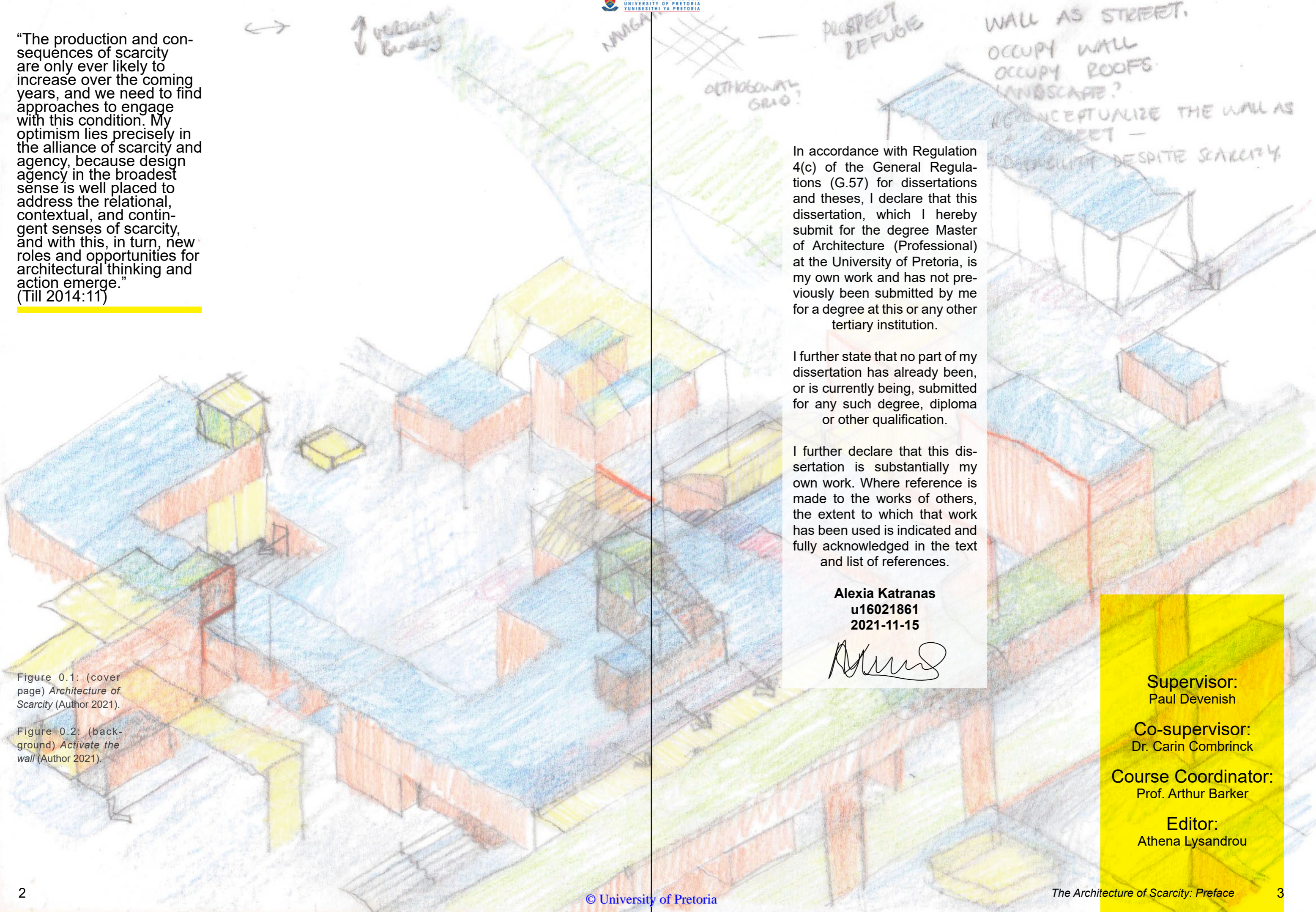




ARCHITECTURE OF SCARCITY

“The production and consequences of scarcity are only ever likely to increase over the coming years, and we need to find approaches to engage with this condition. My optimism lies precisely in the alliance of scarcity and agency, because design agency in the broadest sense is well placed to address the relational, contextual, and contingent senses of scarcity, and with this, in turn, new roles and opportunities for architectural thinking and action emerge.”
(Till 2014:11)



In accordance with Regulation 4(c) of the General Regulations (G.57) for dissertations and theses, I declare that this dissertation, which I hereby submit for the degree Master of Architecture (Professional) at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.

I further state that no part of my dissertation has already been, or is currently being, submitted for any such degree, diploma or other qualification.

I further declare that this dissertation is substantially my own work. Where reference is made to the works of others, the extent to which that work has been used is indicated and fully acknowledged in the text and list of references.

Alexia Katranas
u16021861
2021-11-15

Figure 0.1: (cover page) *Architecture of Scarcity* (Author 2021).

Figure 0.2: (background) *Activate the wall* (Author 2021).

Supervisor:
Paul Devenish

Co-supervisor:
Dr. Carin Combrinck

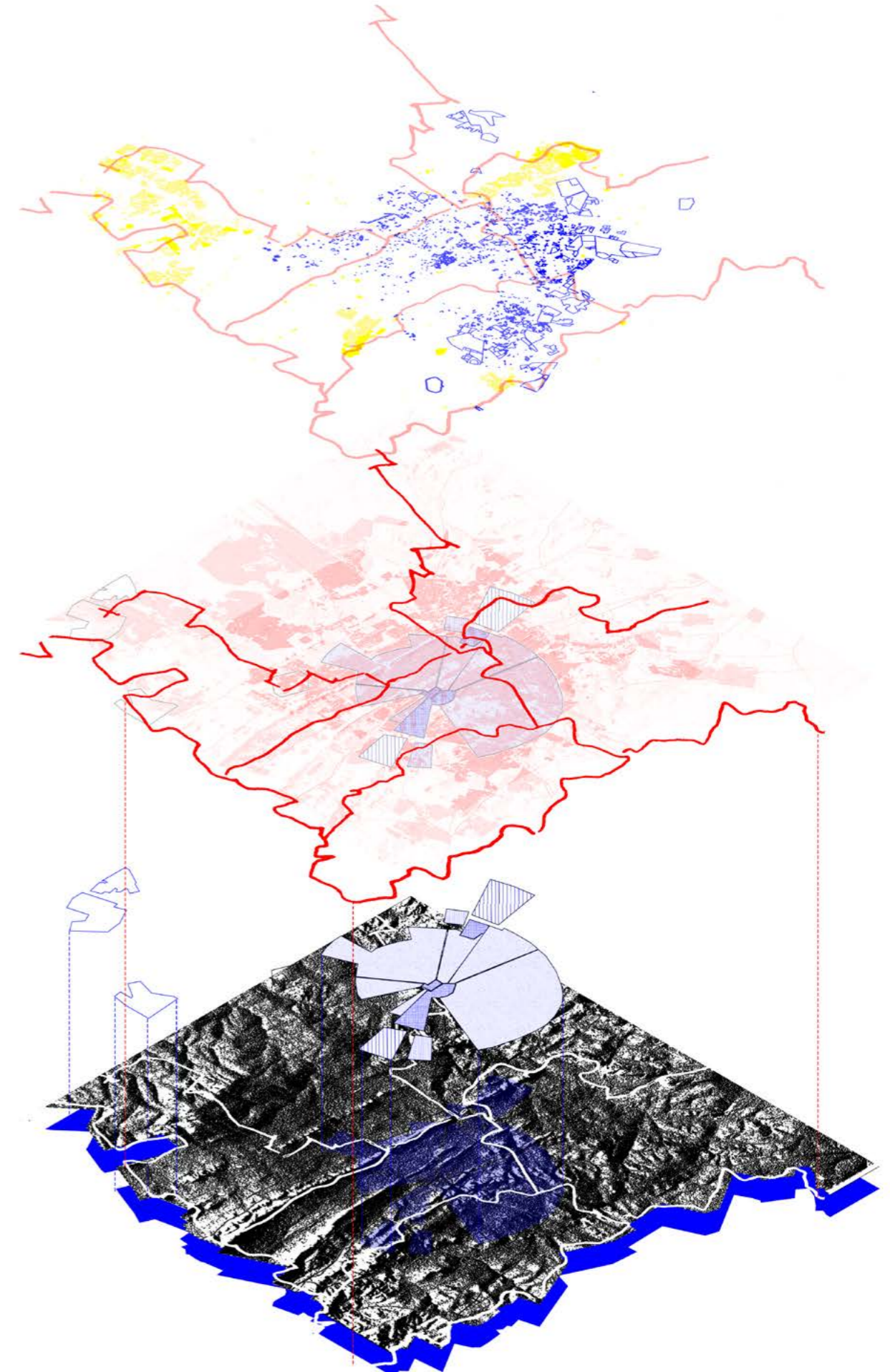
Course Coordinator:
Prof. Arthur Barker

Editor:
Athena Lysandrou



Figure 0.3: (above)
Location of Study
(Author 2021).

Figure 0.4: (right)
Summary of Issues
(Author 2021).



ABSTRACT

This project is situated within the highly **polarised and fragmented landscape of Moreleta Park**, where contemporary manifestations of exclusionary apartheid values, in the form of **gated communities**, are confronted by the emergence of “grass-root disturbances”, in the form of **informal settlements**. *An architecture of abundance meets an architecture of scarcity*, or rather, a defensive architecture that fearfully attempts to answer the socially constructed inevitability of scarcity is confronted by an architecture that emerges from physical conditions of scarcity, which are both the direct consequence of, and condoned through, the exploitation and discrimination that emanates through the fear of inevitable scarcity.

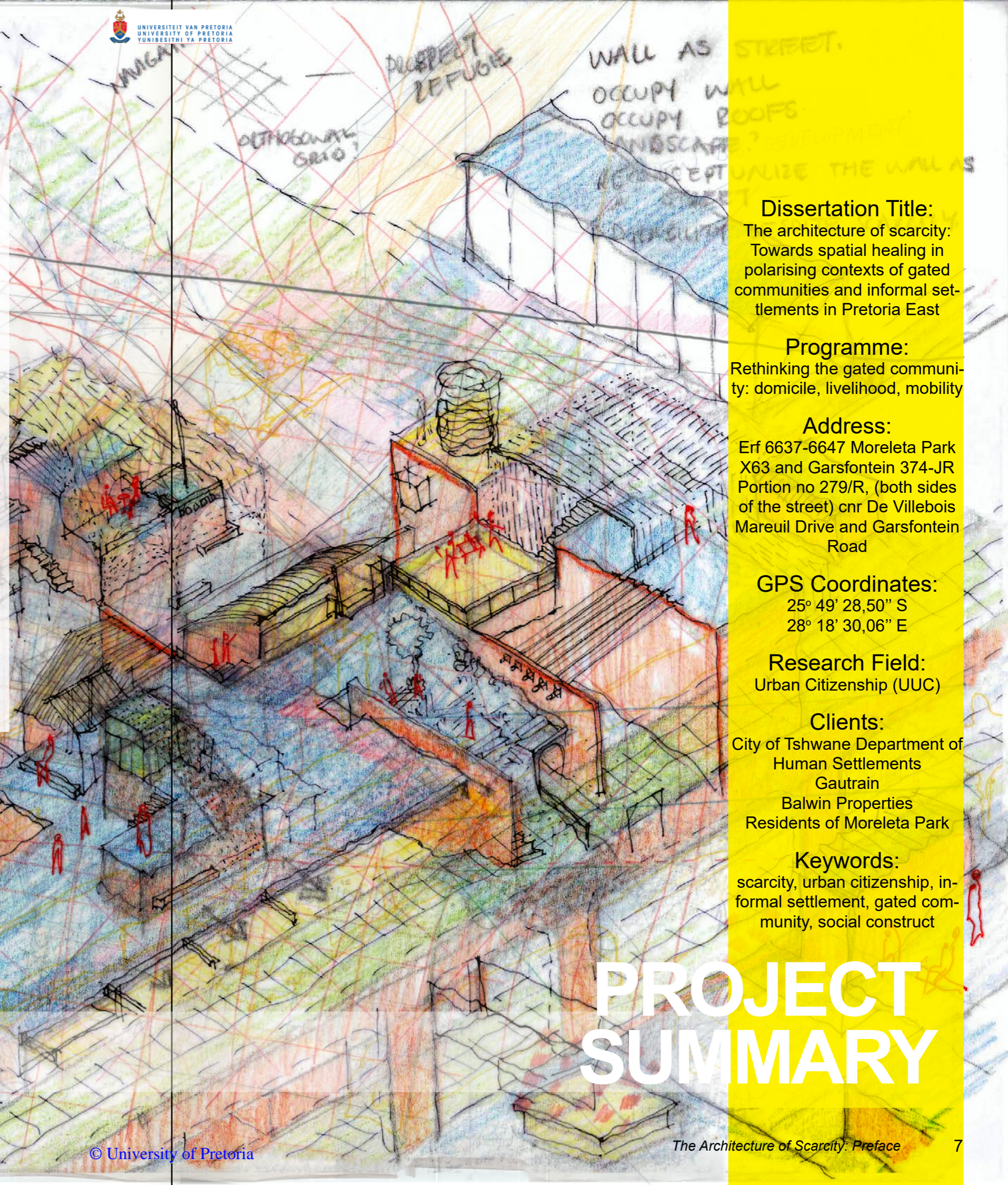
Scarcity is seen to limit agency, but what if scarcity could induce agency? Scarcity has already shown the potential to catalyse massive change, and has shown itself to promote the subsequent ingenuity necessary for survival.

By learning from the complex socio-spatial landscape of the past, present and “future” South African city, through a deeply collaborative, agency-kindling process that is grounded in a foundation of critical theory and phenomenology, this architect/facilitator/actor aims to reimagine an architecture of

scarcity that embraces ephemerality and sensitively emancipates the potential of boundary beyond that of division. *This project gestures towards an architecture that is not a solution-driven answer, but a dialogue-inducing question; scarcity that is not a problem, but an opportunity.*

Yielding the benefit of a site favourably located beside a proposed Gautrain/transport node, with close proximity to both a gated community and informal settlement - the programmatic opportunity of domicile, livelihood, and mobility emerged as useful mechanisms for integration, and are manifested in the exploration of a housing typology that rethinks architectural and technical constitution of the traditional gated community.

Alexia Katranas
U16021861
2021



Dissertation Title:
The architecture of scarcity:
Towards spatial healing in
polarising contexts of gated
communities and informal set-
tlements in Pretoria East

Programme:
Rethinking the gated communi-
ty: domicile, livelihood, mobility

Address:
Erf 6637-6647 Moreleta Park
X63 and Garsfontein 374-JR
Portion no 279/R, (both sides
of the street) cnr De Villebois
Mareuil Drive and Garsfontein
Road

GPS Coordinates:
25° 49' 28,50" S
28° 18' 30,06" E

Research Field:
Urban Citizenship (UUC)

Clients:
City of Tshwane Department of
Human Settlements
Gautrain
Balwin Properties
Residents of Moreleta Park

Keywords:
scarcity, urban citizenship, in-
formal settlement, gated com-
munity, social construct

PROJECT SUMMARY

This project would not have been possible without the support of countless incredible individuals. It is nearly impossible to pay worthy tribute to the impact you have all had during this challenging year. I am profoundly grateful for, and in awe of, the magnitude of love and humanity that exists around me.

I would like to express my deepest thanks to my parents, Tommé and Margarita Katranas. It has been your unwavering love, support, and faith in me that has carried me through my life and work. Thank you for reminding me to look after myself whilst I cultivate my passions.

To my supervisor, Paul Devenish: thank you for meeting my often abstract ideas with enthusiasm and dedication, and for helping me translate the meaning that existed in the chaos. This outcome would not have been possible without your patience, expert wisdom, and guidance. Thank you for pushing me to constantly improve and grow as a designer.

To my co-supervisor, Dr Carin Combrinck: you have helped expand and shape my understanding of architecture into a discipline I can believe in. I cannot thank you enough for your love and knowledge, for inspiring us with your courage, for believing in me, and, most importantly, for helping me be brave.

To Prof Arthur Barker, thank you for your commitment to guiding, cultivating, and challenging our ideas. I am incredibly grateful for your support, and legendary life-saving pep-talk.

Thank you to Boukunde, and the passionate and dedicated individuals that form its heart. I wish to thank Jason McBean and Mpho Petele for always checking in on us, and for always making their help and guidance available.

To Athena, thank you for your dedication; for matching my love of writing, and enriching this dissertation.

Thank you, Annique, for keeping me calm and afloat in that final week - supporting me far beyond the generous hours you spent helping me build the model.

To my brother, christopher, thank you for keeping me sane and motivated, and for helping me craft a crit exhibition that I am proud of.

To my fellow collaborators, I owe you my deepest gratitude: the Moreleta Park MArch(Prof) team - for sharing your talents, encouragement and perseverance, on and off site; the MArch(Hons) group, for immersing yourselves with commitment and open minds; the amazing duo from Sweden, for your shared enthusiasm for and meaningful contribution to our research.

To my fellow MProf class, and particularly, incredible studio comrades (the United Students Studio Republic), thank you for always being so generous with knowledge and support, and for being a constant source of joy and inspiration. To those who lifted me when I felt I could no longer walk - Brentan, Martine, Dhané, Alex, Heike, Cameron, Mia, Zoë, Adrian (my partner-in-crime), and countless others - this year would have been impossible without you.

To the UUSSP, Delani and Chris, my team and work companions: thank you for walking (sometimes climbing) this journey with me, and affirming how powerful, rewarding, and meaningful it is to collaborate and share in one another's victories and growth. You never hesitated to offer a helping hand, a shoulder, a laugh, and a comprehensive list of reasons to persevere.

I take immense pride in the mark your voices have had on my own work, and have endless appreciation and respect for the incredible contribution your individual projects will continue to make.

To my partner and best friend, Ruan: thank you for walking this journey with me; for sharing in and embracing my passion for Architecture. From the very first pages you helped me pin up in my first year of studies (colour wheels and sit-things, most probably), to the day I completed my Masters degree, you have offered endless love and support. Thank you for inspiring me, and for believing in me.

Finally, thank you to the many voices that are reflected in this project: those who inspired me with their ideas, theories, and writing; stakeholders who offered valuable engagement and insight in their expert fields, such as community health-workers, local NGO's; the residents of Plastic View, who so generously assisted us in our research within their neighbourhood, and welcomed our thoughts, ideas, and engagement.

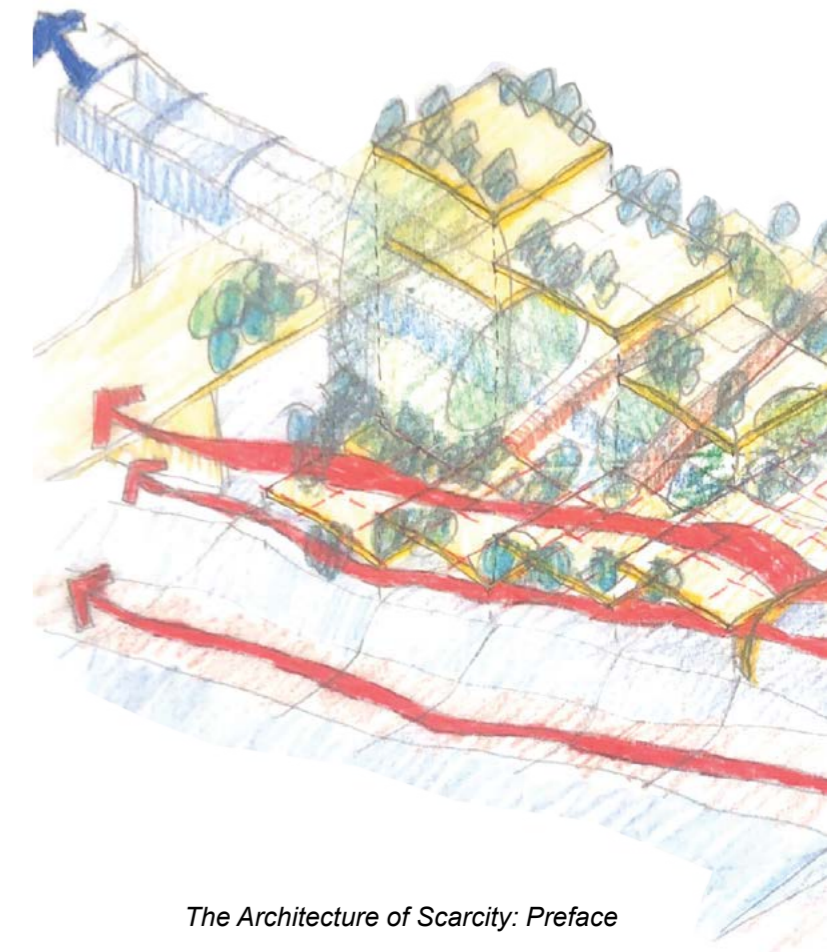


Figure 0.5: (previous page) collage of theoretical exploration (Author 2021).

Figure 0.6: (right) Theoretical sketch of architectural approach (Author 2021).

CONTENTS

12

ESSAY 1
POSITION +
SITUATION
PRE-DESIGN

- 1.1. Background
- 1.2. Definition of Terms
- 1.3. The Issue of Scarcity
- 1.4. The Opportunity of Scarcity

64

ESSAY 2
DESIGN RE-
SEARCH
(DESIGN)
GENERATIVE

- 2.1. The Role of the Architect
- 2.2. Case Study: Moreleta Park
- 2.3. Precedent Study
- 2.4. The Architectural Opportunity

180

ESSAY 3
SYNTHESIS
(DESIGN)
EVALUATIVE

- 3.1. The Role of the Architecture
- 3.2. Design and Technical Development
- 3.3. The Architecture of Scarcity
- 3.4. Scenario Testing

272

ESSAY 4
CRITICAL RE-
FLECTION
POST-DESIGN

- 4.1. *A PRE-RAMBLE* (not the end, but the beginning)

295

APPENDIX

REFERENCES

284

PREFACE

1

ESSAY 1

POSITION + SITUATION

PRE-DESIGN

1.1. p16 BACK- GROUND

1.2. p18 DEFINITION OF TERMS

1.3. p20 THE ISSUE OF SCARCITY

- 1.3.1. Scarcity as a social construct.
- 1.3.2. Scarcity and the history of South African Urban Planning.
- 1.3.3. Scarcity, insecurity and spatial division.
- 1.3.4. The City of Tshwane: Unified but not integrated.
- 1.3.5. Gated and informal communities: the anticipation versus the experience of scarcity.
- 1.3.6. Moreleta Park: Demonstrating the anticipated needs and conditions for the future South African city.

1.4. p44 THE OPPOR- TUNITY OF SCARCITY

- 1.4.1. Towards spatial agency.
- 1.4.2. Unpacking the phenomena of space, materiality, and time.
- 1.4.3. The question of scarcity and architecture.
- 1.4.4. Domicile, livelihood, mobility.
- 1.4.5. Locating the research.
- 1.4.6. An architectural methodology for the Scarce City.
- 1.4.7. Statement of approach to architecture



Figure 1.0.1: (right) Boundary wall in Cemetery View, Moreleta Park (Author 2020).

Figure 1.1.1: (below) View of gated communities from Plastic View informal settlement, Moreleta Park (Kriek 2021).

THE GENERAL, URBAN, AND ARCHITECTURAL- AL ISSUE



1.1. BACK- GROUND

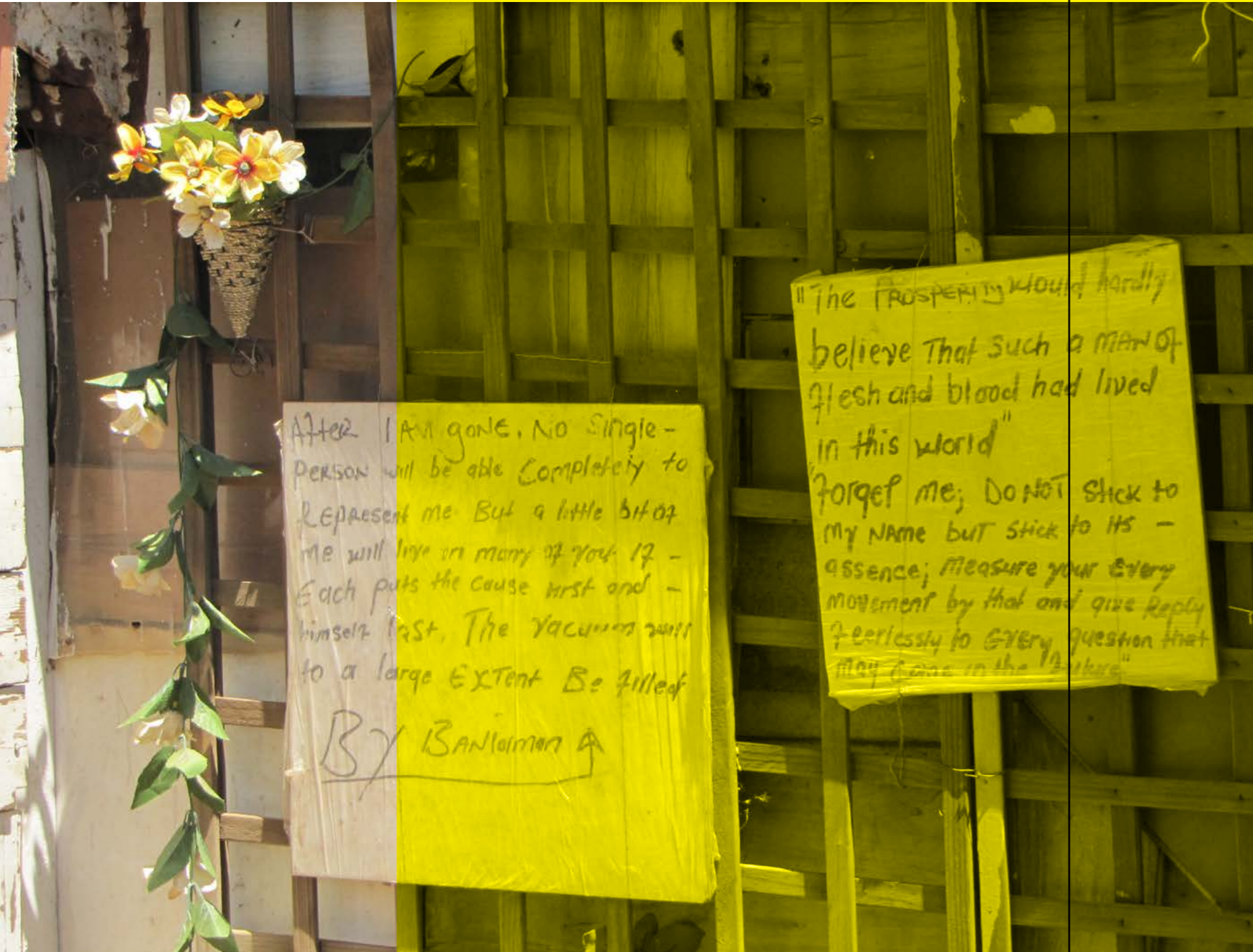
Twenty-six years into democracy, spatial inequality continues to plague South African cities (Strauss & Liebenberg 2014), despite major shifts in the political paradigm upheld by the country's constitution (Constitution of the Republic of South Africa No. 108 of 1996). Thus, spatial development frameworks are arrantly centred around mitigating the remaining oppressive economic implications of apartheid spatial planning, prioritising urban reform through principles of spatial justice, sustainability, efficiency, quality and resilience (City of Tshwane Department of City Planning and Development 2018, Spatial Planning and Land Use Management Act No.16 of 2013).

A clear schism exists between theory and practice. Today, in addition to the difficulty of realistically implementing urban reform over remnant apartheid urban morphology, new developments continue to emerge as contemporary manifestations of exclusionary apartheid values (Landman 2004, Strauss & Liebenberg 2014). This exposes the dominant neoliberal socio-political agenda fulfilled by architecture at present (Till 2014), with the polarising existence of informal settlements

and gated communities within South African cities as the natural consequence (Landman 2006).

When considering the innate role of architecture in both perpetuating and potentially mitigating the existing social, economic and physical conditions of disparity, the meaning of architecture in terms of its phenomenological ideation as the "boundary condition" or "in-between" becomes significant (Norberg-Schulz 1976:3–10). One can examine the role played by social constructs, such as scarcity and abundance, in architecture (Till 2014), and what an understanding of this role in its historical and contemporary context would mean in terms of agency (Awan et al. 2011), power (Foucault 1972), and securing equal rights to the city (Lefebvre 1968, Section 9(2) of the Constitution of the Republic of South Africa No. 108 of 1996).

Figure 1.2.1: (below) Poetry displayed on the wall of a home in Plastic View, Moreleta Park (Herbst 2021).



1.2. DEFINITION OF TERMS

1.2.1.

Scarcity Postulate:

The belief that scarcity is an unavoidable reality, resulting in a gap between man's theoretically unlimited needs, and a limited ability to meet these needs (Xenos, 1989).

1.2.2.

Apartheid:

"A policy or system of segregation or discrimination on the grounds of race" (Oxford University Press 2020).

1.2.3.

Gated community:

(see pg 31)

1.2.4.

Informal Settlement:

(see pg 33)

1.2.5.

Domicile:

A country, place, or space which a person securely identifies as their constant "home" - whereby creating one's domicile becomes the act of dwelling (Pallasmaa 1999:79).

1.2.6.

Livelihood:

Conditions and functions necessary for achieving and sustaining domicile, whether the means of generating a formal/informal income, or merely any act that secures access to human dignity.

1.2.7.

Mobility:

Refers to an individual or group's freedoms and capabilities to advance or progress on a physical (transport, movement) social, economic, and political level.

1.2.8.

Transactional

A transactional relationship, both in nature and in social structures, can be an action, system, or construct which operates competitively, prioritising individual/internal gain far beyond collective/exterior implications. Such gestures may detrimentally induce binary conditions, and promote division, exclusion, disparity, and exploitation. A clear example in which this attitude manifests is in the market driven economy, where space, materiality, and time are commodified - and the individual success of any exchange/transaction of such commodified elements is measured and awarded based on an individual attaining more value than what they yielded for it.

1.2.9.

Relational

A relational connection or gesture, characteristic of resilient systems, is distinctively mutually beneficial - because value is measured collectively; the individual understood in terms of the collective.

1.3. THE ISSUE OF SCARCITY

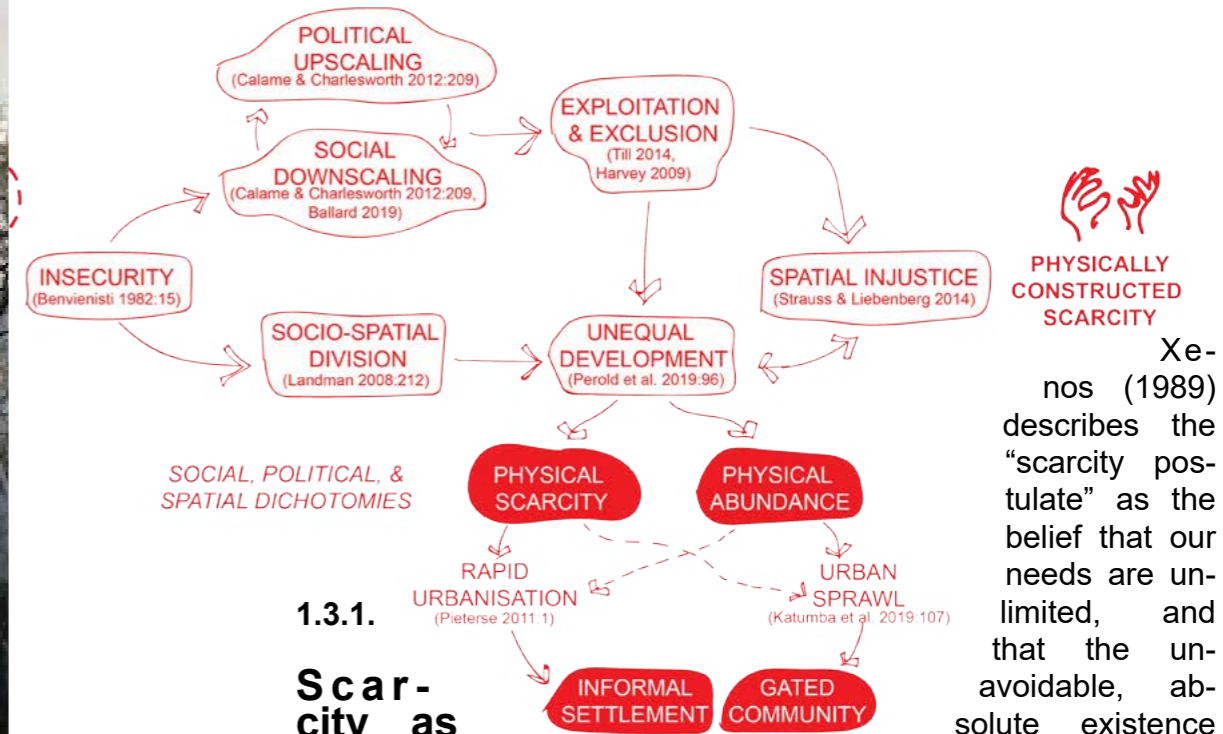
Figure 1.3.1: (below) Claim street in Johannesburg under violence by allegedly Zuma supporters (Muchave 2021).

Figure 1.3.2: (right) The relationship between scarcity and the making of our cities (Author 2021).

CAN THE WORLD BE SHARED?



SOCIALLY CONSTRUCTED SCARCITY
(Till 2014, Xenos 1989)



1.3.1. Scarcity as a social construct

Foucault (1972) argues that human actions are largely normalised by society, through social constructs that govern perceived needs and desires, and thus, how decisions are made. Thus, a social construct is an exertion of normalising power – not possessed by any individual or group. Although social constructs are inherently abstract, the universal participation in this “normal” results in its physical manifestation. In this way, scarcity can be understood as a social construct.

Figure 1.3.3: (right) *Sophiatown removals* (Schadeberg b. 1931; printed in 1999).

Figure 1.3.4: (far right) *Standard pattern sequence of division* (Author 2021, after Calame & Charlesworth 2012:205-236).

Figure 1.3.5a: (below) *Sectarian division lines in Belfast* (Calame & Charlesworth 2012).

Figure 1.3.5b: (below) *The Israeli 'security fence' in East Jerusalem* (Calame & Charlesworth 2012).

Figure 1.3.5c: (below) *The Green Line in Nicosia, Cyprus* (Calame & Charlesworth 2012).

Figure 1.3.5d: (below) *Boundary wall in Cemetery View, Moreleta Park* (Author 2020).

1.3.2. Scarcity and the history of South African urban planning

The relationship between constructed scarcity and the pursuit of abundance is evident in South Africa's history, such as in the Natives Land Act of 1913 (RSA 1913). This legislation sought to deal with tension over power and control of mining and agricultural capital in South Africa, by reserving the right to rent or own land to the white population. In addition, the act spatially secured exploitative access to black labour to support the production of capital at a much larger scale (Philip 2014).

In 1948, South Africa saw the election of the Nationalist Party into government, whereby apartheid was formalised on an institutional level. The party's strong "religio-political" Afrikaner nationalist agenda, which sought to further secure the interests of the white Afrikaner

minority in relation to land rights, was evident in the urban policies that followed (Janse van Rensburg 2009). Before the end of apartheid in 1991, the Group Areas Act of 1951 (RSA 1951) and the Black Homelands Citizenship Act of 1970 (RSA 1970) were some of the policies informing disparate spatial planning that critically inhibited the permanence of black citizenship in urban areas (Philip 2014).

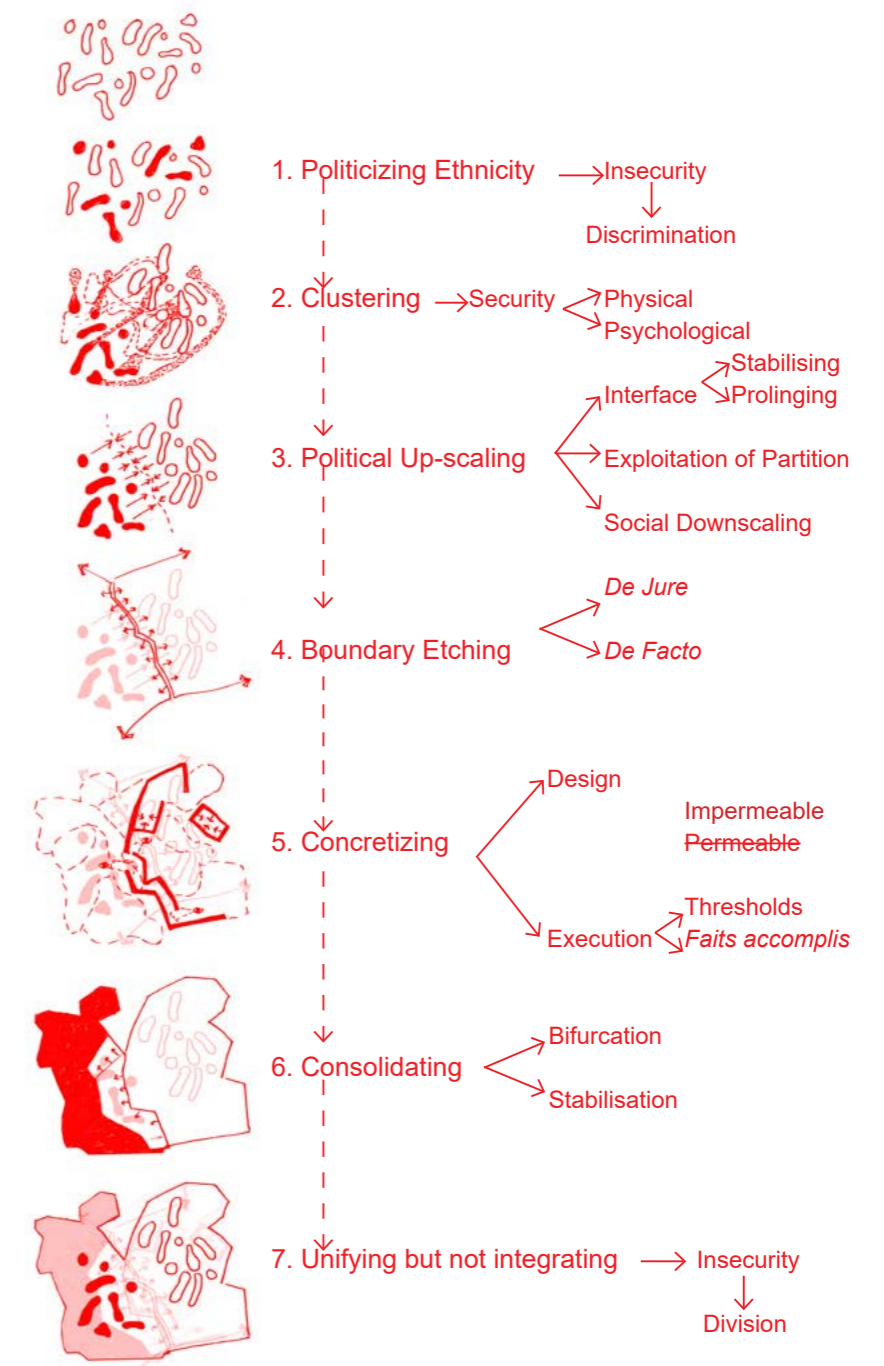
1.3.3. Scarcity, insecurity and spatial division

A firm correlation has been drawn between the insecurity induced by socially constructed scarcity, inter-ethnic tension and the subsequent socio-spatial division that prevails in South African cities. This notion is further supported globally in the study of five other divided cities where the violent spatial division lines that propagate enclosure and



physical separation constitute an attempt to ease insecurity and conflict (Calame & Charlesworth 2012:209) – a repressive assertion of power where there has been a breach in the "urban contract" (normalising power) (Calame & Charlesworth 2012:156). From this, a standard pattern sequence could be identified for

divided cities, acknowledging the significance of socio-political constructs as precursors to physical partitioning, and the importance of addressing this as a prerequisite for real spatial healing (Calame & Charlesworth 2012:205–236).



- Black Population
- Formal Black-African Suburb
- Formal Black-African Homeland
- Informal black-African Suburb
- White Population
- White Suburb
- Indian/Coloured Population
- Indian/Coloured Suburb
- ▨ Industrial
- CBD
- Informal Settlement
- Backyard Shacks
- Gated Community

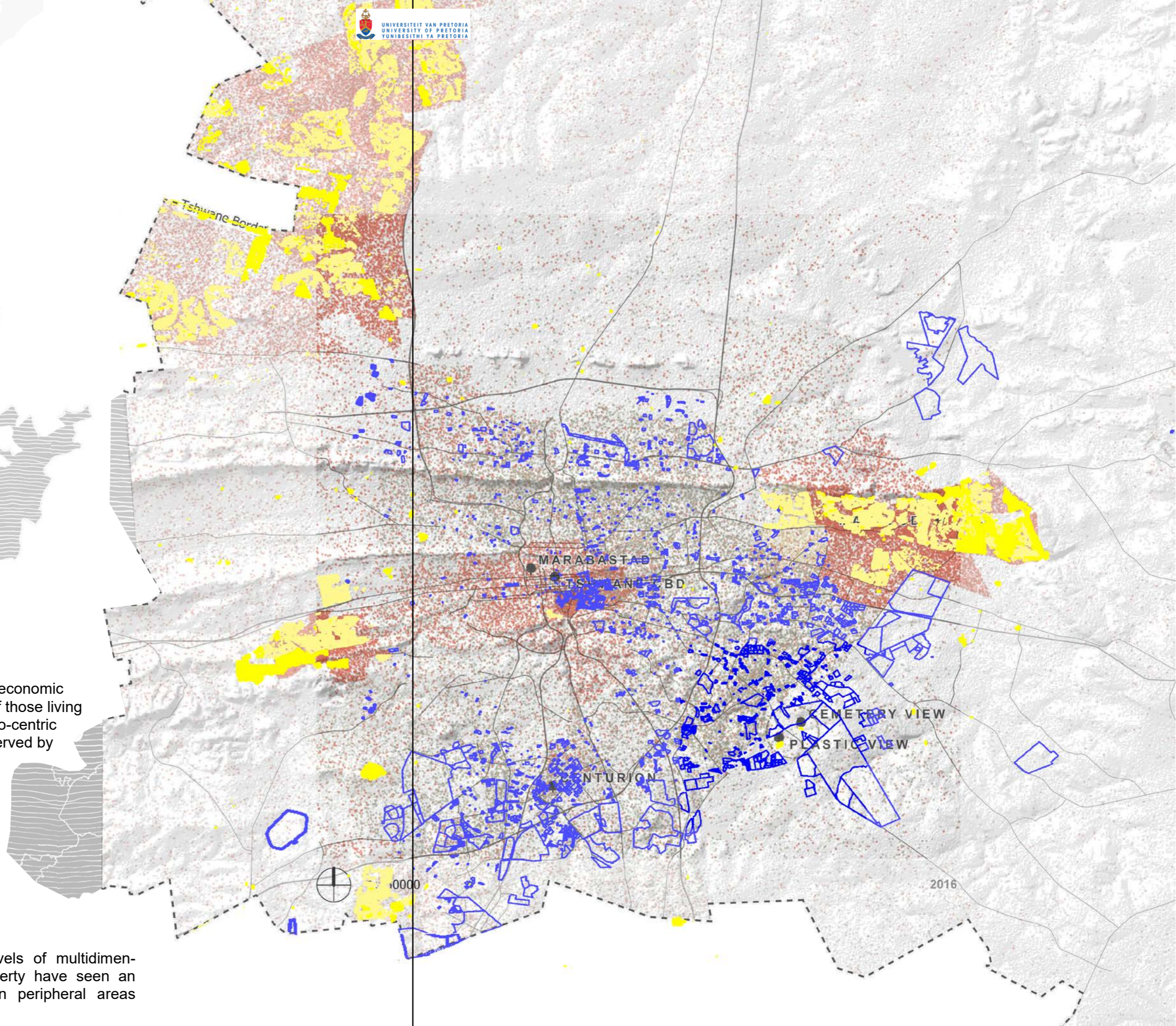


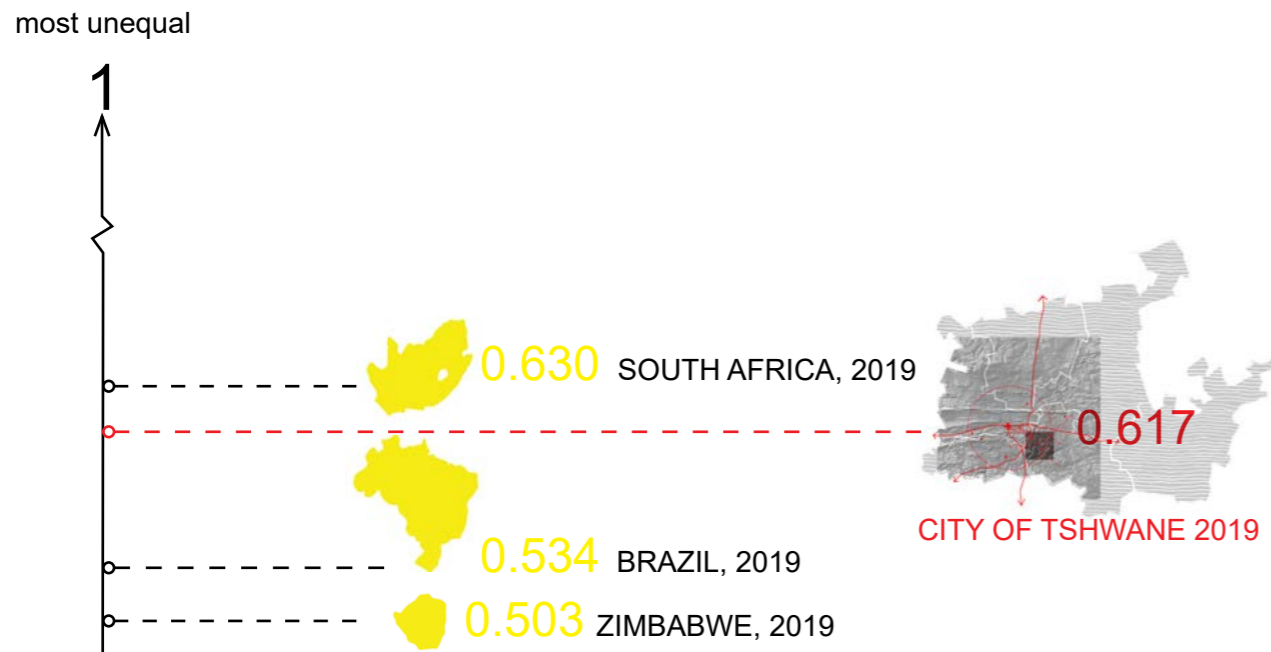
Figure 1.3.6: Locating Pretoria, the divided

1.3.4. The City of Tshwane: Unified but not integrated

Considering current legislative efforts such as the Spatial Planning and Land Use Management Act of 2013 (SPLUMA) (RSA 2013), a shift has been made regarding the planning and facilitation of urban interventions from a legal standpoint (Joscelyne 2015). Despite this, Tshwane remains a deeply divided “dual city” (Horn 2020) marked by continued uneven development,

where the economic interests of those living in the mono-centric core are served by the labour of inhabitants of the marginalised periphery (Horn 2020:5, Peberdy 2017:16).

Hence, levels of multidimensional poverty have seen an increase in peripheral areas



(former black homelands), with affluence remaining concentrated in previously advantaged white areas, on the opposite end of the city (Katumba et. al. 2019:107). Consequentially, Tshwane displays a growing schism between conditions of scarcity and abundance, poverty and affluence. The present lack of social cohesion (Ballard 2019), or social downscaling (Calame & Charlesworth 2012:156), mirrors a failure to eradicate the socio-spatial boundaries that had once served to neutralise perceived insecurity through systemic exclusion and exploitation of a racially discriminated “other”.

a comparatively lower unemployment rate and a higher GDP per capita than the South African average (UN-Habitat 2020:33-44). This is a major pull for economically strained citizens of peripheral rural areas, neighbouring provinces, and SADC countries such as Zimbabwe and Lesotho. However, the city faces high levels of inequality, represented by a high Gini coefficient – which is expected to rise further because of COVID-19 (Gauteng Provincial Government 2021:57).

Rapid urbanisation without adequate industrial growth and an existing infrastructural deficit is the dominant condition subjected to most post-colonial African cities, resulting in high unemployment and poverty (Pieterse 2011:1).

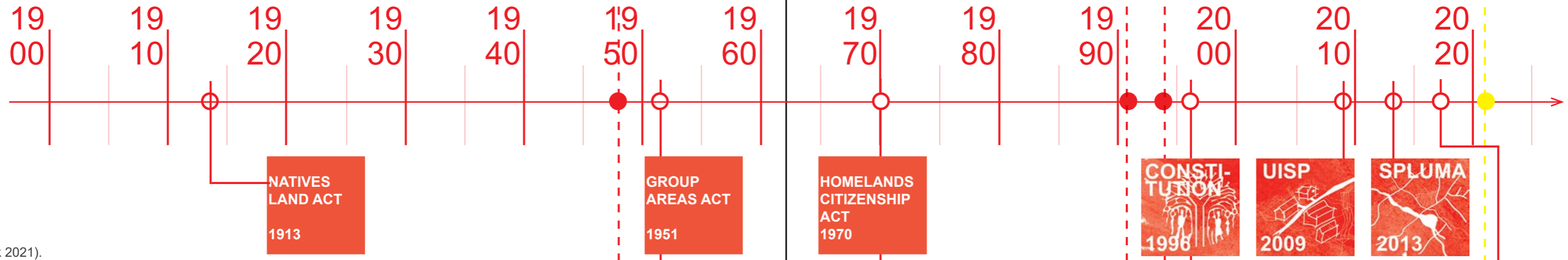
To design integrated cities, the perspectives of an emerging, marginalised, urban majority should be considered to better address social, economic, and geographic exclusion (Landman 2008:212, Pieterse 2011:5, Till 2014, Harvey 2007).

Despite displaying an inefficient urban form, Tshwane boasts

city (Author 2021).
Figure 1.3.7: (above) Graph comparing City of Tshwane’s gini-coefficient to the averages of three unequal countries: South Africa, Brazil, Zimbabwe. South Africa has the highest gini-coefficient, an indicator of inequality, in the world (Author 2021, after Gauteng Provincial Government 2021).

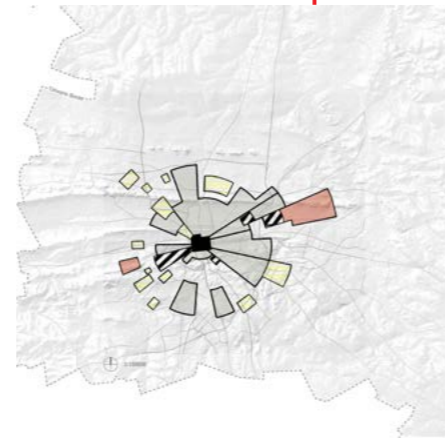
Figure 1.3.8: (right) Women gather in a street in Plastic View, Moreleta Park



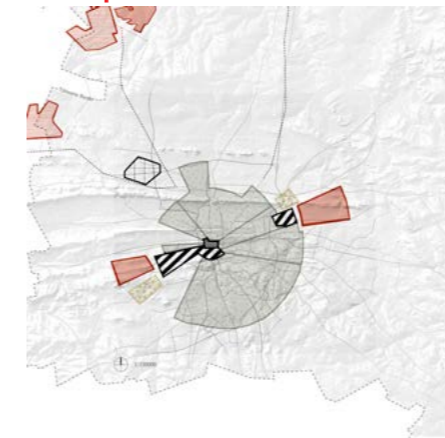


(Kriek 2021).

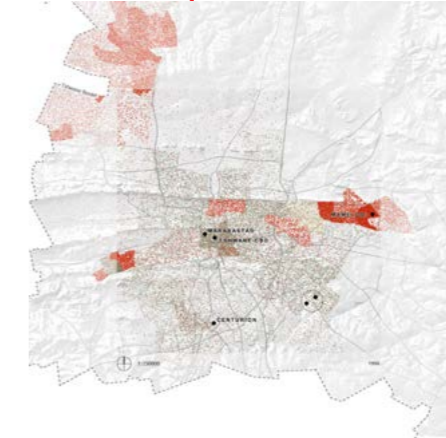
Figure 1.3.9: A timeline of the City of Tshwane's development - with reference to the standard division pattern sequence (Chalame & Charlesworth) and the Social spatial Heuristic (see fig. 1.3.11 on page. 24) (Author 2021).



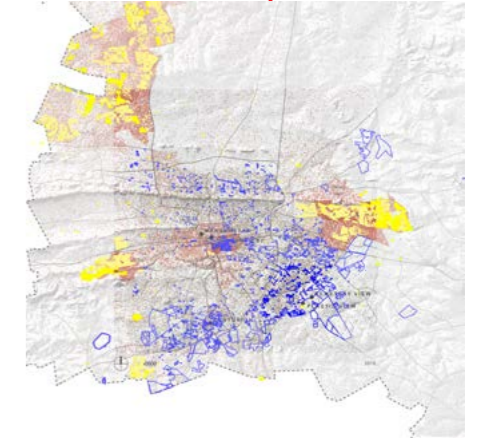
Pre-1950 Pretoria: **Segregated City** (Davies 1981, Horn 2020, Hamann 2015 after Olivier & Hattingh 1985)



1970-1984 Pretoria: **Apartheid City & Seperate City** (Hamann 2015 after Olivier & Hattingh 1985)

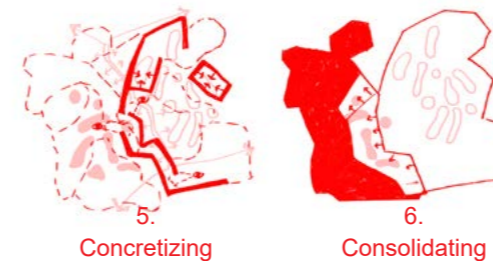
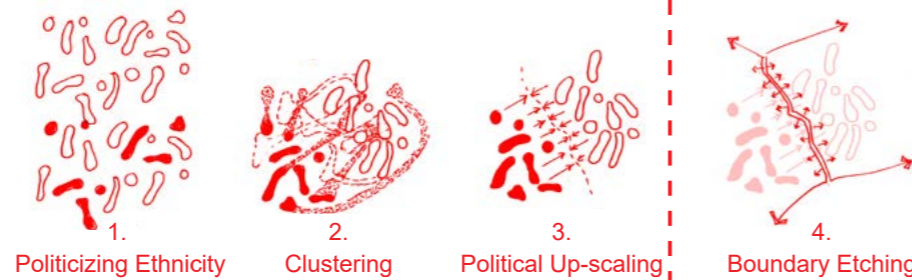


1996 Pretoria: **Post-Apartheid Unified City** (De Bruin 2020 in UP Dept Arch Hons: Moreleta Park Integration Project 2020a)



2016 - Present Pretoria: **Post-Apartheid Divided City; "Unified"** (Author 2021, Data from GCRO database, Basemap from De Bruin 2020 in UP Dept Arch Hons: Moreleta Park Integration Project 2020a)

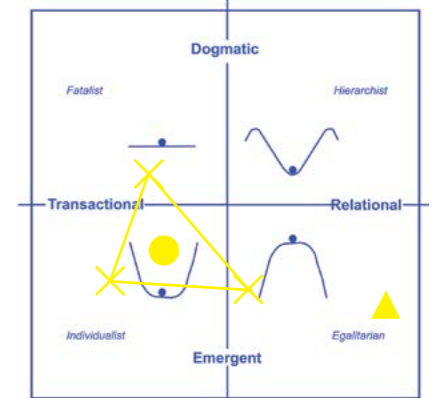
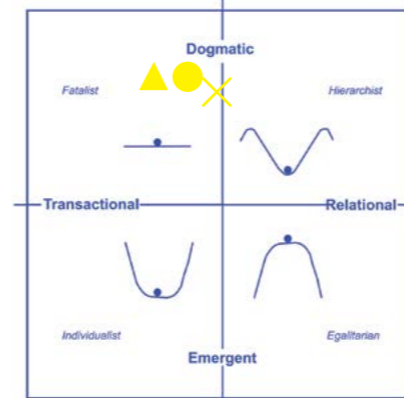
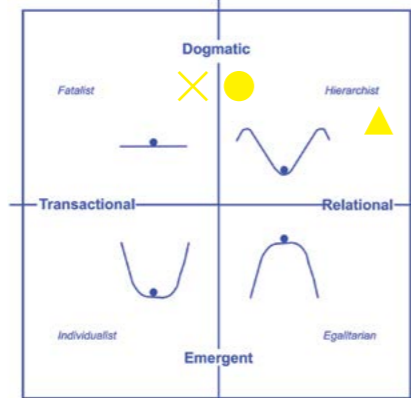
- Black Population
- Formal Black-African Suburb
- Formal Black-African Homeland
- Informal black-African Suburb
- White Population
- White Suburb
- Indian/Coloured Population
- Indian/Coloured Suburb
- ▨ Industrial
- CBD
- Informal Settlement
- Backyard Shacks
- Gated Community



civic imperialism

ethnic nationalism

civic nationalism

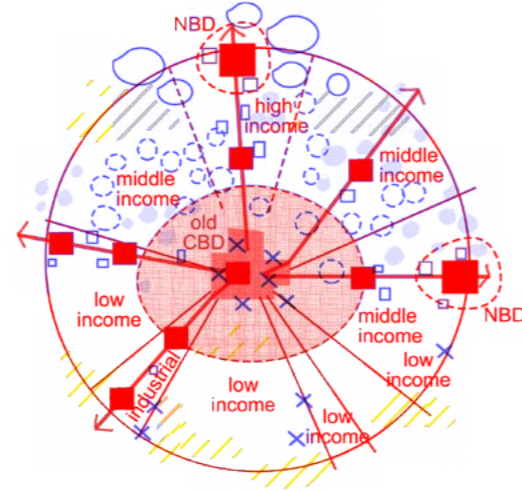
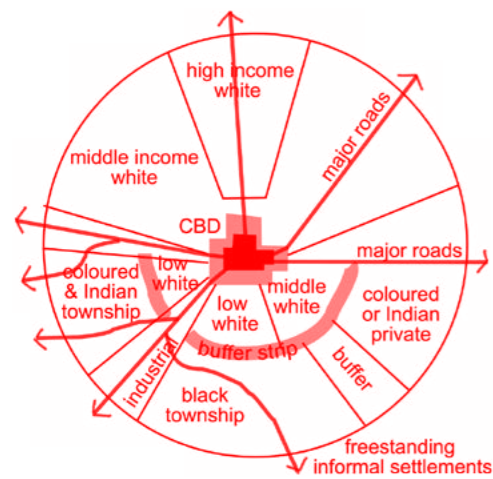


1948 Apartheid Begins

1991 Apartheid Ends

1994 Democracy

- ✕ Physical manifestation
- ▲ Political Values
- Social Values

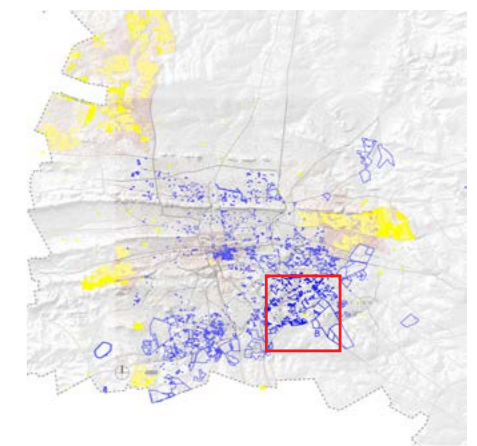
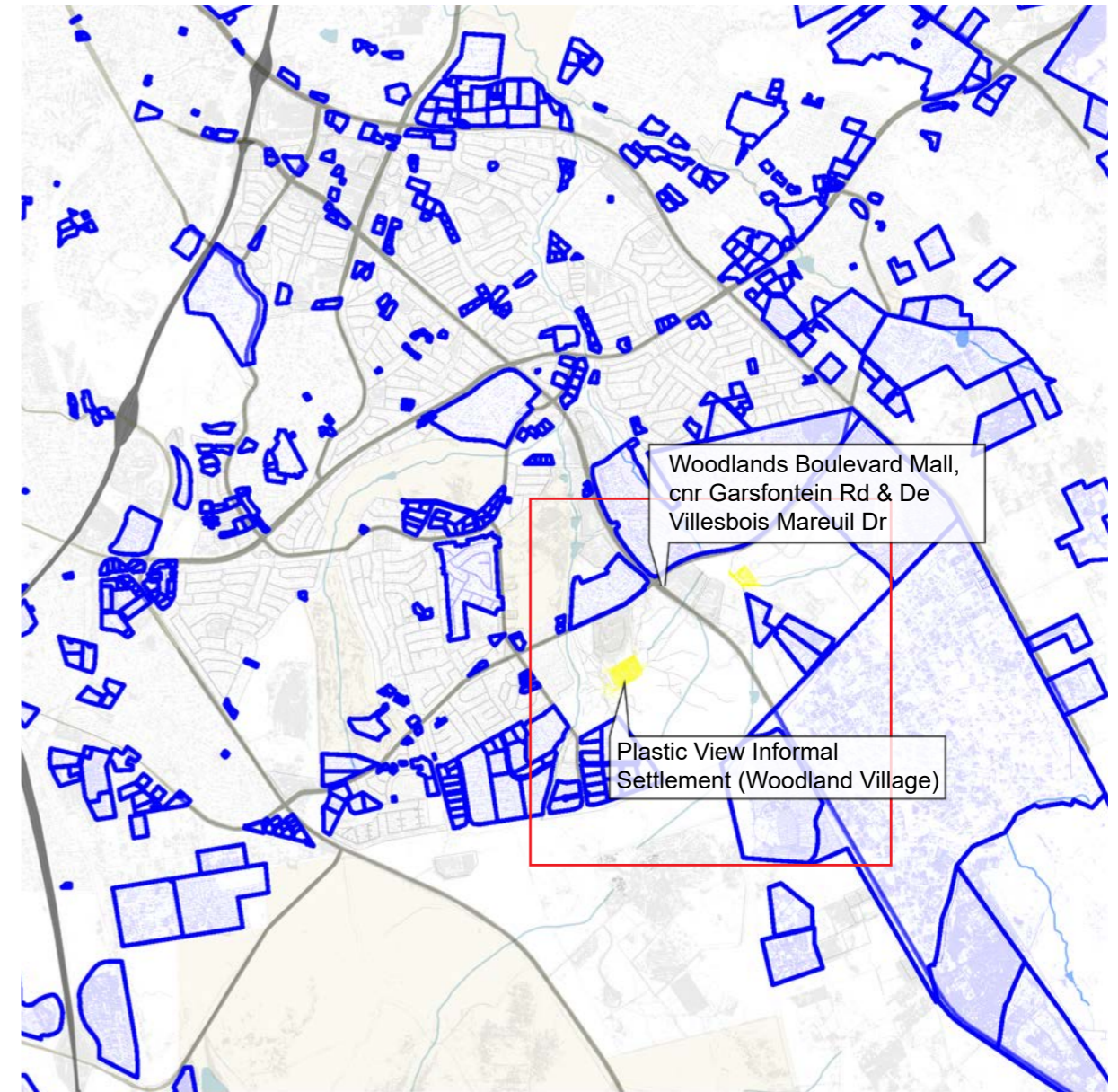
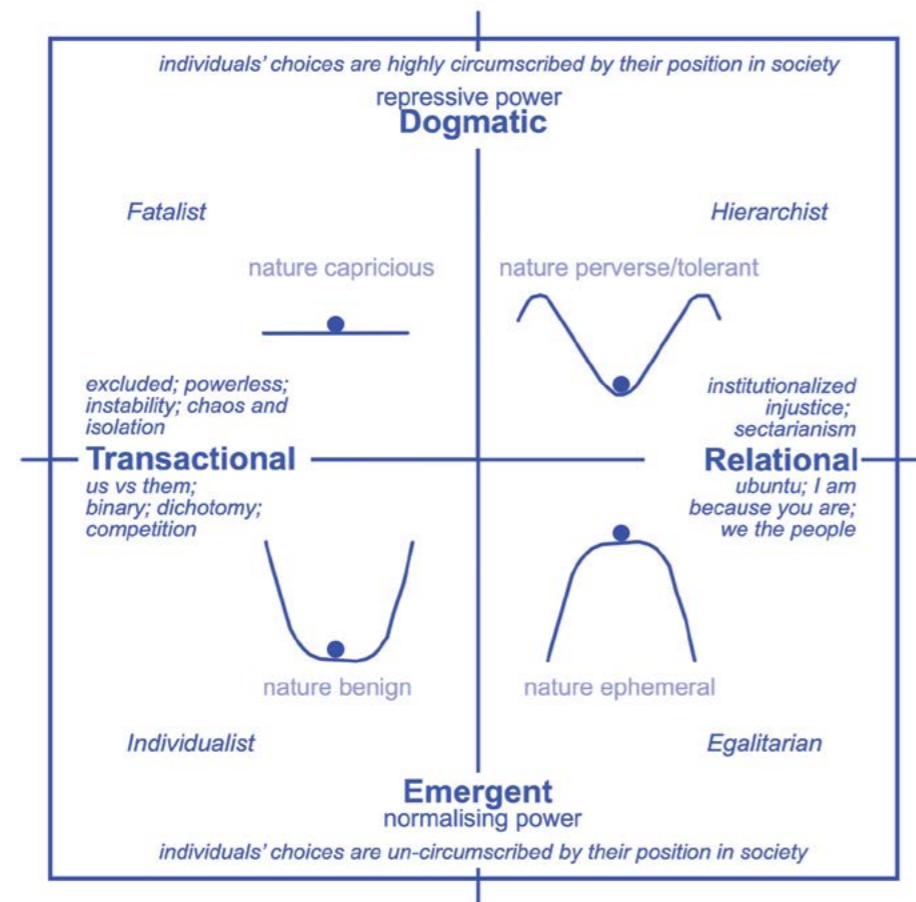


1.3.5. Gated and informal communities: the anticipation versus the experience of scarcity

Since the 1990s, Tshwane's redlines (ethnic divides) have merely been replaced and perpetuated by green lines (economic divides) (Landman 2004:151, Calame & Charlesworth 2012). Old barricades – the products of scarcity and the resulting systems of dogmatic prejudice – sit beside new exclusionary forms of enclosure. The South African gated community is argued as a response within the city core to the threat of increasing crime, alongside other socio-economic issues, such as poverty and unemployment (Landman & Schonteich 2002). This, however, also coincides with the constitutionally capacitated flow of racially and socio-economically diverse groups into previously exclusively white areas (Section 9(2) of the

Constitution of the Republic of South Africa No. 108 of 1996), revealing the lingering bias that drives defensive architecture. This suggests that where there is a transactional, binary condition, little social cohesion, and the anticipation of inevitable

scarcity we build walls. Thus, it becomes helpful to assess differing political, social and spatial paradigms with a unified socio-spatial heuristic (adapted from Wildavsky's (1957:6) models of four cultures).



Legend
 Informal Settlement
 Backyard Shacks
 Gated Community

Figure 1.3.10a: (far left above) *Apartheid City* (redrawn after Davies, as adapted by Napier et. al 1999, & Landman 2006).

Figure 1.3.10b: (left above) *Gated communities and the new apartheid city* (redrawn after Landman 2006).

Figure 1.3.11: (left) Right: A socio-spatial heuristic for assessing conceptions of power and scarcity with respect to social constructs (paradigm, worldview) legislation (political paradigm, policy, frameworks) physical constructs (architecture, urban morphology) (Author 2021 after Wildavsky 1957:6).

Figure 1.3.12: (right above) *Gated communities in Pretoria east* (Author 2021, adapted from author in Moreleta Park Integration Project 2020).

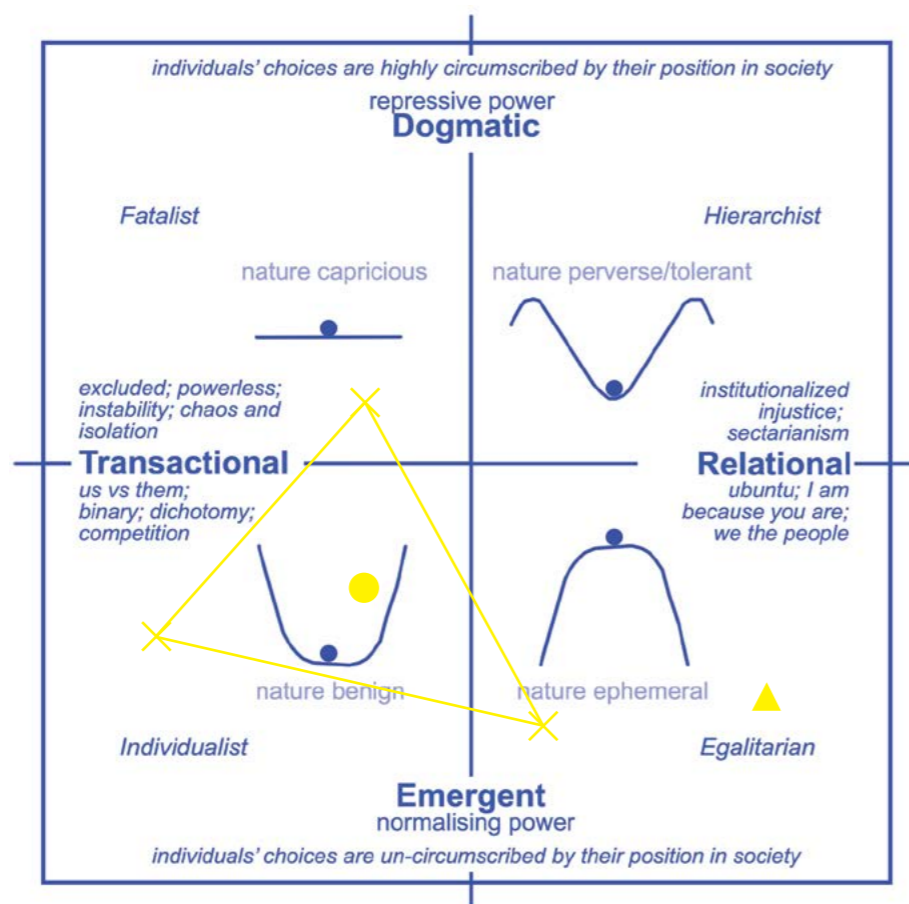


Figure 1.3.13: (left above) Houses in Woodhill Golf Estate, Moreleta Park (Kriek 2021).

Figure 1.3.14: (left) Socio-spatial heuristic broadly displaying the social, political, and spatial values that manifest gated communities and informal settlements (Author 2021 after Wildavsky 1957).

Figure 1.3.15: (above) Houses in Plastic View informal settlement, Moreleta Park (Kriek 2021).

With affordable housing located far from work, education opportunities, and amenities, many urban migrants resort to dwelling informally in temporary, self-built or rented homes on unoccupied land-parcels closer to the city core, with little to no service provision (Perold et al. 2019:96). Informal settlements are characteristically positioned close to these opportunities as a temporary steppingstone or gateway into economic advancement – a solution to the burden of distance (previously a strategic buffer) and the resulting high

transport costs (Victor 2009, Peres & du Plessis 2013). Faced with a more physical, manifestation of scarcity – often resulting in the infringement of the non-derogable right to human dignity (Section 10 of the Constitution of the Republic of South Africa No. 108 of 1996) – informal urban dwellers are forced to hyper-optimize spaces, within and between largely transient building structures in anticipation of the risk of forced removals (Perold et al. 2019:96).

We, the people of South Africa,

Recognise the injustices of our past;

Honour those who suffered for justice and freedom in our land;

Respect those who have worked to build and develop our country; and

Believe that South Africa belongs to all who live in it, united in our diversity.

We therefore, through our freely elected representatives, adopt this Constitution as the supreme law of the Republic so as to –

Heal the divisions of the past and establish a society based on democratic values, social justice and fundamental human rights;

Lay the foundations for a democratic and open society in which government is based on the will of the people and every citizen is equally protected by law;

Improve the quality of life of all citizens and free the potential of each person; and

Build a united and democratic South Africa able to take its rightful place as a sovereign state in the family of nations.

May God protect our people.

*Nkosi Sikelel' iAfrika. Morena boloka setjhaba sa heso.
God seën Suid-Afrika. God bless South Africa.
Mudzimu shatutshedza Afurika. Hosi katekisa Afrika.*

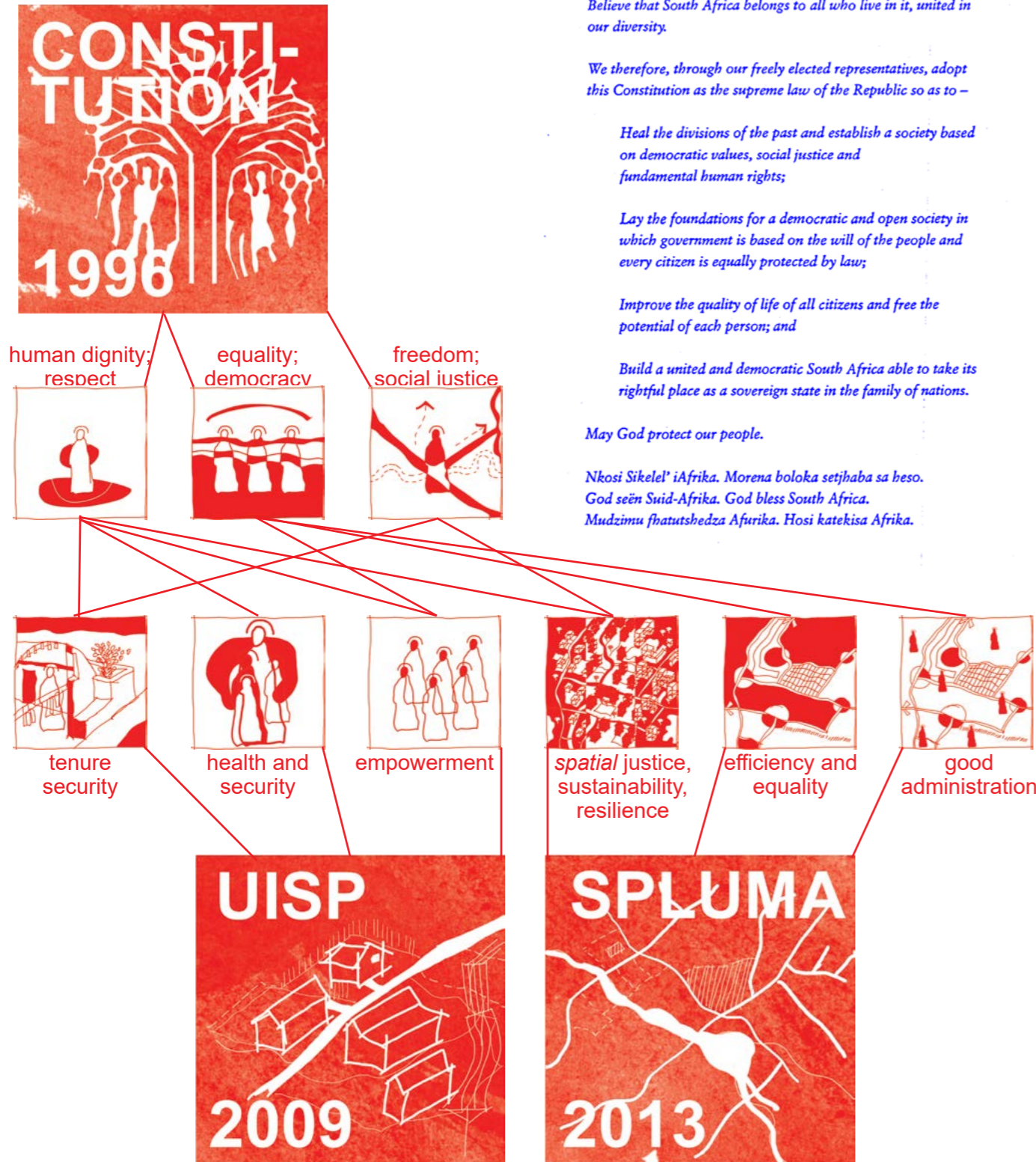


Figure 1.3.16: (far left) *Key values and intentions of relevant policy and legislation* (author 2021).

Figure 1.3.17: (far left) *Preamble to the Constitution of the Republic of South Africa No 108 of 1996* (RSA 1996).

Figure 1.3.18: (left) *Gumpole roof and support structure in Plastic View, Moreleta Park* (Kriek 2021).

1.3.6. The difficulty in translating policy to empowerment

Policy-driven efforts have failed when matched against their goals and values. One such example is the application of the Upgrading of Informal Settlements Policy (UISP) (RSA 2009), a volume of the National Housing Code dedicated to in-situ upgrading. Particularly, the policy's objective of providing empowerment has been dampened by inaction from relevant municipalities, which raises doubt on the viability of such processes to empower, especially when these policies are inaccessible to those they aim to benefit. With respect to land-tenure security, as a pre-

cursor to legitimising and developing informal settlements, Neuworth (2005) notes that, it is necessary to look beyond the demarcation of land as a means of allocating property rights.

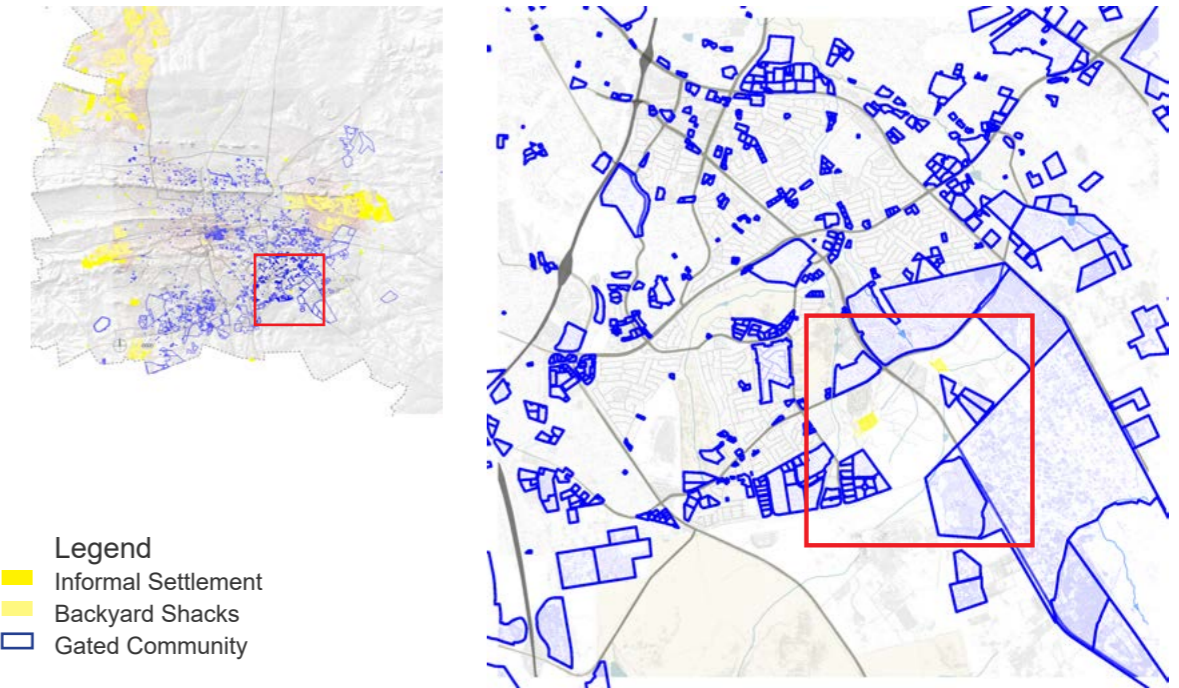
Furthermore, the gap between legislation and practice could be attributed to the lack of social transformation, as it is through this lens, that decision-makers engage with the policy. This is especially true in the case of SPLUMA (RSA 2013), where council approval of development applications is subject to criteria far removed from the context of a project, as well as the larger principles they aim to enforce. Perhaps an appropriate alternative lies beyond current form

and static performance-based codes, within a more holistic criteria for regulating development in the built environment. In undertaking the goal of integrating our cities, the decision-making process at a precinct, or even neighbourhood, level would need to accommodate the needs of informal urban dwellers to use the city to achieve their goals (Simone 2006). This requires a shift in our understanding of the "right to the city" (Lefebvre 1968) from being merely "served by the city", to having the capacity to "pursue multiple aspirations"(Simone 2006:323).



Figure 1.3.19: (left) Gated community and informal settlement in Moreleta park, site plan sketched (De Bruin & Katranas (author) & Kriek 2021)

Figure 1.3.20: (right) Locating Moreleta Park (Author 2021, adapted from author in Moreleta Park Integration Project 2020).



