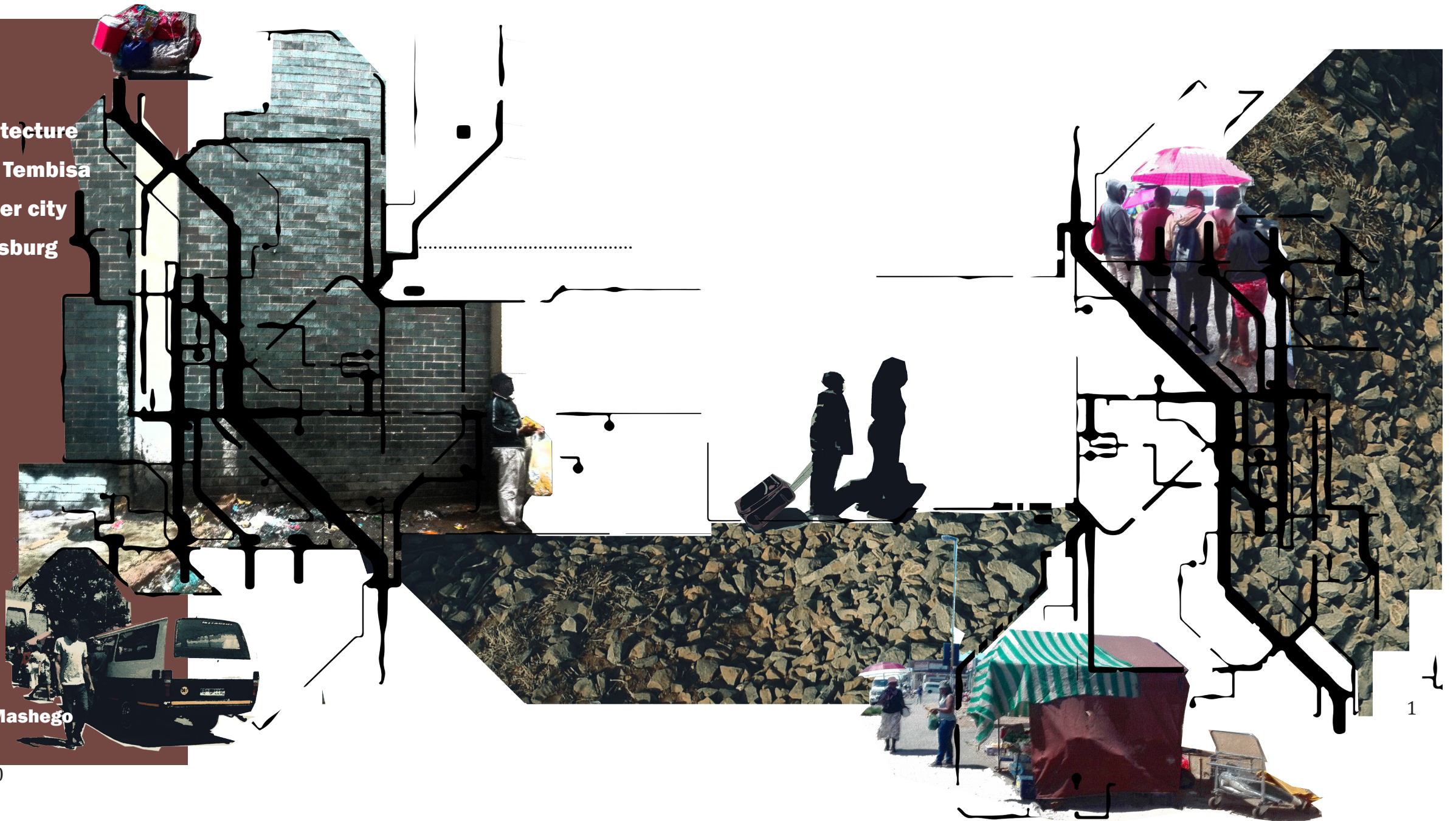


Influx

Finding
a taxi architecture
in between Tembisa
and the inner city
of Johannesburg

Nonhlanhla Mashego

16 March 2020



Influx Control (noun) [mass noun]: “(in South Africa during the Apartheid) the rigid limitation and control imposed upon the movement of black people into urban areas.”
(Lexico Dictionaries | English, 2020)

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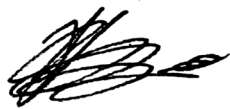
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Declaration

I, Nonhlanhla Mashego am a student registered for the course Master of Architecture (Professional) in the year 2019. I hereby declare the following: I am aware that plagiarism [the use of someone else's work without permission and/or without acknowledging the source is my unaided own work except where I have stated explicitly otherwise. I have followed the required conventions in referencing thoughts, ideas, and visual materials of others. For this purpose, I have referred to the Graduate School of Engineering and the Built Environment style guide. I understand that the University of the Witwatersrand may take disciplinary action against me if there is a belief that this is not my unaided work or that I have failed to acknowledge the source of the ideas or words in my own work



16 March 2020

Departure: approach

This essay stems from my fascination with the phenomenon of taxis the unapologetic way in which the taxis system operates in the city and my experiences of dissatisfaction with the infrastructure whilst commuting to and from Tembisa and the inner-city in which Wits University is located. This report takes on the form of narrative reporting for the framing of a design project. For this architectural project, I explore the taxi system through the theoretical lens of power, space, and memory which I relate to identity, transformation and belonging. My architectural and artistic intention is expressed through Juhani Pallasmaa's "*The Eyes of the Skin: Architecture and the Senses*" in which he writes: "significant architecture makes us experience ourselves as complete embodied and spiritual beings; in fact, this is the great function of all meaningful art" (Pallasmaa, 2005, p.11).



2

Fig.2_The author waiting in line at Esangweni taxi rank. Photo by the author (2019).

As a point of departure, I ask the following questions:

1. The core question is twofold: first, how can we describe the spatial agency generated by the movements of urban residents utilising a networked system of taxis acting in urban space and, how can the architect use and rewrite this spatial language into a taxi architecture. How can architects multiply, innovate, and write a phenomenological way of operation in the city, into a sustainable building?
2. What is the theoretical layer that a taxi rank design project can add to the archives and discourses that exist on the understanding of power and urban space in Johannesburg? How does the discourse of “power, space, and architecture” in a “post-colonial African city” construct identities and how can we reconcile them with the envisioned self? (Biko, 2004; Hall, 2011).

Background

Architecture and infrastructure are a material culture that is inscribed with the stories that we tell ourselves about the past and the present. These imaginations frame the stories we tell ourselves about the future. Buildings become cultural objects and subjects in how they frame space. When political power dynamics influence architecture, they influence the cultures and the societies in which they are built and as a result are influenced by the cultures that they have created. Architectural languages of modernisms of European origin has been used by structural powers in Africa to construct collective narratives (Elleh, 2002).

The urban scape of Johannesburg utilises the languages of these modernisms to tell the story of Nationalism. It has been layered by transitions, temporalities, movements, and habitations of the indigenous. Through the landscape, a vast continuum of space, of material culture, the colonial apartheid government positioned itself as a total domineering power.

This is an account of how the language of superiority and therefore segregation was inscribed onto the landscape but it is more an account of defiance.

As space production puts forward, this account is about the re-written stories and memories of the real-time interaction of people, buildings, infrastructure, and machines with the geography. (Ashcroft, 2001).

Of a focus to this paper is the phenomenon of the South African minibus taxi industry and its effect on the Johannesburg landscape.



Fig.3_ A view of Johannesburg from Carlton Centre. Photo by the author (2014)

Fig.4-5 _The inner-city Johannesburg with modernisms in the cityscape. Photos by Samson Matlayane (2018)

Abstract

This report problematizes the “single story” of the minibus taxi industry as a criminal, violent lawless phenomenon, which is an undeniable layer, but the label is missing a dimension. (Adichie, 2009). Another way to view this industry is, as that physical entity that offers freedom from the map or the latitude to navigate the landscape.

Moving and inhabiting is a tool to transform and add a layer of operation on the post-apartheid landscape. It is a tool that negotiates access to resources. The action of taxi’s through and in Johannesburg occurs in tandem with informal trading and around these spaces, recyclers are prevalent. These agents’ act of claiming their place in the city by occupying pavements, roads, and vacant sites, can be seen a play in the city’s power, architecture, and space dynamics but, are also survivalists’ strategies. Transport hubs and taxi rank nodes in the cityscape can become a point of enquiry about sustainability: economic, social and through design, ecological.

This report is a study of what the temporality of the phenomenological paradigms of belonging can be in defining and designing contemporary and future African dense cities.

It is an experiment to be conducted as an iterative design of the spatial node along a journey and route, a micro part of a complex macro network.

This investigation is about understanding the social and economic systems enacted on the frameworks and infrastructure of the city; how they comply, resist and rewrite colonial and post-colonial geographies as well as the narratives.

It seeks to map out and invert through architecture, how the different actors in these networks that are positioned at the intersection that is a taxi rank, make space. In this instance, the one occurring at Esangweni in Tembisa and the one occurring at the eastern edge of the inner-city operated by the Johannesburg Tembisa Taxi Association (JTTA).



Fig.6_ Map of Johannesburg showing municipal boundaries.
The map is a recreation by the author (2019), source (City
of Ekurhuleni Metropolitan Municipality,2019a)

1. Flux: Collective memory and transformation

Narrative as memory



Fig.7_Author at Freedom square in Kliptown. Photo by Rethabile Mogaki (2014)

Collective memory is written by those in power and is used as a tool to appease the masses as well as to achieve political agendas. Ngugi wa Thiongo in *“Moving from The Centre: The Struggle for Cultural Freedoms”* explains as follows, “Culture is a [material and non material] product of a people’s history. But it also reflects that history and embodies a whole set of values by which a people view themselves and their place in time and space” (wa Thiongo, 1993, p.60).

In “post”-apartheid South Africa, the democratic government wrote for the country the master narrative of a “rainbow nation”, where legislative freedom is ground for an appeased integrated and liberal society. This is only one layer of freedom. It is written in the constitutions, policies and architectural monuments that have been dedicated to these ideals such as, Freedom Square in Kliptown. However, this kind of freedom can be viewed as a form of structural violence. In his book, *“Pathologies of Power: Health, Human Rights, and The New War on The Poor”*, Paul Farmer argues that “paper and political freedom” does not equate to social transformation (Farmer, 2004, p.9).

The transition from equal civil rights to implementation is a long road. This can be seen in the back log in the implementation of the post-nationalism *“National White Papers”* on housing and transport. So, structural violence is still inscribed onto the landscape. This is where the “post” condition of colonial apartheid does not exist, but what does exist, is a landscape inscribed with many layers of history, her story, as well a real-time and alternative story (Department of Transport, 2017).

There are two evident layers of material culture with which the praxis of informal economies in the city act. They can be thought of as layers appropriation and re-appropriation. On the one hand, appropriation is the imperial geographical and spatial definition imposed on indigenous lands, and with it, surveillance, control, and dominance. On the other hand, re-appropriation is how urban African communities rewrite the defined spatial geography (Ashcroft, 2001). Therefore; collective memory is not only constructed narratives but the lived reality as well.

Brian Fay writes in his book *“Contemporary Philosophy of Social Science: A Multicultural Approach”* that; “Stories are lived because human activity is inherently narrational in character and form: in acting, we knit the past and future together. But stories are also told in that with hindsight we can appreciate narrative patterns, which we could not appreciate at the time of acting. We tell stories in acting and we continue to tell stories afterwards about the actions we have performed. Our lives are en storied and our stories are enlivened” (Fay, 1996, p.197). This is the idea that there is always a story within a story, and that the stories influence each other.



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Fig.8_The layers created in the city on Banket street in the Johannesburg CBD (Central Business District). Photo by the author (2019).

Structural violence

Bill Ashcroft writes in *“Post-Colonial Transformation”*, about the importance of maps and geography in post-colonial studies and understanding the re/appropriation: “geography, then was a conception of space which had extremely deep cultural purchase, as well as very specific material effects in the lives of colonised peoples as demonstrated in the division of Africa”(Ashcroft,2001, p.148). The map was an effective tool of the definition of the domain of imperialism. It was used to instil Nationalism’s constructed identity of dominance, and hegemony. (Hall, 2011). This is the putting down of boundaries, apportioning of the land, defining the portions, and then controlling who could cross those boundaries. This is about the geopolitical conception of race. In 1984, the Apartheid government was responsible for the formation of the TBVC countries (Bunting, 2004)

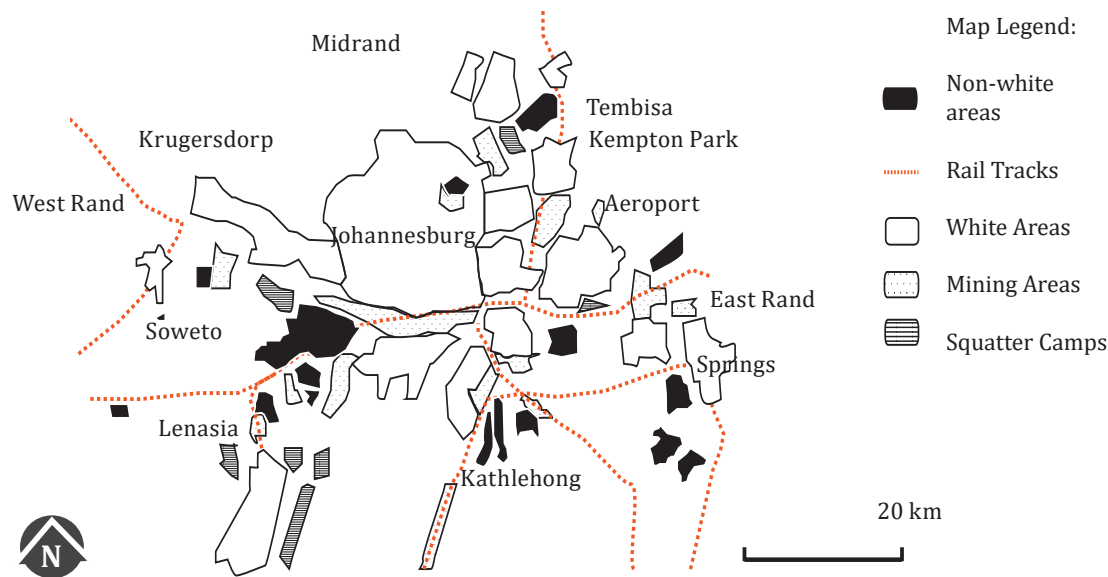
They were the republic of Transkei, Bophuthatswana, Venda. The Republic of South Africa which included Bantustan’s/homelands was a separate country. Black people were given citizenship of the TBVC countries, but “they were presumed to be ‘aliens’ in the Republic of South Africa and therefore not entitled to representation in the national parliament” (Bunting,2004, p.36).

This is how apartheid disenfranchised black people (Bunting, 2004). They were only entitled to urban space as labourers in the mines and women as domestic workers. Amid the ebbs and flows of growth of Johannesburg, South African imperialism controlled the movements, black people, and women. It was a monitoring of the influx into the city between the homelands and the township. (Fontana-Giusti, 2013).

Foucault’s conception of “biopower” and “influx” are about the control and surveillance of the trajectories, movements, and the lives of those that are governed by structural capitalist powers. (Beavon, 2004; Fontana-Giusti, 2013). In the South African context, these ideals manifested into legislation in the form of the 1950’s *"Group Areas Act"* along with the 1930’s *"Urban Natives Areas Act"*, among others. The space that was perceived to be the best such as those in the city were reserved for the ‘whites’.

The peripheral and undesirable locations were reserved for the non-white migrant workers, with the ‘black’ and native Africans being allocated the furthest locations from the city-centre, they were only allowed into the CBD for work.

The inner city was for the constructed dominating elite that was privileged to participate in the rising economy and the developing urbanising infrastructure.



9

Fig 9_A map of depicting racial segregation geographical principles in the planning of urban Johannesburg. Recreation by the author (2019) after (Valleix,2002).

WEST RAND ADMINISTRATION BOARD : SANDTON

Reference No: 4/4
Telephone no: 40-7631
P O Box 273 : BERGVLEI : 2012

PART A
ONE 30c REVENUE STAMP
ON ORIGINAL

The Chief Commissioner
Department of Co-operation and Development
P O Box 1179
2000 JOHANNESBURG

Sir

LABOUR ACT 1964 : APPLICATION FOR PERMISSION TO INTRODUCE A SPECIFIC BLACK WORKER

This office has no objection to the undermentioned application as there is no suitable workseeker available to fill this vacancy. He is not an illegal entrant and approved accommodation is available. This office undertakes to ensure, insofar as it is possible that he will return to his home district after the termination of services with undermentioned employer.

CHIEF LABOUR OFFICER : SANDTON

PART B TO BE COMPLETED BY APPLICANT

Chief Labour Officer
SANDTON

I hereby apply for permission to introduce and engage the following Black worker as a
(occupation) at the following address:

FULL NAMES: IDENTITY NO : TAX IDENTITY NO:.....
ETHNIC GROUP:..... AGE:..... HEADMAN/CHIEF:..... DISTCT.OF DOMICILE:.....
ADDRESS IN HOMELAND:

I offer him a wage of R.....per month/week plus(privileges). I certify that he is not already in my service and is at the abovementioned address in his home district. I contacted him in the following manner

I hereby acknowledge that in terms of Section 10 and 11 of the Urban Areas Consolidation Act (Act no 25/45 of 1945), as amended, the Chief Labour Officer of the West Rand Administration Board, Sandton, has jurisdiction to impose the conditions that a person whom permission is given to employ a Black worker from an outside area, shall give security to the satisfaction of the Chief Labour Officer that at the termination of the contract of employment entered into with the worker, such worker will be returned to his home, or last place of residence.

I therefore hereby undertake that if I am granted permission to employ abovenamed, I shall provide him with a rail ticket to enable him to return to his home or last place of residence if the contract of employment with me is terminated for any reason whatsoever, or if on his arrival in the prescribed area of Sandton I decide not to employ him. I agree that no deduction for this purpose will be made from his wages

I hereby authorize any officer of the Labour Bureau concerned to enter into and sign a written contract of service with the worker concerned in terms of this application, for which purpose this authority shall be regarded as a special power of attorney, provided that such contract of service shall be duly attested by an attesting officer (not being the person who enters into and signs the contract on my behalf).

I have noted that if this application is approved the contract of employment with me will be for a period of one year only.

I undertake to refund all labour bureau fees paid by the Black worker in terms of Regulation 23(1) of Proclamation R 74 of 1968 when he is engaged by me.

I certify that authorized accommodation for this worker is available at
(type of accommodation, e.g. inmates of hostel etc.).....

Name and full address of Employer:

..... SIGNATURE OF PROSPECTIVE EMPLOYER

CHIEF COMMISSIONER

PART C

Reference no:N3/11/2-B/.....
Date:.....

10

Fig.10_The application forms that black people had to fill to be in the city.
Source: from the personal documents of a black worker who was living in Alexandra in 1975

Transformation

Imperial logic and social engineering not satisfied with the urban landscape wanted to control the inside of the home. “*In Space, Gender and Place*”, Doreen Massey writes that production of geography has also been the production of gender and the identities thereof. Similarly, Bill Ashcroft writes that imperialism’s conception of geography was about the separation of space and time. Furthermore, masculinity was coded as time and as such the writing of history. The feminine was perceived as lack and emptiness, which is also a hegemonic conception of space (Ashcroft, 2001; Massey, 1994). The imagery of lack brings forward the idea of invisibility on the landscape/geography. So, transformation is also about the re-appropriation of the narrative of geography.

The home was/is hegemonically considered to be women’s place of production and the workplace (usually in the city), a men’s. So, control and containment were about orchestrating culturisation to imperialism in the realm of creation of familial networks. The Calderwood Non European house model studies(1951) of the ideal township of Kwa Thema point to those of Nationalist imperialism. The NE51 model 9 became the prototype design for homes in Tembisa (Calderwood, 1953).

Zeynep Celik describes how French imperialism was obsessed with infiltrating the home in Algiers:

“French architects were struggling to rationalise, tame and control indigenous forms. Especially important was the appropriation of women’s spaces into which a great deal of consideration was invested. Nevertheless this consideration did not achieve access into Algerian women’s lives, which remained closed to colonisers-a situation eventually revealed active role that women’s lives were to play in a war unexpected by the French.” (Celik, 1997, p.139).

The home in Algiers became a site of the mobilisation of resistances, that refused “infiltration” as did South African townships; townships becoming very sites of resistance to control against having one’s identity defined and delineated. What the taxi industry represents is home that stretches and erases boundaries. Putting a “post” in apartheid planning without effecting change on contemporary spatial realities of the disenfranchised, does not create a condition of the post.

Trinpha Min-ha's quote below talks of the spatial reality that remains:

“With a kind of perverted logic, they work toward your erasure while urging you to keep your way of life and ethnic values within the borders of your homelands. This called the policy of “separation development” in apartheid language “(Minh-ha, 1995, p.247)

Maps also become the foundation for infrastructure projects, therefore infrastructures not only bear witness to collective and “Nationalist” narrative, but they are also complicit. What this means for the urban African prescribed a faraway township as home and further, the definitions of Bantustans, homelands and “Emakhaya”ⁱ as the only authentic home, is a confinement of identity to one place, which is also a separation of the body from the land, but I posit that identity is defined as one moves across the land/geography/map/route/journey. It is a renegotiation of one's position in the politics of belonging. In “*Beyond the Recognition and Re-distribution Dichotomy: Intersectionality as Stratification*” Yuval-Davis writes: “Our longings, or aversions, are related to our

belongings in but complicated and ambiguous ways, and what social group or category we belong to does not determine our political or cultural values ... And yet: the former informs the latter” (Yuval-Davis, 2011, p.6).

This brings us to the concern of taxis with geography and maps. The taxi re-inscribes the African identity onto geography. Bill Ashcroft's thoughts on “cultural identity” being about “positioning” are those I relate to the taxi industry (Ashcroft, 2001, p.4).

This industry continually positions itself on the landscape as a power. In Johannesburg, a taxi is a predominantly African mode of contemporary operation on the geographic landscape that; inscribes networks, channels and is an extension of associational, familial, and relational ties which is also an opportunity to become (De Boeck and Plissart, 2004). Becoming is important because it is about transformation, about finding a position in which to share and tell your story. Taxi's movements transverse the infrastructural “erasure” and while traversing it write it over.

i “Emkhaya” is an IsiZulu term often used in the townships to refer to the homelands

2. Spatial order: movement and power

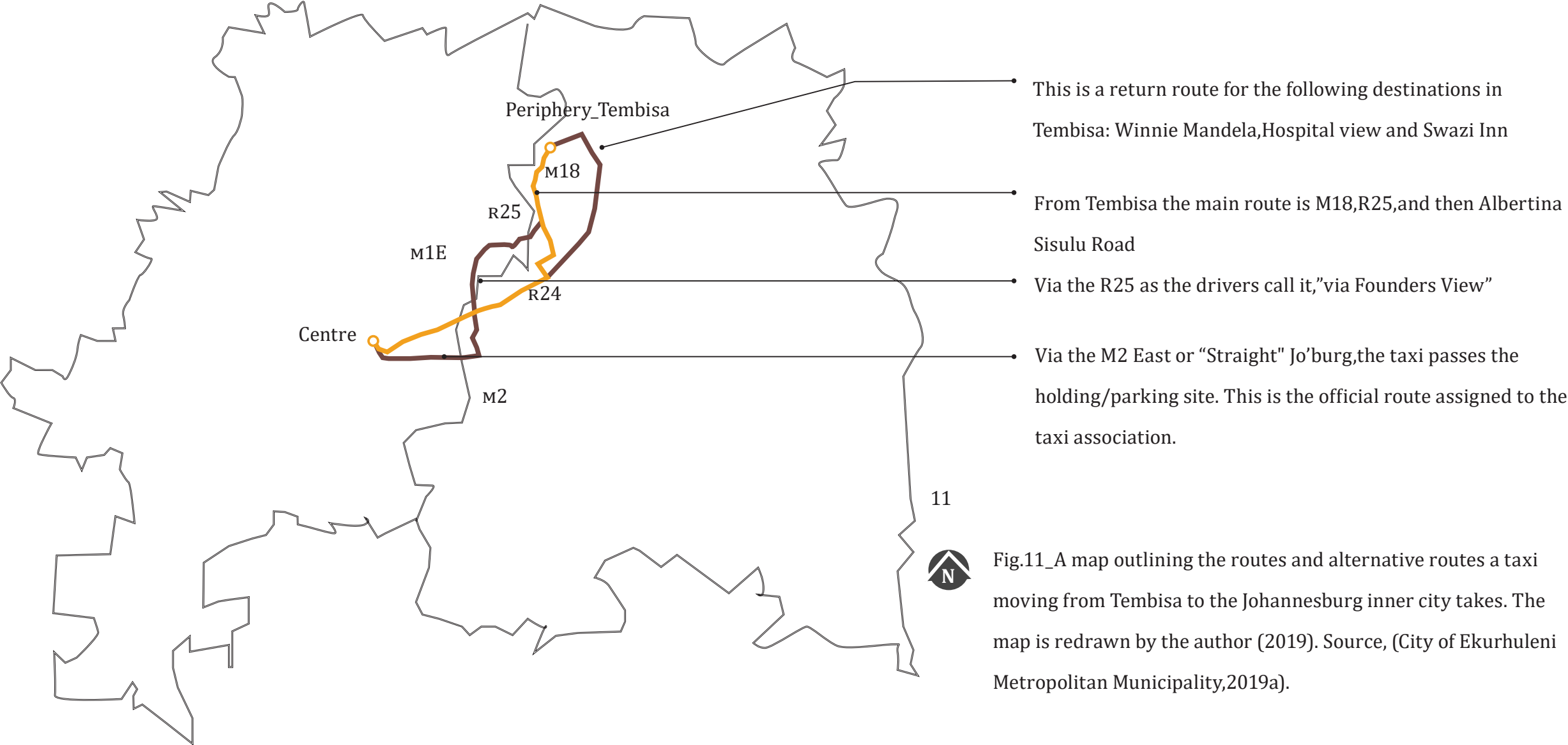
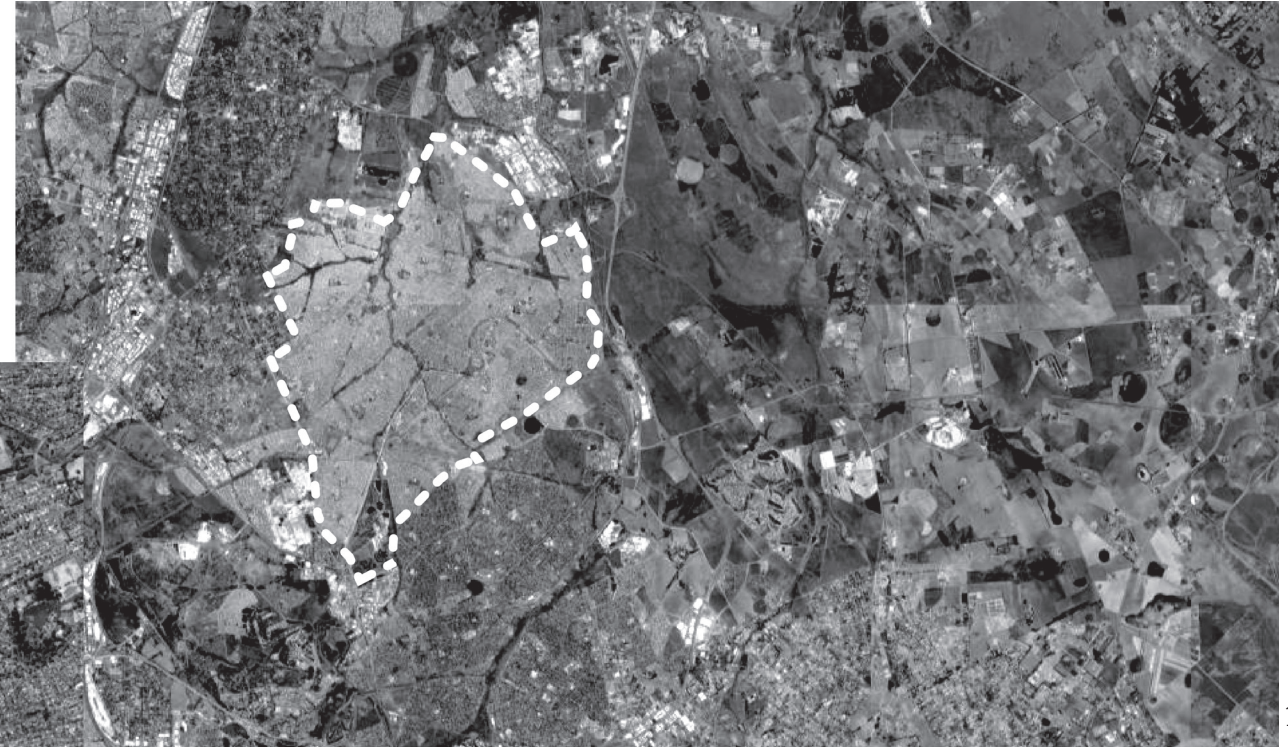


Fig.11_A map outlining the routes and alternative routes a taxi moving from Tembisa to the Johannesburg inner city takes. The map is redrawn by the author (2019). Source, (City of Ekurhuleni Metropolitan Municipality, 2019a).



12



13

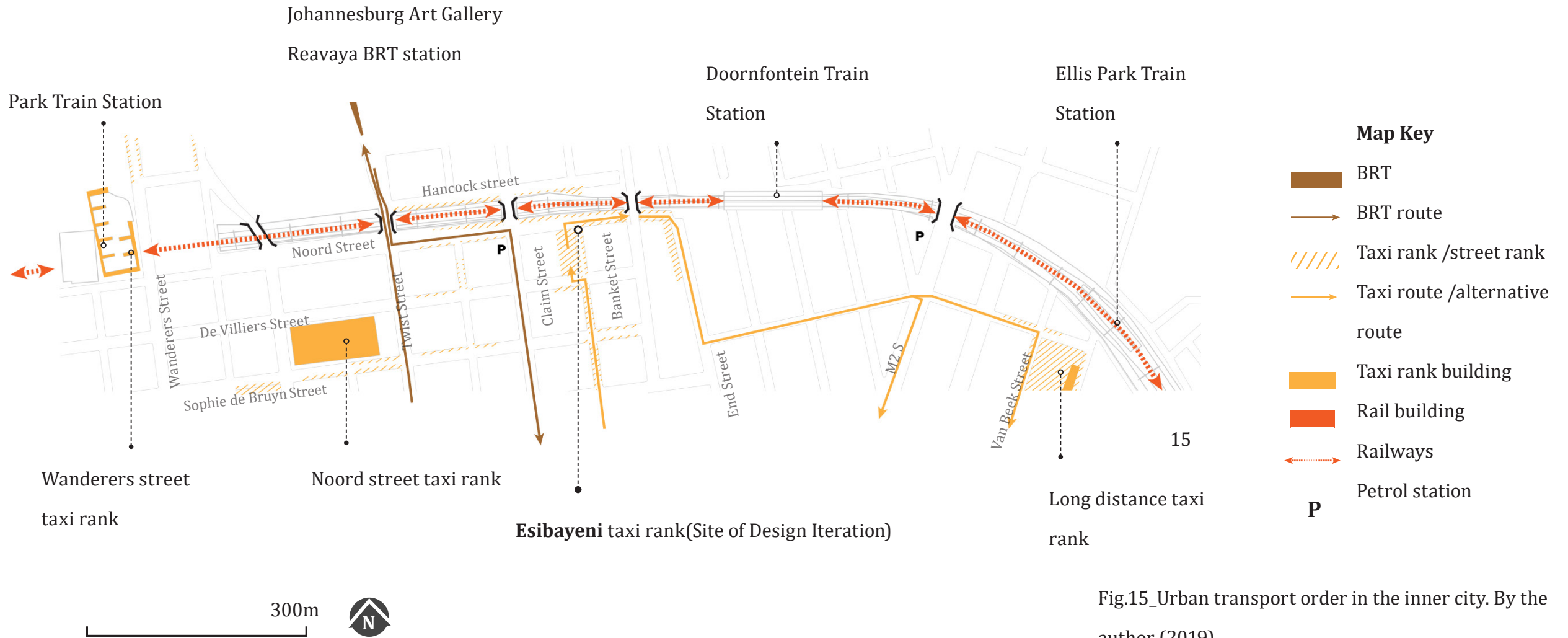
Fig.12_Aerial map of the Johannesburg inner highlighting the historical boundary of the city. Image recreation by the author (2020). Source, (City of Ekurhuleni Metropolitan Municipality, 2020).

Fig.13_Aerial map depicting the urban fabric in Tembisa. The image is a recreation by the author (2020). Source, (City of Ekurhuleni Metropolitan Municipality, 2020).



