



ICCAUA Proceedings Journal

*Proceedings of the international conference of contemporary affairs in architecture and urbanism-ICCAUA
Volume 9 (December 2026), 2610400*

ICCAUA
Proceedings Journal
<https://journal.iccaua.com/>

Journal homepage: <https://journal.iccaua.com/>

DOI: <https://doi.org/10.38027/ICCAUA2026EN0400>

Complicit Space: Architecture, Coloniality and the Engineering of Belonging

¹ Tasmiya Chandlay

¹ Department of Architecture, Faculty of Art, Design and Architecture, University of Johannesburg, Johannesburg, South Africa

¹ E-mail: tasmiyac@uj.ac.za

Abstract

Received: 22.04.2026
Revised: 23.06.2026
Accepted: 01.07.2026
Available online: 10.07.2026

Copyright © 2026 by the author(s).

All rights reserved.

This article is published under an open-access model and is made available in accordance with the terms of the Creative Commons Attribution 4.0 International Licence (CC BY).



The publisher maintains a neutral stance concerning jurisdictional claims in published maps and institutional affiliations.

This article has been selected and peer-reviewed for publication in this journal as part of the 9th International Conference of Contemporary Affairs in Architecture and Urbanism, held on 7–8 May 2026 in Istanbul, Türkiye.

The colonised encounter is never an innocent event. It is always a trauma, a form of violence, a permanent shock that leaves traces (Fanon, 1963).

As the primary constructors of spatial development, coloniality and apartheid have actively embedded their ideologies throughout the South African postcolonial landscape. Architecture and spatial planning were instruments of state apparatuses, embodying their ideals and intentions in their physical built form.

Existing scholarship on apartheid and postcolonial spatial theory has extensively examined urban segregation, township planning, and domestic housing as separate fields of inquiry. However, these spatial categories are rarely analysed as interdependent components of a unified system of governance.

This paper contributes to architectural and urban scholarship by developing a multi-scalar reading of architecture as a continuous system of governance, examining how spatial planning extends beyond functional requirements to shape identity, memory, and social hierarchies, thereby reframing architecture as an active system of socio-spatial governance.

Keywords: Postcolonial Architecture; Coloniality; Spatial Politics; Identity and Belonging; Subversive Design.

1. Introduction

Architecture has never been a neutral force; it wields immense power to hurt or heal (Mthiyane, 2020). Throughout colonial and apartheid governance in South Africa, spatial planning and architectural design functioned as complicit instruments to organise society, regulate movement, and structure belonging (Lefebvre, 1991). Cities, townships, and homes were not simply built to provide shelter or infrastructure; they were designed to reflect and enforce political ideologies upon subjugated people to ensure racial division, superiority, and order.

Under the racially charged system of Apartheid, the built environment became a mechanism through which the state exercised and enforced control over populations (Foucault, 1977). Through shaping patterns of settlement, mobility, and social interaction, lives were rerouted to support a system that valued division and racial stratification.

Within critical urban and architectural scholarship, Lefebvre's theory of the production of space (1991) and Foucault's concept of disciplinary power (1977) have been central to understanding the relationship between space and governance. Postcolonial urban studies have further examined apartheid spatial planning as a system of segregation and control. These frameworks often analyse spatial conditions at isolated scales, focusing separately on cities, townships, or domestic environments. This limitation is addressed by examining these scales as interconnected components of a unified system of governance.

This paper extends existing scholarship by proposing a multi-scalar framework that understands architecture as a continuous system of governance operating across urban, settlement, and domestic scales. These spatial scales are analysed as interdependent components of a single governance system rather than as isolated case studies.

The structure of the City of Johannesburg is a clear example of how urban planning and architecture complicitly acted to create chasms to physically and spatially separate communities (Christopher, 2001) and establish hierarchies of access to resources and opportunity.

Similarly, the planned development of the townships under The Group Areas Act (1950) allowed for the systematic segregation of people along racial lines (Parnell, 1993), through which all people were racially relegated to dwellings and communal spaces (South African History Online, 2020). The designated Indian township of Lenasia illustrates how townships functioned as regulated environments that managed distance, visibility, and belonging.

At a quotidian scale, government-built housing within townships was used to reinforce these spatial logics as well as Western-centric familial ideals within the domestic sphere. Standardised house designs structured daily routines, family arrangements, and patterns of use (Chipkin, 1993), demonstrating how architecture extended governance into everyday life.

Therefore, architecture is analysed as a unified system of governance operating across city, township, and domestic scales, revealing how spatial planning produces enduring socio-spatial hierarchies in the South African postcolonial landscape.

2. Materials and Methods

2.1 Research Approach

The systematic complicity of architecture within the South African spatial landscape requires cross-disciplinary research methods which allow the holistic influence of these systems to be brought to light.

This study adopts a qualitative case study methodology (Yin, 2018) within a comparative multi-scalar framework. The research examines how architecture and spatial planning operate as instruments of governance across three interrelated spatial scales: the city, the township, and the domestic. These scales are treated as analytical units through which spatial power relations and governance logics can be compared.

2.2 Case Study Structure

The study analyses three case study sites, each at a different scale: Johannesburg as the urban case, Lenasia as the township case, and standardised township housing typologies as the domestic case. These cases are selected as representative spatial formations produced through apartheid and colonial planning systems, allowing for the analysis of governance mechanisms across different spatial scales.

2.3 Data Collection

The study draws on multiple qualitative data sources, including historical archives, apartheid-era planning documents, legislative and policy frameworks (such as the Group Areas Act), urban planning maps, architectural drawings, housing typologies, and secondary scholarly literature. These materials provide a layered understanding of spatial production and regulatory systems across the selected scales.

2.4 Analytical Procedure

Data is organised through a structured scalar classification system (city, township, domestic). A comparative analytical approach is then applied to examine how mechanisms of spatial control, regulation, and segregation operate within and across these scales. The analysis identifies recurring spatial governance strategies, including patterns of segregation, mobility restriction, and typological standardisation.

The interpretation of findings is informed by Lefebvre's theory of the production of space (1991) and Foucault's concept of disciplinary power (1977), which provide the conceptual lens for understanding architecture as a mechanism of socio-spatial governance.

2.5 Methodological Outcome

This methodological framework enables the construction of a multi-scalar reading (see Figure 1) of architecture as a system of governance.