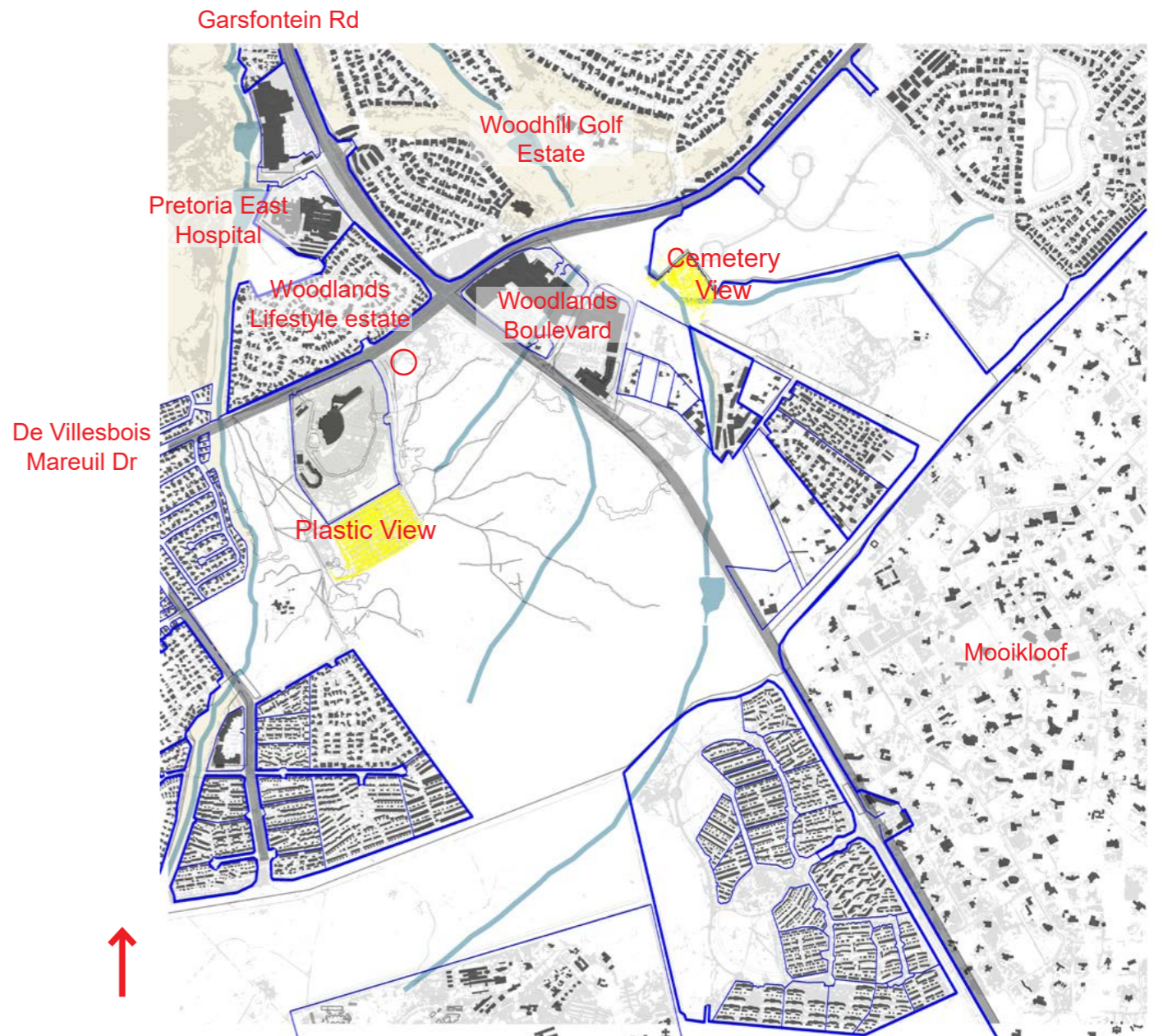
1.3.6. Moreleta Park: Demonstrating the anticipated needs and conditions for the future South African city

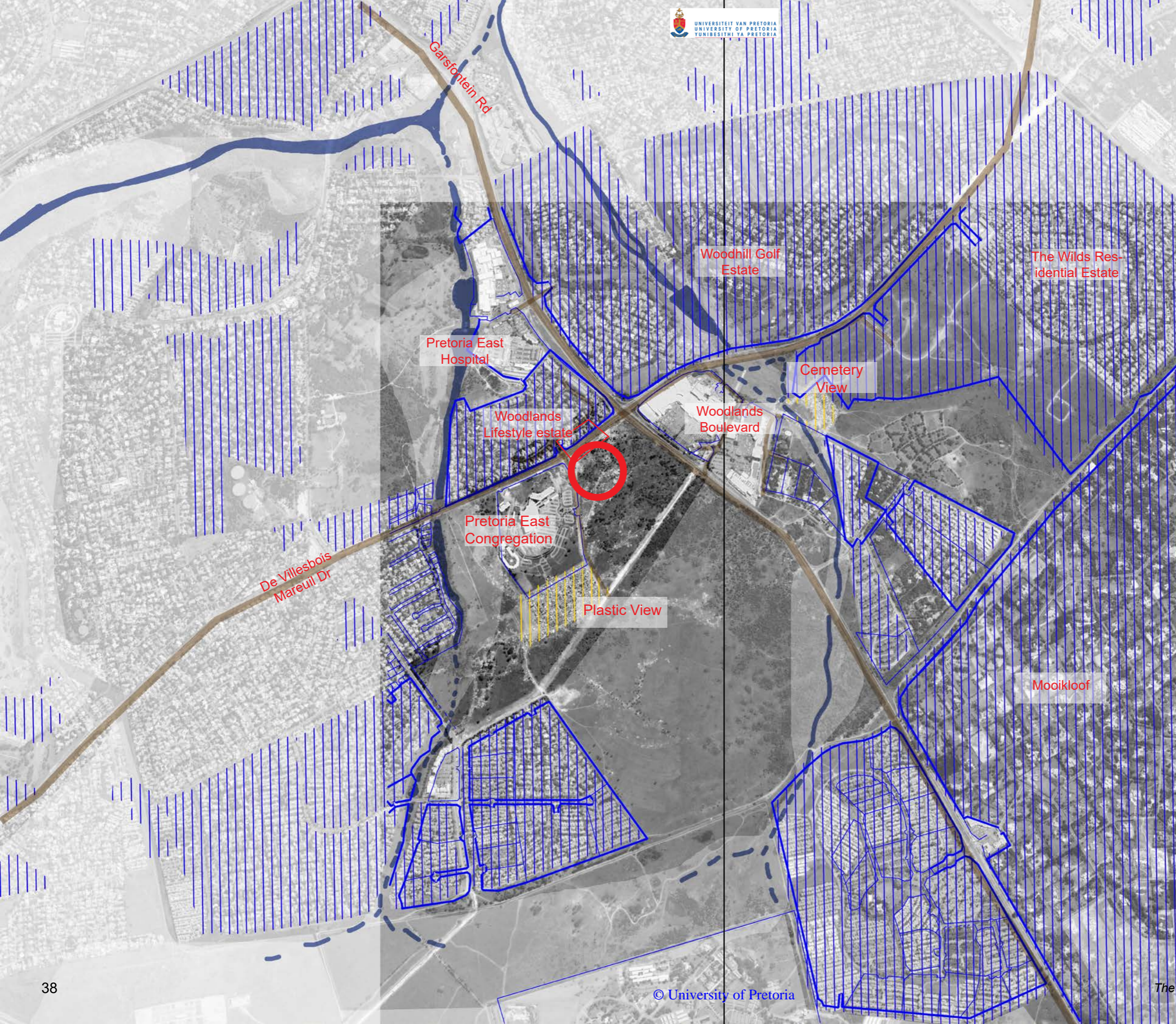
In this investigation, the spatial phenomena of gated communities and informal settlements has become an important case study, and a potentially powerful condition in which to postulate the potential of architecture regarding integration. Even more fascinating are the instances where these two types of communities are “facing off” on each other’s very doorsteps, where an architecture of abundance meets an architecture of scarcity.

This is evident in Moreleta Park, a residential suburb situated to the east of Pretoria, where the flow of urban sprawl collides with that of urbanisation – where two informal settlements have emerged from and within the residual land and resources of gated communities.

Despite the unavoidable display of socio-economic and spatial polarisation throughout the area, there also lies the ingenuity and agency of our excluded urban poor that enable their survival between fragments of the stratified, exploitative “formal” city (Simone 2006:323). The very existence of informal settlements exhibits an unideal solution to large-scale socio-spatial injustice that policy makers and high-level government actors have failed to remedy.

In this case, the threat and fear of scarcity – that we so desperately attempt to “fix” through architecture – seems to obscure what is arguably the opportunity of scarcity. Till (2014) argues that a shift away from this “problem-solving paradigm” towards one of spatial agency is necessary so that the underlying root causes and behaviours can be understood and engaged beyond just the isolated symptoms or “problems” (2014:11).





“Design agency does not presume to solve problems in relation to scarcity; it only aspires to make the best possible sense of the prevailing and often competing conditions. Is it necessary to build that building in the first instance? Are the parameters by which the project is defined the most appropriate ones? Can one measure things in other ways? What and who constructed the scarcity? All of these questions require one to challenge the brief as an a priori truth, intervening as a collaborative designer at the very earliest stages before other factors have overdetermined the project. Agency starts by questioning the original premise, and so what might first be seen as a problem to be fixed becomes a new way of looking at things.”
(Till 2014:11)

Figure 1.3.21: (left) Chosen site indicated in red, De Villebois Mareuil Road, Moreleta Park (Author 2021, Google Earth Image).

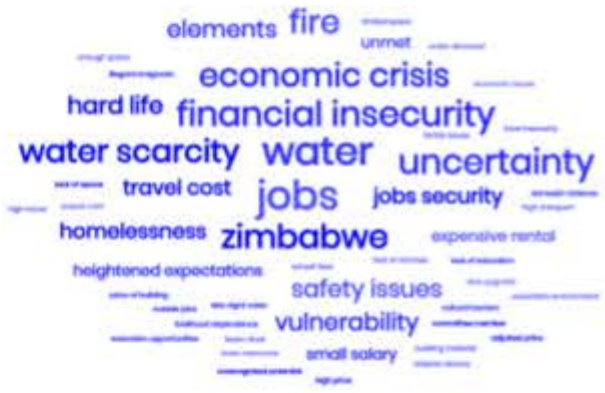
Figure 1.3.22: (pg 40-41) Scarcity in Moreleta Park (Author 2021 after Moreleta Park Integraton Project 2021).

Figure 1.3.23: (pg 42-43) Site photographs, De Villebois Mareuil Road, Moreleta Park (Author 2021, Kriek 2021, De Bruin 2021)



MAP THE SCARCITY:
MORELETA PARK

NEOLIBERALISM



we don't have enough money for rentals out there. People usually have their work. We are workers for those around us. We have got our permanent homes somewhere else. Some go every week, some live in Zimbabwe, Mozambique, Lesotho. They are looking for a cheap place to stay close to where they work to make more money for their families.

US vs THEM

INSECURITY

SCARCITY OF RESOURCES

SPATIAL DIVISION & FORTIFICATION

currently we are running short on water - place will become filthy. Filth is not good. I am a human being like you.

Where are you from? Has anybody told you about the scarcity of water? We have many problems here. Safety issues. Priority is these kids. Diseases caused by lack of water and sanitation. Sanitation is the first priority. After that, education.

"Room is better than sleeping in a bush"

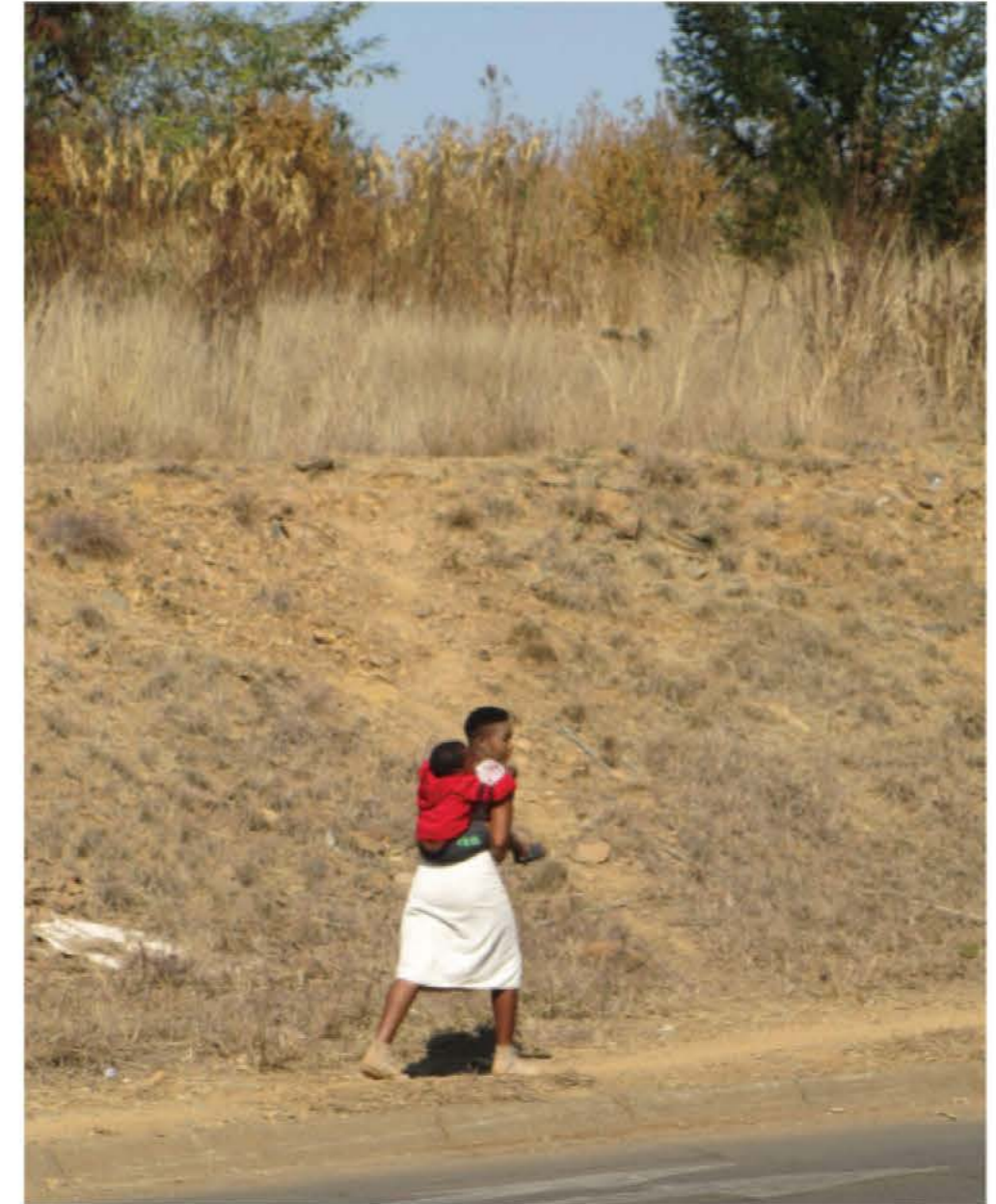
"sometimes, my friend, you are going to get R10 000, me I'll get R500, but the way we use it, that money, [is what matters]"

"SCARCITY" AS A PHYSICAL CONSEQUENCE

SCARCITY AS A SOCIAL CONSTRUCT

THEORETICAL LENS





ARCHITECTURE IS A SOCIAL PRODUCT

Figure 1.4.1: (below) A spazashop window in Plastic View, Moreleta Park (Kriek 2021).



1.4. THE OPPORTUNITY OF SCARCITY

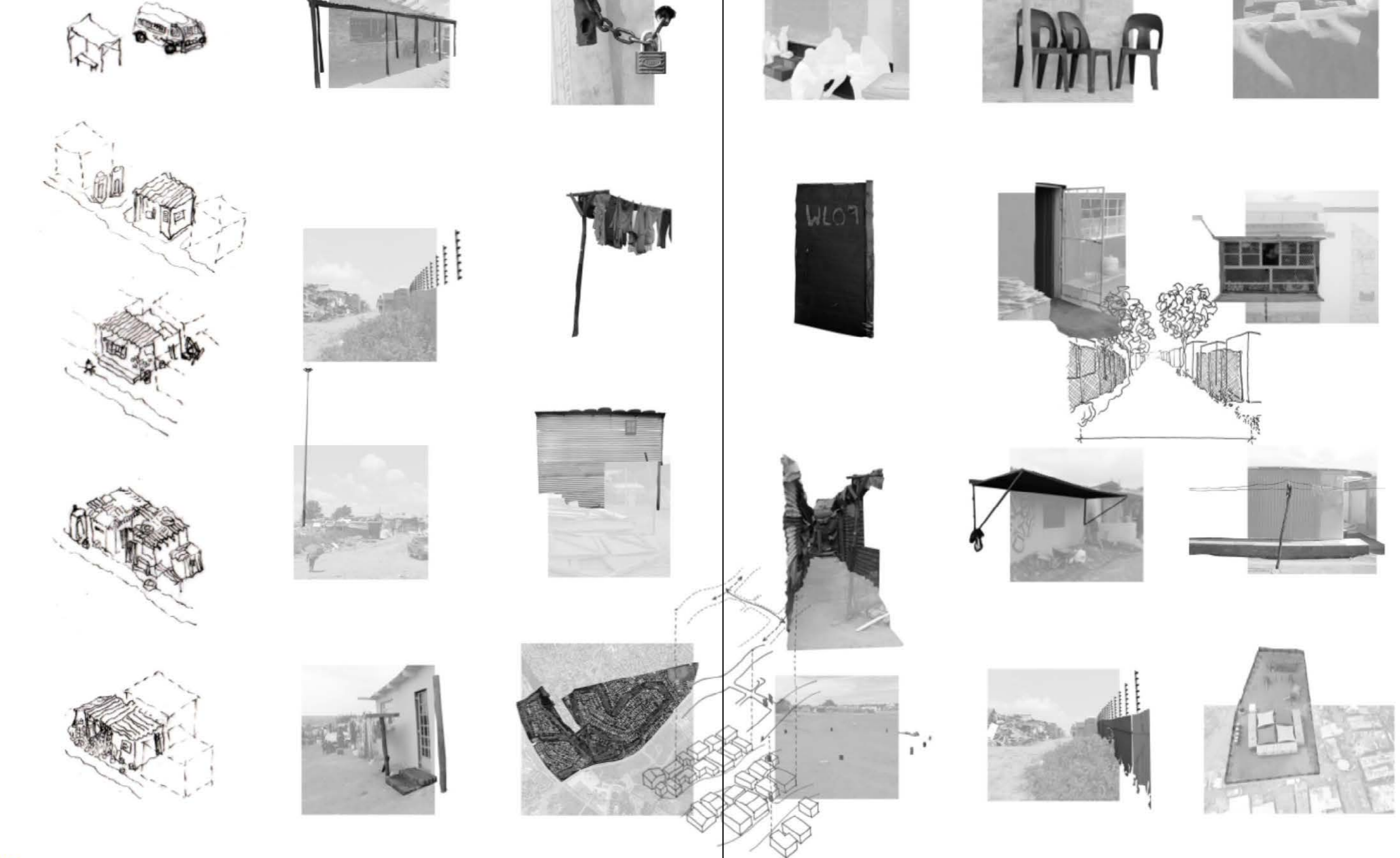
1.4.1. Towards spatial agency

To promote integration, architecture will need to better address scarcity. By reframing scarcity and acknowledging the complex facets of its social production, new opportunities may emerge in relation to the issues of injustice, segregation and schisms between policy and practice (Till 2014:11). Central to this notion is the idea that architecture is a “social product” (Lefebvre 1991:36). In this light, spatial agency is an architectural movement motivated by a desperate need to rethink the object-centric, market-driven, and sole-authored approach that constitutes mainstream architectural practice. This promotes a shift towards a co-authored, inclusive process that engages social structures to yield spatial freedoms and capabilities to the end user (Awan et al. 2011, ASF 2010:104-5). Thus, the conceptualisation of

architecture should be further explored, not only through the lens of contemporary modes of urban fragmentation, such as gated communities and the grass-root “disturbances” (Du Plessis & Peres 2013) of informal settlements, but also through an understanding of social constructs such as scarcity. In addition to engaging the socio-spatial complexities both on and off site, this understanding constitutes a responsibility to collaborate with the various actors involved.

Spatial agency positions the architect’s role as a facilitator of authentic dialogue in service of marginalised groups (Awan et. al 2011). Through the acknowledgment of social boundaries (normalising power), architecture can better address the physical boundaries that manifest and suggest a more repressive form of power (Foucault 1972). Hence, this project will follow a participatory design approach, through participatory action research (Howard & Somerville 2014).

Figure 1.4.2: (right) Excerpt from 'A Socio-Spatial Lexicon for the Future City' showing the hyper-optimisation of space, as well as threshold and boundary conditions (Author in Moreleta Park Integration Project 2021).





1.4.2. Unpacking the phenomena of space, materiality and time

Architecture or “dwelling” (dasein), as it exists within the landscape between earth and sky (Heidegger 1954, Heidegger 1993:351), serves as an artificial boundary condition or “in-between” (Norberg-Schulz 1976:3–10) that is leveraged to manifest contemporary socially constructed dichotomies. In the context of the South African city, this has been likened to a colonial construct, where a fixation on the object and the individual (“Western philosophy”), as opposed to experience and the collective (“African philosophy”), has rendered the spatial landscape as highly controlled,

commodified and void of the agency and opportunity that a more “dynamic city” may present (Van Rensburg & Da Costa 2008).

The gated community exhibits “modern capital man’s” commodification and compartmentalisation of time, space and architecture – contrasting the “frightening ephemerality” (Pallasmaa 1999:79) of materiality expressed by neighbouring informal settlements (Landman 2006; OMM Design Workshop 2007). Architecture’s turbulent relationship with time is reflected in its relationship with scarcity (Harries 1982:59, Till 1996, OMM Design Workshop 2007). While this manifestation of architecture is toxic to the greater urban context, it is rooted in

a universal need for security when shaping one’s domicile in space (Pallasmaa 199, Harries 1982, Calame & Charlesworth 2012:209).

Therefore, it would be ineffective to simply oppose man’s current self-preserving need for enclosure. Rather, we should focus on how architecture can be constructed to fulfil this need without imposing and preserving potentially harmful ideas of the present on the future. There is opportunity to question how existing infrastructures of division can be modified to be easily appropriated by their inhabitants in the present and future city.

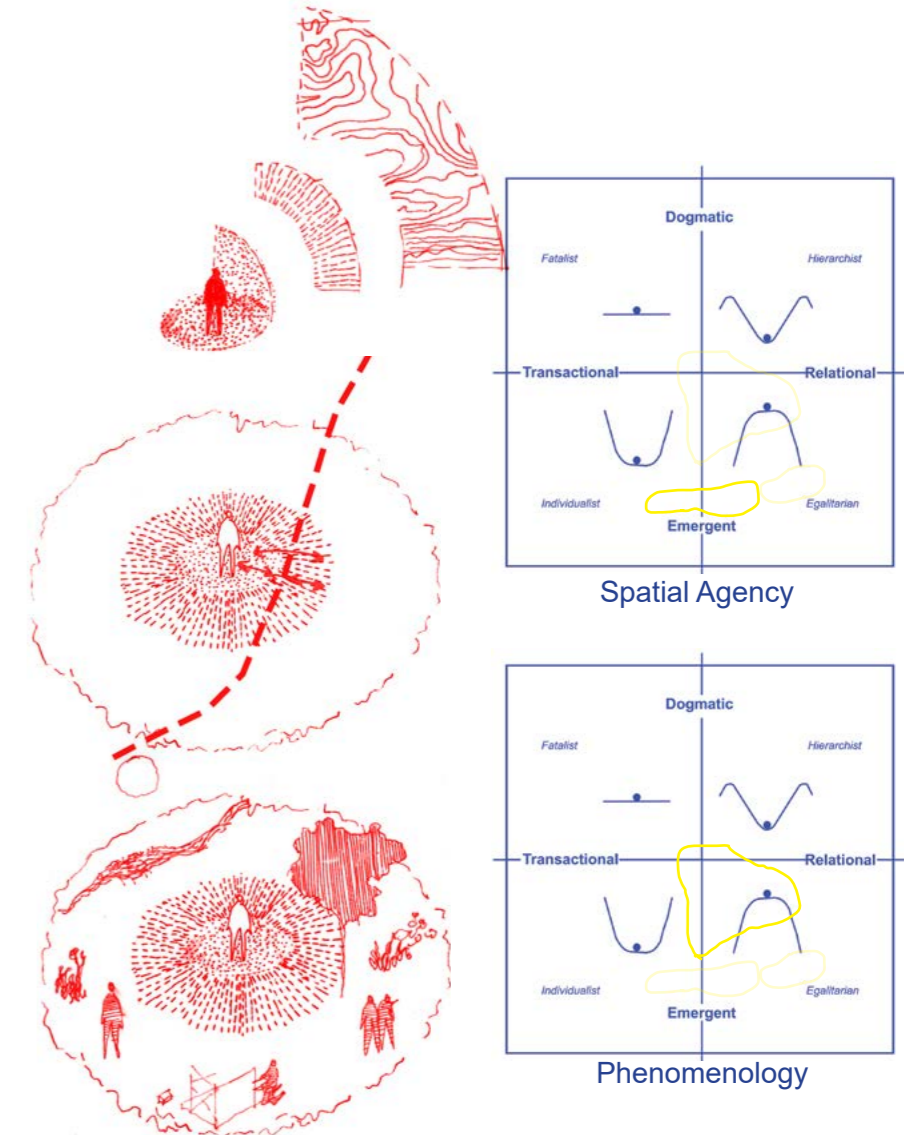


Figure 1.4.3: (left) *The tower of Babel* (Breugel the Elder 1564).

Figure 1.4.3: (right and below) *Architecture as domicile in space, and boundary condition* (Adapted from author 2020).

Figure 1.4.4a: (far right) *Locating spatial agency discourse* (Author 2021 after Wildavsky 1957).

Figure 1.4.4b: (far right) *Locating phenomenology in architecture discourse* (Author 2021 after Wildavsky 1957).

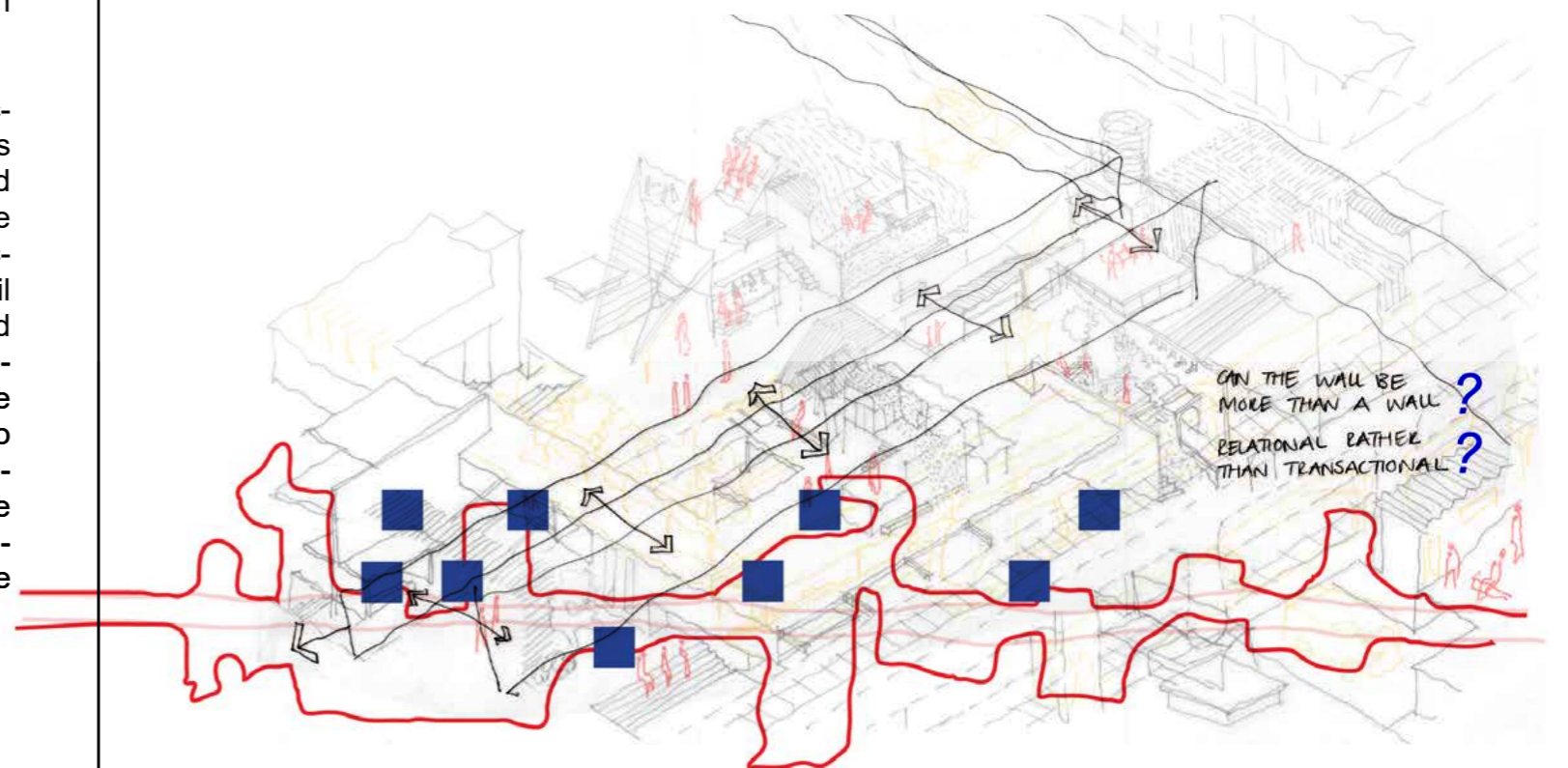


Figure 1.4.4c: (below) *Locating the ecological paradigm* (Author 2021 after Wildavsky 1957).

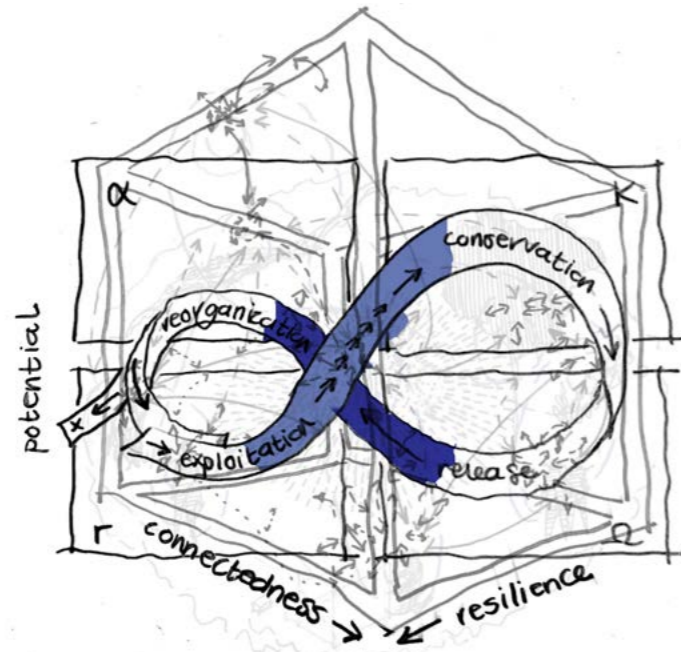
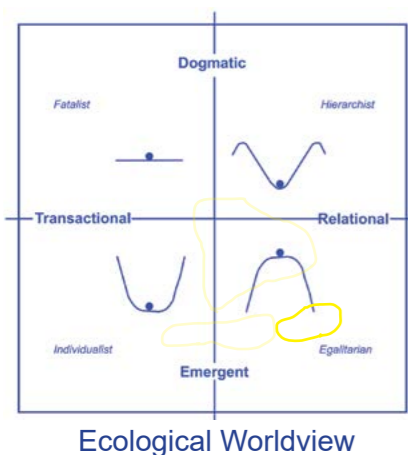
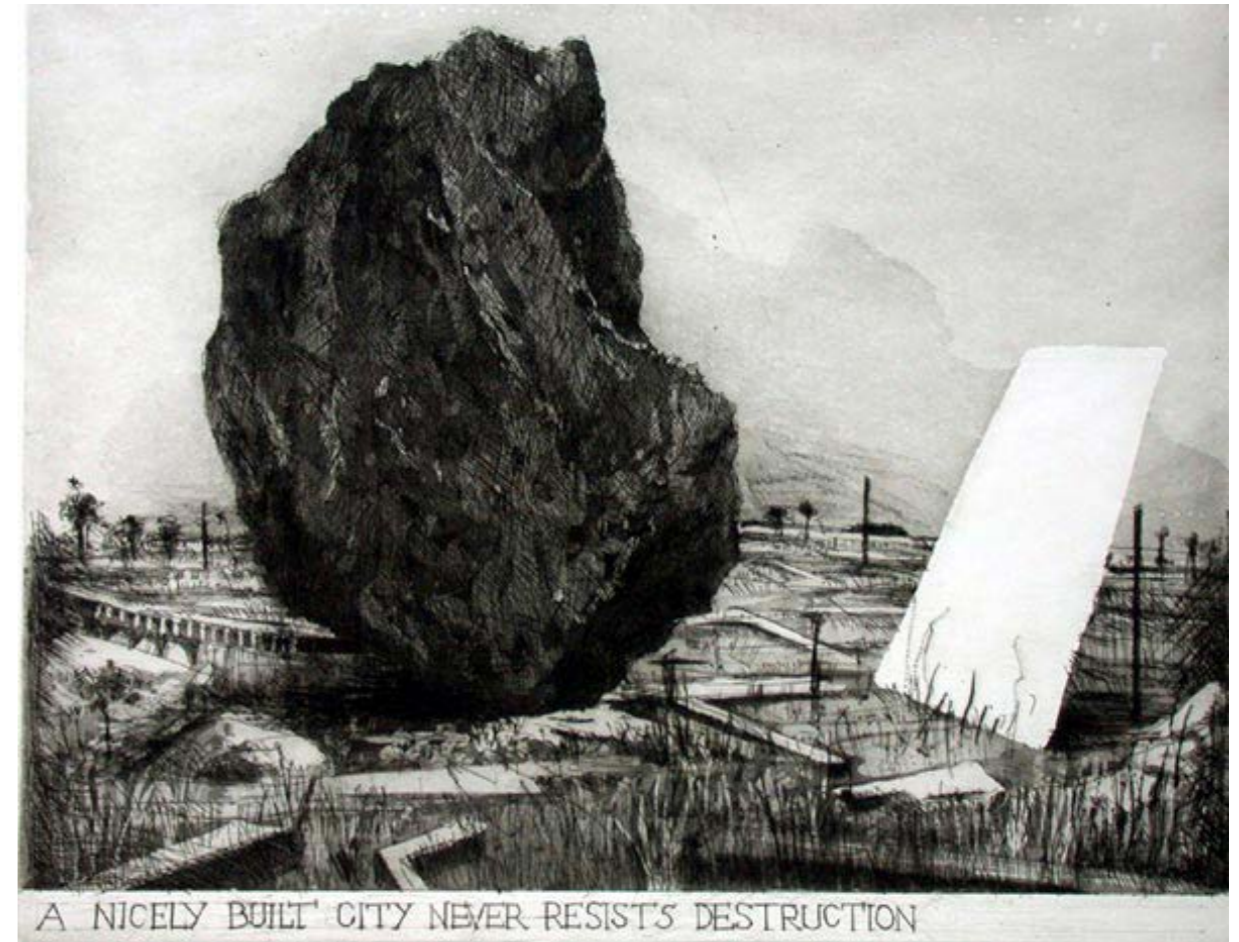


Figure 1.4.5: (right) *The Adaptive Cycle* (Author 2020 after Holling 2001).

Figure 1.4.6: (far right) *A Nicely Built City Never Resists Destruction* (Kentrige 1995).



1.4.3. The question of scarcity and architecture

The ecological worldview posits that change begins with critically assessing how one sees the world and understanding one's role in relation to its systems (Mang et al. 2016). Accordingly, phenomena are understood in terms of their complex relationships, rather than as static outcomes or objects (Hes & Du Plessis 2016). We as actors should thus shift to a relational, rather than a transactional, connection with the world (Mang et al. 2016) to depart from the "us vs them" rhetoric that shapes our fear of time and scarcity. Panarchy follows this conceptualisation of change, and con-

siders the dynamic, relational organisation of systems, across various nested scales of space and time (Holling 2001). This can be visualised as the adaptive cycle, which anticipates change, and the nature thereof, by virtue of the system's connectedness, resilience, and potential at any given time. These properties shape the perpetual trajectory of systems as they move between four events (Exploitation, Conservation, Release, and Reorganisation). Holling (2001) explains that the adaptive cycle embraces the juxtaposition between "growth and stability" and "change and variety".

While change may be inevitable, under more resilient conditions, violent change does not have to be. This further contests boundary as a mono-functional defensive tool, because the pursuit of protecting oneself from scarcity and ephemerality, without reconsidering the toxicity of these constructs to begin with, inadvertently effects the doom believed to be so imminent.

The remaining spatial inequality present in South African cities is evidence of the failure of architecture, to provide closure against ephemerality and scarcity. Ultimately, time promises that these seemingly permanent and artificial structures will eventually meet the obsolescence they anticipate – if not through graceful approach

or decay, then through violent demolition of contested space. One may argue, that architecture conspires, just as any other thing which is subject to time, to participate with natural cycles of decay and growth – and this should be considered from the beginning of the design process, as opposed to being merely a factor that requires prevention or remedy. By shifting the role of architecture from "answer" to "question", the opportunity for heightened agency and dialogue is promoted between all actors on a systemic level. The individual agency of those living in our cities, and awareness of this agency, is key in translating South Africa's altruistic institutional values into practice.

This raises the following questions:

- (1) How does the social construct of scarcity manifest itself in the architecture of informal settlements and gated communities in Moreleta Park?
- (2) How can the co-making of architecture transform the relationship between scarcity and architecture to promote spatial healing in the polarising context of Moreleta Park?

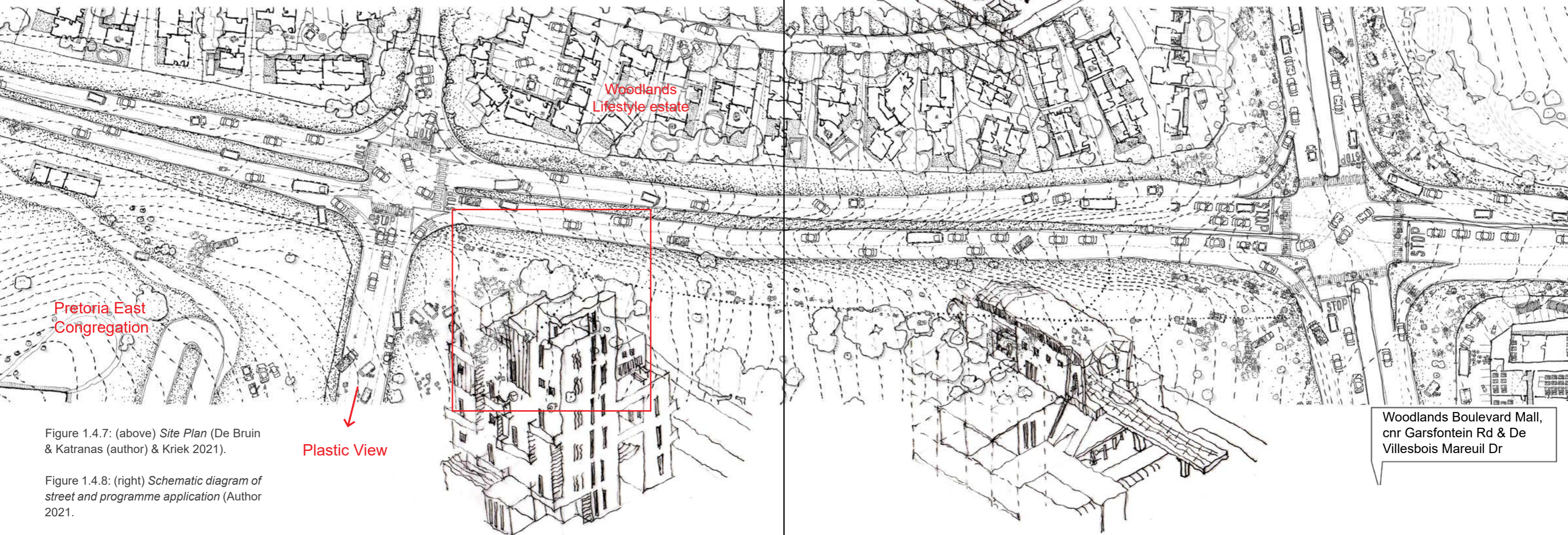


Figure 1.4.7: (above) Site Plan (De Bruin & Katranas (author) & Kriek 2021).

Figure 1.4.8: (right) Schematic diagram of street and programme application (Author 2021).

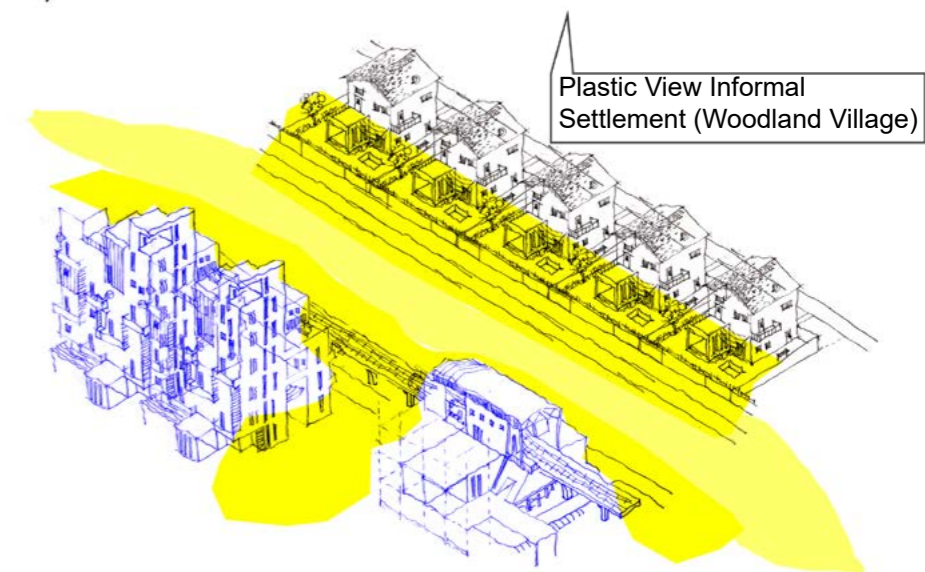
1.4.4. Domicile, livelihood, mobility

A persuasive argument for better achieving the “right to the city”, as described by Lefebvre (1968) and Simone (2006), can be made for the programmatic activation of private-public boundaries with recreation and livelihood opportunities – as these spaces have the capacity to enhance capabilities or agency. This is a departure from the current object-driven fixation on providing social housing or “domicile” infrastructure alone.

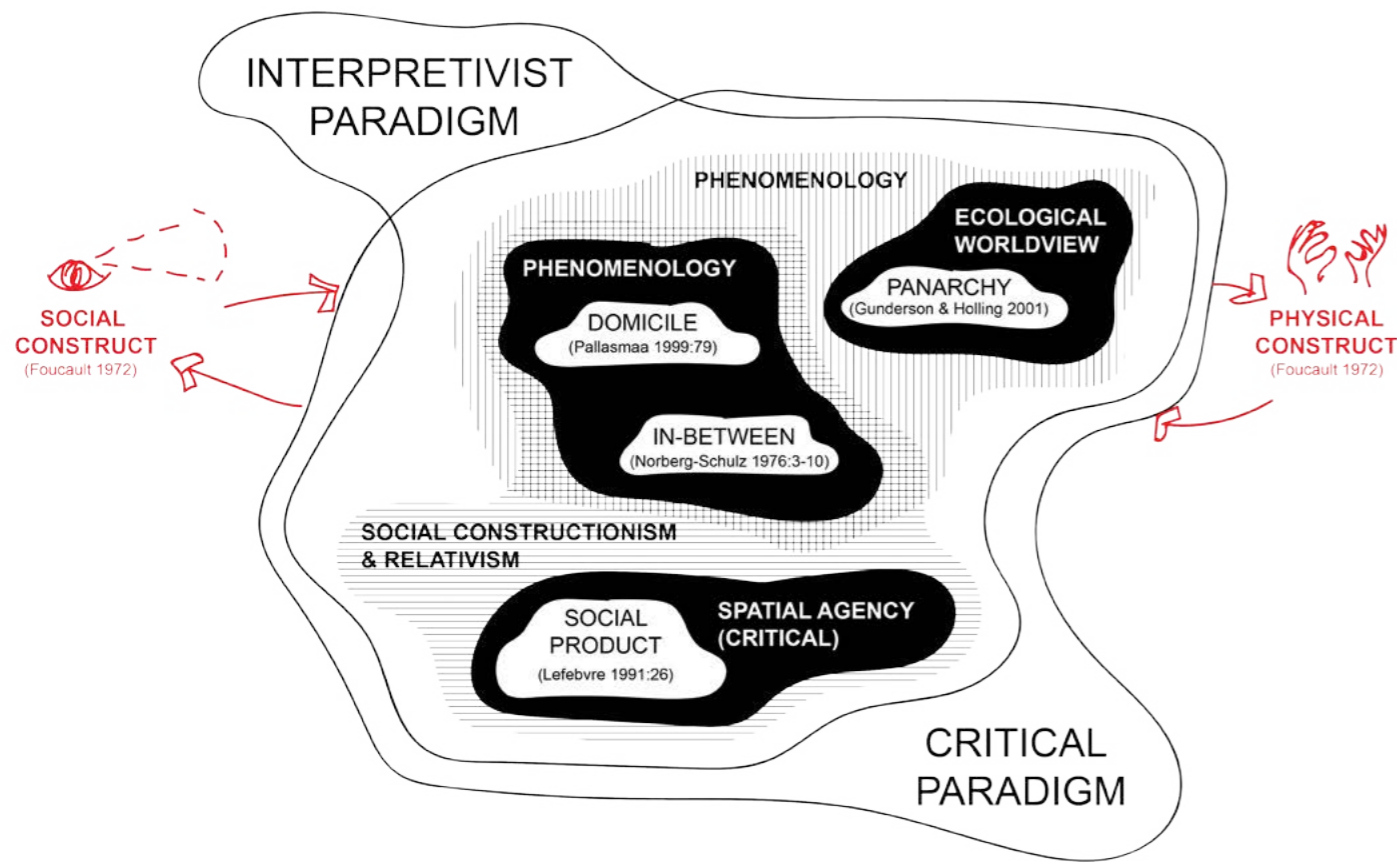
The site chosen for this investigation is situated on a street with a gated community on the northern side (existing domicile), and open land on the southern side. There is immense value and necessity in reimagining the existing boundary condition of the gated community – alongside the opportunity to design a new, reconceptualised boundary condition that respects the current need for enclosure while affording its users the possibility of “dissolving” it when enclosure is no longer needed. By accommodating various

forms of livelihood at the spatial boundary, socio-economic boundaries can be addressed, which can enable upward economic mobility – whether the beneficiaries are residents of gated communities or informal settlements. By introducing more diverse residential conditions, such as low-income housing, residents of informal settlements can transition more easily to better living conditions. As necessitated by a surge in urban migrancy, the introduction of temporary live-work accommodation alongside transportation infrastruc-

ture provides an alternative that supports social, economic, and spatial mobility – particularly for those not accommodated by the UISP (2009), such as foreign nationals. This programmatic approach could establish the future social conditions in which community clusters no longer feel the need for such physical boundaries, thus promoting socio-spatial integration and enhancing capabilities on an urban, local and architectural level.



Plastic View Informal Settlement (Woodland Village)



1.4.5. Locating the research

The ontological ideas presented in this research fall within an interpretivist research paradigm through the realms of phenomenology, social constructionism and relativism (Kivunja & Kuyini 2017). In addition, the research aligns with the critical paradigm, given its focus on agency, power relations and social justice (Guba & Lincoln 1988, Martens 2015; both as cited in Kiyunja & Kuyini 2017). Falling within the epistemic and ontological overlap of these two paradigms, the research approach combines intuitive (action/dialogic and experience), transactional (interviews) and authoritative (legislation) knowledge. Thus,

the research is broadly located within grounded theory, where action research forms a part of the empirical data gathering process (Lianto 2019). Finally, context-driven, collaborative design methodologies are considered through the theoretical lenses of spatial agency, phenomenology, and the ecological worldview. Participatory action research (Howard & Somerville 2014) will form the framework of the research and design. At the core of this process is the collaboration with master's and honours students from both the University of Pretoria and the Chalmers University of Technology. Thus, the distinction between deductive and inductive research, or rather, the continuous process of test-

ing and postulating, serves to guide the research through the site's inherent complexity. The analysis of empirical data will be based on regenerative principles (Mang et al. 2016), as well as phenomenologically grounded activities based on Jordaan's (2015) triad, to examine the various dimensions of place. Furthermore, due to the socio-spatial focus of this research, Saldana's (2013) codes-to-theory model will be necessary for developing grounded theory from on-site observations.

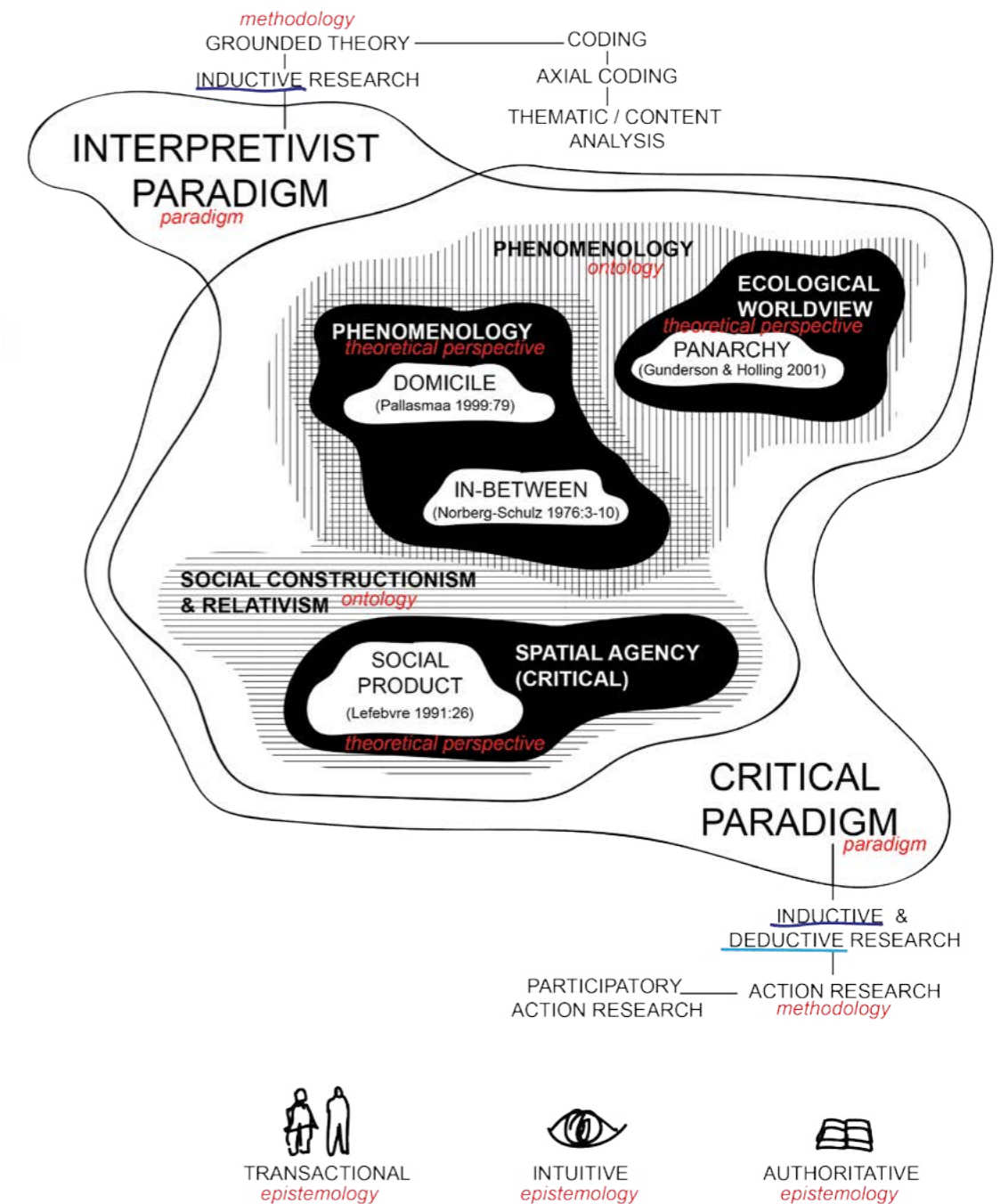


Figure 1.4.11: (left) *Locating the research paradigm* (Author 2021).

Figure 1.4.12: (right) *Locating the research methodology* (Author 2021).



1.4.6. An architectural methodology for the Scarce City

The architectural and research approach can be organised into the following milestone exercises and outcomes:

1. **Catalogue/lexicon:** Making use of coding for the purpose of uncovering patterns and relationships in empirical data (interviews, photographs, experiences) and within theory and legislation.

2. **Case-studies:** Considering either the “spirit of place” (historical, existing, and anticipated man-made or natural elements) of the site context (i.e., site analysis of Plastic View Informal Settlement), or places of thematic and programmatic relevance.

3. **Precedent studies:** Drawing insight from relevant existing spatial and technical interventions, and making use

of theoretically grounded socio-spatial heuristics as a criteria for unpacking these various architectural responses.

4. **Scenario testing:** Providing opportunity for spatial and programmatic exploration at various spatial and time scales, and user perspectives (i.e., urban frameworks).

5. **Prototyping:** Translating theory into action, testing spatial processes within real-life conditions, and setting up a feedback loop that promotes reflective practice.

6. **Design Charrettes and site engagement:** Engaging the transfer of cross-disciplinary knowledge between various spatial agents, such as site stakeholders, engineers, and other architects.

7. **Critical reflection:** partaking in an ongoing process of design and technical refinement.

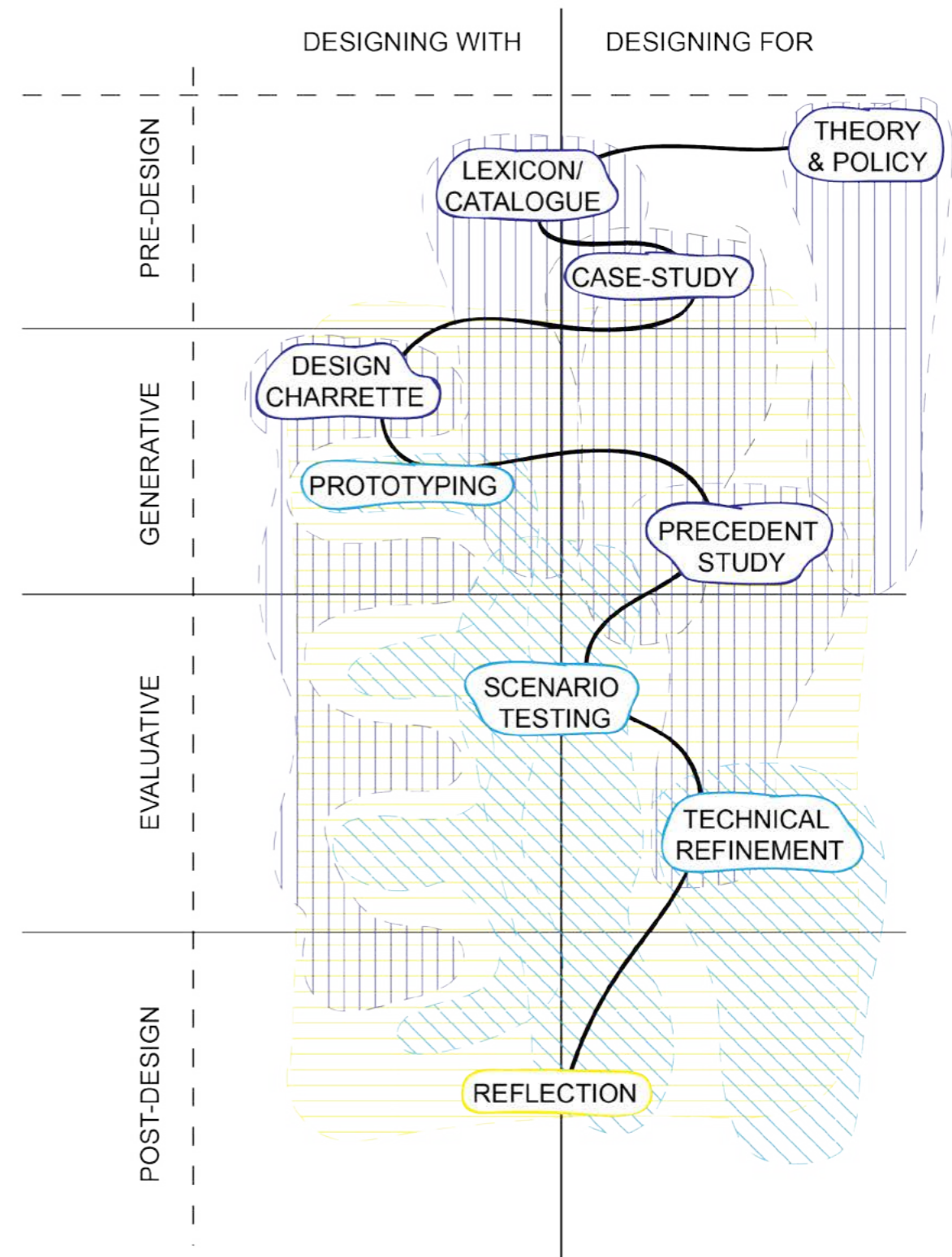
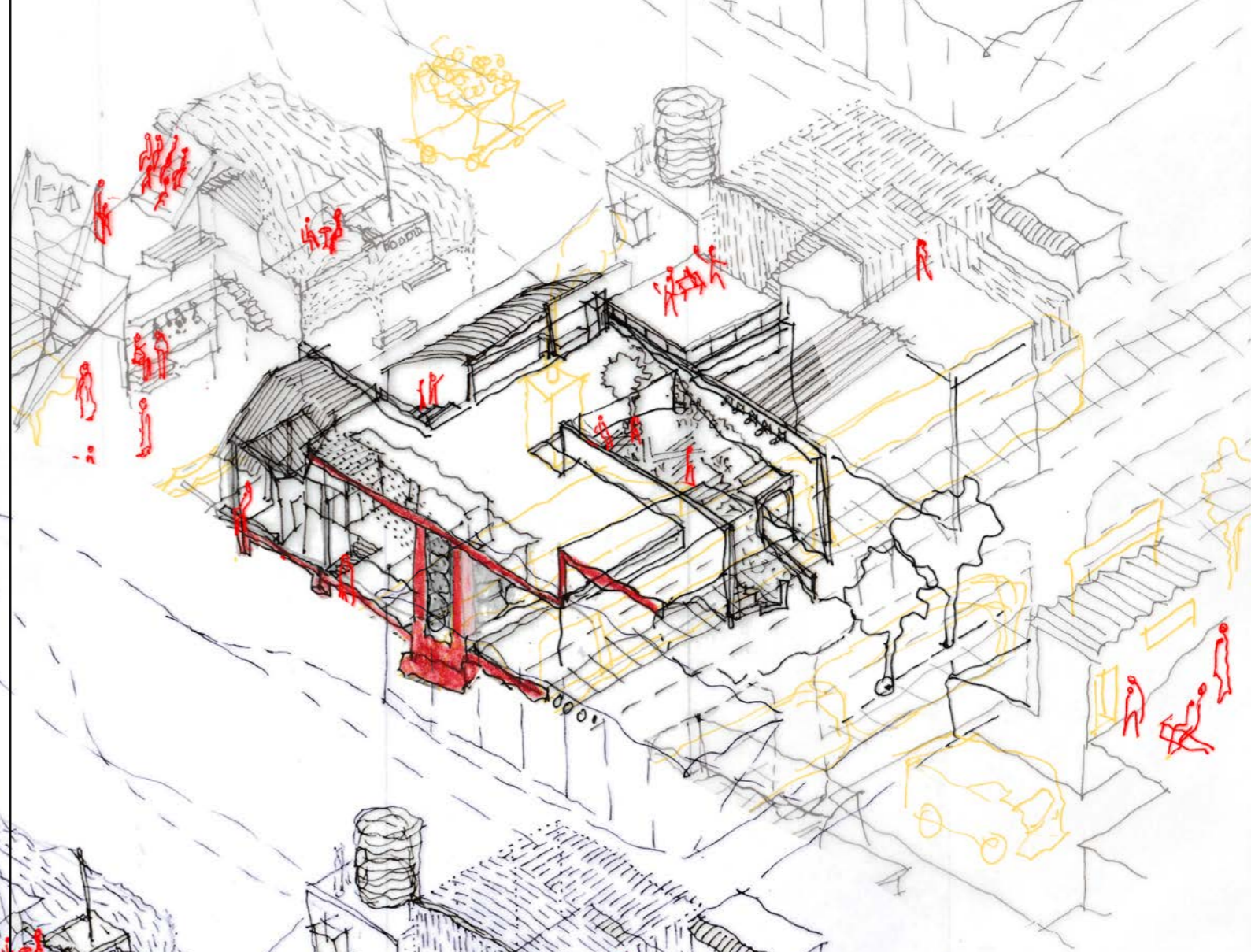
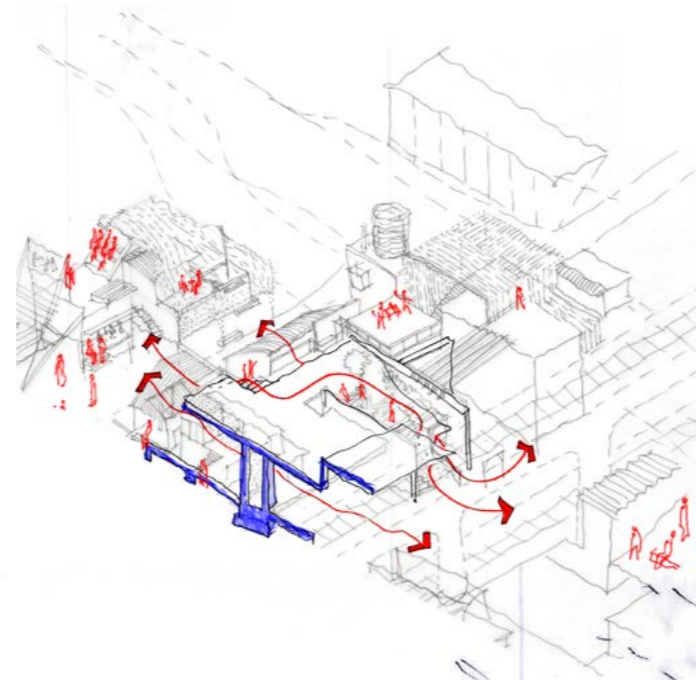
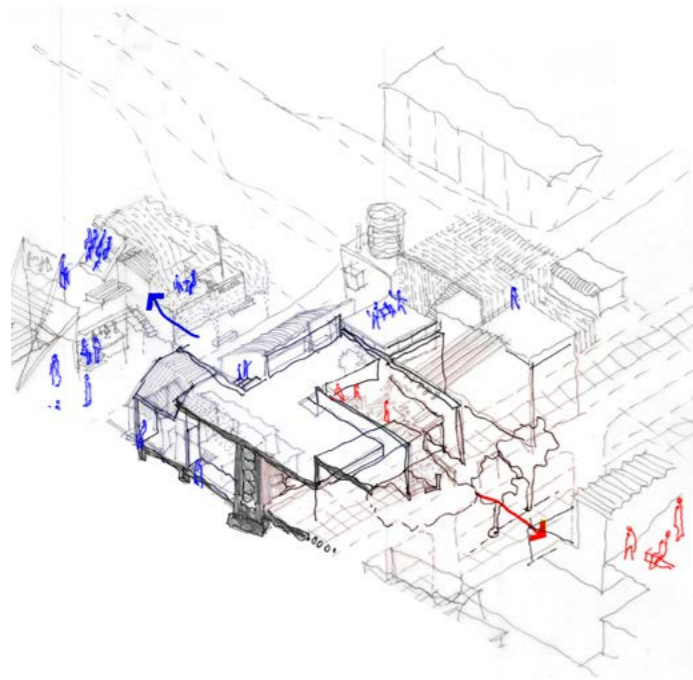


Figure 1.4.13: (above) *Engagement during the prototyping phase* (Zorn 2021).

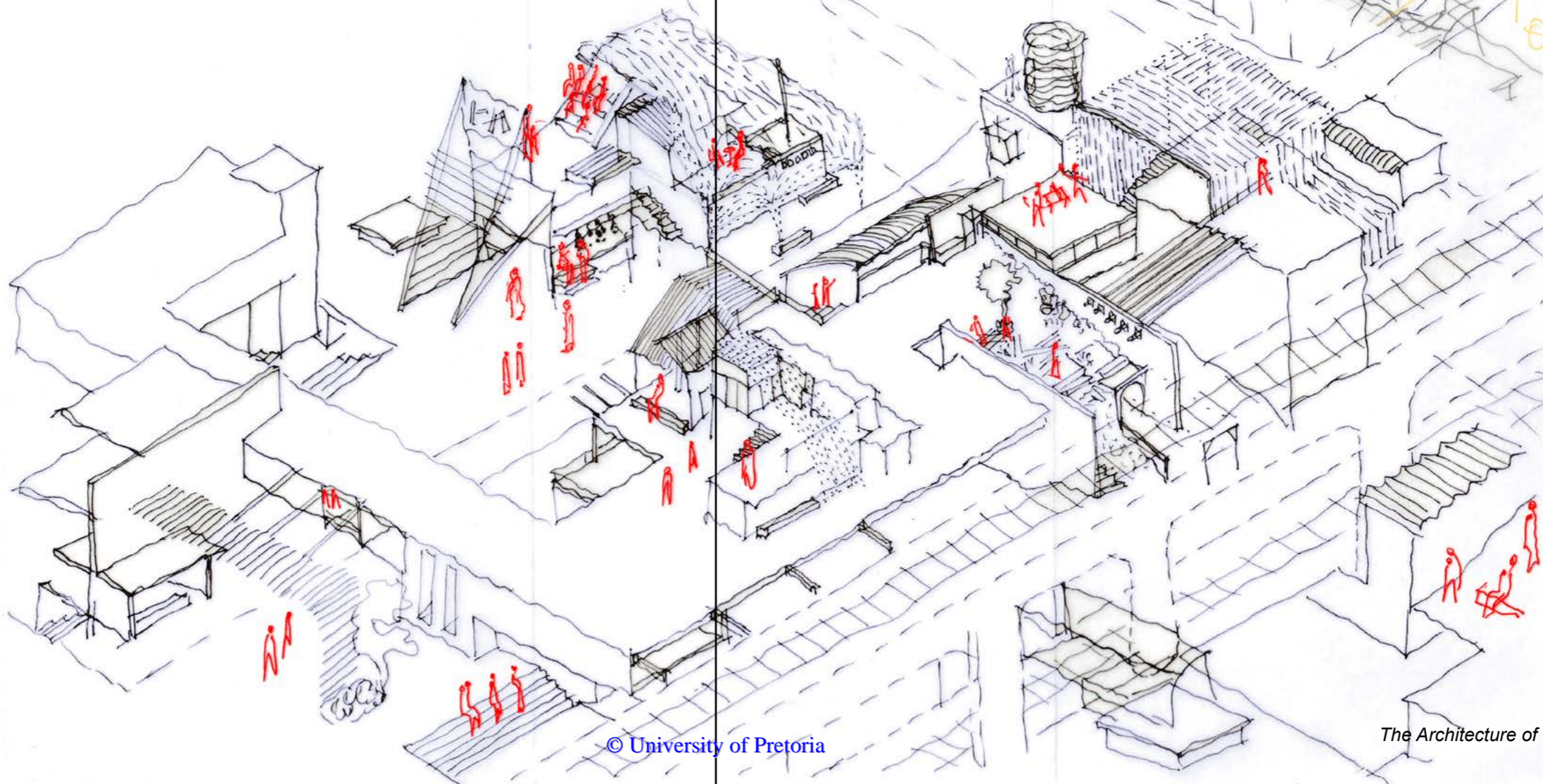
Figure 1.4.14: (right) *An architectural methodology for the Scarce City* (Author 2021 after Saldana 2013, Howard & Somerville 2014, Jordaan 2015, Mang et. al 2016).

Figure 1.4.15: (pg 60-61) *The emancipation of the boundary* (Author 2021).



1.4.7. Statement of approach to architecture

Scarcity is seen to limit agency, but what if it could induce agency? Scarcity has already shown the potential to catalyse massive change, and to promote the subsequent ingenuity necessary for survival. By learning from the complex socio-spatial landscape of the past, present and "future" South African city, through a deeply collaborative, agency-kindling process that is grounded in a foundation of critical theory and phenomenology, this architect/facilitator/actor aims to reimagine an architecture of scarcity that embraces ephemerality and sensitively emancipates the potential of boundary beyond that of division. This project gestures towards an architecture that is not a solution-driven answer, but a dialogue-inducing question; scarcity that is not a problem, but an opportunity.



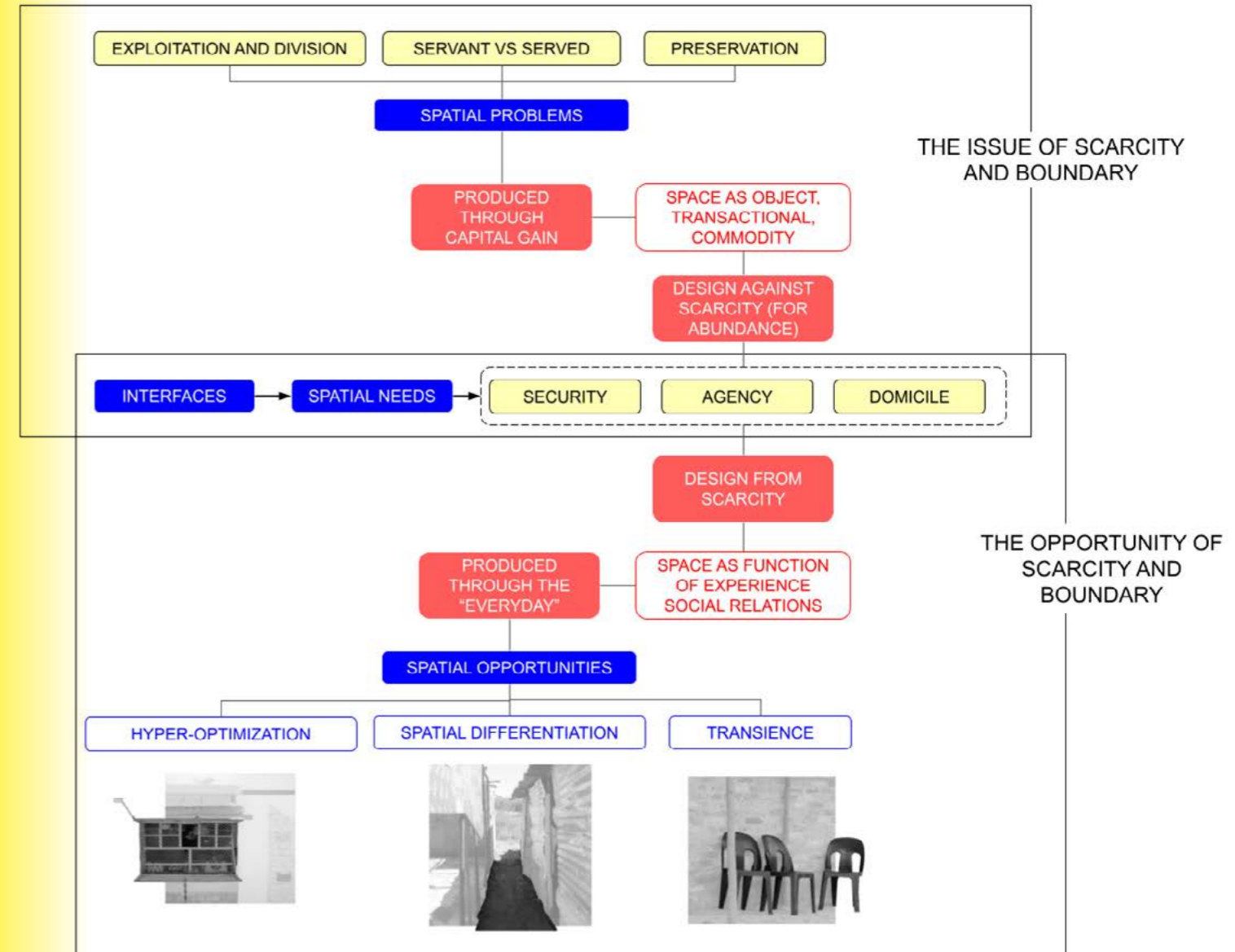


Figure 1.4.16: (left) *Plastic View Streetscape* (Ramsey 2020).

Figure 1.4.17: (above) *Summarized conceptual approach* (Author 2021).

ESSAY 2

DESIGN RESEARCH

(DESIGN) GENERATIVE

2.1. p68 THE ROLE OF THE ARCHITECT

- 2.1.1. On authorship.
- 2.1.2. Expanding beyond the professional.
- 2.1.3. A concern for place.
- 2.1.4. The Moreleta Park Integration Project.

2.2. p84 CASE STUDY: MO- RELETA PARK

- 2.2.1. Locating Moreleta Park.
- 2.2.2. The origin of Moreleta Park.
- 2.2.3. A morphology and materiality of scarcity.
- 2.2.4. Output 1: Socio-spatial lexicon for the future city.
- 2.2.5. The inherent act of hyperoptimisation.
- 2.2.6. Third spaces and places.
- 2.2.7. Safety, surveillance, and insecurity

2.3. p140 PREC- EDENT STUDY

- 2.3.1. Theoretical, methodological, architectural, and technical frames of reference.
- 2.3.2. Designing from scarcity: the work of Lina Bo Bardi.
- 2.3.3. Creating domicile by providing the essentials of life: housing by Balkrishna Doshi.
- 2.3.4. Shared spaces as a tool for hyperoptimisation: lessons on spatial organisation from Cohen and Garsen Architects.
- 2.3.5. Growing inward: translation of spatial intent to material expression in the housing of Peter Barber.

2.4. p160 THE ARCHI- TECTURAL OPPORTU- NITY

- 2.4.1. Outputs of the participatory action research process.
- 2.4.2. Output 2: A platform for engagement.
- 2.4.3. Output 3: Ethical roadmap to student engagement within vulnerable communities.
- 2.4.4. Output 4: An urban framework for the future city.

Figure 2.0.1. (right) A DStv satellite dish spotted above a roof made covered with plastic sheeting in Plastic View (Kriek 2021).



Figure 2.1.1: (below) *The plastered brick front facade of a Plastic View spaza-shop, with timber eaves that awaits roof sheeting for shading (Author 2021).*

Figure 2.1.2.a: (right, above) *An example of an activated street-facing threshold space in Plastic View, taken in 2020 (Moreleta Park Integration Project 2020).*

Figure 2.1.2.b: (right, below) *The same activated street threshold exactly one year later (2021), now built of brick. The timber from the tree that used to feature is now used as part of the roof structure (Moreleta Park Integration Project 2021).*



2.1. THE ROLE OF THE ARCHITECT

2.1.1. On Authorship

There has been a shift in recent times with respect to the architectural design process, and more particularly - a departure from the notion of the architect as “hero-author”, and rather, a recognition of the collective capacity of multiple authors - as argued within the discourse of spatial agency (Barthes 1977:142-148, Schnieder & Till 2009:97). Here, there is a marked emphasis on process, and success is measured based on outcomes situated far beyond the scope of what is traditionally understood as architecture (in the form of a building) - visible in the work of Balkrishna Doshi, Urban Works, and Sameep Padoora. There is significant difficulty in pursuing such a process in practice, where architecture is reduced to a specialist discipline and a service accessed and leveraged by society’s economically advantaged minority and those with political agency - the contemporary image of what gives an individual the power to act or shape their world. This has resulted in the industry becoming increasingly redundant and in desperate need of transformation.



2.1.2. Expanding beyond the professional

The architect is thus tasked with the challenge of mediating their responsibility and capacity to serve a larger scope of individuals, albeit on a potentially non-physical, social level - with the normative expectations and needs of their consumer-clients. In this endeavour, and in the context of a highly unequal society, there is room to critically consider both socially and physically constructed scarcity and its relationship to architecture (Till 2014).

Here, there is opportunity to learn from the un-recognized individuals, such as residents of Plastic View, and organisations such as Abahlali BaseMjolo, who already challenge traditional practice by shaping our cities informally - as well as the works of architects such as Lina Bo Bardi, that aim to reposition architecture to acknowledge a shared production of identity; as extensions of the everyday. This necessitates a reframing of the architect's role from designing against the eventuality of scarcity, to designing from scarcity. There is no doubt that a complete departure from making "buildings" is an unhelpful place to start if common ground between the "formal" and "informal" place-making environment is the ultimate goal. So, then, for the sake of

operating an investigation in such a way that contemporary market-driven approaches to practice might also see positive change, or come out of a context of scarcity rather than that of abundance, one is compelled to still ask what comes of the elevated capacity of the architect, through educational and practical experience, to fully explore and realize the spatial and technical potential of a place.

2.1.3. A concern for Place

A potentially powerful overlap with the longer established architectural paradigm of phenomenology has been identified, which although understood through the subjective perspective of the individual in respect to space, materiality, and time - gestures towards the extension of making or shaping one's environment far beyond the formal scope of the architect; to whoever subsequently experiences and makes use of the space (Sennett 2009). Globally, the work of architects such as Alvar Aalto, Carlo Scarpa, and Peter Zumthor are acknowledged to be examples of sensitive, experience-centered architecture that is conceived out of a process concerned with gaining a deep understanding of user and place. In a different light, a promising concern for the flexible emergent capacity of buildings can be observed

globally in the mat-building strategy of structuralists in the 1960's. Local African examples that reflect these two positions include the work of OMM Design workshop, Chris Wilkinson, Cohen and Garsen, 26'10 South, and Fancis Kere - and, by virtue of a different cultural and social landscape, have shown more regard for the space-making capacity of the non-architect, end-user, in their design processes. Despite this, there still exists an opportunity to explore the potential that exists by combining the existing concern for the end-user experience, with a process that is equally centred around, and inclusive to, the non-architect actor. In this way, the process does not end with the conclusion of the building process, just as the experience or use of the "place" being made, does not simply commence once the job of designing and building is complete.

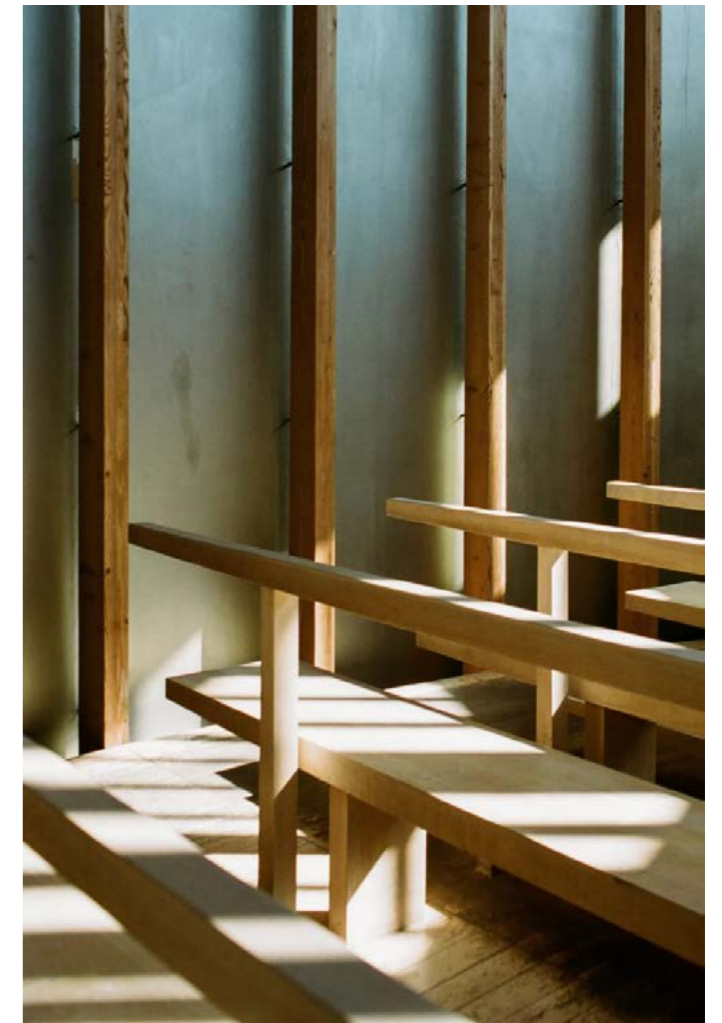
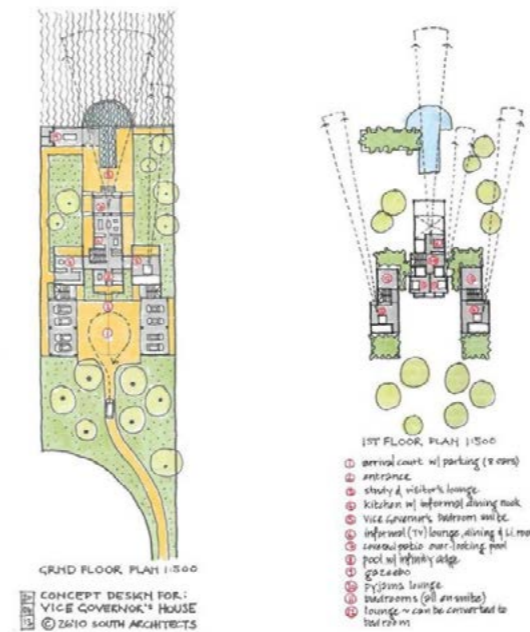
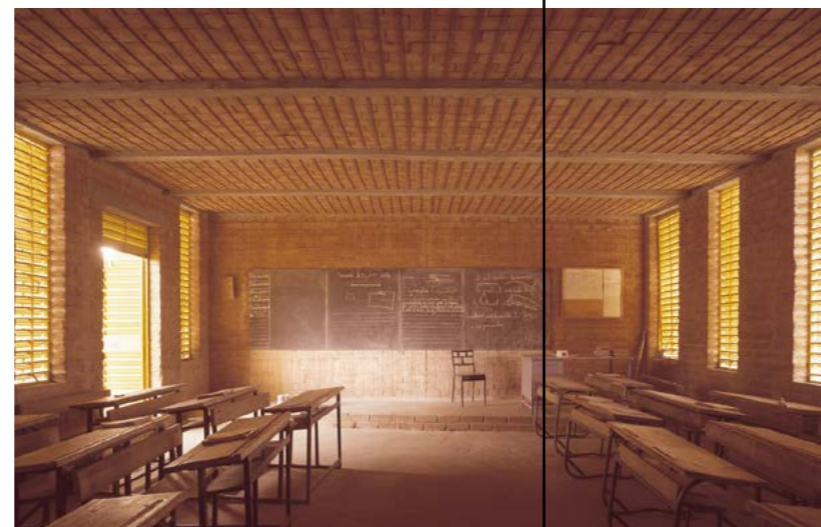


Figure 2.1.3: (far left, below) Interior of a classroom at Gando Primary School, Burkina Faso, designed by Fancis Kere (Duchoud 2009).

Figure 2.1.4: (top left) Sol Plaatje University by Wilkinson Architects, Northern Cape, South Africa (Wilkinson Architects 2014).

Figure 2.1.5: (left middle) Concept Sketch by 26'10 South Architects (Deckler 2020).

Figure 2.1.6: (bottom, middle) Scarpa's courtyard seen from the lower level, with its steel frame acting as a clerestory, bringing light down to surrounding spaces ('Ambiente' Exhibition; period photograph 1968).

Figure 2.1.7: (bottom, far right) Timber detailing in Peter Zumthor's Caplutta Sogn Benedegt (Stani 2020).

Figure 2.1.8: (top) *Colourful isometric sketch, characterising and contextualising Plastic View Informal settlement* (Katranas & De Bruin 2020)

Figure 2.1.9: (far right, below) *Diagram contextualising the research output of the Moreleta Park Integration Project honours students 2020, with QR codes that link to the respective open source content* (Katranas 2020).