14

Fig.14_Urban order 1: figure-ground of the Johannesburg site
by the author (2019)





16

Fig.16_Inner city: Noord street taxi rank.
Photo by the author (2018)



17

Fig.17_Inner city: corner Sophie du Bruyn
and Claim street street-side taxi rank.
Photo by the author (2019)



18

300m



Fig.18_Urban order: figure-ground of
the Tembisa. By the author (2019).

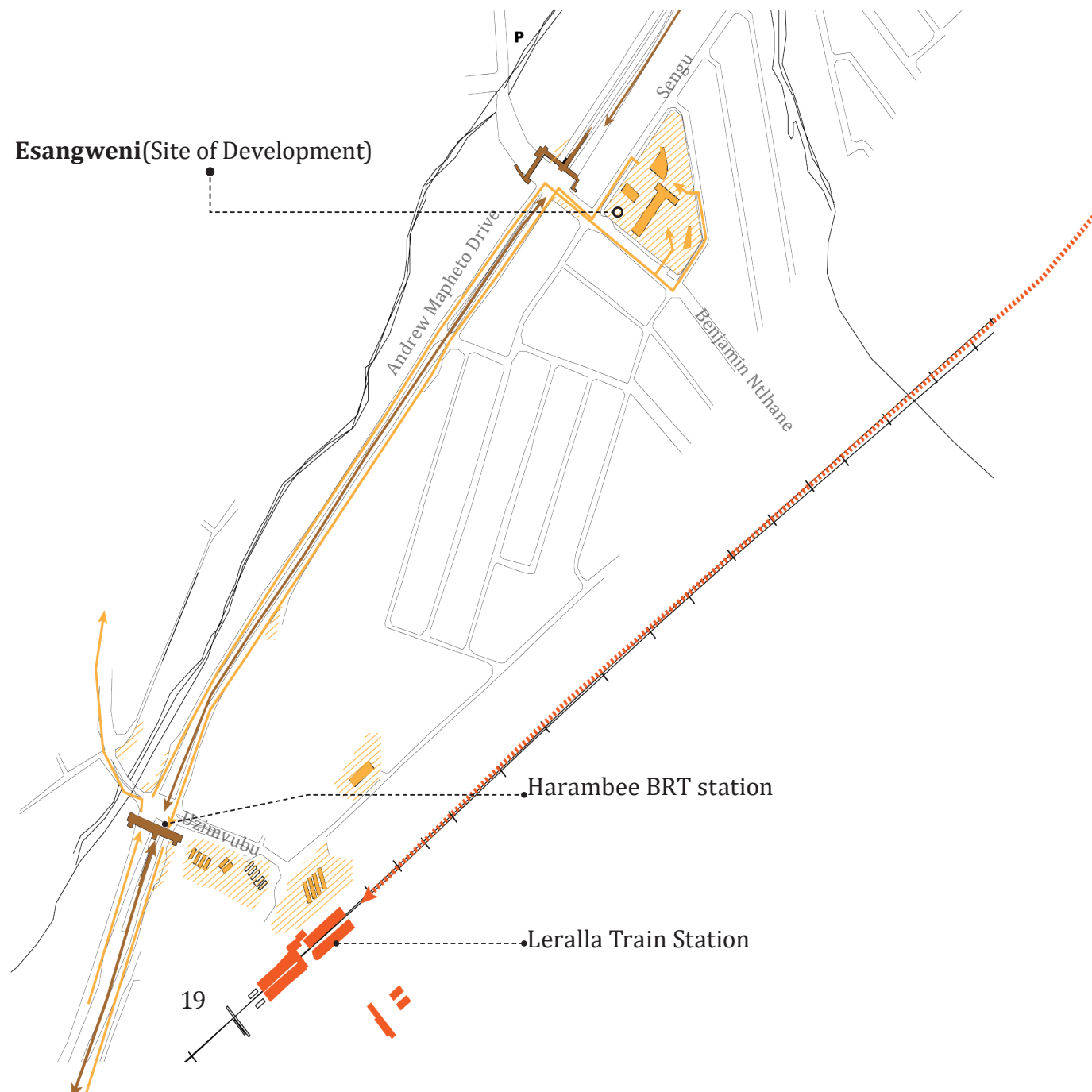


Fig.19_Urban transport order in Tembisa. Map by the author. (2019).

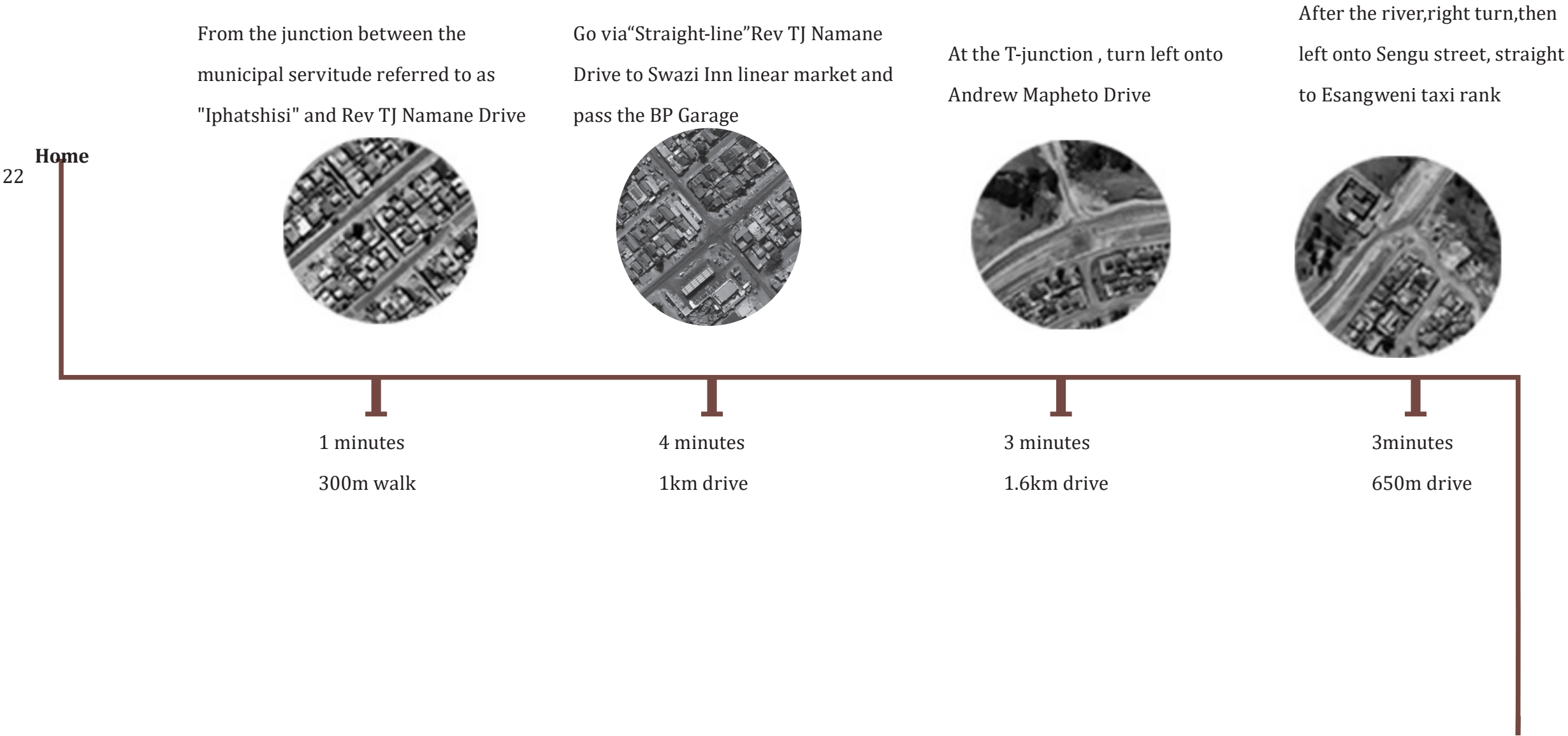
Fig 20_Esangweni taxi rank. Photo by author (2019).



21

Fig.21_The Harambee BRT (Bus Rapid Transit) development which is under construction. Photo by author (2019).

Fig.22_Travel lines: the form the author's commute from Tembisa to the inner city of Johannesburg takes explained in English the way someone from the township would give directions. Time line by the author(2019) after (Google Maps,2019).



Via the M18, Leaving Tembisa ,passing
Chloorkop industria



1 minutes
1,1km drive

From Birch Acres
mall via the M18



3 minutes
2,7 drive

Tembisa Plaza to the Birch
Acres mall

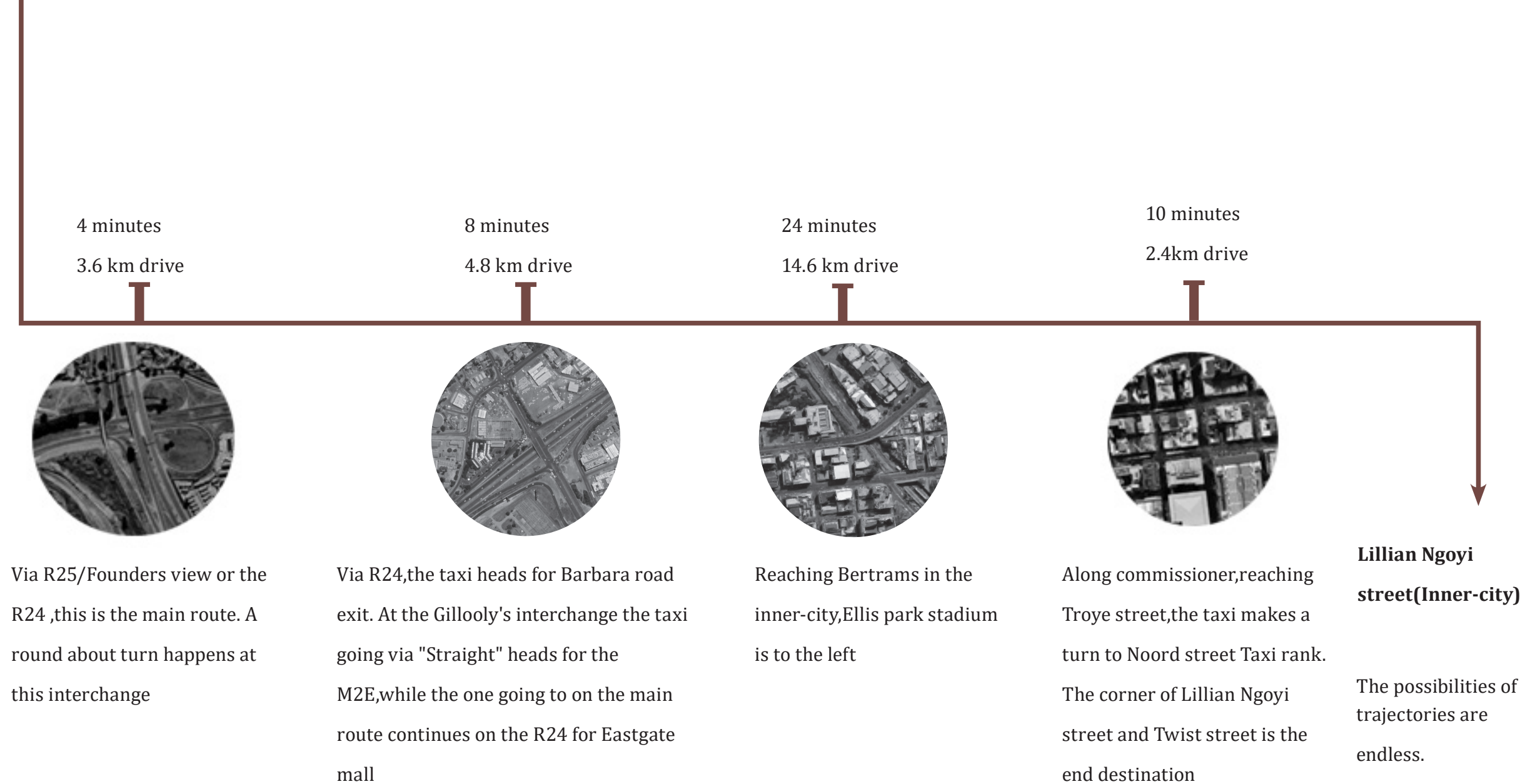


2 minutes
1,2km drive

Esangweni taxi rank to
Tembisa plaza



4minutes
1,2km drive



Movement

Below is an illustration of just a small part of the colour and complexity occurring on a journey from a part of Tembisa to the Johannesburg centre, from the perspective of one passenger-the author. It displays and talks about the socio-economic orders that are created through space and through the movements of the people and the taxi's interacting and navigating the intersection that is a taxi rank.

To open possibilities in the city, you must keep moving: *Leaving home in Tembisa, the black and silver rusting gate complains with a thud as I rush across the street through the passage or as we call it "Iphatshisi"ⁱ-which essentially is a municipal servitude. The streets are buzzing with murmurs of early morning conversation. It is six-thirty in the morning. A woman is taking a toddler to crèche, just down the street; the neighbour sits a low-level wall he has built just outside his yard. I wave at him he waves back; the birds are singing and the sun is starting to make an appearance on the Eastern horizon.*

i "Iphatshisi" is an alley or, which is usually a municipal servitude

On my way to the inner-city, dashing through the passage to an arterial road, Rev TJ Namane, as I make my way, a young dirty- looking man (assumed to take Nyaopeⁱⁱ because of his appearance and is called a Nyaope boy) shouts out to me: "Sister, Esangweni?"ⁱⁱⁱ Esangweni ? I nod as I rush to cross the road. Simultaneously he starts to whistle at the local taxi that had already passed the "passage". This is adjacent the road that is referred to by locals as Straight line because a local taxi taking this route, or travelling in this part of Tembisa does not make a turn, it follows the road. Getting onto that Venture^{iv}(a Toyota Venture turned into a local taxi) is an effort, an act of thrusting whatever bags you have inside while simultaneously lifting one's leg to enter. The man that called the taxi for me closes the door, and, while I greet, demands one rand from the driver for delivering the service of stopping the taxi on my behalf, and in turn helping the driver get a customer. He steals my experience of pointing down to call a local taxi and demands and a fee for it. I must make my nine o'clock.

ii Nyaope is drug that is prevalent in South African townships

iii "Esangweni" is IsiZulu for entrance as at the gate and the name of the arterial taxi rank

iv A "Venture" is a Toyota brand model vehicle that operates as a type of local taxi

There is chatter and mumbling; a woman complains about 'these boys' demanding money for a service no one asked them to provide. In the background, fifteen and fourteen-seater taxi's howler and hoot, attracting customers. The sound from our Ventureⁱ pierces into the atmosphere with its own hooting. Passing the soccer stadium, school children wearing red, green, and white uniforms walk to school. The hooting goes on, I recall the nine o'clock, and the hooting goes on, now fading to the periphery of my mind. Reaching the end of Straight line and turning into the main exit and entrance road into Tembisa from the CBD and Northern suburbs and townships such as Sandton and Alexandra. More complaints enter the now quiet space, from the same woman, this time, bemoaning the extra time that the BRT development has taken, and how the construction of the new bridge extension to support the widening of the road for a bus lane causes ridiculously slow-moving traffic protracting the time it takes to travel home.

i A "Venture" is a Toyota brand model vehicle that operates as a type of local taxi

She too fades to the background, and as the taxi takes another turn, this time Southbound, a couple of men and several women pray to my left, just beyond the local brick-making place, a few meters from the stream that flows North. Another turn. Oh yes! The nine o'clock. Someone who is been sitting at the back exclaims 'egatini'ⁱⁱ- meaning that for some of us this is our stop. Getting off, a woman sells fruits, sweets, and snacks in front of the fence of the taxi rank, under a black plastic structure with wooden sticks for both columns and roof structure. Another woman sits alongside the taxi rank entrance, on a plastic chair with a small child on her lap, and a couple of buckets filled with baked goods, displayed in clear plastics sitting on top. A taxi leaving the taxi rank narrowly misses me. To the right, there is another stall of beer crates and wooden planks, fruit, and snacks on top. Walking past a container smelling like Sunday cooking, or maybe Beef stew, at the same time chatter and laughter goes on amongst the men gathered around the taxi lane for the Bryanston Sandton area which is to my left, heading to my stall of Johannesburg taxis I hear the rattling of the wheels of a trolley. The airtime, sweets, snacks, and pain tablets retailer, as he wanders around to where people are standing in line.

ii 'Egatini' is a combination of English and Zulu which means at the gate or entrance

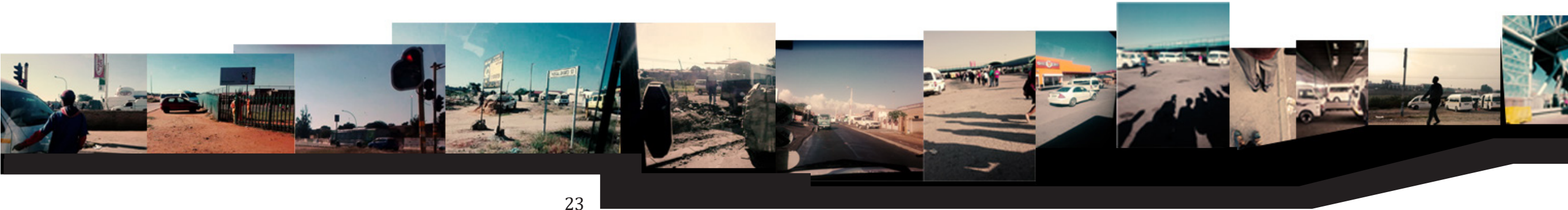
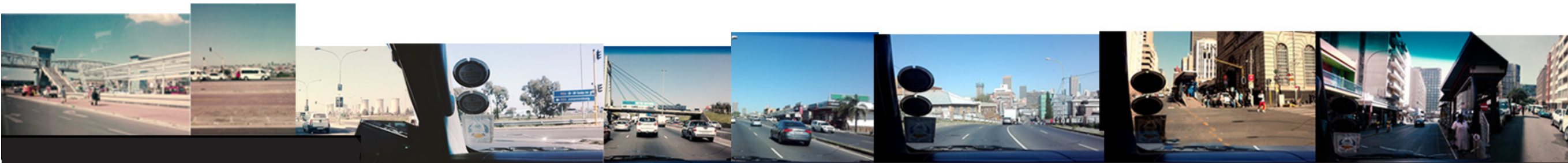


Fig.23-24_Journey: the phenomenology of commute.
The series of photos by the author (2019).



24

The sun starts to make an appearance to the East and a train just leaving Leralla train station makes its rhythmic sounds in the distance. The line is long, and nine o'clock. Standing in line a Pastor appears and starts preaching, singing, and then praying, then requesting offering for the service delivered. Getting into the taxi, I recall nine o'clock.

The taxi is a hub and a driver of what Abdou Maliq Simone refers to as “inner street economies” that are orchestrated by the everyday practices of by Africans moving in and out of urban and urbanising African cities. While they go about that, they find unconventional strategies for inserting and interacting with the networks and systems of space making in the city. These systems are tethered to a capitalist network of moving, moving people, and creating movement, which in turn are tethered to the accumulation of wealth, through the formal industry as well as informal means and strategy all to sustain “livelihood and opportunity” (Simone, 2006, p.358).



Fig.25_Inner street economies at corner Sophie du Bruyn and Twist streets. Sketch by the author (2018). After Google Street View (Google Maps, 2017).

Power in space

The capitalist network of moving in the form of a taxi can be represented as a power, historically-an anti-power that has continued to exist and move through the occupation of space. In this occupation of space, it creates space and as per Henri Lefebvre's iterations of social-political space production, continues to exist despite local and regional bodies of the post-colonial apartheid and previously the apartheid's governments' attempts to bypass the underdeveloped industry and mode of transport. It is capitalist because capitalism is the economy of growth and exploitation. It is a mode of transport that supports and moves a large portion of the South African population. The Majority the people that use public transport are women (Khosa, 1998).

It is a physical entity that folds the distances of sparsely addressed remnant spatial inequality (Hansen, 2006).

This bypassing can also be seen the implementation of the Gautrain and BRT developments. I remember, in 2006, before the Rea Vaya BRT development and construction, in the Johannesburg CBD, commuters travelling to Tembisa used to find the JTTA taxi's serving that route at the corner of Claim and Noord

streets, where now, in 2019, what I see, is a dedicated Rea Vaya bus lane on the road, demarcated by the protruding yellow concrete barrier on road, the landscape. There are layers on the landscape, so while the JTTA taxi is no longer at that junction, there is long-distance (to other provinces) taxi is that utilise Noord street. A cacophonous ecosystem of embodied economies also prevails.



26

Fig.26_Taxi space making outside Esibayeni taxi rank. Photo by the author (2019).

Informal trading is not without its story; the municipality has attempted to control the sprawl of pavement trading, “Operation Clean Sweep” of 2013 was used as a strategy to clear and clean the streets for redevelopment and the reconstruction of the City of Johannesburg into a “World Class City”. As means to survive the threat of the municipality, traders mastered the tactic of impermanence/flux which is the art of being able to pack up one’s shop and source of income quickly to get away from the police. Some set-ups are just pieces of plastic laid on the pavement, with the merchandise displayed on top. As Abdou Maliq Simone writes in *“Pirate Towns: Reworking Social and Symbolic Infrastructures in Johannesburg and Douala”*: “This is a critical orientation to keep things open the possibilities that constitute a multiplicity of trajectories of accumulation, collaboration, livelihood, communications, co-optation and state engineered disappearance” (Simone, 2006, p.360).

Sheets-Johnstone further explains that space is not only that we which inhabit by crossing a boundary or, a threshold outside of the body, that the body is the very threshold of space, which means that our movements create space.

This means that space is not only a container as is hegemonically conceived, it is also an activity created by movements and is a means of “self-transformation or conversions” of the body from a stationary position (Sheets-Johnstone, 2010, p.325).

This is also explained by Ashcroft’s thoughts on spatial cognition: “In natural perception, space is generated by intentional movement-it exists on the horizon of every object” (Ashcroft, 2001, p.131).

Movement creates different positions and vantage points of acting with space, it is an activity of becoming, of folding oneself onto the expanse and thus defining it. The body’s movements construct and cross boundaries and, as Simone puts it, “become infrastructure”. It is an incessant defining of one’s identity. Maxine Sheets-Johnstone in *“Movement: The Generative Source of Spatial Perception”*, first points to the use of auto-ethnography of the city and the contested spaces that are taxi ranks, as a negotiation of access and; makes the analysis of movement significant in understanding the space production occurring at these sites (Tembisa and inner-city).

Sheets-Johnstone also talks of “examining movement phenomenologically” through the “objectifying of self-movement”, where the kinetic properties and qualities of experiences that are linear, tensional, areal and projectional are explored and understood. This is also what constitutes how spatial knowledge is learnt, and obtained by moving, immediate interaction with the “here” and “there” (Sheets-Johnstone, 2010). She explains that; “...because we experience our movement, we can at any time investigate how movement creates a spatial and temporal energetic dynamic and in effect determine what is there, in the perception of self-movement” (Sheets-Johnstone, 2010, p.328).



27



28

Fig.27_Pedestrians are crossing Hancock street. Sketch by the author (2018). After Google Street View (Google Maps, 2017).

Fig.28_Man is selling fruit outside Metro Mall. Sketch by the author (2018). After Google Street View (Google Maps, 2017)

So, in examining my movement, I have found networks of movement are held together by the forces of tension. The fact that the taxi ranks are contested spaces that sometimes invoke fear. As such they become spaces of resistance-to movement, occupation, and control. It becomes resistance against certain behaviours. Where this phenomenon occurs, crime is rare unless some members of the industry are perpetrating it. The fear creates safety for commuters from the rest of the “hunters” in the city. As a hunter industry, taxis are driven by the need to accumulate wealth through the territorisation of routes with a high concentration of commuters (De Boeck and Plissart, 2004). The taxi industry is masculine and patriarchal in origin, and the violence it comes with can be seen as an exclusion of women. This is changing; I have been driven to and from the city by two of the women that are a part of the Johannesburg Tembisa Taxi Association. The growth in ownership by women, often by inheritance from familial ties is far more exponential than the driving. The taxi industry also has issues with the public. The protracted waiting times for commuters is one. There is always the fear of an outbreak of violence. However, the industry is made up of diverse multicultural, colourful, and engaging people.

The city is a space creating movement that can have instances of unsafety where, if one goes against the flow of the ecology of the networks or one is just simply unlucky, one can fall prey. This can be seen in Johannesburg's notoriety for muggings and constitutes some of the rest of the hunters of the city. As Filipe de Boeck writes in *"Invisible Urbanisms in Africa"*: "so that's how capital moves in the city, that's what it's about,...it's not about maximalizing, it is not about having but about being, not about possessing but about consuming, about singularizing oneself by immediately putting capital into constant circulation." (De Boeck, Simone and Rao, 2007, p.7).

When leaving Braamfontein, through the inner-city, this is a window into the form that navigating home takes: Leaving the University in Braamfontein, the grey turnstile returns to its place with a monotonous click as I cross Jorrißon street. The traffic officers' hand signals create a yielding space for cars moving along Jan Smuts. There is a cacophony of sounds: chatter laughter, screams. From across the Wits Art Museum, hammering from the construction of the new Wits Residence building. Cars are taking off in all directions. I need to get home. It is four in the afternoon.

Rushing to cross De Korte street, the sun makes its last movements of the day. It casts long shadows of buildings and people on the road. Going to Wanderer's street, there are fifteen people, five Rand each person. The taxi takes off and crosses the Mandela Bridge. A train is heading South. The rhythmic industrial sounds of metal hitting metal fade to the background. While the sounds of taxi's taking off and hooting dominate the sound scape. The arterial taxi rank to the Southern and Northern parts of Johannesburg, Metro Mall taxi rank is to the left as we turn into Bree Street, now Lillian Ngoyi Street. A man stands on the road, just off the pavement and opposite the shop. With him is a trolley of various kinds of fruit and water bottle with holes on the lid. He sprays the fruit. Taking off again, a Putco bus obstructs traffic and as we cross over to Sauer street, someone gets off.



29

Fig.29_Metro Mall taxi rank. Sketch by the author (2018). After Google Street View (Google Maps, 2017).

Taking off again, another taxi obstructs traffic. A man in the middle of the road is narrowly missed by a taxi. While Speeding down Lillian Ngoyi Street there is hooting, one taxi greets another and the other screams at the single passenger vehicle. Crossing Joubert street, which leads to Park Station, modernist buildings stand with overhangs that form canopies over the pavements. Underneath the canopies, a line of people is forming. This is where a taxi's park in public parallel parking spaces and load passengers directly off the pavement.



30

Fig.30_Bodies, machines, and the road at Wanderer's street. Sketch by the author (2018). After Google Street View (Google Maps, 2017).

The local taxi turns onto Wanderers Street and here too there is another street-side taxi rank. As I get off to walk East towards Claim street, I am confronted with lots of hooting, too many people, chatter, shouting, laughing, music and speakers. People have things to do and things to buy. Pedestrians walk on the road, between taxis, fighting them. There is another street-side taxi rank and another. MTN taxi rank is just ahead. Multitudes of people are weaving through. The pavements are dominated by a square or rectangular tent-like canvases with merchandise on them. Another man advertises his merchandise. Another offers directions to help locate the taxi to various destinations. Zionist church hymns blast from a nearby speaker, the air smells like Mala-mogoduⁱ fused with dirt and smoke.

i Mala-mogodu is tribe.

Passing derelict Drill hall, traders sit on the pavement just in front of it. Another taxi node pops up just opposite the derelict old cinema. The cinema has been appropriated as shops selling pungent spices. Entering high-speed Claim street, A Reavaya passes heading Southeast. A blind man sits on the pavement with white enamel cup, legs folded with his back against the wall of the church at the corner, clapping. I need to get home. Turning into De Villiers Street, the urgency subsides. Entering the taxi rank, the single file taxi entrance is also for pedestrians, walking alongside the slow-moving taxi, gravel, stones and, dirt. Finding the line home, I stand there, a train heads East, it whistles and screeches as it fades off.

Que-marshals, also known as taxi rank managers organise, count and direct people to the taxis heading to various destinations. There is inaudible chatter on the walkie talkies 'sitting on the waist of the Que-marshal just ahead. Waiting to go home. Plastic bags hang and sway in the trees. There are conversations; shouts and laughter which converge to hang in the space. A woman arrives at the rank selling boiled mealies. The smell fills the air. A Taxi makes an impossible turn. Another exits the single file exit. Standing. Waiting. A man at the trading stall just at the front of the line speaks to the women in the VIP Johannesburg Tembisa association membership line.

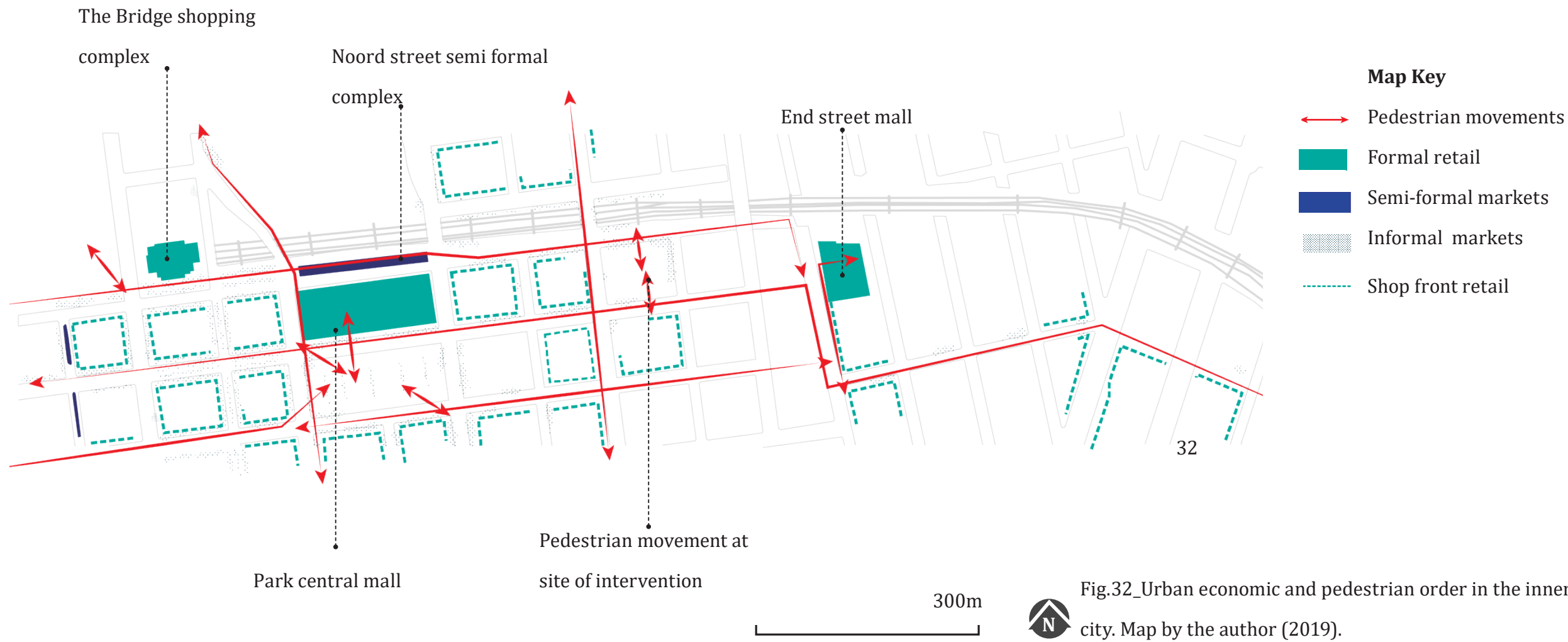
This card can be bought, Fifty Rand per year. It is about buying your waiting time back. How this happens is that the people with this membership have a separate line. When a taxi arrives, they get preference. A man sells combs, nail clippers and all sorts of small trinkets. Following closely behind him is two women. The blind one sings, while the other directs her and collects change. Home...The taxi rank is lined with retail shacks facing the inside. The rest of the canvas-covered shacks are facing the adjacent streets where taxis have taken possession.



31

Fig.31_Possession at Banket street. Photo by the author (2019).

i A "walkie talkie" is a two-channel radio.





33



34



Fig.33_Noord street market. Photo by the author (2019).

Fig.34_Isimbuvu street trading. Photo by the author (2019).

Fig.35_Urban economic and pedestrian order in Tembisa. Map by the author (2019).



36

Fig.36_Urban economic and pedestrian order in the inner city. Photo by the author (2019).



