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Theoretical exploration on wonder
and accessibility in the in-between
of Rotterdam

(Dis)enchantment of the Interstitial Space

(DIS) ENCHANTMENT OF THE INTERSTITIAL
SPACE

Exploration on wonder and accessibility in the urban
in-between of Rotterdam

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Master of Landscape Architecture
January 2026

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Image front cover: Rotterdam's interstitial space at
Spoordijk Spangen, Created by author, 2025.

Keywords

Interstitial spaces, design, accessibility, wasteland ecology, ruderal ecology, terrain vague, left-over space, Loose space

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Introduction

Perhaps you have skipped through this bundle of research and glanced at the images, maps, and text: fragments of rough ground, unmanaged shrubs, traces of demolition, or paths that seem to lead nowhere. If you know Rotterdam you might have recognized a few places, but most probably you haven't and are wondering what these images of vague spaces, unmanaged bushes, and neglected plots are doing in a book about landscape architecture

If you are from Rotterdam, where this work is based, you might be looking at the maps, wondering what these highlighted areas are. You are pretty sure there is nothing there, right? Haven't you walked by that street at least a handful of times, still not noticing what lies behind? Surely it cannot be that special - or perhaps not?

The spaces that this book is concerned with are precisely those overlooked, neglected, and hidden places. They are not designed squares, not programmed parks, not commercial plazas, but something in between. They are what is left over, what lies in the cracks of the city, what slips from our conscious maps. In short: the interstitial space, literally, the space between spaces

In the urban landscape, it refers to those places that fall between established functions, categories, or boundaries. They might be strips of wild bushes along a railway, wastelands left after demolition, abandoned harbor sites, fenced-off plots, or infrastructural in-betweens. Their scale ranges from tiny forgotten patches in the city to extensive abandoned rail yards on the suburbs.

What unites these spaces is not their form but their ambiguity. They are not fully public, nor fully private. They are not officially programmed, yet they are not entirely empty either. Their borders are

often blurred, their uses informal, their aesthetics messy. They are spaces that resist easy definition.

The subject resonates with a broader critique of how cities are designed and experienced today. Increasingly, public spaces are programmed, commercialized, and surveilled. Access is tied to consumption; behavior is guided by design. Against this backdrop, interstitial spaces offer something radically different: looseness, spontaneity, and openness to the unexpected.

The literature on such spaces is rich but fragmented, spanning multiple disciplines. In urban design, they were described as lost space (Trancik, 1986), undesirable urban leftovers in need of redesign. In anthropology, Augé (1995) called them non-places - anonymous, transitional spaces of modernity, lacking identity, history, or relational depth. In architecture and cultural theory, Solà-Morales (1995) introduced the term *terrain vague*, referring to urban voids that resist programmed use and definition, emphasizing their indeterminacy and resistance to capitalist redevelopment.

Solà-Morales captures the tension between redevelopment and preservation vividly:

“What is to be done with these enormous voids, with their imprecise limits and vague definition? Art's reaction... is to preserve these alternative, strange spaces. Architecture's destiny [by contrast] has always been colonization, the imposing of limits, order, and form, the introduction into strange spaces of the elements of identity necessary to make it recognizable, identical, universal.”

While these terms differ, they share a critical framing: interstitial spaces are often cast as problems to be solved or as emptiness awaiting inscription. What is less developed in the literature,

however, is an aesthetic, ecological, social, and experiential appreciation of these landscapes.

More recently, scholars and designers have begun to shift their view. Franck and Stevens (2007) describe them as loose spaces - environments that enable greater diversity and freedom of choice, allowing people to pursue activities beyond their original design. Ecologists have drawn attention to their not fully discovered biodiversity and spontaneous vegetation - ruderals that thrive in disturbance. (Gandy, 2013; Jorgensen & Keenan, 2012). These places hold social, ecological, and cultural value not often found in the city's planned landscapes.

This book aligns with that perspective: that interstitial spaces, far from being meaningless voids, hold unique experiential, aesthetic, and ecological qualities that matter for urban life. To stand within an abandoned railway yard or the scrubland beside an overpass is to experience a distinct atmosphere of wildness, openness, freedom, or even enchantment.

These qualities, this sense of looseness and possibility, deserve recognition within landscape architecture and urban thought. The interstitial space might be modest, hidden, or temporary, but it has the power to make us see the city differently. As a place still full of unplanned life, uncertainty, and wonder.

Rotterdam's Growing Pains

I, myself, has been living in Rotterdam for the past 5 years after growing up next to the forest in the south of the Netherlands. I live right around the corner of Museumpark and the Euromast park, two of the main public parks of Rotterdam. Still, my city does not feel like a green city and I sometimes feel that it misses a certain quantity and quality. The green spaces are too new, or too structured, too commercial, too busy and sometimes simply too boring. In my dissatisfaction and confusion about Rotterdam's fragmented personality I unawaresly started seeking for more wild places. While studying, working and living in Rotterdam I have slowly been able to start seeing the many forgotten green corners and started researching what this is.

Therefore, as landscape designer living in Rotterdam, this essay takes Rotterdam as example to talk about the topic of the in-between, the left-over, the interstitial space.

Rotterdam is an exemplary city in which to explore this subject. Its urban fabric is marked by destruction and reconstruction: the 1940 wartime bombing, followed by decades of rapid infrastructural and industrial development. The result is a city full of seams and gaps. Unlike older European cities with continuous historical cores, Rotterdam is characterized by modernisation, expansive infrastructure and a rich industrial harbor history. Large infrastructural corridors - rail, road, and port-related industry - divide districts, leaving behind a mosaic of unprogrammed land. Interstitial spaces are everywhere in Rotterdam, yet they remain largely unacknowledged.

At present, Rotterdam's development agenda focuses on densification, mixed-use redevelopment and extending public green space. Initiatives such as the Central District (around Rotterdam central) aim to produce multi-functional and climate-adaptive public space with a lot of space for green. While standing in the midst of a national housing

crisis, Gemeenteraad Rotterdam (2025) is "working towards a climate-neutral, fossil-free city and explicitly pursues climate-adaption measures" that aims to provide all inhabitants a green space within a 15 minutes walk and is resilient for the future.

Many recent projects are designed to do multiple things - recreation, water storage, biodiversity and sport - often within a tight and legible design language. Examples of this include water squares (Benthemplein watersquare, 2013) and redevelopment parks (eg. Dakpark, 2015) that balances technical infrastructure with landscape programming. This tendency favors programmed and sometimes commercialized public spaces that can be defended politically and budgetary (Peinhardt, 2021).

Rotterdam's ambitions are admirable and progressive, setting high goals for their green public development in a city that is currently very paved and stoney. Formal green spaces are highly valued and perform important functions for urban inhabitants and the non-human. They can offer a wide range of activities concerning social life, health and proximity to nature (Rupprecht & Byrne, 2014). What is also an important factor is the perceived safety by users, especially by minority groups, woman and elderly.

While these more formal green spaces contribute to economic growth and a polished image, they risk erasing the city's informal and ambiguous landscapes. It is in this context that interstitial spaces appear both vulnerable and significant: vulnerable because they are prime candidates for redevelopment, significant because they embody an alternative form of public space: open-ended, less commodified, and more unpredictable. In this context, the interstitial offers not only a spatial but also a political alternative.



Fig 0.1
Rotterdam's official greenstructures (parks, forests, singels)



Fig 0.2
Rotterdam's official greenspaces + unofficial greenspaces. (grown on own accord, not planned)

chapter 1

Understanding The Interstitial Space

This chapter will set apart the multiple theoretical narratives that exist about interstitial spaces. It also holds a warning about being aware that designing interstitial spaces is a paradoxical idea.

1.1

Defining the interstice: Theoretical Spatial Perspectives

Interstitial spaces are the overlooked “spaces between places” in the city, often lacking function, program, or destination. Various terms capture their ambiguity, openness, and potential for social, cultural, and ecological engagement. While Trancik sees these spaces as problems to fix, Solà-Morales and Clément highlight their freedom, possibility, and ecological value. This chapter develops a working definition of interstitial space, emphasizing both its spatial and perceptual qualities.

1.2

The Design Paradox

Interstitial spaces are valuable for their vagueness and openness, but designing them risks erasing these qualities. This is a tension called the design paradox of indeterminate spaces. The High Line shows how accessibility can come at the cost of spontaneity and self-seeding wildness.

Fig 1.1
Parking lot tucked away next to train
line, Rotterdam. Own work, 2025.



1.1 Defining the interstice: Terrain vague, Loose Space and Urban Voids

The word interstice derives from the Latin *interstitium*, meaning “interval” or “space between.” It combines *inter-* (between) and *sistere* (to stand), literally translating to “standing between.” Interstitial space can therefore be read as “a space between spaces,” or perhaps more aptly in this research, “a space between places”, with places understood as destinations that are known, visible, and accessible. Between such places - parks, streets, buildings, forests, or countryside - lie spaces we tend not to see, either because we do not want to (demolition sites, messy fragmented corners) or because they are not meant to be found (railway verges, infrastructural margins, unmapped residuals).

These spaces are everywhere in the city, yet remain overlooked. Because they lack function, program, or destination, they also lack a clear name. Since the 1990s, designers, scholars, and artists have projected a proliferation of terms onto these undefined fragments; *terrain vague*, loose space, lost space, urban void, and many others. Such discussions emerged from landscapes of de-industrialisation and a growing awareness of infrastructure’s impact on the urban fabric. As modernist planning declined and attention shifted toward regeneration and aestheticisation¹, “leftover” spaces became the subject of intense debate about their value, image, and beauty. In planning policy they are often problematised as voids or waste, yet among designers, artists, and social theorists there is also a quieter recognition that these urban margins may hold ecological, social, and aesthetic promise.

Because no single term properly captures their complexity, the vocabulary surrounding interstitial spaces is almost endless. Sergio Lopez-Pineiro has collected more than two hundred terms for the urban void: wastelands, lost spaces, anxious landscapes, brownfields, buffer zones, commons, cracks, dead spaces, junkspace, *terra incognita*, *terrain vague*, urban ruins, wildscapes, and many others.² Lopez-Pineiro cites landscape architect James Corner, who observed that “a void cannot be labeled because to name it is to claim it in some way.”

While various terms will appear throughout this work, it is necessary to move toward a working definition. To do so, three key theoretical perspectives will be brought into dialogue: Ignasi de Solà-Morales’s *terrain vague*, Roger Trancik’s lost space, and Gilles Clément’s third landscape. Through their overlaps and differences, this chapter develops a conceptual ground for understanding the interstitial space and begins to reveal the gaps these perspectives leave open for alternative ways of engaging the urban in-between.

¹ Brian Rosa and Dimitrios Panayotopoulos-Tsiros, “Is the Terrain Still Vague? Reconsidering Indeterminate Spaces,” *Social & Cultural Geography* (2024): 1

² Part of the collection made by Sergio López-Pineiro, *A Glossary of Urban Voids* (Berlin: Jovis, 2020).

1.1.1 Theoretical foundations: three key perspectives

Roger Trancik – Lost Space (1986) ¹

In *Finding Lost Space*, Trancik was one of the first to systematically diagnose the fragmented and residual areas of the modern city. He defined “lost space” as the leftover environments that result from car-oriented design, zoning, and the breakdown of spatial continuity. For Trancik, these spaces represented a failure of urban form, symptoms of a planning logic that prioritized movement and efficiency over human experience. His goal was to reintegrate these neglected voids into the urban fabric through design coherence and active use. Yet in naming them, Trancik inadvertently exposed how pervasive these interstitial conditions are within modern cities. However, Trancik’s critique reveals something more: that these interstitial conditions are not exceptions, but rather contribute to modern urban life. The very qualities he saw as loss – looseness, indeterminacy, openness – later became revalued as forms of potential.

Ignasi de Solà-Morales – Terrain Vague (1995) ²

Almost a decade later, Solà-Morales offered a very different reading of similar spaces. His *terrain vague* refers to undefined, ambiguous, and marginal spaces within the urban landscape that are often abandoned or overlooked, but possess latent potential for creativity, social interaction, and alternative forms of possibility outside of formal city planning. “Terrain vague,” he wrote, can be seen in “the relationship between the absence of use, of activity, and the sense of freedom, of expectancy, ...void then as absence, and yet also as promise, as encounter, as the space of the possible.” Instead of seeing them as failures, he saw them as places of freedom, memory, and imagination. The ‘vague’ carries both meanings of the word: emptiness and possibility. Solà-Morales cautioned against the tendency to redevelop or aestheticize these terrains, proposing instead to value their openness and resistance to control. In doing so, he reframed the interstitial not as a problem to fix, but as a space of potential and a mirror for the city’s unconscious and its capacity for change.

Gilles Clément – Third Landscape (2004) ³

Landscape architect Gilles Clément’s concept of the Third Landscape (2004) extends the idea of the interstitial into the ecological domain. He identifies neglected, uncultivated, or abandoned areas like roadsides, fallow fields and railway verges as essential refuges for biodiversity in a world dominated by human management. Unlike parks or reserves, these spaces are not curated but emerge as residues of abandonment or indifference. The third landscape is therefore neither a primary, wild place in which nature has taken over with its conservative balance, nor is it subject to urban or agricultural transformation by man. It is neither a place totally decided by

nature, nor one totally decided by man, but it is instead that border, an interstice, abandoned by man but not yet reabsorbed by nature, one in which something new can happen: it is a democratic reservoir for life outside planning and control. Unlike Trancik, he does not seek to reintegrate them through design, and unlike Solà-Morales, his focus is not on cultural memory but on ecological coexistence. The Third Landscape celebrates indeterminacy as an act of care: to leave room for what exceeds human intention and challenge dominant aesthetics by valuing the spontaneous. In doing so, Clément situates the interstitial as an undesigned living, dynamic component of the urban ecosystem.

¹ Roger Trancik, *Finding Lost Space: Theories of Urban Design* (New York: Van Nostrand Reinhold, 1986).

² Ignasi de Solà-Morales, “Terrain Vague,” in *Anyplace*, ed. Cynthia Davidson (Cambridge, MA: MIT Press, 1995), 118–123.

³ Gilles Clément, *Manifeste du Tiers Paysage [Manifesto of the Third Landscape]* (Paris: Sujet-Objet, 2004).

1.1.2 Shared Characteristics, Meanings and Gaps

Across these three perspectives, the interstitial space emerges as a complex and layered condition. Each author addresses the gaps within the urban order, the places where planning, architecture, and infrastructure fall short or withdraw. These spaces are characterized by openness, temporality, and potentiality: they are undefined, continuously changing, and receptive to new forms of occupation or growth. Yet they differ in how this condition is valued. For Trancik, the gap is a problem to be resolved; for Solà-Morales, a possibility to be preserved; for Clément, a necessity for ecological resilience.

Together, they reveal the tension that interstitial spaces present between control and freedom while simultaneously produced by urban systems and resisting them. They embody the feeling of being both inside and outside the city, visible yet overlooked, unwanted yet vital.

While these frameworks have been crucial in naming and valuing the urban in-between, they leave certain gaps. Their readings largely remain conceptual or ecological, overlooking the experiential and aesthetic dimensions that shape how people perceive and relate to these spaces. What does it feel like to encounter an interstice, to move through a space that is a bit scary, ambiguous, fragmented, and seemingly forgotten? These sensory and emotional responses - curiosity, unease, wonder - are essential to understanding how such places can foster new forms of engagement and care.