2.1.4. The Moreleta Park Integration Project

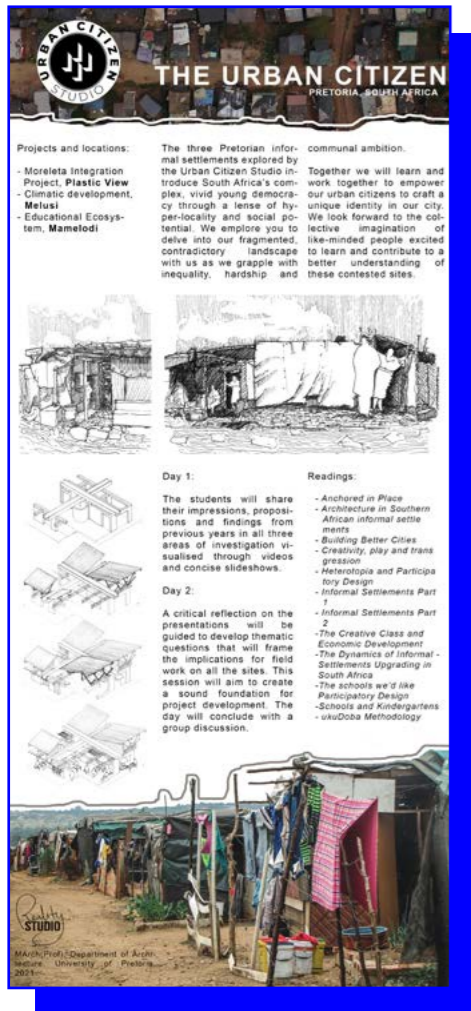
Before delving into the work of notable professionals that have helped locate the intention and approach of this project within the continuum of architectural discourse, it is necessary to outline the core contextual conditions and experiences that have ultimately galvanized the architectural stance. Between 2020 and 2021, students from the University of Pretoria's Unit for urban Citizenship were afforded the opportunity to explore this very meaning of the architect's role within the con-

text of Moreleta Park, through the theoretical and methodological lenses of Community Action Planning (Hamdi 2010), Codesign (Vaajakallio & Matelmaki 2014, Lee 2008), and Participatory Action Research (Howard & Somerville 2014). This cross-disciplinary research process enabled collaboration with an array of individuals through a hyperlocal site engagement process and global collective knowledge-base. Established by the 2020 Q1 Moreleta-based Architecture Honours studio with the commencement of our research in 2020, and henceforth referred to as the Moreleta Park Inte-

gration Project - this section will cover an overview of the last two years of engagement with specific emphasis on the process from February to June 2021. The collective effort of the Moreleta Park Integration Project became an important avenue through which primary data was collected, mapped, interpreted, and packaged - and became particularly useful to stakeholders and partners that are directly involved in disaster relief for Plastic View and Cemetery View during the COVID-19 lockdown and events such as fires.



2020



Delani Kriek
UP M(Arch) Prof



Alexia Katranas
UP M(Arch) Prof



Lina Zachrisson
Chalmers M(Arch)



Nick Ramsey
UP M(Arch) Prof



Alexander Mbedzi
UP M(Arch) Prof



Chris De Bruin
UP M(Arch) Prof



Brendon Creighton
UP M(Arch) Prof



Dhane Herbst
UP M(Arch) Prof



Julina Lindqvist
Chalmers M(Arch)

Annique Haese, Charlotte Swart, Wessel Ebersohn, Ingrid Schmutz, Naseera Goga, Nicholas Hudson, Ryan Meij, Tiamelo Mojakhoko

UP B(Arch) Hons

Figure 2.1.10: (top) South Africa context brochure prepared for prospective reality studio group members (Kriek 2021, featuring sketches by De Bruin 2020 and Jordaan 2020)

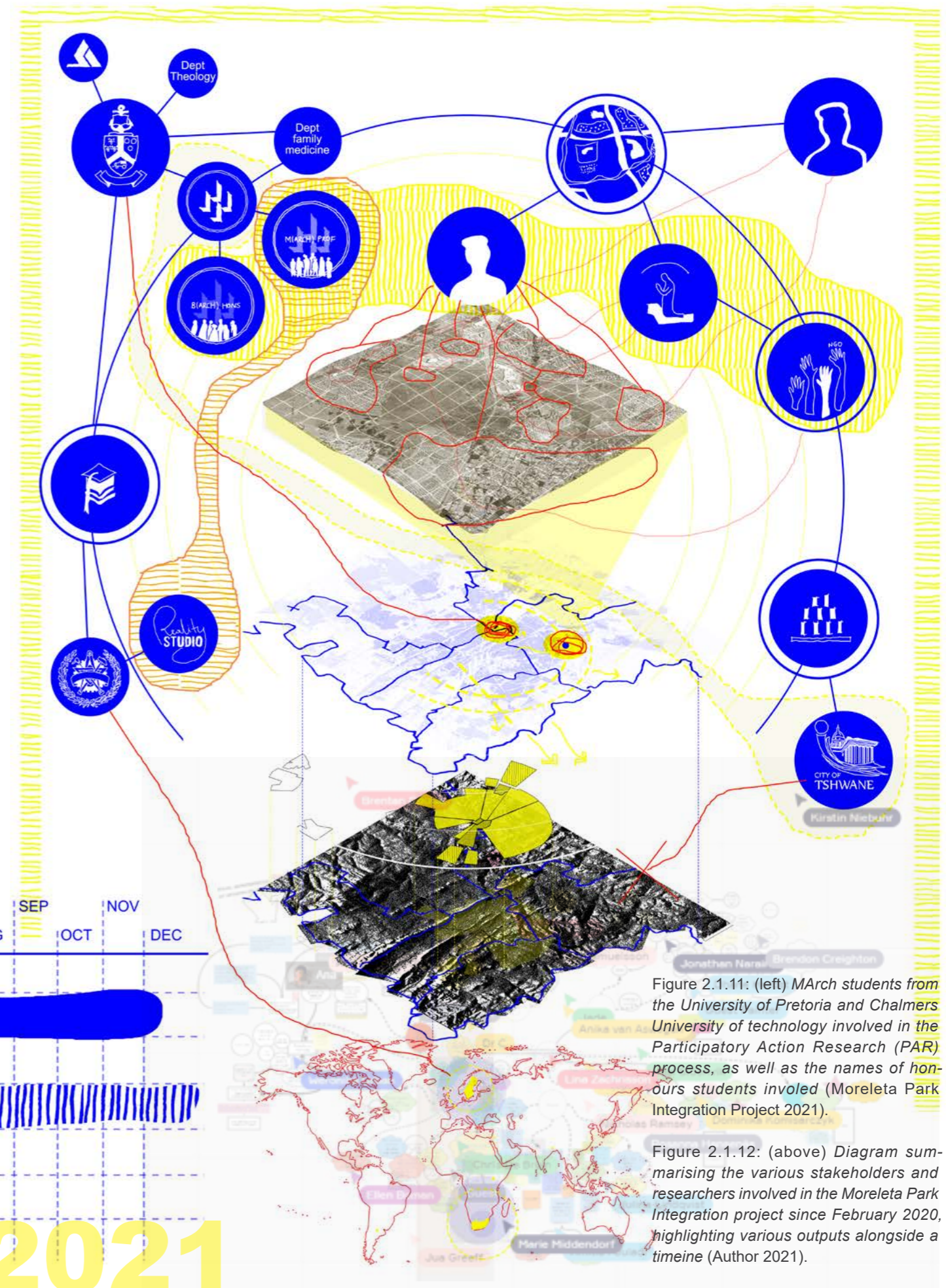
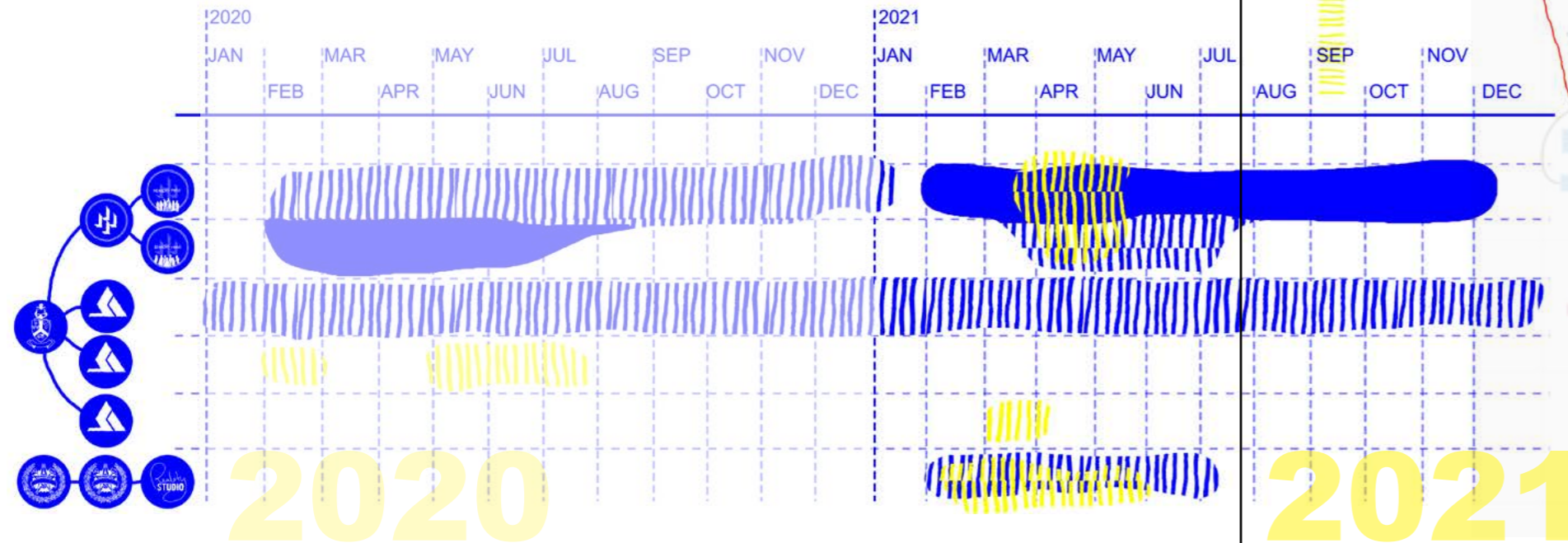


Figure 2.1.11: (left) MArch students from the University of Pretoria and Chalmers University of technology involved in the Participatory Action Research (PAR) process, as well as the names of honours students involved (Moreleta Park Integration Project 2021).

Figure 2.1.12: (above) Diagram summarising the various stakeholders and researchers involved in the Moreleta Park Integration project since February 2020, highlighting various outputs alongside a timeline (Author 2021).

MORELETA PARK INTEGRATION PROJECT

BACKGROUND

Macro scale
Plato View is a spontaneous urban settlement in Moreleta Park, Pretoria. The settlement was formed as a result of a land reform process that was initiated in the 1970s. It is a result of a process that was initiated by the state to provide housing for the urban poor.

Mezo scale
The 1970s and 1980s Apartheid Land Act controlled all land in the South African Republic. The act provided for the state to acquire land and to allocate it to the urban poor. This act was a result of a process that was initiated by the state to provide housing for the urban poor.

Micro scale
Plato View was established and developed by the municipality in the 1970s. It was a result of a process that was initiated by the state to provide housing for the urban poor. The settlement was formed as a result of a process that was initiated by the state to provide housing for the urban poor.

Human scale
The settlement was formed by the municipality in the 1970s. It was a result of a process that was initiated by the state to provide housing for the urban poor. The settlement was formed as a result of a process that was initiated by the state to provide housing for the urban poor.

WHERE ARE WE?

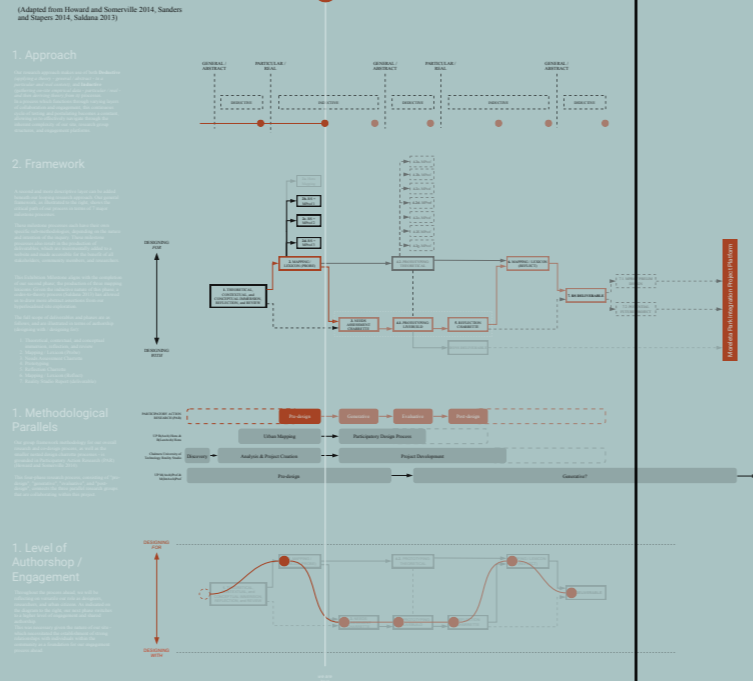


WHO ARE WE?

Moreleta Park Integration Project consists of all 11 students from University of Pretoria, and 2 students from Chalmers University of Technology. We are currently collaborating in four smaller groups in order to cover more ground and gain insights into various urban issues.

- Socio-spatial cataloguing**
- Circular material and skills flows**
- Empathy and greater rituals**
- Shared spectrum floor mapping**

FRAMEWORK METHODOLOGY



WHERE ARE WE NOW?

We have spent three weeks thinking into our various urban issues, while developing our methodologies and models of research. An earlier data collection and analysis phase was carried out in parallel with our fieldwork research process and the final project research methodology to produce a range of data that can be used going forward. All the data collected was analysed through the various lenses that provide a rich and layered understanding of the city space across the various scales. The aim is to create a project by creating a capacity for further complexity and a rigorous process that will be shared over our lifetime. The website 'Stay local'.

FINDINGS

As we are entering the research phase of our project, we collectively believe that the findings from the research phase will be a valuable addition to the understanding of the Plato View. It is a characteristic, multi-layered and the life of the settlement. It is a complex and multi-layered space that is constantly evolving. It is a space that is constantly evolving and changing. It is a space that is constantly evolving and changing.

WHERE ARE WE GOING?

Reflection and analysis
Needs assessment charrette
Prototyping / Livebuild

Our intention from the charrette and analysis phase is to create a shared vision for the future of the settlement. We are currently working on a range of projects that will be shared over our lifetime. The website 'Stay local'.

REFLECTION

The reflection is a key to professional growth. It is a process that allows us to learn from our experiences and to apply that learning to our future work. It is a process that allows us to learn from our experiences and to apply that learning to our future work. It is a process that allows us to learn from our experiences and to apply that learning to our future work.

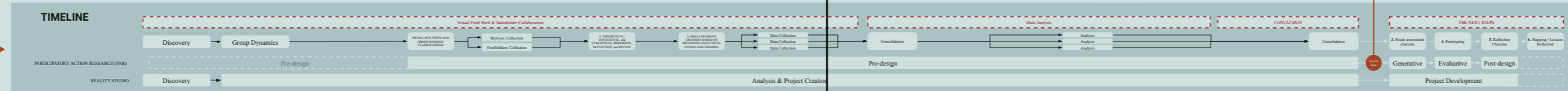


Figure 2.1.13: (above) Reality Studio virtual Miro exhibition (Moreleta Park Integration Project 2021).

2021

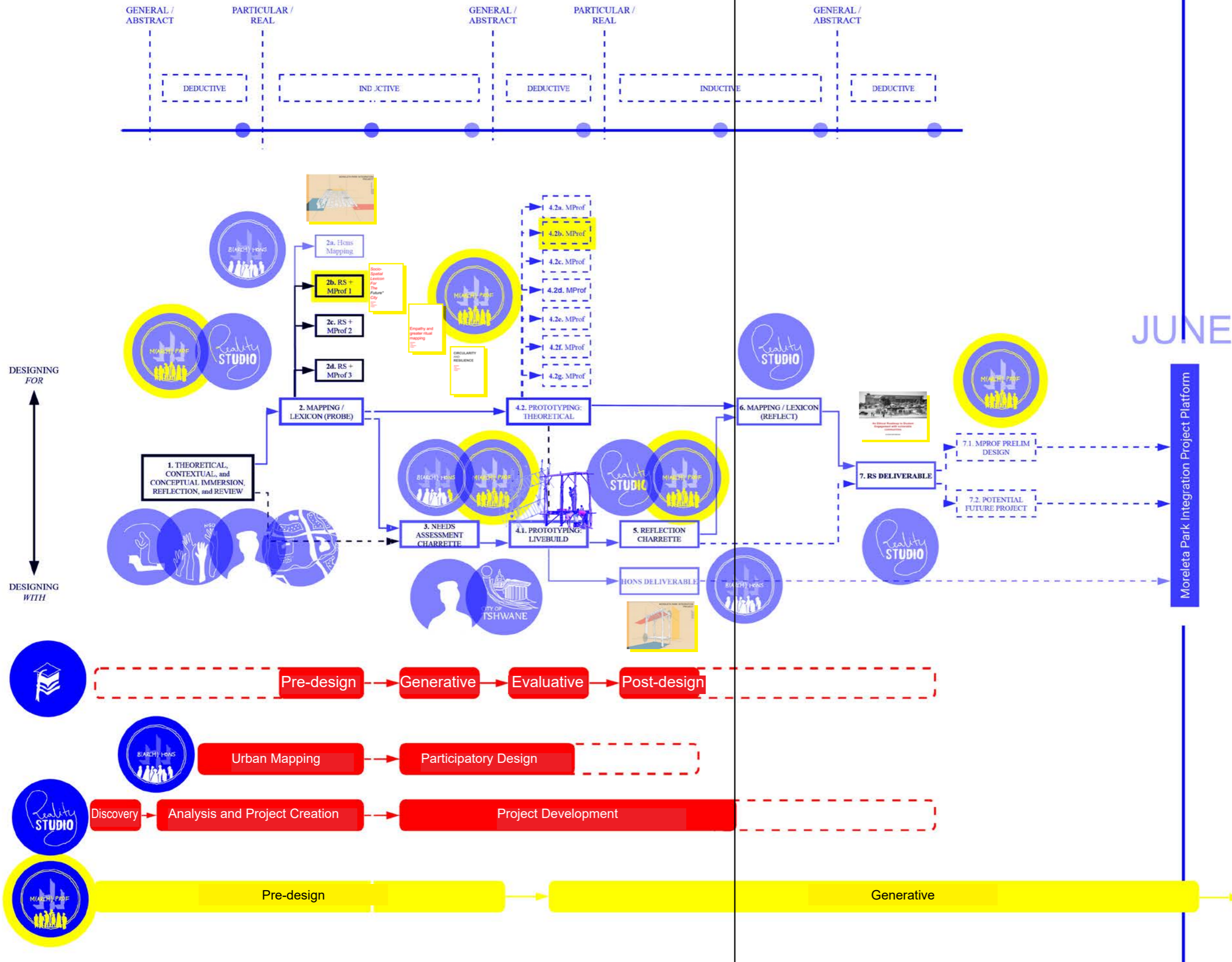


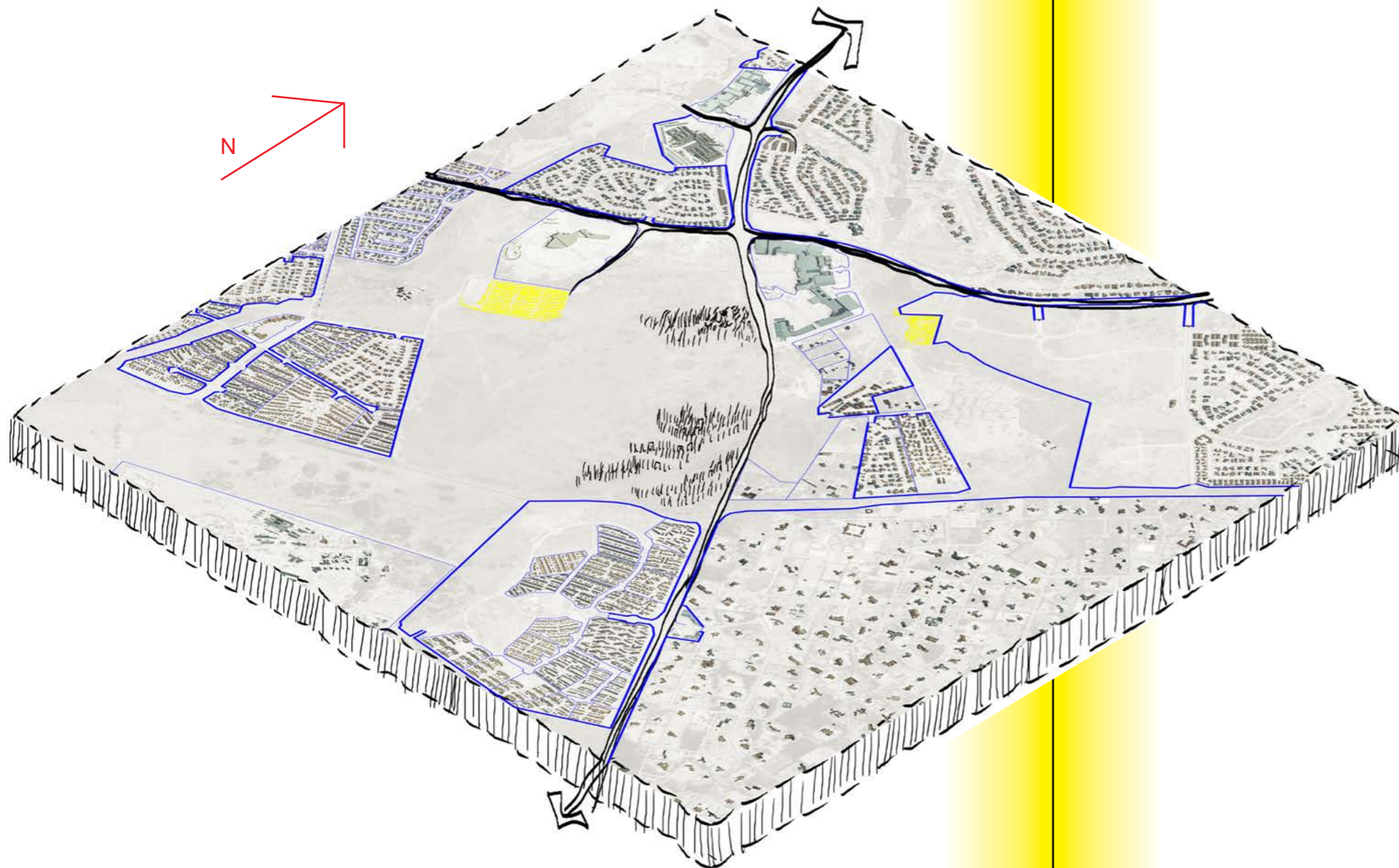
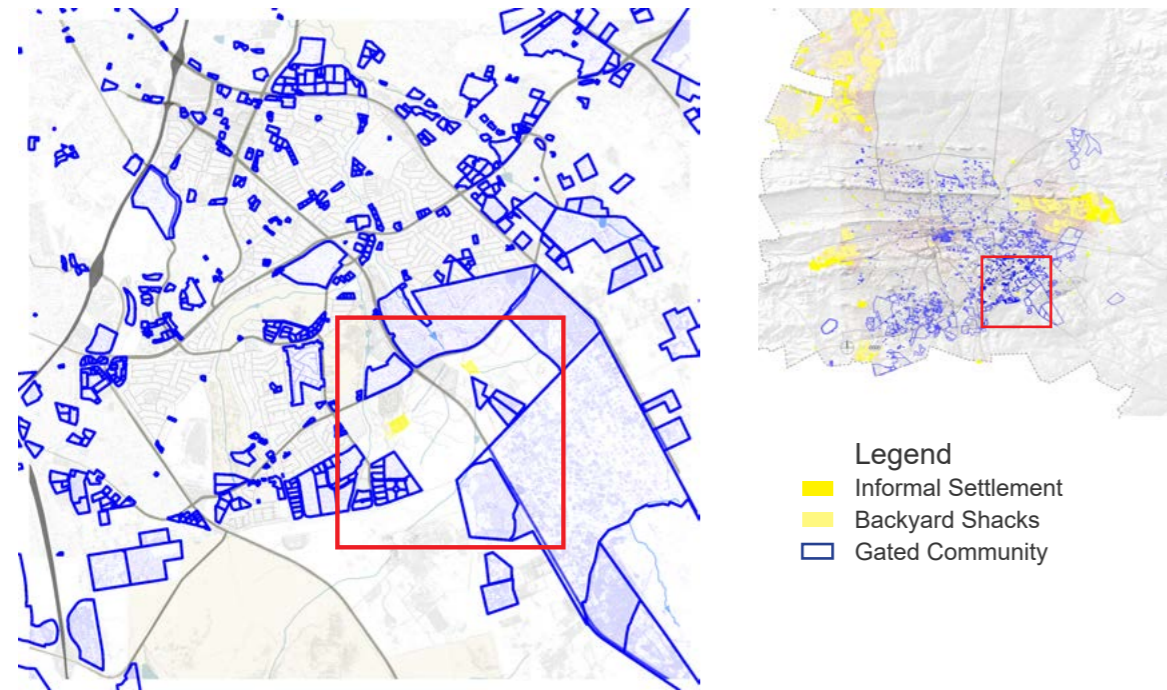
Figure 2.1.14: *Moreleta Park Integration Project Framework Methodology* (Diagram by Author 2021; Adapted from Howard and Somerville 2014, Sanders and Stapers 2014, Saldana 2013).



Figures 2.1.15a-f: Photographs from the numerous site visits, during the field research process between February and June in Plastic View (Moreleta Park Integration Project 2021).

Figure 2.1.6: (page 82-83) Two community leaders play a boardgame outside of the community initiated office in Plastic View (Zorn 2020).





2.2. CASE STUDY: MORELETA PARK

Figure 2.2.1: (left) *Isometric map of Moreleta Park, the case study area* (Author 2020)

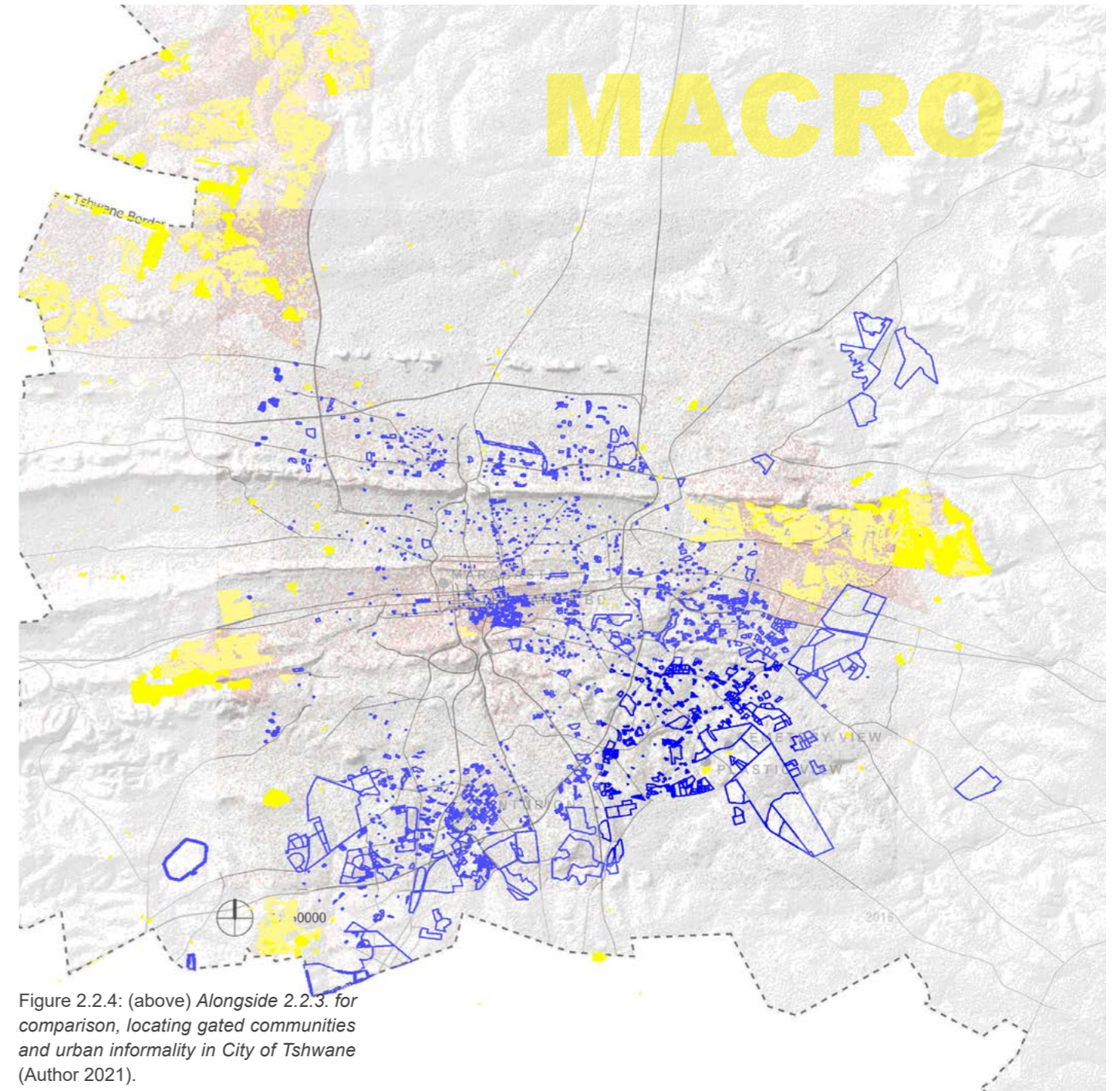
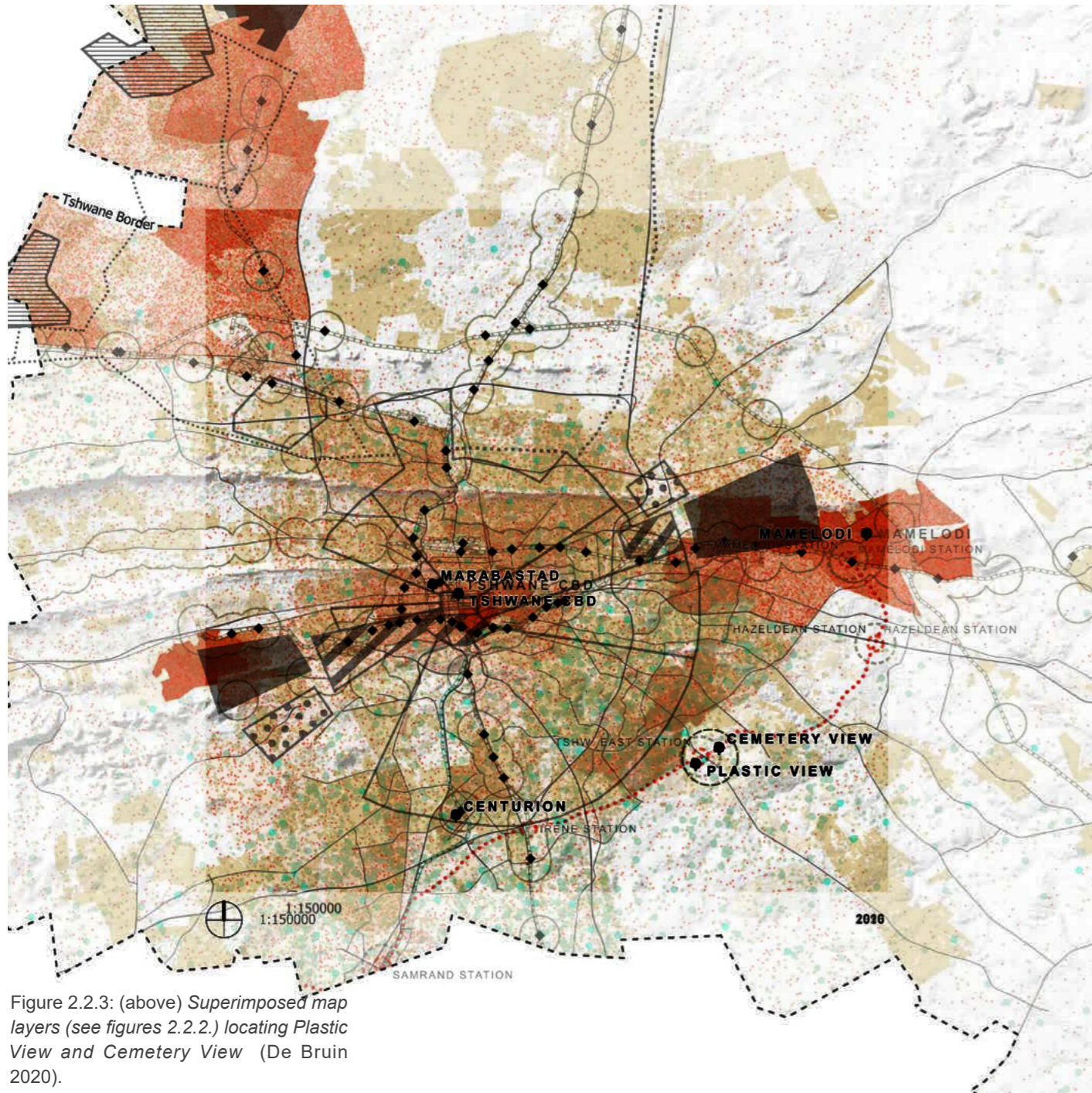
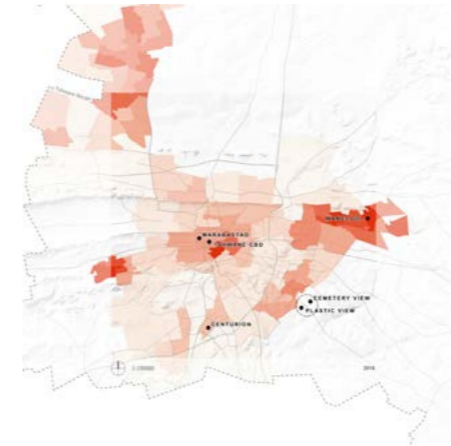
2.2.1. Locating Moreleta Park

It has been asserted that socially constructed scarcity results in a system that tries to avoid scarcity by resorting to often violent and discriminatory measures, thereby producing the scarcity that is feared (Till 2014). The physical consequences of socially constructed scarcity are perhaps most poignantly displayed in and permeated by the callow urban grain of Moreleta Park; the front of the battle of multiple futures.

When unpacking each layer and dimension of place, the most appropriate point of entry, embedded with clues of the “future city”, has been the

area’s evolution of urban morphology - especially given that this investigation explores a site where urban sprawl and urbanisation meet and display telling patterns from both the static and kinetic city (Mehrotra 2020).

As a foundation to the arguments that follow - the next set of mapping, completed in 2020, provides a brief overview of information such as urban planning schemes, land-use, service infrastructure and morphology - at a macro, meso, and micro level. These are viewed against maps which identify gated communities and urban informality at each respective scale.



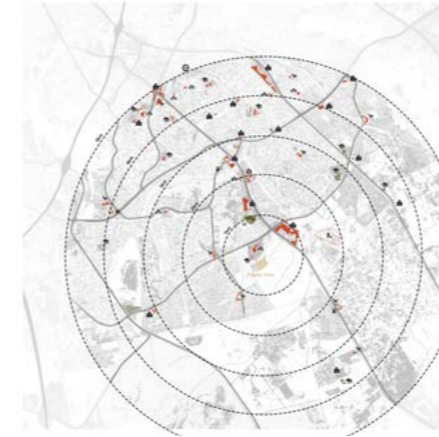


Figure 2.2.5a: (left) Contextual meso map layer (Katranas 2020).

Figure 2.2.5b: (left) City of Tshwane Region 6 zoning (Katranas 2020, adapted from CoT RSDP 2018).

Figure 2.2.5c: (left) City of Tshwane Region 6 nodes and corridors (Katranas 2020, adapted from CoT RSDP 2018).

Figure 2.2.5d: (left) Amenities within a 1km-5km radius of Plastic View (Katranas 2020).

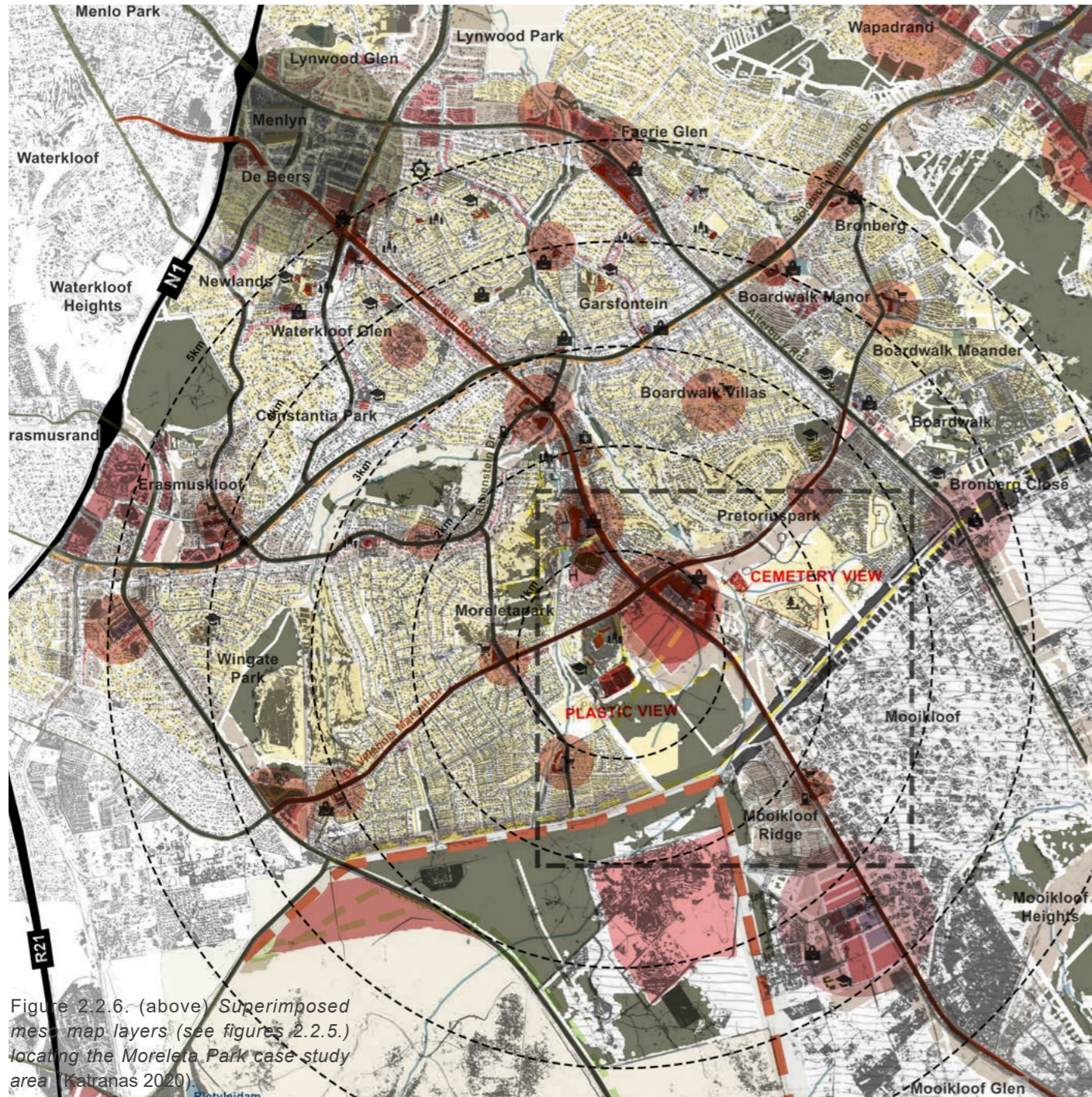


Figure 2.2.6. (above) Superimposed meso map layers (see figures 2.2.5.) locating the Moreleta Park case study area (Katranas 2020).

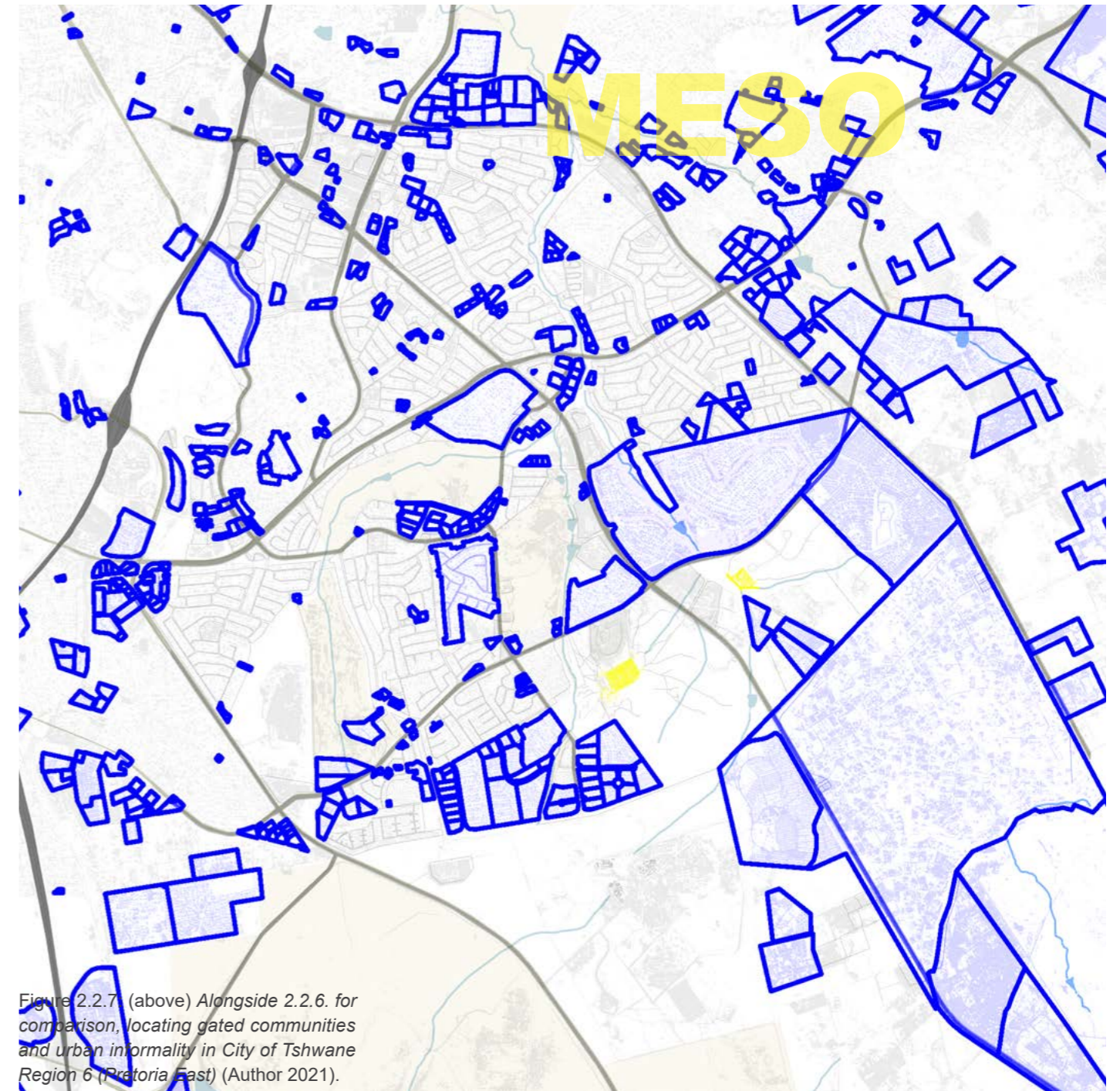


Figure 2.2.7. (above) Alongside 2.2.6. for comparison, locating gated communities and urban informality in City of Tshwane Region 6 (Pretoria East) (Author 2021).



Figure 2.2.8a: (left) Contextual micro map layer (Katranas 2020).



Figure 2.2.8b: (left) City of Tshwane Region 6 - Moreleta Park and Wingate Park nodes and corridors (Katranas 2020, adapted from CoT RSDP 2018).

Figure 2.2.8c: (left) micro context land parcels and ervens (Author (Katranas) 2021).

Figure 2.2.8d: (left) External job opportunities from the perspective of Plastic View and Cemetery View (Katranas 2020).

Figure 2.2.8e: (page 91) Servitudes and infrastructure reticulation (Katranas 2020)

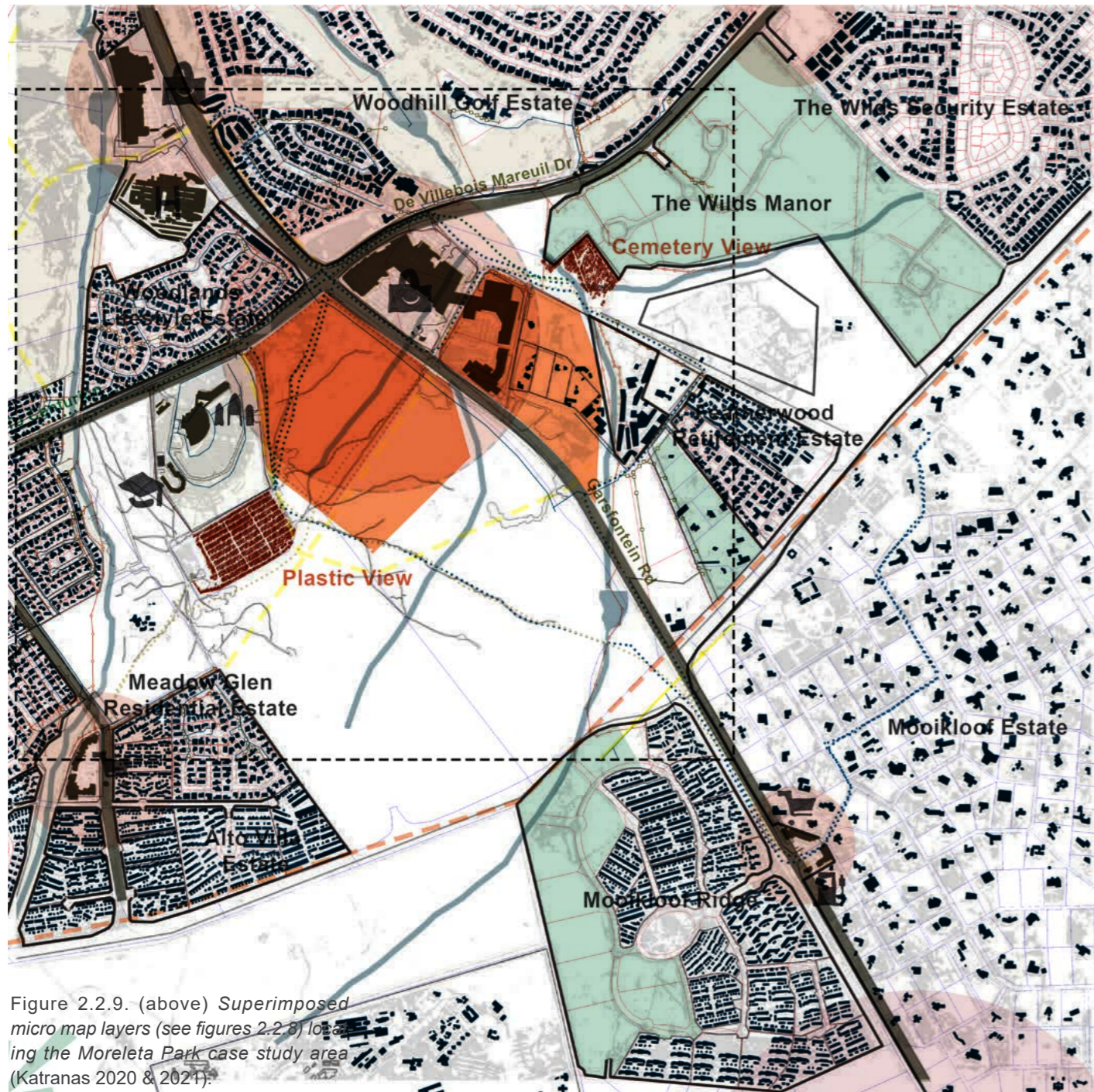


Figure 2.2.9. (above) Superimposed micro map layers (see figures 2.2.8) locating the Moreleta Park case study area (Katranas 2020 & 2021).

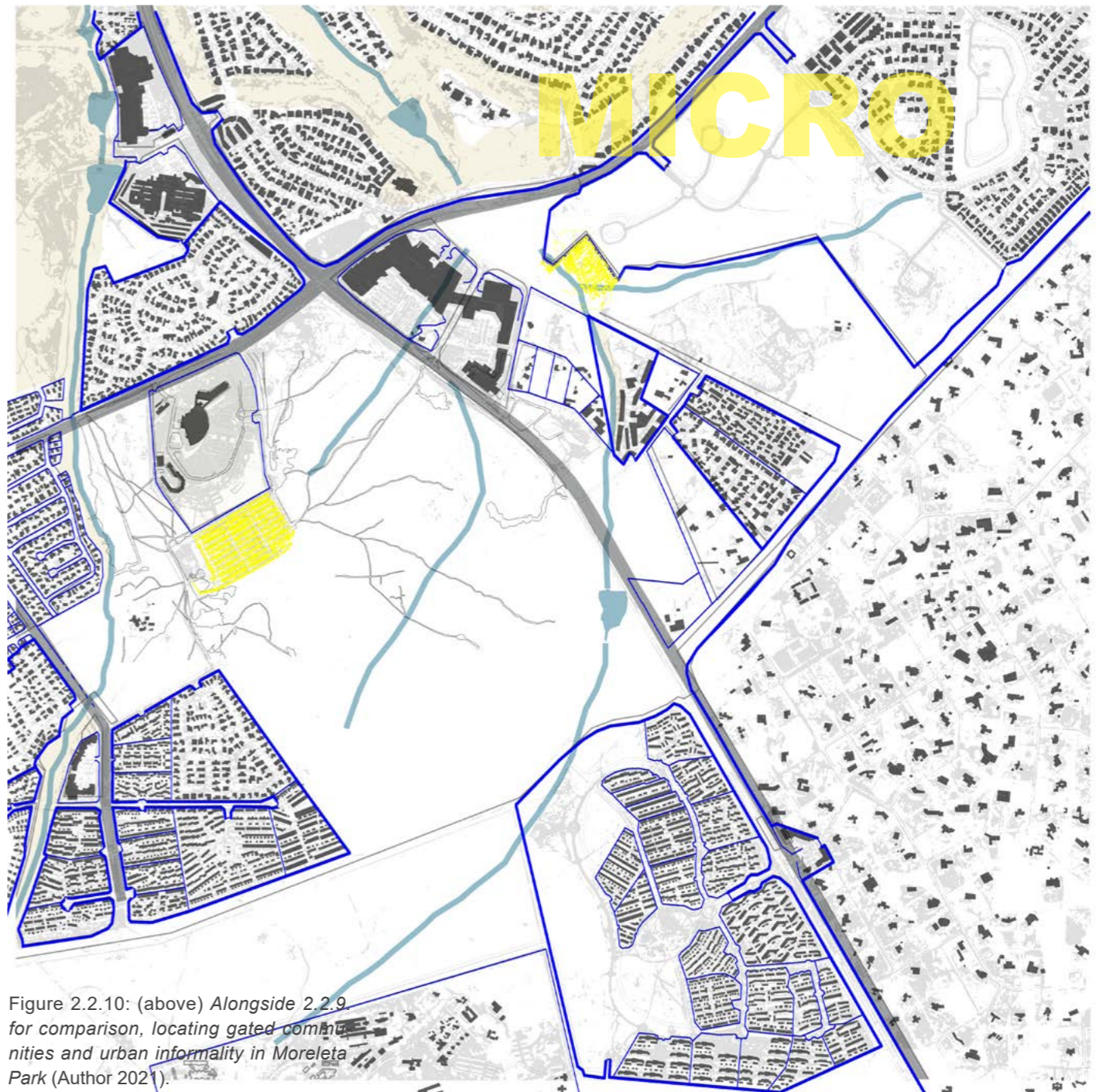
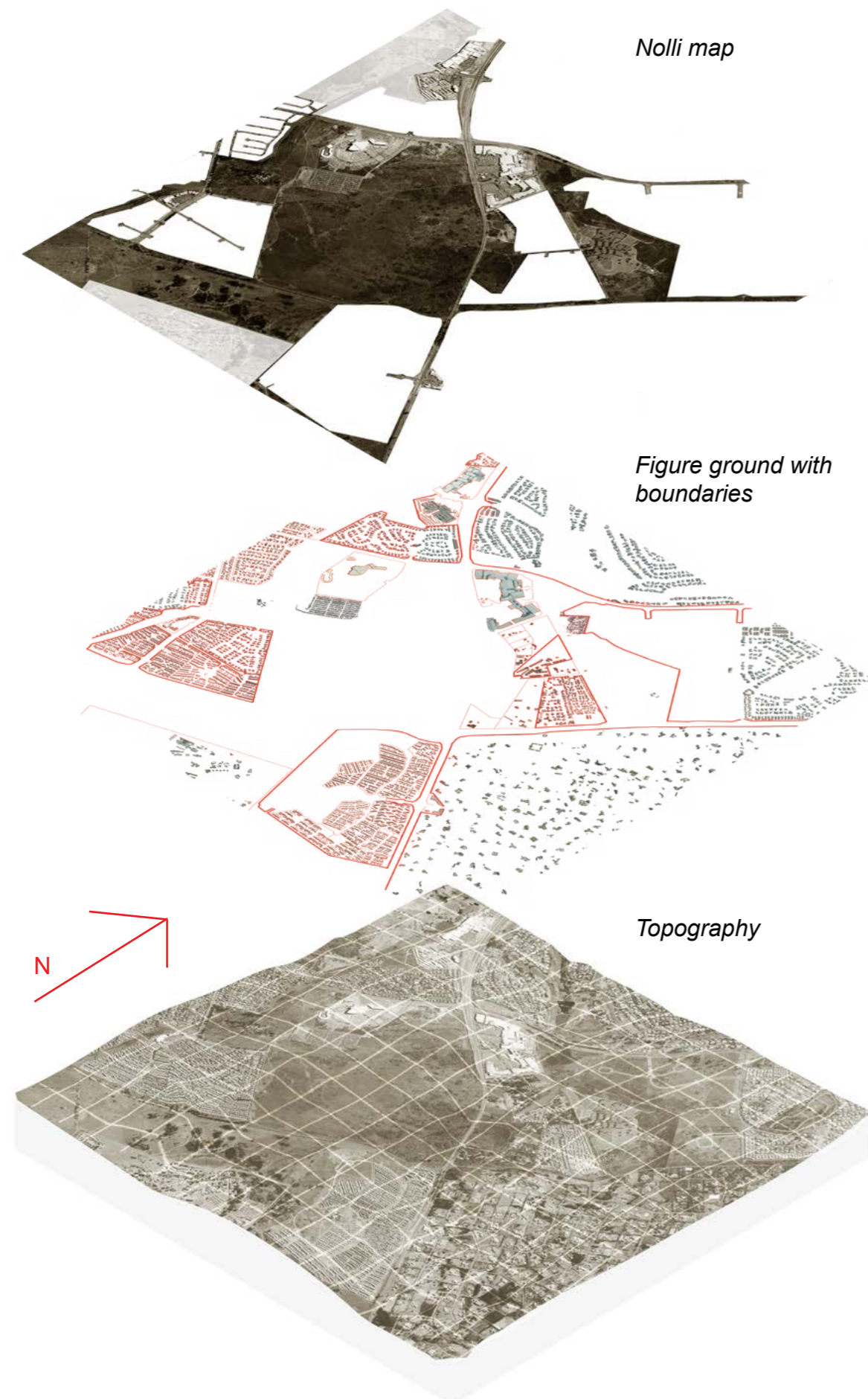


Figure 2.2.10: (above) Alongside 2.2.9 for comparison, locating gated communities and urban informality in Moreleta Park (Author 2021).

FINDINGS



This investigation has led to the discovery of a variety of patterns, trends, and relationships.

1. First, the current fragmented and vehicle-centric morphology induces a dependence on and overconsumption of resources - due to the resulting lack of cross-optimisation of resources and flows. This results in an unsustainable system that fuels the toxic social construction of scarcity, which in turn, results in the need for fortification.

2. This, alongside the problematic climate implications that arise from a similarly transactional attitude to the environment, disproportionately impacts those living in informal settlements – for socio-economic reasons and due to their location in spaces left after planning (SLOAP) that are often undesirable or unfit for development (such as cemetery view being in a flood plain).

3. There is an increasing trend towards the enclosure of existing open neighbourhoods and streets – hindering the walkability of an already pedestrian-dismissive urban landscape.

4. The City of Tshwane has identified several important nodes and corridors situated near Moreleta Park – and this project's focus area falls on a state-owned land parcel that is situated within walking distance of the Woodlands Boulevard Node. According to the City of Tshwane Region 6

Spatial development framework, “this land is served by Garsfontein Drive and De Villebois Mareuil Drive, and it is ideally located to accommodate mixed land used comprising of-ices and a small percentage of higher density residential developments” (City of Tshwane 2018).

5. A node is defined as “a place where both public and private investment tends to concentrate” (City of Tshwane, 2018) and translates to job opportunities. The tendency to separate land-use zones, and concentrate economic functions into centralised nodes, does little to accommodate the more natural transition of residential buildings along main roads into economic enterprises (and ultimately, the intertwining of domicile, livelihood, and mobility) – which is more linear and requires a more porous street edge than what gated communities allow.

6. Several future roads and future BRT routes have also been identified in the area (City of Tshwane, 2018). These include future highways and Mobility Spines. The Identified mobility spine (a) has been earmarked as a future Gautrain railway line. This line will link Samrand and Irene to Pretoria East, and Run from Pretoria East to Mamelodi (City of Tshwane, 2018).

7. Within the micro-scale area, residential urban grain and density ranges between one housing unit per hectare

in Mooikloof, to between 2-10 units per hectare in the high-income residential gated communities such as Woodlands Lifestyle estate and Woodhill Golf Estate, 30-40 Units per hectare in older residential neighbourhoods and higher density complexes such as Meadow Glen and Alto Villa Estate, and over 120 units per hectare in plastic View informal settlement.

8. There is little to no service provision in Plastic View and Cemetery View informal settlement.

9. Moreleta Park is favourably positioned amongst a variety of privately funded amenities, such as schools, a hospital, and malls – with varying levels of accessibility on a recreational level, and providing formal job opportunity on a livelihood level.

Figure 2.2.11: (left) Series of isometric maps highlighting the dominant urban morphological characteristics of the Moreleta Park study area: Nollli map, figure ground, and ortho-photo topography map (Author 2020 & 2021).

2.2.2. The origin of Moreleta Park

Moreleta Park exists on significantly valuable land, owed to its ecological assets such as the visual beauty of undulating topography and the prominence of both perennial and non-perennial fluvial systems operating in tandem with ecologically crucial wetlands within a catchment area. An analysis of historical imagery from 1994 to present reveals the steady degradation of these natural flow driven systems alongside the area's rapid urban infrastructure development. This predominantly low-density, high income residential development, as well as the construction of malls such as Parkview and Woodlands Boulevard - facilitated the emergence of loosely scattered informal dwellings in the open veld since 2001. This was revealed through interviews with community members of Plastic View, who remember the days prior to formalisation in 2007 as a time of instability and insecurity.

"I have been living in PV since its inception in 2009 but have been here since 2004. Was staying in the bush in the area. When I first came, I came on my own. Then my wife came in 2016. I saw and learnt a lot - life experiences. Saw

many things in life, most of them are dangerous things. At that time there was no leadership, each and every person was doing their own thing. When someone is walking, when people don't know them, they take all their belongings. It's one of the reasons that made me want to be a leader. To create change."

Respondent 20

"I am from Zimbabwe, moved here in 2007. Came here because we were staying outside in the bush. And then the other man "Colin" came, put a fence, "come inside, for safety". Came here because my husband was working here. Came to join him. I never thought of moving anywhere else. It is cheap to stay here. The money we are earning is not enough to rent somewhere else, transport is expensive. It is easy for us to stay here and support our children. My children still need clothes, food, school - hardly manage that - so wouldn't think of moving yet. Have family in Zimbabwe. Usually go home during easter and

December. When Zimbabwe became hard to survive, we came here. We come here for jobs. Otherwise I wouldn't have left Zimbabwe. We spend time teaching other people to cook - especially during the weekend. Friends visit each other, teach cooking, socialize. Ingredients bought at woodlands or checkers. Some things we get from the spaza shops, some stuff from the malls."

Respondent 22

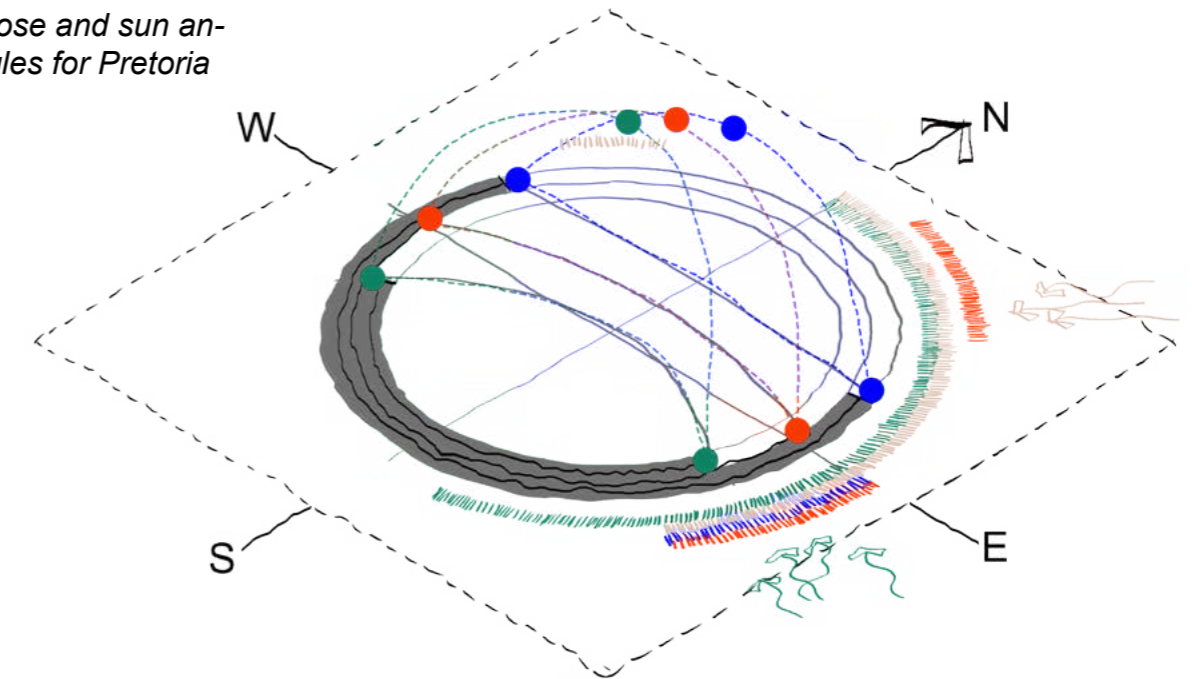
"Room is better than sleeping in a bush."

Respondent ____

Both protected and inhibited by a string of 12 court-orders mediating the needs and responsibilities of the court, police, the nearby churches, the municipality, malls, the residents of the plastic view as well as the home owners associations of surrounding gated communities, Plastic View, otherwise know as Woodlane Village, has become a part of the identity of an otherwise fortified upmarket area (Mashika 2019).

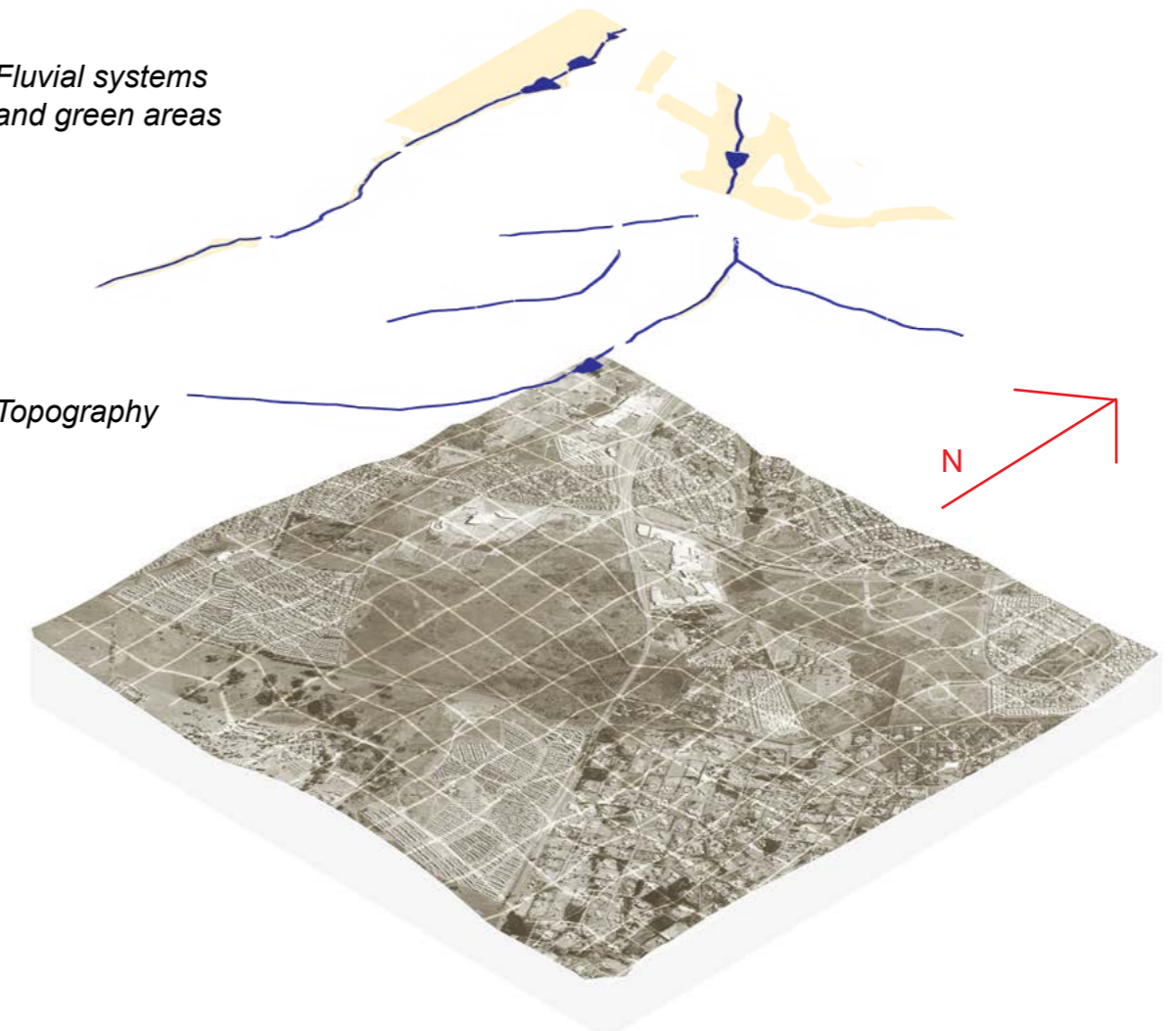
Figure 2.2.12: (right) Series of isometric maps highlighting the environmental considerations and characteristics of the Moreleta Park study area: seasonal wind-rose and sun angles, fluvial systems and green areas, and ortho-photo topography map (Author 2021).

Seasonal wind rose and sun angles for Pretoria



Fluvial systems and green areas

Topography



2.2.3. A morphology and materiality of Scarcity

Characteristic of contemporary planned neighbourhoods, Moreleta Park lacks both the humane sensibility of scale, as well as the complexity and organisation required to support resilient and effective cities. Described as a “Floating city” these deficits are made visible by the plethora of shopping malls and gated communities - which whilst dominating large areas of space and existing in great frequency, are limited in function and are regrettably change averse (Salat & Bardic 2011).

Salat and Bardic (2011) aptly capture the conundrum faced by developing cities, having been robbed of crucial processes of emergence that are known to engender the capacity to better deal with the social and physical dimension of scarcity. Similar to the view posited through the theory of Panarchy, and the adaptive cycle: if a city were to be conceptualised as a complex open system in continuous flux, constituting a palimpsest of objects and events that exist at various scales of magnitude and at respectively inversely related frequencies - then, when faced with the external flows and disturbances which interrupt the system’s preferred equilibrium, it is the invaluable “orderly patterns of chance” facilitated by

complexity which defines the systems strength to return towards momentary equilibrium (Salat & Bardic 2011, Holling et al. 2002, Peres & Du Plessis ___).

There is a strong link between the ecological paradigm orientated theory of Panarchy, and the Gestalt theory posited by the paradigm of phenomenology - which aims to understand place and acknowledges it as that which exists in relation to contexts and “in configurations with other places” (Jordaan 2015:71). With respect to the material dimension of Moreleta Park, in addition to the unmistakable distinction between violently permanent and forcibly transient constructs, there also exists, on a hermeneutic level, a tendency towards a “Nostalgic and romantic approach to placemaking that leads to superficial and anachronistic productions of old places, and even kitsch environments” (Jordaan 2015:68). This is evident in the tuscan style of homes in both the gated communities and informal settlements - a mere simulacra of efficiency (OMM design workshop___) and paradise. This reveals a misdirected attempt at tapping into the image or symbol that represents the healthy emergent, palimpsestuous complexity found in ancient tuscan towns. It indicates the act of preserving a static image of paradise, and a rejection and fear of time and change.

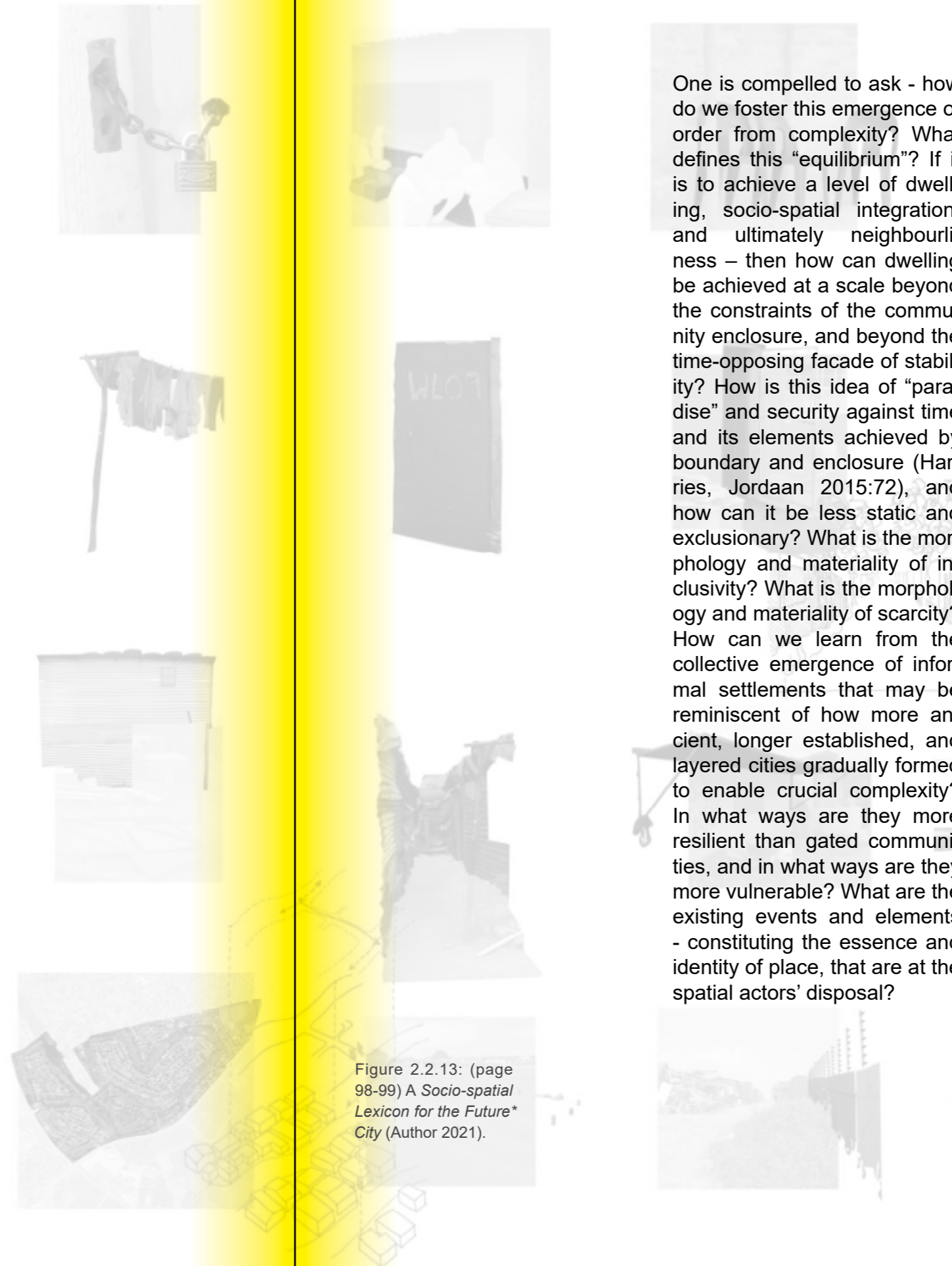


Figure 2.2.13: (page 98-99) A Socio-spatial Lexicon for the Future* City (Author 2021).

One is compelled to ask - how do we foster this emergence of order from complexity? What defines this “equilibrium”? If it is to achieve a level of dwelling, socio-spatial integration, and ultimately neighbourliness – then how can dwelling be achieved at a scale beyond the constraints of the community enclosure, and beyond the time-opposing facade of stability? How is this idea of “paradise” and security against time and its elements achieved by boundary and enclosure (Harrises, Jordaan 2015:72), and how can it be less static and exclusionary? What is the morphology and materiality of inclusivity? What is the morphology and materiality of scarcity? How can we learn from the collective emergence of informal settlements that may be reminiscent of how more ancient, longer established, and layered cities gradually formed to enable crucial complexity? In what ways are they more resilient than gated communities, and in what ways are they more vulnerable? What are the existing events and elements - constituting the essence and identity of place, that are at the spatial actors’ disposal?

Bearing in mind the dominant condition of urban migrancy and socio-spatial discrimination present in post-colonial and post apartheid cities, perhaps the most useful starting point is acknowledging that the present and future city is in fact a “community of strangers, an elsewhere, a place of transience” (Enwezor 2011:386). Where strangers live in proximity, and there inherently exists physical barriers.

In order to successfully leverage the often overlooked complex processes of emergence within Moreleta Park as well the City of Tshwane at large, the crucial question of “what does it mean to live in a city today”, was embarked on through the lens of Plastic View informal settlement. Through a socio-spatial cataloguing process (Katranas & Kriek & Zachrisson 2021) that identified hyper-optimisation, third spaces and places, and safety, surveillance and insecurity as relevant avenues of inquiry, the next three sections comprise a coded, multi-scalar, and visual collection of objects, conditions, and typologies that lend to a greater understanding of the “placial” dimension (Jordaan 2015) and Essence patterns (Mang et al 2016) of Moreleta Park.

SOCIO-SPATIAL LEXICON FOR THE FUTURE* CITY



MPIP 2021 Home Context Mapping Ethical Roadmap Needs Assessment About

MAPPING

Socio-Spatial Lexicon For The Future City*

SOCIO-SPATIAL LEXICON FOR THE FUTURE CITY

EMPATHY AND GREATER RITUAL MAPPING

UNIT FOR CIRCULARITY AND RESILIENCE

			} Socio-spatial cataloguing
Delani Kriek UP M(Arch) Prof	Alexia Katranas UP M(Arch) Prof	Lina Zachrisson Chalmers M(Arch)	
Nick Ramsey UP M(Arch) Prof	Alexander Mbedzi UP M(Arch) Prof	Chris De Bruin UP M(Arch) Prof	
			} Empathy and greater rituals
Brendon Creighton UP M(IntArch) Prof	Dhane Herbst UP M(IntArch) Prof	Julina Lindqvist Chalmers M(Arch)	
Anniqwe Haese, Charlotte Swart, Wessel Ebersohn, Ingrid Schmutz, Naseera Goga, Nicholas Hudson, Ryan Meij, Tlamelo Mojakhoko UP B(Arch) Hons			} Broad spectrum focus mapping

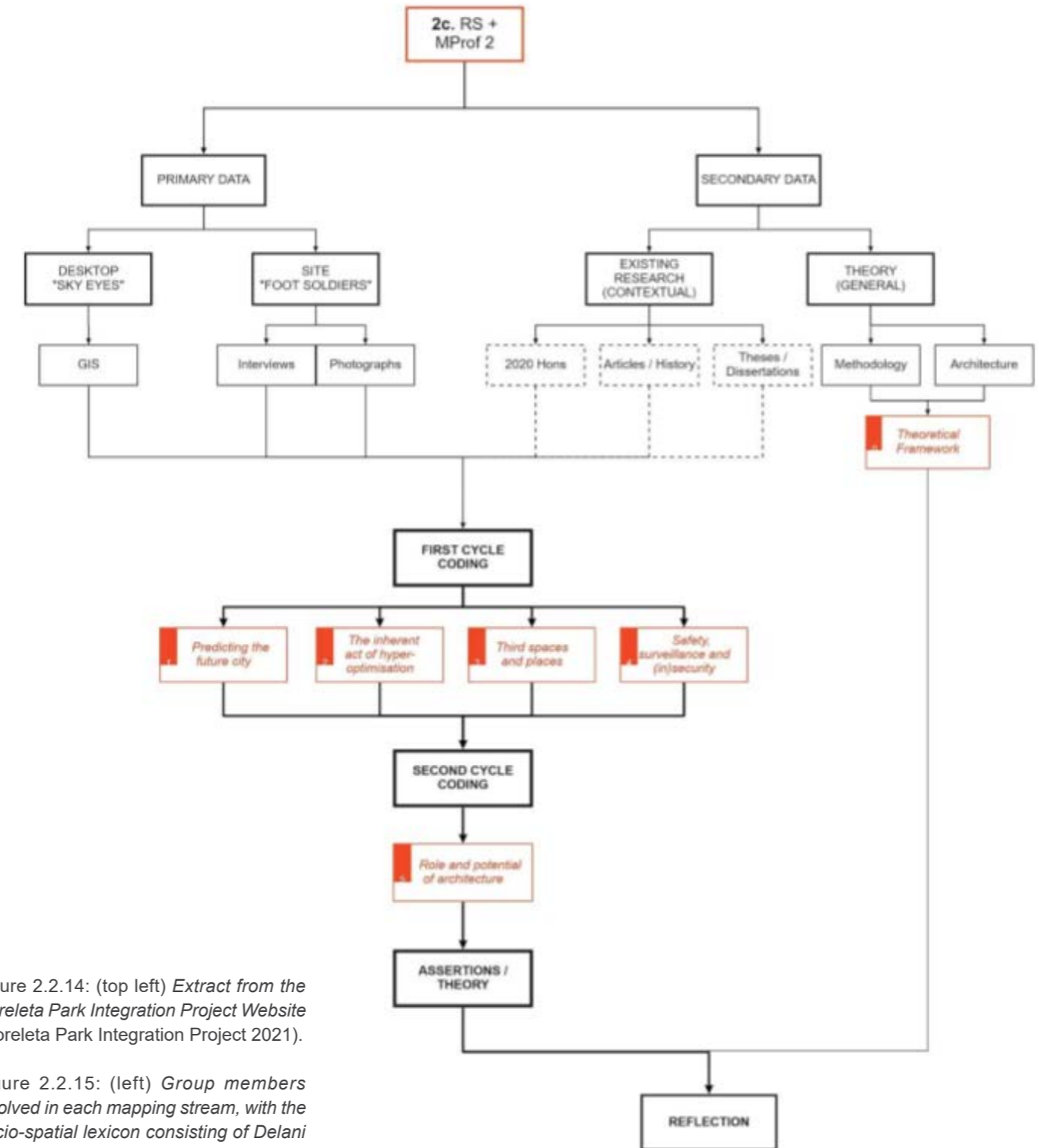


Figure 2.2.14: (top left) Extract from the Moreleta Park Integration Project Website (Moreleta Park Integration Project 2021).

Figure 2.2.15: (left) Group members involved in each mapping stream, with the Socio-spatial lexicon consisting of Delani and Alexia from the University of Pretoria, and Lina from the Chalmers University of Technology (Moreleta Park Integration Project 2021).

Figure 2.2.16: (above) Spatial Lexicon for the Future City Methodology (Author 2021, Adapted from Saldana 2013).

SOCIO-SPATIAL LEXICON

The inherent act of hyper-optimisation

- Material usage
- Levels of appropriation
- Socio-spatial self organisation



2.2.4. The inherent act of hyper-optimisation

“The hyper-optimisation of spontaneous urban settlements is an inevitable evolution of our future urban landscapes. As all future urban population growth is estimated to happen in informal settlements, slums and other spontaneous dwellings, the self-organisation and appropriation of these areas of our cities is of vital importance, not least in the pursuit of social and environmental sustainability.

In Plastic View, we are able to identify multiple indicators of this inherent change in action. It takes the physical form of changes and appropriation to housing typologies, building materials, appropriation of the public and semi-public space and reorganisation within pre-existing and creation of new blocks and groupings in the settlement.”
(Extract from Zachrisson in Moreleta Park Integration Project 2021)

Figure 2.2.17: (left) The inherent act of hyper-optimisation (Kriek 2021).

Building Materials



2.2.4.1. Plywood

Indicator of high level of appropriation. Easily accessible in non-standard sizes from a variety of sources (as building scraps), doubled up for better insulation.

Fig. 2.2.4.1a (above) Plywood construction (Zachrisson in Moreleta Park Integration Project 2021)
Fig. 2.2.4.1b (above) Plywood construction explanatory axonometric (Author in Moreleta Park Integration Project 2021)



2.2.4.2. Corrugated metal

High level of flexibility, and sheet metal has a good resale value making it a durable investment.