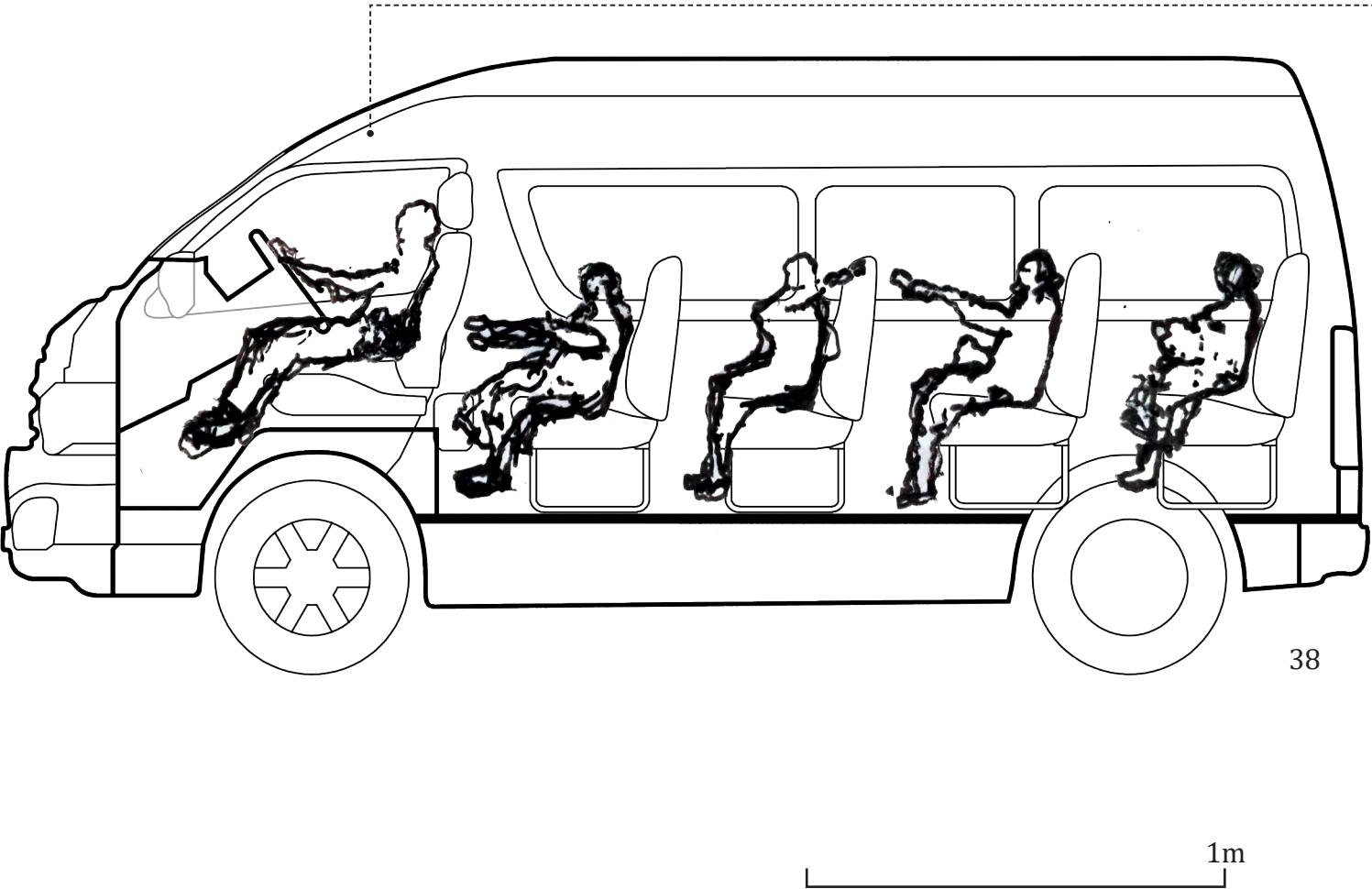
37

Fig.37_Urban economic and pedestrian order along the M18 road also known as Andrew Mapheto Drive. Photo by the author (2019).

What I observe at this taxi rank which is an unbuilt piece of open land and property that the association has re-appropriated. This is in alignment with what Simone iterates in saying that “Africans do make cities that work”, just not in the accepted ways or within parameters defined by governments. This is where if the resources, infrastructures and opportunities are “limited” then “existent materials”, spaces and movements will be appropriated/re-appropriated, “by theft, looting and heretical use of infrastructures, languages, objects and social practices that ensure that the available material passes through many hands” (Simone, 2006, p.328). As such, creating multiple functions and possibilities while simultaneously bringing together an array of different people acting through space and territories, all occurring and evident at the intersection that is a taxi rank. For Simone such activity is significant. In *“Too Many Things To Do”* he writes: “it is here that individuals take part in events, places and networks where many different activities do and could happen, homes become workshops, workshops become associations and associations become components of interlinked production, systems of buying, selling, making, cultivating exchanging and socialising” (Simone, 2014, p.26).

This is how it goes at this rank and the adjacent streets. The traders become rank managers. The woman who sells mealies gets a lift from the residence at which she cooks. Passengers find people from their home towns. Sometimes the men evade the torture of waiting by going to nearby bars, waiting for the peak to subside, especially month-end. It is a place layered and created by the actions of people interacting. The people are brought together by different trajectories; in this space different people find commonalities. At this site association between the traders, taxi industry and diverse passengers start to form or re-form. These networks open the horizon to the possibility of “something else” (Simone and The Max Planck Institute for the Study of Religious and Ethnic Diversity, 2018).

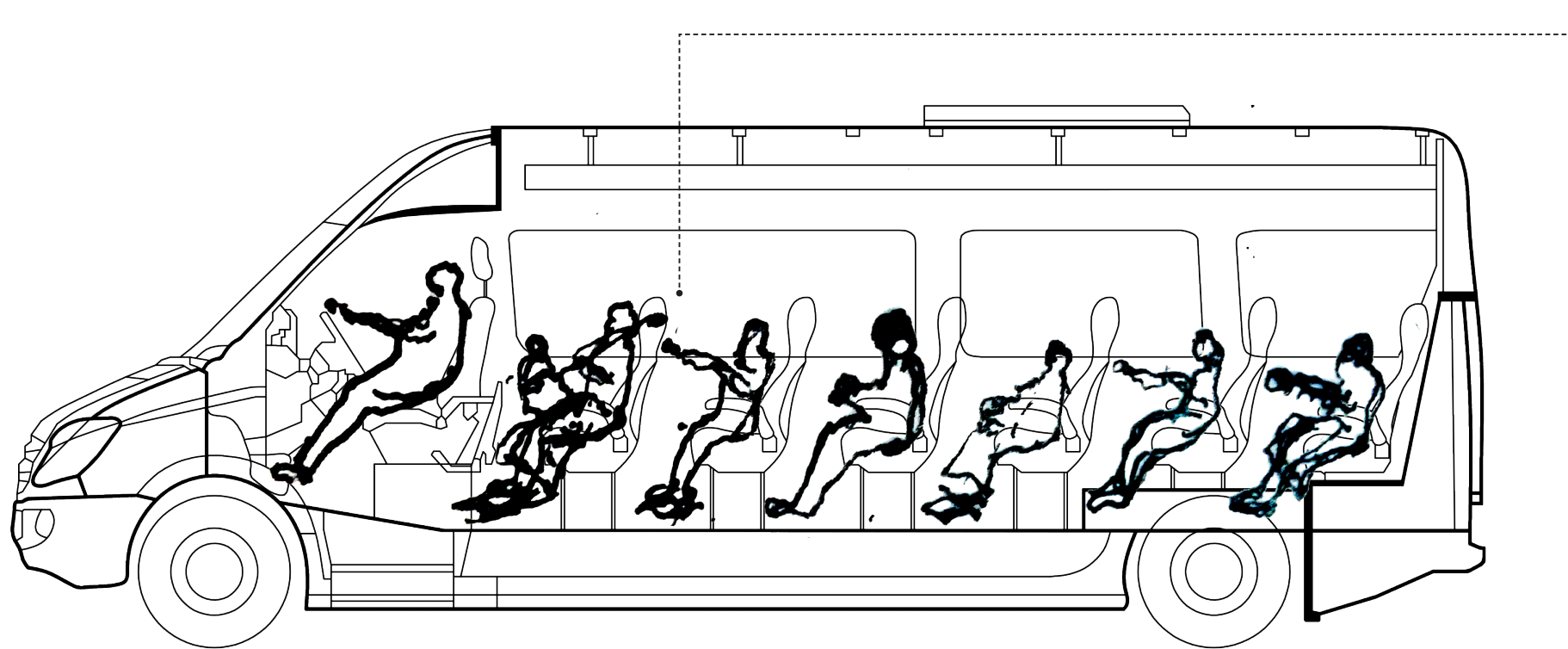
3.Home: the politics of belonging



Below is a narrative of one form of sociality:

A driver in a Quantum one morning asked me in IsiZulu: “Are you in a rush?”. While I was making mental calculations of the change for the money coming from the back by order of seats I replied: “no”, also in Zulu. As the taxi passed Tembisa Plaza, I was finished with the accounting, I checked with him that his money is Three hundred Rand (Twenty Rand per person multiplied by fifteen). He says thank you and goes on to say: “well, because you aren’t in a rush I will drive slowly and properly, in Zulu; “Ngizohambagahle” after which he explained that he had been up since three in the morning because his ranking position was number 5 and at 9 o’clock(after rush-hour), he had already been to the inner city and back 3 times.

Fig.38_Cross-section through Quantum taxi: a heterotopia.
Drawing by the author (2019)

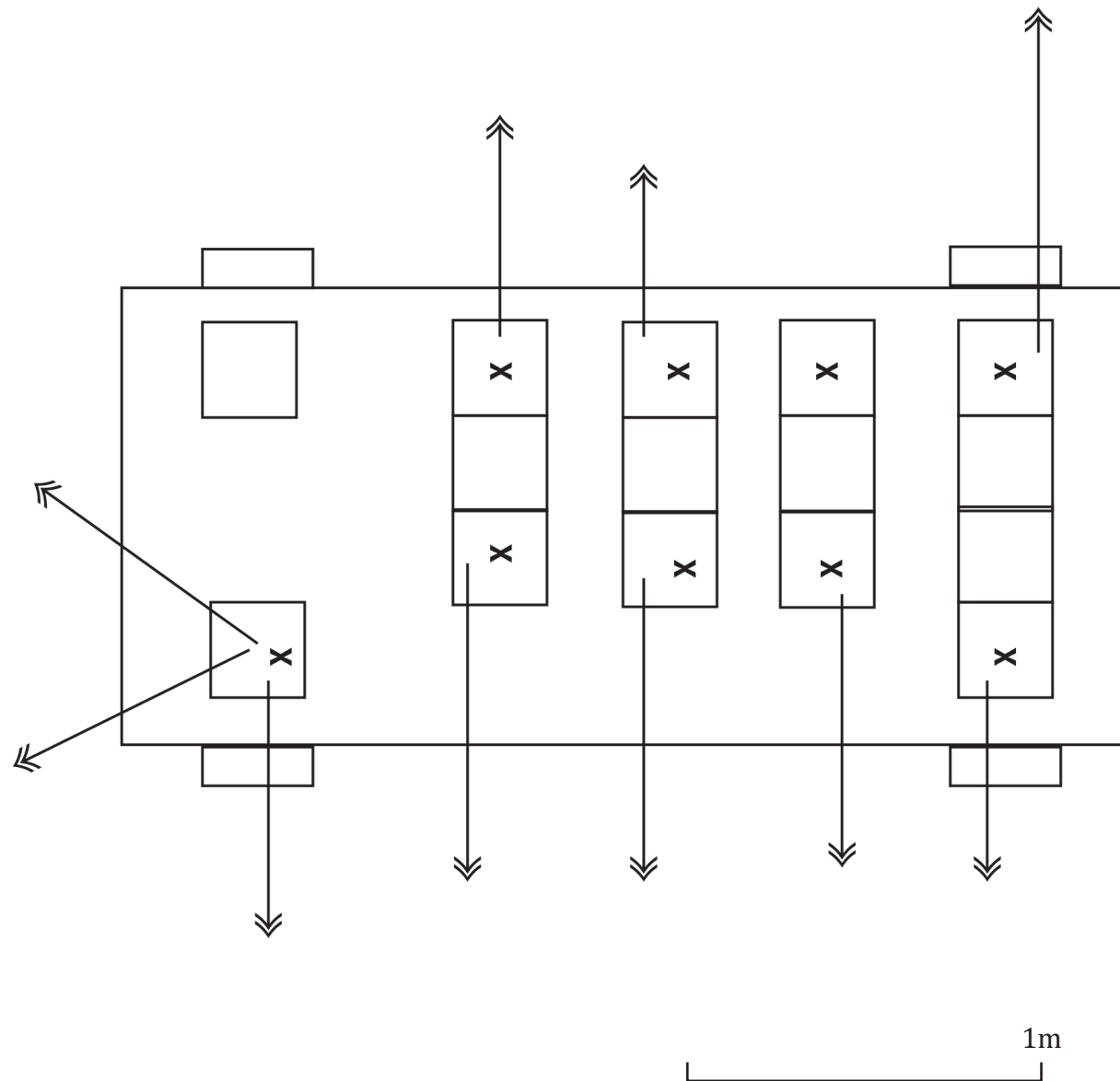


A taxi has an economic order as well. Taxi's utilise cash economy.

39

1m

Fig.39_Cross section through a Sprinter (a mini-bus) taxi showing the socio-spatiality and economic order. Drawing by the author (2019).



40



41

Fig.40_Diagram of a typical plan of taxi and the positioning/vantage points of observation and operation. Diagram by the author. (2019).

Fig.41_Seeing close and seeing far: the end of Straight line (Rev. RTJ Namane) in Tembisa. Photo by author (2019).

Belonging through embodied economies

The Johannesburg Tembisa Taxi Association calls the taxi rank “Isibaya”ⁱ, here, the taxi is a metaphor for a cattle economy occurring in the city. It is a space not designated for current use, a space where rural networks and ideologies are brought into the urbanising city. Creating a source of income and occupying a space in which you have been historically prohibited from occupying because of society’s entrapping binaries: the case of the city of Johannesburg; of rich versus poor, formal versus informal, black versus white, and, South African and immigrant, is an act of positioning oneself in space and enacting one’s identity onto that space, it is an act of claiming one’s right to live, a claim to existence, to citizenship.

This reads in conjunction with Joel Modiri’s reading on identity politics through the lens of Steve Biko’s “Black Consciousness” (Modiri, 2017). Positioning is a claim to human right without permission, in this instance, through the praxis of informality. It is a violent act against “structural violence”. Can this claim made by the taxi industry and the informal trade that follows, be read as redefining the identity of inferiority that has been thrust on the existence and the agency of the marginalised by one of the meanings of Edward Said’s “Orientalism”:

i Isibaya refers to a kraal in IsiZulu, it is also a metonym for cattle economies.

which is of the dominating subjugating powers of the past and the contemporary ones that perpetuate it on the streets of the CBD of and between the peripheral townships in the City of Johannesburg?

A taxi in this context is an appropriated piece of technology. Advancements in technology were not intended to empower the governed, but they have (White, 1997). Some taxi drivers and owners take such ownership on their vehicles. They write slogans, quotes as well as popular culture stickers, often stuck the vehicles. These stickers are usually in the languages of the owner or the driver and will have a meaning. The “walkie talkie”ⁱⁱ being used at the inner city and in Tembisa is appropriated technology. It is essential to the management of the numbers of taxi versus passenger ratios at both sites, particularly during rush-hours. It is critical for the inner-city site as the holding and parking facilities are located at the edge of the CBD.

ii A walkie talkie is a two-channel radio

This is Bill Ashcroft's re-appropriation, not of the landscape, but vehicles and technology. Luise White points to this re-appropriation as expressed in *"Cars Out of Place: Vampires, Technology and Labour in East and Central Africa"*: the vehicle imagery drawn here points to the ideas about the map and erasure; "Tools, themselves properly used, could empower, ordinary Africans. Those who were skilled enough to use them lost something too, not direction, but their identity: they became invisible" (White, 1997, p.449). In the way that they become invisible, they also become "immaterial infrastructure" (De Boeck and Plissart, 2004, p.237).

The mini-bus taxi industry first operated as "Chevrolet sedans" which were brought about to address inadequate road transport provisions when the motor industry in South Africa started to grow. The initial operations were within localised communities (McCaul, 1990). Before the 1930s, there were no road transport regulations. These only came about as the *"Motor Carriers Act"* in 1930 and 1977 as the *"Road Transportation Act"*.

During this period the taxi industry evolved to "kombi's". Kombi's were 10-seater vehicles: their operations were illegal but they covered greater distances because the coming into effect of the *"Group Areas Act"* caused parts of the population to live further from city-centres. The transport act created a "loophole" for the taxi to operate. As McCaul states: it defined a bus as a motor vehicle designed or modified "for the conveyance of not more than nine passengers, including the driver" (McCaul, 1990, p.35). So the kombi/taxi operated as an eight-passenger carrier, the first major heretical move made by the taxi industry (McCaul, 1990; Simone, 2006).

Commuters favoured taxis for its efficiency and faster movements in comparison to the state-owned and provided, rail and bus modes. As such it became a "threat to the monopoly" of the already established modes of South African transport (McCaul, 1990, p.50). Hence in drafting legislation, the national transport commission was "hostile" to the taxi's often making permits hard to obtain and enforcing the "permit system" through the heavy surveillance by the railway police. However, mother industries of mining and finance were in favour of the taxi industry as it ensured the transportation of their labourer's.

The transport industry has been highly politicised in South Africa with the deregulations following in 1986, in tandem with bus boycotts and the pressure of the 1976 youth uprisings. This deregulation caused an oversupply of taxi's competing for customers and exacerbated the violence that was there from the onset (McCaul, 1990; Hansen, 2006). This contemporary operation of power in space that the taxi industry holds and exercises has inadvertently been created by the politicisations of the transport industry and the attitudes of disfavour held by both colonial and post-apartheid governments, in alignment with how Simone describes the networks and alternative ways of space making in the city, as the city is both a "setting and a cause" (Simone, 2006, p.358).

The struggles of the governed give rise to and cause resistance, as Foucault iterates in "*Subject and Power*". Taxi politics or the politics of the urban poor are not aimed at taking power for control and subjugation but to rather use power for accumulation, for attaining life, for now, for the present, for survival. It is productive power that operates on the backdrop of structural power. These movements and spaces provide us with unconventional space making practices

and are imbued with languages of a potential architecture of the future, situated in now-ness. It cannot be denied that these are underdeveloped and under-resourced spaces historically and presently. There is great suffering among the people that utilise and create spaces. They have been riddled with violence and they are also placing of immeasurable poverty (Simone, 2004b). The following collaborative thought of Rudosky, Kornberger and Clegg points to a reason but also points to the power of the people to do things for themselves.

"The history of architecture is an anthology of buildings of and by the privileged" (Rudosky,1966,p.1 cited in Kornberger and Clegg,2003,p.6) but there is a world of minor infamous, unprivileged architect, an architecture without architects, indigenous and evolving formed by users and developed just in time."(Kornberger and Clegg,2003, p.6).



Fig.42_Geo-political social space production:
Esangweni taxi rank in Tembisa. Photo by author
(2019).

42

On the Spatial Development Framework of the City of Ekurhuleni, Esangweni, an arterial taxi rank that connects Tembisa to most commercial centres to the West and surrounding, does not appear on the map as a part of the proposed development. Currently, it is steel and corrugated sheeting, traffic engineered shed. Taxi ranks are civic structures, the architectural language they use to be in the world should be civic and about the place, so, this is an erasure, caused by a post colonial administration, a layer onto the historical. This setting of invisibility/disregard provides the necessary darkness in the landscape to operate in heretical ways. Much like the Algerian homes, a landscape/space that is free from the gaze of control, therefore becoming one of non-cultural assimilation (City of Ekurhuleni Metropolitan Municipality, 2019b; Celik, 1997).

Taxi phenomenon postulates its cultural identity by being proud to speak indigenous languages, Zulu being the predominant one, but not the only one, there is an interaction of Sepedi, Sesotho, and Xitsonga all the languages of the all the countries of South Africa, popularly known as the official languages (Minh-ha, 1995).

Language is important because it has been used by imperialism as a tool for domination. According to Ashcroft, this is the reason the use of language is a transformative tool (Ashcroft, 2001). So, the taxi industry is maximising this invisibility. It becomes a layer of operation, and another is that of inscribing their indigenous languages, expressions and names to objects and places. This is about finding a way to belong to a place from the vantage point of a place origin, here place not regarded as temporal, but rather an association to a network, a culture. The intermingling of the languages (which is cultural expression and reformation), with a collectively appropriated machine, on appropriated geography, bring forward the idea that identity is always in flux. Being African in the city is not a homogeneous endeavour, but there is a collective, distinctive, and layered way of the contemporary urban African. The taxi is one. It makes possible the transformative act of crossing/erasing boundaries of access and control (Ashcroft, 2001).



43

Fig.43_A home in the city: Esibayeni taxi rank in the inner city. Photo by author (2019).

The woman with the bucket selling scones at the entrance of Esangweni rank, the man with the trolley selling sweets, the people, and the scale of the things that they carry, how they consume space and make space, it is all embodied. It is an assemblage about the body. These are modes of accumulation that are about human scale. In the instance of the taxi, it is about incessant assimilation of the machine onto the body (De Boeck and Plissart, 2004).

We can also start to think of people as place, therefore a taxi is a social space. It is social space in various ways: After the morning “rush” hour taxis operators park their taxis along the pavements and in the taxi rank terminals while they wait for their turn to load passenger, this is space production- it blurs the threshold’s between the streets the pavement and the taxi; When the taxi is moving, the taxi itself becomes a social space, a moving theatre, a space where conversation, squabbles or silence can occur, a space of interaction, a communal space. And then there is still the map, on the map, a taxi’s socio-spatiality is political.

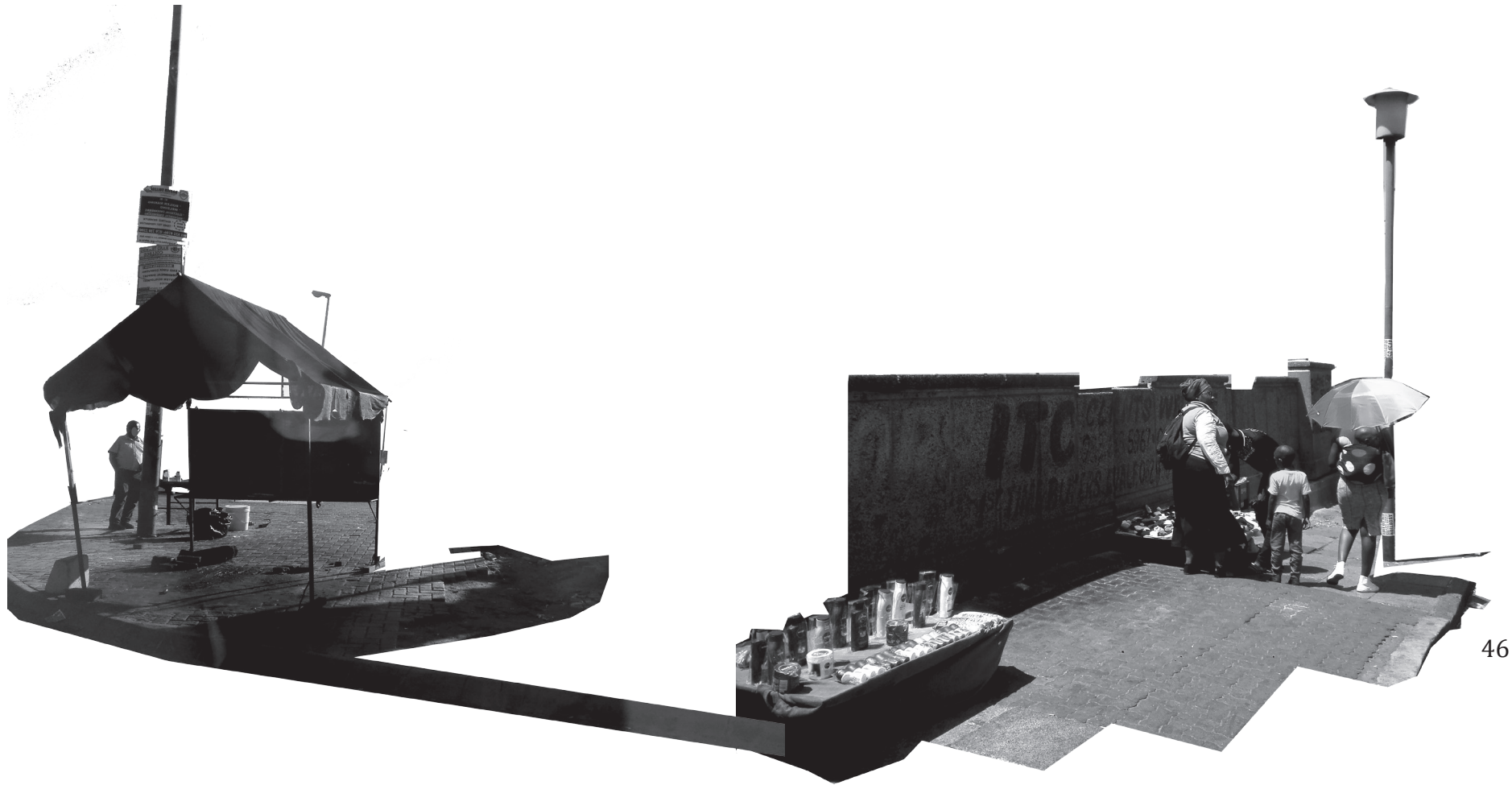


Fig.44_Embodied economies and assemblages about the body: waiting for customers to come by, waiting for the taxi and waiting to go home Collage by the author (2019).



45

Fig.45_Embodied economies and assemblages about the body: to's and fro's, walking to stay alive. Collages and images by the author (2019).



46

Fig.46_Embodied economies and assemblages about the body: the reprieve of off-peak times. Collages by the author (2019).



47

Fig.47_Embodied economies and assemblages about the body: moving to position oneself. Collages by the author (2019).

Home: finding a place

On the issue of home, Tembisa is a township that was officially established in 1957, around the times of the promulgation of the Nationalist's government "*Group Areas Act*". It is a previously dormitory township in the East Rand, now under the administration the City of Ekurhuleni Municipality. It was created as an erasure of the African urban population, through influx control. In addition to that, the different parts of Tembisa were divided into different ethnic groups, for example; Tsenelong is known to have been a Bapedi Section of Tembisa, sections like Entsonalanga is Zulu and so on. This is a choreographed double "Separation Development" where nationalism appropriated native languages (Minh-ha, 1995;South African History Online, n.d.).

Tembisa is a subject of the map and 40-Kilometres away from the inner-city. It's very initial inscription onto the landscape is in the language of imperialism. This brings me back to Abdou Maliq Simone's "setting and causes" and makes the case for development and transformation in Tembisa: "Cities remain at least officially inscribed in a narrative of development, but development as a specific modality of temporality is not simply about meeting the needs of citizens. It is also about capturing residents to a life aesthetic defined by the state so that they can be citizens" (Simone, 2004a, p.1).

The home was set to be dormitory and an in-between space between the homelands and the city. And, because it was designed that way, there is a material lack in Tembisa. So going into the future, we need something else to look up to, other than the blinding light from "Ama-Apollo"ⁱ, a different icon for the South African township. In the same way, that habitation, movement, and embodiment continually inscribe new layers onto the cityscape. In the township, Africans not only inhabit and re-appropriate the streets but the matchbox houses too. Looking at taxis as a point of focus, both the inner-city and Tembisa have poverty of material space, but this is also the condition of possibility (De Boeck and Plissart, 2004).



48

Fig.48_Apartheid designed floodlight in Tembisa. When the lights go out, intersections and alleyways become unsafe zones. Photo by the author (2016).

i "Ama-Apollo" is a name given to the apartheid township flood lights

Thomas Hansen writes in *"Sounds of Freedom: Music, Taxis, and Racial Imagination in Urban South Africa"*: a township is "a space of blackness, that is plebeian, no-nonsense, defiant, and potentially violent" (Hansen, 2006, p.188). This is also true of Tembisa. So, home is a position of origin/operation/ creation and a heterotopia. The city, taxi ranks and intersections are heterotopias. These are spaces where the conditions of "disorder" and lack are also their possibilities.

Taxi ranks also have another quality which has not been discussed yet: they are iconic, place markers and way finders for multitudes of people arriving and leaving the city. Another way in which taxis operate is that they stop to load commuters at stop signs, intersections bus stops and wherever they can. Commuters use signs and hand signals to stop taxis. These signs are determined by the name of the place, connotations of the place, stories of the place or the images of that place (Woolf, 2014).

Noord Street taxi rank in the inner-city has MTN branding on the level that taxi's park. Now Noord Street taxi rank is popularly known as MTN taxi rank. The signs and the naming, this is about language and transformation.

Performance and sounds fill the spaces of taxi ranks. Sometimes it is traditional dancers; sometimes a teenager singing songs to make a few Rand and, the smells, the mealies at Esibayeni taxi rank. There is dirt too. So, in the way that taxis are way finders in the city, they can also be De Boeck's mirror. A mirror is that place that makes us take a pause, that has the semblance of home, where one can get a reprieve.

Where one feels freedom and where one belongs and where one can walk slow. Where there is food and dance. Where there are corners and niches hide to smoke and drink. In the African city, this means that it is also a place that reconciles the incessant flux of accumulation and burden of hunger with the dreams of building better horizons (De Boeck and Plissart, 2004). It is therefore inscribed in space as an image that is written in the language of home. It is also a metonym for the dreams of building. It is the dream to look upon the horizon and landscape, and, witness one's accomplishments. To see things, change.

Simone writes in *“For the City yet to Come: Changing African Life in Four Cities”*:
“In city after city one can witness incessant throbbing produced by the intense proximity of cooking, reciting, selling, loading and unloading, fighting praying, relaxing, pounding and buying all side by side on stages too cramped, too deteriorated, too dense with waste history and disparate energy and sweat to sustain all of them” (Simone, 2004a, p.1).

This is what the new typology of taxi ranks wants to be: a beacon that is not only a public amenity of safety and enjoyment but, that also captures and highlights the phenomenological everyday experiences of commuting, moving and simply being in heterotopic Johannesburg. More mealies, less dirt, less sweat. As an infrastructure architecture project, the typology also wants to be Kinshasa’s lamp post as illustrated by Filipe de Boeck in *“The Possibilities of the (I’m)Possible” In Kinshasa: Tales of The Invisible City*:

“On the corner between the main bypass road and the entrance to the commune of Mont Ngafula, someone started building a Fina gas station. It took several

years to complete, but the gas station finally opened in 2002. A couple of months later the owner placed a huge lamp post on the premise. Soon the gas station used its generator and therefore did not depend on the city, for its electricity supply, the lamp kept burning. In no time at all, the lamp post gave birth to a large number of bars cybercafé and a telephone shop around the station while buses and taxis began to use this as a terminus of their trajectory, thereby bringing even more people to the pass bars. Business at the nearby Fwakin hotel started picking again after many years.”(De Boeck and Plissart, 2004, pp.230-231)

Therefore the future of African cities lies not necessarily in buildings that are just buildings and architectures. It lies in infrastructures that facilitate sociality between different people with different trajectories (Simone, 2016b).

This means that buildings for these spaces become like the Mont Ngafula's 'lamp post', a catalyst for the movements and interactions of people. At Esibayeni, the lamp post is the trees on the appropriated site and when it rains, the umbrella. This networked phenomenon of capitalistic movements demands an architecture that speaks to its qualities of multiplicity, difference and belonging that is self-organising and can be transformed as needed. This is a search for sustainable architecture that has the capacity, flexibility, and dynamism to handle cities that are growing and expanding with transnational identities that are becoming. If people can be seen as infrastructure then, so can architecture: an assemblage that can be mutated, always ready to be enacted upon, embracing imperfection and the oscillations of evolution.



Fig.49_The possibility of something else for taxi ranks. Something other than a taxi rank, which can be an anxious space of belonging and not belonging. Sketch by the author (2019).



51

Map Key



Trees



Green spaces

Fig.50_Public amenities and green spaces in Tembisa. Where the topography allows, social activity happens along the river. Photo by the author (2019).

Fig.51_Open space alongside the river on Andrew Mapheto drive. Some residents use it as urban farming plots, others, as grazing land. Photo by the author (2019).