This work contributes to the discussion by approaching interstitial space not only as a spatial or ecological phenomenon, but as an experiential condition as well: a terrain of perception and imagination that challenges how we define beauty, order, and belonging in the city.

In this work, the interstitial space is understood as a condition that is both spatial and perceptual. A territory of looseness, ambiguity, and coexistence that resists fixed form or function. The interstitial space exists in the overlaps, margins, and leftovers of the city, but is defined less by physical boundaries than by the experiences it evokes: hesitation, curiosity, wonder, and care. Rather than treating these places in the city as problems to solve or resources to develop, this research approaches them as spaces of encounter, where the human and non-human, the planned and accidental, the visible and invisible can meet.

1.2 The Design Paradox

If the defining quality of the interstitial space lies in its undefinedness, its vagueness, then to define it through design is to risk its disappearance. This is what Sitong Luo¹ calls the design paradox of indeterminate spaces: any attempt to articulate or formalize them may compromise the very conditions that make them valuable. The designer thus finds themselves in a contradictory position: drawn to these spaces precisely because of their vagueness and openness, yet aware that design itself can so easily overwrite that quality.

This dilemma is clearly visible in projects such as the High Line in New York. What began as a spontaneous urban wilderness, an elevated terrain vague where plants self-seeded between the rails, has, through redevelopment, become one of the most curated public parks in the world. Its roughness and unpredictability have been replaced by maintenance and spectacle. The project's success in terms of accessibility and popularity also demonstrates its loss: the interstitial character that once defined it has been transformed into a controlled aesthetic of "designed wildness".

Acknowledging this paradox does not mean abandoning design altogether. Rather, it calls for a more reflexive approach, one that recognizes the interstice as a self-transforming condition. As Linde Kneip writes, " - , even if the interstices are essentially undefinable, they are not untouchable for design, on the condition that designers are mindful of the self-transforming nature of the sites. It is the self-transforming interstices that make interstices so inspirational for designing."

To engage with these places is not to fix or complete them, but to reveal their existing dynamics and to make visible and accessible what is already there, and to support the processes that sustain their vitality. Accessibility, in this sense, does not mean formalization. It means creating the possibility of encountering, of seeing, entering, or sensing these spaces without erasing their autonomy. The challenge for design is to expose the inherent value of the interstice without enclosing it; to open paths, views, and interventions that allow people to experience them while keeping their looseness intact. By finding the right forms of minimal and potentially reversible intervention, interstitial spaces can become not merely leftovers, but living additions to the urban landscape: places that continue to evolve, self-organize, and invite wonder and a bigger empathy for nature and society.

¹ Luo, S. (2021). Disclosing interstices: Open-ended design transformation of urban leftover spaces. *A+BE | Architecture and the Built Environment*, 11(16), 43

chapter 2

The Value of Undefined Spaces & Messy Aesthetics

The last chapter talked about what we understand under the phenomenon of interstitial spaces. The second chapter will focus on what these spaces actually provide the human and non-human, and how their aesthetics tend to undermine it.

2.1

The Social Value of 'Loose Space'

Examines the social significance of interstitial and undefined urban spaces. It explores how their looseness and absence of prescribed function enable alternative forms of use, appropriation, and creative expression. These spaces accommodate marginal groups, support temporary and collective activities, and foster conditions of freedom, diversity, and inclusion that are often constrained in formal public environments.

2.2

Alternative Ecologies: The Ruderal Nature of the Urban Leftover

Examining ruderal plant communities that emerge in disturbed urban environments. It discusses their ecological development, associated ecosystem services, and relationships to human activity. The chapter also categorizes non-native species according to their modes of arrival and adaptation, illustrating how movement and disturbance shape contemporary urban ecologies.

2.3

Aesthetics of the unkept, Framing the unfamiliar

Focuses on the social qualities that emerge from the spatial and aesthetic characteristics of interstitial spaces.

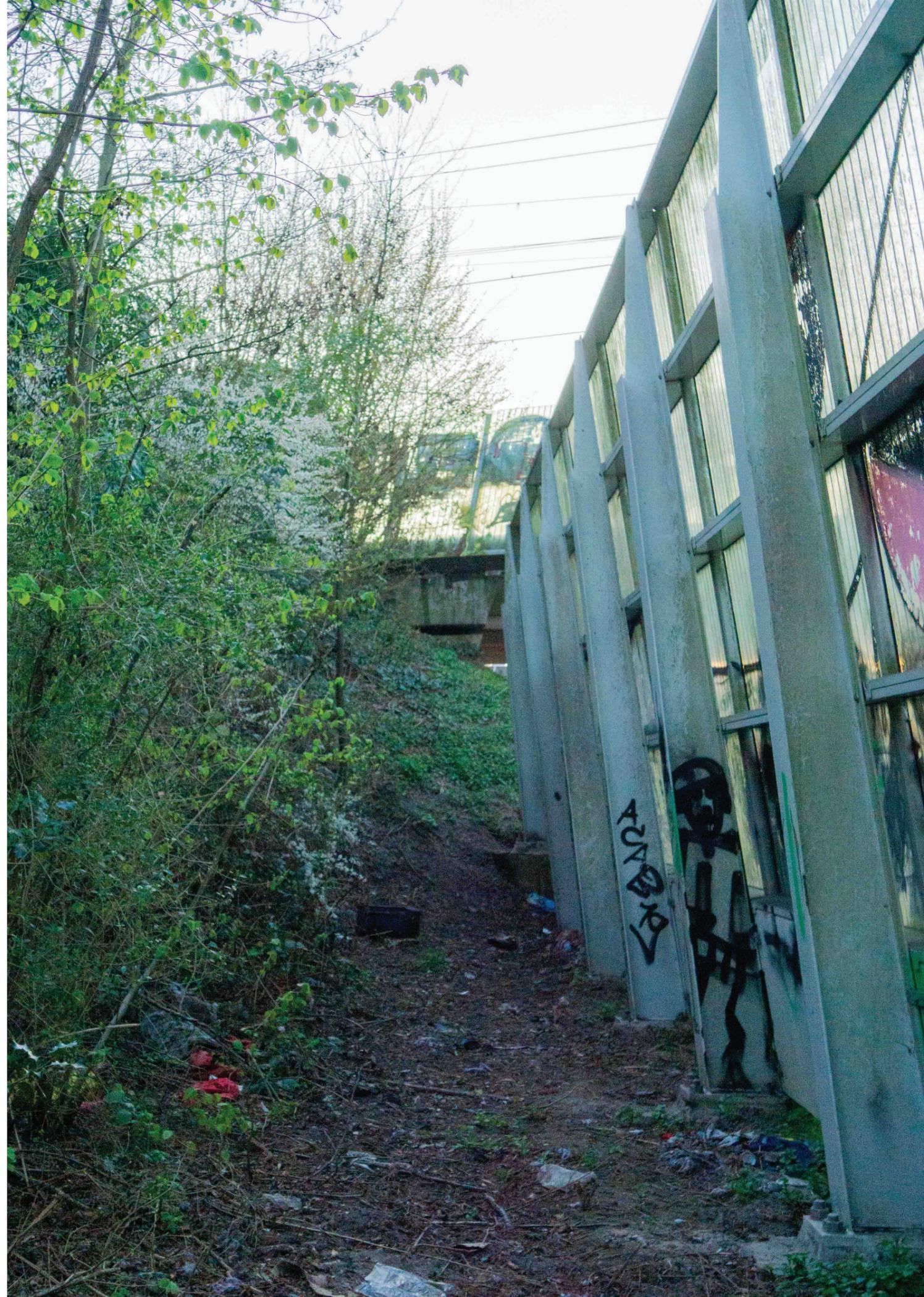


Fig 2.1
People made their temporal home next to
highway sound wall, Rotterdam. Own
work, 2025.

2.1 The Social Value of 'Loose Space'

In Rotterdam, interstitial spaces can be found everywhere once you start to look. Along railways, under flyovers, around the harbor and go on. These places are the in-between grounds of the city, without a clear purpose. Yet it is clear that even without purpose or program, these spaces are packed with life. People walk their dog or go for a run, but also spray graffiti, gather up with friends, ride their bikes or even make bonfires. These acts reveal something often overlooked about the social value of interstitial spaces: they enable forms of use and appropriation otherwise constrained in formal public spaces.

Between the private courtyards and the designed squares lie these unregulated terrains. In contrast to the managed structure of city parks or 'singel' promenade, the left-over spaces carry a different kind of openness - "creating a greater accessibility and freedom of choice for people to pursue a variety of activities."¹ This freedom is vital to the social metabolism of the city. As Franck and Stevens describe, "Here lies the breathing space of city life, offering opportunities for exploration and discovery, for the unexpected, the unregulated, the spontaneous and risky."²

The public space in the city is used in many different ways to accommodate a very wide range of public using them. Sometimes these activities correlate with the intended use of this place, like people walking their dog in a park or using a sidewalk to do some shopping. Interstitial spaces, in contrast, often don't have an assigned function ascribed to them, like an abandoned railyard, or never had any designated purpose at all, like next to a highway. In Rotterdam, this free space can be felt most clearly where infrastructure and vacancy leave unprogrammed space: under the Luchtsingel, in the abandoned train tracks near Delfshaven, on the edges of the Maas or around the strips of land along the Rotterdam ring-way. This absence of an intended use makes interstitial spaces a different kind of public space than the ones with an intended or fixed use. Their marginal position within the city frees them from the prescriptive order of other formalized public spaces which creates conditions where alternative practices can unfold.³ This accommodates a more spontaneous and unregulated behavior.

The concept of loose space, introduced by Franck and Stevens (2006), offers a powerful lens to understand this dynamic. They define the quality of looseness as the potential for people to use urban spaces in ways not prescribed by their planners, architects or authorities, enabling behaviors of appropriation and adaptation. When talking about the behavior looseness enables, we can think about people skateboarding, performing music on the streets, or children turning empty lots into playing areas. But also the act of protesting, graffitiing or even as shelter to sleep or to sell goods. Looseness generates activities that are not productive or reproductive, being a matter of leisure, entertainment, self-expression of political expression, reflection and

¹ Karen A. Franck and Quentin Stevens, *Loose Space: Possibility and Diversity in Urban Life* (London: Routledge, 2007), 3.

² Ibid.

³ Karen A. Franck and Quentin Stevens, *Loose Space: Possibility and Diversity in Urban Life* (London: Routledge, 2007), 4

social-interaction - all outside the daily routine and the world of fixed functions and fixed schedules.

"Free access to a variety of public open spaces, anonymity among strangers, a diversity of persons and a fluidity of meaning are all urban conditions that support looseness."⁴

'Loose space' in that context is described as a place that is able to enable this kind of loose behavior because of their ambiguity in intended use or because their spatial lay-out offers an interpretation for a large variety of behaviors that don't align with the designed function. In other words, looseness emerges not from design intention but from users' capacity to re-appropriate spaces through unplanned and often temporary actions.

As Luo (2021) writes, such spaces can become "Spaces of Coexistence," porous to both human and non-human users. Leftover spaces no longer have any clear usage or meaning and therefore become more porous for what could take place. She states that it is therefore open for serving multiple subjects, human as well as non-human.⁵ The leftover space becomes truly inclusive because of this lack of fixed use and can attract a very diverse mix of social groups and identities, as well as becoming a retreat for wildlife that lives in the city.

⁴ Karen A. Franck and Quentin Stevens, *Loose Space: Possibility and Diversity in Urban Life* (London: Routledge, 2007), 4

⁵ Luo, S. (2021). *Disclosing interstices: Open-ended design transformation of urban leftover spaces*. *A+BE | Architecture and the Built Environment*, 11(16), 43

2.1.1 Appropriation and Marginal groups

One of the most significant expressions of looseness in Rotterdam is the appropriation of interstitial space to those who lack access elsewhere. Verges along the A20 or disused train yards near the harbor often host temporary encampments and sleeping spots for people without a home. Because leftover spaces do not have set restrictions on use and users, they offer a place to minority social groups to stay, use and appropriate. This is an important part of urban life as these people also have the right to stay and belong in the city, even without 'owning' property for example.

The primary users of the interstitial space are often more vulnerable marginal social groups such as homeless people, migrants or even gangs who are often not being welcomed in other urban public spaces. According to Luo, this comes from the appearance of leftover spaces, which presents to these people the absence of authority and regulations. This gives them a chance to occupy or appropriate the left over spaces.¹ This of course also attracts social groups that are not part of marginal social groups like grass-root artists, dog walkers, trainspotters, ravers or foragers that all are attracted to this looseness, but use the same fragment in different ways.

Another reason for this could also be because leftover spaces do not have some bigger capitalistic motive, they are to be used free of cost. This could be related to Henri Lefebvre's ideas about appropriation the urban space in his 'Right to the city.' As Lefebvre famously stated:

"The right to the city manifests itself as a superior form of rights: right to freedom, to individualization in socialization, to habitat and to inhabit. The right to the oeuvre, to participation and appropriation (clearly distinct from the right to property), are implied in the right to the city."²

This text highlights that quality of urban life lies not only in ownership and planned use but also through the lived practices that can transform space into a meaningful place. Interstitial sites, often overlooked in formal planning, become a place where this right is enacted: marginal groups inhabit, adapt, and temporarily claim them as their own.

Franck and Stevens (2006) expand on this through their concept of "tying down" loose space, showing how informal and temporary appropriations, from skating and graffiti to shelter and gathering, anchor otherwise undefined spaces into the social fabric.³ This free use manifests a certain degree of appropriation. For example homeless people get to find a quiet spot under

¹ Luo, S. (2021). Disclosing interstices: Open-ended design transformation of urban leftover spaces. *A+BE | Architecture and the Built Environment*, 11(16), 94.

² Henri Lefebvre, *Writings on Cities*, trans. and ed. Eleonore Kofman and Elizabeth Lebas (Oxford: Blackwell, 1996), 173.

³ Karen A. Franck and Quentin Stevens, *Loose Space: Possibility and Diversity in Urban Life* (New York: Routledge, 2006), 3-5

a bridge to set up for the night and leave their belongings. This can be seen in many of these marginal spaces all over the world. According to a study done by Hudson (2015, p. 478) the longer people get to stay in such a place, the higher the level of appropriation to the space they show.⁴ For example homeless people building more permanent structures or even forming small communities.

In conclusion, interstitial spaces give (marginal) groups a place in the city to stay and to lay claim to, a quality not often found in other public places, reinforcing their unique social value.

⁴ Hudson, John. "Homelessness and the Right to the City: Appropriation and Belonging in Urban Margins." *Urban Studies* 52, no. 3 (2015): 478

Fig 2.2: Abandoned trainbridge and discarded materials used for graffiti and hangout, Rotterdam. Own work, 2025.



2.1.2 Creativity and Temporal Use

Another social dimension of leftover spaces is the chance to express ourselves creatively through appropriation. In many leftover spaces around the world you can find personal graffiti tags, street musicians, grassroots exhibitions and self made objects or structures like bmx parks, treehouses or gathering places. These are not works of art in the institutional sense, but momentary expressions that respond to a specific place and time. This freedom to create and to express is a hard thing to do in a very managed public space such as a park or plaza.

