Picking Up the Red-Light District

Utilizing Toxic Tours as a method for Research-Driven Tourism and Stakeholder Engagement in addressing waste in the De Wallen District

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Abstract

This thesis examines the use of toxic tours as a method to research waste, tourism, and toxicity in Amsterdam's Red-Light District. The research incorporates perspectives from Discard Studies, Degrowth, and Critical Design to frame waste as a relational, cultural, and political phenomenon rather than an 'issue' to be solved. Toxic tours, or guided critical walks, positioned participants as co-researchers, engaging them in structured, hands-on process such as observing, photographing, collecting, and reflecting on discarded items.

The study identified five recurring patterns of learning: (1) connection with others creates understanding, (2) playfulness and creativity unlock insights, (3) real-time reflection deepens awareness, (4) small acts of care ground learning in practice, (5) iterative design enables deeper learning. These experiences revealed hidden infrastructures, moral hierarchies, and socio-economic inequalities. They also helped participants develop emotional, ethical, and big-picture understandings that traditional tourism or research rarely offer. Participants shifted from seeing waste as an individual responsibility to understanding it as a shared systemic responsibility, demonstrating how tourism can function as a medium for learning, reflection, and collective action..

Methodologically, the research shows how hands-on, critical approaches can shift power, challenge dominant stories, and imagine new ways of living in the city, aligning with Escobar's (2018) idea of the pluriverse. Although participants experienced strong emotional and perceptual shifts, lasting behavior change was limited. This suggests a need for ongoing or supported forms of engagement. Toxic tours turn extractive forms of tourism into opportunities for care, ethical awareness, and regeneration by framing travel as a space for reflection, learning, and shared action. This approach offers a practical model for researchers, policymakers, and practitioners working toward more sustainable and participatory urban futures.

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Prologue

At dawn, De Wallen is both beautiful and filthy. This paradox says more about Amsterdam than the neon-lit nights ever could. Seagulls fight over scraps as children cycle to school, late-night wanderers drag themselves past street sweepers, and machines rumble through alleyways in a choreography of chaos, decay, and renewal. At the intersection of these realities, I began to wonder: how can a place so rich in layered realities, where beauty and waste coexist, be dismissed as dirty, problematic, or chaotic? Why do cities reduce complexity to cleanliness, overlooking the very dynamics that give urban life its vitality?

This research grows from my own encounters with De Wallen. It resists the common narratives that scapegoat particular groups and instead seeks to understand the site as an intricate system of interdependent actors: tourists, residents, sex workers, business owners, cleaners, trash collectors, and deposit scheme collectors. Experiencing De Wallen across these shifting rhythms transformed my perspective. Waste was not only a byproduct of the city but also a lens into its hidden negotiations, its spontaneous coexistences, and its tensions between order and disorder.

What began as a subjective fascination became a deeper intellectual puzzle about how we read, value, and govern urban life when filth and beauty are inseparably intertwined. This puzzle is not only personal but also academic. Cities everywhere are confronted with the question of how to deal with waste, disorder, and the everyday traces of human activity. Policies often aim for efficiency, tidiness, and control, yet in doing so they overlook the meanings and relationships that form around chaos. De Wallen becomes an extreme case through which to explore the hidden dimensions of this paradox; a micro galaxy within the Pluriverse. It offers a concentrated view of how multiple realities coexist in one space —"a world where many worlds fit"— and how the management of waste reflects wider social, moral, and political choices (Escobar, 2018).

Figure 0.1 Grey heron in Oudezijds Achterburgwal. Author.

Figure 0.2 De Wallen being cleaned. Author.

Figure 0.3 Regular maintenance tasks in De Wallen. Author.

Figure 0.4 De Wallen at dawn. Author.

1 Introduction

1.1 Tourism

Tourism is an 'economic powerhouse'. It accounts for 10% of global GDP, 30% of services exports, and one in every 10 jobs worldwide (UNWTO). The United Nations World Tourism Organization's (UNWTO) classifies various types of tourism based on their focus, scale, and purpose, recognizing forms that contribute to economic growth, cultural exchange, and environmental sustainability. These categories encompass a wide range of tourism experiences and are largely based on the primary motivation of travellers. Still, the UNWTO does not recognize certain forms of tourism that often intersect with voyeurism, exploitation, political sensitivities, and ethical dilemmas.

Tourism is often framed through an extractive lens (Higgins-Desbiolles, 2022). Visitors consume local resources, commodify cultural heritage, and contribute to environmental degradation (Pezzullo, 2007). Early academic literature primarily focused on how tourism shapes and distorts local realities, often emphasizing its role in reinforcing stereotypes and commercializing culture (MacCannell, 1976; Culler, 1981).

Recently, there has been a shift in the viewing of tourism towards recognizing its capacity to foster new ways of thinking. Scholars now explore its potential to cultivate multi-perspectivity, encouraging visitors and hosts to engage in intercultural dialogue, and critical reflection (Ormond & Vietti, 2021, p. 533). Tourism is a potential tool for social and environmental transformation (Pololikashvili, 2024). It is capable of contributing directly and indirectly to all 17 Sustainable Development Goals (SDGs) identified by the United Nations. This evolving perspective aligns with the United Nations World Tourism Organization's (UNWTO) recognition of tourism as a key driver of sustainable development.

Tourism is essentially a way of making sense of the world, unifying fragmented views by situating societies within a coherent structure of rituals, monuments, and landscapes (Culler, 1981). Acknowledging such capacity, tourism has recently been conceptualized beyond economic growth and as a social force so that justice, equity, and sustainability may be secured (Higgins-Desbiolles, 2022). This implies that tourism experiences have value beyond profit and have the power to establish positives social ties between locals and visitors to overcome negative stereotypes (Melubo & Doering, 2021).

By encouraging visitors to travel in ways that align with the local's own world views and social practices, tourism experiences can further act as vehicles that contribute to the main purpose of the SDGs: peace and prosperity for both the people and the planet for now and also into the future (Melubo & Doering, 2021; United Nations).

Classifications on types of tourism are diverse. These can vary accordingly to the type of resources, the experience it provides, groups to which its targeted, or the type of knowledge it provides and its purpose. Zhang et al. (2023) construct an ontology for classifying and organizing tourism types using the names and meanings of existing tourism categories. This ontology is built on prior work of Leiper (1979), Wu et al. (2012) and Park et al. (2016) and contains six categories encompassing tourism themes, tourism attraction, tourist characteristics, tourism space-time, tourism experience, and transportation. The UNWTO's (2019) operational definitions for tourism types provide a common framework for all parties in the tourism industry to help standardize the way they classify and discuss different kinds of tourism. Table 1.1 contains the operational definitions for tourism present in this framework.

Table 1.1: UNWTO's Operational Definitions on the types of tourism (UNWTO, 2019).

TYPE OF TOURISM	AIM OR SCOPE
Cultural Tourism	Visitor's essential motivation is to learn, discover, experience and consume the tangible and intangible cultural attractions/products in a tourism destination.
Ecotourism	Nature-based tourism activity in which the visitor's esseWntial motivation is to observe, learn, discover, experience and appreciate biological and cultural diversity with a responsible attitude to protect the integrity of the ecosystem and enhance the well-being of the local community.
Rural Tourism	Visitor's experience is related toa wide range of products generally linked to nature-based activities, agriculture, rural lifestyle / culture, angling and sightseeing.
Adventure Tourism	Takes place in destinations with specific geographic features and landscape and tends to be associated with a physical activity, cultural exchange, interaction and engagement with nature.
Health Tourism	The primary motivation of activities is to contribute to physical, mental, and/or spiritual health through medical and wellness-based activities which increase the capacity of individuals to satisfy their own needs and function better as individuals in their environment and society.
Business Tourism	Visitors travel for a specific professional and/or business purpose to a place outside their workplace and residence with the aim of attending a meeting, an activity or an event
Gastronomy Tourism	Characterized by the visitor's experience linked with food and related products and activities while travelling.
Water tourism	Broken into three sub-categories: Coastal tourism refers to land-based tourism activities. Maritime tourism refers to sea-based activities. Inland water tourism refers to tourism activities which take place in aquatic-influenced environments located within land boundaries.
Urban/City Tourism	Takes place in an urban space with its inherent attributes characterized by non-agricultural based economy such as administration, manufacturing, trade and services and by being nodal points of transport.
Mountain Tourism	Takes place in a defined and limited geographical space such as hills or mountains with distinctive characteristics and attributes that are inherent to a specific landscape, topography, climate, biodiversity (flora and fauna) and local community.
Education Tourism	Primary motivation the tourist's engagement and experience in learning, self-improvement, intellectual growth and skills development.
Sport Tourism	Travel experience of the tourist who either observes as a spectator or actively participates in a sporting event generally involving commercial and non-commercial activities of a competitive nature.

1.1.1 Research-Driven Tourism

While existing frameworks from the UNWTO (2019) and Zhang et al. (2023) are useful for classifying tourism, they do not adequately define research-driven forms of tourism. This concept is broadly applied to market research, academic studies, and the analysis of traveler behavior, with the goal of improving experiences, business strategies, or sustainability.

These frameworks overlook the growing interest of visitors who want to join a travel experience to participate in research or learn for academic purposes. On its end, academic tourism can refer to experiences, typically carried out by students, where learning, research, and cultural immersion are the primary motivations (Deyà-Tortella et al., 2020). Altogether, academic or research-driven forms tourism, resist easy classification for defying the commodified logic that defines most tourism types. These forms of tourism are fundamentally different and require a new way of understanding the practice itself. Following Culler (1981), tourism can be seen not merely as leisure, but as a form of semiotic disruption, where the roles of visitors, the meanings of places, and traditional narratives are actively contested.

1.1.2 Tourism for Social and Ecological Justice

By being associated to leisure, tourism is known for perpetuating uneven conditions between visitors and locals. Still, scholars agree that it creates opportunities to access new places and relate to each other (Pezzullo, 2007; Ormond & Vietti, 2021). To contest tourism's hegemonic structures and worldviews, scholars claim that *socialising tourism* can make tourism responsive to the society in which it occurs, orientating it to more just and sustainable futures (Higgins-Desbiolles, 2022).

To achieve this transition, diverse actions across scales and contexts need to be taken. The global tourism industry can start to be changed through practices like welcome ceremonies, recognition of mutual responsibilities, or participation of locals in tourism not hosts or stakeholders but as tourists. This way tourism can be reconstructed in a more inclusive way (Higgins-Desbiolles, 2022).

Toxic tours have emerged as a form of alternative tourism that raises awareness of social and environmental injustices through rhetorical and educational engagement. Giovanna Di Chiro (2001) defines *toxic tours* as environmentally based tours which*"highlight the not-so-scenic sites scattered on the landscape and cast a very different light on the assertion that a compatible relationship can exist between capitalism as we know it and the health of humans and the environment"* (p. 35). Toxic tours have a non-commercial character, whilst being organized and facilitated by locals (Pezzullo, 2007). They merge elements of nature and culture and serve as a form of "education as social action" by promoting environmental justice, facilitating collective learning, and encouraging activism (Di Chiro, 2000; Whelan, 2005). These tours seek to address the exclusion of marginalized communities from public policy deliberations while recognizing that tourism is not only driven by leisure and consumption (Pezzullo, 2003).

Toxic tourism shifts beyond leisure and economic motives by incorporating education, social awareness, and activism. It also serves as inspiration for counterhegemonic resistance, self-governance and education (Pezzullo, 2007). However, because of ethical concerns, lack of regulation, and potential risks, alternative forms of tourism can be seen as controversial. These alternative forms of tourism often involve travel to sites of suffering, environmental destruction, or political unrest, often blurring the line between educational purpose and spectacle gawking as a manifestation of the 'tourist gaze' (Yankovska & Hannam, 2014; Bigby et al., 2023; Urry, 1990).

Toxic tourism can overlap with other forms of tourism, such as dark tourism. This is because both engage with similar themes of environmental degradation, human suffering, or social activism. However, toxic tours remove the obstacles that prevent a complete grasp of environmental problems and their potential solutions. They contribute to shape new practices based on the principles of environmental and social justice (Di Chiro, 2001). Toxic tours actively contribute to civic learning and activism by acknowledging tourism's impact and fostering deeper socialization between visitors and marginalized communities (Higgins-Desbiolles, 2022). Drawing from Hannah Arendt's notion of "visiting" as a politically progressive act (1977), toxic tours offer an alternative engagement that resists dominant tourism narratives and advocates for the correct socialization of tourists by questioning how the "Other" is received (Scott & Hall, 2012; Ormond & Vietti, 2021). Table 1.2 gives an overview of the various forms of tourism that are often discussed alongside *toxic tours in academia.*

Table 1.2 Forms of tourism often discussed alongside toxic tourism and/or tours in academia.

TYPE OF TOURISM	AIM OR SCOPE
Toxic Tourism	Emphasizes the interrelationships between the environment and local cultures while shedding light on the assertion that a compatible relationship can exist between capitalism and the health of humans and the environment (Di Chiro, 2001).
Dark Tourism	Functions as a 'mediating institution' that facilitates the construction of contemporary ontological meanings of mortality, allowing visitors to contemplate life and death through consumption (Stone, 2012).
Disaster Tourism	Involves visits to sites that commemorate natural or human-made disasters, including locations where loss of life has occurred due to environmental catastrophes or conflicts (Yan et al., 2016).
Ecotourism	A form of nature-based tourism where visitors are primarily motivated by the desire to observe, learn about, and appreciate biological and cultural diversity (UNWTO).
Cultural Tourism	Encompasses travel driven by the motivation to engage with, learn about, and experience both tangible and intangible cultural heritage in a destination (UNWTO).
Justice Tourism	Rooted in ethical tourism theory. It prioritizes justice, equity, and sustainability over profit-driven strategies (Higgins-Desboilles, 2008).

1.1.3 Toxic Tours

Toxic tours provide a 'counter experience of everyday life' by appealing to the 'uglier sensualities of the world' and by exposing people to the costs of 'human greed' (Pezzullo, 2007, p. 10). It translates feelings into practices that foster agency and resistance that seek to mobilize public sentiment and dissent against material and symbolic toxic patterns (Pezzullo, 2007).

Toxic tours function as more than a passive experience for both visitors and locals. They actively connect visitors with local communities grappling with ongoing environmental crises, fostering deeper awareness and advocacy while providing a multi-sensory, embodied experience (Pezzullo, 2003; Bigby et al., 2023). Toxic tours can deepen an individual's understanding of their own communities by fostering education through social action (Whelan, 2005). They can also make participants critically reflect upon the structures that enable or disable collective and individual agency on their communities (Varelas et al, 2018).

Exploring toxic tours in De Wallen offers a compelling example of how historical city centers can expose often-invisible waste infrastructures, particularly the "front-region", where initial stages of municipal solid waste management occur (Zapata & Zapata Campos, 2018). These tours can serve as a platform for questioning the multiple perspectives held by the diverse groups present in De Wallen. These inherently foreground crucial inquiries such as whose material evidence is acknowledged or ignored, whose histories are told or erased, and whose priorities are deemed worthy of communicating (Pezzullo, 2007). Consequently, toxic tours can provide a "behind-the-scenes" experience, revealing the hidden dimensions that contribute to the problem on waste in De Wallen (MacCannel, 1976). Moreover, toxic tours can be an example that makes tourism work for the public good by invoking change in polluted places (Higgins-Desbiolles, 2022).

As a methodology, toxic tours in De Wallen, can offer participants an experience that extends beyond the identification of visible pollutants. It can stimulate critical reflection upon urban waste infrastructures, collective social memory, and the political dimensions of visibility, thereby fulfilling the transformative and activist aims of the toxic tourism paradigm

Figure 1.1 Gull feast. Author.
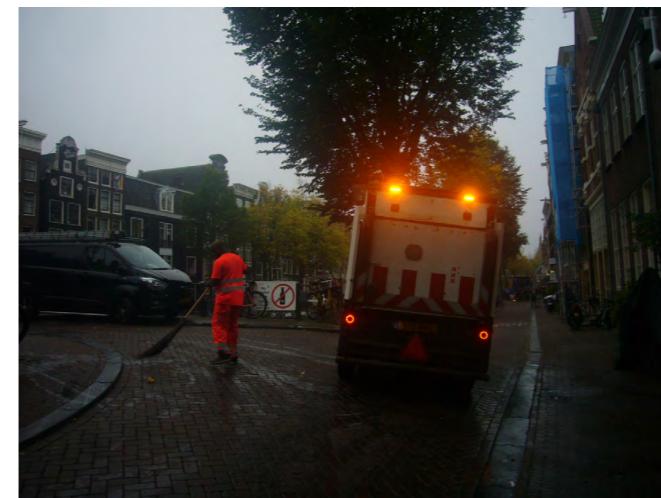
Figure 1.2 Maintenance tasks in De Wallen. Author.

1.2 De Wallen: Amsterdam's Red-Light District

Amsterdam's Red-Light District, locally known and referred throughout this research as De Wallen, has historically balanced opposing forces, evolving from a major trading port into theater for modernity, commercializing excess, regulating tolerance, and hosting transgressive tourism (Beaver, 1987; Benjamin, 1999; Ulf, 2011). This evolution was shaped by Dutch Calvinistic moral geography, which normalized the presence of foreigners for economic gain while reinforcing social hierarchies. Trading spaces like De Wallen became sites of both prosperity and marginalization, where economic opportunity coexisted with the exclusion and regulation of certain groups (Beaver, 1987).

Since the construction of the canal belt in 1613, the wealthy moved out of De Wallen, leaving behind workers tied to the harbor economy (Amsterdam Gemeente, 2022). By the 1980s, the area had deteriorated due to an influx of heroin dealers and a declining maritime industry. De Wallen became associated with "wasters" such as sex-workers, rogues, vagabonds, pimps, drug users, and gamblers. This shaped the identity of De Wallen as a place of perceived "waste" and "wasters" (Scanlan, 2005; Amsterdam Gemeente, 2022).

1.2.1 Tourism in De Wallen

Amsterdam stands at a critical crossroads where its international appeal as a cultural and liberal metropolis clashes with the needs of its local population. While there is undeniable economic value in tourism, there is growing concern as to whether the city will remain sufficiently liveable for its residents (Nederlands Dagblad, 2025).

In recent times, examples like the "Stay Away" campaign, aimed at deterring disruptive forms of tourism that capitalize on Amsterdam's image as a place of "unlimited possibilities". These examples have made tourists the new receptacles of societal frustration, embodying excess and perceived moral degradation (City of Amsterdam, 2023; Holligan, 2023). De Wallen's identity taps into desires for transgression and spectacle, reinforcing its status as a "leisure factory" or people who embark on "wasteful behaviour" (MacCannell, 1976; Scanlan, 2005).

Simultaneously, the waste generated in the area in both literal and symbolic ways, has overwhelmed local infrastructure, uncovering the environmental burden of capitalist-driven tourism (ANP Producties, 2024). These phenomena are also fueled by the locals' 'staged authenticity' which creates the illusion of "real" local life for tourists and reinforces socially constructed stereotypes (MacCannell, 1976). This superficial way of experiencing, referred to as 'the tourist gaze', shapes the interactions between visitors and destinations (Urry, 1990).

Research has repeatedly likened both tourists and their practices to instinct-driven animal behaviors, reinforcing perceptions of tourism as an undesirable practice (Culler, 1981; MacCannell, 2024). This perspective aligns with concerns raised by locals, notably Amsterdam's Mayor Femke Halsema, who has proposed moving the Red-Light District away from the De Wallen, aiming to curb the voyeuristic chaos that currently disrupts the area. This reflects how Author.ities are reevaluating the "kind of visitors" the city seeks to attract (Business Insider Nederland, 2018; de Vries, 2025). By doing so, Author.ities acknowledge how the infrastructure and practices within De Wallen have contributed to the commercialization of transgression. Here, tourism experiences are reduced to a commodified spectacle of consumption rather than as a learning opportunity for unifiying fragmented views (Culler, 1981).

Drawing on MacCannell's (1976) concept of 'staged authenticity,' and acknowledging Pezzullo's (2009) assertion that 'tourism is toxic' the experiences curated for tourists in De Wallen, such as voyeurism and guided tours of the district's "sinful" history, reflect a carefully constructed set of behaviors and attractions that commodify the local culture. These experiences exploit and commodify the district's historical association with waste and moral transgression. Consequently, it diminishes the potential for meaningful cultural exchange and reinforces the perception of the district as an 'authentic' site of vice. It narrows down tourist's role as passive consumers and producers of trash, and disables critical perspectives on capitalistic, growth driven models of tourism that do not serve the interests of the locals (Higgins-Desbiolles, 2022).

1.2.2 De Wallen as a Living Lab: Tourism, Identity, and Systems of Waste

De Wallen stands as one of Amsterdam's most symbolically charged urban environments where the pressures of tourism, identity, and waste collide. Its small scale, density of use, and conflicting moral geographies make it an extreme case of the city's broader struggles with tourism-driven consumption and urban management. In this sense, De Wallen functions as a living laboratory: a real-world site where interdependent social, cultural, and material systems can be observed in a magnified form.

The consumption behavior of tourists and the tourism offer in De Wallen mutually reinforce the commodification of local culture. This cyclical relationship has two outcomes: it positions tourism as a major contributor to waste generation in the eyes of some local groups, and it incentivizes locals to further exploit the site's associated imaginaries for profit. Such dynamic places additional pressure on Amsterdam's waste management infrastructure, resulting in unmet needs, inconsistent behaviors, and a general lack of clarity around trash responsibility and regulation. As a result, locals often blame deposit scheme collectors and tourists for engaging in allowed activities. In one hand, collectors gather refundable deposits from misregulated practices fueled by tourists and locals, on the other hand tourists engage in consumption driven by De Wallen's hedonistic imaginaries. Figure 1.3 illustrates the complex interplay between tourism, the multi-layered identity of De Wallen, and its systems of waste.
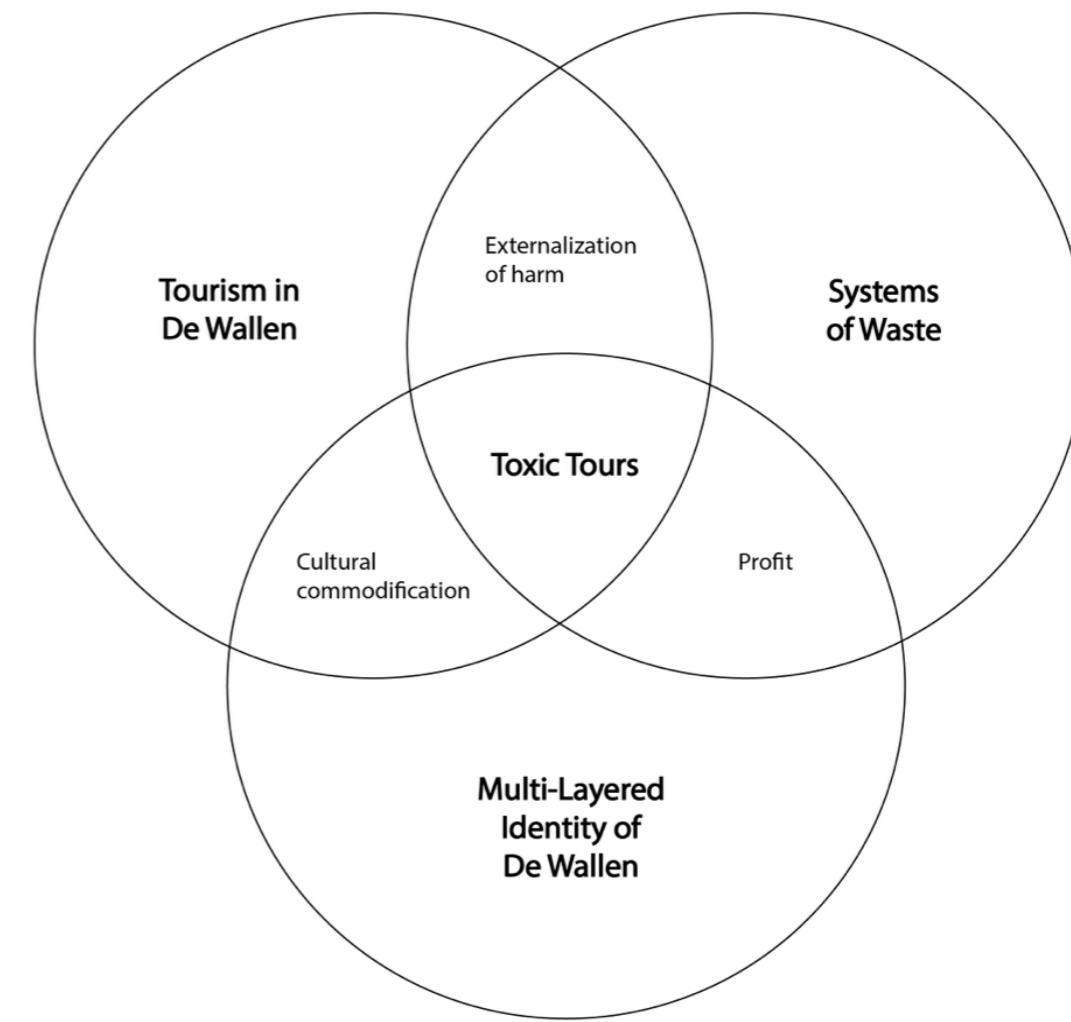
Figure 1.3 The De Wallen Trifecta: Tourism, Identity, and Waste

1.2.2.1   Multi-Layered Identity of De Wallen

De Wallen has long symbolized a space of contradictions, but its evolution into a tourism-driven economy has intensified social tensions and infrastructural strain (Hielkema, 2025). Drawing on Scanlan's (2005) Calvinistic notion of stewardship and waste, where 'to waste' is equal to not make the best use of something (e.g. time, opportunities, resources), tourism presence and profit strategies in De Wallen perpetuate cycles of overconsumption, excess, and cultural commodification (MacCannell, 1976; Schama, 2014; Boztas, 2023). Resident perspectives on the trash issue revolve around three interconnected arguments: that tourism has degraded the place; that tourists are directly responsible for the littering; and that the resulting volume of trash is a shameful spectacle that damages Amsterdam's image in the eyes of visitors (Hoorn, 2024; Sevil, 2024; Herter, 2025).

1.2.2.2   Tourism in De Wallen

This intersection of historical, cultural, and economical factors creates a complex and evolving identity for De Wallen. Two simultaneous processes of consumption happen: tourists consume a commodified and distorted version of local culture and heritage, while locals exploit these cultural representations to cater to the demand for staged authenticity. This overlap often frames tourists as 'undesirable' in the process (MacCannell, 1976). An example of this is 30,000 residents of the city taking the Municipality of Amsterdam to court for exceeding the agreed-upon twenty million visitor overnight stays. Another example is online debates by locals who claim that directly linking nuisance to the number of visitors is the wrong approach (Hielkema, 2025; NOS Nieuws, 2025; Het Parool, 2025).

The unprecedented volume of visitors further intensifies pressures on De Wallen's already strained public infrastructure and community relations. In 2024, Amsterdam welcomed a record-breaking 15.1 million day-trippers. The central districts, including De Wallen, accounted for 59 percent of international tourist spending, with 42 percent of visitors entering the Red-Light District (NL Times 2025). Residents often claim that public spaces are treated as disposable by tourists while simultaneously holding them responsible for the strain on local waste systems (Sevil 2024). These allegations reinforce stigmas that fuel discriminatory perceptions and displace blame onto the service industry. Visitors labelled as "cheap tourists" are frequently criticized for excessive waste generation and disregard for civic norms (Sevil 2024; Herter 2025). Conversely, other resident perspectives position tourists and tourism as the main justification to clean the city and tackle such a form of 'poverty' (Herter, 2025).

1.2.2.3   Systems of Waste in De Wallen

These dynamics unfold simultaneously in what is considered the 'front stage' of tourist activity and 'front region' of municipal solid waste management activities (MacCannell, 1976; Zapata & Zapata Campos 2018). To combat trash accumulation Amsterdam prioritizes efficiency. This measures include the '*afvalbakkenoffensief*', or trash bin offensive, which consists on replacing trash bins in the city center with bigger containers (Hart, 2025; Boztas, 2025). Measures like these, displace informal deposit scheme collectors and obscures systemic causes of waste.

Following Liboiron's (2021) assertion that "pollution is colonialism," this displacement reflects spatial hierarchies that privilege sanitized central zones while exporting disorder to the peripheries. Peripheries in turn, are turned into 'wastelands' that are deemed as disposable or less valuable. These practices, also known as 'waste regime', shape citizen behavior, and contribute to irresponsible consumption, neglect, and erasure of De Wallen's history and working groups (Zapata & Zapata Campos, 2018). Paradoxically, De Wallen represents a reversal of this dynamic where the colonial center itself becomes the site of degradation and marginalization. In this context, *toxicity* is a social and political phenomenon, reflecting colonial histories and power imbalances with vulnerable communities disproportionately affected by environmental hazards (Liboiron et al., 2018; Liboiron, 2021).

1.2.2.4   Toxic Tours in De Wallen

A toxic tour in De Wallen emerges as a powerful tool for critically engaging with the area's complexity. By guiding participants through spaces of visible and hidden waste, the tour exposes how De Wallen's contradictions are materially and morally organized. A tour of this kind acts as a powerful vehicle to uncover the entangled relationships between touristic practices and the moral judgments placed on them. These complex dynamics are further shaped by the area's economic dependencies and the limited infrastructure available to support such systems. It offers multiple ways to better understand the problematic nature and multilayered contradictions embedded in the everyday life of De Wallen. As a living-lab experiment, the tour connects embodied experience with systematic examination, revealing how tourism, infrastructure, and governance intertwine in everyday practices.

1.3 Problem Statement

Despite the growing body of literature on toxic tours, several critical gaps remain in understanding their role as a standalone alternative to conventional tourism and its systemic impact on environmental degradation. Existing research has primarily focused on industrial activity as a source of environmental degradation and community learning rather than conceptualizing trash as a pollutant and waste as a source of toxicity. Toxic tours are largely framed within activism (Pezzullo, 2003; Bowers, 2013; Martinez, 2025), education (Su & Jagninski, 2013; Yankovska & Hamman, 2014; Varelas et al., 2017), and community engagement (Whelan, 2005; Su & Jagninski, 2013; Melubo et al. 2021; Bigby et al., 2023), rather than as platforms for participant-driven knowledge production.

Toxic tours often occur in productive landscapes and suburban areas, rather than in highly visible urban spaces. This limits their engagement with mainstream urban actors (Pezzullo, 2003; Di Chiro, 2004; Bigby et al. 2023; Martinez, 2025). The narratives surrounding these tours also diverge. Some document the experiences of tour guides (Yankovska et al, 2014; Bigby et al. 2023) while other Author.s document their own experiences tour assistants (Pezzullo, 2003; Di Chiro, 2004; Varela et al., 2018; Martinez, 2025). This creates duality in how these tours are understood. Differences stem from a focus on primarily autoethnographic and performative experiences that engage audiences through embodied presence (Pezzullo, 2003; Di Chiro, 2004; Pezullo, 2007; Bigby et al., 2023) or function as activistic mechanisms that expose and teach environmental racism (Whelan, 2005; Su & Jagninski., 2013; Varela et al., 2018).

While toxic tours have mostly been studied on environmental degradation and marginalized communities, their absence from complex urban environments like Amsterdam's De Wallen presents a critical gap. De Wallen stands out as one of the most contested areas in Amsterdam due to its trading origins, nightlife-related and transgressive activities, dense urban layout, historic infrastructure, and an exceptionally high influx of tourists that results in a temporary and fleeting nature (Amsterdam Gemeente, 2022). These types of spaces offer rich potential for researching waste as a complex, multilayered, site-specific phenomenon, where the concentration of tourism and activity makes visible the ways in which existing social and cultural orders are disrupted (Liboiron et al., 2018).

1.4 Research Objective

This research explores how a toxic tour in a contested urban setting can broaden its use. It proposes a toxic tour in De Wallen as a device for co-producing knowledge through embodied forms of care and curiosity. By challenging taken-for-granted ways of perceiving, experiencing, and understanding, the toxic tour will play a key role in exposing participants to the site's complexity. Simultaneously, participants will contribute to understanding the site's toxicity in through multiple perspectives, aligning with Arturo Escobar's concept of the Pluriverse (2018). Specifically, the toxic tour aims to understand waste as a complex and layered place-based physical and cultural phenomenon that exposes hidden harm. As a result, participants will self-asses this toxic tours' main goals, broadening the systemic understanding, fostering socio-ecological relations, and generating alternative ways of knowing (Escobar, 2018; Liboiron & Lepawsky, 2022; Savini, 2023).

This objective will be met by addressing the following research questions:

"What insights can be gained regarding tourism and waste in De Wallen through the design and implementation of research-driven tourism in the form of a toxic tour?"

SRQ1. *What frames and understandings position de Wallen as a site of toxicity?*

SRQ2. *What toxic tour design for de Wallen can generate a learning ground for waste, tourism, and toxicity?*

SRQ3. *What insights emerge from participants' engagements in a toxic tour in De Wallen?*

SRQ4. *What broader insights do toxic tours as a method offer for addressing research-driven tourism in cities?*

1.5 Scope

This study explores the potential of toxic tours as a research-driven tourism method for engaging with complex urban issues. Situated in De Wallen, Amsterdam's historic Red-Light District, it examines how waste operates as layered, place-based physical and cultural phenomena. De Wallen's dense overlap of identity tourism, commerce, morality and urban maintenance make it an extreme case for exploring how material and symbolic forms of waste reflect broader moral, social, and economic dynamics. This environment presents as a case for establishing a Living Lab because its entangled, real-world dynamics provide the ideal conditions for applied research and testing solutions.

Grounded in Critical Design, Tourism, Degrowth, and Discard Studies, the project examines waste in De Wallen as a cultural and moral force shaping urban dynamics. Participants, acting as co-researchers, will conduct walking and photo-based activities to foreground their perceptions of waste, testing how toxic tours can serve as tools for touristic activity and co-creation of knowledge. Here, *toxicity* is understood as an urban condition and an analytical lens for revealing hidden relations between harm, value, and visibility.

Fieldwork, conducted from May to August, will include early morning tours (Mondays and Thursdays, 8:00–10:00 a.m.) aligned with municipal waste collection. This timeframe captures interactions between tourism, waste management, and everyday urban rhythms. Combining Participatory Action Research and ethnographic fieldwork, the tours function as both method and performative act, allowing unplanned encounters and collective documentation to deepen understanding of waste, toxicity, and cities.

Figure 1.4 View from Oudezijds Voorburgwal. Author.

Figure 1.5 Warmoestraat during trash collection time. Author.

2 Systematic Literature Review & Theoretical Framework
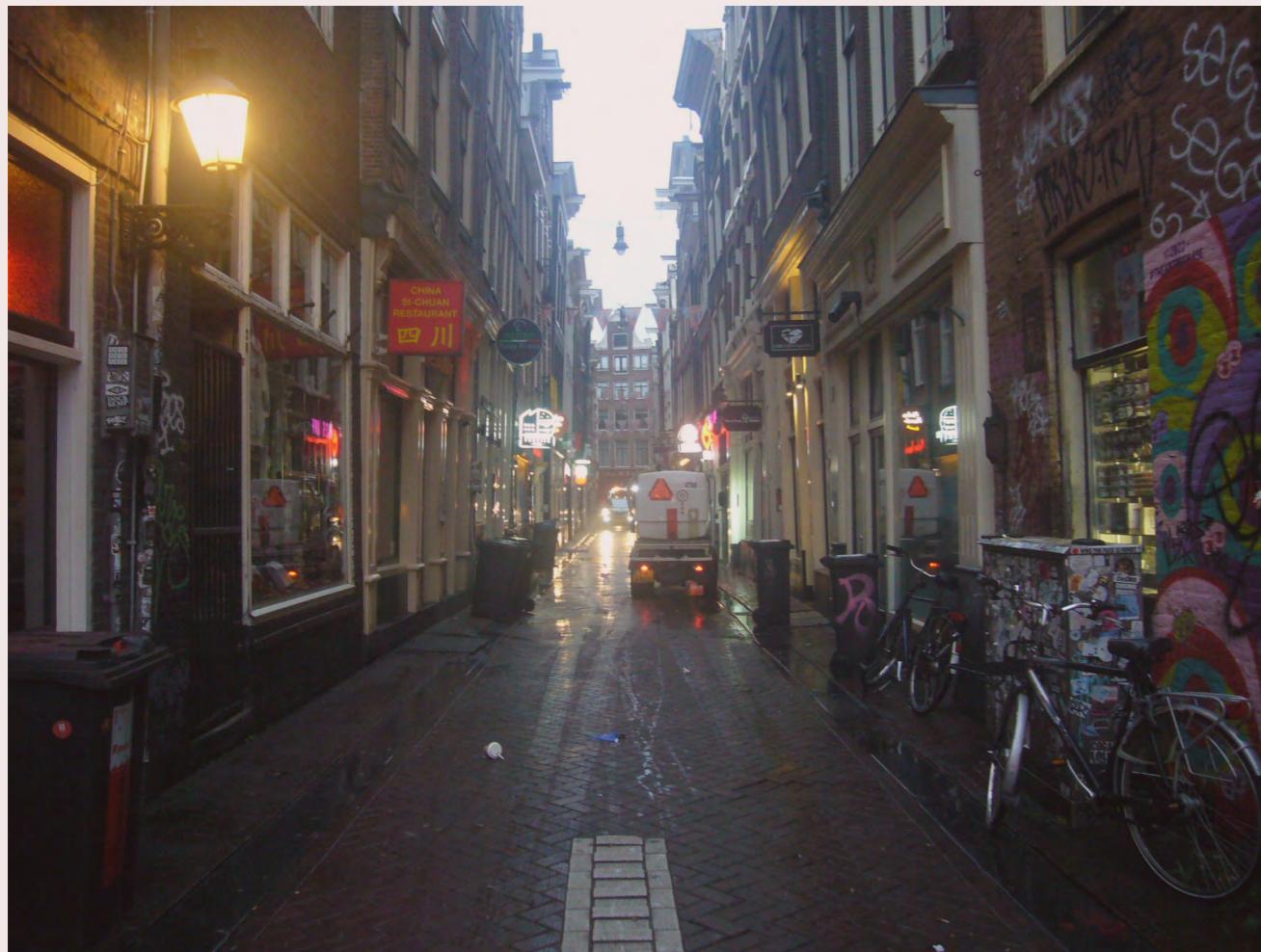
Figure 2.1 Cleaning vehicles in Lange Niezel. Author.