53



54

Map Key

Trees

Green spaces

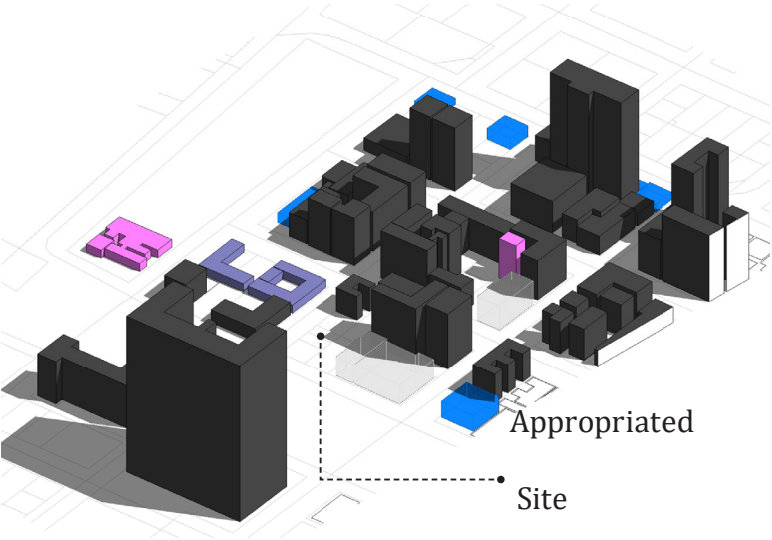


Fig.52_Public amenities and green spaces in the city. Map by the author (2019).

Fig.53_ Ellis Park stadium, view from Troyeville. Photo by the author (2019).

Fig.54_End street park. Photo by the author. (2019)

Site analysis



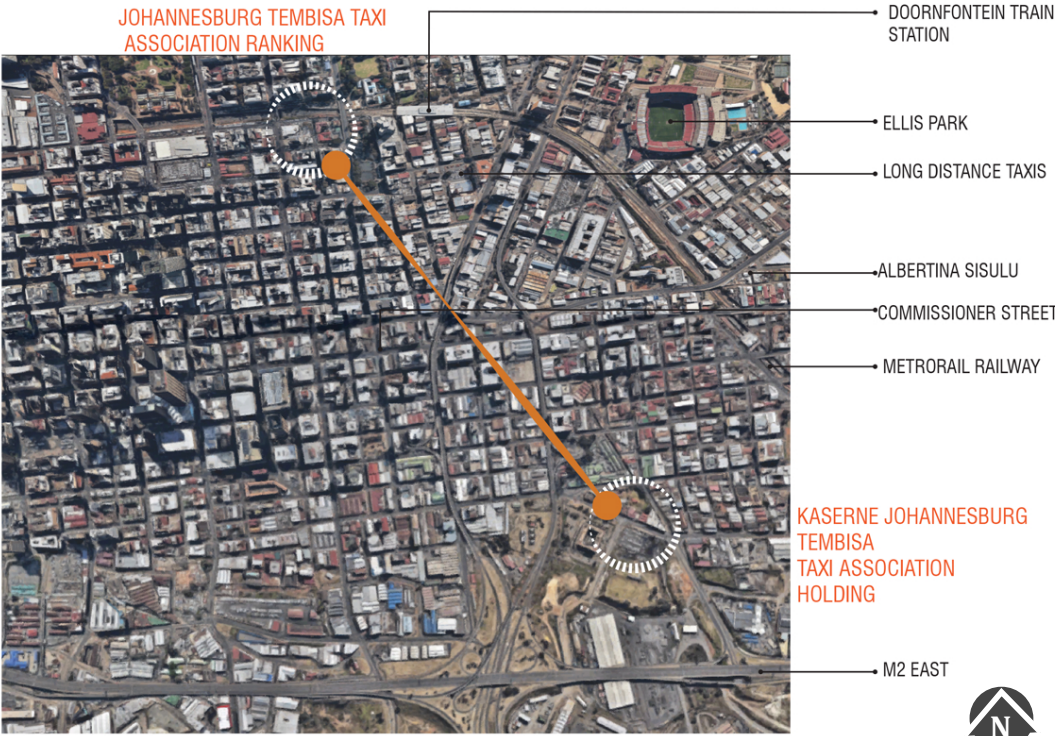
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Land Use Legend

- Schools
- Industrial
- Commerce/Retail
- Religious
- Transport
- Residential/Mixed use



56



57

Fig.55_Inner city ranking site land use. Diagram by the author (2019).

Fig.56_Tembisa rank land use. Diagram by the author (2019).

Fig.57_Position of parking or holding site in the inner city. Source, (Google Maps,2019)

Traffic engineering models and routes

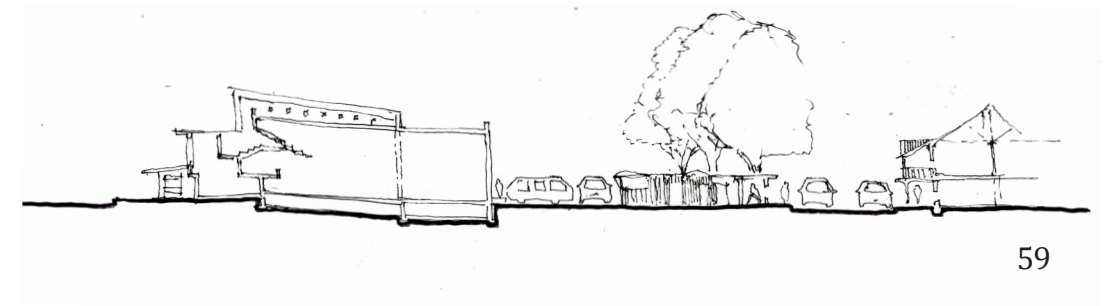
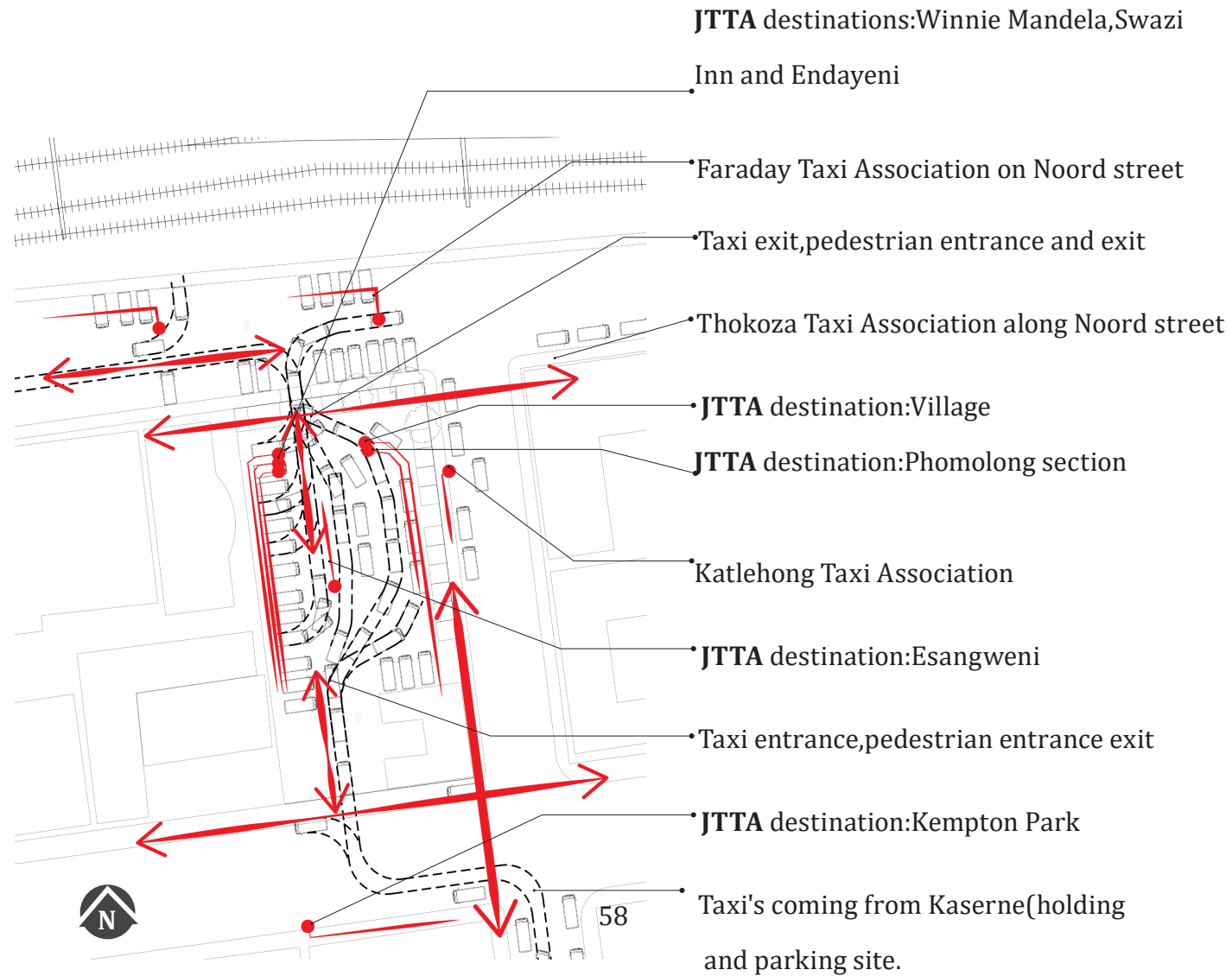
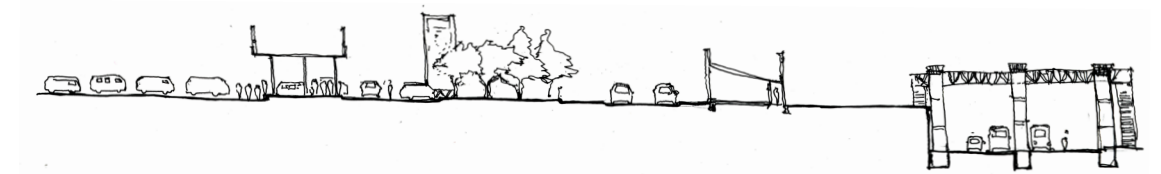
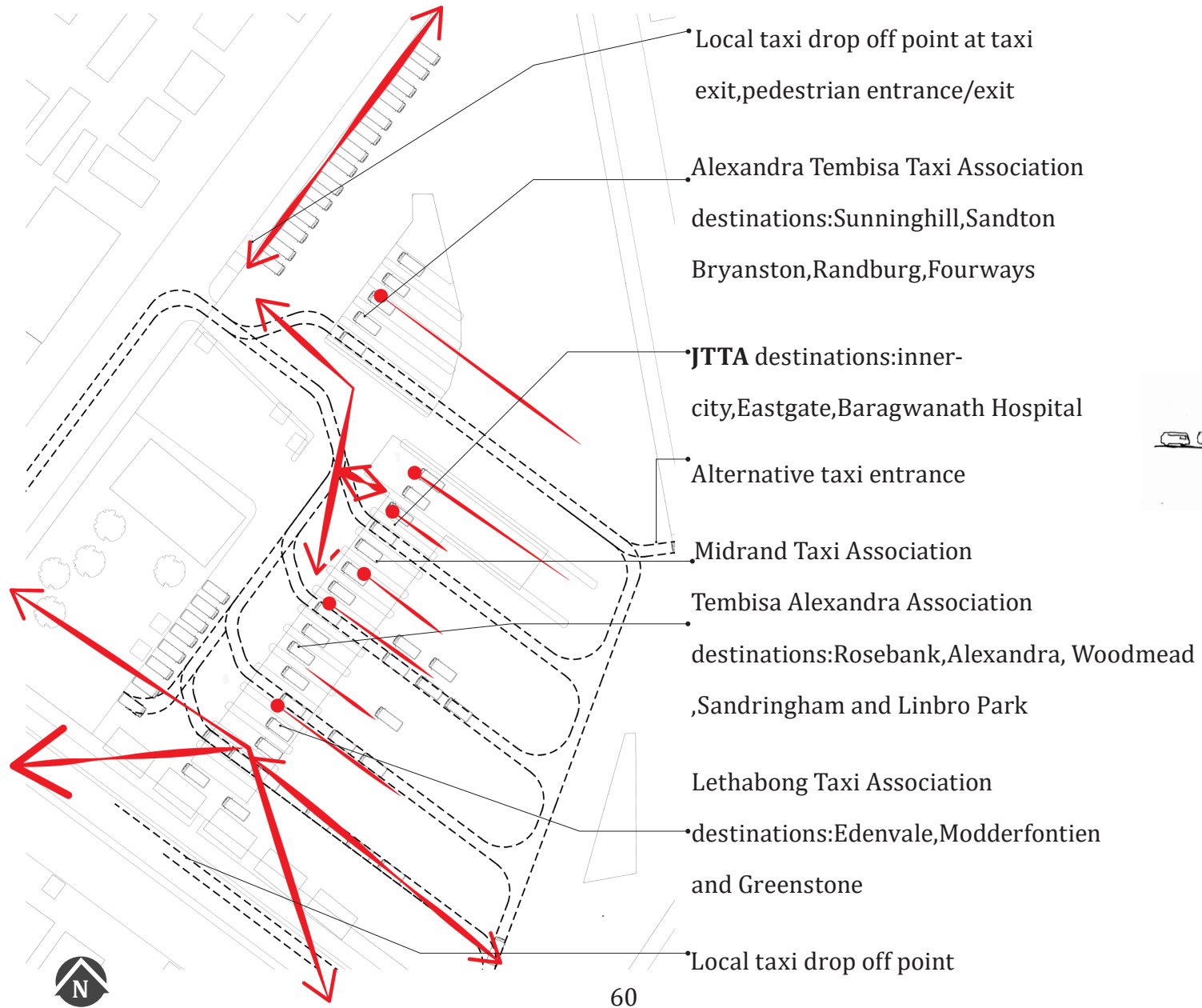


Fig.58_Inner city pedestrian movement versus taxi movements. Diagram by the author (2019).

Fig.59_Cross section through the inner-city site. Sketch by the author (2019).



61

Fig.60_Tembisa traffic engineering. Diagram by the author (2019).

Fig.61_Tembisa rank section. Sketch by the author (2019).

Design project trajectory: the concept of the urban proposal

Design clues permeate these spaces at the intersection. There are orders and organisations to be capitalised upon and, through design and in capitalising them recreate and innovate them. Just like how these spaces function: how they transform intended use of spaces, objects, and functions into the unconventional, the architect can transform these ways of being in space into ways of being sustainable. The taxi industry or the minibus taxi industry is multiple, like a rhizome. It generates multiplicity: by opening many ways of attaining a livelihood. So, it is also in need of multiple developments and improvements.

The conceptual proposed development for this report is a networked development project of taxi rank facilities. The development intention is to a corridor of freedom to the East, the concept of one building across three sites. Three sites have been earmarked for the development because they function as different nodes along the same line. The site in the inner-city (Esibayeni) ranking has the potential to be what Metro Mall in Newtown is for Soweto and the North, an artery. This is what Esangweni already is, however, its

architecture does not show it to be so. For this development: the inner-city model of separate parking and ranking will remain, both components would be developed in the form of an architecture of belonging. The objective of this project is to find ways for the sites to earn an income, as a mitigation of the competition and terrorisation of routes and corridors. This is an attempt to match the immaterial infrastructure with the material infrastructure (De Boeck and Plissart, 2004).

4. Finding the architecture of the in-between

Folding Space: Searching through Play



62

What are the possibilities in form and geometry that a taxi's space production creates?

Fig.62_Searching through making. Collage by the author (2019)



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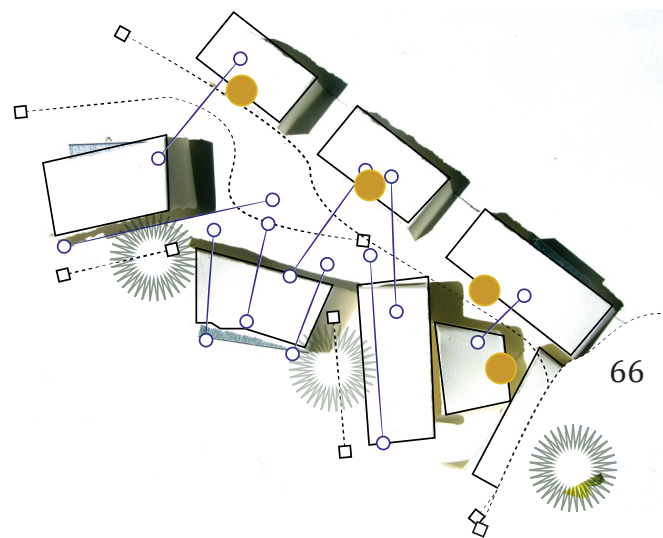
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Fig.63_Understanding the network of a taxi through the idea of a rhizome. The open circle represents the potential of a taxi rank forming. The other two represents existing taxi ranks and how there are networks within networks in these spaces. By the author (2019).

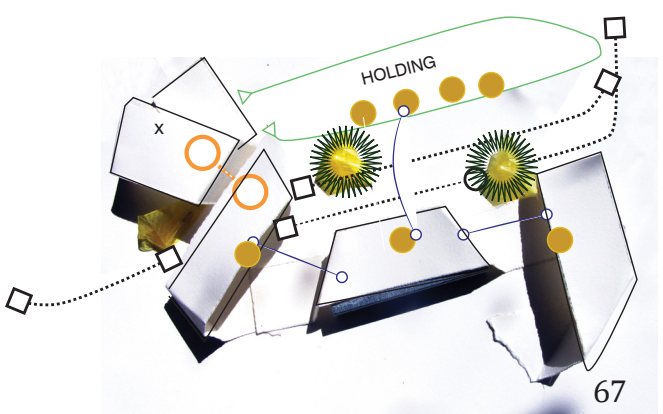
Fig.64_The power of words: finding the words to describe the project. By the author (2019)



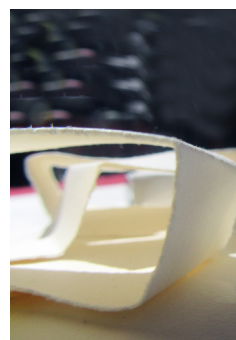
Fig.65_Paper conceptual model exploring the idea of the folded journey between Tembisa and the city. What are the spaces that are created by the folds? The idea of folding creates open and closed spatial qualities. By the author(2019).



66



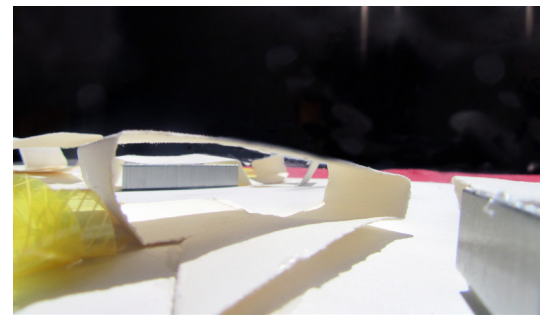
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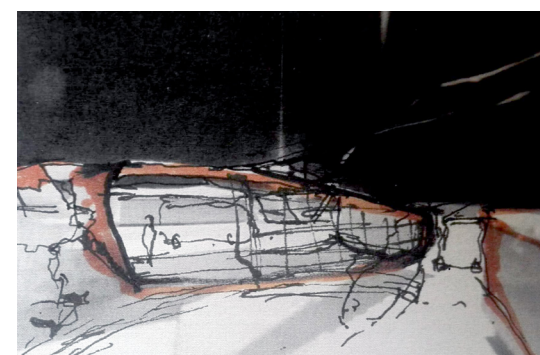
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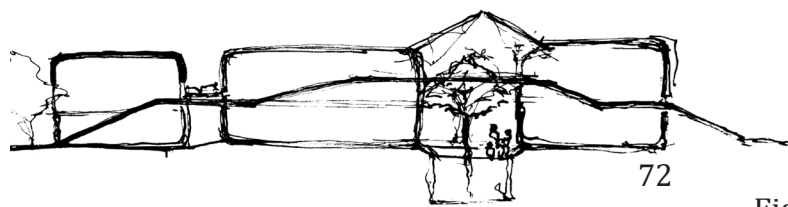
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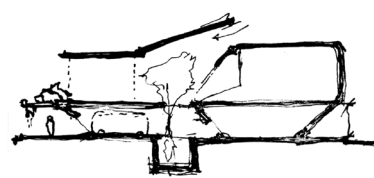
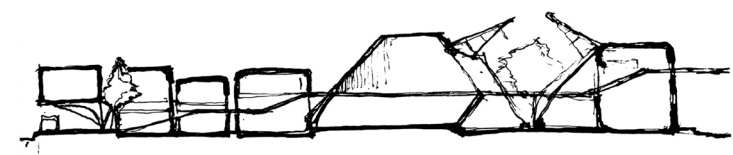
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Fig.66-67_Re-inscribing the social and economic order onto concept paper models. By author (2019).

Fig.68-71_Exploring what the form the folds can take and translating them to architecture. By the author (2019).

Fig.72-75_Multiplied uses exploration. This where walls and façades can become canopies or ranking spaces. By the author (2019).

Precedent studies

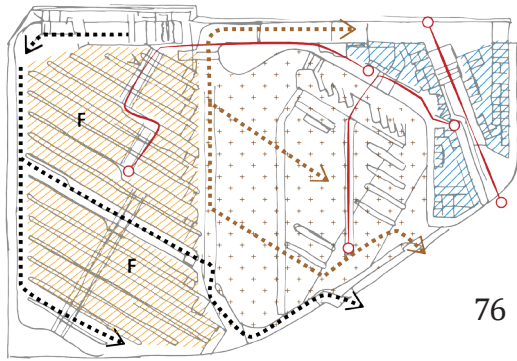


Fig 76_Ground floor plan showing traffic engineering and pedestrian movement. By the author after Urban Soup (2019).

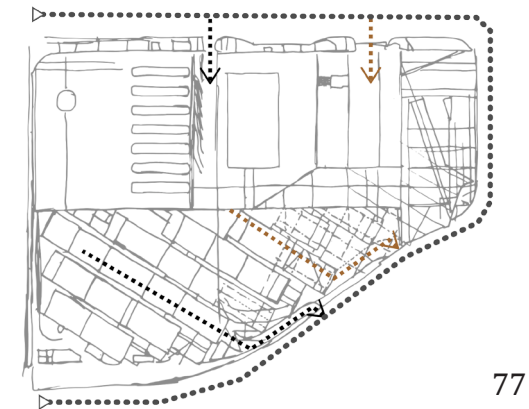


Fig 77 _Taxi and bus movements with a dedicated right turn lane. By the author after Urban Soup (2019).

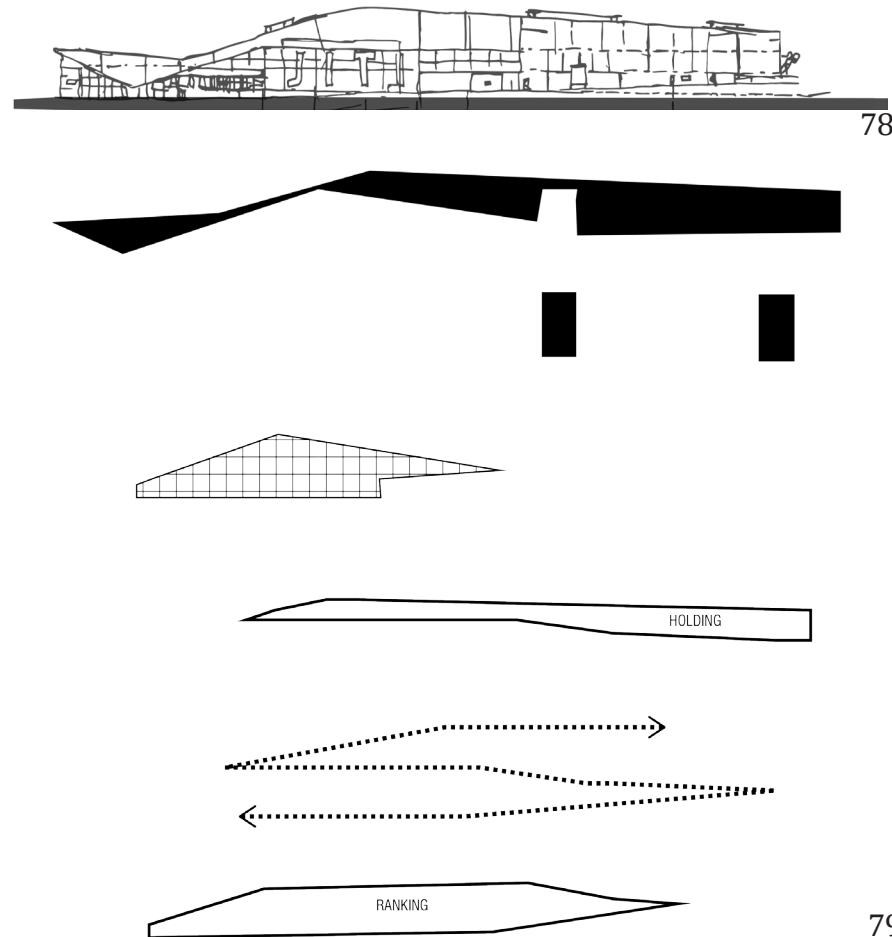


Fig 78-79_Elements of architectural consideration Diagrams by author after Urban Soup (2019).

Johannesburg International Transport Interchange

Designer: Urban Soup

Location: Harrison & Queen Elizabeth Street

Year: 2014 -Current

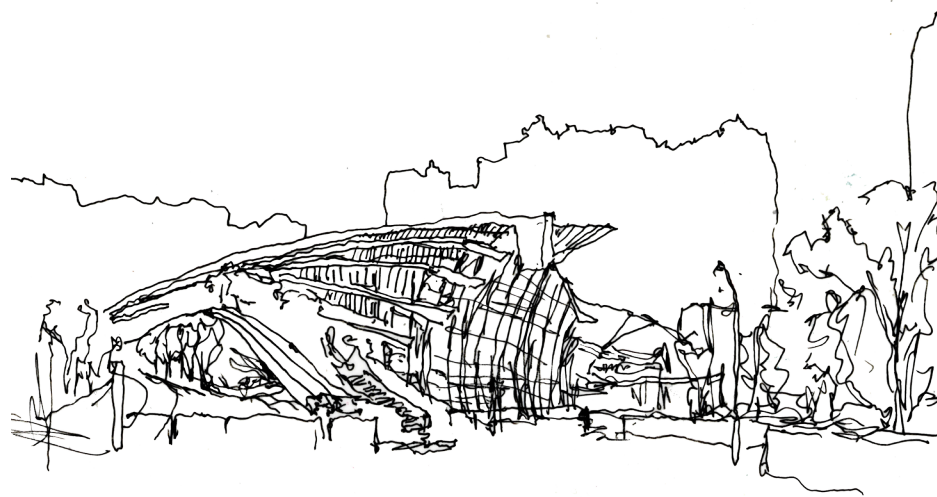
1. Getting light into the interchange
2. Fire escapes ,number of, distance in relation to scale
- 3.Ventilation is a key element for transport/pedestrian buildings this is for the extraction of fumes.
- 4.Holding Facilities ,operator amenities and offices situated on the upper floors for ease of movement from holding to ranking
- 7.Ranking,Offices,retail formal and informal at lower floors,to keep the ground floor more public



80



81



82

West Kowloon Station

Designer: Andrew Bromberg at Aedas

Location: Hong Kong

Year: 2018

Fig 80-82 _Civic gesture in creating parks and green roofs on arching roofs of the train station.
Sketch by the author (2019) after, (Warchol, 2019)



Parking Garage Cliniques Universitaires

Saint-Luc

Designer: Modulo architects, de Jong

Gortemaker Algra Architects

Location: Belgium

Year: 2016

83

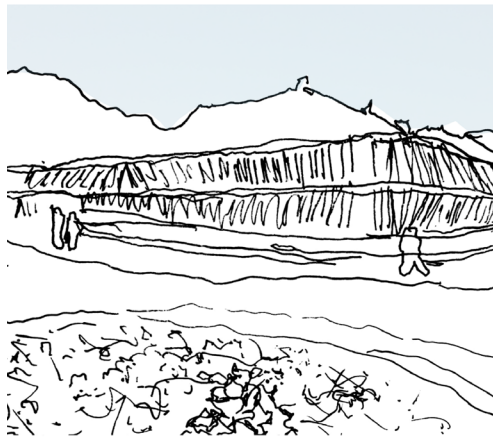


Fig 83-84 _Natural ventilation: the building is both inside and outside.

Sketches by the author (2019) after (van Landschoot, 2017).

84



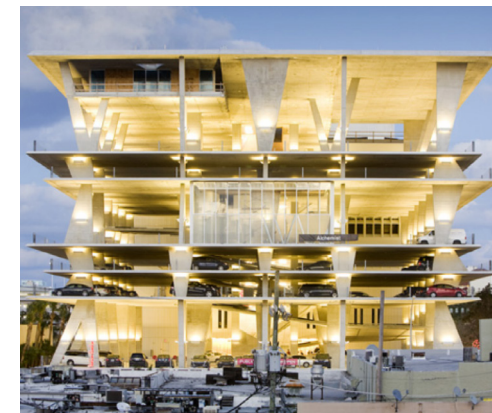
85

1111 Lincoln Road

Designer: Herzog & de Meuron

Location: Miami beach

Year: 2010



86

Fig 85-86 _Materiality and volumes of space make public architecture Photos by the architect. (Herzog & De Meuron, 2010).

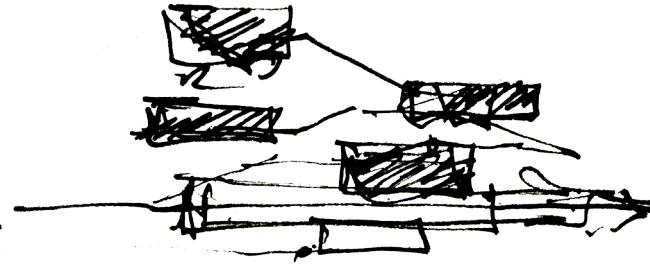
Urban design conceptual taxi rank design principles



87

Fig.87_Plan of concept. Sketch by the author (2019).

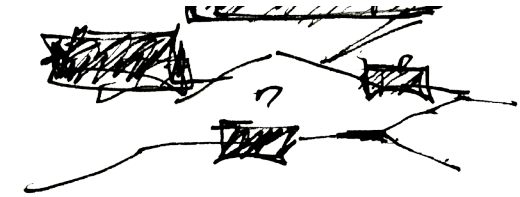
Design Principle: The conceptual idea for the new taxi rank is that it can be an assemblage. The idea is to take the street, along with the taxi ranking social and economic orders and networks and fold the street onto a constrained and (im)possible site like the one in the inner city. Create a piece of architecture infrastructure that re inscribes these networks of belonging



88

Fig.88_Conceptual section for design iteration in the inner city. Sketch by the author (2019).

Iterative experiment site: In the inner city, networks will be woven onto the vertical folding and unfolding on the challenging 60 x 30m site. This is the exploration of (I'm)possible.

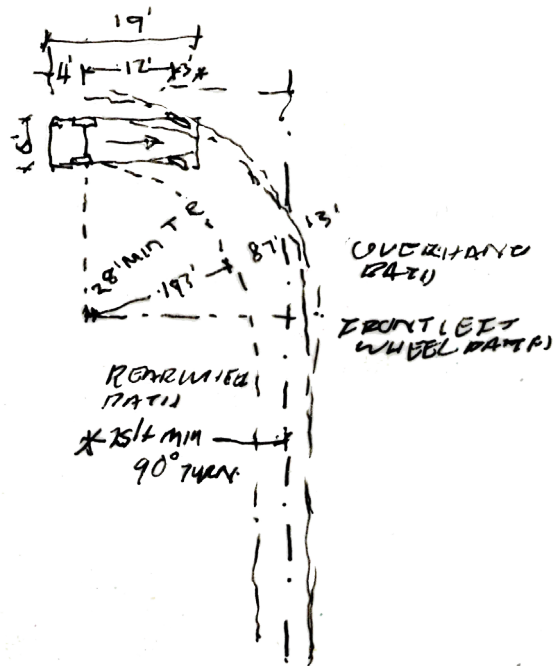


89

Fig.89_Conceptual section of the possibilities in Tembisa. Sketch by the author (2019).

Urban conceptual site proposal. The intention is to take the implementation of experimental site and write concept of folded street economies that form public amenities onto the Tembisa site, a concept of the same architecture, yet with a different tempo. This would be an act of transformation, by changing the language of existing taxi architecture.

