

VULNERABLE USERS IN SPACE

THE SPATIAL MARGINALIZATION OF CLEANING WORKERS
IN PUBLIC FACILITIES

<u>INTRODUCTION</u>	1
<u>TOILETS AND CLEANING WORKERS AND SOCIETY</u>	
SPACE IN SOCIETY : WHY PUBLIC TOILETS?	7
WORKER TO SPACE : THE IMPORTANCE OF MAINTENANCE LABOUR	11
SOCIETY TO SPACE AND WORKER: STIGMA, SPATIAL PRIORITIES, AND MARGINALIZATION	15
CARE TO WORKER : DIGNITY THROUGH DESIGN	21
<u>WORKER IN SPACE : THE HONG KONG SCENARIO</u>	
PUBLIC TOILETS IN HONG KONG	27
CLEANING WORKERS IN HONG KONG	33
SPACE TO WORKERS : PHOTOGRAPHY COLLECTION AND INTERVIEWS	37
<u>FINAL THOUGHTS</u>	67
<u>BIBLIOGRAPHY</u>	
<u>LIST OF FIGURES</u>	

This thesis is inspired by the movie *Perfect Days* by Wim Wenders, which follows a cleaning worker's routine as he maintains a series of architecturally significant public toilets designed for the Tokyo Toilet Project. These toilets, celebrated for their innovation and design, aim to improve traditional perceptions of public toilets as dirty or unsafe. The film highlights the worker's role in maintaining these spaces, raising a critical question: What about the space for the cleaning worker?

In the film, the worker's dedication is evident in the care he takes with his duties, supported by thoughtfully designed uniforms that reflect his integral role in the project. However, the film also reveals a glaring omission: the spaces themselves do not accommodate the cleaning worker. Key moments show him transporting cleaning tools between sites using his car and taking breaks outdoors or inside his vehicle due to the lack of designated spaces for rest or storage. These scenes underline a deeper issue: although cleaning workers spend more time in these spaces than any other users, their needs remain unaddressed in the design process.



Figure 1. "Hirayama carrying tools to the toilet" Wim Wenders, *Perfect Days*, 2023



Figure 2. "Hirayama having lunch under the tree" Wim Wenders, *Perfect Days*, 2023

This situation mirrors the reality in Hong Kong, where cleaning workers in public facilities often face similar neglect. In Hong Kong, these workers, who are frequently outsourced and among the lowest-paid in the workforce, endure heavy workloads and long hours. Attendant rooms, if provided, are typically small, poorly lit, and inadequately furnished, reflecting the broader marginalization of this group. This raises critical questions: How does spatial design contribute to the marginalization of cleaning workers? What factors lead to their exclusion from design considerations? How can space be used to elevate their status and foster dignity?

This thesis investigates these questions by exploring the relationship between space and marginalized groups, focusing on cleaning workers in public facilities. It examines how spatial design reflects societal hierarchies and explores how design can serve as a tool to promote dignity and respect. Using Hong Kong as a case study, this research will document the conditions of public toilets maintained by cleaning workers. Documentary-style photography will capture the spatial conditions of public toilets, shedding light on how these spaces reveal the workers' realities.

The aim of this thesis is to serve as a reminder to designers and architects of their responsibility to consider marginalized groups when creating public spaces. By documenting and analyzing the spatial realities of cleaning workers, this research advocates for inclusive design principles that address the needs of all users. Ultimately, it seeks to demonstrate that architecture is not only a tool for inclusion or exclusion but also a lens for socio-critical analysis. Space is more than a practical necessity—it is a medium that constructs power, status, and dignity.

Methodologies

This thesis employs a combination of theoretical research and visual documentation to examine the spatial marginalization of cleaning workers in public facilities. By integrating literature review, photography, and interviews, the research aims to uncover both structural and experiential aspects of this issue.

1. Literature Review and Policy Analysis A review of academic literature, labor policies, and urban planning documents provides a theoretical foundation for understanding the relationship between space, social hierarchies, and the marginalization of cleaning workers. Since public toilets are heavily dependent on maintenance labor, examining policies on outsourcing, labor rights, and spatial planning helps contextualize how systemic decisions shape the realities faced by cleaning workers.

2. Photography as Documentation Photography is used as a primary tool to document the working conditions of cleaning workers in public toilets. This method captures spatial neglect in areas such as attendant rooms, storage spaces, and resting areas—spaces that are often overlooked in design. By visually analyzing these environments, photography highlights the contrast between design intentions and actual use, offering tangible evidence of how space marginalizes those who maintain it.

By combining these methodologies, this thesis investigates how public toilet design, policy decisions, and societal attitudes contribute to the marginalization of cleaning workers, advocating for a more inclusive approach to spatial design.

Public toilets are not merely places for hygiene; they are reflections of social values, urban priorities, and power structures. Their design, maintenance, and accessibility communicate broader societal attitudes toward public space, dignity, and inclusivity. The way public toilets are integrated into the urban environment reveals which groups are prioritized and which are overlooked.

Public Toilets as a Clear Lens for Spatial Hierarchy

Among public facilities, public toilets stand out as an ideal subject for spatial analysis because they offer a single, clearly defined function—sanitation. Unlike multipurpose spaces such as libraries or parks, public toilets have rigidly classified attendants, making it easier to observe spatial organization and hierarchy within them.

- **Primary Users (Citizens/Public):** Public toilets are designed to accommodate all citizens, with accessibility, hygiene, and security as key considerations. Greed identifies eight primary user groups that should be considered in inclusive toilet design: women, men, children, older people, disabled individuals, transgender and non-binary people, caregivers with dependents, and workers who require sanitation facilities as part of their occupation. These groups have distinct needs that influence spatial and functional planning to ensure equitable access and usability.¹
- **Secondary Users (Cleaning Workers):** Unlike general users, cleaning workers do not use the facilities for personal hygiene, but they actively engage with the space as part of their work. Many cities that provide public toilets employ either full-time attendants or assign frequent cleaning shifts, ensuring that cleaning workers spend significantly more time in these spaces than the average user. Hong Kong, in particular, serves as a strong example, where hundreds of public toilets employ full-time toilet attendants who remain in the space for an average of eight hours per shift. These workers are either stationed permanently or assigned for frequent cleaning, making them among the most present individuals in these spaces compared to any other user group. They are not only service providers but direct users of the space, as they must navigate it, access storage areas, and use sinks and other amenities to complete their tasks.

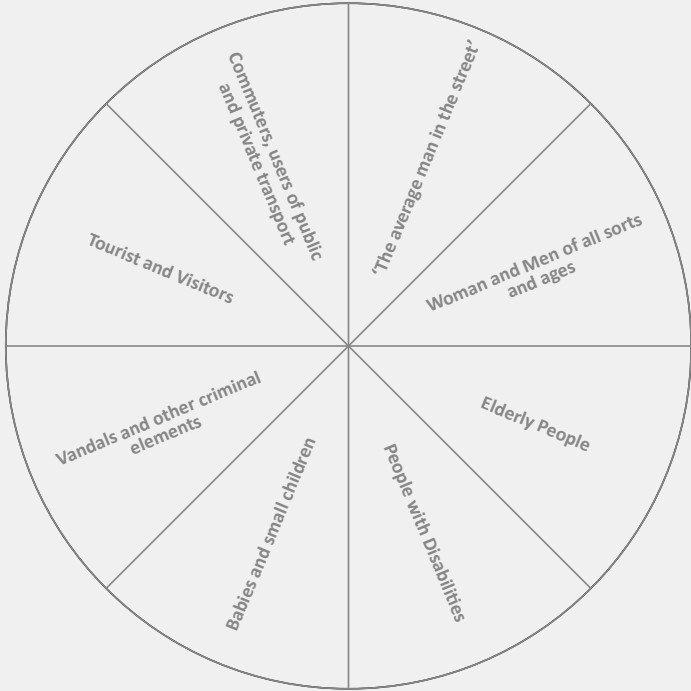


Figure 3. Greed. The range of public toilet user groups

¹Greed, Inclusive Urban Design: Public Toilets

The Tokyo Toilet Project: An Idealized Model

The Tokyo Toilet Project (TTT) represents a rare case of public toilets receiving extensive financial support, world-class architectural input, and high maintenance standards. Launched by the Nippon Foundation in collaboration with the Shibuya City Government, the project enlisted sixteen renowned architects, including Tadao Andō, Toyō Itō, and Kengo Kuma, to redesign seventeen public toilets across Shibuya. The initiative aimed to change public perceptions of toilets by making them aesthetic, accessible, and technologically advanced.