Fig. 2.2.4.2a (above) Corrugated metal construction (Zachrisson in Moreleta Park Integration Project 2021)
Fig. 2.2.4.2b (above) Corrugated metal construction explanatory axonometric (Author in Moreleta Park Integration Project 2021)



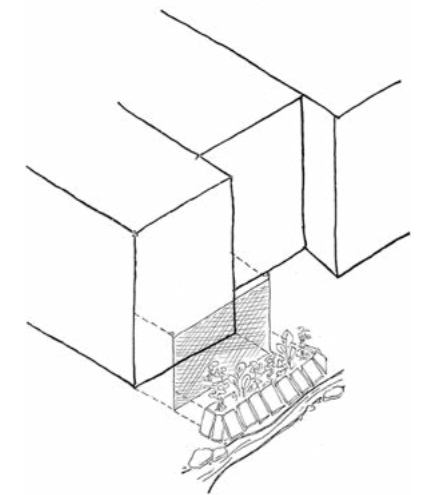
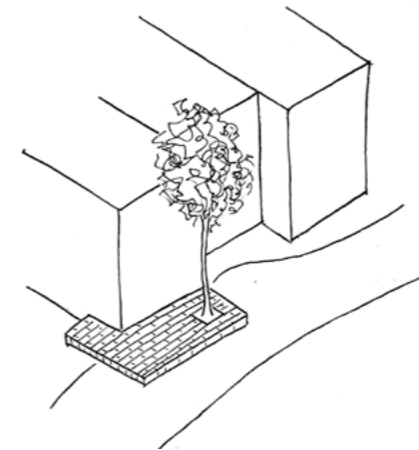
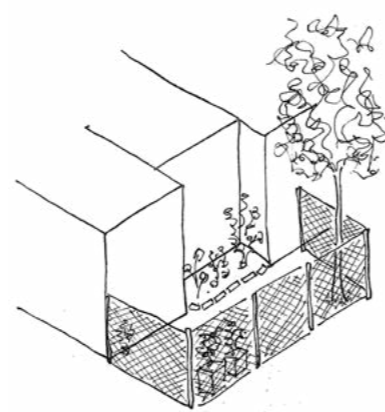
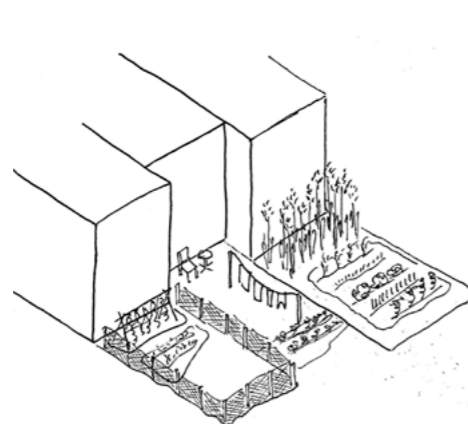
2.2.4.3. Brick masonry

Plastered and exposed stock brick exterior and interior facades. Bricks signify stability and safety against fires and other natural disturbances. Is consistent with the prevailing structural material of surrounding residential buildings.

Fig. 2.2.4.3a (above) Brick construction (Zachrisson in Moreleta Park Integration Project 2021)
Fig. 2.2.4.3b (above) Brick construction explanatory axonometric (Author in Moreleta Park Integration Project 2021)

Levels of appropriation:

Garden typologies



2.2.4.4. Vegetable Garden

Gardens used for urban agriculture are mainly located on the southern periphery of the settlement challenging its formal boundaries.

Fig. 2.2.4.4a (above) Vegetable Garden (Zachrisson in Moreleta Park Integration Project 2021)

Fig. 2.2.4.4b (above) Plywood construction explanatory axonometric (Zachrisson in Moreleta Park Integration Project 2021)

2.2.4.5. Aesthetic Garden

Decorative front and back yards indicating a high level of appropriation and an expression of identity. Most often sighted in stands considered to be longstanding permanent homes.

2.2.4.6. Planted tree

A single tree planted in the front yard or on the pavement on the front porch.

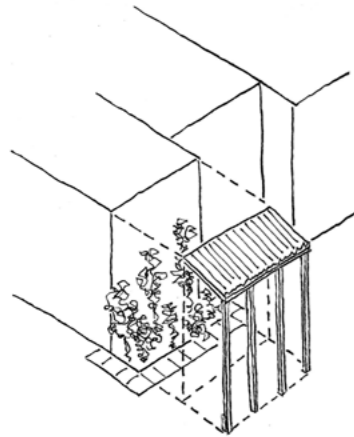
Used as a landmark, shading mechanism, or celebrated for visual beauty.

2.2.4.7. Vegetable patch

Smaller scaled vegetable garden that double up as aesthetic gardens. Often found on central stands within the settlement.

2.2.4.8. less structured flowerbed

Used to demarcate space, often at the foot of physical boundaries such as fences. Green spaces are also used as buffers alongside boundary walls in surrounding residential and commercial developments.



2.2.4.9. Structured Flowerbed

Versatile and movable, pots multiply the potential uses of softscaping. It is seen here to assist in threshold and the linear demarcation of public and private space.

2.2.4.10. Collection of Pots

Versatile and movable, pots multiply the potential uses of softscaping. It is seen here as a visually beautiful element, used to create a public facing space that can be gathered around.

2.2.4.11. Vegetable Pot

Versatile and movable, pots multiply the potential uses of softscaping. It is seen here as a visually beautiful element, used to create a public facing space that can be gathered around.

Fig. 2.2.4.4a (above) Vegetable Garden (Zachrisson in Moreleta Park Integration Project 2021)

Fig. 2.2.4.4b (above) Plywood construction explanatory axonometric (Zachrisson in Moreleta Park Integration Project 2021)

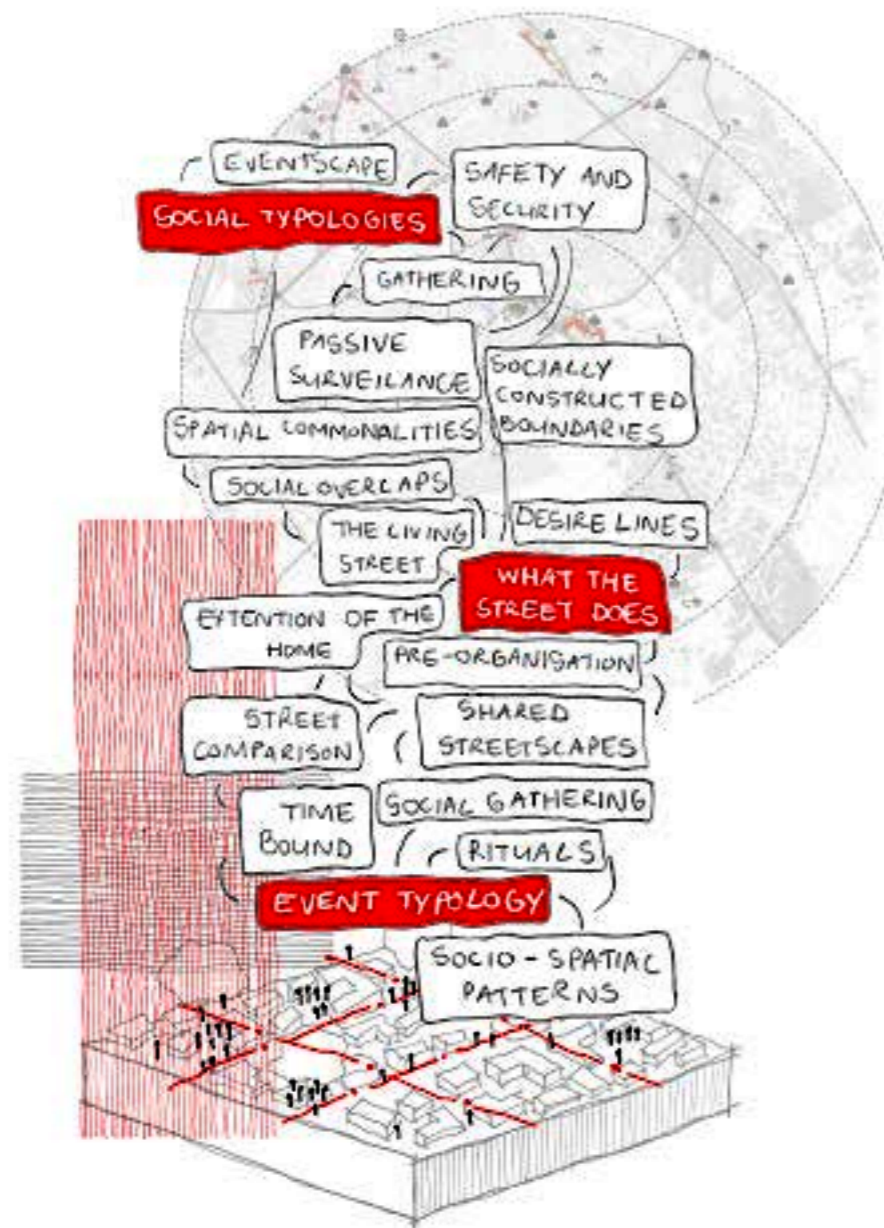
SOCIO-SPATIAL LEXICON

Third spaces and places

Social typology

The streets

Event typology



2.2.5. Third spaces and places

“This section of the socio-spatial lexicon is focusing our attention to the third spaces and places of spontaneous urban settlements. Third spaces are places between work and home and include the streetscape as well as public official and informal gathering and event spaces.

are trees or greenery, on private porches or verandas, she-beens and barber shops, as well as around water tanks and other amenities. Such places as well as the general function and purpose of the street, are therefore of interest for this section’s investigation.”

(Extract from Zachrisson in Moreleta Park Integration Project 2021)

From the research made in 2020 it was observed that third spaces in Plastic View consist of street spaces where there

Figure 2.2.18: (left) *Third spaces and places* (Kriek 2021).

SOCIO-SPATIAL LEXICON

Safety, surveillance, and insecurity

Interfaces: boundaries and thresholds

Methods of surveillance



2.2.6. Safety, surveillance, and insecurity

"The urban wall has always been the result of an ongoing, often volatile, process of negotiation between the city and its enemies, its allies, its elites, and its marginalized residents. Minimizing real and perceived group vulnerability is a primary force shaping city-making and partitioning". (Calame and Charlesworth 2012:144)

observed mechanisms of association and exclusion - and the manifestation of its interfaces - are unpacked at various scales to better understand the intrinsic relationship between architecture and survival.

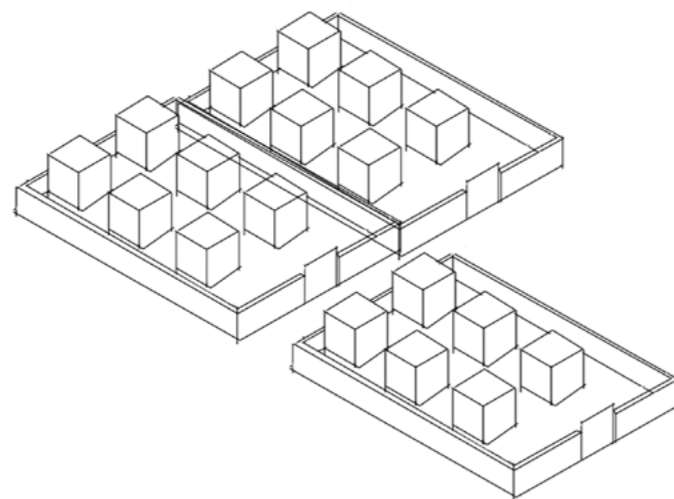
(Extract from Katranas in Moreleta Park Integration Project 2021)

With the scarred morphology of post-apartheid Pretoria as the backdrop, the contextually

Figure 2.2.19: (left) Safety, surveillance, and (in) security (Kriek 2021).

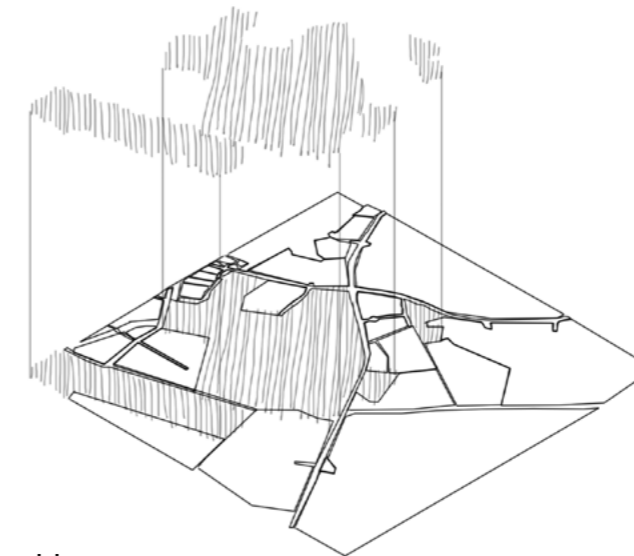
Interfaces: Boundaries and thresholds:

Macro Scale



2.2.6.1. Fortification

Dominant urban condition of Moreleta Park. Large scale enclosure is utilized by gated communities using high boundary walls and limited, controlled access points. This contradicts the City of Tshwane's goal for a more "walkable City".

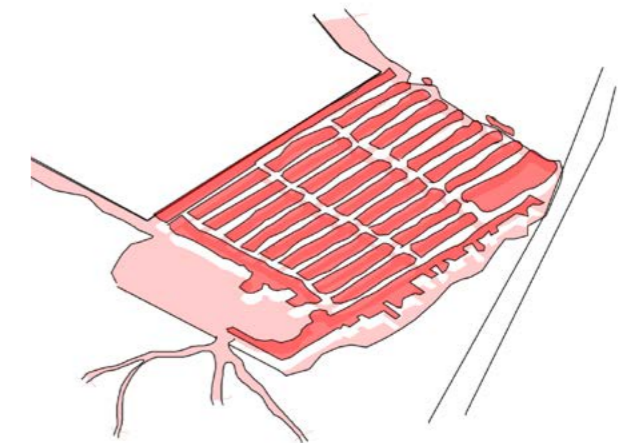
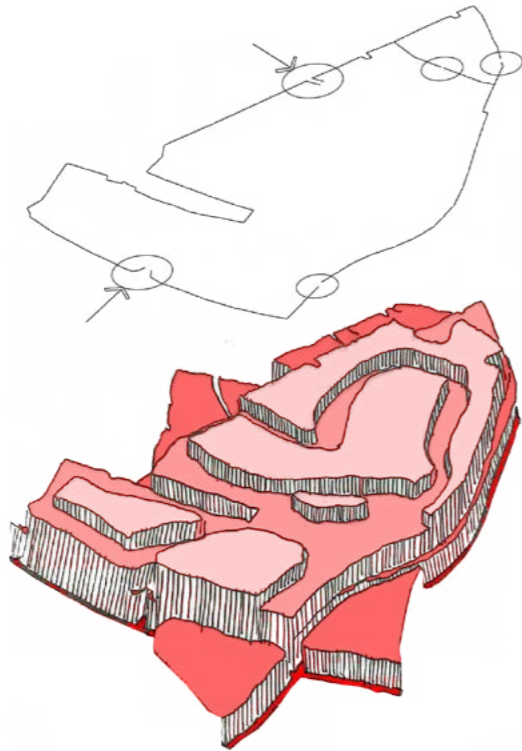
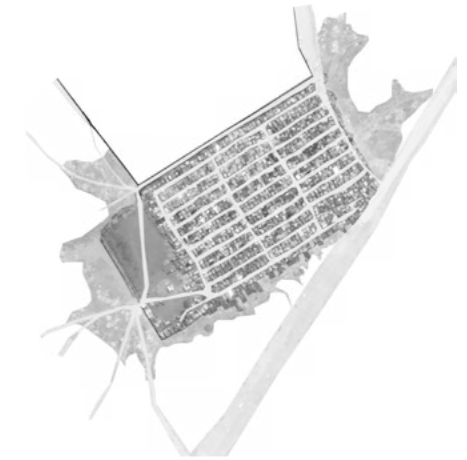
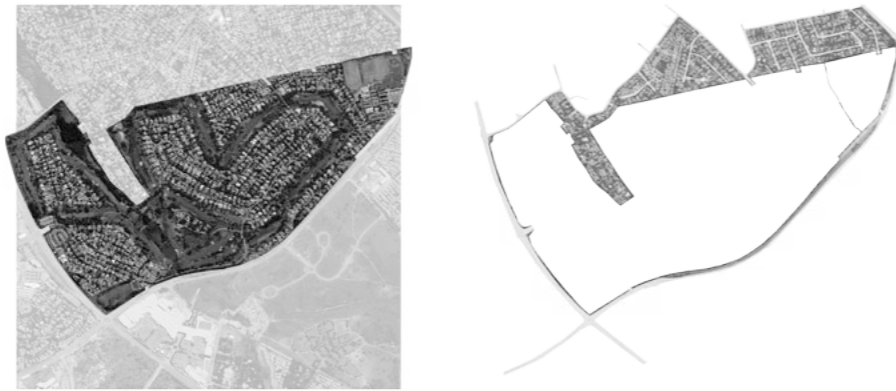


2.2.6.2. Residue

Comprising the wetland, and 220 hectares of key municipal land, these left-over spaces host Plastic View and Cemetery View informal settlement. A variety of urban frameworks have been proposed for the important government-owned land.

Interfaces: Boundaries and thresholds:

Meso Scale



2.2.6.3. Woodhill Golf Estate

2.2.6.4. External Interface

2.2.6.5. Internal Interface

2.2.6.6. Plastic View Informal
Settlement

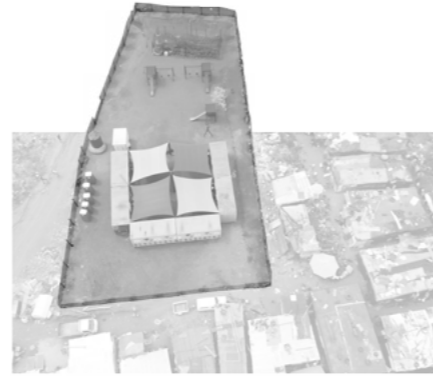
2.2.6.7. Interfaces

Interfaces: Boundaries and thresholds:

Micro Scale



2.2.6.8. Boundary Fence



2.2.6.9. Pre-school



2.2.6.10. Demarcation of
space with rocks

(De Bruin 2021)



2.2.6.11. Multi-flat stand

(De Bruin 2021)



2.2.6.12. Single stand



2.2.6.13. Double Storey



2.2.6.14. Front Porch



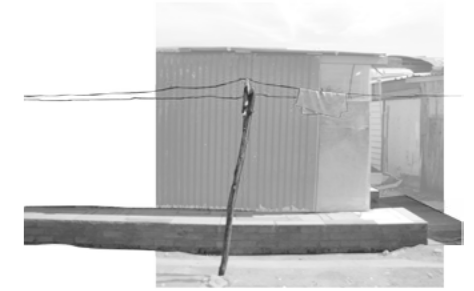
2.2.6.15. Canopy



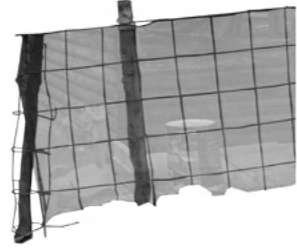
2.2.6.16. Alley



2.2.6.17. Communal Fence



2.2.6.18. Plinth Seating



2.2.6.19. Washing Line

2.2.6.20. Front-yard Fence

2.2.6.21. Street Entrance

2.2.6.22. Front Gate

2.2.6.23. Gate and street entrance

2.2.6.24. Spazashop interface

Methods of surveillance:



2.2.6.25. Floodlight



2.2.6.26. Businesses



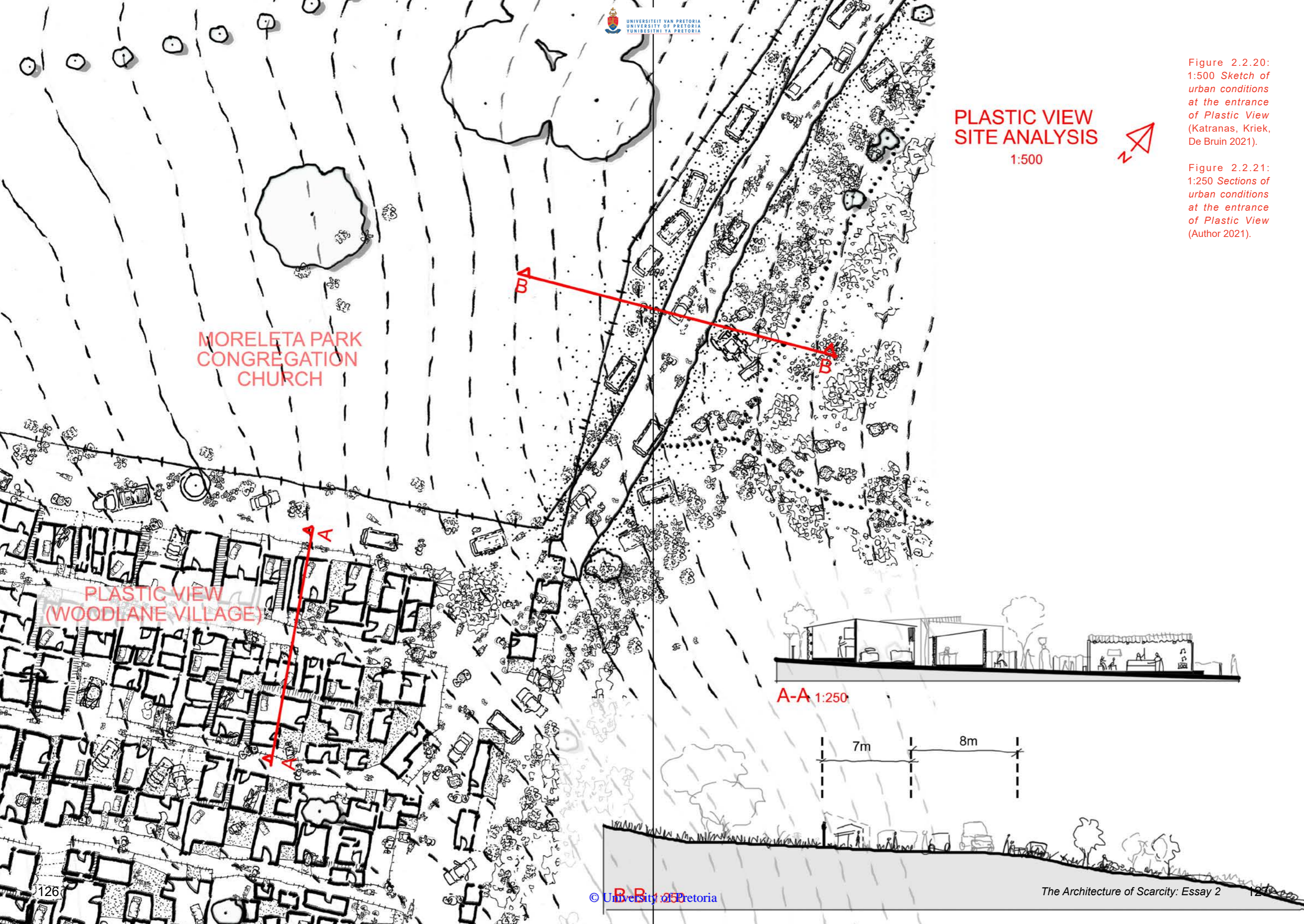
2.2.6.27. Seating



2.2.6.28. Camera



2.2.6.29. Padlock



**PLASTIC VIEW
SITE ANALYSIS**

1:500



Figure 2.2.20:
1:500 Sketch of
urban conditions
at the entrance
of Plastic View
(Katranas, Kriek,
De Bruin 2021).

Figure 2.2.21:
1:250 Sections of
urban conditions
at the entrance
of Plastic View
(Author 2021).



A-A 1:250





Figure 2.2.22:
1:500 Sketch of
urban conditions
at the Taxi-rank
South of Plastic
View, on the corner
of Wekker
Rd and Brabham
Street (Katranas,
Kriek, De Bruin
2021).



Figure 2.2.23:
1:500 Sketch of
urban conditions
on either side of de
Villiers Marek
Dr, North of Plastic
View, includ-
ing Woodlands
Lifestyle estate
(Katranas, Kriek,
De Bruin 2021).



Figure 2.2.24:
1:500 Sketch of
urban conditions
on the Southern
site of Plastic
View, depicting a
Sunday morning
soccer match on
the soccer field,
the netball field,
the ECD, and neigh-
bouring dwellings
(Katranas, Kriek,
De Bruin 2021).

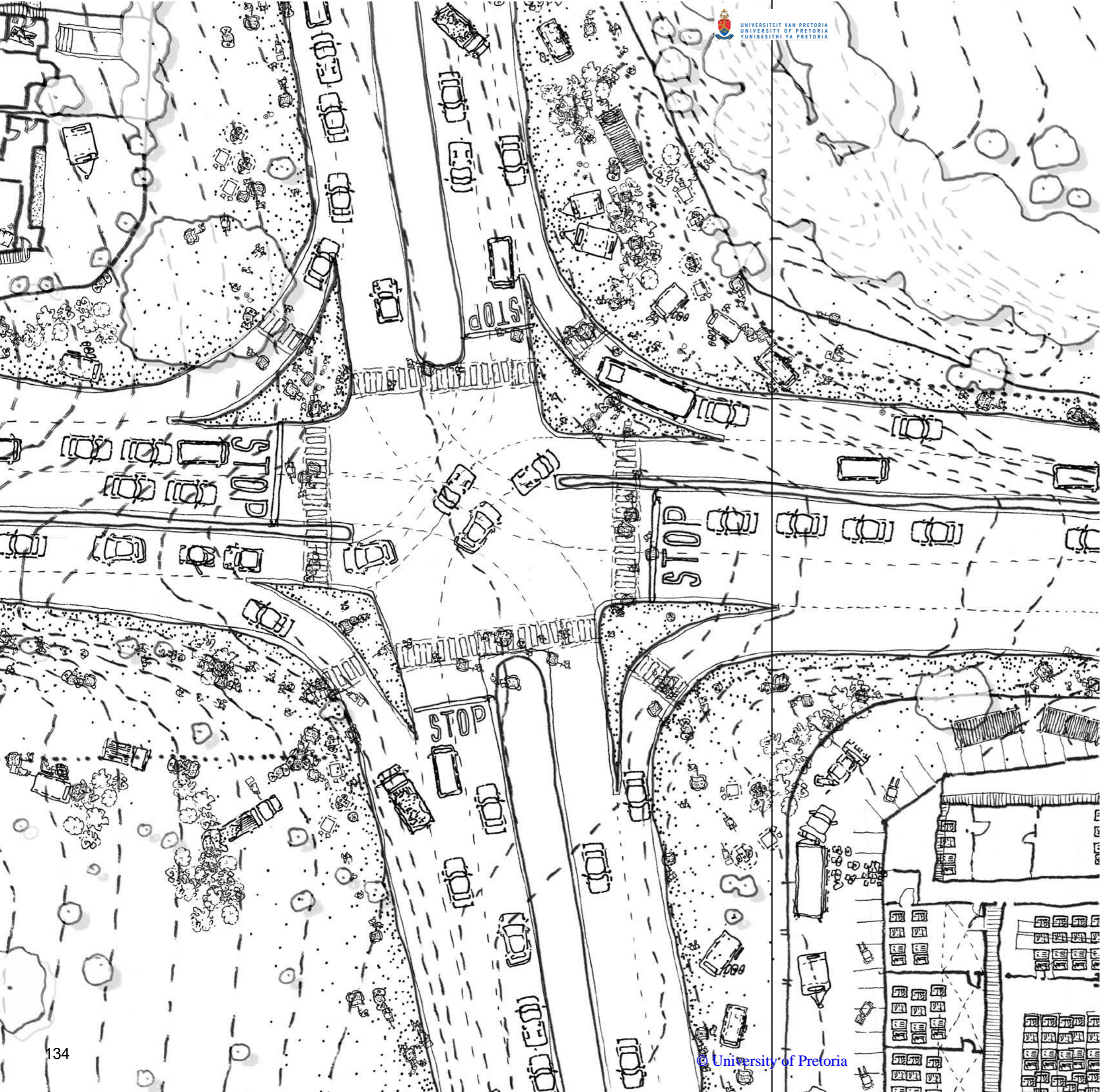
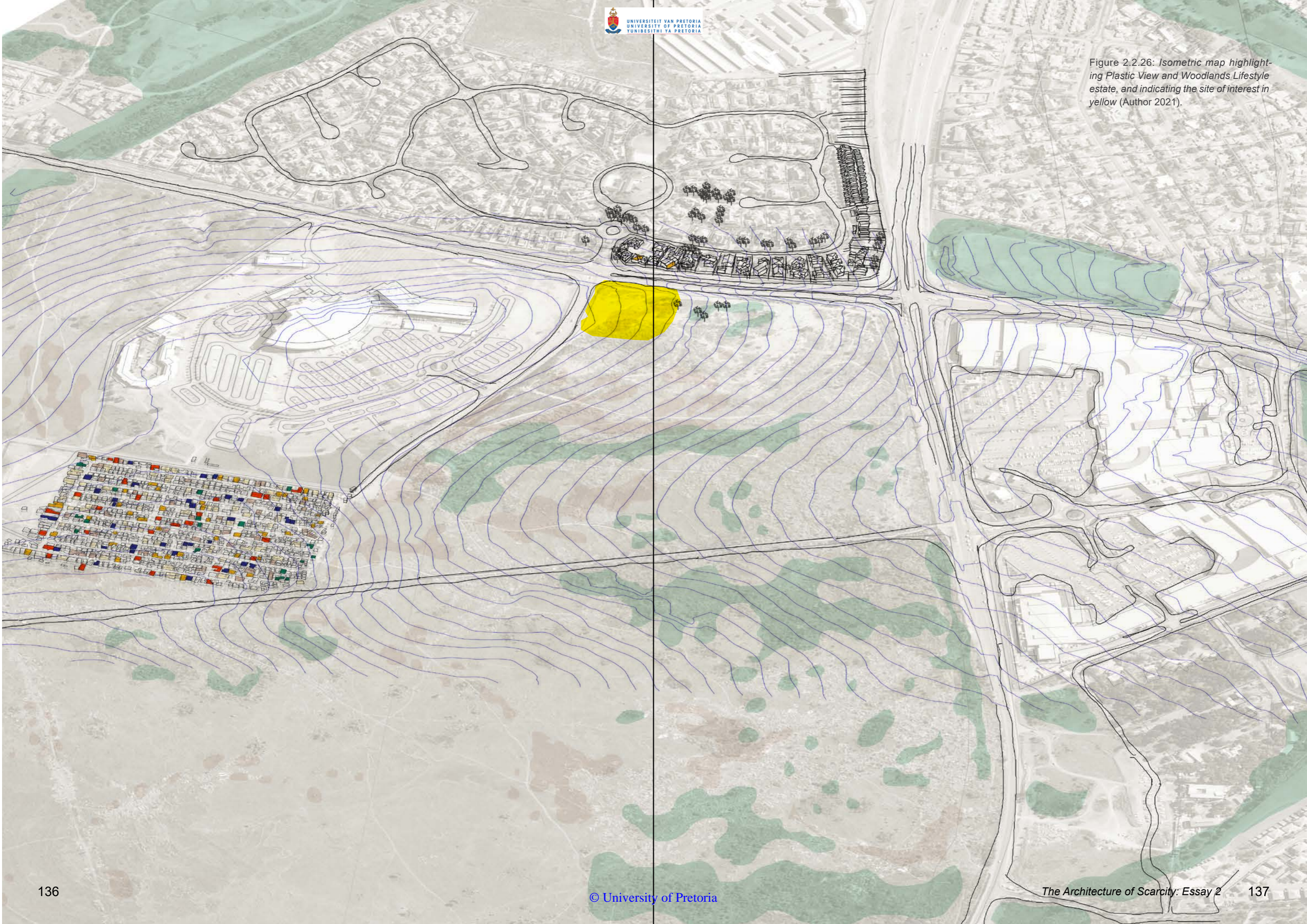


Figure 2.2.25:
1:500 Sketch of urban conditions on the Southern site of Plastic View, depicting the busy intersection of De Villesbois Mareuil Drive and Garsfontein Road, as well as the hard-edged boundaries of Woodhill Golf Estate, Woodlands Lifestyle Estate, and Woodlands Boulevard Mall (Katranas, Kriek, De Bruin 2021).

Figure 2.2.26: Isometric map highlighting Plastic View and Woodlands Lifestyle estate, and indicating the site of interest in yellow (Author 2021).





Figures 2.2.27: Site photographs conveying key insights on boundary, hyper-optimisation of space, and third spaces in Moreleta Park (Moreleta Park Integration Project 2021).



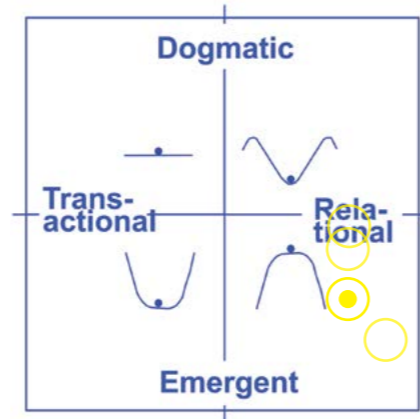


Figure 2.3.1: (left above) Locating the physical and socio-spatial context of the works of Lina Bo Bardi (Author 2021).

Figure 2.3.2: (left below) Interior stage and audience space of the Teatro Oficina - blurring the boundary between actor and audience; embodying a literal theatre of the everyday (Bujedo Aguirre).

2.3. PRECEDENT STUDY

2.3.1. Theoretical, methodological, architectural, and technical frames of reference

The work of few of the architects touched upon previously will be unpacked where they provide notable guidance for dealing with this project's particular "placial", spatial, programmatic, and technical requirements. Alongside the findings of the socio-spatial lexicon, and by utilising the socio-spatial heuristic - architectural responses and processes will be further assessed to identify key relationships, principles, and strategies to assist in establishing appropriate design principles.

Bardi is critical of the mainstream approaches employed during the 1960's, image fixated search for new identity in Brazil - by shifting focus to material usage and building processes, that better serve the interests of those participating in the construction and occupation of buildings. Her view of architecture as the "theatre of the everyday" results in simple manifestations that celebrate the notion of architecture being produced from a context of scarcity, rather than representing abundance. Architectural practice served as a device of resistance in face of austerity, largely by demystifying the idea of poverty, and the fear and shame associated with it (Williams 2009).

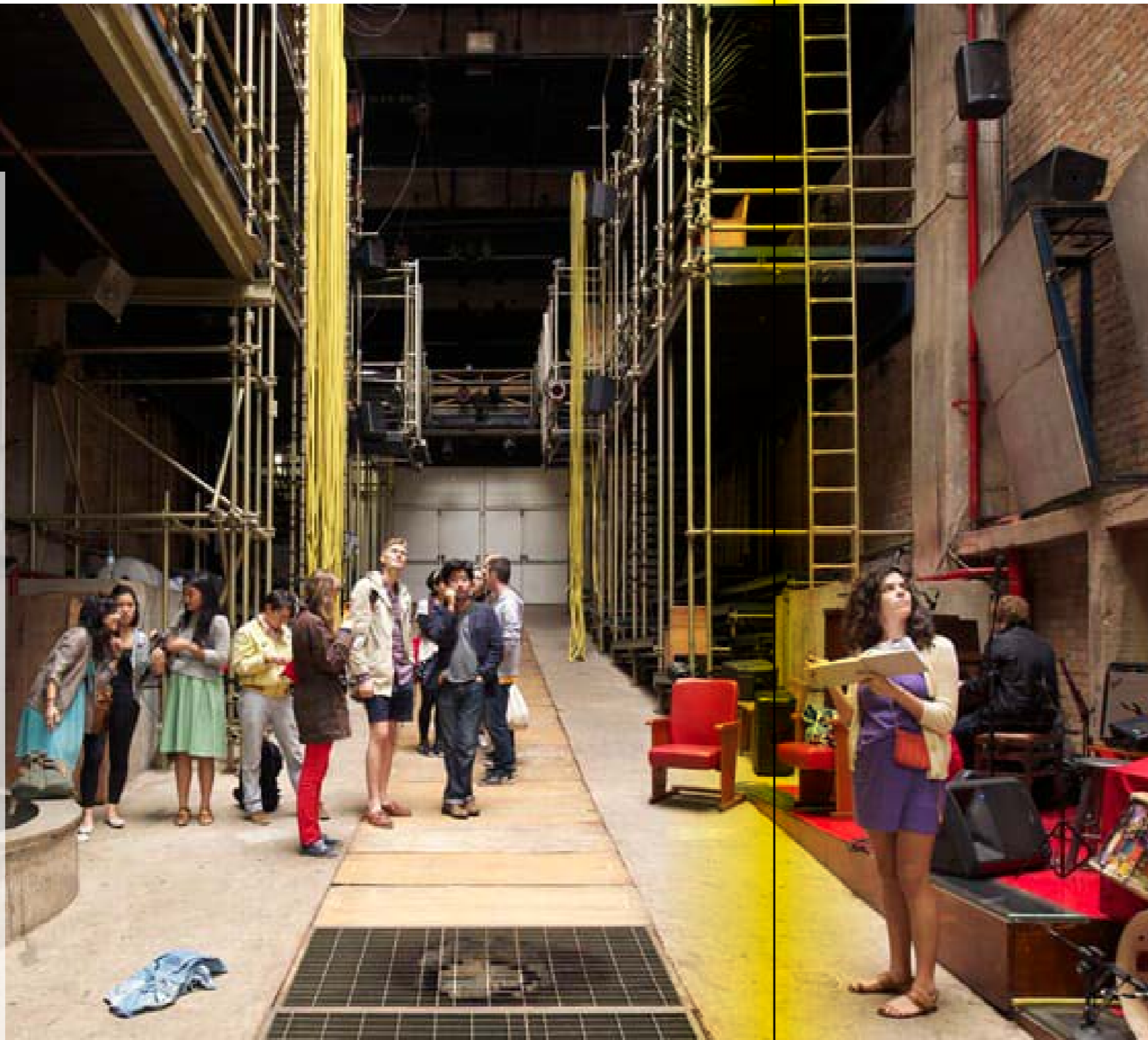
2.3.2. Designing from scarcity: the work of Lina Bo Bardi

As a foundation, the work of Italian-born, Brazilian-naturalised architect and activist Lina Bo Bardi, will be interrogated to better understand the potential of leveraging architecture for socio-political change.

Bo Bardi's idea of "poor architecture" finds inspiration in the motivations of Glauber Rocha's film "A Estetia da Fome", "The Aesthetics of Hunger" - which opposes the poverty-concealing sanitising exercises embarked on by the Brazilian government to erase traces of post-colonial identity, and to present as more "developed" to the western world. Resistance is achieved by both Rocha and Bo Bardi by visually accentuating the "other", or "those people (the poor) that the middle class fears most" (Williams 2009).

"I am architect, I break walls."

Deeply motivated by politics, the architecture of Lina Bo



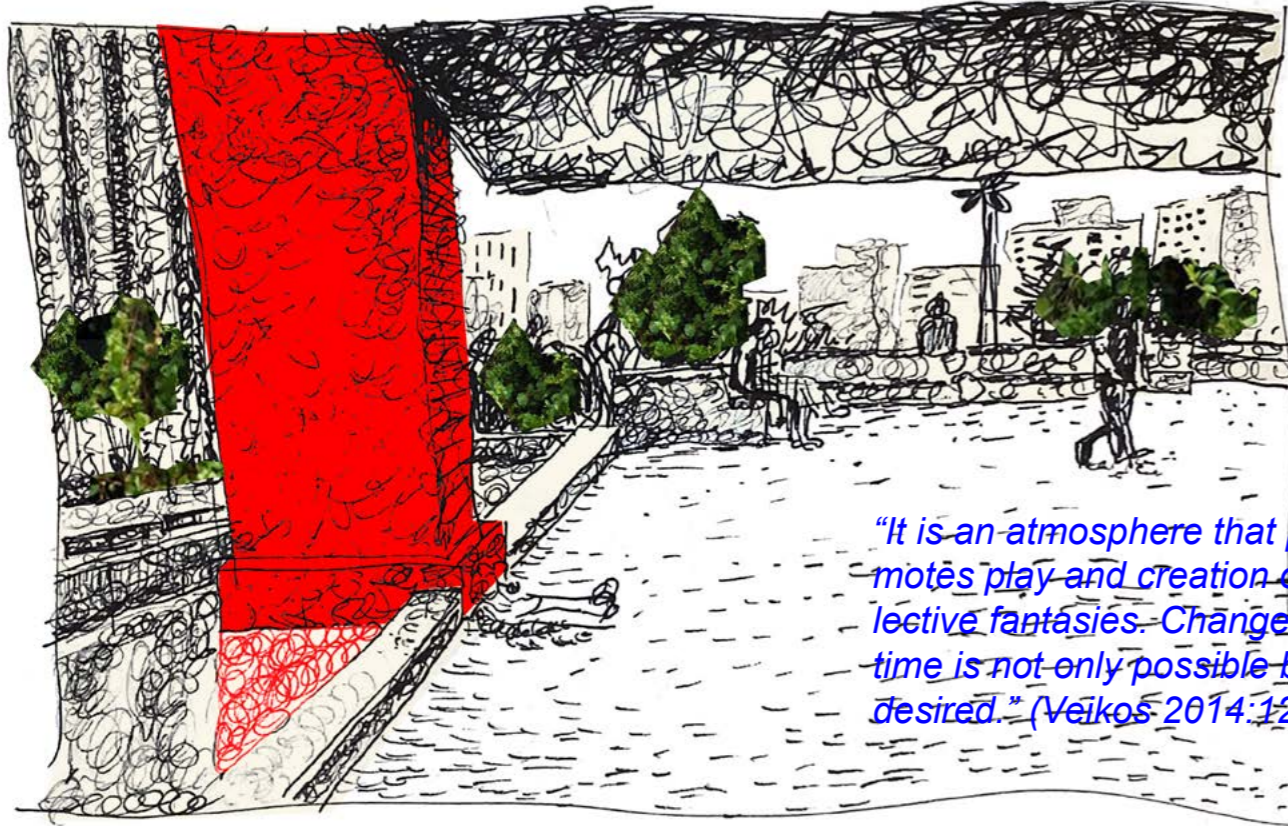
Architect:
Lina Bo Bardi

Selected Work:
Sesc Pompeia
1977, Sao Paulo
Teatro Oficina
1984, Sao Paulo
MASP
1968, Sao Paulo

Relevance:
Conceptual
Spatial
Material Articulation

Principles:
Architecture of resistance
"Not beauty, but freedom"
Architecture of scarcity
Architecture as landscape
Architecture as street

*“Not beauty, but freedom.”
(Bo Bardi 1992)*



“It is an atmosphere that promotes play and creation of collective fantasies. Change over time is not only possible but desired.” (Veikos 2014:126)

“Civilising architecture through the dignification of human life, through active participation in collective processes of artistic communication, of the collective management of knowledge, of the collective creation of a collective identity.”

Her work achieves this in various ways, beginning with her acknowledgement of the participatory nature of occupation. This is celebrated though affording design freedoms to inhabitants, both spatially through openness that encourages unanticipated event, and materially through unbarred and raw finishes, so that people may breath life into a building as opposed to merely consuming it as a commodity (Veikos 2014:126).



Figure 2.3.3: (left above) *Drawing of the MASP (Author 2021).*

Figure 2.3.4: (above) *Street entrance to the Teatro Oficina (Bujedo Aguirre).*

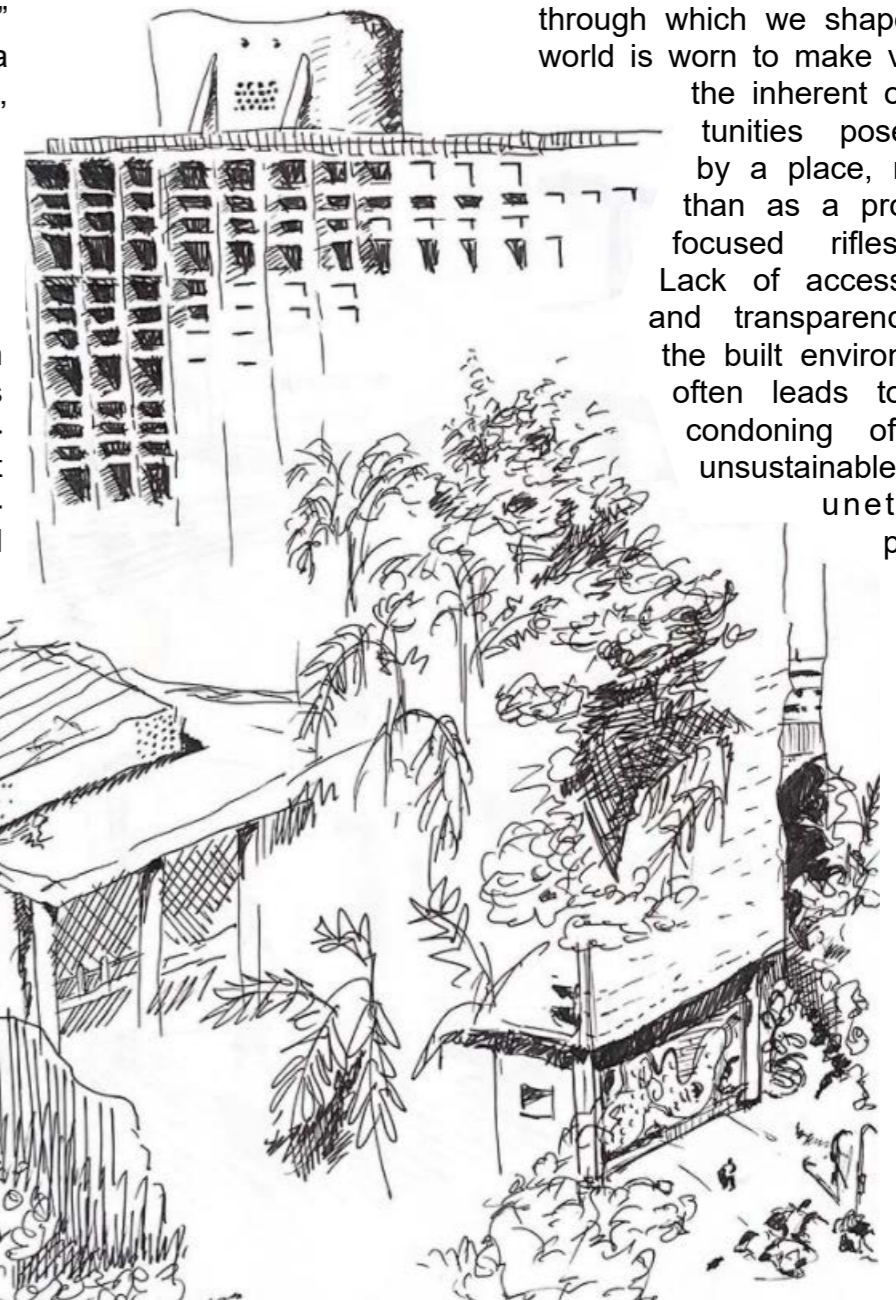
Figure 2.3.5: (right) *Sketch Explorations of various works of Lina Bo Bardi (Author 2019).*

It is perhaps her fixation with building as an extension of landscape which allowed the architecture to harness the potential of specificity of place. Expressed through her exposure and celebration of building structure and services, and visible marks of time (erosion, decay), Bo Bardi honours the inherent fragility of life and nature with respect to time and its many instruments - furthermore honouring nature as the primordial essence of “being” (Bader 2014:89, Veikos 2014:125). This also translates to the highly accessible, change-embracing public centred “domestic landscapes” created in the Sesc Pompeia (1977), Teatro Oficina (1984), and Museu de arte Sao Paulo (1968) (Veikos 2014).

Bo Bardi’s frame of reference included a favouring of the Italian vernacular, and precipitated a further appreciation of Brazilian vernacular. This is reflected in the spatial versatility, complexity, and almost ruin-like palimpsest encouraged by her brutalist material expression (Bader 2014:89).

*“Architecture must be key to the landscape, merge with the landscape, become the landscape itself.”
(Bo Bardi & Paganini 1940:40)*

There is much to learn from her limited but incredibly impactful built projects in terms of their ability to ultimately transform architecture from being a divisive “wall” or barrier, to a “street” that emancipates the “other”, on a physical and social level. This is why her work has become increasingly relevant, especially within the increasingly austere urban conditions materialising not only within post-colonial and post-conflict divided cities, but also within the traditionally developed world.



An increase in physical conditions of scarcity, fuelled by desire for the sanitised image of capital abundance, necessitates a deeper level of accountability within the built environment on a systemic level. This is specifically urgent with respect to its present role in accentuating the stigma of poverty and thus urban informality, by refusing to legitimize the face of what is ultimately a valid, age-old socio-economic condition.

Change becomes possible when the direction of hostility is shifted from the symptom to the root cause, and when the lense through which we shape our world is worn to make visible the inherent opportunities possessed by a place, rather than as a problem focused riflescope. Lack of accessibility and transparency in the built environment often leads to the condoning of the unsustainable and unethical practice.

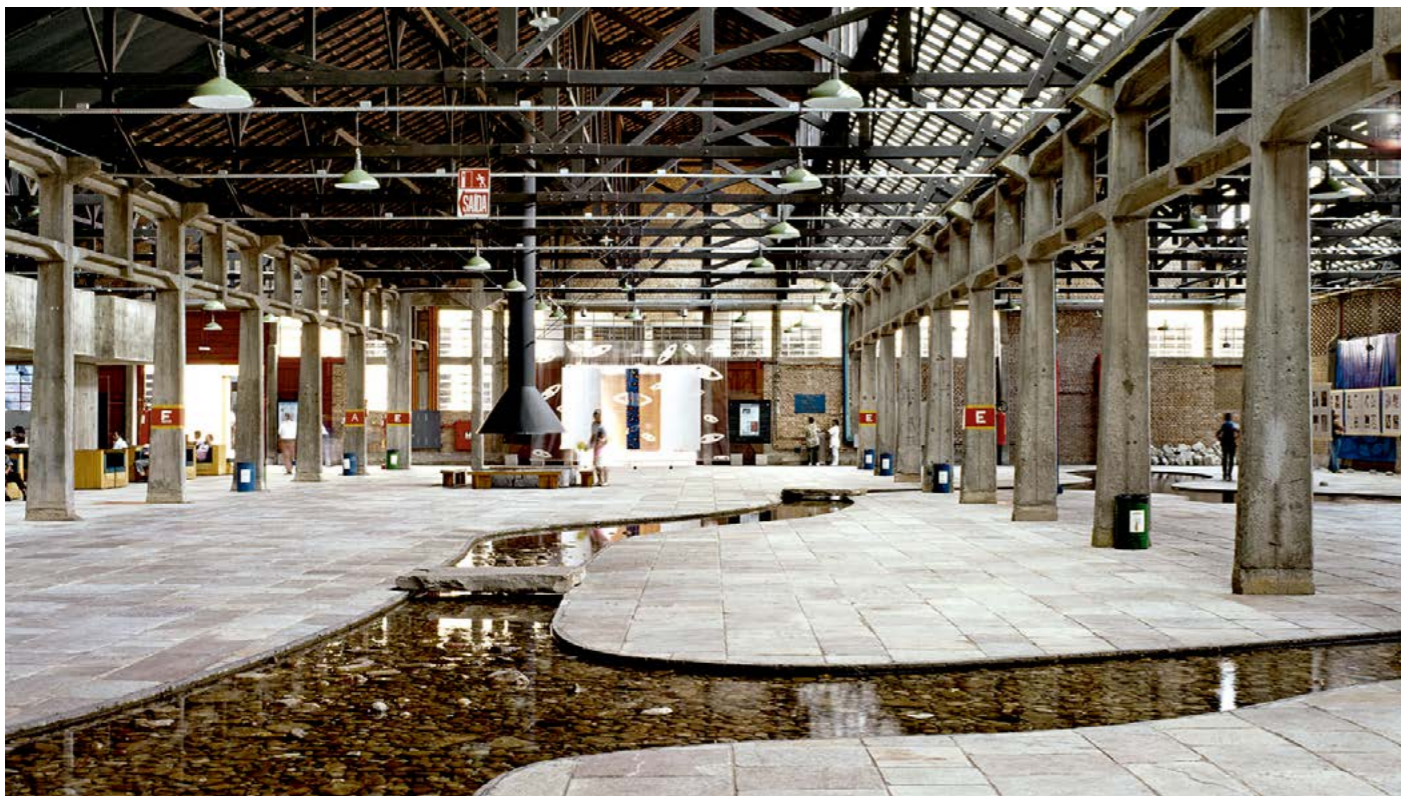
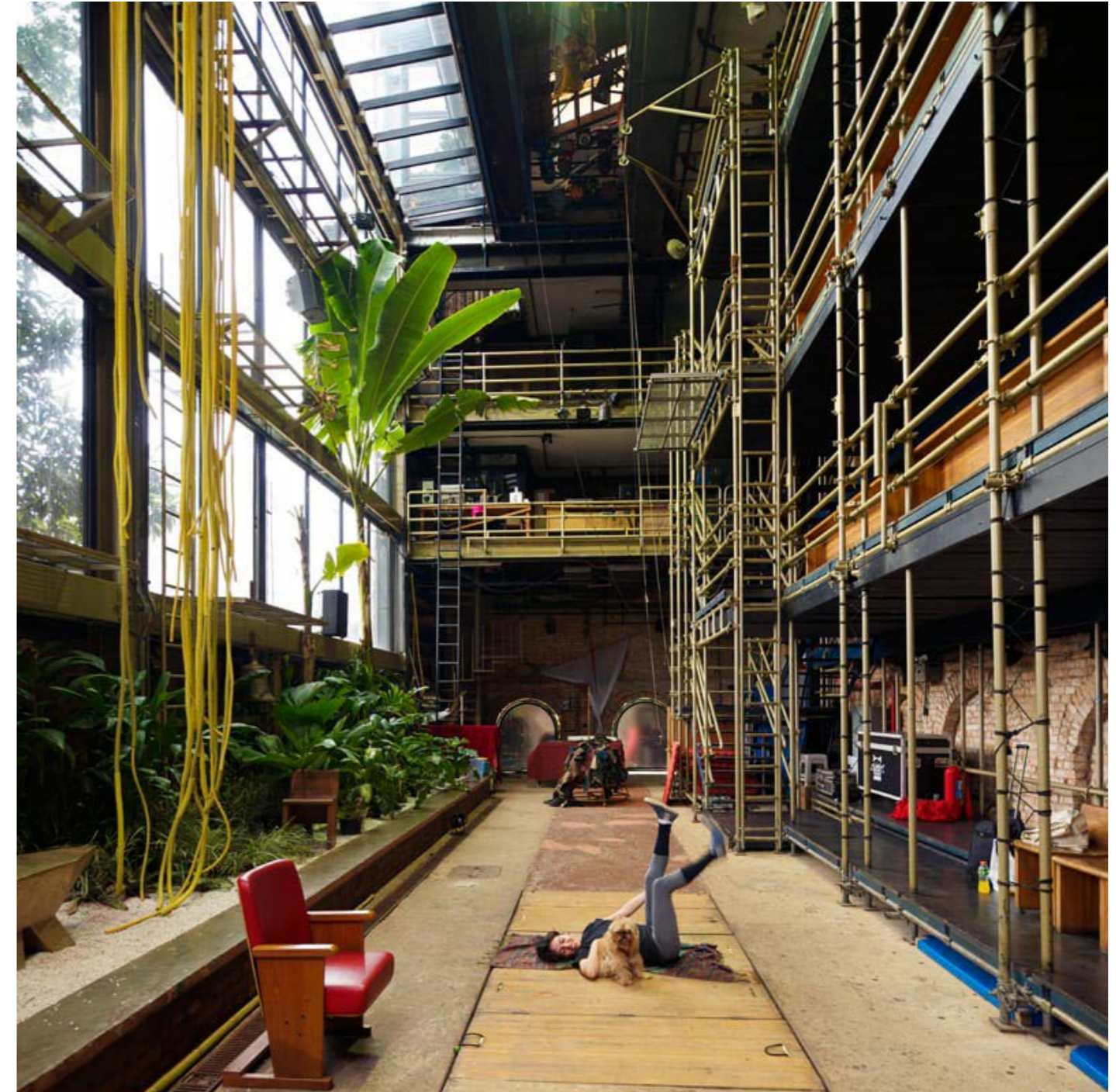


Figure 2.3.6: (left above) *Street condition at the Sesc Pompeia* (Bujedo Aguirre).

Figure 2.3.7: (left) *Interior public space at the Sesc Pompeia* (Bujedo Aguirre).

Figure 2.3.8: (above) *Teatro Oficina* (Bujedo Aguirre).

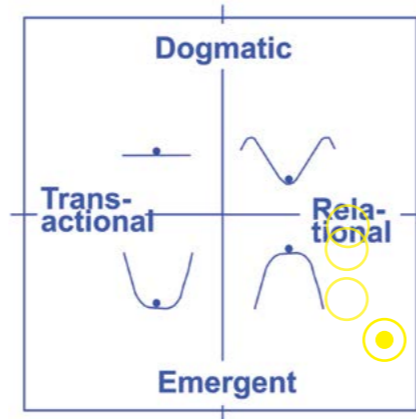
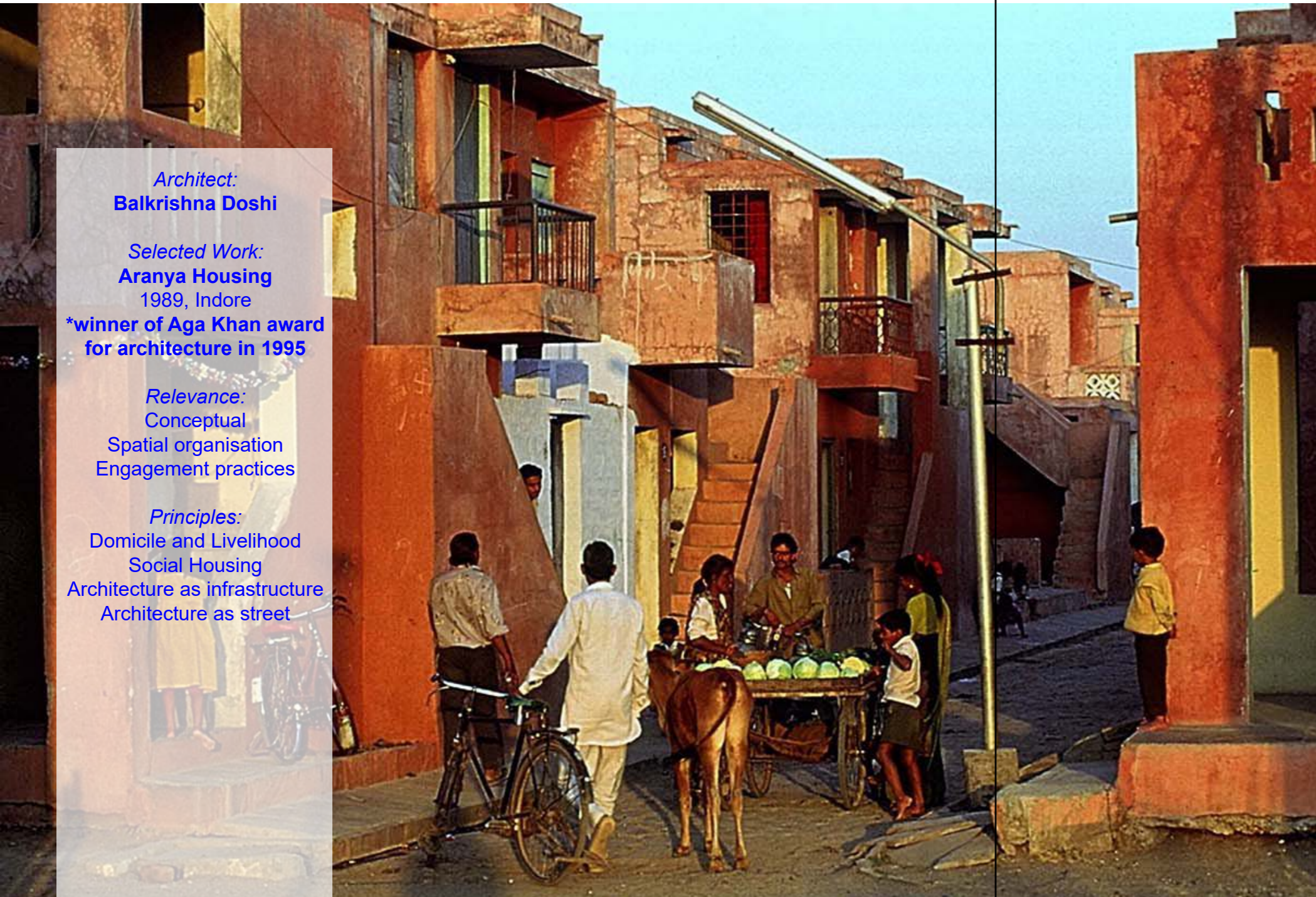
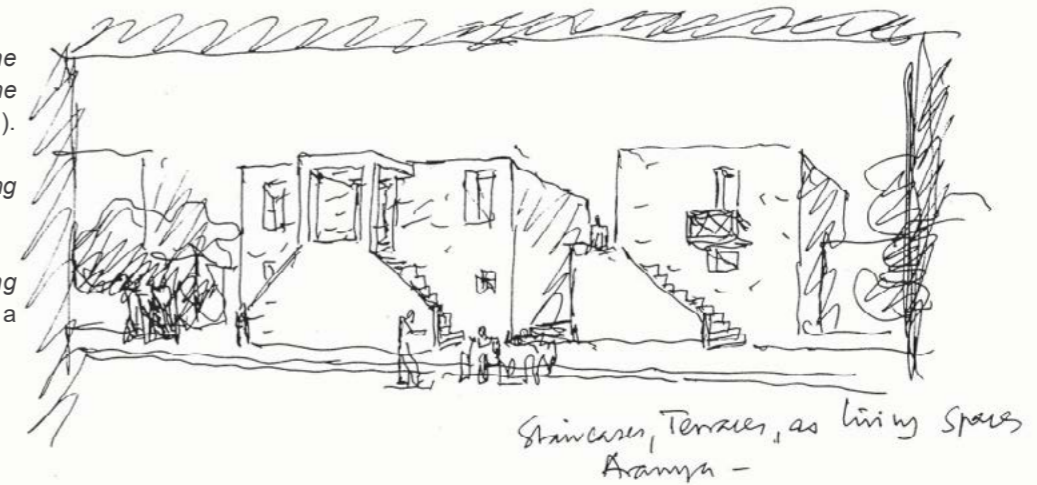


Figure 2.3.9: (left above) Locating the physical and socio-spatial context of the works of Balkrishna Doshi (Author 2021).

Figure 2.3.10: (left below) Aranya Housing in the 90's (SANGATH).

Figure 2.3.11: (Right) Aranya Housing conceptual sketch (Vastushilpa Foundation).



Architect:
Balkrishna Doshi

Selected Work:
Aranya Housing
1989, Indore
***winner of Aga Khan award for architecture in 1995**

Relevance:
Conceptual
Spatial organisation
Engagement practices

Principles:
Domicile and Livelihood
Social Housing
Architecture as infrastructure
Architecture as street

2.3.3. Creating domicile by providing the essentials of life: housing by Balkrishna Doshi

“Architects are on a pedestal, they aren't looking down, where there are a lot of clients.”

Faced with an omnipresent socio-spatial urban condition that does little to address the housing needs of the urban poor - and the rippled effect of urbanisation, overcrowding, slum-conditions, and ultimately the violation of the right to human dignity - the Aranya low-cost housing model, commissioned in 1983 by the Indore Development Authority, embodies the fruitful outcomes that follow when the very role of the architect and the inhabitant is questioned (Mollard 2019:121-122).

First, the space-making potential of the end-user is recognised, and the architect's role is shifted to comprise the planning of infrastructure, such as water, sewer, and electrical services, and street plots. This aligns somewhat with the protocol suggested in South Africa's Upgrading of Informal Set-

tlements Policy.

The second level of intervention is focussed on affording end-users the choice and agency over shaping their living spaces. This is done initially by divvying a kit of parts: different options or variations that can be applied to the plot in relation to service blocks at the back end. Circulation (including vertical circulation) is concentrated on the street, creating a complex, activated threshold that both sets the stage for outward living, and provides the opportunity to observe from more semi-public and private boundary elements, such as balconies, windows, and stairs. The street becomes the extension of the home, transcending the physical boundary of its walls (Mollard 2019:121).

The third level of intervention is the untapped potential for expansion, which is purposefully yielded from the architect to the individual end-user, and provokes opportunity for livelihood within the neighbourhood realm. This expands the function of housing from a device of shelter which provides “crucial privacies”, to a place of resilience and cooperative community growth and development.

As a complete scheme, the resulting spaces are designed for and centred around public life, acknowledging the social structures that exist at the core of domicile. The right to shelter and human dignity is satisfied, alongside other “essentials of life” such as Shops, Cafe’s and businesses. Both architect and end-user become connected to the act of building, and thus, the articulation of the boundary; with it, the power to foster inclusive private and public realms.

“That means borders that are diffuse. What you need to find is how to create not separations but buffer zones, places where there is room for variation.”

The street, the courtyard, and the activated buffer/threshold have proven to be timeless elements of the architect and inhabitant’s syntax of design, transcending cultures and socio-economic strata. This makes them excellent elements for integration, and this is utilized by Doshi in the planning of Aranya, where housing typologies allow for households from different socio-economic backgrounds to be accommodated alongside one another, as both stranger and neighbour.

These same elements are demonstrated with great success in Plastic View, and although present in Moreleta Park’s gated communities, are largely underutilised, and hin-

dered by more transactional attitudes towards placemaking. There lies the opportunity to explore this potential with respect to gated community typologies, to better leverage the nuanced potential possessed by the boundary, for integration.

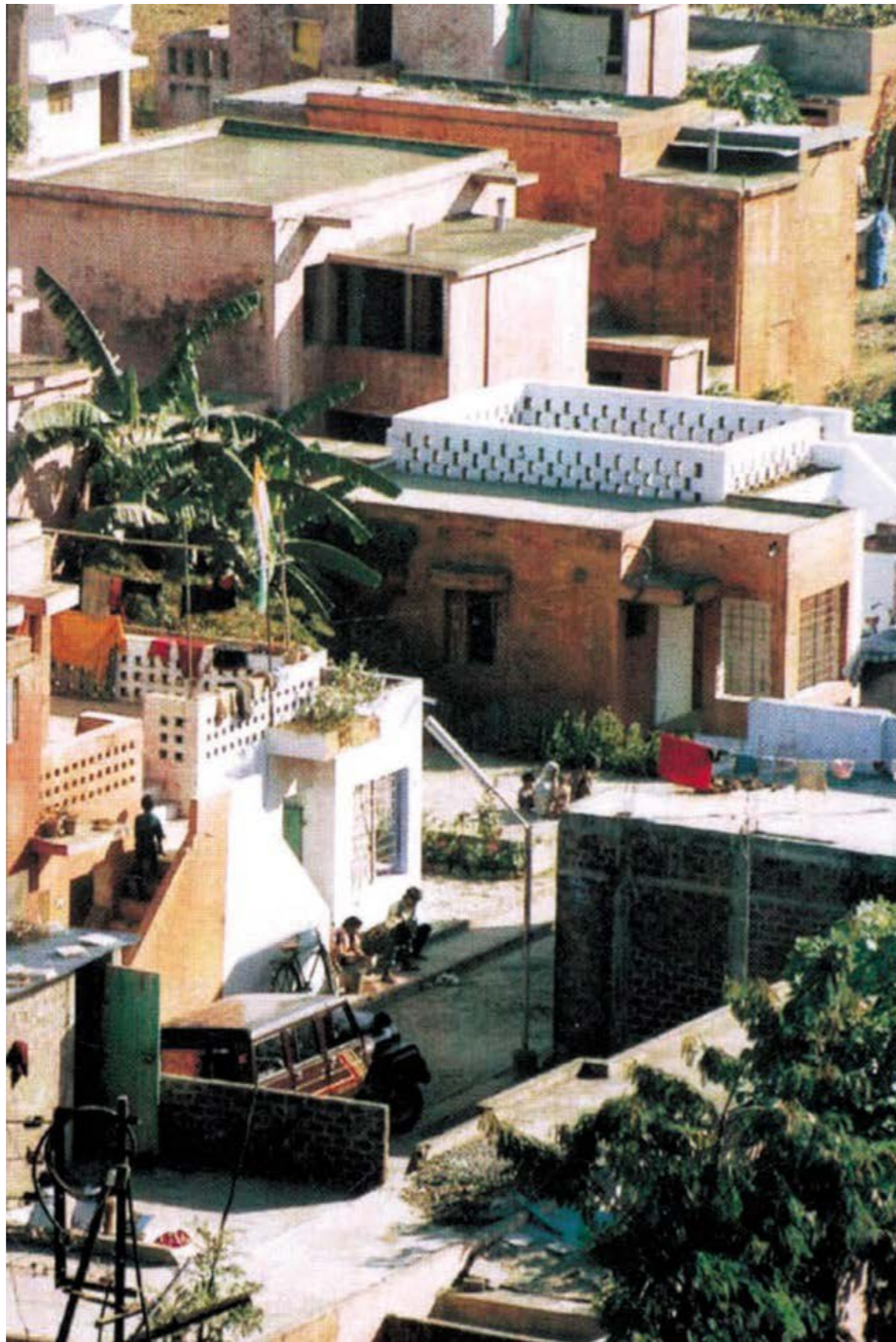
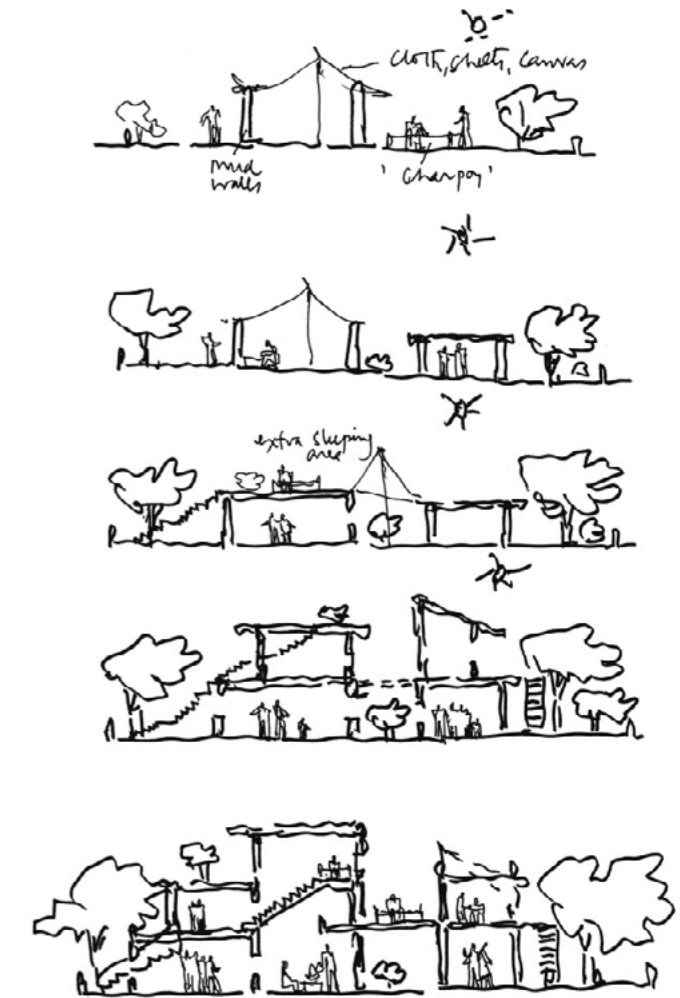
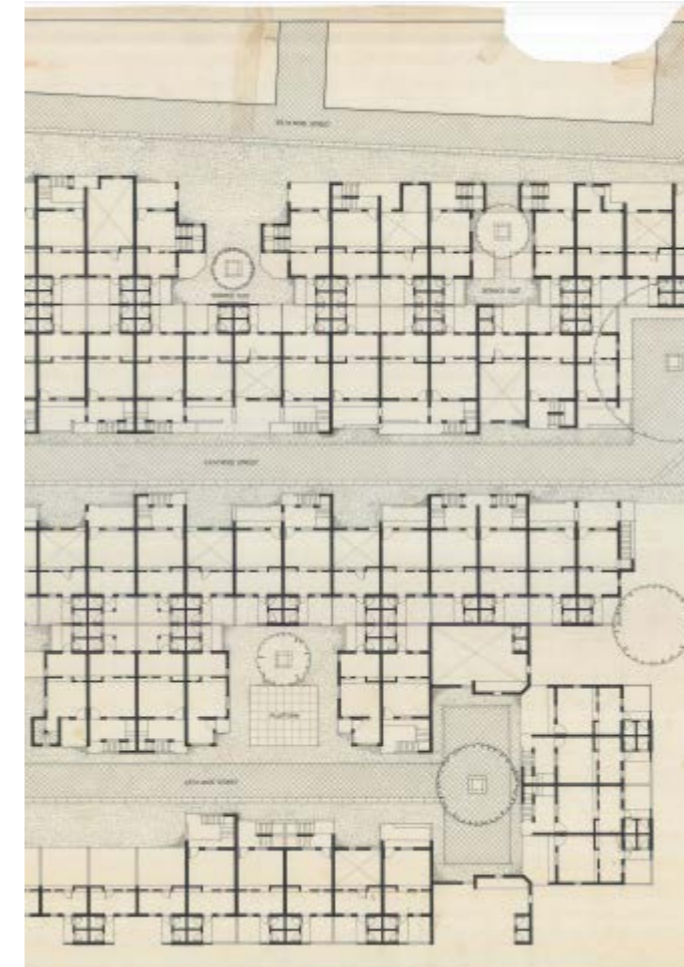
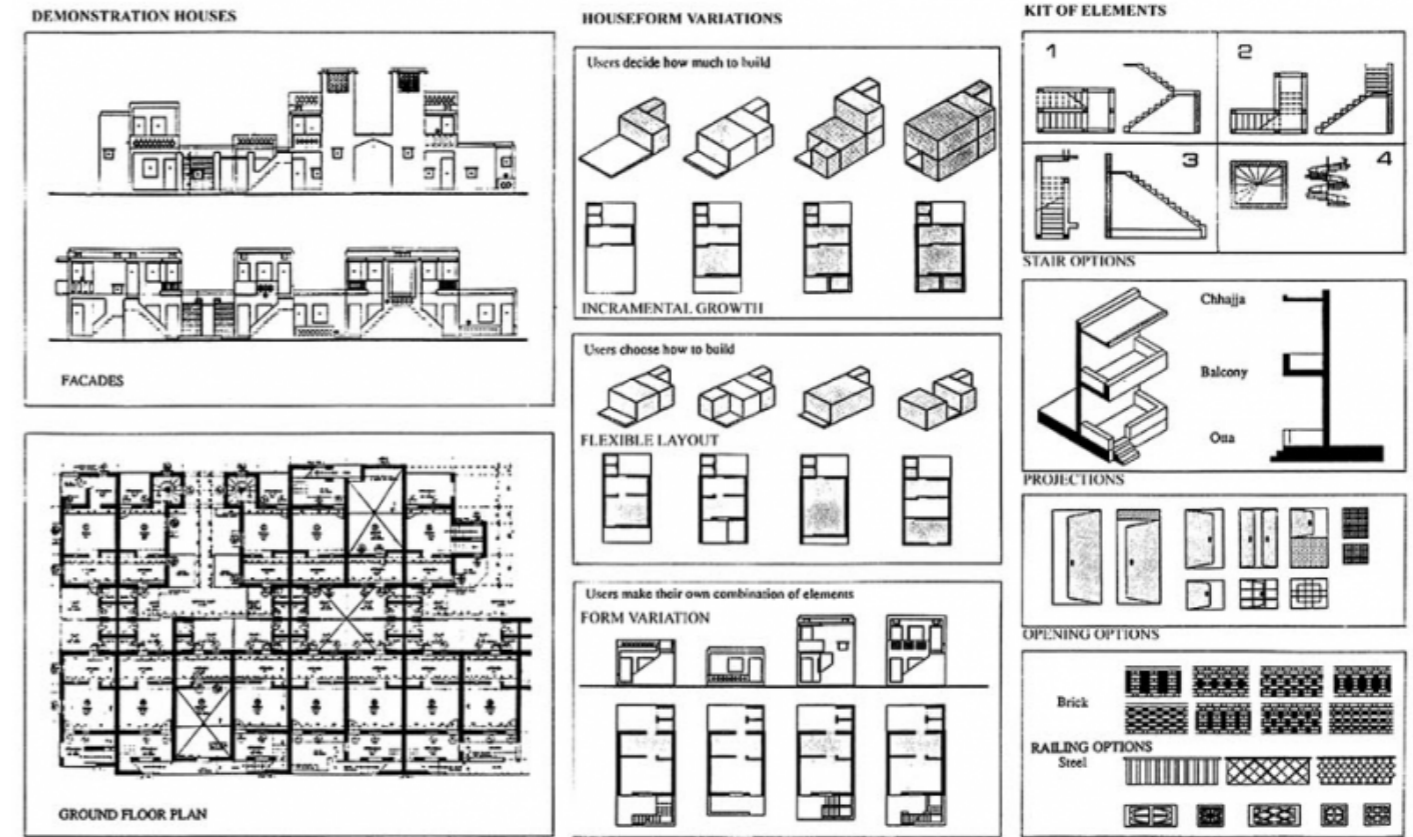


Figure 2.3.12: (below) *Photograph of Aranya from a rooftop in the early 90’s* (Vastushilpa Foundation).

Figure 2.3.13: (right above) *Aranya Housing kit of parts* (Vastushilpa Foundation).

Figure 2.3.14: (right below) *Aranya Housing base-plan* (Vastushilpa Foundation).

Figure 2.3.15: (far right below) *Aranya Housing conceptual sketch* (Vastushilpa Foundation).



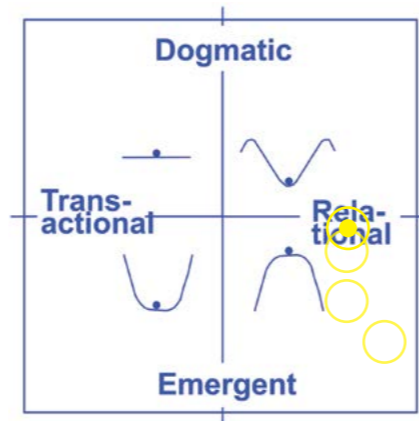
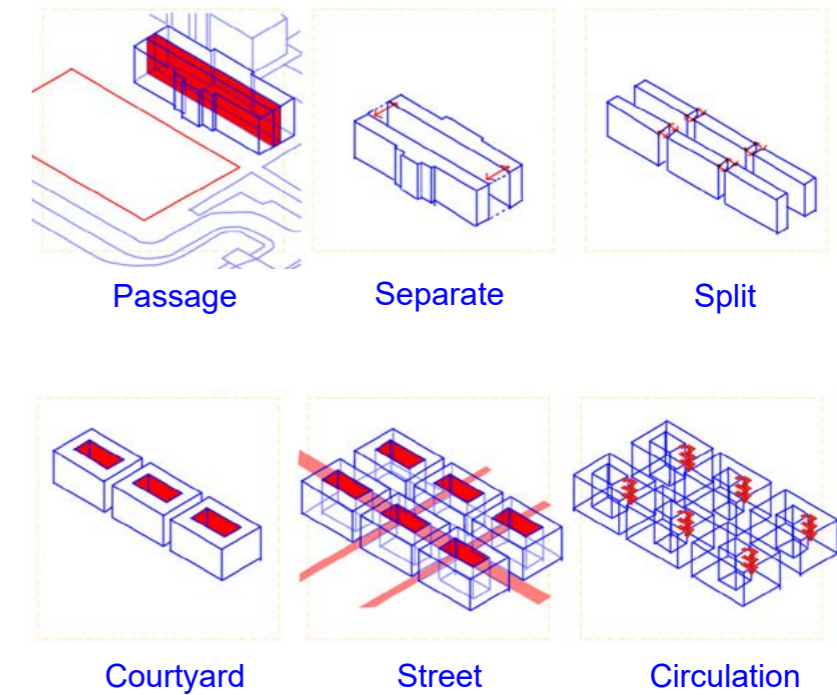


Figure 2.3.16: (left above) *Locating the physical and socio-spatial context of the works of Cohen and Garson Architects* (Author 2021).

Figure 2.3.17: (left below) *Courtyard at UMP Student Residences* (Cohen and Garson Architects).

Figure 2.3.18: (Right) *UMP Student Housing design principles* (Author 2021, after Cohen and Garson Architects).



2.3.4. Shared spaces as a tool for hyper-optimisation: lessons on spatial organisation from the work of Cohen and Garson Architects

Two differently scaled residential projects by Cohen and Garson Architects benefit from fuller micro-urban semi-private spaces through cluster typologies. In both cases, these in-between spaces were programmed either as “calm moments”, social gathering spaces, and pedestrian streets. In addition to achieving the benefits of providing what Bo Bardi would refer to as “public living rooms”, these in-between spaces are curated to suit Mbombela’s hot climate, and Johannesburg’s slightly milder climate.

sist in promoting cross-ventilation, outdoor shading, and street-level permeability - all contributing to a healthy live-learn domicile for students. Whilst the services, circulation, and organisation of the structure is not conceived as needing to accommodate change or appropriation, the private bedroom units specially plug into shared service amenities such as bathrooms and kitchens. This spatial configuration defines varying hierarchies of association. Each of the five residential blocks consist of two shared living clusters per building level, with the spaces between private bedrooms and shared amenities connecting to vertical circulation and courtyard spaces - elongating and grading the threshold between most public and most private.

Courtyards and external circulation in the University of Mpumalanga’s student residences have proven to as-



Architect:
Cohen and Garson Architects

Selected Work:
UMP Student Residence
2014, Mbombela
Seven Houses
2008, Johannesburg

Relevance:
Hyperoptimisation
Spatial organisation
Material Articulation

Principles:
Community clusters
Courtyard typology
Shared spaces
Architecture as street

In the case of Seven Houses, these ideas are expressed most convincingly through a common, shared, access street - overlooked on either side by the individual family homes that form this smaller, client-initiated community cluster. A simple yet impactful spatial gesture demonstrated in this scheme is use of the traditional row-house typology to create two different shared spaces, the street through the middle and a shared backyard on either side, that are spilled into through the front and back facing facades respectively. In addition to these shared outdoor spaces, intermittent courtyards and roof terraces within each sectional title provides more private outdoor living rooms.

Situated within a well-established suburb of Parkview, an existing house was demolished and one acre (4000sqm) worth of land was divided into the shared street and yard portions, as well as into seven sectional title portions of 725sqm each (five full-sized and two half-sized). Whilst reflecting the same enclaved quality of other gated communities and complexes - this scheme is successful in mitigating the deficit of capabilities for livelihood integration, faced by traditional gated community complexes. This is due to its scale, grain, density, typology footprint, and high level of engagement from the homeowners throughout the process.

Of larger interest, however, is the notion of gradual densification and hyperoptimisation of traditional suburban plots, both previously developed and

for future development, to accommodate and integrate a more diverse community of urban dwellers within well located upmarket areas. In the case of Moreleta Park, the architecture of plastic view, despite displaying slum conditions, provide contextual testaments to the value that shared street and courtyard spill-out spaces poses on a social and pragmatic level.