“We were under the trainbridge with a whole diy scaffolding to make this big piece, they [the police] just drove by and said nothing, haha. They don’t care about this place.” - Rotterdam graffiti artists.¹

It is apparent that creativity thrives there where regulation is absent and it happens on many different scales. We will look at examples of creative outlets and self-organized temporal uses on the micro, meso and macro-scale.

On the smallest scale we can think of a single graffiti tag or a spontaneous jam session.

One scale bigger, creativity and self organisation is seen in DIY skateramps, or pop up garden plots. These activities offer a creative outlet, but often also create a bigger community in these leftover spaces.

On the biggest scale of create uses seen in leftover spaces, the macro-scale, are larger groups taking over these spaces. This often only happens when leftover spaces are left unassigned for a longer period. Collectives can take over warehouses or railyards to host exhibitions, festivals or markets. In Rotterdam, these three scales are visible across the city’s interstitial network: from individual tags along the Luchtbrug, to self-built skate ramps in the city fringes, to large-scale raves and exhibitions in disused port warehouses. Each of these temporal actions transforms the atmosphere and identity of the place, if only for a moment.

While these activities often don’t last on a longer timescale, they change the character and identity of the leftover space. They could leave traces reminding us about its temporal uses, like old murals, temporary structures and of course also memories. This cycle of appearance and disappearance mirrors the shifting life of the city itself. Rotterdam, with its constant construction and reconstruction, knows this rhythm well. A clear example of this is the Keile district, a breeding ground for creative outlets that change over and over, while slowly creating its own new palimpsest on the harbor. A future of the Keile district without its grass-root creators would almost be unimaginable.

Oswalt, Overmeyer & Misselwitz argue in *Urban Catalyst: The Power of Temporary Use* that leftover urban spaces can serve as a catalyst for temporary creative uses.² Creative outlets could

¹ Interview by author with Rotterdam graffiti artist, conducted May 2025

² Philipp Oswalt, Klaus Overmeyer, and Philipp Misselwitz, *Urban Catalyst: The Power of Temporary Use* (Berlin: DOM Publishers, 2013), 325

be bars and clubs, start-up firms, outdoor cinemas, art galleries and informal markets. As they argue, “Indeed, it is often precisely here that innovative cultural production and a vibrant public sphere are to be found.”³ Temporary creative use does not only fill a void but often actually initiates urban transformation.

These creative appropriations expand the social value of interstitial spaces, producing freedom and inclusivity can even form the basis of community.

³ Ibid., 325

2.1.3 Producing Freedom and Urban Inclusivity

“For a society to be free requires public spaces which are in various ways open, unregulated and visible to many others.”¹

Leftover spaces are being used by such a variety of people while being able to coexist is a special quality, though it can also create tension. This could often be the case when more normal and regular uses meet uncommon or offensive uses.² Sometimes the behavior seen in these places is deemed as transgressive. Franck and Stevens talk for example about selling counterfeit goods, underage drinking or even public sex. They say that while these behaviors are uncommon, they also test the limits of what is socially acceptable behavior. They argue, “Sometimes transgression establishes new standards of acceptability for the urban space, as with public protests in a society emerging from dictatorship or the increasing openness of homosexuality.”³

This highlights an important social value of the interstitial space, namely the creation of a greater understanding for each other. It offers a chance to encounter the other, the spontaneous event and to experience a greater diversity and discovery of the unexpected.⁴ This is what gives cities life and vitality.

Meeting the other, or the ‘stranger’ can actually help people become more civil and relaxed towards difference. The diversity and density of urban space generally demands measures of social flexibility and acceptance within ourselves. Seeing other people pursue activities you yourself would not find acceptable, like doing drugs or seeing two men walk hand in hand - “Encounters with what is shocking or troublesome - can be a benefit, resulting in a greater acceptance, tolerance and personal growth.”⁵

Such freedom holds profound social value. Loose spaces such as interstitial spaces enable diversity by allowing multiple groups to inhabit the same environment in different ways. They foster inclusivity by offering access to those often marginalized in more regulated contexts, including youth, informal workers, and the homeless. They also nurture affective bonds, as people who temporarily claim these spaces create new meanings and attachments through their activities.⁶

Yet these spaces are not only inhabited by those on the margins, also another group of people are drawn to them: the observers, the caretakers and open-minded citizens that are interested

¹ Karen A. Franck and Quentin Stevens, *Loose Space: Possibility and Diversity in Urban Life* (New York: Routledge, 2006), 18

² Luo, S. (2021). Disclosing interstices: Open-ended design transformation of urban leftover spaces. *A+BE | Architecture and the Built Environment*, 11(16), 94

³ Karen A. Franck and Quentin Stevens, *Loose Space: Possibility and Diversity in Urban Life* (New York: Routledge, 2006), 12

⁴ *Ibid.*, 4

⁵ *Ibid.*, 22

⁶ Henri Lefebvre, *Writings on Cities*, trans. and ed. Eleonore Kofman and Elizabeth Lebas (Oxford: Blackwell, 1996).

in these different areas. These are the people that start organizing in these places from the bottom up, hosting cleaning days, mapping spontaneous vegetation or leading a birdwatching tour. Sometimes their efforts evolve into community gardens or small collective parks, yet they often remain aware of others who use the same spaces out of necessity. Together, they form an informal and voluntary network of caretakers.

In Rotterdam, there is a strong presence of such engaged citizens who recognize the importance of these places and, while self-organizing, often collaborate with the municipality. Examples include Stadspark West, Essenburgpark, De Spoortuin, De Groene Connectie, and De Rotterdamse Florawerkgroep.⁷ Their presence introduces another dimension of social value: they cultivate care and awareness. They help translate the meaning of these spaces to the broader public and to the municipality, making them legible without fully formalizing them.

Concluding on this chapter, these interstitial spaces offer a social dimension to cities that enrich urban life with unpredictability, spontaneity, supporting informal appropriation, and fostering greater inclusion and acceptance.

⁷ Examples drawn from local Rotterdam community initiatives; see also “De Groene Connectie,” Gemeente Rotterdam, accessed November 3, 2025, <https://degroeneconnectie.nl>

2.1.4 Reflection

This chapter demonstrates the unique social value of interstitial, “loose” spaces in cities like Rotterdam. Despite their lack of formal purpose, these spaces support a wide spectrum of activities. From dog walking and skateboarding to graffiti, pop-up gatherings, and temporary shelters, they allow people to appropriate and interact with the city in ways impossible in designed public spaces. Their ambiguity fosters spontaneity, creativity, and exploration, giving rise to personal and collective experiences that are temporal, flexible, and socially inclusive.

Interstitial spaces are especially important for marginalized groups such as homeless people, migrants or youth, who can occupy, adapt, and claim space without formal restrictions. Simultaneously, they attract diverse publics, including grassroots artists, observers, and caretakers, creating a layered, shared urban environment where multiple forms of use coexist. This coexistence fosters understanding, tolerance, and social experimentation, reinforcing the city’s social fabric.

Overall, interstitial spaces reveal that social value in urban life arises not from control or planning, but from openness, freedom, and the capacity for appropriation. They are territories that generate inclusivity, freedom, and meaningful social engagement, offering a crucial counterpoint to the regulated, designed green spaces of the city.

2.2 Alternative Ecologies: The Ruderal Nature of the Urban Leftover

Leftover spaces in the city are more than a free haven for marginal groups or youths. Also animals, plants, fungi and insects find their way to these spaces for refuge. Leftover spaces present a type of nature that is not found in planned city parks, lacking their formal maintenance, having a lesser level of traffic and not having to comply with curated aesthetics. But it goes further than that. The type of nature found in interstitial spaces is not a type associated with any other type of nature. It is not the same kind of nature that we find in a wild forest, or in the agricultural landscape around the city, nor the dune landscape or in the marshes. City nature, and in particular nature found in degraded landscapes, consists of a totally new type of nature, which has found its existence in the specific conditions of the city. Gilles Clement has coined this type of landscape the ‘Third landscape’. This type of landscape offers a certain value that is often overlooked, but once paid attention to, greatly valuable and interesting.

The Netherlands is one of the most densely built countries of Europe. Funnily enough, we have had very little interest in our urban flora compared to other countries. Central and eastern-European cities have been extensively researching and writing about their cities’ ruderal nature since the seventies. Cities like Köln, Dortmund, Duisburg, Münster, Berlin, Zürich, Danzig, Warschau, Poznan and also Rome and London have had a focused interest on their cities’ nature, especially post second world war. They all conclude that the plants growing in their city consist of a totally different identity than the plants of their surrounding countryside, but have a surprisingly similar identity between those cities.¹ This is a fascinating question, and can be explained by the similar conditions that these European cities present, alongside the modern way of transportation these cities are all connected.

¹ Ton Denters, “De flora van het Urbaan district,” *Gorteria* 24 (1998): 65



Fig 2.3: Pictures from the site analysis in Rotterdam that was conducted for part of this research, Rotterdam, Keile. Own work, 2025.

2.2.1 Ruderal Ecology

The diversity in vegetation in the Dutch metropole appears to be surprisingly diverse, similar to many other European cities. Rotterdam in specific counts in 2025's observations over 1100 wild plants.¹² Left-over lands or Wastelands, or the term respectively used in Dutch and German literature 'Braak' and 'Brache/Brachen', plays a large role in this diversity. 'Braak' or 'Brachen' translates to fallow land or wasteland, referring to a piece of land that is not currently in use. Classically coming from agriculture, it has found a new meaning as brownfields in the context of the city. It refers to former industrial or commercial land that is left open, unused and vacant and has many similar conditions as the interstitial space, even overlapping completely in certain cases. Left-over lands are found all around the urban area, often ranging from smaller sites in the centre to vast lands in the periphery. They might arise from the demolition of houses or industry or simply the disappearance of any form of maintenance and therefore develop themselves for a long time totally undisturbed. Just like in any other ecosystems this happens according to the natural processes, starting from pioneer stadia to a more stable and more woody stadia.³ Because of this vacancy nature tends to totally take over, yet they possess a totally different kind of plant diversity than public green spaces. An average lawn houses approximately twenty species of wild plants, no matter the surface area. A left-over land of any size houses tenfold of wild plant species. Left-over lands therefore justify a large number of the (special) biodiversity in the city.⁴

In 'The Flora of the Urban District' (1998), Denters says that the urban district can be best described as a 'culture-steppe' possessing many similarities with steppe ecologies. Open and strongly dynamic plant communities that can withstand relatively high temperatures and long droughts dominate the city district. These are typically consisting of annuals and/or strongly competitive plants from rural or pioneer communities. Ruderals, coming from the latin translation of the word 'rubble', are a group of species that are adapted to the highly dynamic conditions of the city. "Often having a short life span, very effective distribution mechanics and often literally though thanks to semi-woody, low laying stems and branches that are resistant to damage and disturbance. They often originate from warmer climates, steppe like climates, explaining their ability to withstand the warmer conditions of the city."⁵

The large diversity found in this 'alternative nature' found in the city is to be explained by characteristics that seem to be very similar to other cities. The first condition is, as described in last paragraph, the higher temperatures and dryer conditions, which can be linked to the heat-island effect. Another condition found in the city is the high level of human disturbance,

like mowing or digging, dumping garbage or building materials, trembling by walkers or the parking of cars. Also the soil itself is an important factor, as city soil that has been processed and cultivated over and over again seems to have an excess of nutrients, especially nitrogen.

ruderal

/ˈruːd(ə)rəl/

Botany

adjective

(of a plant) growing on waste ground or among **rubbish**.

¹ Ton Denters, "De flora van het Urbaan district," *Gorteria* 24 (1998): 65

² Bioblitz 2025

³ Floris Brekelmans & Remko Andeweg, "Braak: ongeorganiseerde natuurbeleving," *Stadswerk Magazine* 4 (2013): 8.

⁴ Floris Brekelmans & Remko Andeweg, "Stedelijke braak en biodiversiteit," *GROEN* 32 (2015): 36.

⁵ Ton Denters, "De flora van het Urbaan district," *Gorteria* 24 (1998): 66

Heat-island

Cities often have a very high level of stony substrates. The region that Rotterdam lies in, Zuid-Holland, exists for 23.4% of surfaces used for building and transportation which is the highest percentage of the Netherlands.¹ One of the effects of having such a high level of hard surfaces is higher temperatures in the city. Also the heat that is created by traffic, heating houses, airco's and industry contribute to these higher temperatures. This heat is not able to escape as it is absorbed in buildings, roads, stone and concrete and emits the heat after sunset. Because of the higher density and actual height of buildings there is less wind which makes it harder to get this heat out of the city. This results in the city being between 2-6 degrees Celsius warmer than the surrounding area.² This is also being called the 'Heat-island effect'. The ruderal plants growing in the city often don't have their origin in the Netherlands itself, but originate from warmer climates. They have found their way to the Netherlands by car or train or simply under the boots of a traveller. These plants like the warmer climate in the city. A known example of a typical ruderal city plant is the *Ailanthus altissima*, a tree that has been behaving invasively since the 90's. Seen on the Dutch 'Distribution Atlas', the *Ailanthus altissima* only grows in the city district and the south of the Netherlands.³ The north of the Netherlands, which is typically around 1 to 2 degrees colder than the south, is yet not very favorable for the tree to grow. Though climate change might make the distribution of ruderal species like the *Ailanthus* more common in the future as the country becomes warmer.⁴

Disturbances

Another specific condition that ruderal species seem to prefer are places in the city that are strongly influenced by human disturbances, having less competition from more developed communities that are more picky with their growing location. In a research by Sprong and Reumer (2008) 60 different wastelands in the city of Rotterdam are monitored on their diversity in plant species. Multiple factors were monitored but their main objective was the level of human disturbance on the site, differentiating from (1) dumping of rubbish, (2) dumping of construction wastes, (3) parking of cars, (4) walking the dog, (5) trampling by commuters and (6) playing children, alongside age, zoning and soil. Surprisingly enough, sites that counted two types of human disturbances counted higher number in plant species than sites with less disturbance. Once the disturbances counted higher than two, the plant diversity actually became less. They concluded that (ruderal) plant communities in Rotterdam's left-over sites

¹ Centraal Bureau voor de Statistiek (CBS), "Hoe wordt de Nederlandse bodem gebruikt?" Nederland in cijfers 2020 – Longreads, 2020

² Centraal Bureau voor de Statistiek (CBS), "Nederlandse steden niet op hitte gebouwd," Atlas Leefomgeving, 8 augustus 2019

³ As seen on the distribution image, retrieved from; FLORON & NDFP, *Ailanthus altissima* – Tree of heaven, Verspreidingsatlas, retrieved October 21, 2025, from <https://www.verspreidingsatlas.nl/5007>

⁴ KNMI, Nederlandse zomertemperaturen: het noorden is het nieuwe zuiden, June 23, 2022, retrieved October 21, 2025, from <https://www.knmi.nl/over-het-knmi/nieuws/nederlandse-zomertemperaturen-het-noorden-is-het-nieuwe-zuiden>

preferred some level of human disturbance; "Apparently, some disturbance is beneficial to the typical urban vegetation."⁵

Soil

Lastly, the soil plays a large role in providing growing conditions for ruderal species, although not extensively researched. Building cities involves a lot of groundwork. Making polders higher with sand, building dikes out of waste materials, building train emplacements from basalt rocks or, making roads and sidewalks and go on. In the process the original soil of the place is almost nowhere to be found anymore but is replaced by a mix of coarse sand, rubble, building materials and even industrial waste. In a Belgian research from Godefroid, Monbaliu and Koeman (2007) it is said that soils in the city center are made up of a thick layer of filled earth with anthropogenic admixtures. They mention bricks, mortar, tiles, charcoal, bones, pieces of metal, glass, rubble and ceramics ranging generally between 5% and 30%.⁶ The coarseness of this soil makes it often dryer because of increased water runoff. The nutrient levels of left-over lands do differ though. On soils with lots of stoney materials like concrete, brick or stone, like the basalt ballast structure for rails, the soil is nutrient low. This mostly enables fastgrowing and tough ruderal pioneers to colonize the substrate. These sites seem to also be often younger and are colonized by plants like narrow leaved ragwort (*Senecio inaequidens*) or Canadian Horseweed (*Erigeron canadensis*). In some left-over plots the nutrients actually seem to be very high, because of (organic) waste dumping, run off from roads or even dogpoop or roadsalt.⁷ Also the slow accumulation of organic material can contribute to the soil becoming nutrient rich. Often phosphorus (P) and nitrogen (N) are found in these soils but also even toxins like lead (Pb) and arsenic (As). These soils seem to provide growing conditions for ruderals, but the more nitrogen loving ones and often also natives or archeophytes, like brambles (*Rubus fruticosus*) or the small stinging nettle (*Urtica urens*).

urban indicators

Some ruderal plants are considered urban indicators. They are an indicator of these typical urban conditions and mostly to only grow in urban environments. They are bound to the factors mentioned above, like the temperature, disturbance and soiltype. Some examples of urban indicator plants are for example wallplants that only grow on old brick walls like the native perennial wall-rocket (*Diplaxis muralis*) or the rare non-native little robin (*Geranium purpureum*).

