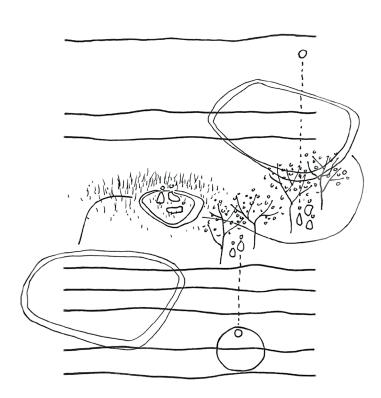
### The interwoven city

reconnecting the social fabric to the layered urban heritage landscape of the Stadsdriehoek



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All images are made by author unless stated otherwise

#### ABSTRACT

This graduation thesis explores how urban green spaces can contribute to enhancing public spaces as connectors to the social fabric within the Stadsdriehoek of Rotterdam. The project critically addresses how processes of globalization and homogenization have diminished spatial identity, historical layering and emotional attachment within highly controlled urban public spaces. Using the theoretical framework of place attachment - consisting of physical, social and mental dimensions - this thesis applies a these aspects as a landscape layer approach to analyze the urban landscape of the Stadsdriehoek.

Through the methods landscape biography, use and activity analysis and the narrative approach, the study reveals how the loss of historical legibility, infrastructural dominance and rationalized design have reduced opportunities for meaningful place attachment. The project proposes urban green spaces as mediators that reconnect the (lost) historical layers through legibility and diversify social uses while embedding collective and personal narratives into the urban landscape. A conceptual vision for the Stadsdriehoek is developed, followed by two speculative small scale designs reflecting opposite conditions: one emphasizing collective,

public narratives at Plein 1940, and another focusing on personal, neighborhood narratives at Achterklooster. These designs illustrate how landscape interventions can serve as adaptive frameworks that foster attachment landscapes, allowing public space to become more socially, emotionally and historically meaningful.



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#### **GLOSSARY**

#### Urban landscape

Can be understood as "a (built) environment where the interactions between human and environment create a historical, socio-cultural, economic and natural landscape (Keshtkaran, 2019)." These interactions create and leave complex intertwined layers, some invisible or entangled.

#### Public space

The meaning of public space "is generally seen as the place where the culture of a city is being formed and where socio-spatial transformations become visible" (Harteveld, 2014). Commonly defined as publicly accessible and publicly owned, public space extends beyond these ownership structures since people's perceptions and social relations shape its meaning and often fall in between clear public-private distinctions.

#### Homogeneous urban environment

Boer (2023) defines a homogeneous urban environment as a "cityscape characterized by

uniformity and standardization, where diversity and irregularities are minimized. This environment emerges from an increasing emphasis on perfection, efficiency and control." The term refers to the opposite of a lively and vibrant city, where chaos and irregularities create a unique urban environment (Hewitt, 2014).

#### Stadsdriehoek

The Stadsdriehoek refers to the former inner city of Rotterdam. The name relates to the previous form - a triangle ('driehoek') - which is now less visible. This part of Rotterdam was completely destroyed during the bombing in 1940 and rebuilt according to modernistic principles.

#### Social fabric

The social fabric refers to the ways in which the urban environment foster interactions, strengthen relationships, and create opportunities for socialization among city dwellers and residents (Gehl, 2010). It is an interwoven relationship where the design of open spaces and streets influences how individuals and communities form social bonds (Lynch, 1960).

#### Sense of place

Sense of place is broadly defined as "the emotional connections and attachments individuals form with specific locations and environments" (International Encyclopedia of Human Geography, 2007), this can differentiate on scale and type of emotion -positive or negative - and does not follow 'stereotyped conventions' (Relph, 1976).

#### Urban green spaces

The definition urban green space refers to a wide range of areas with vegetation - such as gardens, parks, green rooftops or lanes of trees. These areas are considered small scale, and are part of the urban environment. They are essential public spaces that promote mental health and social interactions, and are a place for relaxation and social gathering (Hartig, 2008).

#### Collective space

This term is based on the assumption that urban space "can be understood as a discontinuous territorial configuration, containing different levels of shared use that are defined by multiple physical, cultural or territorial boundaries" (de

Solà-Morales, 1992). This change in approach to design interventions focuses on spatial qualities and the socio-cultural impact of the intervention (Scheerlinck, 2013). The collective space implies a collectiveness, a feeling of ownership that is shared.

#### Porous movements

The term porous movements refers to spatial appropriation of spaces in cities by residents or visitors. These movements are often small-scale and informal interventions through which people personalize, adapt or reclaim urban spaces (Boer, 2023). Designing for porous movements means creating a adaptable urban structure that is fine-grained, continuous and open (Viganò, 2018).

#### Smoothification

Smoothification of the city can be seen as a process that prioritizes visual perfection over spontaneity and diversity (Boer, 2023). This phenomenon adds to the 'close city', that is overly controlled and does not allow for adaptation by people and therefore these spaces lose social complexity (Sennet, 2020).

#### **INTRODUCTION**

I started this graduation project because I was fascinated by the effect of landscape architectural design on the social fabric of cities. The landscape is often analysed from a systematic 'natural' approach, and I wondered what that meant for the complex socio-cultural layers of the landscape. How can we as landscape architects design with these seemingly 'soft' layers and connect them to the landscape?

Landscape architecture can be understood as a design discipline influencing the built and/or natural environment, 'creating spaces that resonate with human emotions, cultural identity, and social interactions' (Dee, 2001). This discipline can analyze and create places that reflect the complex intertwined layers of landscape over time.

Starting from this layered landscape, within the framework of this project landscape architecture should leave room 'for friction, for multiple views, for change and for the unexpected' (De Wit & Bobbink, 2020). These influences should especially be considered in fast-changing urban environments, where 'uniformity and standardization' are prioritized and 'irregularities' are reduced (Boer, 2023).

This graduation project will focus on a part of the inner city in Rotterdam - the Stadsdriehoek - an interesting case study due to the lost heritage layers and disconnected social fabric.

In the urban context of the Stadsdriehoek in Rotterdam, landscape architecture can be used to imagine a stronger connection between place and people through the implementation of urban green spaces. As described by James Corner (2006), in the urban context the need for living green is ever increasing and an important part for a 'wholesome life'. Considering the role as landscape architect urban green spaces can be used as a tool to reflect on the different layers of landscape, since they have the ability to make connections to different disciplines such as urbanism and architecture (Hunt, 2000; De Wit, 2016). I especially consider landscape architecture to be an essential discipline in the creation of a socially just city, where who and what is in/excluded should be deliberated and the socio-political context is taken into account (De Block & Vicenzotti, 2018). Thus, while working with heritage, the social aspect is an important focus in this project. The project will focus on the disconnected heritage while opening up the public space for different views and adaptation. Additionally, as a landscape architect the ecological aspects will naturally be included in

the design interventions.

This graduation project is about the influence of globalisation on public spaces and the social fabric of city centers. This thesis thus explores how urban green spaces can act as a lens to rethink the meaning of public spaces in their surrounding layered landscape. The aim is to explore the potential of revitalising the connection between the optimized urban fabric and the lost historical layers as an attempt to reconnect people with their surroundings.

#### MOTIVATION

In general, a social angle in landscape architecture is highly relevant. As the acknowlegment of the Antropocene has now become part of many urban problematiques, it influences the position in the discipline of landscape architecture as well, particularly when it concerns designing the city and her public spaces. I wondered what this 'new focus' has changed of how we look at the landscape. The climate and ecological crisis show the dominance humans have over the landscape, and ineffitably forces us to take responsibily for this role.

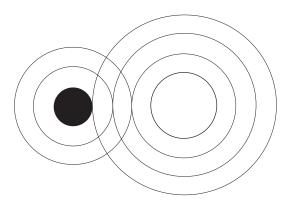
This responsibility has infiltrated into the landscape architecture discipline, and consequently the 'underlying structures of topography and hydrology' are now often the main structuring elements for designs of the metropolitan landscapes (Rijksoverheid, 2021)(De Block et al., 2018). This does not only imply an 'simplified landscape approach' to the territory but ultimatly everything becomes based on 'infrastructural and ecological systems' (De Wit & Bobbink, 2020), where social structures are stripped down and attached to the systematic elements of design.

Still, this approach does not only neglect the

socio-political context but also the complexity of landscape. This made me wonder what our role as landscape architects could be when we would not only include this socio-political context but start the design process from this point. Additionally, the effect of landscape architectural design on the social fabric is something to consider more. As we often analyse the landscape from a systematic 'natural' approach, I wondered what that meant for the complex socio-cultural layers of the landscape. How can we as landscape architects design with this complexity and improve such seemingly 'soft' layers?

#### 'The tendency (...) to focus one-sidedly on ecological issues has neglected the complex nature of landscape.'

(G. De Block, et al., 2019, p.5)



**Disruption of focus.** The diagram represents the unbalanced focus on the ecological issues by neglecting the social problems. (Based on work of Waldemar Cordeiro).

### Chapter $A \mid Theory \ and \ topic$

### The attack of globalisation on public space

1.0 Prologue Rise of efficiency Efficiency through time

1.1 Frame
A growing detachment
Smoothification of cities
Privatization of public space

1.2 Theoretical framework Towards place attachment

1.3 Design strategy
Urban green spaces as connector

1.4 Aim Towards connection

1.5 Location
Why the Stadsdriehoek?
Dreams of a metropolis
Urban green spaces in the Stadsdriehoek

1.6 Define Problem statement & research question Methodology Methodological framework

#### Part 1.0 | Prologue

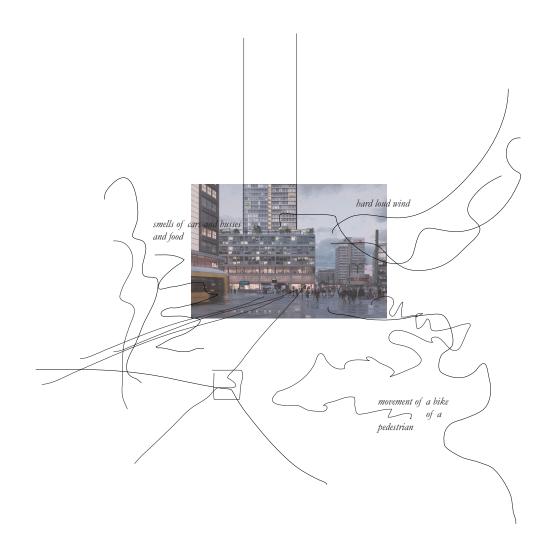
#### RISE OF EFFICIENCY

As of 2007 more than half of the world's population lives in cities (United Nations, 2008), marking a significant change in where and – more importantly – how most of us live. No other landscapes are so entangled with humans than cities are, leaving complex intertwined layers of spatial and social change (Jóźwik, 2024). This urban landscape affects people, but is often - especially during the last century - not being designed for people (pointed out by Jane Jacobs and others since the mid-twentieth century). The way we live in large-scape cities, these often rationalized, controlled and efficient environments, lacks human relation to the urban landscape.

This change in how the urban environment has become more distant from people and has been optimized for economic benefits origins in the modernistic ideas that started in the beginning of the 20th century (Holsten, 1989). The simultaneous need for efficiency and optimalization in economic growth took over the world as globalization, resulting in immense urbanization which led to the restructuring of urban spaces and therefore impacting public spaces significantly. Soja and Kanai (2007) argue the emphasis on economic efficiency as well as the expansion of infrastructu-

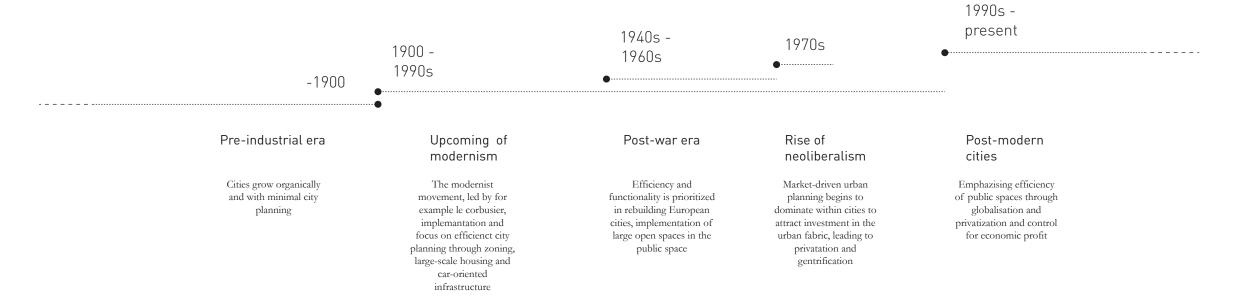
re have impacted the public spaces by prioritizing economic benefits over social interaction. Since the 1990s the economical profit has taken a hold of public spaces through privatization and control. This acceleration of globalization has positioned the Global North as the center for the free market ideology, leading to the privatization of urban spaces or mostly as an economic framing of how cities are perceived and managed (Boer, 2023).

As mentioned before, how globalization and standardization have affected cities is visible in their public spaces. Especially in the Global North, public spaces show often a scale that relates to the global intent, where the context is slowly erased by similar and nonspecific desgins with surrounding buildings that are generic, functionalistic and occasionally high rise which all result in a lack of human relation to the landscape (see image on the right).



**For whom?** Living in large-scape cities, these often rationalised, controlled and efficient environments lacks human relation to the urban landscape. (KaBa1, 2023) Alexanderplatz, Berlin.

#### EFFICIENCY THROUGH TIME



**Timeline - the rise of efficiency in city planning**. Showing the gradual transition to profit driven city planning.

Adapted by author based on Soja and Kanai (2007)

#### Part 1.1 | Frame

#### A GROWING DETACHMENT

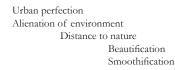
The development towards privatized, controlled and optimized public spaces in cities, creates problems with identity and how this influences the public space and the social fabric. The consequences result in loss of social connection to the city and reduced urban identity, which causes decreased quality of urban life (Boer, 2023). Additionally, Veldhuis (2023) argues that within inner cities everything has become clean, whole, and safe. It seems like a repelling 'protective' layer has been placed over the city, everything that people have added or want to add is rejected. This mostly happens in the tourist areas, where you can sweep the public space clean, and the next day it looks completely new again. In public green spaces this phenomenon is visible as for example borders around vegetation and benches that are impossible to sleep on, all to ensure a clean image and 'safe' environment. This is not only happening in The Netherlands, but in major cities around the world.

In the beginning of the 21st century Augé (1995) mentioned this disconnection in places that became more standardized, arguing that it effected our relationship towards our environment which has become more distant and detached. While Augé relates this development with the rising of commercial landscapes and 'supermodernity',

this phenomenon - named non-places - is now completely overtaking cities and turning them into generic metropolitan landscapes, where spatial definition and orientation seem to be fading (Boer, 2023). Trigg (2017) refers to these places as if "they are defined by a lack of historical relation to their surrounding environment, together with the absence of a specific identity." He highlights the connection between history, place and identity; referring to these places as a lack of reflection of a layered landscape and therefore a disconnection between people and place. Additionally, Hewitt (2014) describes how globalisation has lead to the homogenization of urban landscapes, resulting in spaces that lack local identity and cultural significance.

These theories express a development towards an even more distant relationship between people and place. Furthermore, by the excessive controlling of the urban environment the distance to nature has increased by repelling chaos and inefficiency. Pointed out by Corner (1999) this distance between nature and urban environments alienates people from nature (and therefore imperfection and chaos), and by controlling the landscape too much this connection can be lost. This problem however can not only be solved by the implementation of more 'green' in the urban environement. The implementation of landscape designs in which







**Smoothification of the landscape - green as decoration.** The need for a controlled, generic environment where 'green' is used to beautify. (Zuidas, 2024)[OKRA, 2018]. Amsterdam & Rotterdam, The Netherlands.

critical reflection and political choice are squeezed out by a fascination with non-human actors, systems and processes can actually damage this connection between landscape and people more (De Block & Vincenzotti, 2018).

Continuing on this implementation of 'green' in public spaces, the use of green elements as aesthetic tools instead of integral components of the ecological and social fabric can further damage the relationship between people and place. Boer (2023) refers to this phenomenon as a form of 'eco-decor', where greenery is used supervisually to suggest liveliness or sustainability without truly engaging with the socio-cultural or ecological layers it appears to support. This ornamental use of nature contributes to the homogenization of public spaces, where 'green' also acts as a topical layer masking the underlying process of privatization and control. Additionally, Corner (1999) similarly critiques this trend warning that landscape in public spaces risks being reduced to scenic embellishment, stripped of its potential to accommodate complexity and adaptation. When green is simply seen as decoration, it emphasizes the city as a static image rather than a lived and dynamic environment. This can transform landscape architecture into a tool of beautification and smoothification, detached from its ability to critically and consciously engage with identity and socio-cultural structures.

# SMOOTHIFICATION OF CITIES IN THE NETHERLANDS

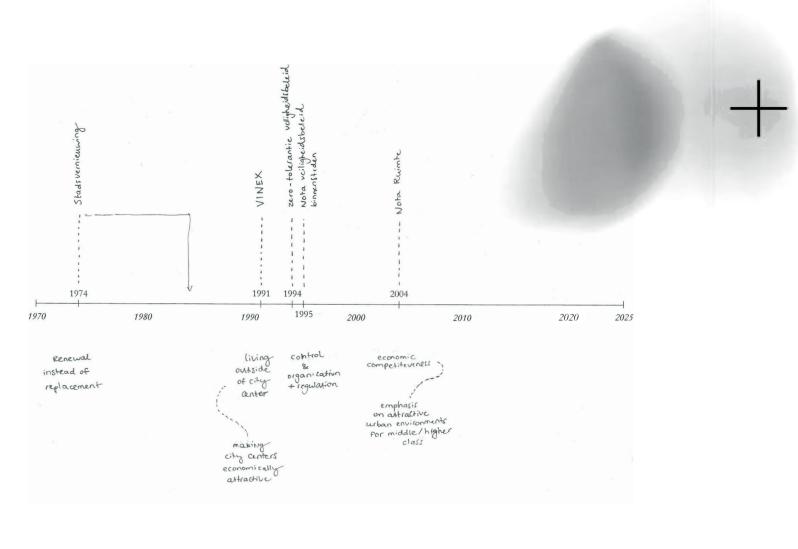
This process of detachment and smoothification of public space can be related to several spatial design policies that prioritize efficiency, safety and aesthetics over historical context and social complexity. Considering policies as top-down movement in the urban environment, these implementations can therefore impact the connection to urban spaces between people and their urban environment.

In The Netherlands the need collided with the desire to revitalizing of deteriorating inner-city centers by implementing the policy of Stadsvernieuwing (Urban Renewal) in the 70s and 80s. While this improved physical structures, they often resulted in the erasing of local identities by the displacement of exiting communities. Comparably, the policy introduced in 1991, the VINEX (Vierde Nota Ruimtelijke Ordening Extra), designated the development of housing to the outskirts of cities while promoting the city centers for economical attractiveness. By the late 90s policies for safety were enforced such as zero-tolerance security policies (zero-tolerantie veiligheidsbeleid), emphasizing control often at the expense of social diversity. Additionally, more policies like Nota Veiligheidsbeleid Binnensteden (Policy Note on Safety in City Centers) and Nota Ruimte (Spatial Planning Policy) continued this process towards standardized urban environments that prioritize safety and functionality over social integration and cultural expression.

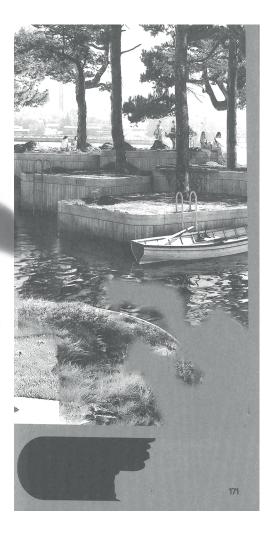
The impact these urban policies have on the socio-economic segregation in western Europe cities such as the Netherlands, have had also spatial consequences for the public spaces in especially city centers. Ostendorf and Musterd (2013) argue that policies promoting urban renewal and largescale housing projects have often resulted in spatial separation of different social groups, reducing diversity in public spaces. Their research shows how these policies aim at urban improvement while simultaneously worsening social inclusivity, leading to more homogeneous and excluding urban environments for certain parts of society (Hewitt, 2014). Furthermore, these policies also deeply influence the role of landscape architecture in city centers. The socio-cultural consequences of landscape designs are often neglected and under these policies landscape is frequently reduced to a decorative role in an overly controlled environment. Landscape designs however have the ability to create space for layered histories, cultural complexity or unprogrammed use instead of adhering to the standardizing by urban policies.

"The new city, the postmodern city, has to be consumed primarily as a spectacle. The streets are not there to be used, but to be viewed, to become part of a broader space of consumption. They offer the individual a landscape to traverse, but one that is increasingly homogenized and emptied of historical and social significance."

The Condition of Postmodernity (Harvey, 1989, p. 199)







Collage and impression of the process of Smoothification in public spaces of cities. Image from the book Smooth City [De Klein, 2023].

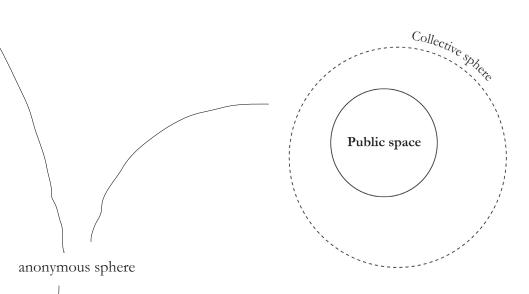
#### PRIVATIZATION OF PUBLIC SPACE

As mentioned before, public spaces in contemporary urban environments are increasingly shaped by the continuous process an economic drift towards making public space more private, it co-evolved with the process towards individualization of public space. This dynamic has gradually contributed to the disappearance of the collective sphere, where individualism is creating an anonymous sphere that is taking over in the rise of modern cities (Schrijver et al., 2006). As modern cities continue to develop under the pressure of economic growth and the rising concern for security, the collective use of space is giving way to more regulated, fragmented and often commercialized urban environments.

The 'anonymous sphere' refers in the urban fabric to public spaces which are no longer rooted in community or shared identity but rather in individual consumption and passive participation (Schrijver et al., 2006). This shift affects the relation between people and public spaces and can be particularly visible in the design of city centers, where functionality and surveillance often overrule openness and spontaneity. Public space is increasingly privatized not only in ownership but also in function. This can be felt especially in city centers

where the transformation of squares, parks and streets into controlled environments are curated for tourism, retail or branding purposes.

Additionally, while the smoothification of the urban landscape may in the first place seem to lead to visually pleasant environments, it in the end fails to support meaningful human interactions or provide expression of collective memory and identity. People might move through these places but they no longer experience them in a deeper sense and cannot form a strong attachment to the urban landscape. Dehaene et al. (2014) emphasize that this obsession with efficiency, aesthetics and legibility in Dutch urban environments risk compressing complexity and local identity in favor of controlled, frictionless public spaces. Simultaneously, landscape architecture might reduce itself to a 'image producing' role where visual appearance of green overshadows its social and ecological function. To conclude, this smoothification of landscape weakens the social connection to the urban landscape and makes it harder for people to relate personally and collectively to their environment.



**Public space in relation of the collective sphere** and an impression of how the anonymous sphere is taking over.

# Part 1.2 | Theoretical framework TOWARDS PLACE ATTACHMENT

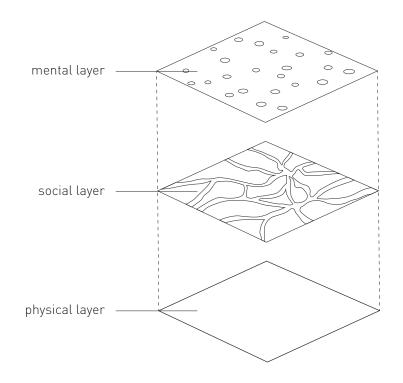
As mentioned before, Boer (2023) and others argue that cities - particularly in the Global North - have increasingly been reshaped into homogeneous environments. His concept of Smooth Cities; where efficiency, safety and aesthetic perfection are often prioritized at the expense of spontaneity and diversity in public spaces, defines the theoryetical departure point for this thesis. As this development directly affects how people relate to their urban environment, it can be examined particularly through the theory of place attachment. Place attachment can be understood through three interconnected dimensions: physical, social and mental.

To approach this theory from a landscape architectural perspective, these three domains can be understood as a theoretical framework for analysing site-specific conditions and as design concepts. These three aspects respond to the growing detachment between public space and history, social connection and identity. Through them landscape architecture can emerge as an connecting practice that provide alternatives for city centers to deepen the relation between people and place.

Firstly, the physical dimension refers to the tangible characteristics of a place—such as natural fea-

tures, built elements, and/or infrastructural layers. These physical aspects form the basis for design strategies such as the landscape layer approach (De Block et al., 2018), which aims to integrate various layers of the urban landscape into coherent spatial interventions. To deepen our understanding of the relationship between people and the physical landscape, Corner (1999) argues that the landscape biography approach helps to understand the influence of the tangible layered landscape on the social fabric of the city. It is a multidisciplinary approach to understanding the history, development, and cultural significance of landscapes over time. It treats a landscape as if it has a "life story," made up of different layers of human activities, natural processes, and cultural interactions that have shaped it. It is important to uncover these complex interactions between people and the environment across different historical periods, providing a deeper understanding of the landscape's evolution and help understand the current physical form.

Secondly, the social aspect focuses on the social network of people in the urban fabric of cities. It relates to the use and activity in a place, and is often influenced by the physical structure and program of the space. In understanding this, Lefebvre (1991) argues that space is produced through social practice and that public spaces are settings shaped by – and shaping – everyday life and can be



## The three aspects of place attachement as landscape layer approach. Based on Relph, Montgomary, Soja, etc.

understood by how the space is used. Additionally, Whyte (1980) emphasizes how people naturally gather and interact when spaces react to the social fabric and are responsive to human behavior. The quality and openness of public spaces directly influence the ability to foster social networks, which is the most important component to understand the social aspect of place attachment.