Iterative design guidelines

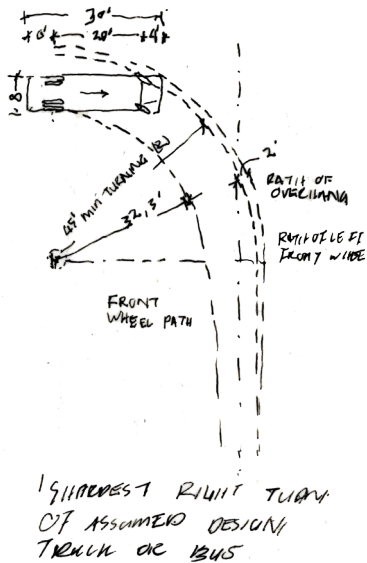


SHARPEST RIGHT TURN
OF DESIGN ORIGINATOR
VEHICLES

Design Vechicle-Sprinter Taxi or Minibus:

Wheel base.....	6.1m
Front overhang.....	1.2m
Rear overhang.....	1.8m
Width.....	2.5m
Minimum turning radius.....	12.8m
Minimum lane width.....	3.7m

91



SHARPEST RIGHT TURN
OF ASSUMED DESIGN
TRUCK OR BUS

92

Design Vechicle-Quantom Taxi:

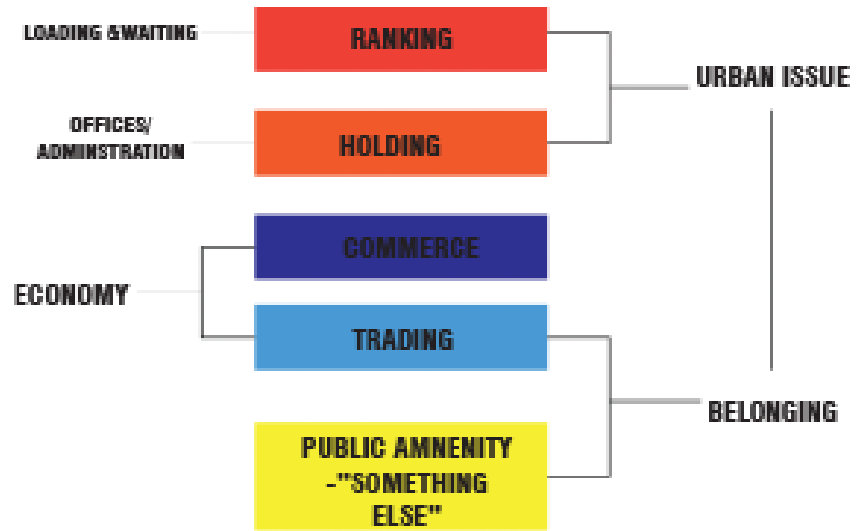
Wheel base.....	3.1m
Front overhang.....	0.7m
Rear overhang.....	1m
Width.....	1.8m
Minimum turning radius.....	6.2m
Minimum lane width.....	3.7m

93

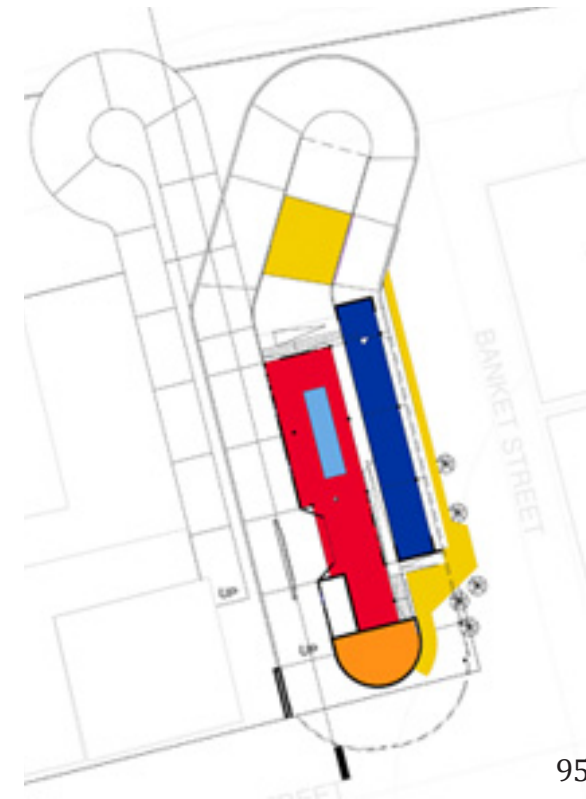
Fig .91 & 93_Taxi turning radius guidelines after the elevated road design guideline data. Source(Adam et al.,2005, p:63).

Fig. 90 & 92_Turning point diagrams after (Henry, 1950, p:125).

Programme



94



95

Fig 94_Programme emerging from socio-economic networks. Diagram by the author (2019).

Fig 95_Diagrammatic programme distribution in the plan. Diagram by the author (2019).

Programme	Size(m²)	Quantity	Total
Inner city site zoning			
Site area	1983		
Zoning 70%	1388	1 Storey	
Land use	Business		
Gross Let-able Area(GLA):Note when sites consolidated.	1388	3 Storeys	
			4164

Circulation			
1:12 Slope pedestrian ramps		10%	416,4
1:10 Vehicle ramps		40%	1665
Pedestrian lifts		x2	80
Good lift		x1	40
			2201,4

Ranking or loading taxi's(2 taxi's/15m²)			
Katlehong Taxi Association(KTA)			
Destination 1	30		
Destination 2	30		
			60
Thokoza Park Taxi Association(TPTA)	60		
			60
Faraday Taxi Association(FTA)			
Bez Valley/Eastgate	60		
			60
Johannesburg Tembisa Taxi Association(JTTA)			360
Phomolong Section and Village	60		
Swazi Inn,Winnie Mandela,Endayeni	60		
Kempton Park and Sebenza	60		
Esangweni and Birch Acres	60		
Oakmoor Train Station	60		
Bronhoorspruit	60		
			540

Holding facilities			
Holding taxi's(15sq/taxi)	700		700
Taxi association offices	250		250
Facilities office	50		50
Fleet management	50		50
Car wash	50	6	300
			1350
City commons 1 at ground floor level			
Deliveries	700		700
Refuse	100		100
Commerce(Spar-Shoprite)	200		200
Kitchenette	30		30
Offices	50		50
Reception and administration	250		250
Informal retail	400		400
Ablutions	100		100
			1830

98

City commons 2 at the third floor level:public amenity"a pause in the city"			
Biodiversity or park	1000		1000
Administration	80		80
Open air restaurants	180		180
Clinic and traditional medicine	100		100
Seating area	300		300
			1660
Hotel/residential/iconic element (6 storeys)			
	500	6	3000
			10581

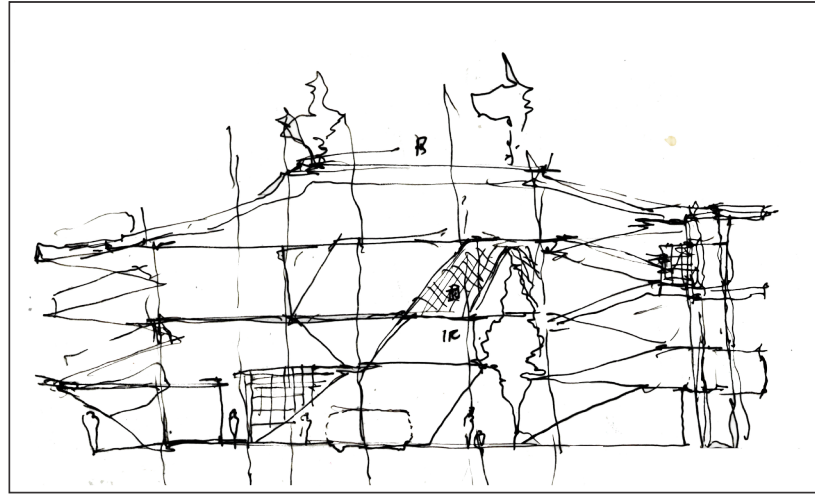
99

Fig .96-99_Detailed programme for the inner-city. Tables by the author (2019).

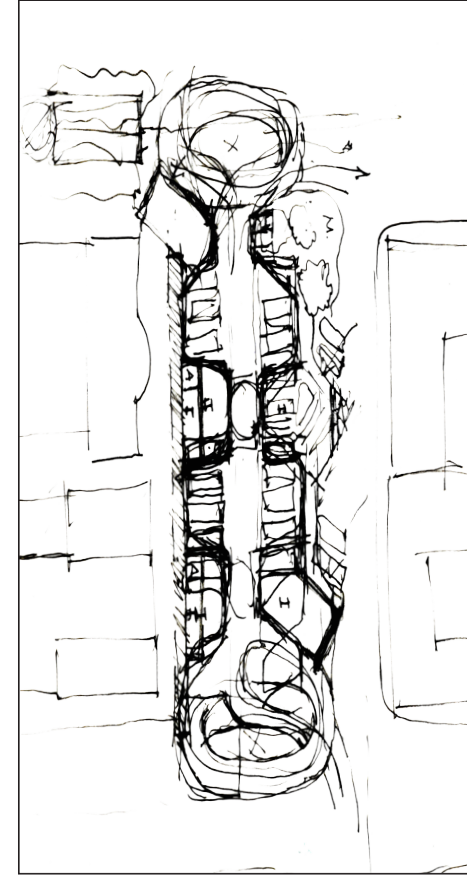
Initial iterations



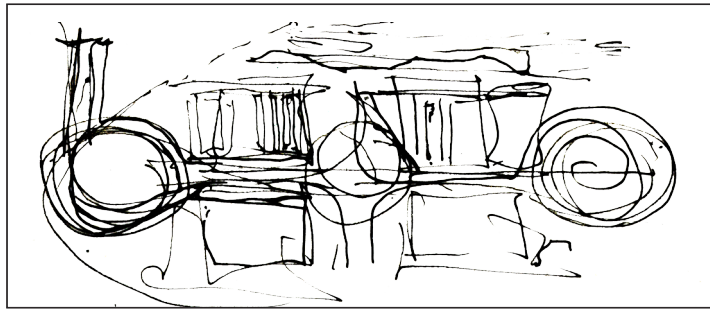
100



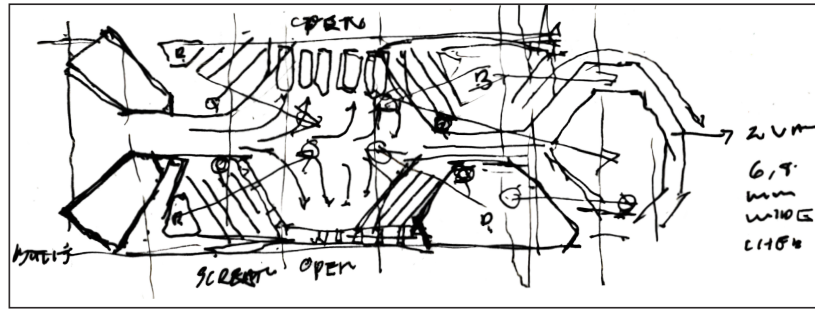
102



104

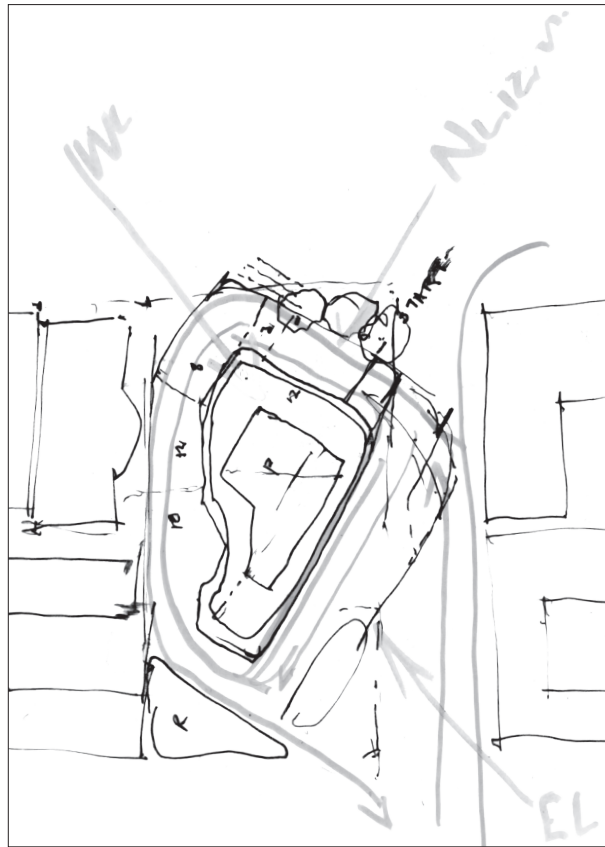


101

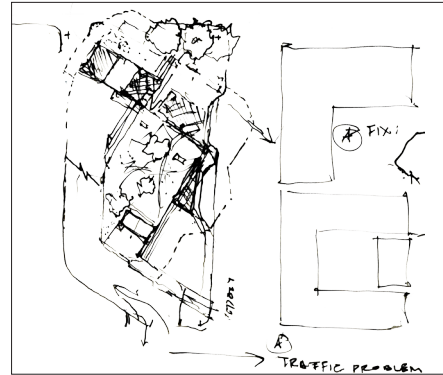


103

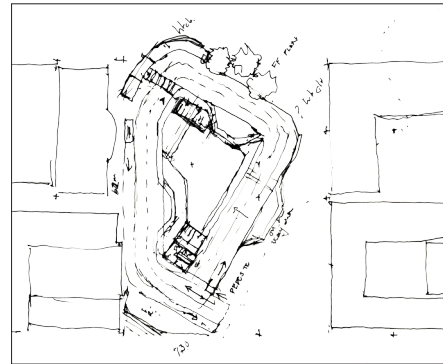
Fig.100-104_Initial design sketches: it is a reconfiguration the site's (Esibayeni) traffic engineering, it is stacked across many levels. This is an exploration of the folding concept of open and close, this is also about light, ventilation, and framed views and it creates ranking enclaves with seating and trading. The ramp length requirements make creating a two entrance and exit ramps on either side impossible. By the author (2019).



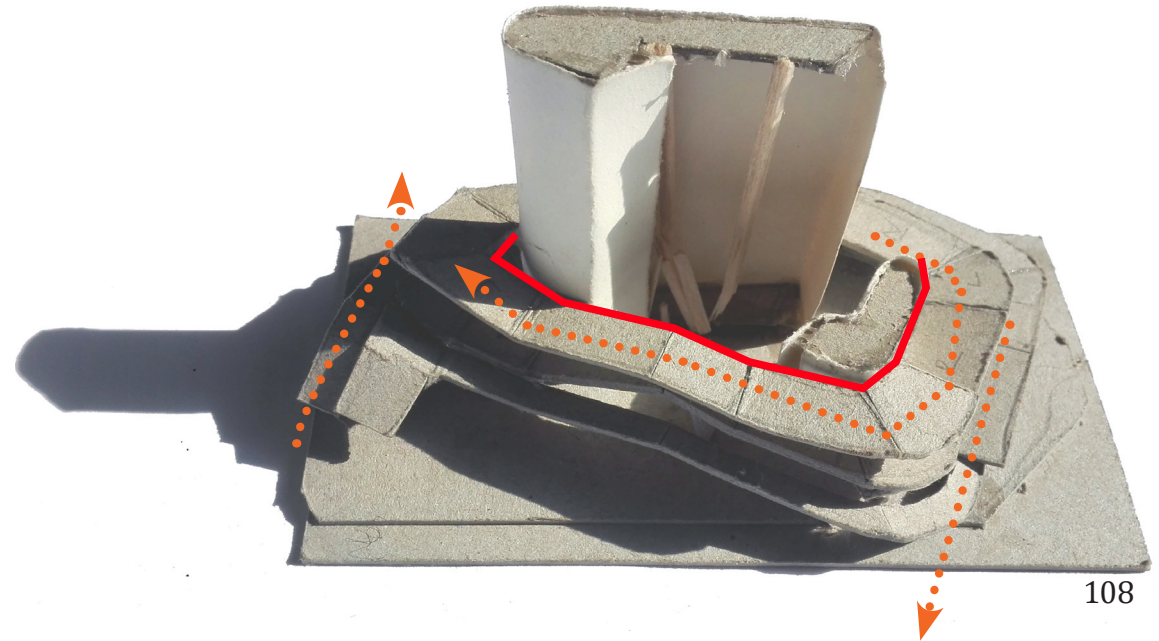
105



106



107



108

Fig.105-108_Figuring out the logic of movement: vehicle ramps on the extremes, pedestrian ramps next and ranking bays on the inside. The orientation is East/West for maximisation of afternoon and morning sun. The open and close condition is also about screening and shading. There are separate entry and exit for the taxi. Sketches by the author (2019).

Reflective thought: If,when the taxi's leave the rank they use Banket heading in the direction of the holding site,then the corner of De Villiers and Banket ,there will be congestion and if they head in the opposite direction,there is enough clearance for to mediate congestion.



109



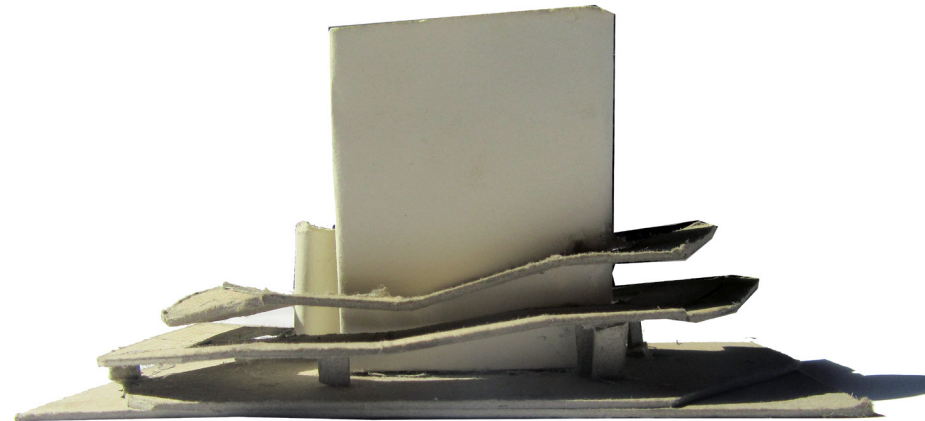
111



113



110



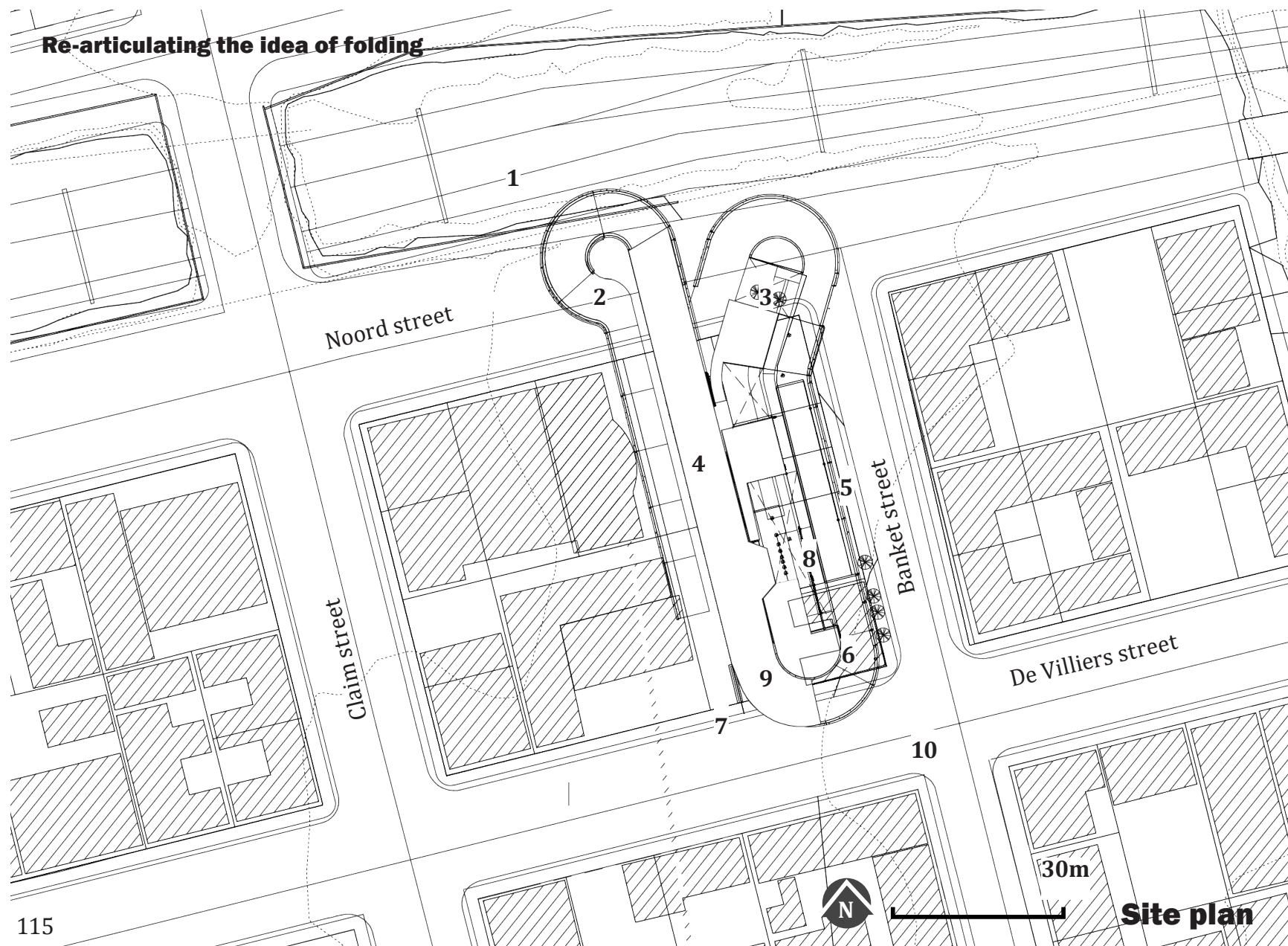
112



114

Fig.109-110_First design iteration model exploration. By the author (2019).

Fig.111-114_Second design iteration model exploration. By the author (2019).



1_Railway

2_Ramp re-appropriating the street at a raised level

3_Pedestrian plaza and entrance under the ramps (privileging people)

4_Folding vehicle ramps at 1:10 slope to create more space

5_Pedestrian entrance and market

6_Existing building on site to be demolished.

7_Taxi exit

8_Folding pedestrian ramps

9_Taxi Entrance

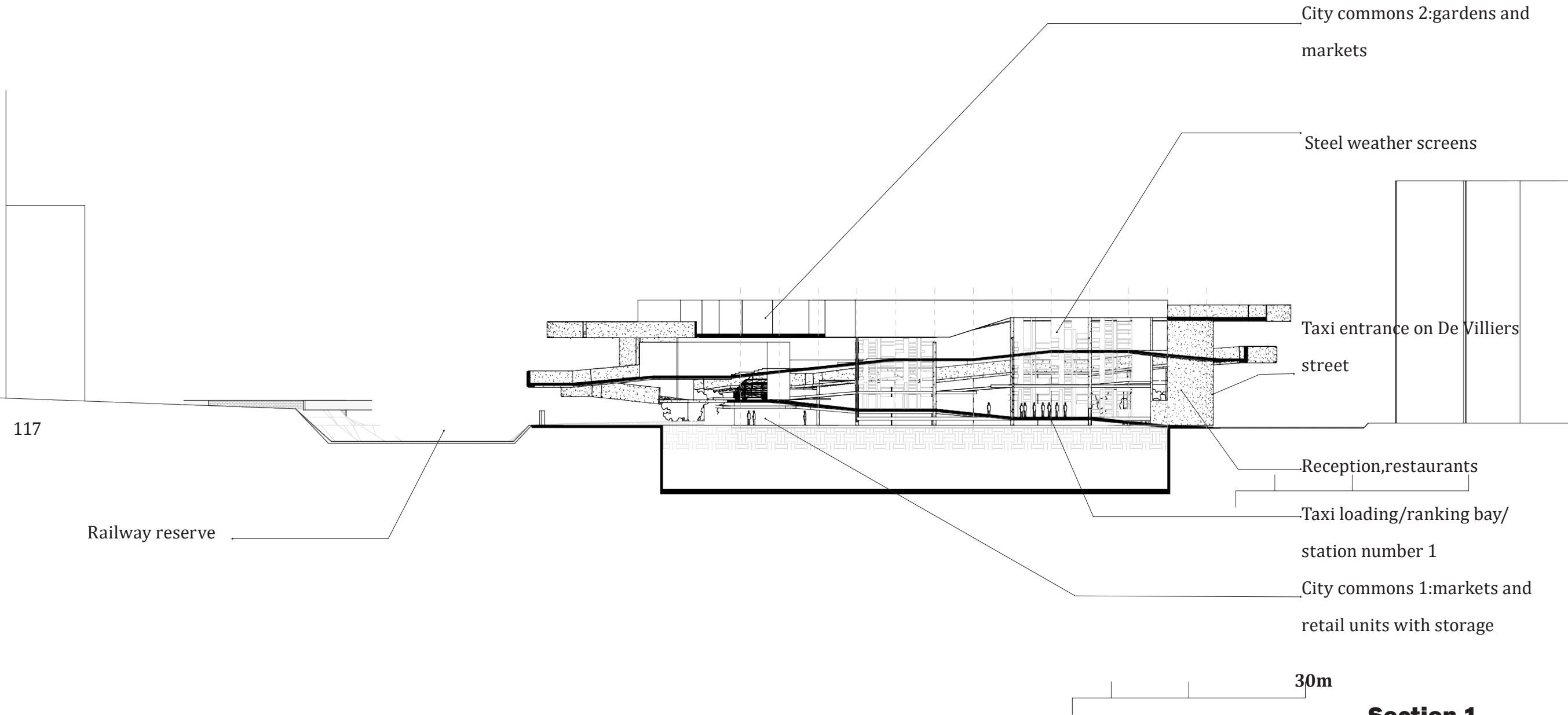
10_Taxing driving from holding site(M2E)

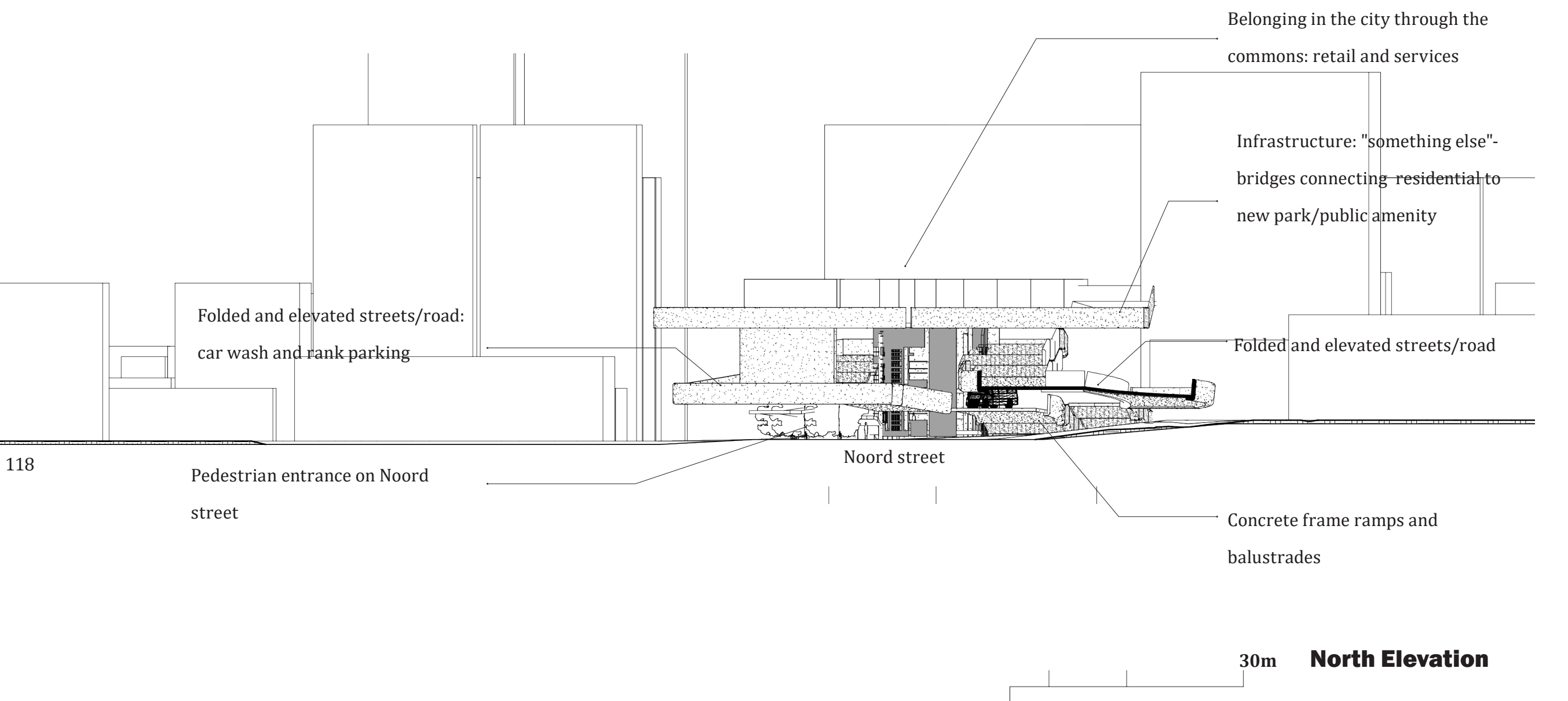
Reflective notes: The positioning of the entrance and exit of the taxi's causes congestion and possible accidents. This need mitigation. The building to be demolished is a heritage building in terms of being over 60 years old. Providing a transformative civic amenity is the justification to put forward for the demolition.



116

Fig.116_Inscribing new layers in the city. This is also a cause of congestion. Collage by the author (2019).





118

North Elevation

Belonging in the city through the commons: retail and services. The architecture is currently missing visual place marker/icon

Horizontal iconic in pedestrian walking view. Creates an unusual hovering element over the streets

Folded and elevated streets/road

Taxi entrance and exit on De Villiers street

Pedestrian entrance on De Villiers street.