2.1 Core Terms

This research is situated within a conceptual landscape shaped by interrelated notions of toxicity and waste. Table 2.1 contains full list of core terms and its definitions. Altogether, the terms reveal how discarded matter and discarding practices are understood within historical and social contexts. These concepts support a layered reading of De Wallen as a contested site where notions of cleanliness and dirtiness have been historically produced and politicized.

Table 2.1 Terms and definitions. Author.

TERM	DEFINITION
Toxicity	Follows the definition of Max Liboiron (2018) in which toxicity is considered a form of disruption towards existing orders.
Waste	Symbolizes an idea of improper use, operating within the moral economy of "the right,the good, the proper, their opposites and all values in between" it incorporates the Calvinistic notion of stewardship for valuable resources. This term originates the ambivalent conception of 'dirtiness' and 'cleanliness' (Scanlan, 2005, p. 23).
Cleanliness	Is not simply the absence of waste or dirt, but an ideal that enables systems of control, visibility, and moral order. It reflects acceptance onto what is visible, valued, and allowed to remain in public space.
Dirtiness	Is treated as a culturally constructed condition that reflects anxieties about contamination, disorder, and moral transgression.
Degradation	Process of physical, social, symbolic breakdown as well as a social and symbolic condition assigned to spaces, bodies, or practices deemed out of order with dominant norms of productivity, hygiene, or moral value.
Trash	Represents the physical form of residues that are discarded once an object is stripped away of the elements which make it valuable. It will be used as a synonym for litter, garbage, debris, and junk.
Discard	The term refers to something that is systematically left out, devalued, left behind, ruined, or externalized. It encompasses material waste, people, landscapes, futures, ways of life, and more. This broader definition is central to the field of discard studies, which examines the social, economic, political, cultural, and material systems that shape waste and wasting.
Value	Especially links to a sense of morality, worth, and the socio-material judgment of what or who gets discarded.
Waste regime	According to Zapata & Zapata Campos (2018) it is similar to Foucault's panoptic tower (Foucault, 1979). It refers to the dominant discursive frameworks through which waste, waste management practices, and waste-related behaviors are represented, moralized, and made intelligible to the public. These narratives operate as ideological tools that frame waste as a technical, environmental, social and moral issue.
Slow violence	Describes a form of violence that occurs gradually and out of sight, typically not viewed as violence at all (Nixon, 2011).
Scale	Dynamic framework of relationships and forces that enables understanding of how interconnected elements in a system influence one another in different magnitudes (Liboiron & Lepawsky, 2022).

2.2 Systematic Literature Review

To structure the findings of this systematic literature review, the selected texts have been analyzed and categorized across four key thematic dimensions: *Types of Toxicity* (section 0) shows how the definition of *"toxic"* broadens from health harms to symbolic and structural harm. *Methodological Approaches* (section 2.2.2) highlights the diversity of academic and activist strategies used to document, facilitate, or study these tours, including ethnography, visual, participatory, or digital approaches over time. Finally, *Site Types* (section 2.2.3) are considered in terms of their spatial, cultural, and political significance, ranging from industrial zones and polluted landscapes to marginalized neighborhoods.

Table 2.2 Structure of thematic classifications

Section Title	Subsection(s)	
Thematic Classifications	Types of Toxicity	2.2.1
	Environmental Toxicity	
	Social and Moral Toxicity	
	Structural Toxicity	
	Discursive Toxicity	
	Methodological Approaches	2.2.2
	Ethnographic & Participatory Methods	
	Visual & Photographic Research	
	Critical Pedagogy & Experiential Learning	
	Transdisciplinary & Multimodal Approaches	
	Site Types	2.2.3

2.2.1 Types of Toxicity

This section of the systematic literature review draws upon Liboiron's (2018) conceptualization of toxicity as a 'disruption to existing orders' to categorize how harm is conceptualized, experienced, and politicized across literature. These include *Environmental Toxicity* (section 2.2.1.1), *Social and Moral Toxicity* (section 2.2.1.2), *Structural Toxicity* (section 2.2.1.3), and *Discursive Toxicity*, which encompasses toxicity related to tourism practices and representational toxicity (section 2.2.1.4).

2.2.1.1 Environmental Toxicity

Environmental toxicity emerges as a central theme across multiple articles. It involves the contamination of land, water, and air, resulting in significant harm to ecosystems and human health (Pezzullo, 2003; Di Chiro, 2004; Yankovska and Hannam, 2014; Martinez, 2025).

This form of toxicity, present in the disruption of natural ecological orders, is addressed by toxic tours in exposing "environmental carcinogens" perpetuated by corporations intervening Louisiana's Cancer Alley in the Mississippi River, the borderlands shared by the United States and Mexico, Indigenous territories, and important ICE processing centers in Adelanto (Pezzullo, 2003; Di Chiro, 2004; Bigby et al., 2023; Martinez, 2025).

2.2.1.2 Social & Moral Toxicity

Social and moral toxicity is highlighted especially in the context of environmental racism, where marginalized and migrant communities disproportionately experience and bear the burdens of institutionalized pollution (Pezzullo, 2003; Whelan, 2005; Martinez, 2025).

This category focuses on the affective, cultural, and moral harms experienced by marginalized communities forced to endure conditions others consider unliveable. Here, toxic tours serve a crucial purpose by creating and promoting ideas for better, more sustainable ways of living (Pezzullo, 2003). Martinez (2025) elaborates on the indigenous feminist theory of *cuerpo-territorio* to foreground how sexual assault represents a form of contamination. Louisiana's Cancer Alley toxic tour emphasizes how racism and classism have fostered an "environmentally unjust climate," turning communities into "human sacrifice zones" (Pezzullo, 2003).

2.2.1.3 Structural Toxicity

Structural inequalities, particularly those embedded in the public sphere of education, urban governance, and incarceration policies, are characterized as forms of toxicity that institutionalize unequal access to resources and opportunities (Su & Jagninski, 2013; Varelas et al., 2017; Martinez, 2025). In this context, toxic tours act as critical pedagogical tools that raise awareness about systemic inequalities and racism, and fostering community ownership, empowerment, and education over local public space (Whelan, 2005; Su & Jagninski, 2013; Varelas et al., 2017).

Literature highlights how public education systems reveal "deep-seated patterns of racial and economic segregation" that profoundly shape opportunity (Su & Jagninski, 2013, p. 105). Moreover, Martinez (2025) shows how historical, social, and political changes led to the presence of detention and prison facilities.

2.2.1.4   Discursive Toxicity

Discursive toxicity functions as an overarching category that often overlaps with other forms of toxicity. Still, it analyzes how dominant narratives, legal frameworks, corporate communications, traditional tourism, and even academic conventions can obscure, misrepresent, or fail to capture the complex lived experiences of affected communities (Pezzullo, 2003; Yankovska & Hannam, 2014; O'Neill, 2024; Martinez, 2025). This framework highlights how language, imagery, narrative framing, and symbolic practices actively distort or depoliticize environmental, social, and bodily harms, impacting public understanding and policy (Pezzullo, 2003; O'Neill, 2024; Martinez, 2025).

Discursive toxicity in tourism practices, manifests in how tourism practices can simplify or exploit local experiences for visitor consumption, as seen when tourists prioritize "real stories" from "real people" (Yankovska & Hannam, 2014). This form of toxicity encompasses how dominant forces distort or conceal harm through various forms of communication. This includes corporate campaigns framing public opinion around issues like breast cancer awareness (Pezzullo, 2003), institutional discourses that implicitly rely on violence to uphold national ideologies (Martinez, 2025), limitations in understanding toxicity purely from first-hand experience (Bowers, 2013), and the strategic use of media to unpack the multilayered nature of toxicity and to shape academic environmental narratives (O'Neill, 2024).

The concept of discursive toxicity shows how powerful messages and ways of talking can hide or twist the real experiences of people facing harm, actively hindering the understanding on the full picture of environmental, social, and personal damage. Reflecting on how influential players "frame public opinion and the dominant discourse," can shed light on power dynamics and find ways to share more honest stories (Pezzullo, 2003).

2.2.2   Methodological Approaches

The literature reveals a variety of methodologies used to document study toxic tours, often combining qualitative, ethnographic, and visual methods to capture complex experiences of toxicity. The methodologies included are *Ethnographic & Participatory* (section 2.2.2.1), *Visual & Photographic Research* (section 2.2.2.2), *Critical Pedagogy & Experiential Learning* (section 2.2.2.3), and *Transdisciplinary & Multimodal Approaches* (section 2.2.2.4).

2.2.2.1   Ethnographic & Participatory Methods

Ethnographic approaches, which involve deep immersion in communities affected by environmental and social toxicity, are crucial for understanding the lived realities of marginalized groups, directly contesting the idea of researcher neutrality (Di Chiro, 2004; Pezzullo, 2003; Bigby et al., 2023; Martinez, 2025).

These methods allow researchers to gain a profound understanding of how communities experience environmental and social harms. Pezzullo (2003) highlights how expanding research approaches can help us better understand the important discussions happening within counterpublics. Similarly, Bigby (2023) emphasizes that using an autoethnographic approach allows for a deep analysis of personal experiences, connecting them to wider social and cultural issues beyond just individual feelings. This participatory approach also extends to co-creating knowledge, as seen in Su & Jagninski's (2013) work with marginalized youth. In it, participants are empowered as active agents of change in their communities through experiential learning (Su & Jagninski's, 2013)
.

By engaging directly with affected communities and embracing their experiences, ethnographic and participatory methods challenge traditional research paradigms. This immersive approach allows researchers to move beyond detached observation, fostering a more nuanced and empathetic understanding of complex injustices, bypassing "the conventional objectivist model, which, many argue, assumes the spectator's (researcher's) neutrality and distance from the object of study" (Di Chiro, 2004, p. 113).

2.2.2.2   Visual & Photographic Research

Author.s underscore the central role of visual methodologies, especially photography and geo-spatial technologies, in critically representing toxicity within contested environments (Pezzullo, 2003; Bowers, 2013; O'Niell, 2024).

O'Niell (2024) argues that photography can "unpack various layers of society and how it (dis)connects with nature" (p. 1), positioning the photo-to-essay as both an advocacy tool and an archival resource for scholars and activists (p. 4). Pezzullo (2003), reflecting on her tour of Louisiana's "Cancer Alley," employed both still and video cameras to capture not only material evidence but also the "immaterial and sensory nature of human experience" (p. 229), stressing the importance of visuality in documenting affect and atmosphere. Bowers (2013) extends this visual logic into the digital realm, advocating for the use of geo-spatial technologies to construct immersive virtual toxic tours, whose "communicative promise" lies in the creation of electronic installations that convey spatial injustice (p. 373).

These studies highlight how visual and photographic methods enrich toxic tourism research by challenging dominant discourses and offering embodied, multisensory ways of knowing. It frames the role of visual media as tools of resistance, situated documentation, and critical pedagogy.

2.2.2.3   Critical Pedagogy & Experiential Learning

Toxic tours are increasingly recognized as powerful pedagogical tools that foster critical awareness and social engagement (Whelan, 2005; Su and Jagninski, 2013; Varelas et al., 2017; Bigby, 2023). They situate learning within lived environments marked by environmental harm and injustice, prompting participants to reflect on the socio-political forces that shape these landscapes (Bigby, 2023; Martinez, 2025).

Whelan (2005) frames toxic tours as a form of popular education rooted in the daily lives of community members, prioritizing collective learning and advancing social, political and structural change priorities. To Bigby et al. (2023), the central goal of toxic tours is to prioritize the sharing of knowledge through education and storytelling. This can be achieved in many ways, whether by recounting histories of forced Indigenous displacement or mentioning the harvested food in the territory (Bigby et al., 2023).

These educational encounters invite participants to engage with environmental injustice beyond abstract theory, but as embodied and place-based experience, empowering both who participate in the tours or facilitate them.

2.2.2.4   Transdisciplinary & Multimodal Approaches

The academic study of toxic tours is characterized by its transdisciplinary orientation, drawing on fields such as geography, environmental justice, sociology, visual culture, Indigenous studies, and feminist theory (Pezzullo, 2003; Di Chiro, 2004; Bigby et al., 2023; O'Neill, 2024; Martinez, 2025).

Scholars like Pezzullo (2003) and Martinez (2025) employ feminist theories, particularly the concept of *counterpublics*, to analyze how toxic tours resist dominant discourses and *cuerpo-territorio* to draw connections between body and land. These perspectives construct alternative representations of understanding.

Similarly, Bigby et al., (2023) and Martinez (2025) foreground decolonial worldviews, proposing land-based pedagogies as essential sites of education and transformation that reconnect land, culture, and community while rejecting extractive epistemologies (Bigby et al., 2023). The incorporation of visual means to document is accompanied by a growing emphasis on the legitimacy of lived experience within research. Scholars such as Pezzullo (2003), Di Chiro (2004), Bigby (2023), O'Neill (2024), and Martinez (2025) foreground the experiences of both researchers and tour participants as essential to understanding the emotional and political textures of place.

This transdisciplinary scholarship integrates critical theory with lived experiences. It challenges colonial, capitalist, and patriarchal structures through layered, contextually embedded methods that allow to interrogate of toxicity as both material and symbolic. As such, toxic tours emerge as sites of political intervention and as spaces for methodological innovation, where storytelling, witnessing, and activism converge.

2.2.3   Site Types

This section delves on places where toxic tours take place. These were classified in the following categories: *urban and industrial zones*, *border zones*, and *virtual and mediated spaces*. Urban and industrial zones includes urban and industrial zones, often located in historically marginalized neighborhoods (Pezzullo, 2003; Varelas et al., 2017). For example, the San Francisco Bay Area is discussed as the site with the highest rate of breast cancer in a Western country, raising questions about the spatial correlation between industrial pollution and health outcomes (Pezzullo, 2003). Similarly, toxic tours in Boston, Chicago and Louisiana explore how localized toxicity intersects with racialized urban segregation (Whelan, 2005; Su & Jagninski, 2013; Varelas et al., 2017)

Border zones simultaneously experience the effects of transnational capital, the weight of colonial history, constant migration flows, and chronic governmental disregard (Pezzullo 2003; Di Chiro, 2004; Bigby et al., 2023; Martinez, 2025). These areas are shaped by geopolitical, economic, and cultural crossings encompassing *Ambos Nogales* and *Adelanto* on the U.S.-Mexico border (Di Chiro, 2004; Martinez, 2025), the Tar Creek Superfund site in northeastern Oklahoma (Bigby et al., 2023), and the portion of Mississippi River between Baton Rouge and New Orleans (Pezzullo, 2003). Additionally, disaster zones such as the Chernobyl Exclusion Zone, areas branded as sacrifice zones or incarceration centers, like Louisiana's Cancer Alley or the ICE Detention Center in Adelanto, show how places become saturated with political, and racial processes extending control beyond constrained areas (Pezzullo, 2003; Yankovska & Hannam, 2014; Martinez, 2025;).

Virtual and mediated spaces demonstrate that toxic tours do not need to be physically grounded to generate affective presence or mobilization. These abstract spaces foster presence and identification among geographically distant audiences. Google Earth-based mountaintop removal tours and photo-ethnographic documentation of desalination politics in California (Bowers, 2013; O'Neill, 2024).

Literature on toxic tours identifies a broad spectrum of physical, political, and mediated spaces where toxicity is both experienced and contested. From polluted urban neighborhoods and racialized industrial zones (Pezzullo, 2003; Varelas et al., 2017), to militarized borders and disaster landscapes marked by state abandonment (Martinez, 2025; Yankovska & Hannam, 2014), these sites function as spaces of memory, resistance, and identity. Such tours foster mutual recognition of environmental and social pressures, underlining how place-based storytelling can generate political awareness and collective action (Whelan, 2005).

Figure 2.2 De Wallen at dawn. Author.

2.3 Relevant Theoretical Models

This chapter situates three interrelated approaches, Degrowth, Discard Studies, and Critical Design Studies, within the multi-level perspective on socio-technical transitions (Geels, 2002). Each perspective addresses waste and its systemic dimensions at a different scale and from a distinct lens, collectively providing a comprehensive framework to analyze urban spaces like De Wallen.

Degrowth (section 2.3.1) operates at the landscape level, critiquing growth-dependent regimes that embed disposability in infrastructural, moral, and spatial orders. *Discard Studies* (section 2.3.2) intervenes at the regwime level, interrogating the systemic conditions that produce and sustain waste. It reframes waste as a symptom of entrenched power structures, slow disasters, and toxicity. *Critical Design Studies* (section 2.3.3) operates at the niche level, offering experimental and participatory strategies to challenge the status quo.

Altogether, these approaches offer complementary strategies to study and intervene the notions of waste, tourism, and toxicity. They link critique, systemic understanding, and creative action to envision more sustainable and equitable urban futures. Figure 2.3 illustrates how these frameworks have been structured in relation to Geels' Multi-Level Perspective (MLP), offering a systematic representation of how multiple levels intersect to generate potential regime shifts in tourism and urban sustainability (Geels, 2002).
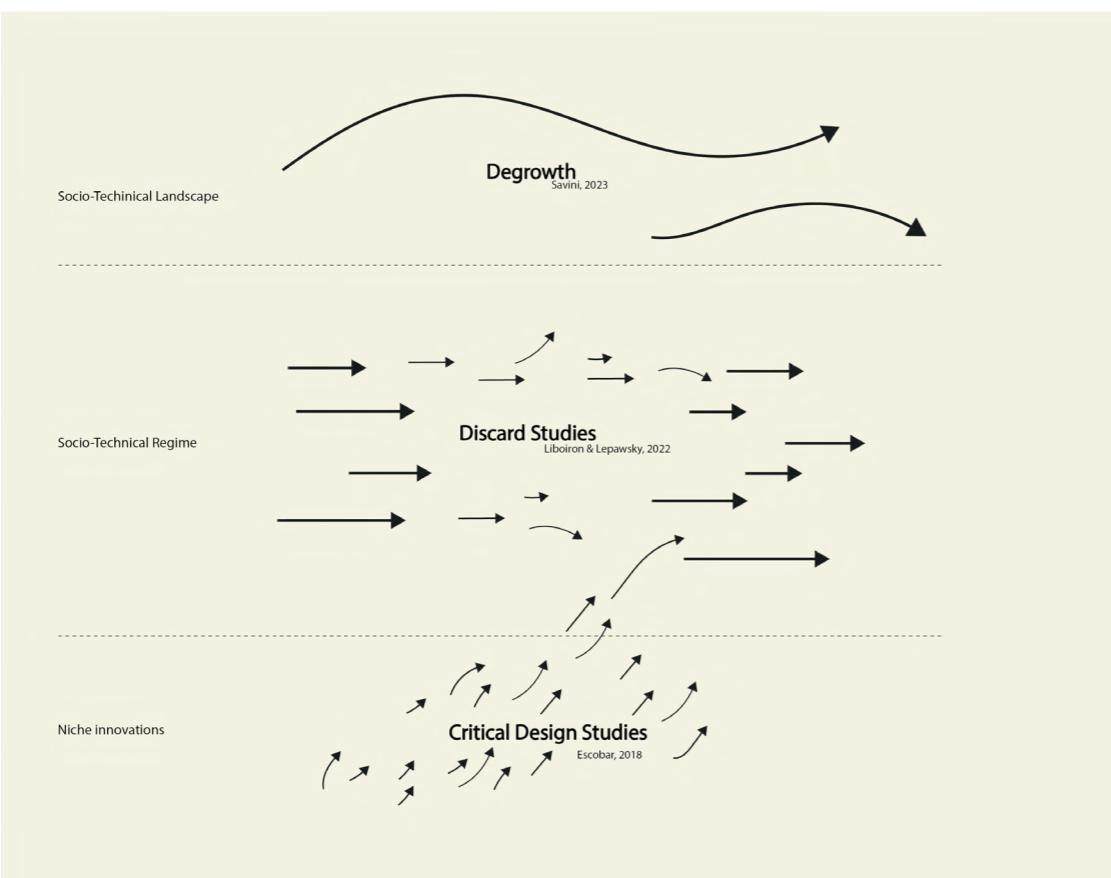
Figure 2.3 Frameworks assembled in relation to Geels' Multi-Level Perspective (MLP). Author.

2.3.1 Degrowth

Degrowth can be understood as a landscape-level critique of the existing socio-technical regime. It operates at the macro level, challenging dominant growth-oriented economic, cultural, and infrastructural norms that structure production, consumption, and urban life. Through the principle of *satiation*, degrowth seeks to promote more responsible and mindful practices of consumption and discarding, aiming to reduce waste and overproduction (Savini, 2025). These practices confront entrenched infrastructural, moral, and spatial orders that stabilize the regime, highlighting how transitions are constrained by established systems of governance, urban planning, and social norms (Geels, 2002). Figure 2.4 situates Degrowth and its related concepts within the MLP.

Degrowth aims to achieve the satisfaction of all essential needs in a determined society. It pursues an agenda that is based on care, culture, education, health and ecological regeneration (Savini, 2025). According to Savini (2025), a transition into degrowth economy can be achieved through separate democratic processes from socio-cultural and political institutions that seek growth. Through depth, agency, and trajectory, degrowth can propose a socio-political transformation that can reduce the resources needed in societies. Table 2.3 summarizes the

three strategic issues in a degrowth transition highlighting their focus and guiding principles.

Table 2.3 Overview of the three strategic issues in a degrowth transition. Author.

STRATEGIC ISSUE	DESCRIPTION
Depth	Depth refers to the degree or scale of socio-cultural transformation targeted by degrowth. Satiation is the principle that society should meet essential needs without overproduction or excessive consumption (Savini, 2025).
Agency	Agency refers to the actors and social groups responsible for enacting degrowth practices. Diffuse agency means that change is driven collectively by grassroots movements, activists, civic organizations, and individuals rather than a single central Author.ity (Savini, 2025).
Trajectory	Trajectory refers to the processes and pathways through which degrowth strategies generate change. It emphasizes non-linear development, where prefigurative actions enact future degrowth principles in the present. Popularization of these practices builds legitimacy and collective pressure, reinforcing a feedback loop that gradually enables regulatory, social, and cultural transformation (Savini, 2025).
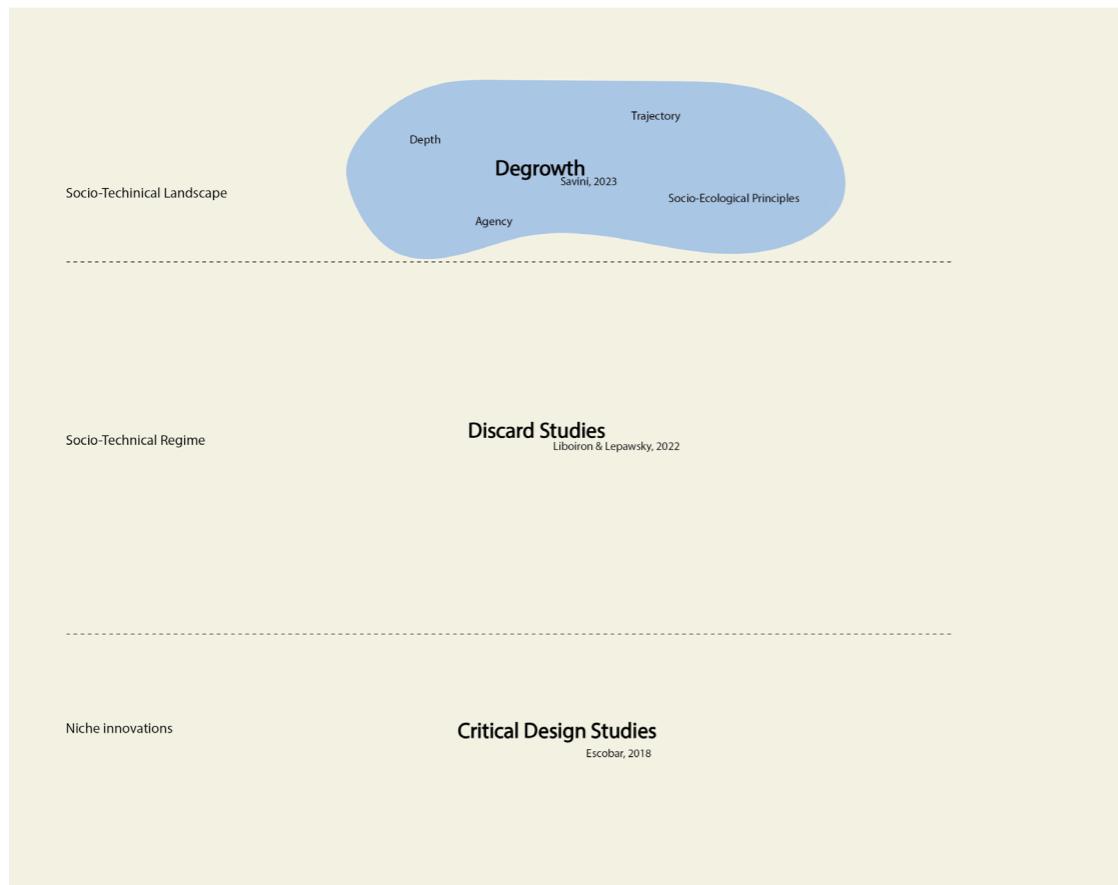
Figure 2.4 Degrowth & related concepts in the Multi-Level Perspective (MLP). Author.

Degrowth reframes waste as a central indicator of a dysfunctional urban metabolism in growth-dependent economies (Savini, 2023). By locating it at the landscape level, degrowth foregrounds the reduction of waste as a fundamental critique of capitalist practices that treat waste as a commodity for profit. In this sense, tourism in areas such as De Wallen exemplify how space, labor, infrastructure, people, and food are treated as disposable commodities. Degrowth foregrounds the role of socio-ecological relations as pathways for regenerative practices, collective social engagement, and sustainable tourism practices (Savini, 2023).

Addressing waste in De Wallen through this lens can lead to more sustaibale practices. Achieving satiation requires a shift from competition and exploitation toward symbiosis, acceptance, and stability. It further requires degrowth actors to be "signifying agents", and to create alternative meanings that challenge mainstream growth logics where small, distributed acts of care support this transition (Savini, 2023; Savini, 2025).

Degrowth emphasizes the importance of practices that model socially and ecologically sustainable behaviors in the present. In doing so, Degrowth coins the term *prefiguration*, defined as "the act of performing in the present what the future society can be" (Savini, 2025, p. 146). In urban contexts such as De Wallen, these principles can be applied to explore waste through tourism practices. This way, the area's identity and culture can be leveraged beyond short-term profit strategies to foster regenerative socio-ecological relations between tourism and waste management.

However, prefigurative practices are often marginalized, ridiculed, or co-opted by incumbent powers. They also frequently lack the scale to trigger immediate systemic change (Savini, 2025). Despite these challenges, successful initiatives reinforce one another, build legitimacy, mobilize public support, and create feedback loops that enable further regulatory and societal change (Savini, 2025, p. 147).

Degrowth strategies in De Wallen could refuse growth-driven rules, hack existing processes, or reinterpret municipal waste management ecologically. Currently, the system maintains growth-dependent profit models by relocating trash to the back end of the city. This approach neglects degrowth principles such as localizing waste reuse and adopting bioregional strategies, which aim to manage residuals within a closed system (Savini, 2023).

Finally, degrowth emphasizes that the urban landscape is inseparable from the natural environment (Savini, 2025). Strategies should aim for regenerative, not exploitative, relationships between the economy and ecology. This perspective suggests new geographies to in practice, where culture, care, and regeneration replace accumulation and disposability. These principles illustrate how degrowth can transform tourism, urban spaces, and everyday consumption practices into systems guided by sufficiency, ecological responsibility, and social well-being (Savini, 2023).

2.3.2   *Discard Studies and Toxicity*

The central goal of Discard Studies is to challenge dominant assumptions about waste. As Liboiron and Lepawsky (2022) argue, Discard Studies "*seeks to shift discussions beyond technological or moral solutions, such as recycling initiatives or plastic straw bans, that address symptoms rather than the systemic origins of waste*" (p.7). Instead, it examines waste through broader power structures and socio-economic dynamics, revealing how waste is embedded in larger systems of inequality and environmental harm. Its questionings can revolve around why recycling is considered as good; what allows certain chemical components to be so ubiquitous despite being harmful, and what must be discarded for certain systems to exist and thrive. In this thesis, Discard Studies is situated at the regime level, as it intervenes in the established socio-technical order by exposing its assumptions and ways of working (Geels, 2002). Figure 2.5 situates Discard Studies and the related concepts for this thesis within the MLP.

Figure 2.5 Discard Studies & related concepts in the Multi-Level Perspective (MLP). Author.

Liboiron et al. (2018) apply Nixon's concept of *slow violence* (2011) to argue that the mechanisms of waste generation function as a *slow disaster*. Unlike sudden, spectacular catastrophes that garner immediate public attention, these chronic processes are incremental, difficult to pinpoint, and operate over extended periods and across different spaces. This invisibility necessitates the development of new ways to represent and narrate their impact.

Cambridge Dictionary defines toxicity as something very unpleasant or that causes harm, Liboiron et al. (2018) further delve into the definition of toxicity by identifying its disruption towards existing orders, collectives, materials and relations. Under such perspective, the mechanisms that enable waste on the streets represent a form of toxicity.

Traditional models of action against waste entail a management approach of separation, containment, clean up and immunization. Such models are now outdated in part, because of the increasing nuance in the material composition of waste. Municipal Solid Waste Management protocols do not address the the broader social, political, military and other power structures that engender toxicity (Liboiron et al. 2018).

Discard Studies challenges the technocentric focus on waste management by shifting attention to the structures that produce waste and sustain its harmful effects. Table 2.4 delves onto the techniques of *defamiliarization*, *denaturalization*, *decentering*, and *depurification* as a way to understand how power is embedded in systems. Discard Studies reveals how conventional solutions, that genersate slow disasters, ultimately fail to address the underlying causes of waste and its pervasive damage.

Table 2.4 Overview of Discard Studies techniques and definitions. Author.

TECHNIQUE	DEFINITION
Defamiliarization	Methods that prevent researchers from using taken-for-granted modes of perception, reading, knowing, or experience. It allows to interrupt common narratives about waste and wasting by making the familiar strange, to uncover the underlying power dynamics and constructed realities that shape our understanding of the world. (Liboiron & Lepawsky, 2022).
Denaturalization	Reveals how specific contextual and historical moments become normalized, allowing to question their assumed permanence and demonstrating that what was constructed can be changed, opening possibilities for new approaches. (Liboiron & Lepawsky, 2022).
Decentering	Challenges systems that rely on externalizing waste and creating "sacrifice zones" by interrogating the power dynamics that establish centers and peripheries, ultimately asking who bears the burden and how to achieve greater justice (Liboiron & Lepawsky, 2022).
Depurifying	Depurifying focuses on dissecting the discourses, logics, and various techniques oversimplify and control difference. This approach contends that "purity" is a more aggressive concept than simply upholding social norms or boundaries.(Liboiron & Lepawsky, 2022).
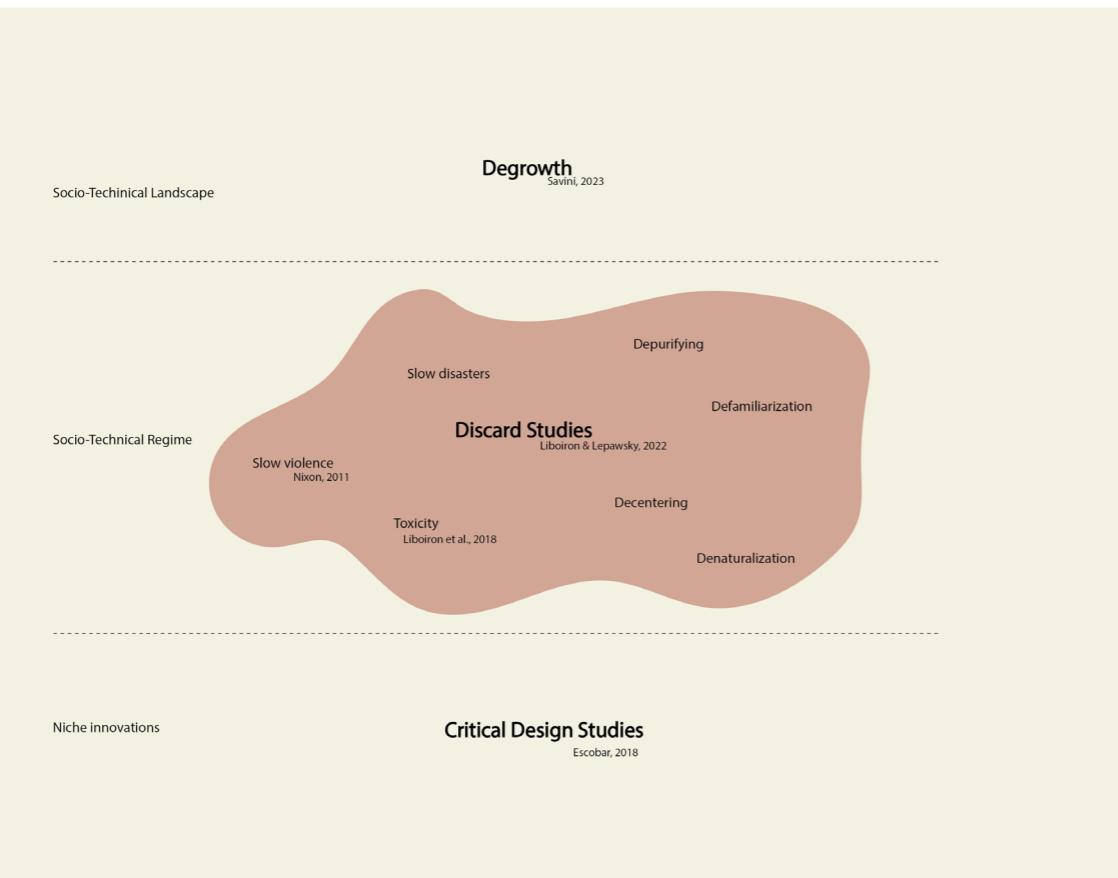
Toxicity in De Wallen disrupts existing orders across multiple dimensions, social relations (residents vs. tourists), spatial organization (public vs. private), and moral hierarchies (clean vs. dirty, respectable vs. outcasts). Waste accumulation in the district functions not just as a material burden, and as a force that reshapes how different actors are perceived. Through Nixon's lens of slow violence, this ongoing degradation gradually reshapes public perception, reinforcing stigmas against marginalized groups such as sex workers, informal trash collectors, or tourists (Nixon, 2011). These populations often become scapegoats, obscuring the systemic failures of urban waste infrastructures.

To confront waste and its impacts, Author.tities must move beyond reactive measures and critically examine the power dynamics that shape its production, distribution, and invisibility. Under a Discard Studies approach, a toxic tour reveals the everyday experiences of waste and toxicity. Beyond the common understanding of its environmental impact, it shows how impacts shape people's lives and perceptions.
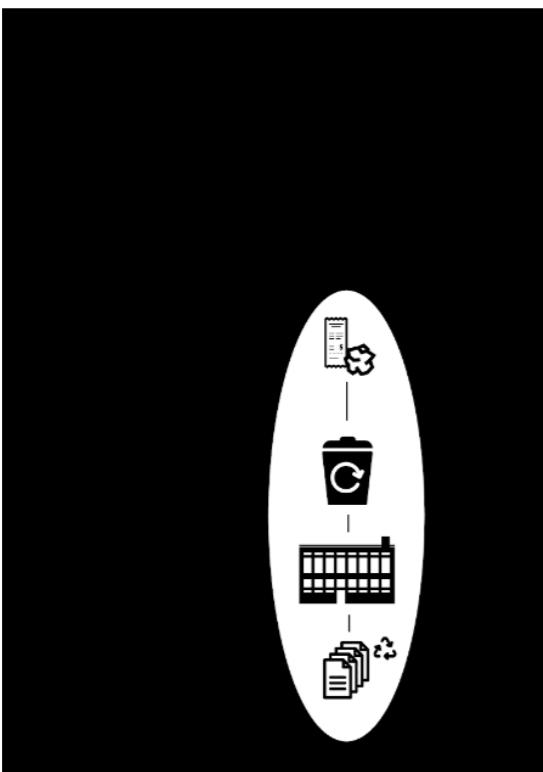
Figure 2.6 Diagram showing the difference between the type of research that focuses on waste (left) compared to Discard Studies, which studies wider systems that enable certain forms of waste and wasting (right). Liboiron et al., 2018.

2.3.3   Critical Design Studies

Arturo Escobar (2018) claims that the world has been an ontological design as a consequence of the expert-driven processes. This phenomena has derived into a One-World World (OWW) view where four different beliefs in the current systems, the individual, science, the economy, and the real, privilege certain ways of knowing and subdue other cosmologies under the rules of the West.