Lastly, the mental aspect relates to the cognitive and emotional meaning that people attach to a place. It refers to sensorial experiences, that can be personal or collective. To unravel the narratives of place, Scheerlink et al. (2017) advocates for a narrative approach – a method that focusses on unveiling narratives lines of personal and collective stories embedded in urban spaces. This approach builds on the legacy of thinkers who link spatial form with human experience: Jane Jacobs (1960) emphasized that the separation of uses leads to urban sterility, advocating instead for vibrant, mixed-use neighborhoods that support social health and public life. Kevin Lynch (1961) introduced the idea of urban legibility, arguing that cities should be easily understandable to help residents develop a mental map and stronger sense of belonging. Jan Gehl (2010) stressed the importance of human-scale design and advocated for slowing down urban life to enhance its quality. His work on walkability and livable streets reinforces the

importance of public space as a setting for shared experience. These theories link the physical conditions with the experience and emotions of people, showing that the aspects of place attachment are intertwined. To understand the experience of a place – both personal and collective – it is important to mention that these narratives are personal and can be contradictory. It 'colors' the way people attach to a place and how strongly they experience the attachment.

Together, these theories and methods highlight how landscape architecture must not only shape the physical environment, but also support social and emotional engagement with public space. In contrast to the Smooth City, a landscape approach grounded in narrative, biography and lived experience allows for more complexity, diversity and collectivity to emerge as an aim to reconnect people with place.

# Part 1.3 | Design strategy URBAN GREEN SPACES AS

CONNECTOR

To counteract the effects of the process towards homogeneous environments, especially in highly planned and controlled environments such as city centers in The Netherlands, urban green spaces can provide a reintroduction of complexity, spontaneity and identity in the urban fabric. By thinking about the city through the lens of urban green spaces, a relational and layered understanding of the urban landscape can be fostered (Steenberg 2008; Van der Velde & de Wit, 2010). This approach will be explored through the three key components of place attachment.

#### Physical aspects

Firstly, urban green spaces as a physical layer can shape the spatial character of the city (Sadler et al., 2010) and through this nature can be understood as a part of the city. Corner (2006) argued that cities built for a wholesome life include living green, however the mistake of Modernists to define an open space as "green" cannot be made. That is why the position and design of urban green spaces in the urban fabric should be precise without being forceful (De Wit, 2016). This argument refers to a careful spatial intervention, not only improving the urban fabric in spatial definition but also in

experience. Moreover, urban green spaces can restore lost complexity in urban centers dominated by infrastructure and efficiency. These spaces can also help with climate adaptation and ecological restoration in cities, and are especially valuable to the management of rain water. Lastly, urban green spaces also provide physical and psychological health benefits for people (Hartig, 2008; Maas et al., 2006).

#### Social aspects

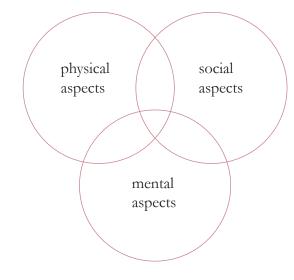
Secondly, urban green spaces also play a crucial role in providing social life in cities. Not only do they serve as informal meeting spots where unplanned encounters interacts but also a place where the community can meet. According to Gehl (2010), well designed outdoor spaces foster vibrancy and invite for social engagement. Furthermore, these spaces contribute to an attractive atmosphere in the city and create space for spontaneous social life. Peschardt (2012) found that the main reason people visit urban green spaces are for restorative use and socializing, highlighting the importance of these places for daily city life. Additionally, Whyte (1980) emphasizes that even small green spaces support spontaneous, dynamic public life especially in contrast to overly programmed and formal environments. This typology is often flexible and more casual, contribute to the informal social fabric of cities. This informal social

fabric is important for building a connection with places and can create a shared urban identity.

#### Mental aspects

Lastly, the mental aspect of urban green spaces can contribute to personal well-being and emotional connection to a place. Not only does access to nature in general within cities offer significant mental health and restorative benefits it also promotes an emotional bond between people and their surroundings (Hartig, 2008; Maas et al., 2006). Furthermore, urban green spaces can improve the mental connection by engendering a sense of place for its city inhabitants (Sadler et al., 2010). Additionally, when green spaces become part of the everyday routine, they become part of personal and/or collective memory, strengthening place attachment from the mental domain. These personal or collective memories can be based on the sensorial experience of urban green spaces, but can also be related to certain social interactions.

By focusing on all three of these aspects (physical, social, and mental) urban green spaces can play a transformative role in reshaping alienated, overly smoothed urban environments into places of meaning and identity.



The three aspects of place attachement. Based on Relph, Montgomary, Soja, etc.

# Part 1.4 | Aim TOWARDS CONNECTION

The aim of this graduation project is to use urban green spaces to improve place attachment in the Stadsdriehoek.

The intent for this graduation thesis is to apply the theoretical framework of place attachment (see image on the left) to a specific spatial situation - a reconstructued city center after WWII in Europe. And to investigate how the design discipline of landscape architecture can apply this theoretical framework in the urban environment, urban green spaces will be explored as a certain type of landscape intervention. This graduation thesis thus explores how urban green spaces can act as a connector to reconnect people with the urban landscape. The aim is to explore the potential of revitalizing the connection between the optimized urban fabric and the lost historical layers as well as differenet narratives as an attempt to reconnect people with their surroundings.

Since (re-)attachment between people and place is the aim, the three dimensions of place attachment – physical, social and mental – are each investigated separately as a landscape layer approach. Rather than focusing only on the physical aspects of the urban landscape, this project aims to deepen the understanding of social and mental aspects of the landscape and therefore this affects how people relate to their surroundings.

For this the former city center of Rotterdam in The Netherlands is chosen – The Stadsdriehoek. This choice will be explained and justified in the coming paragraphs.

# Part 1.5 | Location WHY THE STADSDRIEHOEK?

To explore the possibility of applying the theoretical framework of place attachment, a specific spatial scenario of the effects of urban smoothification has to be chosen. This can be particularly experienced in The Netherlands, where high spatial density is combined with a strong planning culture, putting increasingly high pressure on public spaces (Boer, 2023).

Within this context, Rotterdam exemplifies a persistent drive for spatial transformation, a process that began with the post-war reconstruction and embracement of the contemporary 'international style' in modern architecture which erased much of its historical urban fabric (Wentholt, 2011). The Stadsdriehoek, the historical center of the city, is a concentrated urban fragment where spatial and social tensions converge. It now reflects a rationalized and modernistic landscape marked by open spaces and high-rise buildings, where activities and functions are separated. The triangle now represents limited spatial identity and little emotional attachment (Nientied, 2018).

Dreams of a metropolis - a city heart with roads and modern high-rise

"It will be beautiful. Rotterdam will be a beautiful city." Rotterdam will be spacious, it will have the elegance of a metropolis: the speeding traffic, the broad boulevards, all the tall buildings will generate a sense of bustle that blends harmoniously with modern life. It will not be easy-going, but today we would prefer to see a row of gleaming cars than a carriage full of old ladies, and we feel more at home in a shop faced in glass and mirrors than in an antiquated grocery store, where the pleasant scent of cloves, soap and candy stimulates us. Rotterdam will be our city, the city of twentieth-century people.'

Rein Blijstra, in Het Vrije Volk 13-11-1952 (Post-War Reconstruction, n.d.)

Where and what is the Stadsdriehoek? > Data: Landelijke Voorziening Beeldmateriaal.

Centrum Nieuwe Werk

#### DREAMS OF A METROPOLIS

This part will argue why the Stadsdriehoek of Rotterdam is a suitable case to examine the detachment of the social fabric. The legacy and influence of efficiency and functionality can be experienced in the old inner city of Rotterdam, a large harbour city of economic importance in the west of The Netherlands as well for European countries located along the Rhine. Due to its post-war reconstruction and ongoing modernization efforts, the public space is increasingly getting detached from its social and historical context. Even though the Stadsdriehoek was once the historical center of the city, these historical layers were destroyed during the 1940 bombing and not recovered. The reconstruction was based on modernistic principles that prioritized clarity, efficiency and economic utility over memory and identity. This legacy can still be felt in the city's spatial urban fabric and the effect on the social fabric.

The public spaces of the Stadsdriehoek today are mostly designed to accommodate mobility, commercial purposes and control. As the post-war reconstruction prioritized wide, open spaces and car-oriented infrastructure; these efficiency-driven redevelopments prioritized economic growth and redefine how the public spaces of the city are

experienced. This development negatively impacted the social and cultural vibrancy of the city, especially in the city center and along the water front. Additionally, the emphasis on modernizing the city led to the loss of human-scale and community friendly environments and these areas became impersonal spaces that do not stimulate social interaction (Van Veelen, 2020).

Continuously over time, this mentality has contributed to the process of smoothification of the urban landscape (Dehaene et al. 2014), which can be especially felt in public spaces like the Binnenrotte or the redesigned Coolsingel. These sites exemplify the shift from local, complex urban environments to highly curated and standardized spaces. While they offer a sleek aesthetic and functional clarity, the public spaces struggle to foster the spontaneous social interactions that supports vibrant urban life (Van Veelen, 2020). These spaces illustrate the process described by Boer (2023) of how public spaces become less about dwelling and gathering, but more about consumption and transportation, negatively impacting place attachment.

As the city seeks to market itself as a 'great' place to visit and live, it simultaneously erodes its own local identity. Wouter Veldhuis (2023) has argued that Rotterdam's investment to become 'beautiful' has made it more into a generic city to welcome everyone. This process has been pushing away the local and specific urban identity of the inhabitants of the city. This urban branding prioritizes again economic benefits over the detachment of the urban landscape and its social fabric.

In the images on the next page you can clearly see that the implementation of spacious roads and dominant car infrastructure reveals how urban form has prioritized mobility over the human scale. The pedestrian flow has become subordinate to the fast movements of cars. This is still visible in the current landscape where this hierarchy has not changed and the focus on optimizing has led to public spaces that lack warmth, historical layering, and the organic unplanned qualities that make a city feel lived-in and accessible.

now 1965



The implementation of large open spaces and car-oriented infrastructure compared to the post-war reconstruction and now, prioriting cars over pedestrial flows. [BRIQ, n.d.] (Vocke, 2018) [Groeneveld, 1967].





Human dimensions are demolished, new ideas of space and light where implemented

# URBAN GREEN SPACES IN THE STADSDRIEHOEK

The configuration and quality of urban green spaces within the Stadsdriehoek need to be critically excessed to understand the current attachment of its users. While the inner city of Rotterdam appears to include a relatively large number of green areas, a closer analysis reveals that these spaces are often fragmented, poorly integrated, and limited in function or ecological diversity. This raises questions about how the current green spaces contributes (or fails to contribute) to the social fabric of the city.

In the current urban structure, many green spaces consist of grass patches or tree lines of which many are either inaccessible or inadequately connected to pedestrian flows. For example, grassy areas may be visually present but are rather often fenced off or bordered by high-speed roads, making them actually unusable. Similarly, tree-lined walkways are often located next to car roads which reduces their potential as inviting public spaces to stay in. In these cases, green spaces act more as a visual or aesthetic component rather than a place for social interaction or a place to stay. Gehl (2011) describes this phenomenon as green that functions as grey.

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This spatial fragmentation and lack of usability influences the quality of the current urban green spaces in the Stadsdriehoek. They are affected by

inaccessibility and the absence of spaces that invite lingering, gathering and other informal social use. Without these interactions, it also becomes more difficult for residents and visitors to form connections with the urban landscape.

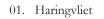
Additionally, the spatial fragmentation creates an urban environment that has a low legibility, in Rotterdam this is visible through framented and wide open spaces that are hard to navigate emotionally. Therefore it is more difficult to form an emotional connection with (green) public spaces (Kaplan & Kaplan, 1989).

Furthermore, the dominance of paved surfaces and car-oriented infrastructure in the Stadsdriehoek reinforces this detachment. Many public spaces remain paved, prioritizing function over creating comfortable green environments. Where trees are located, they are often next to roads, serving more as buffers than as integral part of urban life. As Jacobs (1961) argued, the success of urban public space lies not in its visual composition alone, but in its capacity to support interaction and layered use for vibrant urban life.

From a spatial perspective, the current scattering of green areas further contributes to a fragmented urban experience. Rather than forming a continuous system, green spaces appear as scattered and often disconnected from the daily flows of pedestrians and cyclists. The lack of consistent usable green spaces limits the accessibility to green spaces for residents overall.

In conclusion, while green spaces are present within the Stadsdriehoek, their spatial structure and accessibility often diminishes their contribution to the public urban life. This makes the Stadsdriehoek an interesting site to implement urban green spaces to improve place attachment between people and their surroundings.







02. Schiedamse dijk



03. Blaak



04. Blaak



05. Grotemarkt



06. Pannekoekstraat

**Pictures of places in the Stadsdriehoek showing the 'green' of the city.** 01/03 'movement' green & 04/06 inaccessable green.

#### Part 1.6 | Define

# PROBLEM STATEMENT & RESEARCH QUESTION

#### Site specific problem statement

The conditions caused by globalization in the public space of cities – the focus on optimalization and standardization – converge in the urban fabric of the Stadsdriehoek in Rotterdam. The inner city deals with the remaining dominant spatial identity focused on functional planning, due to radical reconstruction and removal of the layered landscape after the bombing during WWII in 1940. Because of the focus on modernizing the urban fabric in the 20th century, the Stadsdriehoek has to deal with public spaces that lack historical layering. The consequences of the continuous negligence of the social fabric resulted in loss of social connection to the urban landscape of the inner city and reduced the quality of urban life. Due to the rising need for order and control of the public space, the Stadsdriehoek is slowly turning into a homogeneous environment where perfection and control are prioritized (Boer, 2023).

To strengthen the relationship between people and place, urban green spaces can provide the means to connect different layers of the urban landscape to their surrounding social context. Additionally, urban green spaces can contribute to the social fabric

of cities by providing for spontaneous interactions and enhancing a dynamic public life (Whyte, 1980). Therefore, the Stadsdriehoek is a relevant case study in exploring how urban green spaces can contribute to enhancing public spaces as part of the social fabric. Since regreening the city centers in The Netherlands is often encouraged (Ministerie van Landbouw, Natuur en Voedselkwaliteit, 2024), the Stadsdriehoek can especially benefit from it due to the large closed-pavement commercial areas, lack of green public spaces and hard water fronts.

#### Design assignment

The design aim of this graduation project is to explore how urban green spaces can can act as a lens to rethink the relation of people towards public spaces in their surrounding urban layered landscape. The aim is to explore the potential of enhancing the connection between the optimized urban fabric and the lost historical layers as an attempt to reconnect people with their surrounding social environment. The focus of the project is on the emotional attachment people form with the landscape, enhancing a sense of belonging and improve quality of urban life.

The main research question is therefore as follows:

What can urban green spaces contribute to enhancing public spaces as connectors to the social fabric in the Stadsdriehoek of Rotterdam?

\_How can urban green spaces reflect the historical layers of public spaces in the Stadsdriehoek?

\_How can urban green spaces strenghten the connection to the social fabric within the Stads-driehoek?

\_How can urban green spaces aid in connecting local narratives to the public spaces of the Stadsdriehoek?

# Part 1.7 | Research METHODOLOGY

The first part of this graduation project is devoted to explore my motivation and observed challenging conditions in the urban environment, as well as on site. An initial exploration and analysis of the site is conducted to understand the unique conditions. Additionally, literature research is conducted about the theoretical framework of place attachment and related theories. From this theory the three aspects are used to each investigating an aspect of place (physical, social and mental).

Each aspect will be explored separately through these methods described below:

\_Literature research: understanding relevant landscape architecture concepts related to the topic and/or theoretical framework and methods. \_Site analysis: describing and interpreting the site

\_Site analysis: describing and interpreting the site according to the topic through maps, drawings, sections and sketches.

\_Field research: part of site analysis by visiting and experiencing the site through walking, photographing and interacting with inhabitants.
\_Reference study: exploring relevant projects

\_Reference study: exploring relevant projects related to the used theoretical framework and approaches.

Simultaneously and building on this obtained

knowledge and methods, the three aspects are each investigated separately to understand and explore the different perspectives more thoroughly:

\_Physical aspect: The landscape biography approach is used to explore through the method palimpsest (Van den Heuvel, 2010) the historical landscape layers of the site. Through mapping and description of these landscape layers, spatial challenges are identified. By uncovering, analyzing, and interpreting these layers will reflect how history, culture, and landscape interacted through time and inform future design strategies (Corner, 1999). Design strategies in which urban green spaces can help with enhancing the spatial legibility and historical connection are explored.

\_Social aspect: Describing and evaluating the public spaces of the Stadsdriehoek. The methods movement analysis will show an abstraction of the social activity and movement through the city. Classification and typologies of landscapes according to use and activity (Whyte, 1980; Lefebvre, 1991) is explored to evaluate the connection between place attachment and the social fabric. Design strategies to enhance the social network and interweave the social landscape typologies with the social fabric of the site.

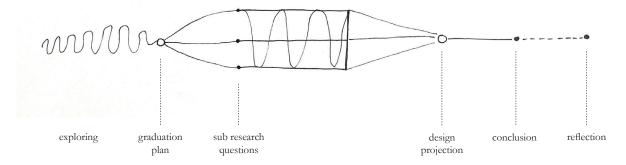
\_Mental aspect: The narrative approach is used

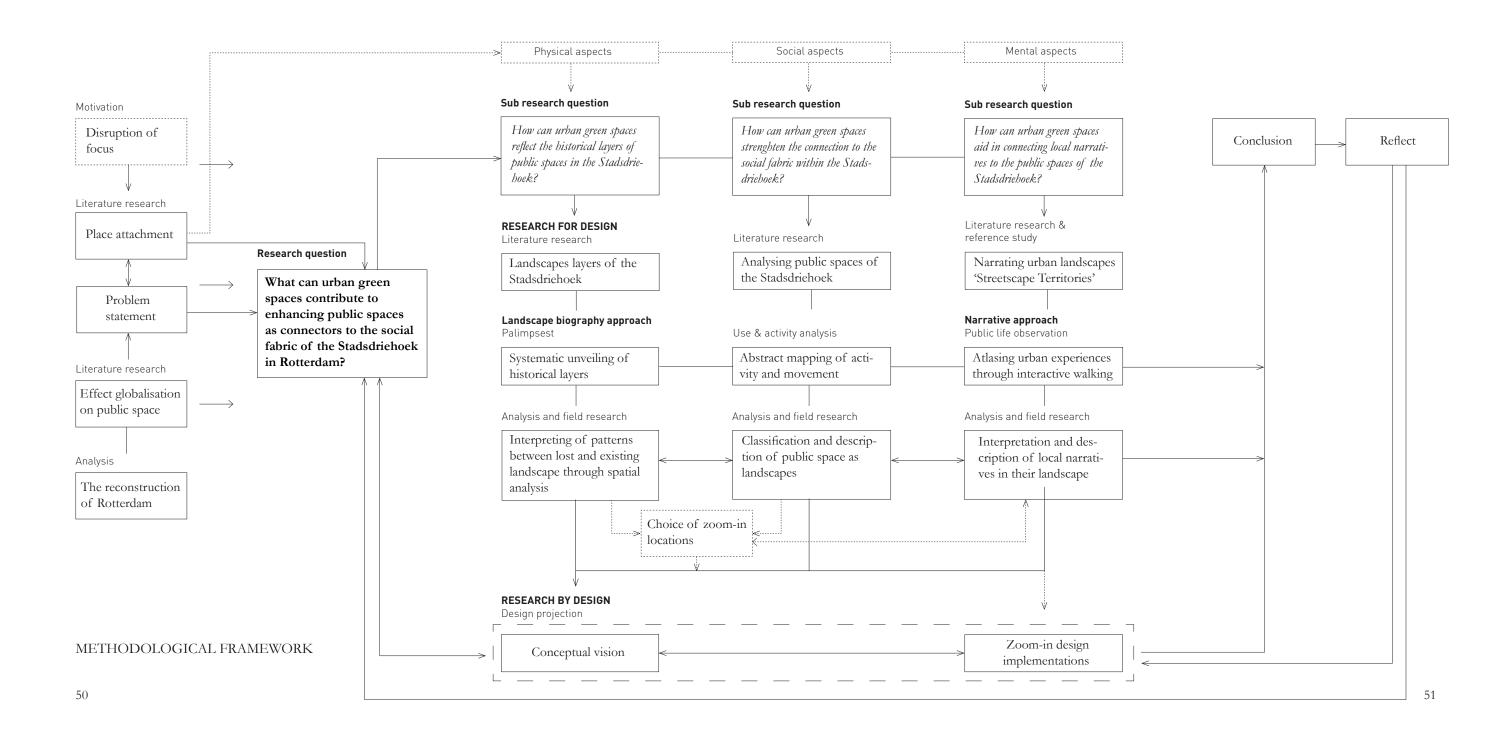
to describe, interpret and evaluate narrative layers of the site, through analytical steps. The first step uses the methods narrative walking (Carole Lévesque) and atlasing urban experiences (Caendia Wijnbelt) to understand and explore through direct engagement, conceptual drawings and objective representations. Through mapping and description the specific narrative conditions of the site are expressed, leading to design implementations contributing to the local identity of the physical and social environment.

The result of this analysis and exploration is a conceptual vision on the scale of the site implementing the design strategies of mainly the physical and social aspects. At the same time two zoom-in site designs are worked out in greater detail, con-

cretizing the narrative findings of the design strategies mainly of the mental aspect. These designs are visualized through speculative hand drawings and suggestive sections as well as diagrams. The aim is to show what urban green spaces can contribute to a sense of place by using specific site conditions.

The last part of the graduation project is used to reflect on this process and outcomes, write findings and conclusions and improve products. Relating back to the main research question.





# Chapter B | Analysis The physical, social and mental landscape

2. Site introduction
The landscape of the Stadsdriehoek
The Stadsdriehoek in wider perspective

# Part 2 | Site introduction THE LANDSCAPE OF THE

THE LANDSCAPE OF THE STADSDRIEHOEK

The Stadsdriehoek used to be the city center of Rotterdam. During the bombing on May 14 1940, this area was destroyed for the intent of damaging the Dutch economy by targeting the harbour of Rotterdam. The damage of the bombing was large, mainly due to the fire it caused (see the fire edge in the image on the right). After the bombing, a reconstruction plan was made that radically diverged from the historical urban fabric. Influenced by modernistic planning ideals, the reconstruction prioritized air, open space and light which increased emphasis on car accessibility and traffic flow (Wentholt, 2011). This relates to previous chapter, since this transformation replaced the dense, complex character of the pre-war urban fabric and contributed to the emergence of a more functionalistic and anonymous urban environment.

The current center extends now twice in size, expanding westward beyond the original Stadsdriehoek. The fire edge now symbolically shows as a separational line between the two parts. The harbor was once intertwined with the historical center, has shifted entirely towards the west to the coastal port area, further altering towards a different identity in the city center.

Despite these transformations, Rotterdam preserves its reputation as a 'working city' referring to its legacy as a harbour city. While the city has long wrestled with issues of poverty, migration, and shifting demographics, especially in the decades following 1950, it is now considered a 'melting pot' of nationalities. Today, Rotterdam is the second largest city in the Netherlands and continues to develop under the pressure of economic growth and urban expansion. Because of this, the city has been investing in its public spaces in the center, aiming to attract private investment (Van Melik & Lawton, 2011). Yet, these processes have often influenced the continuous neglection of

municipality border
fire edge (brandgrens)
bombed area
neighborhood edges
built environment



0 1 km 2 km 5 km N

Where is the Stadsdriehoek? In context of the current center and the fire edge after the bombing in 1940 during WWII.

# THE STADSDRIEHOEK IN WIDER PERSPECTIVE

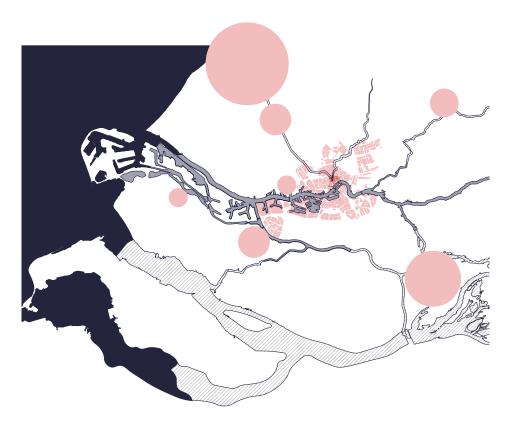
The Stadsdriehoek is situated in the turn of the Maas, one of the delta rivers of The Netherlands. Located within one of the most densely built areas of the country, the city is surrounded by other cities of which most of them are also situated there due to the close connection with the rivers and the sea. This geographical position of Rotterdam, with direct access to the sea, has historically shaped the city's identity as a major harbour - which is the biggest in Europe.

Due to the fast economic development, a growth in the size of the harbour was needed. This scale difference is immense, and the Stadsdriehoek does not relates physically to the size of the planned Modernistic harbour anymore (it does relate mentally and socioeconomically). Additionally, this also means that the public life of the Stadsdriehoek has changed, as Modern planners focussed on programs as functions to be altered creating an even bigger disconnection with the harbour.

Overall, the physical and social disconnection between the harbour and the old city center illustrates the shifting relation between the urban center and its industrial past.

Today, the Stadsdriehoek's connection to its geographical and urban context has changed significantly. Its relation toward the rivers Maas and Rotte has diminished, as the city has expanded into a metropolitan region. This metropolitan region makes Rotterdam part of the Randstad, which is an urban network that includes major cities such as The Hague, Utrecht and Amsterdam. This polycentric urban structure makes the Stadsdriehoek part of a strong infrastructural system and has led to blurring boundaries between these cities.

onnection to its geo
has changed signihe rivers Maas and
city has expanded into
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e Randstad, which is
des major cities such

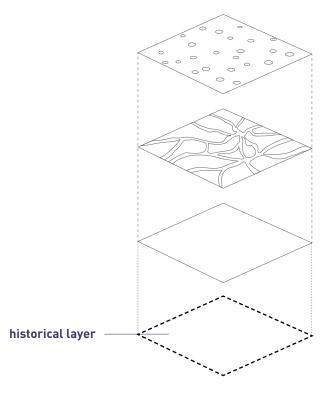




Stadsdriehoek in context of the delta rivers in Southwest Netherlands. The scale of the harbour is not related to the scale of the Stadsdriehoek anymore.

