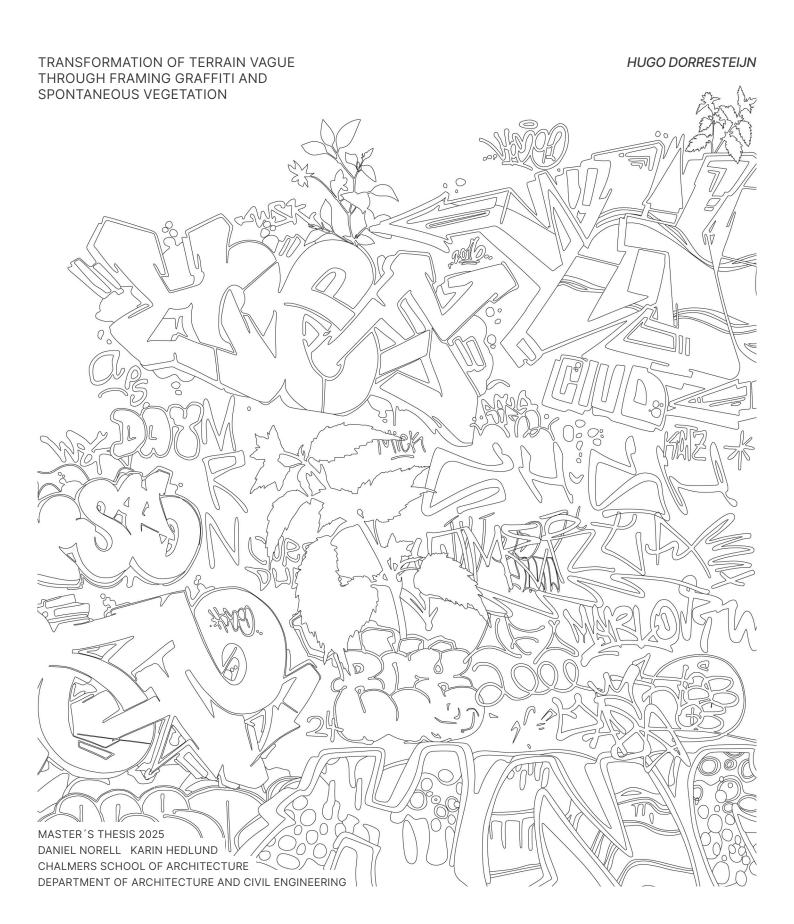
# Rudera



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## Abstract

This thesis investigates the unique phenomena of graffiti and ruderal vegetation occurring in the vacant lots of the post-industrial landscape. Defined by architect Ignasi de Solà-Morales Rubió as terrain vague, these spaces foster an emergence of spontaneous phenomena through their abandonment and neglect, turning our city's wastelands into their wilderness. However, the inevitable redevelopment of these spaces frequently overlooks their role in enabling these phenomena, despite significant social and ecological potential.

This research aimed to compile and develop architecturally focused knowledge on graffiti and ruderal vegetation as an alternative approach to transformation of terrain vague. And through this process, generate architectural design strategies capable of amplifying their potential and shifting their perception within architectural discourse.

The methodology was guided by the research question; how can architectural design transform terrain vague through amplifying graffiti and ruderal vegetation? Observations and architectural documentation of these phenomena throughout Gothenburg's industrial harbor, resulted in a series of spatial principles explaining their relationship with architecture. Key findings reveal how the appearance of graffiti is influenced by accessibility, visibility and surface conditions, while ruderal vegetation responds to disturbance patterns, maintenance and substrate availability.

A review of theory and case studies underscored the importance of communicating intentionality in gaining public acceptance of these phenomena. With findings suggesting this can be achieved through framing them with a formal language symbolizing care or embracing their wildness.

Based on these findings a series of design explorations were generated, culminating in a speculative architectural proposal. The design outcome functions as a framework for user-led adaptation, facilitating and framing spontaneous phenomena in such a way that the proposed space remains functional and attractive.

In developing a design vocabulary for graffiti and ruderal vegetation, this research contributes an alternative approach to terrain vague, providing a basis for future projects navigating this context and the interaction between architecture, graffiti and ruderal vegetation.

**KEYWORDS:** 

GRAFFITI; RUDERAL VEGETATION; TERRAIN VAGUE; POST INDUSTRIAL TRANSFORMATION



### STUDENT INFORMATION

Hugo Dorresteijn is an architectural designer from New Zealand, who graduated with a Bachelor of Architectural Studies in 2022 from Victoria University of Wellington. After gaining practical experience as an architectural intern, he moved to Sweden to pursue a long-held passion for Scandinavian culture and design. His interest in contextually resonant architecture has deepened throughout his Master's studies at Chalmers, particularly in exploring how contemporary architecture can respond in unique ways towards context and how designers can work with nature, rather than against it.

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## Introduction



Fig 1. [57.727, 11.995] Derelict Warehouses Marieholm.

### **BACKGROUND & THEORY**

### THE TERRAIN VAGUE

This thesis departs with a question posed by Architect Ignasi de Solà-Morales Rubió in his speculative essay 'Terrain Vague', "How can architecture act in the terrain vague without becoming an aggressive instrument of power and abstract reason? Undoubtedly through attention to continuity: not the continuity of the planned, efficient, and legitimated city but of the flows, the energies, the rhythms established by the passing of time and the loss of limits." (1995, p.123).

In his essay, Solà-Morales employs the term 'Terrain Vague' to describe the ambiguous and seemingly leftover spaces that occur in the urban environment, such as wastelands, empty lots and industrial ruins (Mariani & Barron, 2013). Despite their negative social perception, Solà-Morales and other advocates of the 'Terrain Vague' describe the vital respite these places provide from dominant spatial practices and social expectations within the conventional urban environment (Díez Medina & Monclús, 2018; Mariani & Barron, 2013). This freedom of possibilities is where the value of the terrain vague lies, it is what allows for subculture and spontaneous phenomena to proliferate.

Given Solà-Morales's position, that a meaningful architectural response to the terrain vague must attend to "the passing of time and the loss of limits" (1995, p.123), the architects focus should be directed toward these spontaneous and subcultural phenomena.

### RUDERAL VEGETATION

The first of these phenomena in focus is ruderal vegetation, the species of plants that first colonize damaged lands and remediate barren soils for the next, performing restorative work both physically and metaphorically (Clément, 2004; Cowles, 2017). Landscape architect Gilles Clément's theory of the third landscape describes how "young, neglected land quickly hosts pioneer species that soon disappear in favour of more stable species until an equilibrium is reached", detailing how with the exception of some areas of climactic extremes and in the absence of human intervention, these neglected spaces will naturally evolve into biodiverse forests (Clément, 2004, p.9).

The potential of these neglected spaces to foster rich ecosystems allows them to serve as alternative habitats for species within the urban environment (Cities and Biodiversity Outlook, 2012; Mariani & Barron, 2013). This is a vitally important role, given the disappearance of many natural habitats as a consequence of human activities, such as, industrial agriculture, forestry and climate change (Naeem et al., 2012; Schröder-Esselbach, 2018). Urban biodiversity not only supports wildlife but also directly benefits human wellbeing through the provision of ecosystem services, including the purification and regulation of the environment, as well as aesthetic and psychological benefits (Schröder-Esselbach, 2018). However, if this biodiversity is not preserved within urban environments, the increasing disconnect may diminish understanding and stewardship of the natural world and its processes (Dunn et al., 2006; Persson & Smith, 2014).



Fig 2. [57.723, 11.978] Abandoned railway Ringögatan.



Fig 3. [57.725, 12.002] Wild vegetation growth along Textilpassagen.

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Fig 4. [57.722, 11.989] Abandoned grain silo Marieholm.

### GRAFFITI

A second phenomenon of interest is graffiti, understood here to encompass the spectrum of typically unregulated and illegal practices ranging from territorial tagging to complex works of street art. While frequently misunderstood and viewed as a sign of dereliction and neglect, graffiti's value lies not only in its aesthetics but in its subversive function (Baldini, 2016). This is because graffiti places art where it is not supposed to be, imposing itself upon the everyday life of the public (McAuliffe & Iveson, 2011). This act of defiance forces us to question how we use public space and exposes us to the diversity of its users (Avramidis & Tsilimpounidi, 2017; Bacharach, 2015).

Graffiti also functions as a marker of human presence. Webb, referring to the early settlers of America carving their names into the rocks they passed, writes, "as far as I can tell they carved their names for much the same reason graffiti writers write their names today, to say 'I was here'' (2023, p.13). As such, graffiti is a marker of the human touch at a particular place and time. It is often employed as a tool for activism and political messaging, and given the absence of regulation, allows for the expression of views and voices that might otherwise be underrepresented (McAuliffe & Iveson, 2011; Verhoeven et al., 2023).

Given its inherent contextuality, graffiti can significantly contribute to place-making and serve as an unregulated form of expression, this important function must be recognized alongside its aesthetic value as an artistic practice. The question remains as to how architecture could facilitate the street artist and graffiti writer, whose capacity is currently dampened by a negative public perception and lack of legal space. For now, it is the unplanned and undesigned conditions of the terrain vague that allow this subcultural practice to flourish.

### TRANSFORMATION OF THE TERRAIN VAGUE

Despite the social and ecological potential of these informal practices, the terrain vague is subject to transformation and development as the city evolves. As Barron notes, "Terrains Vagues are often terminally temporal" and "most likely to be developed into categorizable built space in the future" (Mariani & Barron, 2013, p.2). These circumstances raise the question of how the informal processes of the terrain vague might be incorporated into their eventual transformation, rather than erased (Kamvasinou & Robert, 2013).

The idea of intervening within these spaces in a way that increases their accessibility and cultural and economic value, without compromising on their social and ecological role is an emerging field of design research. It is forced to navigate the negative social perception of these spaces, "The potential social values of terrains vagues are not always readily discernible from the outside, especially given the generally negative associations these areas carry, such as appearing outmoded, uncared for, dirty, and dangerous" (Mariani & Barron, 2013, p.9). This contributes to lack of understanding surrounding how to integrate their essential qualities architecturally.

A few projects showcase the potential of this approach, the most distinguished of which being The Highline in New York City, where an abandoned railway was transformed into an urban nature trail. Its wild appearance was interpreted as a design asset and the resulting transformation indicates the social and ecological potential of this approach to terrain vague. This and other examples will be examined as a part of this investigation.

The limited examples of this approach indicate a lack of architecturally focused knowledge surrounding the conditions that facilitate or inhibit the phenomena of terrain vague. This gap in architectural discourse prompts the central research question for this thesis:

### How can Architectural Design Transform Terrain Vague through Amplifying Graffiti & Ruderal Vegetation?

### SUB-QUESTIONS

- 1. What are the spatial characteristics of graffiti and ruderal vegetation and how are they influenced by architectural conditions?
- 2. How can architectural design shift negative perceptions of terrain vague and its phenomena?

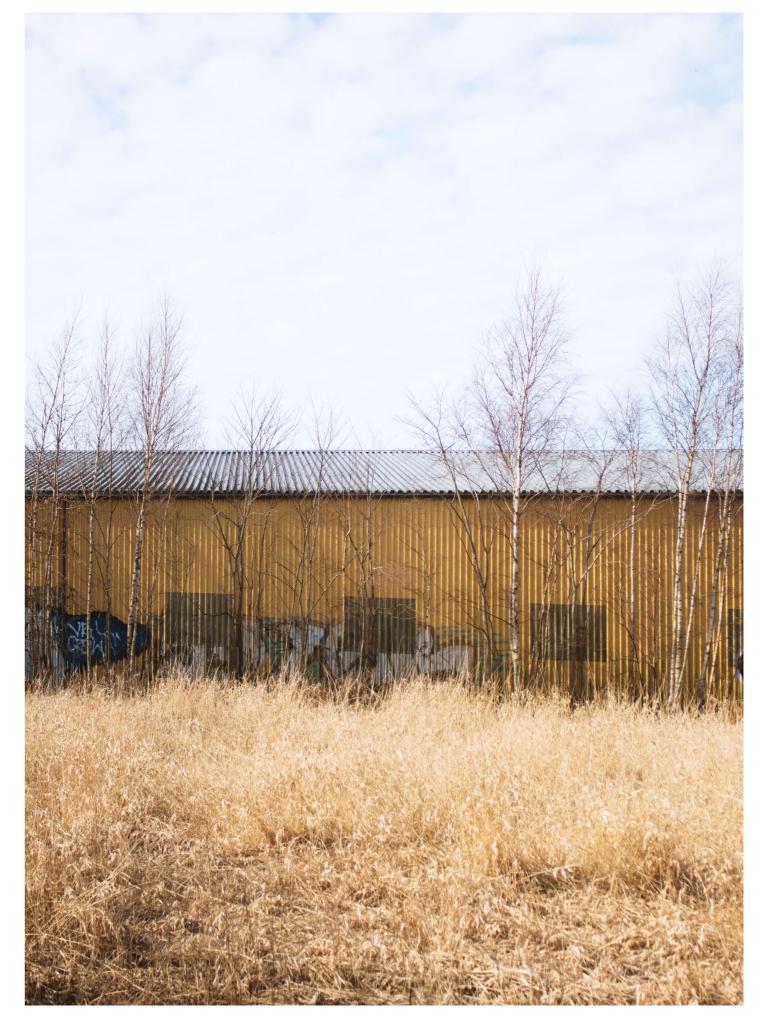
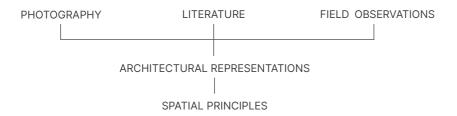


Fig 5. [57.728, 11.951] Vacant Lot Backaplan.

METHOD DIAGRAM

## Documentation→ & Analysis

Investigates the spatial characteristics of graffiti and ruderal vegetation and how they are influenced by architecture.