According to Escobar (2018), it remains necessary to free design from its conventional thinking and reposition it within the diverse ways of knowing and being of the Pluriverse, "a world where many worlds fit". This way, design can be transformed from an expert-driven process into design practices that challenge the business-as-usual mode of being, producing, and consuming (Escobar, 2018). This thesis exemplifies an alternative way of world-making and situates critical design studies at the niche level of Geel's MLP (Geels, 2002). Figure 2.7 situates Escobar's concepts within the MLP.
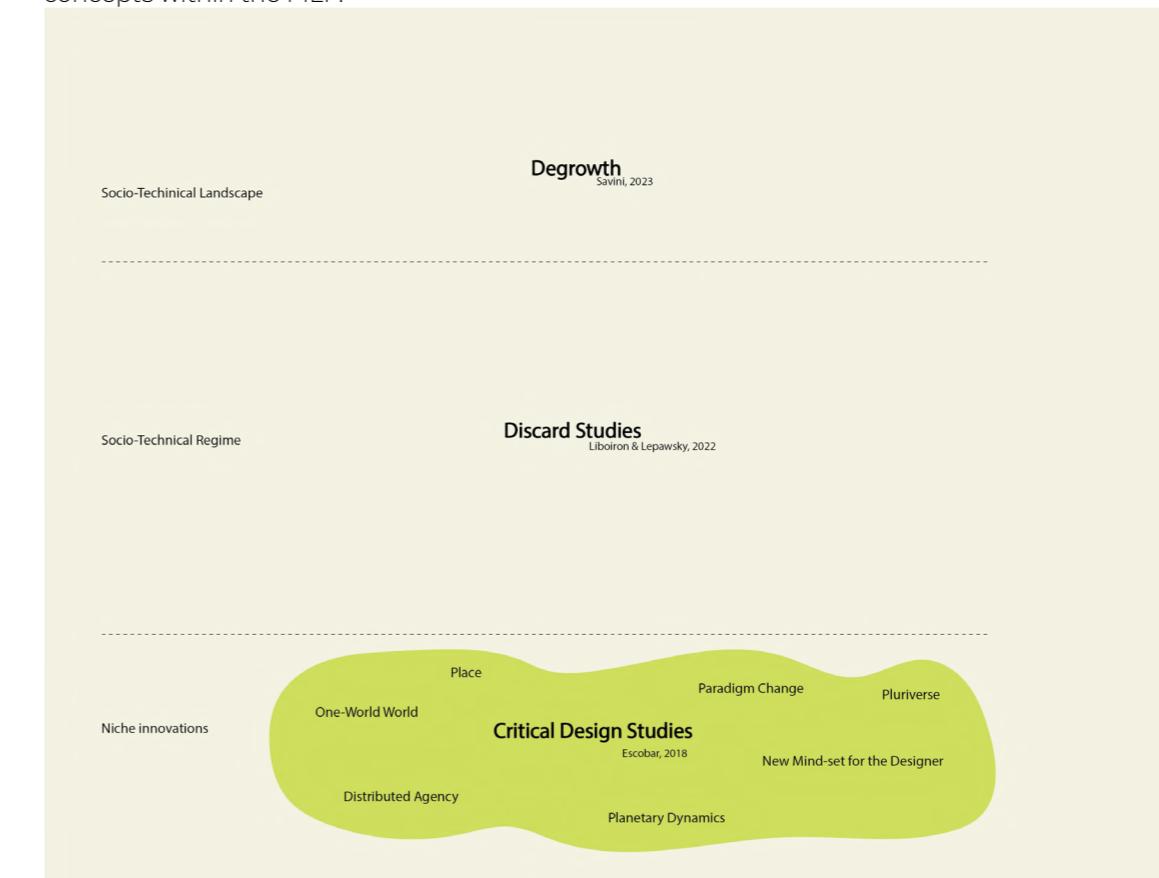
Figure 2.7 Critical design studies & related concepts in the Multi-Level Perspective (MLP). Author.

Critical Design embodies the experimental, transformative potential that could, under the right conditions, destabilize regimes and interact with the landscape (Geels, 2002). It can go a long way against design that reinforces the status quo (Escobar, 2018). Under the lens of Escobar, the consolidation of waste institutions and its encircling social norms, have been defined heteronomously through expert-driven processes and not by communities nor through local political processes (Escobar, 2018).

Critical Design perspectives offer innovative ways to tackle waste's complex nature by envisioning processes that are participatory, socially oriented, situated, and open ended. These questions point directly to an emerging field that seeks to unify these transformative efforts: *design for transitions*. As Escobar (2018) details, leading design thinkers arrived at this vision through work across diverse contexts, where seemingly distinct elements consistently converged. Escobar's analysis of their work successfully identifies these common threads, articulating a single framework for design for transitions that encompasses seemingly disparate elements. Table 2.5 links Escobar's (2018) elements by to the ten operational principles of design for transitions outlined by Irwin, Kossoff, and Tonkinwise (2015).

Table 2.5 Escobar's Core Concepts in Design for Transitions. Author.

CONCEPT	DEFINITION
Place	Design must be grounded in local, everyday contexts and focus on solutions that are specific to a community's unique location, while still being connected to a global network of knowledge.
Distributed Agency	Recognizing that agency (the capacity to act) is spread among many actors, design work must support and amplify emergent, bottom-up (grassroots) initiatives to connect them into a broader, shared vision for transition.
Paradigm Change	The shift to a systems-based mindset that understands problems and solutions in terms of interconnected living systems (both social and natural), aiming to restore and protect these ecosystems.
Planetary Dynamics	Solutions must acknowledge and operate across the vast scales of time and space required to address large-scale, long-term global and environmental challenges.
New Mindset for the Designer	Designers must adopt a reflective posture and recognize their own role as a critical component of the design process. This requires integrating and recontextualizing knowledge from diverse disciplines (transdisciplinary approach).

Critical Design emphasizes the need of making visible the main ecological and social manifestations of unsustainability, aligning with the need to spatialize and narrate toxicity. Conceiving De Wallen as a designed space with spectacle, regulation, and flows of bodies, capital, and meaning, a toxic tour critically redesigns its perception by foregrounding waste, residue, and infrastructural breakdown. Walking, witnessing, and observing becomes a form of spatial and multisensory activism that reshapes how waste and urban toxicity are understood. In this way, Critical Design becomes a platform for co-producing meaning and fostering community engagement around systemic environmental challenges.

Physical spaces affected by pollution or resistance efforts can act as spatialized testimonies that showcase the ongoing struggles against systemic toxicity. These spaces not only document the harm but also inspire collective reflection and action, transforming abstract issues into multisensory phenomena.By integrating these principles, this research can serve as a foundation for fostering deeper connections between communities, their environments, and the ongoing fight against systemic toxicity in the form of pollution.

Toxic tours can highlight the possibility of collective reflection and locally focused actions to impact broader systems of waste management. They necessarily employ a bottom-to-top approach that can engage De Wallen's communities into signifying the current stakeholder relations surrounding waste as well as its practices, and its marginalized groups.

2.4   Relevant Conceptual Models

This section introduces how toxic tours can act as a device that mediates between De Wallen's regime and the Pluriverse. It incorporates the spatial, symbolic, and affective dimensions of waste in De Wallen to envision new forms of tourism.

Following John Scanlan (2005) waste emerges at the threshold where things lose meaning or utility, thus becoming 'filth', 'shit', 'rubbish', or 'garbage' when they are no longer recognized within systems of value. This uncertainty that renders waste so analytically rich: it reveals how societies determine what (and who) is expendable. Waste is thus approached as a boundary object capable of revealing the tensions and contradictions embedded in urban classification systems (Douglas, 1966).

To operationalize these ideas within the context of this research, the conceptual frameworks are also adapted to Geels' MLP (2002). Figure 2.8 shows the conceptual framework assembled in relation to the MLP. In it, the Toxic Tour as Device emerges at the niche level, challenging dominant practices and narratives are both reproduced and contested.
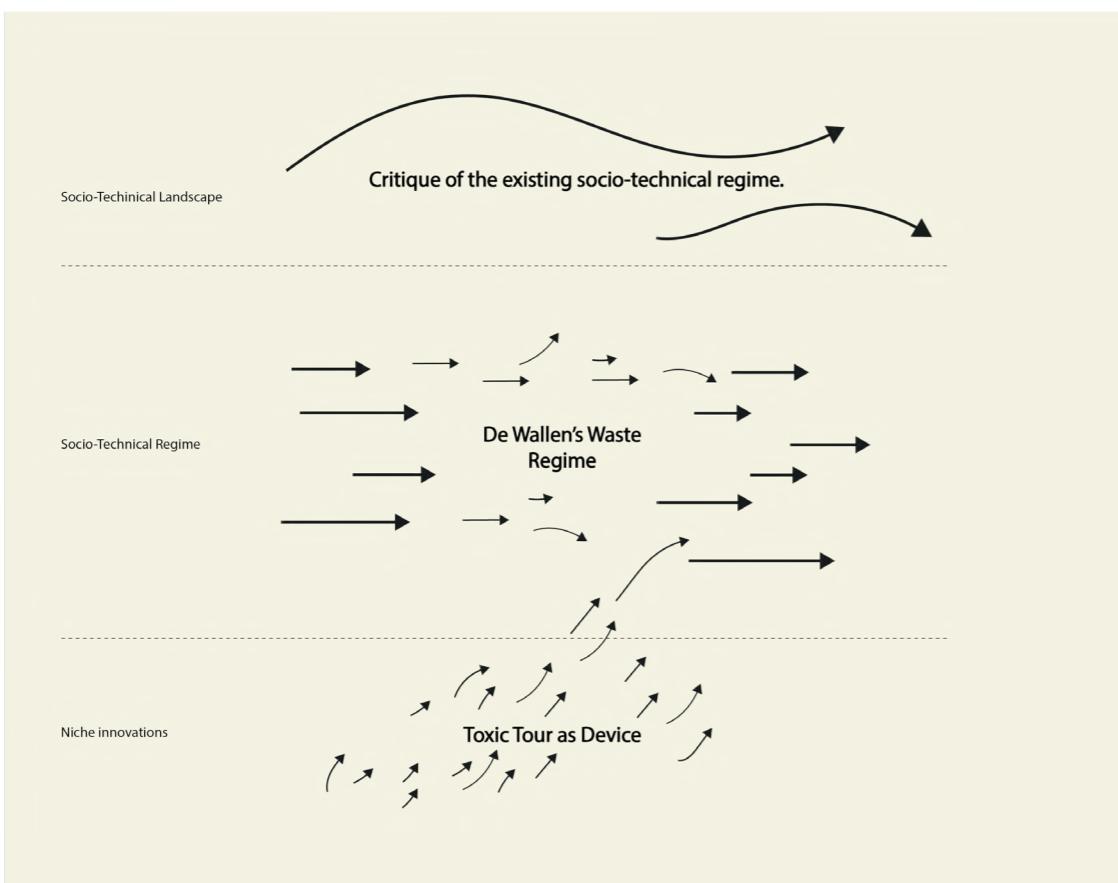
Figure 2.8 Conceptual frameworks assembled in relation to the MLP.

2.4.1   Toxic Tour as a Device

Conceptually, the toxic tour functions as an epistemic and participatory method, enabling participants to actively co-produce knowledge rather than passively observe. It is a speculative platform through which dominant narratives in De Wallen can be challenged and reconsidered. Drawing on Arturo Escobar's notion of the Pluriverse (2018), the tour encourages a multiplicity of ways of knowing, perceiving, and caring for urban space. Instead of offering a single diagnosis or solution, it surfaces situated knowledge and embodied responses to waste and tourism.

As Phaedra Pezzullo (2003) argues, "toxic tours rhetorically invent more liveable designs for life" by rearticulating memory and community (p. 228). Figure 2.9 serves as a conceptual diagram that maps the relational dynamics and scales of the toxic tour as method and device. It shows how a toxic tour can interact directly and mediate between diverse elements encompassing individual participants, group configurations, physical contexts, and systems. Directional arrows illustrate flows between elements, showing how each layer of knowledge can permeate across them. In this way, the tour functions serve both as a research method and a generative encounter within Escobar's Pluriversal (Escobar, 2018).
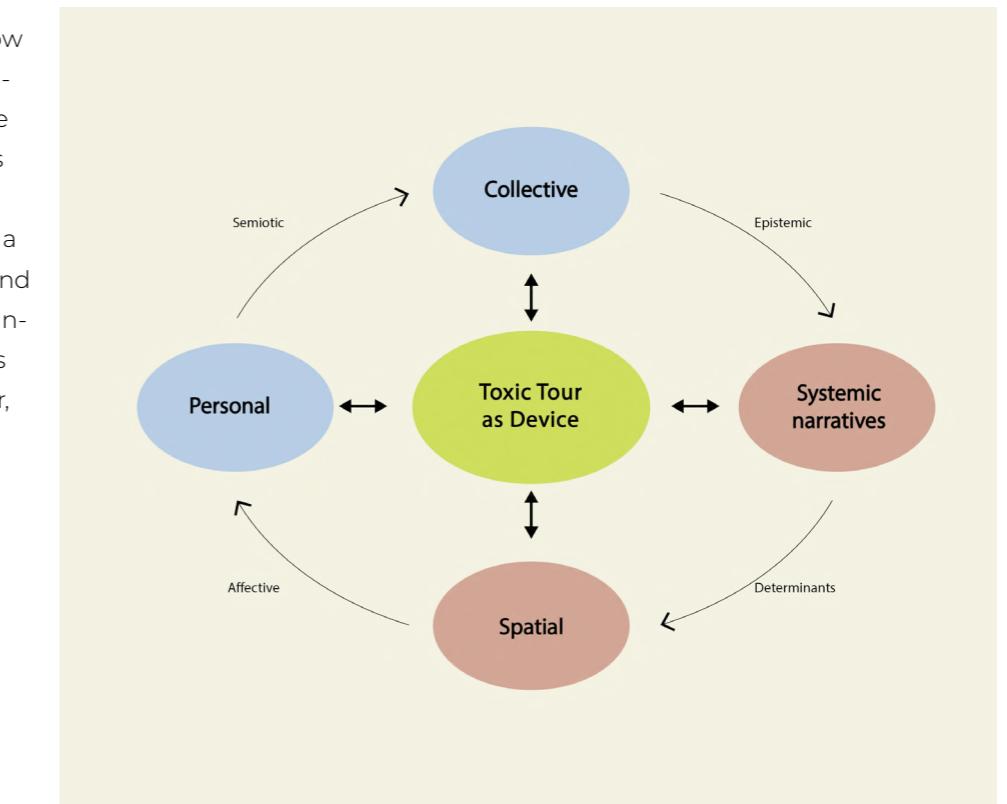
Figure 2.9 Toxic tour as device. Author.

3 Research Methodology

This research will be structured around the four sub-research questions that will answer the following main research question:

"What insights can be gained regarding tourism and waste in De Wallen through the design and implementation of research-driven tourism in the form of a toxic tour?"

First, evolution trends on toxic tours will be outlined with help of the systematic literature review, establishing the theoretical basis for framing De Wallen as a site of toxicity (Section 3.1). Second, the design of a toxic tour in De Wallen will be operationalized by drawing on the themes identified in academic literature; these will be aligned with site-specific conditions and learning goals, to develop a toxic tour format that transforms waste and tourism into a situated ground for learning (Section 3.2). Third, participant engagements in toxic tours will be explored to generate situated insights into waste, tourism and toxicity through iterative Participatory Action Research (PAR)(Section 3.3). Fourth, broader methodological insights will be analyzed to foreground how toxic tours can be structured to generate co-produced knowledge and situated learning. Table 3.1 shows the overview of the research procedure that follows in the rest of the sections.

Table 3.1 Overview of research procedure. Author.

Sub-Research Questions	Methods	Section
SRQ1 How can De Wallen be understood as a site of toxicity?	Systematic Literature Review	3.1
SQR2 How can the design of a toxic tour of De Wallen generate a learning ground for waste, tourism and toxicity?	Systematic Literature Review	3.2
		3.2
SRQ3 What insights emerge from participants' engagements in a toxic tour in De Wallen?	Participatory-Action Research,	3..3
	Qualitative and Quantitative Survey	
SQR4 What broader insights do toxic tours as a method offer for addressing research-driven tourism in cities?	Data Stream Triangulation	3.4

Systematic Literature Review

The review will target peer-reviewed articles published since 2000 since the first academic material on toxic tours published by Di Chiro (2000). The systematic literature review will us the SCOPUS database as it has comprehensive coverage of peer-reviewed literature in the social sciences and humanities. The full search string is:

PUBYEAR > 2002 TITLE-ABS-KEY ((toxic tour OR toxic tours))

Inclusion criteria will prioritize English-language publications from relevant fields such as cultural studies, tourism studies, environmental and science education, communication, and urban affairs, while excluding articles from unrelated areas such as medicine, engineering, pharmacology, and business. Article selection will proceed in stages, first by title relevance, then abstract, and finally full-text relevance. Table 3.2 contains an overview of the inclusion and exclusion criteria for the systematic literature review. Appendix A: Systematic Literature Search Terms contains a detailed breakdown of the search terms, as well as the identified articles for this section of the study.

Table 3.2 Inclusion and exclusion criteria from systeamtic literature review. Author.

Inclusion criteria:	-Peer-reviewed journal articles -Published between 2002 and 2025 -Written in English -Focused on toxic tours or related conceptual frameworks -Belonging to the fields of cultural studies, tourism studies, environmental education, science education, communication, or urban affairs
Exclusion criteria:	-Theses, reviews, books, reports, or conference proceedings -Publications from unrelated disciplines such as agricultural sciences, medicine, engineering, pharmacology, computation, maritime health, biology and business -Non-English publications

The screening and data extraction process will be conducted by the researcher using literature management software, privileging first title coincidence, abstract relevance and finally content. For each selected article, data will be collected on the year of publication, title, abstract, and keywords.

The review will be limited by its reliance on SCOPUS and restriction to English-language sources, which may result in the exclusion of relevant non-indexed or non-English materials. Table 3.3 contains an overview of the screening and selection process of the selected literature.

Table 3.3 Screening process of academic literature sources. Author.

Number of Articles in Scopus	56
Excluded Titles	37
Excluded Abstracts	6
Unavailable	1
After filtering	12

This process will allow for the construction of a chronological overview of the field, highlighting how the concept of toxic tours has evolved across disciplines, contexts, and theoretical perspectives.

3.1 Temporal Overview of Academic Literature

3.1.1 Evolution of Toxic Tourism Literature

The methodology for this study will follow a systematic literature review to answer *"what frames and understandings position De Wallen as a site of toxicity?"*

This section will build upon the results of the systematic literature review by situating selected works within broader temporal and conceptual developments in the field.

The purpose will be to trace discursive and methodological transformations within the literature and to interpret how the concept of toxicity will migrate from environmental contexts to urban, symbolic, and relational domains.

Temporal Categorization

The literature will be organized into three temporal waves:

• Environmental Justice and Activism (early 2000s)
• Expansion into Urban and Experiential Sites (mid-2010s)
• Multimodal, Representational, and Decolonial Directions (late 2010s–2020s)

The categorization will be guided by publication date, focus, and methodological innovation. This process will allow for a temporal reading of how toxicity will be reconceptualized through changing sociocultural and academic priorities.

Coding and Synthesis Process

Each article will be examined through qualitative content analysis to identify key theoretical frameworks, methodological approaches, and problem framings. Codes will be inductively generated from textual patterns across the written texts, focusing on:

• Conceptualization of toxicity
• Spatial framing
• Purpose and positionality

The coding results will be synthesized into a working framework that will highlight the evolution of ideas rather than a simple chronological listing. This interpretation will inform a synthesis framework at the beginning of the section.

3.1.2 Identification of Emerging Trends and Reflexive Orientations

The second stage will consist of qualitative data analysis of the SLR. Using thematic coding, the collected literature will be analyzed to identify emerging trends that define the field.

A framework will capture the identified trends of toxic tours in academic literature in a table, where each dimension is described and validated by the sources. The outcome will be a framework of the trends that been progressively incorporated into toxic tourism scholarship.

3.1.3 Case Study Contextualization

This section will detail the systematic process for justifying De Wallen as the central case study site, leveraging the theoretical framework established in the previous stage. The main purpose is to demonstrate that the conditions in De Wallen align with the expansive, multilayered concept of toxicity developed from the literature review.

Framework Development and Cross-Referencing

The academic trends previously identified in the toxic tour literature will be organized into a dedicated analytical framework where a comprehensive review of site conditions in De Wallen will be conducted using historical accounts, modern perspectives, municipal reports, and contemporary media coverage.

Each of the five academic trends will be systematically cross-referenced with documented site conditions in De Wallen. This process will establish specific, evidence-based justifications for the case study selection.

3.1.3.1 *Historical Perspectives of De Wallen*

A systematic historical tracing process will be employed to contextualize De Wallen's present condition within Amsterdam's long-standing moral, spatial, and cultural geographies. The review will be conducted of foundational historical and cultural literature concerning Amsterdam's urban development, particularly focusing on the 17th-century period of Calvinist influence and the consolidation of De Wallen as a site in Amsterdam. Key historical and cultural themes will compiled into a chronological framework.

3.1.3.2   Modern Perspectives of De Wallen

Modern policy and social debates will be analyzed to illustrate how these contemporary conditions perpetuate a state of toxicity by disrupting social relations and marginalizing certain groups.

This contextualization will draw from diverse materials including news articles, editorial columns, municipality sources, and historical essays to elaborate on why the site is interpreted as a space where toxicity exists.

The review will focus exclusively on materials addressing Amsterdam and De Wallen, published in Dutch and English, and limited to the post-COVID period (i.e. since 2020) due to the recent visibility of issues such as mass tourism, increased waste, and concerns around livability. Materials will be collected using standard search engines and news databases, the search terms used in the search engine will be:

"tourism", "tourists", "tourist", "Amsterdam", "De Wallen", "Red-Light District"

Table 3.4 contains an overview of the screening and selection process of the news articles that justify the site's justification.

Table 3.4 Screening process of news sources. Author.

Search terms	"tourism", "tourists", "tourist", "Amsterdam", "De Wallen", "Red-Light District"
Local media outlets	13
International publications	2
Institutional actors	6
Total articles selected	21

Key sources will prioritise local media outlets such as *Parool*, *Telegraaf*, and *BNNVARA*, international publications like *Monocle* and *The Economist*, and communications from institutional actors such as the City of Amsterdam, Airbnb, Hospitality Management, and Booking.com.

3.2 Toxic Tour as a Learning Ground

3.2.1 Pairing Methodologies, Toxicities, and Site Conditions

This section answers *"what toxic tour design for de Wallen can generate a learning ground for waste, tourism, and toxicity?"* by building upon the SLR previously carried out in section 3.1.1. A second layer of thematic coding will be conducted to identify the core analytical themes that underpin toxic tourism. Table 3.5 contains the themes that will be codded inductively.

Table 3.5 Themes across academic literature of toxic tourism. Author.

THEME	DESCRIPTION
Types of Toxicity	Conceptualizations of what constitutes toxicity. These will include both material toxicity and symbolic toxicity.
Methodological Approach	Attention will be given to **how** scholars and practitioners research, document and engage with sites of toxicity. Methods will also seek to document the ethical and reflexive dimensions that underpin researcher motivations.
Site Types	The overarching spatial qualities of sites where toxic tours occur will be analyzed to understand how toxicity manifests, how it is made visible, and how it is documended.

Framework

The methodological process will commence by translating the four established theoretical *Types of Toxicity*. These toxicity types will be systematically cross-referenced with corresponding *Methodological Approaches* to generate a set of specific, replicable research activities according to site conditions

Operationalization of Design

To justify subsequent design decisions, these three thematic axes toxicity, methodology, and site will be paired to operationalize the framework into design. Toxic tour main goals will be assigned to each category. This matrix will function as the operational framework for the tour, defining how theoretical insights will translate into experiential encounters in De Wallen. As a result, preliminary activities and photo missions will be identified. The process will aim to disrupt taken-for-granted representations, provoke critical reflection, and cultivate new ways of seeing and inhabiting the urban environment.

3.2.2 Toxic Tour Development & Implementation

This phase focuses on the development of a toxic tour situated in De Wallen, bridging the previous analytical and design-oriented frameworks into a practical, site-specific implementation. The tour design will translate academic understandings of toxicity into spatial experiences, transform methodological reflexivity into embodied practices, and situate toxic tourism discourse within a living, contested urban environment.

Table 3.6 summarizes the key design and implementation components, that will guide the development and implementation of tours. These will be presented throughout the results and incorporate figures in order to facilitate the replication of the research.

Table 3.6 Key design and implementation components. Author.

SECTION NAME	CONTENT
Site & Thematic Constraints	Constraints arising from De Wallen's physical layout, urban dynamics, safety requirements, and thematic framing of toxicity.
Activities & Photo Missions Structuring	Specific tour activities structured around thematic missions to highlight toxicity, spatial dynamics, and participant engagement.
Material & Experiential Aspects	Incorporation of specific tools and logistical aspects that support embodied participant learning
Information Retrieval & Documentation	Strategies for capturing site-specific and participant-generated information.
Autoethnography & Positionality	Reflexive practice by the researcher to document embodied experiences, positionality, and interpretive observations.
Platform Submissions	Dissemination of the tour on digital platforms to reach broader audiences while experimenting with framing and presentation.

The intended outcomes will privilege a flexible tour itinerary with activities that adapts to different

street conditions, trash collection dynamics, and a feasible documentation strategy. Thematic missions and activities will emphasize spatial and social interactions, while autoethnography and positionality work will support awareness and the role of researcher/tour guide throughout the project. This flexible design will provide a conceptual scaffold from which the design can evolve responsively throughout iterations.

Finally, the platform submissions will serve as an instrument to present the tour experience as well as a research experiment, that will test how different framings of the tour (critical, civic, tourist-friendly, or experimental) shape the researcher's understanding of the tour itself.

Tours will comply with local regulations ensures ethical and safe execution throughout the iterative process. Appendix B shows the complete overview of touring guidelines in Amsterdam.

3.3   Toxic Tour Application

To explore how participation in a toxic tour may generate new insights into waste in De Wallen, this section answers *"what insights emerge from participants' engagements in a toxic tour in De Wallen?"*

This section will incorporate Participatory Action Research (PAR) to reframe the toxic tour as a research method and a civic tool designed to engage publics and generate co-produced, reflexive insights. Through iterative cycles of design, facilitation, and feedback, the tour will aim to elicit embodied, relational, and reflexive forms of knowledge. Participants will be positioned as co-creators, whose contributions will help reshape the itinerary, activities, and learning outcomes across successive iterations.

3.3.1   Participant Reach-Out

Nine iterations of the toxic tour will be run with different participant groups, selected using semi-purposive sampling to ensure a mix of experiences, knowledge, and perspectives. Participants will meet the key requirements outlined in table Table 3.7, including relevant knowledge or interest in urban issues or sustainability,

willingness to actively engage, and agreement to follow safety and tour guide-

lines. This ensures that everyone can contribute meaningfully to both the research and the tour experience.

Table 3.7 Participant requirements for toxic tour participation. Author.

REQUIREMENT	DESCRIPTION	EXAMPLE
Relevant knowledge or experience	Participants should have some background or interest in urban issues, sustainability, or design.	Students in urban studies, local residents, waste system operators, or researchers.
Voluntary participation & consent	People join freely and agree to participate before the tour.	Signing up on Calendly or agreeing verbally on consent.
Willingness to engage	Participants should take part in discussions, observations, and reflections.	Participating and sharing thoughts during activities otrcompleting post-tour feedback.
Diverse perspectives	Groups should include different ages, backgrounds, or areas of expertise.	Mixing students, professionals, locals, and international participants.
Follow safety & tour rules	Participants must follow instructions and local regulations.	Staying in safe areas and respecting public space guidelines.
Contributing data	Participants agree to provide input for research, like notes, photos, or reflections.	Taking photos, sharing observations, or completing reflection templates.

3.3.2   Data Collection & Toxic Tour Findings

Data from toxic tours will be analyzed and classified under four main categories. It will be derived from documented material, including transcripts, photographs, participant discussions, autoethnographic template, and reflexive researcher notes. The compiled qualitative data will form the primary corpus for subsequent coding and analysis.

To organize and interpret this material consistently, the data will be coded under four main categories. These categories help connect what happens during each tour to the overall research questions and design goals. Table 3.8 outlines the coding categories that will be used to structure and interpret data across iterations.

Table 3.8 Coding categories to structure toxic tour findings and interpret data. Author.

CODING CATEGORY	DESCRIPTION	EXPECTED DATA
Purpose and Context	Establishes the interpretive background for the data. It will capture framing and focus of each tour iteration, as well as environmental conditions, and participant composition.	Description of route, weather, participant group size, and thematic framing
Participant Observations and Insights	Records how participants engage with the tour's content and environment, including reactions, emotional responses, discussions, and moments of reflection.	Transcripts of participant conversations, reflexive notes on reactions to specific sites, or photographs documenting interactions.
Methodological Lessons	Identifies design insights emerging during the tour, particularly those that inform adjustments for subsequent iterations.	Researcher notes or autoethnographic template noting logistical challenges and participant engagement
Reflexive Researcher Notes	Documents the researcher's own embodied, affective, and interpretive reflections before, during, and after each tour.	Autoethnographic notes on the researcher's perceptions of the site, emotional responses, or reflections on positionality and ethics.

To capture participants' experiences and create a shared visual and experiential record, WhatsApp groups will be used during the tours. Participants will share photos, observations, and reflections in real time, contributing to a collective archive that complements the researcher's notes and autoethnographic reflections. This approach ensures that the data collected is rich, diverse, and grounded in participant engagement. Table 3.9 summarizes the tools that will be used and their specific purposes.

Table 3.9 Summary of documentation tools and key details. Author.

DOCUMENTATION TOOL	DETAILS
Audio Recordings	Recorded using an **iPhone placed in a kidney bag** for mobility and discretion. The researcher sometimes **repeated participant comments** to ensure the audio and ideas were clearly documented.
Photographic Material	Includes images taken by both the researcher and participants to document context as well as capture participant responses in activities.
Reflexive Researcher Notes	Taken after the tour to capture immediate reflections and emerging themes.
Audio Recordings	Recorded using an **iPhone placed in a kidney bag** for mobility and discretion. The researcher sometimes **repeated participant comments** to ensure the audio and ideas were clearly documented.
Autoethnographic Template	Structured form completed after each session. (**See** Appendix B: Post-Tour Autoethnographic Template)
Follow-up Feedback Form	Contains open-ended qualitative questions and quantitative Likert-scale items. (See sections 3.3.4 & 3.3.5)
Whatsapp Groups	Used as a platform to facilitate to enrich the documentation.

3.3.3 Coding Themes & Insights: Participant Engagement & Learning

The analysis will follow a two-stage qualitative coding process, combining inductive and deductive techniques. These will be assembled into a framework that incoporates descriptions and key insights related to participant experiences.

Inductive Coding for Main Themes

An open, inductive coding process will be applied to the data corpus to identify emergent patterns, concepts, and key ideas related to participant engagement and experience. This process will be performed without relying on a pre-existing theoretical framework.

Through iterative comparison and consolidation of codes, main themes will be derived from the data, establishing the primary categories of participant findings. These themes will reflect the most significant and frequently occurring aspects of participant experience.

Deductive Coding for Subthemes

The established theoretical framework and the initial research questions will be used to perform a deductive coding pass. This deductive analysis will structure the content within the main themes, allowing for the identification of specific subthemes.

This process will ensure that findings are anchored to both the participants' lived experiences (inductive) and the study's theoretical objectives (deductive).

Synthesis and Documentation

The coded data will be synthesized to establish the core description and key moments associated with each main theme and subtheme. Themes and subthemes will be cross-referenced with documented evidence from the tour findings to ensure transparency and traceability of the results.

3.3.4 Qualitative Survey

An open-ended qualitative survey will gather descriptive accounts of participants' experiences, including emotional responses, personal takeaways, and the potential long-term impact on their perceptions of tourism and waste.

Data Collection and Selection

The narrative data from all open-ended questions and reflective prompts in the participant surveys will be systematically collected and transcribed. This qualitative responses will be specifically selected to draw out personal reflections, descriptions of key moments, emotional responses, and final evaluations of the tour's impact on issues such as waste, tourism, and connection to the city.

Coding and Themes

A thematic analysis will be applied to participant responses to reveal the core takeaways from the toxic tour. This process will be inductive, allowing themes to emerge directly from the participant voices rather than being imposed by a pre-existing framework. Findings will be then assembled into six definitive key themes that together illustrate how the toxic tour was experienced, understood, and evaluated.Direct quotes from the participants will be systematically extracted and categorized under the relevant themes to provide contextual depth, participant voice, and evidence for the thematic claims.

Thematic Interpretation and Synthesis

The derived themes will be analyzed to determine how the toxic tour was experienced. The analysis will focus on identifying how the combination of sensory engagement with reflective discussion fostered deeper awareness of waste, unseen labor, and shared responsibility.

The final synthesis will connect the experiential findings to the tour's effectiveness as a pedagogical tool, documenting which aspects remained most meaningful and how the tour fostered curiosity for further learning and action. The themes and insights will be presented in a final table format for transparent documentation of findings. Table 3.10 contains the open-ended questions that will be used in the feedback form.

Table 3.10 Qualitative, open-ended questions contained in the feedback form. Author.

OPEN-ENDED QUESTIONS
2. How did you find out about the experience?
3. In your own words, how would you describe the experience to others who weren't part of it?
4. Who do you think is this experience for? Who is it not for?
5. What are a few important takeaways for you personally and your understanding of trash and/or tourism?
6. How did it feel to be part of this experience?
7. What did you hope for but didn't happen?
8. What were some of your most important moments in the whole tour?
9. What were some of the things you documented in the experience? (Doesn't have to match the previous answer)
10. What are one or two things that you are going to take into consideration the next time you are a tourist (based on this experience)?

3.3.5   Quantitative Survey

Participants systematically self-assess the toxic tour's main goals through Likert-scale questions. They will evaluate the extent to which the tour influenced their understanding of waste-tourism dynamics, fostered critical reflection in De Wallen and encouraged civic or behavioral shifts. This provides a measurable framework for comparing the effectiveness of the tour across iterations.

Design and Implementation

A self-assessed learning outcomes questionnaire will be designed utilizing a quantitative scale (0–5, where 5 indicates the highest self-assessed achievement). The evaluation will contain specific goals derived from the overarching toxic tour main goals present in the operationalization of the design of the toxic tour present in section 3.2.1. The survey will be administered to participants within 24 hours after the conclusion of the toxic tour activity to allow for reflection of perceptual and affective shifts to.

Data Collection

The self-assessed scores for each learning goal will be collected from the participating individuals through the feedback form results in Google Forms. A total score will be calculated for each learning outcome across all respondents who complete this section. The overall pattern of scores will be analyzed to identify which types of knowledge or impact are most pronounced.

Quantitative-Qualitative Cross-Referencing

The ranked total scores for the self-assessed goals will be systematically cross-referenced with the key themes derived from the qualitative survey analysis. This cross-referencing process will establish the connection between participants' numerical assessment of their learning and their descriptive, narrative experiences. The final analysis will interpret the findings to underscore how immediate sensory and place-based experiences tend to be the most impactful, thereby documenting the toxic tour's potential to open critical conversations and progressive engagement with issues of waste and tourism. Table 3.11 contains an overview of the main goals of the toxic tour that will be evaluated by participants.

Table 3.11 Goals of the toxic tour in De Wallen that will be self-assessed by participants in Likert scale (0-5). Author.

GOALS OF TOXIC TOUR
12. Seeing the Red-Light District (De Wallen) from a new perspective
13. Using the body as a tool to explore and understand complex ideas
14. Discovering alternative ways of doing tourism
15. Tracing and understanding systemic connections (e.g. waste, policy, space)
16. Walking with a more critical and reflective eye
17. Engaging in collaborative research while having fun
18. Understanding waste not just as a material, but as part of broader social and political systems
19. Thinking differently about your own habits or presence in the city
20. Feeling more connected to the city through walking and observation

3.3.6   Integration of Findings

This section will detail the systematic process of triangulating findings from the qualitative coding, the participant reflection surveys, and the quantitative learning outcomes to generate integrated and robust interpretative patterns. This methodology will establish the overall effectiveness of the toxic tour as a reflexive learning intervention. Table 3.12 contains an overview of the three data streams and their purpose in the present research question.

Table 3.12 Overview of data streams for participant engagement analysis. Author.

DATA STREAM	DATA SOURCES	DERIVED INFOR-MATION	PURPOSE	TRIANGULATION
Toxic Tour Field Data	Transcripts, autoethnographic template, participant and researcher photographs	Key Insights & Themes	Contextualize and indentify understandings and relevant moments of the toxic tour in De Wallen	Foundation for conceptual themes
Qualitative Survey Data	Descriptive responses from participants	Key Insights & Themes	Understand participant interpretation of the experience and its affective outcomes	Validates and expands field findings
Quantitative Goal Data	Numerical Likert -scale (0-5)	Scores	Rank the perceived achievement of toxic tour main goals	Tests alignment between design intentions and participant experience

Triangulation of Data Sources

Findings from the three complementary data sources will be systematically cross-referenced. This process will involve linking the thematic categories from the qualitative data to the self-assessed learning goals that received the highest scores, thereby establishing a verifiable connection between reported experience and perceived learning achievement. The combined data will be analyzed to identify overarching interpretative patterns across the entire dataset.

Deriving Overarching Patterns

The synthesized findings from the cross-referenced data will be subjected to a final interpretative analysis to distill the five key overarching interpretative patterns. Each pattern will be formulated to synthesize recurring insights related to engagement, reflection, and signification.

The significance of each pattern will be explicitly articulated to illustrate how the combined findings reveal the inner workings and pedagogical mechanism of the toxic tour method.

Final Conclusion on Methodological Impact

The five interpretative patterns will collectively be used to draw the final conclusions regarding the transformative potential of critical walking methodologies. The findings will be leveraged to suggest how critical tourism can function as a verifiable method of civic engagement and participatory care, challenging dominant consumption narratives and reframing urban issues as interdependent processes.

3.4   Toxic Tour Potential for Research-Driven Tourism

The final analytical stage will answer "what broader insights do toxic tours as a method offer for addressing research-driven tourism in cities?" by focusing on the toxic tour as a research method that generates knowledge and participant learning.