# Chapter B | Analysis The physical, social and mental landscape

3. The urban heritage landscape The Stadsdriehoek through time A 'reconstruction'?



59

# Part 3 | The urban heritage landscape THE STADSDRIEHOEK THROUGH TIME

This part of the analysis will focus on the changes that were made in the landscape through time by showing the most significant historical layers. This historical analysis is important to understand our current relation to public space and 'green'. Also, the structure of the public spaces is analyzed to understand the relationship between the public spaces and where the main structures were located to be able to read the current landscape.

Additionally, particular consideration will be given to the physical effect of the bombing in 1940 and the spatial results of the reconstruction. Lastly, some conclusions will be drawn from observations of the current physical landscape and its spatial experience.

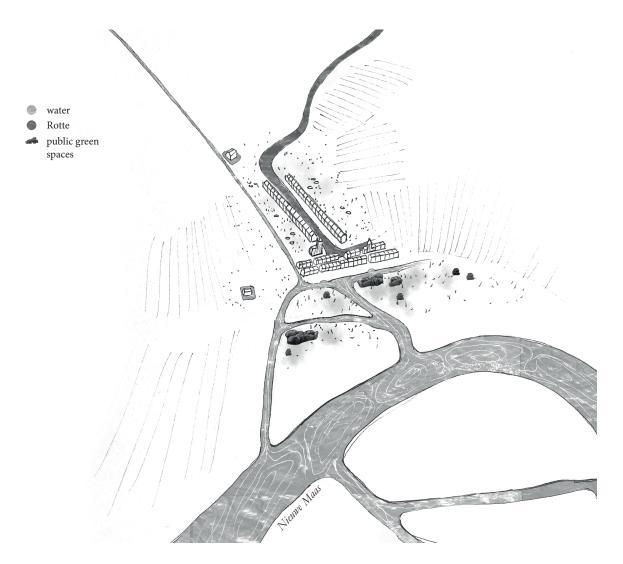
#### City rights | 1340

After the first settlement around 300 - 1000 AC was abandoned, efforts were made once again to cultivate the land where Rotterdam is now situated. By draining the water from the peat landscape, the soil subsided and the area became too prone for flooding to live safely. This came to an end by the placing of the dam in the Rotte - the muddy and

shallow peat river towards the Maas - closing the Schielandse high-sea dike for protection against the sea. The dam was made in 1270 (around the location where the Markthal is now situated), positioned above a convenient turn of the Maas. Behind the dam houses were placed along the Rotte on terps - heightened soil - and they farmed in the wetlands behind. This was because the Maas and the Rotte could both still overflow often. Later on, houses were also placed on the Hoogstraat, and sluices were made to control the waterways and drain the water from the Rotte and protect against the high water of the Maas.

In 1340 Rotterdam received its city rights, which provided the city to protect itself and a canal towards Overschie was dug for trading with Delft. Also, the city rights provided the right to organize yearly markets. These markets were held around the main public building the Groote Kerk and the little amount of public space was provided there. These markets were not very elaborate like other cities, Rotterdam was already in this time mainly focused on fishing and trading.

Since the city is still part of the landscape and a small city with limited people, there were little public spaces and no green spaces because the landscape was still connected to the houses and there was no need yet for green in the built environment.



Rotterdam in 1340. Waterways and public green spaces are highlighted.

#### A significant trading city | 1700

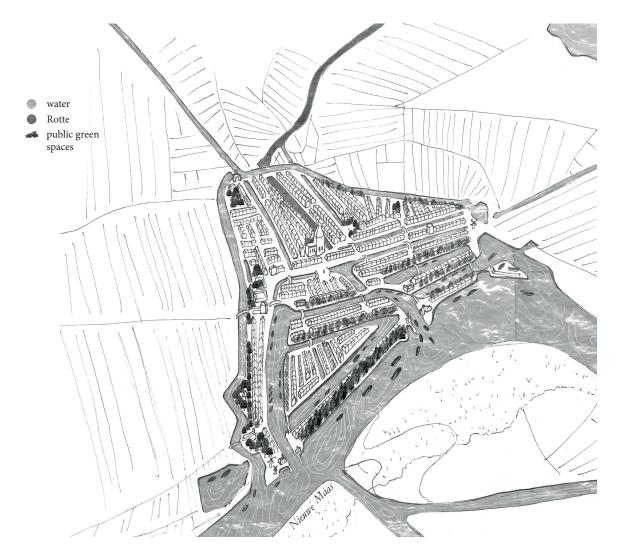
Between 1358 and 1500 the Coolvest and Goudse vest are being dug for protection against robbers. These canals and city walls were meant to protect Rotterdam from pirates and looters. In 1500 the city of Rotterdam became a significant city with many fishing ships in the harbour for trade worldwide.

By 1700 Rotterdam became a prosperous trading city. The transition towards a substantial city had influence on the structure and density of the city. While the city did not grow a lot in size, it did change. The city became more densely built and an expansion towards the river was made, with the construction of warehouses, chic houses, markets and wharves. This resulted in two parts of Rotterdam - called land city and water city - with the Hoogstraat (the dam) as a connector where the most important public services were located. Public spaces with a social function were also located around the Hoogstraat, where markets were organized.

Towards the river chic houses were built, where rich traders lived and decorated or renovated their houses. The public green spaces in the city were therefore also located around water city. These streets next to the water were often lined with trees. A great example is De Boompjes, a promenade where people could walk and parade next to the Maas. Living and working were intertwined, especially in the harbour area. Here the

canals were lively places, the emptying and loading of the boats made it a busy place. Green public spaces were mostly located next to the Coolvest and on the Boompjes.

Lastly, the first land reclamations took place, so more agriculture was possible. The Coolvest and Goudse vest functioned as a strict boundary between city and rural. The agricultural land was used more intensely and more farms were built, slowly paving the path for the urban extension outside of the Stadsdriehoek.

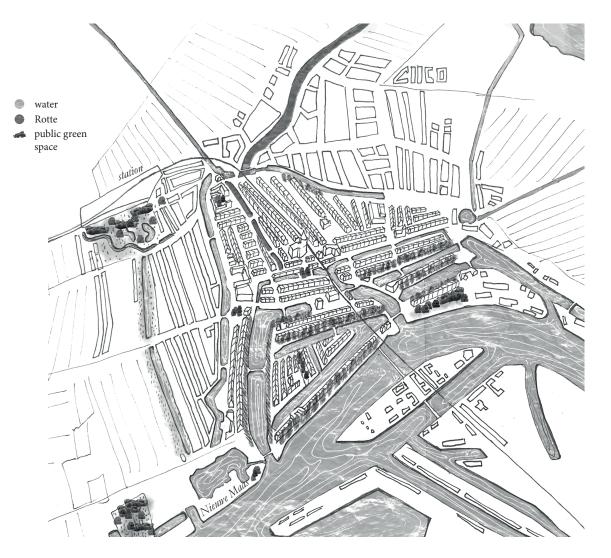


**Rotterdam in 1700.** Waterways and public green spaces are highlighted.

#### The big working city | 1900

In 1820 due to the industrial revolution, the harbour industry grew and there was a considerable amount of new housing needed for workers. The expansion outside of the Stadsdriehoek was made and this marked the city's growth in size for the first time. This rapid industrial growth also required an expansion of the harbour in 1830 and in 1866 the economy of the city was rising even faster due to the Nieuwe Waterweg, a direct connection towards the sea benefiting international trading.

In this industrial harbour city, public (green) spaces made room for more housing and waterways were filled in to create roads. Where once the Rotte lay to meet the Maas, an elevated train track in 1847 was built crossing right through the Stadsdriehoek. The station Blaak connected the city with Dordrecht, and around it formed a square - Beursplein - with important service buildings such as the City Hall. There was a shift towards Beursplein and slowly the Coolsingel throughout the beginning of the 20th century for important public services and stores, scattering the social structure. This made the Binnenrotte and the Hoogstraat lose part of their importance in the social structure of the city. Public green spaces were small and rare, except the park on the Oosterkade. The streets in the old harbour area were however often still lined with trees. The more significant public green spaces where now located near the main station - the zoo Blijdorp - and next to the singels, which were waterways with a soft border on each side to promote better water quality. Together with Het Park in the southwest of the Stadsdriehoek, these green public spaces are not only more significant in size but also in usability. This marked the shift of important public green spaces towards the west and therefore to the outside of the Stadsdriehoek.



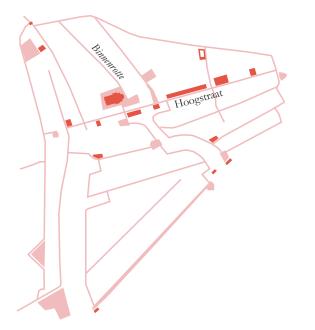
Rotterdam in 1900. Waterways and public green spaces are highlighted.

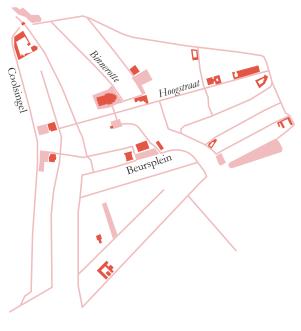
#### Public space structures through time

Comparing the structures of the main roads and public spaces throughout the times of 1340, 1700 and 1900 you can see significant change between the structure of 1340 and 1700. In 1340 the structures were more oriented towards the north and alongside the Rotte, while the only public space was located next to the church (and close to the Hoogstraat).

Between 1700 and 1900 the public space structure scattered away from the Hoogstraat. This is in 1700 clearly the main street with important public buildings and services. While in 1900 these buildings and services were partly moved to Beursplein and the Coolsingel. This created a more scattered public space structure and emphasizes already the shift towards the west which later on happened.







1340

1700

public space

public and/or important buildings

Public space structure comparing 1340, 1700 and 1900.

#### A 'new' city

Before the bombing in May 1940, many prestigious urban projects were planned. All these improvement plans with modern buildings were each designed as an integrational part of the existing urban fabric, were suddenly stripped of their context after the bombing. And these buildings now stood as untouchable monuments alone in their isolated forms, once grown from its former situation, seemed now so unapproachable (Wentholt, 2011).

After the bombing the reconstruction removed everything that was in the way of the new vision, creating a significantly different spatial patterns between the landscape before and after (see images on the next page). A clear distinction in density of the urban fabric can be seen, as well as a rationalization of the spatial layout. An evaluation of the change in public structures will be made and the spatial experiences will be compared between the lost and existing urban landscape.

#### **ROTTERDAM JOURNAL**

#### Т

Rain in Rotterdam. Dusk. Wednesday.
Opening my umbrella, I raise my collar.
Four days later they bombed the city,
and the city is no more. Cities –
they are not people hiding
during a downpour. Streets, buildings
do not converge in such cases
and, falling, do not call for revenge.

#### Ш

Around me, the mass of new buildings.
For Le Corbusier,
there's something in common with the
wings of war,
both worked wholeheartedly
on changing Europe's appearance.
What the Cyclops will forget in their rage,
the pencils will soberly complete.

#### Ш

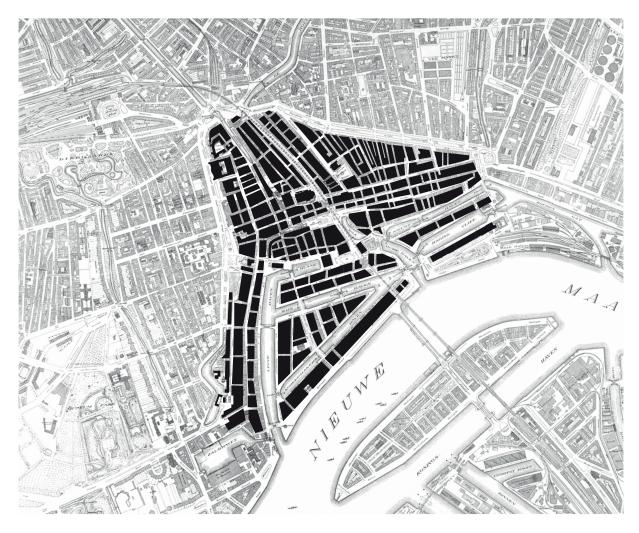
No matter how healing time is, the stump, without seeing any distinction from its goal, still hurts. And the pain is stronger – from the cure.

Night. Three decades later, we drink wine under the large summer stars in an apartment on the twentieth floor – at the level once reached by those who once soared here into the air.

oseph Brodsky. July 1973. ublisher: Pushkin Fund, Petersburg, 1992.



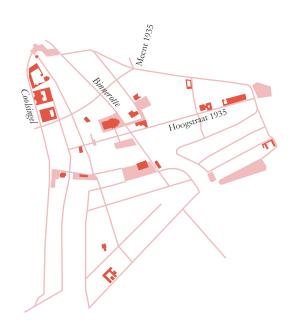
Left over buildings after bombing on 14 may 1940. The fire edge ex-

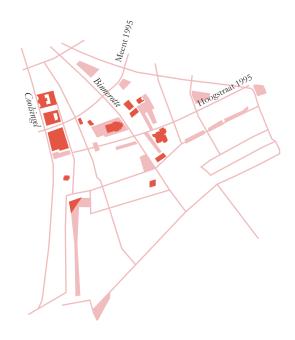


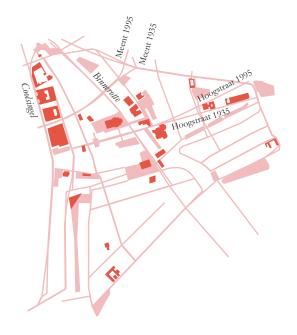
Spatial patterns of the buildings in the Stadsdriehoek around 1935 (Stadsarchief Rotterdam, 1935)



Spatial patterns of the buildings in the Stadsdriehoek around 1995 (Topotijdreis, 2006)







# Public space structures compared between 1935 and 1995

Visible in the comparison of the public space structures of 1935 and 1995 is that the Coolsingel became increasingly important and shifted the center of Rotterdam towards the west, where the focus is no longer on the Hoogstraat. The streets orientation of the Meent and the Hoogstraat also changed, creating a gridlike structure. Also, where the Rotte once met the Maas - around the area of the current Markthal - quite some public or important buildings are still situated as well as public spaces. It seems like the amount of public space increased compared to before the reconstruction, however the quality of these (green) public spaces is still questionable (this will be discussed later on).

Public space structure comparing 1935 and 1995.

public spacepublic and/or important buildings

### A 'RECONSTRUCTION'?

Can it be called a reconstruction if almost nothing has been reconstructed? The layered landscape has been removed and a new top layer has been attached, disregarding the social and cultural fabric.

#### The Basic Plan

The planning for a new center had even begun before the bombardment. According to Wentholt (2011), the ongoing negative valuation of the city center in the beginning of the 20th century stimulated a continues urge for renewal. This urban dynamic of leaving the old for the new, made any connection to the past and its historical layers a form of nostalgia that had no place in Rotterdam. Because of this, Van Traa's reconstruction plan - The Basic Plan - could only originate in a city that held a deep-seated aversion to its own physical form and the need to get rid of itself.

In the Basic Plan the idea of the spatial orientation of the old city triangle was abandoned. The street pattern was transformed into an even more regular grid of large traffic roads. Additionally, a significant intervention was the separation of areas for living, working and recreation. The center was primarily intended for working, shopping and entertainment making the public spaces vulnerable.

Due to the lack of use throughout the days, as argued by Jacobs (1961), the quality of urban spaces is reduced and the negatively impacts vibrancy of urban life. Visible on the images on the right side, new modernistic buildings replaced historical ones and the priorition of openness and car-oriented spaces are dominant.

As the plans were unveiled to the people of Rotterdam, initial disbelief and discomfort were swiftly overshadowed by the 'propaganda' of the Basic Plan. It argued that a new center was essential for economic growth, especially since the old one was deemed 'ugly' and 'filthy'. However, as time passed and reflection deepened, a sense of remorse grew stronger, fueled by the realization that the hope for the city's return had irreversibly faded (Wentholt, 2011).







01. Leuvehaven

02. Nieuwemarkt

03. Binnenrotte



04. Plein 1940



05. Coolsingel



06. Laurenskwartier

Before and after the reconstruction.

Spatial experiental differences between 1935 and 1965 (Stadsarchief Rotterdam, n.d.)

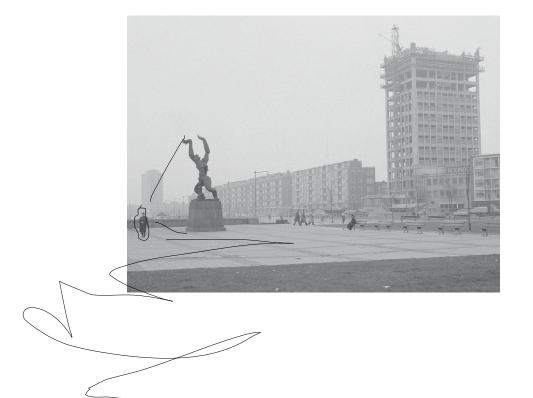
#### The legacy of modernism

The current spatial disconnection experienced in the Stadsdriehoek can be linked back to the legacy of modernist planning principles that dominated part of the 20th century. Following the destruction of World War II, many European cities (including Rotterdam) were reshaped by a vision of progress focused on rationalization, functional zoning and car-oriented infrastructure. While this approach succeeded in modernizing the city and responded to contemporary post-war needs, the effect on the landscape architecture discipline created a crisis that harnessed functional zoning between green and grey on a large scale (De Block & Vincenzotti, 2018). It also enforced large-scale structures that replaced the more human-scale environments.

As Czarnecki and Chodorowski (2021) argue, the reconstructed city often replaced intimate environments with open spaces and infrastructural lines, which reduced sensory diversity and legibility of the spaces. The result is a fragmented urban fabric that has through time contributed to weakening a sense of belonging for the residents of the Stadsdriehoek. Alvanides and Ludwig (2023) highlight that such spatial decisions consequently resulted in loss of social connection to the city and created problems with livability that still reoccur to this day.

This loss of place attachment is further explained by two interrelated spatial changes. Firstly, the removal of historical layers during post-war reconstruction led also to the removal of spatial memory rooted in the urban fabric. Historic landmarks and structures that once created continuity and identity were replaced by more abstract forms that lack historical depth. Without these tangible relations to the past, residents were left with fewer connections to their collective memory, weakening the emotional connections between people to place.

Secondly, the urge for constant renewal in the Stadsdriehoek, has maintained a continuation of demolition and rebuilding of the Stadsdriehoek. Rather than allowing urban environments to mature and accumulate meaning, the repeated transformations of buildings and public spaces do not create a sense of connection. Places become transient, damaging the possibility for long-term attachment. In this case, the city does not act as a stable place for personal and communal urban life but instead becomes an ever-changing landscape where the forming of emotional connection is continuously disrupted.



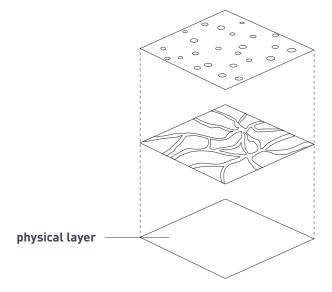
**Rebuilding of Rotterdam post-war,** with the statue of Zadkine. Rotter-dam was seen as the ultimate City of Reconstruction in The Netherlands. (Post-War Reconstruction, n.d.)

# Chapter B | Analysis

# The physical, social and mental landscape

4.0 The physical landscape A layered landscape

4.1 Interweaving the past and existing Intangible beginnings
Physical heritage
Concluding the physical landscape





# The physical landscape



# Part 4.0 | The physical landscape A LAYERED LANDSCAPE

The spatial composition of the Stadsdriehoek shows a fragmented urban fabric due to the segregation of functions. This segregation is visible in the separation of commercial functions, industry and residential zones – of which the later are pushed to the outside edges of the Stadsdriehoek. These fragmented areas result in a lack of spatial cohesion and contributes to a reduced sense of connection across the city center. Residential large scale housing are often enclosed by large scale commercial blocks or main infrastructure, limiting interaction and integration between different types of urban life.

A critical observation is the dominance of car-oriented infrastructure throughout the Stads-driehoek. The structure of the street network is heavily focused on car mobility, with large asphalted car roads creating physical and perceptual boundaries within the city center. This emphasis on vehicle accessibility undermines pedestrian connectivity and disturbs its spatial continuity thus experience. In several areas, public space seems to be shaped by modernistic spatial expression or based on infrastructural reason, rather than by social or ecological considerations.

Furthermore, some public spaces include grass or tree cover, which are often limited in scale and disconnected from each other. Furthermore, these 'green' public spaces are located frequently next to infrastructure, making them less attractive to use and stay in. The lack of accessible and larger green spaces reduces occasions for recreation and informal social encounters.

Overall, these spatial characteristics suggest the dominance of zoning, prioritization of car mobility, and lack of green spaces contribute to a fragmented experience of place. This spatial fragmentation disturbs not only the physical landscape but also the social and mental landscapes, reducing opportunities for collective memory, everyday encounters, and emotional attachment to the area.

## **Current spatial layers of the Stadsdriehoek.**The functional planning of the Stadsdriehoek has

resulted in segregated functions, lack of parks and the spatial orientation focused on the car roads.

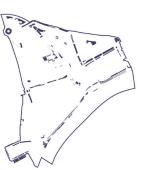


Buildings

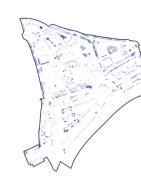


Highway and car roads





**Grass and parks** 



Trees in height



Sport facilities



Commercial areas



Industry areas



Residential areas

#### A lost waterscape

#### The river Maas

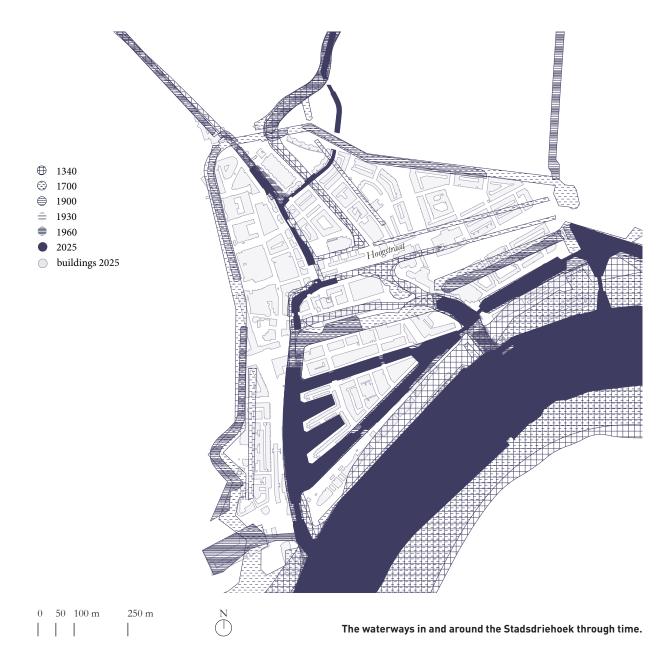
One of the most noticeable shortcomings in the spatial organization of the rebuilt center is the lack of contact as well as an absence of integration, with the river. Despite long open viewpoints like the Coolsingel in the direction of the Maas, the achieved effect is the opposite of integration. The river has not been brought closer to the city; it merely adds to the experienced empty, open spaces, to the barrenness, inhospitableness, and windiness that Rotterdam already suffers from, and it reinforces the discomfort feeling with the city. This relation makes the river Maas intangible, and is reinforced by the spatial form of the Stadsdriehoek.

The removal of the division of the center into a land city and a water city occurred when the dike underneath the Hoogstraat was moved to the riverbank, and the Maasboulevard became the new dike. This not only disturbed the previous spatial and social structure, but also did it create a greater distance with the river.

### Water through time

Another conclusion about the water structures in the Stadsdriehoek is related to the remaining inner waterways, the ruminants of the Rotte and later other canals. Not only have these waterways changed over time or have been removed, disturbing their spatial relation to the landscape. But also, the relation to these waterways have changed due to the change in use. The canals were used to transport and (un)load items on and off boats, creating an interactive relation between water and the canal banks. Because of this use, the waterways were all connected to the Maas. The remaining waterways relation to this active use has disappeared and the (visual) connection to the Maas. The remaining connection is the 'promenades', trees lines next to the water where people can walk along. These are now often partly used for parking.

Overall, there is an overwhelming spatial lack of connection to the Rotte and therefore the beginning and history of Rotterdam. Furthermore, the edges are often defined by roads and are the leading lines in the orientation which affects the legibility of the city by foot. This makes the spatial experience of the Stadsdriehoek disoriented from its historical layers, especially the water layers.



# Part 4.1 | Interweaving the past and existing INTANGIBLE BEGINNINGS

Analyzing the physical landscape and its history is essential to understand the current spatial qualities and atmosphere of the Stadsdriehoek. The images shown on the right visually capture the urban experience of the current situation of the historic course of the river Rotte, tracing its path from the northern part of the city center toward its former convergence with the Maas. This linear evaluation reveals a interesting sequence of changing urban character, atmosphere, and scale.

The route begins in areas defined by active, often green public spaces that appear well-used and dynamic. These spaces seem to encourage informal encounters and offer a sense of vibrant urban life. However, this continuity is abruptly discontinued by the presence of large infrastructural barriers, such as wide roads and traffic intersections with little pedestrian permeability. These infrastructural elements disrupt the spatial legibility of the route, making orientation toward the river increasingly difficult. Reaching the Maas requires often detours and crossings, which lead to constant reorientation revealing the lack of spatial coherence.

