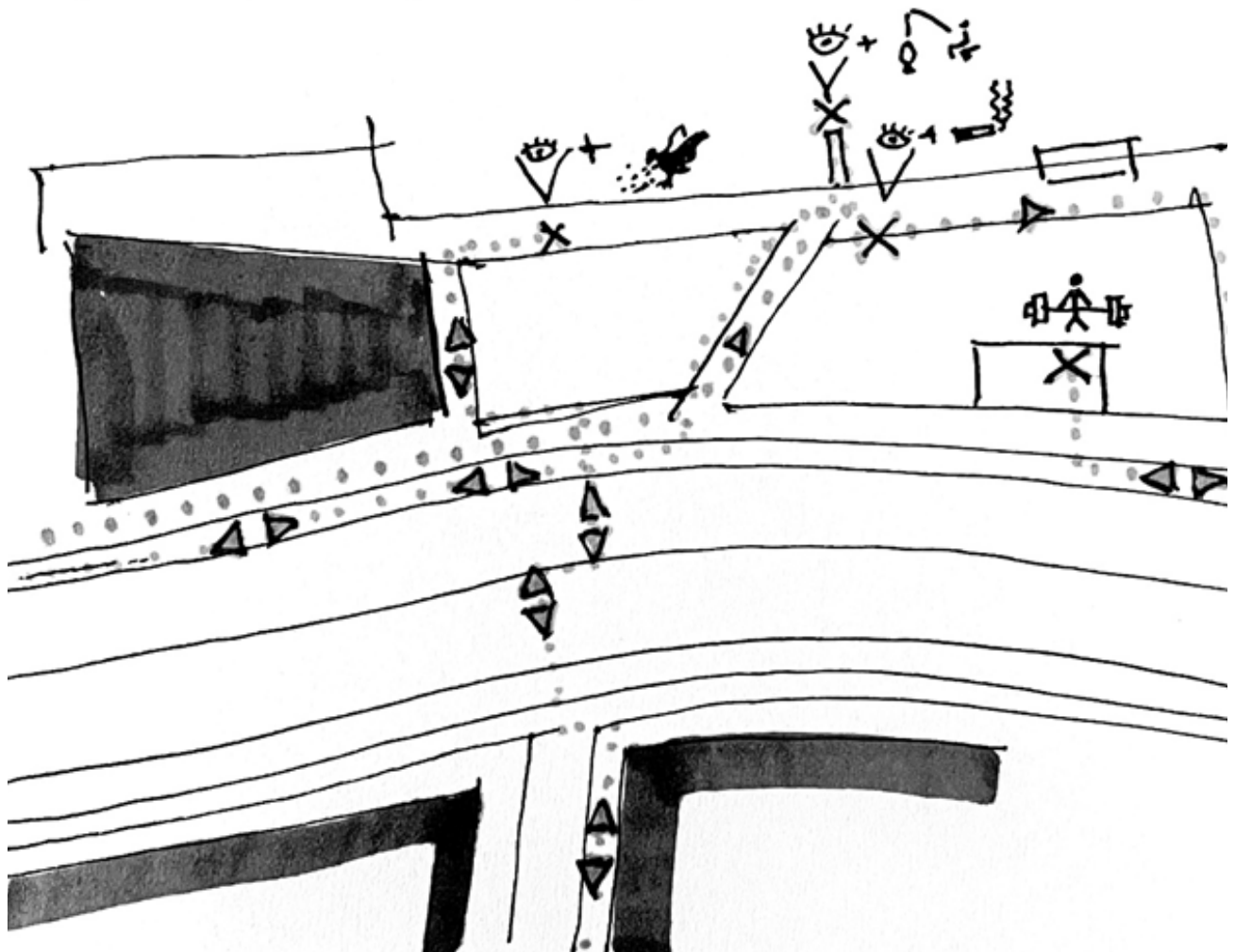
Some users appear to have an emotional connection to the park, as evidenced by their consistent use despite constraints – such as a wheelchair user – or regular routines, like a man frequently feeding birds. (interview nr) The park shows minimal signs of vandalism and relatively small amounts of litter, primarily consisting of cigarette butts and laughing gas canisters. This contrasts sharply Maashaven Oostzijde, under the metro bridge, where both the quantity and variety of litter are significantly greater (interview nr).