3.4.1   Methodological Data Collection

Data Collection

Methodological data will be derived through a multi-source collection approach following each of the nine toxic tour iterations. This combined body of data will serve to document the iterative process of testing, refining, and recontextualizing the walking, observing, and collecting research tools. Table 3.13 contains the data types that will provide insight into participant engagement, site dynamics, and the effectiveness of different methodological interventions.

Table 3.13 Data sources used to capture methodological lessons across toxic tour iterations. Author.

DATA TYPE	DESCRIPTION	EXAMPLE
Transcripts	Records of participant discussions and interactions during the tours.	Quotes from participants, dialogue during guided prompts, spontaneous comments.
Photographs	Visual documentation taken by both participants and the researcher to capture site conditions, interactions, and moments of engagement.	Images of sites visited and discussed, participant responses and interactions, and discussion topics.
Reflexive Researcher Notes	Reflexive notes recorded immediately after each tour to document observations, emotional responses, and emerging patterns.	Notes on unexpected events, logistical challenges, or sensory experiences.
Autoethnographic Templates	Structured templates filled in by the researcher to record embodied and reflexive experiences.	Reflections on personal positionality, responses to participant behavior, or affective impressions of the site.

Iterative Analysis and Synthesis of Lessons

The collected data will be subjected to an iterative, qualitative analysis after each tour to identify and articulate specific methodological lessons. Each identified lesson will be anchored to verifiable evidence in the data through documentation of key moments. This continuous analysis will allow for a nuanced understanding on the adaptation and refinement of the tour design over the nine iterations.

Synthesis of Methodological Findings

The specific lessons gathered across all nine iterations will be synthesized into a final, structured table that compiles the iteration, the resulting methodological lesson, and the supporting key moments. This synthesis will establish the methodological knowledge generated by the research, illustrating how the toxic tour evolved from a pilot idea into a refined, reliable framework for research-driven, reflexive tourism.

3.4.2   Coded Themes & Insights on Toxic Tour as a Method

This concluding section will detail the process used to evaluate and refine the toxic tour as a transformative research methodology. This analysis will consolidate observations from all nine tour iterations to derive transferable lessons regarding activity design and researcher facilitation.

Categorization of Methodological Patterns

The compiled autoethnographic data (transcripts, notes, reflections) will be categorized into two main analytical groups to organize the findings:
• Methodology & Activity Design: This category will focus on patterns related to the creation and adjustment of the tour's structure. The analysis will highlight how the tour structure functioned as a flexible system responsive to context and emergence.

• Researcher Facilitation & Reflexivity: This category will focus on patterns related to the researcher's relational role. The analysis will underscore that facilitation is a relational and interpretive process central to the methodological depth.

Synthesis of Lessons

For each identified methodological pattern, a clear Description will be formulated based on the aggregated data across all iterations. Specific key moments will be isolated and referenced to illustrate the practical, lived context of each methodological lesson.

3.4.3   Cross-Case Triangulation

This concluding methodology section will detail the process used to triangulate all data streams, generate core interpretative patterns, and distill the transferable methodological principles of the research.

Initial Triangulation

The three foundational data streams will be combined through five sequential triangulation analyses. Table 3.14 contains a description of the data streams that will be used to inform the research question at hand.

Table 3.14 Data streams from the iterative development of the toxic tour as method. Author.

DATA STREAM	DATA SOURCES	DERIVED INFORMATION	PURPOSE
A. Participant Engagement & Experience	Sub-Research Question 3 Transcripts, autoethnographic template, photographs, qualitative survey, quantitative survey	Insights into how walking, sensing, and discussing generate situated knowledge, emotions, and awareness.	How participants interacted with place, waste, and each other.
B. Methodology & Activity Design	Autoethnographic template with activity logs and itinerary documentation Comparative analysis between tour iterations (1–9) Coding categories	Insights into design principles for research-driven tourism	How tour design, sequencing, and materials shaped engagement.
C. Researcher Facilitation & Reflexivity	Transcripts, autoethnographic template with activity logs and itinerary documentation	Insights into facilitation as co-research; ethical negotiation; emotional labor; shifting roles between researcher/tour guide–participant.	How the researcher/ tour guide positionality and adaptation affected outcomes.

Topic Identification

These analyses will systematically examine the intersections of the data streams to derive five high-level topics that structure the final findings. For each topic, the specific intersections between themes will be analyzed to formulate overarching analytical patterns. Table 3.15 shows the expected key insights obtained by combining data streams.

Table 3.15 Expected key insights obtained by combining data streams. Author.

TOPIC	DATA STREAMS COMBINED	OUTCOME
Co-production of Knowledge	A + C	Understand how knowledge emerges through interaction and dialogue
Affective Learning as Method	A + B	Identify how sensory and emotional experiences enhance reflection
Situated Ethics and Positionality	B + C	Explore ethical and relational dimensions of research-driven tourism
Transformative Potential of Tourism	A + B + C	Show that tourism can shift from entertainment to critical engagement
Methodological Transferability	B (based on A & C)	Derive generalizable principles for designing research-driven urban tours

3.4.4   Cross-Pattern Triangulation and Synthesis

Cross-Pattern Triangulation and Synthesis

The analytical patterns generated from the five initial triangulations will be subjected to a cross-pattern triangulation to identify the deeper, recurring mechanisms that bind the findings together. This analysis will trace the reappearance of five key recurrent patterns across the data streams to establish the core logic of the toxic tour method.

Distillation of Core Insights and Transferable Principles

The five recurrent patterns themes will be distilled into five final core insights that articulate the transferable principles of the toxic tour framework. The significance of each core insight will be defined to articulate its value for future urban research, demonstrating how the method offers new ethical and methodological pathways.

4 Results

Figure 2.9 Participant findings. Author.

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To address the main research question, the thesis unfolds across five dimensions of inquiry. First, section 4.1 examines emerging trends in toxic tour literature that position De Wallen within academic conceptualizations of toxicity. Second, section 4.2 considers how thematic shifts in this literature inform the design elements of a toxic tour in De Wallen, linking theoretical perspectives with practical implementation. Third, section 4.3 turns to the empirical findings of the toxic tours, tracing toxic tour evolution and the situated insights that emerge from participants' engagements with De Wallen's material and symbolic landscapes. Finally, section 4.4 will identify the cross-cutting patterns across three data streams to demonstrate how toxic tours can be replicated. Table 4.0 shows the structure of the following chapter.

Table 4.0 Structure of chapter. Author.

Section	Section Title	Subsection(s)
4.1	Evolution of Toxic Tours in Literature	Evolution of Toxic Tours in Literature
		Emerging Trends and Reflexive Orientations
		Situating De Wallen as a Site of Toxicity
4.2	Thematic Framework Analysis for the Design of Toxic Tour	Pairing Methodologies & Toxicities to De Wallen
		Toxic Tour Development & Implementation
4.3	Toxic Tours as a Method for Participant Insight	Participant Reach-Out
		Findings From Toxic Tours
		Key Themes & Insights From Participant Engagement & Learning
		Qualitative Responses in Feedback Form
		Quantitative Assessment of Toxic Tour Goals
		Integrated Findings on Participant Engagement & Learning
4.4	Toxic Tours for Research-Driven Tourism	Methodological Lessons from Toxic Tours
		Key Themes & Insights from Toxic Tours as Method
		Triangulation and Methodological Synthesis
		Cross-Pattern Triangulation & Synthesis

4.1 Situating De Wallen Within Temporal Shifts in Academic Framings of Toxic Tours

This section traces how academic literature on toxic tours has evolved and intersected along three axes. First, through a systematic literature review, the *Evolution of Toxic Tour Literature* (section 4.1.1) situates the literature within three waves, highlighting the expansion of the concept of toxic tourism from environmental concerns to socio-political and spatial domains. Second, *Emerging Trends and Reflexive Orientations* (section 4.1.2), examines distinct directions within the literature to finally inform the positioning of *De Wallen as a Site of Toxicity* (section 4.1.3). In this section only the systematic literature review functions as a methodological component, the subsequent subsections are literature insights and case study positioning. Table 4.1 shows the structure of the following chapter.

Table 4.1 Structure of the literature review chapter. Author.

Section		
	Section Title	**Subsection(s)**
4.1.1	Temporal Overview	Toxicity as Environmental Harm and Social Justice
		From Environmental Toxicity to Urban and Everyday Toxicity
		From Urban Toxicity to Symbolic and Relational Toxicity
4.1.2	Emerging Trends and Reflexive Orientations	
4.1.3	Situating De Wallen as a Site of Toxicity	

4.1.1 Evolution of Toxic Tour Literature

Over the past 25 years, toxic tourism literature has undergone a marked transformation, expanding from its early focus on environmental justice to increasingly nuanced critiques of social marginalization, education, urban space, and representational politics (Pezzullo, 2003; Pezzullo, 2003; Di Chiro, 2004; Whelan, 2005; Su & Jagninski, 2013; Varelas et al., 2017; Bigby et al., 2023). This temporal overview divides the literature into three phases that contextualize the evolution of toxic tours in academia: *Environmental Justice and Activism* (section 4.1.1.1), *Expansion Into Urban and Experiential Sites* (section 4.1.1.2), and *Multimodal, Representational, and Decolonial Directions* (section 4.1.1.3). Table 4.2 presents a synthetis of the temporal evolution of toxicity across academic literature.

Table 4.2 Temporal evolution of toxicity in academic literature. Author.

TEMPORAL PHASE	APPROX. PERIOD	FOCUS	DEFINING CHARACTERISTICS	METHODOLOGICAL TENDENCIES	AUTHORS
Phase 1: Toxicit as Environmental Harm & Social Justice	Early 2000s – Mid 2000s	Toxicity as environmental harm and social justice	Emphasis on community-led activism and embodied witnessing. Framing toxicity as an ethical and political condition. Links to feminist political ecology and environmental communication.	Qualitative case studies; ethnography; activist scholarship; rhetorical analysis.	Pezzullo (2003, 2007); Di Chiro (2004); Whelan (2005)
Phase 2: From Environmental Toxicity to Urban & Everyday Toxicity	Mid 2010s – Late 2010s	Urban and everyday toxicity; moralized and pedagogical spaces	Shift from polluted landscapes to urban contexts and lived experiences. Use of technology and digital platforms for mediated toxic tours. Pedagogical and activist intersections.	Mixed methods; participatory observation; digital ethnography; education-based research.	Bowers (2013); Yankovska & Hannam (2014); Varelas et al. (2017, 2018)
Phase 3: From Urban Toxicity to Symbolic & Relational Toxicity	Late 2010s – 2020s and beyond	Symbolic, relational, and decolonial framings of toxicity	Focus on representation, affect, and relational ethics. Incorporation of more-than-human, Indigenous, and decolonial frameworks. Integration of visual and multimodal methodologies.	Visual ethnography; participatory arts-based research; decolonial and feminist methodologies.	Bigby et al. (2023); O'Neill (2024); Martinez (2025)

4.1.1.1   Toxicity as Environmental Harm & Social Justice

The first wave of toxic tourism literature corresponds to the foundational texts that establish and foreground, above other types of tourism, the moral obligations of toxic tourism and the role of embodied presence (Pezzullo, 2003; Pezzullo, 2003; Di Chiro, 2004). This period is characterized by literature that draws on the traditions of environmental justice and feminist political ecology. It uses polluted or degraded landscapes to carry out 'counterpublics', or acts to oppose and contest structural inequalities, to foster education between activism and communities (Di Chiro, 2004; Pezzullo, 2003; Whelan 2005).

Literature informs the interrelationship between people with their social and physical landscapes, emphasising interlocking dynamics, and the importance of rethinking environmentalism through the perspectives of community, activism, place and, marginalized voices to expose long standing environmental racism (Pezzullo, 2003; Di Chiro, 2004). Moreover, Whelan (2005) argues that the dialogue between activist and environmental education communities must be prioritized to promote education in advocacy campaigns which "may be employed in a similarly strategic manner to lobbying, electoral politics and media tact" (Whelan, 2005, p. 126).

The educational dimension becomes a foundational legacy of early toxic tourism literature, shaping later iterations that engage new subjects and new methods, while retaining this critical pedagogical quality at their core.

4.1.1.2   From Environmental Toxicity to Urban & Everyday Toxicity

By the mid-2010s, toxic tourism literature began moving beyond environmental degradation into more urbanized and morally charged places. This wave employed the use of recent technologies as means to document new sites and scales of impacts in difficult to reach places, or specific communities within cities, still safeguarding a crucial educative component throughout its purpose. (Bowers, 2013; Varelas et al., 2017). Overall, it extends the notion of toxic tourism not just to inform, but to equip tourists, residents, far away public, and teachers with epistemic and activist tools (Yankovska and Hannam, 2014; Bowers, 2013; Varelas et al., 2017)

This wave of scholarship branches into two significant directions. First, it reconceptualizes the tourist not as a passive observer, but as an active witness and positions the tour itself as a pedagogical tool for critical learning rather than counterpublics (Yankovska and Hannam, 2014; Varelas et al., 2017). Second, it embraces non-physical or mediated toxic tours as a method. This approach leverages modern technologies to expose and narrate toxicity in new ways, moving beyond simple documentation (Bowers, 2013; Di Chiro, 2004).

Literature showcases the role of tour guides in constructing narratives of commodification and how community narratives foreground state negligence, survivor voices, and environmental injustice (Yankovska and Hannam, 2014). Geospatial technologies and online platforms were also used to extend activism and advocacy into digital space, arguing that desired effects of a toxic tour "may be produced virtually" (Bowers, 2013, p. 374). Varelas et al. (2018) surface how local community organizations developed place-specific programming "to the development of the preservice teachers' sociopolitical understandings and the intertwinement with ideas about their roles as science educators" (Varelas et al., 2017, p. 24).

These developments broaden the understanding of what constitutes toxicity to encompass discursive violence, ideological invisibility, and mediated affect, transforming the tourist gaze into a politically conscious encounter, where learning is embodied, situated and transformative and highlighting the role of toxic tours as community-based educational tools in marginalized or racialized neighbourhoods.

4.1.1.3 From Urban Toxicity to Symbolic & Relational Toxicity

In recent years, toxic tourism literature has embraced a broader set of methodologies and representational concerns, ranging from visual anthropology to more-than-human ethics to interrogate how toxicity is experienced, contested, remembered, and produced (O'Neill, 2024; Bigby et al., 2023, Bigby et al., 2023; Martinez, 2025).

Literature starts discussing about the underrepresentation of critical, image-based work, and marginalized actors and community decisionmakers highlighting toxic tours, for example, "as opportunities for tourism to be a platform for education on multiple levels" that interweave sociocultural, economic, political knowledge, and ways of being (Bigby et al. ,2023, p. 406; O'Neill, 2024).

O'Neill (2024) incorporates a photo-essay ethnographic methodology to visually foreground coastal exploitation issues at the core of toxic tourism; Bigby et al. (2023) challenge the colonial and extractive logics that underlie many dominant environmental and tourism discourses by framing toxic tours as rituals of reconnection between "the place, people and all creation" (Bigby et al., 2023, p 391); Martinez (2025) prompts "to consider forms of resistance that move beyond the Western gaze" (Martinez, 2025, p. 5) by incorporating theories of *cuerpo-territorio* and abolition geography, and exposing human rights violations in migrant incarceration centers.

These examples of toxic tours serve as relational interventions, centering Indigenous cosmologies and frameworks of justice, indigenous feminist and non-Western concepts of body and space, and innovating on methods that document and resist both environmental degradation and underrepresentation (Bigby et al., 2023; O'Neill, 2024; Martinez, 2025).

4.1.2 Emerging Trends and Reflexive Orientations

Toxic tourism literature is evolving from its early environmental justice roots toward a more complex engagement with socio-political, cultural, and representational dimensions of toxicity. Foundational work by laid emphasis on environmental racism and embodied experiences of harm, while subsequent studies expanded the focus to include sites of trauma and political neglect (Pezzullo, 2003; Di Chiro, 2004; Yankovska and Hannam, 2014; Varelas et al., 2017; Martinez, 2025). This trend reflects a broadening of toxic tourism scholarship to interrogate not only physical contamination but also the symbolic and moral implications of toxicity.

The field increasingly embraces Indigenous and Latin American Indigenous feminist perspectives, positioning toxic tours as acts of relational justice and cultural resurgence that challenge colonial narratives, migration and foster land-based healing (Bigby et al., 2023; Martinez, 2025). Pedagogically, toxic tourism is being reimagined as a participatory, experiential practice that builds sociopolitical awareness and community empowerment. Scholars advocate for toxic tours as critical educational tools that connect activism, learning, and place-based identity (Whelan 2005; Su & Jagninski, 2013; Varelas et al., 2017).

Methodologically, there is a growing use of visual, multimodal, and digital tools to document and convey toxic experiences. Photo-essays, video documentation and geo-spatial communication highlight the power of visual methods in amplifying marginalized voices and activist messages (Pezzullo, 2003; Bowers, 2013, O'Neill's, 2024). As a result, the literature highlights the use of specific methods toxicity's multilayered nature addressing how these overlapping harms are experienced and contested in toxic sites. Table 4.3 summarizes these key trends in literature and their core characteristics.

Table 4.3 Key trends in toxic tourism academic literature. Author.

TREND	DESCRIPTION	SOURCE
Expanded Socio-Political Focus	Moves beyond environmental harm to include social, cultural, and moral aspects of toxicity.	Yankovska and Hannam, 2014; Varelas et al., 2017; Martinez, 2025
Multimodal & Visual Methodologies	Uses photography, video, and digital technologies to document and communicate toxic tours.	Pezzullo, 2003; Bowers, 2013, O'Neill's, 2024
Indigenous & Decolonial Perspectives	Centers Indigenous knowledge and land-based practices to resist colonial frameworks through toxic tours.	Bigby et al., 2023; Martinez, 2025
Experiential & Participatory Learning	Toxic tours as tools for critical education and community empowerment through embodied, situated experiences.	Whelan 2005; Su & Jagninski, 2013; Varelas et al., 2017
Multilayered Concept of Toxicity	Recognizes environmental, structural, and symbolic dimensions toxicity intersecting in sites.	Pezzullo, 2003; Di Chiro, 2004; Yankovska and Hannam, 2014; Varelas et al., 2017; Martinez, 2025

4.1.3 Positioning De Wallen as a Site of Toxicity

The evolution of toxic tour scholarship traces a steady widening of what counts as toxicity and where it can be located. Initially anchored in the politics of environmental justice, the field moved into urban and experiential terrains, where toxicity became intertwined with social, cultural, and affective landscapes. More recent work embraces representational and more-than-human perspectives, framing toxicity as a dispersed and relational condition mediated through images, narratives, infrastructures, and sensory experience. Emerging tendencies of research consolidate these trajectories through reflexive, participatory, and multimodal practices that treat toxic tours as critical learning environments rather than static itineraries. Table 4.4 displays an overview on how toxic tours have evolved in academic literature.

Table 4.4 Academic trends in toxic tours and De Wallen as a toxic site. Author.

TREND	DESCRIPTION	JUSTIFICATION FOR DE WALLEN	KEY PERSPECTIVES
Expanded Socio-Political Focus	Moving beyond environmental harm to include social, cultural, and moral aspects of toxicity.	Ongoing debates about sex work, overtourism, and regulation. It shows how toxicity can be social and political, not just physical.	de Vries (2025); Hoorn (2024); Gemeente Amsterdam (2023)
Multimodal & Visual Methodologies	Use of photography, video, and digital tools to document and communicate toxic experiences.	De Wallen is heavily represented as both attraction and problem. The area's visibility and media portrayal contribute to its image.	City of Amsterdam (2023); Heyward (2023); Hospitality Management (2025)
Indigenous & Decolonial Perspectives	Centering Indigenous knowledge and land-based practices to resist colonial frameworks in toxic tourism.	De Wallen reflects similar power imbalances where global tourism commodifies local culture and bodies. The district exposes how visitors' gaze and consumption replicate colonial-style exploitation dynamics.	van der Craats (2025); Airbnb (2025); Visser (2025)
Experiential & Participatory Learning	Toxic tours as tools for critical education and community empowerment through embodied, situated experiences.	Guided tours, protests, and participatory studies in De Wallen allow people to experience urban toxicity firsthand. Can raise awareness about the lived consequences of tourism and policy on local communities.	Hoorn (2024); Sevil (2024); Mbarki (2024)
Multilayered Concept of Toxicity	Recognizing environmental, structural, and symbolic dimensions of toxicity intersecting in toxic sites.	De Wallen's toxicity is structural (housing pressure, regulation), symbolic (stigma, voyeurism), and social (resident fatigue, moral judgment).	de Vries (2025); Havelaar (2025); The Economist (2024); Booking.com (2025)

The evolution of toxic tour scholarship shows a clear movement from seeing toxicity mainly as a material and environmental problem toward understanding it as a social, symbolic, and relational process that shapes how people live, feel, and act. Consequently, toxicity has evolved in literature into something that is experienced, represented, and co-produced through relationships, narratives, and research practices themselves

Under such trend, waste in De Wallen can be recognized as a form of toxicity because it disrupts collectives, social relations, and existing orders under overlapping commercial, social, political, and infrastructural pressures. It disproportionately affects marginalized groups, reinforces social inequalities, and replaces rooted imaginaries of the area with sanitized, consumption-oriented narratives.

4.1.3.1 Calvinistic Moral Geographies and the Making of Tourism in Amsterdam

Understanding De Wallen's present condition as a site of contested tourism, waste, and urban regulation requires tracing its deeper historical and cultural roots. The social and spatial fabric of Amsterdam has long been shaped by moral and material tensions: prosperity and restraint, cleanliness and tolerance, visibility and control. As Schama (2014) and Beaver (1987) note, the Dutch moral geography that emerged during the seventeenth century linked Calvinist ideas of modesty and discipline with everyday practices of order and cleanliness. These moral and spatial codes not only structured urban life but also influenced the ways in which difference, desire, and "dirt" were spatially managed (Bavel & Gelderblom, 2009; Persson, 2011). Examining the historical trajectory, from early moral economies to the city's later adoption of liberalism and mass tourism, allows to understand how tourism in De Wallen reproduces long-standing contradictions in Amsterdam's urban identity. Table 4.5 outlines key historical themes and transformations that continue to shape how waste, morality, and tourism intersect in the contemporary city.

Table 4.5 Evolution of the cultural, spatial, and moral geographies of Amsterdam and De Wallen. Author.

THEME	DESCRIPTION	SOURCES
16th–17th Century: Calvinist Moral Geography and Prosperity	The Dutch got rich early through trade. Their Calvinist religion said people should live simply, even if they were wealthy. They believed success showed God's favor, but they also had to act humble and disciplined.	Schama (2014), Beaver (1987), Persson (2011), Bavel & Gelderblom (2009)
17th Century: Cleanliness as Moral and National Identity	Cleanliness became a way to show good morals and national pride. Dutch people kept their homes, canals, and streets spotless to prove they were godly and disciplined.	Beaver (1987); Bavel & Gelderblom (2009); Schama (2014); Persson (2011)
17th Century: Zeedijk and the Culture of Tolerance	The Zeedijk dock became known for being open-minded about religion, trade, and ideas. This tolerance later shaped Amsterdam's relaxed attitude toward sex work and drugs.	Beaver (1987)
Early 17th Century: Spatial Reorganization of Amsterdam (Canal Belt Expansion, 1613)	Wealthy citizens moved to new canal neighborhoods (the Canal Belt) built after 1613. This separated rich and poor areas and changed how people used the city. The harbor and working-class zones became less visible to elites.	Mak (2000); Gemeente Amsterdam (2022)
Late 19th Century: Modernization and Cultural Transformation	After 1880, Amsterdam turned into a modern city. New buildings like the Rijksmuseum and Central Station made it easier for visitors to come. The city started to become a tourist destination.	de Brock (2024)
1960s: Amsterdam as a Liberal Tourist Destination	Amsterdam became known as a free and open city, where people could do almost anything. Tourism grew around this image of freedom, drugs, and sex, ideas rooted in the city's older culture of tolerance.	de Brock (2024)
Late 20th Century: Decline and Marginalization of De Wallen	As the shipping industry fell and drugs spread, De Wallen became poorer. The area was linked with prostitution, drug use, and poverty, seen as the "dirty" side of the city. This created the contrast between clean, tourist-friendly spaces and "waste" spaces.	Gemeente Amsterdam (2022)

4.1.3.2   Modern Perspectives on Tourism

Amsterdam and De Wallen are facing growing tension between the economic benefits of tourism and the declining liveability for residents. The city government has introduced new policies to control overtourism such as curfews, smoking bans, and limits on short-term rentals, but these have sparked mixed reactions. Residents have protested against noise, litter, and overcrowding, while platforms like Airbnb and Booking.com argue they are unfairly blamed and call for better infrastructure instead of bans. Some scholars and locals promote sustainable and small-scale tourism models, yet Amsterdam's strong economic dependence on tourism makes major change difficult. The city now seeks balanced and sustainable tourism strategies that protect residents' quality of life while maintaining economic vitality. Table 4.6 summarizes the main themes, key aspects, and principal sources that outline Amsterdam's current tensions between economic value, governance, and urban liveability.

Table 4.6 Amsterdam's current tensions between economic value, governance, and urban liveability. Author.

THEME	MAIN ASPECTS	SOURCE
Economic Value vs. Liveability	Tourism boosts the economy but harms resident comfort and sustainability.	Nederlands Dagblad (2025); de Vries (2025)
Governance & Policy Responses	City bans cannabis smoking, enforces curfews, limits Airbnb, and launches "Stay Away" campaign.	Gemeente Amsterdam (2023); Heyward (2023); de Vries (2025)
Resident Responses & Civil Protest	Locals complain about nuisance, filth, and overcrowding; protests call for stronger action.	Hoorn (2024); Sevil (2024); Mbarki (2024)
Platform Reactions & Institutional Contestation	Airbnb and Booking.com push back, defending their role and promoting better infrastructure.	Visser (2025); Airbnb (2025); Booking.com (2025); Hospitality Management (2025)
Alternative Lodging & Sustainable Tourism	Scholars advocate for home swaps and small rentals as sustainable options; critique vague "liveability."	van der Craats (2025); Kroon (2025)
Structural Dependency on Tourism	Tourism is vital to Amsterdam's economy; restrictions risk harming jobs and public revenue.	de Vries (2025); Havelaar (2025); The Economist (2024)
Strategies for Sustainable Urban Development	Push toward responsible, respectful, and environmentally conscious tourism.	Booking.com (2025); Hospitality Management (2025); City of Amsterdam (2023)

4.2 Thematic Framework Analysis for the Design of the Toxic Tour

Section 4.2.1 matches the thematic findings found in literature to specific conditions in De Wallen to inform the conceptual foundations of the toxic tour design. Section 4.2.2 outlines the tour's development and implementation, detailing how these elements were integrated to translate the framework into a situated critical tourism practice. Table 4.7 presents the structure of this section.

Table 4.7 Structure of the framework for design chapter. Author.

Section	Section Title	Subsection(s)
4.2.1	Pairing Methodologies & Toxicities to De Wallen	
4.2.2	Toxic Tour Development & Implementation	Site & Thematic Constraints
		Activity & Photo Mission Structuring
		Integration of Materials & Experiential Aspects
		Information Retrieval & Documentation
		Autoethnography & Positionality
		Platform Submissions

4.2.1 Pairing Methodologies & Toxicities to De Wallen

The following section translates these thematic insights into a design framework, combining ethnographic, visual, participatory, and transdisciplinary methods to anchor abstract toxicities in specific situations, and to cultivate a critical and affective engagement with waste, tourism, and toxicity in De Wallen. Table 4.8 shows how the three thematic dimensions from the systematic literature review inform the design logic and goals of the toxic tour in De Wallen.

Table 4.8 Cross-referenced themes for toxic tour design & GOALS in De Wallen. Author.

TYPES OF TOXICITY	METHODOLOGICAL APPROACHES	SITE-SPECIFIC CONDITIONS IN DE WALLEN	GOAL	ACTIVITY
Environmental Toxicity	Ethnography, visual & photographic research, experiential learning	Focus on material flows of trash, their temporality (Monday/Thursday mornings), and sensory encounters.	Understand waste not just as a material, but as part of broader social and political systems; trace systemic connections and see the city from a new perspective.	Activity 1 + Photo Mission 1
Social & Moral Toxicity	Participatory methods, critical pedagogy	Highlight marginalized or hidden labor (waste workers, sex workers), power dynamics, and moral geographies.	Think differently about your own habits or presence in the city; walk with a more critical and reflective eye; discover alternative ways of doing tourism.	Activity 2
Structural Toxicity	Participatory methods, transdisciplinary & multimodal approaches	Reveal systemic tourist economies, urban governance tensions, and spatial inequalities through route design.	Trace and understand systemic connections; engage in collaborative research while having fun; use the body as a tool to explore complex ideas.	Activity 3
Discursive Toxicity	Visual/photographic research, transdisciplinary & multimodal approaches	Challenge dominant representations of De Wallen through reflective prompts, and curated counter-narratives	See the Red-Light District from a new perspective; critically reflect on tourism narratives; feel more connected to the city through walking and observation.	Photo Mission 2

De Wallen's spatial, temporal, and socio-cultural complexity served as the site framework through which these approaches were operationalized. Building on the thematic classifications outlined above, the design of the toxic tour integrates these insights to transform De Wallen into a site of critical inquiry. The types of toxicity informed the site-specific applications, while the methodological approaches shaped the forms of engagement. As a result, the tour was conceived as a reflexive platform where participants could co-produce knowledge, confront assumptions, and encounter toxicity as a multi-layered, contested phenomenon.

4.2.2 Toxic Tour Development & Implementation

This section details the design and execution of the toxic tour methodology through its constraints, activities, materials, and data strategies. First, *Site & Thematic Constraints* will explain how the location and timing in De Wallen were chosen to intensify participant engagement with waste and tourism narratives (Section 4.2.2.1). Second, *Activity & Photo Mission Structuring* outlines the tour's design as an integrated, participant-centered research tool combining structured engagement and performative elements (Section 4.2.2.2). Third, *Integration of Materials & Experiential Aspects* discusses how physical props and structural components were incorporated to support embodied learning and critical reflection (Section 4.2.2.3). Fourth, *Information Retrieval & Documentation* details the mixed-methods approach used to capture the multi-dimensional experiences through both researcher and participant data collection (Section 4.2.2.4). Fifth, *Autoethnography & Positionality* describes how the researcher's self-reflection served as a central, reflexive tool to iteratively refine the method and interpret the generated knowledge (Section 4.2.2.5). Lastly, *Platform Submissions* documents the iterative process of framing and submitting the experience to platforms like Airbnb and GuruWalk to achieve public dissemination (Section 4.2.2.6). Table 4.9 shows the structure of the following chapter.

Table 4.9 Structure of toxic tour development & implementation. Author.

Section	Section Title	Subsection(s)
4.2.2.1	Site & Thematic Constraints	
4.2.2.2	Activity & Photo Mission Structuring	Sensory Walk & Photo Mission 1
		Photo Mission 2 & Dumpster Dialogues
		Activity 3
4.2.2.3	Integration of Materials & Experiential Aspects	
4.2.2.4	Information Retrieval & Documentation	
4.2.2.5	Autoethnography & Positionality	
4.2.2.6	Platform Submissions	First Submission: Counterpublic Framing
		Second Sumbission: Civic Engagement
		Third Submission: Sanitized Tourist-Friendly
		Fourth Submission: Testing Alternative

4.2.2.1 Site & Thematic Constraints

De Wallen as a Living Lab was chosen because it embodies layered historical significance and a complex, contested identity. The neighborhood is inhabited by a wide range of stakeholders such as residents, sex workers, business owners, tourists, municipal Author.ities, and waste collectors, whose perspectives often collide. This entangled web of stakeholders makes it an ideal setting for examining how waste and tourism are entangled in competing narratives and practices.

The spatial configuration of De Wallen was intentionally used to scaffold the structure and activities of the tour. Its diverse street conditions and uses, and mixed residential-commercial character shape both physical encounters and social interactions. These spatial features were incorporated to intensify participants' sense of proximity to waste, stigma, and urban tourism. Figure 4.1 shows the overlap of identified trash situations with the urban layout of De Wallen.

The tour's temporal design further amplified participants' encounters with waste. Each iteration lasted 90 to 120 minutes and was scheduled during the early morning phases on Mondays and Thursdays, when trash collection takes place and when businesses stock up. This timing allowed participants to observe waste in its most visible and transitional state, amplifying both its material and symbolic presence.
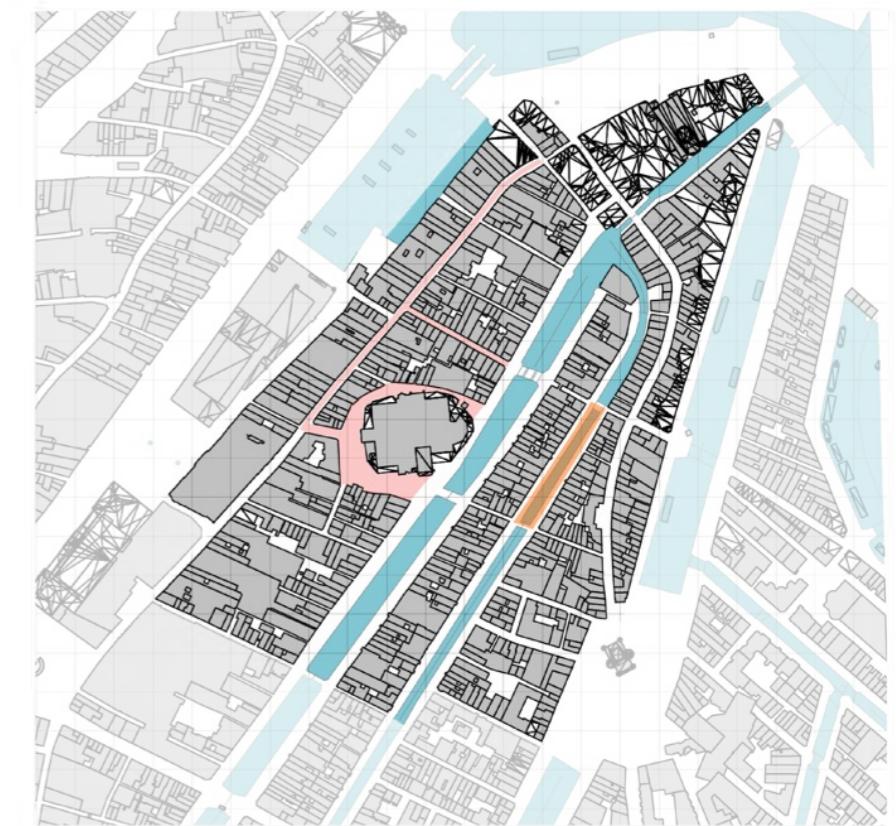
Figure 4.1 Identified trash hotspots in De Wallen. Author.

4.2.2.2   Activity & Photo Mission Structuring

The tour was developed within the methodology of Participatory Action Research (PAR), which emphasizes cycles of action, reflection, and change. In practice, this meant that each iteration of the tour was treated as an experiment. Participant observations during the tour, combined with post-tour reflections and documented outcomes, revealed the elements resonated most strongly with participants, what did not function as intended, and how participants interpreted the overall process. Figure 4.2 illustrates the developed structure of the toxic tour through learning arches.

This feedback loop directly informed adjustments to the activities, route, and strategies used by the tour guide to elicit knowledge. The cycle unfolded in a consistent pattern:

Planning → Tour Execution → Tour Observation → Post-Tour Reflection → Replanning

Each cycle fed into the next, ensuring that the tour remained reflexive rather than fixed. Figure 4.3 and Figure 4.4 show some of the script iterations containing the full structure of the toxic tour. The later incorporated color coding and one page per phase to facilitate the tours.

Figure 4.2 Toxic tour design. Author.

✅ TOXIC TOUR STRUCTURE 2.0

🔴 INTRODUCTION (5–7 min)

"Good morning and thank you for waking up early to join this Toxic Tour.
Your presence here contributes directly to my **MSc MADE thesis project**, which explores how **Toxic Tours** can be used as a research method to understand the intersections of **tourism, waste, and place-making** in **De Wallen**.

Who knows what is a Toxic Tour is?

- A **toxic tour** is a guided experience that reveals hidden or normalized forms of environmental and social harm.
- Originated in environmental justice activism, toxic tours expose sites of pollution, exclusion, or neglect.
- Example: Fenceline communities in the US South, oil-affected regions in Nigeria, e-waste circuits in India, or waste infrastructures in Naples.

Main Objectives:

- Make invisible systems visible.
- Reframe waste as a social, cultural, and political object.
- Engage participants in critical reflection, situated learning, and co-investigation.

This tour is free of charge — but I ask for your curiosity and active engagement as payment. I consider you not just participants, but **co-researchers**, helping to reflect on the urban environment and the systems that shape it.

- Feel free to document: trash, people, animals, canals, feelings, or anything meaningful.

Some quick **privacy notes**: I will be documenting parts of the tour through verbal notes, and some of you might choose to take photos or recordings. These will be used in my research but will remain anonymous unless you explicitly agree otherwise. If you feel uncomfortable at any time, please let me know.

Are you OK with me recording and sharing anonymized insights from today's session?
(Pause for **verbal consent**.)

You are invited to take photos of anything that resonates with you — it could be a piece of trash, a smell, a sound, a place, or something symbolic. I'll gather these at the end via Airdrop.

Checklist (Internal):
☑ Route mapped & GPS on
☑ Research prompts ready
☑ Participant photo (if consented)
☑ Audio notes initiated

Figure 4.3 Toxic tour 2 script cover. Author.

TOXIC TOUR STRUCTURE 7.0

🟢 INTRODUCTION

"Good morning and thank you for waking up early to join **MSc MADE thesis project**.

Walk through one of Amsterdam's most iconic + deeply misunderstood urban spaces: **De Wallen**.

Sold as a tourist spectacle → Neighborhood has complex layers of:

- dispossession, overconsumption, waste—of materials, spaces, and even people; that **collide with long-standing cultural ideals** of cleanliness, self-control, and civic moderation clash with mass tourism's disruptive excesses.