When approaching the river, the landscape becomes increasingly empty, bare and detached. The

public space here is dominated by megastructures, large buildings and infrastructural elements resulting in limited street-level interaction. This results in an experience of openness and exposure with little green, contrasting severely with the more intimate and lively character of the previous areas. The transition between these two zones is not only spatial but also atmospheric, resulting in questions about how such differences have emerged and what they indicate in relation to the history of the Stadsdriehoek: is this experiential difference related to the post-war reconstruction or already visible in the historical layers? And are there historical layers still visible in the current urban landscape? Is this spatially visible? By exploring these questions, this part aims to uncover how historical narratives, physical transformations, and previous planning decisions continue to shape the spatial experience and therefore the place attachment within the Stadsdriehoek of Rotterdam.

### Quality of the urban green spaces

Quality of the public space in the inner city is still often paved, where the car is dominant and trees are mostly placed next to roads. Another observation is about the public space and where the urban green landscapes are located now and what they mean spatially for the urban fabric. This is about the quality, there are quite a lot of urban green spaces but the quality is not high. The green urban spaces are often inaccessible, do not invite people to stay and are low in diversity.

### Spatial experience

The spatial experience of the urban green spaces is in the map on the right related to accessibility, configuration and placement. These three aspects influence the spatial experience and are translated into six categories through which the Stadsdriehoek is analyzed. This spatial analysis shows that current green structures are often lined, especially next to roads and that a considerable amount of urban green spaces are inaccessible. Concluding from this, spatially the green structures are used to lead movement, especially car movement. While the urban green spaces are often used as decoration or regreening of spaces. This regreening seems to function as an improvement for the infiltration, but often has no social or spatial function.





















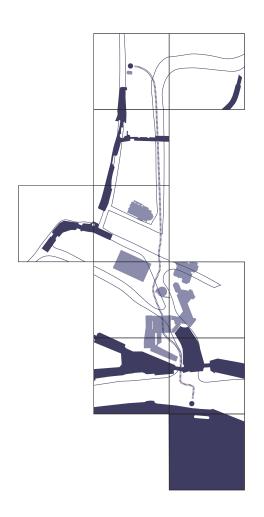












The pictures follow the old course of the Rotte towards the Maas (Google Maps. (n.d.)

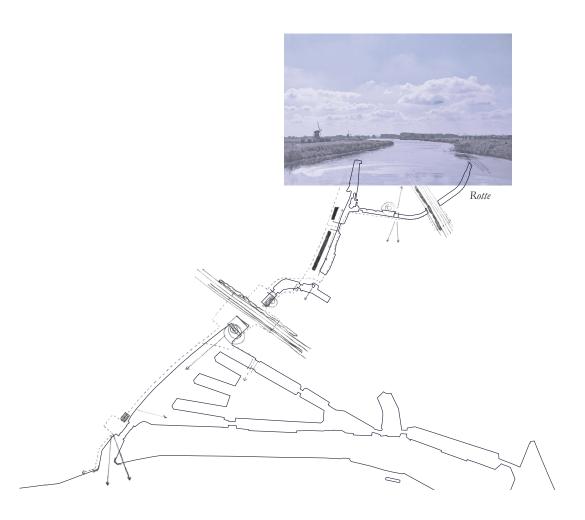
#### The 'invisible' water

As much of the historical water system in the Stadsdriehoek has been filled in and closed off, these water structures are seemingly not legible anymore in the contemporary urban landscape. However, these places where water once shaped the city's spatial structure, can now be referred to as 'invisible waterscapes' since they now only indirectly through small traces show their presence. For example, in streets and squares that now occupy the place of former canals the soil continues to reveal its origin: pavement stays wet longer or trees grow less well due to poor drainage which all hint at the underlying hydrological conditions. The water has not vanished from its place, rather it has been suppressed and is still visible – when looked for - in the urban landscape.

### The water story of the Rotte & Maas

This phenomenon is particularly relevant in the context of the Maas and the Rotte. The name 'Rotta' – the old name of the river Rotte – refers to 'muddy water', named after the slow and sediment-rich water of the Rotte. The Maas on the other hand has a very different character, more forceful tidal changes, creating a dynamic interaction of these two rivers that where ones the reason for settling in this location and therefore a critical part of the city's identity and spatial orientation.

However, currently these two river identities as well as the overall spatial structure of the Rotte are difficult to read in the landscape. What remains is a center that has physically distanced itself from its historical waterscape, impacting not only the spatial legibility but also the spatial experience of people.



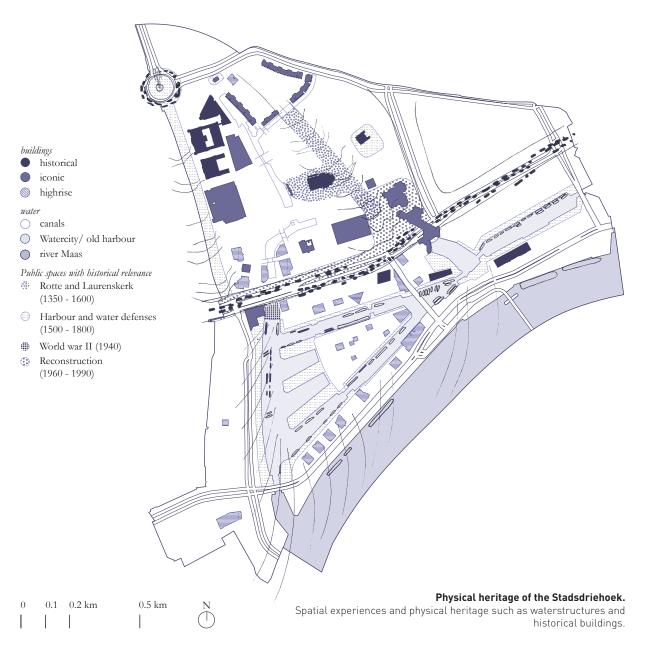
Current experience of the remaining Rotte (Staatsbosbeheer Zuid-Holland, 2018)

# PHYSICAL HERITAGE OF THE LANDSCAPE

As shown in the previous parts, the current landscape of the Stadsdriehoek has lost its historical spatial legibility and consists of scattered objects refering to the past. In the northwest of the Stadsdriehoek (waterstad) some historical buildings are still part of the urban landscape, their scale is large and the public spaces around partly represent this history in references. Around the Laurenskerk the space reflects layered history as well as around the old library next to Nieuwemarkt, but these references here are made mostly in architectural or statues. The Blaak cuts through the Stadsdriehoek and is not only experiencable as a large infrastructural elements but also affects the spatial legibility greatly. The south part (waterstad) consists in the west of highrise buildings, making the area prone to heavy wind. The water structures in this area refer to its previous function as a harbour and is now used still for recreational purposes and functions partly as a museum. Along the Maas, large-scale car infrastructure dominate that reinforcing an inhuman scale that further disrupts the urban legibility.

The modernist interventions that created these spatial conditions are themselves becoming part of Rotterdam's heritage. As Choay (2001) suggests,

heritage is not only about preserving monuments but also about recognizing the significance of urban forms that reflect collective memory and cultural shifts. Therefore, the large open spaces of the Stadsdriehoek can be understood as a new heritage layer, embodying Rotterdam's identity as a city of reconstruction, experimentation as well as its resilience. These open voids that are often criticized for their scale now offer new values: space for flexibility, temporality and adaptation to contemporary urban life. Preserving aspects of this openness acknowledges both the traumatic past and its continuous search for new urban meaning.



# CONCLUDING THE PHYSICAL LANDSCAPE

To conclude the analysis of physical landscape, through the methodology of landscape biography the unveiling of the historical layers the sub-question is answered: how can urban green spaces reflect the historical layers of public spaces in the Stadsdrichoek?

The Stadsdriehoek has gone through radical spatial transformations, from its layered pre-war urban fabric to the modernist reconstruction that erased most of its spatial memory. The priority for car-oriented infrastructure, zoning and openness have disconnected the area not only from its layered complexity but also from the historical water systems (Rotte and Maas) that used to define the identity of the city center.

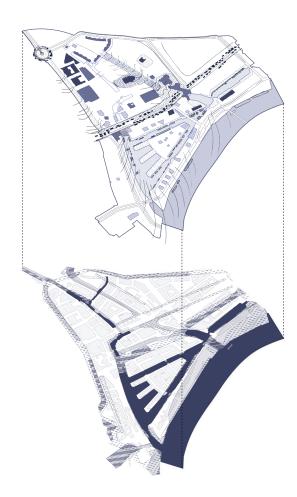
However, the question is not whether we should restore the past, but how we can recognize and re-engage the historical layers without removing the existing layer. A purely restorative approach risks continuing the modernist logic of erasure and replacement that ignores the contemporary heritage within the current urban fabric: including the large open spaces and elevated architectural buildings. These are also a part of the layered

landscape. This approach encourages to question which historical layers we choose to value and how to include them into the existing landscape (Huyssen, 2003). While lost elements and relations such as waterways and pre-war public space structures are important, the large-scale oriented (green) public spaces enforced by modernist planning have become part of the Stadsdriehoek's contemporary heritage. These current spatially modernistic public spaces carry meaning and attachment and are formed through time; thus they cannot be considered anymore as erasures, but as spatial heritage.

Urban green spaces can thus carry the ability to operate as a way through which these layers are made legible again. Not through imitation or repair, but through reinterpretation which allows the landscape to function as a reflection between visible and invisible historical layers and between people and urban form (Corner, 1999). Urban green space becomes a lens through which spatial disconnection can be framed as potential and fragmentation as an opportunity to relate between place and people.

In doing so, urban green spaces are not a decorative solution, but can create a spatial structure that invites reinterpretation of the past in the lived spatial conditions of the present (De Block et al., 2019). Thus, urban green spaces become a

tool of spatial legibility: not only to restore lost connections, but to make space for complexity and continuity - qualities that modernist planning erased or ignored. In this way, urban green spaces do not only reflect the past, but integrate the layers of time into the contemporary urban fabric.



#### The two spatial heritage layers.

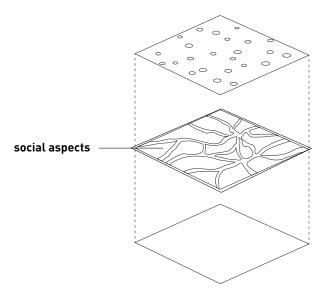
The (lost) water structure layer related to the contemporary urban landscape with its existing spatial qualities and heritage.

# Chapter B | Analysis

# The physical, social and mental landscape

5.0 The social landscape Defining public space The social system of the Stadsdriehoek

5.1 The landscape as social construct Social landscape typologies Concluding the social landscape



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The social landscape



# Part 5.0 | The social landscape DEFINING PUBLIC SPACE

An evaluation of the public spaces within the Stadsdriehoek is necessary to understand their relationship to the surrounding urban fabric. To understand the formation of these public spaces, it is important to analyze how the physical characteristics – such as shape or form - of these spaces influence social environments. Special importance is given to how these public spaces facilitate or hinder social interaction, with a focus on the social network of activity and use. This is to understand the movement of people through the city center, and to draw conclusions over the dynamics of the social fabric within the site.

### The Nolli Map

To define the public spaces of the Stadsdriehoek, a first examination of the open space was conducted through the use of a Nolli map. The Nolli map offers a valuable representation of the city's structure by distinguishing between open and built spaces; where infrastructure, buildings and water are represented in black. It visualizes the distribution of open space and how these spaces are interconnected or obstructed by built form (Ji & Ding, 2021). This approach provides a clear overview

of accessibility and connectivity within the social fabric of the city.

In the context of this analysis, public buildings have also been included as part of the open space network, as they are important point in the social network by facilitating public services. The Nolli map shows that the majority of open space is concentrated in the upper half of the Stadsdriehoek, particularly in the eastern part. Additionally, the amount of private spaces in this area is noticeable, revealing a first hint to a more private atmosphere in this part of the city center.

This spatial pattern suggests a fragmentation of the public realm, which may create functional and experiential quality difference in these spaces. The relationship between form and use, as highlighted in the Nolli map, is crucial for understanding how the social fabric functions in a city.

- built environment
- O open & accessible space
- private space
- public buildings



0 0.1 0.2 km 0.5 km N

Nolli map of the Stadsdriehoek.

The publicly accessible public space, where public buildings are also part of the public / open space.

### The character of the public spaces

To better understand how the physical environment shapes the quality of public spaces in the Stadsdriehoek, an experiential spatial analysis was done and visualized in the map on the right. This map reflects qualitative observations of the spatial character, where areas are identifying as open, enclosed or hidden as well as identifying disturbances such as traffic noise or strong winds. This is critical in evaluating public space, as the spatial configuration and sensory experience directly influence patterns of use and activity.

The post-war rationalized urban morphology of the Stadsdriehoek is characterized by large open spaces that are often exposed to climatic changes and dominated by car traffic. These conditions frequently result in inhospitable environments that discourage staying or gathering and therefore social interaction. As shown on the map several public spaces are exposed to car noise and/or wind, which compromises their usability and experiential quality.

In contrast, more enclosed or semi-hidden spaces such as those situated within built environments or shielded from traffic, offer an evidently different atmosphere. These areas tend to feel more intimate and thus more encouraging for social use and diverging activities. The difference in spatial experience between these open and enclosed spaces marks the importance of comfortable environmental conditions and perceived sensory experience in determining public space use (Lynch, 1960). These spatial conditions do not only impact social activity but also play an important role in promoting or obstructing the attachment of people.



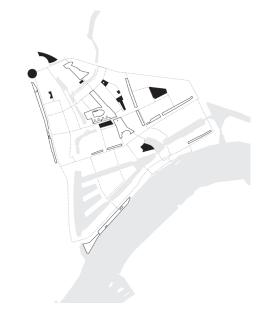
0 50 100m 250 m

N

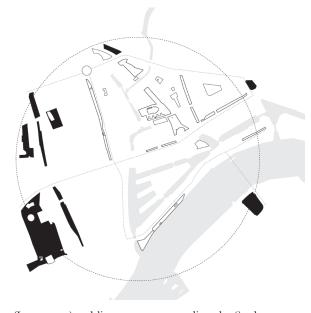
**The public spaces of the Stadsdriehoek.** The spatial character of the public spaces in relation to experienceable qualities.



Main structures public spaces



Smaller public spaces within the network



(Important) public spaces surrounding the Stadsdriehoek

### The relation of the public spaces

An abstract analysis of the relevant public spaces of the Stadsdriehoek and their relation to each other is shown in the images on the left.

The main structures are often linear spaces and are usually narrow, while the form of the smaller public spaces is often related to their surroundings. These smaller public spaces are mostly located in the top half of the Stadsdriehoek, with a focus on the eastern part. Also, the public spaces that are connected with public services and social activities are located in the north-west. However, when you relate the public spaces of the Stadsdriehoek to the public spaces of the overall center, the large structures are mostly located in the west and therefore outside of the Stadsdriehoek. This shows that the focus of the public spaces is shifted towards the west, which was also concluded in the historical analysis of the previous section.

The relation of the public spaces of the inner city in Rotterdam. Inspired by LIST (Inner city 100 waterelements).

# THE SOCIAL SYSTEM OF THE STADSDRIEHOEK

To further understand the social network of the Stadsdriehoek, a divarication is made between open and public space. In this context public space can be understood as a space that is open for every layer of society, where a sense of connection can be felt by collective or personal attachment. The map on the right presents an overview of the public spaces in the Stadsdriehoek, focusing on their characteristics and interconnections. Additionally, the map highlights not only the distribution of public space but also their environmental qualities through a color gradient ranging from light to dark blue. This gradient reflects variable amounts of sun exposure and vegetation cover where lighter tones indicating sunny, open and paved areas while darker tones suggest more shaded and vegetated environments.

This visual categorization provides an understanding of how the microclimatic conditions influence the use and comfort of different public spaces and their connections. Firstly, public spaces with more vegetation and shade are likely to offer thermal comfort, biodiversity and an enclosed atmosphere. This can positively influence people's willingness to stay and gather. Secondly, the

excessively paved and sun-exposed public spaces may appear more barren or inhospitable especially during warm weather, which reduces their usability and therefore their social value.

In addition to these environmental qualities, the map also illustrates the connectivity of public spaces and indicates how they are linked to one another. These connections are important to understand the movement network of the Stadsdriehoek, as they reveal routes of pedestrians and the way the public spaces function as a linked system. This map can also indicate the influence of these environmental qualities on the pedestrian network through the changing weather conditions. While in summer, connected green and shaded spaces will support the walkability and encourage social interaction, this will also be the case for more open and sunny areas during the winter months. This indicates an interchangeable use of the public space throughout the year.

Overall, the map serves as both a visual and analytical tool that helps evaluate the quality and usability of public space in the Stadsdriehoek. It emphasizes that the spatial connections and environmental conditions are crucial to take into account when analyzing urban experience and the relationship between people and place.

shade/vegetation

sun/pavement
public buildings



0 0.1 0.2 km

0.5 km

The spatial relation of the public spaces and buildings.

The lines show the main connections between the spaces.

### Movement through use and activity

An abstract map is made of the activity and use of the public spaces in the Stadsdriehoek. This is done through the method of connecting the nodes. By identifying the most relevant social nodes lines are drawn in between resulting in the social network of the Stadsdriehoek.

Shown in the drawing, the activity is mostly concentrated in the north-west part of the center. This can be related to the amount of commercial and public services located in this area. The playgrounds are mostly located on the outskirts of the Stadsdriehoek (related to the residential areas) and the running activities are mainly next to the river.

These movements and activities says something about the people in the Stadsdriehoek, each type of activity or function is used by different types of people. Where tourists might visit the public buildings or visit some restaurants, these people have a completely different experience of the Stadsdriehoek than people that want to go shopping or running. This shows a relation of how the landscape can be experienced differently by people related to the use and activity of the landscape.



# Part 5.1 | The landscape as social construct SOCIAL LANDSCAPE TYPOLOGIES

In order to fully understand the social fabric through a landscape architectural perspective, a reconceptualization of the urban landscape is necessary. With the often-used systematic approach (De Block et al., 2019), the natural layer is often considered separate from the cultural layer. The intertwined reality of how in the urban landscape people relate to their surroundings needs a different representation, expressing relationships and experiences. Urban landscapes should refer to the emotional and psychological connection between people and place (Menatti et al., 2019), that are formed individually or collectively.

In order to represent the urban landscape, as well as a more fitting way of capturing existing landscape types, a new typology is created using the theory of Whyte (1980) and Lefebre (1991). It offers a critical foundation for understanding and categorizing the public space based on activity and use. These theories form the framework of the classification of six landscape typologies: social, cultural, commercial, transient, rest and event landscapes.

Firstly, Whyte's observational studies of public spaces, particularly in The Social Life of Small

Urban Spaces (1980), emphasize the everyday use of urban spaces and how elements such as seating, shade and the presence of others contribute to the social vitality of a place. This focus on human behavior and use patterns informs the *social* and *rest* typologies, where interactions and passive engagements are shaped by the physical environment.

Secondly, Lefebvre's The Production of Space (1991) contributes by conceptualizing space as socially formed, shaped by both the physical context and social relations. His framework of perceived space (spatial practice), conceived space (representations of space) and lived space (representational spaces) all enable an understanding of public space as dynamic and multi-layered. This theoretical approach supports the *cultural*, *commercial*, *event* and *transient* typologies, where space is not only defined by static functions but also by movement, symbolism, temporality and collective meaning.

To conclude, Whyte's and Lefebvre's theories allow for a multidimensional reading of the urban landscape that goes beyond form and function to include identity and experience. These understandings helped the creation of the typologies, which are not merely categorizations based on the physical environment but are rather reflections of how space is inhabited and perceived through both every day and sporadic uses.

### Seperate typologies

Staying			Moving		Visiting
rest landscape	social landscape	cultural landscape	commercial landscape	transient landscape	event landscape

### Defining typologies

As mentioned before, these typologies are based on the activity and use of public spaces as well as on the theories of Whyte and Lefebvre. Additionally, these typologies are divided between staying/moving/visiting to be able to use the typologies as a guideline for the design as well as understanding the type of social interactions these spaces provide. Because of this, the spatial devision of the typologies can be analysed more clearly. Below is a description of each typology type and some examples.

### Staying

Social landscape

Spaces where people gather, meet, linger, and interact spontaneously or intentionally.

Examples: Plazas, street corners, community gardens, benches in busy areas.

Rest landscape

Spaces of pause, reflection, retreat — important for physical and mental wellbeing.

Examples: Pocket parks, library gardens, courtyards, riverbanks.

#### Cultural landscape

Spaces rooted in shared memory and symbolic meaning, reflecting a collective identity. Examples: Memorial sites, performance spaces, historic areas.

### Moving

Transient landscape

Spaces primarily used for movement and passage, sometimes potential for encounter.

Examples: Sidewalks, bridges, underpasses, train station surroundings, parking areas.

### Commercial landscape

Spaces dominated by economic exchange and consumer activity, often programmed but layered with informal social use.

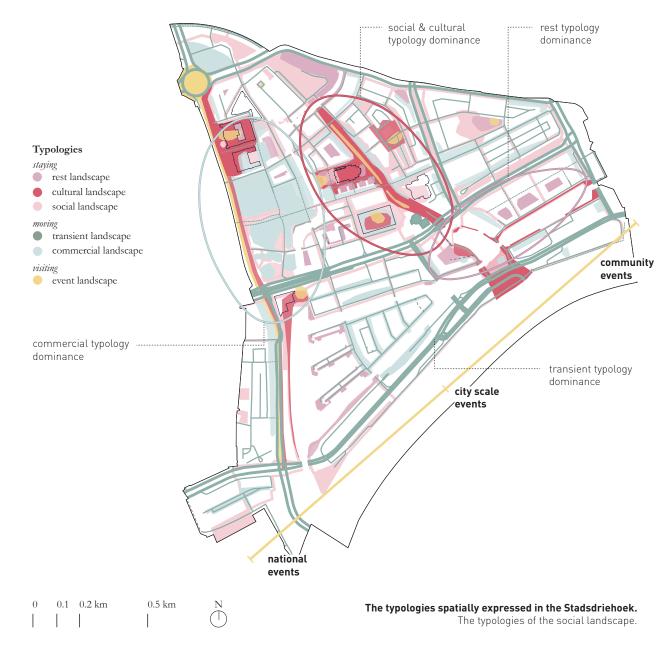
Examples: Market squares, shopping streets, popup stalls, food courts.

### Visiting

Event landscape

Flexible, open spaces designed or adapted for programmed activity and temporary transformation.

Examples: Open grassfields, open plazas and streets



### Overlapping of typologies

Visible in the map on the previous page, these typologies are shown on the scale of the Stadsdriehoek and some conclusions can be drawn from this map. Firstly, the amount of commercial landscapes are quite significant, and often located in the north-west part of the city center. Another dominant typology is the transient landscape, related to the amount of infrastructure. Lastly, the lack of the cultural and rest landscapes are visible. This can be related to the lack of physical historical references and to the amount of open space. Often the rest landscapes are located next to the water or are enclosed green spaces. These physical aspects are not very common in the Stadsdriehoek.

To fully understand the social landscape of the Stadsdriehoek, an additional consideration is made. Since the function of the landscape is related to placement and use, the aspect of time needs to be considered. These functional aspects are not static; they change in time and consequently influence the typological classification of the social landscapes. Since variations can occur throughout the day or week - for instance, in the case of weekly markets - but can also extend to monthly or annual events such as marathons. These dynamics impact not only the patterns of use and activity, but also relate

to the physical form of public spaces within the Stadsdriehoek. Many of these spaces are designed to accommodate large-scale, occasional events rather than the everyday use.

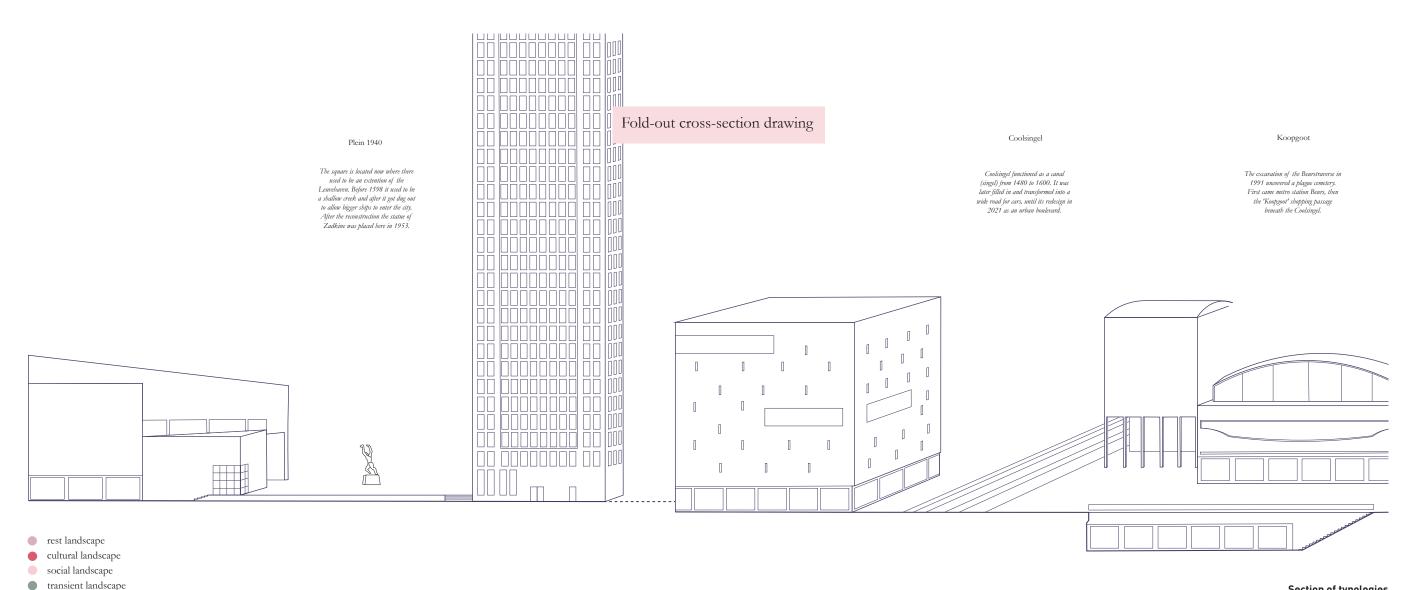
This is one of the reasons why the typologies do not exist as isolated categories, but rather as overlapping and interacting layers. To more accurately reflect the dynamic character of these public spaces, it is necessary to conceptualize the typologies as overlapping rather than next to each other. The coexistence of different activities within a single space that are shaped by factors such as time of day, weather, and event schedules requires a different representation that can express this complexity.