TTT exemplifies an idealized vision of public sanitation infrastructure, demonstrating what is possible when financial backing and architectural ambition align. Unlike traditional public toilets, which often suffer from poor maintenance and negative perceptions, TTT emphasizes cleanliness, usability, and dignity in sanitation spaces.

Bridging from Tokyo to Hong Kong: A Comparative Perspective

While the Tokyo Toilet Project sets a new standard for public toilet design, it exists in a highly controlled, well-funded context that is not reflective of most cities' sanitation infrastructure. In contrast, Hong Kong provides a more conventional example of how public toilets are typically managed—through government agencies that prioritize functionality over architectural innovation. Hong Kong's public toilets are essential urban facilities, yet they are designed and operated with a utilitarian, cost-driven approach. Unlike Tokyo, where the TTT aims to elevate the public toilet into a civic asset, Hong Kong's toilets remain practical and minimally designed, catering to basic sanitation needs. The stark contrast between the two models allows for a critical examination of how public toilet design reflects broader urban governance strategies.

The Overlooked Role of Cleaning Workers

Although the Tokyo Toilet Project highlights maintenance as a key component of its design, it unintentionally exposes an important oversight: the spatial needs of cleaning workers themselves. The film *Perfect Days* (2023), originally conceived as a promotional tool for TTT, evolved into a meditative exploration of labor and cleanliness. The film follows a toilet cleaner as he moves between various TTT locations, meticulously maintaining these celebrated spaces. However, despite the emphasis on well-maintained facilities, the film also subtly reveals that cleaning workers lack designated areas to rest, store their equipment, or move efficiently within the spaces they maintain.



Figure 4. "Hirayama cleaning the toilet" Wim Wenders, *Perfect Days*, 2023

Public spaces depend on cleaning workers, yet their needs are rarely considered in design. Public toilets, which require continuous upkeep, often fail to accommodate those who maintain them. Storage is inadequate, rest areas are missing, and cleaning layouts make maintenance difficult. Although essential, these workers remain invisible in spatial planning.

Modern architecture prioritizes aesthetics over upkeep. Hilary Sample argues that buildings are seen as static objects rather than spaces requiring continuous care.² Yang Yang highlights how cleaning workers, like their labour, are hidden within service areas, ensuring they remain unseen.³ This chapter examines how public toilets rely on maintenance labour and how neglecting this role can lead to broader consequences, including hygiene deterioration and public space degradation.

The Necessity of Maintenance Labour in Public Space

Public toilets require constant maintenance, yet their design rarely considers the needs of cleaning workers. These spaces are in continuous use, accumulating waste and dirt faster than other public facilities. Regular cleaning is essential to ensure hygiene and functionality, yet cleaning staff often lack the tools, storage, and space necessary to perform their jobs efficiently.

Susan Leigh Star describes maintenance as an “infrastructure of care”—a system that sustains daily life yet remains largely invisible.⁴ Public toilets remain usable not because of their design but because of the continuous labour invested in their upkeep. Without proper maintenance, these spaces quickly become unsanitary, reinforcing negative public perceptions and reducing their accessibility.

The Broken Windows Theory, proposed by James Q. Wilson and George L. Kelling, suggests that visible signs of neglect, such as unclean spaces, lead to further disorder.⁵ In the context of public toilets, poor maintenance encourages misuse—if users encounter an already dirty space, they are less likely to treat it with care, exacerbating hygiene problems. This highlights the essential role of cleaning workers in maintaining both physical cleanliness and social responsibility in public spaces.

Cleaning Work as a Continuous Process

Cleaning public toilets is not a one-time task but an ongoing process. Unlike other public spaces that can function with periodic upkeep, toilets require frequent and rigorous cleaning to remain usable. High foot traffic, exposure to waste, and the necessity for hygiene mean that cleaning workers must revisit the same areas multiple times a day. Despite this, most public toilet designs fail to accommodate this continuous cycle of maintenance.

One major issue is the lack of proper storage for cleaning supplies. Many public toilets do not have dedicated storage areas, forcing workers to place tools in hallways, corners, or even inside restroom stalls. This not only hinders their efficiency but also contributes to clutter and potential safety hazards. Proper storage would ensure that cleaning materials are easily accessible while maintaining a tidy and organized workspace.

Additionally, the physical strain of cleaning is rarely considered in public toilet design. Scrubbing floors, lifting heavy supplies, and reaching into confined spaces place significant stress on workers' bodies. Narrow stalls, low ventilation, and hard-to-clean surfaces further increase their workload. A design that integrates easy-to-maintain surfaces and ergonomic layouts would not only benefit workers but also improve overall hygiene by making routine cleaning less strenuous and more effective.

The Role of Cleaning Workers in Public Hygiene

Cleaning workers are the primary force maintaining hygiene in public toilets, preventing the spread of bacteria and ensuring accessibility for all users. Without their labour, these facilities would quickly become unsanitary, limiting their usability and deterring the public from accessing them. The presence of cleaning workers is particularly important in high-density areas such as transport hubs, parks, and urban centers, where toilets experience heavy usage throughout the day.

Public perception of toilet cleanliness directly affects how these spaces are used. A visibly clean toilet encourages responsible use, while a neglected one leads to further mistreatment. This aligns with the Broken Windows Theory, which suggests that when maintenance declines, users are more likely to contribute to the disorder.⁶ Regular and visible cleaning efforts not only maintain hygiene but also reinforce positive behavioral patterns, ensuring that public toilets remain welcoming and functional.

²Sample, *Maintenance Architecture*
³Yang, *In-Visible: A Narrative on Precarious Workers of Intimate Daily Cleaning*
⁴Star, “The Ethnography of Infrastructure,”

⁵Kelling and Wilson, “Broken Windows: The Police and Neighborhood Safety,”
⁶Kelling and Wilson.

Cleaning workers are essential in ensuring that public toilets remain hygienic and accessible. Their labour prevents spaces from falling into neglect, directly impacting public perception and usage. However, most public toilets are designed without consideration for the continuous nature of cleaning work. The lack of proper storage, physically demanding layouts, and inefficient design choices make maintenance more difficult than necessary.

Incorporating maintenance into the design process is not just beneficial for cleaning workers—it improves hygiene, sustainability, and public satisfaction. The Broken Windows Theory suggests that poorly maintained spaces encourage further disorder, reinforcing the importance of frequent and effective cleaning. To create truly inclusive and functional public toilets, designers must recognize the critical role of cleaning workers and integrate their needs into spatial planning.

Public toilets should not only serve those who use them but also those who maintain them. By designing with maintenance in mind, cities can ensure that public toilets remain clean, dignified, and accessible to all.

Public space is neither neutral nor evenly distributed; it is a product of social reproduction, reinforcing existing hierarchies and power structures. Cleaning workers, despite their essential role in maintaining public facilities, are often neglected in spatial design. This exclusion is not accidental but deeply rooted in societal stigma, spatial priorities, and hierarchical reinforcement.

This chapter explores how status creates space and how space reinforces status, using three key theoretical lenses:

- **Social Reproduction and Spatial Neglect:** Examining why cleaning workers are structurally overlooked in design.
- **Purity, Danger, and Stigma:** Using Mary Douglas's *Purity and Danger* to explain the social perception of toilets, impurity, and how this connects to the marginalization of cleaning workers.
- **The Production of Space and Status:** Drawing from Henri Lefebvre's *The Production of Space* and *The Space of Production* to analyze how spatial design reinforces social hierarchies, determining whose presence is prioritized or erased.