Been prototyping this walk method as a participatory way to engage with complex urban systems, in this case to better understand the ongoing situation between waste and tourism in DW.

To bring in voices and views that are often overlooked in conventional policy or planning discussions.

It's part of my interest in using living labs and experiential methods to support urban innovation.

This experience takes upon the **tradition of toxic tours** → flips traditional forms of doing tourism.

- **Originally used** as guided experiences that reveal hidden or normalized forms of **environmental pollution**. (Cancer Alleys in Louisiana, Chevron's environmental impact in Ecuador)
- **Today** toxic tours have **evolved to use tourism's potential to challenge and communicate all kinds of systemic invisibilities and social harm.**

Today we are exposing ourselves to its **material, social, and symbolic toxicity.**

But unlike traditional toxic tours, we are also **co-researchers, not passive observers**.

This walk will help us question how waste — both literal and metaphorical — is created, managed, and denied in urban life.

Are you OK with me recording and sharing anonymized insights from today's session?

☑ ROUND OF INTRODUCTIONS

"What expectations do you have for this tour?"

⊘ PRACTICALS 70-90 minutes; stops; **activities/missions**, share insights and discuss"

Figure 4.4 Toxic tour 7 script cover. Author.

Each activity was paired with physical props and performative techniques to scaffold reflection, collaboration, and critical inquiry. The general sequence of each phase follows a consistent pattern that allows the toxic tour to remain flexible, accommodating both individual and collective reflections:

Activity/Photo Mission → Reflection Prompts → Discussion of Uncomfortable Question → Group Reflection → Thematic Note

Table 4.10 provides an overview of the activities and photo missions designed for the tours.

Table 4.10 Activities and photo missions of the toxic tour. Author.

ACTIVITY/PHOTO MISSION	PURPOSE
Activity 1: Sensory Walk	Introduces the aesthetics and atmospheres of trash through amplified aesthetics and embodied witnessing.
Photo Mission 1: Something That Evokes a Feeling	Grounds participants to specific trash configurations to better identify bodily reactions and emotions derived from these.
Activity 2: Dumpster Dialogues	Encourages critical engagement with how social layers and power dynamics are present in public space.
Photo Mission 2: Instagram Shot / Art Installation	Enables participants to dive into an aesthetical appreciation of the site and generate creative associations tied to the site.
Activity 3: Trash Oracles	Allows for a creative collective exercise of waste ethnography through a light-hearted atmosphere
Photo Mission 3: Crime Scene	Enables participants to assume a different perspective with which to engage with the objects found in the site

Figure 4.5 shows the final mapping exercise directly informed the design of the tour by aligning spatial observations and activities with patterns of waste accumulation. The overlay of De Wallen's urban fabric revealed hotspots of discarded matter, which were then incorporated into the route. Moreover, waste accumulations were treated as sensory cues that deepened reflection and guided activity design. As a result, spatially situated activities emerged directly from the mapping, further reinforcing participants' role as co-researchers.

Meeting point/ Ending point

Fixed Circulations

Final Reflection

Sensory Walk

Photo Mission Announcement: Evoked Feeling(s)

Activity

Thematic note/ Reflection

Dumpster Dialogues

Photo Mission Announcement: Instagram Moment

Activity

Thematic note/ Reflection

Trash Oracles

Photo Mission Announcement: Crime Scene

Activity

Thematic note/ Reflection
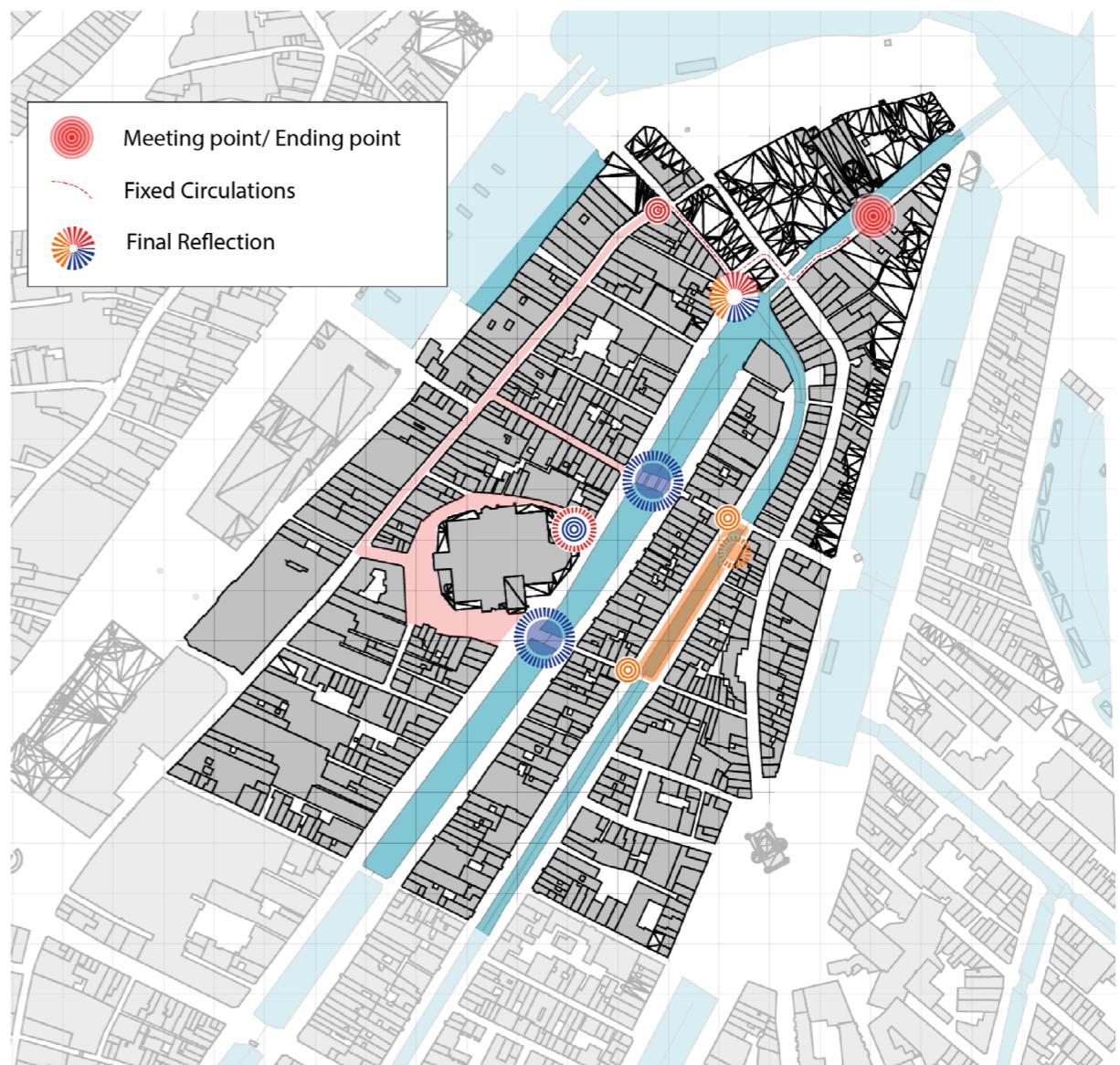
Figure 4.5 Overlay of De Wallen with toxic tour design. Author.

4.2.2.2.1 Sensory Walk and Photo Mission 1

The Sensory Walk and accompanying Photo Mission foregrounded participants' embodied experience with the urban environment. While walking through Warmoestraat on trash pick-up day, participants were invited to move mostly in silence, paying attention to bodily reactions and emotional responses triggered by sensory stimuli. They documented moments that evoked strong sensations or feelings through photography, linking visual compositions to their personal experiences.

Physical props and materials enhanced this engagement: phones, and audio recorders supported documentation, while reflective vests ensured safety in early-morning traffic and acted as visual communicators signaling the tour's counter-narrative character. By combining sensory observation with material documentation, participants were encouraged to slow down, recover situated knowledge, and critically reflect on how their perceptions contribute to meaning making in cities.

4.2.2.2.1 Photo Mission 2 and Dumpster Dialogues

Photo Mission 2 and Dumpster Dialogues together fostered critical reflection on aesthetic, social, and systemic dimensions of De Wallen. In Photo Mission 2, participants photographed "Instagram moments" or scenes resembling art installations, playfully adopting alternative perspectives and empathizing with tourist experiences.

Following this, Dumpster Dialogues prompted participants to interrogate dominant narratives, surface moral geographies, and identify hidden labor, community care, and tourist traps. These activities were supported by transforming passive observation of the city into an active form of embodied inquiry. By pairing photography with structured dialogue, participants were guided to critically analyze systemic injustices, including stigma, visibility, and exclusion, in ways that went beyond superficial assumptions.

4.2.2.2.3 Activity 3

The third planned activity combined two elements: Trash Oracles and Photo Mission 3: Crime Scene. These were designed to engage participants with discarded objects in order to interpret them. In practice, participants merged these into a single, improvised action: collaboratively staging a crime scene and linking objects selected. This emergent outcome reflected the adaptive and participatory character of the method, as well as participants' inclination to reinterpret toxicity as a performative and collective experience rather than a set of separate analytical tasks. Table 4.11 summarizes the original design intentions of the Trash Oracles and Photo Mission activities, alongside the way participants adapted and merged them during the toxic tour.

Table 4.11 Synthesis of activities designed for activity 3 and participant agency. Author.

ACTIVITY	DESCRIPTION
Trash Oracles	Participants were meant to select discarded objects using trash pickers and imagining object-specific stories.
Photo Mission 3: Crime Scene	Participants were meant to adopt a critical perspective, to detect and document broader spatial and systemic patterns.
Emergent Participant Activity	Participants merged both exercises into a single one: staging a collective crime scene. This reflected participant agency, transforming analytical observation into performative interpretation, and showing how toxicity can be experienced as a shared urban narrative.

Table 4.5.1 Sensory Walk, Dumpster Dialogues & Emergent Activity 3. Author

4.2.2.3   Integration of Materials & Experiential Aspects

The tour's material and structural components were deliberately chosen to support embodied and performative learning. Sampling devices (trash pickers), documentation tools (phones, audio recorders), maps, and protective equipment (reflective vests) were incorporated throughout the tour. These items facilitated participant interaction, ensured safety, and visually communicated the tour's counter-narrative in a way to generate interaction with non-participants.

Performative and experiential techniques, including route design, scripted prompts, and interactions, will work with materials to transform participants into co-researchers. The sequence of activities, paired with physical engagement, is designed so that participants can experience De Wallen differently, reflect critically, and generate collective knowledge.

Table 4.12 summarizes the key material, structural, and performative components of the toxic tour, illustrating how tools, equipment, and experiential techniques were used to facilitate participant engagement, embodied learning, and collective knowledge generation.

Table 4.12 Material and experiential components of the toxic tour. Author.

COMPONENT	PURPOSE	EXAMPLES
Material and Structural	Facilitate participant engagement and documentation, ensure safety, visually communicate the counter-narrative, and encourage interaction with non-participants.	Trash pickers, phones, audio recorders, maps, reflective vests
Performative and Experiential	Transform participants' experience of De Wallen, encourage critical reflection, support embodied learning, and generate collective knowledge through action and participation.	Route design, scripted prompts, interactions, staged activities

4.2.2.4   Information Retrieval & Documentation

Information retrieval and documentation were central to capturing the multi-dimensional experiences generated by the toxic tour. To achieve this, a combination of researcher-led and participant-led strategies was employed, reflecting the tour's grounding in critical design research, autoethnogWraphy, and participatory action research (PAR). This mixed-methods approach allowed the collection of rich, multi-layered data while positioning participants as active co-researchers. Table 4.13 provides an overview of the methods used to document the toxic tour iterations and their purpose.

Table 4.13 toxic tour documentation techniques. Author.

DOCUMENTATION TOOL	PURPOSE	DETAILS
Audio Recordings	To capture live conversations and spontaneous reflections during the tour.	Recorded using an iPhone placed in a kidney bag for mobility and discretion. The researcher sometimes repeated participant comments to ensure the audio and ideas were clearly documented.
Photographic Material	To visually record the environment and participant "photo missions."	Includes images taken by both the researcher and participants to document context as well as capture participant responses in activities.
Reflexive Researcher Notes	To document observations, atmosphere, and researcher impressions.	Taken after the tour to capture immediate reflections and emerging themes.
Autoethnographic Template	To record the researcher's personal reflection after each tour iteration.	Structured form completed after each session. (See Appendix B: Post-Tour Autoethnographic Template)
Follow-up Feedback Form	To gather post-tour responses and self-evaluation.	Contains open-ended qualitative questions and quantitative Likert-scale items. (See sections 3.3.4 & 3.3.5)
Whatsapp Groups	To gather participants' own photos or notes.	Used as a platform to facilitate to enrich the documentation.

4.2.2.5   **Autoethnography & Positionality**

Autoethnography served as a central method for capturing the researcher's evolving role, positionality, and reflexive insights throughout the toxic tour. This approach combined coding to walk transcript and a post-tour template to log emergent themes, affective responses, personal impressions, activity details, and unexpected participant contributions. Autoethnography allowed the researcher to reflect not only on what participants observed and expressed, but also on how team dynamics, shared experiences and interactions activated participant's own critical thinking.

Autoethnographic reflection functioned as a reflexive tool within the participatory action research cycle. After each tour iteration, the researcher assessed participant reactions, responses, and moments of silence or success. These reflections informed iterative adjustments to the tour, including modifications to activities and better facilitation strategies. Because of this particularity, autoethnography operated as both a methodological strategy and pedagogical device, ensuring the research remained responsive to emergent insights and participants' lived interpretations. Figure 4.6 shows a the autoethnographic template filled in by the researcher.

Figure 4.6 Autoethnographic templates filled with researcher notes from TT4. Author.

4.2.2.6   Platform Submissions

The experience was submitted to Airbnb Experiences three times, each with the aim of refining the framing and broadening its appeal to participants. Submissions were progressively adjusted based on Airbnb's feedback, including changes to the uploaded photographs as the data collection phase advanced. Airbnb's submission process also required linking related social media platforms such as Instagram or TikTok to demonstrate legitimacy and presence. In all submissions, pricing was set to the lowest amount allowed by Airbnb to uphold ethical standards and ensure the experience was not perceived as commercialized research. Table 4.14 documents the timeline of all three submissions, including submission dates, feedback reception, final decline notices, and the total number of days each review process lasted.

Table 4.14 Timeframes on toxic tour submissions. Author.

INTENT	PLATFORM	SUBMISSION	REVIEW	DECLINE
Untouring Amsterdam's City Center	Airbnb	June 14th, 2025	June 17th, 2025	June 23, 2025
Be a Positive Tourist in the Red-Light District	Airbnb	June 24th, 2025	June 26th, 2025	June 27th, 2025
Unseen Amsterdam: A Morning Walk	Airbnb	July 3rd, 2025	July 4th, 2025	July 8th, 2025
Unseen Amsterdam: A Morning Walk	GuruWalk	July 3rd, 2025	July 16th	Accepted
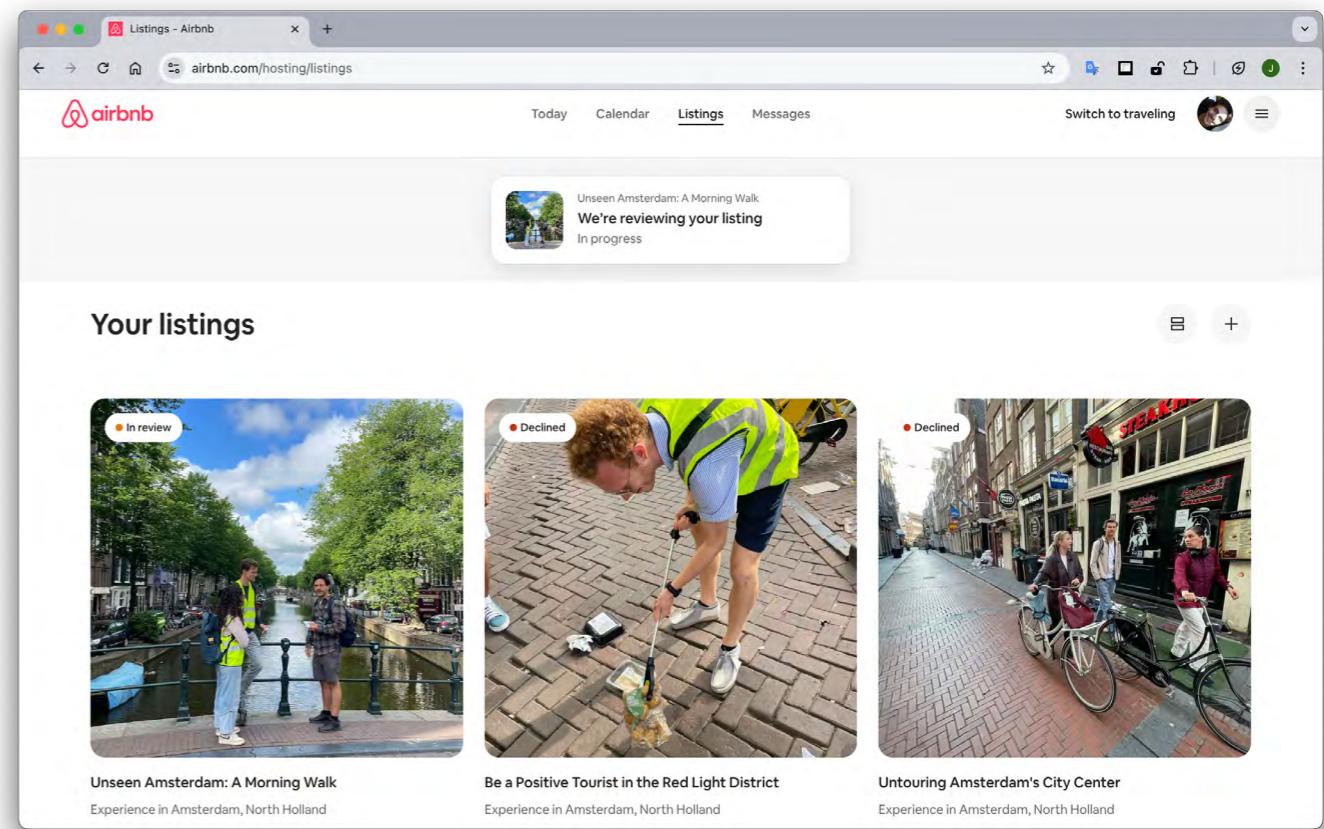
Figure 4.7 Researcher Airbnb experience dashboard with submitted experiences. Author.

4.2.2.6.1   First Submission: Counterpublic Framing

The first submission, titled "Not a Tour™ – Just a Student Studying Trash", was made on June 14th, immediately following the toxic tour dry-run, which served as an exploratory visit to refine the content. Due to limited familiarity with tourism regulation in De Wallen and concern about potential legal consequences, the title deliberately distanced the experience from conventional tours. It emphasized the research purpose and was designed to appeal only to those sympathetic to its activist tone. This first submission then adopted a *counterpublic* framing (Pezzullo, 2003), introducing the idea of 'untouring' as a form of resistance to dominant tourism narratives. Photographs submitted with this version portrayed the 'raw' conditions in De Wallen, including images of participants amidst street litter. On June 17th, Airbnb responded requesting "just a few changes," but despite revisions, including renaming the tour "Untouring Amsterdam's City Center", the experience was officially declined on June 23rd. Figure 4.8 shows the email notification on the submission.
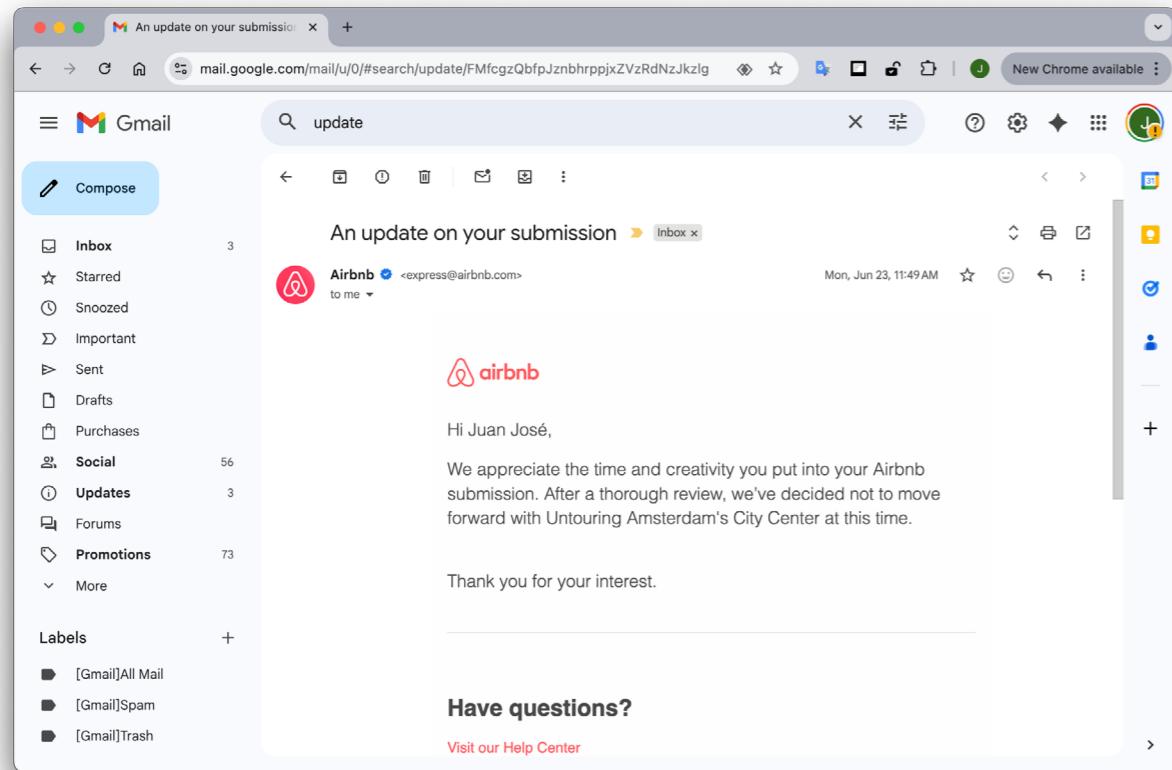
Figure 4.8 Screenshot of an email from Airbnb declining the submitted experience. Author.

4.2.2.6.2   Second Submission: Civic Engagement Emphasis

The second submission, *"Be a Positive Tourist in the Red-Light District"*, was uploaded on June 24th. This version maintained a counterpublic stance but emphasized direct civic engagement, showcasing images of participants cleaning up trash and engaging in reflective group discussions. The use of fluorescent yellow vests made the activist intentions explicit. While the title was not flagged, Airbnb cited "low resolution or visible compression" in the submitted photos and declined the experience on June 27th. Figure 4.9 displays the arguments given for rejected images, including examples of inadequate variety and clarity according to Airbnb's quality standards.
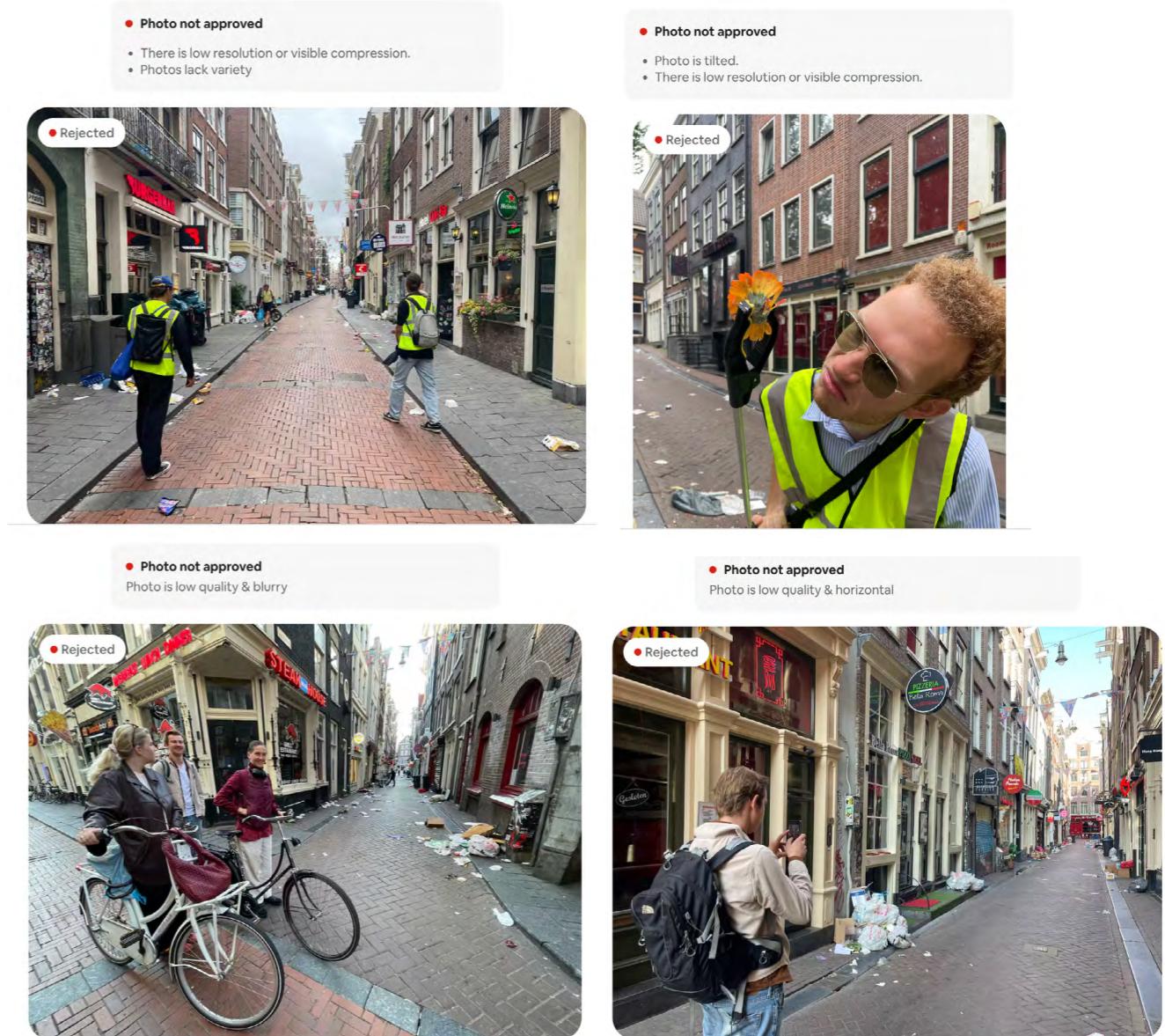
Figure 4.9 Screenshots of Airbnb standards and requiremens for which experiences are declined. Author.

4.2.2.6.3   Third Submission: Sanitized Tourist-Friendly Framing

The third and final submission, *"Unseen Amsterdam: A Morning Walk"*, was made on July 3rd. This version deliberately removed the explicit activist framing, instead presenting a more polished, tourist-friendly itinerary that aimed to subtly "reveal" the hidden aspects of De Wallen (MacCannell, 1976). The focus of the title on morning hours responded to earlier participant feedback regarding the distinct atmosphere at that time of day. On July 4th, Airbnb requested itinerary revisions and updated photos; by July 8th, the submission was again declined. Although some previously accepted images were now rejected, this version emphasized positive, accessible language and avoided abstraction or cynicism in alignment with Airbnb's content guidelines. AI tools assisted in condensing the itinerary descriptions to fit strict platform limits (e.g., 50-character titles, 150-character summaries, 25-character activity headings). Figure 4.10 presents the proposed itinerary, which attempted to balance Airbnb's branding expectations with the critical goals of the research

4.2.2.6.4   Fourth Submission: Testing Alternative Platforms

The decision to submit the tour to GuruWalk emerged from a participant's suggestion during the sixth tour iteration. The submission was made on July 3rd and was accepted without revision on July 16th. Unlike Airbnb, GuruWalk imposed no specific formatting guidelines or quality checks for content, itinerary design, or photographic standards. The tour title, description, and itinerary were directly adapted from the final Airbnb submission, while location points were specified using existing materials, including the places listed in Figure 4.5, images collected during the data-gathering phase, and written content previously prepared. Figure 4.11 contains the overview page of the listing submitted.

Figure 4.W10 Submitted itinerary for third toxic tour submission. Author.

Figure 4.11 Overview of toxic tour submission in GuruWalk. Author.

4.3   Toxic Tours as a Method for Participant Insight

This section explores what insights emerge from participants' engagements in the toxic tour conducted in De Wallen. The analysis focuses on how participants experienced, interpreted, and emotionally responded to the tour as it unfolded.

First, section 4.3.1 starts by delving upon the participant reach-out strategy and the semi-purposive groups recruited for participation. Second, section 4.3.2 shows the tour findings by drawing on the tour transcripts, the authoethnographic template, reflexive researcher notes, and documented photographs by participants and researcher. Third, section 4.3.3 organizes key themes and subthemes that capture the main forms of participant engagement and meaning-making observed across the data. Fourth, section 4.3.4 showcases the themes and insights obtained across post-tour qualitative survey responses. Fifth section 4.3.5 ranks participants' self-assessed evaluations of the tour's goals, and links them to the qualitative themes derived from the survey. Finally, section 4.3.6 summarizes the main interpretative patterns related to participant engagement and experience derived from mixed-method triangulation.

Table 4.7 Structure of the framework for design chapter. Author.

Section	Section Title	Subsection(s)
4.3.1	Participant Reach-Out	Analogue Recruitment
		Semi-Purposive Sampling
4.3.2	Findings From Toxic Tours	Toxic Tours 1 - 9
4.3.3	Qualitative Responses in Feedback Form	
4.3.4	Quantitative Assessment of Toxic Tour Goals	
4.3.5	Integrated Findings on Participant Engagement & Learning	

4.3.1   Participant Reach-Out

4.3.1.1   Analogue Recruitment

As a response to platform barriers, flyers were distributed to attract participants. These were distributed locally and featured a QR code linked to a Calendly booking page. This system automated scheduling by sending confirmation emails, reminders with instructions, and follow-up emails after the tour. In addition, Calendly collected participant information to support logistical planning and provided a mechanism for post-tour communication, with a feedback form sent 24 hours after each experience. Figure 4.12 shows a preview of the scheduling page for participants of the toxic tour iterations.
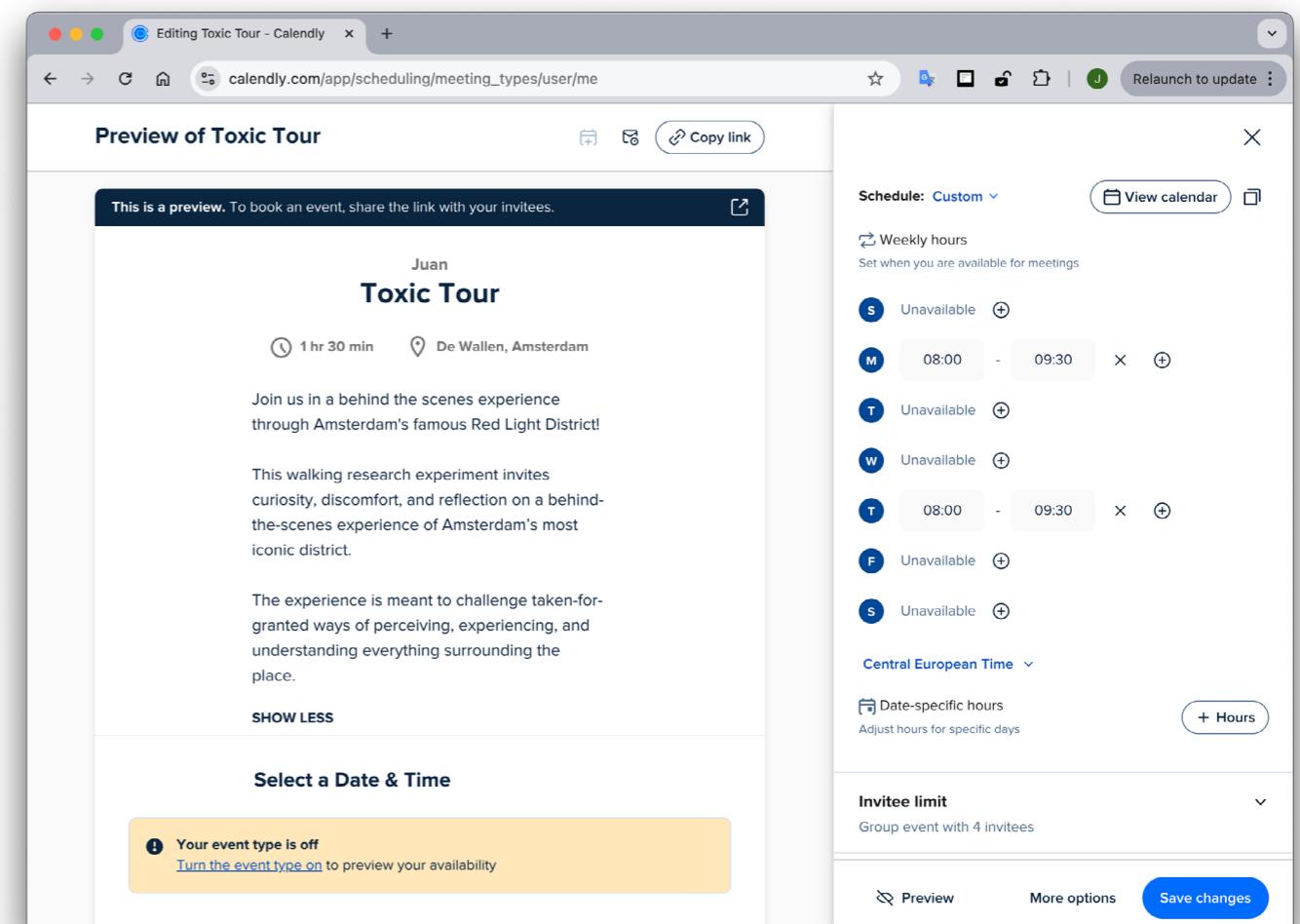
Figure 4.12 Preview of Toxic Tour scheduling page in Calendly. Author.

Flyer design was central to sparking curiosity and framing the tour as an academically credible experience. The first flyer combined playful and sarcastic language with elements of suspense, inviting participants to view the tour as a "behind-the-curtains" encounter with De Wallen. This communicative strategy aligns with the concept of staged authenticity, where experiences are valued for their promise of privileged, insider knowledge (MacCannell, 1976). The flyer also featured images from site observations to stimulate curiosity, alongside key themes, practical tour details, and institutional logos that reinforced its legitimacy as part of a research project.

Flyer design evolved across tour iterations to increase appeal and reflect participant involvement. The second version incorporated new images, including photos of participants, which both documented the process and enhanced the visual impact. This iterative adjustment mirrored the reflexive character of the tour itself, allowing outreach materials to remain dynamic and responsive. Figure 4.13 shows both flyers used to publish the research.

THE RED LIGHT DISTRICT UNSEEN
TOXIC TOUR IN DE WALLEN

★★★★★
"A spiraling mix of bodily fluids, capitalism, and municipal absurdity. Amsterdam has never felt this raw – or this real."
– The Anthropocene Gazette

★★★★★
"Like a hangover with subtitles. Raw, unfiltered access to the back-end of the city's most polished illusion."
– Trash Talk Cinema

What to expect

On this tour, you might spot:
• Local fauna
• Red-light cabins mid-sanitization
• Scattered clues to last night's wild stories
• Accidental street art

We will also be reflecting upon:
• The identity of De Wallen
• How privilege, labor, tourism, and systems collide in plain sight
• What are the unseen forces enabling different types of violences

Details

• Duration: ~ 60 mins of walking, watching, and interacting.

• Free of charge — your curiosity is the currency.

• Meeting point and time shared upon registration

Reserve now!

Find a spot or book a group walk!

AMS
AMSTERDAM INSTITUTE FOR ADVANCED METROPOLITAN SOLUTIONS

TUDelft
Delft University of Technology

WAGENINGEN
UNIVERSITY & RESEARCH

Figure 4.13 Toxic tour flyers. Author.

4.3.1.2   Semi-Purposive Sampling

Through semi-purposive sampling, nine toxic tour iterations were carried out, privileging epistemic diversity above specific demographies. The majority of participants were segmented into specific groups whose expertise and focus to foreground diverse understandings in the same topic. Participants from tour iterations 1 – 7, were asked personally to sign-up through Calendly, whereas some participants from iterations 8 and 9 enrolled by their own interest on the flyers, and LinkedIn publication of the researcher. Table 4.15 outlines each tour iteration, date, group profile, number assistants, and relevance for future iterations.

Table 4.15 Participant group Profiles and relation to toxic tour. Author.

TT	DATE	GROUP	#	CONTRIBUTION AS GROUP
1.	June 12, 2025	Students who have undergone Living Lab course and are about to graduate	3	Critical eye on identifying the issue and providing solutions based on the Living Lab methodology.
2.	June 19, 2025	Young professionals currently developing expertise in urban studies.	3	Preliminary activity testing. Systemic understanding of the problem through the lens of urban studies.
3.	June 23, 2025	Part-time work on the operation of a trash collection and reward system venue	3	Toxic Tour testing on specific groups of people highlighting epistemic diversity.
4.	June 25, 2025	Students who have undergone Living Lab course and are about to graduate.	3	Critical and multi-lense engagement on activities. Successful collaborative work.
5.	June 30, 2025	Students and professionals actively working in research.	3	Curious driven and broad understanding of sustainability and design problems.
6.	July 3, 2025	Multi-disciplinary and complementary professional perspectives on urban problem.	3	Critical eye on researching and communicating urban phenomena.
7.	July 7, 2025	Local Dutch residents with higher education levels.	4	Situated understanding of the problem from local perspectives
8.	July 10, 2025	Random group conformation of expats and waste expert.	3	International residents in Amsterdam opened to new urban perspectives.
9.	August 4, 2025	Amsterdam Born & Raised, Urbanist on African Cities Project & Univeristy Public Affairs	3	Practical overview on the problem, complemented by technical perspectives.