Currently, the park primarily caters to a single type of user—those who wish to linger within its space. Its location, adjacent to a street dominated by industrial functions, limits incidental visitors, as few people pass through or enter the park spontaneously. Additionally, the park lacks connectivity to daily routes, such as commutes to work or school, as it is configured as a pocket or dead-end space. There are also limited facilities for diverse activities beyond sitting on benches; for example, there is no playground, shaded areas, or zones separated from the street for safety. Moreover, the absence of commercial activities

further diminishes its functionality. As a result, the park functions solely as a lingering destination, rather than as part of a larger network of activities or pathways.

Image: Visual representation of the current use of the Balkon aan de Maashaven, on the east from the plot

ADDITIONAL INFO - PEOPLE



Conclusions

Both the park and the building will be situated in a context that significantly influences the design approach, as they are positioned between the waterfront on one side and the street on the other. While the waterfront is considerably more attractive, it is located on the northern, shaded side. This creates a conflict of interests that must be carefully addressed during the building's design studies, particularly since the primary function of the structure will be residential housing.

The building currently occupying the plot lacks historical significance and is physically closed off from the surrounding neighbourhood. It contributes neither aesthetic value to the park nor to the site as a whole. Its function appears to be highly specialized, possibly housing laboratories, with parking located on the upper floors. These features suggest the structure is unlikely to support functional repurposing, as the design includes non-standard room sizes and multi-level car ramps. Consequently, most of the building's layers, particularly its plan and structure, would be challenging to reuse. Therefore, demolition of the building is proposed, with further investigation to assess the feasibility of reusing elements such as the façade and thermal insulation.

The plans developed by Mecanoo in

collaboration with the municipality of Rotterdam envision a pedestrian bridge connecting Katendrecht and Tarwewijk. The site's design should account for this anticipated development and function as a gateway to the neighbourhood. To achieve this, several key aspects must be addressed:

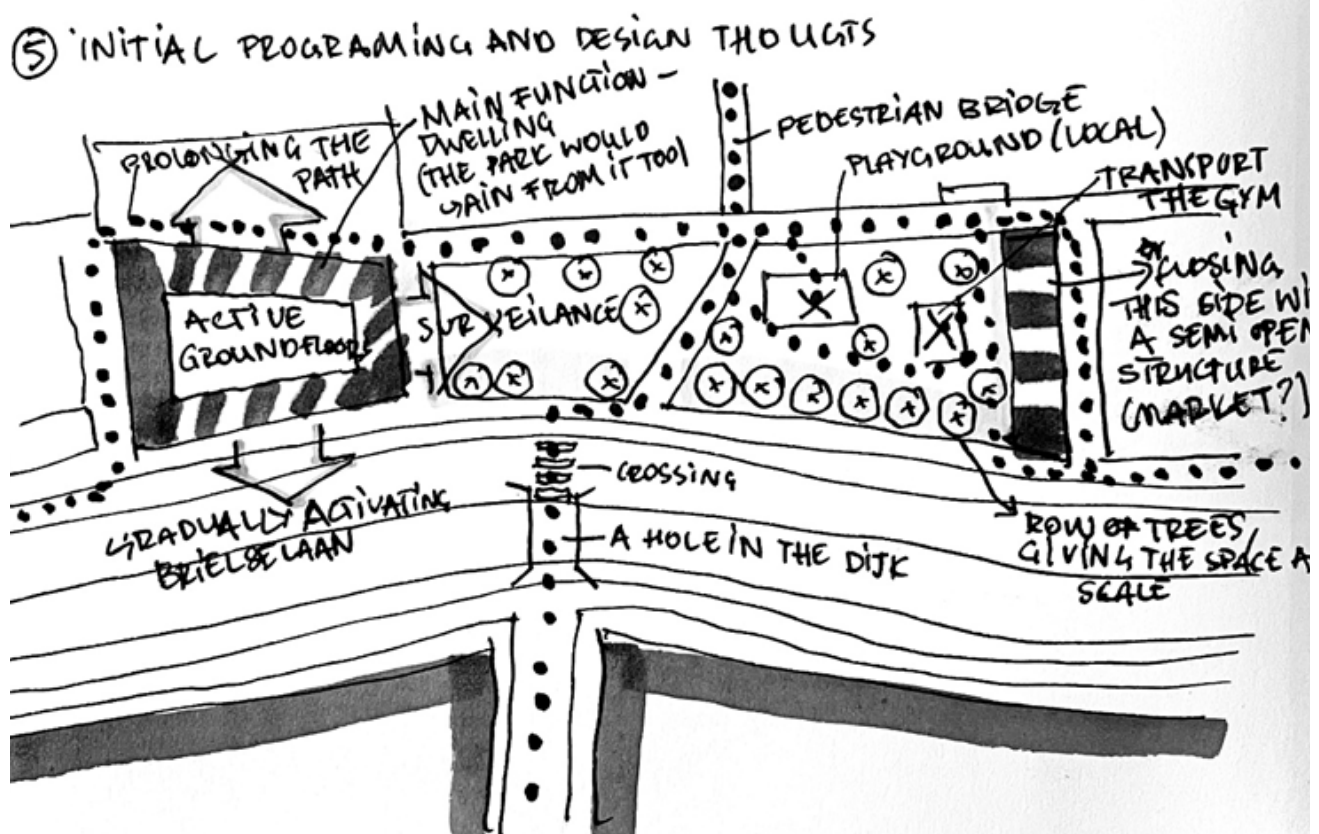
- Public functions should be strategically positioned near the anticipated landing point of the pedestrian bridge, specifically on the eastern section of the plot currently occupied by the existing building.