By weaving together these perspectives, this chapter seeks to answer: Why are cleaning workers neglected in spatial design, and how does space both reflect and reproduce their marginalized status? The examination of these themes is crucial in understanding the broader implications of spatial justice and rethinking the role of maintenance labor in urban planning and architectural design.

Social Reproduction and the Neglect of Cleaning Workers

The neglect of cleaning workers in spatial design can be understood through social reproduction, which perpetuates inequalities across generations and institutions. Cleaning labor is often performed by marginalized groups, reinforcing its status as low-value work. This systemic positioning is not merely a reflection of economic conditions but is deeply tied to cultural and social hierarchies that determine whose labor is recognized and valued.

Pierre Bourdieu's concept of *habitus* explains how spatial and social structures interact to sustain these hierarchies.⁷ Cleaning work, associated with maintenance rather than creation, is seen as invisible labor—an essential but unacknowledged presence within public facilities. This results in attendant rooms, storage spaces, and break areas that are either inadequate or absent, physically manifesting the perception of maintenance work as secondary.

Furthermore, neoliberal labor policies reinforce this invisibility. Privatized cleaning services prioritize cost-cutting, often at the expense of workers' spatial rights—denying them sufficient rest areas, functional storage, or dignified working conditions.⁸ The consequence is a structural neglect that persists across urban environments, reinforcing social divisions and further reducing the visibility of cleaning workers in the public realm.

⁷ Bourdieu, *Distinction: A Social Critique of the Judgement*
⁸ Harvey, *Spaces of Global Capitalism*

Purity, Danger, and the Stigma of Cleaning Work

Mary Douglas's *Purity and Danger* explains how societies construct concepts of purity and pollution to regulate social order.⁹ Public toilets are symbolically polluted spaces—linked to bodily waste, disease, and disorder. Consequently, those who work in these spaces become associated with impurity, reinforcing stigma and exclusion. The cultural associations of dirt and cleanliness extend beyond mere hygiene, shaping how labor in these spaces is perceived and treated within broader society.

Cleaning workers experience spatial concealment because their labor is associated with waste, reinforcing the idea that their presence must be hidden. This manifests in several ways:

- **Back entrances and service corridors:** Cleaning workers are often required to navigate spaces unseen by the public, reinforcing their separation from the primary users of public facilities.
- **Poorly maintained attendant rooms:** The areas designated for cleaners are often crammed into small, unhygienic, or inaccessible corners, reinforcing their low spatial priority.
- **Restricted interaction:** Societal norms discourage engagement with cleaning workers, furthering their social and spatial erasure. The divide between those who use the space and those who maintain it remains largely unacknowledged in architectural and policy discussions.

Douglas's theory helps explain why toilets are a key site of marginalization—not just for their function but because of how they reproduce spatial stigma, affecting those who maintain them. The stigmatization of maintenance labor, particularly in sanitation, extends beyond space and into perceptions of class, reinforcing the idea that certain forms of labor must remain unseen and unrecognized.

The Production of Space: How Status Creates Space and How Space Reinforces Status

Henri Lefebvre's *The Production of Space* and *The Space of Production* reveal how space is not neutral but actively shaped by social hierarchies.¹⁰ Lefebvre argues that social status dictates how much space individuals and groups are allocated, reinforcing pre-existing power structures and influencing spatial distribution at all levels of society.

How Status Creates Space

Higher-status groups are given greater spatial autonomy, while lower-status workers are confined to restricted, hidden spaces. This is evident in public facilities:

- **Public users are prioritized:** Toilets are designed for users' comfort, aesthetics, and efficiency, while cleaners' spaces are minimized or ignored.
- **Backstage vs. Frontstage Segregation:** Borrowing from Goffman's frontstage-backstage concept,¹¹ cleaning workers are pushed to backstage areas, reinforcing their low spatial status and excluding them from the spaces they help maintain.

How Space Reinforces Status

Conversely, space not only reflects status but also actively produces it. By placing cleaning workers in hidden, inadequate spaces, their marginalization becomes normalized:

- **Spatial Erasure:** The absence of visible, dignified spaces for cleaning workers signals their exclusion from public life.
- **Restricted Movement:** Cleaning workers must navigate hidden pathways, reinforcing their outsider status in spaces they sustain. The physical design of public facilities perpetuates this hierarchy by reinforcing the divide between those who create value and those who maintain it.

Lefebvre's theory highlights that public space is designed to maintain existing hierarchies, making the neglect of cleaning workers a structural issue rather than an oversight. This cyclical process ensures that certain groups remain marginalized in both the physical and social dimensions of urban life.

⁹ Douglas, *Purity and Danger: An Analysis of Concepts of Pollution and Taboo*
¹⁰ Lefebvre, *The Production of Space*
¹¹ Goffman, *The Presentation of Self in Everyday Life*

Marginalization is not merely a passive outcome of spatial design but an active process shaped by economic, social, and political structures. It involves the systematic exclusion of certain groups from full participation in society, reinforcing disparities in access to resources, visibility, and rights. In the context of public space, marginalization manifests in the physical and symbolic separation of labor groups such as cleaning workers, whose needs and presence are often overlooked. This process is sustained through design choices that prioritize aesthetic and functional concerns for dominant users while neglecting the working conditions of those who maintain these spaces. By embedding exclusion into the built environment, spatial marginalization perpetuates broader social hierarchies, making it a fundamental aspect of urban inequality.

To challenge this cycle, urban designers and policymakers must rethink public space through an inclusive lens, recognizing cleaning workers not as peripheral laborers but as rightful users of space. Addressing this issue is not only about improving workplace conditions but also about reshaping societal attitudes toward labor, status, and spatial equity.

Spatial Justice: Rethinking Public Design

To address these issues, spatial justice must be incorporated into urban design. This means:

Recognizing Cleaning Workers as Users: Cleaning workers should be explicitly considered in design processes to ensure their access to safe and functional spaces.

Breaking the Stigma of Impurity: Public narratives must shift to acknowledge and value maintenance labor, challenging the deeply embedded associations between cleaning work and low social status.

Dignified Spatial Design: Attendant rooms, storage areas, and break spaces should be treated with the same care and consideration as other user facilities, ensuring that those who sustain public spaces are not neglected in their own environments.

The concept of dignity in design is integral to ensuring that public spaces accommodate all users, particularly those responsible for their maintenance. Cleaning workers, who play a vital role in sustaining public facilities, are often excluded from spatial considerations, leading to inadequate workspaces and poor working conditions. Despite their continuous engagement with public restrooms and other sanitation facilities, they remain invisible in the architectural planning and policy-making processes.

Henri Lefebvre's theory of space production provides a foundation for understanding how cleaning workers are marginalized in spatial planning. He argues that spaces are not neutral containers but are actively shaped by power structures that dictate their use and accessibility.¹² Public toilets, in particular, are designed primarily for public users, with little attention to the needs, well-being, and dignity of cleaning staff. This chapter examines theoretical perspectives, participatory design approaches, and real-life case studies that advocate for dignity-driven design solutions.

Dignity in Spatial Production

Dignity in design refers to the recognition and respect of all users, including maintenance workers, through spatial and policy-based interventions. Tatjana Schneider critiques conventional architectural paradigms, arguing that modern urban planning prioritizes economic efficiency and aesthetic appeal over inclusivity and labor conditions¹³. When spaces are designed without considering workers, they reinforce social hierarchies that devalue maintenance labor.

Sandra Bartoli and Mathias Heyden introduce the concept of commons-based governance as an alternative model for designing public spaces. In their study on Berlin's Großer Tiergarten and Tempelhofer Feld, they highlight how collectively managed spaces can accommodate diverse users and ensure equitable access and dignity¹⁴. Applying this framework to public toilets, worker-centric designs could integrate dedicated rest areas, secure storage facilities, and ergonomic layouts to uphold dignity in their work environments.