Figure 4.13 Toxic tour flyers. Author.

4.3.2 Findings from the Toxic Tours

This section provides an overview at each of the toxic tour iterations explored in this research. The data for each tour was compiled from various data sources: transcripts, researcher and participant photographs, post-tour researcher notes, and filled-in autoethnographical templates.

These materials were then assembled per iteration, categorized into context, methodological lessons, participant observations, and autoethnographical notes. These categories ensured that each iteration was grounded in the researcher's experience and aligned with the study's analytical framework.While the descriptions work on an aggregate level across all tour iterations, they also offer a focused overview of each tour's specific goals, insights, participant interactions, and methodological discoveries. This dual perspective contextualizes the individual discoveries within the broader framework of the research. Each subsection concludes with a table summarizing the three most relevant insights across the nine toxic tour iterations.

Toxic Tour 1: *Pilot & Problematization*

The first iteration of the toxic tour in De Wallen served as a pilot and initial immersion into the field. Its purpose was to test the feasibility of the tour as both a pedagogical and research tool, assessing thematic relevance and gathering participant feedback to refine future versions. This pilot focused primarily on tourism, De Wallen, and Amsterdam without yet integrating insights from the systematic literature review on toxic tours. Participants were informally engaged to explore which elements of the walk resonated most.

"You kind of know the consequences of your own actions, but you don't see them merging into one big problem, and that's what it [the tour] really visualizes."

The tour's design at this stage emphasized spontaneous dialogue over structured activities, with highlights emerging organically from conversations rather than through pre-planned exercises. Figure 4.14 depicts a participant photographing a street scene alongside the image captured.

Figure 4.14 Participant capturing a street scene with a camera, shown next to the resulting photograph. Author. & Participant

Toxic Tour 2: *Activity Design & Participant Engagement*

Toxic Tour 2 marked the first instance in which the activities were fully designed, scaffolded, and mapped for live application. This iteration functioned as a crucial testing ground for how the activities could shape the flow of the walk, participant engagement, and data capture. The focus was not solely on revealing the physical site, but on cultivating structured opportunities for observation, dialogue, and interaction that could produce meaningful documentation.

"It's very contrasting with the beautiful buildings that are here and very old. Also, you have all of these trucks, which are massive and make a lot of noise because they need to bring in the beers and clean up and support all of this because there's so much demand for goods and stuff."

As seen in Figure 4.15, the tour was also the first to integrate vests and afvalgrijpers which subtly shifted the group's presence in the public space. Material documented by participants also began to depict the creative and artistic components of the research. Figure 4.16 photographs where use of different planes adds poetic value that depicts participant's sensibility.

Figure 4.15 Participants wearing fluorescent vests while carrying out activity 3. Author.

Figure 4.16 Photos captured by participant's own initiative. Participant.

Toxic Tour 3: *Group Epistemologies and the Tactile Experience*

The third iteration of the toxic tour was conducted with students employed part-time at Droppie, a circularity start-up that recovers value from waste. This participant profile aligned with the thesis aim of gathering insights from diverse pluriverses of knowledge and practice. The aim was to explore how professional and personal positionalities shaped interaction with the site and its toxicity. Figure 4.17 contains some relevant moments experienced throughout the tour.

"I thought it was so funny because of course at Droppie we're like focused on separating and recycling and stuff. And then. Of course, the workers you saw them just throw everything in the truck: paper, carton, glass, metal, e-waste, plastics... And I thought, yeah, they have no choice. They have to do it."

As pointed out by a participant, the use of vests also showcased the counternarrative potential of the tour:

"The trash truck workers were allowing us to take pictures and not saying anything and just like trying to work a bit harder, even the driver came out of the truck"

Figure 4.17 Photos captured by participants and researcher during TT3. Author. & Participant.

Toxic Tour 4: *Scaffolded Engagement and Emergent Improvisation*

Toxic Tour 4 took place under rainy weather conditions, adding a layer of physical challenge to the research environment. Despite the discomfort, participants demonstrated a strong commitment and enthusiasm to engage in the activities, reflecting their deep investment in the topic and the participatory process. A key moment of this walk encompass the witnessing of a neighbor revenge, where one resident dumped her trash in front of another one's doorstep after the pick-up cycle had passed. Figure 4.18 contains some relevant moments experienced throughout the tour.

Tour Guide: "I'm going to take a picture, yeah. It does feel like revenge, right?"

Participant 1: "More like a f*ck you."

Participant 2: "Yeah."

Participant 3: "The other guy was looking upset. I'm upset. What happened?"

Tour Guide: "Wow. Yeah, this is..."

Participant 1: "Intense."

Tour Guide: "Are you getting why I am obsessed with this?"

Participant 1: "The gossip."

This iteration also marked a further maturation of the tour's design, with more nuanced observation of environmental disruptions and emergent social dynamics on site, alongside a richer integration of participant improvisation into the research methodology.

Figure 4.18 A visual summary of the TT4's mood and key events, presented as a photographic collage by the researcher. Author. & Participant.

Toxic Tour 5: *Tour Takeaways & Diverse Participant Dynamics*

This fifth iteration of the Toxic Tour differed significantly from previous runs in terms of participant interaction. Unlike earlier tours, this group was composed of individuals who did not know each other beforehand and who joined for diverse reasons, some out of pure interest, others to support the research. Despite improvements made to the tour design, the session required a greater number of prompts to keep engagement high. Still, this iteration managed to capture a strong emotional component. Figure 4.19 shows the pictures taken by the participant.

"Well, it must also be crazy living on the streets, even without garbage. But yeah, I was mainly disgusted and also quite angry, mainly because it feels like no one cares. I'm not sure if it's actually that bad, or if it just gets worse and worse. There was also a picture of a full food package, like beef or somethingm that made me angry, seeing perfectly good food thrown away after so much energy was put into pro-ducing it."

This experience clarified two key insights: as a researcher and tour guide, one may delve into abstract layers of the research that not all participants fully understand or resonate with, and the importance of interactions with external agents and tie them to the topic.

Participant 1: He said, "yeah, better you start cleaning up the sh*t here".

Participant 2: "and just start cleaning already."

Tour Guide: That was interesting because usu-ally we get thanked. That also speaks about like the type of signification that we give to trash and to the people that pick it up...
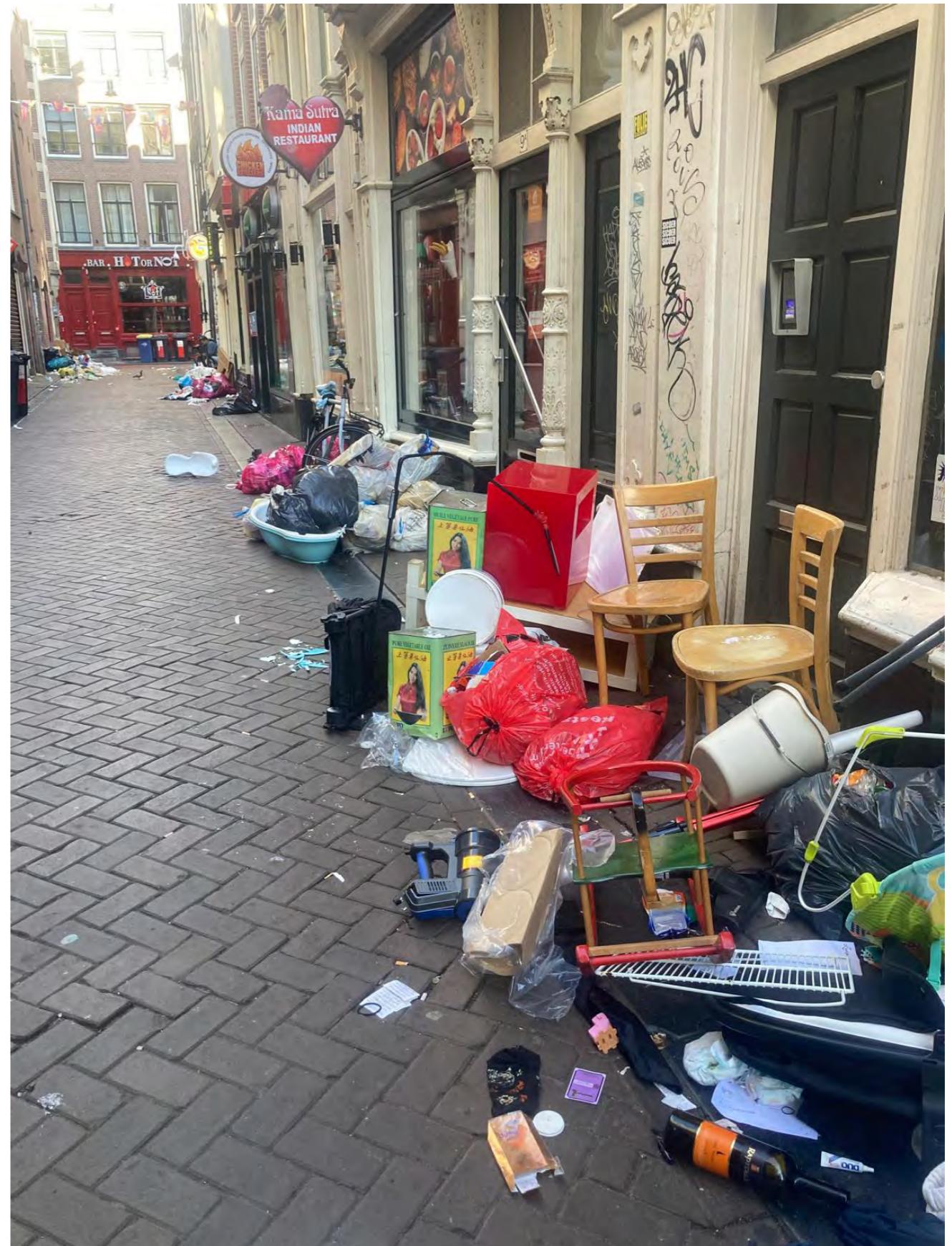
Figure 4.19 Picture taken in photo mission 1. Participant.

Toxic Tour 6: *Collective Curiosity and Contrasting Perspectives*

This iteration of the Toxic Tour was marked by active collaboration among participants, where meaningful realizations emerged through joint discussions, brainstorming, shared activities, and collective questioning. The walk placed a greater emphasis on reviewing and discussing results gathered by co-researchers, with only minimal adjustments made to the script, activities, and documentation afterwards.

The dynamic allowed participants to connect their personal interests with broader themes such as value attribution, societal norms, and cultural consumption patterns. Objects encountered were not simply observed but contextualized through shared narratives, linking individual perspectives to collective interpretations. Figure 4.20 shows the picture taken by a participant during activity 1, to which she later reflected:

Tour Guide: which type of tourist traps can you think of in this place?

Participant 1: Everything 'weed in'… Or all the pastry shops that are like really pretty pastries, but they're so expensive

Tour Guide: And then they end up in the top of bins like the picture [of the first activity].

Another example stood out, where the activistic component of the walk could be grasped through activities. Figure 4.21 shows the picture at hand.

Participant 2:

Participant 3: This looks as if you're standing there

Tour Guide: So that's also like your art installation. You're putting your body on the line of art.

Participant 1: It's like a mirror. So you look back and you see a woman standing there as well but it's a different girl.

Tour Guide: maybe even with the with the vest that's fluorescent, you're trying to send a message, right? becoming the artist-activist also.

Figure 4.21 Picture taken by participant during photo mission 2. Participant.

Toxic Tour 7: *Local Voices and the Frustration of Familiarity*

This tour's tone and trajectory were shaped by the mismatch between participant expectations and the type of tour offered. The group consisted entirely of Dutch nationals living in Amsterdam, whose perspectives and familiarity with the area influenced both the depth of engagement. Moreover, the group began to be recognized by locals from De Wallen, sparking brief conversations about the recent Wallen- buurtfestival held over the preceding weekend.

Unlike previous iterations, there was noticeably less enthusiasm from participants, which in turn affected the researcher/tour guide's own attitude and excitement. Participants generally approached observations in a condescending sense, rather than curiosity.

"I can elaborate why I only took one picture and it's it's pretty much every corner looks the same with a pile of trash. So it's in four pictures of a different pile of trash in each corner. But I think the message is the same. It's just the dirty part of the city, I guess."

The tour also revealed the critical and emotional component tied to locals during the walks and the activities. Reflecting upon Dutch culture in the transactional nature of De Wallen participants discussed. Figure 4.22 shows a picture taken by the researcher/tour guide on the topic discussed.

Participant 4: "They're guests, and they're only [at the food venues] once, so they don't have to provide value. They just want to sell one thing and they know they will never come back. Hence this."

Participant 2: [sex work] it's a legitimate business. Yeah, OK. Cheating-cleaning-cheating-contributing to the economy; fast food does contribute to excess waste, we all agree.

Participant 1: You know, you also see the, the patriarchy in the Red-Light thingies. You never see guys behind those lights." Participant 4: No. Well, now you do. When they when they're cleaning.

Figure 4.22 Photo taken during a reflection moment. Participant.

Toxic Tour 8: *Cleaning Component As Performance*

The eighth walk of the Toxic Tour took place at the same time as previous ones, but the site conditions were markedly different because the trash collection phase had already occurred. This meant that the tour happened mostly during the cleaning phase, allowing for different observations related to processes, equipment, and personnel creating a playful yet disruptive moment when the group had to avoid the water-jet's spray while highlighting how its presence hindered ongoing care activities. The reason for this schedule shift is unknown, though the frequency of previous walks (twice a week for a month) and the visibility of the group's vests may have contributed to the change in dynamics with local cleaning staff. Figure 4.23 contains a visual summary of the toxic tour.

During explanations, the tour guide/researcher found himself explaining the process of understanding on the matter through the previous iterations:

"It's just this amount of waste that nobody can really understand. And, out of this lack of understanding and avoidance, its when we start to reject it. If we start reflecting upon what we're seeing and try to identify its sources or its components, then we can have a better understanding of why you're feeling so much rejection towards it."

Participants represented diverse backgrounds, where a participant acknowledged benefiting from part of the mess, and reframing trash an often-overlooked act of community care.

Tour Guide: Who profits from all of this mess? By selling these things products.

Participant 3: Many companies, companies I profit myself.

Participant 1: Random companies. You personally put money in your pocket?

Tour Guide: You profit yourself. You, you're part of the perpetrator.

Participant 3: That's also safe sex, right?

Figure 4.23 A visual summary of the TT8's mood and key events, presented as a photographic collage by the researcher. Author. & Participants.

Toxic Tour 9: *Navigating Layers of Care and Conflict*

Toxic Tour 9 occurred four weeks after the first eight iterations, organized as a final walk for the research due to a spontaneous registration and interest expressed by others following a LinkedIn post by the tour guide/researcher. This edition took place shortly after the Pride celebrations of the previous weekend, which the tour guide/researcher initially feared might lead to extensive clean-up efforts that could impact the tour's focus. Still the site's own dynamics showed key moments like an outcast of De Wallen moving a recently ran over rat from the street. This act was experienced as a moment of unexpected care from one of the site's most marginalized figures, imapcting participant and researcher alike. Figure 4.24 shows snapshots of this situation.

Once again the toxic tours revealed their capacity to foster blended observational exercises with spontaneous interactions derived from objects found while linking them to systematic underpinnings.

"Most of it [the waste] I guess is commercial. People that are making a lot of money from the tourists... and you cannot have fun and pay attention to the trash... they exclude each other."
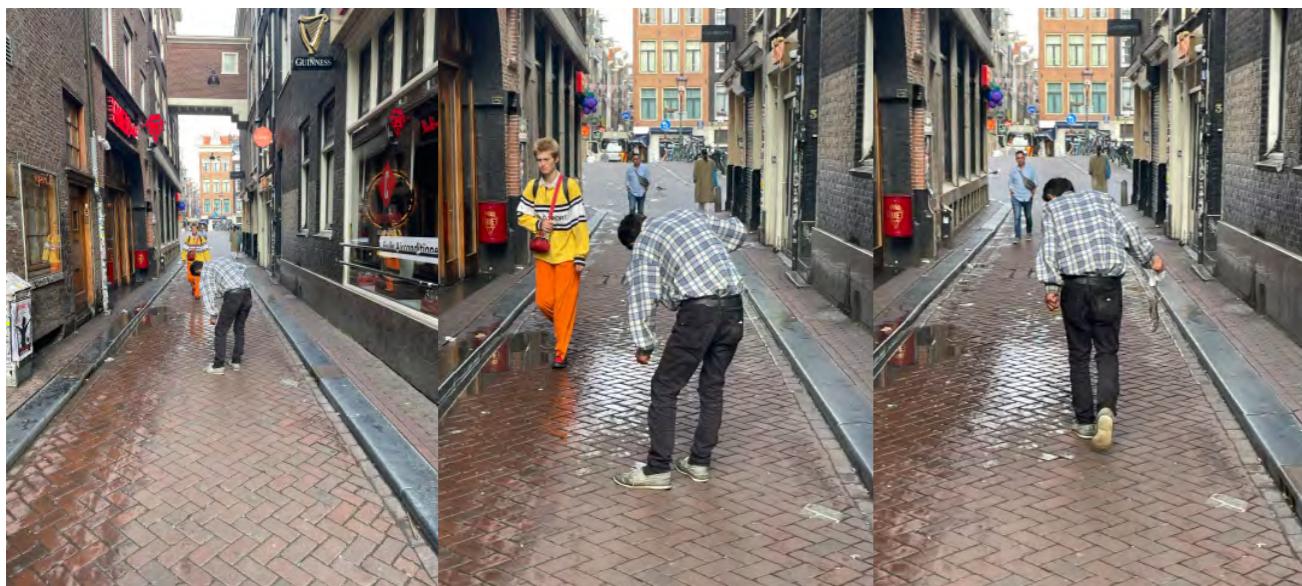
Figure 4.24 Snapshots on the relocation of the ran-over rat as a form of care. Author.

There were also rich opportunities for active participation and enjoyment from attendees by engaging in tour activities:

Tour Guide: Good. Alright Bram, let's give us a wild guess. What's your theory about what happened last night?

Participant 2: Yeah, this is clearly Princess Peach has been on a wild night wearing lip gloss. She's a queen, she had lost a high heel somewhere and then. And then she was getting sleepy. So she had a Red Bull.

[Group laughs]

Tour Guide: Did Mario ever come?

Participant 2: Well there's a lot of Italians here so...

[Group laughs]

The walk hosted a great deal of interactions and situation that challenged preconceived ideas about the site and the content delved upon throughout the walk. Figure 4.25 is a visual summary of how the walk unfolded.

Figure 4.25 Visual summary of the TT9's mood and key events. Author. & Participants.

4.3.3 Key Themes & Insights from Participant Engagement & Learning

This section draws participant engagement and exeperience findings across the 9 toxic tour iterations documented. Main themes were obtained through inducted coding and subthemes were identified through deducitve coding. Table 4.16 summarizes the key themes, subthemes and insights related to participant engagement and experiences across toxic tour findings.

MAIN THEME	SUBTHEME	DESCRIPTION	KEY MOMENTS
Diversity of Imaginaries Fostered	Playful and Narrative Reimaginings	Participants projected creative interpretations onto waste and site, linking personal or cultural imaginaries with material objects.	Post-apocalyptic interpretation of De Wallen (TT4); Princess Peach narrative (TT9); metaphorical reading of Austrian water bottle & strawberry container (TT2); imaginative recipe comments using trash (TT4); video game parallels (TT9)
	Co-creation & Collective Storytelling	Improvised group activities and photo missions facilitated shared Author.ship, generating collective meaning from waste.	Half-eaten Stroopwafel discussions (TT6); cooperative feeding game with cherries and afvalgrijper (TT8); Instagram photo discussions and commentary (TT6); neighbor 'revenge dumping' incident (TT4)
	Researcher Mediation & Facilitation	The tour guide scaffolded knowledge, encouraged reflection, and guided participant imagination through prompts and silences.	Moving group for cleaning trucks (TT4); leveraging participants' improvisations for creativity (TT4, TT8); video-game reference discussion (TT9); facilitating participant reflection on environmental and social dynamics (TT2, TT5)
Particularity of the Site	Sensory, Social & Historical Specificity	Site-specific features such as noise, layout, residents, and festivals shaped observations and interpretations.	Pride and Wallenbuurtfestival context (TT6, TT9); seagulls scavenging (TT1, TT2); observation of residents' habits through windows (TT3); discarded objects tied to nightlife and dark identity (Banana Bar ticket TT5; bunny mask TT4)
			Figure 4.26 depicts some of these key moments.
	Temporal & Seasonal Variations	Waste patterns and site experiences differed based on timing, municipal routines, and festivals.	Discarded food, diapers, and nitrous oxide cans after Pride (TT4, TT9); cleaning truck presence shaping tour (TT8); weekend tourist peaks (TT1, TT2)
Affective Responses to Waste	Emotional Engagement	Participant emotions evolved from shame, disgust, or embarrassment to curiosity, amusement, reflection, and empathy.	Homeless man during clean-up (TT9); dead rat sighting (TT9); leftover food reactions (TT5); embarrassment about cigarette butts (TT7); recognition from passerby "trots op jullie" (TT8)
	Personal Reflection & Ethical Awareness	Participants reflected on their own habits, values, and complicity in waste production.	Participant admitting throwing own cigarette butts (TT6); shame while picking up items (TT3, TT6); walking on far side to avoid trash (TT7); discussion about leftover food and food waste (TT5)
Multilayered Waste Understanding	Object-Social-Site Linkages	Connecting waste items with broader social, environmental, and governance issues, linking personal observations to systemic patterns.	Cigarette butts and fast food packaging (TT2, TT7, TT9); sexual health items (condoms, joint cones) (TT1, TT3, TT5, TT6, TT9); roses, beauty products, black heel, bunny mask (TT2, TT4, TT5, TT7, TT8). Figure 4.27 compiles some of these moments.
	Engagement Beyond Observation	Participants actively intervened, organized, or assisted with waste, demonstrating care and deepening understanding.	Picking up statiegeld bottles (TT6); cleaning up post-activity (TT2, TT6); answering tourist questions (TT6, TT8); playful cherry-feeding game (TT8)
Understandings Related to Tourism	Tourist Influence on Waste	Recognition of tourism as a driver of consumption patterns, visible waste, and commercial practices.	Air conditioning and English-named venues indicating tourist focus (TT1, TT3); participants recognizing businesses profiting from tourists (TT9); identifying tourist traps (TT6, TT7)
	Intersection with Local Practices	Distinguishing between tourist-related and resident-generated waste; exploring moral geographies.	Local participants noting tourists vs. residents (TT8); perception of British tourists (TT9); effects of gentrification vs. touristification on waste and marginalized groups (TT4)

Figure 4.26 Particularities of De Wallen. Author. & Participants.

Figure 4.27 Multilayered waste understanding in De Wallen. Author. & Participants.

4.3.4   Qualitative Responses in Feedback Form

Open-ended questions were designed to draw out personal reflections, descriptions of key moments, and emotional responses that could not be accessed through observation alone. These narratives provided contextual depth and participant voices on issues such as waste, tourism, and their connection to the city, while also highlighting which aspects of the tour remained most meaningful after the experience. Figure 4.28 Shows a snapshot of the post tour feedback form sent to participants within 24 hours after the toxic tour. It also contains a QR code to access it.

Analysis of participant reflections revealed six key themes that together illustrate how the toxic tour was experienced, understood, and evaluated. Across all responses, the toxic tour was experienced as a unique, engaging, and emotionally resonant intervention that encouraged participants to see waste and tourism through a critical and empathetic lens. By combining sensory engagement with reflective discussion, the tour fostered deeper awareness of waste, labor, and shared responsibility, while also inspiring curiosity for further learning and action. Table 4.17 synthethizes the key themes and insights across identified participant answers.

Table 4.17 Synthesis of themes derived from participant answers in qualitative survey. Author.

THEME	DESCRIPTION	QUOTES
1. Novelty & Critical Perspective	Participants described the toxic tour as an unusual and thought-provoking alternative to typical city tours. It offered a new way to see Amsterdam's De Wallen and challenged common perspectives on tourism.	"Not the usual tour but more of what we need." / "An interesting, unique way to experience Amsterdam Wallen area that you will remember." / "Chaotic good."
2. Embodied Engagement	The tour's activities encouraged participants to question how waste, consumption, and tourism are connected. Engagement through observation and participation deepened their critical awareness.	"Looking from the perspective of [waste and trash]." / "Raising questions about what we consume and discard." / "It sparked curiosity and creativity to engage with this ignored topic."
3. Emotional Impact	Participants experienced a mix of curiosity, discomfort, and empathy, which they viewed as meaningful and productive. Feelings of unease led to reflection and greater appreciation of unseen labor and waste systems.	"It's worth the discomfort to realize and gain empathy for all the unseen labor that makes your city what it is." / "Uncomfortable at times, but challenged to view things beyond my preconceived notions." / "Curious, shocked, and amazed."
4. Audience & Accesibility	Respondents saw the tour as best suited for curious, open-minded participants comprising locals, tourists, or policymakers interested in social issues. It was less suited for those seeking light entertainment.	"Anyone interested in how cities work." / "Everyone produces trash and has little idea of the impact of their trash." / "Not so much for hedonist pleasure seekers and escapists."
5. Tourism & Waste Awareness	The tour led to deeper insight into the shared and systemic nature of waste and tourism. Participants recognized that responsibility is collective, involving tourists, residents, and infrastructure.	"It's not just tourism that is to blame... rather a vicious cycle of disregard." / "Cooperation between municipality, restaurants, citizens, tourists." / "Being more aware of my impact."
6. Memorable Moments & Reflection	Participants appreciated the experience but suggested more context, stories, and solutions could enhance learning. Many reflected on memorable sensory or social moments that reinforced the tour's message.	"Learn about the various systems of waste collection and the laws about packing." / "Storyline or fun facts to put into your pocket." / "Seagull wars over trash." / "The sound of glass being collected."

Figure 4.28 Post-Tour Feedback Form main page & QR code. Author.

4.3.5 Quantitative Assessment of Learning Outcomes

The results for the quantitative assessment of learning outcomes (0-5) from the toxic tour was answered by 11 participants out of the 17 who filled in the previous section. This section was added after the fourth iteration of the toxic tour and its main goal was to clarify the type of knowledge that the method helped to facilitate.

The overall pattern of scores reveals that the tour was particularly effective in producing immediate perceptual and affective shifts, such as connection to the city and critical observation. Outcomes tied to systemic reasoning and personal behavioural change were less pronounced. Findings reveal how immediate sensory and place-based experiences tend to be the most impactful, while their translation into long-term habit change or systemic literacy requires more sustained intervention. This underscores the potential of the toxic tour to open critical conversations and forge connections that could progressively conform a more sustained and systemic engagement with issues of waste and tourism in the city. Table 4.18 shows the ranked learning outcomes linked to qualitative survey themes that illustrate participant experiences.

Table 4.18 Cross-referenced and ranked learning outcomes from the toxic tour in De Wallen. Author.

RANKED SELF-ASSESSED GOAL (0-55)	RELATED SURVEY THEME	CONNECTION
1. Feeling more connected to the city through walking and observation (52)	Embodied Engagement	The goal emphasizes connecting with the city via physical presence and observation, which directly relates to engaging the body and senses in the experience.
2. Walking with a more critical and reflective eye (49)	Novelty & Critical Perspective	Developing critical observation aligns with experiencing the tour as thought-provoking and offering a new lens on the city.
2. Engaging in collaborative research while having fun (49)	Memorable Moments & Reflection	Combines active participation with reflection and enjoyment, matching survey feedback on memorable, engaging moments.
4. Understanding waste not just as a material, but as part of broader social and political systems (47)	Tourism & Waste Awareness	Focused on systemic insights, seeing waste as embedded in social, economic, and political systems.
5. Seeing De Wallen from a new perspective (46)	Novelty & Critical Perspective	The goal of re-framing the neighborhood aligns with participants' experience of the tour as something that shifts perspectives.
6. Using the body as a tool to explore and understand complex ideas (43)	Embodied Engagement	Physical exploration maps directly onto the theme of embodied engagement.
7. Thinking differently about your own habits or presence in the city (42)	Emotional Impact	Reflection on personal behavior and presence involves emotional engagement.
8. Tracing and understanding systemic connections (37)	Tourism & Waste Awareness	Understanding systemic linkages in waste and tourism relates to participants' awareness of shared, structural responsibilities.
9. Discovering alternative ways of doing tourism (36)	Novelty & Critical Perspective	Exploring new modes of tourism aligns with participants recognizing the tour as unconventional and thought-provoking.

4.3.6 Integrated Findings on Participant Engagement & Learning

The triangulation of qualitative and quantitative data reveals strong alignment between participants' reported experiences and their self-assessed learning outcomes. Insights were drawn from three complementary sources: (1) qualitative analysis of the toxic tours, (2) participants' post-tour qualitative survey reflections, and (3) quantitative Likert-scale evaluations of key learning goals. These combined sources allowed the identification of overarching patterns across the dataset. Table 4.19 summarizes the main interpretative patterns derived from this mixed-method triangulation, highlighting the key insights about how and why the toxic tour effectively facilitates reflexive learning and awareness.

For the upcoming section, Table 4.20 summarizes the five overarching interpretative patterns that emerged from the tri-angulated analysis. Each pattern synthesizes recurring insights across the toxic tour data, survey responses, and self-assessed goals, illustrating how participants' experiences combined around shared engagement, reflection, and signification. These patterns are the first of the the three data used to reveal how the toxic tours worked as a method.

Table 4.19 Triangulation of toxic tour findings, participant experiences, and self-assessed goals. Author.

TOXIC TOUR MAIN THEME	RELATED QUALITATIVE SURVEY THEMES	MOST RELATED SELF-ASSESED TOXIC TOUR GOALS (SCORE 0-55)	INTERPRETATION
Diversity of Imaginaries Fostered	Novelty & Critical Perspective Memorable Moments & Reflection	Seeing De Wallen from a new perspective (46) Discovering alternative ways of doing tourism (36)	Participants constructed imaginative, symbolic, and playful interpretations of waste. These align with survey feedback describing the tour as a unique, reflective alternative to conventional tourism and with self-reports showing strong alignment to novelty and perspective-shifting goals.
Particularity of the Site	Novelty & Critical Perspective Tourism & Waste Awareness	Seeing De Wallen from a new perspective (46) Tracing and understanding systemic connections (37)	Participants' sensitivity to De Wallen's sensory, social, and infrastructural layers deepened awareness of the site's uniqueness and contradictions. Survey data mirrors this through emphasis on critical reflection about tourism's ecological footprint. Goals confirm high resonance with perceiving the city through new, systemic lenses.
Affective Responses to Waste	Emotional Impact Embodied Engagement	Walking with a more critical and reflective eye (49) Using the body as a tool to explore and understand complex ideas (43)	Emotions ranging from shame and disgust to curiosity and humor show that bodily and affective engagement shaped learning. Survey results highlight discomfort as productive for reflection, and self-assessed goals confirm strong affect-based awareness and embodied learning outcomes.
Multilayered Waste Understanding	Embodied Engagement Tourism & Waste Awareness Memorable Moments & Reflection	Understanding waste as part of broader social and political systems (47) Tracing and understanding systemic connections (37)	Through object analysis and observation, participants connected waste to governance, consumption, and identity. This mirrors survey emphasis on systemic connections and aligns with high-ranked goals for systemic and socio-political understanding of waste.
Understandings Related to Tourism	Tourism & Waste Awareness Novelty & Critical Perspective Audience & Accessibility	Feeling more connected to the city through walking and observation (52) Discovering alternative ways of doing tourism (36)	Participants reflected on shared responsibility among tourists, locals, and businesses, echoing survey recognition of collective accountability. The strongest-rated goal (52) reinforces the tour's success in fostering connection to the city through reflective mobility and critical tourism practice.

Table 4.20 Data Stream: Participant experience and learning of the toxic tours. Author.

THEME	INTERPRETATION	SIGNIFICANCE
1. Feelings and Bodies Drive Thinking	Emotional and sensory encounters with waste (disgust, shame, curiosity, humor) transformed passive observation into curiosity and reflection. Discomfort prompted participants to question their own waste habits and perceptions of tourism.	Using emotions and the body made learning deeper and more personal. Participants didn't just see waste, they felt it and understood it.
2. Learning Happens Through the Place Itself	The unique sights, sounds, and activities of De Wallen helped participants connect big ideas (like tourism economies, waste regimes and governance, or social behavior) to the real city.	Situated, embodied engagement turned the Red-Light District from a stereotyped spectacle into a living field for curiosity and learning.
3. Collective Imagination Helps Make Sense of Things	Participants used creative thinking, storytelling and playfulness to make sense of the site's complexity and ambiguity.	Collective imagination and storytelling acted as coping mechanism and learning technique, enabling reframing of waste, place, and agency.
4. Waste Shows How We're All Connected	Through interactions and activities, participants recognized waste as a phenomenon involving tourists, residents, and institutions rather than isolated actors.	Understanding shared responsibility helps people see the bigger picture and think about how actions affect the city.
5. Ownership & Agency Activates Participants	Walking carefully, noticing details, and interacting respectfully Wactivated ownership and agency in participants rather than leaving them as detached observers.	Activing participants can be a way to see differently, care for the city, and reflect on social and environmental issues.

The analysis of triangulated data reveals that critical walking methodologies can act as transformative frameworks for reimagining how people relate to urban environments. The five interpretative patterns collectively illustrate a shift from detached observation toward embodied, affective, and collaborative modes of knowing the city. Participants not only encountered De Wallen as a contested space but also co-constructed meaning through emotion, imagination, and reflexivity. These dynamics point to the pedagogical potential of discomfort, the value of context-specific understanding, and the generative role of collective storytelling in environmental and social awareness. More broadly, the findings suggest that critical tourism can become a method of civic engagement a participatory act of care that challenges dominant narratives of consumption and reframes waste, tourism, and life in cities as interdependent processes.

4.4 Toxic Tours for Research-Driven Tourism

This section examines the broader methodological insights that toxic tours offer for addressing research-driven tourism in cities. The focus shifts from participants' experiences into five overarching themes obtained through the combination of three different data streams. Results foreground how the structuring and flexibility of the toxic tours worked to generate embodied and situated learning, reflexivitiy, and care.

First, section 4.4.1 draws the main methodological lessons documented across toxic tour findings. Second, section 4.4.2 organizes methodological lessons into the remaining data streams of this research: *Methodology & Activity Design (B)*, and *Researcher Facilitation & Reflexivity (C)*. These two data streams will be triangulated in section 4.4.3, along with *Participant Engagement & Learning (A)*, to identify patterns that demonstrate how toxic tours can be replicated as research-driven models for urban learning and engagement.

4.4.1 Methodological Lessons from Toxic Tours

The methodological lessons presented in this section emerge from the iterative process of facilitating and reflecting upon nine toxic tours the conducted. Beyond site-specific learning, each tour served as an opportunity for testing, refining, and recontextualizing how walking, observing, and collecting could function as tools for research-driven tourism. The data was derived through transcripts, researcher and participant photographs, post-tour researcher notes, and filled-in autoethnographical templates. Methodological lessons are illustrated through key moments. Table 4.21 contains a synthesis of the specific lessons gathered across the nine toxic tour iterations.

Table 4.21: Synthesis of toxic tour lessons across iterations. Author.

ITERATION	METHODOLOGICAL LESSONS	KEY MOMENTS
TT1: Pilot & Problematization	Piloting tests feasibility and thematic fit. Early feedback refines design and reveals natural participant resonances.	Initial discomfort and curiosity surfaced key themes (disgust, curiosity). Spontaneous dialogue clarified effective prompts and script ambiguities.
TT2: Activity Design & Participant Engagement	Structured, prop-based activities scaffold engagement and reflection.	Using afvalgrijpers changed body language and confidence; guided walks improved documentation and reflection.
TT3: Group Epistemologies & the Tactile Experience	Diverse backgrounds enrich perspectives; tactile methods expose embodied tensions.	Droppie workers' insights revealed insider views; tactile engagement balanced aversion and curiosity.
TT4: Scaffolded Engagement & Emergent Improvisation	Environmental disruptions invite improvisation; flexible structures yield rich, adaptive data.	Heavy rain led to improvised "crime scene" and playful collaboration, sustaining morale and insight.
TT5: Tour Takeaways & Participant Dynamics	Unfamiliar groups need facilitation; affective responses are as valuable as cognitive ones.	Researcher prompted reflection amid silence; a hostile encounter spurred dialogue on stigma and control.
TT6: Collective Curiosity & Contrasting Perspectives	Collaborative meaning-making connects individual insights into collective narratives.	Half-eaten stroopwafel became a symbol; fishermen dialogue and Instagram task expanded interpretive depth.
TT7: Local Voices & the Frustration of Familiarity	Familiarity dulls curiosity; researcher visibility shapes dynamics and tone.	Detached locals prompted teasing facilitation; recognition by De Wallen residents revealed researcher positionality.
TT8: Cleaning Component as Performance	Active processes reveal systemic operations; diverse perceptions shape enactment.	Cleaning trucks triggered playful reactions; humor reframed maintenance as performance.
TT9: Navigating Layers of Care & Conflict	Timing and iteration reveal evolving site meanings and unexpected care dynamics.	Post-Pride context reframed "care"; encounters (dead rat, Princess Peach) expanded collective imagination.

4.4.2 Key Themes & Insights from Toxic Tours as a Method

Through repeated facilitation, observation, and post-tour reflection, patterns began to crystallize around how activities were designed, scaffolded, and adapted, as well as how the researcher's role evolved in response to participant dynamics and contextual contingencies.