The average single plot size of existing erven in Woodlands Lifestyle Estate is roughly 1000m² with an average legal area of 800m² - and typically consists of a single dwelling that houses a family of four (MPIP 2020a). When the same erf area is superimposed onto Plastic View - the approximately nine dwellings, as well as three streets, and small courtyard spaces, are covered, accommodating a wider variety of programme and functions related to livelihood.

Whilst the principles governing the Seven Houses scheme provides scope for a middle ground, and the potential to mediate different housing needs in the rapidly urbanising future city - there exists a lack of opportunity for permeability and integration into the outside neighbourhood. There is value in further exploring the potential of what is usually treated as a defensive property boundary wall - to that it becomes a meaningful space and threshold where there exists the opportunity for social, political, economic, and spatial negotiation.

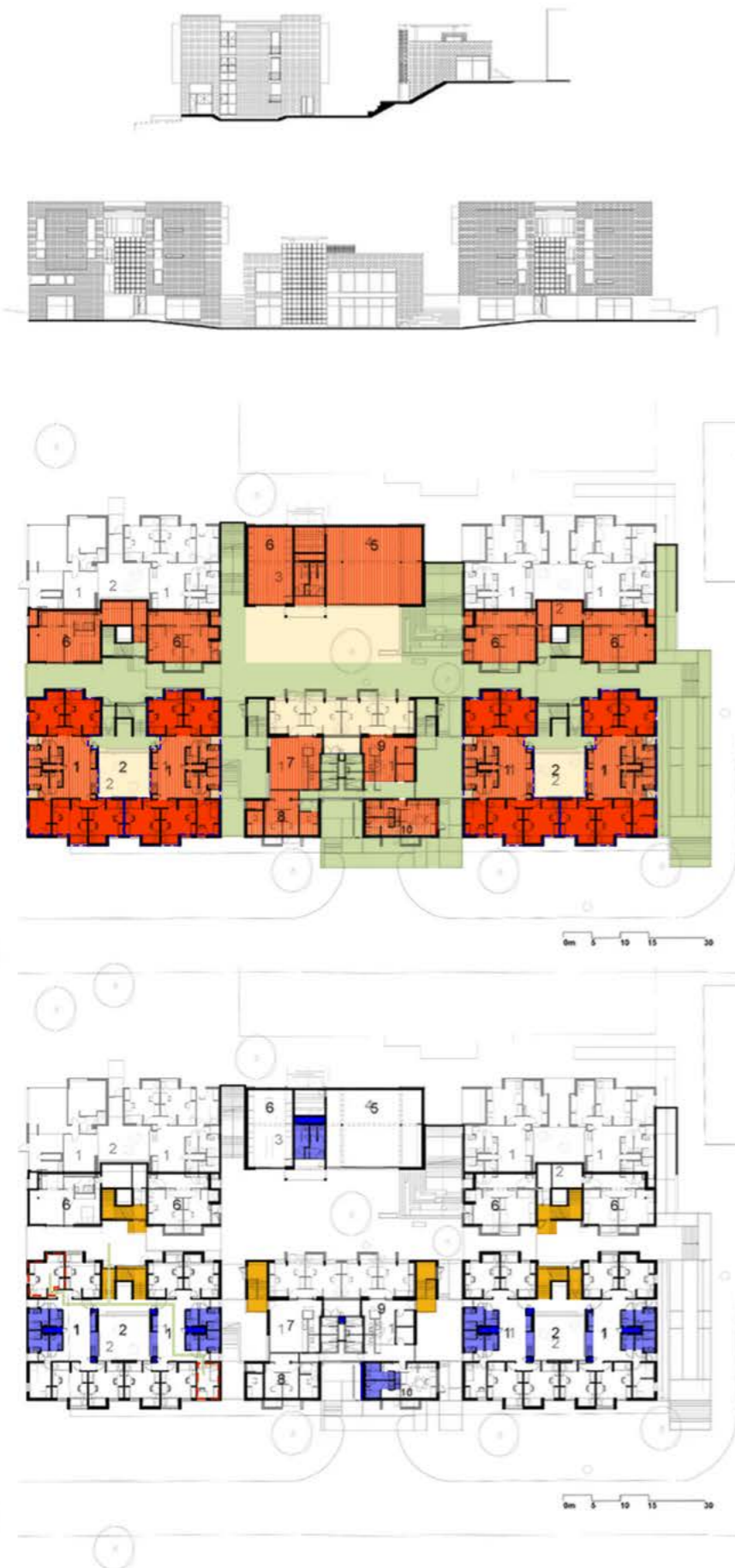


Figure 2.3.19: (left above) *UMP Student Residence elevations* (Cohen and Garson Architects).

Figure 2.3.20: (left middle) *ground floor plan* (Cohen and Garson Architects) indicating organization of private, semi-private, circulation, and courtyard spaces (Author 2021).

Figure 2.3.21: (left below) *ground floor plan* (Cohen and Garson Architects) indicating vertical circulation and service spaces (Author 2021).

Figure 2.3.22: (far above) *Seven Houses* (Cohen and Garson Architects).

Figure 2.3.23: (above) *Seven Houses plan* (Cohen and Garson Architects) indicating organization of private, semi-private, circulation, and courtyard spaces (Author 2021).

Figure 2.3.24: (immediate left) *Comparative study of an 800m² portion of land in Woodlands Lifestyle Estate and Plastic View, indicating organization of private, semi-private, circulation, and courtyard spaces* (Author 2021).

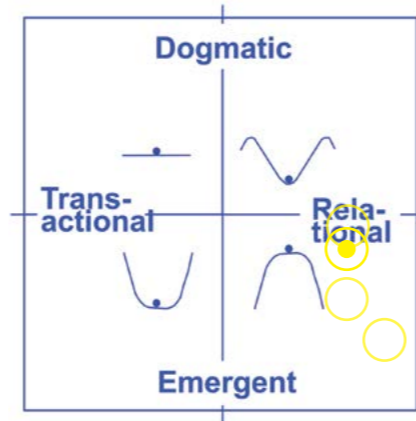


Figure 2.3.25: (left above) *Locating the physical and socio-spatial context of the works of Peter Barber* (Author 2021).

Figure 2.3.26: (left below) *Upton Village Proposal sketch* (Peter Barber).



Architect:
Peter Barber

Selected Work:
Ilchester Road
2018, Barking (London)

Relevance:
Conceptual
Spatial
Council housing
Material Articulation

Principles:
Security of Tenure
Palimpsest
Mixed tenure
Courtyard typology
Architecture as street

2.3.5. A return to the relational: translation of spatial intent to material expression in the work of Peter Barber

Between the 1860's and 1940's, following the industrial revolution and two world wars, and the subsequent urbanisation and infrastructure damage - a necessary boom in provision of council housing in London occurred to fill a growing housing gap. Regrettably, this saw the demolition of many old areas of the city by the 1950's, in favour of large multi-storey modernist apartment blocks, enclosed by boundary gates and parking lots (Cordell 2019:99-103). Severing decades of community and social structures that were entwined in the courtyards and streets of densely populated traditional back-to-back, terraced row-houses - government's fixation on clearing areas deemed as "slums" proves once again to be a misguided gesture towards the simulacra of efficiency.

In many of the more favourable cases, a process of "municipalisation" was undertaken, retaining the integrity of existing neighbourhood morphologies

- by buying up private flats, upgrading their infrastructure to suit the needs of a growing population and rapidly changing technology, and providing residents "secure council tenancies" (Cordell 2019:101). The success of this approach serves as both guidance and testimony to the potential of South Africa's under-utilised Upgrading of Informal Settlement Policy.

The subsequent success enjoyed by the residents of municipalised neighbourhoods, was proven inconsequential through the lens of Margaret Thatcher's anti-poor Neoliberal agenda in the 1980's and the architecture which followed, prophetic of the lingering socio-spatial transactionality that exists globally today.

Much of what makes the housing of architect-urbanist Peter Barber so significant is his utter rejection of architecture's neoliberal affiliation, and his favourable consideration of those left vulnerable by current socio-economic structures. In lieu of the sprawling image-fixed, profit-driven housing market (presented much in the likeness of Moreleta Park's formal architecture) - Barber stresses the importance of "old

buildings”, such as the traditional terraced housing (still deemed as slums by government). Old buildings are crucial to the functioning of cities, as well as possess the crucial patterns and qualities necessary for designing better “new buildings” (Barber 2021) - the latter being most relevant for any intervention in Moreleta Park.

“Asked for a solution that can be scaled up in the face of a housing market that prioritises profit over housing needs, Barber’s answer is that the problem is, once again, a political issue, and not one about design. ‘Some people might say the ending of private property. We have to do something pretty radical don’t we?’” (Cordell 2019:107)

Consistent with the work of Bo Bardi, Doshi, and Cohen and Garson Architects - the main considerations and “building-blocks” for space making are the street, courtyard, security of tenure, and mixed tenure. Visible in one of the firm’s more simple yet activity-catalysing architectural response - a council housing project on Ilchester Road in Barking, London - the application of such architectural syntax results in a materially-humane and everyday-celebratory architecture. Furthermore, perhaps it is Barber’s attention to the finer, tangible surfaces that dwellers interact with most intimately, and the leveraging of each material’s visual and tactile potential, that sets these projects apart from their less humane counterparts.

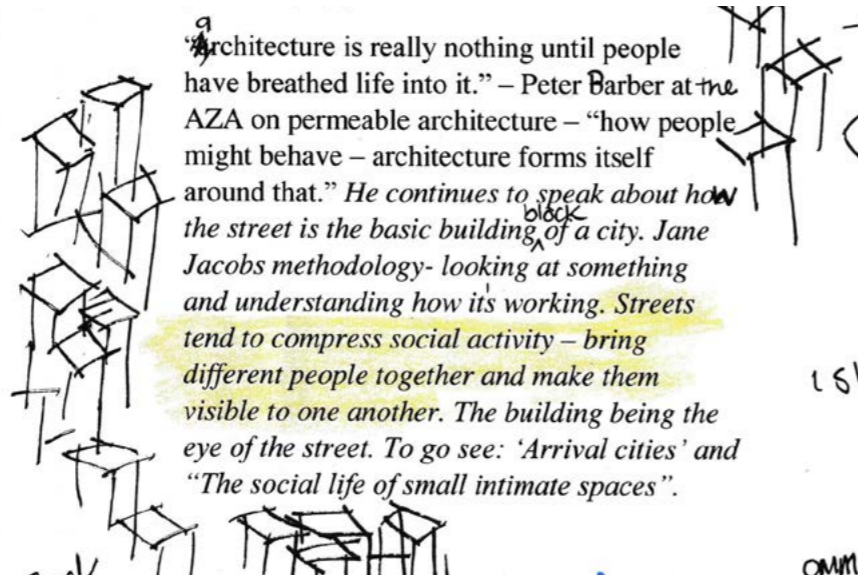
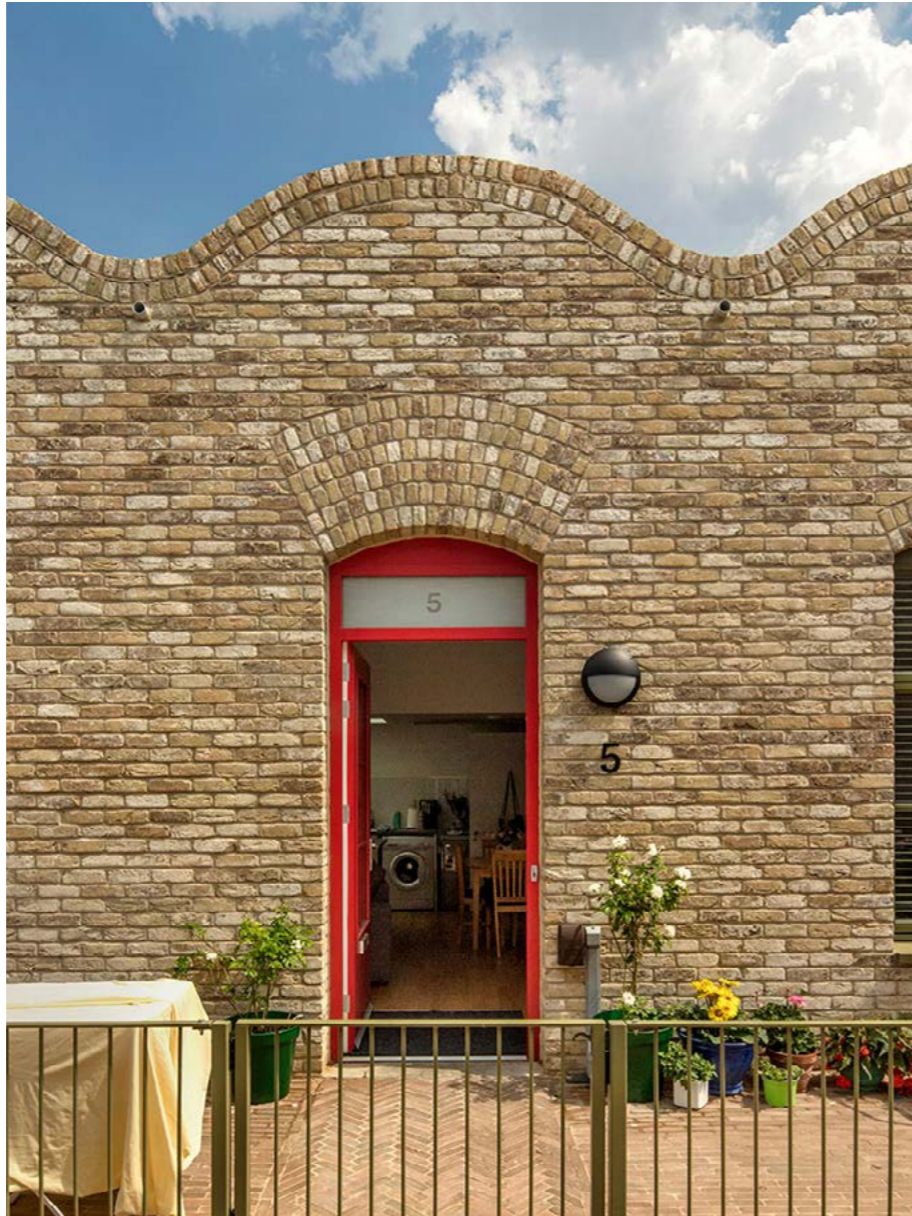
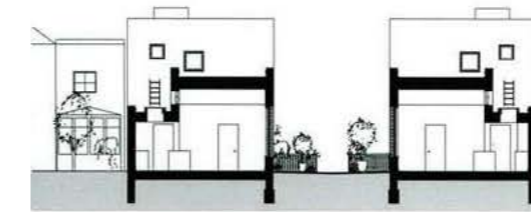


Figure 2.3.27: (left above) Excerpt from notes taken on Peter Barber (Author 2018).

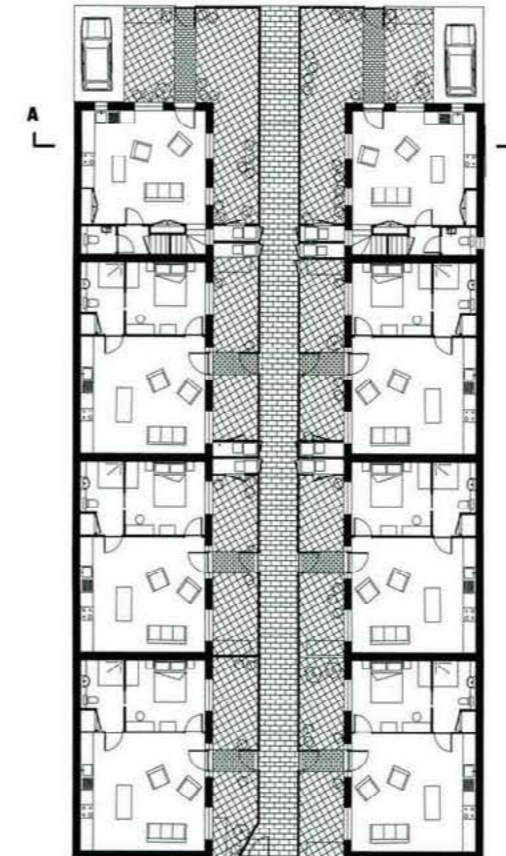
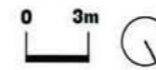
Figure 2.3.28: (left below) Entrance to council home in Ilchester road (Peter Barber).

Figure 2.3.29: (lbelow) Section and plan of Ilchester road project (Peter Barber).

Figure 2.3.30: (right) Ilchester road project, view from street (Peter Barber).



section AA



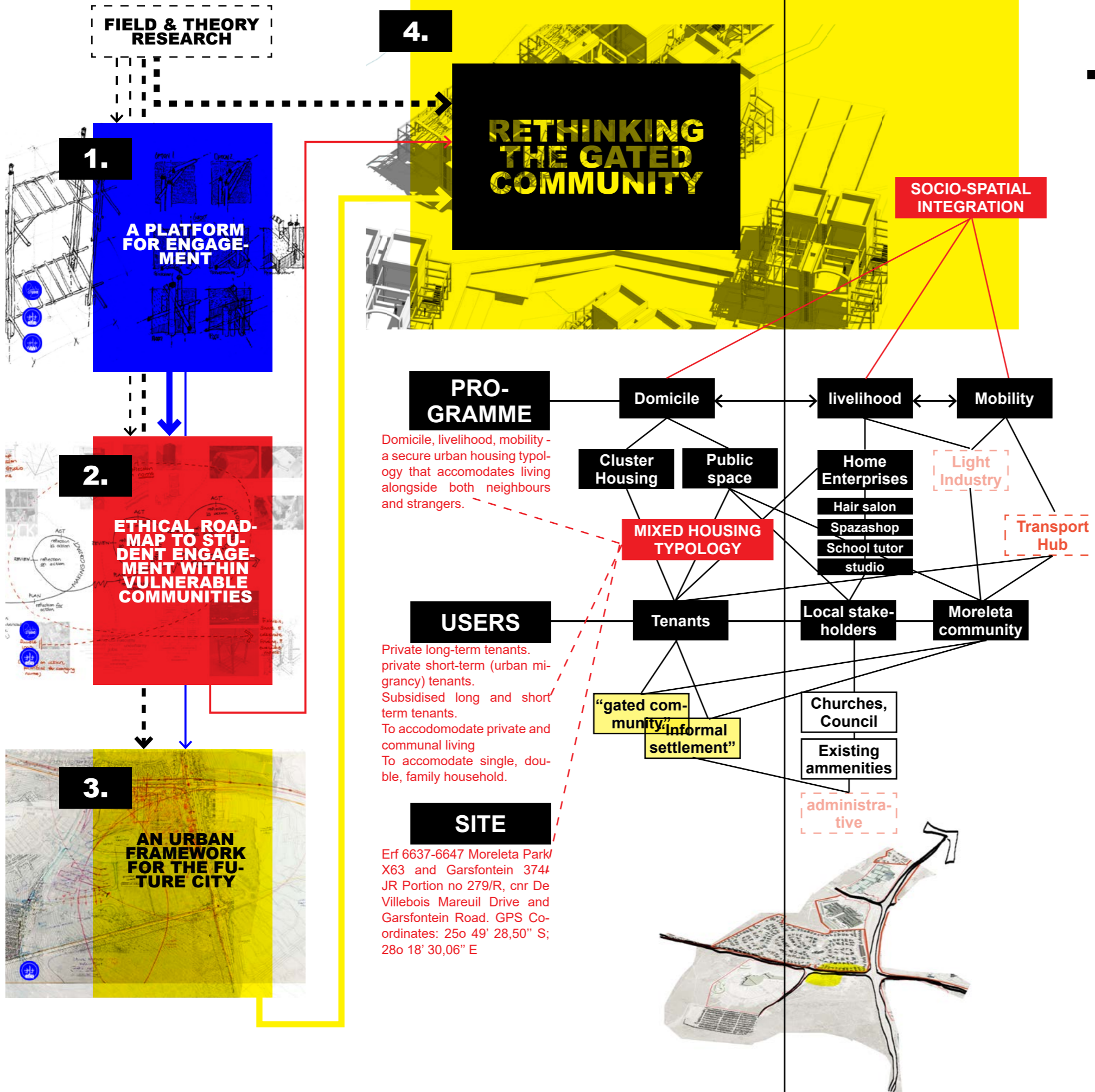
ground floor plan





Figure 2.3.31: (right) *Ilchester road project*, view towards street (Peter Barber).

2.4. THE ARCHITECTURAL OPPORTUNITY



The findings from the participatory action research process outlined in the previous chapter have manifested in three major outputs to be graphically summarised within essay 2:

- 1. A Platform for engagement** in the form of a live-build prototype exercise, completed in collaboration with the 2021 honours students.
- 2. An ethical roadmap to student engagement within vulnerable communities** - serving as the main output of the Reality studio for Lina Zachrisson and Julina Linqvist from the Chalmers University of Technology.
- 3. An Urban Framework for the future city**, completed in collaboration with Delani Kriek and Chris De Bruin, who are within my studio and share the same case study area.

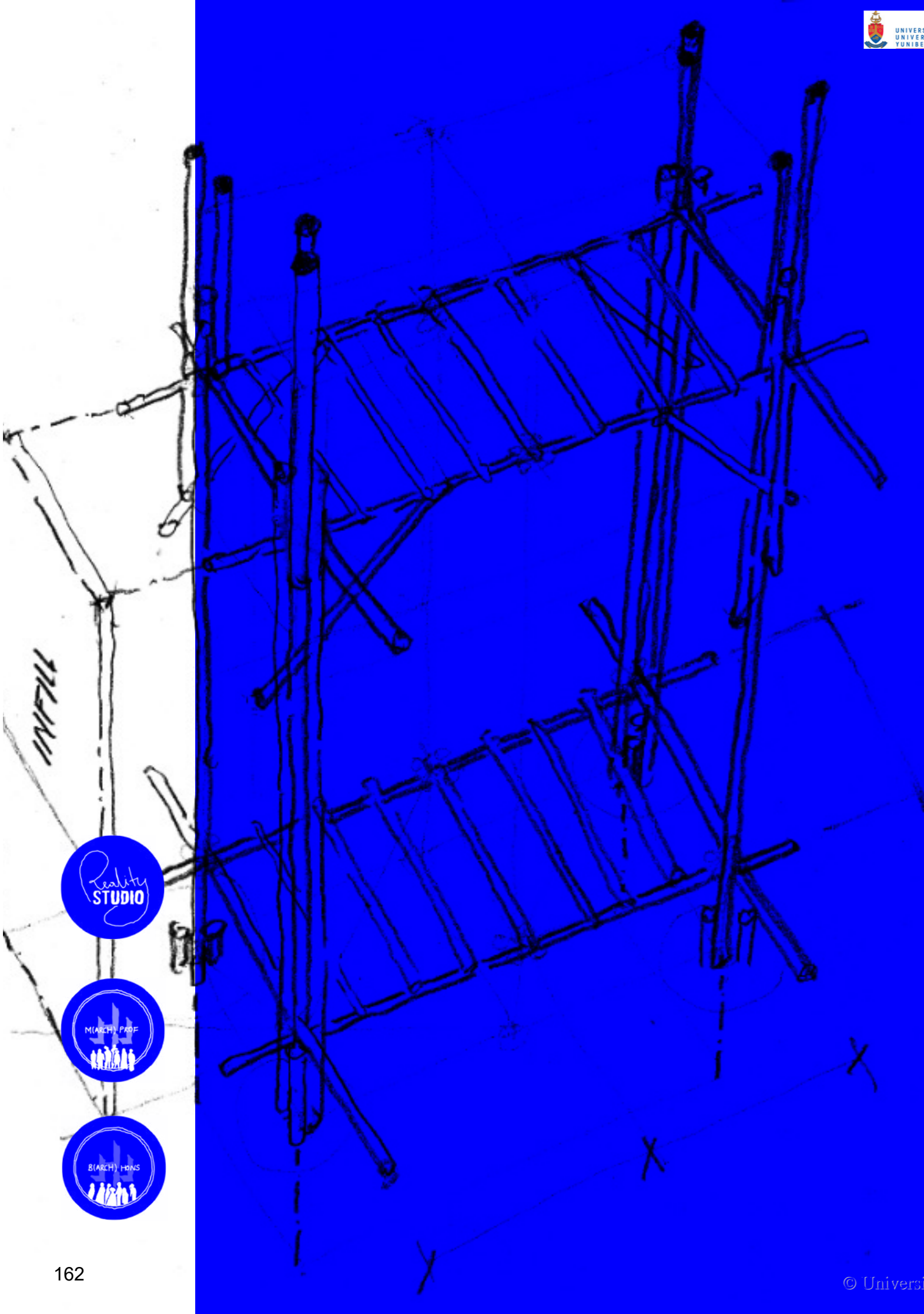
These each stand as their own architectural outcomes, achieved through a co-authored, design-lead research process. In the context of this project, whereby the the fourth, most important outcome (the eventual individual process towards designed building response) becomes a response to a particular research question - the three preceding outputs

act as informants alongside the initial mapping process. In this way, the "co-design" aspect is not the direct means of spatial enquiry for this dissertation outcome - but rather an preceding process that yields the necessary knowledge and insight that will allow a more authentic architectural response.

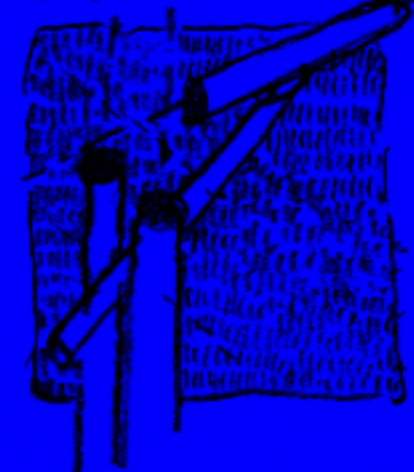
This was proven particularly helpful as the engagement precipitated a better understanding of the needs of Moreleta park residents - ultimately informing the programme and influencing the choice of site.

On an ethical level, it was important to step away from site engagement once the direction of the project output resulted in only one-sided, and not mutual, benefit (only the student-architect and their hyperthetical project is benefitted).

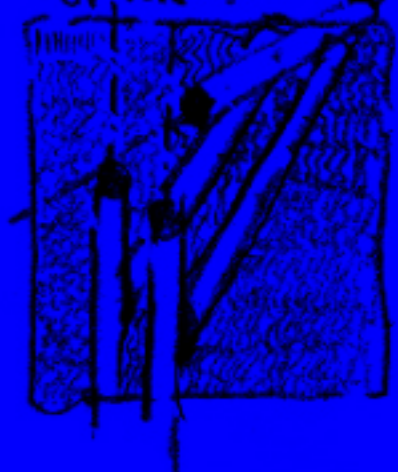
Thus, before proceeding to the project-specific design process outlined in essay 3, this essay is concluded with the backdrop of the three relevant group outputs.



OPTION 1



OPTION 2



TEMPORARY



BUDGET



TRANSITIONAL



PERMANENT

FLOOR



ROOF

A PLATFORM FOR ENGAGEMENT



LIVE BUILD

AWARENESS?

JCP? → live build → Guide Book developed by (Pilot) us

DATA SAYS NO → for JCP

UISP
↳ MAINLY FOR SA CITIZENS

↳ LETTING?
↳ MOVE? XENOPHOBIA

PRINCIPLES

- materials
- DFD
- Must respond to needs → small changes?

MATERIALS
↳ source on site

SCALE → 1:1 of small component

IDEAS

- Double stoney
- ↳ frame
- ↳ observe
- ↳ Ja Nkoro

OPTION 2

1 code sign
2 const.
3 Reflection

How
MP&L

LIVE BUILD

↳ Mirror

↳ ON SITE
↳ Platform of engagement

↳ external

↳ external

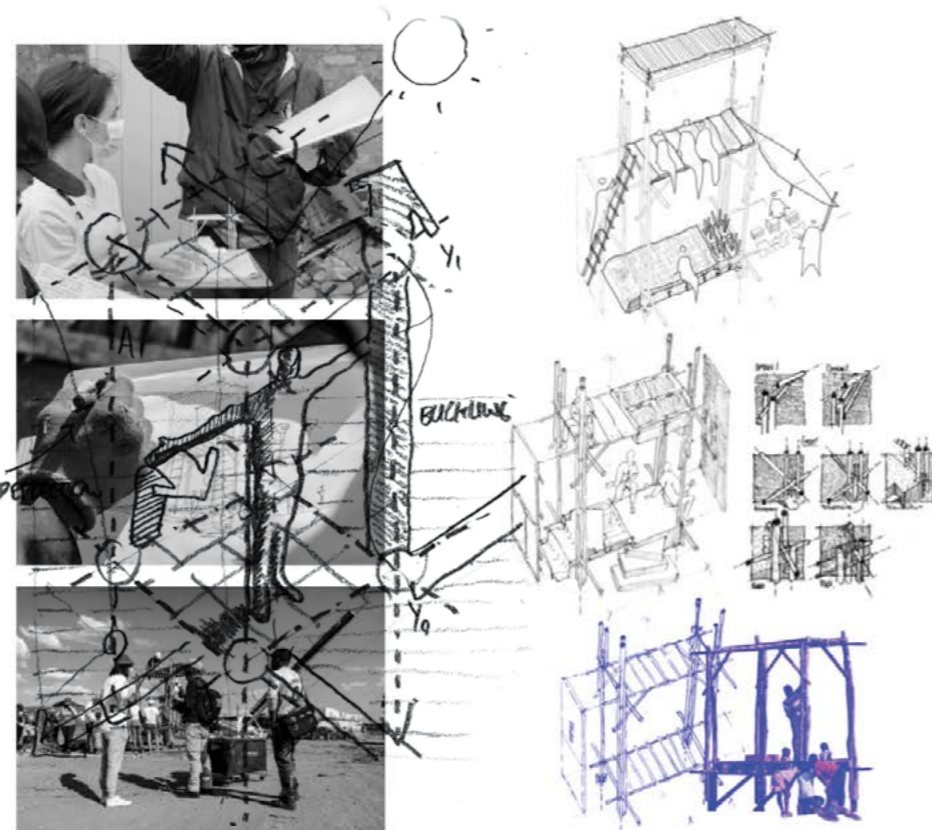
GAPS

- skills?
- co-design? } community members
- Needs assessment

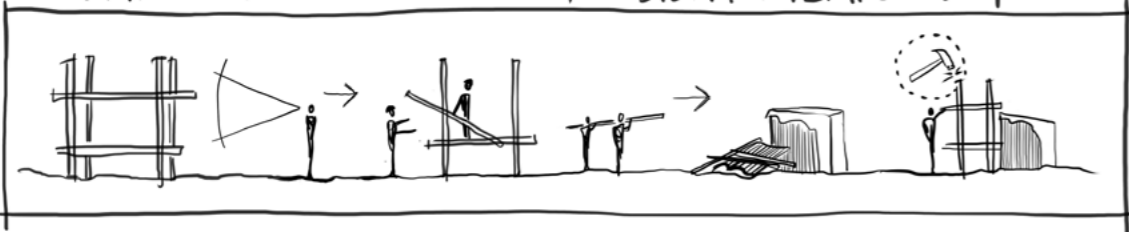
1. DESIGN RESPONSE

2. ENABLE DIALOGUE

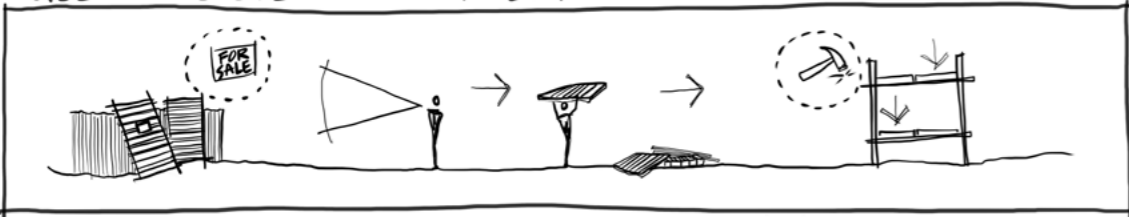
3. SUPPORT AGENCY



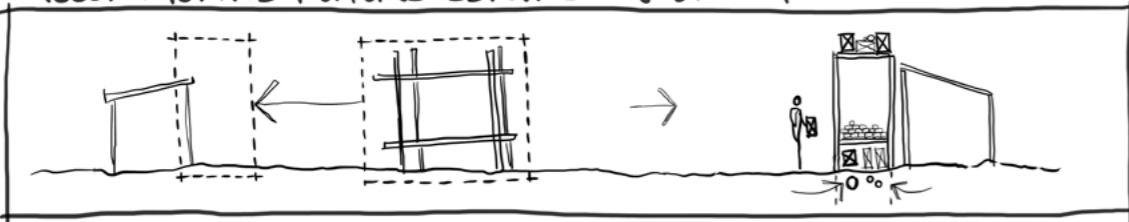
DESIGNED FOR DECONSTRUCTION, MOBILITY & TEMPORALITY



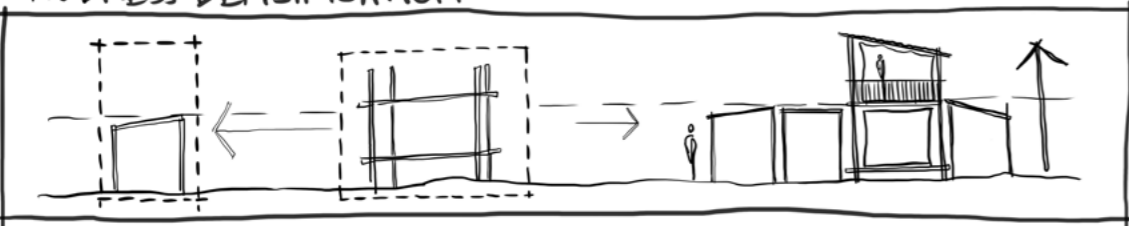
USE AVAILABLE & AFFORDABLE MATERIALS



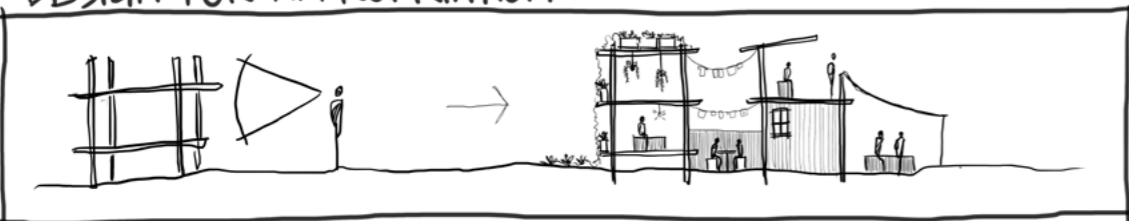
ACCOMMODATE FUTURE SERVICES & STORAGE



ADDRESS DENSIFICATION



DESIGN FOR APPROPRIATION



Above: MArchHons students, Moreleta Park Integration Project 2021



The reality is that you can't really set up a mutual goal unless all parties are equally and directly implicated in the outcomes.

... because our intention is not, and should not, be to assume the position of being "saviours" [...] It felt a little bit more like journalism; I think that's how our stakeholders started to see us eventually.

Real benefit and change can only happen when people who can take action are able to use our research outcomes

In general we were over cautious with ethics simply to ensure no discomfort and ensure that we could use all the valuable information later

The mall and the sweets situation was a bit of a jolt. Sometimes improvisation doesn't have the best outcome. I suppose at least we learnt never to bring sweets to site."

ETHICAL ROAD- MAP TO STUDENT ENGAGEMENT WITHIN VULNERABLE COMMUNITIES

We were under the impression that we assessed most of the [...] but [...] (and soon [...] we didn't nearly think of everything.

We had a clear plan to use epicollect and geotagged photos etc. This however changed when we tested it on site as we realised that we needed something more engaging and personal, which lead to a reiteration of our questionnaires to paper."

I'm not sure that this is possible, but it will be fruitful to, from the get go, know what groups to target. We can build on existing relationships and expands if the opportunity presents, but it won't be possible to always include everyone."

Generally we had loose daily goals which guided us more than a set plan would have because of the ever-changing circumstances"



(Zachrisson & Lindqvist 2021)



An Ethical Roadmap to Student Engagement with vulnerable communities

A critical self-reflection



"In a highly divided and unequal society, the point is not to arrive at consensus but rather to bring differences and conflicts to the surface, in order to generate deeper democratic engagements. Only then, can the root causes of social and economic conflicts emerge, creating the basis for more radical and transformative debates" (Pieterse & Van Dijk, 2014:153)



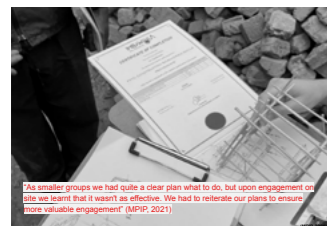
"We as a community face many challenges but speaking to you is good. It seems good that someone somewhere is interested in hearing our side of the story" (Pieterse & Van Dijk, 2014:153)



"When practicing agency and co-design constantly we have some way to go with regard to building a sustainable collaborative trust network" (MPP, 2021)



"Although we have and more probably will continue to, constantly question ourselves, this probing is not rooted in self-doubt but rather in a personal obligation toward Moreleta Park's urban issues and the fact that few desire to recognise, let alone address, these issues" (MPP, 2021)



"As smaller groups we had quite a clear plan what to do, but upon engagement on site we found that it wasn't as effective. We had to reiterate our plans to ensure more valuable engagement" (MPP, 2021)

"We should definitely go back to site when our projects are in a more developed phase and reflect as a large collaborative" (MPP, 2021)



"I think as a large group we failed at this [building the type of contact we were aiming for], we didn't pull through on the expectations that we ourselves created especially with the prototype, but we still have a chance to amend this throughout the year" (MPP, 2021)

"There needs to be change in the ethical and moral conviction of people in the field" (Combrink, 2021)

HOW CAN STUDENT RESEARCHERS BETTER ENSURE AUTHENTIC, ETHICAL ENGAGEMENT WITHIN VULNERABLE COMMUNITIES?

“

Situated within a project that aimed to empower vulnerable communities, a student researcher set out to engage with the data samples that constructed the core of the project. Upon arrival at site the data samples became dynamic, fluid in their movement.

The researcher looked at a mirroring image. A reflective window. A human being. A man from Plastic View. She began the same old introduction, attempting to explain the group's intentions, and why they were documenting his neighbourhood. He jokingly responded with an analogy to a zoo.

One March afternoon, a student researcher indulged in desperate reflection...

"The issue here lies in that it is us students imposing an architectural project which has not been sought after by the community in any way.

There needs to be a common goal, which allows the opportunity to learn, and arrive at a more informed architectural outcome.

Depending on the ideas generated through our future engagements, it is likely that the architectural outcome will solely be serving the student, in which case the role and power balance must be shifted accordingly - where the stakeholder becomes a sort of "su-

pervisor" on their own accord. In other words - "designing with", I speculate, is only authentic where the goals and outcomes are for the shared benefit of all parties, regardless of the participatory nature of the process.

Without this shared benefit, the project itself is inevitably (and only hypothetically) "designed for" stakeholders, riddled with tokenism, and furthermore, of no direct value to them.

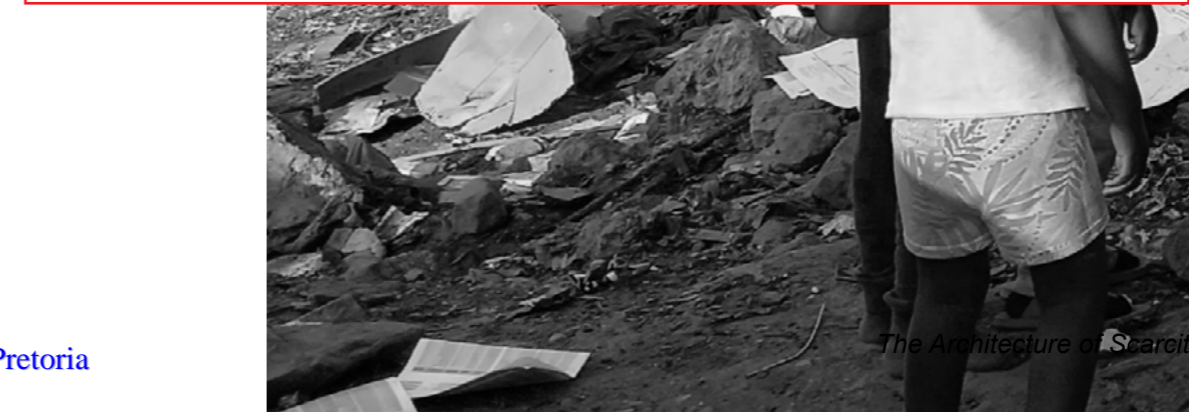
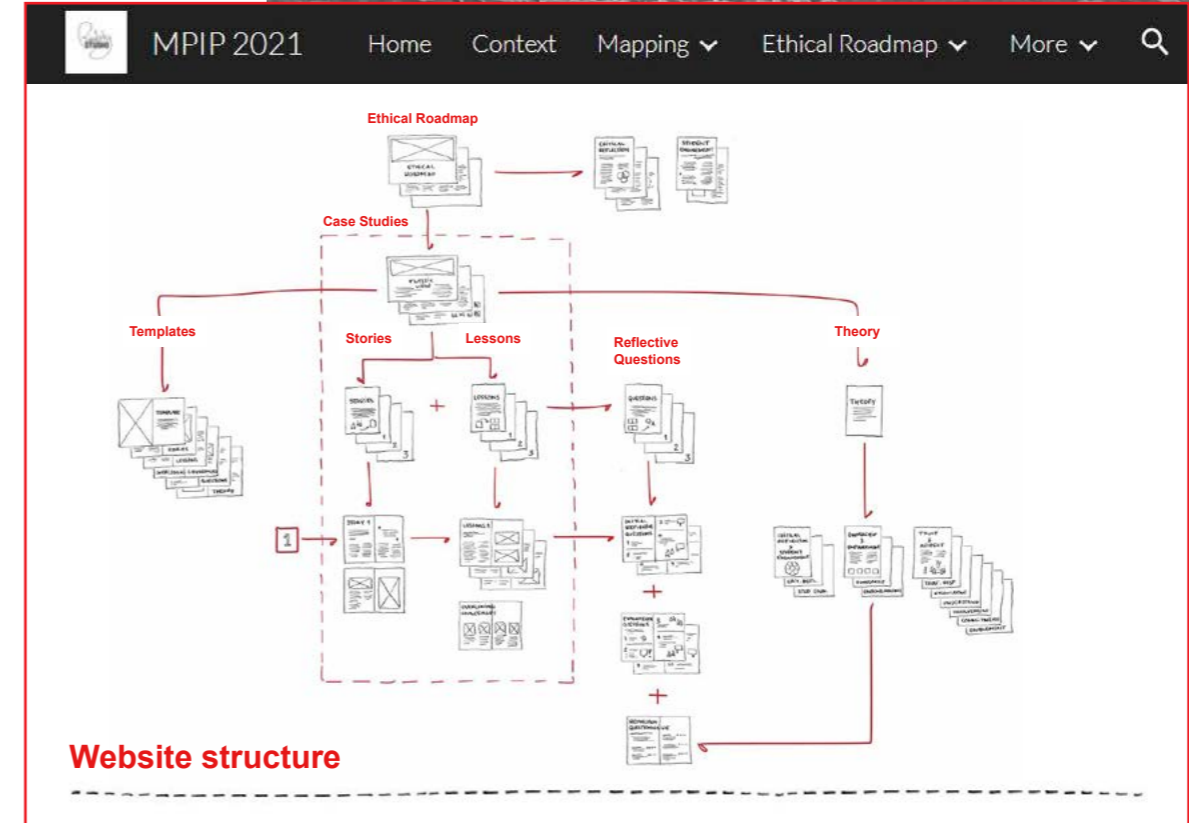
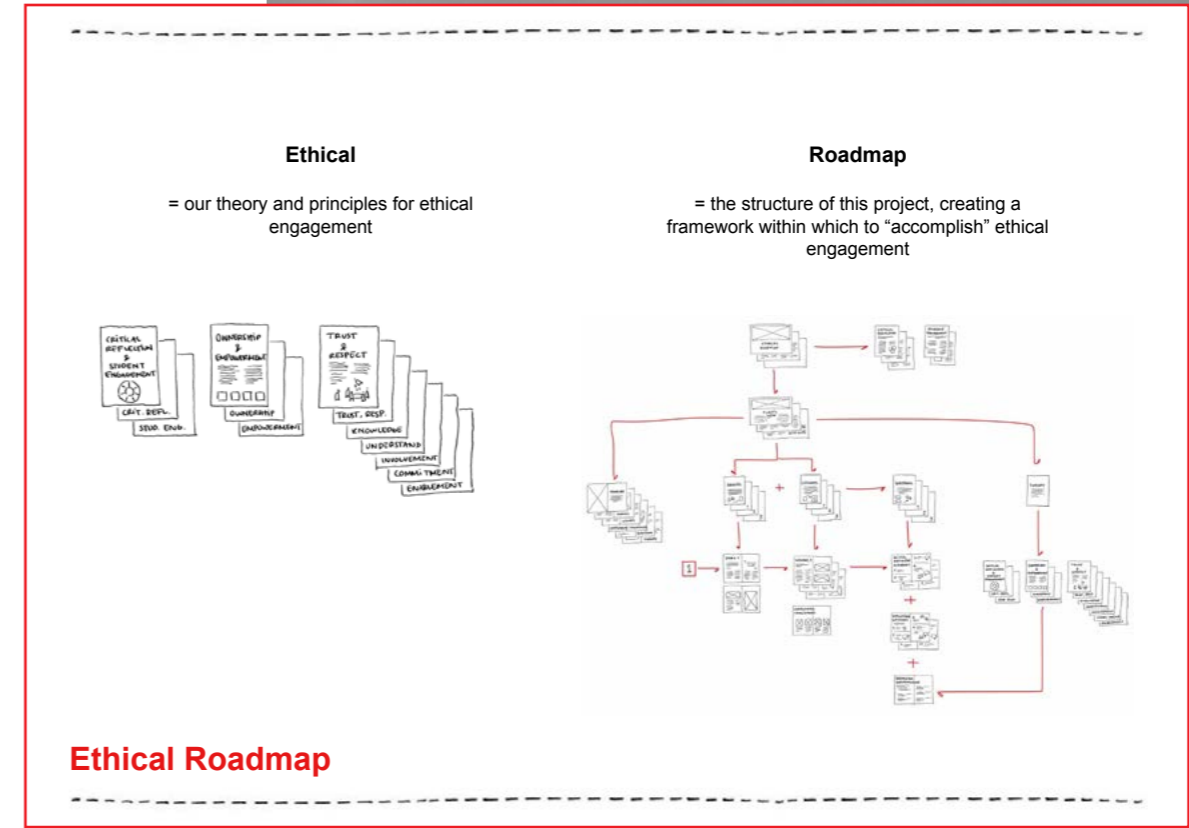
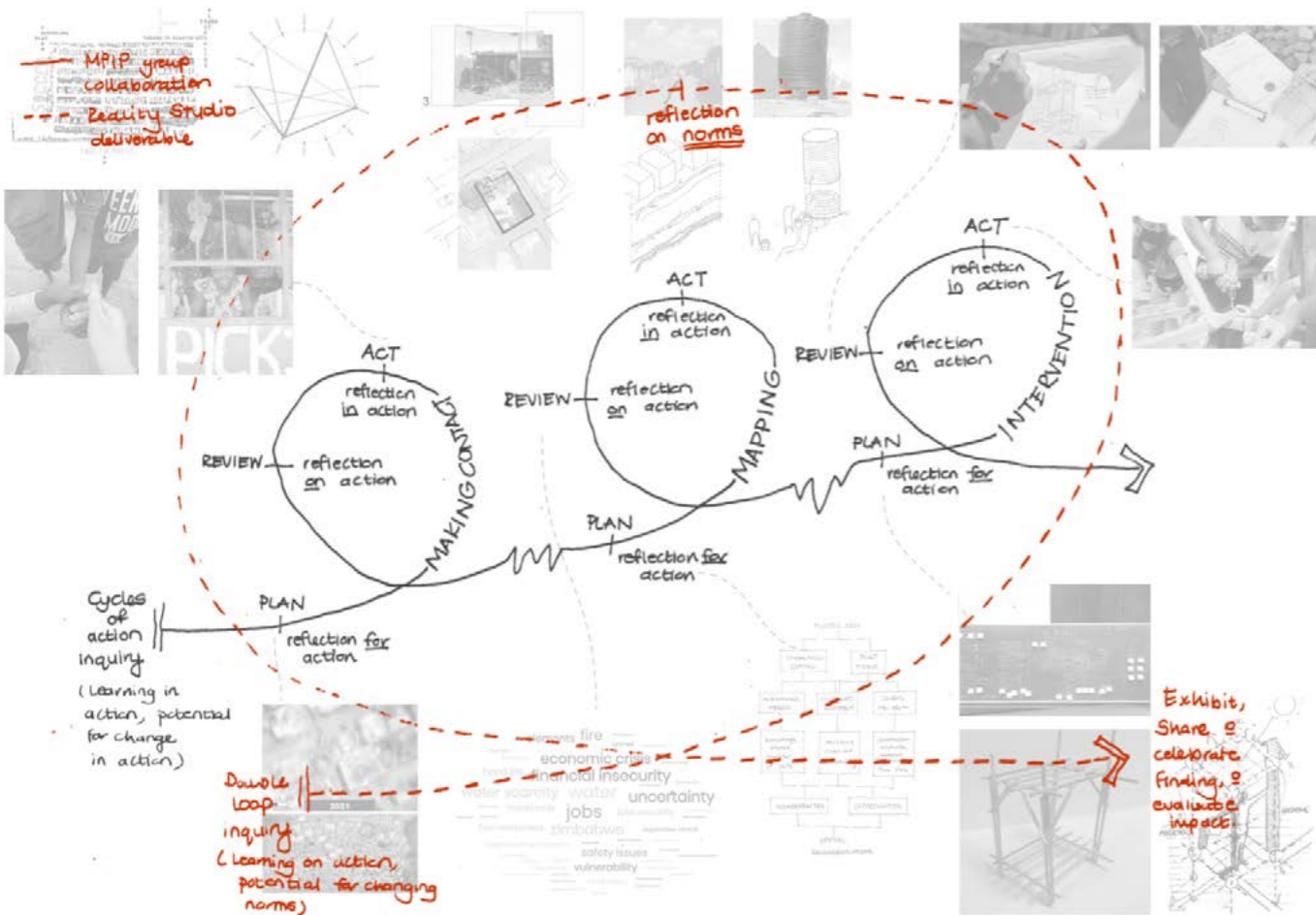
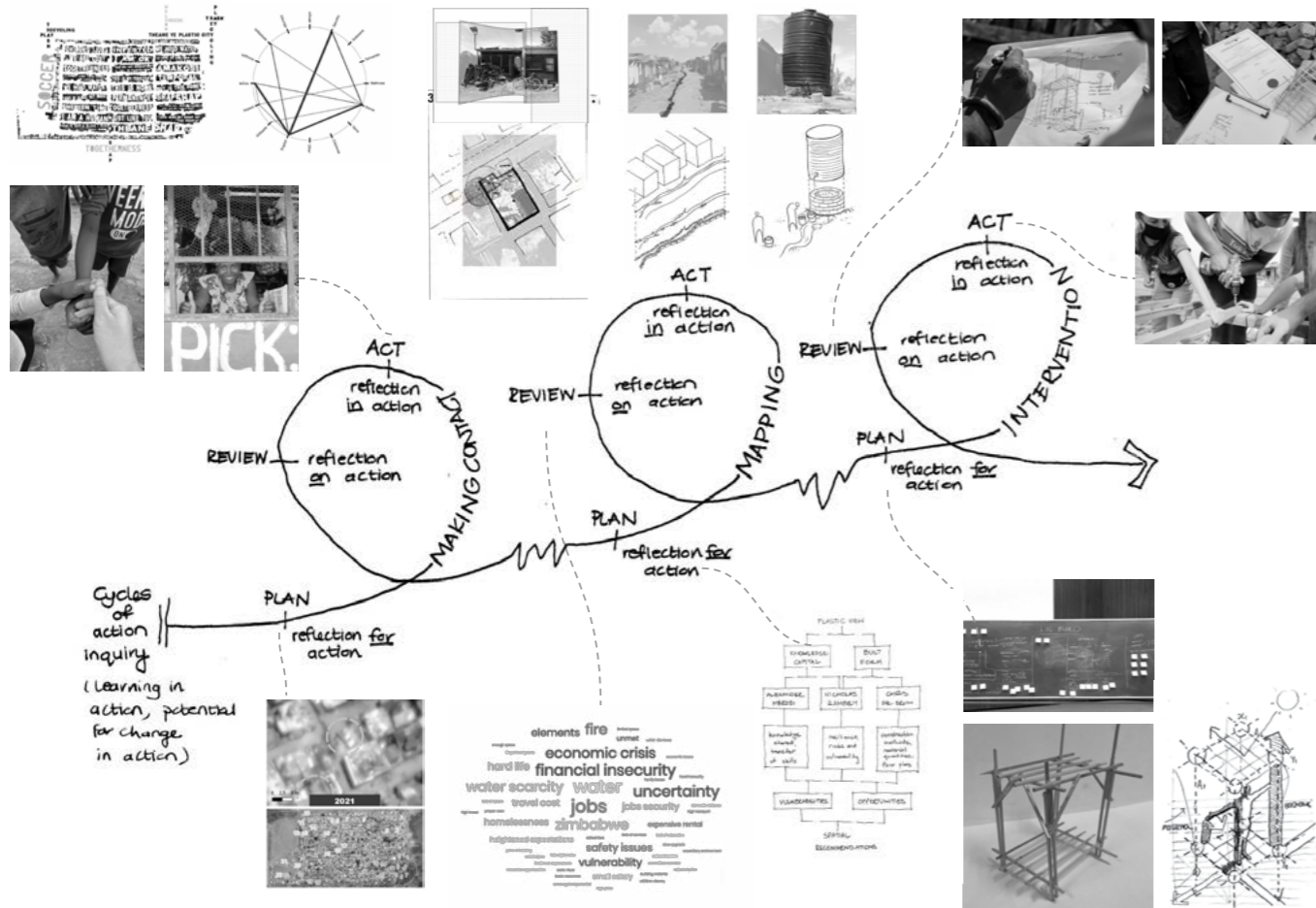
It is important to understand common needs and capabilities.

I suppose my biggest trouble here is justifying the imposition of a codesign process on the assumption that my own case-study and design project is something that a community needs or will benefit from.

How does one distinguish their position as a researcher for the collection of shared knowledge production, from that of a privileged person trying to use their privilege for what they assume is "good".

I feel uncomfortable documenting the lives of people (and taking their time) for the purpose of a design project which is ultimately used to assess my individual abilities and merit."

- A Katranas 13/03/2021

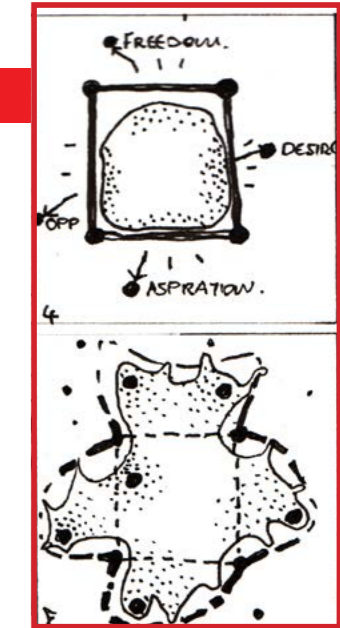
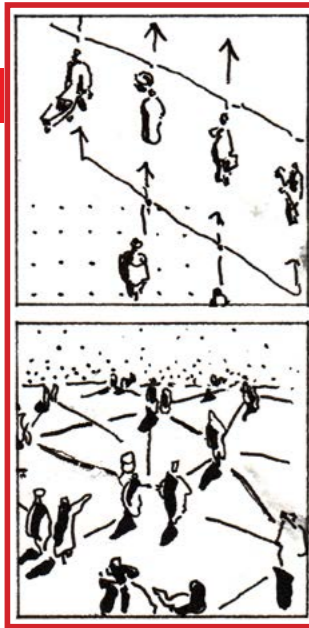


AN URBAN FRAMEWORK FOR THE FU- TURE CITY



PRINCIPLES

Extract from Urban Vision (Katranas, Kriek, De Bruin)



Design for Transformation: there is irony in that other cities around the world are moving towards fragmentation (Simone 2006). This highlights that it is not just the remnant apartheid division that exists spatially at an urban scale that requires remedie, but also - a systemic shift, from consumption driven development to more inclusive agendas, is necessary (Meagher 2018).

Design for Urbanisation: recognise and accept increased spontaneous kinetic currents within the static urban fabric as a consequence of rapid urbanisation (Mehrotra 2008:205, Pieterse 2011:1, Dodman et al. 2017).

Design for informality and spontaneity: design from the perspective of the Slum, recognising it as the "heart of the city" (Pieterse 2011:5), the entry-point to the city in its role as a means to enable upward socio-economic mobility (Griffiths 2018, Simone 2006).

Design for agency: "the individual's freedom to choose and bring about the things that he/she values" (Frediani 2010:176, Schneider & Till 2011). Simone argues that "Viewing the right to the city as the right to pursue multiple aspirations ensures that no structure of governance can ever really manage the activation of this right" (2006). This places the focus on how "freedoms" and "opportunities" are allocated, instead of assets or rights (Architecture Sans Frontiers International 2012:104-105, Sen 1999) - The Capabilities Approach (CA) Framework.

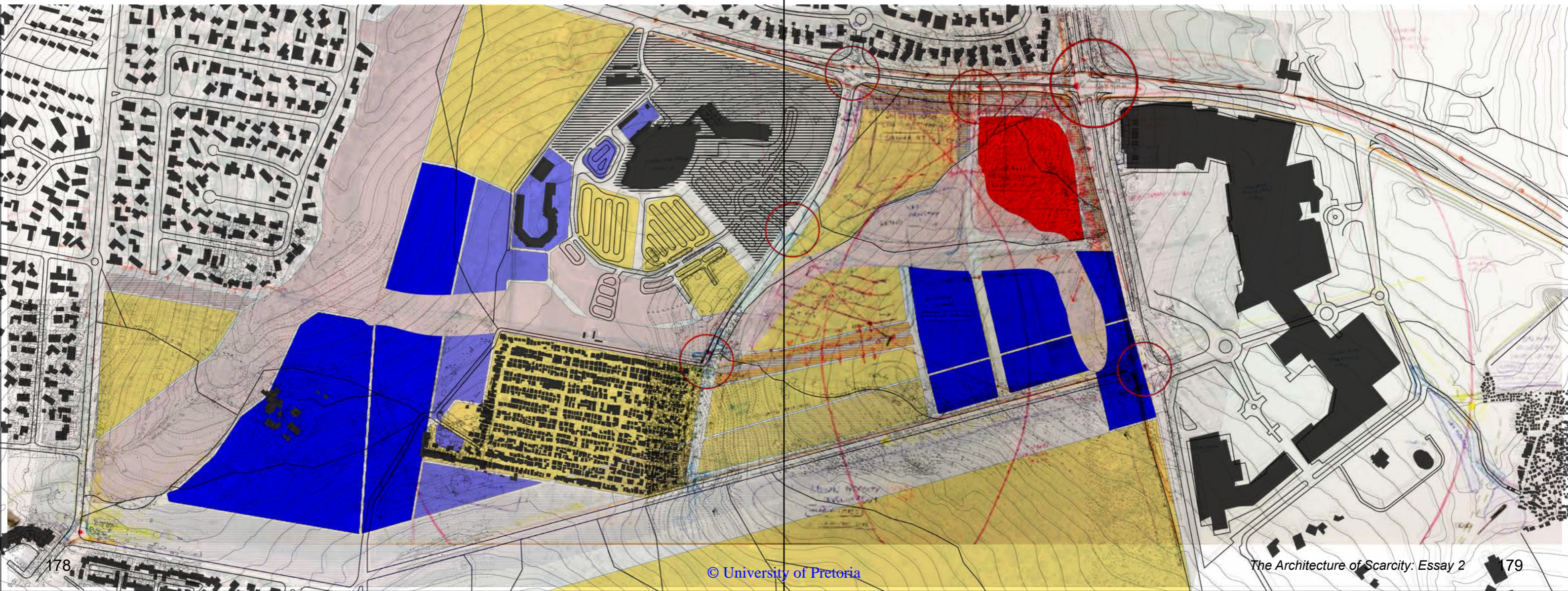
Design for resilience: Salat argues for self-sufficient districts made up of heterogeneous communities with a strong recognition of the existing site condition; compact, walkable, mixed use and a high level of economic self-sufficiency (2011). Strength and resilience in interconnectivity (Salat 2011:18).

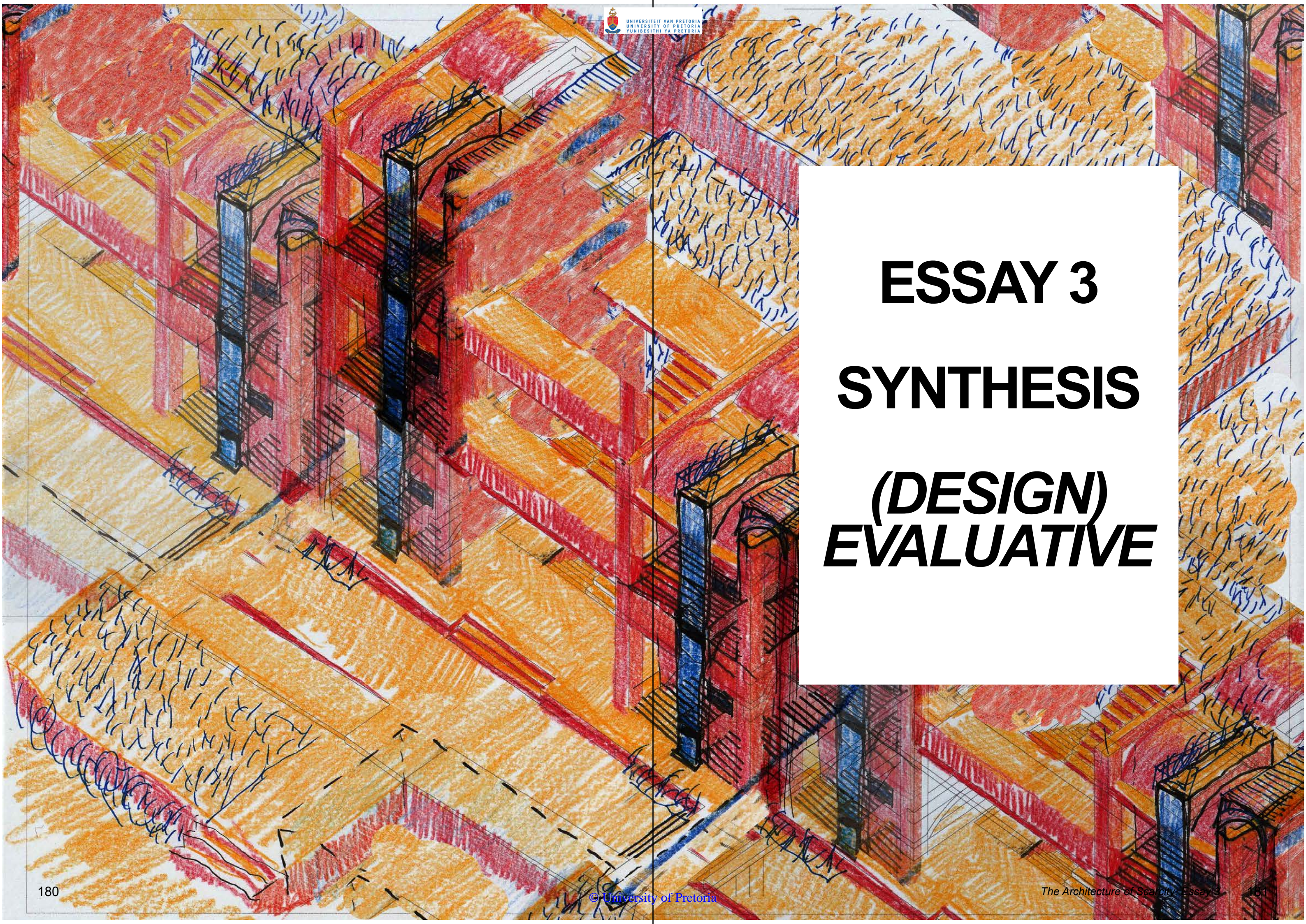
Design for the re-integration of Industry: as a means to ameliorate the diminished livelihood prospects that are linked to the problematic disconnect between urbanisation and the industrialisation necessary for sustainable growth (Meagher 2018, Dodman et al. 2017)

Design for long-term infra-structuring

Design for Change, evolution, .: Informal urban contexts present "city spaces where there are many different ways to get something done - where the way you prefer just isn't possible now" (Simone 2006). This is in contrast to the more permanent "formal" infrastructure.

- domicile dominant
- public green space
- Livelihood dominant
- Transport-Mobility dominant





ESSAY 3
SYNTHESIS
(DESIGN)
EVALUATIVE

3.1. p184 THE ROLE OF THE ARCHITECTURE

3.1.1. Engaging the social dimension of scarcity through architecture

3.1.2. Engaging the physical dimension of scarcity through architecture

3.1.3. A consolidated syntax of design: an alternative gated community

3.2. p194 DESIGN AND TECHNICAL DEVELOPMENT

3.3. p246 THE ARCHITECTURE OF SCARCITY?

3.3.1. The landscape

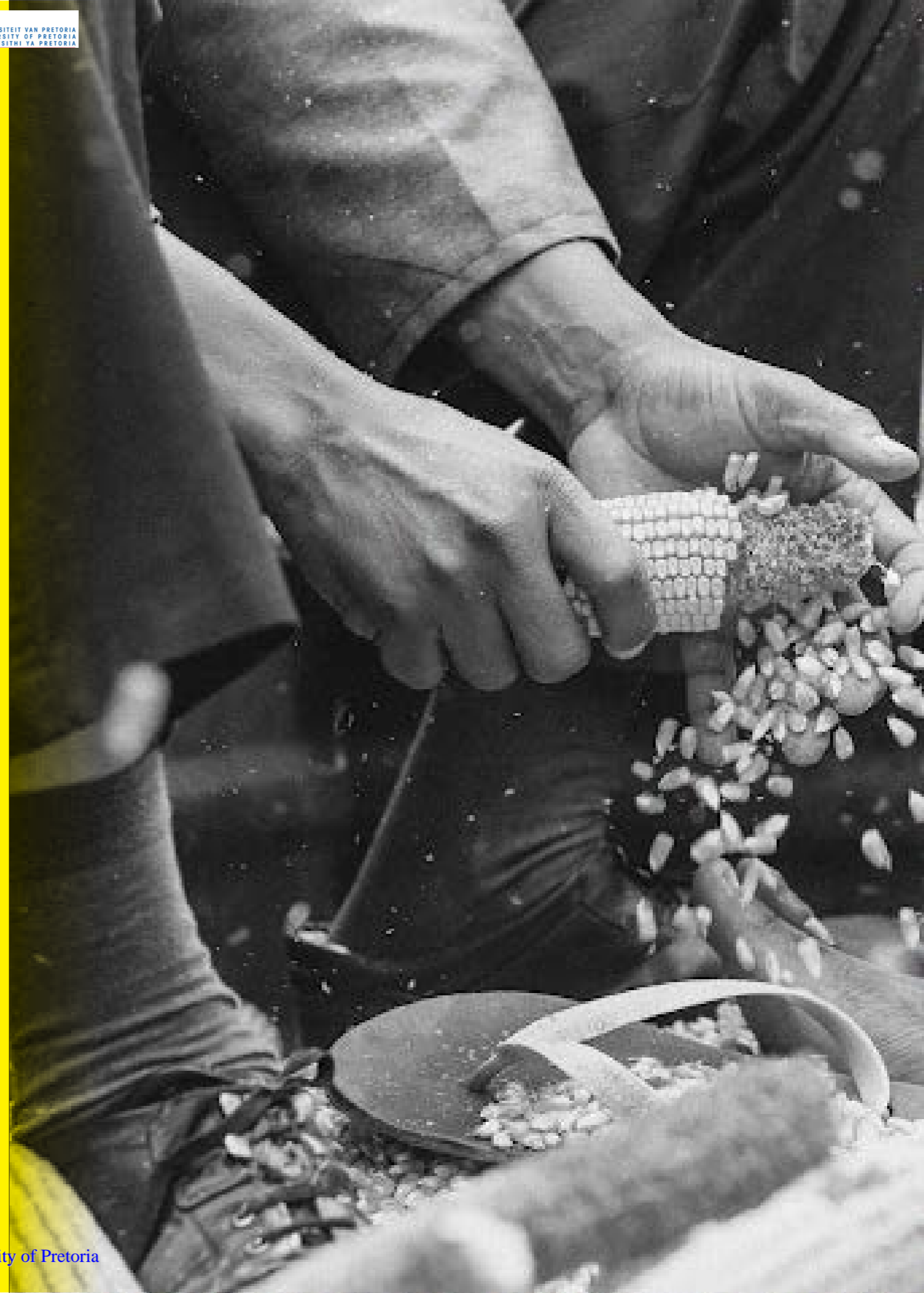
3.3.2. The dwelling

3.3.3. The water system

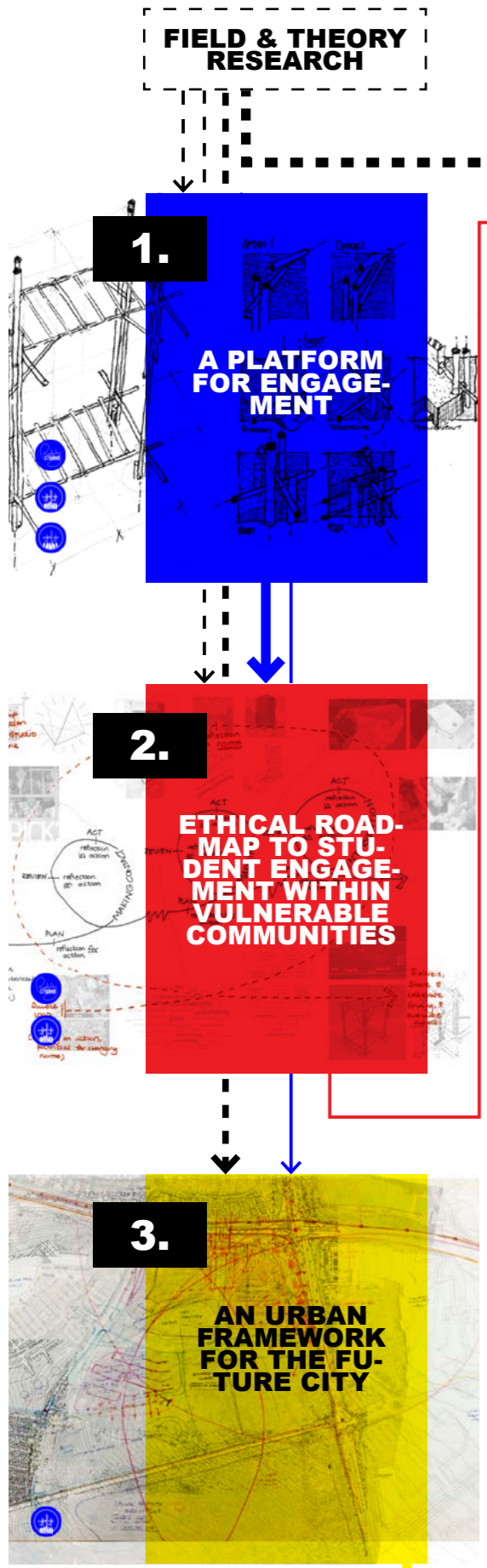
3.3.4. System Integration

3.3.5. SBAT report

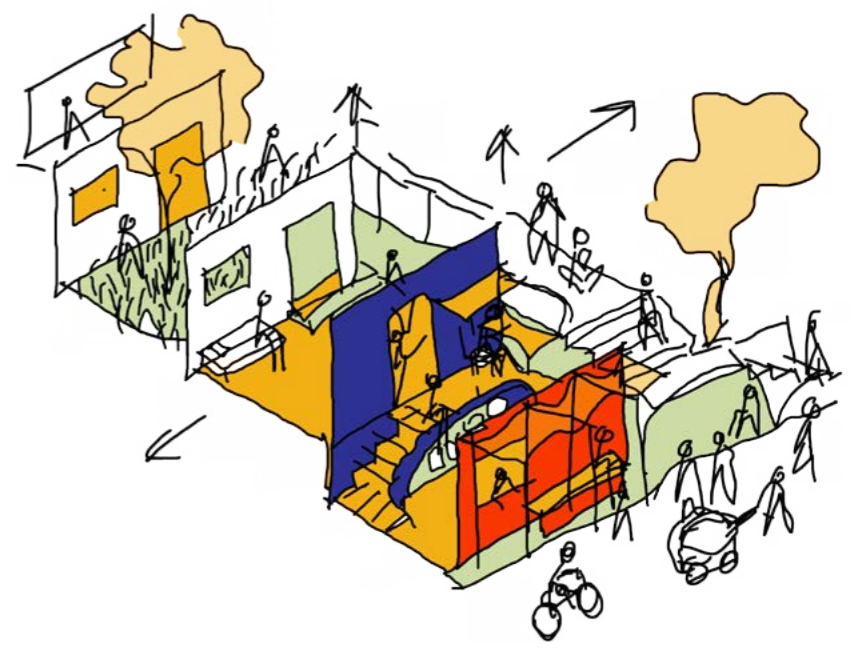
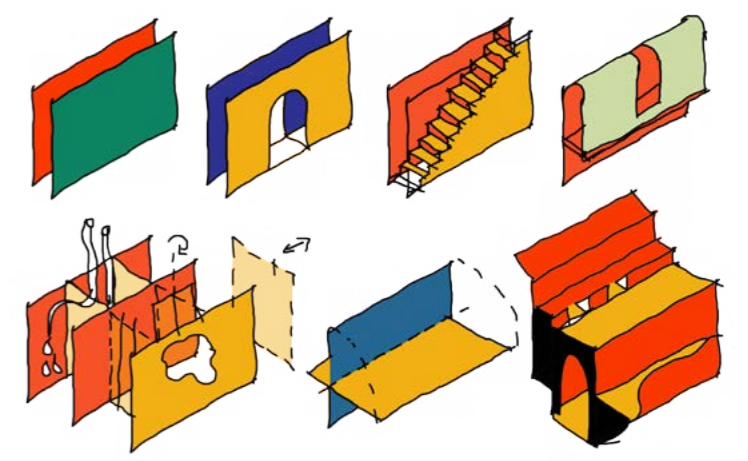
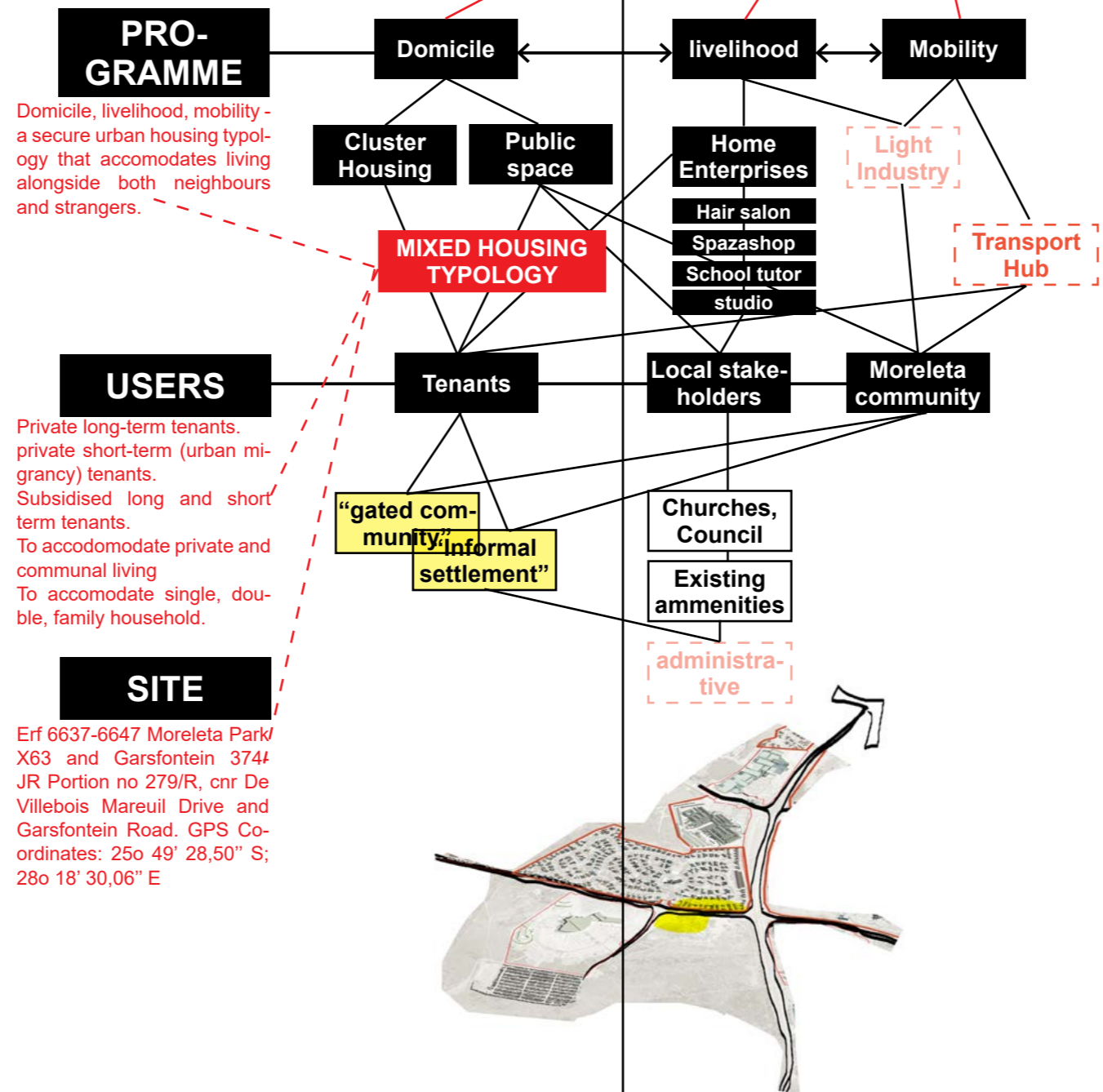
3.4. p270 SCENARIO TESTING



3.1. THE ROLE OF THE ARCHITECTURE

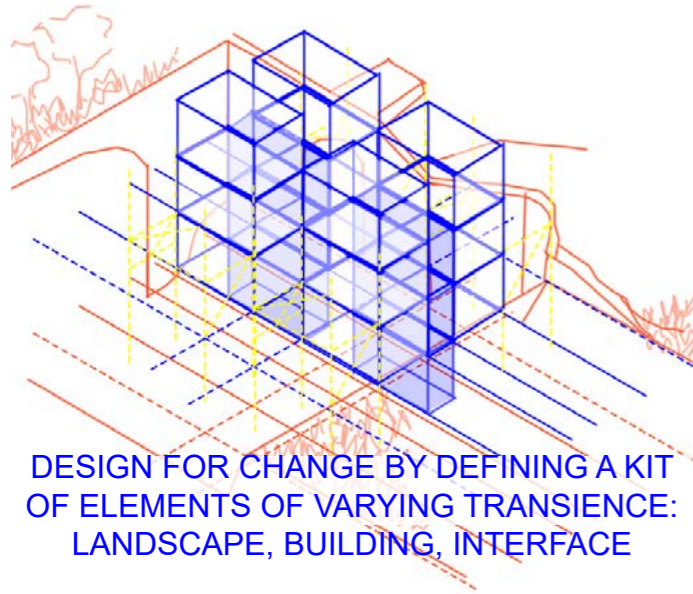


SOCIO-SPATIAL INTEGRATION

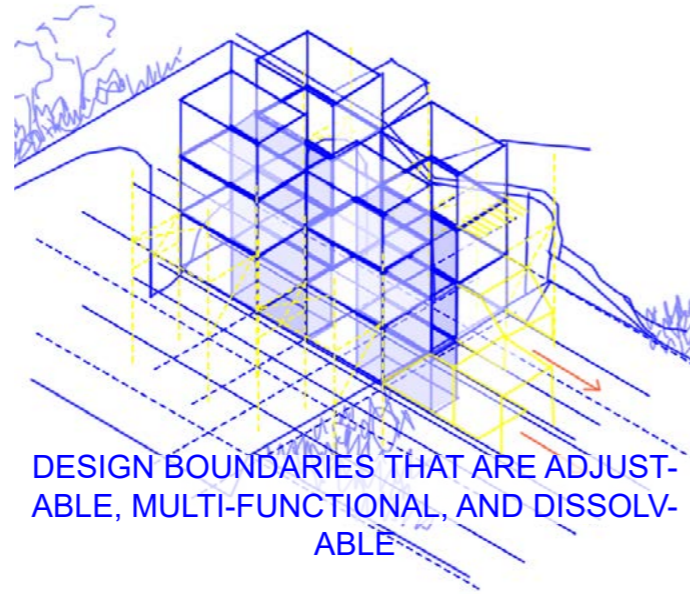


RETHINKING THE GATED COMMUNITY

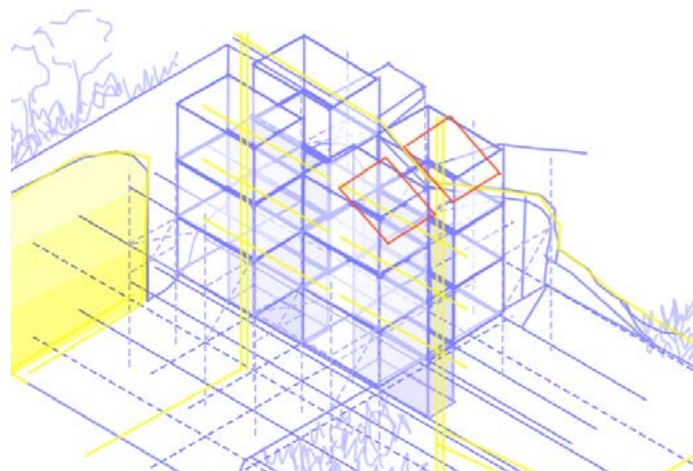




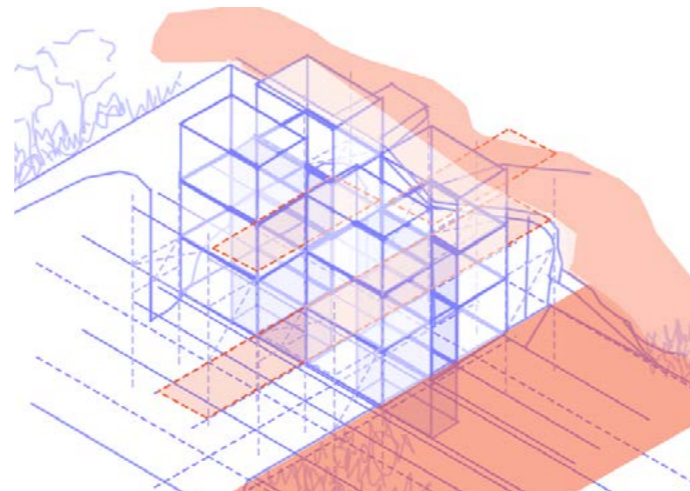
DESIGN FOR CHANGE BY DEFINING A KIT OF ELEMENTS OF VARYING TRANSIENCE: LANDSCAPE, BUILDING, INTERFACE



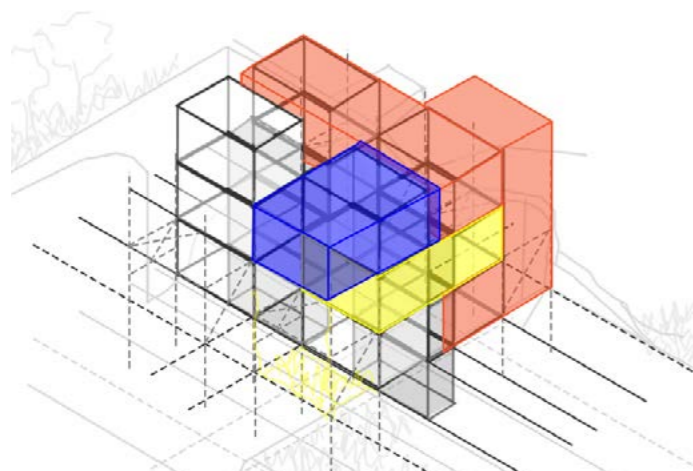
DESIGN BOUNDARIES THAT ARE ADJUSTABLE, MULTI-FUNCTIONAL, AND DISSOLVABLE



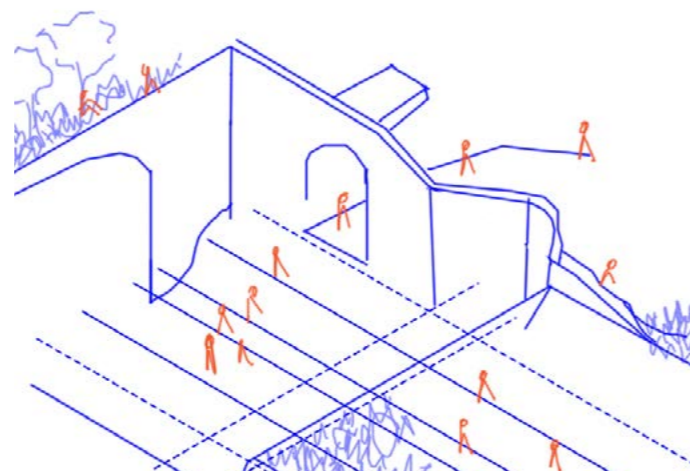
DESIGN FOR THE PROMOTION OF RELATIONAL SYSTEMS BETWEEN BUILDING AND LANDSCAPE, WITH A FOCUS ON HARNESSING WATER.