Conceptual section through the Stadsdriehoek

To visualize these dynamics, a conceptual section through the Stadsdriehoek has been developed. This section illustrates the use and activity within public spaces, showing the six typologies derived from the theories of Lefebvre and Whyte. The physical landscape will be the base for section, where the development of the physical landscape of the public spaces will be shown through time. Subsequently, two different time-based scenarios are presented to highlight how the typologies shift through time: a sunny Saturday, which reflects increased recreational and commercial activity, and a

rainy Wednesday afternoon, characterized by more transient or inactive use. The final layer of the section focuses specifically on the event landscape, outlining the occurrence and type of events across the section. Notably, the events layer reveals a specific shift from the west to the east of the Stadsdriehoek. While in the west of the city center more international and city-scale events are organized, in the eastern part there are more localized forms of events.

The future design interventions will be introduced as an addition to this section. These interventions will be represented a layer that adds to the existing landscape, rather than as 'renewal'. Rather than replacing what exists, these designs will be focused on the small scale and reinforce the narratives of the local residents to add to the social complexity of the urban landscape.



### Section of typologies

Section showing the overlap of typologies, there are no hard edges. The urban landscape are dynamic social layers.

116 117

commercial landscape

event landscape

# CONCLUDING THE SOCIAL LANDSCAPE

To understand how urban green spaces can strengthen the social fabric of the Stadsdriehoek, it is important to recognize the fragmented nature of the social network. The spatial structure of postwar planning has produced disconnected public spaces that are often dominated by infrastructure and are mostly defined by climate discomfort such as wind-exposed squares and dominant traffic corridors. These spatial conditions have partly resulted in discouraging of spontaneous gathering and informal social use and thereby are weakening opportunities for strengthening social cohesion. Additionally, the modernistic principles have resulted in the segregation of functions, which Jacobs (1961) describes as a negative influence on the livability of the city as well as its social fabric.

Through the lens of the proposed social landscape typologies (social, rest, cultural, commercial, transient, and event landscapes) it became obvious that some typologies are underrepresented, particularly those associated with slower, more intimate forms of occupation (rest and cultural landscapes). In contrast, transient and commercial landscapes seem to be overrepresented, resulting in a specific urban experience more focused on movement and

consumption rather than dwelling and staying.

Therefore, when thoughtfully integrated, urban green spaces have the potential to rebalance this distribution and diversify for more opportunities for connection. Urban green spaces can offer physical structure and environmental qualities that make lingering and informal encounters more likely to happen, these qualities are necessary for a vibrant and inclusive social fabric (Whyte, 1980; Gehl, 2010). Moreover, by introducing green qualities such as softness, shade and visual enclosure; urban green spaces can reshape the character of otherwise inhospitable environments and transform passive spaces into active and meaningful places. So, rather than acting as decorative interventions, urban green spaces can function as a diverse tool that can correspond to different public life patterns: from quiet reflection in rest landscapes to collective activities in event spaces, as well as everyday encounters in social or cultural landscapes (Whyte, 1980; Lefebvre, 1991; Gehl, 2010).

This diversification of public spaces is essential for encouraging social interaction across a wide range of different urban users. A public space that only supports a narrow range of activities risks excluding forms of use that are less visible but equally important to the social fabric (Lofland, 2017). Introducing a more varied combination of

urban landscape typologies ensures that different temporalities (daily, seasonal, occasional) and social forms (individual, group, informal, institutional) can coexist and interact within the same public space.

Consequently, these urban green spaces must be understood as relational places that function within the broader social fabric. Their impact lies not only in isolated implementation but in their capacity to add to the social network of differentiated but interconnected public spaces. As Gehl (2010) argues, the vitality of public life emerges from a fine-grained structure of places that invite varied forms of presence, not from monumental or singular interventions.

In conclusion, urban green space is not just a spatial structure for social life but an active framework that enables diversity, complexity and encounter. It is through this intentional diversification (through the six typologies) that urban green spaces can make public spaces of the Stadsdriehoek more socially connected.

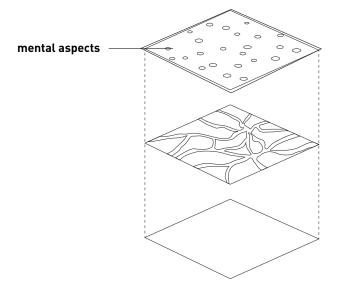
# Chapter B | Analysis

### The physical, social and mental landscape

6.0 The mental landscape The narratives of the Stadsdriehoek

6.1 Types of narratives Landscape narratives Collective narratives Personal narratives

6.2 Making narratives spatial Porous movements in public space Concluding the mental landscape





The mental landscape



# Part 6.0 | The mental landscape THE NARRATIVES OF THE

# THE NARRATIVES OF THE STADSDRIEHOEK

Understanding the mental landscape of the Stadsdriehoek requires engaging with the intangible and often subjective ways people relate to their surroundings, which can be through memory, narrative and perception. Based on the previous described urban conditions, the physical and social layers of the Stadsdriehoek are increasingly rationalized and standardized and therefore there is a risk that the narrative layer becomes erased or difficult to develop. In response, some theories have emphasized the importance of narrative approaches to spatial design, since urban landscapes are not just physical configurations but places of meaning. According to Lynch (1960) and Lefebvre (1991), public spaces are not passively experienced but actively lived and interpreted through personal and collective memories.

### Streetscape Territories

Within this narrative approach, the research and design framework of Streetscape Territories (Scheerlinck, 2013) offers a valuable reference. It highlights how urban stories are spatially embedded and how design interventions can reveal or strengthen these narratives.

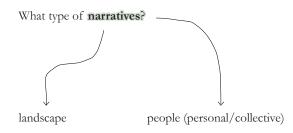
Streetscape Territories focuses on the boundary between private and public space, seeing the street not only as a circulation of infrastructure but as a social and psychological threshold. In this view, public spaces like streets are narrative spaces where collective and individual identities come together in shared use and memory. These places are a stage for everyday narratives, diverging from informal routines to collective patterns. Additionally, the layering of past and present narratives continues to shape the perception of contemporary public space. When using these narratives in design interventions, the Streetscape Territories highlight the importance of micro-interventions that invite for taking ownership and express presence.

#### The need for narratives in the stadsdriehoek

The Stadsdriehoek, once the historic heart of Rotterdam, has suffered a radical spatial and cultural disconnection due to the post-war reconstruction. This physical rupture also led to a mental disconnection resulting in a loss of emotional attachment as well as historical discontinuity and removal of spatial identity. The city center became optimized for efficiency with large-scale infrastructure that displaced the human-scale and layered urban fabric which supported the shared memory.

As Wentholt (2011) describes, this transformation created a 'mental void': the center no longer referenced the collective and personal memories of its residents. It became a place to pass through rather than identify with. The rebuilding efforts focused on physical functionality, ignoring the need for recognizable spaces representing a long historic continuity with layered narratives.

In this context, a narrative approach to the urban landscape is not redundant but essential, it allows public spaces to be reinhabited emotionally. Narratives can offer continuity and can reconnect people with place not by reconstructing the past, but by acknowledging its traces and valuing the present narratives and emotional connection.



#### Different kinds of narratives

In this project, a distinction is made between landscape narratives and the narrative of people about the landscape. Based on the case study Streetscape Territories (Scheerlinck, 2013), the narratives of people are divided between personal and collective narratives to understand their differences. Logically, these narratives do not exist separately and are always combined, however to be able to create an understanding of these two types and an attempt to summarize or exemplify these narratives a differentiation is necessary.

# Part 6.1 | Types of narratives LANDSCAPE NARRATIVES

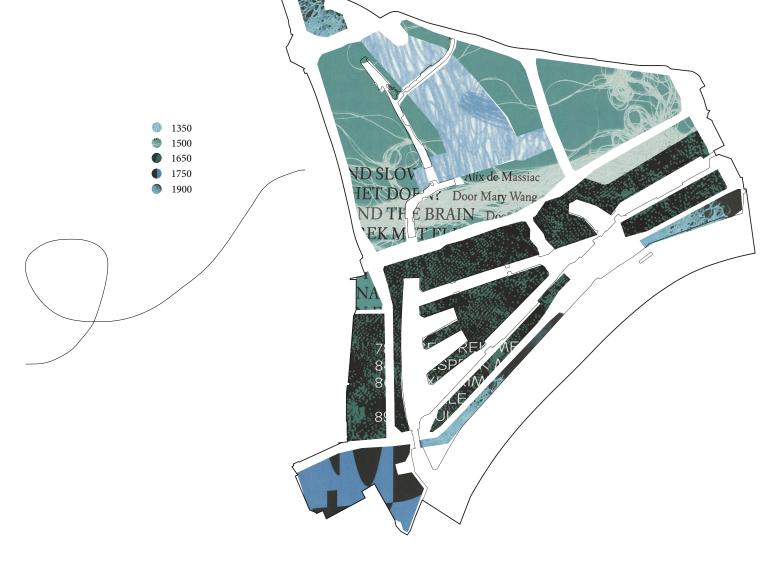
The narratives of the landscape in the Stadsdriehoek has been mostly erased due to removal of the historical forming of the morphology, and because of this historical references are mainly made with art forms such as statues. Argued by Wentholt (2011) these cultural elements were seen as an important means to fade the meaninglessness of the city center. This approach aligns with modernistic tendencies to reference the past indirectly or symbolically rather than through preservation or restoration of old forms.

This method reflects a broader modernistic perspective, where history is not necessarily embedded within the urban fabric but is instead recalled through discrete, curated elements. The members of the Dutch CIAM group underscored this phenomenon, noting a link between Rotterdam's approach to urban beautification and its liberal character, with Van Tijen remarking, "liberalism also means a lack of culture. Nowhere is that more evident than here [in Rotterdam]" (Wentholt, 2011).

This perceived cultural void is visible in the urban landscape of the Stadsdriehoek. Here, the historically layered landscape has been stripped away, replaced by a new overlay that prioritizes functionality and modernity over historical continuity. References to the past are rendered in a static, almost frozen manners; the city center transformed into a collection of objects that allude to an invisible past rather than narrate a continuous story. This approach turns historical references into artifacts, suggesting a past that is acknowledged yet detached from the present (Wentholt, 2011).

### Lost layers

On the right you can see the Stadsdriehoek and the gradual expansion of the urban environment and built additions in time. This layered landscape got removed after the bombing and reconstruction. The center used to reference to different periods of time, creating a deep and complex spatial environment. This has now been lost, and on the next page you can see a collage referencing to this removal of complex layers.



0 0.1 0.2 km 0.5 km N The layered landscape of the Stadsdriehoek according to the expansions through time.





2020 • 1953





2020. 'ledereen is dood behalve wij' (Wikifrits, 2021) - 1953. De Verwoeste Stad (Snoek, n.d.) - 1874. Maagd van Holland (Heyligers, n.d.) - 1662. Beeld Erasmus (Linders, n.d.)



#### COLLECTIVE NARRATIVES

#### A mental void

As the reconstruction seemingly abandoned the character and form of the old Stadsdriehoek, the center represented as a great 'mental void' for the people of Rotterdam. The old center had no place in the future, where the physical density called for 'urban expansion' and the ugliness necessitated 'urban beautification' (Wentholt, 2011).

As the functions were seperated and went from a place of residence to a place of work, the center became literally drained. The neglection and changing of social structure of the city has contributed to the diminished expressive power of the Stadsdriehoek, and a lack of 'general interest' made it hard to shape the mental and cultural layer. This was also due to the new form the city took, as the center was seen as an hole within a sea of houses and neigborhoods. The historical center was no longer even part of the geographical center amidst the large agglomeration.

#### **Narratives**

Captured by R. Jacobsen in 1951 (Wentholt, 2011), the former teacher described the modest role the city center played in the eyes of the Rotterdammers. He mentioned: "It is as if lost amid the sea of houses that has grown around it. It also played hardly any role in the imagination of the majority of Rotterdammers anymore. They no longer saw the complex called Rotterdam from the old city triangle."

"Als ik hier niet werkte, zou ik niet weten wat ik hier moest zoeken. Maar ik zal altijd blijven."

"If I didn't work here, I wouldn't know what I would be doing here. But I will always stay."

"Het individu kan zich niet meer persoonlijk aan zijn stadsdecor relateren. Duizend maal hetzelfde raam is een onvatbaar iets."

"The individual can no longer personally relate to their urban surroundings. A thousand times the same window is something intangible."

\_quotes (Wentholt, 2011)

# "When it happened [the reconstruction], we thought in our innocence: the city will come back."

Qoute from: (Wentholt, 2011, p.23)



Collage as impression of how the reconstruction happened and was experienced. The men behind the drawing table, the workers doing the heavy work and the reaction of people being presented with the plan.

"When it happened [the reconstruction], we thought in oissatifaction our innounce: "If I didn't work here, I wouldn't know what I would be THE doing here. But I will always stay. CITY dissatisfaction WILL COME radical BACK. renewal emptiness, empty open spaces, Lossed baldness, in an im. inhospitability immense flatulence unban Maple Liberalism allomeans MENTAL outturcless EMPTIVELL "The individual can no longe- personnal A constant urge to to their urban surroundings. A thousand radically time the same window is something implove intangible." the antic, a inevitable, incurable aversion that is fed Willing and

Narratives of the Stadsdriehoek after the reconstruction. The narratives of the inhabitants of Rotterdam in the center (Wentholt, 2011).

a place that dares to innovate. Rotterdam is not a city for gentle people ino nonsense, just work! Manhattan next to the There are no foreigners, only A REAL CIT, Rolledammers Modern ] A trendy and district diverse & multicultural beautification with many shops Reconstruction everything is new ranother highbuilding 1 gentrification 2 fore? not afraid of new

Narratives of the Stadsdriehoek now. The narratives of the inhabitants of Rotterdam now (Hamidi, 2024).

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"There is a continual urge to radically improve the center, to let go of the existing and make way for the new; an inevitable, incurable aversion fed by the real or perceived mediocrity of the existing."

Wentholt, 2011)

"Te Rotterdam ben ik geboren onder de adem van de Maas. En liep ik, met mijn eigen stilte temidden van het straatgeraas." (Prins, 1946)

# Narratives about the reconstruction of the Stadsdriehoek

The reconstruction following the 1940 bombing was driven by modernization and functionality visible in the urban landscape through efficient flows of traffic and separation of functions. However, this left many residents with a sense of alienation. In the book of Wentholt (2011) the Stadsdriehoek is described as an 'invisible' city center, no longer meaningful or recognizable. Further, other residents mentioned in the book recall the disconnection of seeing familiar places replaced by anonymous structures.

From a narrative perspective, this illustrates the failure to recover the memories of place. The modernist approach, in its pursuit of renewal, has rejected the value of the how the physical landscape interweaves with the social fabric as well as the mental aspects. This rupture in these layers of the urban landscape created narratives of loss, nostalgia and disorientation of the reconstructed center. These narratives continue to be present in open spaces and infrastructural corridors of the Stadsdriehoek. These narratives can be considered collective, since people have a similar narrative about the same situation, creating a sense of collectiveness.

# Narratives about Rotterdam and the Stadsdriehoek now

Today, the mental landscape of the Stadsdriehoek is defined by contradictions. On one hand, the city positions itself as a dynamic and modern metropolis with bold architecture, efficient infrastructure, and an international identity. On the other hand, many residents still experience a certain disconnect from the center, which can be related to the continuous renewal and construction of new buildings.

In the poem (Prins, 1946), the phrase "Ik liep met mijn eigen stilte temidden van het straatgeraas" reflects a tension between individual experience and the city's urban dynamics and rhythms. The quotes from citizens show that while they feel positively towards the Stadsdriehoek, the identity is focused on architecture and commercial purposes. This reflects back to the condition Boer (2023) describes as a homogeneous environment, where the identity is polished to perfection and therefore the current identity does not reflect a layered, historical and rich dynamic of narratives. This absence of a diverse character resurrects with similar collective narratives that seems to be mostly shallow and related to the supervisual and 'new' identity of the Stadsdriehoek.

#### PERSONAL NARRATIVES

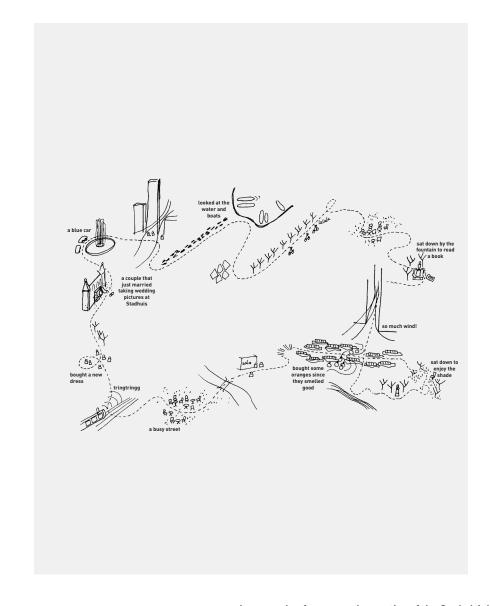
To understand the mental landscape beyond collective abstraction, local and personal narratives were explored through creative techniques including drawing and mapping. These reveal a richness of interpretation and the differentiation in daily and personal narratives. In contrast with these collective narratives, personal narratives are much more subjective and therefore the question arises which narratives do you consider? These personal narratives are everywhere and also part of the collective narratives, but to be able to draw some conclusions about the local narratives of the Stadsdriehoek an example is made (see image on the right).

Interestingly, this example can be spatially shown in a cognitive map (Lynch, 1960) showing a walk through the Stadsdriehoek based on personal encounters. Every person sees the city differently and everyday the city is different, resulting in many different memories and narratives.

To conclude the personal narratives of the Stads-driehoek as a whole, a conclusion can be drawn that different parts of the Stadsdriehoek carry different personal narrative intensities. The western part which are closer to commercial flows, carry more public narratives of movement and event.

The eastern area (mostly residential and less flow) and inner places reveal in contrast quieter and more intimate stories about often daily routines, in locations such as courtyards or water edges that offer moments of pause.

These personal narratives are not always harmonious. Some contradict, others overlap, reinforcing the idea that urban identity is always layered and sometimes contested, and is yet therefore a great base for designing.



An example of a personal narrative of the Stadsdriehoek. Walking through the Stadsdriehoek, what do you see and encounter?.

### Part 6.2 | Making narratives spatial POROUS MOVEMENTS IN THE STADSDRIEHOEK

While the Stadsdriehoek's large-scale public spaces and modernist spatial structure may appear static or impersonal, a closer reading reveals a more nuanced reality. Within these rationalized, 'smooth' environments, residents and visitors continue to engage in subtle ways of spatial appropriation which can be described as porous movements (Boer, 2023). These are small-scale, often informal interventions through which people personalize, adapt or reclaim urban spaces.

In environments described by Boer (2023) as 'smooth', the social fabric seems to be thinned and opportunities for people to attach meaning or express themselves spatially are diminished. However, it is precisely in these sanitized contexts that porosity becomes a form of resistance, as users mark their presence through informal paths or subtle modifications to their surroundings. In the Stadsdriehoek, two types of porous movements were observed and documented:

### 1 Collective porous movement

These small-scale spatial practices are shared among groups of people or communities, often without formal organization. An example of this are the desire paths, these informal shortcuts across vegetated edges reflect an intuitive movement rather than planned or forced. These paths materialize collective behavior over time and challenges the spatially designed public spaces. Another example are the collective greening efforts of removing tiles in a street or placing planter boxes. These actions are often more organized and done by neighborhood residents. These acts not only reconfigure the space physically but also layer it with social and emotional meaning. They indicate urban landscapes of collective attachment - places where adaptation was spontaneously or planned, but done with a collective effort.

#### 2 Personal porous movements

These are individual movements that emphasize personal identity into the public domain. An example is the placing of stickers in public spaces, or more focused on urban green: the placing of personal plants or furniture in public thresholds such as a bench or flowerpots near a home's edge. These individual acts are often invisible in conventional mapping, but from a place attachment perspective, they are critical to understand how people create meaning and memory in space (Lofland, 1998; Menatti et al., 2019).

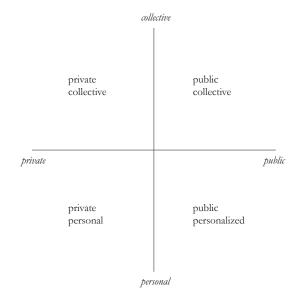






01.

**Examples of how people take hold of mark their impact on the public space in the Stadsdriehoek.** 1 Collective personalization - desire paths and 2 personal personalization - placing of own plants and green structures.

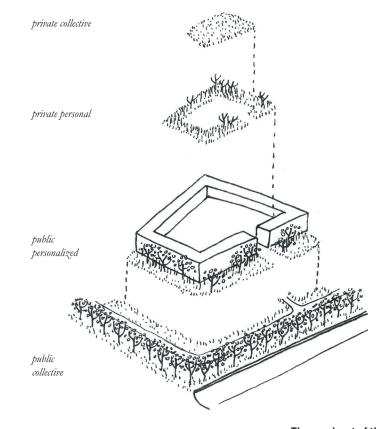


**Narrative framework.** Based on work from Scannell & Gifford [2014].

#### Different types of narratives

To support the spatial translation of narratives, a theoretical framework is developed based on a study that draws on both Scannell and Gifford's (2010) tripartite model of place attachment and Manzo's (2005) exploration of place meaning. Scannell and Gifford (2014) provide a structured lens through which the dimensions of private/public and personal/collective can be clearly formed. Their model distinguishes between the person (individual vs. collective attachment) and place (public vs. private), making it fitting to support the quadrant structure of the framework.

In addition to analyzing emotional bonds (the mental landscape), this quadrant structure also provides insight into the social and physical dimensions of place attachment. Firstly, certain public spaces may foster collective attachment both mentally and socially, while others may support private but collective interactions. Secondly, physical elements define whether a space is perceived as public or private and thus can shape how attachment forms. In this way, the framework does not only guide narrative translation into urban spaces but also becomes a design tool to assess how places are experienced, used and maintained across all three landscape layers (more about this later).



The quadrant of the narrative framework spatially expressed. The public collective space is accessible for everyone, the public personalized space is public yet made personal and therefore more private. While the private personal space is completely private, the private collective space is partly accessible and this space is collectively 'owned'.

# CONCLUDING THE MENTAL LANDSCAPE

To answer the question: how can urban green spaces aid in connecting personal and/or collective narratives to the public spaces of the Stadsdriehoek, an overview of the analysis is provided and speculations are discussed.

In the Stadsdriehoek decades of spatial erasure and continuous redevelopment have weakened the mental landscape of the city center. What remains are public spaces with limited spatial resonance, where local identity is often reduced by commercial functions and transient flows. To improve this condition, urban green spaces can act as spatial connections helping to reconnect people to place through memory, emotion and sensorial experience.

From a landscape architecture perspective, urban green spaces are not only ecological or aesthetic, they are also a narrative and emotional structure. As Corner (1999) has emphasized that landscapes which carry layered histories have sensorial and spatial patterns that can evoke past uses and invite new meanings. When designed with sensitivity to narratives, urban green spaces can reveal or reframe personal attachment and strengthen this

connection. Additionally, urban green spaces support not just collective or personal narratives by implementing needs and revealing historical layers, but also through personal attachment. According to Scannell and Gifford (2014) emotional connections to place are formed through cognitive, affective and behavioral experiences. Urban green spaces support these through evoking symbolic meaning (cognitive), stimulating lingering and reflection (affective) and support appropriation and routine (behavioral). These qualities make them particularly effective in creating meaningful relationships with space, especially in environments where such connections have been weakened or erased.

Urban green spaces also play an important role in mental health and well-being. Studies in environmental psychology show that access to green environments reduces stress, improves attention restoration and strengthens overall psychological resilience (Kaplan & Kaplan, 1989; Maas et al., 2009). In the context of the Stadsdriehoek, where many public spaces are perceived as harsh, open or impersonal; introducing narrative-based green environments can help create a more emotionally stronger city center.

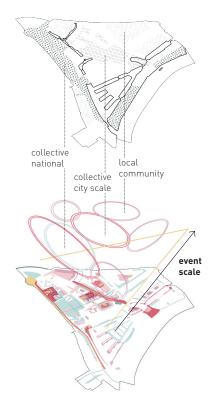
### Landscape as an agent for porosity

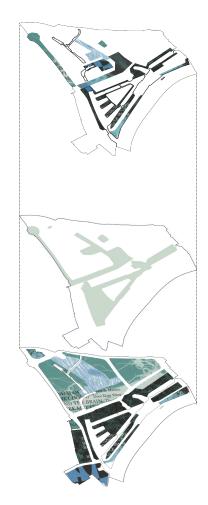
In a 'smooth city' where 'perfect' designs resists complexity, landscape architectural interventions - especially urban green space - can act as an agent of porosity. Through its material flexibility, ecological processes and openness to adaptation, landscape can offer opportunities for informal adaptations that stimulate emotional relationships to re-emerge. Rather than controlling public spaces, landscape architecture can embrace and design for an unfinished, flexible and adaptable place, the very qualities porous movements rely on. As De Wit & Bobbink (2020) suggest, landscape architecture must create room for "friction, for multiple views, for change and for the unexpected."

The emotional connection towards the landscape can be spatially expressed through the quadrant model, and therefore a guideline of which type of narratives should be included in the design is suggested in the map on the page below. Here the relation between the mental and social and physical landscape is made. Through using the physical layer as a guideline for where the historical landscape narratives are important and through the social layer the scale of the narratives are defined by using the typologies that show how the spaces are used now. This gives an indication together with the landscape layer on how to catogarize the scale of the narratives.

Thus, urban green spaces seem to have the ability to strengthen the public spaces of the Stadsdriehoek with including personal and collective narratives. The focus of these narratives are guided by the quadrant model as well as the historical layers, and from these starting guidelines site specific narratives can guide the design interventions. By supporting personal and collective memories as well as enhancing mental and emotional wellbeing, they provide the means to reweave the fragmented layers of the Stadsdriehoek into a more complex and meaningful place.