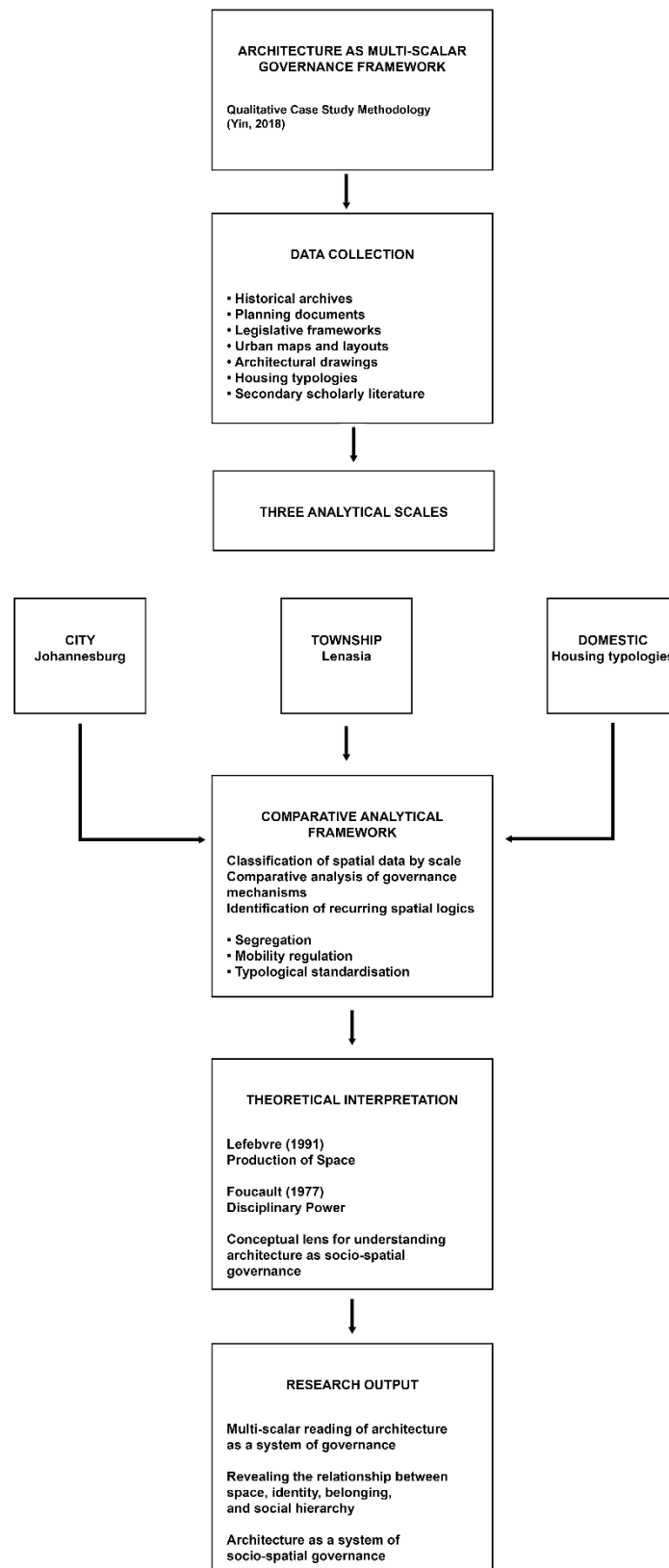


Figure 1. Architecture as Multi-Scalar Governance (Diagram developed by the Author).

3. Results

3.1 The City: Johannesburg

3.1.1 Spatial Structure and Segregation

The land on which the City of Johannesburg resides has a long history of contestation between African communities indigenous to the region and Dutch and English colonial forces, involving wars and processes of land annexation predating the city's founding. Prior to the discovery of gold, parts of the Highveld were used for agricultural farming within the Zuid-Afrikaansche Republiek (Beavon, 2004).

The discovery of gold was the catalyst for the formal establishment of Johannesburg as a mining settlement (Chipkin, 1993). In 1886, S. J. P. Kruger, President of the South African Republic (Transvaal), issued a proclamation (see Figure 2) in the *Staatscourant* declaring Johannesburg an official town (South African Republic, 1886), thereby consolidating its position as a central node in South Africa's emerging extractive economy.

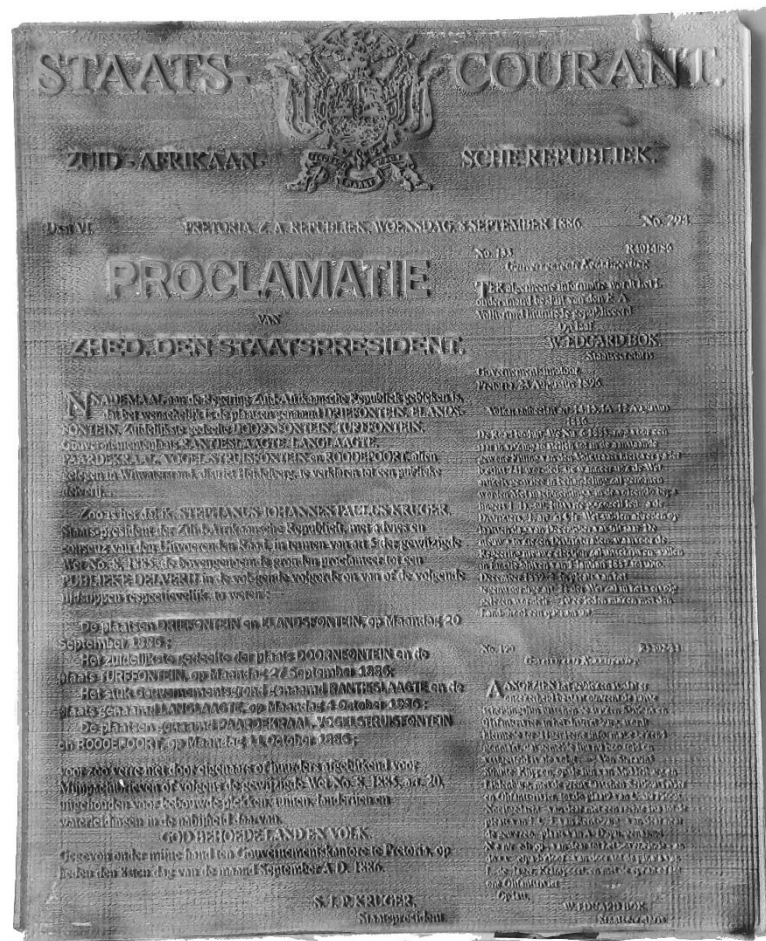


Figure 2. Making Realisation - Proclamation of Johannesburg (Resin Casted). (Note. Reprinted and adapted from *The making of the mother: Dismantling institutionally complicit architectures towards ethical futures* (p. 221), by T. Chandlay, 2023, University of Johannesburg.).

This proclamation formalised the discovery of gold in the Witwatersrand region and facilitated the rapid expansion of the mining industry. It enabled the development of infrastructure, governance structures, and institutional systems necessary for extractive profitability (Beavon, 2004). The proclamation demonstrates how political intentionality is translated into legal and administrative frameworks that become embedded in the spatial production of the city through planning and design.

The history of gold mining in Johannesburg is extractive, serving the interests and profits of colonial systems over a period of approximately 90 years, and involving war, migration, labour, and multiple systemic changes—namely colonial rule and apartheid segregation.

The growth of the mining industry was largely backed by international colonial interests (Chipkin, 1993), which drew investments and support to protect the sustained process of gold extraction, helping further colonial control and consolidated colonial influence in the region. Primarily and spatially, the city presented as a “segregated city” (Christopher, 1994) with a defined grid-like central core, a massive industrial mining belt and the emergence of racialised and class-based geographical habitation within the city.