¹² Lefebvre, Henri. *The Production of Space*.

¹³ Schneider, Tatjana. "Notes on Social Production: A Brief Commentary."

¹⁴ Bartoli, Sandra, and Mathias Heyden. "Metropolitan Commons: Spatial Commoning in Berlin's Großer Tiergarten and Tempelhofer Feld."

Case Study: Baan Mankong Slum Upgrading (Thailand)

One of the successful participatory design models is the Baan Mankong slum upgrading program in Thailand. This initiative allowed local residents to co-design their housing and sanitation facilities, ensuring that their needs were met in ways that respected their daily experiences.¹⁵ The program not only provided physical improvements but also empowered residents by including them in the decision-making process, reinforcing dignity through participatory governance.

Relevance to Public Toilet Design: If cleaning workers were given a participatory role in public restroom design, they could help determine optimal locations for storage, ergonomic solutions, and improved sanitation conditions, ensuring dignity in their workspaces.

Conclusion: Dignity as a Core Principle in Public Space Design

Ensuring dignity in design is not simply a theoretical ideal but an essential ethical and functional imperative. Public spaces, particularly restrooms, should be designed not only for their users but for the workers who sustain them. As Lefebvre's spatial theory illustrates, workers inhabit the 'lived space' of public facilities but remain absent from design considerations.¹⁶ Case studies such as the Baan Mankong program demonstrate that participatory design approaches can actively restore dignity to marginalized laborers.

Meanwhile, urban projects that focus solely on aesthetics and public-facing amenities risk overlooking the essential role of maintenance workers. Moving forward, urban planners and policymakers must prioritize worker-centered design, ensuring that maintenance labor is not only acknowledged but respected. This transformation would mark a critical step toward spatial justice, where all individuals—regardless of their role—experience dignity in the built environment.

¹⁵ Wungpatcharapon. "Making Places, Building Communities, Empowering Citizens: Participatory Slum Upgrading in Thailand."

¹⁶ Lefebvre. *The Production of Space*

Brief History

The history of public toilets in Hong Kong traces back to the late 19th century during British colonial rule. In response to cholera outbreaks between 1865 and 1866, the government introduced public toilets in 1867 as part of broader efforts to improve public health. These facilities were strategically placed in squatter areas, rural locations, and urban spaces lacking proper sanitation to address pressing health concerns.

Rapid urbanization and population growth during this period worsened unsanitary conditions, particularly in densely populated areas like Tai Ping Shan. The situation reached a crisis point in 1894, when a devastating outbreak of bubonic plague claimed thousands of lives. This tragedy highlighted the urgent need for reform, with Tai Ping Shan becoming a focal point for colonial government efforts to improve public hygiene. As part of these measures, the first public toilet and bathhouse in Hong Kong was established on Pound Lane in 1904. Located within Tai Ping Shan, this facility served both men and women free of charge, representing a significant step toward addressing critical sanitation needs in the area.¹⁷

Between 1901 and 1942, the colonial government constructed 13 public toilets, including six underground facilities designed to conserve space in densely populated urban areas. However, these early facilities often suffered from poor lighting, inadequate maintenance, and insufficient ventilation, limiting their effectiveness and deterring use by the public.¹⁸

Modernization of public toilets began in the 1940s with the introduction of water-flush systems to improve hygiene standards by the government. Despite logistical challenges and public resistance, this transition marked a pivotal step in enhancing sanitation infrastructure.

By the early 1990s, the management of public toilets was overseen by the Urban Council and the Regional Council, which played a key role in maintaining cleanliness and operational standards. However, in 2000, these councils were dissolved, and their functions were consolidated under the newly established Food and Environmental Hygiene Department (FEHD). This restructuring aimed to streamline public health services and ensure more efficient management of sanitation facilities across the city.



Figure 5. Pound Street Toilet after refurbishment, 2023

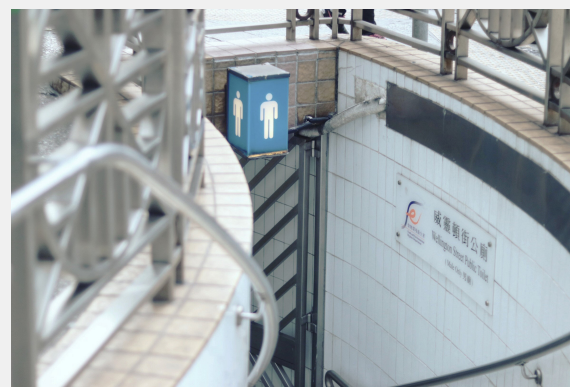


Figure 6. The last underground public toilet in Hong Kong

¹⁷ Lynn, Gabriella. "Hidden Hong Kong: A History of Hong Kong's Public Bathrooms."
¹⁸ "Pound Lane Public Toilet and Bathhouse, Sai Ying Pun, Hong Kong."

Public Toilets Under FEHD

The Hong Kong Special Administrative Region (HKSAR) consists of three main geographical regions: Hong Kong Island, Kowloon (including the Kowloon Peninsula and New Kowloon), and the New Territories (which also encompasses the Outlying Islands). Politically, Hong Kong is divided into 18 districts, each governed by a district council. These geographical and political divisions provide a framework for the distribution of public services, including public toilets.

As of 2024, the Food and Environmental Hygiene Department (FEHD) manages 811 public toilets across Hong Kong, distributed as follows: 91 on Hong Kong Island, 61 in Kowloon, and 659 in the New Territories and Outlying Islands. This distribution is shaped by the geographic characteristics and urban planning needs of the regions. In the New Territories, the larger number of public toilets reflects its vast land area and rural characteristics, rather than a high population density. In contrast, Kowloon and Hong Kong Island have fewer toilets but much higher utilization rates due to their dense populations and concentrated urban activities.

All public toilets managed by the FEHD are open 24 hours a day and free of charge. They are cleaned at least twice daily, with additional attention given to high-utilization facilities. High-utilization is defined as toilets receiving over 300 visitors daily on average. From the report in 2019, about 78% of public toilets on Hong Kong Island and 92% in Kowloon fall into this category, while only 19% of those in the New Territories meet this threshold. To ensure effective maintenance and service, each toilet deploys same-gender attendants—a female worker for the female toilets and a male worker for the male toilets. These attendants are responsible for maintaining cleanliness, restocking essential supplies like toilet paper and liquid soap, and promptly reporting any damages for repair, ensuring consistent hygiene and user satisfaction.²⁰



Figure 7. Hong Kong map showing 3 regions and 18 districts

²⁰ Legislative Council Secretariat. Public Toilet Facilities and Services 20-21

Public Toilet Refurbishment Programme

Launched in 2000, the Public Toilet Refurbishment Programme aimed to modernize public toilets across Hong Kong. In the 2019-20 Budget, the government allocated HK\$600 million to refurbish about 240 public toilets over five years (2019–2024), covering 30% of the 798 public toilets under FEHD management.²⁰

The programme focused on improving hygiene, ventilation, accessibility, and infrastructure by upgrading materials, installing touchless facilities, and ensuring better ventilation and odor control.

However, the programme prioritized facility upgrades while overlooking the needs of cleaning workers, who continue to face poor working conditions. Reports and media coverage have urged the government to address these concerns in future renovations.²¹ The Public Toilet Refurbishment Programme was introduced in 2000 as part of the government's effort to improve the hygiene and maintenance standards of public toilets across Hong Kong. Managed by the Food and Environmental Hygiene Department (FEHD), the programme aimed to modernize existing facilities, enhance sanitation measures, and improve the overall user experience. The initiative focused on structural repairs, upgrading ventilation systems, improving water efficiency, and implementing more durable and easy-to-clean materials.