#### Grounding narratives





Conclusion drawn from the physical and social landscape. Landscape layers based on historical layers and the scale of the public spaces related to the event typology.



0 0.1 0.2 km 0.5 km N
The type of dominant narratives is related to the scale of the public

space and the historical layers.

# Chapter B | Analysis The physical, social and mental landscape

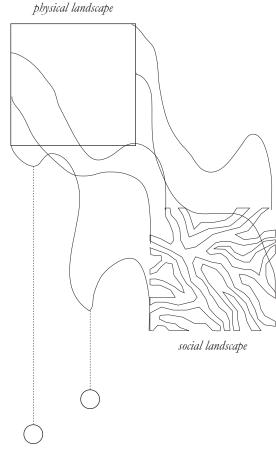
7. Concluding the analysis Interweaving the physical, social and mental landscapes

#### Part 7 | Conclusion

#### INTERWEAVING THE PHYSICAL, SOCIAL AND MENTAL LANDSCAPES

To conclude the findings of the physical, social and mental landscapes of the Stadsdriehoek, an overview of the relevant topics is made. Instead of focusing on the challenges which were revealed in the analysis, this overall conclusion is framed in concrete steps for design interventions. The understanding of where attention is needed instead of what needs to be repaired or removed is an important change of thinking moving towards the design.

Jacobs (1961) has argued that cities are not problems to be solved but rather a complex and adaptive system that requires a careful reading of its existing dynamic of strengths and weaknesses. She emphasizes on preserving the existing physical structures and social network for a stronger emotional connection instead of erasing this for 'renewal'. Framing this conclusion in a way that focuses on adding instead of removing correlates to the contemporary movement towards smoothification described in the first chapter. The need for complexity as well as shifting the focus to a lived, layered landscape instead of trying to perfect the urban environment is essential for the attachment between people and place.



mental landscape

- Reconnection with the Rotte and Maas through **Physical** Heritage Cultural spatial legibility - Highlighting historical traces and revitalizing lost heritage lines and elements - Making the Stadsdriehoek experiencable and Spatial readable with green structures - Preserving parts of the spatial heritage of the current identity - Reducing dominant infrastructure through slowing down traffic

Public spaces - Enclosing of some open and large public spaces Social Character through green elements

Connection

Diversity

- Reducing the influence of disturbances for comfortable public spaces - Emphasizing and connecting the network of

smaller public spaces

- Diversifying of spaces throughout the Stadsdriehoek for different uses and activities

- Reinforcing differentiation of local and city-scale

identity through public spaces

The combined analysis of the physical and social reveals a diverse urban environment, where the spatial structure and the patterns of use are interconnected. Through the lens of the physical landscape, the Stadsdriehoek is marked by spatially separated zones, infrastructural corridors, lost historical layers and fragmented urban green spaces. These environments shape the spatial legibility and experiential conditions of the city center. Through the social landscape of the Stadsdriehoek, these spatial qualities of the public spaces accommodate certain activities and uses, from transient landscapes where people pass by to residential areas where the public areas function as social or rest landscapes.

To understand how these layers interweave with the mental landscape, an additional view on the urban landscape is required, one that does not focus only on form or function alone but on memory, perception and experience. The mental layer was made visible through a combination of narrative mapping, quotes and a site-specific analysis of informal patterns described as porous movements. These methods revealed where emotional attachments, personal experiences and symbolic meaning still persist, giving meaning to the contemporary urban fabric.

Although the mental landscape often operates at a smaller and frequently more personal scale, it is not detached from the physical and social layers, but actually depends on them. As Boer (2023) argues, the conditions of the 'smooth city' suppresses complexity, spontaneity and therefore narrative depth. As mentioned before, when there is space for porous interventions - such as desire paths or informal planting - spatial situations are created where mental connections can materialize through the social and physical fabric.

While the social and physical landscape design interventions may operate at the scale of the city, mental interventions are visible in the micro-scale of moments and personal patterns or collective memory. Consequently, they influence (and are influenced by) the larger spatial and social systems. Therefore, the mental landscape becomes a thread that weaves through and connects the three layers, ensuring that the design not only responds to the site's form and use, but also to its narratives.

These findings imply that design interventions should not be solely focused on spatial form or use. Instead, the mental layer enquires narrative-focused interventions that aim for public spaces to implement personalization, interpretation and adaptation. As Scannell & Gifford (2010) and Corner (1999) argue, emotional connection between people and place are created through personal and social interactions over time and urban green

# physical & social landscape narratives collective

mental landscape

narratives

#### Mental

Narratives

- Interpretation of local and/or collective narratives as a base for the design

Social - Space for the unplanned and spontaneous

> - Minimalistic design interventions that stimulate users to claim the site

- Temporality and flexibility by adaptable interventions

Physical - Soft borders and hybrid spaces

> - Space for spontaneous vegetation and ecological processes

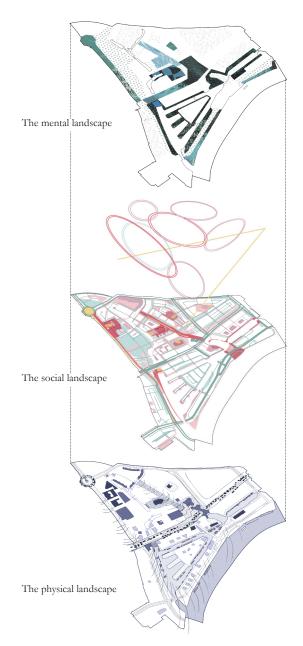
- Re-use and reinterpretation of the existing landscape

spaces are able to create an adaptable and fitting environment for these interactions.

#### Towards a vision

Ultimately, the integration of the physical, social, and mental layers - conceptualized in this project as attachment landscapes - offers a layered foundation for reconnecting people with place. Each layer contributes differently: the physical landscape provides the spatial and historical framework; the social landscape stimulates this framework through diversifying use and activity and therefore public life; and the mental landscape embeds it with meaning, experiential and emotional depth. When addressed together, these layers form a resilient and adaptable green structure that not only improves spatial quality but also stimulates a stronger social cohesion. In this way, designing with urban green spaces for attachment is not simply about aesthetics or regreening but it becomes a interconnected place: one that re-establishes connections between people and the environments they inhabit and between individuals and the collective urban identity they share.

The three analysis layers related to each other. Each layer consists of concluding findings of the analysis.



### Chapter C | Design projection

#### A new narrative

8.0 Towards a design brief A narrative project

8.1 Design as an evolving narrative A new way of designing cities

8.2 Rewriting the city A conceptual vision The Stadsdriehoek in three layers

8.3 Translating into a design Translating the theoretical framework Two opposite public spaces Atlassing urban experiences

8.4 Design projection
Approaching the public space
Connecting in public collective space
Connecting in personalized public space

#### Part 8.0 | Towards a design brief A NARRATIVE PROJECT

This part firstly explores how the main research question can be answered: What can urban green spaces contribute to enhancing public spaces as connectors to the social fabric in the Stadsdriehoek of Rotterdam?

The proposed design principles demonstrate that the answer does not respond to a single gesture, but lays in a layered and relational approach. Urban green spaces should not mainly function as aesthetic improvements or for ecological purposes, but as spatial connectors that are capable of reconnecting fragmented landscapes, reshape public life and restore narrative meaning. This is expressed through three guiding design strategies that align with the three layers of the place attachment framework:

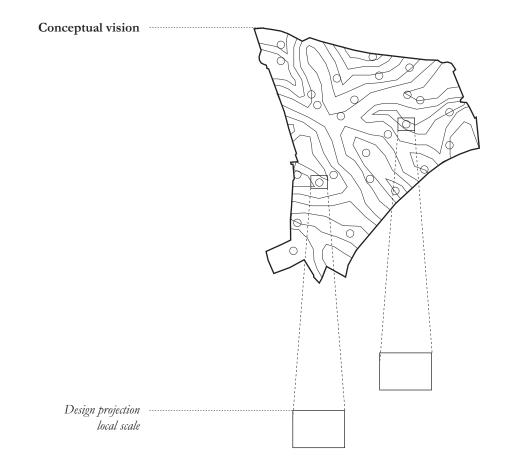
For the physical layer, a conceptual vision should be introduced that restores spatial legibility, reconnects lost historical traces and provides spatial rhythm through green design interventions. The green structures can support continuity while also framing movement and defining atmosphere.

Next, for the social layer the public spaces should be partly designed for the people that use the specific space and are already there, and partly for new uses and people. The social conditions should be considered (scale, frequency of use and type of interactions) and the public space should be capable of adapting to diverse uses so residents and/or visitors are more inclined to stay and gather. This reflects the different types of use and activity identified in the analysis and responds to the kind of publicness the space should provide.

Lastly, the mental layer should be addressed through the integration of narratives and shared memory and history. On the large scale the narratives are guided by historical landscape layers and through the public/private and collective/personal spatial conditions. On a small scale these guidelines are implemented through design principles based on narratives that allow for site specific conditions that stimulate personal and/or collective narratives, informed by the atlassing of urban experiences.

These three layers interweave together and form the base of the design projection. The proposed interventions do not aim for fixed solutions but create conditions for layered attachment, enabling the public space to become a lived and socially meaningful part of the Stadsdriehoek.

Thus, the aim of this graduation project is to reimagine the Stadsdriehoek as a layered and living



landscape where urban green spaces will act as approach to reconnect people with their surrounding social environment. The project uses urban green spaces as a design tool to strengthen place attachment through the repair of historical continuity (physical), enhancement of the social fabric (social), and integration of collective and local narratives (mental).

This design projection will be developed at two scales: the territorial (Stadsdriehoek as a whole) and the local (zoom-in locations). At the territorial scale, the relationship between the three aspects of place attachment is explored through a conceptual vision. This is aimed at exploring how urban green spaces can repair the spatial legibility and historical layers (physical), diversify the use and activities (social) with the additional layer of site-specific narratives (mental). This vision addresses the challenges of urban smoothification by reintroducing spatial complexity and legibility.

This conceptual vision forms a layered framework of the Stadsdriehoek in which a choice for the zoom-in locations is made to illustrate possible design interventions fitting within this vision. At the local scale, two contrasting zoom-in locations are developed: one reflecting the collective, city-scale narrative of the Stadsdriehoek's identity; and the other focusing on every day, neighborhood-spe-

cific experiences. Through narrative-based design projections, these sites demonstrate how urban green spaces can reflect both individual and shared memories and become places of ownership, expression, and belonging.

The goal is to illustrate how porous, flexible and narrative-focused designs can reposition urban green spaces as both physical interventions and socio-cultural entities in the Stadsdriehoek. Ultimately, this project aims to challenge the development of public space to optimized places and instead tries to reclaim it as a dynamic urban landscape shaped by - and shaping - place attachment.

## Part 8.1 | Design as an evolving narrative A NEW WAY OF DESIGNING IN CITIES

Rethinking our relationship with landscape in the city, and how we can enable landscape designs to create flexible and porous public spaces.

It is about designing of beginnings, not endings (Allen, 1999). Design principle of leaving things unfinished on multiple scales. This can be done by taking a half-step - proposed by Hill (2021) so people have the space to take initiative. These design interventions are not the end, but the start. Radical change can be difficult to take in one step, but if these changes happen over time, at the pace of its residents and users, radical change becomes comfortable and fitted within its context (Hill, 2021).

"...essentially, the whole point of cities is culture, not efficiency—at least 'culture' in the multiple senses that Raymond Williams described: processes of intellectual, spiritual and aesthetic development; particular ways of life, or patterns of living; and practices of cultural production, embodying and articulating what we stand for as society."

(Hill, 2021, Working with Brian Eno on design principles for streets, para. 3)

#### Part 8.2 | Rewriting the city

#### A CONCEPTUAL VISION

In order to redesign the landscape of the Stadsdriehoek a different representation is needed. To reimagine a stronger connection between the social fabric, the spatial landscape and the narratives of the Stadsdriehoek, a reconfiguration of the legend of its map is needed. Maps often show only horizontal occupies, while they are actually interwoven or can change throughout time. This richness and complexity of the urban landscape gets often lost in translation through systematic analysis like the layer approach (De Block et al., 2019). To represent the urban landscape as the complex layers it exists of, this new vision for the Stadsdriehoek makes use of a layered legend, which utilizes the three layers of place attachment. The first physical layer acts as a spatial and historical framework for the second social layer - which showcases the overlapping diversification of the social landscape typologies proposed in part 4. The third mental layer represents the emotional connection as a spatial translation of narratives.

Since these layers are interconnected, these connections are also shown in the legend to explain the relationship between these layers and design concepts. The design principles of the conclusion in the analysis is also shown.

#### A new connectivity - conceptual vision

#### Frame

physical elements

- water
- tree lines
- buildings

#### **Typologies**

#### Public space as interwoven fabric

#### staying

- rest landscape
- cultural landscape
- social landscape

#### moving

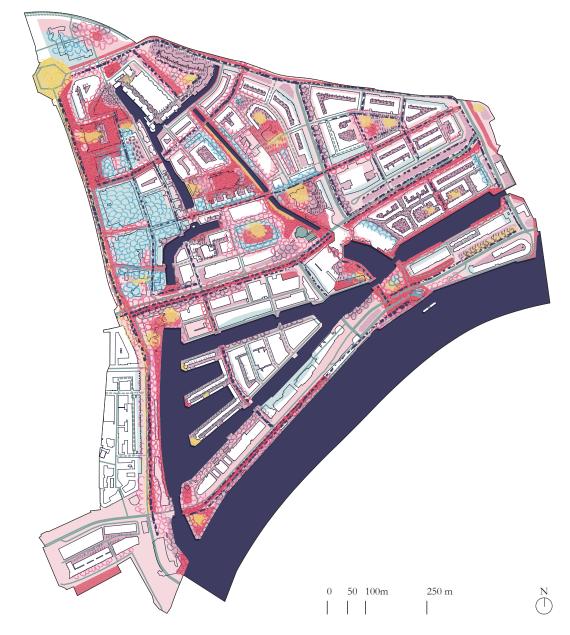
- transient landscape
  - speed of movement
  - == fast (car)
  - medium (car, bike)
  - --- slow (bike, walk)
- commercial landscape

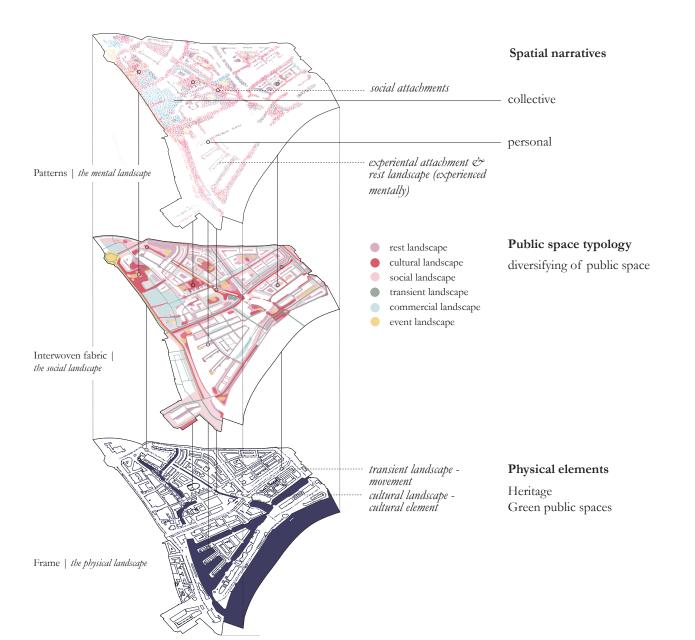
#### visiting

event landscape

#### Patterns

- personal private spaces
- personalized public spaces
- collective private spaces
- © collective public spaces



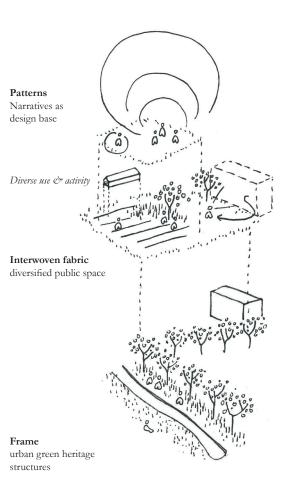


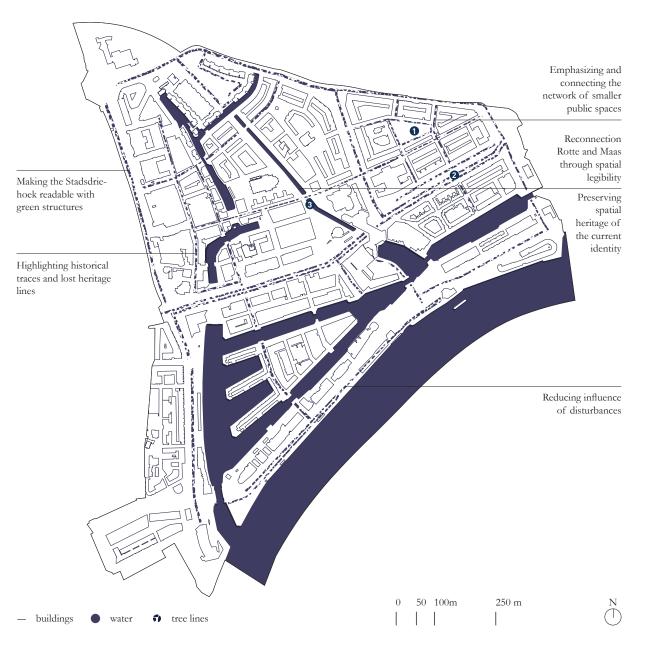
## THE STADSDRIEHOEK IN THREE LAYERS

As mentioned before, the conceptual vision serves as a layered map to emphasize the interconnected conditions of the urban landscape.

The frame responds to the disconnection of the historical layers and enhances the legibility of the Stadsdriehoek by the use of urban green spaces as tree lines. The typologies act as an interwoven fabric within this physical frame. With the use of urban green spaces, the social fabric of the public spaces is diversified and overlap. Implementing the mental connection, a distinction in personal and collective narratives are made to use as base for the design of the urban green spaces (explained further on) and act as unique patterns for each public space.

These layers lay the base for unique and specific design interventions that responds to the specific site conditions in each public space. This creates a new connectivity between people and place through the revitalization of personal and collective layers of the landscape.





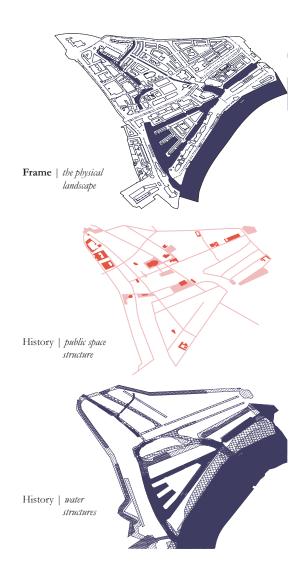
#### Frame | the physical landscape

The aim of the frame is not to introduce a new visual language but to emphasize the historical traces of the lost landscape and the legibility of the existing landscape.

The aim of the frame is to reconnect the Stadsdriehoek with its historical layers, improving the legibility and improving the quality of public green spaces. To reestablish the connection of people and the urban landscape the spatial experience of the landscape is improved. Urban green spaces can aid in this by creating legible structures using tree lines to support emotional engagement. This is done through three concepts - leading, enclosing and framing - each with emotionally engaging characteristics. Firstly, leading creates a sense of flow and continuity. This can stimulate legible connections and trace historical lines. Second, the principle of enclosing creates the feeling of closure and security as well as a sense of privacy. Lastly, framing can cause a feeling of proximity and visually belonging together creating a calm and ordered experience (Kaplan & Kaplan, 1989).

Additionally, the choice of design interventions is based on site specific conditions and therefore relate to the existing landscape.





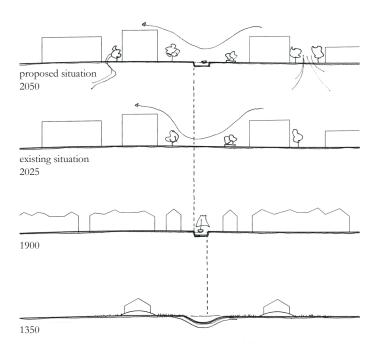
#### Historical layers

The historical layers of the Stadsdriehoek - including lost watercourses, pre-war green public spaces and shifted street grids - are retranslated into the existing landscape. This is done through the implementation of turban green spaces that highlight the historical traces and reconnect the remainders of the Rotte with the Maas physically and legible.

To translate this historical landscape into the existing landscape, a design translation has te be made. This is important to preserve part of the spatial heritage to not repair but strengthen the current identity of the Stadsdriehoek.

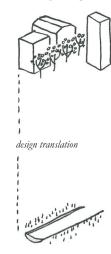
Tree lines are used to retrace erased spatial lines and create legibility while connecting the narratives of the landscape. These interventions do not aim to reconstruct the past but rather to relate the present with historical continuity and preserving traces without direct translation. Hereby, the urban landscape becomes readable and emotionally attached and create a strong frame for the public spaces of the Stadsdriehoek.

#### Sections throughout history



The section shows the same location through out time, showing that the physical landscape is always changing. A proposed design is made that refers back to the historical layers while keeping the spatial quality of the existing landscape.

design intervention in existing landscape



historical landscape



#### Typologies

#### staying

- rest landscape
- cultural landscape

#### social landscape

- moving
- transient landscapecommercial landscape

#### visiting

event landscape

#### staying





#### moving





#### siting





spatial

social interaction

#### Interwoven fabric | the social landscape

The aim for the second layer of the conceptual map is to interweave the social landscape typologies by diversifying and overlapping. This is done through the creation of three categories, and for each category typologies will be dispersed and design aims will be explained. These categories are important to switch from programmed activity to behavioral potential, which Gehl (2010) advocates for. His theory for types of activities in public space make a distinction between necessary, optional and social activities.

#### Staying (optional)

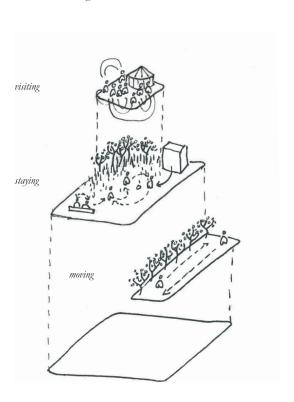
These typologies represent the public spaces that people will stay in and interact with the landscape and others the most. They are the places where people choose to stay in, and can entail activities such as sitting and reading. By this it also causes that these typologies are the main focus when diversifying public space.

#### Moving (necessary)

This category represents the necessary movement of for example going to work and in the vision these typologies represent a reduced speed of movement as well as reduced dominance of infrastructure by prioritizing slow movement.

#### Visiting (social)

These areas depict the public spaces that are most changeable for events and therefore hold greater collective value. This typology holds social value through the events by the possibility for gathering and interacting.



#### Interweaving the social fabric

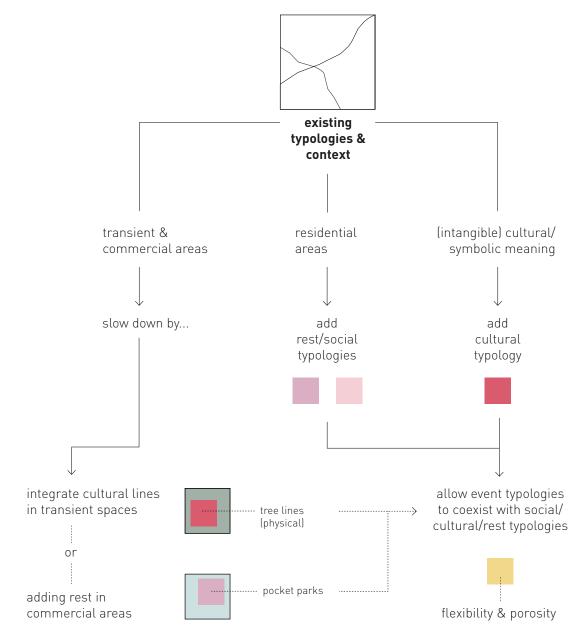
This categorization helps the interwoven social fabric of the Stadsdriehoek to emerge not from fixed programs but from designing spatial conditions that enable behavioral diversity. Designing for these transitions enhances social adaptability and everyday engagement with place. The social landscape typologies in this project - rest, social, transient, commercial, cultural and event - are shaped by spatial conditions. The physical design principles enclosing, leading, and framing influence how public space is experienced and used:

\_Enclosing supports rest and social landscapes by creating intimacy, comfort and opportunities for interaction

\_Leading elements reinforce transient and commercial spaces by guiding flow and encouraging short-term use

\_Framing gives identity and legibility to cultural and event spaces, supporting collective gatherings and historical meaning

This physical frame allows the social landscape to emerge from spatial form, ensuring that typologies are not imposed but relate to how space is shaped and lived. To understand the placement of the typologies, the factors and steps towards diversification is shown on the right.





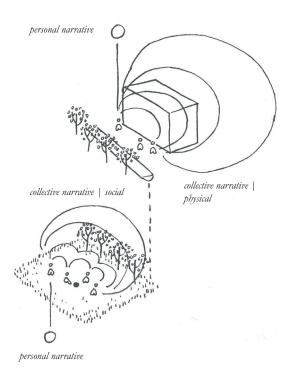
#### Patterns | the mental landscape

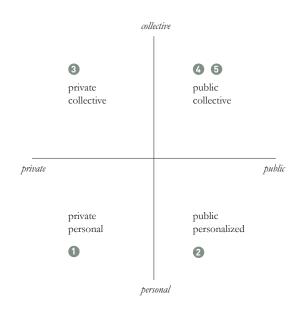
The mental landscape addresses how places are emotionally understood through personal memories or collective identity. These attachments influence how people value and care for public spaces over time. Designing for the mental landscape means asking: Whose memory and narrative is embedded in this place?

In residential or intimate spaces design can reflect more personal narratives, offering room for daily interactions with communities. In more public or symbolic locations, collective meaning should take precedence so that through spatial or historical references these narratives can be expressed.