Figure 3. *Plan of Johannesburg and suburbs, highlighting areas of Freehold and location in pre-apartheid Johannesburg.* (Note. Adapted from *Plan of Johannesburg and suburbs* [Map], by B. W. Melvill, 1897, Historical Papers Research Archive, William Cullen Library, University of the Witwatersrand. In the public domain).

3.1.2 Structure

3.1.2.1 Central Core & “Mining Belt”

The city was laid out in a grid pattern around Market Square (the economic hub) and Commissioner Street with the 70 km-long Mining Belt running east to west along the southern portion of the city. This physical barrier of mines, dumps and industrial land separated the city into North and South (Beavon, 2004).

3.1.2.2 The Wealthy North

The city’s elite residents (that of mine and landowners called Randlords) occupied the northern areas of the city, particularly that of Doornfontein and thereafter suburb areas such as Parktown and Houghton (Chipkin, 1993), escaping the noise and dust generated through mining activities.

3.1.2.3 The Working Class West & South

Racially white working-class people (particularly “Afrikaners”) settled into suburb areas within the Western and immediate South of the mining areas as these areas were easily accessible for work within the city.

3.1.2.4 “Locations” & Freeholds

While initially not as rigid as the later apartheid laws (see Figure 4), segregation was a cornerstone of colonial rule and functioned to subjugate people of colour. Non-white residents (Black, Indian, Coloured) were pushed into under-served areas within the city. However, freehold areas were rare zones where non-white residents could legally hold property deeds (Christopher, 1994). Unlike locations (see Figure 3), which were state-owned and controlled, these freehold areas allowed for private investment and, by virtue of being sold by land speculators rather than the municipality, bypassed early government residential restrictions.

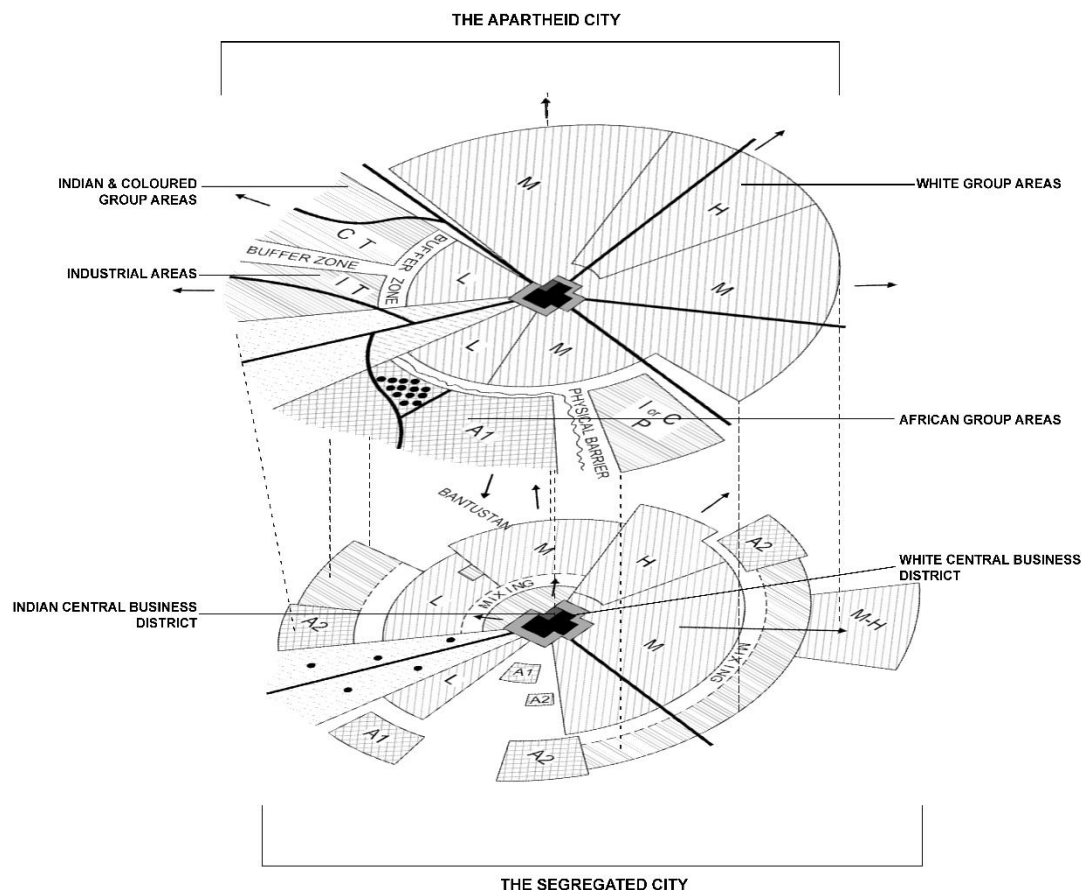


Figure 4. Transformation of the Segregated City into the Apartheid City. (Note. Adapted and annotated from *The making of the mother: Dismantling institutionally complicit architectures towards ethical futures* (p. 221), by T. Chandlay, 2023, University of Johannesburg).

3.2.3 The Apartheid Institution

The change of hands from the broader colonial system to that of apartheid furthered the ideals of segregation and stratification of people and formalised systems of discrimination.

The 1948 political victory of the National Party was fundamental in the formalisation of racial segregation (Parnell, 1993). Apartheid was written into law and officially took effect, thereby making the fraternisation of different racial groups illegal and punishable by law.

The Group Areas Act (South Africa, 1950) was instrumental in translating state segregationist ideology into spatial form by regulating the everyday movement of populations through the racial division of urban space. The Act mandated that cities be divided into racially segregated zones in which designated racial groups could live, own property, and/or conduct trade. In practice, Black residents were largely excluded from property ownership rights. This legislation enabled several formerly diverse or predominantly Black neighbourhoods to be declared “White-only” areas, resulting in widespread destruction and forced removals (Christopher, 1994).

Previously established freehold areas, where non-white (particularly Black) residents had been permitted to own land, were expropriated by the state. This facilitated the relocation of non-white populations into racially designated townships, many of which were situated in the southern regions of Johannesburg. Relocation was determined according to apartheid racial classifications: Black residents were moved to Meadowlands and other parts of Soweto, Coloured residents to Eldorado Park, and Indian residents to Lenasia. Meanwhile, the previous freehold areas were razed to the ground and rebuilt as white suburbs.

These removals created a profound physical and social divide within Johannesburg. Apartheid urban planning reserved land close to the central business district (CBD) and other essential amenities for white residents. Wealthier white populations occupied expansive properties in the northern suburbs, while middle- and lower-income white residents were accommodated in the lower parts of the city. Many of these suburban developments emerged directly through the displacement of non-white communities and the destruction of previously integrated neighbourhoods.