Attendant Rooms in Public Toilets

Attendant rooms are an integral feature in some public toilets managed by the FEHD, designed to provide on-site workers with a functional space for their duties. As outlined in the Handbook on Standard Features for Public Toilets, these rooms should ideally have a floor area of approximately 3m², if space allows, and be included in both male and female toilets. Each room is equipped with a viewing panel made of tempered clear glass (or a viewing panel on the door) to allow attendants to monitor the toilet area efficiently. To enhance comfort and usability, the rooms should include a 13-amp power point and an oscillating fan.²¹ Despite these guidelines, the quality and design of attendant rooms vary widely across facilities. Many public toilet cleaners lacked proper rest and dining facilities. A 2019 survey found that 71.3% of outsourced cleaners reported that their employers did not provide designated dining areas. More than 50% of cleaners who brought their own meals ate inside cramped, poorly ventilated attendant rooms cluttered with cleaning supplies. Some attendant rooms measured as little as 0.8 square meters, far below the 3-square-meter standard recommended by FEHD.²²

These shortcomings have been addressed in recent refurbishment programs, with a focus on improving these spaces to provide a more dignified and functional working environment for attendants. However, site visits to refurbished public toilets reveal persistent challenges, such as limited space and superficial upgrades that fail to address fundamental design flaws. These findings underscore the need for a deeper rethinking of how spaces for cleaning workers are prioritized in public facilities.

²⁰ Audit Commission 2019
²¹ The Ombudsman 2019

²¹ Food and Environmental Hygiene Department. Handbook on Standard Features for Public Toilets
²² Yahoo News, Survey Finds Over Half of Public Toilet Cleaners Eat Meals in Duty Rooms

Cleaning workers play a vital role in maintaining public hygiene in urban environments. In Hong Kong, outsourced cleaning workers form a significant portion of the city's sanitation workforce, yet they often face poor working conditions, low wages, and a lack of proper facilities. This chapter examines the demographics, employment conditions, wages, and systemic issues affecting outsourced public toilet cleaners in Hong Kong, highlighting the challenges they endure and the implications of government outsourcing policies.

Demographics of Public Toilet Cleaning Workers

Public toilet cleaners in Hong Kong are predominantly elderly and low-income workers. According to a 2019 survey conducted by the Hong Kong Catholic Commission for Labour Affairs, 68.2% of outsourced public toilet cleaners were aged 65 or above, with 33% falling between 66 and 70 years old. Some were even over 80, indicating the heavy reliance on elderly labor in this sector. Furthermore, 85.5% of these workers had only completed primary school or had no formal education, positioning them as non-skilled laborers with limited employment alternatives.²⁴

Outsourcing System

Since 2000, all cleaning services for these facilities have been outsourced to private contractors. By 2019, nearly 80% of the FEHD's 13,300 sanitation workers were outsourced, leaving only about 2,600 directly employed Grade II sanitation workers.

The outsourcing of public sanitation services can be traced back to the 1997 Asian Financial Crisis, which led the government to adopt cost-cutting measures, including outsourcing non-core services. In 1999, the government introduced the "Voluntary Retirement Scheme," encouraging civil servants to retire early and form private companies to bid for outsourced public services. By 2000, the outsourcing model was fully implemented, shaping the employment structure seen today.²⁵

Shift Patterns and Work Hours

Outsourced public toilet cleaners typically work in two shifts: daytime and nighttime. Day shift workers generally work between 8 to 9.5 hours, with an unpaid one-hour meal break. Night shift workers have 6-hour shifts without any designated break, meaning they often work continuously without rest. Reports indicate that night shift cleaners are not provided with meal allowances or proper resting arrangements, further worsening their working conditions.²⁶

Impact of Government Outsourcing Policies

The poor working conditions of public toilet cleaners are largely attributed to the government's outsourcing model, which emphasizes cost efficiency over labor welfare.

Hong Kong's "lowest bid wins" policy has led to a race to the bottom, where contractors reduce costs by offering lower wages, fewer benefits, and minimal staffing. In some districts, nighttime cleaning staff were eliminated altogether, leaving high-traffic public toilets unstaffed in the evenings. This not only affected hygiene standards but also placed additional strain on daytime workers, who had to compensate for the lack of nighttime maintenance.²⁷

²⁴ Hong Kong Catholic Commission for Labour Affairs, 2019

²⁵ Hong Kong Legislative Council. Inquiry on FEHD Outsourced and Directly Hired Cleaners

²⁷ Kinlilu News. Unsanitary and Inhumane: Public Toilet Cleaners Face Harsh Working Conditions

²⁶ HK01. Union Criticizes Lack of Meal Breaks for Night Shift Toilet Cleaners

The 2019 media exposure and advocacy efforts played a critical role in making the government recognize the spatial challenges faced by public toilet cleaners. While the initial refurbishment projects ignored the needs of cleaning workers, sustained pressure from unions and media coverage led to policy adjustments that included spatial improvements in subsequent toilet renovation projects. This shift indicates how public pressure can influence urban design, ensuring that marginalized workers are not overlooked in future infrastructure developments.

Despite wage increases in 2022, disparities between outsourced and directly employed cleaners persist, and the outsourcing model continues to prioritize cost-cutting over worker welfare. Addressing these challenges requires rethinking government outsourcing policies, strengthening labor protections, and ensuring public sanitation workers are included in future facility upgrades as a standard practice, not as a reactive measure.

2019 Reports and Their Impact on Government Response

A key turning point in the discourse on public toilet cleaners occurred in 2019, when the Hong Kong government announced a budget for public toilet refurbishment. While the initial focus was on upgrading infrastructure, labor unions and media reports intensely criticized the lack of attention given to the working conditions of the cleaners who maintained these facilities. This widespread attention pressured the government to respond to spatial design inadequacies within public toilets, marking a shift in renovation priorities.

The 2019 reports revealed that outsourced public toilet cleaners earned significantly lower wages than government-employed cleaners. While government-employed Grade II cleaners had a starting salary of HK\$13,730 per month, outsourced workers earned between HK\$8,000 and HK\$12,000, with night shift workers making even less, averaging HK\$6,411 per month.²⁵ Many outsourced workers also lost long-term benefits like severance pay and annual leave entitlements due to frequent contract renewals.

Beyond wage disparities, media coverage and labor unions highlighted the inadequate working environments within refurbished public toilets, forcing policymakers to acknowledge these oversights. These advocacy efforts coincided with a more spatially conscious refurbishment approach in projects launched after 2019, where improvements extended beyond public-facing features to include designated cleaner rest areas, improved ventilation, and better staff facilities.²⁸

²⁵ Now News. Concern Groups Highlight Poor Working Conditions of Public Toilet Cleaners

The public toilets documented in this study are across Hong Kong Island and Kowloon, with a focus on districts where high population density leads to intense usage and increased reliance on full-time cleaning workers. Wan Chai, Yau Tsim Mong, and Central were selected as primary study areas due to their diverse mix of business districts, tourist hotspots, and recreational spaces. These areas see a constant flow of users, intensifying the demand for well-maintained public toilets and the workers who sustain them.

This section, Space to Workers: Photography Collection and Interviews, is divided into two parts. The first presents four detailed case studies of public toilets in Wan Chai, a district where all facilities are managed by the same outsourced company. Despite having the same employer, wages, and working hours, cleaning workers experience starkly different resting conditions—some have access to proper break spaces, while others are left with inadequate, makeshift solutions.

The second part consists of a photographic collection documenting public toilet spaces in Wan Chai, Yau Tsim Mong, and Central. While these additional districts are not analyzed in depth, the visual documentation highlights the broader patterns of spatial neglect faced by cleaning workers across Hong Kong. Notably, this study focuses on female public toilets and their attendant rooms, as access to male facilities was not possible.

Cleaning workers dedicate themselves to maintaining public hygiene, yet their own basic needs are often overlooked. Their assigned workplaces are determined by chance—almost like a lottery—yet they perform their duties with care, treating these spaces as if they were their own. If they are expected to provide clean environments for the public, they too deserve a dignified space in which to rest.