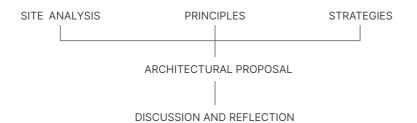
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Explores how architectural design can shift the negative perception of these phenomena and how they can be amplified through architectural design.



### 

Applies principles and strategies within a context specific architectural proposal in order to test and evaluate findings.



### METHOD

To address the research question, this investigation is structured into three phases:

The first phase, documentation and analysis, combines architectural documentation of field observations with relevant insights from literature to understand the spatial characteristics of graffiti and ruderal vegetation as well as the architectural conditions that shape, facilitate or inhibit them. Architectural drawings are constructed through a combination of high-resolution photographs and 3D satellite data.

The second phase, exploration, examines how the negative perception of graffiti and ruderal vegetation might be shifted through architectural design. This is achieved by identifying design strategies within literature and case study analysis. These strategies are then combined with the spatial principles from the previous phase to explore potential design concepts in drawings and diagrams.

The final phase synthesizes principles and design strategies within a speculative architectural proposal on a relevant site in order to evaluate how successfully the aims of the research can be achieved.

### **AIM & DELIMITATIONS**

The objective of this thesis is to compile and develop architecturally focused knowledge on graffiti and ruderal vegetation as an alternative approach to the terrain vague, generating architectural design strategies that amplify their potential and shift their perception in both public and architectural discourse.

Documentation and Analysis is based solely within Gothenburg, Sweden. Economic Considerations of proposed design strategies are not the core focus of this thesis. Extensive research regarding the technical implementation of ecological systems would require the knowledge of landscape architects, ecologists and horticulturalists and is outside the scope of this thesis.

### SELECTION OF METHOD

The methodology was designed to investigate the architectural conditions currently facilitating graffiti and ruderal vegetation as key phenomena of the terrain vague, and how architectural design can shift their negative perception. Combining these insights, design strategies could be proposed that not only amplify these aspects but also shift their negative perception to ensure their general acceptance.

The methodology combines research for design and research by design methods. Review of social, ecological and architectural literature provides theoretical support for personal observations and findings while case study analysis reviews how the aims of this thesis are executed within design practice currently. Architectur-

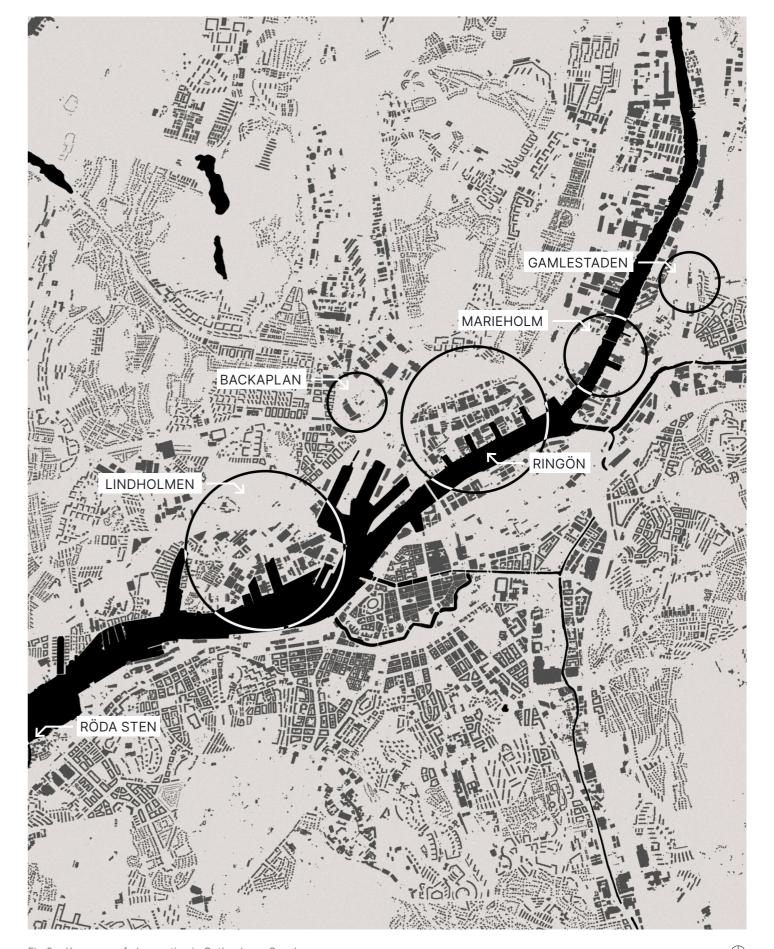
al representation as a means of communicating findings provides the spatial and technical clarity necessary for an architectural audience. Representation of graffiti and ruderal vegetation through architectural convention allows them to be seen as a part of an architect's toolkit, and less as by-products but rather intentionally designed or facilitated elements. Lastly a design proposal is employed to test and evaluate the findings and strategies.

Gothenburg's deindustrializing harbor is a prime setting to facilitate this investigation and situate design explorations. Built on an industrial economy of shipbuilding, manufacturing and trade, Gothenburg has a rich industrial heritage (Enhörning, 2010). However, since the 1970's shipyard crisis Gothenburg has been transitioning from an industrial city to a knowledge and events city, with many previously industrial areas being transformed and re-purposed such as Eriksberg, Lindholmen and Frihamnen (Enhörning, 2010; Holgersson, 2010). This ongoing transformation provides the context upon which the findings of this research can be evaluated and applied to.

# Documentation & Analysis

### FIELD STUDY LOCATIONS

The adjacent map highlights the key areas throughout Gothenburg, Sweden where phenomena were observed. Included alongside photographs and drawings are coordinates [57.727, 11.995], allowing those interested to also explore and observe these phenomena.



 $\label{eq:Fig.1} \mbox{Fig 6.} \quad \mbox{Key areas of observation in Gothenburg, Sweden.}$ 

 $\overline{\phantom{a}}$ 

### **GRAFFITI & STREET ART**

The difference between graffiti and street art is ambiguous and the subject of debate within theoretical art discourse, Bacharach describes the spectrum as "falling somewhere between bona fide institutionally supported public art, on the one hand, and illegal, childish scribbles on private property, on the other" (2015, p.481). Despite blurry definitions and contested positioning within this spectrum, there are defining attributes that describe substantial differences between the two practices.

Graffiti typically consists of highly stylized letters, words or pseudonyms written in spray paint, and is regularly unsolicited and produced illegally (Avramidis & Tsilimpounidi, 2017). Given its illegibility, graffiti's primary audience is other graffiti writers with the marking of territory and gaining notoriety being central motivators behind its creation (Bacharach, 2015; Riggle, 2010). However, graffiti is more than just territorial marking, as Bacharach describes the practice shares a similar institutional structure with other formal artistic communities, describing "a strict set of stylistic features that different kinds of graffiti writing has (tagging, graffiti proper and masterpieces); an unwritten code of conduct around the conditions under which it is appropriate to tag over someone else's works; a close-knit community whose members compete for attention and respect; artists who respond to each other's works and who make works with the intention of presenting them specifically to other members of their community" (2015, p.491).

The difference between street art and graffiti appears to lie in the artwork's intentions and content. While the intent of graffiti is to communicate with other writers, street art is often created to communicate to a wider audience and typically contains symbols and imagery that are more readily understood by the general public, often incorporating political or social messaging (Avramidis & Tsilimpounidi, 2017; Bacharach, 2015). Given its approachability, street art is more likely to be commissioned and permitted as opposed to graffiti (Avramidis & Tsilimpounidi, 2017).

It is perhaps impossible to view these phenomena within binary categories and rather focus on facilitating forms of this practice that contribute positively to urban environments and architectural conditions. The following illustrations depict some of the most commonly observable styles of graffiti, portrayed in elevation to communicate scale in relation to the human form, supporting descriptions are based on classifications from Tretti-Beckles & Vergara-Heidke (2023) and September (2024).

**DOCUMENTATION & ANALYSIS** 

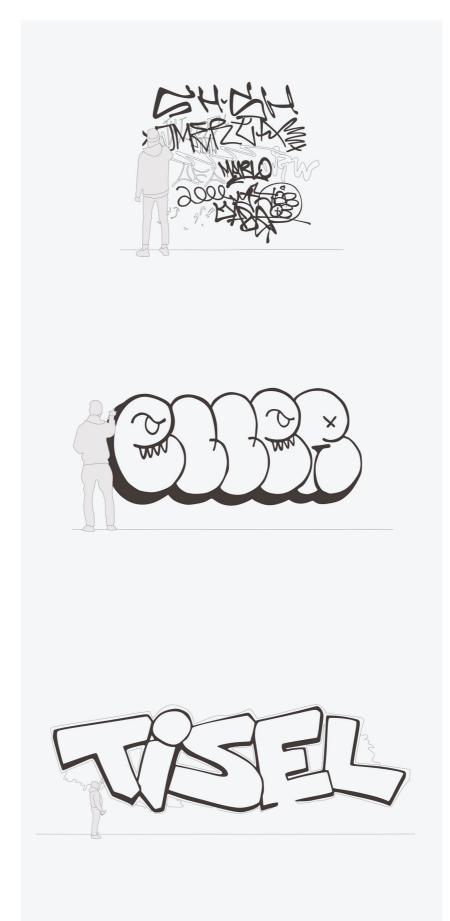


Fig 7. [57.729, 12.005], [57.689, 11.902], [57.735, 12.005] Graffiti Styles

### TAGGING

Tagging is the quickest form of graffiti, typically featuring the writer's signature in a singular line and colour. Their speed and simplicity make the tag an effective means of spreading a writer's influence throughout the city (Bacharach, 2015).

### **THROW UPS**

A step up from a tag, the 'throw up' is a form of graffiti characterized by bubbly or blocky shapes usually painted with two colours. This form of graffiti commands a greater presence than a tag but is still relatively fast to produce.

### **BLOCKBUSTER**

Blockbuster graffiti is an impactful, yet simplistic style intended to cover large areas of a surface quickly, featuring the writer's alias in blocky letters of just two to three colours.





**MASTERPIECES** 

WILDSTYLE
A complex, highly illegible yet captivating style of graffiti characterized by highly dynamic and distorted characters with symbols such as arrows and stars.

An overarching term used to describe works of graffiti that feature greater complexity and

skillful execution. Characters are written in multiple colours and layers with depth and dynamism. These works differ from previous

styles in that notoriety is gained through the expression of artistic skill rather than scale, territory and presence (Bacharach, 2015).



### STREET ART

Street art varies greatly in content but differs from graffiti in that it typically portrays images and symbols rather than words. The meanings of these works are often more discernible to the general public. Street Art can occupy a lot of space and generally requires more time to execute than works of graffiti.



Fig 8. [57.727, 11.995], [57.735, 12.005], [57.689, 11.902] Graffiti Styles

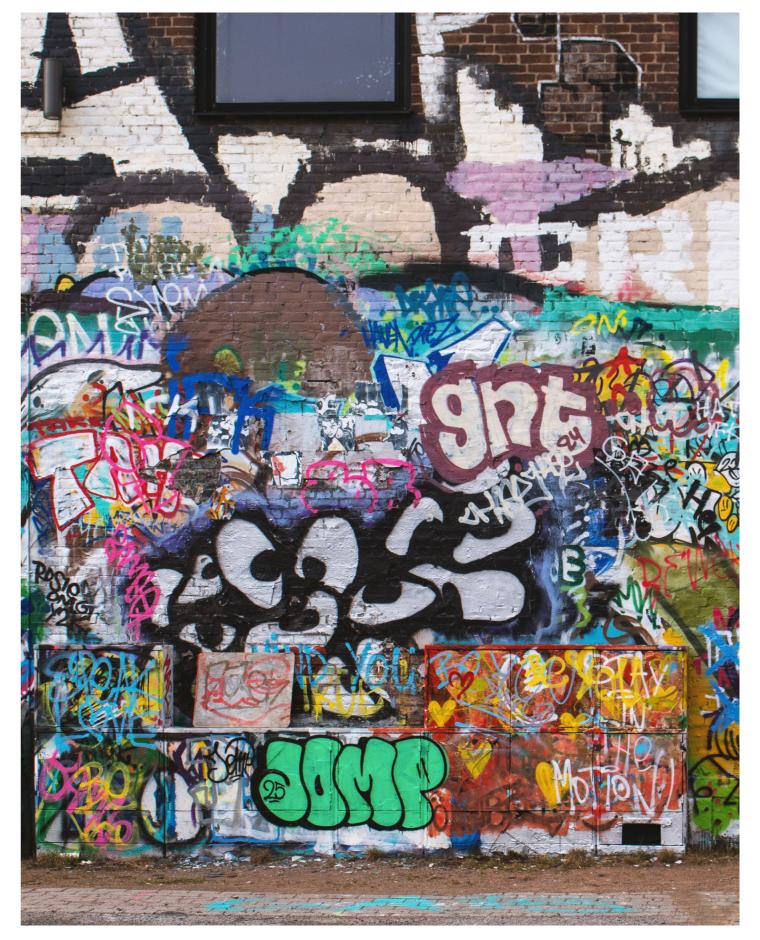


Fig 9. [57.689, 11.902], Graffiti Facade at Röda Sten Konsthall.