⁵ Jorinde Sprong & Jelle W.F. Reumer, "Vegetation of Urban Wastelands in Rotterdam and the Effect of Human Disturbance," *Deinsea* 12 (2008): 21–36,

⁶ Sandrine Godefroid, Dennis Monbaliu, and Nico Koedam, "The Role of Soil and Microclimatic Variables in the Distribution Patterns of Urban Wasteland Flora in Brussels, Belgium," *Landscape and Urban Planning* 80, no. 1–2 (2007), 46

⁷ Flora van Nederland, Ruderaal, geraadpleegd op 21 oktober 2025, via <https://www.floravannederland.nl/plantengemeenschappen/hoofdgroepen/ruderaal/>

2.2.2 Species and Origin

A lot of the ruderal species that are found in the city don't originate from the Netherlands but have actually traveled here from the Mediterranean or even further from Asia, Africa or the Americas. When they arrived and how they behave in our ecosystem determines a lot about how we as humans think about them and how wished upon they are.

Classifying species as either native or alien is central to nature conservation practice. The native versus non-native or even native/alien discussion is heated among ecologists and conservationists and is non-conclusive, with every researcher having a different notion on what is native, what is not native and what is allowed into the ecosystem. Researcher Charles Warren (2021) even talks about the classification between native and alien being “- contested, raising philosophical and geographical questions about place, space, rights, identity and belonging.”¹ Warren explains that although the categories native and alien are often employed as discrete and binary categories, he states that the terms are better to be understood as a cluster concept representing the maximum values of a continuum in which many complex entanglements exist. A plant being intrinsically alien or native is naturally not possible, as their relations are connected to a particular area and a particular time. Plants can be native in North-America but alien in the Netherlands and vice versa. Nations tend to hold a different threshold for these terms.

Also when the plant has entered the area is of big importance. Many researchers agree that the year 1500 AD, when European colonization took off, is taken as a ‘year zero’ for being considered native or not. But to make it even more difficult to follow, others categorize these plants, having come along due to human interference before 1500, as aliens but under the denominator of ‘Archeophyte’. Having been in a certain area for such an extensive long time they can be considered as part of the ecosystem and therefore can be considered native. Plants that have entered an area after 1500 AD are then called ‘Neophyte’ and are considered as alien species.

However, a plant considered as neophyte or alien, does not give any indication about its contribution to ecosystem services like providing food or shelter, improving soil conditions or fixing nutrients, or providing even landscape architectural values. This ‘new nature’ is what famous ruderal botanist Ingo Kowarik calls ‘novel ecosystems’ in which he says the origin of the species is less important than their ecological role.²

¹ Charles R. Warren, “Beyond ‘Native v. Alien’: Critiques of the Native/Alien Paradigm in the Anthropocene, and Their Implications,” *Ethics, Policy & Environment* 26, no. 2 (2023), 287

² Ingo Kowarik, “Novel urban ecosystems, biodiversity, and conservation,” *Environmental Pollution* 159, no. 8-9 (2011), 1974-1983

While I agree with Kowarik's views on ‘novel ecosystems’, it might be relevant for this research to make the distinction nevertheless. Not for the reason to classify them or value them, but for the sake of understanding their role in the ruderal system and how they got there. Ruderal communities only exist because of the anthropological influence us humans have had on our surroundings. Therefore, rather than questioning whether a plant belongs to this ecosystem, it becomes more revealing to ask how it came to be here, through which human processes it traveled, and how it has adapted to and shaped the conditions of its ruderal environment.

In ruderal communities, every plant is a trace of human influence, whether it arrived through trade, transport, construction, or cultivation. These species embody the entanglement of human and ecological processes: they are both products of disturbance and agents within it. Their presence tells stories of movement, adaptation, and resilience within a landscape that is itself anthropogenic. For this reason, distinguishing between native, alien, and invasive species in this research does not serve to hierarchize them, but to reveal the different trajectories of arrival and the modes of co-existence that have formed today's urban ruderals. In this sense, the classification becomes a narrative device rather than a moral one to help understand the human-ecological histories inscribed in the spontaneous vegetation of the left-overs of the city. Their trajectories of arrival will be discussed in the next subchapter.

1 Natives

Some plants thriving in ruderal sites originate from local floras and can therefore be considered native. These are often common species that possess ruderal traits such as rapid germination, effective seed dispersal, high tolerance for drought, heat, nitrogen and disturbance, and a generally short life cycle.

Typical early colonisers include *Urtica urens* (small nettle), *Sisymbrium officinale* (hedge mustard), *Myosotis arvensis* (field forget-me-not) and *Senecio vulgaris* (common groundsel). In later successional stages, more perennial and competitive species appear, such as *Taraxacum officinale* (dandelion), *Achillea millefolium* (yarrow) or *Plantago lanceolata* (ribwort plantain). Over time, woody pioneers take over. *Rubus fruticosus* (bramble), *Salix* spp. (willow), *Betula pendula* and *B. pubescens* (birches), *Sambucus nigra* (elder), *Populus nigra* (black poplar) or *Frangula alnus* (alder buckthorn). Although these species are native to the Netherlands, their success in ruderal conditions still depends on human disturbance. They flourish where other vegetation has been cleared or is unable to grow because of the harsh ruderal conditions.

2 Alien

The flora of the Netherlands is not static. Species disappear, and new ones arrive. They often come from regions with similar ruderal ecologies. Because of their hardy and opportunistic nature, these newcomers are well adapted to the harsher human-made environments such as harbours, railway embankments and construction sites.

In ecology, several terms exist to describe these species: alien, non-native, exotic, or neophyte. The distinction between these categories largely depends on the time their arrival. Species introduced before 1500 AD, when large-scale intercontinental travel was rare, are known as archaeophytes. Having been present for centuries, they often behave and function as natives, fully integrated into local ecological systems and contributing to ecosystem services. Species arriving after 1500 AD are classified as neophytes. Many neophytes are ruderal species by nature and are adapted to open, disturbed, nutrient-low soils and capable of rapid colonisation. According to 'Flora in het urbaan district', they are established primarily in dynamic zones such as riverbanks, industrial sites and (for over 50%) urban areas, where disturbance and exposure prevent the dominance of stable native communities.¹

Their numbers are growing rapidly. The 1998 report 'Flora in het urbaan district' concluded that between 1962 and 1996, roughly seventy new vascular plant species were recorded as newcomers to the Dutch flora. Compared to the decades before that, Denters noted that that is a sixfold increase in the appearance of neophytes.² 20 years later, according to the 'Compendium voor de Leefomgeving', the number of 5x5 km grid cells in which alien species were observed grew from 30 in the 1990s to 160 by 2017. That is a significant expansion. Most introductions occur through trade in ornamental plants, the transport of soil and construction materials, or ballast water from ships.³

3 Invasives

Some alien species behave in a way that is considered 'invasive': spreading aggressively and out-competing native vegetation. This is often regarded as problematic, particularly when they dominate sites or affect infrastructure. Many invasive species exploit ruderal conditions like disturbed soils, railway verges, or wastelands and use these as efficient corridors for expansion. Typical examples include *Fallopia japonica* (Japanese knotweed), *Ailanthus altissima* (tree of heaven), and *Heracleum mantegazzianum* (giant hogweed). These species reproduce both

¹ Ton Denters, "De flora van het Urbane district," *Gorteria* 24 (1998): 68

² Idem

³ Centrum voor Milieu-en Leefomgeving, *Invasieve plantensoorten zijn in de laatste decennia sterk toegenomen in Nederland* (indicator 1398, versie 03), 5 January 2017, retrieved 22 October 2025, from <https://www.clo.nl/indicatoren/nl139803-invasieve-plantensoorten-zijn-in-de-laatste-decennia-sterk-toegenomen-in-nederland>.

vegetatively and by seed, possess deep rhizomes that regenerate after removal, and can even damage concrete or rail structures.

However, it is important to note that most neophytes do not invade well-developed, undisturbed, or "natural" vegetation.⁴ Their presence remains largely restricted to disturbed, human-made environments. In other words, to ruderal habitats. Their success is a direct outcome of anthropogenic disturbance and mobility, making them not external invaders but products of our own landscapes.

reflection

While these distinctions between native, alien and invasive are useful for ecological classification, they should not be understood as moral categories. In ruderal systems, all plants whether they are native or introduced exist as part of a human-shaped ecological continuum. What is most revealing is not where they belong, but how they arrived, how they adapt, and what roles they fulfill within these novel urban ecosystems.

⁴ Find this source... where did I read this again?? Dutch magazine

2.2.3 The Arrival and Agency of Ruderal Species

Rotterdam shares many characteristics with other nearby large cities such as Duisburg or London. The climate, the dense infrastructure and the constant movement of goods and people create similar ecological conditions. Yet Rotterdam also has its own specific urban ecology. Its harbour, which is the largest in Europe, plays a central role here. Tons of goods, fungi, insects and plants have entered Rotterdam via its waters and ships. The trainlines and roads also act as corridors, distributing plants across the urban fabric of the country and therefore Rotterdam. Some ruderal plants even escape from gardens into the wild.

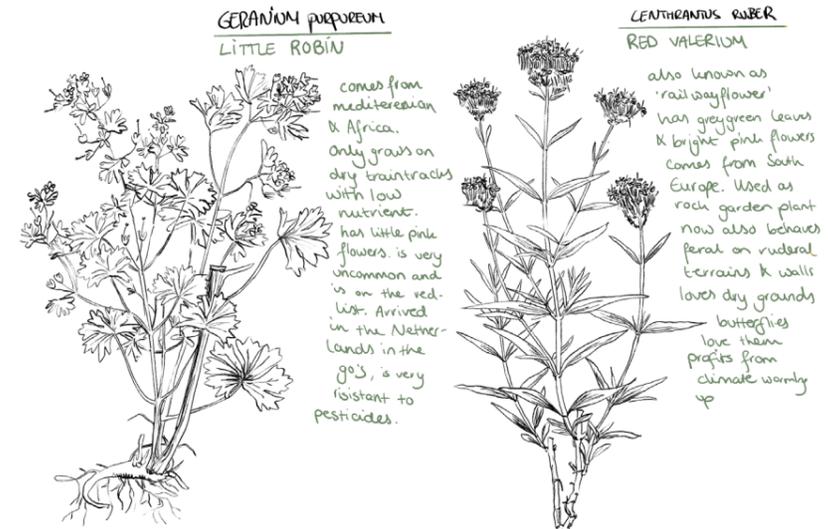
Ruderal species are closely tied to human movement. They follow our trade, our waste, our construction and disturbances. They mirror our own patterns of human occupation and abandonment of space. We call this 'Synanthropic vegetation', plants that live with humans. Ruderal species are a direct example of this. To understand their role, it helps to see these plants not as static elements of nature but as travelers with different relationships to place. Drawing inspiration from Roberta di Cosmo's (2024) typology of 'mediators, guardians, travelers and transporters' in urban insect assemblages.¹ This section proposes categories for ruderal plants in Rotterdam; Voyagers, Drifters, Fugitives and Custodians. Each group represents a distinct mode of arrival, adaptation and interaction with the anthropogenic environments.

Voyagers

These plants arrive from far away. They have crossed seas and borders to get here, often unintentionally carried by ships, containers on trains or ballast sand. Rotterdam's harbor or shunting yards are their main gateway. Seeds are transported in ballast water, in soil attached to machinery or unintentionally in imported materials. Once released, they find habitat in the vast infrastructural terrains of the harbour: pipeline corridors, loading yards, industrial zones and storage grounds. In the zones around the port or shunting yards, where heavy industry and constant groundworks take place the soil is in permanent flux. This creates ideal conditions for these opportunistic pioneers. Species such as *Ambrosia trifida* (giant ragweed), *Senecio inaequidens* (narrow-leaved ragwort), *Lepidium virginicum* (virginia pepperweed) or *Berteroa incana* (hoary alyssum) all came to the Netherlands as seeds hidden in between a cargo of wool, a load of soybeans or as hitchhikers in grain and exemplify these voyagers: cosmopolitan opportunists that thrive where the soil remains in flux.