The Bowen Road Public Toilet is an individual toilet facility located along the popular Bowen Road walking trail on Hong Kong Island. Surrounded by nature, it serves a steady stream of joggers, hikers, and nearby residents, especially in the morning hours.

The toilet was refurbished in 2017, it now includes:

- Female Toilet: 1 squat cubicle, 1 sitting cubicle
- Male Toilet: 1 sitting cubicles, 3 urinals
- An accessible unisex toilet

Despite the updates, it remains the only public toilet in the area without a dedicated storage or attendant room.

To maintain the facility, two cleaning workers—a male and a female—are assigned to work the 7:00 AM to 5:30 PM shift. In 2022, a 1800 x 2400 mm pre-fabricated container was installed as a storage room for cleaning supplies, but it lacks electricity and ventilation, making it unsuitable for use as a rest area.



Miss Lui, a 52-year-old cleaning worker, has been stationed at Bowen Road Public Toilet for more than six years. She described the challenges of working in a space that lacks proper facilities for workers.

“This toilet is surrounded by nature, and there is no sheltered area where we can stay during our working hours. We clean the toilet about three to four times per shift, but in between, we need a place to sit and rest. Since there is no attendant room, we had to set up our own resting space.”

To address this, the cleaning team repurposed materials to create a shelter. The cleaning company had provided a large umbrella, and over time, the workers collected discarded furniture from the refuse collection point to make the space more functional. Although the prefabricated container was added for storage, it was not designed for workers’ use.

“We put two chairs and a small cabinet inside, but since there’s no electricity or ventilation, it’s too hot inside. We only stay there when it’s raining or very windy; otherwise, we prefer to sit outside.”

The hillside location of the toilet presents additional difficulties. Unlike urban areas, there are no nearby food options, making it inconvenient for workers to buy meals.

“It takes about 30 minutes to walk downhill to buy food and another 30 minutes to walk back up. Since our lunch break is only one hour, it’s not possible to eat out. Instead, we use a rice cooker under our shelter to prepare meals ourselves.”

The outdoor setting also affects cleaning operations, particularly in bad weather.

“On rainy days, it’s difficult to keep the toilets dry because we are constantly moving in and out. We have to wear raincoats while cleaning, which makes our work even more challenging.”

The ground conditions behind the facility were not originally suitable for daily work. This area is essential for supporting workers’ daily routine, yet it was left undeveloped, with only rocks and uneven dirt.

“We needed a proper space near the toilet to store our cleaning supplies and take breaks. Since there was no designated area, we had to create our own storage and rest space. The ground was full of rocks and mud, so we gradually cleared it ourselves. We even asked a nearby construction team for five bags of concrete to level the area. We did this in five rounds to make the space more usable.”



The case of Bowen Road Public Toilet reflects a common issue in public infrastructure: the design prioritizes visitors while neglecting the needs of those who maintain the space. The refurbishment in 2017 improved the facility, yet no provisions were made for workers, and even the later addition of a storage unit was not designed with their well-being in mind.

Instead of a designated resting space, workers have had to create their own solutions using available resources. Their adaptations highlight the gap between policy-driven facility upgrades and the realities of maintenance work. Ensuring that public toilet designs include space for workers would improve both working conditions and the overall quality of these facilities.



WORKER IN SPACE : THE HONG KONG SCENARIO



The Hing Fat Street Public Toilet is a standalone facility located near Victoria Park, one of the busiest public spaces in Hong Kong. The park is a popular destination for joggers, families, and event-goers, hosting large-scale fairs such as the Lunar New Year Fair. Due to its central location and continuous foot traffic, the toilet experiences high usage throughout the day.

To accommodate demand, cleaning workers are assigned to two shifts, with day-shift workers covering 7:00 AM to 5:30 PM. The toilet was refurbished in 2017, modernizing its layout and sanitation infrastructure. It now includes:

- Male Toilet: 3 squat cubicles, 6 sitting cubicles, 9 urinals
- Female Toilet: 7 squat cubicles, 7 sitting cubicles
- An accessible unisex toilet

Despite these upgrades, the refurbishment did not address the needs of maintenance workers. The attendant room, located inside the female toilet, remains extremely compact and poorly equipped.



Miss Wong, a 57-year-old day-shift cleaning worker, has been stationed at Hing Fat Street Public Toilet for nearly two years. She described the challenges of maintaining a facility with no dedicated space for workers to rest comfortably.

“This toilet is always busy, so we need to clean it about five times per shift. Between rounds, we also check the condition of the toilets after each user to make sure the next person has a clean space to use.”

The attendant room measures only 1030 mm by 1000 mm, leaving barely any space for movement. Inside, the room contains: a large control panel that takes up significant space, two chairs though only one can be used at a time, a small foldable table and a cabinet for personal belongings. With no ventilation or extra room, the worker can only sit with the door open, facing outward, using the doorway as an extension of their workspace.

“As you can see, we mostly sit in the chair with the door open, facing outward. When you get used to the space, it feels more natural to rest this way.”

Due to limited storage options, one of the toilet cubicles has been repurposed as a storage room for toilet paper and cleaning supplies. This adaptation is a clear sign that maintenance spaces were never considered in the original design.

Hing Fat Street Public Toilet is located near many restaurants, making it easy for workers to buy meals. However, some still prefer to bring their own food and eat in the attendant room.

“Sometimes, we like to bring food and eat in the attendant room. If we do that, we try to close the door while having lunch inside.”

Still, the small, enclosed space makes staying uncomfortable, especially in hot weather.

“Since the room is too small and gets really hot in summer, I bought myself a small fan that fits inside to help cool down.”

The lack of proper facilities for resting, eating, and storage means workers must constantly adapt to their surroundings, using whatever space is available to them.



Hing Fat Street Public Toilet was once recognized as a model for public toilet design, focusing on public convenience, accessibility, and sanitation standards. However, the lack of adequate space for maintenance staff contradicts the very principles that made it an award-winning design.

The conversion of a toilet cubicle into a storage room and the cramped conditions of the attendant space are clear signs that cleaning workers were overlooked in the facility's design. While the public benefits from a well-maintained and accessible space, the workers responsible for its upkeep are left with no proper rest area, inadequate ventilation, and insufficient storage.

This case highlights the ongoing gap between public infrastructure planning and maintenance realities.





The Wing Hing Street Public Toilet is located in the busy Tin Hau district, surrounded by restaurants, offices, and residential buildings. It is a high-utility facility, frequently used by people working nearby, particularly restaurant staff and outdoor workers.

This facility is integrated with a refuse collection point, making it a multi-purpose building. On the ground floor, there are two accessible unisex toilets facing the street, while the main male and female toilets are located on the second floor.

In 2020, the facility underwent refurbishment, updating the layout and increasing capacity. The current toilet layout includes:

- Female Toilet: 3 squat cubicles, 9 sitting cubicles
- Male Toilet: 1 squat cubicle, 5 sitting cubicles, 8 urinals

The refurbishment also introduced a designated storage room and an attendant room in both the male and female toilets. However, despite these improvements, the space for maintenance workers remains impractical in its design.



While the renovation provided separate storage and attendant rooms, the cleaning staff found that the original attendant room was too small for daily use. Instead, they decided to switch the functions of the two rooms, using the larger storage room as their resting area and the original attendant room for storage.

- The designated attendant room (approximately 1300 mm × 2300 mm) contains a large electrical control panel and a built-in locker (300 mm × 1890 mm × 600 mm). However, workers found the space too narrow and less comfortable for resting.
- The storage room (approximately 1700 mm × 2900 mm) provides better ventilation and more space, making it a more suitable resting area. However, it lacks electrical sockets, so workers use an extension cord from the original attendant room when needed.

Miss Chan, a 76-year-old cleaning worker, has worked at Wing Hing Street Public Toilet for over 12 years. She explained that the switch was made to improve daily comfort and functionality.