MEDIATE PUBLIC-PRIVATE AND DOMICILE-LIVELIHOOD SPACES WITH VARYING LAYERS OF STREET.



DESIGN FOR SUB-LETTABLE, HYPEROPTIMISED LIVING AND WORKING SPACES.



SECURE ACCESSIBLE PUBLIC SPACE.

DESIGN AIMS

3.1.1. Engaging the social dimension of scarcity through architecture

This project considers what it means to dwell within the South African city, where there exists socially constructed and physically manifested scarcity - and, invariably - spatial dichotomies, the “in-sider” and “outsider”, the compartmentalization and commodification of space, and security or enclosure at the expense of equal access to the right to the city.

Whilst the hard boundary condition woefully serves as the repressive mechanism through which these socially constructed rules are imposed in the name of security, it does, however, enable the opportunity for “stranger” and “stranger” to live in close proximity. Considering current spatial needs and practices, it becomes valuable to explore ways in which to subvert the gated community - where boundaries are articulated so that public space is protected and celebrated, opportunity for livelihood is secured, and edge conditions are activated and hyper optimized. These are believed to be prerequisites for achieving domicile at present, whilst embracing change

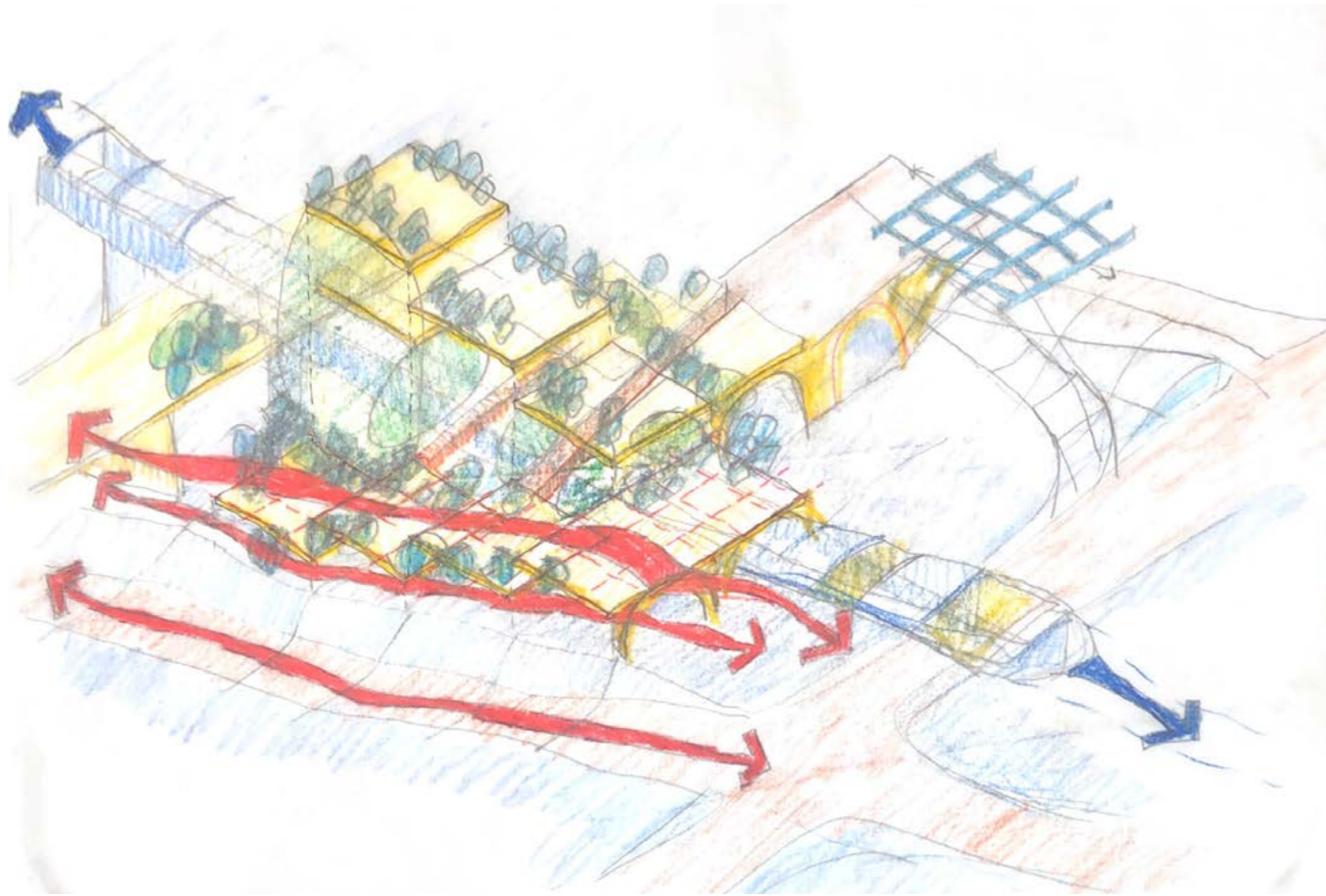
and anticipating a future where boundaries can dissolve, and neighbour meets neighbour.

3.1.2. Engaging the physical dimension of scarcity through architecture

With the planning and implementation of gated community-like developments – there is the unique opportunity to allow such neighbourhoods to enjoy the environmental and financial advantages of integrated infrastructure that sits between large-scale centralised and small scale individual decentralised infrastructure (with respect to water, sewerage, and electricity). Despite this, the area lacks the complexity of scale that would be attributed to a more resilient city/neighbourhood. For this reason, and due to the pressing existing issue of water scarcity experienced by households residing in Plastic View and Cemetery View, it is appropriate to explore ways in which architecture can integrate with infrastructure to participate and augment existing natural processes of water collection and filtration in the area.

user controls level of enclosure. opportunity to dissolve boundary whilst acknowledging current spatial needs. To dwell amongst neighbour and stranger.



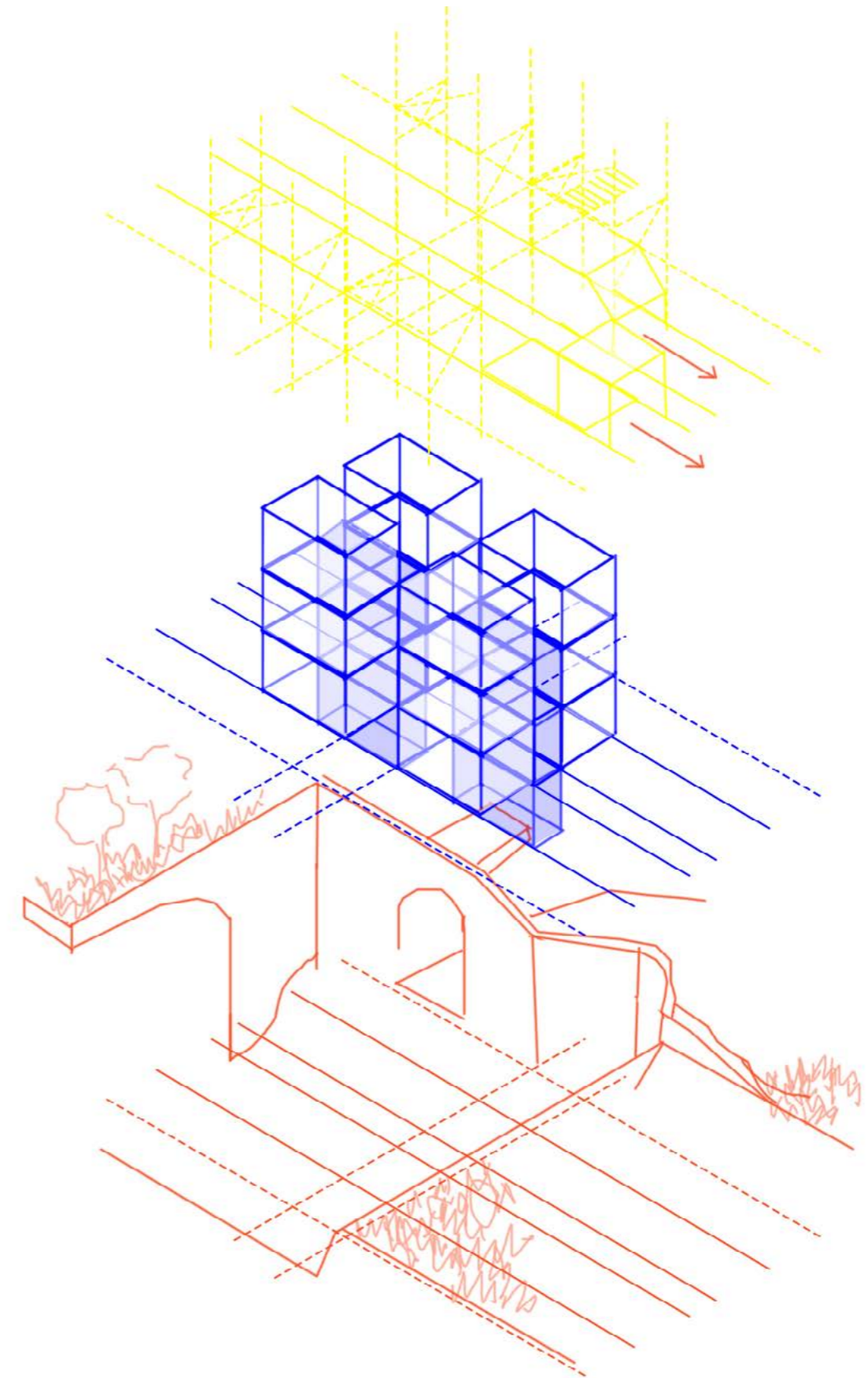


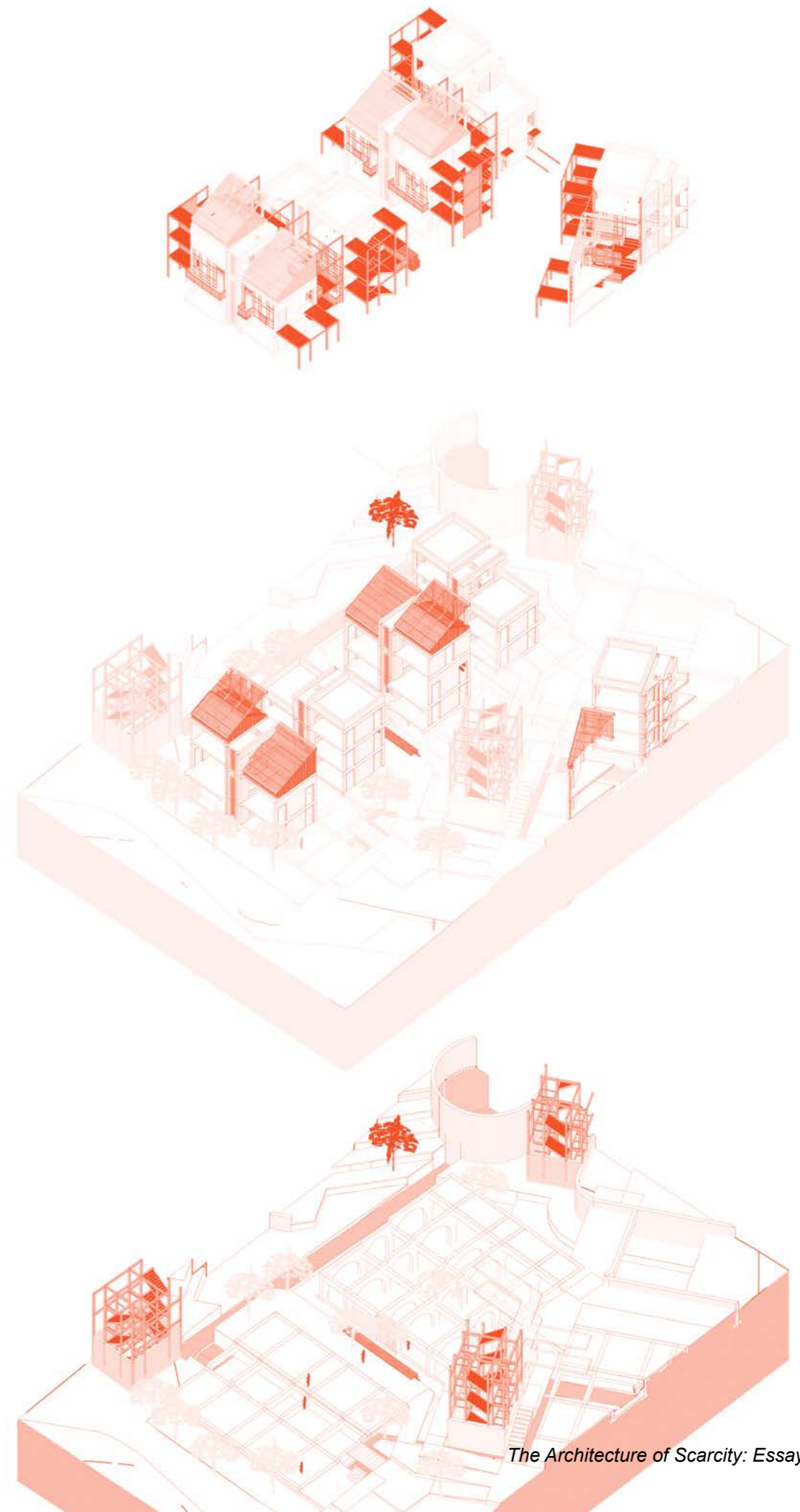
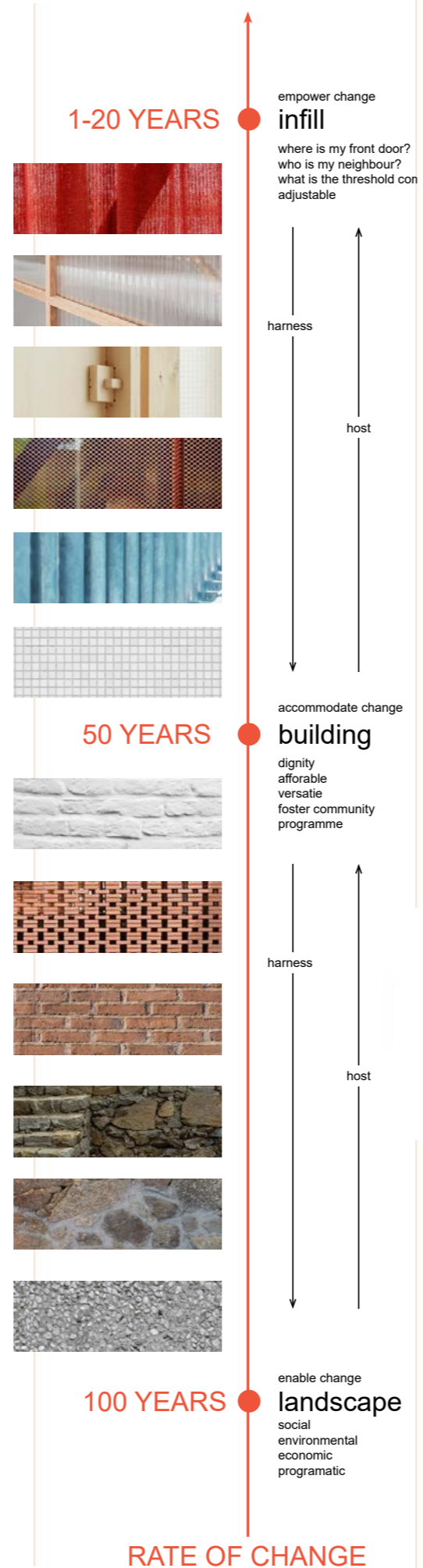
3.1.3. A consolidated syntax of design: an alternative gated community

Here, the parallel in the relationship between scarcity and time becomes significant. The intention is that architecture should enable, accommodate, and empower the everyday event as it changes and evolves - rather than disabling, defending, securing and preserving. Value lies not in what can be preserved and commodified, but in what is living and fleeting. In response to this, the architecture is conceptualized into three main, time

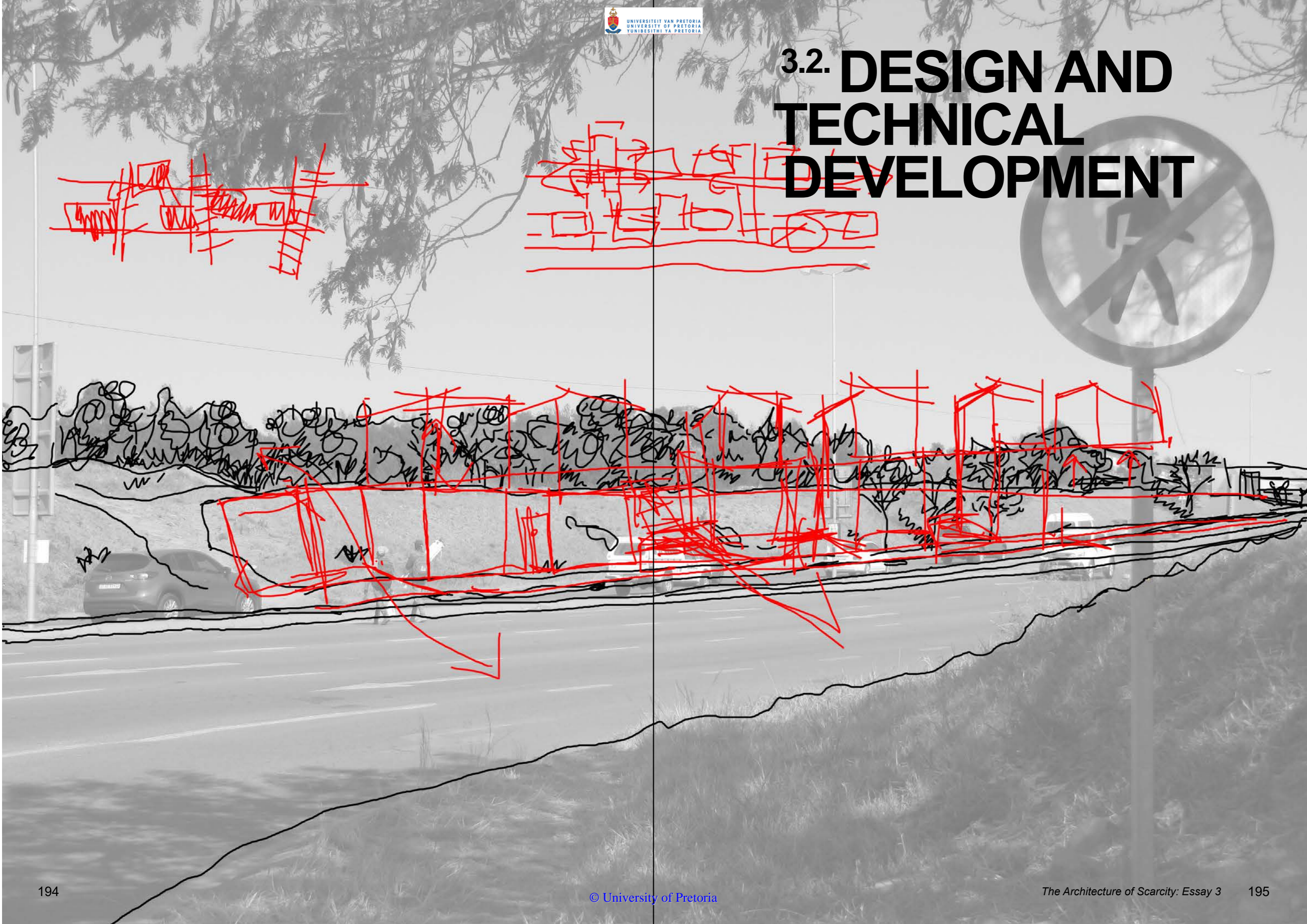
dependent fields: the more durable landscape (100+ years) - which uses spatial differentiation of the ground plane so that it becomes a generous street, and embodies a particular wholeness (not a series of parts). To facilitate and prevent the gautrain line from becoming an impenetrable buffer, the terraced landscape allows the opportunity to tunnel, or bridge over and between, with the help of an inhabitable, punctured "wall" and threshold which wraps around the landscape. The landscape hosts the ever-changing dwelling, functions, and people through the second layer of infrastructure in the form of a series of

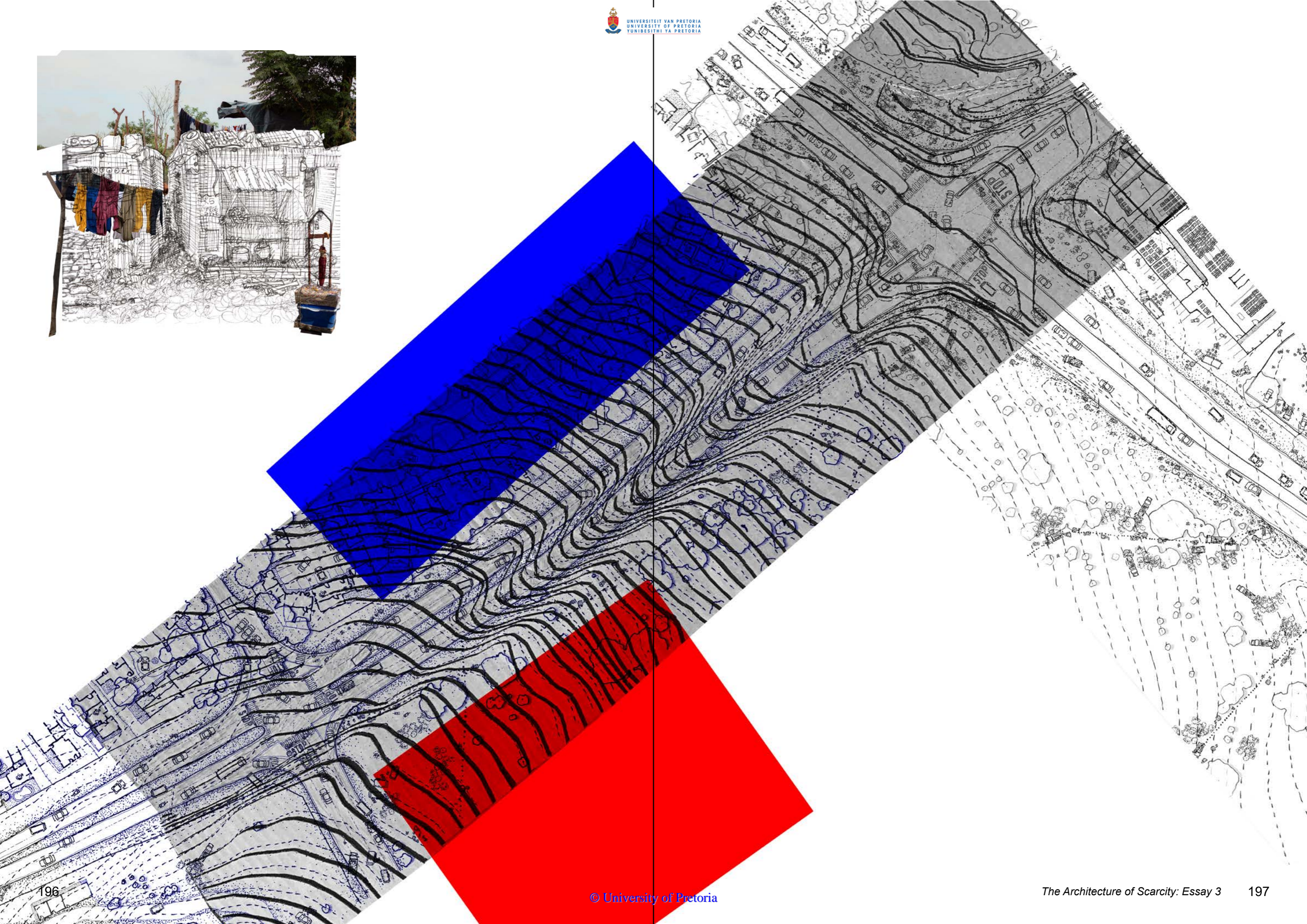
masonry bearing walled buildings (50+ years), more temporary, and intentionally designed with the optimization and versatility of the building envelope in mind. The wall is largely occupied, and spaces are organized so that units can easily sub-divide or be incorporated into larger units, depending on the articulation of the third layer. This layer (1-10 years), is where choice is afforded to the user in terms of how thresholds are layered and articulated.

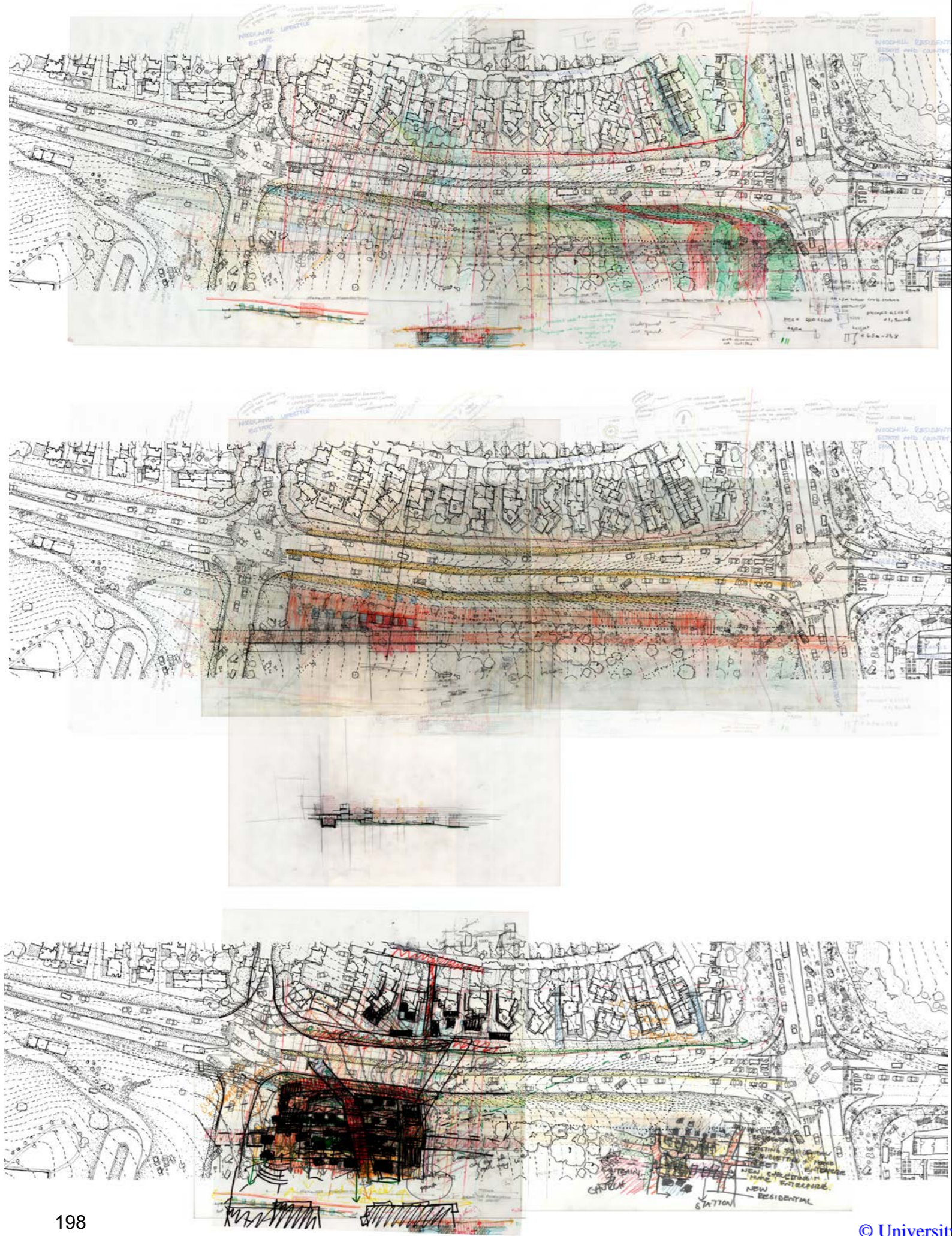


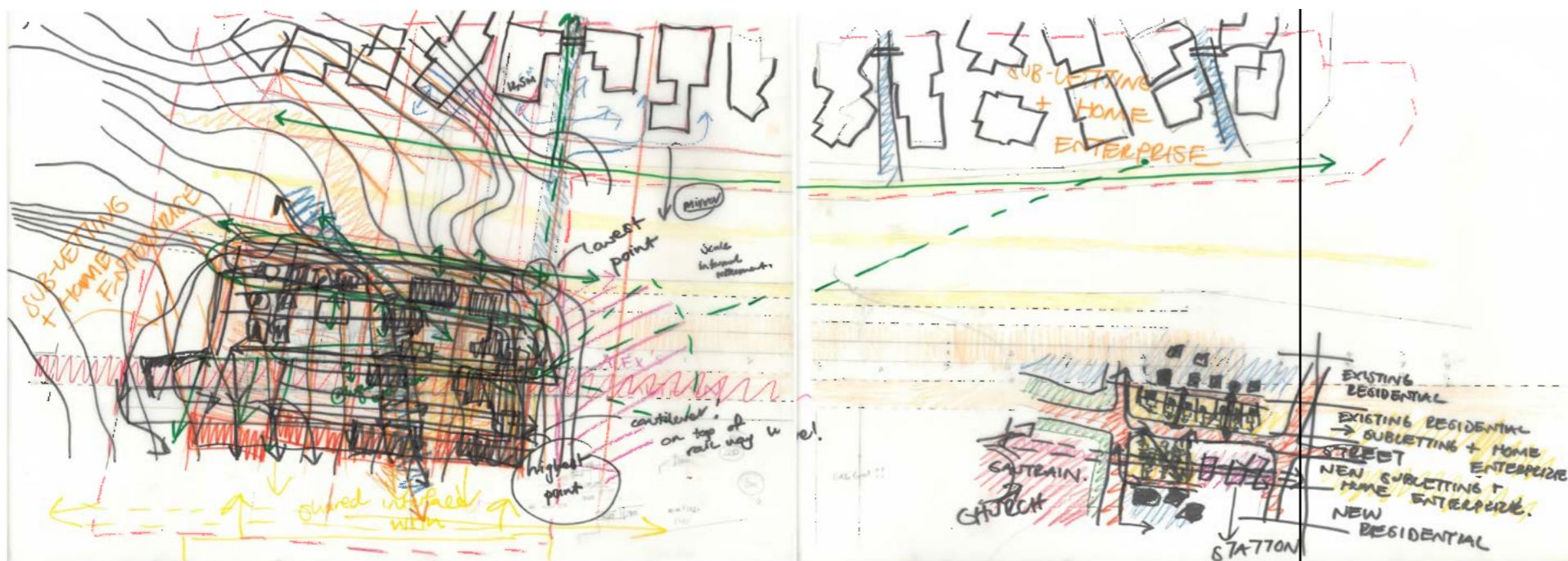
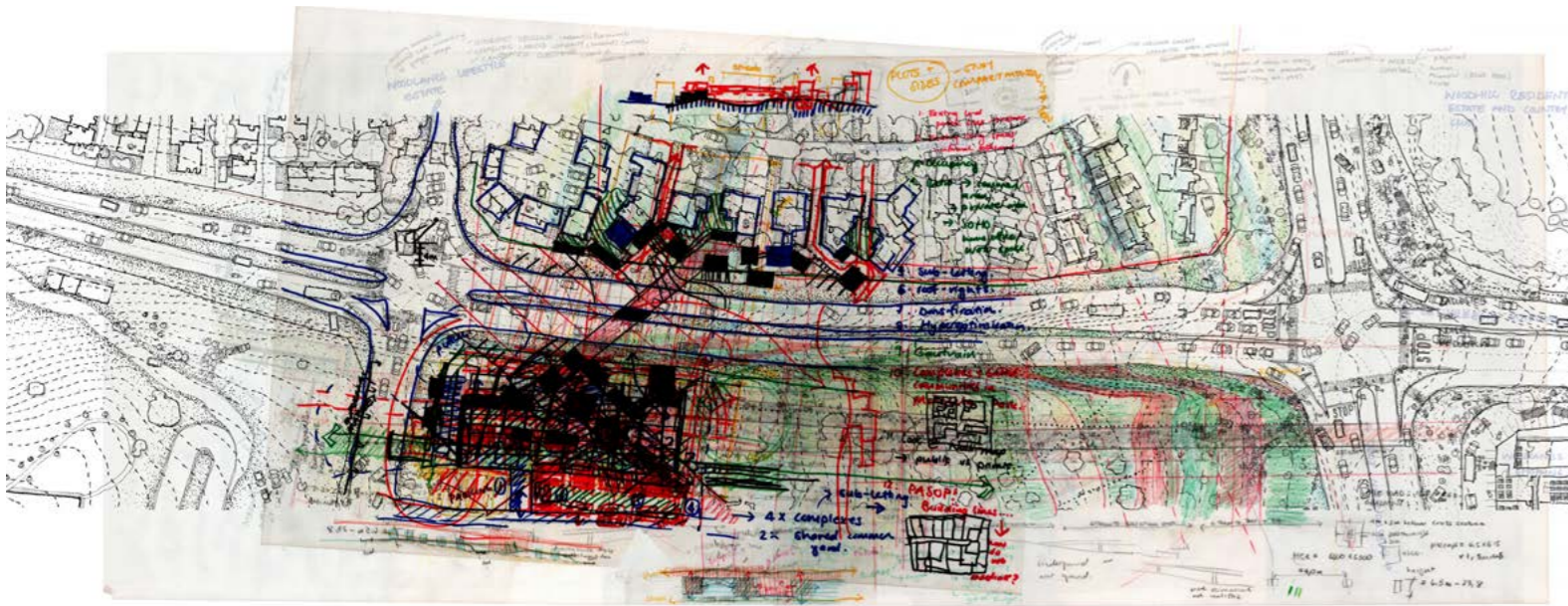
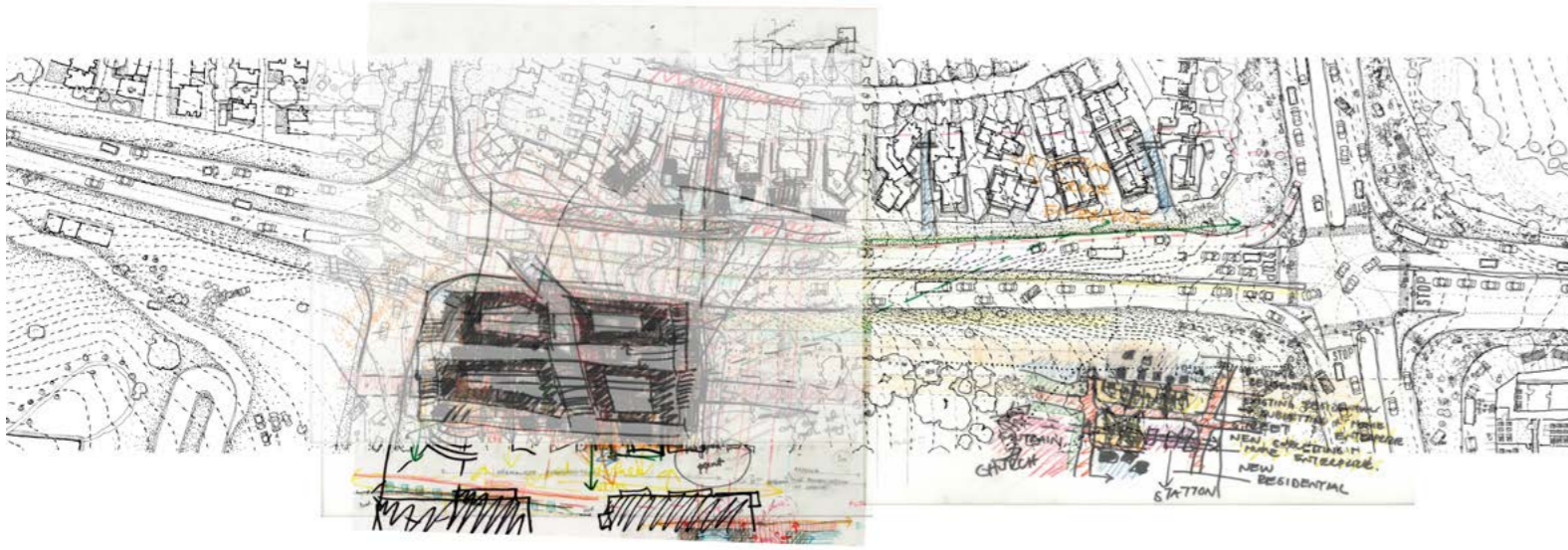


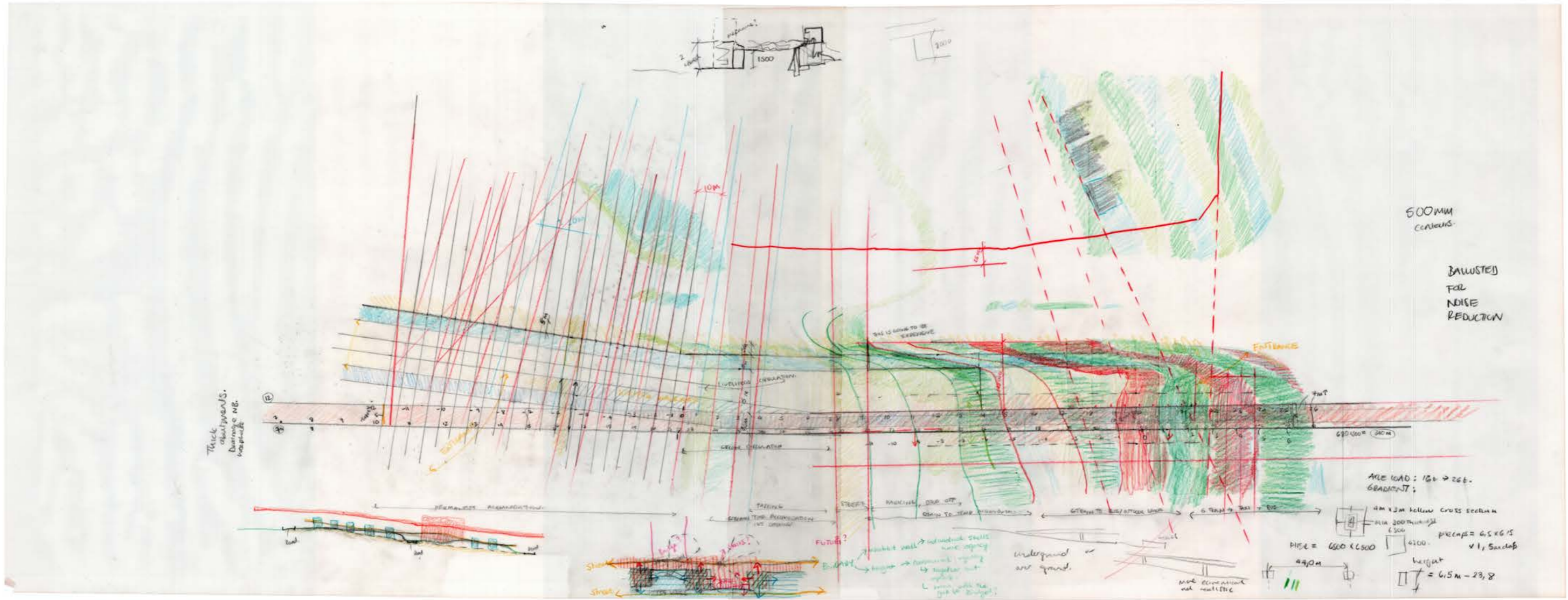
3.2. DESIGN AND TECHNICAL DEVELOPMENT





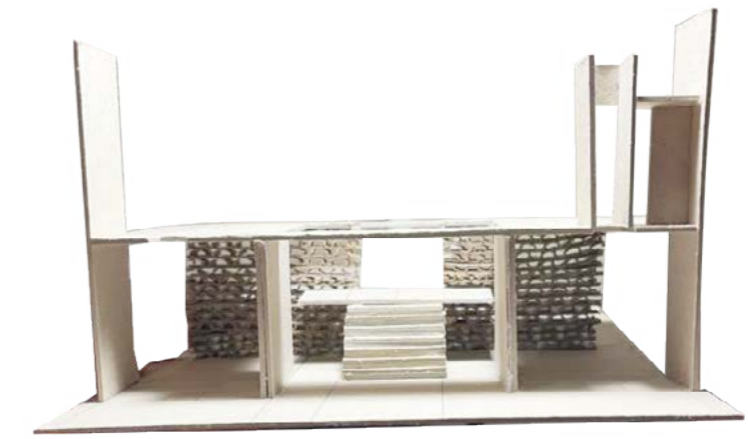
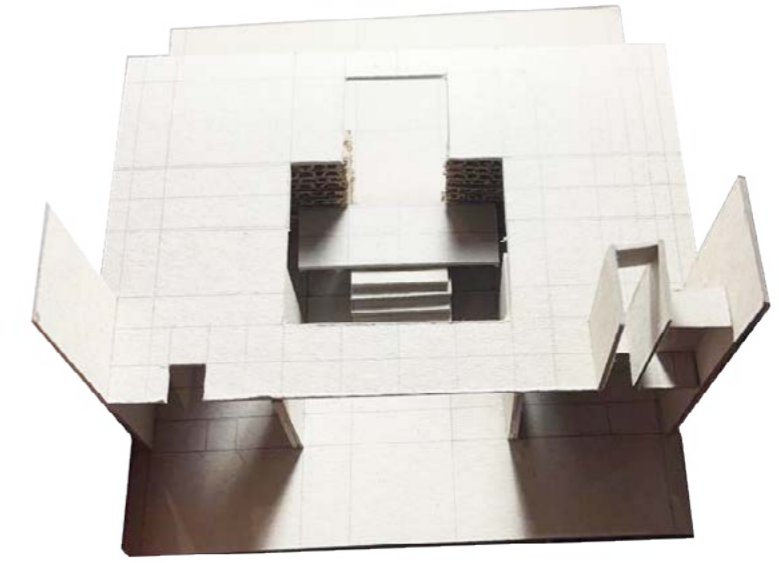
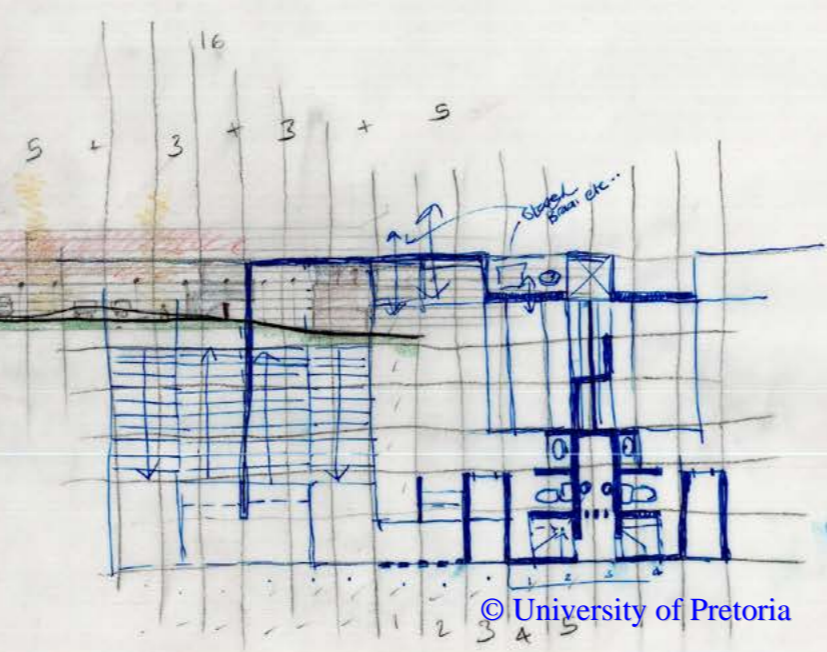
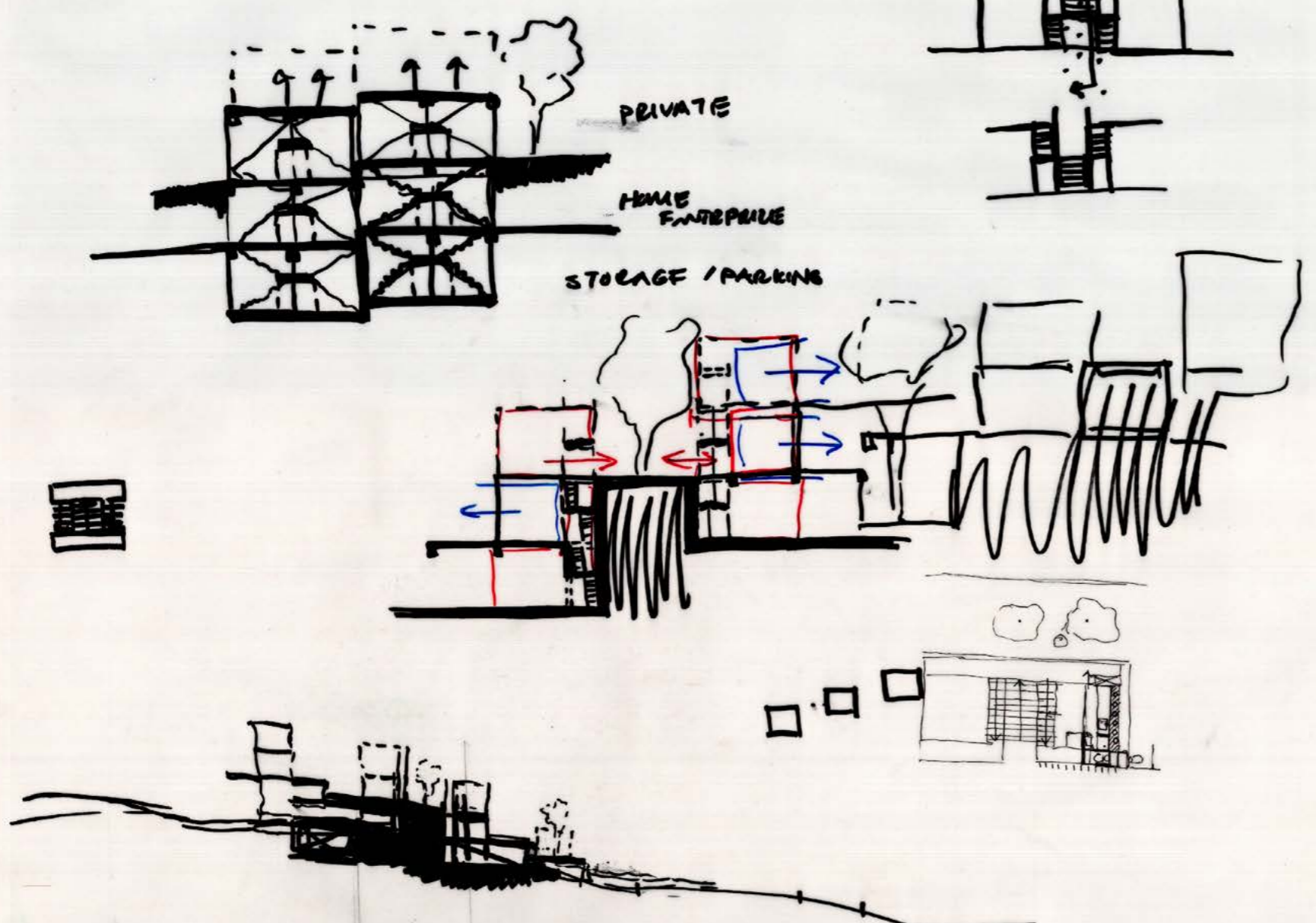






2210

$(13) \times 170 = 2210$
 $(13) \times 250 = 3250$





PUBLIC ELEVATOR?

- RESPONSE :
- ① Building → urban grain → why? → hierarchy.
 - ② slope → vertical differentiation.
 - ③ Wall
 - ④ Street.
 - ⑤ Public vs private
 - ⑥ movement → mobility.
 - ⑦ defensive vs porous.
 - ⑧ level of porosity.
 - ⑨ programming.
 - ⑩ L porosity measures etc.
 - ⑪ parcel boundaries
 - ⑫ SCAP.

METHOD.

PHYSICAL PERSPECTIVE
METHOD.
PHYSICAL PERSPECTIVE

ARCHITECTURE

PHYSICAL CONSTRUCT

1. Apartment Building along a Party Wall - Herzog & de Meuron 1988 Basel, Switzerland. - Mafos

2. CIDCO - low cost housing, Mumbai India, Raj Bawa, 1998.

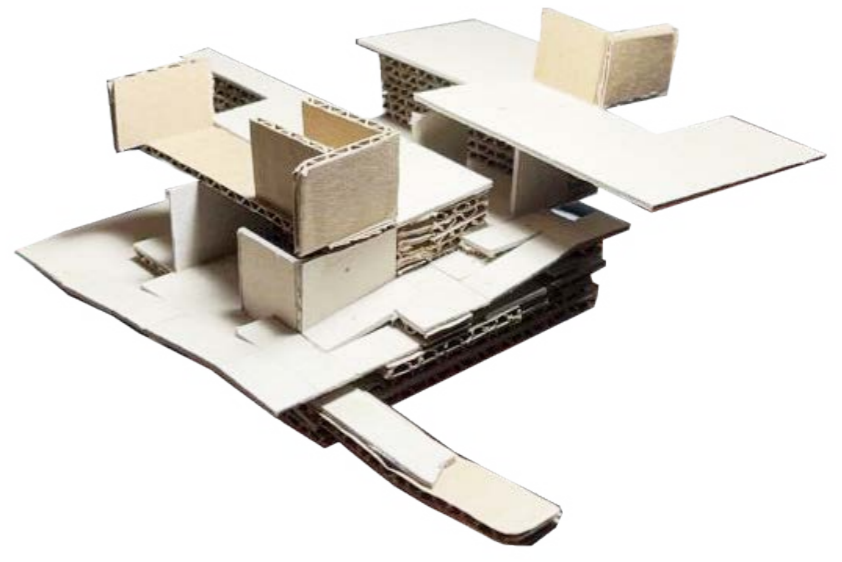
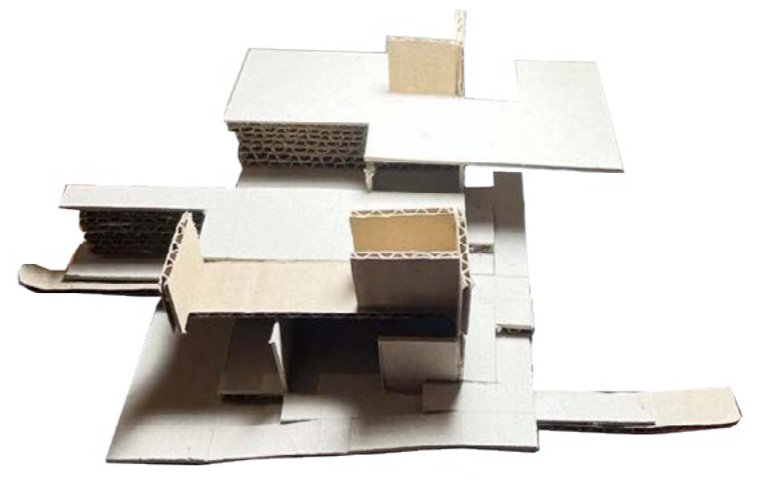
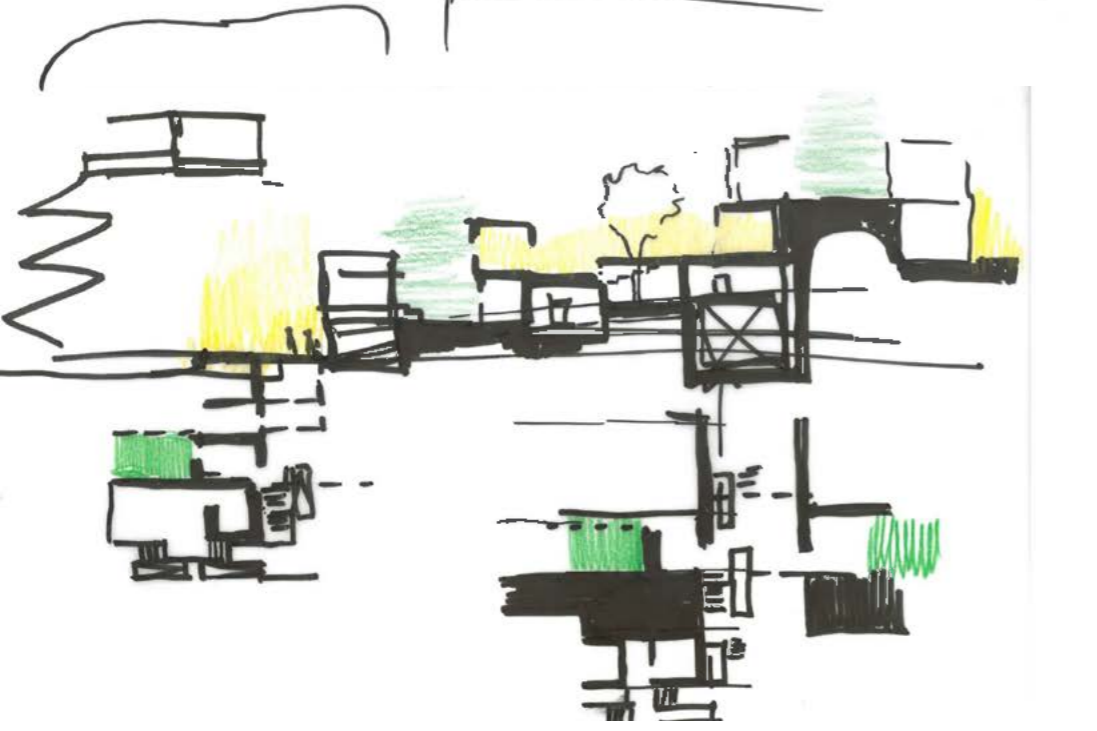
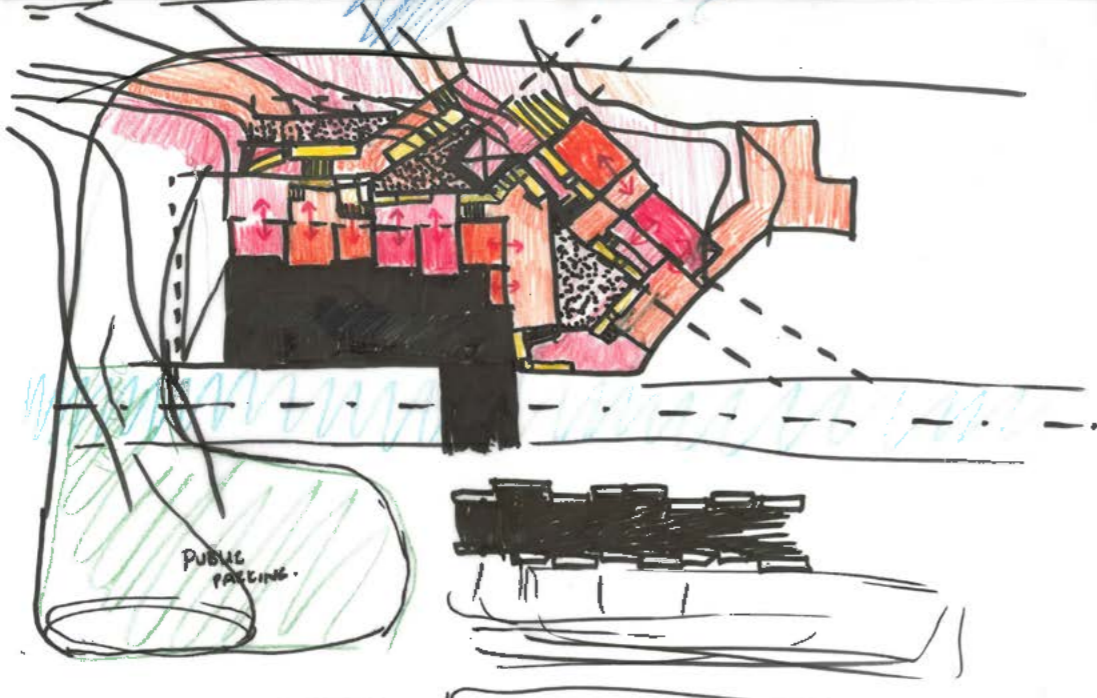
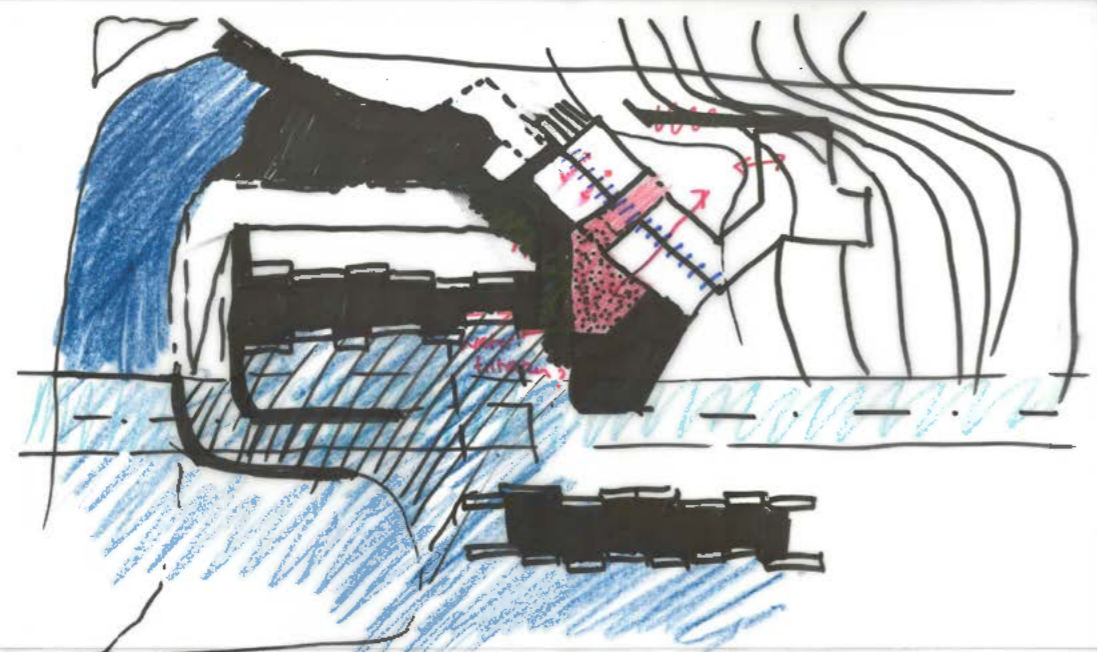
3. VILLA VERDE $3 = 12.7 = 12700m^2$
 $6.3 \times 8 = 50.4$
 $8 \times 8 = 64$
 $8 \times 8 = 64$

4. CITE MANIFESTE, MULTIKASTE SOCIAL HOUSING

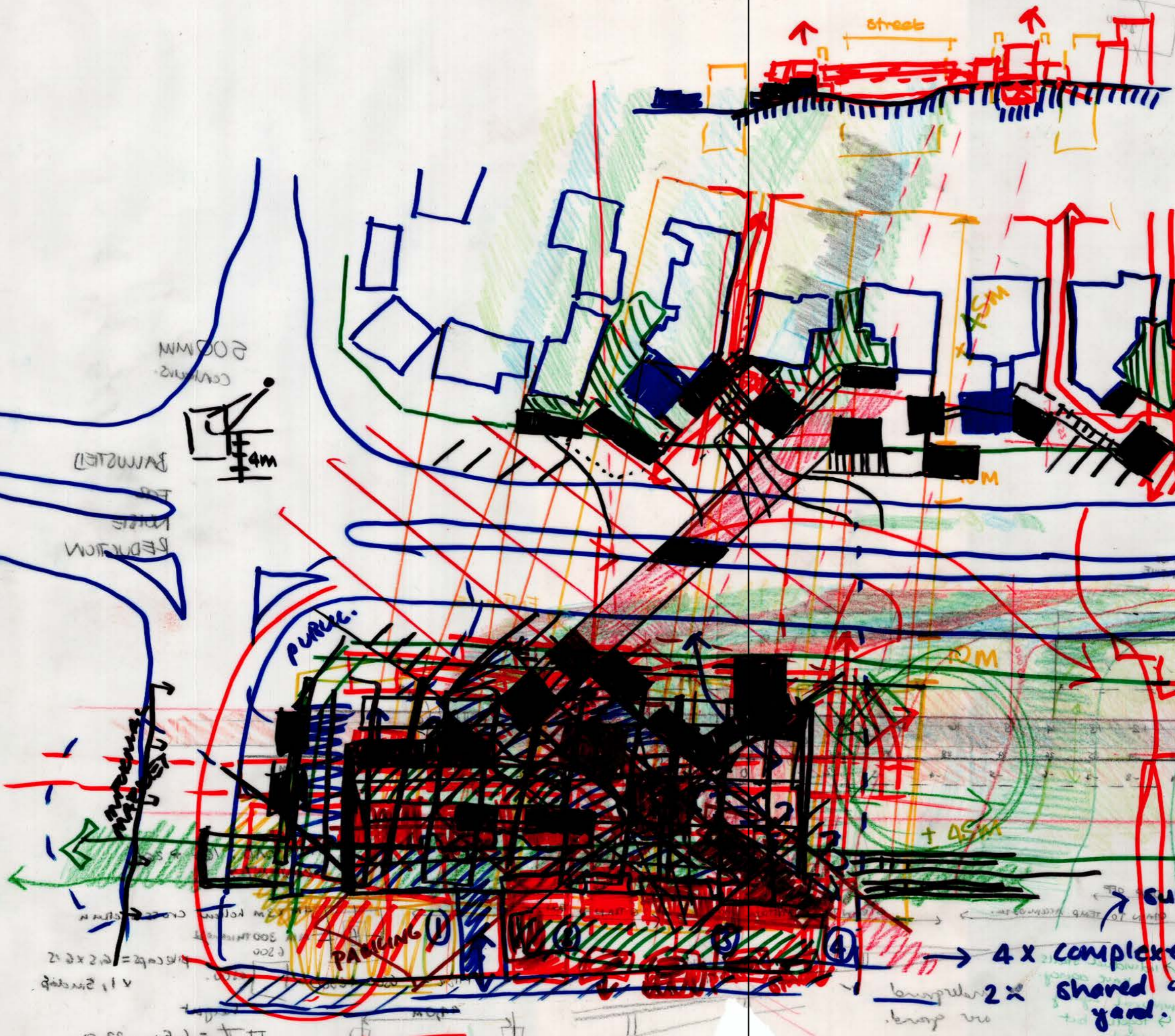
5.



6.

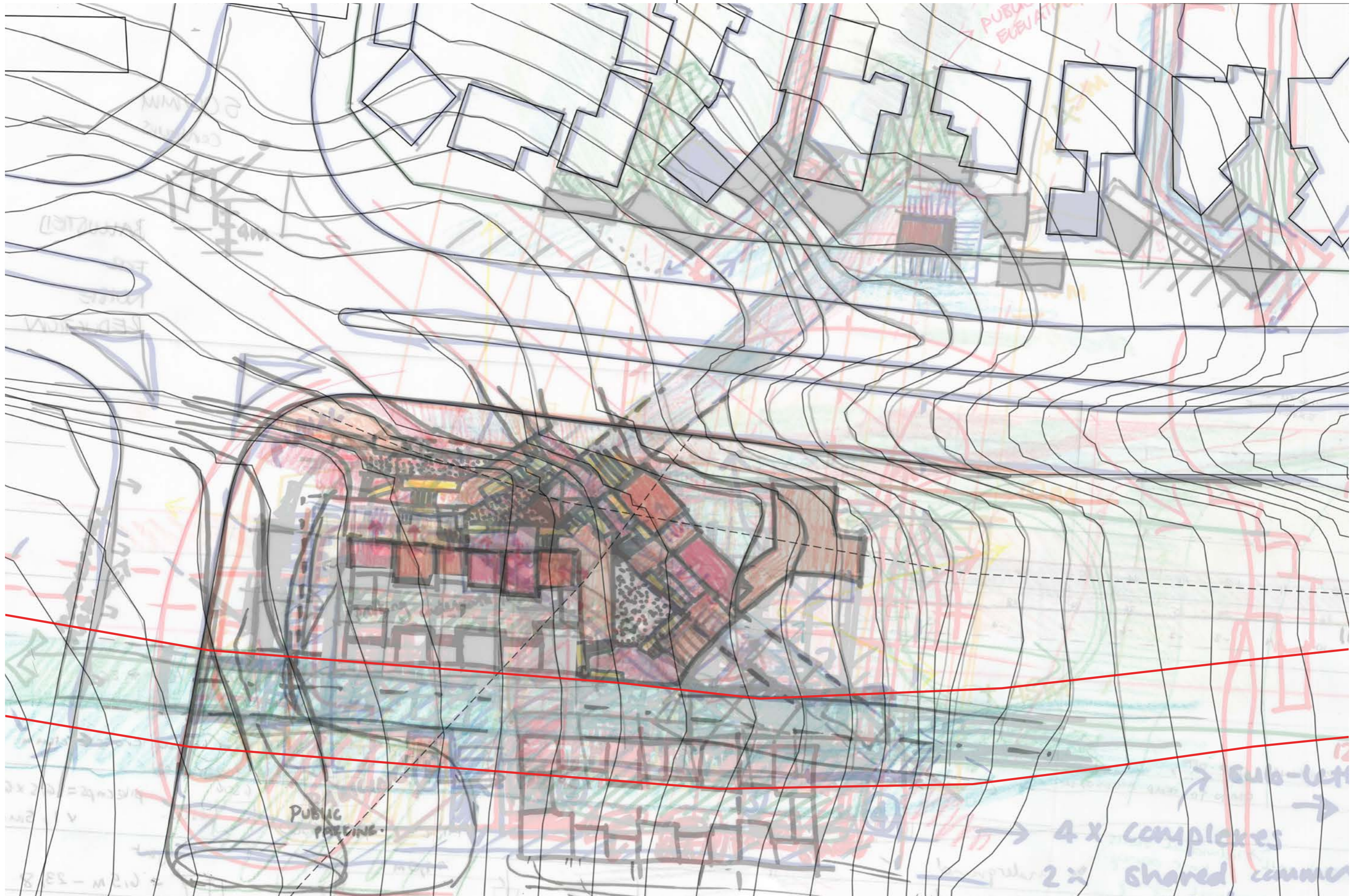
ARCHITECTURE AS STREET

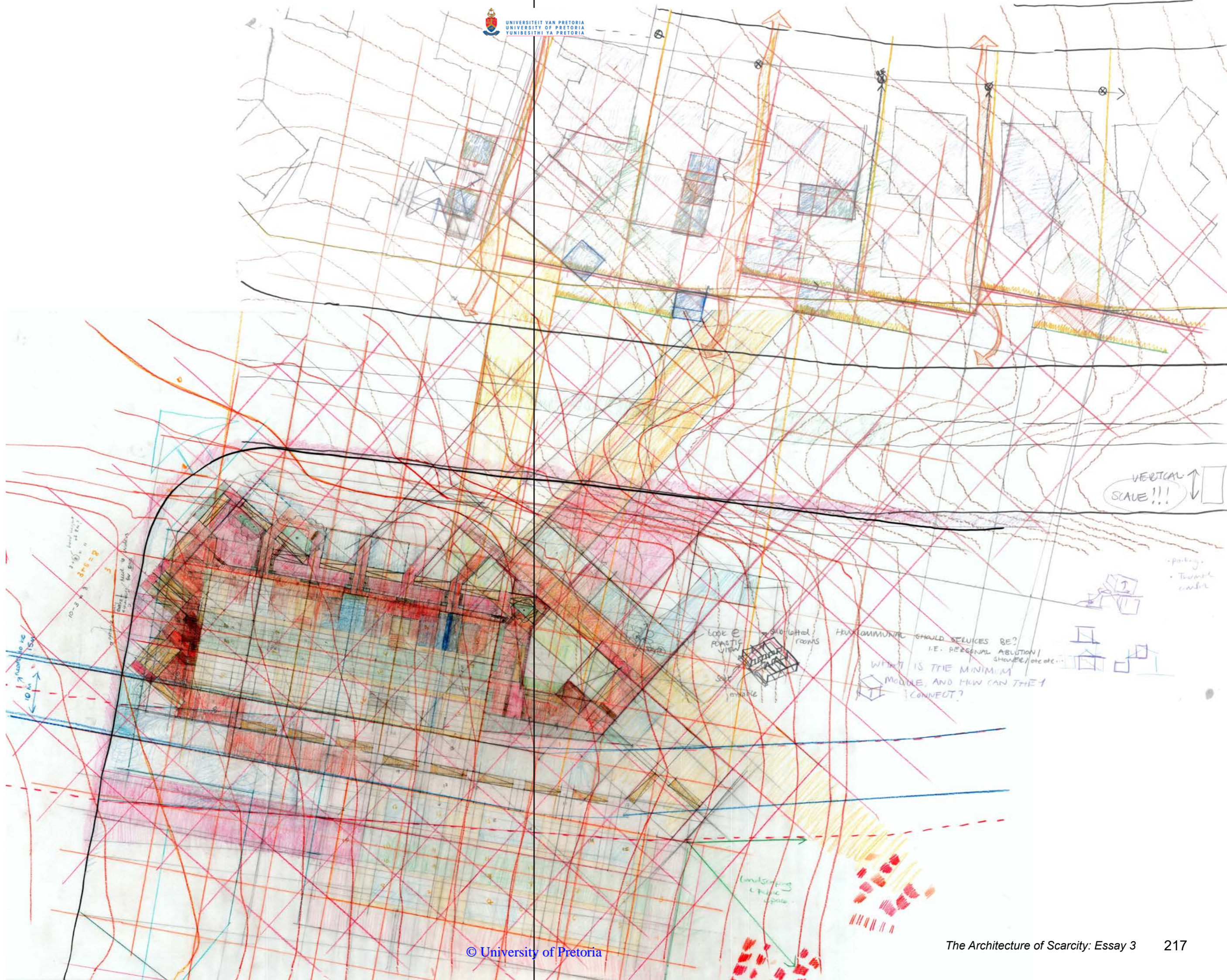


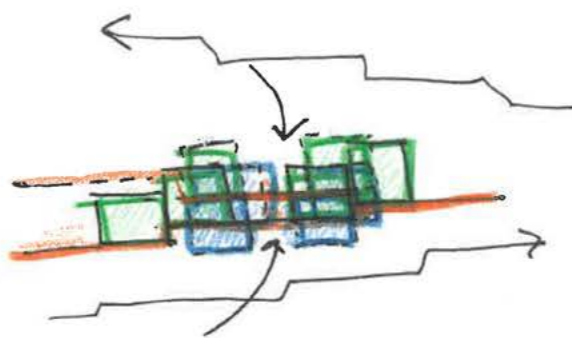
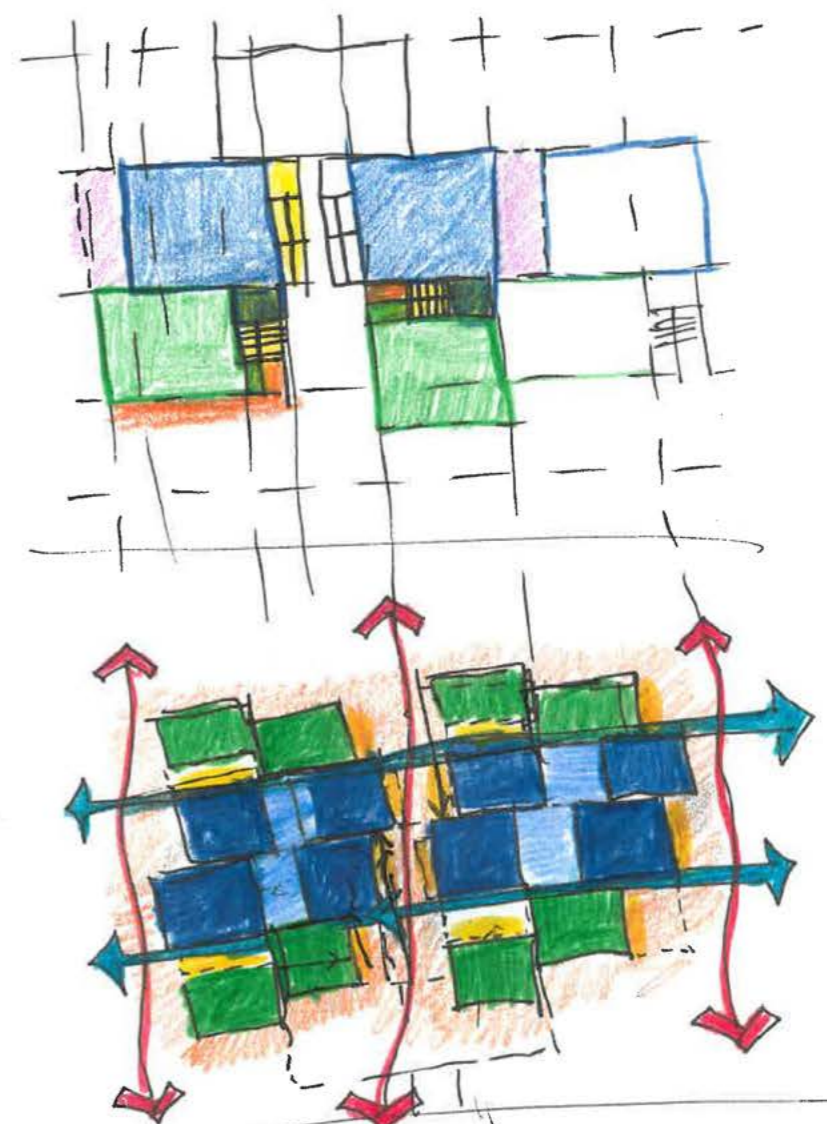
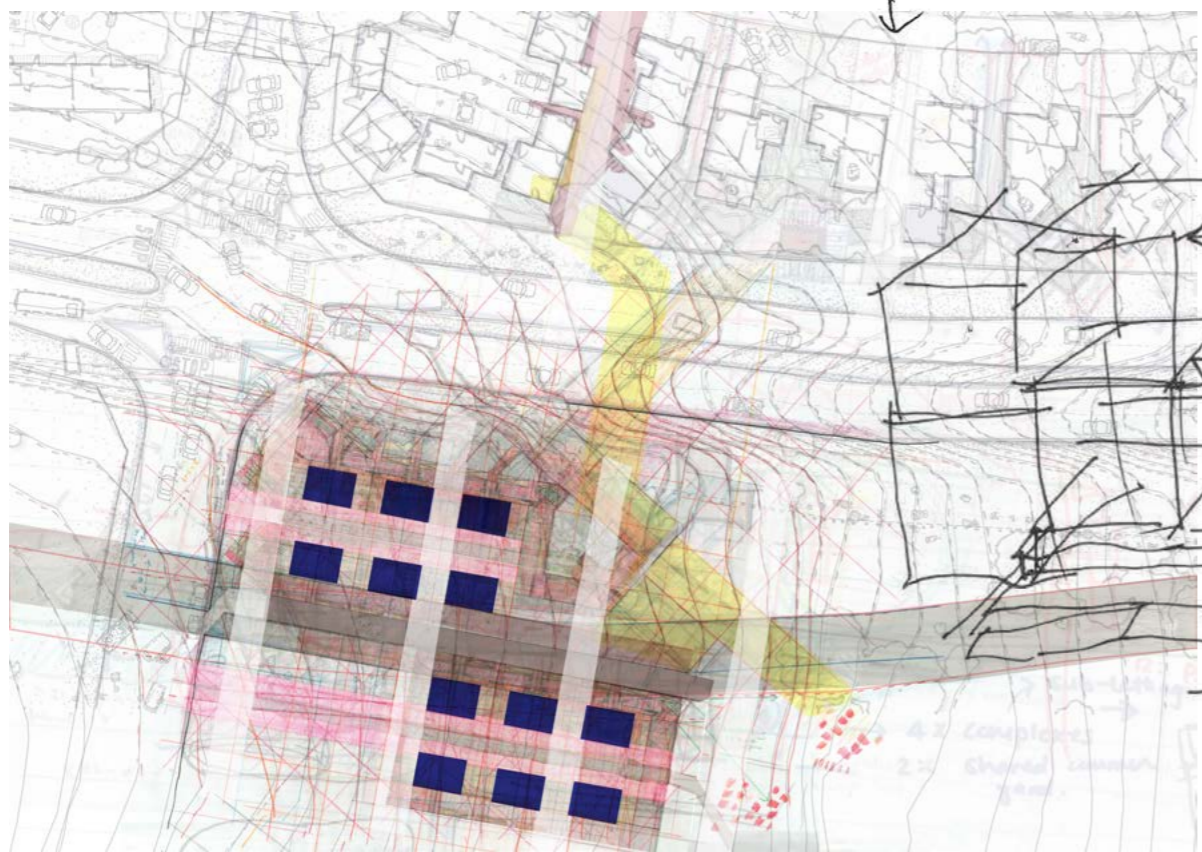
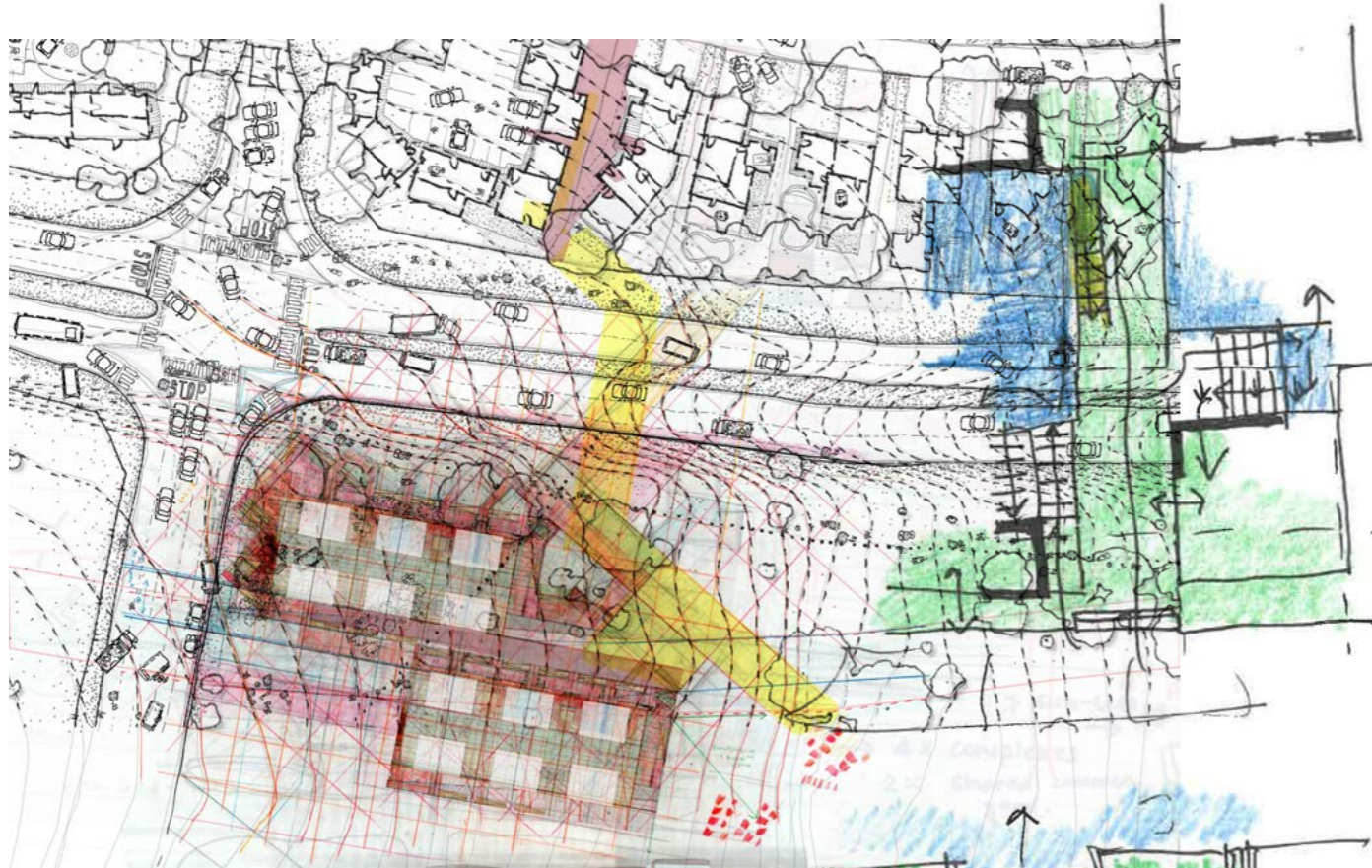