¹ Roberta di Cosmo, Plot 003 [Project], Waterschool M4H+ / Studio Makkink & Bey, developed with Matilde Patuelli and Raphael Flipo, Rotterdam, 2024

DRIFTER - spreads along highways & railines



VOYAGERS - Carried from far away

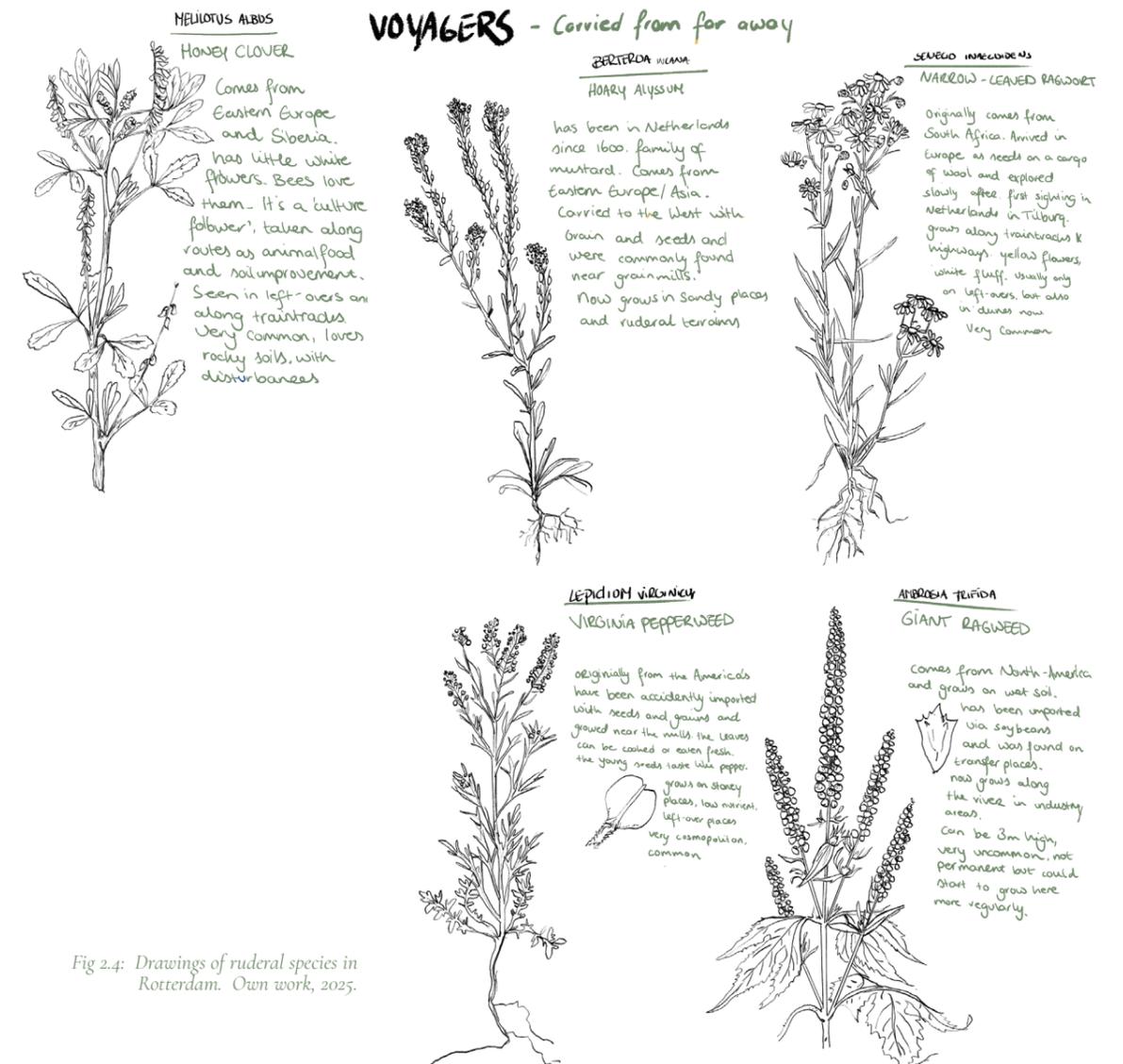


Fig 2.4: Drawings of ruderal species in Rotterdam. Own work, 2025.

Drifters

Move more lightly. They spread along trainlines and highways, enabling the inland spread of many thermophilic species. Their seeds cling to vehicles and trains or settle in the gravel of railway beds, where the heat and dryness resemble warmer climates, ideal for Mediterranean and steppe-origin plants. Through these anthropogenic networks they are able to colonize over a vast terrain moving from city to city. They tolerate dryness, heat, gravel, disturbance and pollution. Examples of drifters are species like *Melilotus albus* (white sweet clover), *Senecio inaequidens* (narrow-leaved ragwort), and *Centranthus ruber* (red valerian) or *Geranium purpureum* (little robin) are characteristic of these environments. Others, such as *Fallopia japonica* (Japanese knotweed) find these corridors an efficient way to expand. According to ProRail, an estimated ten hectares of Japanese knotweed now grows along Dutch train tracks.¹

Fugitives

Another source of ruderal plants are the escapees from domestic and horticultural landscapes. They are plants once imported for their aesthetic or utilitarian purposes and were meant for gardens, agriculture or decoration. Yet they have ‘escaped’ cultivation and have naturalized in wild and semi-wild environments. Many species currently behaving as invasives find their way into our wilderness through the fences of horticultural centres, gardens or planters. They are typically quite extravagant in the way they look, unlike the other categories, but wind up in feral places least expected. Species like *Buddleja davidii* (butterfly bush), *Fallopia japonica* (japanese knotweed), the *Ailanthus altissima* (Tree of heaven) or the *Heracleum mantegazzianum* (giant hogweed).

Custodians

They are the long-term inhabitants of the ruderal realm. They are often native or archeophyte pioneers that stabilize disturbed ground and prepare it for others, originally from forest fires, floods or naturally in the dunes. They persist in disturbed soils and have accompanied human settlements over centuries, and have adapted and entangled with human presence. Their presence provides groundcover, food and structure. Species such as *Urtica dioica* (common nettle), *Plantago lanceolata* (ribwort plantain), *Achillea millefolium* (common yarrow), but also more rare species like *Papaver dubium* (long-headed poppy) and *Origanum vulgare* (wild marjoram). Or even trees like *Salix* (willows) form the connective tissue of the city’s open terrains. They hold the soil together and keep space alive for new arrivals.

Together these four characters describe a dynamic network that moves with human activity. The ruderal landscape is not a fixed ecosystem but a constantly adjusting one, shaped by trade, infrastructure and neglect. Its inhabitants are resilient and responsive, finding ways to persist within the flows of the city, forming ‘novel ecosystems’; communities where the origin of a species matters less than the role it plays.

FUGITIVES - escaped from horticulture



Fig. 2.5: Drawings of ruderal plant species in Rotterdam.. Own work, 2025.

¹ KRO-NCRV Pointer, “ProRail: exotische woekerplanten zijn een risico voor de veiligheid op het spoor,” 21 July 2021

2.2.4 Benefits of Ruderal Ecologies

As discussed in the current chapter, ruderal communities in the Dutch urban district are very diverse and layered. They teach us to read our urban landscape through a lens not of ‘weeds’ but actually as our own anthropogenic shadow. Coming back to the discussion of native and alien, it would be good to highlight that though there rests a very negative connotation on these communities, they do very much have qualities worth mentioning. These communities stabilize soils, produce food and provide crucial ecological and social services in the urban environment. The term ‘weed’ does not always indicate that a plant is totally undesirable. Some researchers even state that ruderal alien communities are responsible for feeding a large part of the urban fauna, as the native flora is simply too far away or unable to adapt.

Professor A. Shapiro (2002) did research on the urban butterfly population in the city Davis, California where the university of California is located. It’s a city with around 60.000 inhabitants with a Mediterranean climate and is surrounded by intense agriculture and a cultivated floodplain. The urban vegetation is dominated by nearly only aliens, with Shapiro estimating that aliens outnumber the natives by 5:1. Its butterfly population of Davis has been extensively researched since the 70’s and is, counting with 32 species, rich. The research concluded that twenty-nine of the 32 butterflies are known to breed at least in part on alien plants, with thirteen not even having any native hosts. ‘Over 40% of the fauna has no known native hosts in the urban–suburban environment. Were certain alien weeds to be eradicated or their abundance greatly reduced, the urban-suburban butterfly fauna would disappear.’¹ It is of course clear that a city in California is not comparable with Rotterdam, but it does give us a good hint about how ecological purism in urban settings is not particularly beneficial or even harmful to its fauna.

Ecological services related to succession on left-over landscapes.

In ecological research ruderal communities are also known as ‘urban spontaneous vegetation’ (USV) and have proved to provide ecosystem services including erosion control, stream or river bank stabilization, excess nutrient absorption (specifically nitrogen in the Netherlands), temperature reduction, provide food and habitat for urban wildlife species, improved air and water quality, sound reduction and even phytoremediation of contaminated soils.² This becomes even more important with climate change changing our environment. But what makes them maybe the most interesting as landscapes is the minimal input of maintenance. Tasks that ordinary urban green spaces would require are not necessary in USV’s like watering, fertilizing, pruning, mowing or planting.. They are able to sustain in a site for years either because of their

¹ Arthur M. Shapiro, “The Californian Urban Butterfly Fauna Is Dependent on Alien Plants,” *Diversity and Distributions* 8, no. 1 (2002): 31

² Peter Del Tredici, “Spontaneous Urban Vegetation: Reflections of Change in a Globalized World,” *Nature and Culture* 5, no. 3 (2010): 308

perenniality or by self-seeding. On top of that, more native species would not be able to sustain in the harsh conditions of the ruderals, making them unmissable.

Many ecosystem services become more prominent the more permanent the vegetation is. However, the diversity in species in left-over spaces is the highest in the first stadium of succession. In case of uninterrupted succession, in particular forestation, the diversity declines. Especially soils with nutrient-low soils harbor the most diverse and special species while also having slow succession of woody species.³ The first stage of left-over ruderal communities usually last for only a few years. In this early phase, bare soil and sand allow a wide variety of truly pioneer ruderal herbs and annuals to establish, creating habitats for birds and insects while stabilizing the soil surfaces. When grasses begin to dominate, the ground will become more covered, the micro-climate stabilizes and organic matter slowly starts to accumulate in the. This lasts usually for about 3 to 10 years depending on the soil type and disturbance. Over time, perennial herbs and ‘zoomplanten’ (fringe species) - which often already struggle to persist in regular urban green - start to grow. This stage can withstand for quite a long time before more woody elements arrive. In dry environments, the betula and black locust, then oaks. Unless very wet and nutrient rich, in that case often a willow forest will emerge.⁴ At this point, the pioneer species have largely disappeared, and the overall biodiversity tends to decline compared to the earlier, more open phases.

Cities nursery

Vacant left-over places in the city with ruderal communities extend the green area of the city significantly.⁵ These places connect many greenspaces in the city with each other, which could be seen as a green corridor in the city in which plants and animals are able to move. However, left-overs are often not permanent, they so to say more create a dynamic patchwork of greenspaces. Because some of these places are not disturbed for a long time, they house many urban fauna here, like bats, foxes and rabbits. They also provide food, not only for insects and animals, also for us humans. Left-over lands host way more edible species than we think, like lamb’s lettuce, wild rocket and especially brambles. This ruderal nature can, just as urban farming practices, play a role in awareness of the origin of our food and nature.⁷

³ Floris Brekelmans & Remko Andeweg, “Stedelijke braak en biodiversiteit,” *GROEN* 32 (2015): 34

⁴ Floris Brekelmans & Remko Andeweg, “Braak: ongeorganiseerde natuurbeleving,” *Stadswerk Magazine* 4 (2013): 9

⁵ Idem p. 11

⁶ See figure ... in chapter 0.2: Rotterdam growing pains

⁷ Floris Brekelmans & Remko Andeweg, “Stedelijke braak en biodiversiteit,” *GROEN* 32 (2015): 36.

2.2.5 Reflection

When looking back at ruderal landscapes from an ecological point of view, their value seems clear. They offer a wide range of ecosystem services, support biodiversity in many stages of succession, and function as crucial places for urban wildlife. Yet despite this, they continue to be perceived as wastegrounds; messy, unkept or simply dangerous. This discrepancy between ecological value and human perception reveals how strong our visual and cultural expectations still guide our understanding and appreciation of nature, especially in the interstitial space.

I think it is clear to state that the problem is not ecological but perceptual. Our discomfort with ruderal landscapes exposes a deeper misunderstanding of what nature should look like. To engage with these places means to question our aesthetic habits and our desire for control. If we are to value the full ecological and social potential of ruderal ecologies, we will need to learn to see their messiness as a form of beauty, a form of resilience and adaptations to our human influence



Fig. 2.6: *Ailanthus Altissima*, one of the most hated invasive trees in the Netherlands. Own work, 2025.

2.3 Aesthetics of the unkept, Flipping the Narrative

The undefined places discussed in the previous chapters have been shown to hold significant social and ecological value. Yet, in conventional aesthetic terms, these places are often perceived as messy, neglected, or uncared for. Ironically, it is precisely the absence of function and maintenance -one of the conditions that enables their ecological richness and social looseness - that causes these spaces to be viewed unfavorably by a broader public. The qualities that generate this value simultaneously trigger rejection, and therefore need to be discussed. This sub-chapter addresses this tension by examining the aesthetics of the unkept and by questioning the dominant perception about them.

Unknown makes unloved

This negative perception of left-over spaces can be explained for multiple intertwined reasons. First of all, these places are often associated with unsafety, as they may attract alternative or marginal communities, lack lighting or have bad vision due to dense vegetation. Second, and more fundamentally, people are not used to the presence of wild or spontaneous nature within the city. This is expected elsewhere, in forests, dunes, meadows, plains, while urban nature is something planned and planted, manicured and controlled.

As a result of this, ruderal vegetation - linked to the city as its growing conditions - tend to fall outside of the accepted aesthetic norms. Their unpredictability and lack of clear intentions are perceived as threats or failures, not as qualities. To be able to access the social and ecological benefits discussed earlier, this is deeply ingrained image of what urban nature should look like has to be reconsidered. This requires a shift away from fixed ideas of control and order, and a flip towards an appreciation of messiness, dynamism and change.

This need for a shift in perception is clearly articulated by urban ecologists Remko Andeweg and Floris Berkelman in their 2015 publication:

“Perhaps the most important reason of our negative association upon the image of left-over is decay, neglect, poverty, sense of unsafety, emptiness, trash. The brackish terrains often give us an unsettling feeling and the flowering Butterfly Bushes, butterflies and chirping grasshoppers don’t seem to be able to counter-set this effect. Even worse, the spontaneous and often opulent growth of the vegetation is often received as a wilderness, seen as uncontrollable, dangerous and hard to manage nature that is primarily seen from an emotional standpoint. This happens almost always in the city. Wilderness can work deterrent, it is estranging and uninviting. Breaking these associations is important for spontaneous nature and left-over lands to get the support they need. This will demand acceptance of the dynamic processes at play and with that the spontaneous changes happening to the landscape inside of the city, meaning letting go of our image of control.”¹

¹ Floris Brekelmans & Remko Andeweg, “Stedelijke braak en biodiversiteit,” GROEN 32 (2015): 35

Their argument makes clear that resistance to messy looking landscapes is not rooted in ecological failure, but in a culturally conditioned emotional response to the perceived disorder. Reframing this therefore is not merely a question of good design or management, but one of aesthetics and perception.

If the aim is to make these places more accessible for the larger public of the city, it is important for us to find a framework through which we can start to value this ‘messy’ aesthetic. We already see this aesthetic represented in other mediums. Photography, film, and art have long explored and celebrated landscapes of abandonment, decay, and ruderal ecology.

In this chapter, such representations are examined through examples including the pre-design High Line in New York by Joel Sternfeld², the film *Stalker* by Andrei Tarkovsky³ and Derek Jarman with ‘modern nature’⁴. In addition, built landscape projects that actively work with an alternative aesthetic, such as *Still Alive by Wagon* landscapes⁵, are discussed. Through these examples the chapter aims to distill strategies for framing and communication the aesthetics of the unkept.

² Joel Sternfeld, ‘Walking The Highline’, (2000)

³ Andrei Tarkovsky, ‘Stalker’ (1979)

⁴ Derek Jarman, ‘Modern Nature: The Journals of Derek Jarman, 1989-1990’ (1992)

⁵ Wagon Landscapes, ‘Still Alive’ (2023)

2.3.1 Messy Aesthetics

When looking at other forms of media engaging with the messy aesthetics of interstitial spaces - often involving ruderal vegetation - a clear cultural trend emerges from the early 2000s onwards. Photography, film, and writing increasingly aestheticise post-industrial and post-urban landscapes, presenting images of abandonment, decay, and spontaneous overgrowth as evocative and beautiful. Messiness is perceived as a mysterious and enchanting atmosphere.