“Before the refurbishment, both the attendant room and storage room were smaller. After the renovation, they were expanded, but the new attendant room is still quite narrow. Since the storage room is more spacious and better ventilated, we decided to switch their functions.”

Despite this change, the storage room was not designed for resting, as it includes a sink but no electrical sockets.

“Since there’s no socket inside, we have to use an extension cord from the attendant room when we need electricity here.”

Because day and night shift workers share the space, they have set it up to accommodate both shifts.

“We have two chairs, one for each of us, and most of the furniture here came from the refuse collection point next door. The space is enough for us to use.”

While the main toilets are on the second floor, the cleaning staff are also responsible for the ground-floor unisex accessible toilets. However, there is no storage space provided on the ground floor, requiring workers to bring all cleaning tools from upstairs.

“Every time I clean the ground floor toilets, I have to carry all the tools down from the second floor and bring them back up after.”



The refurbishment of Wing Hing Street Public Toilet allocated more space for maintenance workers, but the way these spaces were designed led to workers adapting the layout themselves.

During the renovation process, workers were not consulted on how these spaces would be used, leading to some impracticalities in daily operations.

“During the whole refurbishment, no one asked us anything when designing the space for workers. That’s why we had to switch the rooms ourselves.”

While the facility functions well for public users, small adjustments, such as considering worker needs in the planning stage, could improve workflow and comfort. This case highlights the importance of involving maintenance staff in future design processes to ensure worker spaces are practical and effectively utilized.





The Tai Hang Road Public Toilet is an individual facility located along a busy traffic road, with a park nearby. Due to its high-traffic location, the toilet experiences frequent use throughout the day, serving both pedestrians and visitors to the surrounding area.

As the newest refurbishment project in the district, completed in 2023, the facility features a modernized design with improved hygiene, functionality, and maintenance efficiency. The updated layout includes:

- Female Toilet: 1 squat cubicle, 5 sitting cubicles
- Male Toilet: 1 squat cubicle, 2 sitting cubicles, 6 urinals
- An accessible unisex toilet

The overall environment is clean, bright, and spacious, reflecting the latest improvements in public toilet design. The spacious layout allows for better movement and accessibility, benefiting both users and maintenance workers.



The attendant room, measuring approximately 1300 mm × 1800 mm, was renovated with shelves and a locker, providing an organized and clean space for workers.

Miss Yan, a cleaning worker who has been stationed here for three years, shared her experience working in this facility. She described how the clean and structured layout of the attendant room makes her job more manageable.

“The attendant room is quite good to use since we have our own space. The storage space is enough, and everything can easily get well organized.”

Despite these advantages, she noted that the room has no windows, leading to ventilation issues at times. Additionally, there is a design defect related to the sewage system.

“There is a manhole cover on the floor, and there are gaps around it. The bad smell from the sewage always comes through these gaps, and it’s hard to stay inside for too long.”

To address this, she used tape to seal the gaps, which helped minimize the odor. This workaround highlights how certain aspects of the spatial design did not fully consider the experience of workers who spend extended hours in the space.

The toilet environment is exceptionally well-maintained, with small decorative elements that make the space feel more welcoming. Many of these additions, Miss Yan shared, were made by her own initiative.

“The flowers and decorations? I put them here myself. I also bought the floral-patterned rubbish bins in each cubicle because the original ones were too small and hard to clean. These make cleaning easier and keep the space tidier.”

Miss Yan takes pride in her work, treating the space as an extension of her home.

“This toilet was awarded as one of the top three cleanest public toilets in Hong Kong! I was so happy to hear that. I take care of this place like it’s my home, keeping it clean and dry.”



The Tai Hang Road Public Toilet demonstrates how thoughtful renovations can improve both public usability and worker efficiency. The dedicated storage and spacious attendant room provide a better working environment compared to older facilities. However, certain design oversights, such as lack of ventilation and gaps around the sewage manhole cover, highlight the importance of considering long-term usability for workers.

Despite these minor issues, the improved spatial layout and dedicated worker facilities make this one of the better-designed public toilets in Hong Kong. Miss Yan's commitment to maintaining a clean and pleasant environment further enhances the space, showing how worker involvement in maintenance decisions can contribute to the success of public facility management.



One key observation from both the four case studies in Wan Chai District and my broader visits to other public toilets across Hong Kong is that the level of consideration given to maintenance workers in spatial design directly affects their workload. The less attention paid to their needs, the greater the physical and logistical burden they must manage.

Public toilets are designed with site-specific constraints, responding to surrounding infrastructure, available space, and user demands. However, this adaptability often comes at the cost of inconsistent or inadequate spaces for maintenance staff. Some facilities integrate well-planned attendant rooms and storage areas, while others lack even the most basic provisions, requiring workers to find alternative solutions.

How Spatial Design Influences Maintenance Workload

The case studies highlight a clear relationship between spatial planning and worker experience:

- Bowen Road Public Toilet – No attendant room or storage space, forcing workers to improvise resting areas and manage cleaning supplies with no designated storage.
- Hing Fat Street Public Toilet – The attendant room was too small, leading workers to use a toilet cubicle for storage, reducing the available space for users.
- Wing Hing Street Public Toilet – A newly refurbished facility, but the attendant and storage rooms were switched by workers due to practical limitations in their original design.
- Tai Hang Road Public Toilet – A spacious and well-organized attendant room and storage space, making daily operations more manageable, though ventilation and sewage issues remained a concern.

Across these cases, a pattern emerges:

- When no dedicated space is provided, workers must find makeshift solutions, increasing physical strain and inefficiency.
- When spaces are provided but poorly designed, workers must adapt them to suit their needs, often at the cost of comfort and ease of use.
- When spaces are well-designed, maintenance work becomes more structured and manageable, reducing unnecessary effort.

This variation in conditions demonstrates how spatial planning directly influences the ease or difficulty of maintenance work. The less concern given to worker spaces in design, the more effort workers must expend to adapt and function within the space.

The Need for Standardized Worker

Spaces in Public Toilets Public toilet layouts will always be influenced by site conditions, but there should still be a baseline standard for worker provisions to ensure more equitable and efficient maintenance conditions across different locations.

Key considerations for future designs include:

- Appropriately sized attendant rooms that are functional, well-ventilated, and free from unnecessary obstructions (such as control panels or sewage access points).
- Accessible and efficiently placed storage spaces to minimize unnecessary physical effort when transporting cleaning supplies.
- Direct input from maintenance staff during the design process to ensure that spaces align with daily work routines and needs.

Recognizing the Link Between Space and Maintenance Workload The differences in worker spaces across public toilets in Hong Kong reveal a critical connection between spatial design and labor conditions. When cleaning workers are given inadequate facilities, their job becomes significantly more difficult, requiring more physical adaptation, inefficiency, and strain.

A well-maintained public toilet depends not just on its design for users but also on its ability to support the workers who sustain it. Ensuring that all public toilets incorporate functional and efficient worker spaces would not only improve working conditions but also enhance long-term facility maintenance.

By addressing these spatial challenges, public infrastructure can better support both users and those responsible for its upkeep, creating a more sustainable and equitable approach to public toilet design.

This thesis began as a reminder for designers—myself included. In the world of design, we are trained to create beautiful, functional spaces, often focusing on aesthetics, innovation, and the needs of those who commission our work. More often than not, the ones making these decisions are those with money and influence. Their needs dictate the priorities of design, while many invisible users—like cleaning workers—go unnoticed. This led me to a fundamental question: Can space serve the vulnerable, or does it only reinforce existing hierarchies?

The starting point of my research was an interest in public toilets. At first, my assumption was simple: public toilets have a bad reputation, and cleaning workers must endure terrible working conditions within them. But as I visited more sites, observed more spaces, and listened to the experiences of cleaning workers, my perspective changed. The toilets I encountered were not what I had expected. Many were impressively clean—not because of advanced design or management systems, but because of the dedication of the workers who maintained them. These workers, rather than being ashamed of their jobs, performed their duties with care, treating the spaces as extensions of their own homes.