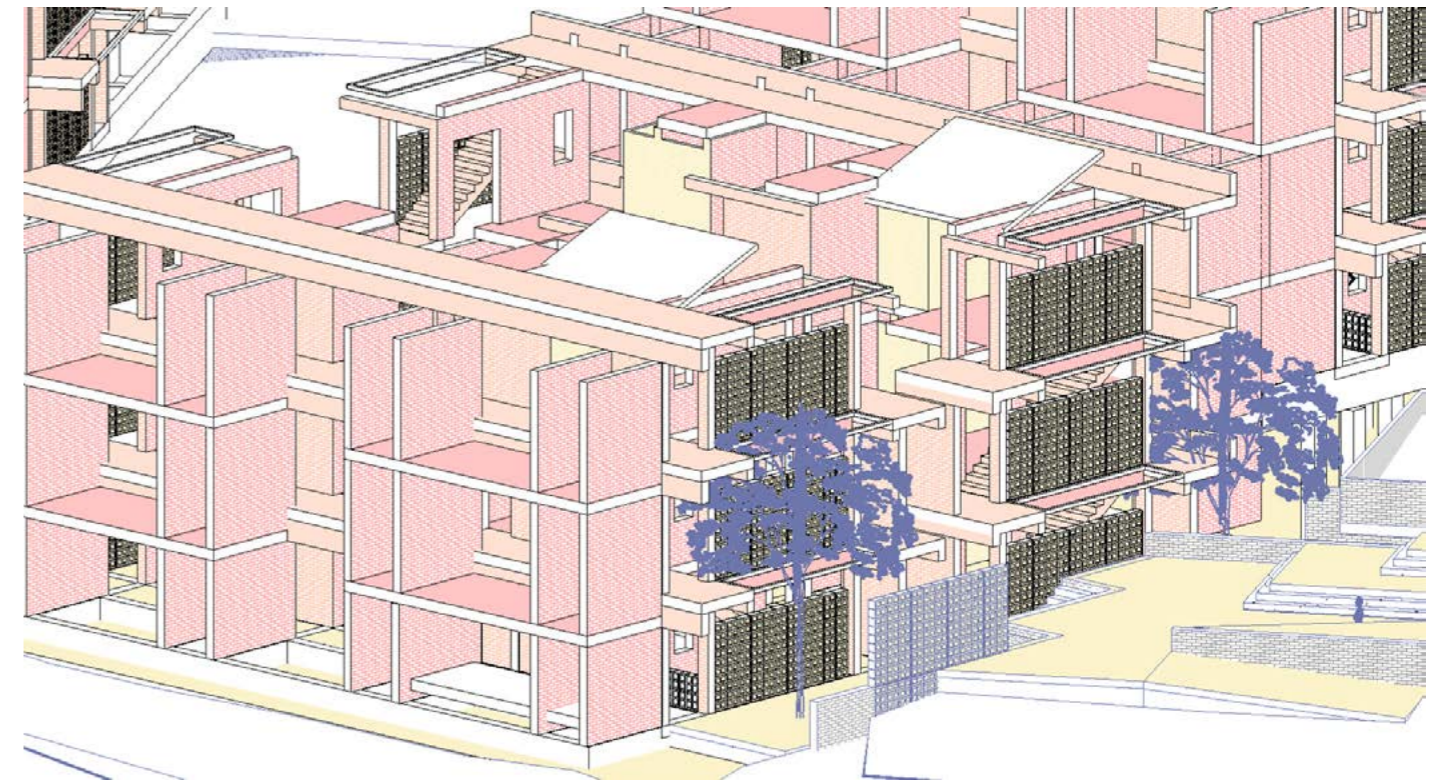
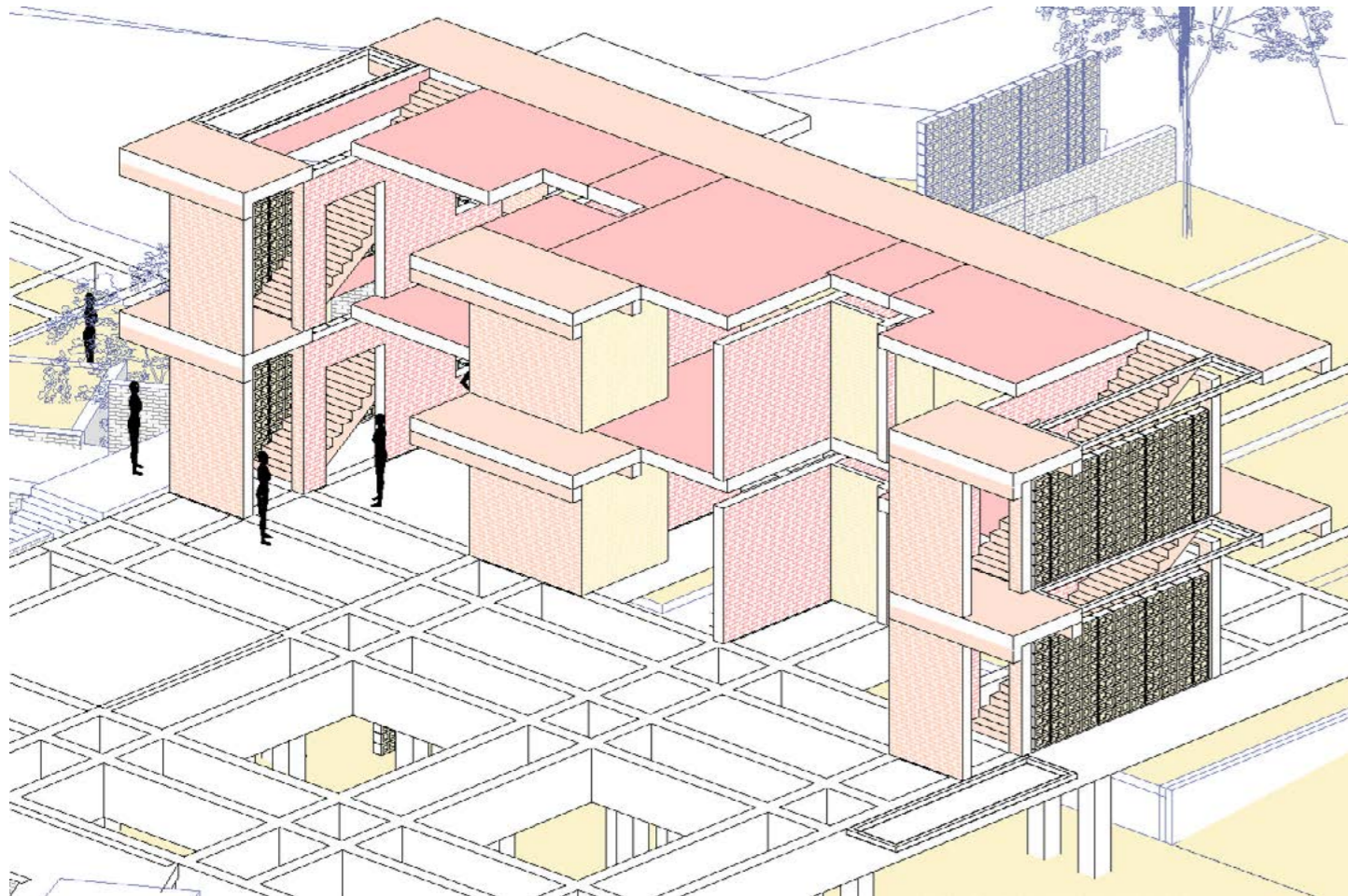
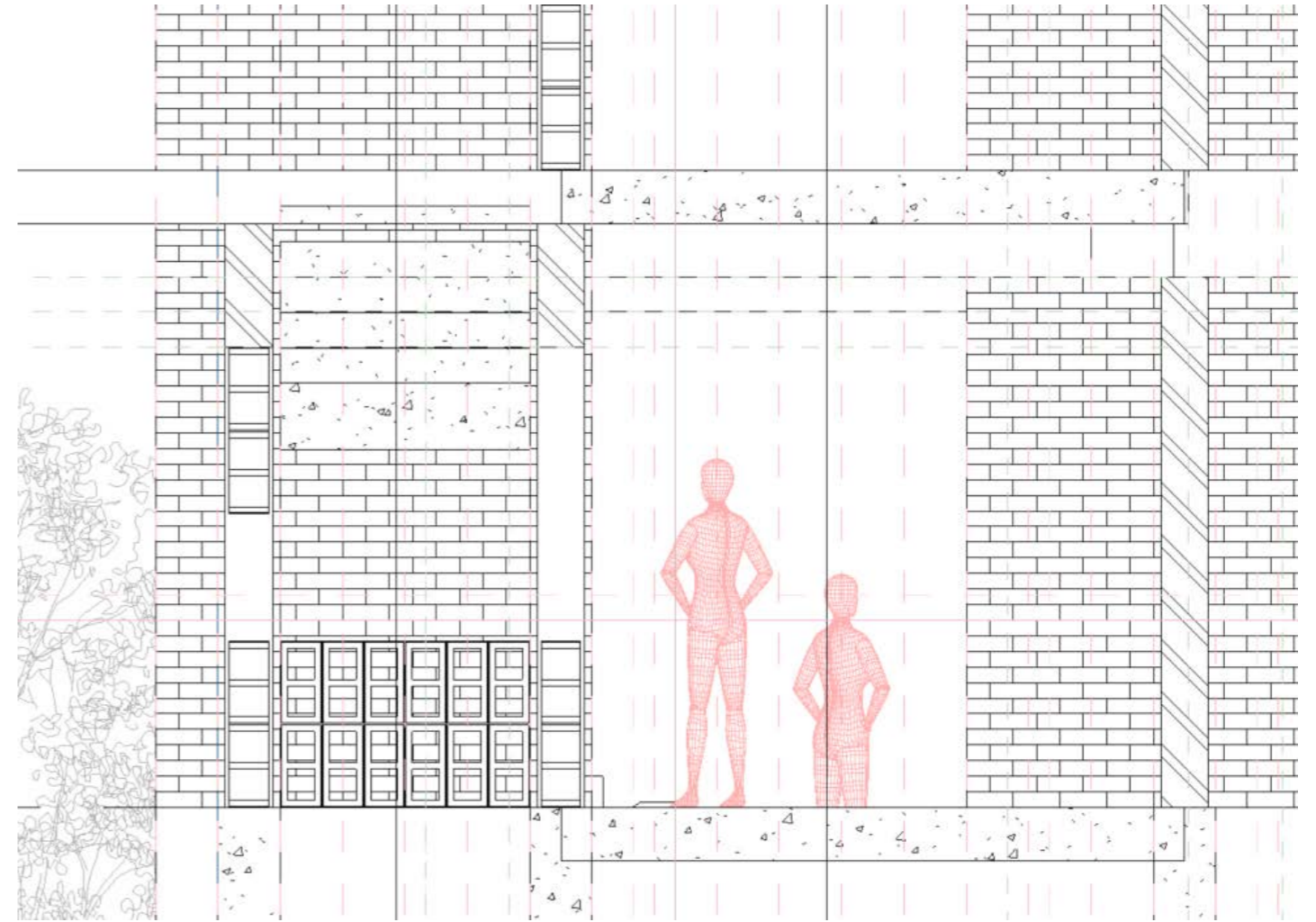
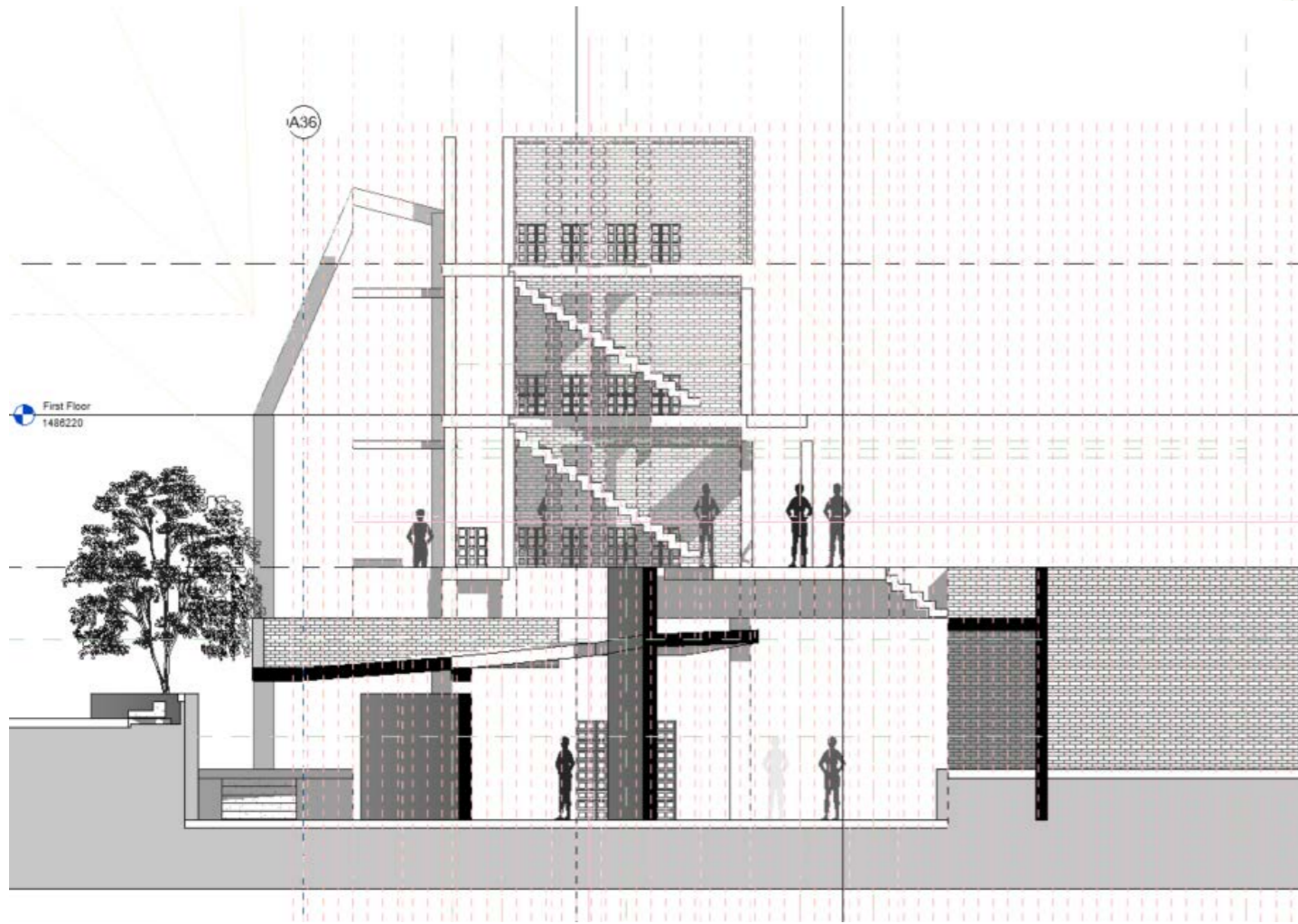


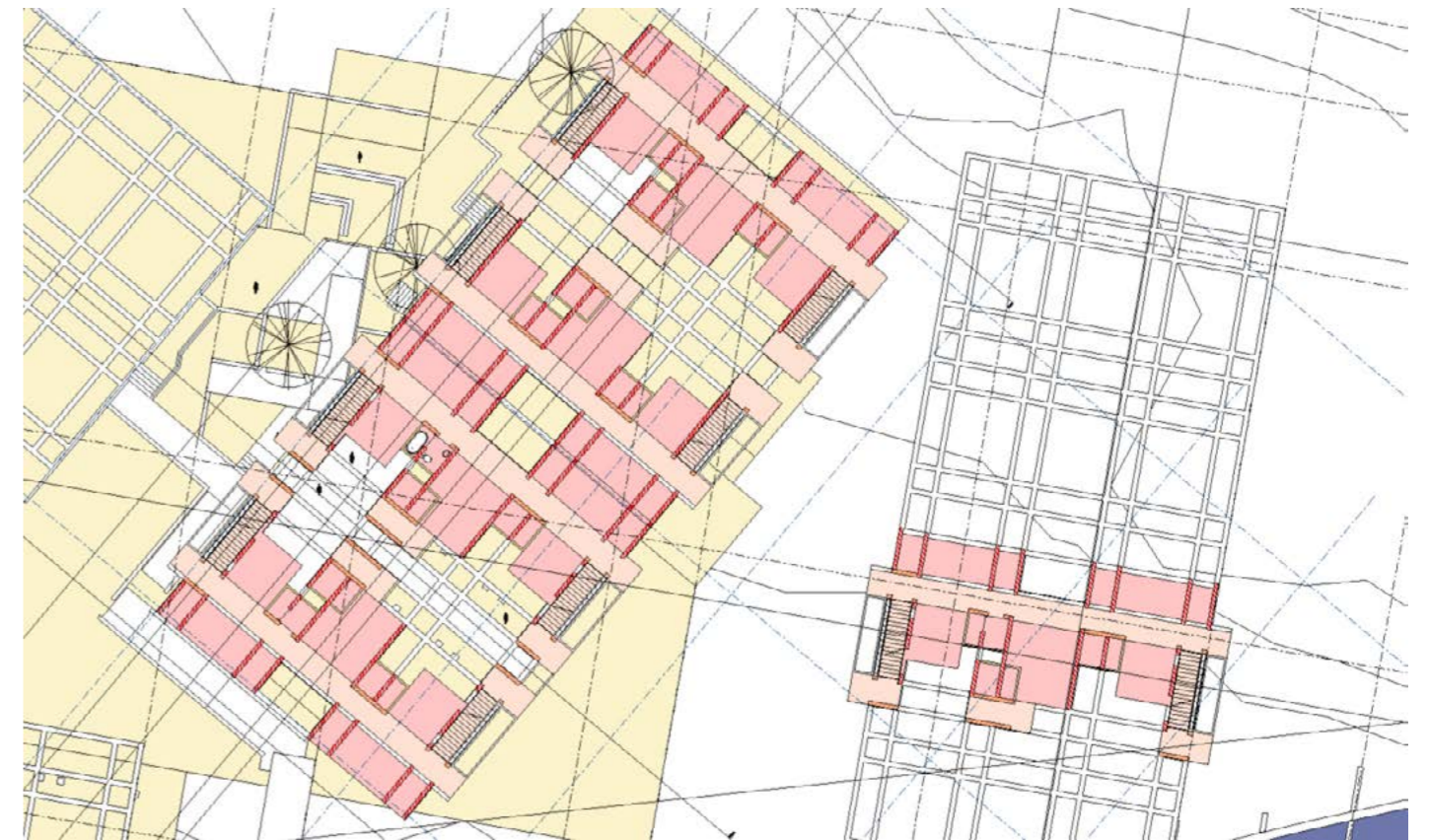
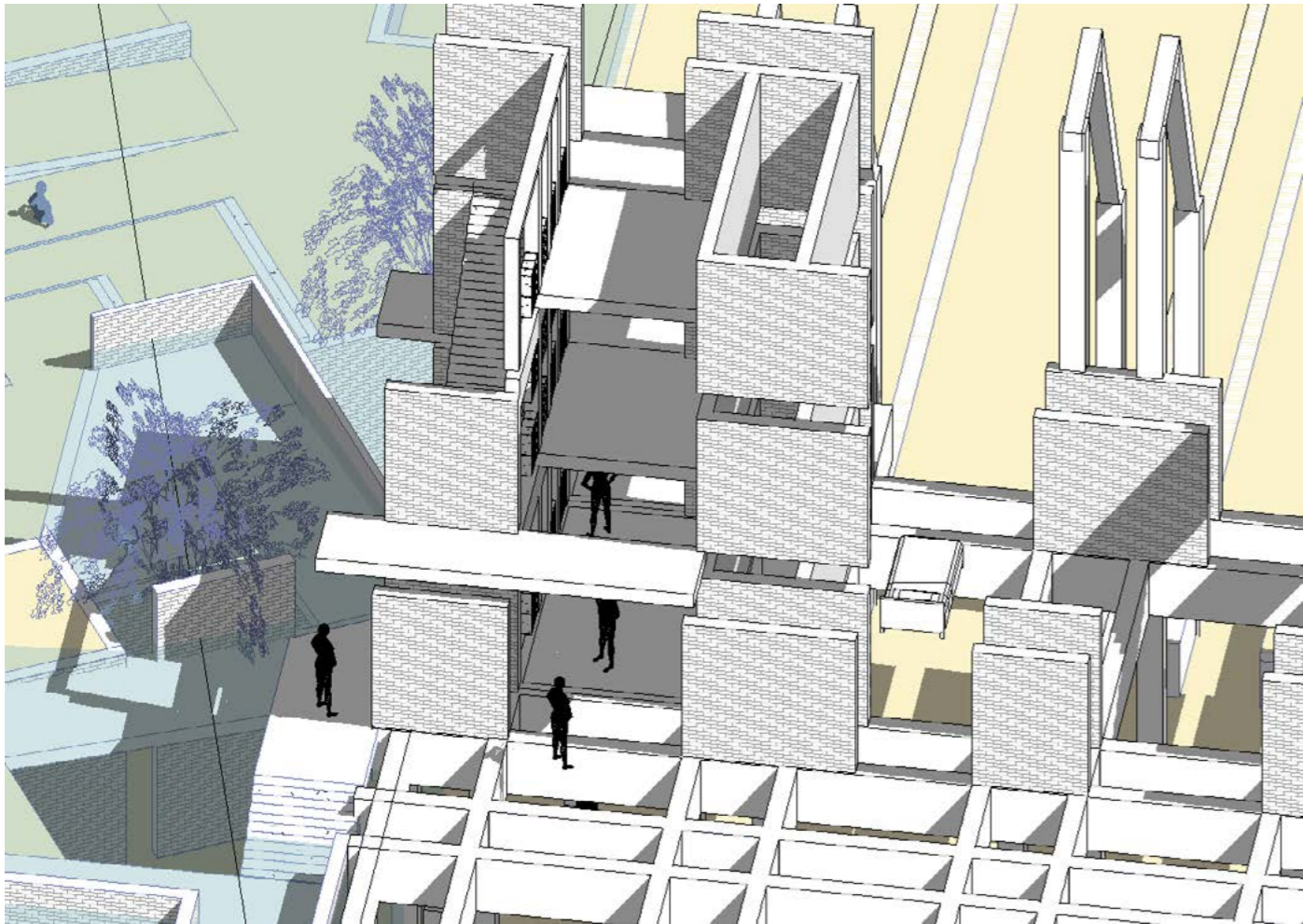
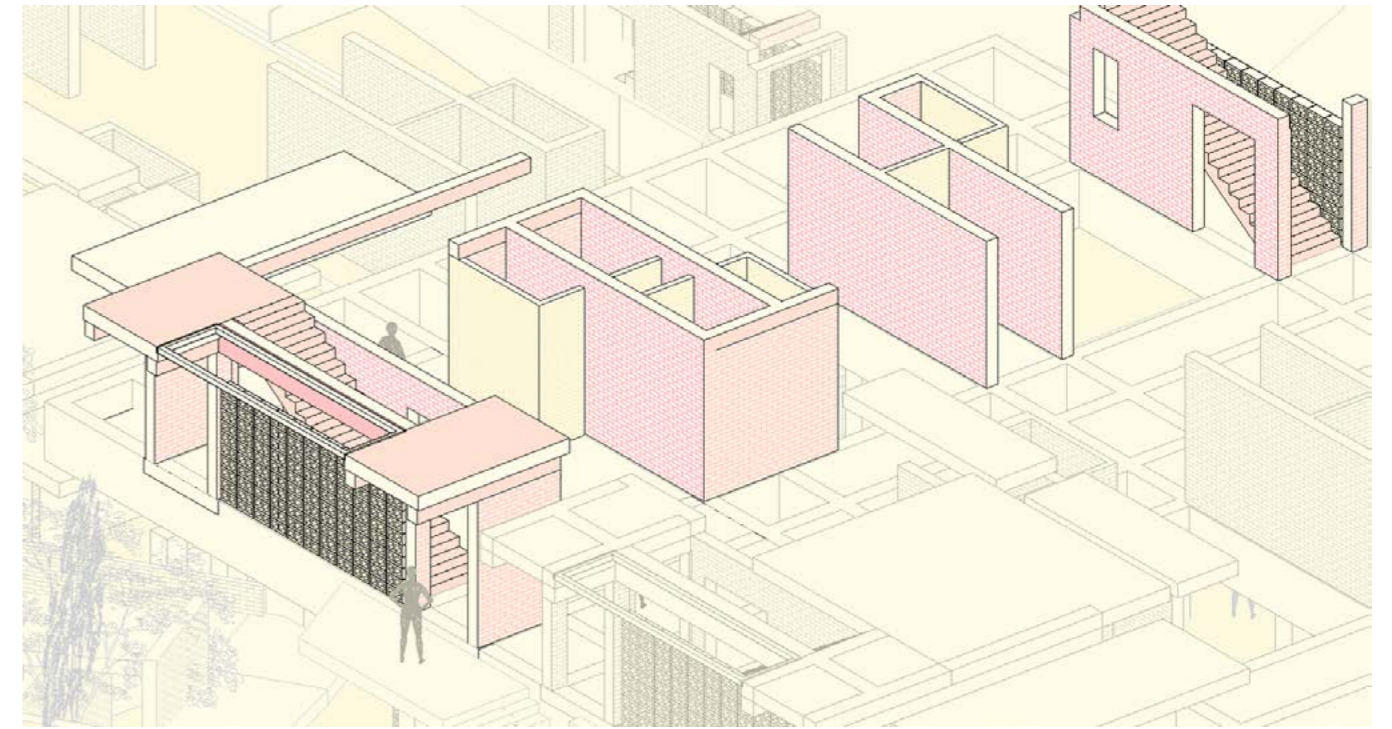
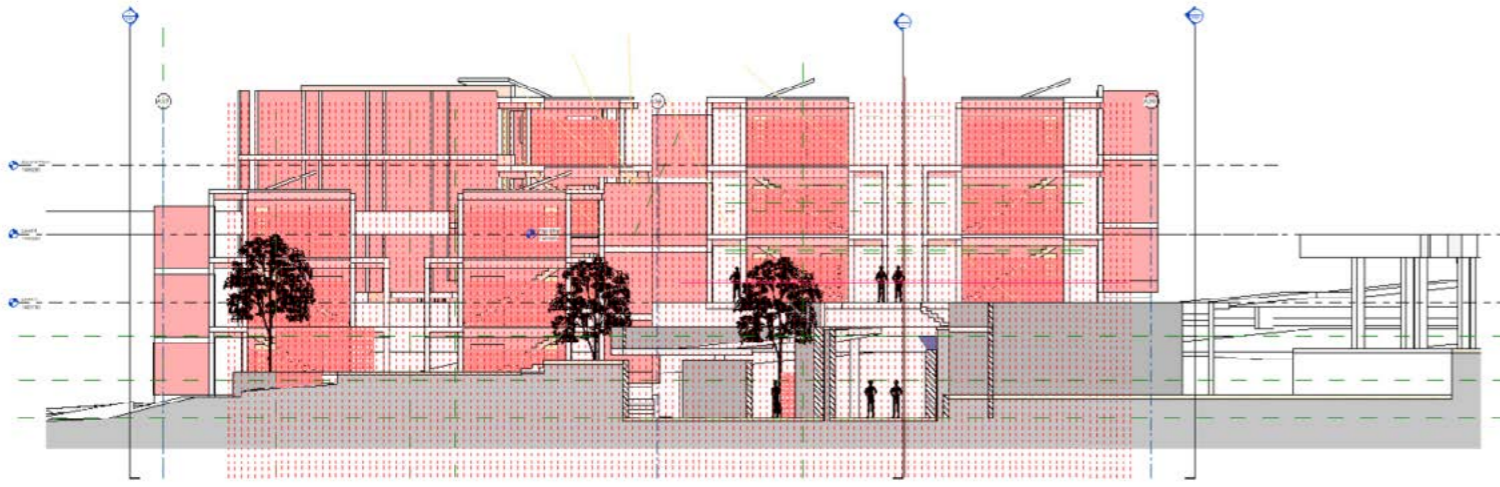
- PLOTS + SIZES** - STUDY COMPARTMENTALISATION
- Existing land parcel sizes → estate.
 - Existing living spaces informal settlement.
 - Occupancy.
 - Ratio → common area → private area → 'SOHO' home office/ work space.
 - Sub-letting.
 - roof-rights.
 - Densification.
 - Hyperoptimization.
 - Gautrain
 - Complexes + Gated communities in Mamelodi Park.
 
 - Code → Notti map → public vs private.
 - PASOP! Building lines....
 
- 4 x complexes shared common yard.
- sub-letting →
- how do we need?

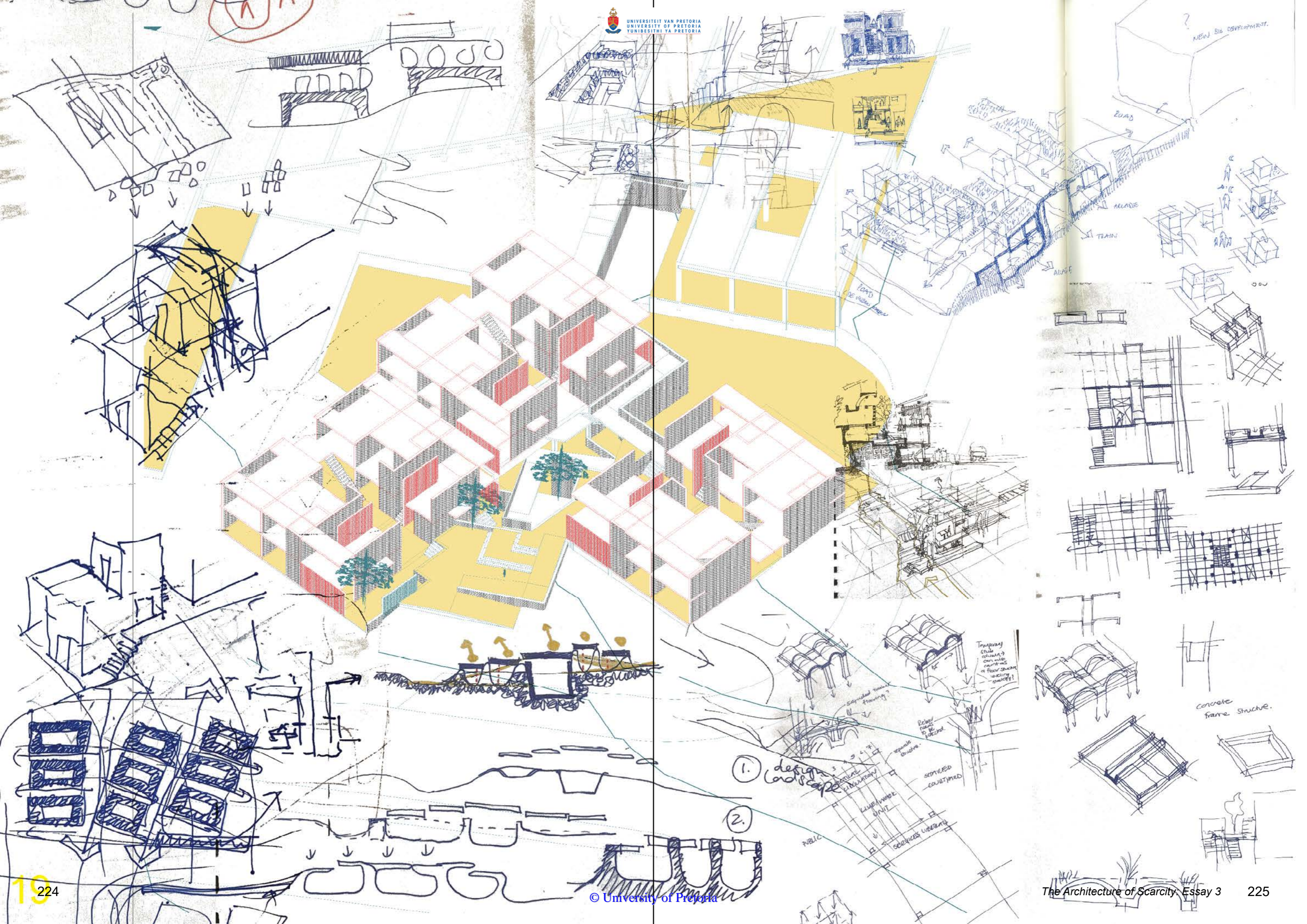


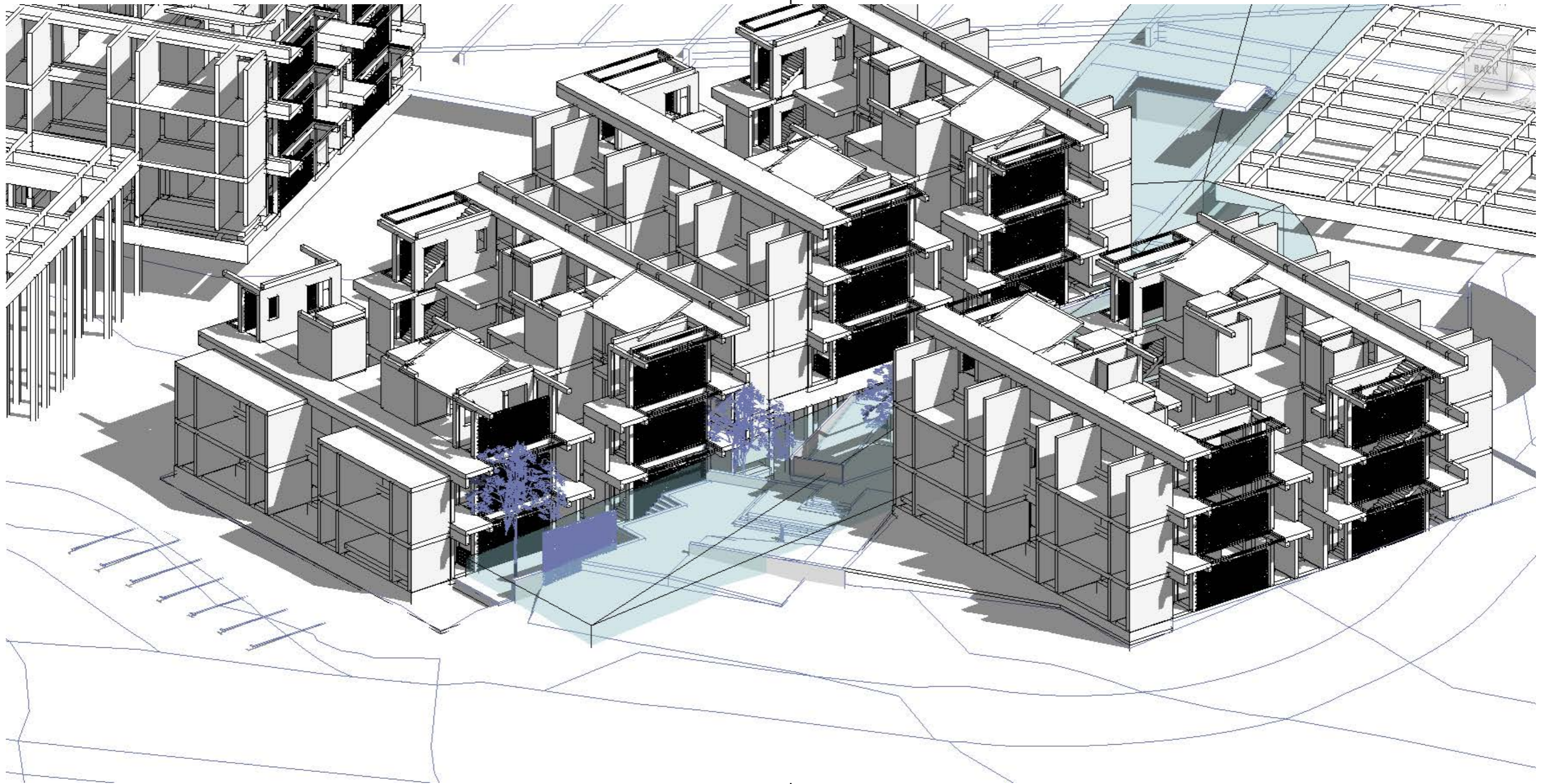




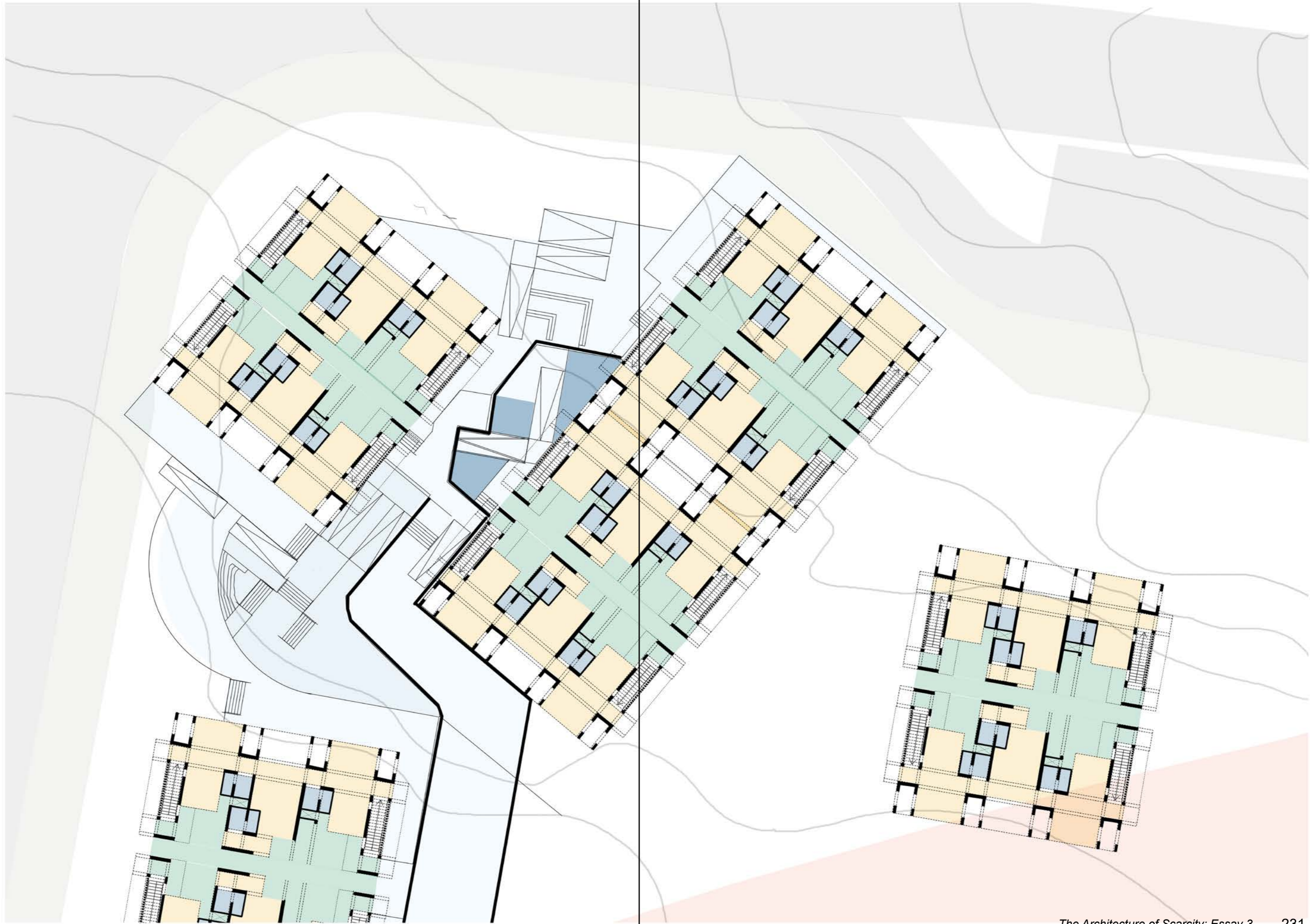


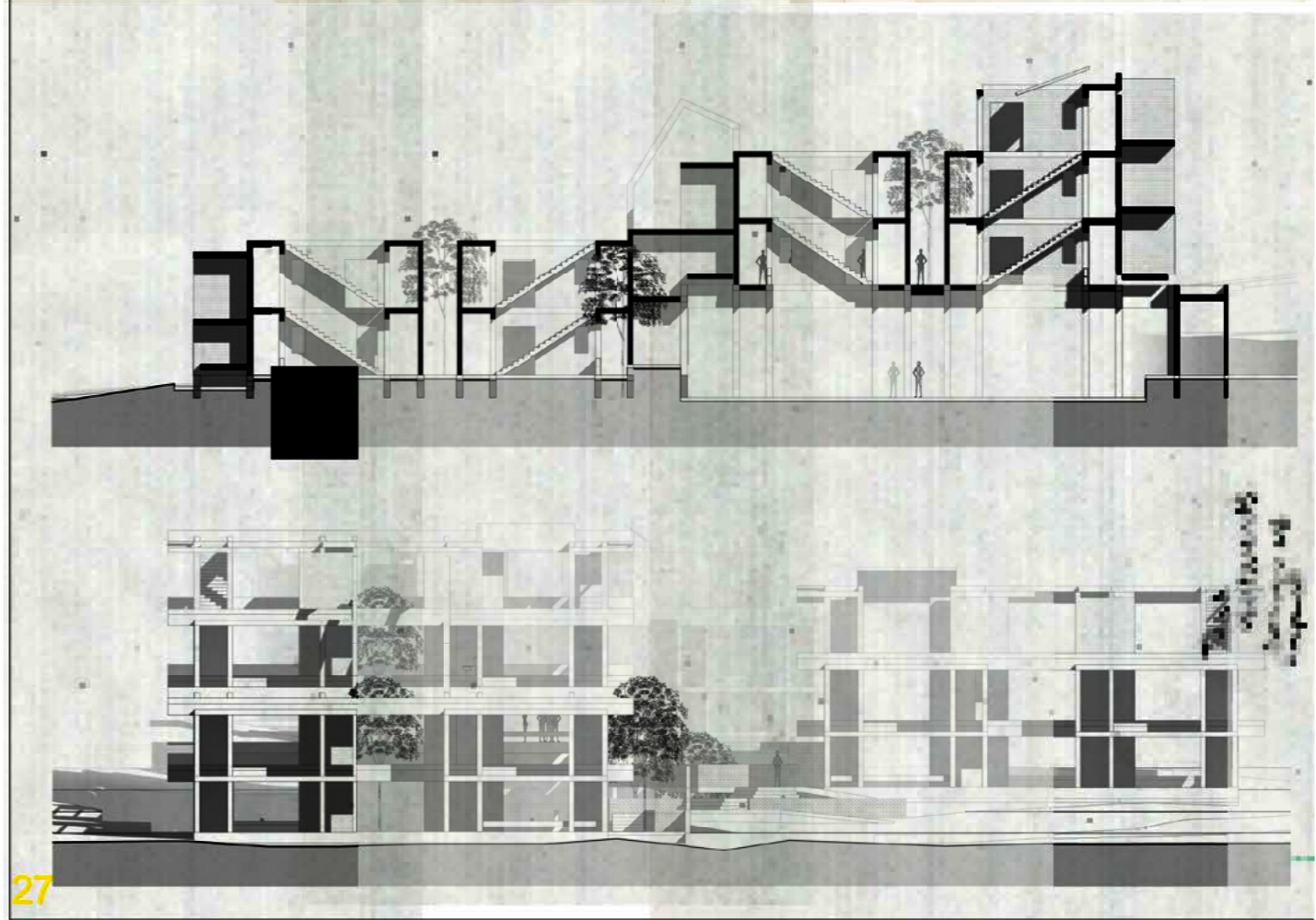
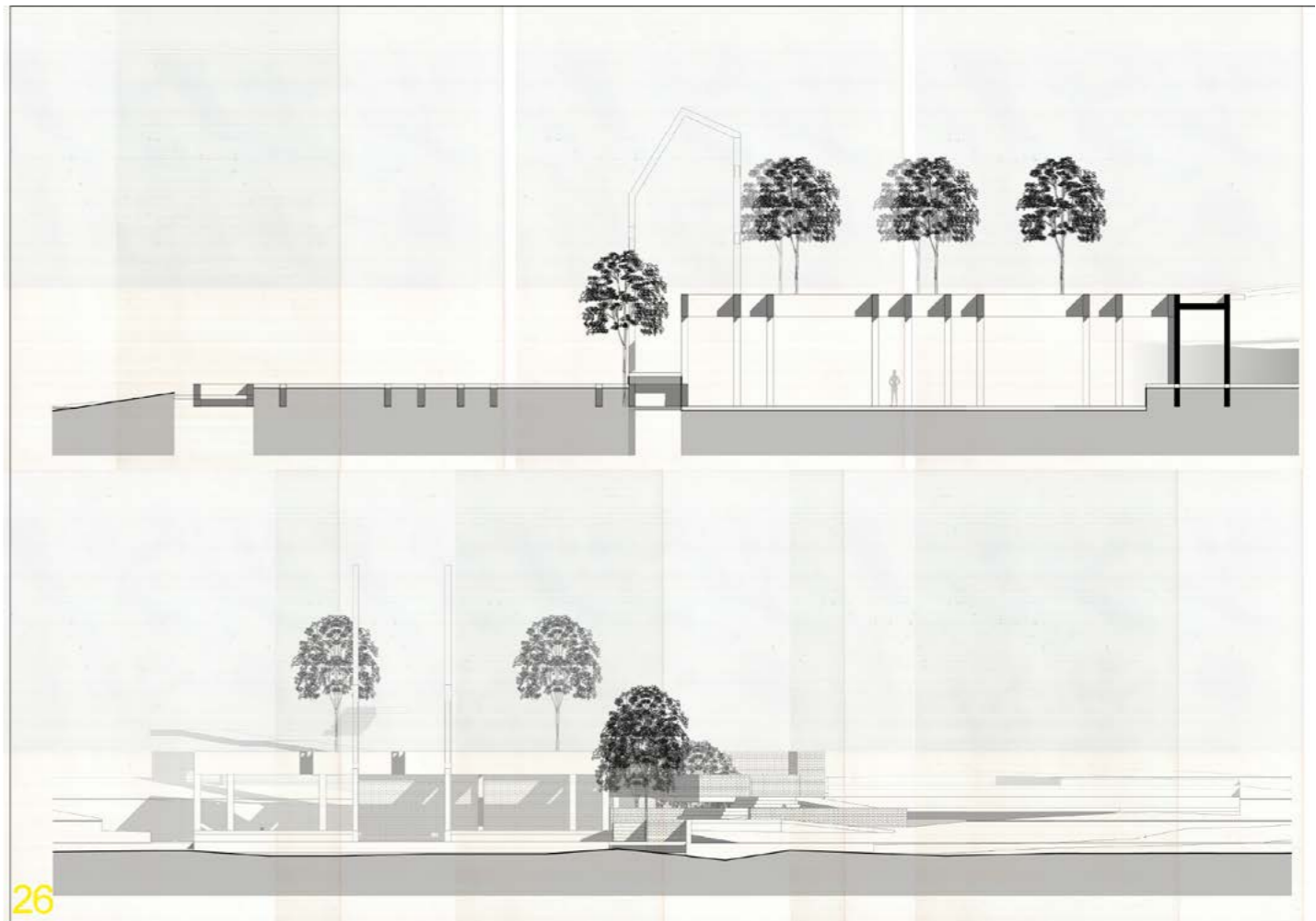
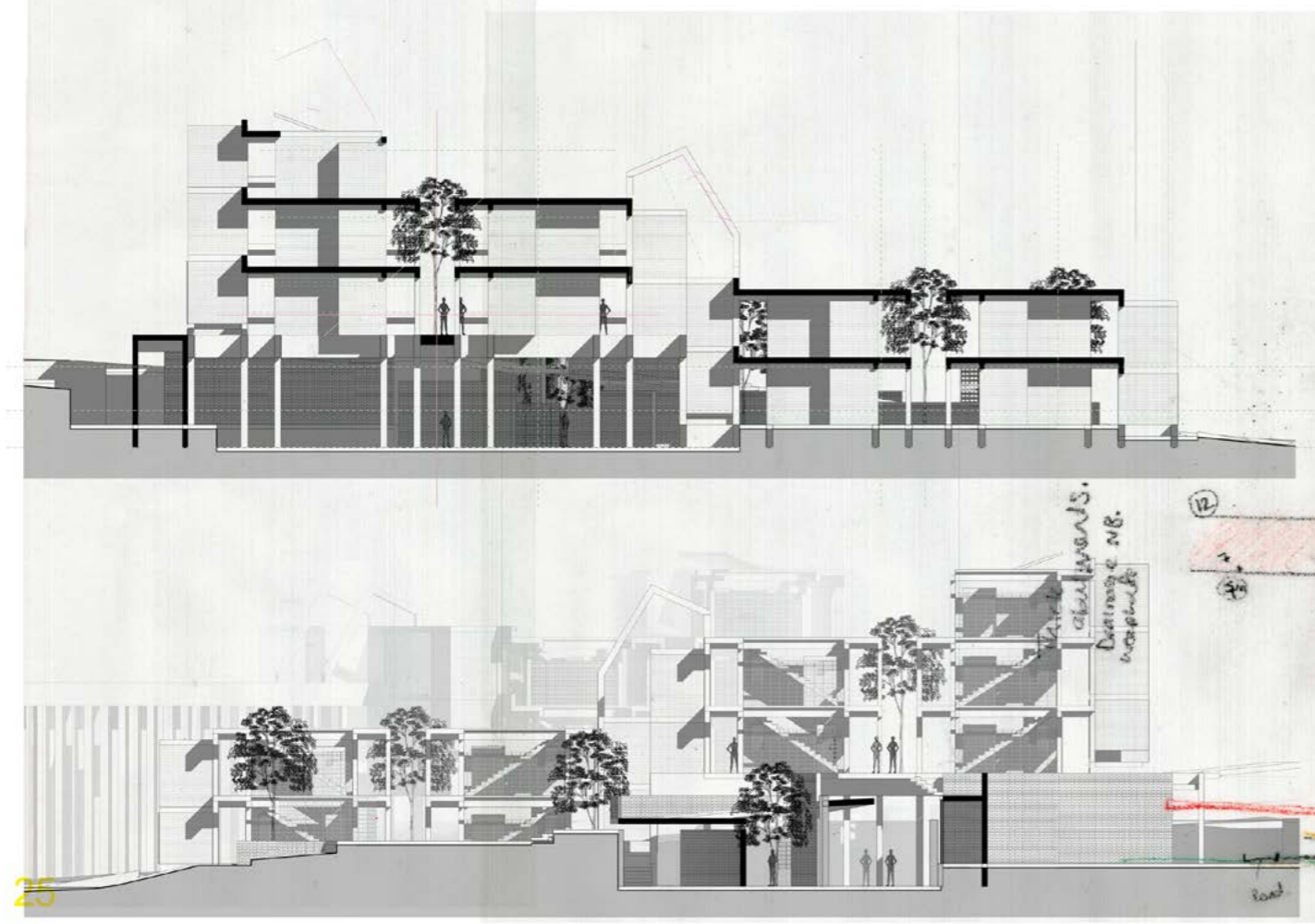
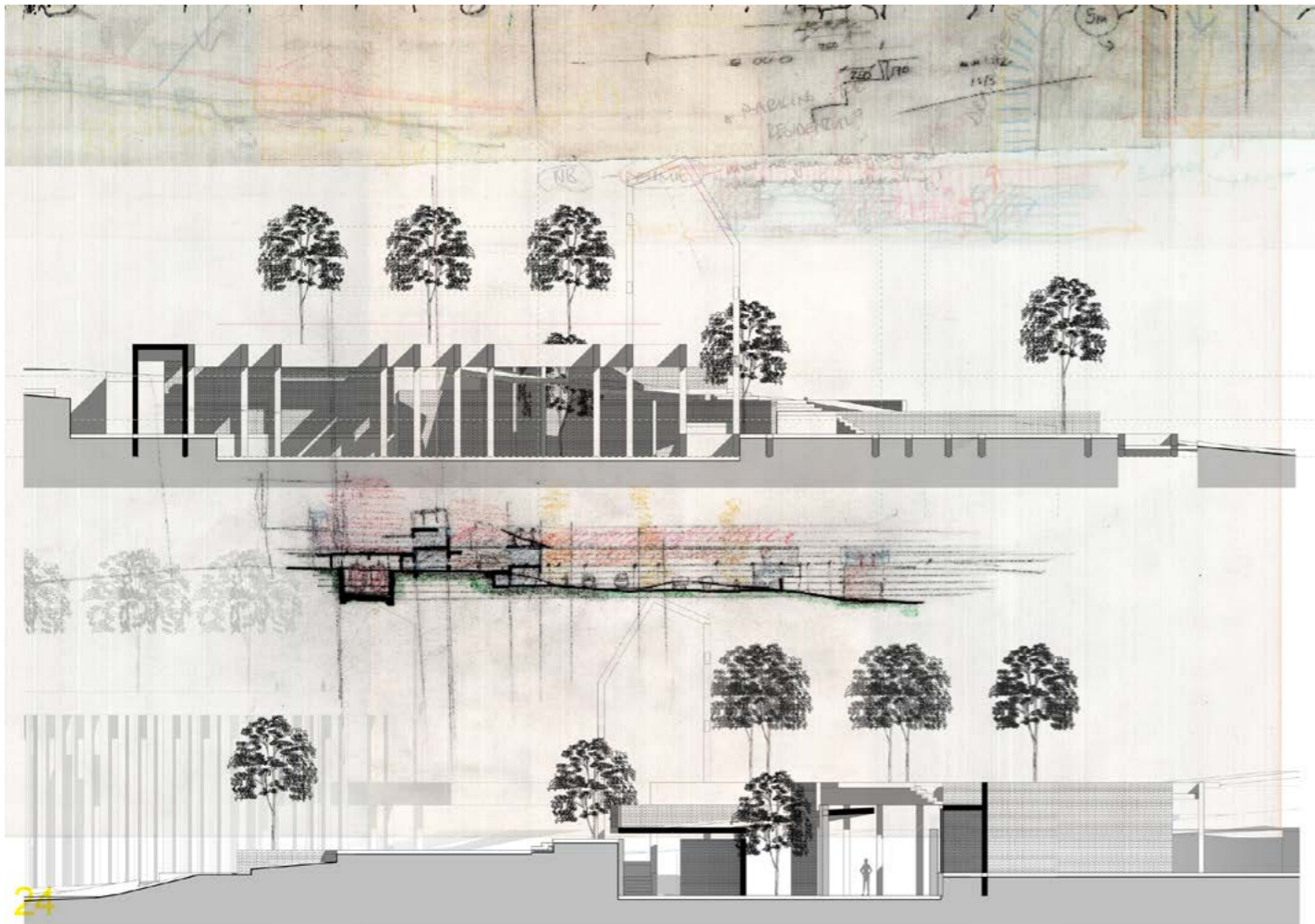


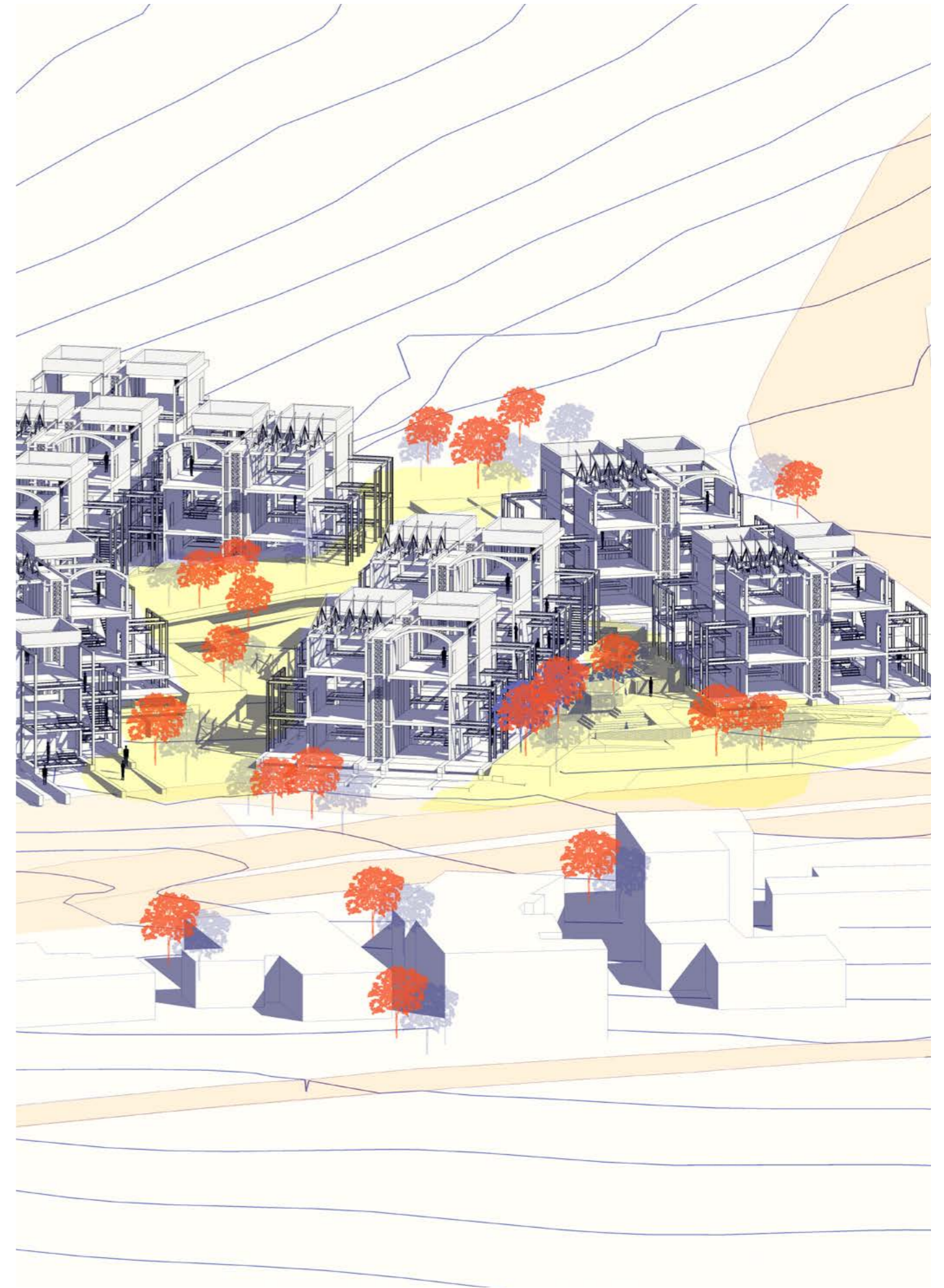
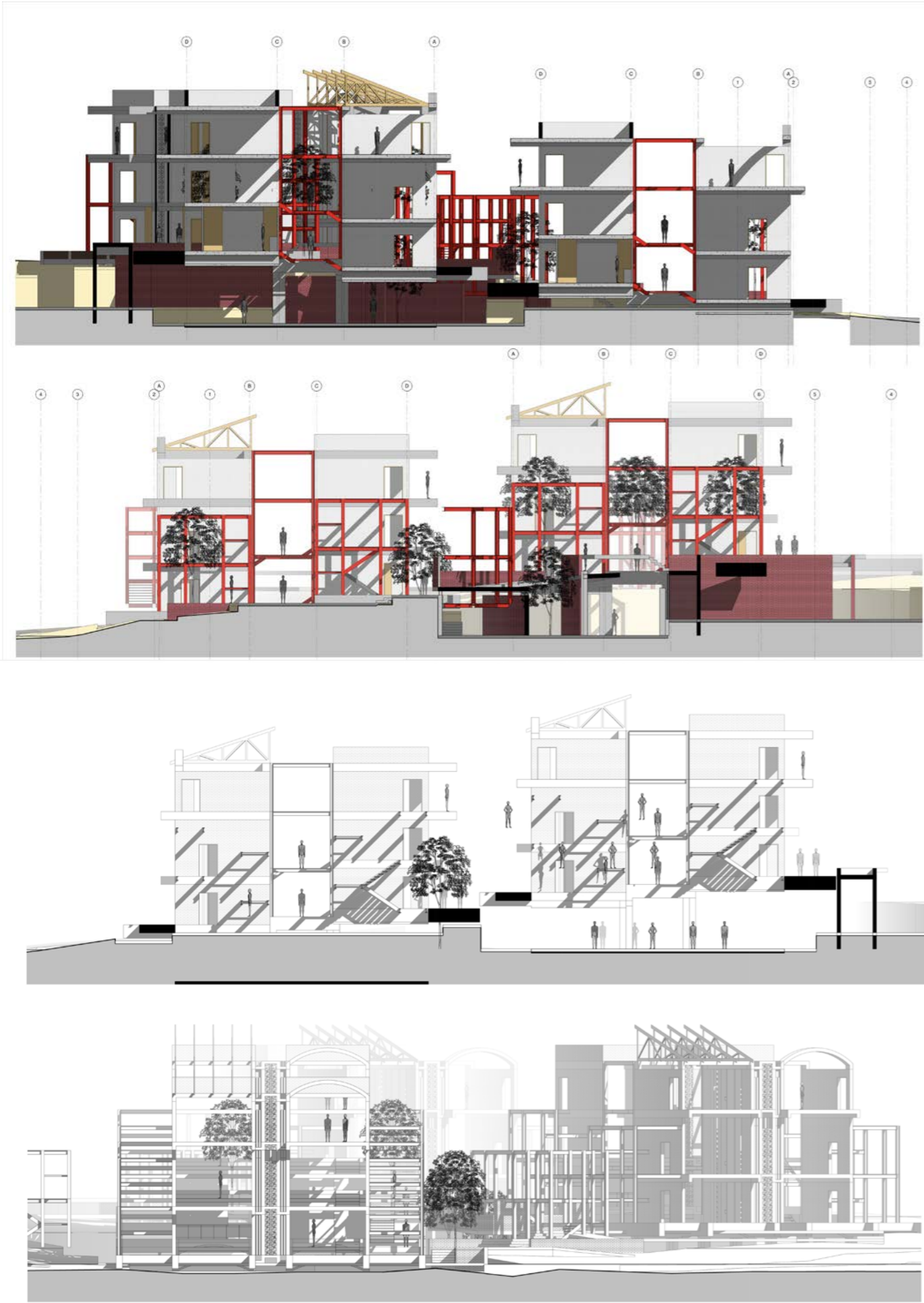




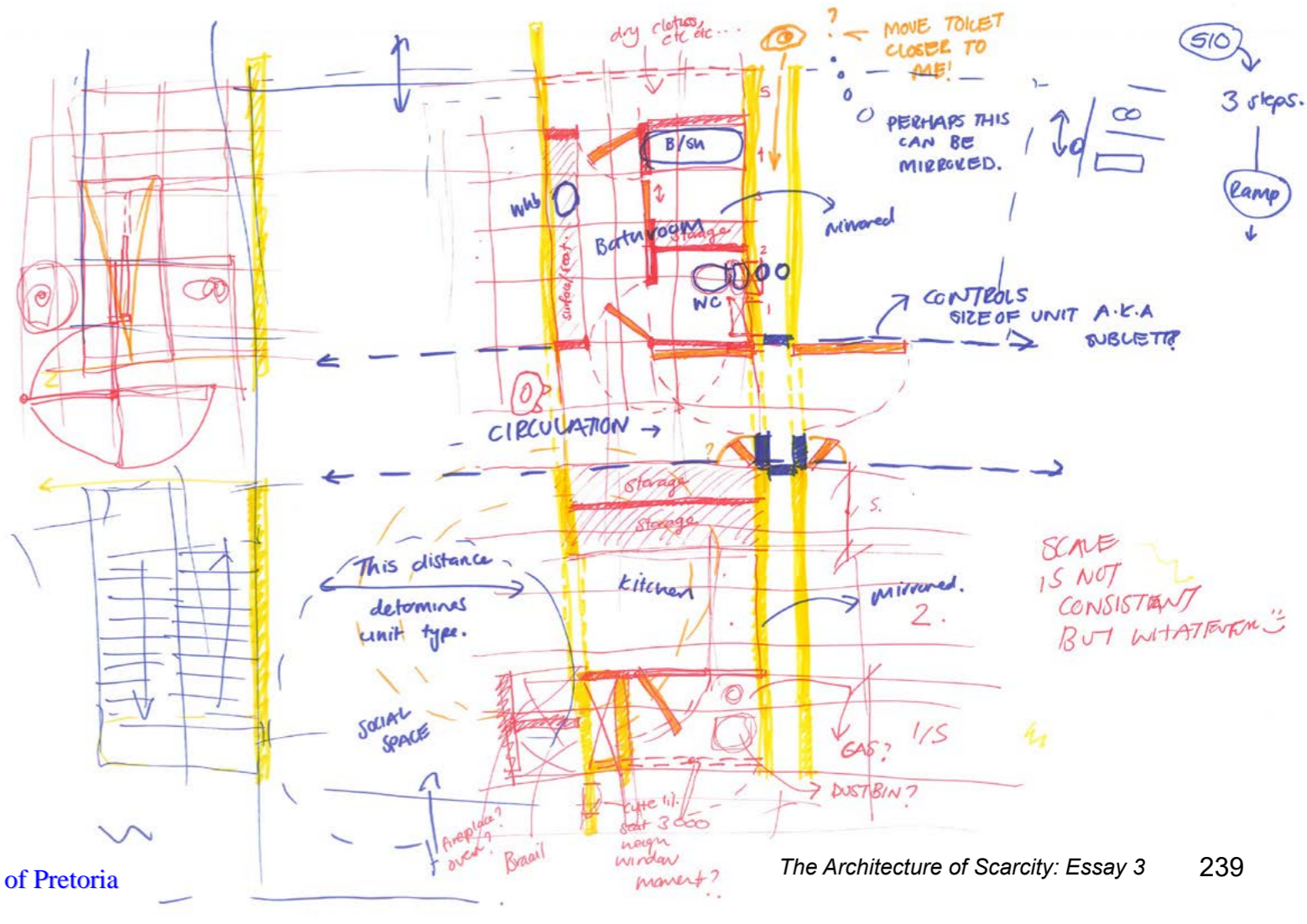
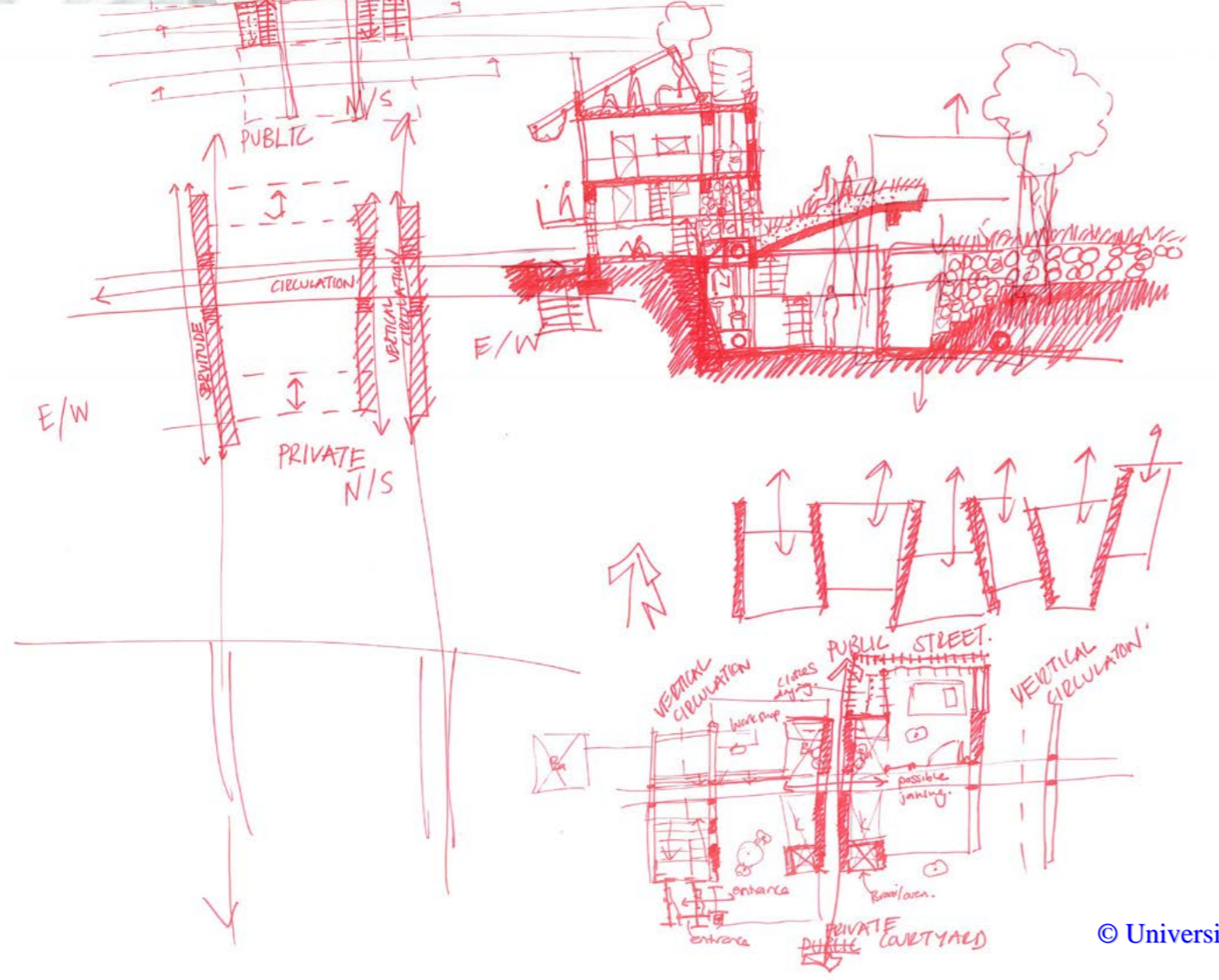
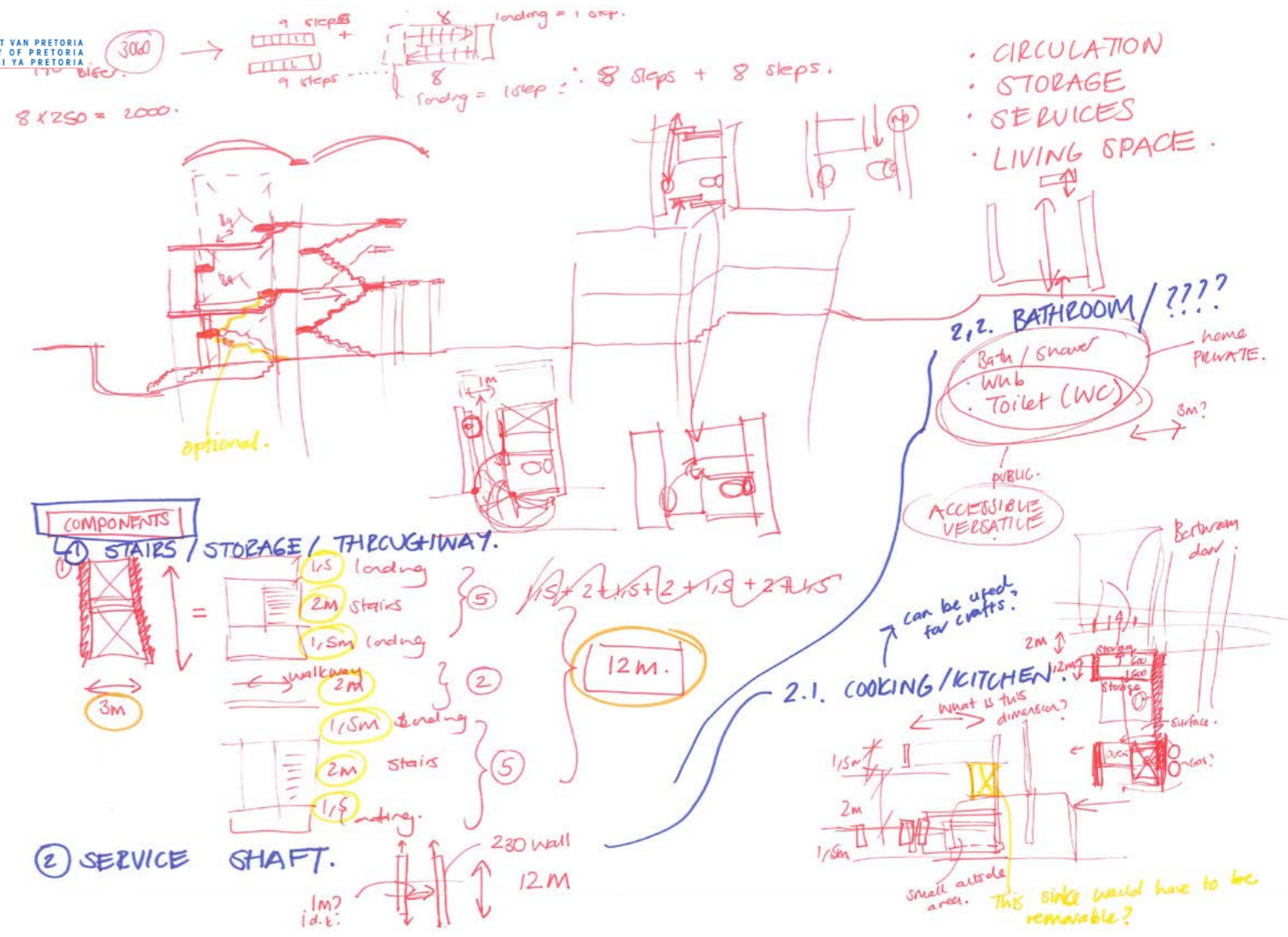
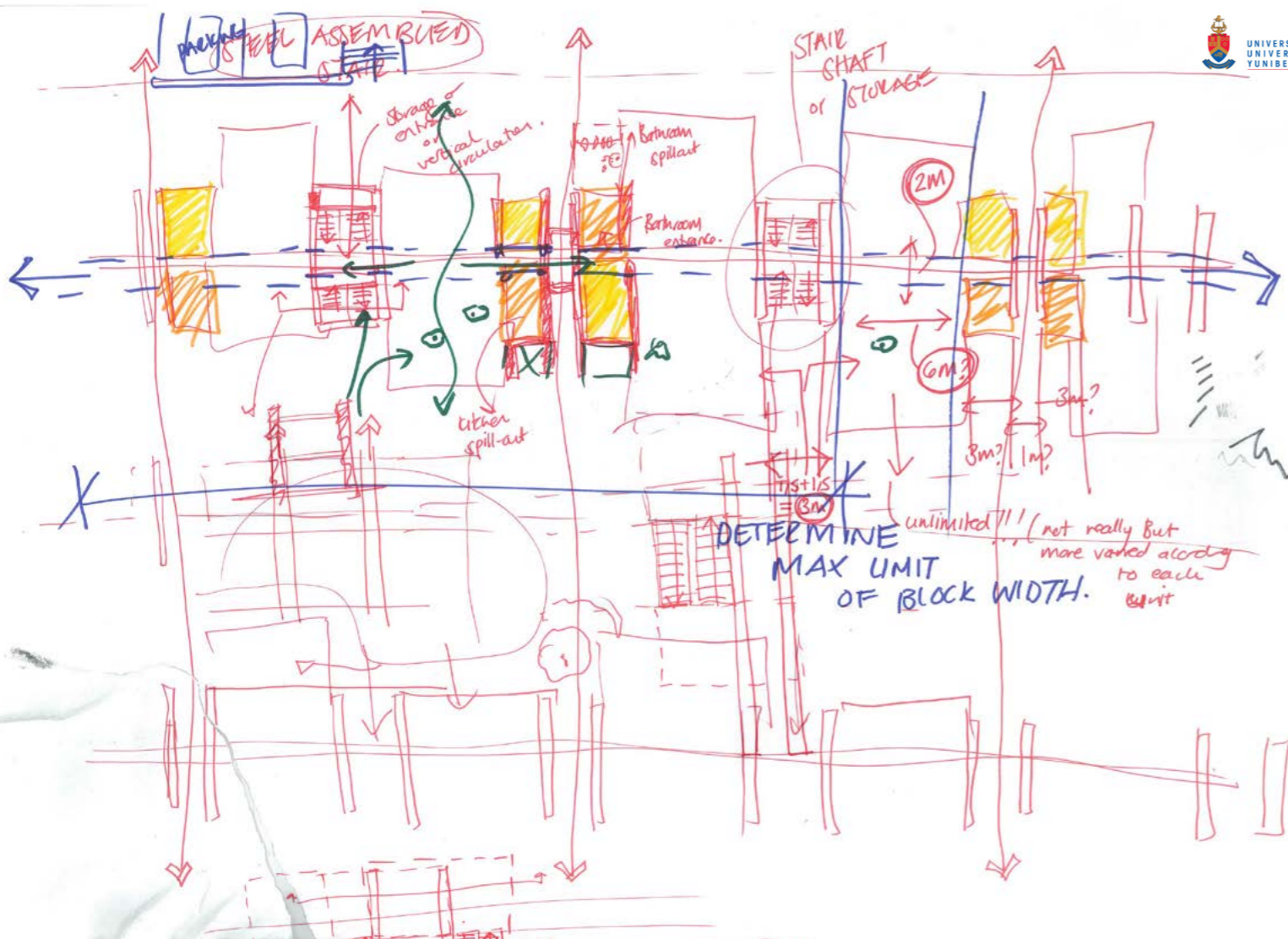


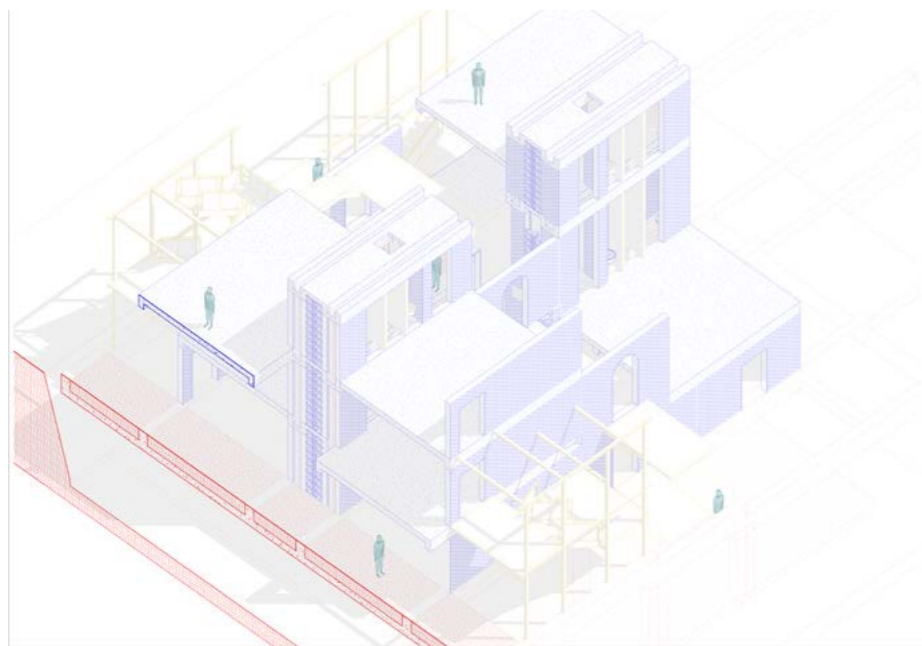
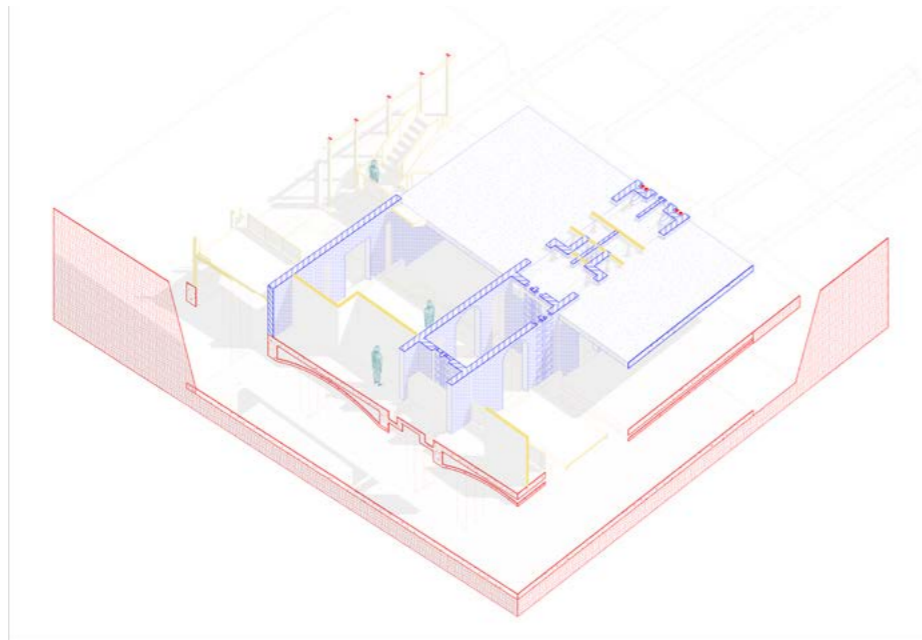
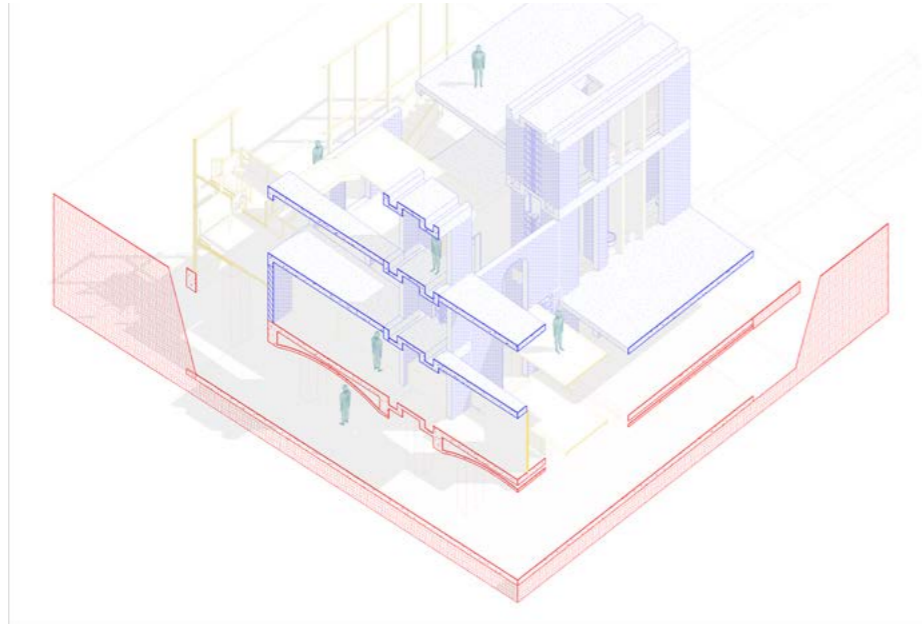