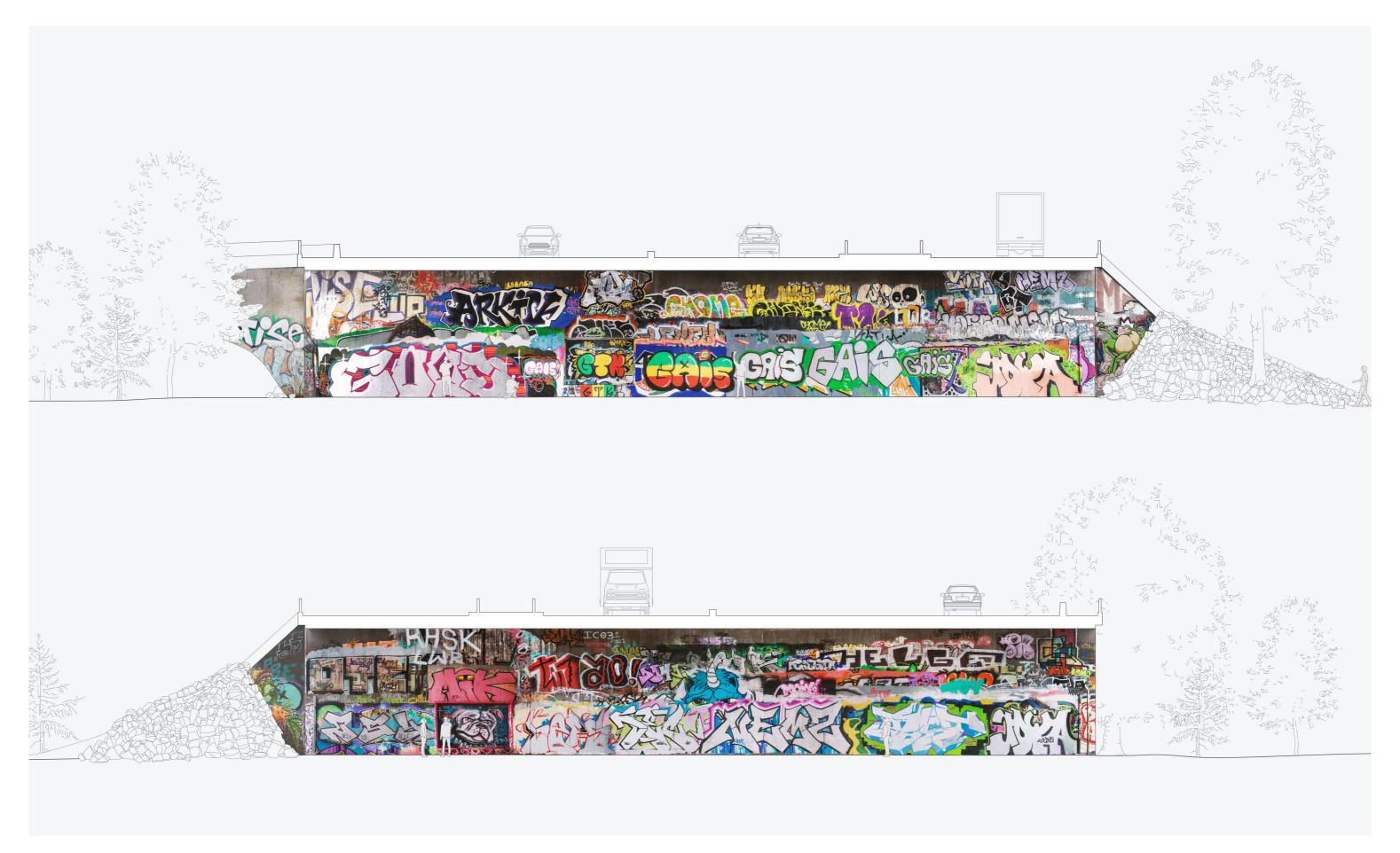


Fig 10. [57.726, 11.980] Sections through Ringögatan tunnel, visualizing graffiti in architectural elevation.

DOCUMENTATION & ANALYSIS

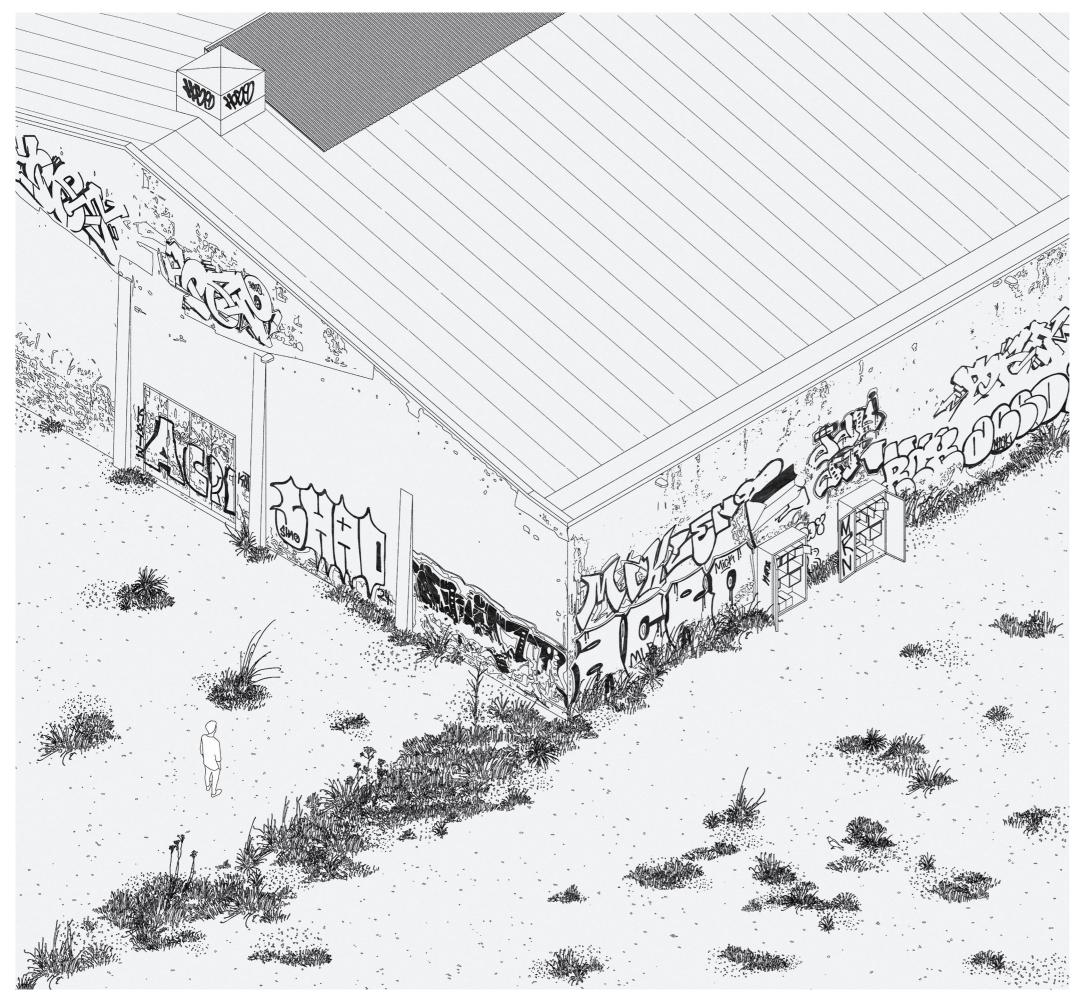


Fig 11. [57.727, 11.995] Isometric of abandoned warehouses in Marieholm.

### VISIBILI

As Riggle writes "a central goal of tagging is to "get up"- graffiti writers want to make their name as visible as possible to as many people as possible, especially to other writers" (2010, p.252). High visibility in relation to architecture means that portions of the facade that are highly visible are preferable. This can mean riskier or harder to access areas, which also makes a writer's work more difficult to write over. Observe in Fig. 11 how graffiti is concentrated around the ground level with the exception of a few pieces near the roof ridge and extraction fan.

### ILLEGALITY

In relation to the spatial expression of graffiti 'illegality' refers to how surveillance affects the quality and characteristics of graffiti produced. Observations across Gothenburg revealed that in locations where writers were less likely to be caught more elaborate graffiti emerged as a result of the artists being able to work undisturbed. Conversely, in locations where with higher degrees of surveillance, lower quality forms of graffiti appeared such as tags and throw ups. Interestingly, the quality of work at the legal walls of Röda Sten (Fig. 9) was substantially lower in comparison to more exclusive and illegal locations, such as the Gamlestaden warehouses or Ringögatan tunnel (Fig. 10). This may be due to competent artists avoiding legal spaces due to the risk of their work being too quickly overwritten. Rather, it seems they prefer to work in areas that are less accessible or unknown to those outside of the subculture.

### **EPHEMERALITY**

Graffiti is ephemeral in nature, often written over, removed or weathering away (Riggle, 2010). This means a graffiti wall is a constantly evolving surface, especially in comparison with that of a commissioned mural. This principle is interconnected with the accessibility of the facade; works of graffiti in highly accessible locations are more likely to be painted over and these sections change more rapidly, while those areas that are less accessible remain more static. Additionally, works of high artistic value such as complex graffiti or street art are less likely to be painted over as it is considered disrespectful within the community to do so. Some works of graffiti can last for many years with other artists actively working around them.

### SCALE & FRAMING

Observe how in Fig. 11 more intricate forms of graffiti are created on the building's facades as opposed to the tagging occurring on the electrical boxes alongside it, suggesting artists prefer larger canvases. Moreover, architecture plays a role here in creating frames, the structure on the exterior of the gable facade is creating divisions which the artists have used to frame individual pieces.



Fig 12. [57.689, 11.902] Fire escape stair, Röda Sten Konsthall.

### **ACCESSIBILITY**

Graffiti appears where writers have access to the architectural surface, which usually means it's concentrated around the ground level. However, certain architectural facilitators such as stairs or ladders open up access to other areas of a structure, shaping where graffiti appears.

Furthermore, observations of different sites where graffiti occurs frequently indicate that it will spread from areas of high concentration to other surfaces, meaning that surrounding structures are likely to become subject to graffiti overtime.

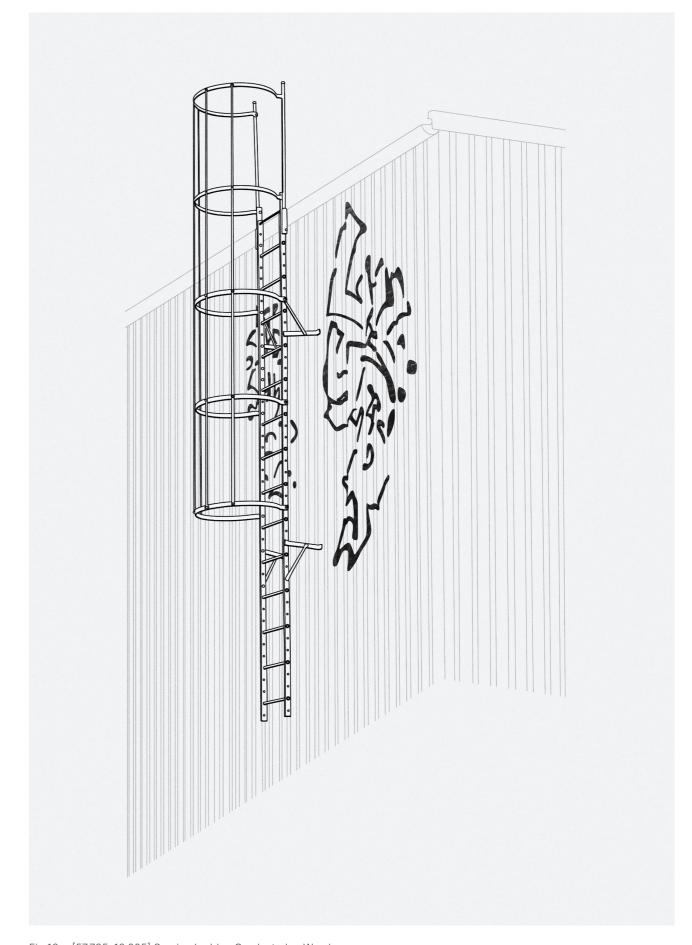


Fig 13. [57.735, 12.005] Service Ladder, Gamlestaden Warehouses.

Fig 14. [57.689, 11.902], [57.688, 11.904], [57.728, 11.995]. Elevations depicting graffiti's relationship to varying surface conditions.

### SURFACE & FORM

Avramidis & Tsilimpounidi describe the "reciprocal relationship" between architecture and graffiti, discussing how architecture "confines and, in a sense, dictates the material and visual result of the writing" (2017, p.4). Indeed, the surface and form of architecture have a direct impact on the characteristics of graffiti produced. Large, flat and vertical surfaces are ideal for the graffiti writer. Graffiti will contort and shrink to fit on irregular or thin surfaces and as a result, it is rare to see higher quality varieties of graffiti on these parts of a structure (Fig. 14, 15 & 16). Another observation is that it appears writers will avoid materials of high quality where a better alternative is present (Fig. 14). Lastly, permeable surfaces with large enough gaps such as chain link fencing or mesh are a considerable deterrent for graffiti (Fig. 14). These observations align with the idea that artists are actively seeking ideal conditions for graffiti given their desire for their work to be seen by others. It makes little sense for a writer to work with unideal conditions if their goals extend beyond mere vandalism.

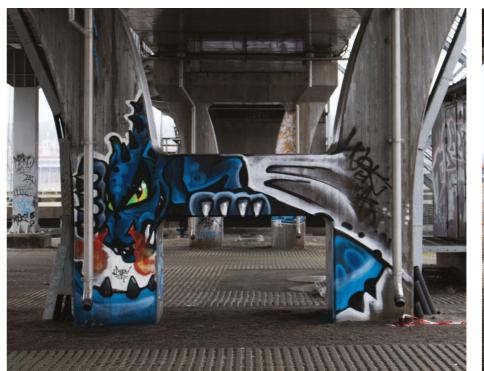




Fig 15&16. [57.728, 11.995]. Graffiti contorting to different forms.

### MATERIALITY

Material choice can greatly impact the visual result of graffiti. Smooth, singular material surfaces such as concrete or metal create a vibrant and uninterrupted appearance of graffiti. Materials that are highly textured such as brick, or those subject to weathering disrupt the appearance of graffiti.