However, this growing presence in visual culture has not translated into a fundamental shift in how messy nature or undefined places are perceived in everyday urban life. One reason for this may be the nature of these encounters. Film, photography, and writing allow viewers to engage with messy landscapes from a distance, without physically entering them. The appreciation remains visual rather than embodied, and while the image of these places becomes attractive, the actual spaces often remain avoided.

The emotional appeal of such landscapes is closely linked to their 'ruinosity'. Abandoned or disused places evoke feelings of nostalgia, curiosity, and wonder, a dynamic that is particularly visible in the photographic genre known as "ruin porn." As discussed by Ryan Madson in the film journal *Offscreen*¹, part of the attraction lies not only in the visual qualities of these sites, but in the act of reaching them. Remote, forbidden, or inaccessible locations gain symbolic value through discovery, while photography or film grants the wider public access to these landscapes without requiring physical presence.

At the same time, this form of representation risks freezing dynamic landscapes into static images. As Madson (also urban planner and architect) points out, post-industrial and post-urban spaces are never empty or still. They are constantly shaped by ecological succession, informal use, and socio-economic transformation. When reduced to images, these places are stripped of their temporal depth and ongoing processes, becoming aesthetic moments rather than lived environments.

Yet this aesthetic framing also holds potential. By circulating images of unkept landscapes, visual culture expands what is considered perceivable and imaginable within the city. As Madson suggests, such landscapes can be read as ruins of the late-modern picturesque. This familiarity can act as a threshold, softening resistance and opening up alternative readings of messiness in urban space.

PRE-DESIGN HIGH LINE

An example of this shift can be found in Joel Sternfeld's photographic series of the New York High Line in the early 2000s, when the elevated freight rail line was still an abandoned piece of post-industrial infrastructure. Sternfeld's images revealed a resilient landscape of steel, rivets, grasses, and self-seeded trees unfolding above the city streets. The juxtaposition of industrial relic and spontaneous nature produced a romantic and emotional reading of the site, making visible a hidden world in plain sight.

¹ Ryan Madson, "Zones: Post-industrial aesthetics and environments after Stalker," *Offscreen* 27, no. 3-4-5 (May 2023),



fig 2.7 Walking the High Line 'Ailanthus Trees, 25th street, May 2000', New York. Photograph by Joel Sternfeld, 2000.



fig 2.8 Walking the High Line 'Track Crossing, April 2000', New York. Photograph by Joel Sternfeld, 2000.

These images circulated widely and altered public perception of the soon to be dismantled abandoned line in the middle of the city, leading to the formation of Friends of the High Line and eventually to the transformation into a public landscape. As Robert Hammond, one of the initiators of Friends of the Highline, later recalled, the initial appeal had little to do with parks: “It was the industrial ruin I was so fascinated by, the steel and the rivets. To imagine a train running through my neighborhood was just so intriguing and exciting.”

Before any formal design intervention took place, the High Line already functioned as a loosely accessible landscape. With traces of informal occupation and use: discarded furniture, broken glass, spray paint cans and makeshift gardens. Ecologically, the site supported a self-seeding ruderal plant community adapted to the harsh conditions of wind, shallow substrates, and neglect.

The transformation from abandoned relict to designed park marked a fundamental shift in character. Although the project references the former railway through retained tracks, linear movement, and a planting design inspired by ruderal vegetation, there is nothing ‘vague’ or ‘loose’ about this place anymore. The vegetation, while appearing wild, is fully designed and maintained, and the former looseness of the site has been replaced by clearly defined paths, safety measures, and opening times. The space is no longer a left-over landscape, but a managed destination. Rather than granting access to an interstitial condition, the project resolves it.

The aesthetic image of vagueness, looseness, and temporality that once captivated people and saved the High Line reveals both the power and the danger of dealing with messy aesthetics: while Sternfeld’s photographs show how framing an unkept landscape can radically shift perception and generate care, the realised project demonstrates how quickly this care can translate into control.



fig 2.9: *Walking the High Line 'Ailanthus Trees, 25th street, May 2000'*, New York. Photograph by Joel Sternfeld, 2000.



fig 2.10: *Walking the High Line 'Track Crossing, April 2000'*, New York. Photograph by Joel Sternfeld, 2000.

STALKER

Where photography merely deals with capturing one moment in time, time-based arts can grapple with the social, political, historical and geographic complexities of post-industrial and post-urban landscapes. A great example of a medium framing this type of landscape would be the film *Stalker* by Andrei Tarkovsky (1979).

Tarkovsky presents us with a subtle while vivid and dynamic abandoned and dystopian post-industrial landscape called 'The Zone'. He poses nature at a very important role in his images, carefully choreographing movements and shots of the protagonists moving through the landscape. The guide warns the visitors "The Zone is a very complex maze of traps. "This seemingly ordinary terrain becomes estranged, as perception shifts from habitual recognition to heightened awareness, pulling what would normally be a passive background into an active foreground.¹ Tarkovsky does this intentionally; "Often we remove nature from films because it seems useless," "We exclude it thinking we are the real protagonists. But we are not the protagonists because we are dependent on nature. We are the result of its evolution. I think to neglect nature, from an emotional and artistic point of view, is a crime".²

Where the images coming from the trend ruin porn present a 'world without us', *Stalker* actually places the spectator and protagonists in the landscape and provokes us with tensions between society and collapse, which disturb us in times of worldwide instability and conflict, climate crisis and pandemics.

While the movie does not elaborate any further on the above mentioned social, political or geographical identities of these landscapes, it does capture us in a certain mystique, mystery or excitement. The Zone is a forbidden world with 'paranormal' activities heavily guarded and not accessible without a guide - The Stalker. It activates the viewer and makes us curious, even though it's 'messy' late-modern aesthetic.

Stalker shows that messy, post-industrial landscapes can gain their power when experienced through time, narrative, and interaction, rather than just as images. It demonstrates that aesthetic and perceptual engagement, not formal design, can also make these spaces meaningful.

¹ Zaš Brezar, "Low-Res Landscape," *Landezine*, March 18, 2025,

² John Gianvito, ed., *Andrei Tarkovsky: Interviews* (Jackson, MS: University Press of Mississippi, 2006), 48. Mast Books



fig 2.11: *Stalker* Film



fig 2.12: *Stalker* Film

MODERN NATURE BY DEREK JARMAN

Derek Jarman's *Modern Nature* provides a real-life complement to cinematic examples like *Stalker*, exploring the aesthetics of pioneer and ruderal vegetation in an unusual, almost apocalyptic setting: his garden at Dungeness, adjacent to a nuclear power station.

Jarman's garden celebrates self-seeding, wild, and unconventional plantings on a site that is industrial, harsh, and otherworldly, yet has generated deep curiosity and attachment within the gardening community, even after his passing. Sentences from the book illustrate how perceiving and narrating a messy or alternative landscape can heighten its value and engagement:

“Dungeness, Dungeness, your beauty is the best, forget the hills and valleys. This landscape is like the face you overlook, the face of an angel with a naughty smile,” and “At first, people thought I was building a garden for magical purposes... it did have magic – the magic of surprise, the treasure hunt.”

Jarman's refusal to fence the garden further demonstrates that such spaces can be experienced without being fully controlled or formalised, retaining their looseness, temporality, and openness.

The garden shows that engagement and meaning can emerge from temporal, personal encounters with a landscape, rather than through carefully curated or managed design. In this way, *Modern Nature* reinforces the chapter's argument that messy, ruderal, and unconventional landscapes can hold aesthetic, social, and emotional value without needing to be formalised.



fig 2.13: Derek Jarman's garden in Dungeness



fig 2.14: Derek Jarman's garden in Dungeness

2.3.2 Reflection

This chapter highlights the tension between the ecological and social value of undefined, messy landscapes and their cultural perception as neglected or undesirable. Across the pre-design High Line, Tarkovsky's *Stalker*, and Derek Jarman's *Modern Nature*, we see that qualities like looseness, temporality, and self-organising vegetation, while generating ecological richness and engagement, are often read as disorder.

These examples also show the power of aesthetic framing. Sternfeld's photographs revealed the hidden beauty of the High Line; *Stalker* immersed viewers in a dynamic post-industrial landscape; and Jarman's garden celebrates wild, ruderal growth without formalisation. In each case, perception and narrative make messy landscapes legible and compelling.

Yet they also reveal limits. The realised High Line demonstrates how quickly care can become control, stabilising and formalising what was once wild and temporal. By contrast, *Stalker* and Jarman preserve openness, unpredictability, and engagement without full management.

Ultimately, valuing unkept urban spaces requires a shift in perception by embracing dynamism, temporality, and messiness and recognising that meaningful engagement and ecological vitality do not require rigid order but rather a framework through which we can experience them.

chapter 3

Accessing the Interstitial Space

In this chapter both theory and precedents are discussed that deal with designing in vague, marginal or undefined spaces, or making them more accessible, in one way or another. From this, a set of tools is distilled, providing answers to how designers can approach the task of designing with the interstitial space.

3.1

Approaches to Design the Interstitial Space

This subchapter is setting a theoretical frame of what has been said and researched about designing with the interstitial qualities. Most of them involve some sense of tools enabling care and understanding.

3.2

Precedents on Accessing Interstitial Qualities

Six very different precedent studies are dissected in their ways of dealing with interstitial qualities, ranging from student projects and private gardens to large scale redevelopment of a disused railway line. A set of tools can be concluded from this subchapter giving future research and design grip on accessing the interstitial space.



Fig 3.1
Maintenance walkway next to highway is totally overgrown with *Petasites hybridus* (Butterbur), Rotterdam. Own Work, 2024

3.1 Designerly Approaches to Design the Interstitial Space

Designing for the interstitial space requires a careful balance between revealing and protecting the qualities that make these places unique. As discussed in Chapter 2, interstitial spaces are often perceived as messy, unsafe or inaccessible, yet they hold strong experiential and ecological value. Designing for the interstitial space requires more than introducing new forms or functions. It demands a sensitivity to processes already unfolding, and an understanding of how people perceive, read and emotionally connect to wild urban environments. Designerly approaches are therefore less about shaping the space itself and more about creating the conditions through which its qualities can be accessed mentally, visually and physically. The following approaches, drawn from landscape theory and contemporary design practice, offer tools for working with rather than against wilderness.

This chapter brings theory and practice together by exploring several designerly approaches that can help make interstitial qualities more legible and inviting, without diminishing their wildness. We look first at “designing with intentional wildness,” drawing from Joan Nassauer’s idea of Cues to Care and from literature that advocates for letting spontaneous processes play a leading role while providing a designed frame. We then turn to the role of aesthetics, considering how beauty and framing can guide attention and support emotional engagement, following thinkers such as Elizabeth Meyer and Maike van Stiphout. A third section explores knowledge and interpretation, including ecological literacy, marginalia aesthetics, and the role of art as a mediator in complex landscapes.

Cues to Care

Joan Nassauer’s concept of Cues to Care offers one of the clearest frameworks for design in landscapes that appear messy or unmanaged. She argues that signs of intentionality, eg. simple, legible gestures such as mown edges, clean paths or small structures help people distinguish ecological wildness from neglect.¹ These cues do not suppress wilderness; rather, they frame it, making ecological processes perceptible and inviting.

The relevance for interstitial spaces is direct. As noted in Chapter 2, these areas often suffer from the perception of being unsafe or abandoned. Andeweg & Brekelmans point out that, despite the widely recognised ecological value of wastelands, their principles are rarely applied in public-space design or management.²

They argue that designers and managers must have “the courage to let go of the idea of a static final image” and allow spontaneous processes to participate- even lead - in the design. Cues to Care align with this approach: they let wildness remain dynamic, while offering just enough clarity to shift the space from “forgotten” to “intentionally left.”

Stewardship

Stewardship is a term that is often used in this debate, also by Naussaur’s Cues to Care theory. It embodies that there are assigned caretakers of the landscape, making sure the place is maintained and cleaned up. But the term goes further than this, it also implies a long-term care for a place, ethical accountability, for people to understand the landscapes dynamic and what it is that it needs to remain as it is or to develop into something else.

Care					
Neatness		Stewardship		Naturalness	
Attractive	Unattractive	Attractive	Unattractive	Attractive	Unattractive
Apparent yard care	Dead or rotten	Good conservation	Poor conservation	Apparent naturalness	Too formal
Fences	Dead or rotten	Conservation	All planted to corn	Development	Too formal
Flowers or shrubs	Lack of yard care	Contour plowing	Effluent from feedlots—poor water quality	blends in	Too much concrete
Home	No flowers	No erosion	Pasture	Habitat	Too open
Landscape	No shade	Pasture	Erodible land	Native vegetation	Bare
Lawn ornaments or architectural details	Not landscaped	Stripcropping	plowed	Natural	Flat
Trees in rows	Messy	Terraces	No conservation practices being used	Trees	Monotonous
Big yard	Cluttered	Windbreak	Pastures are overgrazed	Wildlife	No trees
Clean and neat	Construction going on		Plowing up the hills		
Clean	Junk		Runoff		
Neat	Messy		Slimy looking water		
No junk	Poor care				
Put away	Abandoned				
Good care	Neglected				
Cared for	No house on a farmstead site				
Maintained	Weedy				
Well kept	Weedy				
Mown					
New					
No weeds					
No weeds					
White					

Figure 2. Content Analysis of Descriptive Terms Organized Under the Concept of Landscape Care.

Fig 3.2 From ‘Messy Ecosystems, Orderly Frames’, Joan Nassauer, 1995

1 Joan Iverson Nassauer, “Messy Ecosystems, Orderly Frames,” Landscape Journal 14, no. 2 (1995): 161–170.
 2 Brekelmans, F., and R. Andeweg, “Braak: Ongeorganiseerde natuurbelieving,” Stadswerk Magazine 2013, no. 4 (2013): 8–11.

Aesthetic Framing and the Role of Beauty

Aesthetics play a central role in how landscapes are valued and cared for. Elizabeth Meyer argues that beauty is not superficial, but a form of environmental ethics: when people find a place beautiful, they invest emotionally in it, and emotional investment leads to stewardship.³ In the context of interstitial spaces, beauty does not perse mean tidying or formalising; it might mean revealing, curating and clarifying qualities already present.

Maike van Stiphout’s⁴ concepts of Adorning, Framing and Sharing offer practical tools for this. Adorning introduces minimal, precise elements that heighten attention, Framing makes existing ecologies visible, Sharing supports coexistence with non-human species. By using aesthetic framing, designers help visitors see value in what might otherwise be dismissed as disorder.

Knowlegde, Interpretation and art

Matthew Gandy’s writing on marginalia aesthetics emphasises that aesthetic appreciation grows with ecological knowledge.⁵ Understanding succession, ruderality or seasonal dynamics enriches the experience of urban wilderness. Designers can support this by creating interpretive layers - signs, markers, glimpses into processes - that make the invisible visible. Art operates similarly. In Südgelände, installations act as landmarks. They help visitors navigate complexity and read the site as intentional and meaningful without domesticating it. Art becomes a mediator between the unfamiliar and the familiar; it frames wilderness as something to be explored rather than avoided.