Folds of the journey become openings and thresholds

119

30m

South Elevation

75

Landings between ramps become trading
areas and informal restaurants

Ventilation and sun screen

1:12 pedestrian circulation ramp

Taxi pick points 01 to have seating and trading
embedded

120

Taxi entrance on De
Villiers Street

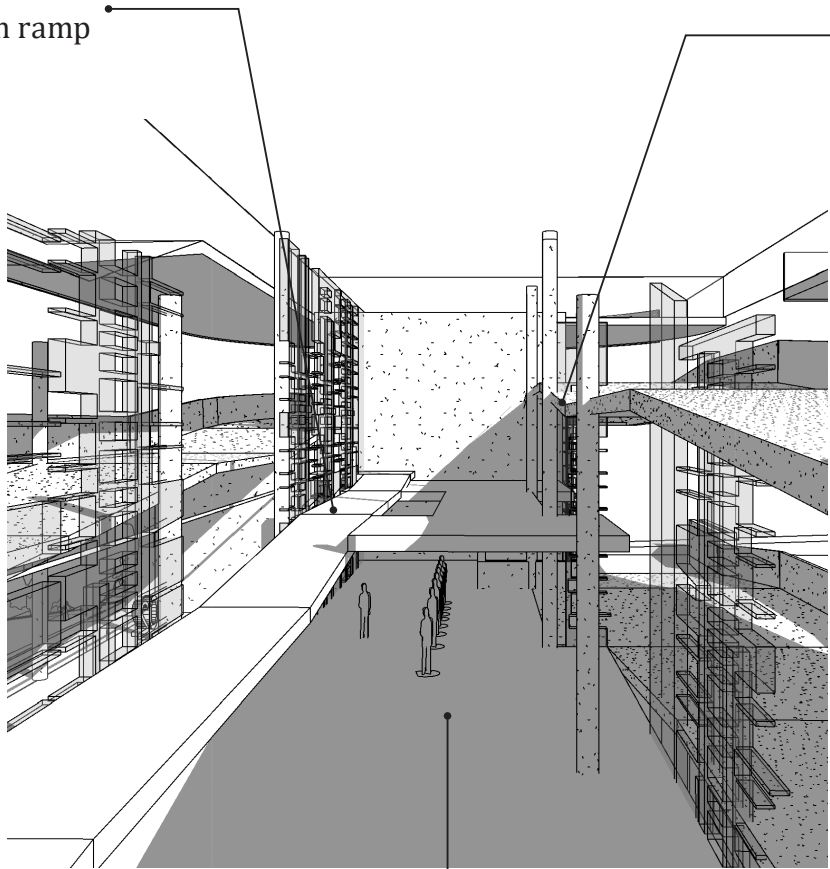
Facilities ,association
offices
and public ablutions

1:10 taxi circulation ramp

Perspective of the First-floor level of taxi pick-up points

1:12 pedestrian
circulation ramp

Folded and elevated streets/
road/ramp

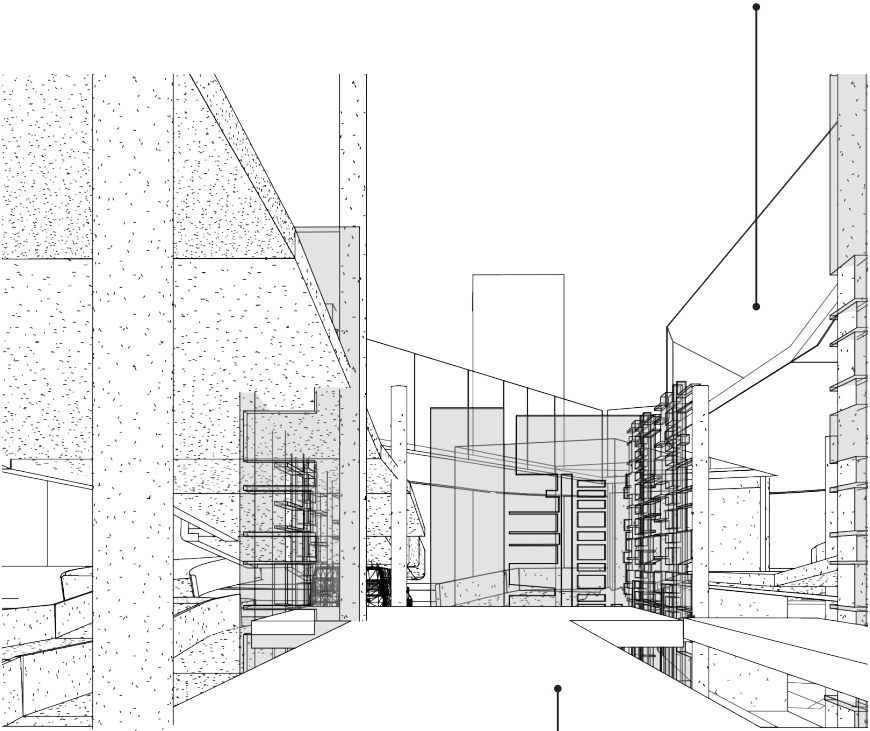


121

Taxi pick points 01 to have seating and
trading embedded

View of taxi pick-up points, trading and pedestrian ramp

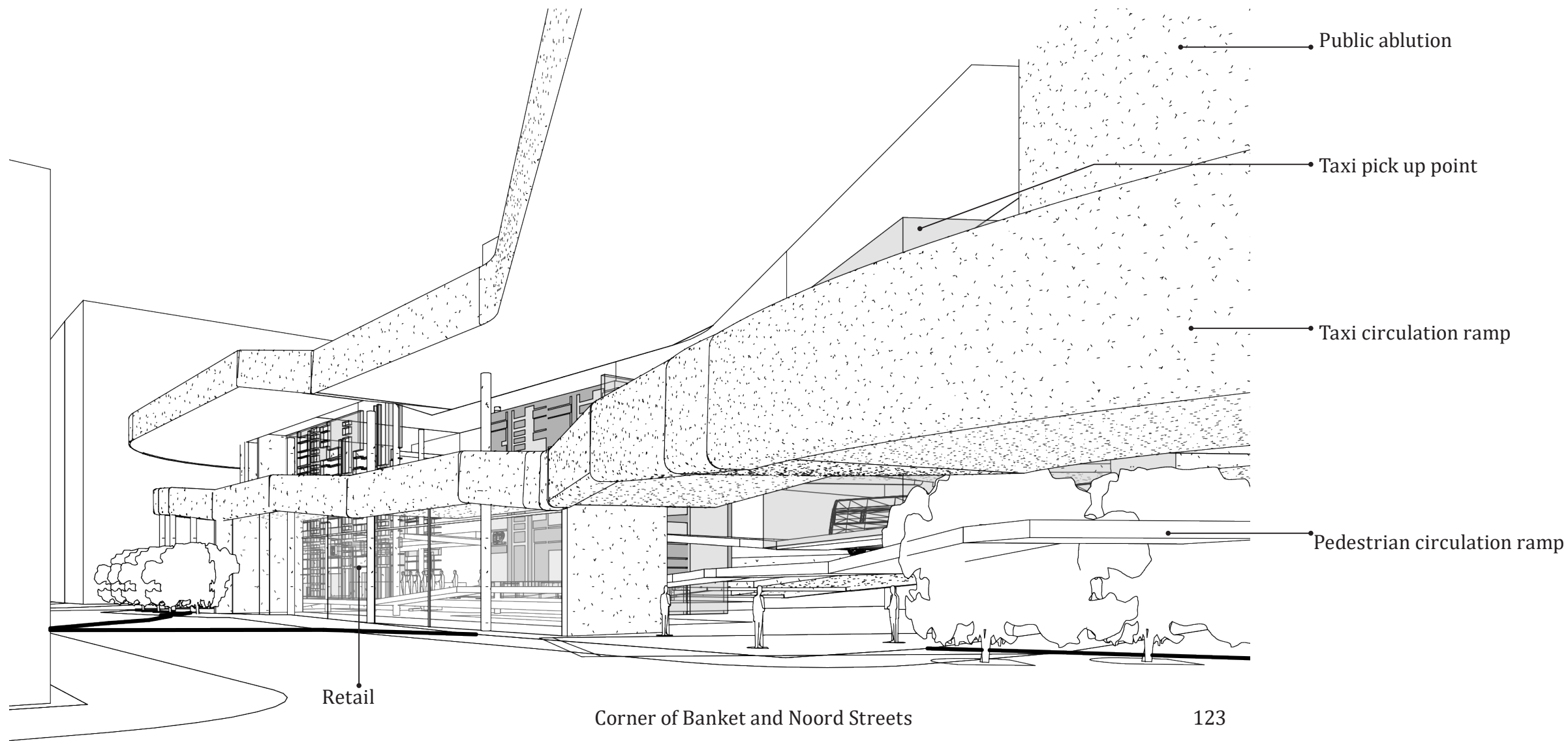
"Folds" in the extended and compacted street
make openings for sun and ventilation



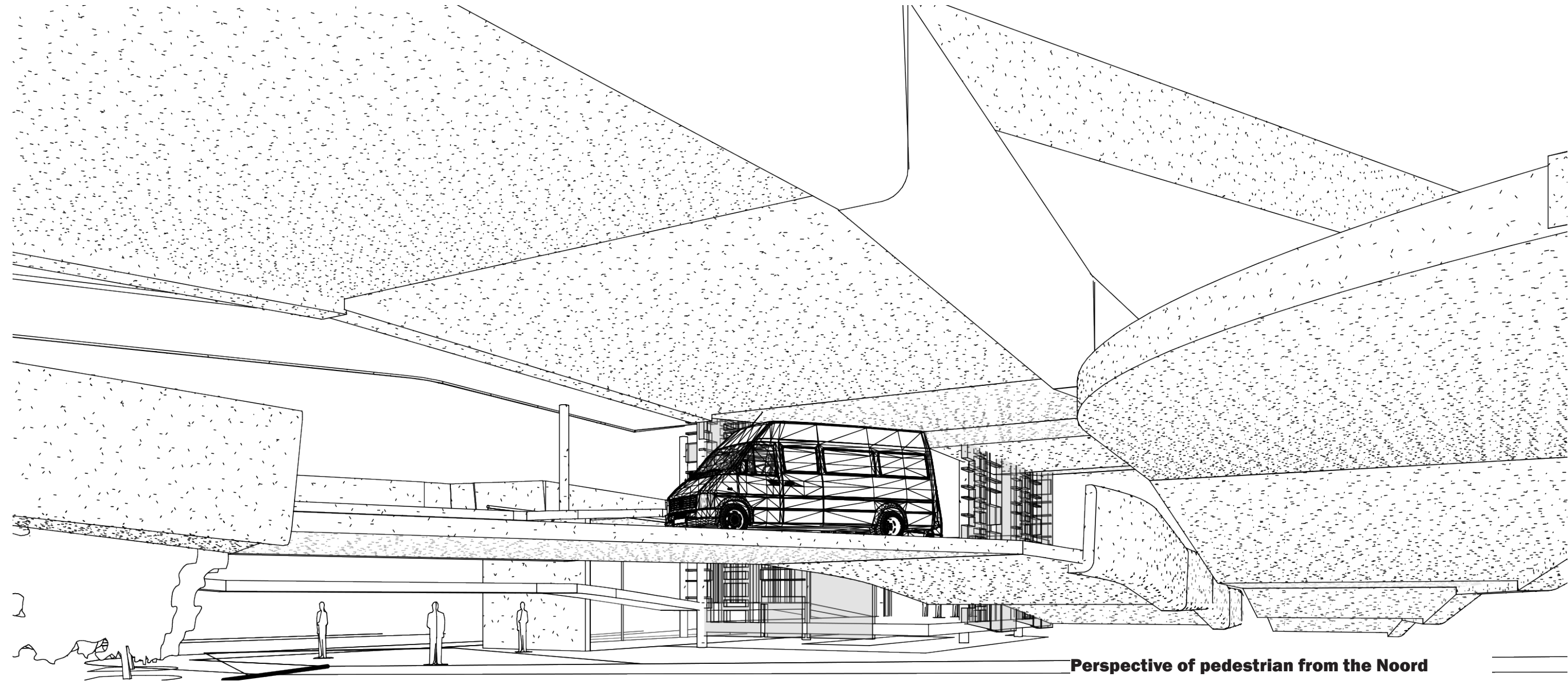
122

Taxi pick up points consolidated with trading

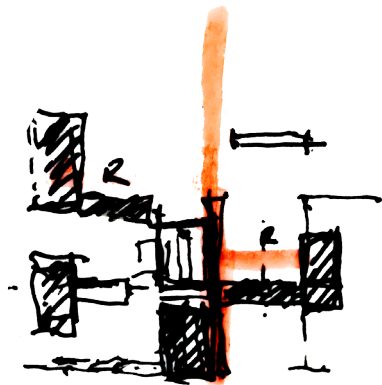
View on Trading level



Perspective from the North

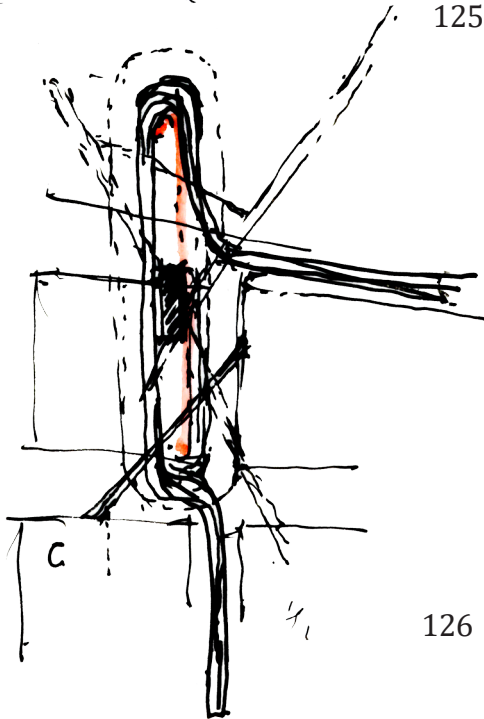


Technical design iteration



125

Fig.125_Section rationalising and understanding the logic of the ramps.
Sketch by the author (2019).

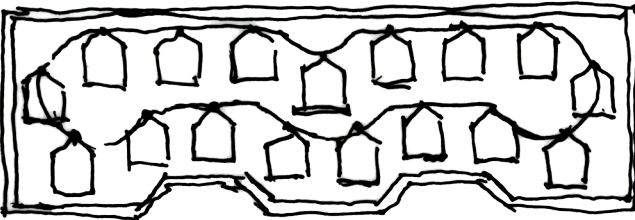


126

Fig.126_Mapping out possibilities of alternative entrances and exits.
Rationalising the ease of circulation. Sketch by the author (2019).



127



128

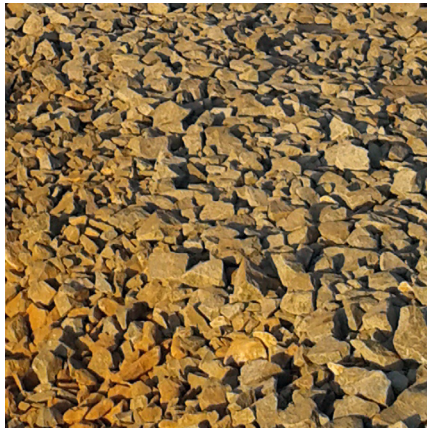
Fig.127-128_The circulation at this point of the iterative process is utilising the logic of a ferrous wheel. The taxi must go all the way to the top floor, and then loop around to return and exit on De Villiers Street. Sketch by the author (Steadman et al., 2000:p8).

Re-appropriating modernism



129

Fig.129_Touch stone experiment explores found objects that relate to the meaning of the project. In this instance, the electrical junction box represents how a taxi rank acts as an intersection for different trajectories. The bolt represents the ideal of a taxi rank that is anchored in a place. Photo by the author (2019).



130

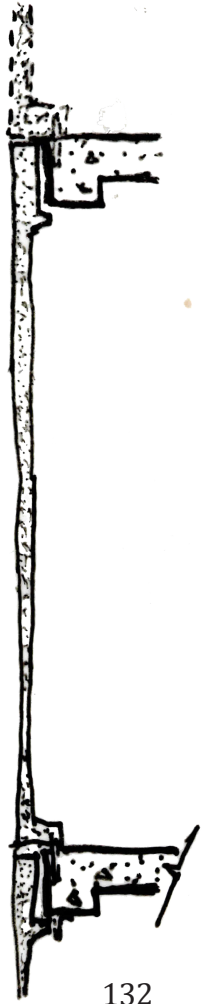
Fig 130_Railway ballasts from the portion of the railway between Tembisa train station and Leralla train station representing concrete or the potential of concrete as a material. Photo by the author (2014).



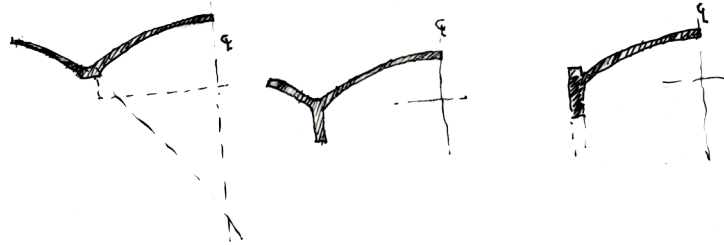
131

Fig. 131_Terracota clay to contrast the concrete, this is an exploration of materials with plastic properties that can be moulded. Clay in Isizulu is called “Ibumba” which also translates to how clay products are made and that is to mould. Image source (Arch daily,2020).

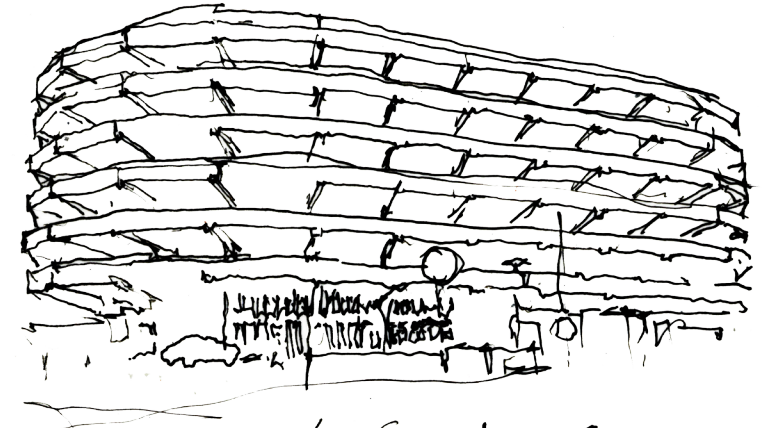
Finding the tectonics



132



133



134

Fig.132_An exploration of the tectonics of concrete. Pre-cast concrete possibilities for taxi ramps and balustrades. Sketch by author after source (Barry, Gorse and Emmitt, 2014, p:429).

Fig.133_Parabolic curves could be utilised to "mould" or form concrete into decorative forms for voluminous pedestrian areas. Sketches by the author after (Bangesh,1992, p:130).

Fig.134_ The Rupert Street car park in Bristol, designed by R Jelinek-Karl shows the tectonic aesthetic the ramps can take on. Sketch by author after (Steadman et al.,2000, p:14).

Belonging in the city through the residential commons. The verticality creates a place marker in the city

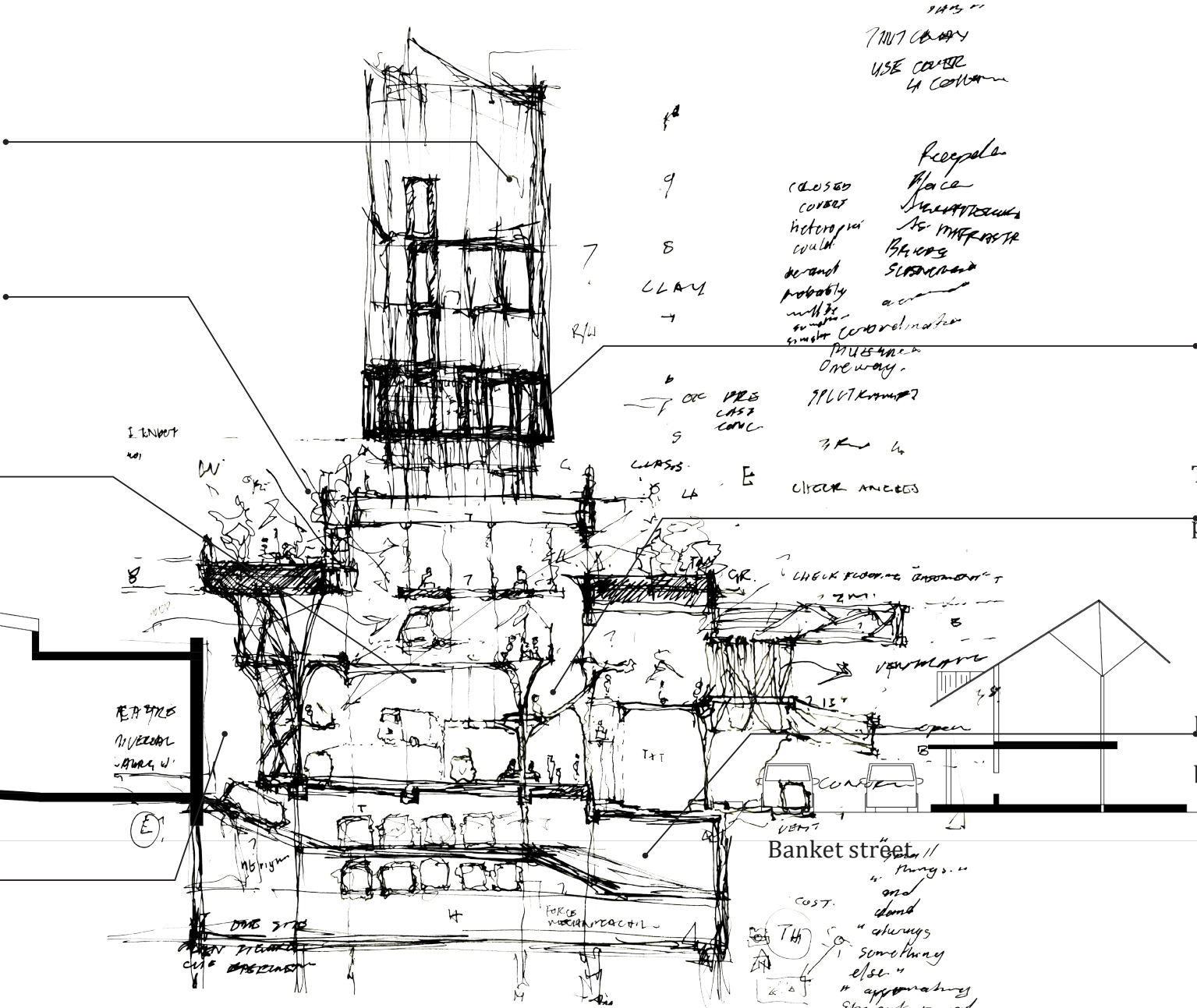
Belonging in the city through the garden and market commons

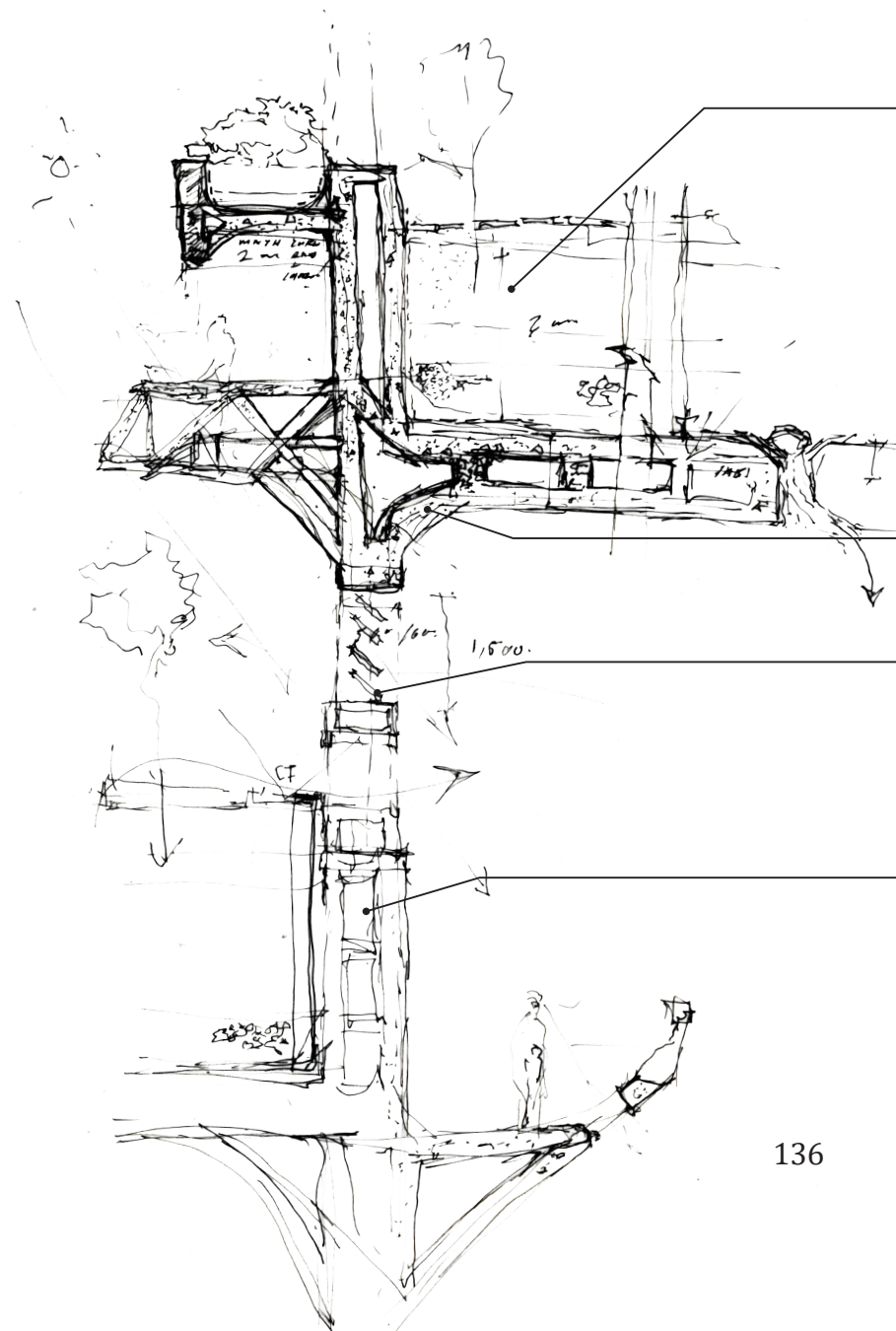
Folding and wrapping street/road.

135

Claim street

Service and access roads





2m depth on 1m thick concrete for soil and planting .There are openings in the concrete for a light weight and sustainable concrete application.

This represents concrete's plasticity which can be formed and moulded into a decorative aesthetic.

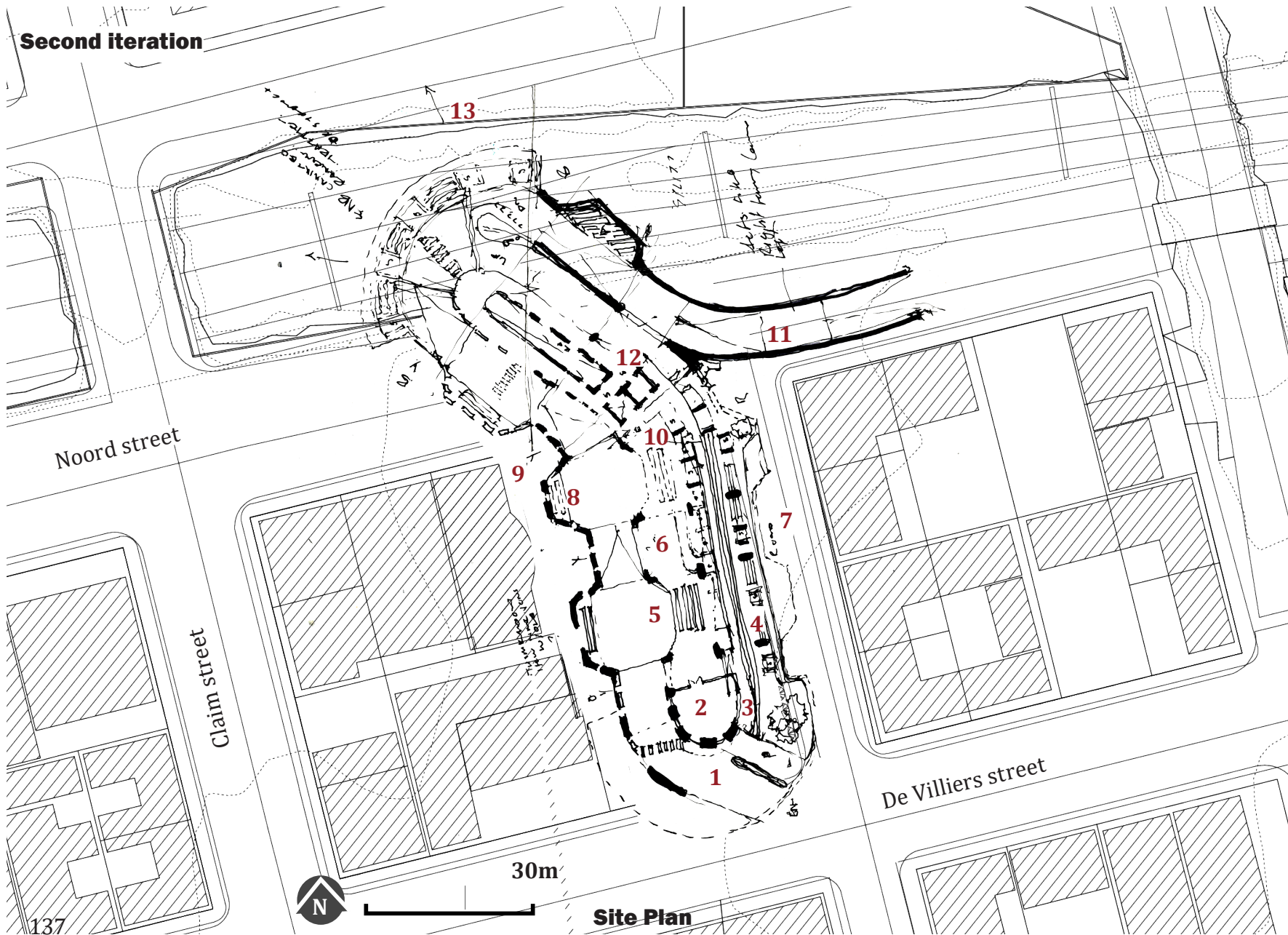
Terracotta clay louvres on the East and West façades

Concrete and clay have high thermal mass properties. This is a possible position for TABS(Thermally activated systems) with a natural ventilation integration as a regulating mechanism

136

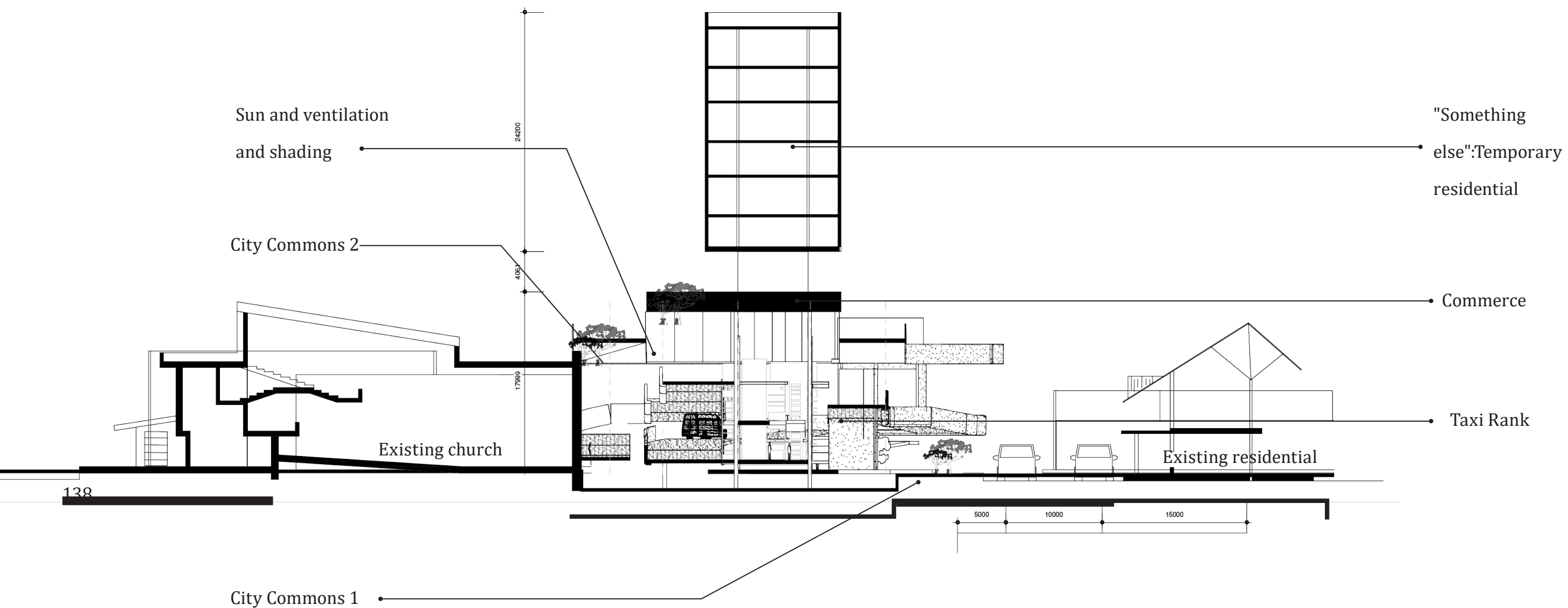
Fig 136_Conceptualising the technical resolution of the inner city. Sketch by the author (2019).

Second iteration



- 1_Entrance
- 2_Offices and ablution
- 3_Pedestrian circulation ramp
- 4_Retail stalls
- 5_Taxi pick up point with seating
- 6_Trading level
- 7_Proposed servitude and pedestrian street.
- 8_Taxi pick up point
- 9_Infrastructure potential to connect to urban fabric
- 10_Trading stalls under pedestrian circulation ramp where there is clear height
- 11_Exit
- 12_Lifts
- 13_Infrastructure potential to connect raised level commons

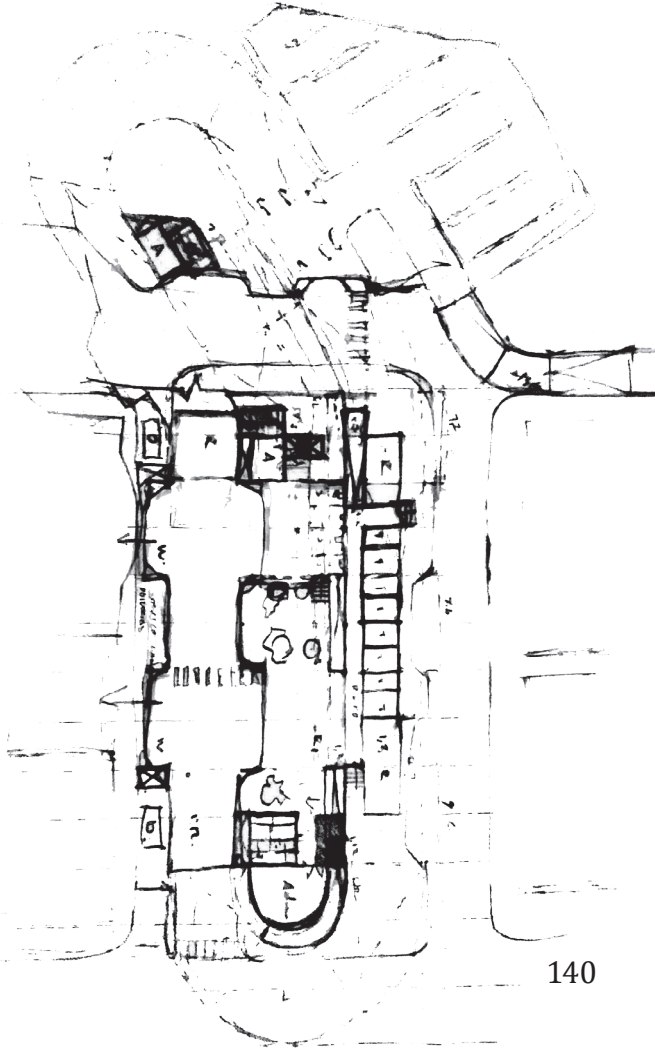
Reflective notes: The positioning of the entrance and exit of the taxi's causes congestion and possible accidents. This need mitigation. The building to be demolished is a heritage building in terms of being over 60 years old. Providing a transformative civic amenity is the justification to put forward for the demolition.