The city planning also made use of large "buffer zones" (see Figure 4) of empty land and/or industrial belts (Mabin, 1992) between the non-white townships in the South and the "White" suburbs (north and central) to act as physical barriers, preventing racial mixing and cohabitation. Further, by moving the non-white workforce far to the periphery, the government successfully cleared the city's inner core for "white only" residence and business.

Townships were instituted as the designated dwelling areas for the removed people of colour and were designed with very limited entry and exit points (often only two or three major roads) (Mabin, 1992). This allowed apartheid police forces to easily "cordon off" entire populations during times of social unrest or protests.

Economically, the instrument of planning moved the vast majority of the workforce (non-white people) far away from the city centre, forcing people to spend a huge chunk of their income and time on buses and trains just to get to work subversively instituting the 40-40-40 logic of spatial apartheid.

While not an official policy, the so-called 40-40-40 planning logic (Huchzermeyer, 2001) has been widely used to describe the spatial design principles and social impact of apartheid planning.

Homes built for relocated families, on average were designed to be 40m² in size (standard size of the tiny "matchbox" houses). Townships would be on average 40 kilometres from the city's economic centres (the CBD and Northern Suburbs) and approximately 40% of racialised workers' salaries would be spent on the commute and within colonial/white owned businesses. The vast majority of non-white townships were intentionally built without major business districts (Mabin, 1992), shopping malls, or industrial zones to ensure residents remained dependent on the "white" city for work and goods. Forcing residents to endure these elements on physical, structural, and financial levels meant that poverty and subjugation was literally built into the architecture and geography and worked as choreography through their daily lives.

3.1.4 The Unfeasible City

The result was a highly effective but devastating tool of spatial engineering. Its primary outcome was the creation of a "divided city" (Turok, 2001) that remains one of the most physically and economically fragmented in the world today.

The most significant modern outcome is that the 40-40-40 structure has not disappeared. Post-1994, the democratic governmental aim was to build millions of new houses thereby equipping millions of disadvantaged South Africans with homes and access to familial and economic prosperity. However, due to the cost of land on the city outskirts remaining vastly cheaper in contrast to areas closer to the cities, many new developments were built in the same remote areas, inadvertently consolidating the old apartheid layout with many township residents continually spending a high percentage of their income on transportation (Huchzermeyer, 2001) and several hours a day to access work and financial opportunities within the city.

The long-lasting effects created through colonial and architectural urban planning continue to impact the residents of the city. Democratic and legal freedoms are yet to impact the architecture and spatial planning. The urban planning of the City of Johannesburg is complicit in the continuation of apartheid logics and planning.

3.2 The Township: Lenasia, Johannesburg.

3.2.1 Planned Settlement and Controlled Belonging

As group areas were designed for the designation and segregation of peoples, townships were created in tandem with these racialised divisions, with rules allocated according to racial classification (Christopher, 1994; Parnell, 1993). The Population Registration Act (South Africa, 1950) mandated that every citizen be registered at birth and assigned a racial classification based on appearance and lifestyle. Within the apartheid system South African residents were classified into four main racial groups: White, Black (initially "Bantu" or "Native"), Coloured (mixed race), and Asian (later added to include Indian and Pakistani populations).

These classifications determined rights, access, and social standing and were used as a sorting mechanism for the townships designated through the Group Areas Act (South Africa, 1950).

One such township is Lenasia, situated approximately 35 km Southwest from the metropolitan hub of Johannesburg and developed through the implementation of the Group Areas Act of 1950 (South Africa, 1950). The name Lenasia is a portmanteau of "Lenz" (from Captain Lenz, who owned the original farm and military base on the site) and "Asia" (referring to the Indian community's heritage).

Lenasia was established in 1956 and officially proclaimed in 1958 as an Indian township, with occupation occurring in staggered phases thereafter. Following the designation and planning of Lenasia as an Indian township under the Group Areas Act (1950), the state worked through the Transvaal Indian Organisation to facilitate the relocation of Indian residents away from central Johannesburg to the township (South African History Online, 2020).

3.2.2 Self-contained township with Buffer Zones.

The township was designed to be a self-contained, isolated satellite town far from the white-dominated centre of Johannesburg and was intended to act as a labour reserve. As part of the buffer zones (Mabin, 1992) mentioned in the urban planning of the city, the town was (and remains) "buffered" by the Lenz Military Base as well as vast tracts of undeveloped land to ensure deliberate isolation with the N12 road acting as the northern boundary of the township, separating it from Soweto.

Residents were transported into the city during the day for employment and returned to designated group areas in the evenings, reinforcing daily patterns of labour circulation.

In order to access the city for work purposes, the township was strategically situated as an offshoot, with limited access points namely, Nirvana Drive (R554) and K43 (Abu Baker Asvat Drive), as a deliberate feature of "Security Urbanism" (Mabin, 1992). The limited access points played a vital role in the planning of military/containment architecture allowing for the South African Police the ability to institute complete shutdown of the entire town with just a few roadblocks. Turning the township into a "total institution" (Goffman, 1961) where movement and potential uprisings was easily controlled and deterred.

3.2.3 Township Planning: The Neighbourhood Concept & Tiered Extensions

The planned layout of Lenasia was a textbook example of apartheid spatial design, a rigid, tiered system that used geography to enforce racial and economic hierarchy.

Apartheid spatial planning in South Africa used adapted neighbourhood unit principles (Perry, 1929; Yiftachel, 1995), for the design of townships such as Lenasia. Each extension was designed to be a self-contained with its own basic local shops and schools, keeping people within their designated zones and reducing the need to travel within the town and towards the white-only city core, with the exception of work purposes (South Africa, 1950; Christopher, 1994).

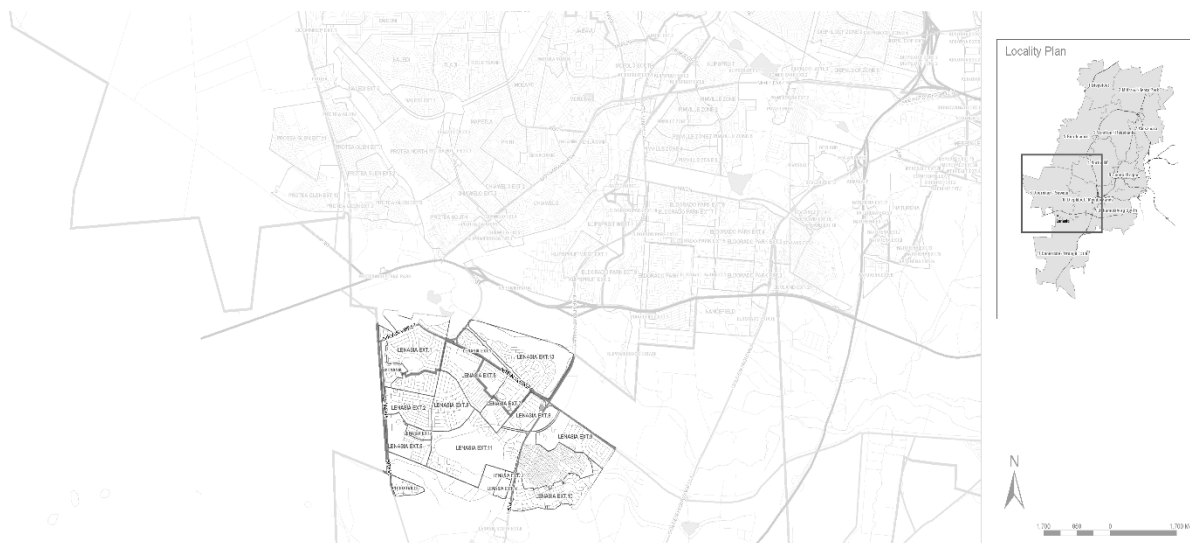


Figure 5. *Map of Lenasia.* (Note. Adapted from Cadastral map - Soweto [Map], by City of Johannesburg, n.d., Corporate Geo-Informatics Directorate).