DOCUMENTATION & ANALYSIS

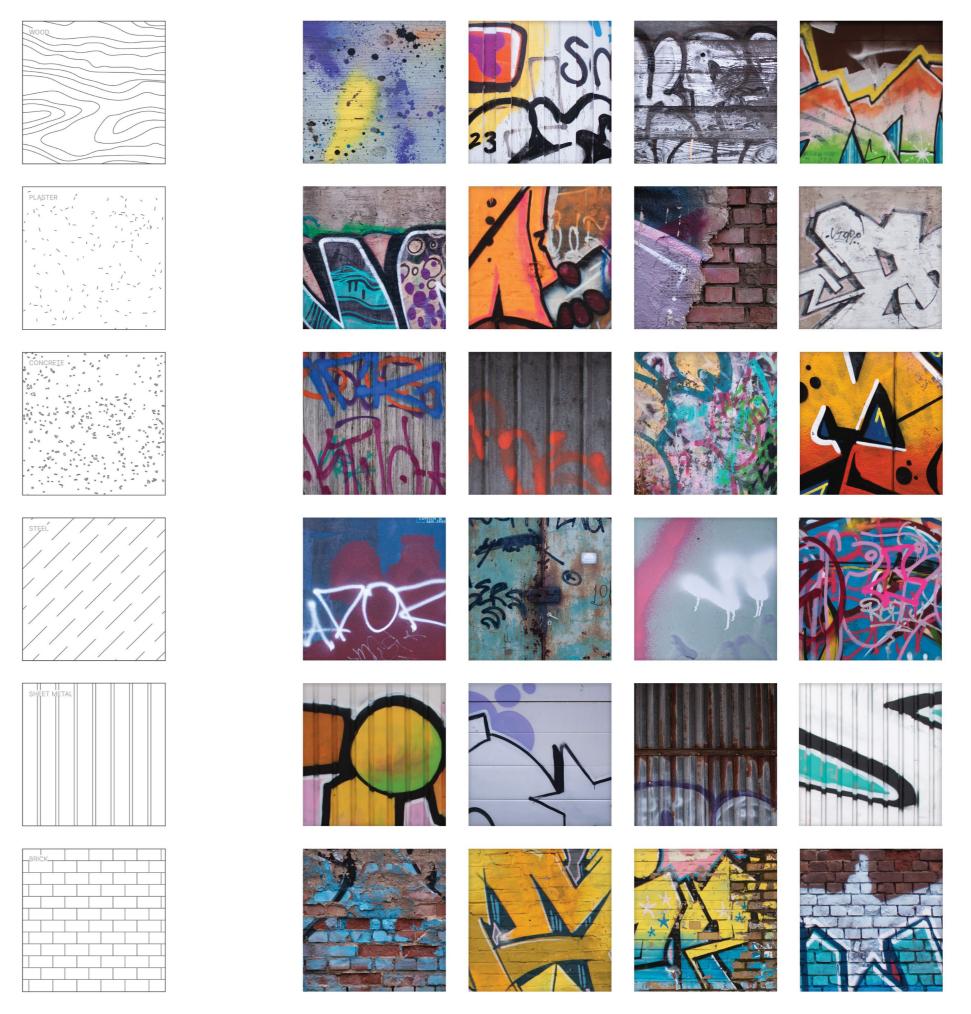


Fig 17. Photographs documenting different material interactions with graffiti.



Fig 18. Selection of ruderal species observed in Gothenburg. 1. Corky-Fruited Water-Dropwort *Oenanthe Pimpinelloides* 2. Goldenrod *Solidago* 3. Burdock *Arctium* 4. Tansy *Tanacetum Vulgare* 5. Common Dandelion *Taraxacum Officinale* 6. Willowherbs *Epilobium* 7. Mugwort *Artemisia Vulgaris* 8. Arrowleaf Clover *Trifolium Vesiculosum* 9. Ragweed *Ambrosia* 10. Northern Dock *Rumex Longifolius* 11. Common Nettle *Urtica Dioica*.

### RUDERAL VEGETATION

Ruderal vegetation describes the initial plant species that colonize degraded landscapes such as wastelands, brownfields and post-industrial ruins. While the term typically refers to species that occur within the initial stages of ecological succession, this research employs 'ruderal vegetation' broadly to describe the ecological phenomena of the terrain vague. This definition aligns with other terms, such as Del Tredici's (2010) "abandoned ruderal landscapes" or Robinson & Lundholm's (2012) "urban spontaneous vegetation".

### THE URBAN ENVIRONMENT

The conditions of the urban environment are significantly different from most natural ecosystems and demand a specific ecological response. Extensive areas of impervious surfaces result in increased storm water runoff, reduced groundwater absorption and reduced evapotranspiration (Schröder-Esselbach & Weber, 2018). These hard surfaces also contribute to the urban heat island effect, causing significantly warmer temperatures compared to surrounding natural areas (Schröder-Esselbach & Weber, 2018; Sieghardt et al., 2005). Additionally, soils are often compacted, degraded and mixed with construction rubble (Del Tredici, 2010; Schröder-Esselbach & Weber, 2018). The conditions of this environment are further strained by high levels of noise, light and air pollution as well as the increased disturbance from human trampling (Schröder-Esselbach & Weber, 2018).

Despite these adverse conditions, ruderal species are well adapted to thrive within the urban environment. Their high tolerance for disturbance, "short life cycle, rapid growth and high rate of reproduction (...) enable them to rapidly colonise degraded sites, exploit available resources, and pave the way for later successional species." (Grime 2006, as cited in, Ranđelović et al., 2024, p.2). The species present in ruderal landscapes typically consist of a mixture of native species from the region, agricultural and horticultural species, and also unintentionally introduced species (Del Tredici, 2010).

### **ECOLOGICAL ROLE**

These species suffer from a negative reputation, often viewed as weeds with little economic value, however, there is growing awareness of their ecological significance within the urban environment (Robinson & Lundholm, 2012). Ruderal vegetation supports the remediation of neglected land through numerous ecosystem services, including phytoremediation of polluted soils, reduction of storm water runoff and balancing urban temperatures (Ranđelović et al., 2024). Additionally, the rich variety of plant species contributes significantly toward urban biodiversity, providing habitats for numerous forms of urban wildlife (Guo et al., 2018; Robinson & Lundholm, 2012).

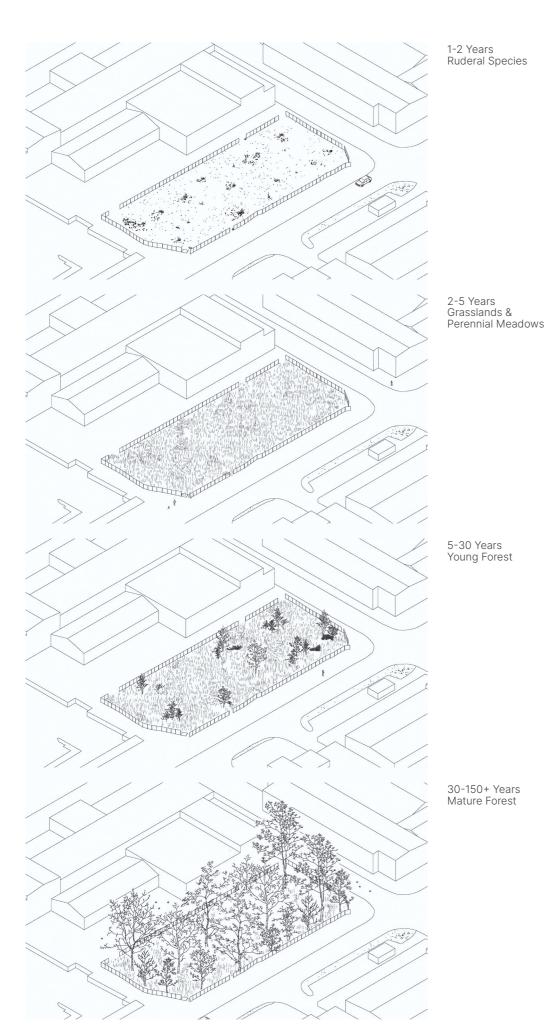


Fig 19. [57.7208, 11.974] Isometric diagram of a brownfield in Ringön, indicating the process of succession based on stages outlined by Grosse-Bächle (2005).

### SUCCESSION

Given the absence of human interference, vacant urban landscapes are subject to the ecological process of succession, whereby initial pioneer plant species remediate degraded soils and establish the necessary conditions for the emergence of later successional species (Clément, 2004; Ranđelović et al., 2024). Eventually a stable, layered ecological structure is established, the equilibrium of a late successional forest (Clément, 2004; Del Tredici, 2010; Keil, 2005).



Fig 20. [57.7208, 11.974] Brownfield in Ringön undergoing early successional rewilding after the recent demolition of a warehouse.

### DISTURBANCE

Disturbance in the form of human or vehicular trampling can be viewed as a spatial principle capable of shaping ruderal vegetation. Where there is frequent disturbance from traffic, typically along circulation routes, vegetation is unable to meaningfully establish itself and the process of ecological succession is interrupted. This suggests that for the process of ecological succession to occur, the designer should carefully plan how humans and traffic interact with the site in terms of high and low disturbance. For instance, the designer could propose where disturbance is intentionally planned to maintain human functionality and where it is avoided to ensure ecological functionality.



Fig 21. [57.729, 11.989] Disturbance based path through a vacant lot near Salsmästaregatan.

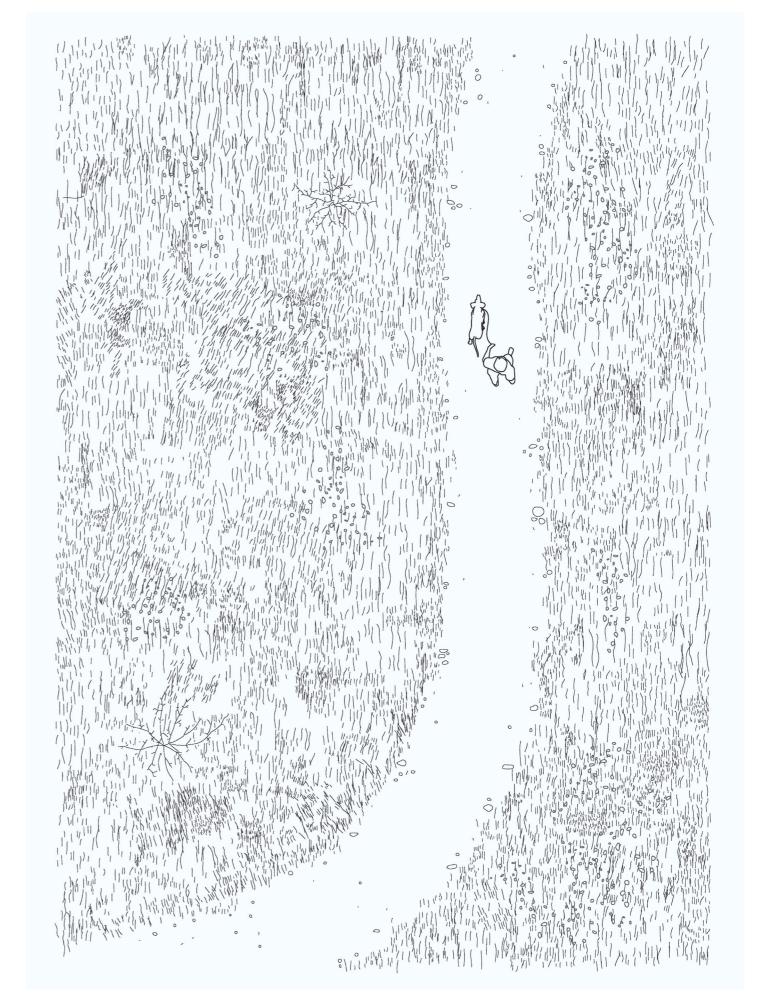


Fig 22. [57.729, 11.989] Plan visualizing a disturbance based pathway through spontaneous vegetation.



Fig 23. [57.730, 12.002] Axonometric of a derelict lot in Gamlestaden indicating how architecture can create difficulty in maintenance allowing for the growth of spontaneous vegetation.

### MAINTENANCE

Ruderal vegetation emerges outside the margins of care, thriving in areas of the city where there is a lack of maintenance. Observations suggest that maintenance is undertaken where it is accessible and where it is deemed necessary. This leaves economically and socially neglected parts of the city and those hard-to-reach places such as fence lines and median strips up for ruderal vegetation to establish itself and flourish (Fig. 23). In contrast, the lawn predominates current expectations for urban vegetation, but it contributes far less towards urban biodiversity and requires frequent and expensive maintenance (Guo et al., 2018).

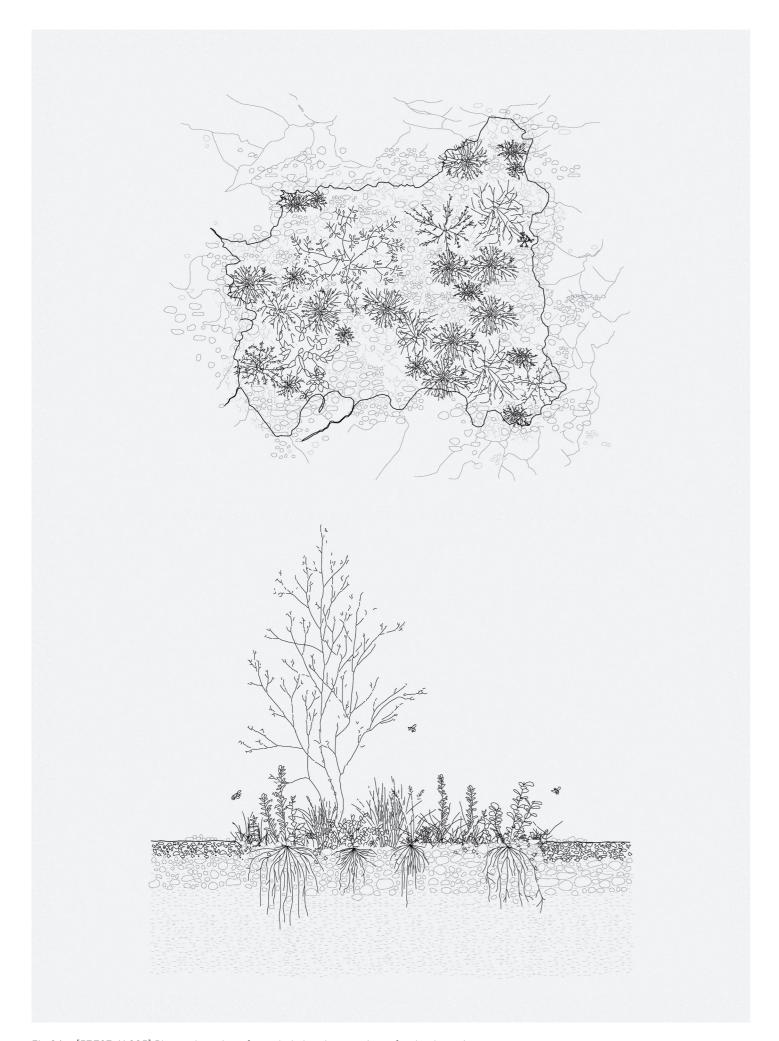


Fig 24. [57.727, 11.995] Plan and section of a pothole hosting a variety of ruderal species.