An important notice in this spatial translation is negotiating the edge between private memory and public expression. Here, design elements such as soft boundaries and adaptable features allow for layered uses and meanings to coexist.

To maintain these patterns over time, spaces must not only be designed for narratives but also cared for. Collective narratives are sustained through shared use and visibility, while personal narratives thrive in spaces that feel intimate, inviting, and open to interpretation.





#### Different types of maintenance

As explained before a spatial translation of narratives is developed into a theoretical framework based on a study that draws on both Scannell and Gifford's (2010) tripartite model of place attachment and Manzo's (2005) exploration of place meaning.

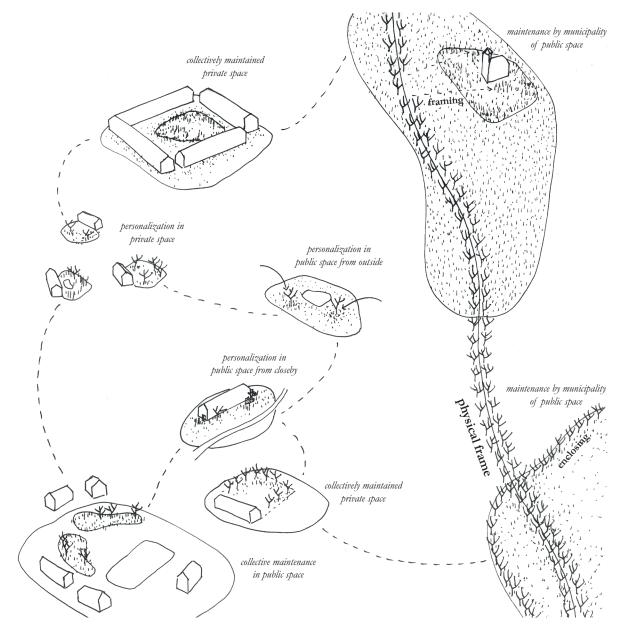
The differentiation in private/public and in collective/personal is not only developed to define which type of narrative should be focused on in each space, but also to determine who maintainces each private or public space. On the right, the images shows different type of spaces which each are maintained in different ways.

- 1 | personalization in private space
- 2 | personalization in public space
- 3 | collectively maintained private space
- 4 | collective maintenance in public space
- 5 | maintenance of municipality of public space

#### Maintenance in public/private spaces.

A differentiation is made between different types of spaces based on which narrative and ownership is considered. Inspired by Hartmeyer (2023).

Narrative framework. Based on work from Scannell & Gifford (2010).

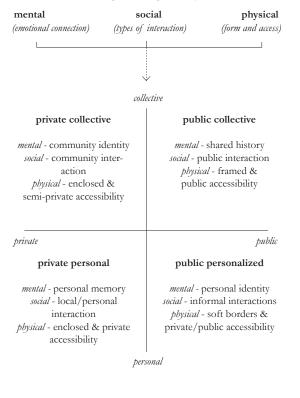


# Chapter 8.3 | Design projection TRANSLATING THE THEORETICAL FRAMEWORK

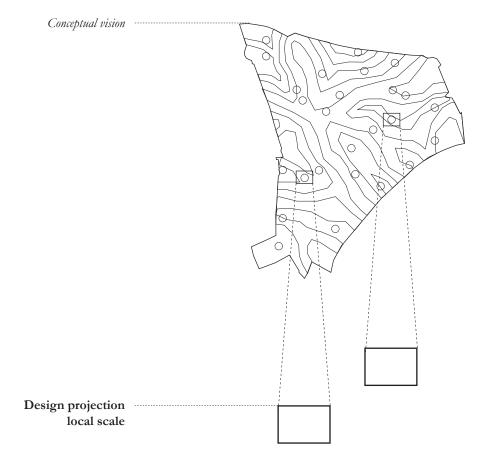
The theoretical framework based on Scannell & Gifford (2010) forms the foundation for selecting and analyzing the zoom-in locations. The theoretical framework is translated into a framework for designing. This framework makes a distinguish between personal/collective and private/public and is does not only relate to the emotional attachment (mental), but also to types of interaction (social) and spatial form and accessibility (physical). This way it allows for a multi-dimensional reading of how spaces are experienced, used and expressed across all three landscape layers.

So in addition to analyzing emotional bonds (the mental landscape), this quadrant structure also provides insight into the social and physical dimensions of place attachment. Firstly, certain public spaces may foster collective attachment both mentally and socially, while others may support private but collective interactions. Secondly, physical elements define whether a space is perceived as public or private and thus can shape how attachment forms. In this way, the framework does not only guide narrative translation into urban spaces but also becomes a design tool to assess how places are experienced, used and maintained across all

#### PLACE ATTACHMENT



Theoretical framework for the three landscape layers of place attachment. Based on work from Scannell & Gifford [2010].



three landscape layers. This maintenance has been explained in the previous part of the conceptual vision and is further developed in the case studies. To fully understand how this theoretical framework can be translated into the Stadsdriehoek, two opposite parts of the quadrant are chosen.

#### TWO OPPOSITE LOCATIONS

As previously mentioned, the selection of zoom-in locations is chosen based on translated theoretical framework as well as on the conclusions drawn from the analysis of the Stadsdriehoek. Each site embodies their own unique conditions and narratives, reflecting different relationships with the urban fabric and the social network of the city.

Rather than selecting design sites based solely on spatial or social opportunity, this model enables a conceptually supported approach, choosing two zoom-in locations that represent opposite ends of the theoretical frame, allowing for diverse and complementary design strategies to be explored. Each site reflects an opposite position within the framework, highlighting different conditions of accessibility, identity and use:

The first zoom-in location aligns with public-collective spaces and is located next to the water's edge and is closely surrounded by semi-public institutions. It is a highly accessible and symbolically charged space so therefore the location is well suited for revealing shared history, strengthening public identity and reinforcing the collective memory through landscape design. This role of this location within the conceptual vision is to act as a

- buildings surrounding the chosen locations
- chosen public spaces
- municipality Rotterdam future projects
- buildings
- O water



0 0.2 0.5 km 1 km N

The zoom-in locations in the context of the Stadsdriehoek.

visible connection between the urban identity and its history.

The second zoom-in location corresponds more closely to public personal or private collective spaces since it is embedded in a residential area. It is spatially enclosed and socially more local, offering the opportunity to work with personal memory, neighborhood identity and community forms of social interaction. Here the design focuses on restoring spatial cohesion and enriching public life by supporting micro-interactions, informal use and personal adaptation.

Additionally, these two locations also align with the typology section of the Stadsdriehoek: the first location is associated with more nationally oriented events, while the second focuses on local events for the neighborhood community. Together, they offer complementary approaches through which an initial investigation and design interventions for a layered urban landscape are developed. Each location plays a distinct but opposite role within the conceptual vision, which aims to reconnect the social fabric to the urban landscape of the Stadsdriehoek.

At the same time, these two sites serve as locations where the theoretical framework based on Scannell & Gifford's (2010) will be applied conceptually.

This model serves not just an analytical lens, but a design tool by guiding how interventions is shaped not only by programmatic conditions but also by the relational dynamics of who uses the space, how they interact and what emotional or historical meanings they attach to it.

By designing from collective, public-oriented experiences in public-collective spaces to personal and neighborhood-based attachments in more localized environments adds to the conceptual vision that proposes spatial interventions that are conceptual and meant to be applied to site specific conditions. This will diversify the different types of place attachment across the urban fabric of the Stadsdriehoek.

The map on the the previous page illustrates the municipality's future redevelopment projects, which primarily focuses on the regreening of public spaces. Since these designated areas are already going to be redesigned, alternative locations were selected to ensure that the proposed designs are both relevant and distinctive.

#### ATLASSING URBAN EXPERIENCES

To understand the site specific conditions of the chosen locations, it is important to represent the zoom-in areas in line with the theoretical framework on page 168, representing the mental, social and physical layers into types of public space.

Firstly, a quick overview of the history of the site is made to understand to understand its current form. In addition to this, an objective drawing is made from a bird's eye perspective to show the context of the physical environment in an abstract way, representing the existing physical landscape. Secondly, through interactive walking and by spending time walking around, the area is photographed and analyzed in words by direct engagement (Lévesque, 2017). This represents the mental layers of the landscape by showing the collective or personal experience and represents the identity of the location. Lastly, the type of social interaction is represented in a way that fits the location and is conceptually illustrated.

These three steps create a base for the understanding of dynamics in the site while relating them to the proposed theoretical framework, and are therefore used as foundation for the proposed design interventions later on.

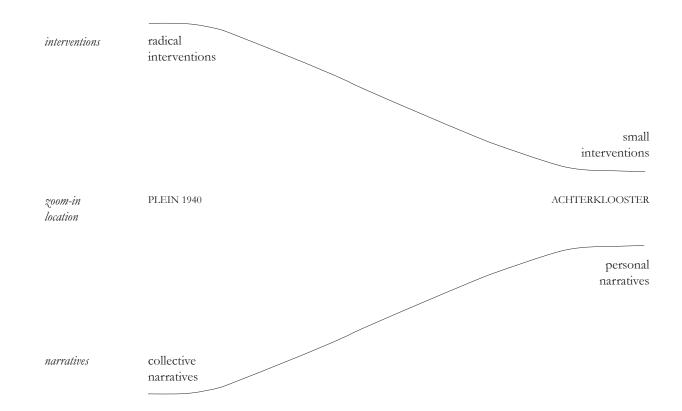
## Chapter 8.4 | Design projection APPROACHING THE PUBLIC SPACE

The zoom-in designs present different patial interventions, each tailored to the specific physical, social, and narrative context of its location within the Stadsdriehoek. Rather than applying a single design language across both sites, each intervention responds to the specific context of local narratives, spatial conditions and forms of public life. These differences reflect the understanding that public spaces are not generic, but a living fabric that is shaped by everyday use and interaction.

All three interventions use urban green spaces as a flexible framework that supports informal adaptation and supports communities to take hold of their surrounding public space. This approach acknowledges the risk of gentrification and exclusion when public spaces are overly programmed or aestheticized. Instead, the designs focus on creating conditions rather than fixed spaces: offering structure and enabling both individual and collective engagement with the site over time.

In the image on the right, the choice of type of narratives and interventions is shown. The argumentation behind the type of interventions and narratives is based on the site analysis. For Plein 1940 is the design interventions are radical, for the reason that the location is considered static and the landscape is paved and controlled, emphasizing this feeling of detachment. To change this, a more radical approach is needed to open up the closed landscape and make it open for attachment and alterations.

For the last area, the Achterklooster, the personal narratives are dominant due to the active residential community of Hoogkwartier. Since there is already a stronger place attachment the interventions will be smaller. This is also because of the personal narratives that call for more smaller design interventions, building more on the existing space. It will be a reflection of the community through smaller design interventions and types of material.



Location one | Plein 1940

#### CONNECTING IN PUBLIC COLLECTIVE SPACE

Firstly, a short historical overview is made to frame the historical relevance and spatial development through time of this location. On Plein 1940 the sculpture De Verwoeste Stad of Zadkine is located, which commemorates the bombing of Rotterdam during WWII. Each year, this space hosts the national Memorial Day ceremony on May 4th, reinforcing its significance in the collective memory of the city. Situated next to the Maritiem Museum, the square also forms part of the cultural and social infrastructure of the Stadsdriehoek. The square is located at the end of the Leuvehaven which once functioned as a central harbour and now connects the site to the maritime history of the city as an open-air museum.

Secondly, this location was explored through direct engagement and walking-based observation (Lévesque, 2017). During fieldwork on February 19th (a cold but sunny day) observations showed patterns of use that reflect both temporary engagement and spatial discomfort. Visitors tended to pause briefly and mainly to take photos of the sculpture or look at it. People working in nearby offices occasionally used the space for smoking breaks and often stood awkwardly around the statue due to exposed and windy microclimate of the square, which is amplified by the surrounding tall buildings. The overall atmosphere can be described as a sensory landscape that is shaped by weather, wind, and spatial openness creating a compelling setting to explore sensory design elements.

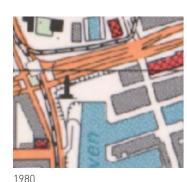
Lastly, the square represents a space of collective narrative and public memory. Since it is widely used by diverse groups such as tourists, museum visitors and city residents; its symbolism is embedded in both national identity and urban history. The spatial openness and frequent use by the public positions the square clearly within the publiccollective space of the theoretical framework. As such, it offers strong potential for design interventions that engage with collective history and public identity while also enhancing social interaction and impact through spatial framing.







2005 | Maritiem museum (since 1986)



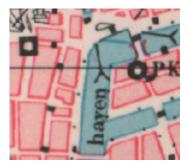


1970 | dolphinarium Dolfirodam



1965

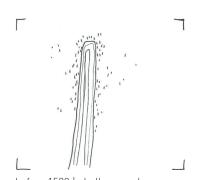




1935

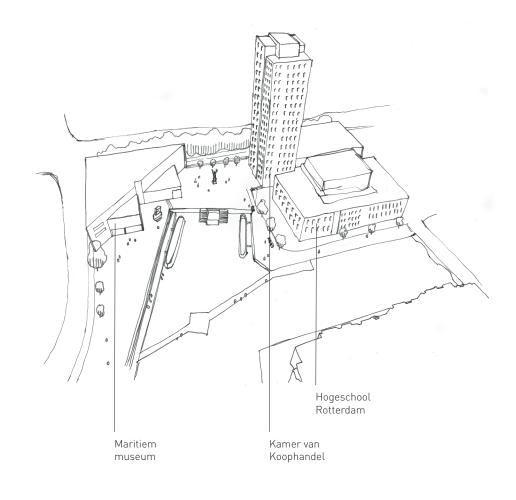


1900



before 1598 | shallow creek

#### Drawing of the physical situation Plein 1940







#### Site specific design principles

The following design principles are partly based on the multi-layered analysis of each zoom-in location, incorporating insights from the physical, social and mental landscapes. Guided by the theoretical model of place attachment, the location represents a distinct position within the personal–collective and private–public diagram resulting in fundamentally different narrative and design strategies.

At Plein 1940, the design responds to a collective narrative rooted in shared history, public symbolism and public identity. This site is positioned in the public–collective part of the diagram and relates to design interventions that emphasize shared memory and symbolic visibility.

The proposed design principles translate these layered conditions into actionable spatial strategies.

Design principles based on collective narratives for Plein 1940:

#### Historical collective narratives

\_Showing traces of the Leuvehaven to reveal lost historical layers.

\_Embedding the bombing narrative through symbolic landscape elements

\_Preserving and framing of spatial openness as heritage

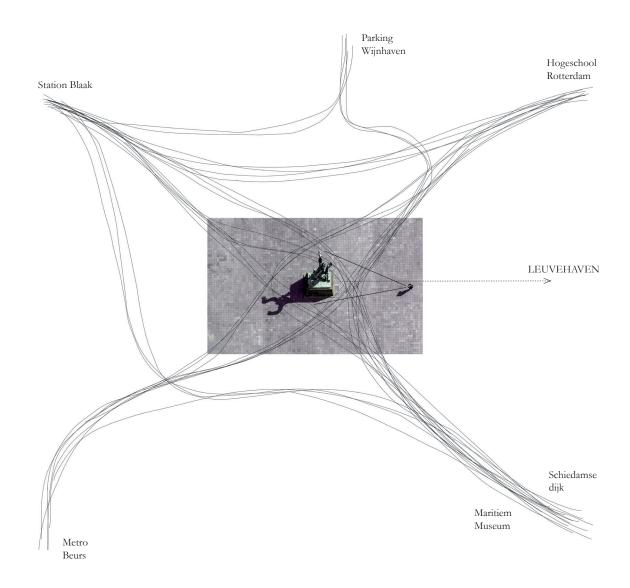
#### Public collective narratives

\_Introduce porous spatial conditions that encourages adaptation of site

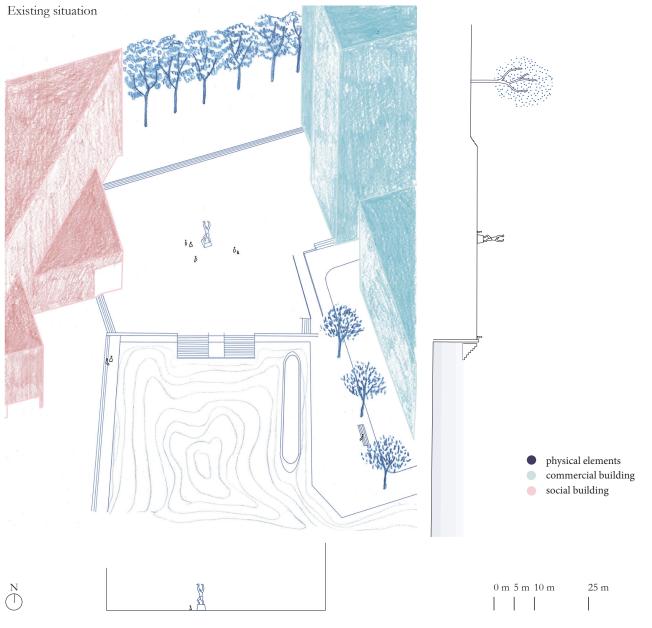
#### Spatial collective narratives

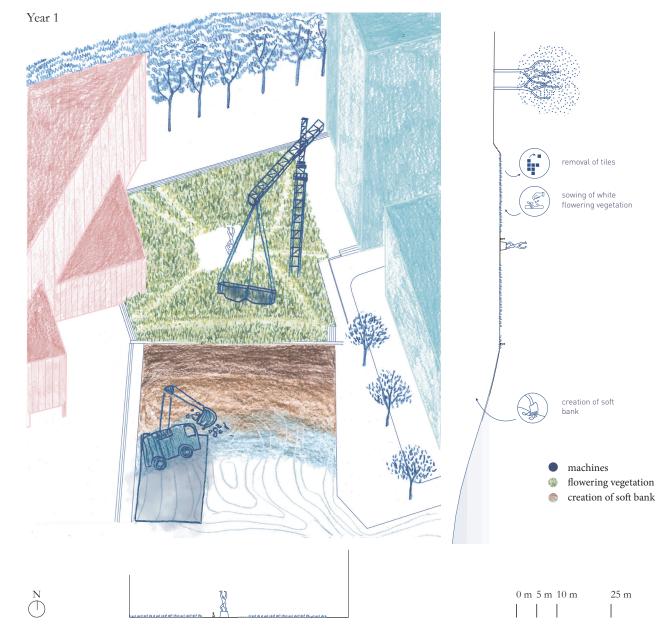
\_Use spatial conditions as sensory design elements to reinforce the character





**Social movement on Plein 1940.** Measured on wednesday 19 februari from 10:00 till 10:30, 1 degree and a little bit of sun.





# Design principles implemented (historical and public collective narratives)

#### Design concept

Through the removal of the tiles and the creation of a soft bank, the landscape is opened up and lays like a blanket on the end of the Leuvehaven. Also, due to the opening up of the square, people are able to leave their mark through the form of desire paths and other adaptation to reclaim the site.

The soft bank refers back to the history of the Leuve, which used to be a shallow creek and after that a harbour where the interaction between land and water was high, and now through the soft bank this interaction can be restored. Furthermore, the vegetation consist on the square of white flowering vegetation and on the soft bank of grasses. The white flowers are a symbol for remembering the war and therefore the square holds more symbolic meaning. The grasses emphasize the spatial conditions of the place through the sensorial character of the grasses that move with the wind. Because of the relatively low vegetation the spatial conditions are preserved and this spatial heritage is emphasized. Overall, the design creates a space that is adaptable and where vegetation and human processes shape the public space over time.

Preserving and framing of spatial openness as heritage

Embedding the bombing narrative through symbolic landscape elements

Introduce porous spatial conditions that encourages adaptation of site

Showing traces of the history of Leuvehaven

Use spatial conditions as sensory design elements to reinforce the character



Space for the unplanned and spontaneous

Minimalistic design interventions that stimulate users to claim the site

Temporality and flexibility by adaptable interventions

Space for spontaneous vegetation and ecological processes

grasses

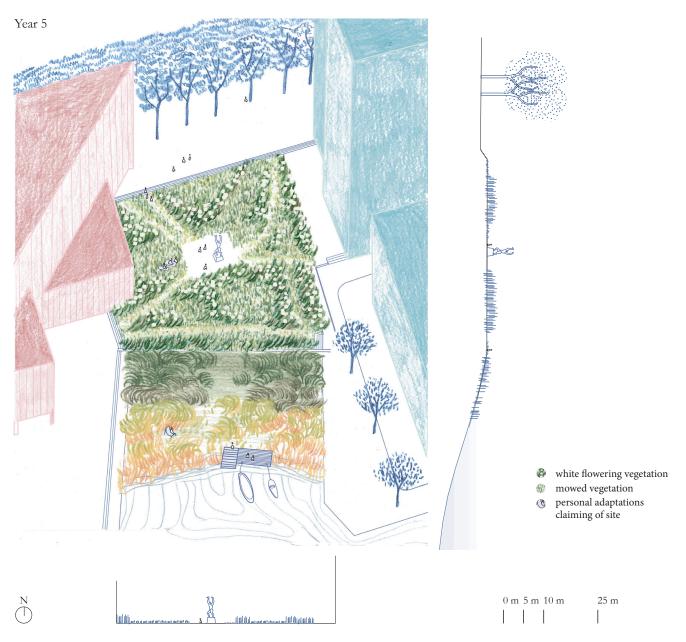
muddy vegetation

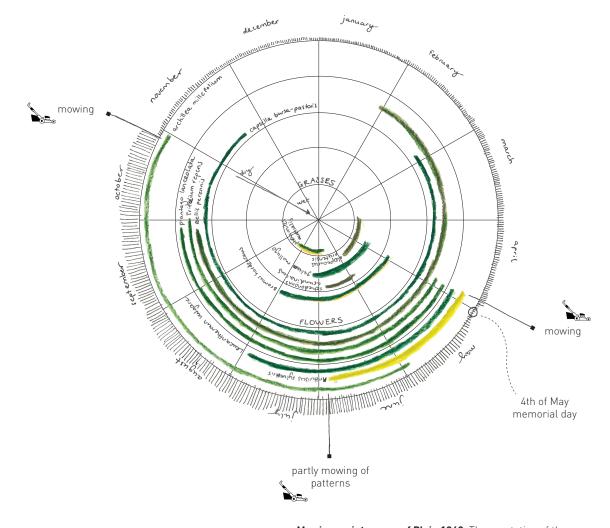




193

Every year





**Mowing maintanance of Plein 1940.** The vegetation of the square are grasses (on the soft bank) and white flowering plants (on the square).

#### Design through time

#### Year 1 (september)

The design interventions are implemented, because of the relatively large interventions machines are neccessary to create the soft bank and take out the tiles and improve the soil quality for the vegetation. The vegetation is sown and because of the movement of people over the square desire paths are propably formed where the vegetation has a harder time to grow. On the soft bank grasses are placed, and some other vegetation might arrive from the water.

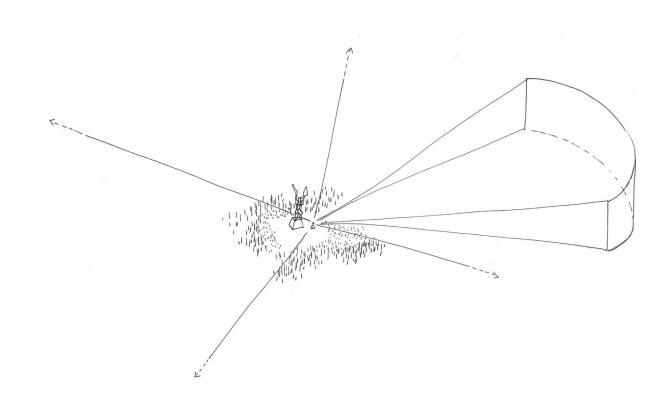
#### Every year (memorial day)

On the 4th of May the square still functions as the place to remember World War II, due to its renewed heritage layers the space holds historical value and is therefore still very suited to remember and gather. Before this day, the square will be mowed to symbolize the death of the war. The place can become muddy due to the amount of people and some repair work has to be done (which could be a collective action on the 5th of may to celebrate freedom and life). This muddy grassfield is an example of how public space does not have to be perfect, it can be a bit raw or even sometimes inconvenient to some people, it does not have to be perfect for everyone.

#### Year 5 (july)

In the beginning of every july, parts of the square and soft bank is mowed to create some spaces and paths for people to use the space and spent time there. The vegetation is developed and are in some parts quite high, creating some intimate rooms where people can feel more enclosed.

After five years some people might bring there chair there to enjoy the sun on a warm day, while others come by boat to read a book on a blanket. Some kids might play in the dirt and others just pass by looking at the white flowers blooming. This all is a possibility of how the design will look like in five years, but this is a suggestion and it might look differently. This is important, since these interventions are about designing beginnings, not endings.



**Spatial experience of Plein 1940.** The square keeps the existing spatial openness and continues to function as a viewpoint to the river Maas and the skyline of Rotterdam adding to the place's memorial meaning.

Location two | Achterklooster

## CONNECTING IN PERSONALIZED PUBLIC SPACE

Firstly, a brief historical analysis reveals the transformation of this site from a layered and historically rooted area to a post-war constructed courtyard. The name Achterklooster refers to a former monastery and orchard that once occupied the space close to this area (Seesink, 2022; Stichting Heimisj, 2022). However, after the bombing of Rotterdam in 1940 the original structure and spatial form were erased. The post-war reconstruction introduced a new residential block in which this urban green courtyard was introduced. The historical narrative of the Achterklooster is not visible in the contemporary physical landscape, yet it still conducts spatial traces through its name and enclosure.

Secondly, direct on-site observation revealed the experiential patterns of the courtyard. The space is physically enclosed by apartment buildings and surrounded with parking spaces for cars, creating a somewhat fragmented yet hard border. While the site is not underused, the dominant presence of a fenced playground limits the site's flexibility. The area is quiet and used mostly by local residents, except for during the playing hours of the daycare when the children play on the square. However,

the lack of diversity in activities and functions contrasts to the rich social network surrounding it such as bars, restaurants, daycare, companies and a community center. This condition positions the Achterklooster as a public space with potential to support local identity and personalization, especially if more layered uses are introduced.