The layout of the township was designed following a tiered extension model and meticulously divided the space into 13 extensions (see Figure 5), each broadly corresponding to different socio-economic conditions among relocated populations:

- Extension 2: Primarily intended for poorest residents. It contains the Thomsville units and the Greyville "matchbox" (NE51/6) houses.
- Extension 1 & 3: Designed for the emerging middle class, with slightly larger 500m² plots and more modern-looking houses.
- Extension 4: Designed as a "mid-town" residential zones and planned as a high-density area to accommodate more families as the inner-city evictions peaked.
- Extension 5: Planned later in around the 1970's with much larger 750m² plots. While originally aimed at being the "luxury" area of Lenasia, the area became socially mixed area due to state haste to remove all Indian residents out of Fietas (mixed areas within Vrededorp and Pageview) and Fordsburg as quickly as possible. The result was the agencies of government building whatever housing was most efficient at the time, even in "upper-class" extensions.
- Extension 6/Anchorville: A specific enclave designated for light industrial purposes in order to replace the Indian industrial functions previously contained in the city, the area acted as another "buffer" between the residential streets and the open veld, further isolating the community.

Due to the rate of removals occurring during the 1970's and 1980's, various other extensions were planned to expand the township to accommodate the influx of residents.

- Extensions 7, 8, & 9 (Late 70s/Early 80s): These extensions were planned to handle the massive migration as the Indian population in the city and other areas, was funnelled almost exclusively into Lenasia.
- Extension 10 (mid-1980s): This extension was planned for primarily private ownership. The government provided the roads and the pipes (serviced stands), but the families built the houses. This led to much more varied architectural design.
- Extension 11: As with extension 10, this residential area was one of the later designated areas and was government serviced but sold as stands. Extension 11 signifies the furthest Southward development of Lenasia before the establishment of Lenasia South. Lenasia South functioned as an independent township.
- Extension 12: There was no functional extension 12, the designation is presumed to have functioned mainly as an additional "buffer" zone.
- Extension 13: Not part of the original apartheid-era master plan for the town, the extension was designed and planned much later in the Northern area of Lenasia.

In contrast to many townships, Lenasia was built with a small business district. The Lenasia Central Business District (CBD) situated in Extension 1, was the final piece of the "containment" puzzle. While many of the extensions were for designed for residential use, the CBD was planned to resolve a specific problem for the apartheid government: what to do with the Indian traders they had forcibly removed from the Johannesburg inner city.

The CBD was built right next to the Lenz Railway Station which functioned as the transport corridor linking residents to Johannesburg CBD (Beavon, 2004; Turok, 2001). Much like the residential extensions, the CBD was designed to be small

to avoid competition with white-owned businesses in Johannesburg and had very few entry roads. The internal streets were deliberately designed to be narrow to maximise stall space, while being surrounded by wide "surveillance" roads like Lenasia Drive, producing a form of panoptic spatial design that allowed police patrols to circle the entire business district easily as well as impose lockdowns, if deemed necessary.

3.2.4 Stagnation of the Township

The township remains shaped by the spatial logic associated with the so-called "40-40-40" pattern (Huchzermeyer, 2001) with modern communal transportation infrastructure unrealised in the area, many residents still face commutes to northern Johannesburg that take over two hours each way, either through private vehicles or informal minibus taxi services.

Furthermore, while originally planned as a relatively small township, Lenasia has experienced substantial population growth over the past decades. It now comprises a diverse mix of residents from different racial and socio-economic backgrounds, and this expansion has been accompanied by ongoing pressures on housing and service delivery.

3.3 The Domestic: The Government-Built Home

The use of government-built homes was a major factor in the efficient development of Lenasia to ensure placement for the Indian population away from the city centre. No government houses in Lenasia were technically "free", the apartheid-era model relied on a mix of rentals, government loans, and low-cost land sales.

Initially the first residents of Lenasia (in Extension 1) were offered plots for roughly R60 in 1957 as the entry point into state-regulated housing. These stands would have had to be purchased, and government loans would be required to build the home according to strict governmental specifications.

In later years, in areas such as extension 5, houses were developed by private companies, and potential owners had to qualify for bank or state-backed mortgages and pay them off over periods of 20 to 30 years. Rental systems were also implemented for poorer residents in areas like extensions 2 (Row housing in Thomsville and "Matchbox" housing in Greyville).

These systems of payment functioned as mechanisms of financial control, binding residents to long-term obligations within the spatial framework of the township (Parnell, 1993; Christopher, 1994). While the removals were beyond the control of the residents, their maintained home within their designated township became a means of responsibility and a financial burden to bear.

This tied residents into subservience within a legal and financial mechanism of control with governments and private companies through long-term repayment periods that extended across decades, reinforcing stable settlement patterns and assimilation within designated townships.

3.3.1 Housing Typologies

Lenasia consists of a variety of apartheid housing typologies that have evolved over time (Huchzermeyer, 2001; Parnell, 1993). At the township's foundation, four distinct government-instituted typologies were instrumental in housing the Indian population. These residential architectures were administered under the designation of "Economic" and "Sub-economic" housing but many were structurally identical to the National Building Research Institute (NBRI) NE51 (Non-European 1951) series, which was developed by architect Douglas Calderwood (1953) as a result of his postgraduate research into what were then deemed the minimum housing standards for non-white residents.

3.3.1.1 Sub-economic: The Row House (Thomsville, Extension 2)

This housing typology consists of long structures divided into six units of two rooms each (one kitchen/living area and one bedroom) (Parnell, 1993). The buildings were designed without any internal plumbing requiring residents to use communal toilet blocks in the shared back area. The approximate area for these houses was 25–30m² and their design was of low-grade brick. These homes were designated as Sub-economic housing and was strictly rented and reserved for the poorest residents and pensioners.

3.3.1.2 Economic: The Matchbox House (NE 51/6) (Greyville, Extension 2)

The "Matchbox" (NE 51/6) typology (see Figure 6) was designated as Economic housing and constructed within the Greyville area. The house was designed to occupy a strict 40m² area with a rigid layout of a "four-room" design consisting of two small bedrooms, and a small kitchen and living area. Built with single-leaf brick walls, asbestos roofs, and no ceilings, these features made the houses notoriously cold in winter and hot in summer (Huchzermeyer, 2001).