- Routes connecting the site to the rest of the neighbourhood must prioritize clarity, accessibility, and unobstructed views. This includes implementing a pedestrian-friendly zebra crossing equipped with a speed bump and traffic lights favouring pedestrians. Additionally, the dyke should be levelled with the street at segments directly facing Hellevoetstraat to ensure seamless connectivity.

To enhance the park's appeal to residents of both neighbourhoods, additional functions should be introduced, such as a market. The need for such a feature was highlighted during interviews (unfortunately not transcribed), complementing the existing functions of the park. Furthermore,

The usability of the park throughout warmer months would be improved by increasing the number of trees. They would serve to create a natural buffer between the park and the street, as well as provide essential shade during summer months – a need highlighted in one of the interviews (appendix etc)

Visual summary of conclusions for the further development of the site



Bibliography

AR3AD110 Dwelling Graduation Studio: Designing for Care in an Inclusive Environment (2024/25 Q1). (2024). Health and Care in the Tarwewijk: a neighborhood analysis.

Google Maps. (2025). Google Maps. <https://www.google.nl/maps/@51.8959245,4.4883191,665m/data=!3m>

1!1e3?entry=tту&g_ep=EgoyMDI1MDExMC4wIKXMDSoASAFQAw%3D%3D

Jürgenhake, B., Macco, K., Hansen, B., Oorschot, L., Presură, A., Kuiper, B., Veen, B. van der, Simson, D., Verlaan, D., Vermeulen, E., Teunen, G., Bosma, H., Kozielski, J., Holtus, J., Savonije, J., Vermeer, L., Popescu, M., Veen, M. van der, Burcksen, M., ... Heslen, Z. (2024). Health and Care in Tarwewijk—A Neighborhood Analysis. TU Delft Bouwkunde.

KNMI - Windrozen van de Nederlandse hoofdstations. (2021). Koninklijk Nederlands Meteorologisch Instituut. Retrieved January 16, 2025, from <https://www.knmi.nl/nederland-nu/klimatologie/grafieken/maand/windrozen>

Mecanoo. (2024). A New Perspective for Rotterdam South. <https://www.mecanoo.nl/Projects/project/249/A-New-Perspective-for-Rotterdam-South?d=0&t=13%20b>

JAREMA KOZIELEWSKI

TU Delft, Faculty of Architecture

2025