This realization made me question: if these workers are the ones who spend the most time in these spaces, why does design not acknowledge them as users? While public toilets are designed for general visitors, the ones who are there the longest—the ones who make these spaces function—are absent from the design process. The Tokyo Toilet Project, which initially inspired my research, represents a striking example of this disconnect. These beautifully designed restrooms, celebrated as architectural landmarks, lack the most basic spatial considerations for those who maintain them. The contradiction is clear: the more we celebrate design, the more we risk forgetting those who keep it alive.

Through this process, I also observed another layer of adaptation. Many cleaning workers, despite poor rest conditions, found ways to make their spaces more comfortable. In Hong Kong, workers collect second-hand furniture—chairs, tables, cabinets—transforming neglected corners into makeshift resting spaces. They carve out dignity in places where none was given. These small acts of agency reveal how people modify space when design does not accommodate them. It also raises a critical question: If space is supposed to be designed for people, why are the most vulnerable users forced to design their own survival?

This thesis has been more than an academic investigation—it has been a shift in perspective. Public toilets and their workers became a lens to view the broader issue of spatial marginalization. Cleaning workers are just one of many groups in society who perform invisible labor. Their work is essential, yet their presence is often disregarded. The same can be said for many other vulnerable groups—maintenance workers, janitors, security staff, caregivers—all of whom ensure that cities function but remain outside the consideration of spatial design.

This research has made me reconsider the role of designers. Space is not neutral—it reflects power structures, values, and social hierarchies. If space can reinforce status, it also has the potential to challenge it. But this requires a conscious effort. Designing for marginalized users does not happen by accident—it must be intentional. Whether through self-awareness or external reminders, designers must ask themselves: Who is missing from this space? Who will spend time here, but has not been considered?

Audit Commission. Planning, Provision and Management of Public Toilets by the Food and Environmental Hygiene Department. Audit Commission, 2019.

Bartoli, Sandra, and Mathias Heyden. "Metropolitan Commons: Spatial Commoning in Berlin's Großer Tiergarten and Tempelhofer Feld." In *The Social (Re)Production of Architecture: Politics, Values, and Actions in Contemporary Practice*, edited by Doina Petrescu and Kim Trogal, 143–162. London: Taylor & Francis Group, 2017.

Bourdieu, Pierre. *Distinction: A Social Critique of the Judgment of Taste*. Harvard University Press, 1984.

Douglas, Mary. *Purity and Danger: An Analysis of Concepts of Pollution and Taboo*. Routledge, 1966.

Fernández Contreras, Javier, and Roberto Zancan, eds. *Intimacy Exposed: Toilet, Bathroom, Restroom*. Leipzig: Spector Books, 2023.

Food and Environmental Hygiene Department. *Handbook on Standard Features for Public Toilets*. Legislative Council, December 2011. <https://www.legco.gov.hk>.

Goffman, Erving. *The Presentation of Self in Everyday Life*. Doubleday, 1959.
Greed, Clara. *Inclusive Urban Design: Public Toilets*. Oxford: Architectural Press, 2003.

Harvey, David. *Spaces of Global Capitalism: A Theory of Uneven Geographical Development*. Verso, 2006.

HK01. "Union Criticizes Lack of Meal Breaks for Night Shift Toilet Cleaners." February 18, 2019.

Hong Kong Catholic Commission for Labour Affairs. *Survey on the Rest and Meal Conditions of Outsourced Public Toilet Cleaners under the Food and Environmental Hygiene Department*. April 2019.

Hong Kong Catholic Commission for Labour Affairs. *Survey on the Rest and Meal Conditions of Outsourced Public Toilet Cleaners under the Food and Environmental Hygiene Department*. April 2019.

Hong Kong Legislative Council. *Inquiry on FEHD Outsourced and Directly Hired Cleaners*. July 6, 2022.

Kelling, George L., and James Q. Wilson. "Broken Windows: The Police and Neighborhood Safety." *The Atlantic*, March 1982.

Kinliu News. "Unsanitary and Inhumane: Public Toilet Cleaners Face Harsh Working Conditions." October 18, 2019.

Legislative Council Secretariat. *Public Toilet Facilities and Services 20-21*. Hong Kong: Research Office, November 23, 2020. <https://www.legco.gov.hk>.
Lefebvre, Henri. *The Production of Space*. Malden: Blackwell Publishing, 2013.

Lynn, Gabriella. "Hidden Hong Kong: A History of Hong Kong's Public Bathrooms." *Localiiz*, July 21, 2022. <https://www.localiiz.com/post/culture-history-public-bathrooms-hong-kong>.

Now News. "Concern Groups Highlight Poor Working Conditions of Public Toilet Cleaners." December 12, 2019.

Pound Lane Public Toilet and Bathhouse, Sai Ying Pun, Hong Kong. *Antiquities and Monuments Office, Hong Kong Government*. September 10, 2018. https://www.aab.gov.hk/filemanager/aab/en/content_4/20180910_historic_2_new_items.pdf.

Sample, Hilary. *Maintenance Architecture*. Cambridge: MIT Press, 2016.
Schneider, Tatjana. "Notes on Social Production: A Brief Commentary." In *The Social (Re)Production of Architecture*, edited by Doina Petrescu and Kim Trogal, 21–27. London: Taylor & Francis Group, 2017.

Star, Susan Leigh. "The Ethnography of Infrastructure." *American Behavioral Scientist* 43, no. 3 (1999): 377–39.

The Ombudsman. Direct Investigation Report on the Management and Repair of Public Toilets by the Food and Environmental Hygiene Department and the Architectural Services Department. The Ombudsman, 2021.

Wenders, Wim. *Perfect Days*. Directed by Wim Wenders. Japan: Fuji Television, 2023. Film.

Wungpatcharapon, Supreeya. "Making Places, Building Communities, Empowering Citizens: Participatory Slum Upgrading in Thailand." In *The Social (Re)Production of Architecture: Politics, Values, and Actions in Contemporary Practice*, edited by Doina Petrescu and Kim Trogal, 29–45. London: Taylor & Francis Group, 2017.

Yahoo News. "Survey Finds Over Half of Public Toilet Cleaners Eat Meals in Duty Rooms Due to Lack of Dining Areas." April 13, 2019.

Yang, Yang. *In-Visible: A Narrative on Precious Workers of Intimate Daily Cleaning*. Master's thesis, University of British Columbia, 2021.

Figure 1. “Hirayama carrying tools to the toilet” Wenders, Wim. Perfect Days. Directed by Wim Wenders. Japan: Fuji Television, 2023. Film.

Figure 2. “Hirayama having lunch under the tree” Wenders, Wim. Perfect Days. Directed by Wim Wenders. Japan: Fuji Television, 2023. Film.

Figure 3 Greed. The range of public toilet user groups Greed, Clara. Inclusive Urban Design: Public Toilets. Oxford: Architectural Press, 2003.

Figure 4. “Hirayama cleaning the toilet” Wenders, Wim. Perfect Days. Directed by Wim Wenders. Japan: Fuji Television, 2023. Film.

Figure 5. Pound Street Toilet Architectural Services Department. “Pound Lane Public Toilet and Bathhouse.” Architectural Services Department. Accessed February 7, 2025 <https://www.archsd.gov.hk/archsd/html/report2023/sc/case-study/1.html>

Figure 6. The last underground public toilet in Hong Kong Chan, Kit. “The Underground Toilet Breaks New Ground.” PMQ. Accessed February 7, 2025. <https://www.pmq.org.hk/leisureculture/the-underground-toilet-breaks-new-ground/>

Figure 7. Hong Kong map showing 3 regions and 18 districts. In possession of author.

FRIDA LAW KA YI
MAIA THESIS, INTERIOR ECOLOGIES
SUPERVISED BY ROBERTO ZANCAN

HEAD – GENÈVE