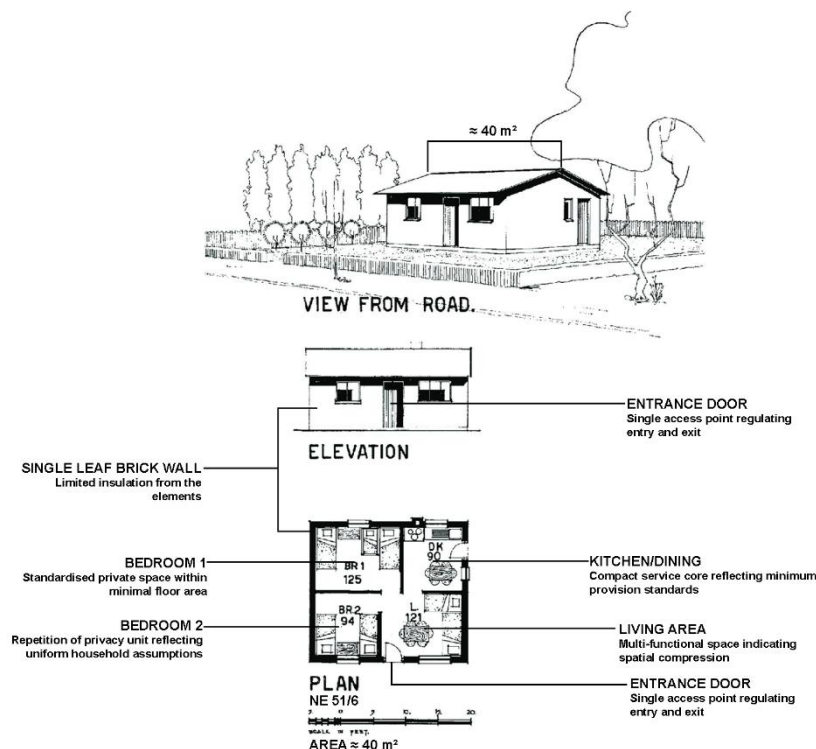


Figure 6. Economic: The Greyville “Matchbox” House (NE 51/6). (Note. Adapted from "Designing KwaThema: Cultural inscriptions in the model township," by H. le Roux, 2019, *Journal of Southern African Studies*, 45(2), p. 280).

They were designed to provide minimum shelter within strict cost and space limitations. These homes were primarily rented out to small families who could not afford the plot purchase and did not qualify for governmental loans. Though these homes were rented, many families eventually "bought" them out through 30-year lease-to-buy schemes.

3.3.1.3 Economic: The Semi-Detached “Matchbox” Houses (NE 51/7)

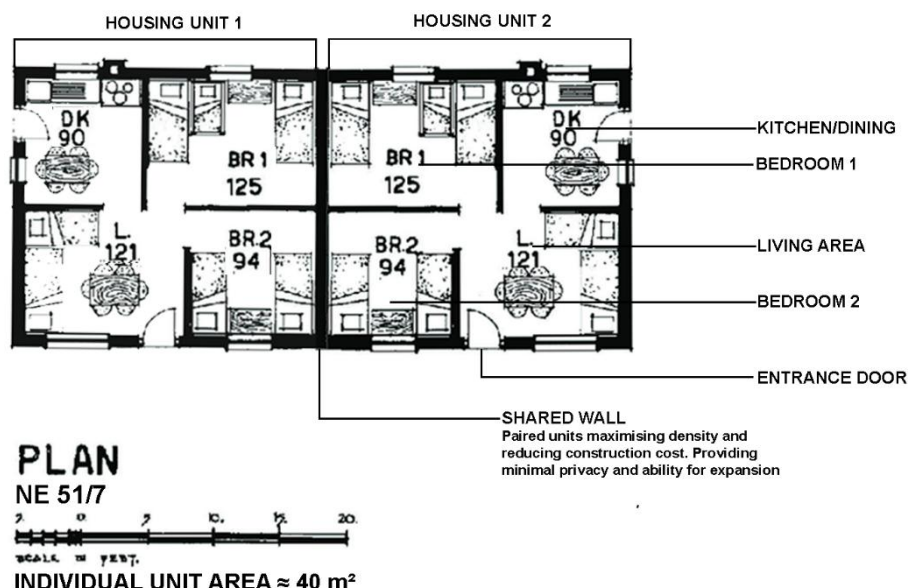


Figure 7. Economic: The Semi-detached “Matchbox” House (NE 51/7). (Note. Adapted from "Designing KwaThema: Cultural inscriptions in the model township," by H. le Roux, 2019, *Journal of Southern African Studies*, 45(2), p. 280).

The NE 51/7 typology (see Figure 7) was also designated as Economic housing and consists of two NE 51/6 units joined together by a common central wall, forming a single building that houses two separate families. Each unit retains the standard "four-room" layout (approximately 40m²) with two bedrooms, a kitchen and living area. It was designed as a cost-saving measure to increase density; by sharing a middle wall and a service line, the state reduced construction costs per unit (Huchzermeyer, 2001; Parnell, 1993). Unlike the standalone NE 51/6, these units offered less acoustic privacy

due to the shared wall and were typically built on smaller, shared-boundary plots. Consequently, because these units shared both a boundary and a wall, they were often the most difficult for residents to renovate or extend later on.