### SUBSTRATES

A substrate simply refers to the material upon which a plant can grow, functioning as a supplier of water and nutrients, anchoring the plant and protecting its roots from the external environment (Fransson et al., 2017). Throughout Gothenburg's terrain vague, several different substrate situations were observed. The first were cracks, gaps and holes where impermeable ground cover deteriorated enough to expose ground soil and plants were able to establish themselves. Second, were accumulations of permeable ground cover such as rubble or gravel piles where species were able to anchor themselves and start to grow. Lastly, leftover man-made objects where substrate accumulated over time also allowed plants to establish themselves.



Fig 25. [57.727, 11.995] Pothole in the deteriorating asphalt outside abandoned warehouses in Marieholm.



Fig 26. [57.722, 11.989] Moss appears to concentrate and grow along cracks in deteriorating hardscape surfaces.



Fig 27. [57.732, 12.004] Piles of gravel and construction rubble are readily adopted by ruderal species.

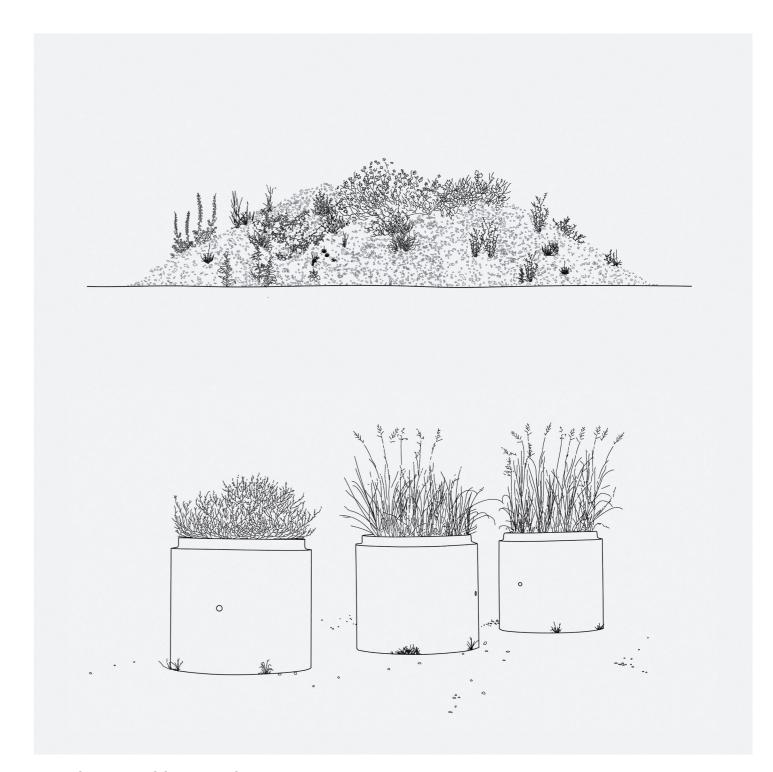


Fig 28. [57.685, 12.000], [57.716, 11.959]. Gravel pile in elevation with ruderal species. Perspective of precast concrete pipes that have accumulated substrate fostering vegetation growth.

# Exploration



Fig 29. [57.727, 11.995] Ruination displaces objects outside of normative social order.

With an understanding of the spatial characteristics and principles that shape graffiti and ruderal vegetation, this section explores how these phenomena of the terrain vague can be successfully integrated into an architectural proposal. The aim is to understand the underlying reason behind their negative perception and investigate how design can both challenge this view and amplify their social and ecological potential. To achieve this, literature and case studies are analysed to identify potential design strategies. These are then combined with the principles from the previous section and explored through conceptual drawings.

### SOCIAL PERCEPTION

Edensor (2005, p.311), argues that "social order is partly maintained by the predictable and regular distribution of objects in space" describing how abandoned places disorder objects, rendering them 'out of place' and disruptive of normative social order. This conflict imposes a negative perception and relationship of dirtiness upon these objects. Gissen (2009, p.150), describes how "nothing is inherently dirty or dirtlike; rather, dirt is a social category that we assign to specific types of social relations." Both authors convey here that our perception of objects is affected by prevailing social expectations of space, rather than their intrinsic qualities. It is these expectations that underlie the negative perception of terrain vague and undesirability of its phenomena, regardless of the social and ecological potential contained within.

Graffiti disrupts the social ordering of space by placing art outside of the gallery and into public space. It is art created without approval, where it wasn't intended to be, and therefore considered vandalism. McAuliffe & Iveson (2011, p.131) write, "those who have advocated for the criminalization of graffiti generally refuse to engage with the important question of what graffiti actually says or looks like – from this perspective, illegal graffiti is just crime, regardless of whether it is beautiful, hateful insightful or dull". The authors describe a binary perception of arts value, one based solely on location rather than one based within its aesthetic or social quality.

Indeed, location affects the perception of plants and nature in a similar manner. The unmanaged growth of vegetation within the urban environment is widely seen as a sign of dereliction and neglect (Del Tredici, 2010). However, where nature is deemed beneficial it is framed as such; "a territory declared a 'reserve' from an administrative point of view is subject to protection, surveillance and sanctions. A roadside or an urban neglected space is not protected. These are places that are usually reduced or eliminated. All are nevertheless biological reserves." (Clément, 2004, p.13). This entirely human categorization of nature dictates whether it's perceived as having value or perceived as being weeds.

Furthermore, this human categorization enforces a divide between humanity and nature. Morton (2012, p.2) describes how the conventional lawn "is a horizontal, privatized version of the concept of nature. In suburban space, the lawn symbolizes the noli me tangere of nature, the performance and preservation of a rigid boundary between the human and nonhuman realms: Keep Off the Grass." Morton implies that our current view of nature pertains to something that is to be controlled, observed, owned and kept separate from human activities. This separatist viewpoint is one that prioritizes neatness and control over ecological functionality and perhaps explains humanity's neglect of the natural world and increasing disconnection from its processes.

### MAINTENANCE AND CARE

Despite the oppression inherent within this spatial ordering, some authors argue that our current expectations derive from a desire for social cohesion. Researcher Joan Nassauer argues that social expectations for neatness and order are "signs of sociable human intention" and that neatness infers "a person has been in a place and returns frequently. It means a place is under the care of a person" (1995, p.162). Nassauer argues that the appearance of a landscape is a reflection upon its owner, and a poorly maintained landscape is a poor reflection on the self (Nassauer, 1995). Furthering this idea, Mattern (2018), describes how maintenance and care bind a community together through shared stewardship over the built environment and its infrastructure.

Therefore, if a cared-for and maintained environment is currently perceived as one where nature is trimmed and poisoned, and graffiti is suppressed and scrubbed away, it raises the question of how these underlying social expectations could shift to accommodate these spontaneous phenomena. In particular, how architecture might be employed as a tool to achieve this, negating any negative aspects, supporting their social and ecological potential and fostering wider acceptance.

### **EXPLORATION & AMBIGUOUS USE**

An initial approach to terrain vague broadly would be to preserve the spontaneity that arises from a lack of any prescribed function or use. It is this freedom from function which enables the proliferation of graffiti and ruderal vegetation in the first instance. Kamvasinou & Roberts (2013, p.188) write, "the power of terrain vague lies in its offer of an alternative space of freedom to usually heavily monitored and commercialized contemporary public spaces." Therefore, a resonant strategy might be for the designer to propose a seemingly unfinished product, a 'framework' of sorts that encourages user led, informal adaptation of the site. Planners might propose flexible multipurpose spaces that lack any rigid function. This strategy would preserve the ability for end users to dictate the space to some degree and of course this adaptation should include those non-human users of the space also. This form of intervention could both facilitate and shape spontaneous processes while also increasing the functionality and accessibility of the original space.

The ambiguity of terrain vague also enables another of its important aspects, the sense of novelty and exploration it permits. As Barron (Mariani & Barron, 2013, p.6) writes, "there are rarely clear paths through terrain vague, the exploration of which is best done with no clear destination or direction in mind". Preserving a sense

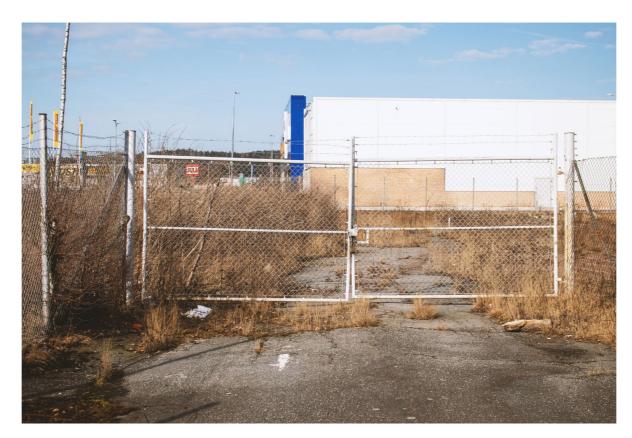


Fig 30. [57.724, 11.958] Despite not being classified as such the vacant lot becomes an unintentional nature reserve

of excitement and unpredictability through architecture could be achieved through a variety of methods. However, the design of circulation and how the space is encouraged to change over time seem to be the most important aspects. Tending to these within a design would ensure varied user experiences each time the space is visited.

### INTENTIONALITY

Communicating that spontaneous phenomena are intentional is crucial for their acceptance within a design proposal. This perception of intentionality can be achieved through balancing and framing these phenomena with recognizable orderly elements. As Nassauer (1995, p.162) notes, "we must design to frame ecological function within a recognizable system of form". She further describes that "when ecological function is framed by cultural language, it is not obliterated or covered up or compromised. It is set up for viewing, so that people can see it in a new way" (lbid, p.163). Nassauer is essentially explaining the importance of spatial symbols as signifiers of human care, and how they must be employed in order for spontaneous vegetation to be accepted by the general public.

Maintenance is one such symbol, although one that fundamentally challenges the presence and ecological viability of spontaneous vegetation. A strategy around this, as Persson and Smith (2014) suggest, is the selective maintenance of key areas of human functionality such as paths, edges and building entrances, this ensures areas of wild vegetation are still seen as managed and under care

Architecture can also communicate care and intentionality through framing devices such as fences, borders and pathways. Henne (2005, p.257) writes, "wilderness can be designed by establishing a visual contrast to a regular pattern or to an object with a regular form. This regular object or pattern, together with the wild vegetation, forms an aesthetic object". This implies that through the creation of an aesthetic object, spontaneous vegetation can be successfully integrated into the built environment.

While these authors refer exclusively to vegetation, the same principles can be applied to other spontaneous phenomena. Plevoets & Cleempoel (2019, p.45) argue that "the aesthetic appreciation of decay can only exist when in contrast with the clean, organized, and conventional environment". This further supports the idea that integrating spontaneous phenomena requires balancing them with spatial symbols of human care. Framing these phenomena through contrast and balance allows for their social perception to radically shift.



Fig 31. [57.720, 11.950] Typical aesthetic expectations for vegetation in the built environment.

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### **CASE STUDIES**

### THE HIGHLINE / NEW YORK, USA / FIELD OPERATIONS & DILLER SCOFIDIO + RENFRO

The Highline is a widely recognized and successful transformation of terrain vague. The designers employed the former railways abandoned and overgrown condition as inspiration for their design proposal and the project engages with the context of the terrain vague in several unique ways. Firstly, the design features few hard boundaries which creates an undefined environment of gradients between paved and green spaces (Cilento, 2009). This decision preserves the sense of ambiguity and spontaneity within terrain vague, while the program of a trail encourages exploration. Barron (2013, p.14) describes trails as "a relatively simple intervention that welcomes diverse users of terrain vague, encouraging looseness and interactivity while avoiding rigid codification". In this approach the highline maintains flexible use while increasing accessibility.

Secondly, the design negotiates the balance between wildness and human perception, down to the level of architectural detail. Rather than contrasting wild vegetation with clear edges, the paving works with fragmented edges, aestheticizing deterioration through architecture. This effectively frames the wild growth of vegetation as intentional and shifts its negative perception.

However, while the Highline's approach to program and vegetation is effective, one might argue the transformation has diminished some spontaneity of the original site. The vegetation while wild in appearance was designed and is regularly maintained. Furthermore, it is possible that original users of the space such as graffiti artists may feel displaced in favor of wider public usage.

### STREETMEKKA / VIBORG, DENMARK / EFFEKT

Streetmekka Viborg is an innovative transformation of an abandoned windmill factory into a cultural hub that amplifies subcultural practices such as graffiti. The project pioneers an architectural program that synergizes with the spontaneity and cultural scene of terrain vague, opening it up to a wider audience and increasing the likelihood of its acceptance through exposure. The facade features a simple translucent polycarbonate shell, effectively balancing the visual intensity of graffiti and the bulk of the original industrial structure. This material lightness shifts the site's impression from one of abandonment and impersonality to one that is open and inviting, importantly adjusting perceptions of terrain vague and the phenomena within. However, the practice of graffiti is limited to an external graffiti wall and a static mural inside the building. A deeper interaction between graffiti and architecture remains to be explored.