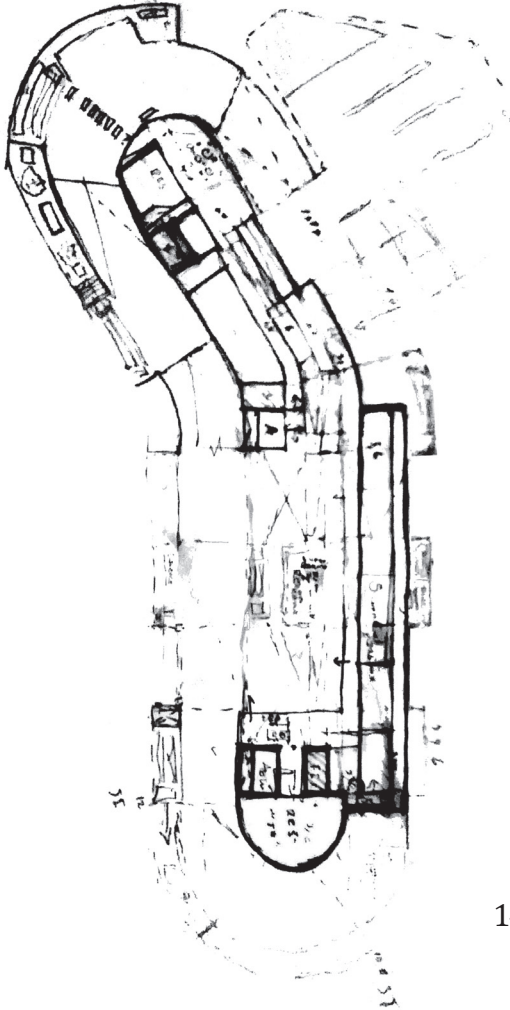
Section 1



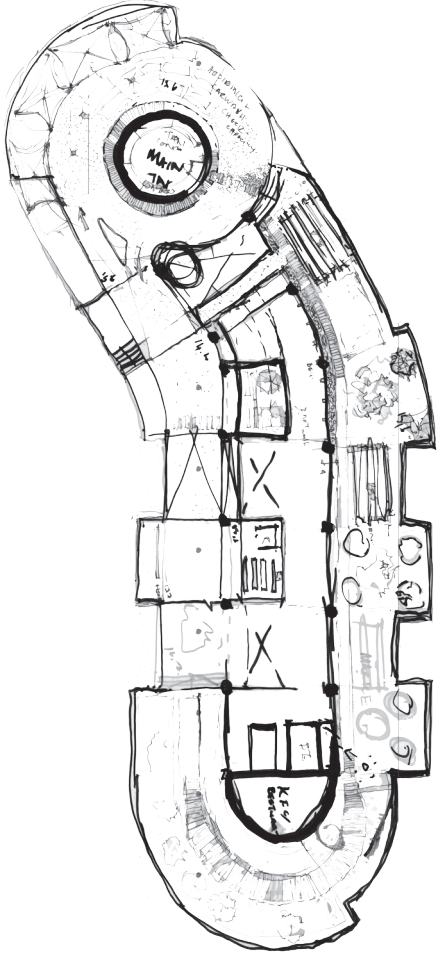
Final iteration



140

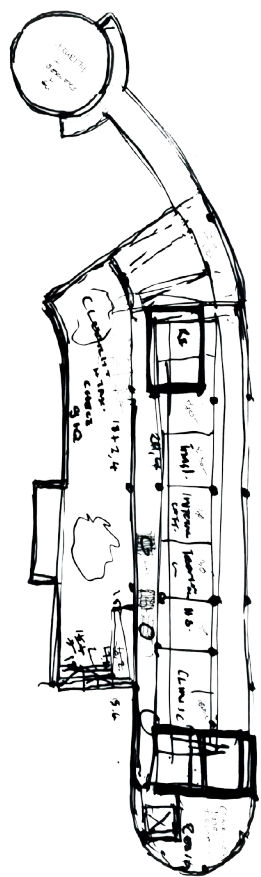


141



142

Fig .140-142_Spatial planning. Ground floor level, Mezzanine, and the Third-floor level. Sketches by the author (2019).



143



144

Fig .143-144_Spatial planning. Fourth-floor level and the Roof level respectively. Sketches by the author (2019).

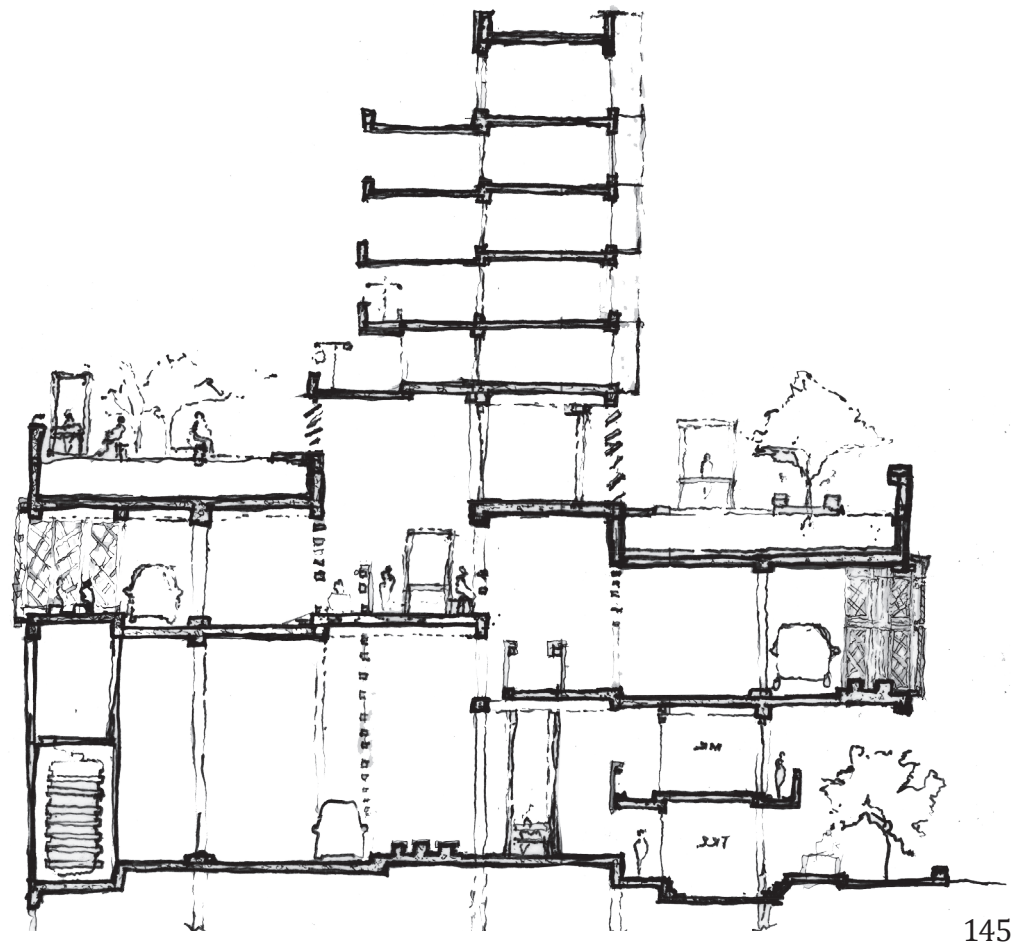
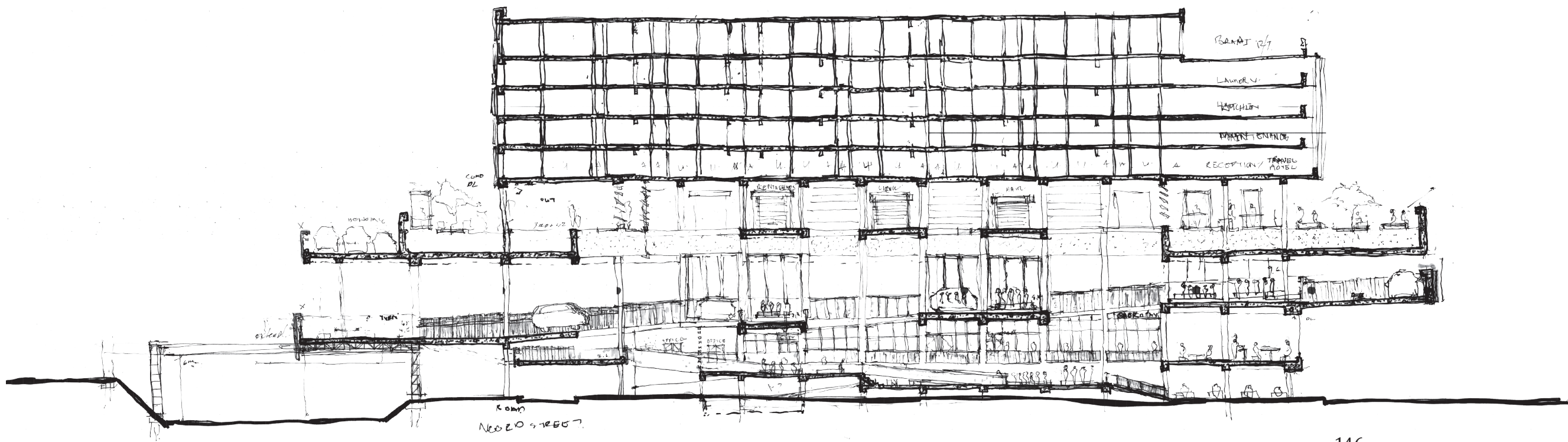


Fig 145_Cross sectional spatial resolution. Sketch by the author (2019).



146

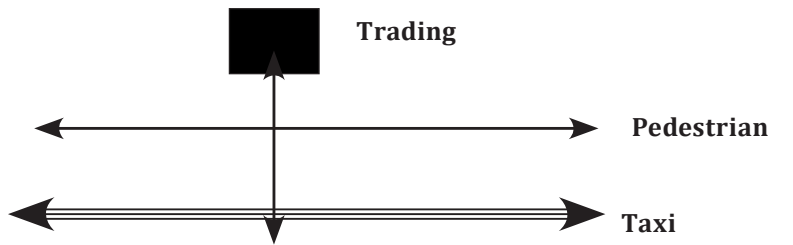
Fig 146_Longitudinal section spatial resolution.
Sketch by the author (2019).

5. Inner city taxi rank proposal

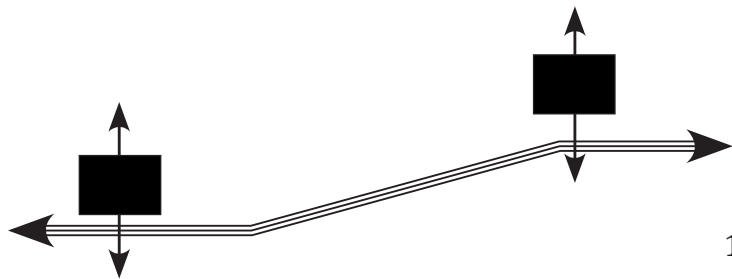


Fig 147_View of proposal approaching from Banket street. Original artwork by the author (2019).

Contextual analysis and design principles



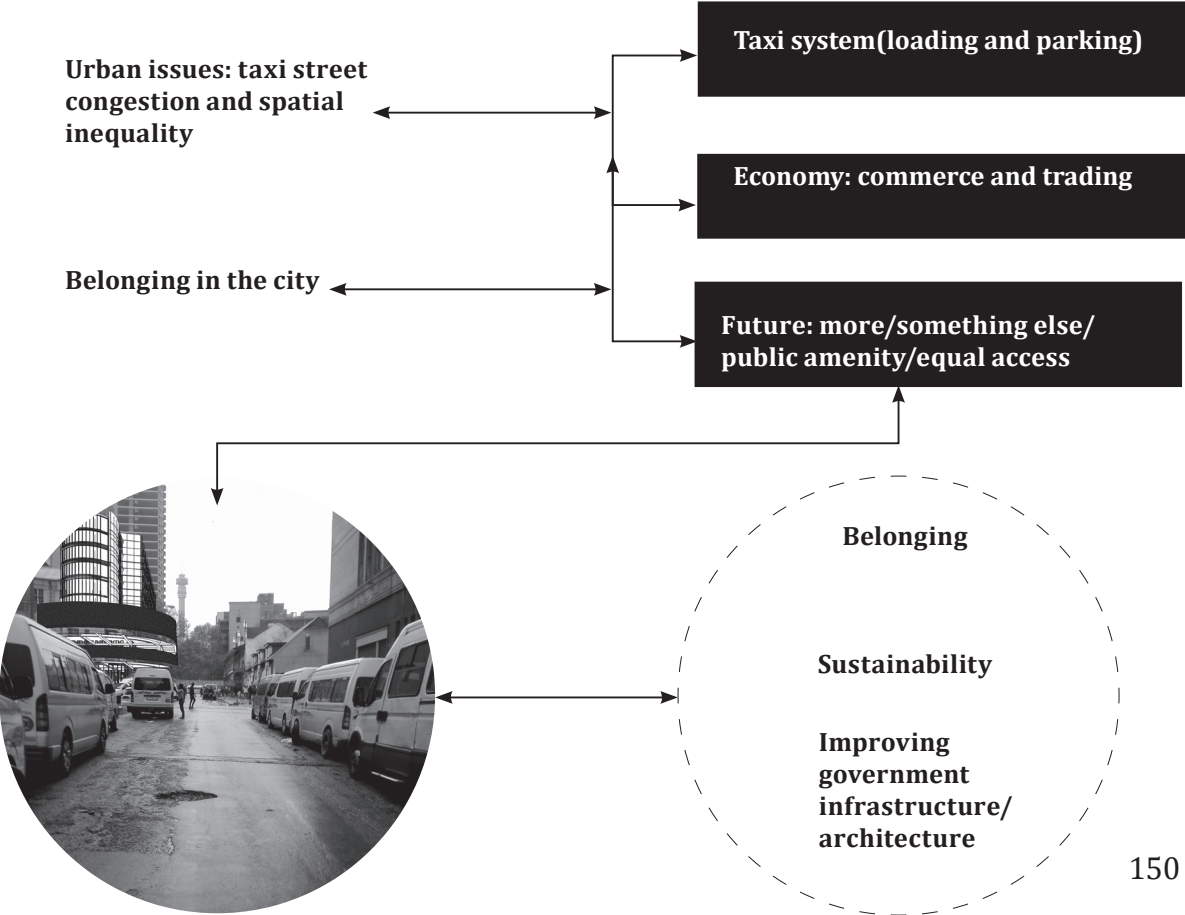
148



149

Fig 148_The socio-economic street order and networks. These are the building blocks of the proposal. Diagram by the author (2019).

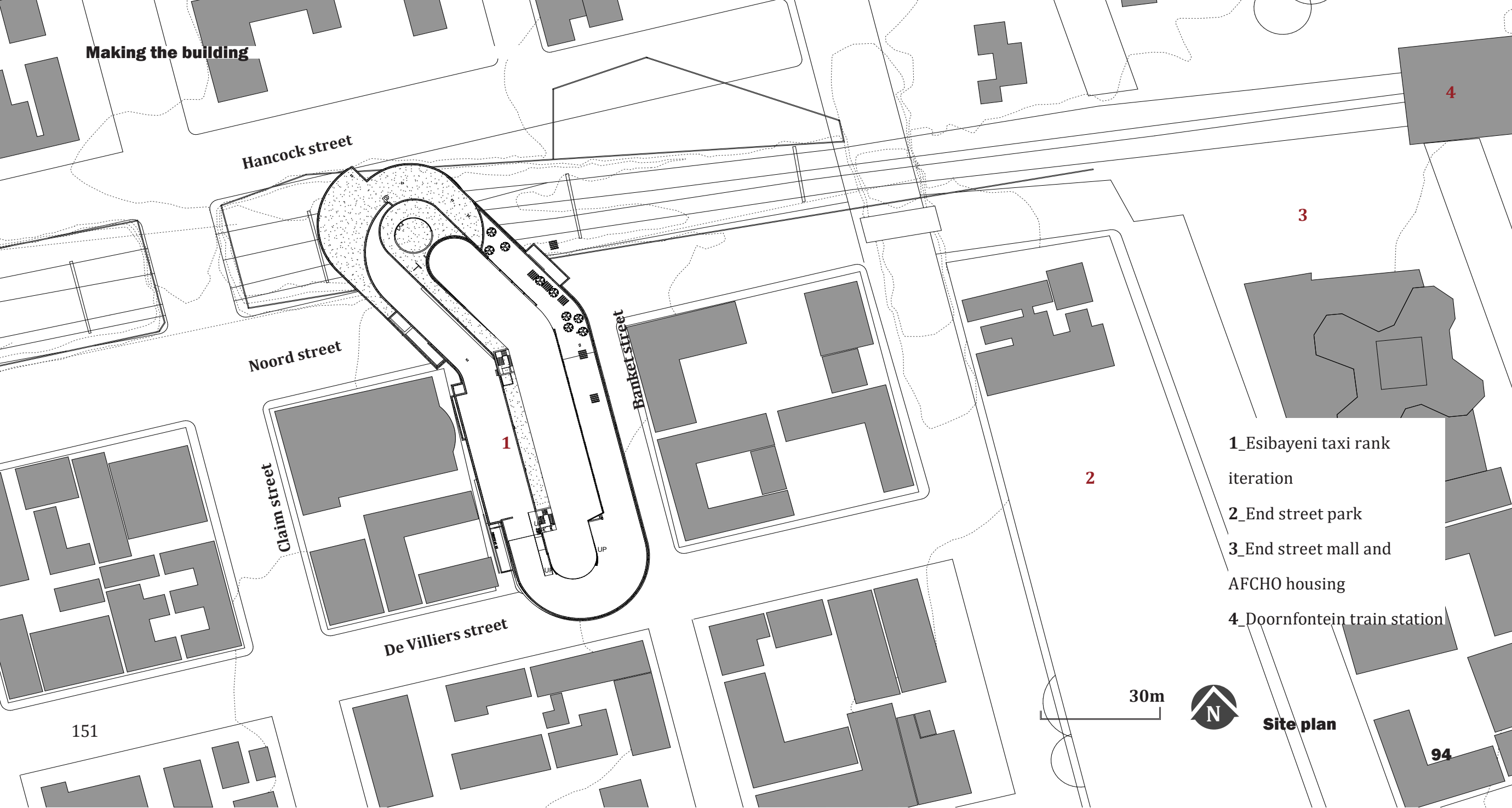
Fig.149_Finding a sustainable architecture by folding and reorganising socio-economic networks into the constrained inner-city site. Diagram by the author (2019)



150

Fig 150_Finding a home: impact and implications; taxi ranks can be seen as place finders on the urban fabric in the city. The macro-scale urban impact would be about transformation in Tembisa i.e. design the ways of being urban and black in the city into a building, and use the results to design urban material into the township. Diagram by the author (2019).

Making the building



Hancock street

Noord street

Claim street

De Villiers street

Banket street

1

2

3

4

1_Esibayeni taxi rank
iteration

2_End street park

3_End street mall and
AFCHO housing

4_Doorfontein train station

30m



Site plan

151

94

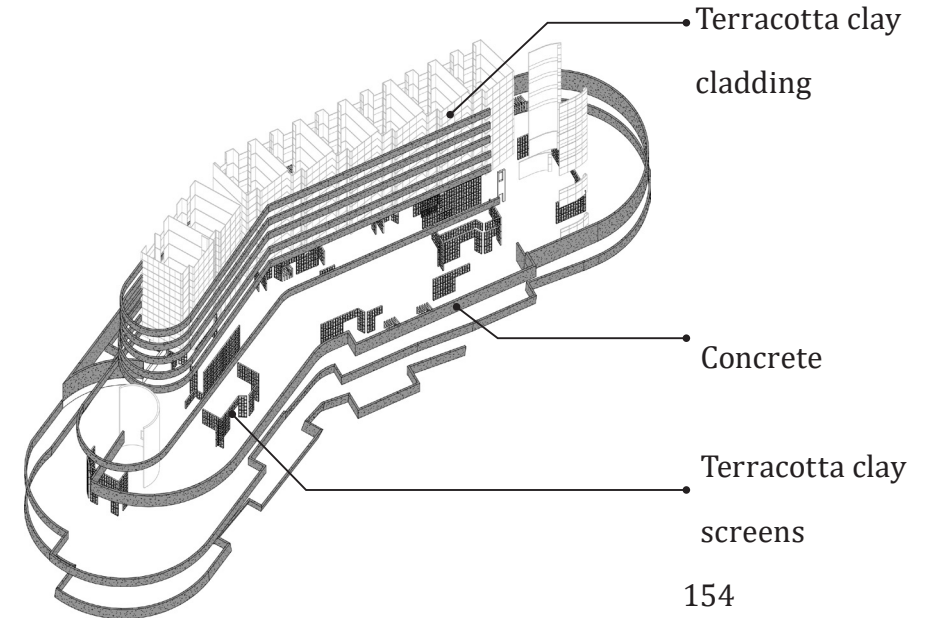
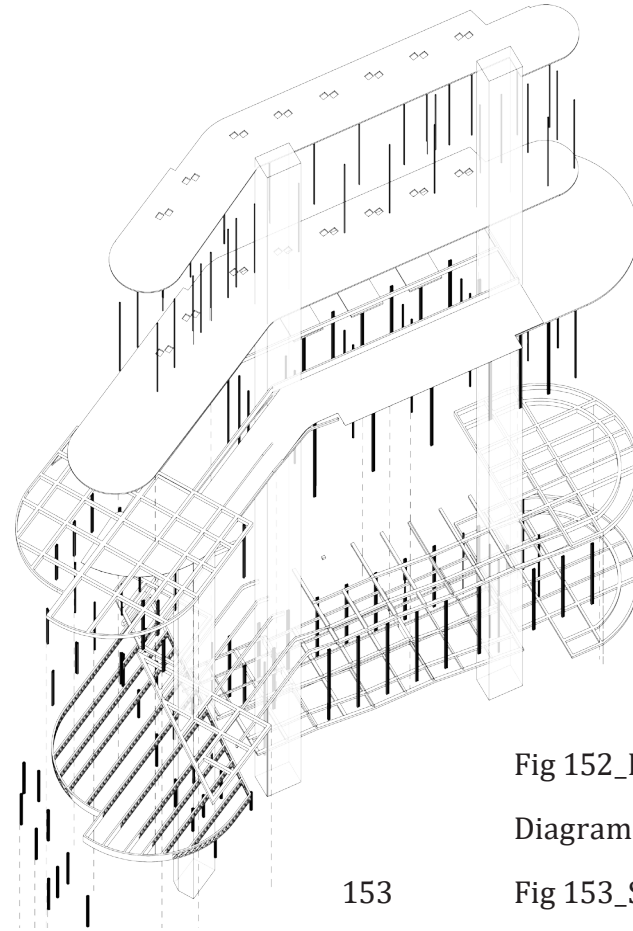
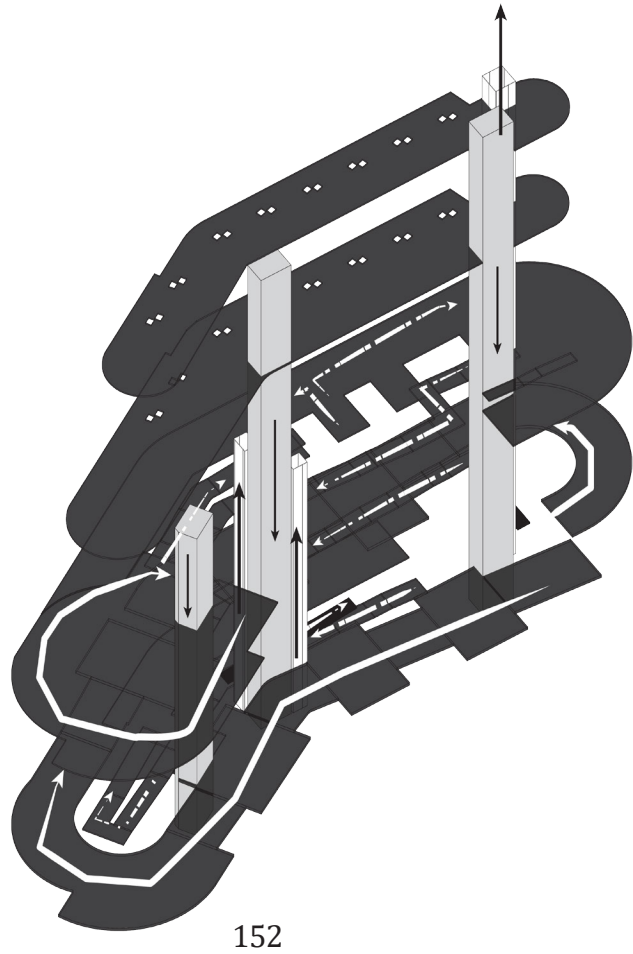


Fig 152_Final movement resolution which is like a ferrous wheel that loops back for a crossover. Diagram by the author (2019).

Fig 153_Structural resolution: concrete frame with horizontal beams as well as composite steel and concrete for the "out of thin air" component-a term used to describe over the railway infrastructure development. Diagram by the author (2019).

Fig.154_Fabric: terracotta clay cladding for the residential component; terracotta screens weather screens for ranking and loading areas. Diagram by the author (2019)

Key:

1&8_Pedestrian entrances

2-6_Retail

7_Pedestrian entrance

9_Central reception and security

10_Taxi exit

11_Taxi entrance

12_Refuse

13_HT/LT/generator

14_Retail

15_Trading zone

16_Taxi loading zone

17_Residential access lifts

18_Parking and taxi wash

30m



Ground floor level

Key:

1_Park/wash

2_Park wash

3_Food

4_Terrace

5_Entrance to anchor retail

6_Major retail tenant(Shoprite/
Spar)

7_Retail management

8_Storage

9_Brand restaurant

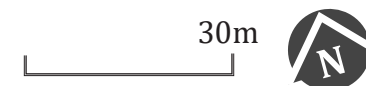
30m



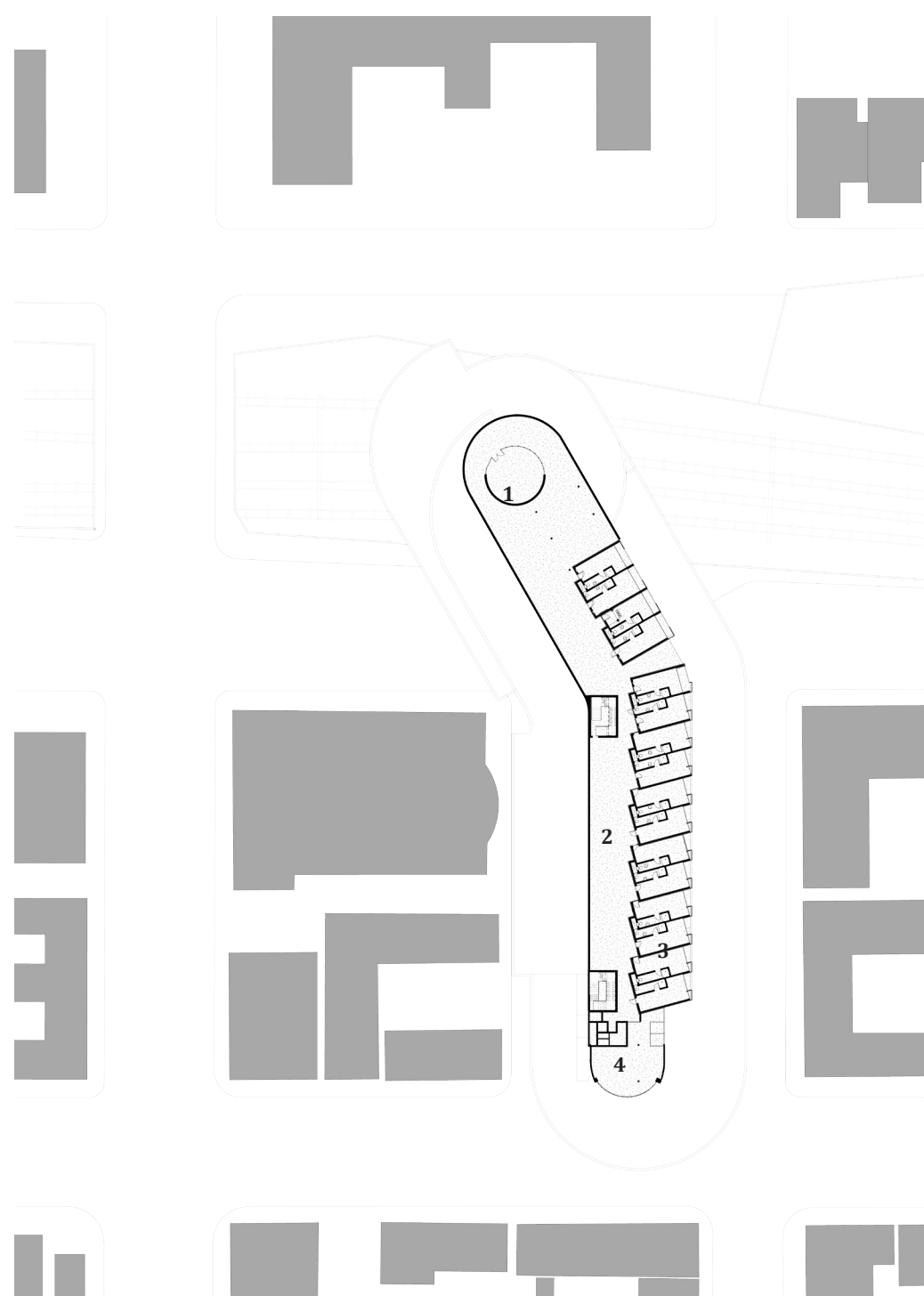
Mezzanine floor level

Key:

- 1_Holding/parking/taxi wash
- 2_Taxi association's offices
- 3_Something else 1:market and park
- 4_Hair salon
- 5_Internet cafe
- 6_Doctor/clinic



Third floor level



Key:

1_Centre management and facilities

2_Communal terrace

3_Something else 2:residential unit

4_Laundry/restaurants/private communal areas

30m

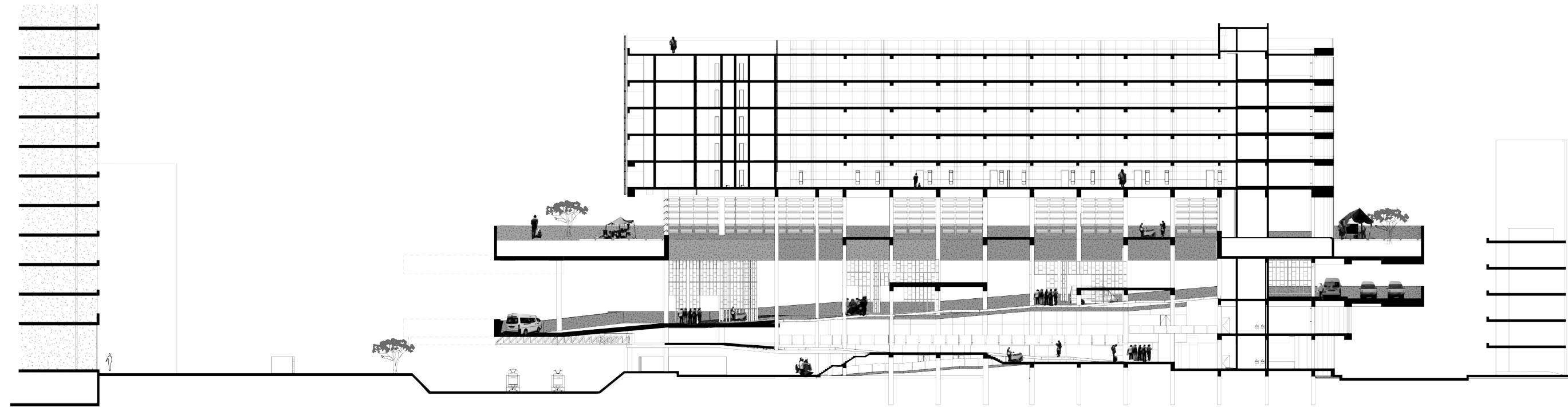


6th to tenth floor level



159

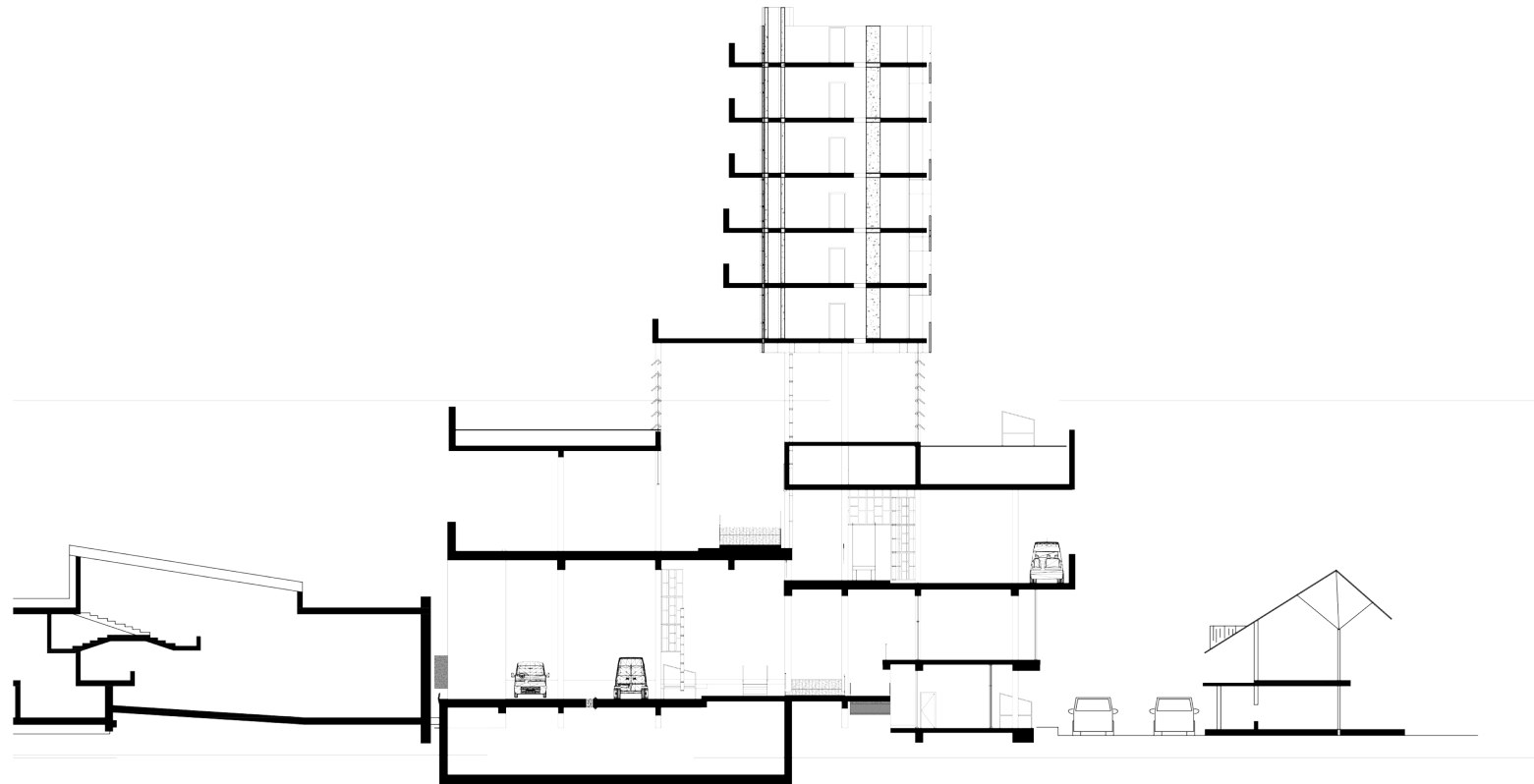
East elevation



160

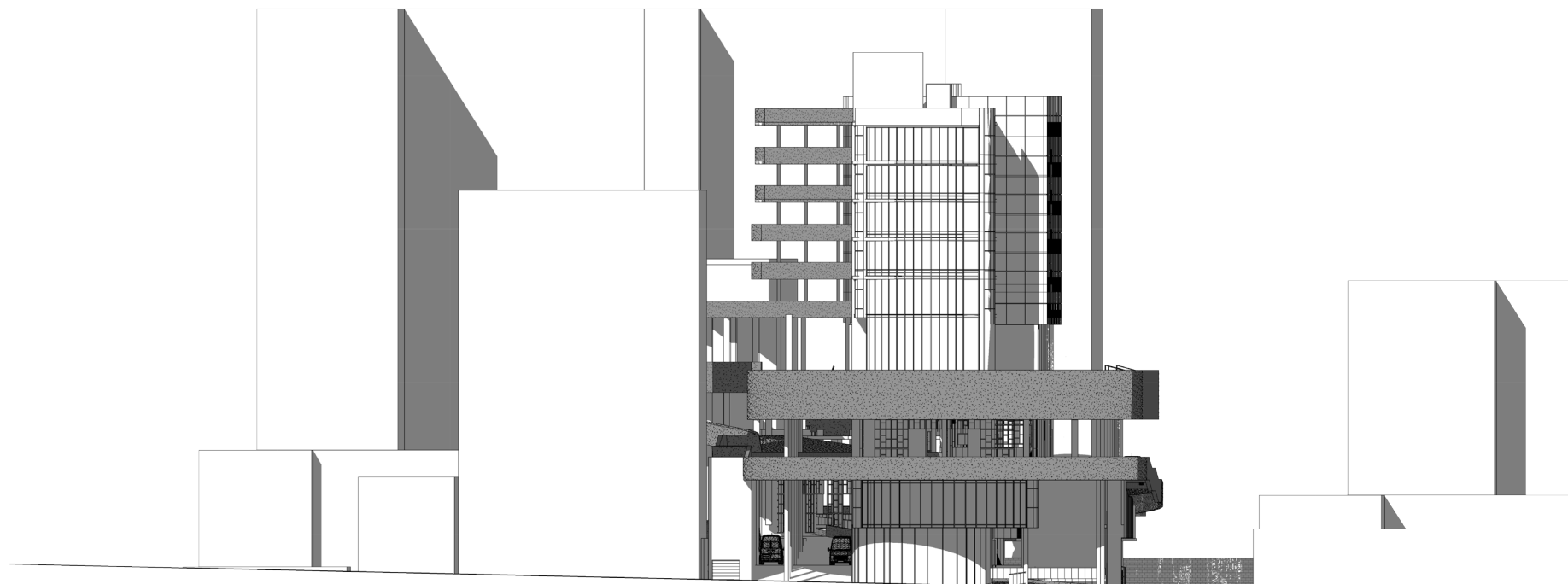
Section A

101



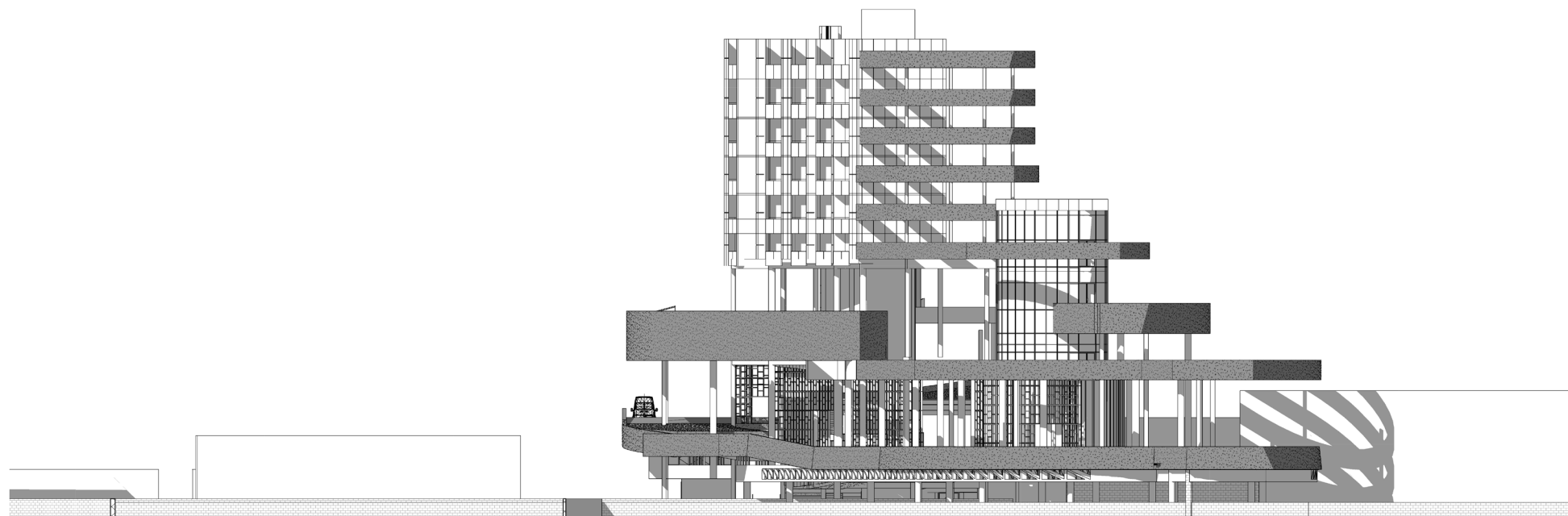
161

Section B

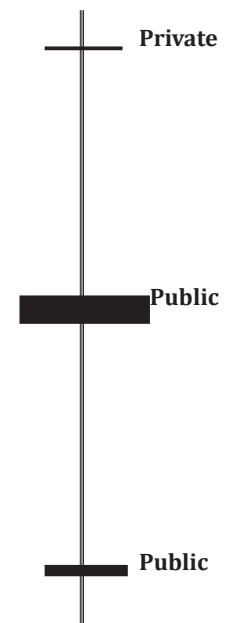


162

South elevation on De Villiers street

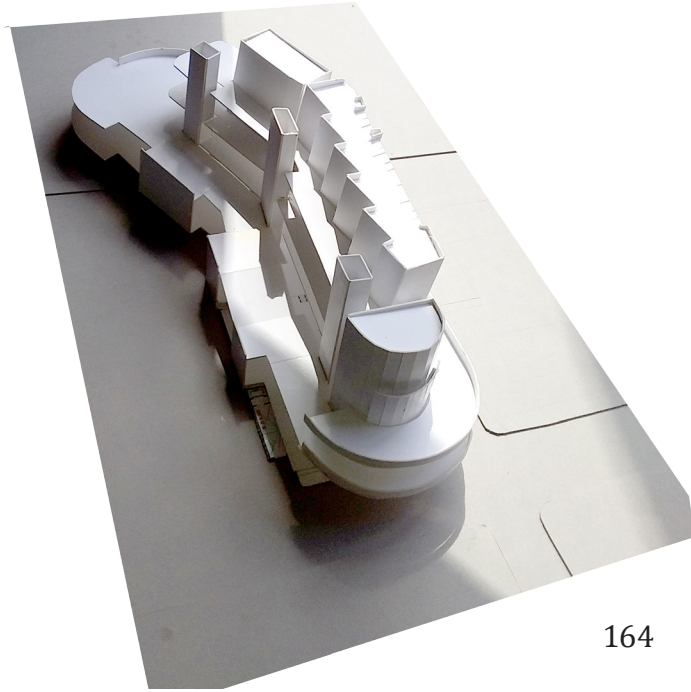


163

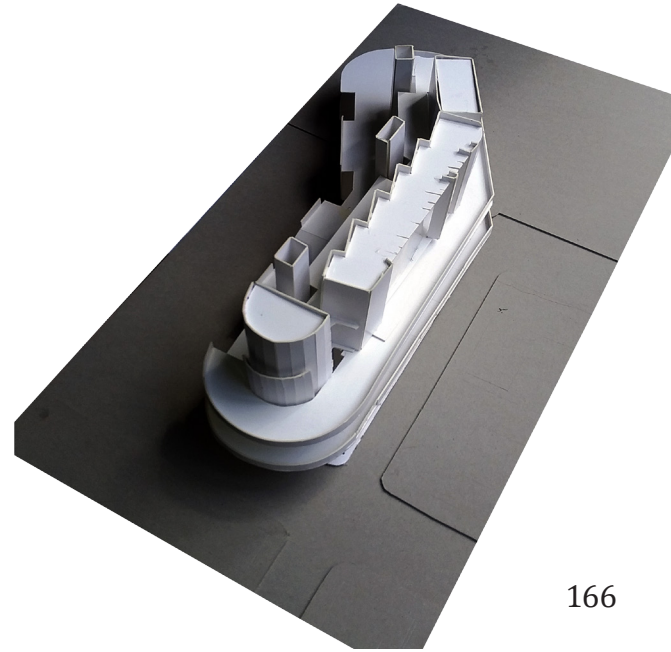


North elevation across the railway on Hancock street

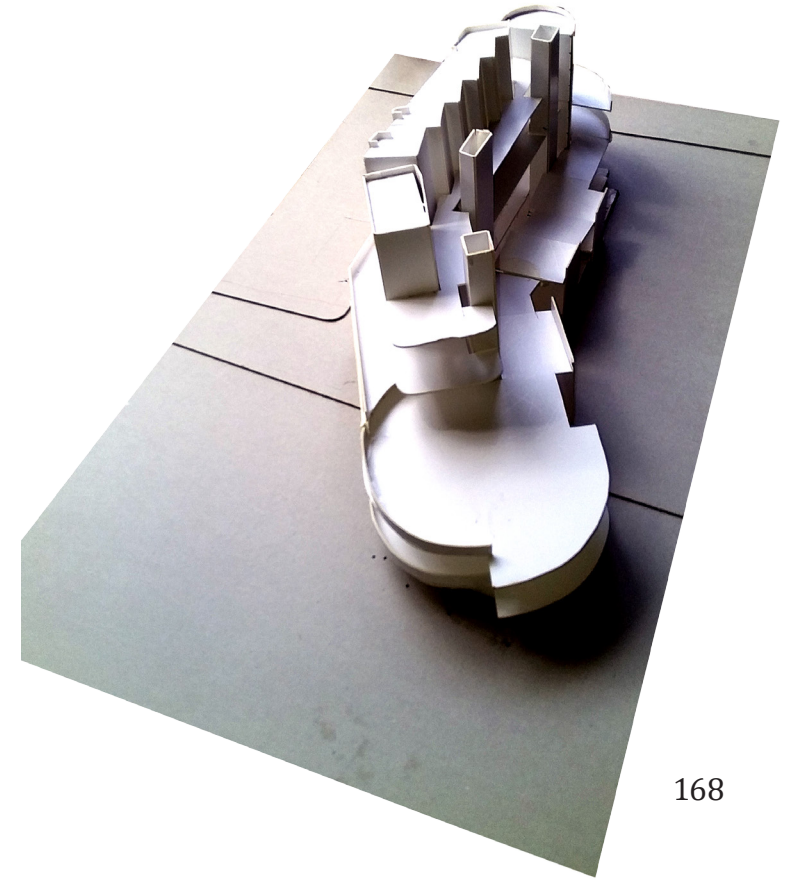
104



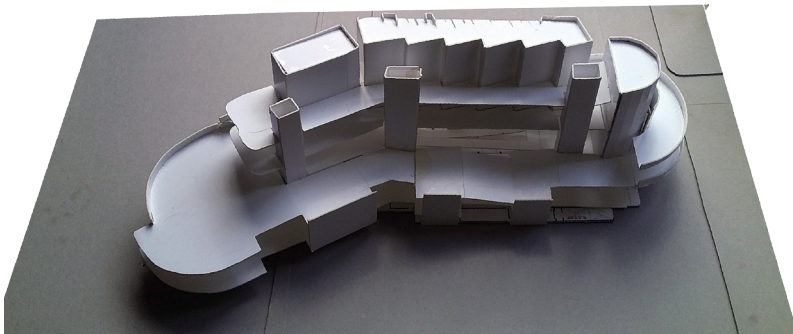
164



166



168

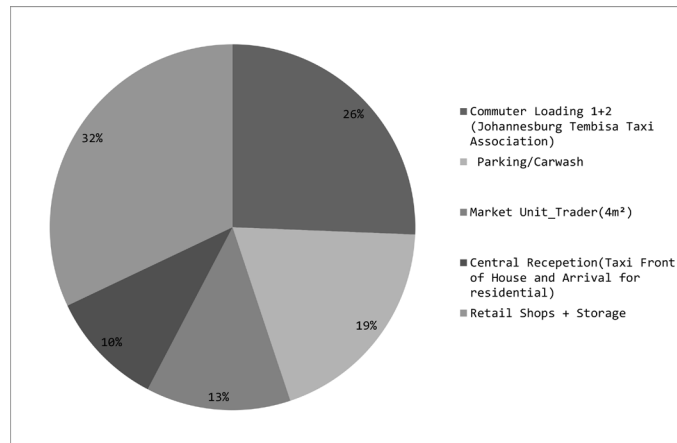


165

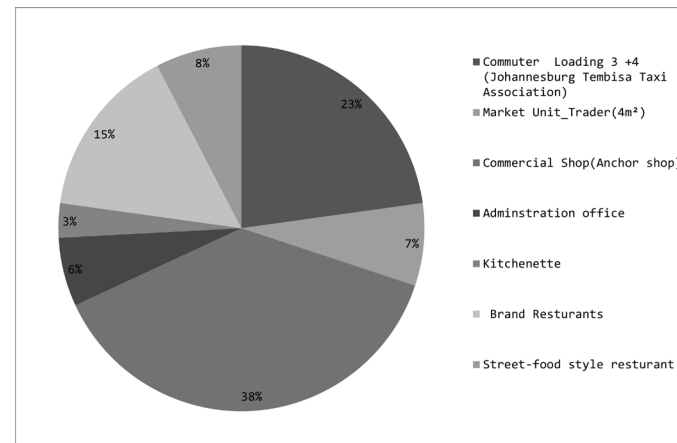


167

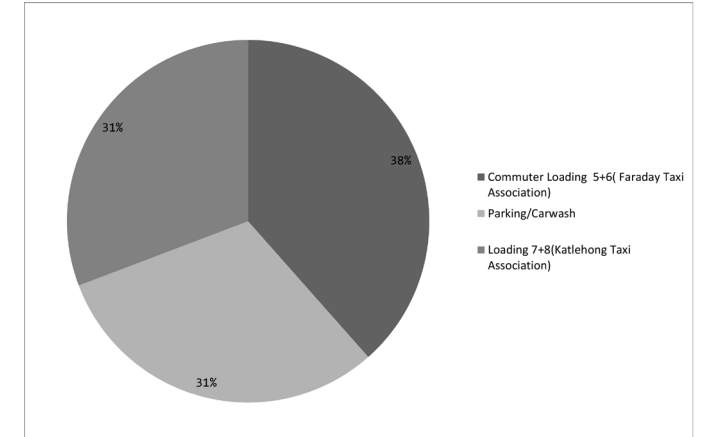
Fig.164-168_Final Esibayeni taxi rank model exploration.
Photos by the author (2019).



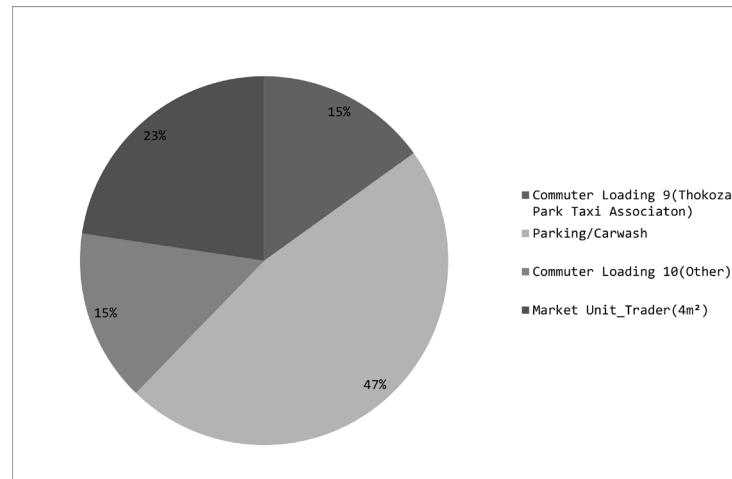
Ground floor level 169



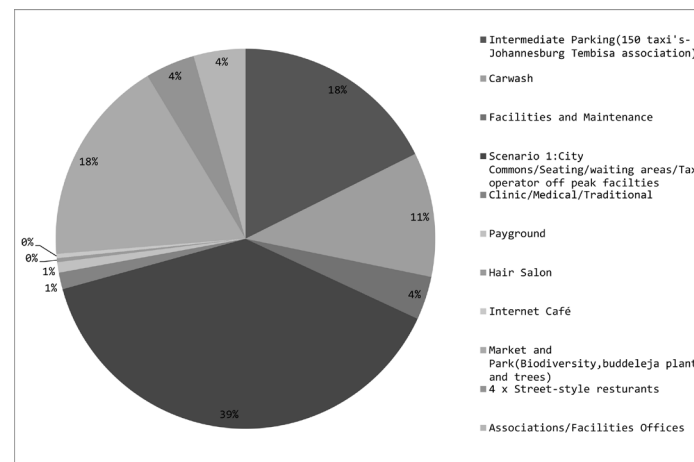
Mezzanine floor level 170



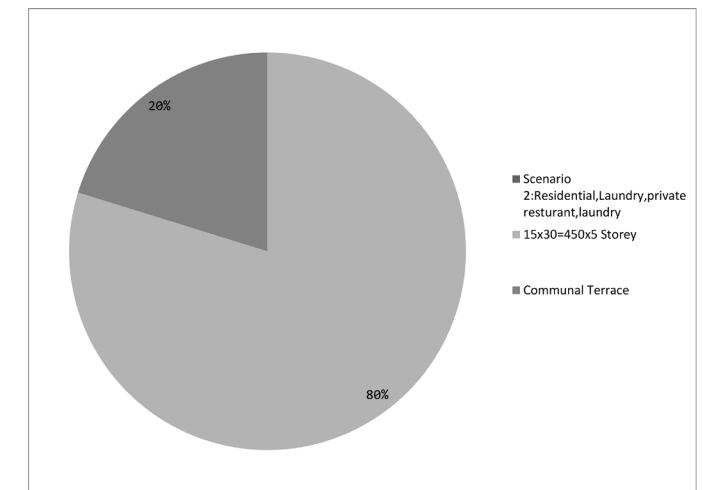
First floor level 171



Second floor level 172

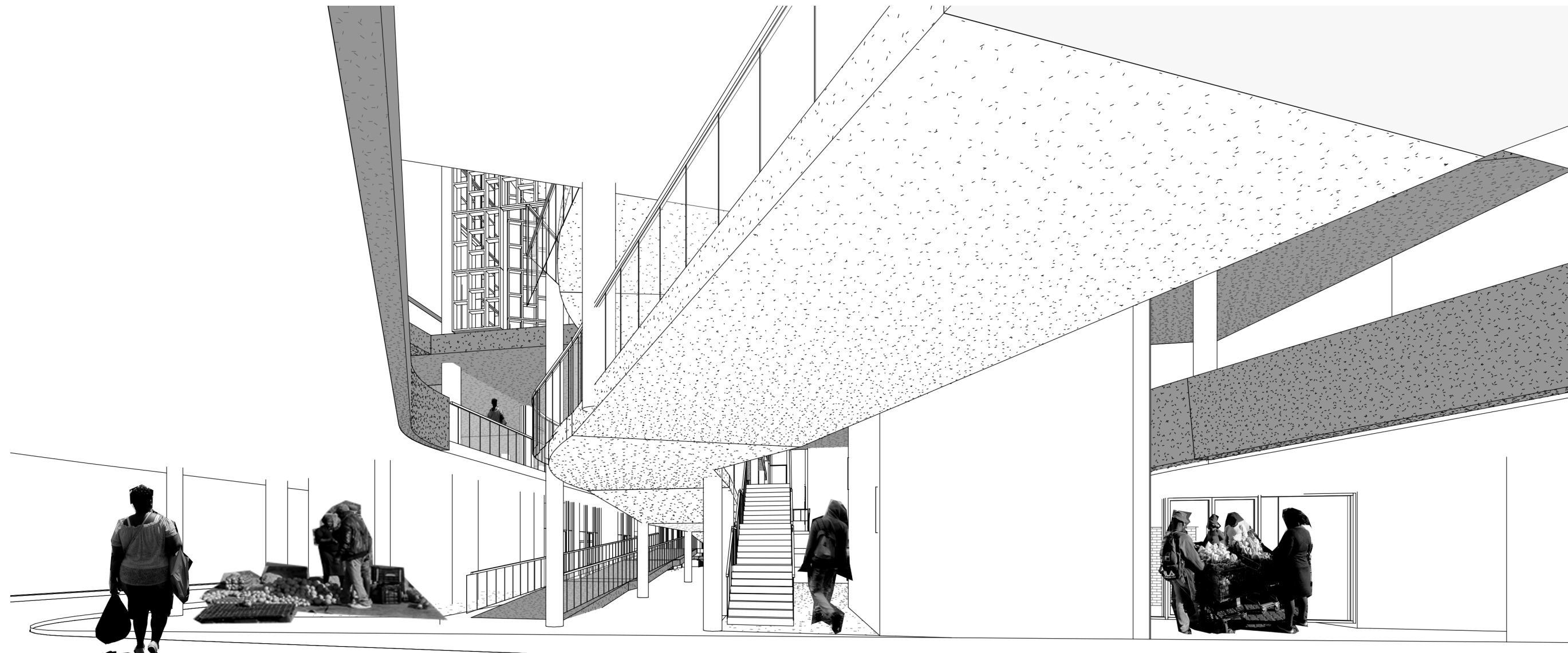


Third floor level 173



6-10 Th floor level 174

Fig.169-174_Programme resolution by floor level. Charts by the author (2019).



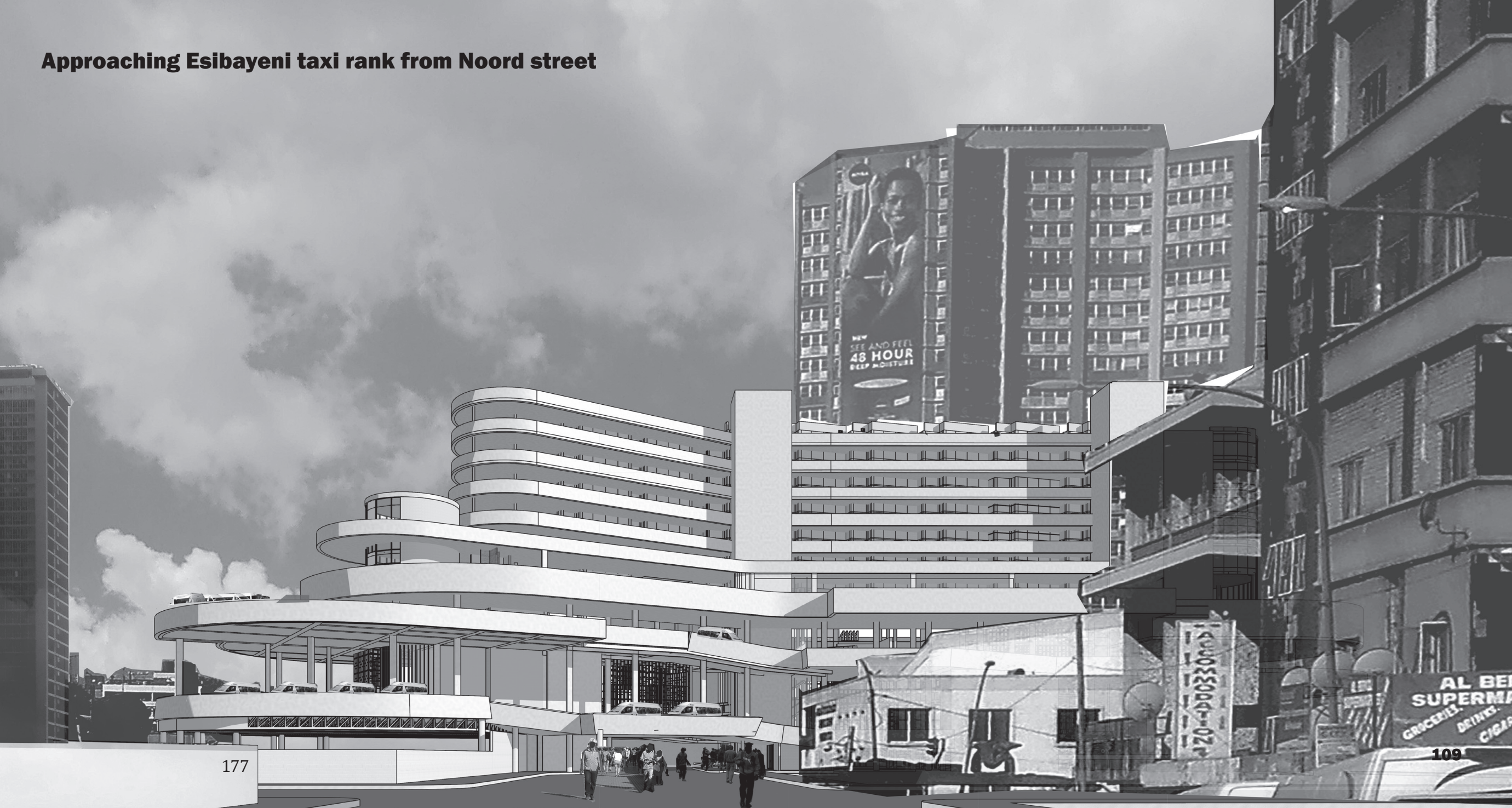
175

Entrance from Noord street

107



Approaching Esibayeni taxi rank from Noord street



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7.Addendums

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Ms NJ Mashego
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Tsenelong Section
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Reference: Ms Olga Ndlovu
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04 September 2019
Person No: 0706976W
TAA

Dear Ms Nonhlanhla Mashego

Master of Architecture (Professional): Change of title of research

I am pleased to inform you that the following change in the title of your Research Report for the degree of **Master of Architecture (Professional)** has been approved:

From: **In Flux: A conversation about the spatial transformation of the Transport Architecture in Tembisa and the East of Johannesburg CBD.**

To: **Influx: Finding a taxi architecture in between Tembisa and the inner city of Johannesburg.**

Yours sincerely

A handwritten signature in black ink, appearing to read 'Ian Jandrell'.

Professor Ian Jandrell
Dean
Faculty of Engineering and the Built Environment

**SCHOOL OF ARCHITECTURE AND PLANNING
HUMAN RESEARCH ETHICS COMMITTEE**

**CLEARANCE CERTIFICATE
PROTOCOL NUMBER: SOAP023/03/2019**

PROJECT TITLE: In flux: A conversation about the spatial transformation of the transport architecture in Tembisa and the East of Johannesburg CBD

INVESTIGATOR/S: Nonhlanhla Mashego (Student No: 0706976w)

SCHOOL: Architecture and Planning

DEGREE PROGRAMME: Master of Architecture Professional (MARCH Prof)

DATE CONSIDERED 07 February 2020

EXPIRY DATE: 07 February 2021

DECISION OF THE COMMITTEE: Approved

CHAIRPERSON
(Dr Brian Boshoff)

DATE:

cc: Supervisor/s:

Hilton Judin

DECLARATION OF INVESTIGATORS

I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to endure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee.

Signature

Date

11/02/2020

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JOHANNESBURG TEMBISA TAXI ASSOCIATION

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P.O. Box 12837, Edleen, 1625
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29 March 2019

To whom it may concern

This letter serves to confirm that Ms. Nonhlanhla Mashego has been given permission to make a study on taxi operations at Esangweni taxi rank and Johannesburg taxi rank which is at corner Claim and Sophie DE bruin

We are therefore pleased to allow her studies with our taxi association and also looking forward to assisting her in all her endeavors

Yours In Transport

T.M Mohlala

(General Secretary)



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