Conclusion

Together, these approaches- Cues to Care, aesthetic framing, ecological knowledge and interpretive or artistic gestures - how how designers can support interstitial spaces without compromising their wildness. Ultimately, these tools enable interstitial spaces to remain dynamic, open and compelling, while becoming accessible and meaningful to a broader public. They help cultivate wonder, curiosity and care: exactly the forms of engagement that sustain such landscapes over time.

3 Elizabeth K. Meyer, “Sustaining Beauty: The Performance of Appearance—A Manifesto in Three Parts,” Journal of Landscape Architecture 3, no. 1 (2008): 6–23.
 4 Maike van Stiphout, Second Guide to Nature Inclusive Design (Amsterdam: Next City, 2023).
 5 Matthew Gandy, “City of Weeds: Tracing the Origins of the Urban Ecological Imaginary,” The MIT Press Reader, February 22, 2022

3.2 Precedents on Accessing Interstitial Qualities

This section examines a set of precedents that, each in their own way, make the overlooked, the abandoned, or the ambiguous more accessible. Although these projects differ in scale, intention, and context—ranging from personal DIY interventions to large-scale memorial landscapes, they share the capacity to reveal interstitial qualities: ruinosity, feral ecologies, the genius loci, spatial conditions, and hidden experiential potential. The selected precedents demonstrate how access to such qualities can be enabled at three levels outlined in this chapter: physical, visual, and mental.

The first example is a small DIY intervention from a group project at the TU Delft, in which a simple bench and path next to a highway opened up a previously unreachable vantage point. By enabling physical access and framing a new view line across a canal, the intervention temporarily activated the site and revealed its spatial value from a previously inaccessible position.

In the Berlin Ruin Garden, interstitial qualities emerge through ruinosity, found materials, and feral plant life. While not a public space, its aesthetic composition reflects the visual language of many interstitial landscapes, decay, pioneer succession, waste or building left overs, demonstrating how ruinosity can be curated as an experiential quality.

The Krater Collective (Tbilisi) illustrates how community involvement can transform closed off, neglected grounds into socially and culturally active sites. By simply opening access, hosting events, and working with local soils and ecologies, the collective activates places that would otherwise remain undefined, generating awareness and shared stewardship.

The Warsaw Uprising Mound offers a different way of accessing interstitial qualities: through intentional design that shapes meaning and readability. Built from the city's rubble, the mound turned a former wasteland into a physically accessible memorial landscape.

At Berlin's Natur-Park Südgelände, access is created through raised boardwalks, managed ruderal succession, and the preservation of industrial remnants. The park uses contrast, the abrupt shift from a designed entrance to wild, unmanaged nature to heighten awareness, while artworks and railyard remnants allow visitors to read the site's layered history.

Finally, the Stalker movement (Italy) demonstrates a radically different approach: accessing interstitial qualities through walking, mapping, and collective presence. Their "transurbant" walks temporarily brought otherwise invisible or inaccessible spaces into public consciousness. Through mental access and social engagement, Stalker made the city's voids part of collective memory without changing them physically.

Together, these precedents show that interstitial qualities can be accessed and amplified in multiple ways. Through physical pathways, curated sight-lines, design interventions, aesthetic framing, community activation, or simply the act of attentive presence.

3.2.1 Wildwijk & Het Land Van Wild - TU Delft elective On Site 2024¹ \Rotterdam

¹. Part of the intervention designed for the On Site studio by student group; Emese Nagy, Ettore Sarti, Frederic de Milliano, Laura Vos, Lotte Wieggers, Luc Waalders, Matteo Lucanto, Menno Poorthuis, Wiebke Stadlander, Yuanjie Wang, Zedi van Oostrom

During the 2024 On-Site elective at TU Delft, supervised by Saskia de Wit and Mónica Veras Morais, a series of temporary interventions was designed and executed for a one-day IABR event. One intervention in particular serves as a compelling example of how minimal means can open interstitial spaces to public experience.

The site consisted of a narrow, inaccessible strip of land between the Rotterdam highway and a canal forced beneath it. A building block along the canal fully blocked entry via land, leaving the area out of reach, overgrown, and effectively unacknowledged. During initial explorations we discovered that many leftover terrains in this district were only reachable from the water; approaching them by boat became a way of entering them as if they were newly discovered fragments of urban wilderness.

The specific location featured a steep vegetated slope and a small flat plateau next to the highway sound barrier. Reaching the top revealed a surprisingly quiet viewpoint: although positioned directly beside traffic moving at 100 km/h and facing a large LED billboard, none of these elements dominated perceptually. Instead, the gaze was drawn outward over the canal and toward the abrupt infrastructural cut where water met highway - an extraordinary viewpoint that very few, if any, people had previously experienced.

The intervention itself was deliberately simple. A floating wooden deck was placed at the underpass to provide access by boat. An orange rope fixed to wooden stakes guided visitors up the steep slope and functioned as a minimal handrail. At the plateau, a suspended wooden bench attached to the highway sound wall invited visitors to sit and take in the unexpected view.

Although the event lasted only a single day, the impact of granting physical access was immediately evident. Participants described the experience as surprising, even revelatory, precisely because such a viewpoint had been hidden in plain sight. After the event, the floating deck, rope, and stakes remained visible for some time, prompting curiosity among passers-by and drawing attention to a location otherwise perceived as ordinary or even irrelevant.

Designerly strategies illustrated by this precedent include:

- Physical access: enabling entry through minimal, non-intrusive structures
- Viewlines: revealing a previously unseen perspective that reframes the site's qualities
- Activation through event: using temporary, low-impact interventions to provoke awareness and engagement without formalising the space.

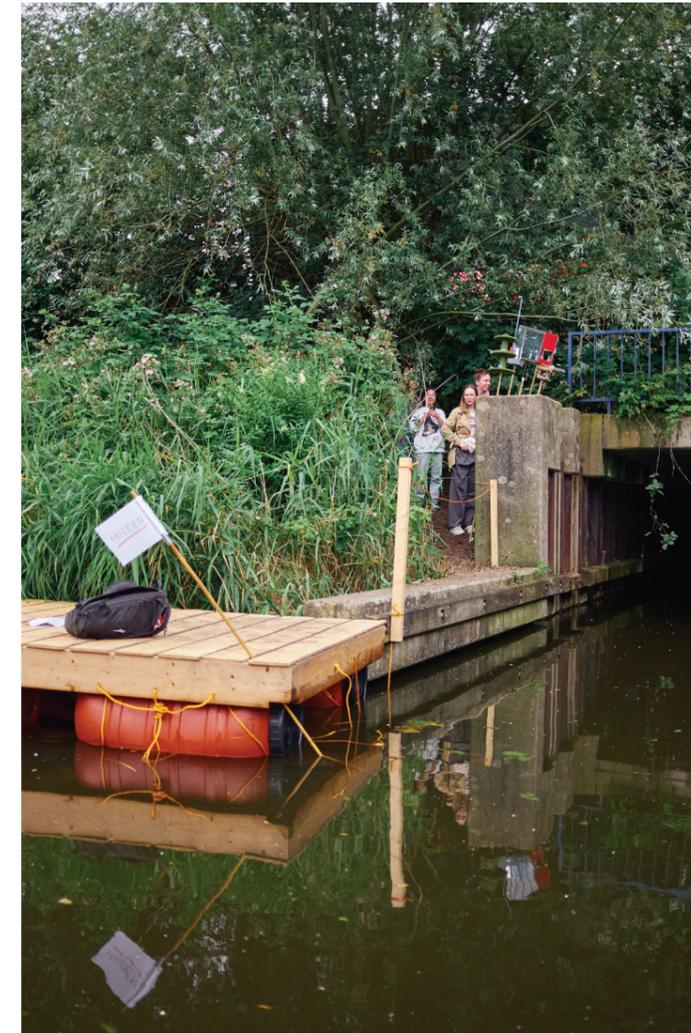


Fig 3.3: Picture taken from project On-Site, woman walking through newly made opening next to highway screen. Own work, Rotterdam. 2024



Fig 3.4: Picture taken from project On-Site, Self made floating docks proving access point to left-over land. Own work, Rotterdam. 2024

Fig 3.5: Picture taken from project On-Site, bench made in between high-way screen to experience view. Own work, Rotterdam. 2024



3.2.2 Berlin Ruin Garden - Tanja Lincke and Anselm Reyle \Berlin

On a neglected plot in Berlin, architect Tanja Lincke and artist Anselm Reyle got a hold of a former GDR water-police boathouse: The building was in a bad state which forced the couple to take it down partly. The site had been left to its own devices since its abandonment, producing the feral landscapes that once characterised Berlin's post-wall 90's voids. By 2008, the ruin was structurally unsafe and required partial demolition. Rather than clearing it away, Lincke chose a surgical removal: carving openings and collapsing segments with marked precision, leaving the ruined walls as a frame for what would become a walled garden.

Incisions were marked onto the walls in advance, dictating exactly what should be demolished and what should stay. The planting scheme blends what was already there: ruderal vegetation, young birches, pioneer shrubs with carefully introduced species. Although Lincke and Reyle wanted to preserve the untamed quality of the site, they found that "real" wildness felt too chaotic. The final composition borrows heavily from Piet Oudolf's style: tall grasses, herbaceous perennials chosen for their seasonal shifts, and clusters of pioneer trees such as oak and beech. Staghorn sumac provides an almost ornamental echo of the famous Berlin 'invasive' Ailanthus.

A diagonal lawn cuts across the ruin, intersecting with blocks of planting that require ongoing, deliberate maintenance to prevent it overtaking the architecture. It is meticulously planned through design and experiment and really goes into the aesthetics of ruderal plants and ruins. And it has a great effect; 'There is a way in which light moves through the ruins over the course of a day, along with the shifting kaleidoscope of the garden's hues over the course of a year – the vibrant greens of the grasses pop against the brick and rust of the ruins in spring, later following their lead and turning copper in autumn' - Architectural Review.

Throughout the site, mounds of salvaged concrete from the former pavement have been arranged as sculptural piles. Some have moss growing on them. The architectural Review calls it ' - folly, even, in every sense of the word - creating ruins in reverse'.

In program, there is non. They realized the power lied in the function-less nature, adaptable for rotating uses, as the site and occupants change over time.

This is relates strongly with the dynamics of interstitial spaces.

Designerly strategies illustrated by this precedent include:

- Perception-shifting through aesthetics: using planting, materiality, and folly ruins to re-frame the value of leftover or derelict sites.
- Working with the genius loci: embracing Berlin's ruderal wasteland aesthetic as a defining design language.
- Structure: reorganizing spontaneous vegetation into legible forms while retaining its feral character.
- Function-less green: maintaining a flexible, program-free environment that supports evolving interpretations and uses.

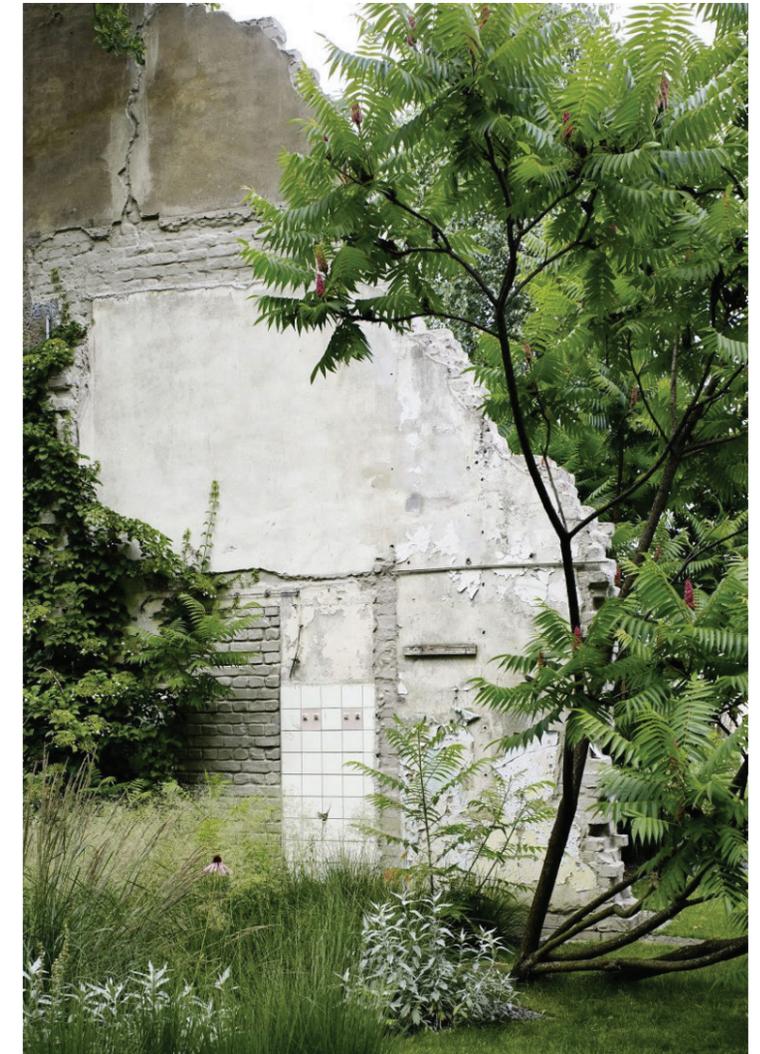


Fig 3.6
Rhus tree, similar to Ailanthus altissima in front of half ruined wall. Foto by Noshe

Fig 3.7
Rhus tree, similar to Ailanthus altissima in front of half ruined wall with concrete slabs. Foto by Noshe



Fig 3.8
Entrance of Berlin Ruin Garden. Foto by Noshe

3.2.3 Krater Kollektiv - Andrej Koruza, Gaja Mežnarić Osole, Danica Sretenović, Amadeja Smrekar, Maša Cvetko, Anamari Hrup, Eva Jera Hanžek \Ljubljana

Krater Kollektiv (Krater collective) is a group of artist, architects, biologists, researchers that work on the intersection of ecology, art, landscape architecture and community engagement. Through their organized workshops, walks, readings, exhibitions and public programs they create opportunities for people to encounter urban wilderness as valuable thing rather than a leftover. They focus on spontaneous ecologies like the plants, soils and organisms that are found in unplanned sites. They are actively focusing on collective stewardship for their urban wilds in Ljubljana.

Their most well-known project, the Krater site, started as an abandoned construction pit on the outskirts of Ljubljana. Instead of redesigning the place, they literally just opened them up for the first time in many years. Interventions such as simple platforms, seating possibility and a hub made the site accessible while available for their explorations and events like their 'creative laboratories' they organize from here. Examples of these laboratories are; making feral cartographies, feral banquets or feral cycling tours.

Designerly strategies illustrated by this precedent include:

- **Community involvement:** Actively involved about the subject while working with community activates care for the land.
- **Physical Access:** Opening up a left-over land to the public.
- **Awareness :** By organizing readings, workshops and by publishing awareness is created about the topic.



Fig 3.9
On-site occupations, events of slow-disturbance: Feral Cartography Cycling Tour. Location: Feral sites of Ljubljana. Danica Sretenović, 2020–2023.