### RÖDA STEN KONSTHALL & DRAKEN / GOTHENBURG, SWEDEN

Röda Sten, a former boiler house located underneath Gothenburg's Älvsborg Bridge, was temporarily occupied by graffiti artists before becoming the contemporary art gallery it is today. The building retains extensive graffiti on two of its facades alongside a purpose-built graffiti wall known as Draken. Röda Sten provides a vital example of the interaction, or lack thereof, between graffiti and ar-

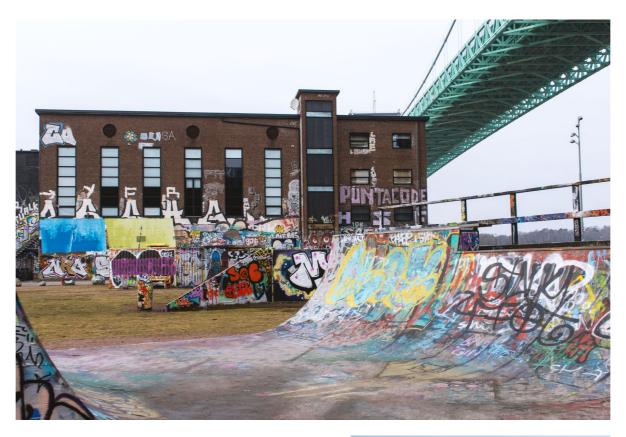


Fig 32. [57.689, 11.902] Röda Sten Konsthall.



Fig 33. [57.689, 11.902] Graffiti wall Draken.

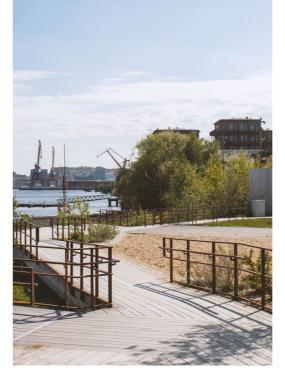


Fig 34. [57.717, 11.956] Shoreline Park in Gothenburg.

chitecture. As graffiti wasn't planned for, the architecture struggles to frame it, and surrounding structures are subject to heavy tagging. There is little visual relief from the graffiti, only where black paint is applied to maintain the building's other two facades. While this creates a wild, disruptive aesthetic, it diminishes from other aspects of the context. If this is a consequence of permitting graffiti, that it will consume everything else, it is not surprising the practice is subject to questionable acceptance by the general public. It raises the question as to how this visual relief could be designed rather than achieved through frequent maintenance.

Furthermore, as previously mentioned the highly accessible graffiti walls at Röda Sten didn't feature as many examples of high-quality Graffiti in comparison with those more exclusive or hidden locations. This suggests a design strategy working with graffiti walls for both experienced and non-experienced artists to encourage high quality works.

### KALASATAMA ELECTRICITY SUBSTATION / HELSINKI, FINLAND / VIRKKUNEN & CO ARCHITECTS

Kalasatama power station is a unique example of a project where graffiti was intentionally integrated from the building's conception, rather than a mere byproduct. The designers incorporated a three-metre-high wall of anodized aluminum panels specifically for graffiti writers to paint on. This wall is framed by the second portion of the facade, a light mesh, creating a sharp edge and contrast, as opposed to the spread of graffiti observed on the walls of Röda Sten for instance. As previously mentioned, employing a clean edge or a frame effectively communicates the intentionality of graffiti. Furthermore, the architects describe how this graffiti wall engages the general public with the otherwise uninviting function of a power station. This is interesting, as graffiti already frequently appears on the most imposing and non-human oriented structures, yet here this relationship is encouraged as a way of engaging people without direct involvement in a building's program.

### SHORELINE PARK / GOTHENBURG, SWEDEN / ATELIER LE BALTO & MARELD

Shoreline Park is highly relevant to this research, as an example of terrain vague transformation within the specific circumstances of Gothenburg. The designers amplified the growth of vegetation by adding substrate mounds and altering the industrial shoreline, creating greater opportunities for both planned and spontaneous vegetation. The parks design closely aligns with the environment of terrain vague, incorporating existing urban biodiversity, low maintenance and working with the natural succession of vegetation overtime. To frame this intentionally wild appearance the designers worked with a variety of edges: some areas are bordered by clean architectural edges using materials that reflect the sites industrial past, such as weathered steel, concrete, stone and asphalt; other areas embrace a wilder aesthetic with stick fences and soft gravel edges. While the park doesn't lean into the aesthetic of decay or deterioration as strongly as the Highline it nevertheless presents a strong approach to transformation within terrain vague.

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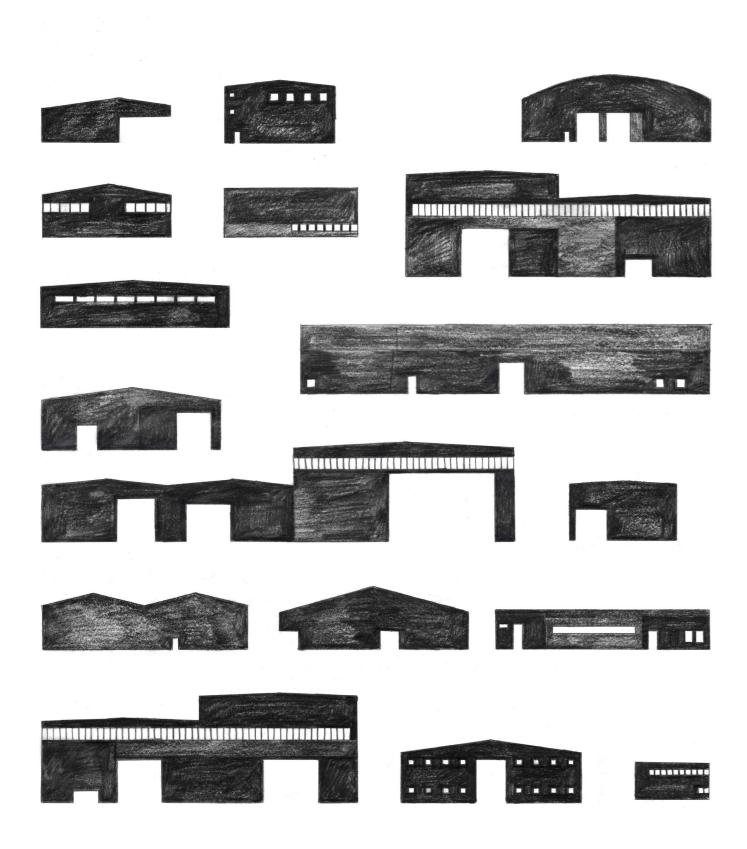
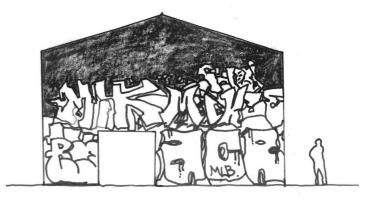
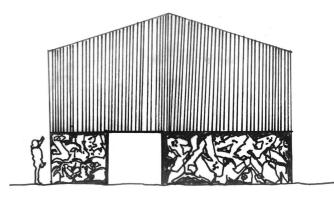


Fig 35. Facade Study. Terrain vague is frequently host to the industrial vernacular, Its almost windowless blank facades yield large horizontal spaces serving as the perfect canvases for graffiti.



[1]



[2]

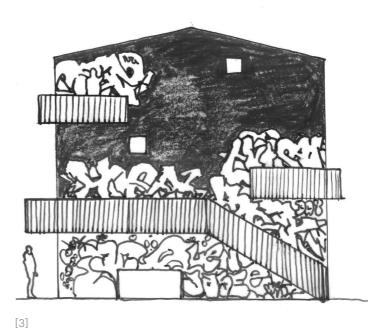
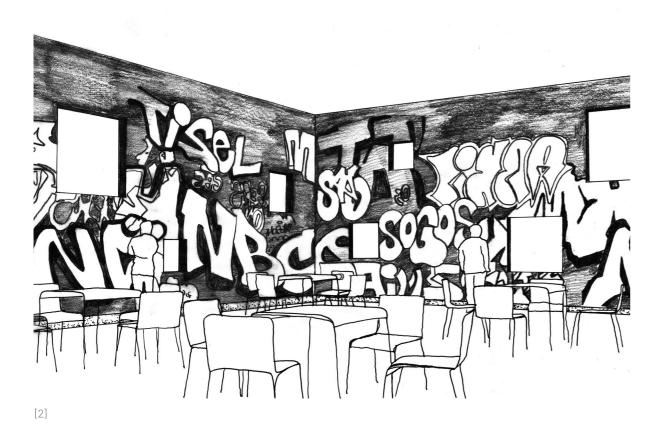


Fig 36. 1. The typical layered and rough edge of graffiti on a facade, almost growing over the facade in appearance. 2. Exploring how a sharp edge can be created through adding a secondary mesh layer, and how openings create individual frames on the facade. 3. Through adding exterior access to the facade the architect can dictate where graffiti will appear.







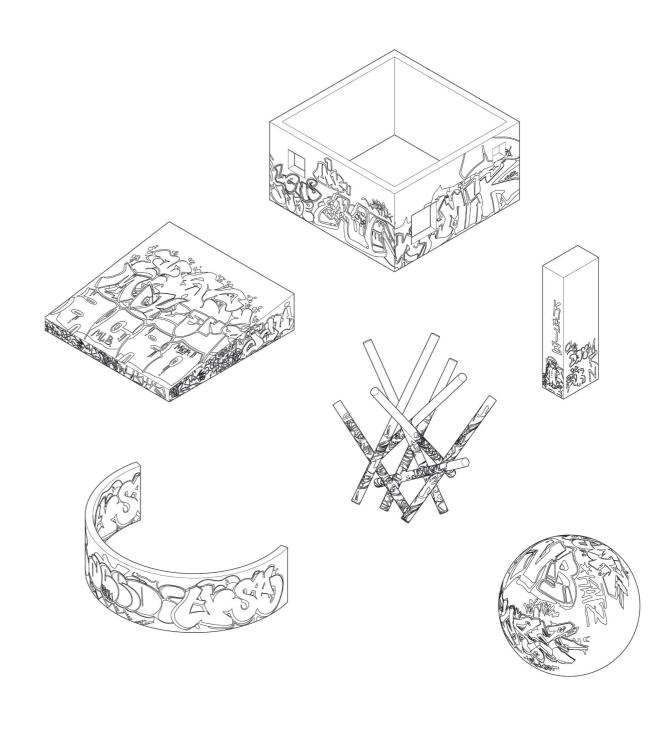
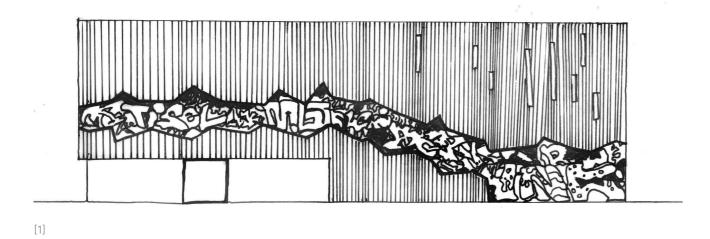


Fig 38. Explorations of the interplay between graffiti and different surface conditions. Typical large flat surfaces appear to uphold the highest quality of graffiti, but smaller confined surfaces could be used to express less complex forms of graffiti such as tagging.



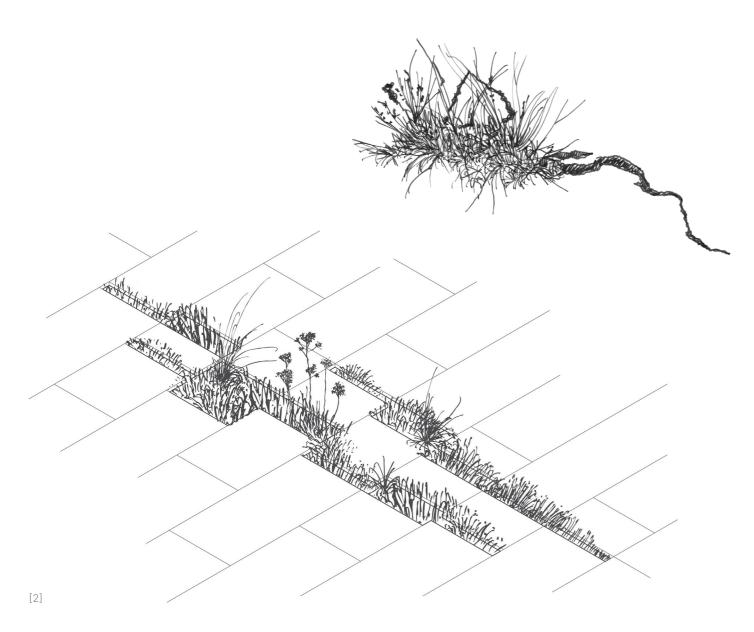


Fig 39. 1. Framing graffiti with a mesh edge that resembles a crack may communicate intentionality through leaning into an aestheticization of decay. 2. Evoking the form of a crack architecturally can frame spontaneous growth as intentional.