3.3.1.4 Economic: The Government House (NE 51/9) (Rainbow)

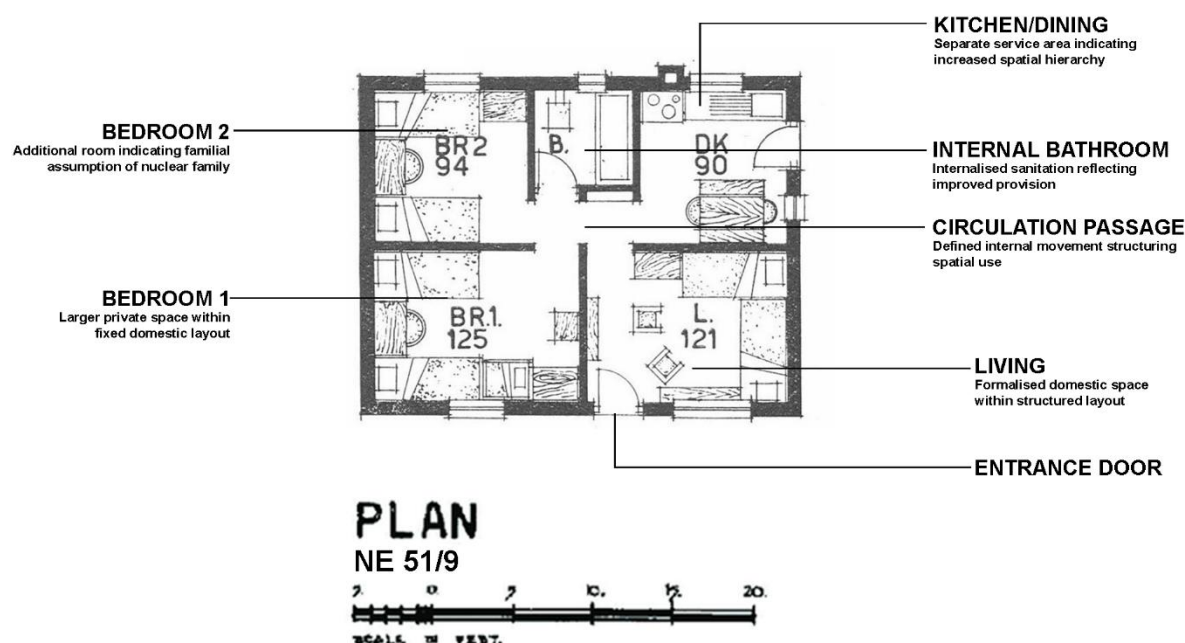


Figure 8. *Economic: The Rainbow House (NE 51/9).* (Note. Adapted from "Designing KwaThema: Cultural inscriptions in the model township," by H. le Roux, 2019, *Journal of Southern African Studies*, 45(2), p. 280).

A slightly more suburban upgrade to the NE 51/6 with slightly larger floor area, the NE 51/9 (Economic) typology (see Figure 8) comprised of a separate kitchen and living area, bedrooms, and an internal bathroom occupying approximately 45–50m² of space (Parnell, 1993). The home usually featured a small internal passage, to allow inhabitants to move through spaces within the home more efficiently.

The area was colloquially known as "Rainbow" due to the houses originally being painted in a variety of different colours to distinguish them from the uniform grey of other extensions. Once again, the homes in this area were aimed at small families, with a mixture of rental and/or direct sale via government loans.

3.3.2 Subjugation of the Home

The apartheid housing system provided shelter and spatial placement for relocated populations, yet it simultaneously reinforced structural limitations on mobility and advancement. Residents occupying government-provided housing faced restrictions on property modification, tenure security, and economic opportunity. For former traders displaced from inner-city commercial areas, the implementation of the Population Registration Act and Group Areas Act often resulted in reduced income and limited market access. Rental tenure and housing allocation therefore operated as mechanisms of compliance within the broader governance structure of apartheid spatial planning.

The housing system imposed structural limits on socio-economic mobility, effectively creating a "ceiling on success" for residents within the township environment.

These conditions ensured that communities remained economically functional as labour reserves (Mabin, 1992) while maintaining limited capacity to accumulate wealth or spatial mobility. The long-term occupation of these housing typologies continues to shape settlement and familial patterns in Lenasia today.

4. Discussion

4.1 Architecture as an Instrument of Governance Across Scales

The findings of this research study demonstrate that architecture and spatial planning within the South African context functioned not merely as mechanisms of shelter or settlement, but as instruments of governance embedded within legal, economic, and political systems. Across the three spatial scales examined (the city, the township, and the domestic), architecture operated as a regulatory framework through which populations were organised, controlled, and sustained within a broader system of institutional power (Lefebvre, 1991).

Rather than existing as isolated planning decisions, the spatial configurations documented in this study reveal a coordinated logic of control in which legislation, infrastructure, and architecture collaborated to systematically structure and manipulate patterns of movement, labour, and belonging. In this sense, the built environment became a physical manifestation of governance (Foucault, 1977), translating policy into spatial form and embedding institutional authority directly into the landscape.

4.2 Spatial Control as a Multi-Scalar System

One of the central insights emerging from this research is that spatial control was not limited to a single level of planning but instead operated simultaneously across multiple scales. At the scale of the city, the establishment of Johannesburg as a mining settlement created the foundational framework for economic extraction and labour regulation (Beavon, 2004). The spatial organisation of this urban core prioritised proximity to mining infrastructure and administrative oversight, positioning the city as a central node within a system designed to maximise productivity, maintain order and remained largely inaccessible to the vast majority of people.

At the township scale, this logic of control became more explicit through the planned development of settlements such as Lenasia. The deliberate positioning of the township at a distance from the metropolitan centre, combined with the use of buffer zones and limited access routes, demonstrates how spatial planning was used to regulate mobility and maintain separation between racial groups. The township was not simply a residential area but a containment and segregation mechanism (Mabin, 1992), designed to sustain a labour force while restricting social and political autonomy.

At the domestic scale, governance was embedded within the design of the home itself. Housing typologies, tenure systems, and plot allocations imposed structural limitations on social relationships, expansion, ownership, and economic mobility. These design decisions created a controlled domestic environment in which residents were responsible for maintaining property within a system that simultaneously constrained their opportunities for advancement. In this way, the home functioned as the most intimate site of regulation (Foucault, 1977), where institutional authority intersected directly with everyday life.

4.3 Architecture as a Mechanism of Economic and Social Regulation

The spatial systems identified in this study reveal how architecture was used to stabilise labour and sustain economic productivity. Townships such as Lenasia were designed to operate as labour reserves (Mabin, 1992), ensuring a consistent workforce for the urban economy while maintaining physical separation from centres of political and economic power. The daily movement of residents between township and city reinforced this relationship, positioning mobility itself as a regulated component of the spatial system.

Financial mechanisms associated with housing further strengthened this system of control. Government loans, rental agreements, and mortgage structures tied residents to long-term financial obligations, creating a form of economic dependency that extended beyond physical displacement (Parnell, 1993). While residents were forcibly relocated through legislative action, the requirement to maintain payments on government-built homes introduced an additional layer of compliance, effectively binding households to the spatial system for extended periods of time.

These arrangements demonstrate how architecture operated not only as a physical structure but as an administrative tool (Foucault, 1977), linking spatial design to financial governance and labour management.

4.4 Persistence of Spatial Logics in the Post-Apartheid Landscape

Although the formal structures of apartheid have been dismantled, many of the spatial logics established during this period remain visible in contemporary urban conditions (Turok, 2001). Long commuting distances, limited access to economic opportunities, and persistent infrastructural inequalities continue to shape the lived experiences of the current residents of former township and group areas. These patterns reflect the enduring influence of planning decisions made decades earlier, highlighting the long-term consequences of spatial governance.

The continued growth of settlements such as Lenasia beyond their original population capacity further illustrates how systems designed for control rather than adaptability can produce ongoing strain on infrastructure and housing resources (Turok, 2001). As populations grow, expand, and diversify, the spatial framework established during apartheid remains largely intact, constraining development and reinforcing patterns of inequality.

5. Conclusions

This study contributes to architectural and urban scholarship by reframing architecture as a continuous institutional system of governance operating across interconnected multiple spatial scales.