Lastly, this location aligns closely with the public–personal or private–collective spaces of the theoretical framework. It is a public, yet socially intimate landscape that supports personal and neighborhood-level narratives rather than collective public narratives. The enclosed form of the courtyard and the proximity to homes make it ideal for exploring design interventions that foster micro-interactions, localized ownership and personal adaptation to reinforce the identity of the site as a shared yet personal place in the everyday life of the neighborhood.

**Historical overview of Achterklooster.** (Topotijdreis, , n.d.) and (Stadsarchief Rotterdam, n.d.)



2025



2005



990



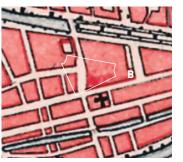
1970



1960 | reconstruction



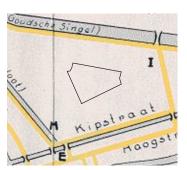
1935 | before reconstruction



1900 | Church (+) and abandoned cemetery (B)

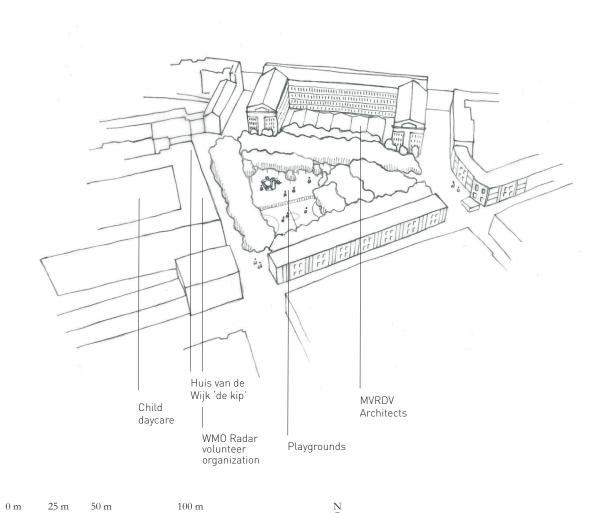


1700 | Orphanage (A) 1598-1940 en cemetery (B) since 1635



1360 | I is Carmelitessenmonestary

#### Drawing of current situation Achterklooster





Collage impression of Achterklooster.

#### Site specific design principles

The following design principles are partly based on the multi-layered analysis of each zoom-in location, incorporating insights from the physical, social and mental landscapes. Guided by the theoretical model of place attachment, the location represents a distinct position within the personal—collective and private—public diagram resulting in fundamentally different narrative and design strategies.

Achterklooster is shaped by personal and neighborhood-based narratives relating to everyday life and informal use. Located closer to the public–personal / private–collective parts of the diagram, it invites designs that support personalization, meaningful interactions and small-scale adaptations.

Design principles based on personal narratives for the Achterklooster:

#### Local personal narratives

\_Enhancing the green character by regreening the site

\_Creating a better environment for the city rabbits \_Introduce a circular walking path to provide a walkable site

\_Diversify play functions with playing elements for infants

\_Increase the amount of open grass spaces and allow more light to infiltrate

#### Neighborhood personal narratives

\_Strengthen the community by emphasizing the relationship spatially with the social institutions \_Support spontaneous use with open lawns and multipurpose surfaces

**PETER** Since 2019, Peter has been participating in walks organized three days a week from the community center 'De Kip'. "At the moment, there are usually four of us. Everyone is welcome!"

DAPHNE "On my days off, I often take Teun to the playground. Unfortunately, there's no baby swing he can sit in with his legs through." Daphne only hesitates to go on Wednesday afternoons. "That's when a lot of older kids are playing, and the atmosphere is more aggressive." **IRENE** One of the first residents of the Ma-

ritiemhof. "I enjoy waving at the children in the daycare downstairs." **KELLY** "I think they've just claimed that little patch of grass for themselves. Isn't that great? I finally saw the rabbits recently! During the lockdown, I started planting façade gardens. My ambition is to actually make the neighborhood greener." KARSTEN "I

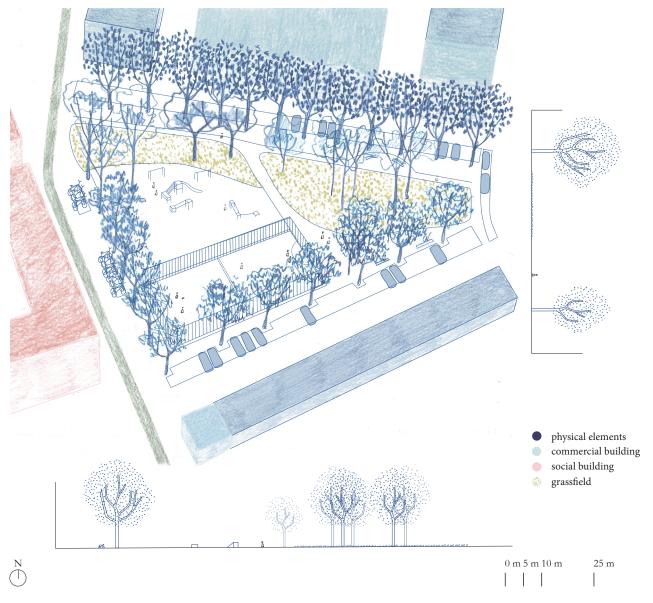
think the ideas for regreening are really cool. I'm from Antwerp, but I've definitely picked up the directness of the people in Rotterdam." **THOMAS** "In the summer, you can also find me on the field in the park Achterklooster. Just kicking a ball around with the kids there." **RENÉ** "A few more parking spots can be removed." **MARIEKE** 

As far as she's concerned, the little park at the Achterklooster could become a sunny and pleasant grassy area where the neighborhood can relax in the summer. ROOS AND BER "It has the potential to become an open space where everyone comes together. A place where we actually sit down instead of just walking through."

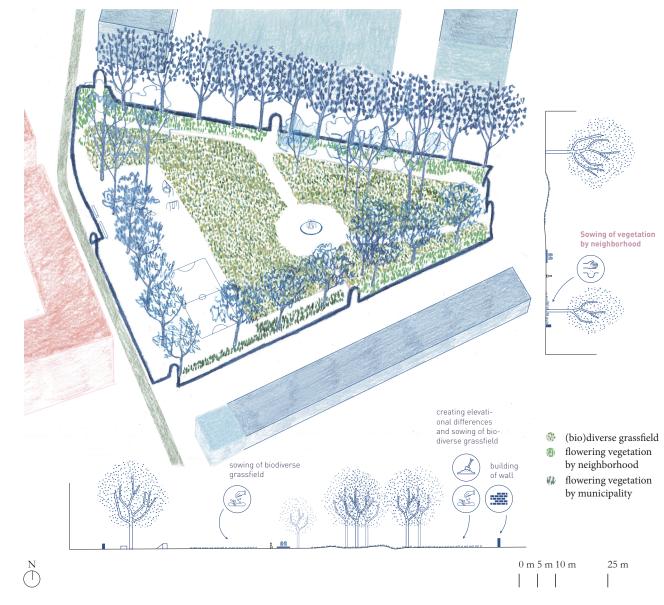
**NORA** "The little park near the Kiphof at the Achterklooster is still too dark."

Local narratives of the residents around the park Achterklooster. The narratives are about ideas and stories for the park. Stories and image [Werkgroep communicatie Hoogkwartier, n.d.]

#### Existing situation



Year 1



#### Design principles implemented (local and neighborhood personal narratives)

#### Design concept

This design is like a houseroom and monastary garden, it is about detailed vegetation and small interventions. Personal and community narratives are the base for the design, and the garden is a space where the community takes care of and therefore the design is eventually speculative.

The garden is enclosed by a low wall, ensuring safety while creating a border to establish a more private experience when enterting. This wall together with the fountain and path system refer back to its historical past of a monestary garden. The monastery garden can be seen as a reflection of the community that surrounds it, embodying its values and way of life (Clément, 1997).

Multiple design interventions are based on the personal narratives creating an environment specifically for the people living around the garden, yet they are partly adaptable and can be used for multiple purposes. Around the edge of the wall, there is space for the implementation of vegetation by the neighborhood. Overall, the design creates a space that is flexible and where human interventions shape the public space over time.

Introduce a circular walking path

Creating a better environment for the city rabbits

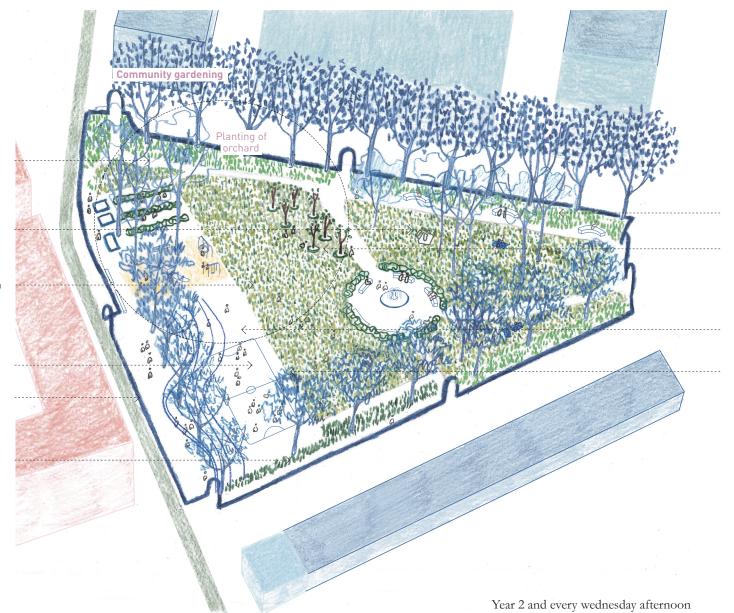
Increase the amount of open grass spaces and allow more light to infiltrate

Diversify play functions

Strengthen the community by emphasizing the relationship spatially with the social institutions

Enhancing the green character by regreening the site

Support spontaneous use with open lawns and multipurpose surfaces



Design principles implemented (mental landscape)

Space for spontaneous vegetation and ecological processes

Space for the unplanned and spontaneous

Re-use and reinterpretation of the existing landscape

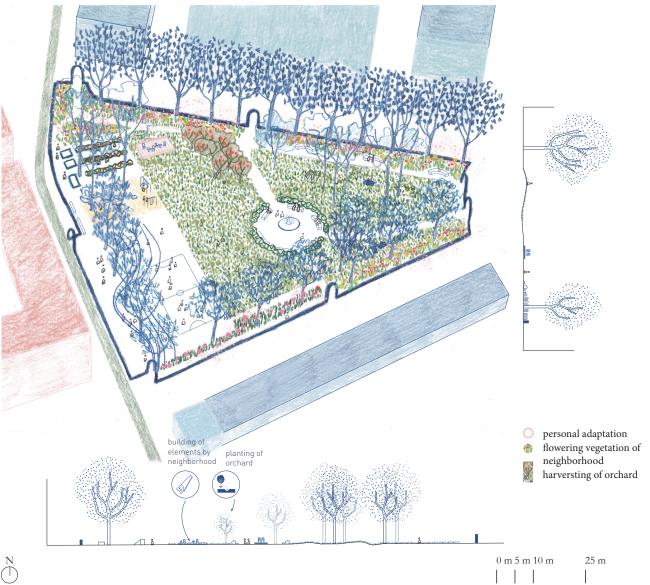
Soft borders and hybrid spaces

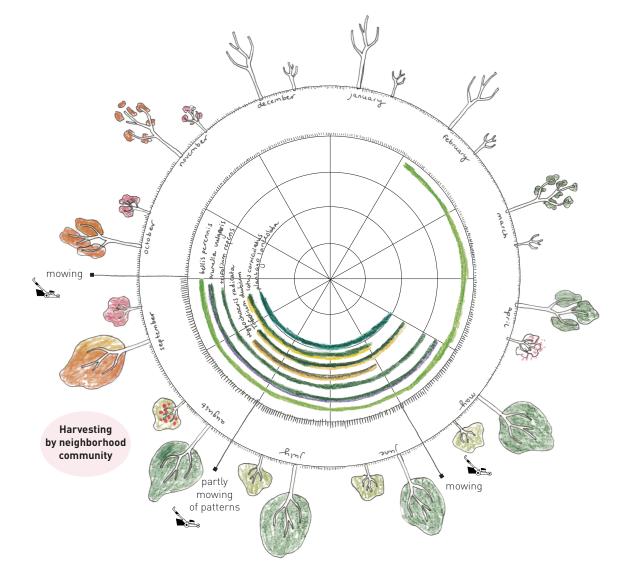


0 m 5 m 10 m 25 m

Year 5

208





**Mowing maintanance of Achterklooster.** The trees of the orchard and the existing trees and the flowering (bio)diverse grassfield are shown throughout the year.

209

throughou

#### Design through time

Year 1 (september)

The design interventions are implemented, because of the relatively small interventions the neighborhood has the oppurtunity to help and through this the neighborhood will feel a stronger connection with the garden. The wall is built and the vegetation is sown (partly by the neighborhood) after the small elevational groundworks are done as well as the removing of part of the asphalted playground and adding suggestive playing fields on the existing ground. Because of the strong community and the community center these activities are organized to engange the neighborhood.

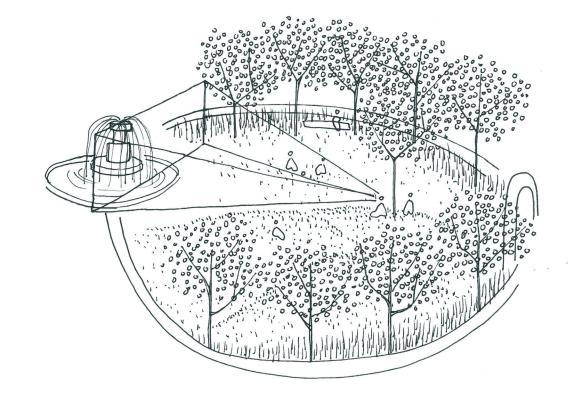
Every wednesday afternoon (year 2)

On wednesdays the garden is used by children playing and people of the neighborhood to rest, interact or walk around. A suggestion is made of how the community will engage with the garden, by for example planting an orchard and berry hedges. On this day the community will work in the garden and maintain the space, while the children play.

Year 5 (july)

In the beginning of every july, big parts of the garden are mowed to create space a for people to use the space and spent time there, as well as for people to play on the grassfield. The flowering vegetation has developed and are in full bloom, the people that sowed these flowers can now pick them for example to bring home.

After five years some people might add some elements to develop the garden further and bring some chairs to enjoy the sun on a warm day, while others come to read a book on a blanket. Some kids might play in the play square or on the grassfield in the sun and others might enjoy in the shade of the trees in a more quiet corner. This all is a possibility of how the design will look like in five years, but this is a suggestion and it might look differently. This is important, since these interventions are about designing beginnings, not endings.



Spatial experience of Achterklooster. The neighborhood park functions as an enclosed garden where the community takes ownership and create a strong emotional connection through daily routines and interactions with the garden and eachother.

#### TWO NEW NARRATED PLACES

The two zoom-in locations demonstrate how urban green spaces can spatially activate the physical, social, and mental layers of place attachment in different ways - one that is grounded in collective memory and public history and the other in neighborhood and personal narratives. Their contrast shows that landscape architecture designs for attachment must respond to both public identity and personal stories.

Plein 1940 functions as a public space of collective narratives and as a important location for the display of the history of the Stadsdriehoek. Framed by the statue De Verwoeste Stad, the square holds emotional and spatial meaning through its openness and symbolic importance. The design preserves the spatial conditions as heritage, while enriching its social and collective meaning. Spatial lines and constructions trace its history to restore historical legibility, while movement patterns are translated into porous design interventions through time. Together, these radical interventions encourage reflection by transforming the square into a public-collective landscape where movement, public social interaction, history and memories converge.

Achterklooster functions as a personalized public space, shaped by daily use and personal/neighborhood narratives. Its identity relates to the contemporary form and functions of the post-war courtyard and historical roots as a former monastery garden. The current mono-functional playgrounds are diversified and flexible through small design interventions. Aditionally, specific design interventions based on personal narratives are implemented such as a walkable circular path. Others are more based on the narratives of the neighborhood such as layered play functions and a stronger social edge near the community centers. These changes reintroduce flexibility and enhance routine use and emotional connection that allows for the site to grow with its users. Rather than imposing a fixed program the design invites co-creation, personalization and gentle transformation over time.

Their differences reinforce the main design goal of this project: urban green space becomes a connector not by prescribing function but by supporting the relational, spatial and narrative dimensions that make people feel connected to place.

# $\begin{tabular}{ll} $Chapter\ D\ |\ Conclusion\ and\ reflection \\ \hline \textbf{Relating the social fabric to the landscape of the} \\ \textbf{Stadsdriehoek} \end{tabular}$

9. Conclusion
Attachment landscapes

10. Reflection Reflection on the project

#### Part 9 | Conclusion

#### ATTACHMENT LANDSCAPES

The aim of this project was to explore the main research question: what can urban green spaces contribute to enhancing public spaces as connectors to the social fabric in the Stadsdriehoek of Rotterdam?

Based on the analysis and design projection, the responds to this question lies in how green spaces engage with the three interrelated layers of place attachment (physical, social and mental) and how these layers are translated into a spatial design through the conceptual vision and the site-specific interventions.

Physically, urban green spaces have the ability to restore continuity in a disrupted urban landscape. The conceptual vision introduces a spatial frame using tree lines and spatial alignments to reconnect lost structures and flows, frame movement and provide better legibility. Additionally, the physical aspects of the design can create a framework that designs beginnings, not endings. In this way the physical elements do not only provide a guidence but also conditions to create a better attachment by leaving space for people to adapt and connect to the site.

Socially, urban green spaces enable a range of public uses by responding to the publicness and proximity of each space. The conceptual vision proposes more spaces for staying and gathering, offering flexibility across different scales of interaction. Additionally, the conceptual vision reacts to the conditions of the existing landscape and proposes different steps for each site as a guideline to improve the social connection to the landscape. The zoom-in locations show possible translations for how this diversification of uses and activities can look like.

Mentally, urban green spaces can embed emotional connection through the spatial expression of unique but crucial as well as recurring experiences that can be narratives, memories and stories as well as symbolic references. They allow users to connect with both shared urban identities as personal experience, guiding the mental layer of designing. The zoom-in locations function as a way to show opposite relations to these narratives from collective historical spaces to everyday personal spaces. The differentiation between public and private is also impacted by these narrative focusses, where collective memories can be expressed in (very) public spaces while personal narratives can be expressed in more private or intimate public spaces.

These considerations show that attachment landscapes emerge when urban green spaces act as a mediator between physical, social and mental landscapes. The design interventions are not meant to resolve the complexity of the city, but to give it space to reintroduce layers of openness and adaptability. In doing so, they position urban green as a social and narrative infrastructure that is capable of reconnecting people to place and to each other in a city that is now often controlled by ongoing transformation and standardization.

#### Part 10 | Reflection

#### REFLECTION ON THE PROJECT

This graduation project fits within the master track of Landscape Architecture and the broader MSc AUBS program by focusing spatially on social, historical and mental relationships in the urban fabric. The project specifically examines how urban green spaces can foster place attachment in the city center of Rotterdam. It builds on the theory of place attachment by separating and analyzing its three layers (physical, social, mental) and translating them into analytical methods and design strategies. This topic aligns with the master track Landscape architecture, since it explores spatially how the place attachment can be improved through urban green spaces as landscape architectural interventions.

#### Reflection on process and planning

The process of this graduation project was largely driven by analysis. This analytical foundation gave structure and depth to the understanding of the site, but also limited early design explorations. While the project's analytical depth is strong, the transition from analysis to design could have been more developed earlier in the process to better align spatial strategies with the theoretical framework. The initial planning intended to move progressively between analysis and design,

yet in practice, the design phase started relatively late. Earlier integration of spatial experimentation could have helped to translate the theoretical insights into concrete design directions sooner, especially since the topic touches on abstract and non-material themes such as memory, identity and social relationships.

The progressive nature of the process - moving between theory, site analysis and designing - was valuable, but sometimes lacked the connection of interrelations. For example, the three landscape layers were analyzed individually, which clarified their specific characteristics but risked oversimplifying their interwoven nature. Only later in the project the realization came how interdependent these layers are, and how important it is to design for their overlap and connection rather than their isolation. Through the conclusion of the analysis and the conceptual vision this connection between layers was considered and explained.

#### Reflection on methods and approach

The methods chosen were each carefully aligned with the theoretical framework. The landscape biography method gave structure to the physical layer, while movement and typological analysis supported the social layer. The narrative approach, used for the mental layer, was more challenging due to the subjective and personal nature of the chosen

information. This also made spatial generalization more difficult. Nonetheless, these narratives added important depth to the understanding of place attachment, particularly when evaluating the existing landscape.

One key insight was that focusing on these three distinct lenses helped break down the complex urban environment. However, the strict separation of the three layers made it at first difficult to visualize how design interventions could operate across layers. This was especially noticeable towards the design projection, so when repeating the process, I would advise to think in interconnections from the start.

#### Academic and societal relevance

Academically, the project contributes to ongoing discussions about how landscape architecture can engage from a socio-political perspective. This social perspective was chosen as a focus of the project, as De Block et al. (2019) argued for a more inclusive approach in landscape architectural design by pointing out the complexity of landscape. It challenges the dominance of the ecological lens by proposing a narrative-based, layered approach. It also experiments with the use of qualitative data, such as informal interviews and spatial storytelling, as a foundation for design decisions.

Societally, the project critiques the smoothification and standardization of inner cities and advocates for designing cities that accommodate imperfection, memory and user adaptation. Implied by Boer (2023) this effect on the urban environment comes from an overall societal problem of need for perfection, especially in The Netherlands. The concept of 'attachment landscapes' offers a framework for designing spaces that support belonging and everyday interaction, particularly in environments where historical erasure and top-down design have disrupted the social fabric of the city.

Ethically, the project raises questions about whose stories are represented in the city and how landscape architects can design with rather than for people. What could have been more explored in the project is who is excluded by the standardization of public space and how this also effects the narratives. The narrative method used in the project aimed to counteract dominant narratives and surface localized and diverse meanings of place.

#### Transferability of results

The analytical framework of this thesis - based on physical, social and mental layers of place attachment - is partly transferable to other urban sites, especially those affected by top-down modernist planning or rapid urban transformation due to globalization. The methods used (landscape

biography, typological mapping, and the narrative approach) can be adapted to fit different contexts.

Additionally, the outcomes of the three layers can be partly applicable to other places. Firstly, the physical layer shows that the legibility and the designing of beginnings rather than endings is important to create an adaptable design. Secondly, the social typology of the urban landscape can be applicable in multiple cities in the Northwest of Europe. Lastly, the mental layer creates unique conditions but focusses on the history and the publicness of public spaces.

What is less transferable, but still significant, is the specific spatial and social knowledge gathered in the Stadsdriehoek of Rotterdam. However, the broader approach - designing for narratives, social use and meaning rather than only for form - is relevant for landscape architecture in many contemporary urban conditions.

#### Reflective questions

In what ways can landscape architecture create informal and emotional connections without relying on formal programming or fixed uses?

Landscape architecture can foster informal and emotional connections by designing spaces that invite interpretation, personalization and adaptation rather than suggesting specific uses or functions. This approach relies on the quality of spatial diversity and flexibility rather than formal programmatic elements like playgrounds or seating areas with predefined functions. It creates a framework where meaning and spatial experience can emerge organically through everyday use and lived experience.

One way this is achieved is by designing for porosity: allowing soft edges and transitions between zones that encourage spontaneous movement and lingering, these spatial qualities support informal behavior. These behaviors often indicate emotional connection and personal adaptation of space. Additionally, landscape architecture can incorporate physical references that resonate with local narratives, such as recollecting traces of historical structures, reintroducing native or cultural significant vegetation or embedding storytelling elements. These strategies help users emotionally relate to a space without needing a formal program.

Also, temporal elements support emotional connection such as designs that allow for change over time (e.g., seasonal planting) and encourage repeated visits and evolving experiences. This variability invites personal connection and memories to accumulate, which is key to forming place attachment.

Lastly, fostering informal and emotional connection is about leaving space unfinished or open-ended, what Corner (1999) refers to as 'loose space'. Instead of controlling every aspect, designers can create conditions for discovery, co-creation and storytelling. This empowers people to engage with the space on their own terms, strengthening their connection to it.

In short, landscape architecture can foster informal and emotional bonds by designing with people, not just for them, creating landscapes that are as much shaped by use and experience as by form.

In what way did your theoretical framework (place attach-

ment) provide new insides in designing?

Looking back, the three-layered approach of the theory place attachment provided not just an analytical lens but a useful structure for the design projection. It allowed me to identify where spatial problems align with social disconnection and where narratives could connect the design interventions. The proposed designs of Plein 1940 and Achterklooster show that when urban green spaces respond to all three dimensions (physical, social and mental) they can reweave the social fabric with spatial nuance and emotional depth.

Additionally, the theory challenged me to see the urban landscape as more than a physical environ-

ment but that the social and mental layers are intertwined in this and are therefore also related to the disconnection of the historical layers. In this way, the theoretical framework pushed the project beyond conventional landscape strategies and towards a more layered approach. It helped me reflect on me as a landscape designer that a design does not need to be a fixed solution or end, it can offer conditions that allow the space to evolve over time and for personal and/or collective narratives to relate to public space.

#### Looking ahead

In the final phase of the graduation project, I will focus on completing and critically refining the spatial design of two zoom-in locations as well as the conceptual vision. These sites will reflect the interwovenness of place attachment layers and illustrate how urban green interventions can act as social, historical and emotional anchors. I aim to translate the narrative and typological findings into tangible and engaging public spaces and framed by spatial interventions informed by historical layers guided by the design principles developed from the research. Additionally, I will complete the graphic and textual representation of the final plans, focusing on how the design communicates the invisible or erased aspects of the landscape.

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