**EXPLORATION** 

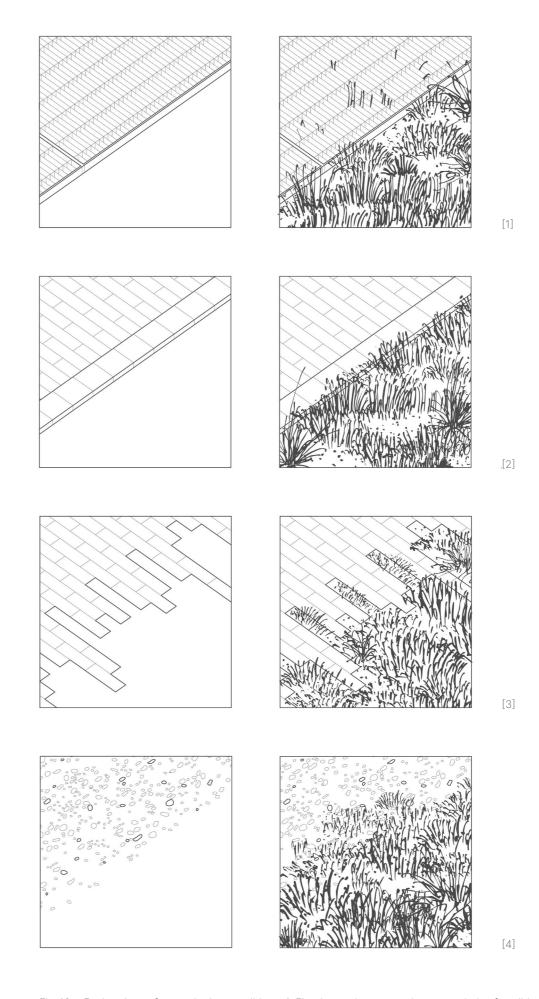


Fig 40. Explorations of several edge conditions. 1. Floating paths may work as a symbols of a wilderness reserve, communicating the value of nature 2. Hard architectural edges are confronted with a risk, that without frequent maintenance they may appear overgrown and messy. [3] Edges that lean into symbols of decay are able to effectively communicate intentionality of spontaneous growth. [4] Soft substrate edges create a rough edge through disturbance based maintenance.

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# Design Proposal



Fig 41. Exterior Perspective

# Fig 42. Location Plan. Ringön, Gothenburg, Sweden.

### SITE SELECTION

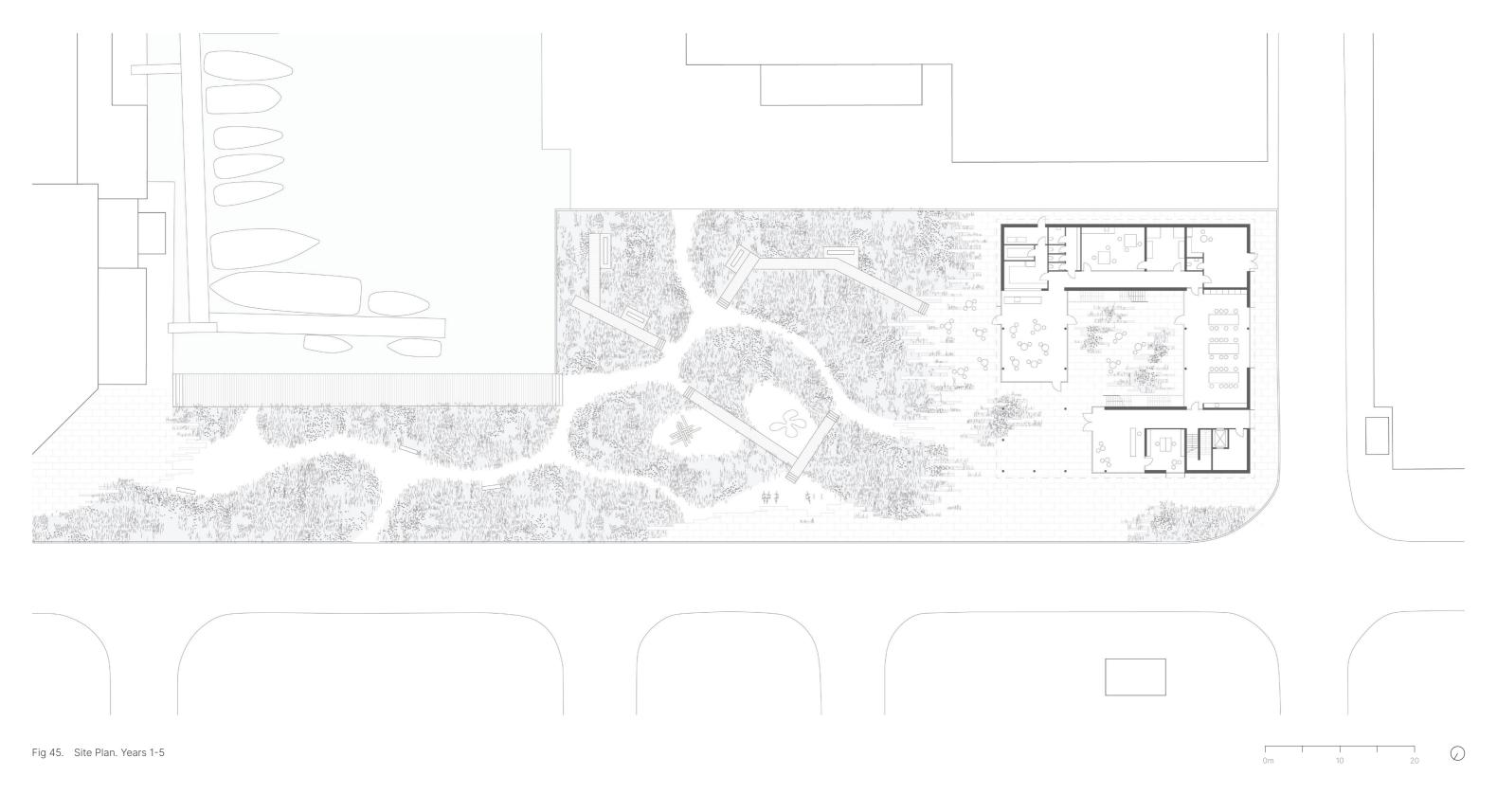
The site selected for the design proposal is a vacant brownfield on Järnmalmsgatan in Ringön, previously occupied by a recently demolished warehouse. Situated in the heart of Ringön the site presents an opportunity for a design proposal which embodies the areas postindustrial transformation and emerging creative culture. Graffiti and spontaneous vegetation are already commonplace in Ringön, indicating that a proposal of this nature would resonate with the area and its current occupants. Additionally, the site lies at the culmination of a potential urban green corridor for Ringön. This corridor could follow the abandoned railway tracks within Ringön and connect the site with Ringögatan Tunnel (Fig 10). At this urban scale, a green corridor would ensure habitat connectivity throughout the area, an essential component of improving urban biodiversity within Ringön, while also connecting multiple local businesses and hotspot locations for graffiti.





Fig 43&44. [57.7208, 11.974] Vacant brownfield selected for the design proposal.

- Buildings
- Göta älv River
- □ Ringögatan Tunnel
- Green Corridor
- Design Proposal



### SITE PLAN

and interactivity.

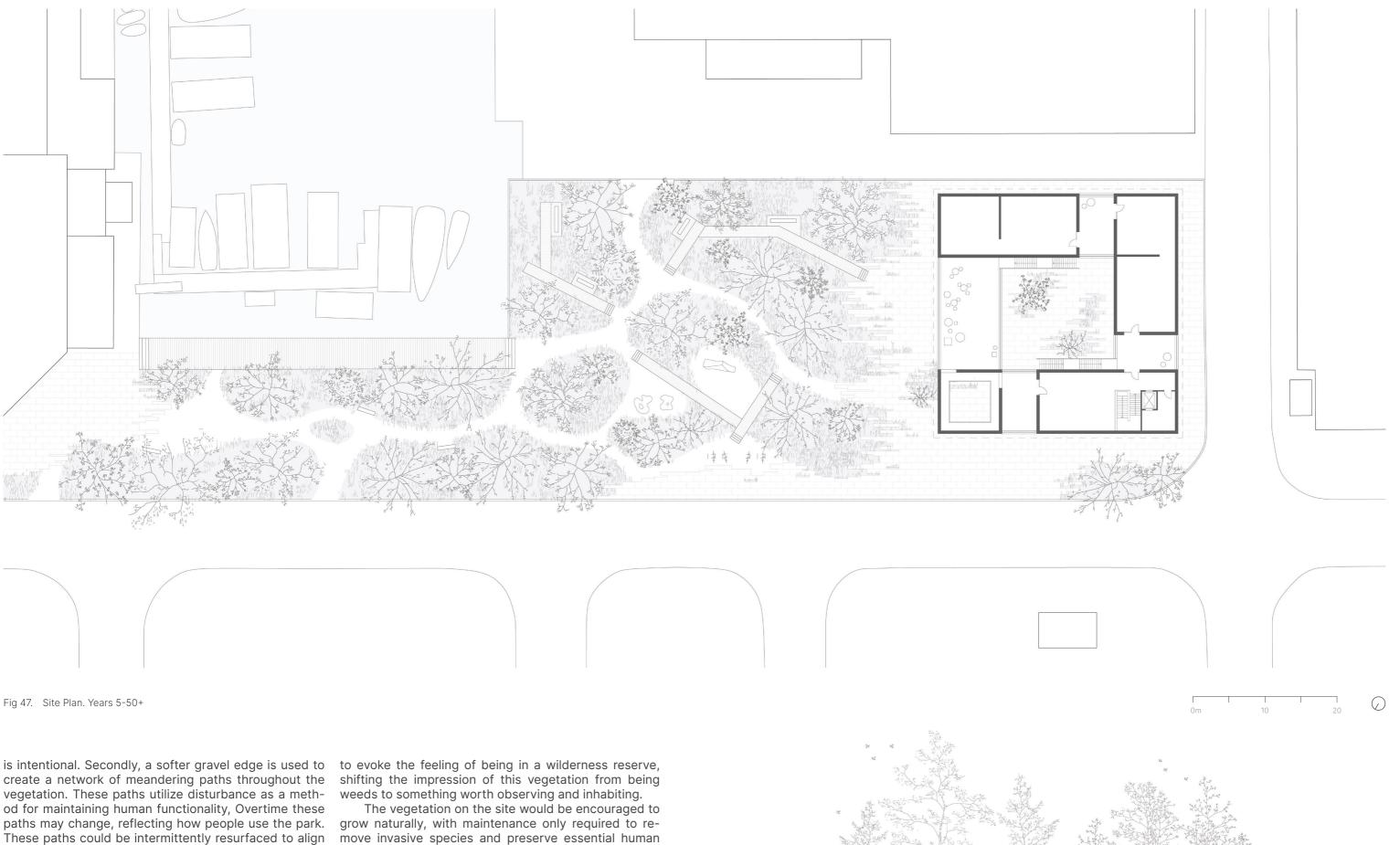
Several types of edge were employed to create dif-

DESIGN PROPOSAL

The site was approached with an understanding that ferent frames for spontaneous vegetation. Firstly, a pavthrough the process of ecological succession, the site ing tile was arranged to create a dissolving edge around would eventually become a forest, therefore the concept the perimeter of the site and in areas of high accessibilfor this proposal centres on an appearance of dissolvity surrounding the building in particular. This paving is ing into nature. However, the site was planned from the also purposefully removed to create patches and cracks forefront with this growth in mind to preserve essential reminiscent of the cracks and potholes from the dochuman functionality in terms of circulation, accessibility umentation phase. This fading appearance creates an aesthetic understanding of decay, effectively communicating the spontaneous growth throughout the site-



Fig 46. Vegetation Years 1-5



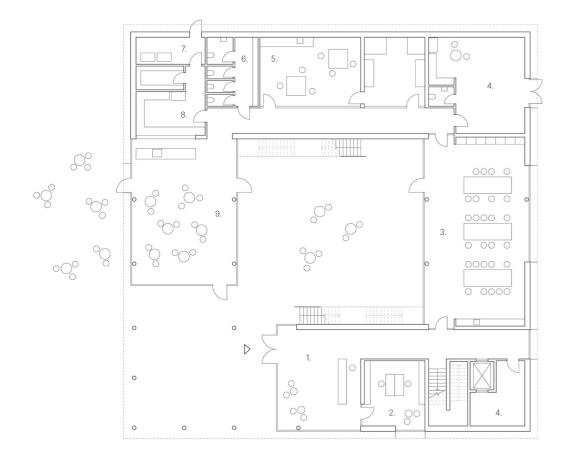
nature.

Lastly, raised metal grate pathways extend through the patches of vegetation. These pathways are intended

**DOCUMENTATION & ANALYSIS** 

with the most efficient circulation, leaving the rest for functionality. Although some species may be planted initially to accelerate the process of succession and increase the public's acceptance of the proposal in its initial years.

Fig 48. Vegetation Years 5-50+



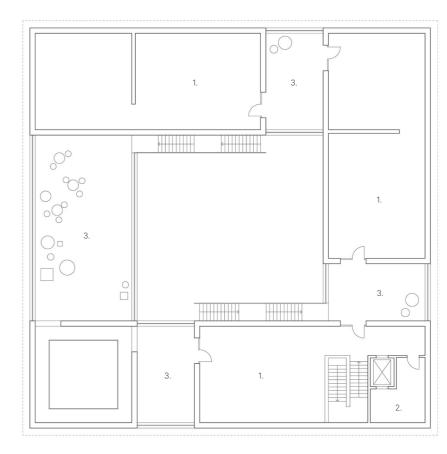




Fig. 49. Ground Floor Plan. 1. Reception 2. Administration 3. Public Workshop 4. Storage & Staff Area 5. Private Studios 6. Restrooms 7. Inwards Goods & Waste Room 8. Kitchen 9. Cafe.









### FLOOR PLANS

The program for the building is an indoor-outdoor gallery, where graffiti writers are encouraged to use the structure as a canvas. The proposal engages with both members of the community and with those outside of it, providing a space for the art form to be experienced and practiced. The ground floor features studios for public workshops and private studios spaces for artists. Upstairs the design features multipurpose exhibition spaces with exterior graffiti walls for writers to openly practice.

### **ELEVATIONS**

A facade of profiled mesh panels wraps the building's exterior, both inhibiting graffiti from overwhelming the entire structure, but also framing a series of exterior canvases. Positioned between windows, these individual canvases are large enough for individual pieces, offering graffiti writers the highest visibility facing the street. While their accessibility exposes them to the risk of being painted over quickly, the quality of work here, and its visibility, serve as a deter-rent, particularly given the availability of canvases within the struc-ture. Additionally, at the building's entrance a set of exposed columns encourage tagging and other less intricate forms of graffiti, exhibiting the layers and dynamic aesthetic of this style.