Two main categories were identified to organize these findings: Methodology & Activity Design and Researcher Facilitation & Reflexivity. The first focuses on how the tours were built and adjusted to guide learning through direct experience. The second shows how the role of the researcher as facilitator, interpreter, and co-participant shaped the group dynamic and outcomes. These categories present key themes on designing and conducting experiential field research in complex, contested urban environments, highlighting the scaffolding of learning processes and the ethics of facilitating critical research to groups of people.

Table 4.22 presents key methodological insights related to the design, sequencing, and adaptability of activities across the research. The themes highlight how scaffolded engagement, environmental sensitivity, and iterative experimentation shaped participant learning and research outcomes. They illustrate how the tour's structure functioned as both a methodological framework and a flexible system responsive to context and emergence.

Table 4.23 presents the evolving role of the researcher/tour guide as facilitator, co-participant, and reflexive practitioner throughout the tours. The themes hihlight how emotional awareness, adaptive facilitation, and iterative reflection influenced group dynamics and knowledge co-production. Collectively, they underscore that facilitation is not a neutral act but a relational and interpretive process central to the project's methodological depth.

Table 4.23 Data Stream: in researcher facilitation & reflexivity design across toxic tours. Author.

THEME	DESCRIPTION	KEY MOMENTS
1. Researcher Role & Facilitation	The guide actively shaped experiences, balancing explanation, teasing, humor, and prompting to elicit reflection.	TT4: Teasing and humor encouraged playful participant engagement; TT5: Facilitated response to hostile passerby; TT6: Guided group interpretation of photo missions.
2. Iteration & Continuous Refinement	The researcher continuously adapted scripts, sequencing, and activities based on prior observations, participant responses, and context.	TT3: Early improvisation and script adjustments; TT4: One-page-per-phase structure; TT6: Minimal adjustments, relying on co-researcher outputs; TT9: Integrated prior learnings for smoother dialogue.
3. Balancing Immersion & Dialogue	The researcher mediated between participant sensory immersion and reflective discussion, ensuring experiences translated into understanding.	TT4: Silent Activity 1 to focus attention; TT6: Photo mission discussions; TT7: Locals less engaged—researcher tried teasing to encourage reflection.
4. Managing Participant Energy & Engagement	Attention to participant motivation, group chemistry, and energy levels to maintain engagement throughout complex, multisensory activities.	TT4: Rain increased physical challenge, yet participants engaged fully; TT5: Non-familiar group needed extra prompts; TT7: Dutch locals showed lower enthusiasm, requiring adaptive facilitation.
5. Reflexive Researcher Insights	The researcher consistently reflected on personal biases, assumptions, and role in shaping data, adjusting approaches accordingly.	TT4: Noted duality of guiding and observing; TT6: Recognized discomfort of participants and own biases; TT9: Adjusted narrative use of prior insights to enrich spontaneous discussions.

Together, methodology & activity design, researcher facilitation & reflexivity, alongside the participant engagement patterns identified in the previous section, conform the three data streams of the methodological synthesis. These three parts reveal how the toxic tours worked as an evolving method where structure, facilitation, and experience all interacted, and show how they evolved into both a methodological framework and a living laboratory to create meaningful, shared learning in a complex urban environment.

Table 4.22 Data stream: Methodology & activity design across toxic tours. Author.

THEME	DESCRIPTION	KEY MOMENTS
1. Pilot & Feasibility	Early iterations tested both participant understanding and practical logistics, refining which activities were achievable and meaningful.	TT1: Observed participant hesitation with sensory engagement; TT2: Feasibility of photo missions tested; TT3: Absence of afvalgrijpers reduced tactile engagement.
2. Activity Design & Scaffolded Engagement	Activities were intentionally structured to build skills, understanding, and reflection in stages, from sensory observation to creative interpretation. The use of props and tools and became facilitated these qualities.	TT3: Sequencing of activities layered reflection and photography; TT4: Photo mission and improvised crime scene; TT6: Half-eaten stroopwafel motif scaffolded discussion about value and consumption; TT9: Conversations because of vests.
3. Emergent vs. Planned Insights	Methodology allowed room for unplanned discoveries, combining structured tasks with flexibility to capture spontaneous, site-specific insights.	TT4: Neighborhood revenge incident observed; TT5: Hostile passerby prompted reflection on stigma; TT8: Cleaning machinery created playful disruption; TT9: Princess Peach narrative emerged organically.
4. Environmental & Contextual Sensitivity	Activities were adapted to the physical and social environment, including weather, ongoing cleaning, and social dynamics, to deepen participant understanding.	TT4: Rain created embodied challenge; TT8: Cleaning phase highlighted performative care; TT9: Post-Pride environment affected waste type and participant reflection.
5. Visual & Experiential Documentation	Photo missions and object collection were integrated to anchor learning, reflection, and creative engagement, supporting both individual and collective analysis.	TT2: Photo missions initiated dialogue; TT3: Participant photographs connected physical trash to socio-cultural context; TT6: Instagram-style Red-Light District photos prompted collective interpretation.

4.4.3 Triangulation and Methodological Synthesis

This section aims to reveal both situated findings and transferable methodological principles by presenting five triangulations that synthesize insights across the study's three data streams. Data streams consist on: Participant Learning & Engagement (A) which demonstrates what people learned in tours through emotion, imagination, and care; Methodology & Activity Design (B) shows how the tours were structured; Researcher Facilitation & Reflexivity (C) shows how they were guided. Table 4.24 contains the list of topics and descriptions obtained by triangulating the three data streams and their description.

Table 4.24 Topics derived from data stream combination. Author.

DATA STREAM	DESCRIPTION
A. Participant Engagement & Learning	How shared dialogue and interaction generate understanding.
B. Methodology & Activity Design	How emotions and sensory experiences drive learning.
C. Researcher Facilitation & Reflexivity	How ethics and researcher stance shape the research process.

Table 4.24 Topics derived from data stream combination. Author.

TOPIC	COMBINATION	DESCRIPTION
Co-production of Knowledge	A + C	How shared dialogue and interaction generate understanding.
Affective Learning as Method	A + B	How emotions and sensory experiences drive learning.
Situated Ethics and Positionality	B + C	How ethics and researcher stance shape the research process.
Transformative Potential of Tourism	A + B + C	How tourism can become a critical and reflective practice.
Methodological Transferability	B (based on A & C)	How the tours offer adaptable principles for future research.

4.4.3.1 Co-production of Knowledge (A + C)

This triangulation examines how participant learning (A), and researcher reflexivity (C) interact to understand how knowledge emerges collaboratively through interaction, dialogue, and shared experience between guide and participants. Table 4.25 presents the triangulations that derived co-production of knowledge.

Table 4.25 Triangulation of participant learning and researcher reflexivity. Author.

A. PARTICIPANT ENGAGEMENT & LEARNING	C. RESEARCHER FACILITATION & REFLEXIVITY	INTERPRETATION
Collective Imagination Helps Make Sense of Things	Balancing Immersion & Dialogue	Co-production occurred when facilitation encouraged imaginative, open-ended dialogue rather than direct explanation. It turned reflection into a shared creative process.
Feelings and Bodies Drive Thinking	Managing Participant Energy & Engagement	Emotional connection acted as the bridge between researcher prompts and participant insight, generating embodied, situated knowledge.
Tourism Can Be an Act of Care	Iteration & Continuous Refinement	Iterative adjustment reflected learning as a two-way process: design evolved through participant input, and ownership of the method increased.
Waste Shows How We're All Connected	Reflexive Researcher Insights	Reflexivity and waste insights converged to form awareness in participants about connections and complicity through dialogue.
Learning Happens Through the Place Itself	Researcher Role & Facilitation	Knowledge production became distributed among people and place: the environment itself acted as a co-educator letting the researcher and group interact with it.

The intersections above reveal recurring dynamics around collaborative meaning-making. Table 4.26 synthesizes these into overarching analytical patterns.

Table 4.26 Overarching patterns on co-production of knowledge. Author.

PATTERN	INTERPRETATION	SIGNIFICANCE
1. Knowledge Emerges in Dialogue and Movement	Learning occurred through continuous interaction (walking, sensing, and discussing). Meaning was built collectively as participants and researcher responded to the environment, external parties and each other.	Co-production is grounded in lived, sensory encounters, not on theory. It validates participatory, dialogical methodologies as a legitimate form to research urban contexts.
2. Researcher as Co-Learner and facilitator	The researcher adopted a responsive, reflexive stance, using emotional cues (frustration, humor, curiosity) to guide engagement rather than direct it. The researcher learned with participants, not just from them.	Reframes researcher role as collaborative and adaptive. Highlights the importance of humility, emotional intelligence, and improvisation in participatory fieldwork.
3. Place and Waste as Co-Authors of Understanding	The stimuli present in the environment (smells, textures, noise, and disorder) became an active agent shaping reflection. Participants' knowledge emerged through interactions with these sensory and affective stimuli.	Positions the environment as a partner in learning, expanding the notion of co-production beyond human actors. Reinforces the methodological relevance of critical walking and multisensory engagement.

Findings demonstrate that co-production of knowledge in research-driven tourism depends on empathic connection, collaborative guidance, and adaptability. The shared knowledge that emerges from these encounters serves as both data and method, shaping research in real-time.

4.4.3.2   Affective Learning as Method (A + B)

This triangulation examines how activity design (B) and participant learning (A) intersect to show that sensory, emotional, and embodied encounters can be research methods. It focuses on how scaffolded activities transformed discomfort, curiosity, and humor into reflective and participatory learning experiences. Table 4.27 presents the triangulations that made affective learning a method.

Table 4.27 Triangulation of participant learning and activity design. Author.

A. PARTICIPANT EXP. & LEARNING	B. METHODOLOGY & ACTIVITY DESIGN	INTERPRETATION
Feelings and Bodies Drive Thinking	Scaffolded Engagement and Activity Design	Scaffolded sensory activities (feeling, photographing, collecting) and the use of materials and props enabled participants to experience emotional reactions (disgust, curiosity, shame) and turn them into subjects of reflection.
Learning Happens Through the Place Itself	Balancing Immersion and Dialogue	Alternating between silent observation and discussion anchored participants in the present moment, transforming the city's atmosphere into an active pedagogical space.
Collective Imagination Helps Make Sense of Things	Researcher Role & Facilitation	The researcher's emotional openness invited participants to experiment with humor and storytelling, making emotional discomfort more manageable and socially productive.
Waste Shows How We're All Connected	Iteration & Continuous Refinement	Adjusting tour prompts across iterations encouraged emotional recognition of systemic interdependence, linking shame, empathy, and care to systems of waste and tourism.
Tourism Can Be an Act of Care	Environmental & Contextual Sensitivity	Attention to timing, sensory context, and atmosphere allowed emotional engagement to evolve into acts of care (walking slowly, observing respectfully, and showing empathy toward workers and residents).

The intersections outlined in the matrix reveal how emotional and bodily responses became integral to the learning process. Table 4.26 synthesizes these intersections into overarching analytical patterns.

Table 4.28 Overarching patterns on affective learning as method. Author.

PATTERN	INTERPRETATION	SIGNIFICANCE
1. Emotions and Actions as Drivers for Understanding	Participants' feelings of disgust, shame, or curiosity, and embodied actions were drivers of reflection that made abstract systems tangible through discomfort.	Demonstrates that felt and embodied experiences can deepen learning and ethical awareness, transforming emotions from subjective 'noise' into legitimate research data.
2. The City Generates Emotional Lessons	The sensory environment (smells, textures, sound) acted as a living classroom that shaped affective and embodied understanding.	Highlights how urban learning depends on direct, bodily engagement with place rather than detached observation.
3. Difficult Emotions Need Guidance	The researcher's responsiveness and tone (humor, empathy, teasing) helped participants navigate emotional discomfort, preventing disengagement.	Shows that guiding felt experiences is a methodological skill. Effective facilitation balances openness with support to promote reflection.

Patterns show that designing for felt experiences allows learning to move beyond cognitive understanding into embodied reflection. Sensory triggers and distractions can become tools for thinking, demonstrating that emotions can be structured intentionally within research-driven tourism to deepen awareness and critical empathy.

4.4.3.3   Situated Ethics and Positionality (B + C)

This triangulation explores how methodology and activity design (B) connects with researcher facilitation and reflexivity (C) to uncover the ethical and relational dimensions of the tours. It focuses on how shared reflection and shifting roles between guide and participants fostered awareness of power, bias, and presence in a contested urban space. Table 4.29 presents the triangulations that made affective learning a method.

Table 4.29 Triangulation of activity design and researcher reflexivity. Author.

B. METHODOLOGY & ACTIVITY DESIGN	C. RESEARCHER FACILITA-TION & REFLEXIVITY	INTERPRETATION
Scaffolded Engagement and Activity Design	Researcher Role & Facilitation	Participants' emotional responses (disgust, shame, curiosity) were guided by the facilitator, showing that researcher reflexivity mediates ethical and moral awareness during encounters with waste.
Environmental & Contextual Sensitivity	Balancing Immersion and Dialogue	Being physically and socially present in De Wallen encouraged reflection on positionality and the ethics of interacting with urban environments and local communities.
Emergent vs. Planned Insights	Iteration & Continuous Refinement	Storytelling and creative activities revealed participant assumptions and biases, while iterative adjustments allowed the researcher to scaffold reflection on social and ethical reflection.
Pilot & Feasibility	Reflexive Researcher Insights	Recognizing shared responsibility for waste prompted participants to consider their roles within broader social, economic, and environmental networks.
Environmental & Contextual Sensitivity	Managing Participant Energy & Engagement	Guided observation and reflective prompts fostered mindfulness and respect, helping participants tour ethically, thus converting tourism in a practice of care rather than passive observation.

The patterns emerging from this intersection show how ethical sensitivity and critical positionality developed dynamically through embodied encounters and conversation. Table 4.26 synthesizes these intersections in identified patterns.

Table 4.30 Overarching patterns of situated ethics and positionality. Author.

PATTERN	INTERPRETATION	SIGNIFICANCE
1. Developing Ethical Awareness Through Direct Experiences	Participants became aware of the social and moral implications of their behavior, guided by the researcher's facilitation.	Ethics in urban tours can be taught experientially, linking reflection to tangible encounters.
2. Awareness Of Positionality Through Shared Participation	Engagement with local context and each other helped participants understand their own positionality, including privileges and assumptions.	Ethical understanding emerges in dialogue and shared experience, not abstract instruction.
3. Adaptive Facilitation Shapes Ethical Learning	The researcher's responsiveness, iterative adjustments, and tone influenced the depth of ethical and relational insight.	Reflective, adaptive facilitation is a core methodological tool for cultivating situational ethics.

This triangulation demonstrates that situated ethics arise from ongoing negotiation and responsiveness. As participants and the researcher jointly navigated vulnerability, shame, and judgment, the walks became laboratories for ethical reflexivity highlighting that critical tourism depends as much on relational care as on methodological rigor

4.4.3.4   Transformative Potential of Tourism (A + B + C)

This triangulation integrates participant learning and experience (A), methodology and activity design (B), and researcher facilitation and reflexvitiy (C) to examine how tourism can shift from passive consumption to active reflection. Table 4.31 focuses on how iterative design, embodied engagement, and facilitation co-produced transformative understandings of urban care and responsibility.

Identified intersections reveal that transformation emerged from the interdependence between method, learning, and reflexivity, showing how planned activities created scaffolds for learning, while emotional exchanges and discussions opened new pathways. Through this layering, the tours evolved into collaborative laboratories of care. Table 4.32 shows the patterns that highlight how tourism can become a space of critical reflection, ethical negotiation, and shared responsibility.

Table 4.31 Triangulation of the three data streams. Author.

A. PART. LEARNING & EXPERIENCE	B. METHODOLOGY & ACTIVITY DESIGN	C. RESEARCHER FACILITATION & REFLEXIVITY	INTERPRETATION
Feelings and Bodies Drive Thinking	Activity Design & Scaffolded Engagement	Researcher Role & Facilitation	Scaffolded activities and materials support embodied, emotional engagement while researcher facilitation guides participants' reflections into learning.
Collective Imagination Helps Make Sense of Things	Emergent vs. Planned Insights	Iteration & Continuous Refinement	Allowing emergent activities encourages creative storytelling and improvisation, leading to richer insights than strictly planned sequences.
Learning Happens Through the Place Itself	Environmental & Contextual Sensitivity	Balancing Immersion & Dialogue	Direct engagement and facilitated guidance with De Wallen's sights, sounds, and social dynamics anchors abstract concepts in real context.
Tourism Can Be an Act of Care	Pilot & Feasibility	Managing Participant Energy & Engagement	Testing and refining activities ensures that walking, noticing, and interacting is sustainable, motivating, and ethically relevant.
Waste Shows How We're All Connected	Activity Design & Scaffolded Engagement	Reflexive Researcher Insights	Structured interactions, supported by tools and props, allow participants to experience relationality, while researcher reflection improves facilitation and observation of social dynamics.

Table 4.32 Overarching patterns on the transformative potential of tourism. Author.

PATTERN	INTERPRETATION	SIGNIFICANCE
Scaffolded Engagement Amplifies Embodied Learning	Carefully sequenced activities, enabled by physical objects, support participants in connecting emotions, sensory experiences, and reflection	Demonstrates that structure plus flexibility leads to deeper understanding and curiosity
Emergent Activities Foster Creativity and Insight	Allowing improvisation and play encourages participants to co-construct meaning	Highlights the value of relinquishing some control to gain richer, authentic insights
Place-Based Immersion Generates Learning	Being immersed in the actual environment helps link concepts to lived experiences	Reinforces the importance of situated learning for comprehension of complex social and environmental dynamics

Patterns show that tourism, when framed as a co-learning practice, can reorient visitors from spectators to caretakers. Through guided and open-ended experiences, participants saw the city as a place of care and conflict, revealing the potential of research-driven tourism to foster environmental consciousness and civic empathy.

4.4.3.5   Methodological Transferability (B (A&C))

This triangulation explores how methodological insights (B) can be synthethized into transferable principles by drawing on participant learning & experience (A) and the reflexive facilitation dynamics (C). Table 4.33 examines how structured experimentation, participant inter-action, and researcher adaptability together can shape a flexible yet replicable framework for critical walking methodologies.

The cross-analysis highlights that what made the tours effective was not a fixed format but an iterative responsiveness to context, emotion, and group energy. In this sense, transferability does not imply standard-ization but the capacity to sustain sensitivity and co-production across different sites and audiences. Table 4.34 contains the patterns that articulate the core principles of this research's toxic tours, showing how reflexive design can lead to adaptable and ethically grounded research practices.

Table 4.33 Triangulation for method transferability. Author.

B. METHODOLOGY & ACTIVITY DESIGN	A. PARTICIPANT LEARNING & EXPERIENCE	C. RESEARCHER FACILITATION & REFLEXIVITY	INTERPRETATION
Activity Design & Scaffolded Engagement	Feelings and Bodies Drive Thinking	Researcher Role & Facilitation	Scaffolded design and the use of artifacts + researcher guidance produces emotionally and rationally engaging experiences that can be replicated in other urban research tours.
Environmental & Contextual Sensitivity	Learning WHappens Through the Place Itself	Iteration & Continuous Refinement	Attention to site-specific conditions, with iterative refinement, provides transferable strategies to integrate knowledge with lived experience.
Emergent vs. Planned Insights	Collective Imagination Helps Make Sense of Things	Balancing Immersion & Dialogue	Flexible structuring and facilitation of discussions enable participants to co-create meaning. Such principles can guide other research-driven tours.
Pilot & Feasibility	Tourism Can Be an Act of Care	Managing Participant Energy & Engagement	Testing, pacing, and monitoring engagement ensures that tours are effective and transferable to diverse groups or sites.
Activity Design & Scaffolded Engagement	Waste Shows How We're All Connected	Reflexive Researcher Insights	Structured engagement paired with researcher reflection allows principles for relational and social learning to be generalized.

Table 4.34 Overarching patterns on methodological transferability of this research's toxic tours. Author.

PATTERN	INTERPRETATION	SIGNIFICANCE
Design Activities That Guide Emotion into Reflection	Structured activities guided by researcher support create robust learning experiences	Provides a blueprint for designing tours that reliably engage participants across contexts
Adapt Tours Dynamically to What the Place Gives You	Continuous adaptation to environmental and social conditions ensures relevance	Offers a principle for flexible, site-sensitive urban research practices
Balance Structure with Spontaneity to Enable Co-Creation	Allowing participant creativity while maintaining guidance	Demonstrates how to balance control andWco-creation in transferable methods
Test and Tune for Energy, Flow, and Feasibility	Trial runs reveal pacing, attention spans, and sensory load	Ensures tours are feasible, enjoyable, and educational in other settings
Use Reflection as a Design Tool, Not Just an Outcome	Reflection on facilitation improves activity design and responsiveness	Supports generalizable best practices for guiding participatory, research-driven urban experiences

This triangulation demonstrates that methodological transferability lies in spirit rather than format. What can travel to other cities or projects is not the specific itinerary but the practice of combining structure with openness, care with critique, and emotion with analysis.

4.4.4 Cross-Pattern Triangulation and Integrative Synthesis

Building on the five triangulation analyses, this final synthesis identifies the overarching logic that binds the toxic tour findings together. The cross-pattern analysis traces the deeper mechanisms that recur across the previous triangulations that revealed how emotions, facilitation, and contextual design interact. These meta-patterns represent integrative principles as they explain how embodied learning, care, and situated practice collectively form a coherent methodological and ethical framework.

In doing so, the analysis posits the structure of this research's toxic tours as a form of knowing that is relational, affective, and adaptive, where learning emerges through movement, dialogue, and care for place. Table 4.35 shows how cross-referenced patterns reveal how emotional engagement, flexible facilitation, and shared reflexivity collectively shaped learning and knowledge production.

Table 4.35 Cross-referenced patterns. Author.

RECURRENT PATTERN	WHERE IT APPEARS	INTERPRETATION
1. Learning Through Shared Sensitivite Encounters	A+C, B+C, A+B+C	Across tours, knowledge emerged from emotionally charged and socially sensitive encounters. Participants and researchers co-constructed understanding through empathy, humor, and curiosity. This pattern suggests that emotional engagement, not detachment, was the engine for learning and reflection.
2. Playfulness as Cognitive Bridge	A+B, A+B+C	Moments of play, storytelling, and humor consistently transformed discomfort or distance into connection and insight. These creative gestures helped participants reinterpret messy or ambiguous realities, sometimes through the use of artifacts, proving that learning can occur through joy, absurdity, and imagination.
3. Real-Time Co-Produced Reflection	B+C, B (A&C)	Reflexivity was a situated, embodied process that unfolded within the walk itself, not as an afterthought. Researcher and participants reflected together on positionality, privilege, and emotional reactions in real time, turning the city into a reflexive mirror.
4. Transforming Tourist Observation into Caretaking	A+B+C, B (A&C)	Participants' attention to waste, cleaning, and maintenance practices reframed tourism from passive consumption to an ethic of care. With the help of different With the help of different materials as facilitators of subtle gestures of care became small but meaningful forms of civic responsibility.
5. Design for Uncertainty	A+C, B (A&C), A+B+C	The tours' iterative and adaptive design allowed for unplanned insights, responsiveness to context, and evolving facilitation styles. This flexibility proved essential for sustaining engagement and transforming unpredictability into methodological richness.

The cross-patterns highlight how learning, care, and reflection unfolded dynamically across the tours, revealing recurring relational and emotional mechanisms. Building on these findings, the following meta-patterns distill these dynamics into broader, transferable principles for research-driven, participatory tourism, showing how sensory engagement and social interaction can become structured tools for knowledge creation.

Table 4.36 Core insights underpinning the toxic tour framework. Author.

CORE INSIGHT	INTERPRETATION	SIGNIFICANCE
1. Connection With Others Creates Understanding	Learning emerged not from isolated observation, but through relationships among participants, researcher, and the environment. Emotional and social ties became central to understanding urban complexity.	Reframes research as a shared, co-constructed experience rather than an extractive act. New urban research forms must emphasize empathy, collaboration, and mutual discovery.
2. Playfulness and Creativity Unlock Insights	Playfulness, humor, and imaginative storytelling helped participants process discomfort and ambiguity, transforming confusion into insight.	Validates creativity as an intellectual and methodological asset, expanding how researchers and participants can think critically through emotions and creative expression.
3. Real-Time Reflection Deepens Awareness	Reflexivity was embodied. It unfolded during the walk itself as participants reacted, discussed, and deepened what they saw and felt.	Grounds reflexivity in lived experience rather than abstract analysis, integrating ethical awareness directly into fieldwork and participant dialogue.
4. Small Acts of Care Ground Learning in Practice	Small acts of kindness, like noticing the cleaners, picking up trash, and greeting strangers, turned care into a practical way of thinking and learning. Participants gained knowledge by actively taking responsibility for the environment.	Positions care as both method and mindset, highlighting its potential to bridge environmental responsibility, social empathy, and civic engagement.
5. Iterative Design Enables Deeper Learning	The tours' iterative evolution demonstrated that flexible, responsive design supports richer insights than rigid structures.	Demonstrates that openness and responsiveness are not weaknesses in research design, but essential qualities for complex, place-based inquiry.

Together, these meta-patterns reveal that the toxic tours in De Wallen functioned as living laboratories for situated learning. Emotional engagement, creative expression, and relational care acted as catalysts for co-producing knowledge that was as felt and thought. Reflexivity emerged in movement, discomfort, laughter, and shared moments of recognition blurring the lines between researcher, participant, and environment. This synthesis demonstrates that tourism, when reimagined through critical walking and participatory design, can cultivate new ethical, methodological, and learning pathways for understanding cities.

5 Discussion

The research dove into the possibilities of research-driven modes of tourism as a method to gather and communicate perspectives in addressing waste in De Wallen district.

Section 4.1 showcaseed how the tendencies of academic literature in toxic tours can evolve to consider contested urban sites as toxic and justifies the case of waste as a contributor to it. Section 4.2 showed how toxic tours adapt to site-specific types of toxicity by incorporating mechanisms that enable critical engagement and reflection. Section 4.3 highlighted the how participants' reported experiences and self-assessed toxic tour goals align with overall findings. It demonstrated how critical walking methodologies can act as transform engagement with urban environments. Finally, section 4.4 identified the cross-cutting patterns that demonstrate how toxic tours can be replicated.
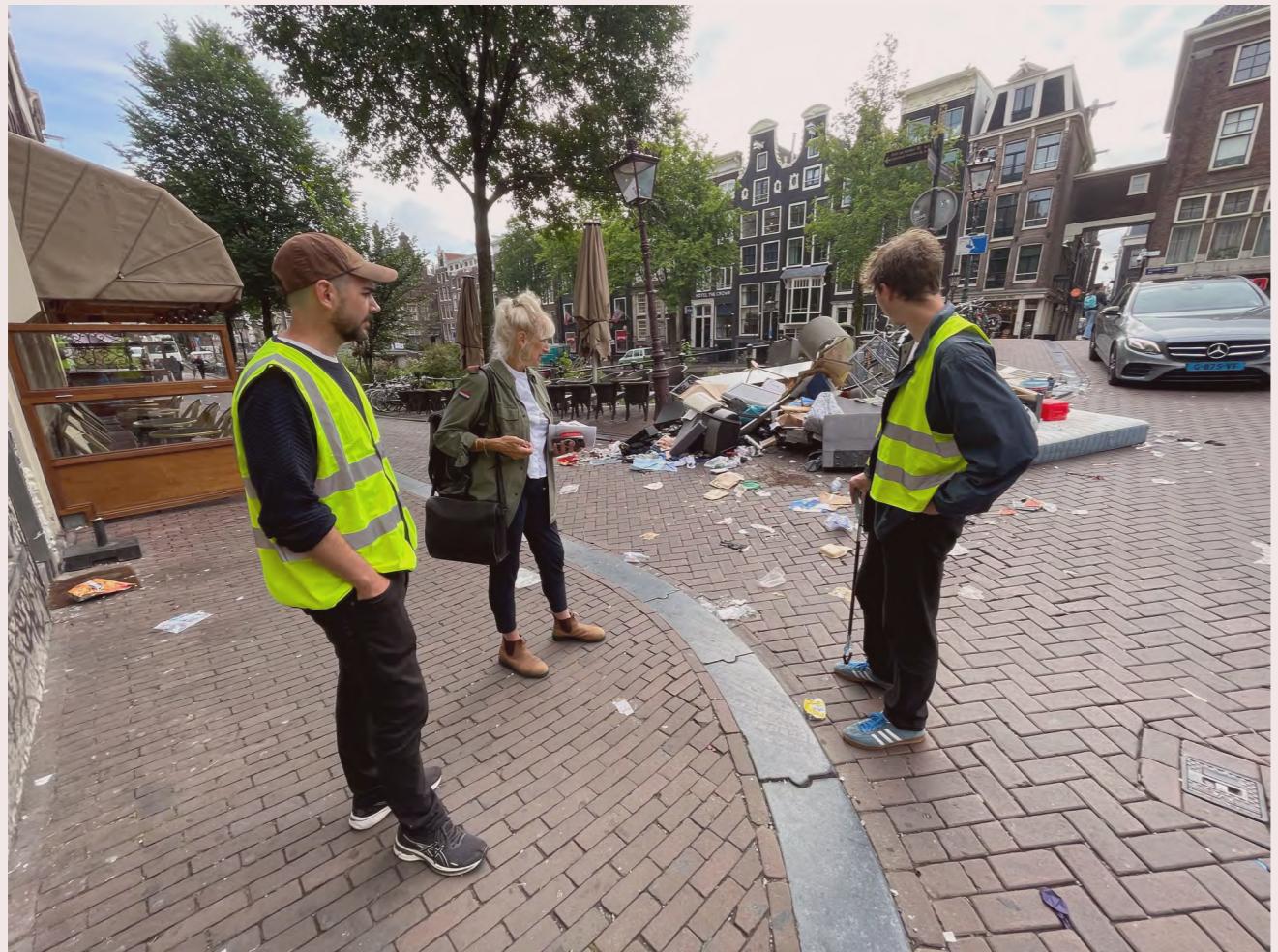

Figure 5.1 Participant interaction with resident.

5.1 Tracing Toxicity: Waste, Tourism & De Wallen

Waste in De Wallen manifests as both a material and symbolic problem that resists separation into discrete categories. It represents the most visible expression of toxicity in the area, exposing the overlapping commercial, social, political, and infrastructural pressures that shape it. As Liboiron et al. (2018) argue, toxicity disrupts collectives, social relations, and existing orders. In De Wallen, this toxicity emerges from the entanglement of historical, social, ethical, and infrastructural systems, where long-standing traditions are displaced by modern, consumption-oriented narratives that seek to sanitize the area. Such processes disproportionately harm vulnerable groups and reinforce social inequality. They also reflect Liboiron and Lepawsky's (2022) contention that purity is an aggressive concept that oversimplifies, disciplines, and controls difference.

Waste and tourism are deeply intertwined in De Wallen. To explore this relationship, the research applies Liboiron and Lepawsky's (2022) notion of *denaturalization* to question the taken-for-granted presence and meaning of waste in this context. By combining Schama's (2014) historical portrayal of Dutch culture with Scanlan's (2005) definition of waste, the study reveals how long-standing ideals of moderation and civic self-control collide with contemporary touristic imaginaries of leisure and indulgence. In parallel, the Degrowth perspective, much like Discard Studies' approach to denaturalization, challenges dominant consumption and production practices, thereby problematizing the very existence of waste (Savini, 2023). Consequently, waste in De Wallen emerges as a site where historical norms, tourist behaviors, and ethical concerns converge and illuminate tensions between tradition, pleasure, and sustainability.

Toxicity in De Wallen can be interpreted through the categories identified in the systematic literature review. *Environmental toxicity* became visible in overflowing bins, scattered waste bags, and vehicles congesting the narrow streets. These observations reveal the environmental costs of sustained consumption practices in the district and highlight the gap between societal expectations and infrastructural capacity. Waste thus shifts from being a mere byproduct to becoming evidence of De Wallen's dependence on continuous cycles of production, consumption, and cleaning. This dynamic illustrates how the pursuit of pleasure and economic growth relies on relentless maintenance routines. Figure 5.2 documents hotspots for trash through the lens of participants, exemplifying these tensions in material form.

Authorities and commercial actors exacerbate toxicity in De Wallen by enforcing 'window-dressing' measures designed to maintain order and visual cleanliness. These practices exemplify what Liboiron & Lepawsky (2022) describe as the need for *depurification*, the undoing of purity as a mode of control. Similarly, Escobar (2018) argues that design produces worlds in which certain realities are privileged while others are obscured. In this context, these purifying practices align with MacCannell's (1976) notion of staged authenticity: the appearance of order and cleanliness conceals the underlying labor, waste, and social inequalities of the district. Consequently, the idea of cleanliness in De Wallen becomes a performance that simplifies complexity and controls difference by concealing the residues of consumption and the labor of those who remove them (Liboiron & Lepawsky, 2022).

Social and moral toxicity in De Wallen exposes how certain populations are designated as outsiders or "wasters," even while actively participating in the district's economic and social life. These dynamics posi-

tion specific groups as transgressors of Dutch cultural values by engaging in practices deemed to produce "mess." Tourists are stigmatized for their leisure activities, while deposit-scheme collectors are blamed for punctured waste bags. Such perceptions align them with historically marginalized figures such as vagabonds, wanderers, rogues, and sex workers (Scanlan, 2005). In this sense, the research demonstrates how tourism is connected to De Wallen, enacting one of the central aims of Discard Studies: to trace historical dimensions of waste and its relational networks (Liboiron & Lepawsky, 2022). Consequently, tourism emerges as an exclusionary cultural and relational practice embedded within broader socio-political systems. Extending this perspective to other practices, such as deposit-scheme collection or the everyday routines of expatriates, including short-term renting and nightlife participation, can likewise be positioned as undesirable. This illustrates how *structural toxicity* operates in De Wallen, as socio-economic and regulatory dynamics expand notions of marginalization beyond tourists to encompass multiple populations entangled in De Wallen's waste and social systems.

In line with Discard Studies' claims, the disposability of materials, services, and people in De Wallen is actively produced through urban and infrastructural design (Liboiron & Lepawsky, 2022). In particular, infrastructural arrangements and tourism practices shape how waste is generated, managed, and perceived. This produces a form of *discursive toxicity,* a set of dominant cleaning narratives and mechanisms that obscure alternative ways of understanding and engaging with waste. For example, the timing of collection routines and the commercialization of touristic experiences both reinforce a system that privileges consumption, efficiency, and spectacle over care, attentiveness, and relational engagement. This cycle forms what Zapata and Zapata Campos (2018) call a "waste regime": an institutional system that normalizes cleanliness and disciplines public perception.

In De Wallen, these routines shape collective imaginaries of the district and determine who is able to access and participate in its spaces. At the same time, cleaning practices obscure the externalities of tourism and consumption, reinforcing cycles of production and disposal. This system directly contradicts Degrowth principles, which emphasize moderation, care, and attentiveness to systemic consequences (Savini, 2025). As a result, waste regimes enable the continuation of tourism while concealing the ethical and ecological costs of its expansion, producing an intensified form of toxicity.

As a whole, De Wallen's identity has long been shaped by the Dutch pursuit of cleanliness and order (Schama, 2014). Yet the district simultaneously functions as a space where disorder is both produced and contained. From this perspective, the research challenges Liboiron & Lepawsky's (2022) concept of *decentralization*, which suggests that central zones export disorder to peripheral ones. While environmental toxicity may be displaced from De Wallen, other forms of toxicity remain internalized within the district. In this way, De Wallen becomes a "sacrifice area" where social tensions and economic interests converge. Both locals and tourists act as generators and recipients of waste, caught in a cycle of leisure, erasure, and blame. Tourists in particular are treated as "wasters," whose presence is problematized through stigmatization and managed rather than understood (Scanlan, 2005; Liboiron & Lepawsky, 2022).

De Wallen thus emerges as a paradox: a site that relies on the continuous production and erasure of its own essence. Put differently, waste makes tangible the contradictions of a neighborhood that thrives on what it simultaneously seeks to hide. Toxic tours transform these contradictions into experiential learning opportunities, turning hidden or abstract aspects of waste into occasions for exploration. Participants encounter, reflect on, and engage with waste, uncovering its social, ethical, and material dimensions, thereby fostering embodied understanding and critical insight into De Wallen's toxicity through tourism.

Figure 5.2 Photo mission 1. Participants.

5.2 Walking the Waste: Learning through Toxic Tours

Toxic tours transformed De Wallen into a learning environment, revealing the role of waste as both a teaching tool and a method connecting theory and practice. The walks made toxicity, as described by Liboiron et al. (2018), tangible by linking theoretical concepts with direct encounters with everyday trash. Following Escobar (2018), the tours also functioned as critical design interventions, exposing hidden infrastructures and redistributing agency among participants.

Toxic tours in De Wallen integrated the diverse methodological approaches identified in the systematic literature review. Participants did not only see waste; they interacted with it and reflected on its significance for tourism and urban life. This enabled the operationalization of Liboiron & Lepawsky's (2022) concept of *defamiliarization*, which incorporates a set of methods that prevent researchers from using taken-for-granted modes of knowing and experiencing. Walking, photographing, collecting, and discussing turned De Wallen into a site of relational learning.

These embodied interactions blurred the roles of tourist, researcher, and activist, echoing Di Chiro (2004), Pezzullo (2003), and Martinez (2025), who show how their work is shaped by positionality and context. One participant acknowledged being *"uncomfortable at times, but overall mostly challenged to view things beyond my preconceived notions",* highlighting the reflective tension involved in the process.

"Uncomfortable at times, but overall mostly challenged to view things beyond my preconceived notions."

— Participant, survey

Ethnographic and participatory methods helped participants recognized how waste exposed the interdependence between tourism, everyday practices, and environmental conditions. This process aligned with Pezzullo's (2003) principle of embodied witnessing, turning observation into ethical reflection. Simple, everyday encounters, such as noticing trash, smells, or cleaning routines, became entry points for critical inquiry. Through shared discussion, participants confronted and questioned their assumptions about De Wallen using ideas from Liboiron and Lepawsky (2022) and Savini (2023). The group reflected on visible waste, social norms, consumption habits, and hygiene expectations that sustain the district's tourism culture, demonstrating that learning about waste extends beyond materials into cultural and ethical dimensions (Liboiron & Lepawsky, 2022; Savini, 2023).