Architecture in this context worked actively to inscribe the intentions of its creators onto the population and landscape of the country. Architectural structures and planning became physical embodiments of collective memory and cultural identity, operating to recode people and space in ways that served colonial and apartheid objectives. In doing so, the authorship of identity was systematically displaced from communities and their cultural rhythms, replacing local agency with state-defined spatial order. This study builds on existing postcolonial and spatial theory by demonstrating how this process operates consistently across multiple interconnected scales rather than within isolated spatial categories.

Across multiple interconnected scales, architecture functioned as a mechanism of governance. Space and the built environment were shaped through deliberate planning informed by legislated views on race, community, and belonging. Residents' occupation and existence within space were determined through governmental authority and its hierarchical valuation systems, enabling the state to assign worth and opportunity according to politically constructed criteria. This reveals governance not as a set of isolated interventions, but as a continuous spatial system embedded across scales.

Taken together, the findings of this research suggest that architecture should be understood not solely as a design discipline but as an institutional practice capable of shaping social and political life. Across the scales of the city, township, and home, planning decisions, building typologies, and infrastructural networks operated as mechanisms through which authority was exercised, normalised, and sustained over time.

This reframing extends conventional architectural analysis that treats buildings, settlements, and cities as separate objects, instead positioning them as interdependent components of spatial governance systems.

Recognising architecture as an instituting practice provides a critical lens for analysing both historical and contemporary urban environments, particularly in contexts where spatial systems have been used to organise populations and regulate access to resources. This perspective underscores the responsibility of architects and planners to consider the long-term social implications of spatial design, as decisions made in the present may continue to structure patterns of belonging, inequality, and exclusion for generations to come.

The framework developed in this study can be applied to other postcolonial contexts where spatial planning continues to structure inequality, mobility, and belonging.

Acknowledgements

The author would like to acknowledge the publicly available resources and references that informed this study.

Funding

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

Conflicts of Interest

The author reports no conflicts of interest.

Data Availability Statement

No new data was created or analysed in this study. All data used in this research was obtained from publicly available sources.

Institutional Review Board Statement

Not applicable.

CRedit Author Statement

Conceptualisation: Tasmiya Chandlay;

Methodology: Tasmiya Chandlay;

Formal analysis: Tasmiya Chandlay;

Investigation: Tasmiya Chandlay;

Data curation: Tasmiya Chandlay;

Writing – original draft: Tasmiya Chandlay;

Writing – review & editing: Tasmiya Chandlay;

Visualisation: Tasmiya Chandlay.

The author has read and approved the final manuscript.

AI Use Statement

AI-assisted tools were used during manuscript preparation for language refinement, proofreading, organisational support, and to assist in identifying potential issues in clarity and consistency. All analysis, interpretations, and final content decisions were undertaken by the author.

Reference List

- Beavon, K. S. O. (2004). *Johannesburg: The making and shaping of the city*. University of South Africa Press.
- Calderwood, D. M. (1953). *An investigation into the planning of urban native housing in South Africa* [Doctoral dissertation, University of the Witwatersrand]. Wits Institutional Repository WiredSpace.
- Chandlay, T. (2023). *The making of the mother: Dismantling institutionally complicit architectures towards ethical futures* [Master's dissertation, University of Johannesburg]. UJ Content.
- Chipkin, C. M. (1993). *Johannesburg style: Architecture and society 1880–1960*. David Philip.
- Christopher, A. J. (1994). *The atlas of apartheid*. Routledge; Witwatersrand University Press.
- Christopher, A. J. (2001). Urban segregation in post-apartheid South Africa. *Urban Studies*, 38(3), 449–466. <https://doi.org/10.1080/00420980120080031>
- City of Johannesburg, Corporate Geo-Informatics Directorate. (n.d.). *Cadastral map - Soweto* [Map].
- Fanon, F. (1963). *The wretched of the earth* (C. Farrington, Trans.). Grove Press. (Original work published 1961).
- Foucault, M. (1977). *Discipline and punish: The birth of the prison* (A. Sheridan, Trans.). Pantheon Books.
- Goffman, E. (1961). *Asylums: Essays on the social situation of mental patients and other inmates*. Anchor Books.
- Huchzermeyer, M. (2001). Housing for the poor? Negotiated housing policy in South Africa. *Habitat International*, 25(3), 303–331. [https://doi.org/10.1016/S0197-3975\(00\)00037-0](https://doi.org/10.1016/S0197-3975(00)00037-0)
- Lefebvre, H. (1991). *The production of space* (D. Nicholson-Smith, Trans.). Blackwell.

- le Roux, H. (2019). Designing KwaThema: Cultural Inscriptions in the Model Township. *Journal of Southern African Studies*, 45(2), 273–301. <https://doi.org/10.1080/03057070.2019.1602323>
- Mabin, A. (1992). Comprehensive segregation: The origins of the group areas act and its planning apparatuses. *Journal of Southern African Studies*, 18(2), 405–429. <https://doi.org/10.1080/03057079208708320>
- Melville, B. W. (1897). *Plan of Johannesburg and suburbs* [Map]. Grocott & Sherry. Historical Papers Research Archive, William Cullen Library, University of the Witwatersrand.
- Mthembu, A. N. (2019). Reflections on expropriation-based land reform in Southern Africa. *Town and Regional Planning*, 75(1), 54–65. <https://doi.org/10.18820/2415-0495/trp75i1.7>
- Mthiyane, W. (2020, July 1). *The architects of systemic racism*. Architizer Journal. <https://architizer.com/blog/inspiration/stories/the-architects-of-systemic-racism/>
- Aziz Amen, M., & Ahmad NIA, H. (2021). *The Effect of Cognitive Semiotics on The Interpretation of Urban Space Configuration*. *Proceedings Article*, 260–274. <https://doi.org/10.38027/ICCAUA2021227n9>
- Parnell, S. (1993). Creating racial privilege: The origins of South African public health and town planning legislation. *Journal of Southern African Studies*, 19(3), 471–488. <https://doi.org/10.1080/03057079308708370>
- Perry, C. A. (1929). The neighborhood unit: A scheme of arrangement for the family-life community (Monograph 1). In *Regional survey of New York and its environs: Vol. 7. Neighborhood and community planning* (pp. 21–140). Committee on Regional Plan of New York and Its Environs.
- South Africa. (1950). *Group Areas Act No. 41 of 1950*. Government Printer.
- South Africa. (1950). *Population Registration Act No. 30 of 1950*. Government Printer.
- South African History Online. (2011, October 19). *Indian Community in Lenasia*. South African History Online. <https://sahistory.org.za/article/indian-community-lenasia>
- South African Republic (ZAR). (1886). Proclamation of Johannesburg. *Staatscourant van de Zuid-Afrikaansche Republiek*.
- Turok, I. (2001). Persistent polarisation post-apartheid? Progress towards urban integration in Cape Town. *Urban Studies*, 38(13), 2349–2377. <https://doi.org/10.1080/00420980120094551>
- Yiftachel, O. (1995). The dark side of modernism: Planning as control of an ethnic minority. In S. Watson & K. Gibson (Eds.), *Postmodern cities and spaces* (pp. 216–234). Blackwell.
- Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). SAGE Publications.