Fig 3.10
On-site occupations, events of slow-disturbance: Feral cartographies of Japanese knotweed & collecting the biomass to produce paper for biennial's reader. Feral plot next to Golovec hill. Ljubljana. Krater Collective 2020–2023. Photo: Amadeja Smrekar



Fig 3.11
On-site occupations, events of slow-disturbance: Feral Cartography Cycling Tour. Location: Feral sites of Ljubljana. Danica Sretenović, 2020–2023.

3.2.4 Stalker / ON-Movement - Francesco Careri, Aldo Innocenzi, Romolo Ottaviani, Giovanna Ripepi, Lorenzo Romito, Valerio Romito \Rome

Stalker is a collective that has been active since the '90's, with architects and researchers from Rome. They founded Osservatorio Nomade (ON) which is a network of artist, architects and urban planners experimenting with self-organized spaces and interventions. Their methods are based on participatory tools like collective walks, oral history sessions and mapping in order to explore the outskirts of their cities; the often neglected and marginal urban spaces, to address urban planning, social and territorial issues.

They engage directly with the spaces by being there and with the people that inhabit them, mostly by organizing walks. By 'bringing the space into being with their events and interventions they make the space mentally accessible and meaningful without actually designing. They use participative tools to construct a 'collective imaginary' for a place and therefore bringing it into existence. They have worked with Roma and gypsy communities, Kurdish migrants, homeless people and other socially marginalised groups.

Stalker's projects demonstrate how marginal spaces can become sites of engagement and care by collective organized events and by responding to their locality and inhabitants.

Designerly strategies illustrated by this precedent include:

- **Engagement with inhabitants:** co-creating interventions with users to catalyse self-organising processes.
- **Research:** using research methodology to explore marginal spaces
- **Awareness :** By organizing participatory co-creative walking sessions they activate and collectively explore left over territories.



Fig 3.12
Stalker movement on-site participatory event.



Fig 3.13
Diagram of left-over spaces, made by Stalker ON movement.

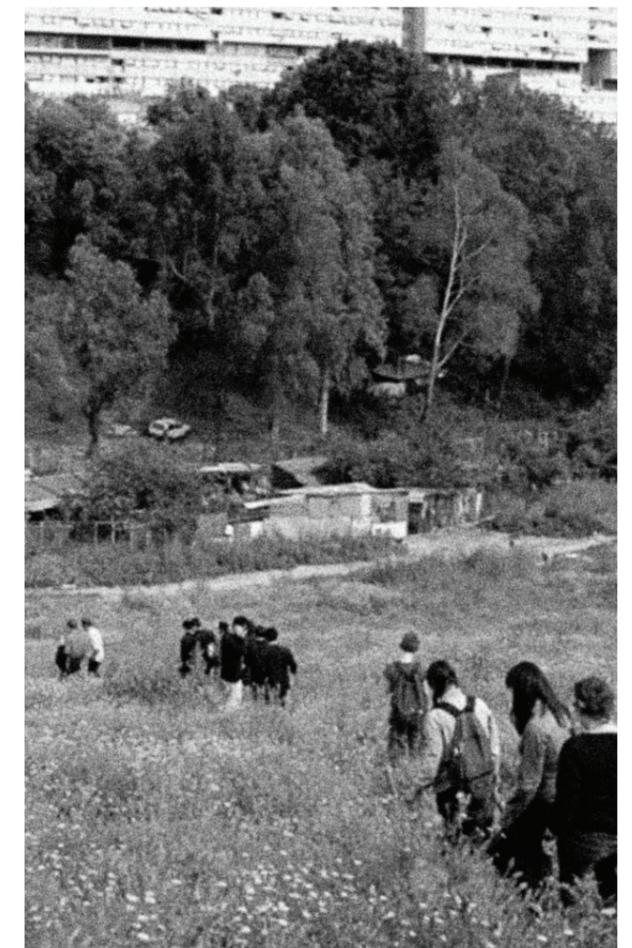


Fig 3.14
Exploring the terrain vague, Stalker NO Movement.

3.2.5 Warsaw Uprising Mound Park

- TopoScape

\Warsaw

The Warsaw Uprising Mound Park transforms an anthropogenic hill of post-WWII rubble into a publicly accessible, multi-functional landscape. As it was decades long a waste hill it was inaccessible to the larger public and totally overgrown with ruderal vegetation and spontaneous plants, leading to a forested hillside. The 2023 design by topoScape retained and strengthened the hill and made it accessible via stairs and walkways. It framed the ruderal vegetation by signs and look-outs. They also reused rubble in multiple ways to create pathways, a artificial ravine, a lapidary and terraces. The park includes ramps, playgrounds and viewing points making it a legible and usable site for all kinds of visitors.

The use of the rubble as aesthetic and archival material gives the site a symbolic dimension, as it is also used as memorial for the Polish resistance in the second world war.

The park demonstrates how physical access, a readable ecosystem and meaning can be combined to make a wasteland accessible, but also very designed. By emphasizing the existing ruderal forest, exposing rubble, and framing the hill as a monumental landscape, the design turns a former wasteland into a space of reflection, recreation, and ecological interest. However it is hard to tell in what degree it has respected its original users and interstitial qualities.

Designerly strategies illustrated by this precedent include:

- Physical access: enabling access to a formerly inaccessible, marginal site.
- Perception through materiality: using rubble and lapidary displays to make history readable
- Ruderal aesthetic: creating meaning and monumental significance through design interventions.

Fig 3.15
One of the retained pieces of rubble from the original site, Warsaw. Toposcape, 2023.



Fig 3.16
The square with rubbleconcrete retaining walls, Warsaw. Toposcape, 2023.



Fig 3.17
The lapidary with rubble from the original site, Warsaw. Toposcape, 2023.



3.2.6 Natur Park Südgelände - Odious \Berlin

Natur-Park Schöneberger Südgelände occupies the former Tempelhof marshalling yard, abandoned in 1952 and gradually reclaimed by ruderal vegetation. Over decades, dry grasslands, pioneer woodlands and dense undergrowth communities developed spontaneously among rusting rails, forming one of Berlin's iconic post-industrial wildernesses. In 1999, after significant efforts by the Berlin community, the site was preserved and designated as a nature reserve, and between 2008–2009 the collective ODIOUS introduced designed it to open the area to the public.

The new access system was key to transforming the site from an inaccessible land into a public landscape. Visitors enter via a mown lawn following a striking yellow portal wall. Old railway lines were converted into routes, and raised steel walkways guide visitors through sensitive ecological zones without disturbing pioneer habitats. Along these routes, relics of railway infrastructure, such as a water tower, rails, engine sheds, a turntable or a preserved steam locomotive, have been kept in place as defining features. Contemporary art installations and sculptural steel structures made from the relics of the railway have been added to activate the encounter between visitors and the site, providing moments of orientation, shelter, and engagement.

These interventions inevitably altered the raw wilderness that once characterised Südgelände. As Ingo Kowarik and Andreas Langer note, the original “railway wilderness” is now shaped by design, maintenance, and artistic objects. For early explorers of the site, this shift is highly perceptible. However, opening up the area, especially through such designed access, has allowed a far broader public to experience forms of urban wildness that would otherwise remain inaccessible or illegible. Kowarik and Langer lean on studies such as Bauer's, demonstrating that such designed access still satisfies a public need for wilderness, enabling a wider audience to appreciate ecological processes previously limited to those willing to trespass or explore marginal terrain.¹

Today the park functions as a hybrid: part nature reserve, part industrial ruin, part open-air art landscape. It provides biodiversity refuge while offering safe circulation, interpretation, and ecological engagement.

Designerly strategies illustrated by this precedent include:

- **Physical access:** converting rails to routes and using elevated walkways to allow entry without disturbing sensitive ecologies.
- **Art:** using sculptural installations from old infrastructure to frame and interpret the site's identity and to give meaning.
- **Guided encounters with site:** by using raised walkways you guide the visitor a clear path, protecting sensitive ecologies and leaving the site intact.
- **Curated ecology:** by preserving selective pioneer vegetations by eg. grazing for ecology and experience.

¹ Ingo Kowarik and Andreas Langer, “Natur-Park Südgelände: Linking Conservation and Recreation in an Abandoned Railyard in Berlin,” in *Wild Urban Woodlands: New Perspectives for Urban Forestry*, ed. Ingo Kowarik and Stefan Körner (Berlin/Heidelberg: Springer-Verlag, 2005), 287–299.



Fig 3.20
Maintenance walkway next to highway is totally overgrown with *Petasites hybridus* (Butterbur). Rotterdam. 2024

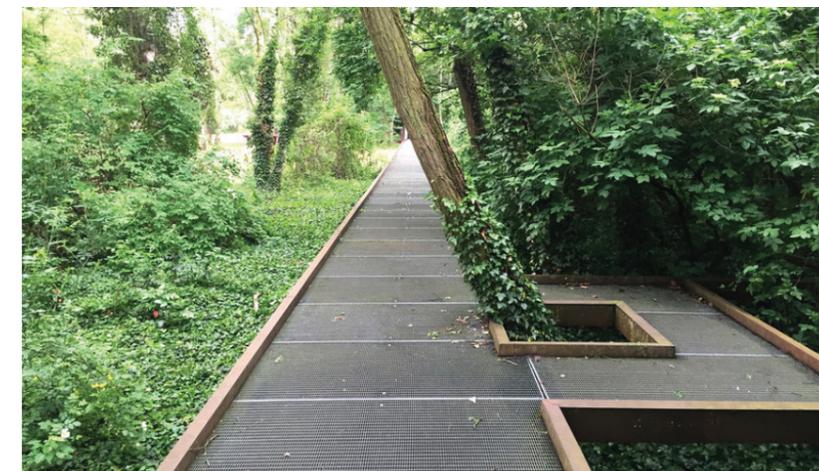


Fig 3.21
Maintenance walkway next to highway is totally overgrown with *Petasites hybridus* (Butterbur). Rotterdam. 2024



Fig 3.22
Maintenance walkway next to highway is totally overgrown with *Petasites hybridus* (Butterbur). Rotterdam. 2024

3.3 Reflection

Across all precedents, a distinct set of designerly strategies emerges, each offering a different way to activate, reveal, or legitimize marginal and interstitial spaces without erasing their informal qualities. Despite their diversity, these strategies consistently revolve around a shared goal: making overlooked spaces accessible, legible, beautiful or meaningful, while preserving their interstitial qualities.

The strategies can be grouped as follows:

- Facilitating Physical Access - Opening up the place through gates, paths, boardwalks
- Creating Meaning and Recognition - Giving spaces social or cultural weight through naming, storytelling, monumental framing, or conservation status, which positions them as places worth caring for.
- Organizing Encounters: - Supporting stewardship, events, walks, workshops, and guided activities that bring bodies into the space and generate new social understandings.
- Art as a Mediator - Using installations and performance to draw attention, spark curiosity, or reveal processes.
- Viewlines - Framing views, lookouts, or curated perspectives to let people see the interstitial from a safe distance or make them visible from outside.
- Design with Ruderal Aesthetics - Letting ruderal or even invasive vegetation, leftovers or waste remain visible, while giving enough structure to orient the visitor.
- Readability - Informal or formal interpretive tools like signs that explain what is happening ecologically or historically.

Taken together, these strategies reveal a pattern. In order to make interstitial spaces accessible, access means more than just getting there. The experience of understanding, knowing and seeing the place through curation by artists, designers and researchers alike is needed to achieve true accessibility. When comparing the precedents and the theory their methods ultimately operate on three intertwined levels of access:

Physical access opens the body to new spatial possibilities. Whether through a bench and path carved into a highway verge, a boardwalk lifted above a rail yard, or a monumental ascent over a mound of rubble, movement becomes a way of encountering what would otherwise remain unreachable.

Physical access makes the interstitial space real: present underfoot, navigable, inhabitable.

Visual access frames what is already there but rarely seen. It shapes how a space is read and understood. Viewlines, framed perspectives, markers, contrasts in design language, or even the curated ruinosity of the Berlin Ruin Garden reorient perception. They make the qualities of a place visible: its feral ecology, its material history, its spatiality. Through visual cues, these spaces become legible for understanding.

Mental access brings the interstitial into collective consciousness. The Stalker movement's walks, the Krater Collective's community activation, or even the act of naming a hidden place all mobilize awareness. These interventions expand the mental map of the city, proving that access does not always require construction, sometimes it is created by a map, stories, or documentation.

As the interstitial networks of Rotterdam continue to shift, shrink, and reappear, the task of design is not to fix them into permanence but to create moments of connection: moments where people can see, reach, understand, and care for these in-between territories. By working with mental, visual, and physical access, designers can evoke wonder without overly formalizing, cultivate care without full control, and open up the city's hidden spaces without closing down their freedom.

Conclusion

This booklet marks the end of the theoretical exploration into interstitial spaces in Rotterdam. With that the beginning of imagining how these spaces might become accessible through possible design interventions, and through helping others see what is already there.

Across the chapters, the central argument has become clear: designing for interstitial spaces is not about fixing or formalizing them, but about creating conditions to encounter them.. By enabling physical entry, making qualities readable, and improving mental recognition, designers can help these abandoned or residual sites become places of wonder, reflection, and engagement, without erasing the ambiguity that makes them meaningful in the first place.

Understanding, here, outweighs intervention. Designing with interstitial spaces often means doing less: working with the genius loci, even when its qualities may be uncomfortable, unpopular, or aesthetically unconventional. They demand that designers reflect on their expectations of order, beauty, and public appeal. Interstitial spaces challenge conventional design logics by resisting formalisation and by exposing the limits of intentionality and planning.

We are entering a relatively uncharted territory. Interstitial spaces are only beginning to receive its proper attention, and existing examples - some now redesigned or formalised into parks - raise further questions. Were these interventions truly engaging with the social and ecological complexity of such spaces, or did they merely repurpose leftover urban land and convert leftover land into easily accessible green? This is research still to be done, and it exposes a persistent tension: designing in unintentionally created spaces is a contradiction in itself. This gap indicates a need for continued

research into how design can meaningfully engage with unintentionally produced spaces, one that demands self-awareness and criticality from the outset. Sometimes the best option is to do nothing.

My hope is that this theoretical work contributes to widening that conversation. By illuminating both the complexity and the qualities of interstitial spaces, I intend this booklet as a call to urbanists, researchers, planners, and landscape architects to broaden their knowledge of complex qualities of city life and nature that happens in the margins. By illuminating the possible design strategies outlined in chapter 3 I hope to inspire designers to take on the challenging act of making the interstitial space accessible.

In the end of this research, access reveals itself as a multilayered condition. It is not just a boardwalk, an explanation sign, or a proper gate. For a space to come into being, it must be experienced. It must be seen, recognised, and thought of. Much of the work ahead lies in shifting perceptions: broadening what we perceive as nature and how diverse this can be, that city life also involves the parts that we are uncomfortable with seeing, but nevertheless deserve a place, and acknowledging that beauty is not universal but cultivated. Beauty really does lie in the eye of the beholder. However, sometimes the beholder simply needs a wider horizon.

Thus this conclusion is not a closure but an opening and an invitation to continue experimenting, observing, and staying with the trouble that interstitial spaces present. The work begins where this booklet ends: in the ongoing practice of paying attention and experimenting.

Fig 3.24
People made their temporal home next to
highway sound wall. Rotterdam. 2024



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Technical University Delft

(Dis)enchantment of the Interstitial Space