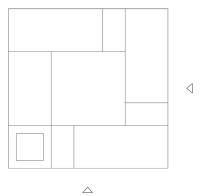
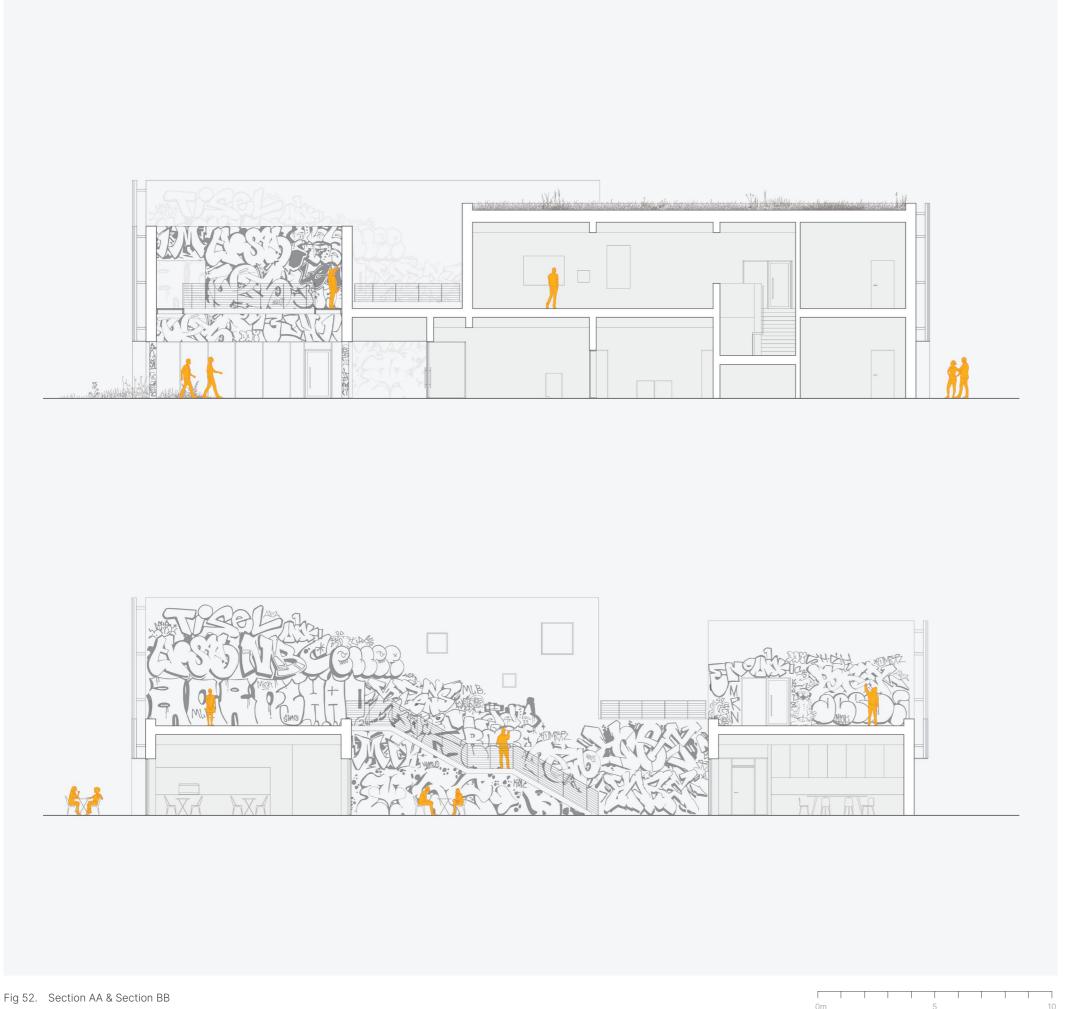


Fig 51. North & West Elevations

DESIGN PROPOSAL



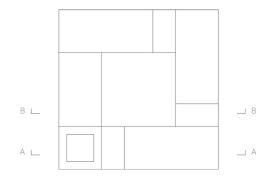


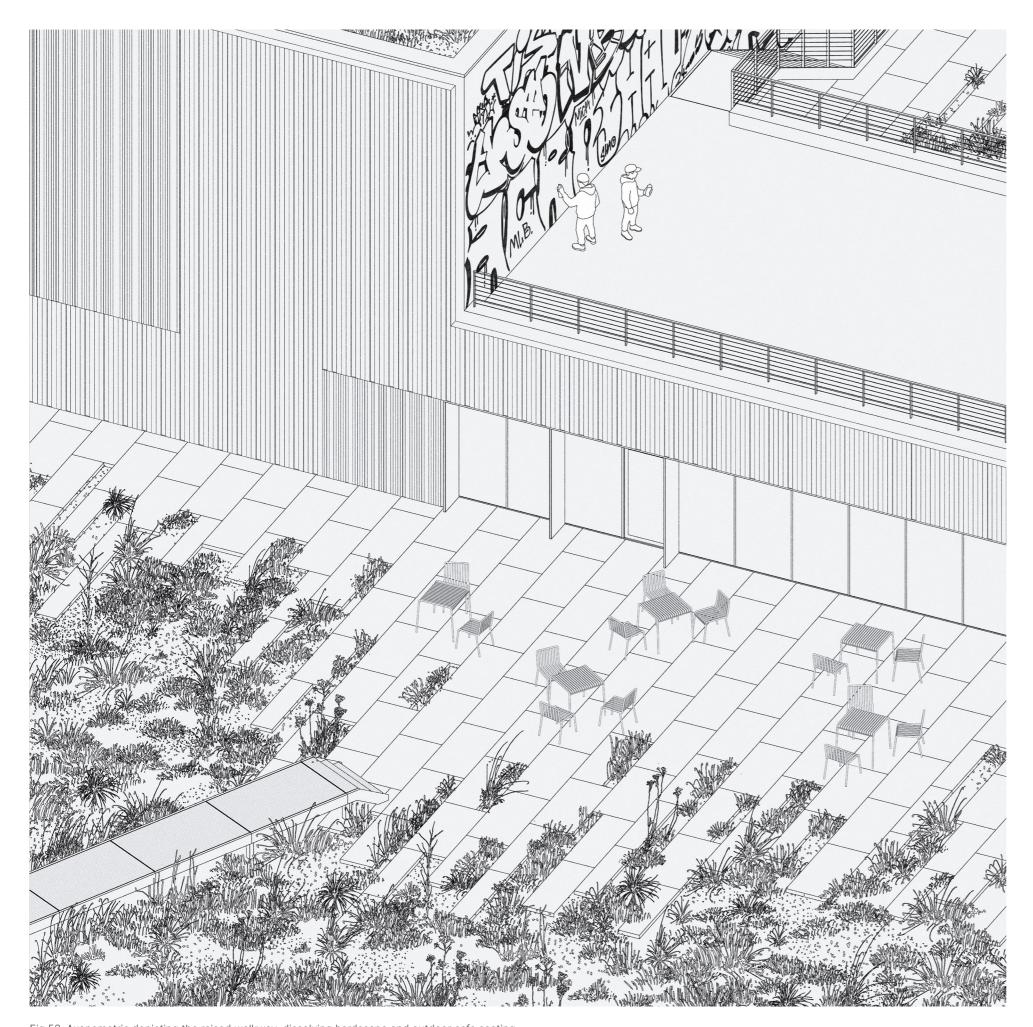
DESIGN PROPOSAL

### SECTIONS

Upon entering the building, visitors encounter an open-air atrium revealing a series of elevated graffiti walls. An entrance sequence designed to evoke surprise and immediately frame graffiti as an intentional part of the architectural experience. Traveling further into the building, visitors reach an inner courtyard where graffiti is invited to spread over the internal facades, showcasing the diversity and visual intensity of a concentrated graffiti facade. This space is intended to contrast with the framed canvases of the exterior and provide a less formal opportunity for writers to work.

Two exterior staircases aligned with the inner courtyard walls provide the necessary access for graffiti to cover these facades and also provide access to the building's rooftop terraces. These terraces join the interior gallery spaces and allow visitors to appreciate graffiti as they move between rooms, functioning also as a place for graffiti writers to rest and gather while they create. The various canvases the building provides for graffiti writers would change in appearance frequently, providing a unique experience of the building each time it is visited and as the graffiti expands overtime.





 $\label{thm:prop:state} \textit{Fig 53.} \ \textit{Axonometric depicting the raised walkway, dissolving hardscape and outdoor cafe seating.}$ 

DESIGN PROPOSAL

# Discussion

### SUMMARY OF KEY FINDINGS

This thesis investigated how designers could approach transformation of terrain vague through engaging with graffiti and ruderal vegetation as key phenomena, in an effort to preserve its spontaneous qualities and amplify its social and ecological potential. The research was guided by the question; How can architecture transform terrain vague through amplifying graffiti and ruderal vegetation?

The findings consist of a series of spatial principles defining the relationship between these phenomena and architecture. These findings address a lack of architecturally focused knowledge surrounding the phenomena of graffiti and ruderal vegetation and are oriented towards designers seeking to understand and work with these phenomena.

Additionally, this research addressed the negative social perception of these phenomena, exploring how design can be employed as a framing device, leaning into conventional symbols of order and care, and through embracing the aesthetic of deterioration to signal intentionality and shift perception.

### **REFLECTIONS**

Regarding methodology, developing an architectural vocabulary for these phenomena became an important aspect of the research. Through translating graffiti and ruderal vegetation into architectural drawings, their behavior and characteristics could be isolated, examined and replicated. However, the level of complexity required to accurately capture their intricacy and diversity also revealed why they may have been largely overlooked within the field.

Through developing a design proposal an additional layer of consideration had to be added onto the existing decisions that shape space. The design process required balancing traditional concerns with also facilitating and framing these phenomena. User safety and functionality clashed with a desire to create areas of risky accessibility, rewarding graffiti artists with high visibility within the design. Furthermore, the expansive and dominating nature of these phenomena had to be balanced with maintaining human functionality and a degree of aesthetic contrast. Navigating this balance explains why in reality a binary often exists between total proliferation of these phenomena or their complete removal. It is a sim-

pler solution to have all the grass mown or to remove all graffiti than to meticulously plan where and how these phenomena will occur.

Despite this, the design proposal offers an additional example of a terrain vague transformation that incorporates its phenomena as opposed to erasing them. Hopefully inspiring this alternative approach to be further developed given its social and ecological potential. Through blending the facilitation of these phenomena with a program and circulation that encourages ambiguity and freedom, the design isn't simply about amplifying these phenomena but also responds to the context as a whole, understanding that it is these qualities which enabled these phenomena to emerge in the first instance.

### **INSIGHTS & DISCOURSE**

This thesis aimed to instigate questions posed by architect Ignasi de Solà-Morales Rubió and other theorists speculating on terrain vague, regarding how architects might approach its transformation without losing its inherent qualities. The findings of this research contribute to this discourse, advocating for the facilitation of key phenomena as a method for achieving this.

The research suggest designers might propose a framework as opposed to a finished product. An architecture left to be appropriated by its users, both human and inhuman, with spaces intentionally designed to change in appearance and function over time. This idea raises questions as to how much involvement the architect should have over the end result and how much control should be left to the users of space. This research suggests the architect's responsibility lies in how this user-led adaptation is guided and framed in such a way that a space remains functional and attractive.

The design proposal worked with similar techniques to the New York City Highline in framing vegetation with dissolving paving but differs in working with a variety of framing devices to communicate intentionality such as disturbance-based paths and raised walkways. Furthermore, the design proposes vegetation to be almost completely spontaneous in origin and enabled to naturally progress into an urban forest, as opposed to the planned gardens of the Highline. Graffiti is also integrated into the proposal, providing a space for the original users of terrain vague. The project differs from Graffiti focused precedents such as Viborg Mekka or the Kala-

satama power station in that accessibility is integrated into the designs concept alongside the creation of spaces which offer differing experiences of graffiti for both visitor and the graffiti writer.

### **FUTURE RESEARCH**

The findings of this research establish the groundwork for further explorations into the interaction between architecture, graffiti and ruderal vegetation. Future research could expand upon the dynamic relationship between graffiti and architecture, exploring how the two influence one another. Moreover, developing further strategies for framing spontaneous vegetation and its integration within the architectural envelope would provide more tools for designers seeking to work with it in their proposals outside traditional landscape design. Beyond the scope of the isolated architectural project, there is potential in exploring micro interventions with these phenomena in mind. These could work to increase human and non-human interactivity with curbsides, infrastructure and other typically overlooked objects and spaces within the urban environment.

This research engages larger questions surrounding humanity and nature, social order and spatial freedom. A tension is highlighted in how given the absence of institutions and notions of care, space is created with the necessary freedom for artistic expression and undisturbed natural growth. This suggests that as a society we must re-evaluate what we expect from the environment if we are to create one that is more ecologically viable and inclusive.

The ecological importance of ruderal landscape highlights how we as designers must work to increase the acceptance of these in-between forms of nature. Doing so would enhance the ecosystem services nature can provide, while also reducing demands on human maintenance. We must challenge the idea that humanity can only subtract from pristine nature and instead prove how we can play a role in restoring it, even in the most removed of urban contexts.

Finally, given the inherently illegal nature of graffiti, it is difficult to know to what extent artists would adopt a space specifically designed for them. Perhaps the answer to this question would become clear through the realization of such a project or in a closer dialogue between graffiti writers, architects and urban planners.

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### **IMAGE REFERENCES**

All photographs, illustrations and figures presented in this thesis were created by the author.

### AI APPENDIX

Al tools Grammarly and Chat GPT v4o were used solely to suggest grammar and syntax corrections in the writing of this thesis. No ideas or claims were generated by Al.

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