This participatory approach produced pluriversal understandings of waste (Escobar, 2018) and supported Ormond and Vietti's (2022) notion of *civic learning* rooted in awareness and reflection. It also responded to Whelan's (2005) claim that toxic tours generate education through social action. Participants moved from passive observation to active engagement, collecting, documenting, and discussing their findings. In doing so, they generated insights that linked activism, community engagement, and education (Whelan, 2025).

The use of props and tools further deepened participant engagement. For instance, during the third activity, participants used trash grabbers to select individual pieces of trash for the crime-scene recreation. One participant acknowledged how *"it makes you really pay attention into what you're seeing and get rid of all the noise",* showing how close attention and reflection happened on both the material and symbolic meanings of trash.

"It makes you really pay attention into what you're seeing and get rid of all the noise"

— Participant, TT5

Fluorescent vests served as visual identifiers, marking participation and increasing visibility. They attracted the attention of passerbys, often prompting spontaneous conversations about waste and the purpose of the tours. At times, they exposed participants to tension or misunderstanding, demonstrating how positionalities can be contested and reveal hidden stigma.

Cameras were another important tool during the tours. Building on studies by Pezzullo (2003) and Di Chiro (2004), photography in this research functioned not only to document researcher experiences but also as a methodological instrument that empowered participants and validated their perspectives. This approach aligns with Bigby et al. (2023) and O'Neill (2024), who emphasize storytelling and visual documentation in toxic tours.

One participant reflected on his photo, saying, *"This one, specifically with the food carton, sends a message: 'I'm done with this thing, so it's no longer my problem. I'm just going to leave it here. I don't see a trash bin, or I do see one, but it's 100 meters too far and I just don't care.'"* This example illustrates how photographs captured everyday scenes and acted as catalysts for discussion, providing tangible reflections of perception, engagement, and agency.

"It seems as if some said 'I'm done with this thing, so it's no longer my problem. I'm just going to leave it here. I don't see a trash bin, or I do see one, but it's 100 meters too far and I just don't care'"

— Participant, TT5

The tour was structured in three phases, each guiding participants through different forms of engagement. In the first phase, participants undertook a sensory walk, observing their emotions and reactions while exploring the site. This allowed them to interrupt common narratives, by incorporating Discard Studies' technique of *defamiliarization* (Liboiron & Lepawksy, 2022). They were asked to take a photograph capturing their impressions, a "photo mission" that grounded later discussion.

During the second phase, participants first searched for beauty before engaging in the "dumpster dialogues," an activity designed to foster reasoning through the lens of Liboiron and Lepawsky's (2022) concept of *denaturalization*. These conversations revealed the contradictions of De Wallen and encouraged participants to consider coexistence and care. One participant reflected in the survey, *"it's worth the discomfort to*

realize and gain empathy for all the unseen labor that makes your city what it is," highlighting the challenges of engaging fully with the tour.

> ## *"It's worth the discomfort to realize and gain empathy for all the unseen labor that makes your city what it is"*
>
> ### *— Participant, survey*

Finally, in the third phase, participants recreated a "crime scene," combining systemic thinking with play and creativity. This exercise helped the group link imagination to broader structural questions and reflect upon Discard Studies' stance on *purity* (Liboiron & Lepawksy, 2022). Participants described this activity as one of the most memorable, showing how collaboration and creativity facilitated a positive and reflective group dynamic.

Overall, the toxic tours operated as both a research method and a learning environment. They redefined responsibility, encouraging participants to see waste as part of broader economic and political systems. This aligns with Su and Jagninski (2013), Varelas et al. (2017), and Savini (2023), who highlight the role of inequality and growth-driven policies in shaping urban environments. Emotional exchanges and collaborative activities fostered a slower and more reflective approach to tourism, consistent with Degrowth principles of sufficiency, accountability, and coexistence (Savini, 2023). This also connects with Higgins-Desbiolles' (2022) call to reorient tourism toward more just and sustainable futures.

Through these experiences, toxic tours transformed De Wallen into a space of reflection and civic engagement. Participants applied Ormond and Vietti's (2021) concept of *multiperspectivity*, emphasizing awareness through stakeholder's multiple viewpoints. The tours created a shared learning environment where participants practiced more ethical and inclusive forms of visiting, as advocated by Melubo and Doering (2021) and Ormond and Vietti (2021).

Toxic tours demonstrated how waste can serve as a starting point for ethical awareness and collective learning. Through critical design, participants engaged with the power structures that sustain the "clean" image of tourism in De Wallen (Escobar, 2018; Liboiron & Lepawsky, 2022). Activities generated insights at both personal and group levels, confirming that toxic tours function fundamentally as critical guided walks. These walks provide a method for exploring broader structural, political, and theoretical dimensions of urban life through tourism.

The following section builds on this discussion by situating waste, tourism, and civic engagement within the frameworks of Degrowth, Discard Studies, and counter-tourism. It highlights how critically guided walks operationalize theory in practice, linking participant experiences to broader structural, ethical, and socio-political considerations in De Wallen. It also provides new alternatives for tourism practices.

5.3 Mapping the Pluriverse: Degrowth, Discard Studies & Systemic Change

To contextualize these findings within broader tourism imaginaries, this section draws on global cultural media to engage Escobar's (2018) principle of the pluriverse, *"a world where many worlds fit"*, emphasizing multiple ways of knowing and experiencing tourism. Building on Liboiron and Lepawsky's (2022) notion of harm, tourism practices worldwide illustrate how cities and communities are affected by irresponsible consumption and extractive economies, often failing to align with Savini's (2025) concept of satiation, which emphasizes moderation and regeneration.

Degrowth and Discard Studies perspectives emphasize the accountability of systemic actors, including businesses, institutions, and governance bodies (Liboiron & Lepawsky, 2022; Savini, 2023). In this research, Savini's (2025) concept of depth, which refers to the scale and degree of socio-cultural transformation targeted by Degrowth, was understood as requiring retroactive application. That is, to achieve satiation, it is necessary not only to plan for future transformations but also to critically examine and intervene in existing systems, practices, and imaginaries (Savini, 2025). This includes analyzing current tourism behaviors, media representations, and institutional structures that reproduce extractive or consumptive patterns.

Platform submissions revealed both tangible and intangible dimensions of tourism offerings, highlighting the power dynamics underpinning De Wallen's tourist economy. Applying the principle of retroactive depth also justifies analyzing media imaginaries that influence tourism practices, as these representations shape how tourists and local actors perceive, engage with, and reproduce the socio-cultural and environmental dynamics of the district (Liboiron & Lepawsky, 2022; Savini, 2023).

The HBO series *The White Lotus* satirizes Western privilege and excess, critiquing performative and extractive tourist behavior. In contrast, Bad Bunny's *Debí Tirar Más Fotos (DTMF)* critiques the commodification of culture and space in Puerto Rico from a decolonial perspective. From a Discard Studies lens, *The White Lotus* depicts "sanitized" travel experiences that remove local complexities and reduce Escobar's (2018) pluriverse to a consumable product (Liboiron & Lepawsky, 2022). Its portrayal of unethical tourist behavior, marked by privilege, exploitation, and detachment, both fascinates and repels audiences, creating a dual impulse: the fantasy of escape and the need for moral distance (The Economist, 2025).

In De Wallen, a similar duality exists. Locals, while criticizing tourism excesses for moral superiority, may also derive thrill from the spectacle, reflecting echoes of Schama's (2014) self-moderation principles in the transgressive performances they condemn.

Just as *The White Lotus* sanitizes local ways of living, De Wallen's urban policies, waste regimes, and tourism imaginaries aim to provide polished experiences of the district, effectively discarding the pluriverse (MacCannell, 1976; Zapata & Zapata Campos, 2018; Escobar, 2018; Liboiron & Lepawsky, 2022). These global and local examples demonstrate that the systems and politics underpinning tourism are closely tied to visibility,

value, and exclusion. From a Degrowth perspective, such practices remove agency from actors, limiting the possibility of enacting moderation, care, or regenerative practices.

The White Lotus warns against passive tourism, where destinations are treated as scenery rather than living environments. Similarly, in De Wallen, the tourist gaze, as theorized by MacCannell (1976), reduces complex social realities into consumable images. Bad Bunny's *Debí Tirar Más Fotos* engages with the politics of touristification, reflecting Degrowth principles by critiquing how colonial-capitalist systems transform land, culture, and identity into consumable products. Songs such as *"Lo Que Le Pasó a Hawaii"* symbolize gentrification and extractive tourism, while *"Turista"* frames tourists as detached and privileged visitors.

Bad Bunny's international popularity, along with his decision to exclude the continental United States from his 2025–2026 tour, signals a political statement of refusal (Jimenez & Cardona, 2025). Amidst risks such as ICE raids, and as supported by Martinez's (2025) toxic tour studies, he subverts traditional tourism hierarchies. This contrasts with Amsterdam, where certain tourist groups and vulnerable groups are labeled sources of pollution and disorder, rather than addressing the broader systemic factors that Discard Studies target (Liboiron & Lepawsky, 2022). Such rhetoric reinforces nationalist discourses around identity, belonging, and immigration (Hielkema, 2025; NOS Nieuws, 2025). Through these examples, tourism emerges as a system of selective visibility and participation, where access, attention, and cultural authenticity are unevenly distributed across people and places.

The research revealed the difficulty of intervening in narratives shaped by online platforms, reinforcing MacCannell's (1976) concept of staged authenticity and the curated imaginaries of tourism in Amsterdam's De Wallen. What appears online as "real" is often selectively presented to fit expectations of pleasure, danger, and desire.

Locally, institutional and community efforts to "clean up" De Wallen can be considered too as anti-foreigner discourses. These measures reproduce hierarchies that distinguish respectable from undesirable tourism while diverting attention from systemic dependencies. In this sense, Degrowth's principle of satiation opposes the economic reliance on mass tourism and global marketing logics that produce waste (Savini, 2025).

Toxic tours offered an alternative approach to inclusion and exclusion dynamics. Rather than erasing certain actors or practices, they deliberately incorporated Escobar's (2018) pluriverse, highlighting marginalized people, overlooked spaces, and flawed systemic designs. This aligns with Savini's (2025) concept of trajectory, in which prefigurative actions enacted in the present moment advance Degrowth principles. Toxic tours made these actors central to the tourist experience and challenged dominant hierarchies of value. Consequently, toxic tours mimic Bad Bunny's refusal and demonstrate that curated tourism practices can either reinforce or contest inequalities, shaping whose presence and interests are considered legitimate.

This contrast highlights the gap between conventional tourism narratives and toxic tours. Unlike curated platform experiences, toxic tours engaged participants by slowing down and fostering reflection. In doing so, they incorporated Degrowth principles of satiation, enabling deeper engagement with De Wallen and reflection on the ethical, social, and material dimensions of tourism (Savini, 2025). Participants confirmed this in survey responses, emphasizing the novelty, entertainment, and thought-provoking nature of the experiences, without losing focus on critical engagement.

Under the Geels (2002) MLP perspective, toxic tours operated within the liminal space of the Pluriverse and the OWW where the OWW's hegemony is contested and influenced. The tours served as cross-pollination spaces for new solutions to urban and environmental challenges, providing participants with tools that challenge Escobar's (2018) heteronomously expert-driven processes, Savini's (2023) market-driven imperatives, and Liboiron & Lepawsky's (2022), dominant knowledge systems. Unlike typical niche innovations developed in insulated experimental spaces, toxic tours functioned as socially-based niche innovations that interacted dynamically with formal and informal institutional practices, managing to bridge dialogue between both poles (Geels, 2002).

In this research, toxic tours closely aligned with theoretical principles from Degrowth, Discard Studies, and Critical Design. Degrowth framed waste in socio-ecological terms, emphasizing regenerative relations and slowing extractive consumption, while Discard Studies highlighted systemic change and the role of power dynamics in shaping De Wallen (Liboiron & Lepawsky, 2022; Savini, 2023). Moreover, toxic tours enacted Pezzullo's (2003) concepts of counterpublics and embodied witnessing, challenging structural inequalities, redistributing agency, and surfacing hidden dynamics of urban waste and dominant tourism narratives. Their simplicity as structured critical walks fostering observation, discussion, and reflection makes them adaptable, replicable, and impactful. It highlights their design as an opportunity to counter mainstream tourism. In doing so, these critical guided walks operationalize Escobar's (2018) ontological design principles, integrating place, distributed agency, paradigm change, environmental concern, and iterative learning into a cohesive and actionable framework.

These critical walks reveal alternative urban and tourism futures, emphasizing accountability, cooperation, and relational coexistence over accumulation and spectacle. They enable regenerative, place-based research (Escobar, 2018; Savini, 2023). While this study focuses on inequalities related to tourism and waste, the approach of critically guided walks could extend to other urban or social issues, offering a flexible method for participatory learning and civic engagement. Nevertheless, broader public curiosity and engagement are necessary to translate these practices into action, as structural constraints and the emotional demands, as reflected by participants, remain significant challenges.

5.4   Limitations

The site-specific focus on waste, toxicity, and tourism in De Wallen enabled deep engagement but limits the generalizability of the findings. While this lens revealed place-based dynamics, dominant tourism imaginaries, and relational understandings of waste, it may not easily translate to other urban contexts or forms of toxicity. Similarly, emphasizing Discard Studies, Critical Design, and Degrowth offered valuable cultural and systemic perspectives but may overlook other dimensions of urban life, such as political landscape, heritage management, or infrastructural constraints. Future research could expand the framework to include these perspectives or apply the methodological approach in different urban settings for comparative insights.

Methodological constraints also shaped the design and execution of the toxic tours. Variations in content, activities, and the degree of perceived activism created ambiguity about the tours' purpose. Time limitations, seasonal factors, and differences in days of the week restricted the number and diversity of encounters, potentially affecting participant engagement and observational richness. The researcher's positionality further influenced the design and facilitation, shaping which perspectives were foregrounded and how knowledge was co-produced. Future studies could mitigate these effects through multiple facilitators, longer study periods, or more standardized tour structures.

The representativeness of the data is limited by the small number of participants and the narrow focus on De Wallen. Certain key groups, particularly sex workers, were not systematically engaged, creating an "absent presence" in the data. Observations were shaped by situational factors such as tourist flows, weather, and neighborhood events, affecting reliability and consistency. Consequently, the findings reflect specific temporal and social conditions rather than universally generalizable patterns. Broader stakeholder participation, larger sample sizes, more varied data collection periods, and deeper platform ethnography could address this in future research.

Finally, the complexity of urban toxicity remains partial. While multiple perspectives on waste and tourism were captured, moral framings, social hierarchies, and interactions are necessarily contextual. On its end, algorithmic territories remain mostly unexplored, and further understanding of these could lead to identify forms of agency and practices of resistance that could reframe its use as tools to carryout counterpublics. The short-term nature of the research also limited the assessment of long-term impact of the tours on participants' behavior, civic engagement, or systemic change. Longitudinal ethnographic or participatory follow-ups would help trace how these engagements evolve over time.

6 Conclusion

This study explored how research-driven tourism can function as a method for uncovering and researching the intertwined dynamics of waste, tourism, and toxicity in De Wallen. First, it positioned waste as a complex and layered phenomenon that reveals the district's social, historical, and moral tensions. Second, it showed how site-specific toxic tours can cultivate witnessing and critical engagement, transforming abstract ideas of toxicity into lived, sensory encounters. Third, it demonstrated that participants' experiences and self-assessment of tour goals align to highlight the transformative capacity of critical walking methodologies. Fourth, it identified five recurring patterns of learning: (1) connection with others creates understanding, (2) playfulness and creativity unlock insights, (3) real-time reflection deepens awareness, (4) small acts of care ground learning in practice, (5) iterative design enables deeper learning. These findings demonstrate that research-driven tourism can transform the city into an active learning space where participants and researchers collaboratively make sense of its social, material, and ethical complexities, generating knowledge that bridges experience and scholarship

Figure 6.1 Participants collecting deposit scheme cans. Author.

Theoretical Significance

The study revealed how toxicity operates within contested urban sites. Moreover, it demonstrated how toxic tours can bridge theory and practice to reveal the entanglement of complex urban dynamics. Specifically, this research sparked embodied and affective insights about tourism and waste that conventional research methods rarely capture. As one participant reflected, "*You kind of know the consequences of your own actions, but you don't see them merging into one big problem, and that's what it [the tour] really visualizes*" capturing how the tour visualized the systemic nature of toxicity.

> ## "You kind of know the consequences of your own actions, but you don't see them merging into one big problem, and that's what it [the tour] really visualizes." — Participant, TT1

In Escobar's (2018) terms, toxic tours helped momentarily enact "a world where many worlds fit". This generated a space where multiple ways of knowing, sensing, and valuing urban life coexisted and challenged dominant place-based narratives. In line with Liboiron and Lepawsky's (2022) notion of denaturalization, the tours questioned taken-for-granted tensions between purity and pollution, problem and solution, inviting participants to see waste through alternative perspectives. The identified core insights operationalize theoretical principles of Discard Studies and Degrowth through Critical Design. Moreover they prefigure Degrowth's core values of care, reflection, and satiation within everyday urban life.

Waste as a Site of Reflection and Learning

Toxic tours transformed waste into a medium for sensory learning, ethical engagement, and collective reflection. Participants experienced affective shifts from disgust and shame toward curiosity, empathy, and shared responsibility of waste. As one participant expressed,

> ## "I was mainly disgusted and also quite angry, mainly because it feels like no one cares... seeing perfectly good food thrown away after so much energy was put into producing it."
> ## — Participant, TT5

Moreover, small acts of care, such as cleaning or collaborative observation, made learning tangible, while playful and creative interactions fostered experimentation and flexible ways of knowing. Moments of humor and imagination also surfaced, as one participant joked, "*Princess Peach had a wild night... she lost a high heel somewhere and had a Red Bull*" (TT9), showing how playfulness opened new ways of relating to waste and its stories." Figure 6.2 shows participant storytelling exercise.

These moments of humor and creative play resonate once again with Escobar's (2018) Pluriverse. They allowed feelings and thought processes to coexist, reimagining waste beyond its utilitarian or moral framing. Consequently, waste emerged as a trigger for reflection, a site of care, and a creative challenge that turned the act of encountering discarded matter into a process of situated learning. These experiences reveal how waste can be a cognitive and ethical tool that creates awareness of social hierarchies, urban infrastructures, and moral entanglements within tourism.

As one participant reflected, *"Most of it [the waste] I guess is commercial... and you cannot have fun and pay attention to the trash — they exclude each other"* (TT9) This captured some of the moral tensions between consumption, pollution, and care that the toxic tours sought to expose.

> **"Most of it [the waste] I guess is commercial... and you cannot have fun and pay attention to the trash — they exclude each other."**
>
> **— Participant, TT9**

Practical Significance

This research demonstrated that tourism can be designed as a participatory, ethical, and collective reflection in urban spaces. In doing so, it can be transformed from an extractive activity into a space for shared learning and civic reflection.

Toxic tours acted as site-specific interventions that blurred the boundaries between tourist, co-researcher, and civic actor. Through guided and scaffolded activities, participants slowed down, observed overlooked urban dynamics, and developed new ways of carrying out tourism. This echoes Liboiron and Lepawsky's (2022) concepts of denaturalization and depurification, as participants began to unsettle taken-for-granted practices and enacted some of Degrowth's core principles by prefigurating new ways in which to relate to the environment.

Overall, this form of carrying out tourism surfaced new understandings of waste and tourism. These findings illustrate how Critical Design principles can foster civic learning by offering concrete strategies for designing tourism experiences that cultivate critical awareness, civic learning, and regenerative engagement.
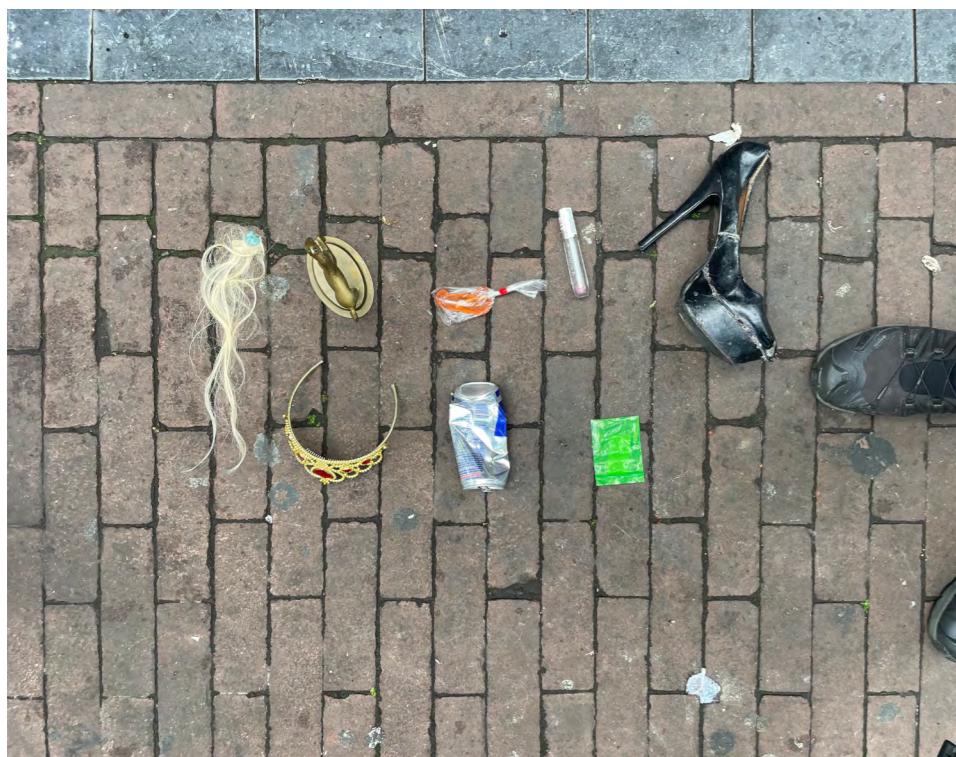
Figure 6.2 Princess Peach's night-out. Author.

Future Research

The focus on De Wallen enabled deep, situated engagement with the social, material, and affective dimensions of waste, but this specificity also limits the generalizability of findings to other urban contexts. Differences between tours, including variations in activities, group size, and the researcher's positionality, shaped participants' experiences and the types of insights that emerged.

Future research could extend toxic tours to diverse topics, participant groups, and urban contexts, testing how transferable and adaptable these insights are across different social and material environments. Future studies could also examine further the role of tourism platforms in shaping place imaginaries and constraining counterpublics, integrating these dynamics into toxic tour design.

Moreover, longitudinal studies can clarify whether repeated or sustained engagement deepens participants' systemic understanding of waste-tourism dynamics and fosters lasting behavioral change. Applying additional analytical lenses, such as heritage, more-than-human perspectives, coloniality, or Indigenous and feminist viewpoints, could further illuminate the ethical, ecological, and social dimensions of waste, care, and urban metabolism (Savini, 2023). Finally, designing interventions that emphasize iterative cycles of testing, reflection, and adaptation could enhance both methodological innovation and practical relevance for urban sustainability.

7 Epilogue

This research reflects my journey through the MSc Metropolitan Analysis, Design and Engineering program (MSc MADE). My studies were guided by an interest in urban innovation from a transdisciplinary perspective that embraces complexity as a strength rather than a limitation. The integration of diverse domains, from entrepreneurship to innovation, shaped the design and orientation of this thesis. By conceptualzing, testing, developing and refining toxic tours as a research tool, this project demonstrates how transdisciplinary programs like MSc MADE enable experimental and reflective approaches to understanding urban life.

The selection of theoretical lenses was initially driven by personal interests, with decolonial and design perspectives providing an ethical and conceptual foundation. These frameworks shaped *why* the research was undertaken: to question dominant narratives and foreground different ways of understanding. The *what* of the study centered on waste and tourism in De Wallen, examined through situated knowledge and pluriversal approaches. The *how* developed into an academically documented practice that fulfilled my original aim: to show people the uncanny and sublime things that also happen in Amsterdam's Red-Light District.

Exploring waste through philosophical lenses transformed the topic into a playground for studying the neighborhood's complex dynamics (Scanlan, 2005; Schama, 2014). Collaboration with participants revealed multiple perspectives and guided the design of activities that surfaced these views. As the research progressed, the use of iterative cycles for testing, validation, and adaptation became central. Each decision shaped the outcomes and informed the evolution of the toxic tours. Appendix C contains the timeline of the research process.

Before fully implementing the tours, a dry run allowed for a reconceptualization of their execution. Logistical constraints displaced the original idea of multiple tours for different audiences, into a single unified format capable of capturing diverse participant perspectives. During the data collection phase, participant recruitment through platforms revealed unexpected challenges. Airbnb obstructed broader participation more than anticipated, providing insights into tourism practices, while algorithmic barriers emerged when listing the experience on GuruWalks. These obstacles highlighted systemic constraints in mainstream tourism and its imaginaries, which became central to the research. This situation opened up a space to engage with tourism in the digital domain, incorporating perspectives from philosophical and discard studies.

Through repeated iterations, another insight emerged. While the method effectively gathered perspectives on waste, self-reflection on my own learnings and "aha moments" raised questions about the tour's educational impact on participants. This led the addition of quantitative learning outcomes, looking to measure objectively how individual knowledge was best facilitated. This revealed how participants experienced civic learning and highlighted the ways in which the tours facilitated reflection on urban waste. Such outcomes highlighted the importance of facilitation and how the dual role of researcher and tour guide shaped the quality of engagement and the depth of insights collected.

This dual role became inseparable from the process. Guiding participants while observing and reflecting demanded continuous balancing of empathy, curiosity, and critical distance. It involved co-constructing meaning, designing activities to elicit participant perspectives, and situating experiences within broader theoretical and socio-ecological frameworks. Over time, my engagement with toxic tours shifted from using them as a means of studying research objects to exploring their potential as facilitators of reflexive and participatory practices. The more iterations occurred, the more diffucult it became to define the tour's nature, as it became capable of being investigative, entertaining, doing activist work, or a combination, depending on participant input, unexpected encounters and participant dynamics. This implied relinquishing control of its fixed structure and embracing messiness, spontaneity and anything that could disrupt it.

Reflecting on my positionality exposed deeper motivations. As a migrant raised in a highly touristic city from the Global South, I brought a lived awareness of the socio-ecological consequences of mass tourism. Martinez's work, *Migrant Abolition Geographies* (2025), made me realize the underlying motivations that inspired the activist dimension of the research. Specifically, as a Mexican migrant, living amidst the climate of hate speech, persecution, and deportation targeting Mexican and Latin American communities in the United States, I resonated with the struggles on how minority and foreign groups are unfairly blamed for structural problems. This awareness became an unconscious driving force behind my choice to carry out this research. These personal experiences shaped the tours' structure, facilitation, and outcomes, raising questions about how results might differ under another facilitator. It also surfaces the embedded role of the researcher in transdisciplinary urban studies.

This journey revealed that research in complex urban spaces is dynamic, iterative, and deeply human. The toxic tours in De Wallen became living processes, evolving with each iteration, connecting theory, practice, and personal reflection. They illuminated unseen dynamics, fostered civic learning, and bridged inquiry with activism. This epilogue reflects on the value of embracing complexity, iterative experimentation, and personal engagement as essential to understanding and shaping urban life.

Figure 7.1 De Wallen's Pluriverse. Author.

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9 AI Use Declaration

Artificial Intelligence (AI) was integrated into this thesis as a supportive tool throughout the different stages of research and writing. The primary platforms employed were ChatGPT and Google Gemini. ChatGPT was used consistently as the main assistant, while Gemini was consulted to cross check outputs, provide alternatives, or handle specific small-scale tasks.

In each AI-assisted conversation, the researcher used Prompt 1 to generate a concise description of the chat, outlining the sections impacted, the collaborative process between AI and researcher, and including specific examples of tasks or outputs. Prompt 2 was then used to produce a detailed, descriptive title that clearly conveys the specific use of AI and the sections in which the conversation contributed. This two-step approach ensured that each conversation provided was documented transparently, highlighting both methodology and iterative interactions while keeping descriptions concise and structured. Table 9.1 shows the prompts used to derive answers from AI chats.

Table 9.1 Prompts for AI use description.

Prompt	Purpose / Description
Prompt 1	Generate a brief description of the AI conversation, outlining the sections impacted, the collaborative process between AI and researcher, and including specific examples of tasks or outputs. Limit to three sentences.
Prompt 2	Based on the description from Prompt 1, create a detailed and descriptive title that conveys the specific use of AI and the sections in which the conversation contributed.

Table 9.2 contains the results obtained from the selection. AI engines do not have access to metadata like the exact first date of use or the full length of the chats, the incorporation of these chats was according to the researcher's estimates.

Table 9.2 AI use prompt responses.

Focus	Description	Conversation Link
Collaborative process focused on refining methodology and systematic literature review	Documents a collaborative process of refining a thesis, focusing on structuring, terminology, and clarity. AI assisted the researcher in improving a systematic literature review and methodology sections by foregrounding key information, organizing complex hierarchies, and simplifying academic language. Examples include structuring a literature review's table of contents and rephrasing concepts like "discursive toxicity" and "representational toxicity." Iterative feedback cycles refined phrasing, structure, and examples.	https://gemini.google.com/app/
Refining a Systematic Literature Review's Thematic and Methodological Sections	AI acted as a thesis advisor to frame and articulate analytical categories for a systematic literature review on "toxic tours." Iterative feedback helped justify the review's scope (from 2000), clarified hierarchical relationships between concepts like "discursive toxicity" and sub-types, and refined thematic section language such as "Environmental Toxicity" and "Transdisciplinary and Multimodal Approaches."	https://gemini.google.com/app/
Refining Methods, Framing Research, and Communicating Participatory Toxic Tours	Documents iterative refinement of a master's thesis on toxic tours. AI helped clarify methods (e.g., thematic analysis vs descriptive reporting), refine research framing (rephrasing research question to emphasize spatial, affective, and sociopolitical dimensions), and support dissemination tasks (editing LinkedIn posts, integrating WhatsApp documentation). Balanced conceptual sharpening with communication strategies while maintaining methodological rigor.	https://chatgpt.com/c/686bc569-2a34-800f-bba8-839bc1a1f487
Development and Refinement of Thesis Sections on Toxic Tourism	Iterative collaboration on methodology, literature review, case study selection, comparative analysis, and participatory action research design. AI helped clarify missing methodological details, and condense text. Examples include refining visual and photographic research descriptions and condensing discussion of physical, border, and virtual.	https://chatgpt.com/c/68889696-2724-8320-be96-eec615092048
AI-Facilitated Exploration of Academic Rigor in Traditional and Design Theses	Clarified criteria for academic rigor in traditional and design theses. AI provided explanations, examples, and practical implications covering tone, argumentation, use of sources, methodology, and critical reflection. Examples included distinguishing creative output from scholarly analysis and outlining impacts of insufficient critical engagement.	https://chatgpt.com/c/68a37e74-ba50-8324-95f4-4cc1a7d02e81
AI-Assisted Reflection and Synthesis for Thesis Methodology (This Chat)	〼 Documents the collaborative process of synthesizing all AI interactions and integrating them into the thesis methodology section. AI assisted in structuring reflective content, summarizing previous chat sessions, and clarifying researcher-AI boundaries for the AI declaration form, including examples of tasks and iterative dialogue.	https://chatgpt.com/c/68cfc9b0-ec6c-832d-8966-2fe7308b4948

Appendix A: Systematic Literature Search Terms

	SCOPUS
Search Term	PUBYEAR > 2000 TITLE-ABS-KEY ((toxic tour OR toxic tours))
Number of Articles	56
Excluded Titles	37
Excluded Abstracts	2
Unavailable	1
After filtering	12

Inclusion criteria:

Peer-reviewed journal articles

Published between 2000 and 2025

Written in English

Focused on toxic tours or related conceptual frameworks

Belonging to the fields of cultural studies, tourism studies, environmental education, science education, communication, or urban affairs

Exclusion criteria:

Grey literature (e.g., theses, reports, or conference proceedings)

Publications from unrelated disciplines such as agricultural sciences, medicine, engineering, pharmacology, computation, maritime health, biology and business

Non-English publications

Appendix B: Touring Regulations In De Wallen

❌❌❌ **City of Amsterdam**

Giving guided tours in Amsterdam: how it works

Welcome to Amsterdam! With an exemption, it is possible to give guided tours for groups of 5 to 15 participants in the Centre city district. Guided tours are not permitted in streets with prostitution windows. You can request an exemption at www.amsterdam.nl/rondleidingen.

→ In this leaflet you can read about the rules related to the exemption, and what is and is not allowed.

What are the rules?

- Guided tour groups may consist of no more than 15 participants. An exemption is not required for groups of up to four people.
- Tours can start from 8:00 and must finish by 22:00 at the latest.
- Tours are not permitted to pass prostitution windows.
- Recruiting participants in public places is prohibited.
- You must prevent participants from loitering in busy places, including entrances to shops, houses, or bars and restaurants during opening hours.
- Guides must wear a badge clearly identifying them and the company they work for.

- No sound amplification equipment may be used during the tour.
- No drugs or alcohol may be consumed during the tour.
- Shouting and loud noise are prohibited.
- Before the tour begins, the guide must instruct participants to show respect to local residents and businesses.
- A tour group must not stop at the same place or move around together with another tour group in such a way that a larger group is formed.
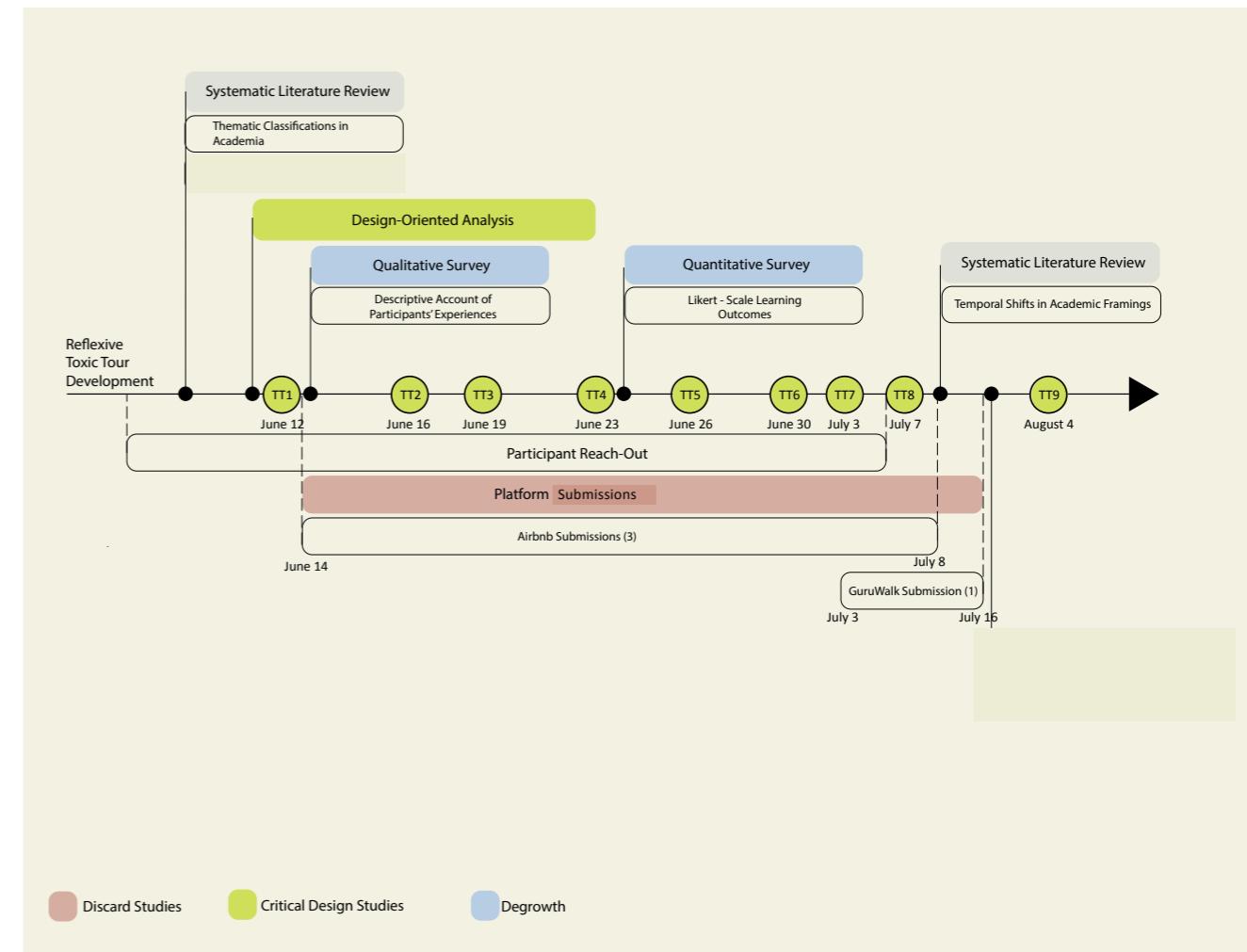- Taxes must be paid for a guided tour or city tour: the Entertainment Tax.

Report to Municipal Taxes department of Amsterdam (Belastingen Amsterdam)

Each city tour participant pays Entertainment Tax. You, or the company that organises the tour, pays this Entertainment Tax to the City of Amsterdam. To pay these taxes, you, or the organising company, need to report to the Municipal Taxes department of Amsterdam (Belastingen Amsterdam). Please note: Entertainment Tax must be paid throughout the city, not just for city tours in the Centre city district. You can read more at **www.amsterdam.nl/toeristenbelasting**.

A tour is an organised walk, or drive with a vehicle, under the guidance of a tour guide.

Appendix C: Research Process

Bedankt!