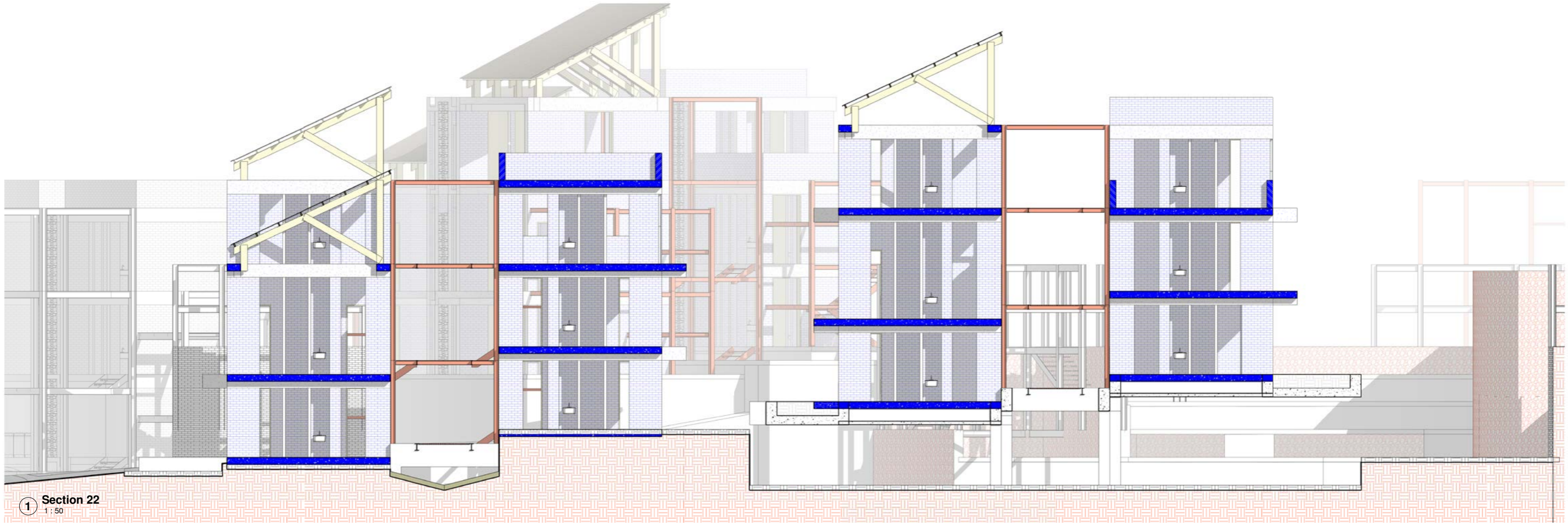




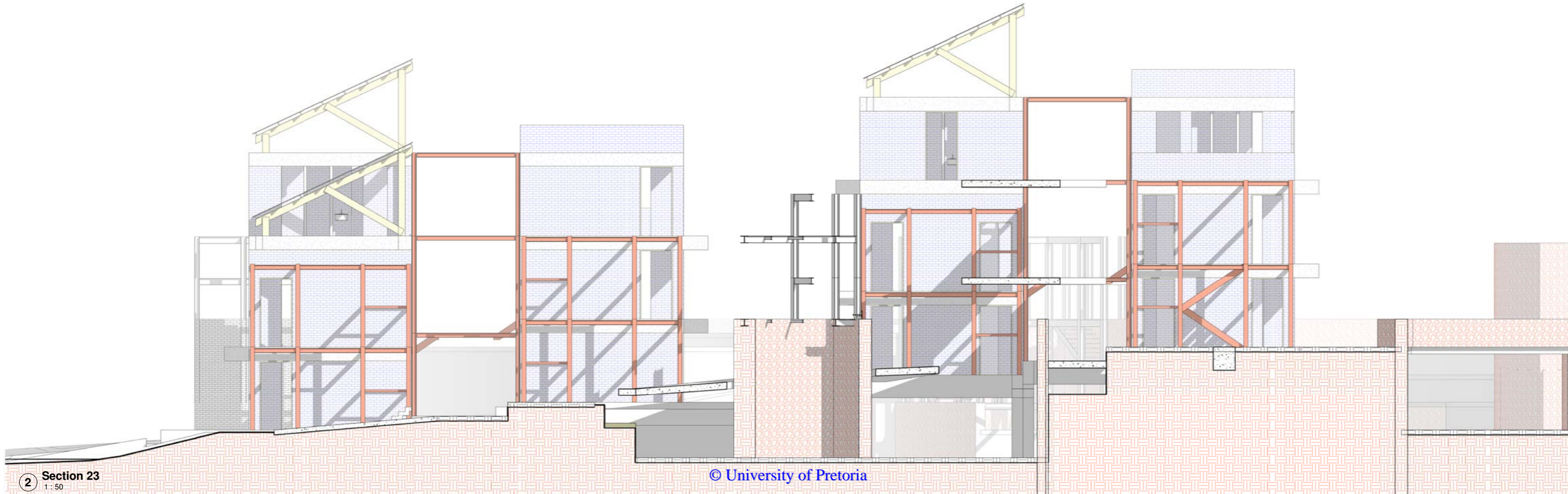




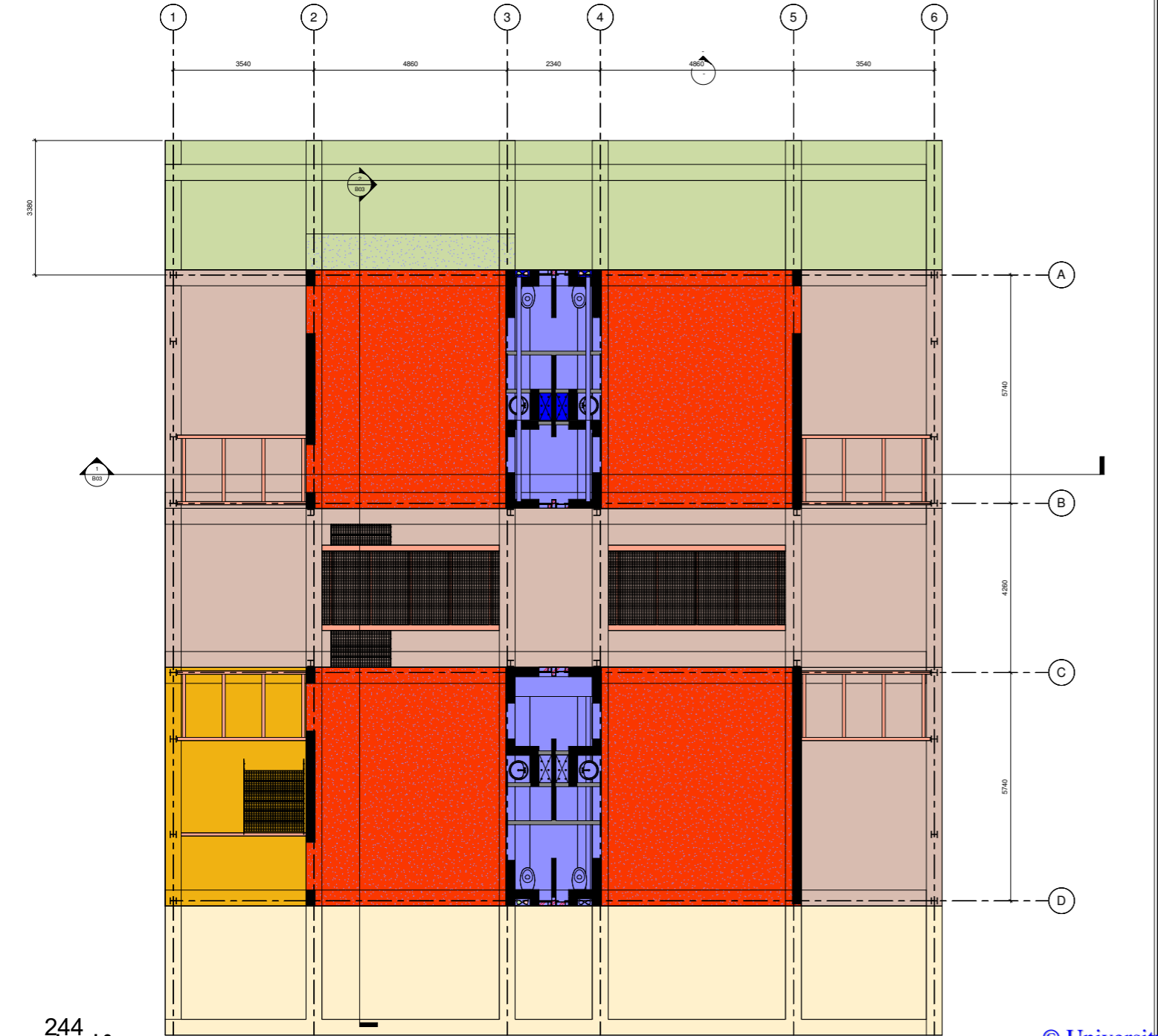
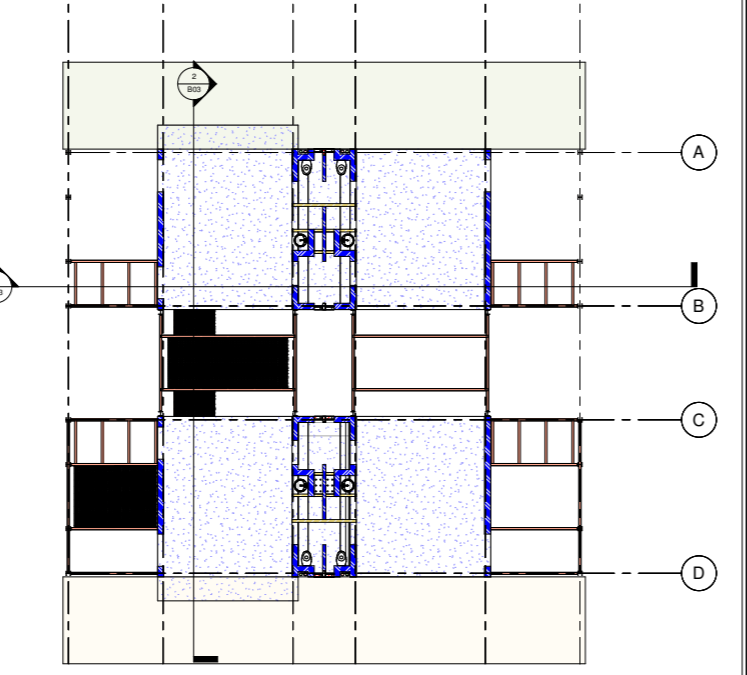
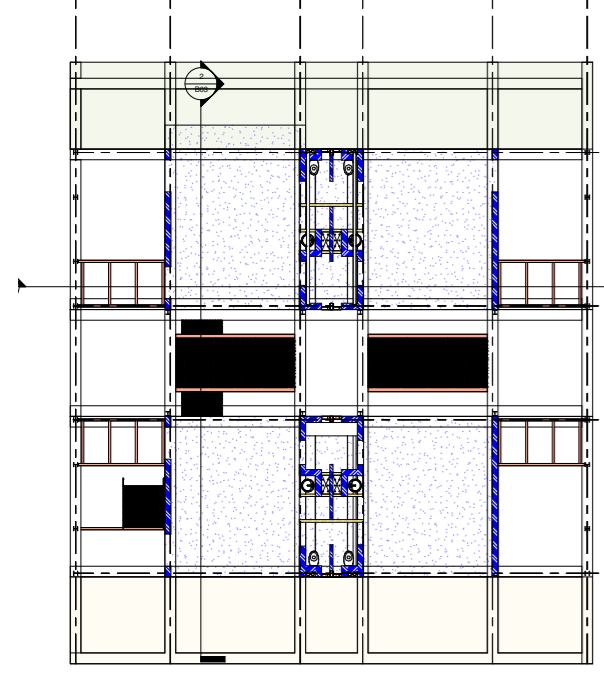




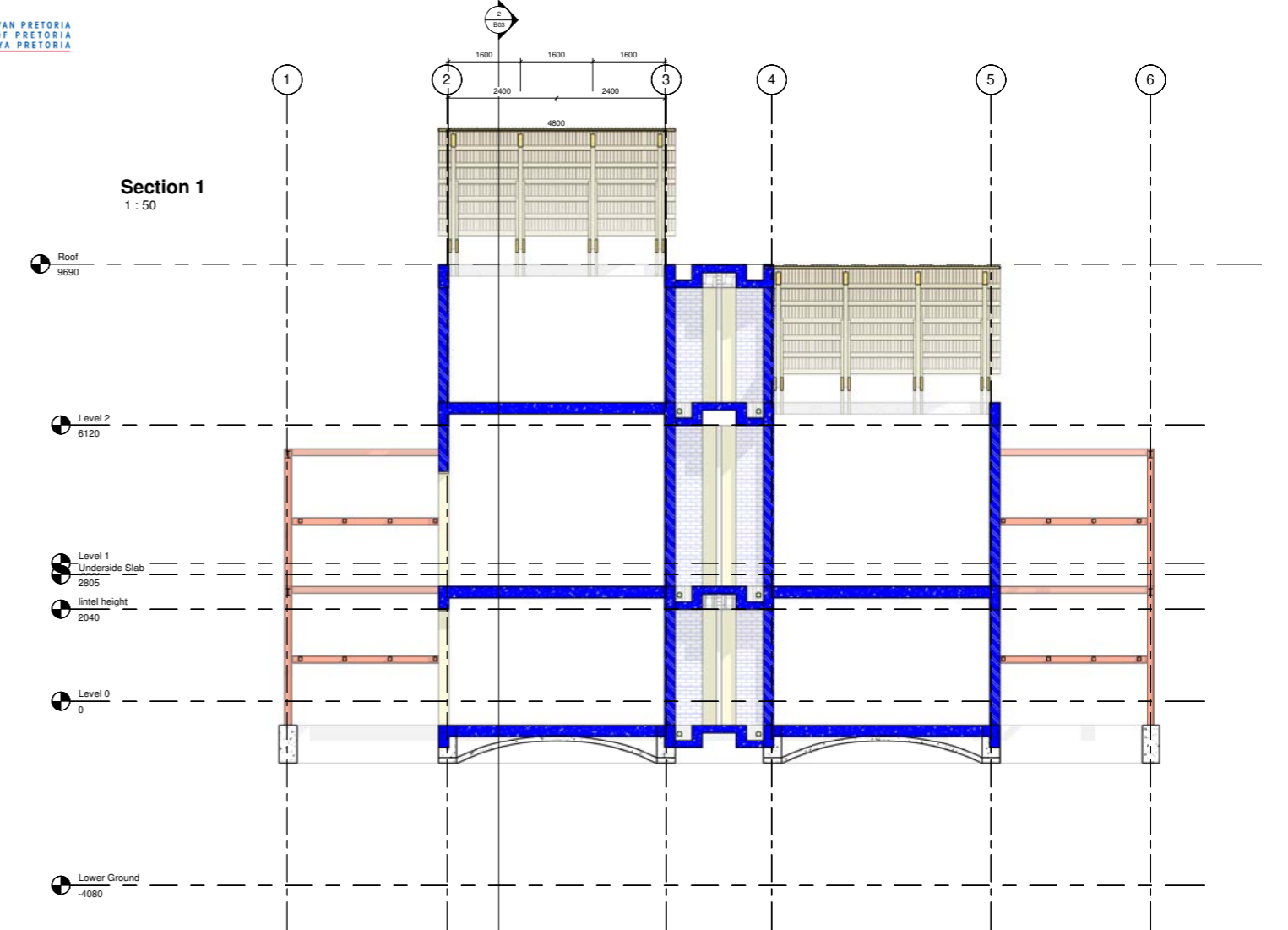
1 Section 22
1:50



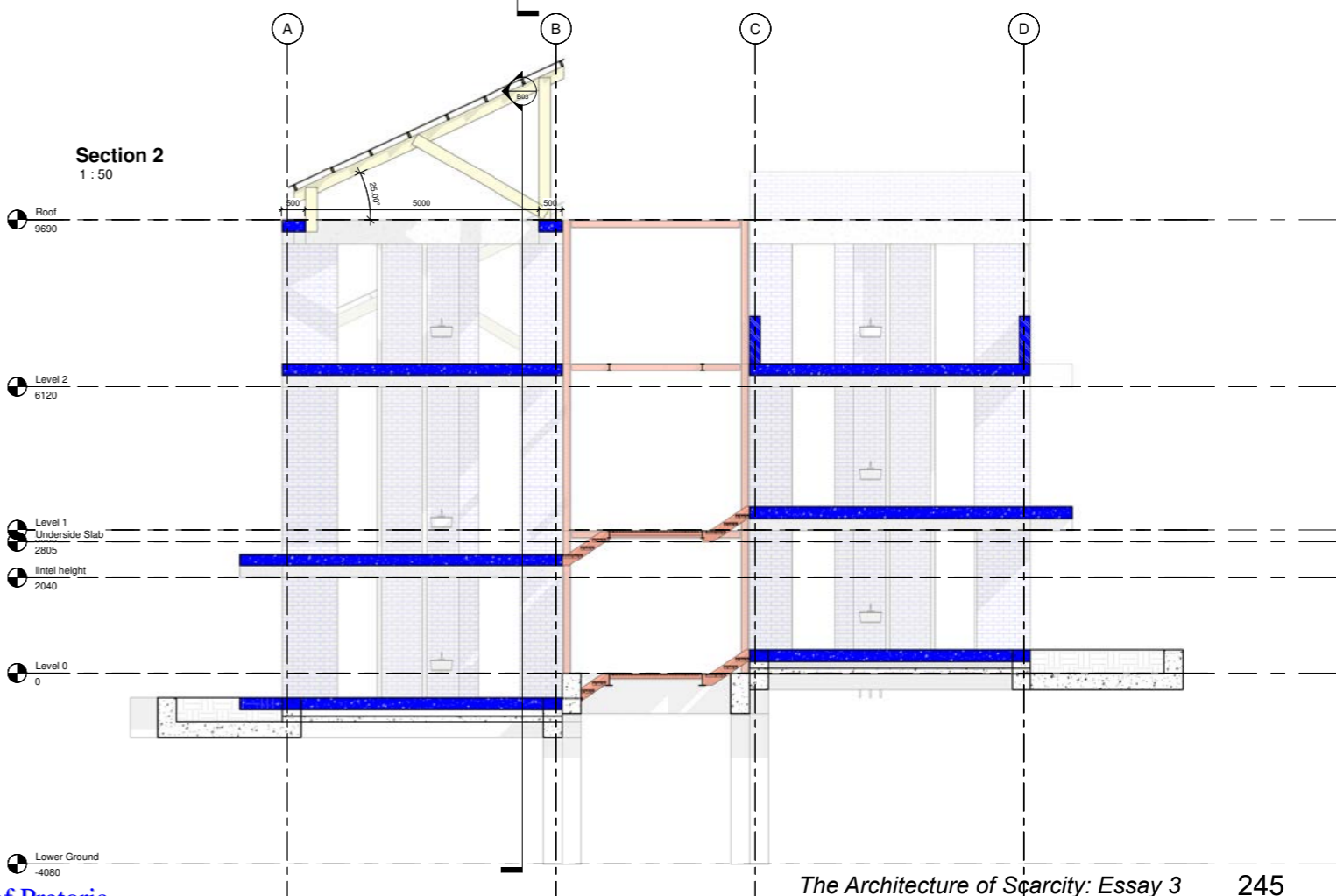
2 Section 23
1:50



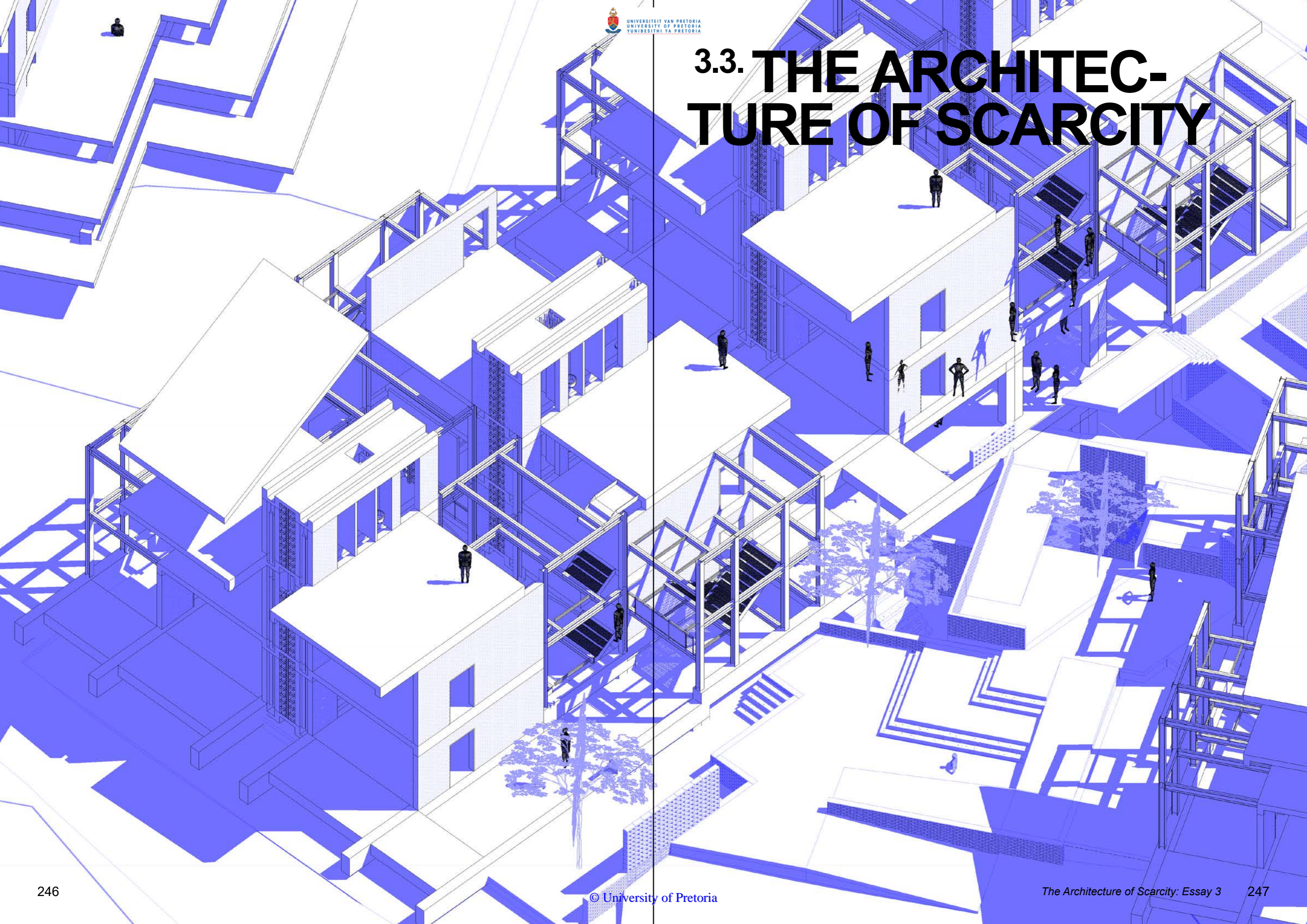
Section 1
1:50

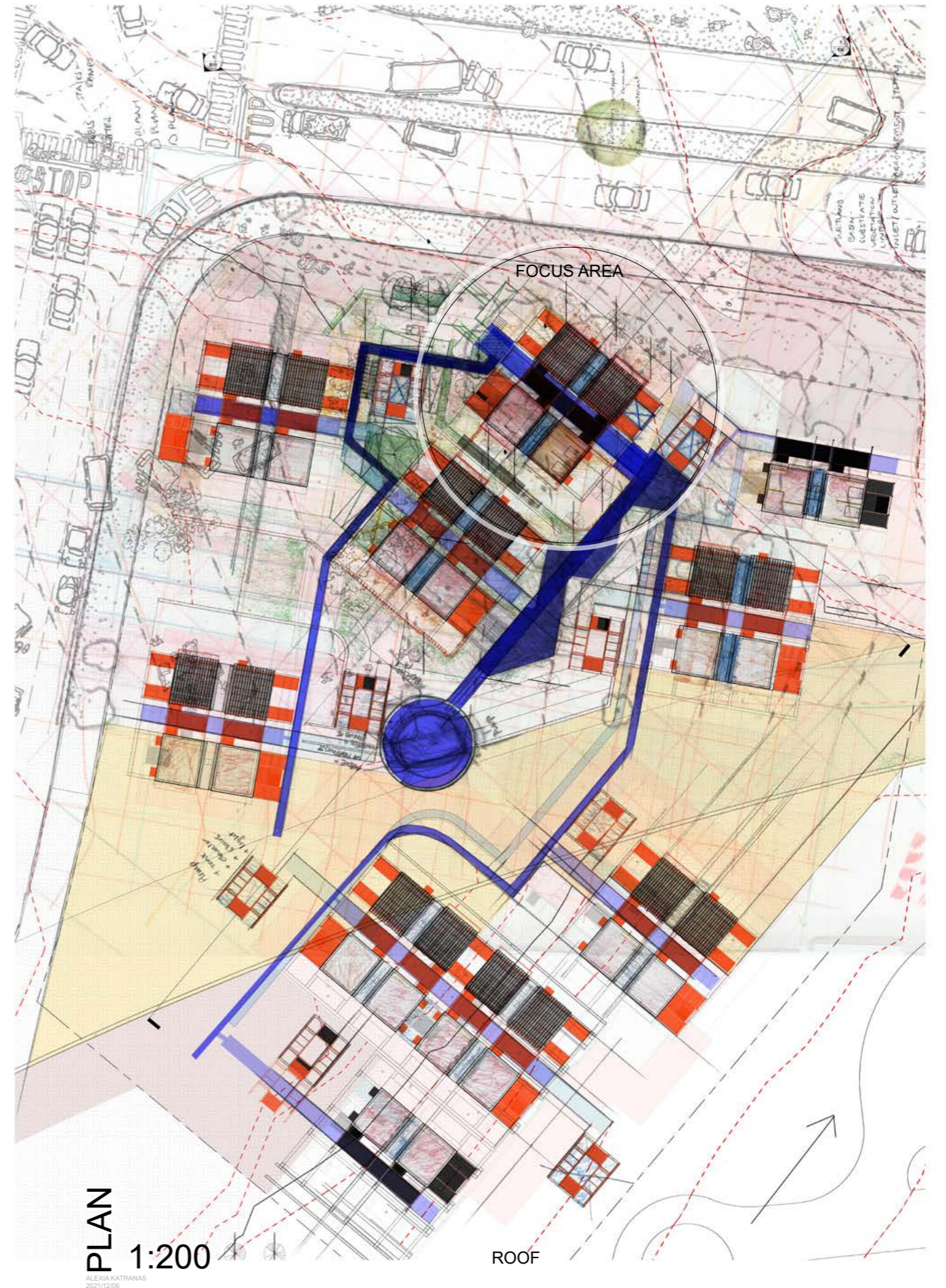
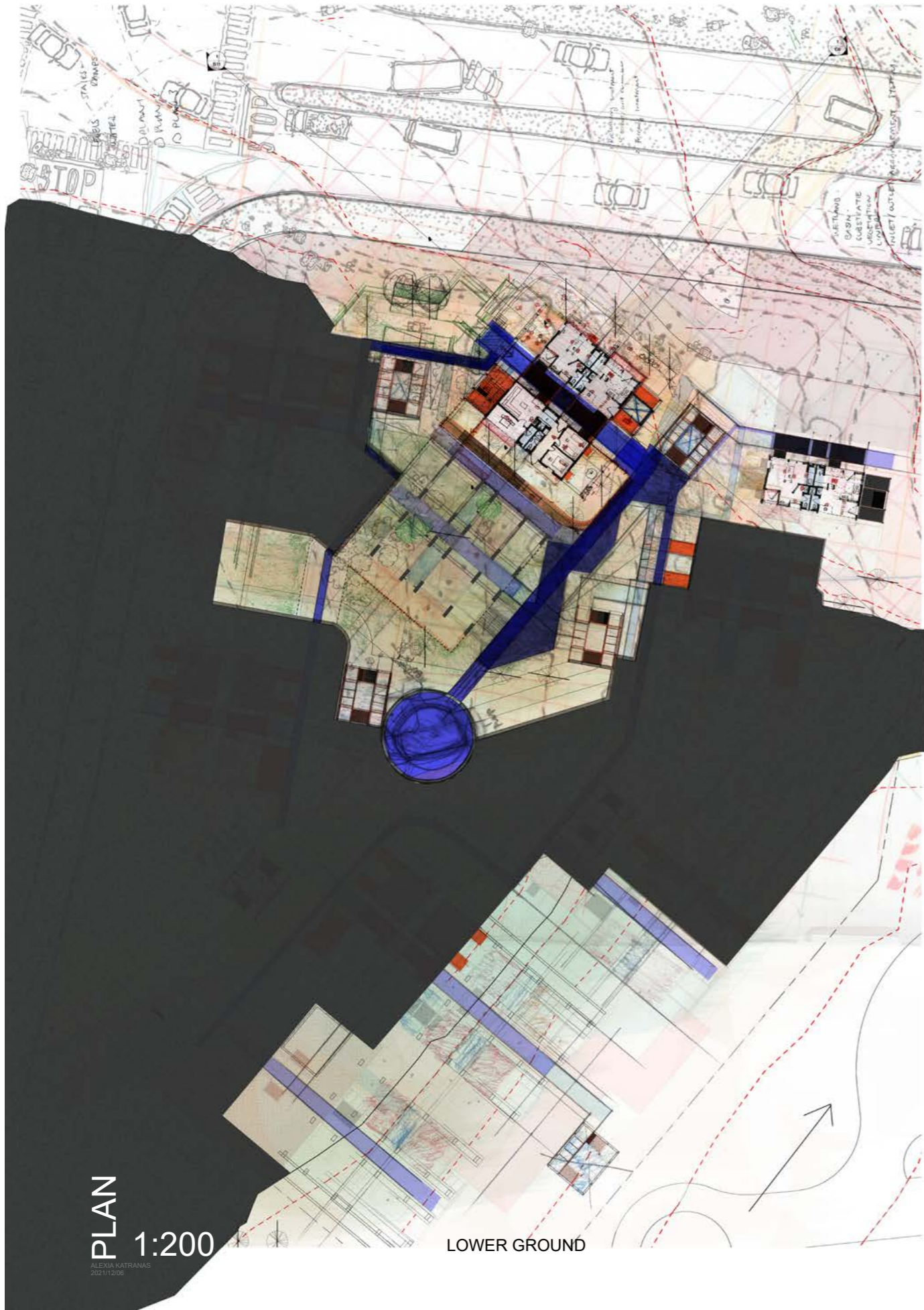


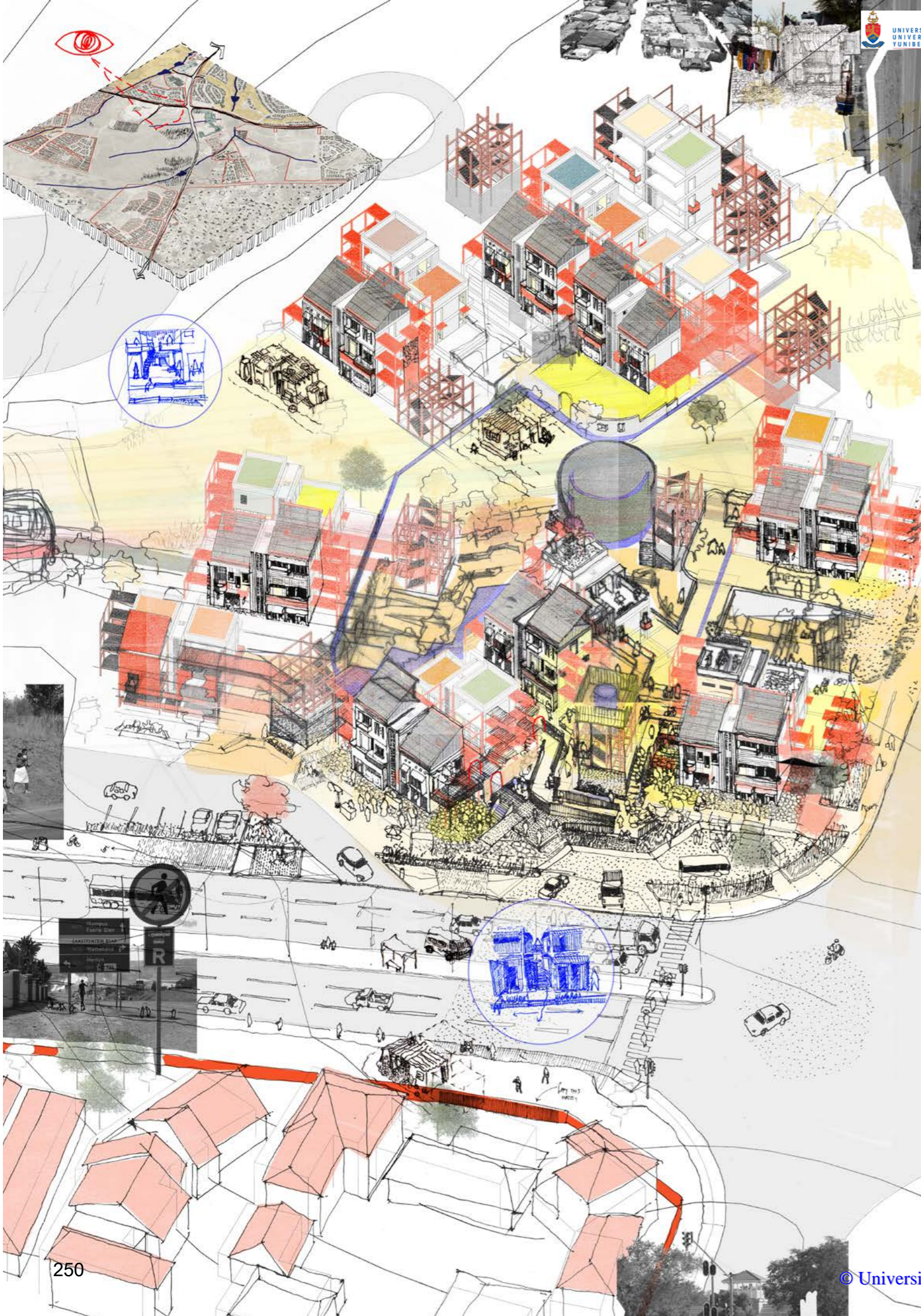
Section 2
1:50



3.3. THE ARCHITECTURE OF SCARCITY





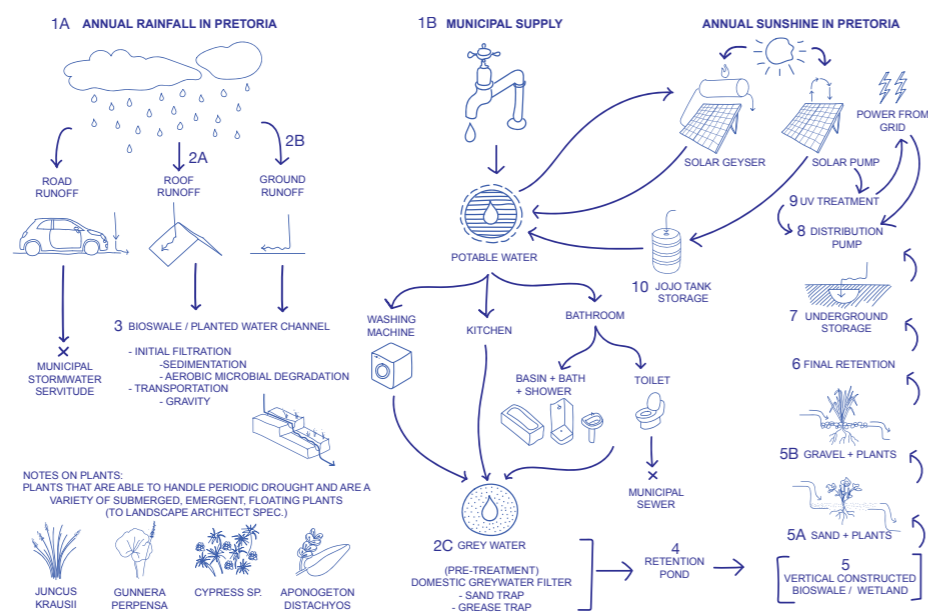
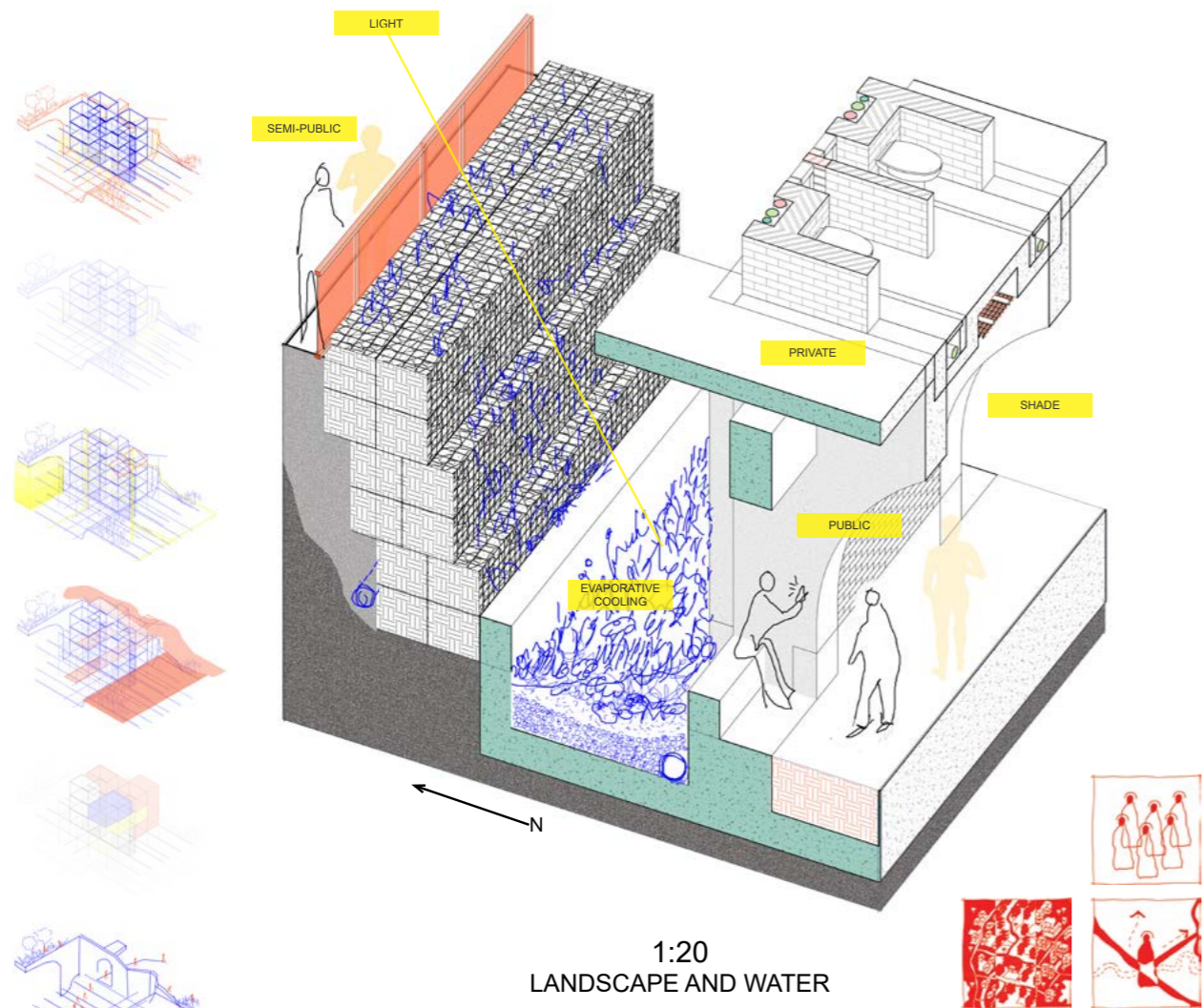


3.3.1. The landscape

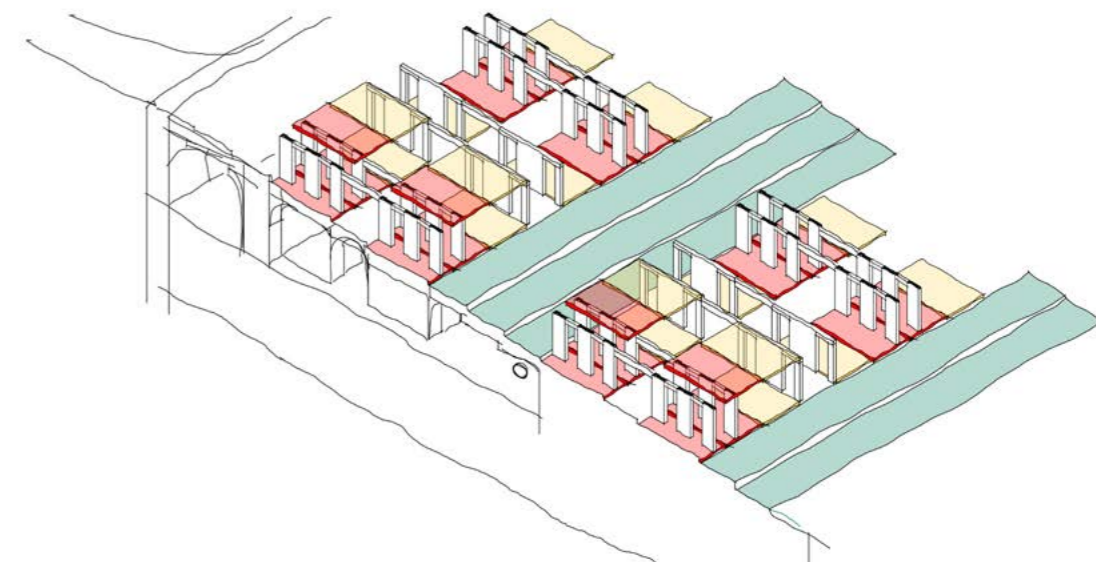
The landscape ruin provides the first architectural opportunity with which to leverage the potential of site, through an act of creating spatial differentiation and articulating boundary. The argument here is to take conventional methods of compartmentalising space, but subverting it so that instead of merely supporting the formation of an “inside-outside” spatial dichotomy (which is typically exclusionary and inside-centric) – the architecture seeks to secure public space through this act of partitioning by setting up the conditions upon which varying levels of threshold, boundary, and enclosure may be achieved. Much like the gesture of Bo Bardi’s MASP, the spatial securing of public space beneath the suspended museum helps to mitigate the otherwise transactional phenomena whereby previously open, accessible space becomes privatised.

On a material level, the use of thick durable elements which articulate the sculpting of earth, and furthermore are time-embracing and participate in natural cycles of decay and evolution, best support and differentiate this landscape from the more temporary elements it hosts. As a structural system, it is important that any structures built over the landscape phase can be demolished or dismantled without compromising the structural integrity of the landscape that supports it. Exposed masonry, terraced gabion walls and concrete structures that make use of the existing rubble available on site following earthworks, as well as the appropriate planting palette – assists both in serving the spatial experiential needs of the landscape and infrastructure it hosts, as well as the organisational and systematic requirements.

The major wall threshold systems that frames and provide

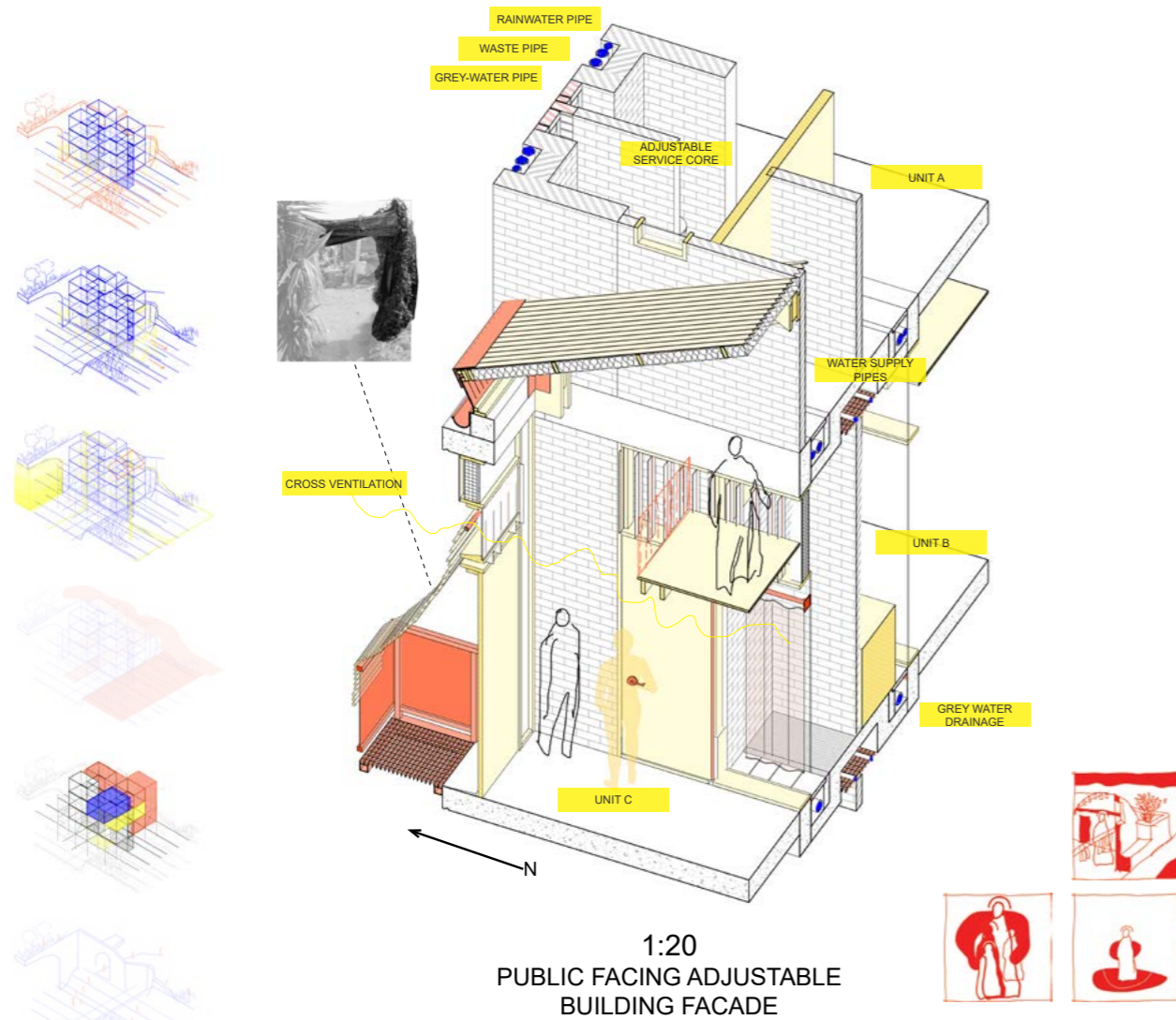


WATER SYSTEM DIAGRAM
(Katranas & Pulles 2021)

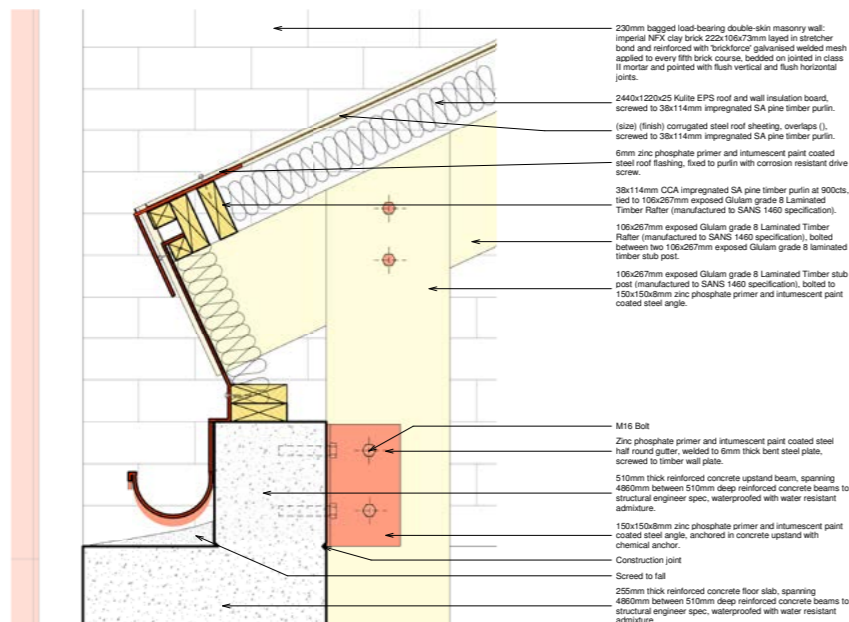


access to portions of the landscape, makes use of bioswales and an integrated drainage pipe reticulation system in order to collect and transport rainwater surface run-off and deposited grey water to a central collection point. The landscape space which exists above the Gautrain is leveraged to house the various chambers needed to greywater into potable water, and furthermore allows the final stored water to be accessed and collected at a public outlets. This infrastructural intervention supports the position taken that values a relational connection with the environment over the presently transactional one. For the purpose of fostering a resilient urban condition that is designed in harmony with scarcity instead of fearing it, it was important to prioritise allowing architecture to harness the same otherwise damaged existing landscape systems and flows of the site, as it sits within a catchment area, in close proximity to a wetland, and over a damaged

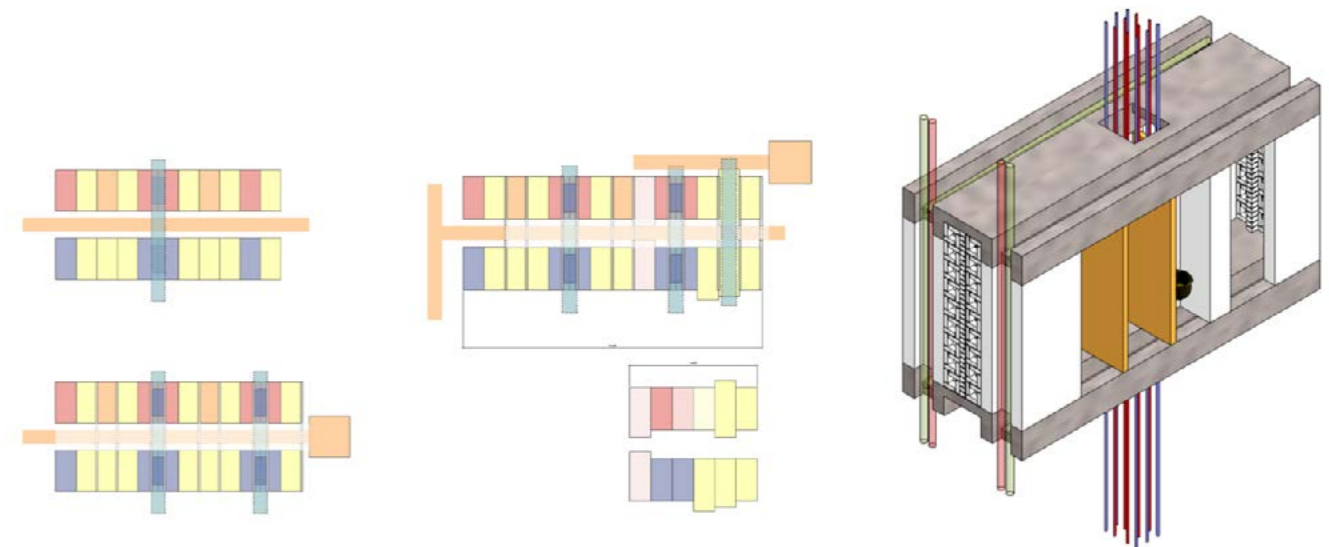
non-perennial stream. Instead of allowing the new development to further damage or enclose these crucial water systems, this interventions aims to secure access to it, albeit artificially, and make the outputs accessible to those typically living furthest on the outside in terms of service delivery. Given the deperate need for water in the surrounding informal settlements at present, this gesture, in addition to the myriad of environmental gains precipitated such as absorbing surface runoff and improving thermal comfort through evaporative cooling – also aims to foster the kind of socio-environmental stewardship required by infrastructure to better respond to the physical dimension of scarcity.



1:20
PUBLIC FACING ADJUSTABLE
BUILDING FACADE



1:5
ROOF AND GUTTER DETAIL

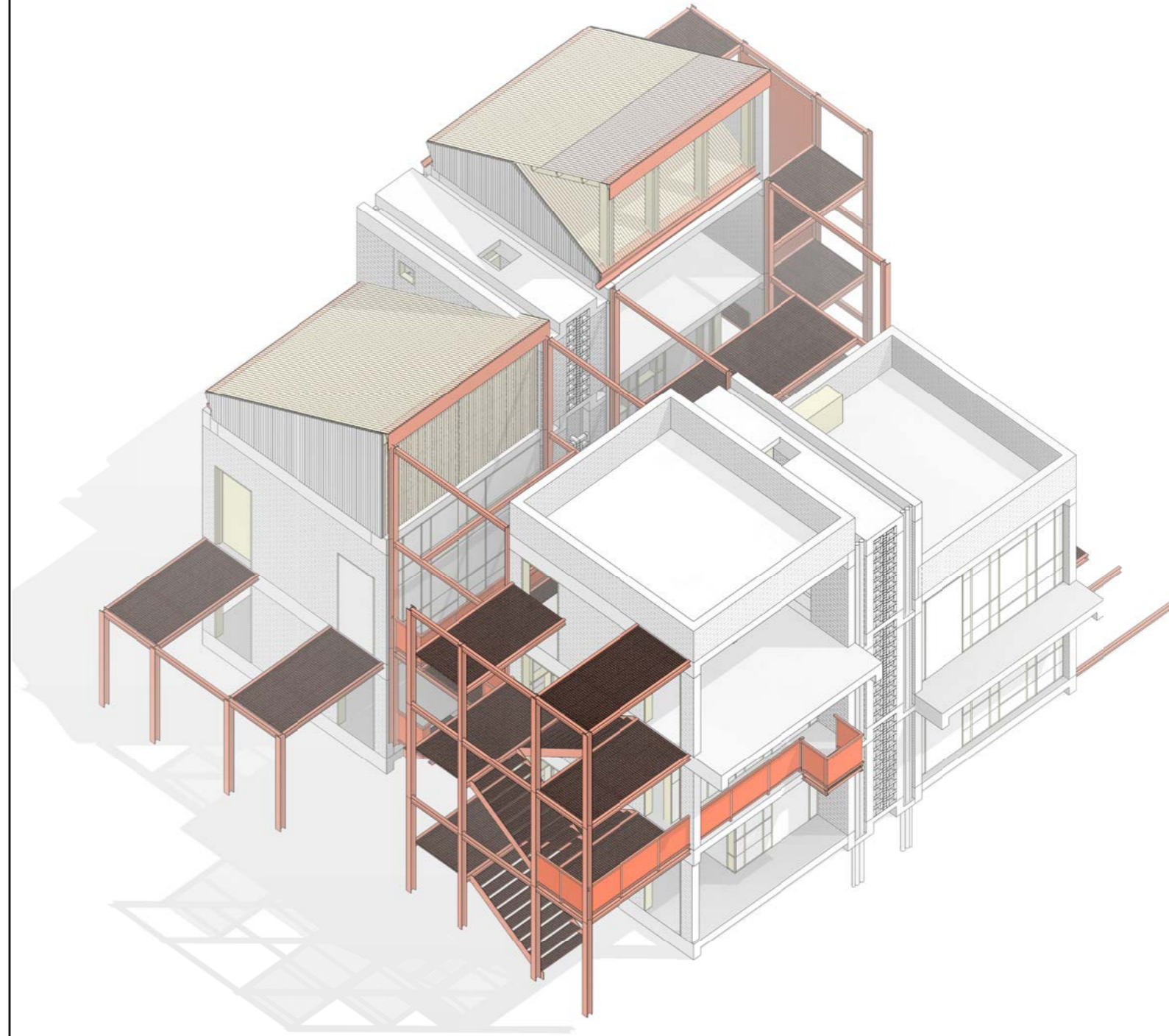
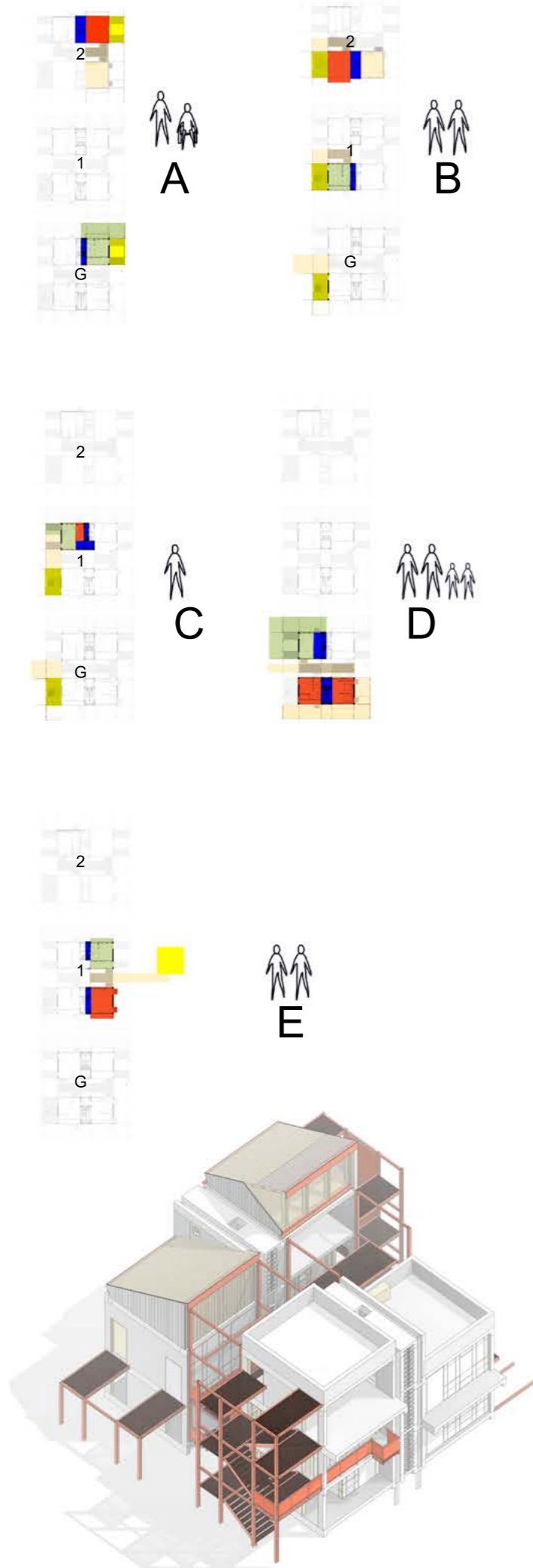


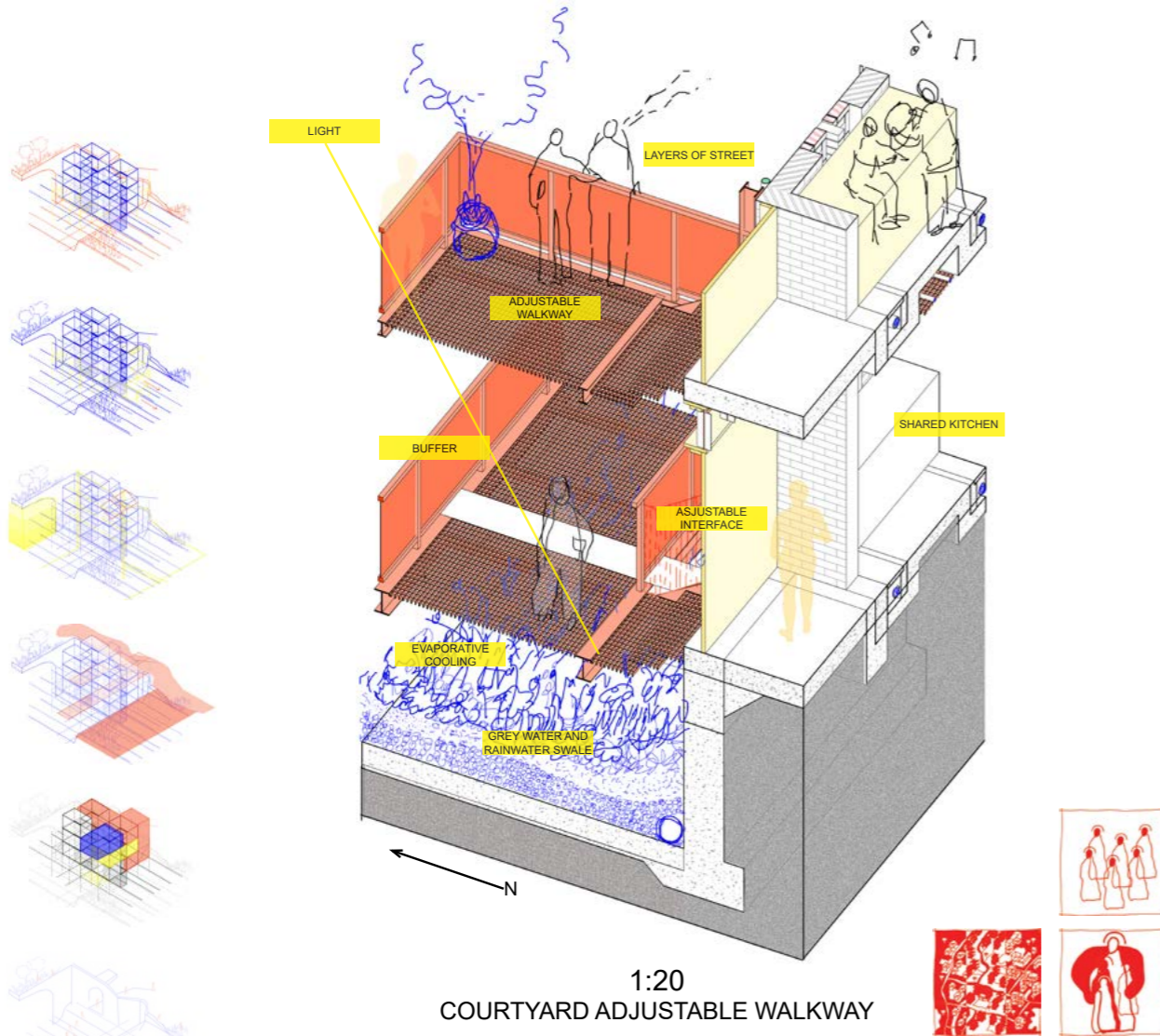
3.3.2. The dwelling

3.3.2.1. The masonry service core

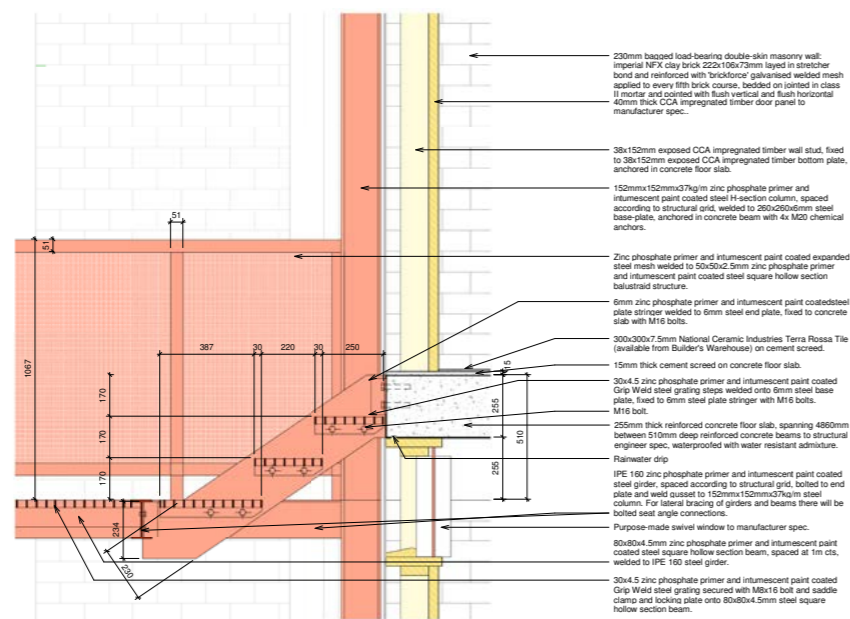
The housing/dwelling layer speaks directly to the occupational requirements of both permanent dwellings and short-term accommodation, and necessitates the insertion of a double and triple storey, terraced, row-house typology buildings within the landscape. These buildings are intentionally designed to allow an open versatile north and south façade, by making use of a series of parallel load bearing brick walls in the east and west façade directions. These northern and southern interfaces are articulated according to the user's needs, and open either onto a more public street (favouring a business shopfront interface) or into a semi-public shared courtyard (favouring a private leisure space). In this way, the streets and courtyard spaces become extensions into which the domicile and ev-

eryday rituals it houses, may spill out. The typical footprint of each collective building block is informed by existing stand sizes in the gated community situated across the road, and achieves a much needed, higher density despite the building footprint area and building height not being too much larger than the surrounding existing low-density homes. This can be attributed to the approach taken in the organisation of services, which are housed and reticulated neatly through a thickened service wall core, that each smallest possible unit module plugs into. Many of the outlets such as basins and toilets are contained within this wall so that they may be more easily concealed when not needed in a particular dwelling configuration. For the purpose of improving thermal comfort, daylighting, and ventilation, the building mass is opened by a 4m wide circulation corridor and courtyard through the middle.





1:20
COURTYARD ADJUSTABLE WALKWAY



1:10
STEEL STAIR DETAIL

DETAIL
3
ALEXIA PATRANAS
2021/12/06

3.3.2.2. External Circulation

Both the floor area within the dwellings, the intermediate service interfaces (E-W), and most pertinently, the North-South street and courtyard interfaces – are thus hyper optimized in terms of function and habitable area. The incredible potential of healthy, activated streets have been realised in the social housing projects of Peter Barber in London, public buildings by architect-activist Lina Bo Bardi, as well as within Plastic View informal settlement. Barber argues that by simply placing front doors directly onto the street, and allowing most circulation to happen outside and within the public sphere, the potential of street to build community and identity is accessed; where architecture becomes a background to peoples' worlds (Barber 2021). This is an attractive proposition for any housing project within South Africa's temperate climate, and on a more hermeneutic level, is often visible within the enclosure of gated communities. This highlights that within our socio-political climate, despite a longing for direct connection to the street, there still exists a need for an extension and layering of thresholds to simultaneously ensure a feeling of safety. Achieved through side-entrances opening into narrow minor roads perpendicular to the street and between dwellings in Plastic View, and in this proposed intervention, through a similar approach

that also leverages the potential of ground plane manipulation for spatial differentiation – this project relies on a layered approach to circulation and threshold, which, at its most secure, should satisfy the level of security sought after in security complexes and gated communities, and at its most porous, should allow boundaries to dissolve and reconfigure. For this reason, vertical circulation and suspended corridors are constructed from steel and expanded steel grid surfaces, allowing a significantly higher level of adjustability than the masonry dwelling spaces. These circulation spaces, existing on the west and east facades, allow for single homes to occupy more than one storey, and can be utilized as an extra room, or external courtyard. In addition to these multi-purposed private circulation spaces, an extra more public vertical circulation core is housed for each block within the surrounding landscape infrastructure, also yielding shade and providing public Wi-Fi-hotspots and phone charging stations, powered by solar panels above. These plug into existing landscape 'minarets' that also provide light and electrical service reticulation.

3.3.2.3. The harnessed boundary

The final and most temporary layer of building comprises the use of interior and exterior partitioning. By affording the end-user the opportunity to shape the interface according

to the amount of space needed, programmatic needs, and security needs – the true value of the steel circulation, masonry service core, and landscape, is leveraged. It is through this layer that boundaries are augmented or dissolved, and that the architectural opportunity of scarcity is most tangible. This is because, despite a reliance on the many layers of architecture that host it, it is the architecture most immediately accessible and malleable by its users that will reflect our evolving relationship to scarcity and time – be it positive or negative. For the purpose of this investigation, a few standard interface articulations were developed according to a hypothetical scenario of conditions and user personas with block A as the backdrop.

3.3.3. The Water System

3.3.3.1. Water Calculations

1. Surface areas and runoff coefficients

Table 3.1.1: Ground surface areas and runoff coefficients (SANRAL 2013, Architective 2015).

Catchment	Runoff coefficient, C	Catchment area, A (m ²)	Adjusted area, A x C (m ²)
Concrete block paving	0,90	3477,00	3129,30
Softscaping	0,35	2753,00	963,55
Constructed wetland	1,00	300,00	300,00
Ground adj. area, A _G (m ²): $A_G = \sum(A \times C)$			4392,85

Table 3.1.2: Roof surface areas and runoff coefficients (SANRAL 2013, Architective 2015).

Catchment	Runoff coefficient, C	Catchment area, A (m ²)	Adjusted area, A x C (m ²)
Steel roof sheeting (sloped)	0,95	978,00	929,10
Flat concrete roofs	0,90	1378,00	1240,20
Roofs adjusted area, A _R (m ²): $A_R = \sum(A \times C)$			2169,30

Total adj. area, A_T = A_G + A_R: 6562,15 m²

2. Supply from rainwater

Table 3.2.1: Monthly rainwater supply from surfaces according to Pretoria average rainfall (Climate-Data 2021).

Month	Average rainfall, P (mm)	Rain yield, R (m ³) R=A _T xP
January	107	702,15
February	99	649,65
March	88	577,47
April	40	262,49
May	17	111,56
June	7	45,94
July	3	19,69
August	7	45,94
September	18	118,12
October	65	426,54
November	92	603,72
December	118	774,33
ANNUAL	661	4337,58

3. Losses from evaporation

Table 3.3.1: Loss of water within swale areas due to evaporation potential in Gauteng Province (Schulze et al. 2001).

Month	Potential evaporation, e (mm)	Rainwater Swale area, a (m ²)	Evaporation, E (m ³) E= e x a
January	228	300	68,40
February	187	300	56,10
March	184	300	55,20
April	144	300	43,20
May	130	300	39,00
June	106	300	31,80
July	118	300	35,40
August	162	300	48,60
September	207	300	62,10
October	239	300	71,70
November	232	300	69,60
December	239	300	71,70
ANNUAL	2176		652,80

4. Demands (designed for the maximum)

Table 3.4.1: (full spread) Average annual daily demands (after City of Tshwane 2017).

Zoning and units for AADD	Domestic	Garden
Residential		
Cluster housing: 41 to 60 units/hectare – kl/day per unit	0,6	0,1
Gate house for security villages – kl/day per unit	0,6	-
Business		
General business with an FSR – kl/day per 100m ²	-	-
Car wash facility	-	-
General		
Park grounds – kl/day per hectare	-	-
Private open space – kl/day per hectare	-	-
Parking grounds – kl/day per hectare	-	-

Commercial	General	Total (AADD/unit)
-	-	0,7
-	-	0,6
0,8	-	0,8
10,0	-	10,0
-	15,0	15,0
-	15,0	15,0
-	3,0	3,0

Table 3.4.2: (full spread) Total demands: (Daily demand = AADD/unit x no. of units).

Zoning	Number	Domestic (kl/day)	Garden (kl/day)
Residential			
Cluster housing	114 units	68,40	11,40
Gate houses	6 units	3,60	-
Business			
General businesses	1272 sqm	-	-
Car wash facilities	1 unit	-	-
General			
Park grounds	0,28 hectares	-	-
Parking grounds	0,2 hectares	-	-
TOTAL		72,00	11,40

Commercial (kl/day)	General (kl/day)	Total daily demand (kl/day)
-	-	79,80
-	-	3,60
10,18	-	10,18
10,00	-	10,00
-	4,20	4,20
-	0,60	0,60
20,18	4,80	108,38

Table 3.4.3: (full spread) Monthly demands: (1m³ = 1kl).

Month	Domestic consumption (m ³)	Garden & irrigation (m ³)	Commercial usage (m ³)
January	2232,00	353,40	625,46
February	2016,00	319,20	564,93
March	2232,00	353,40	625,46
April	2160,00	342,00	605,28
May	2232,00	353,40	625,46
June	2160,00	342,00	605,28
July	2232,00	353,40	625,46
August	2232,00	353,40	625,46
September	2160,00	342,00	605,28
October	2232,00	353,40	625,46
November	2160,00	342,00	605,28
December	2232,00	353,40	625,46
ANNUAL	26280,00	4161,00	7364,24

General usage (m ³)	Total demand, Q (m ³)
148,80	3359,66
134,40	3034,53
148,80	3359,66
144,00	3251,28
148,80	3359,66
148,80	3359,66
144,00	3251,28
148,80	3359,66
148,80	3359,66
144,00	3251,28
148,80	3359,66
144,00	3251,28
148,80	3359,66
1752,00	39557,24

Greywater harvested as a percentage of the domestic and business water use

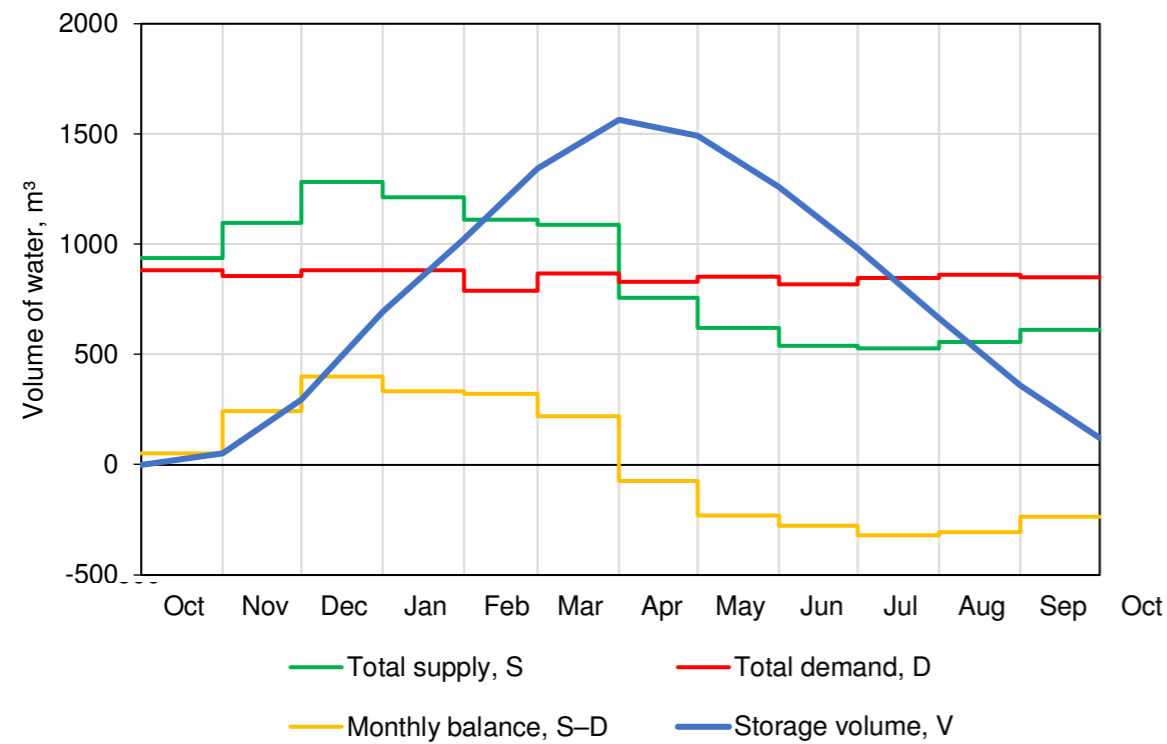
Domestic greywater percentage = 20%

5. Storage level - Assuming an empty facility on 1 October (start of the South African hydrological year)

Table 3.5.1: Projected monthly storage level as a function of supply, demands, and losses.

Month	Garden demand, I (m ³)	General use demand, G (m ³)	Car wash demand, C (m ³)	Evaporation losses, E (m ³)
September				
October	353,40	148,80	310,00	71,70
November	342,00	144,00	300,00	69,60
December	353,40	148,80	310,00	71,70
January	353,40	148,80	310,00	68,40
February	319,20	134,40	280,00	56,10
March	353,40	148,80	310,00	55,20
April	342,00	144,00	300,00	43,20
May	353,40	148,80	310,00	39,00
June	342,00	144,00	300,00	31,80
July	353,40	148,80	310,00	35,40
August	353,40	148,80	310,00	48,60
September	342,00	144,00	300,00	62,10
ANNUAL	4161,00	1752,00	3650,00	652,80

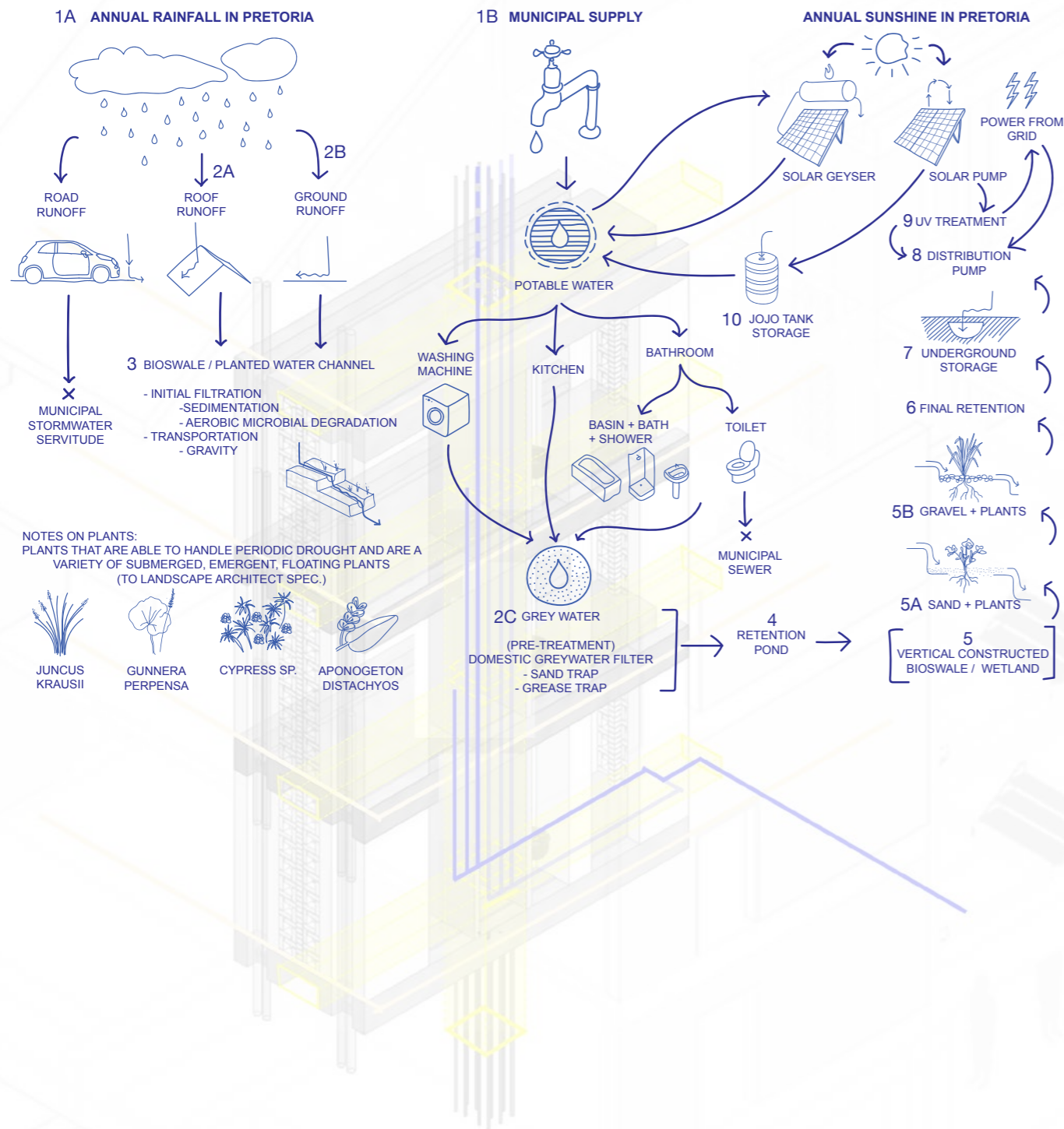
	R + H - G - I - C - E			Cuml. balance at month END
Greywater supply, H (m ³)	Precipitation yield, R (m ³)	Monthly balance (m ³)	Storage volume, V (m ³)	
				0,00
	509,49	426,54	52,13	52,13
	493,06	603,72	241,17	293,30
	509,49	774,33	399,92	693,23
	509,49	702,15	331,04	1024,27
	460,19	649,65	320,14	1344,41
	509,49	577,47	219,56	1563,97
	493,06	262,49	-73,66	1490,31
	509,49	111,56	-230,15	1260,16
	493,06	45,94	-278,81	981,35
	509,49	19,69	-318,42	662,93
	509,49	45,94	-305,37	357,55
	493,06	118,12	-236,93	120,63
ANNUAL	5998,85	4337,58	120,63	



Graph 3.5.1: Projected monthly storage level as a function of supply, demands, and losses.

Maximum storage volume in year 1, V_{max}	1563,97 m ³
Swale depth, d_w	0,30 m
Swale surface area, A_w	300 m ²
Swale volume, $V_w = d_w \times A_w$	90 m ³
Req'd tank storage, $V_{max} - V_w$	1473,97 m ³
1480 kl of underground storage to be provided	
Depth of underground storage	3 m
Area of underground storage	493,33 m ²

3.3.4. System Integration Dwelling service cores



3.3.5. SBAT report

SUSTAINABLE BUILDING ASSESSMENT TOOL RESIDENTIAL

1,04

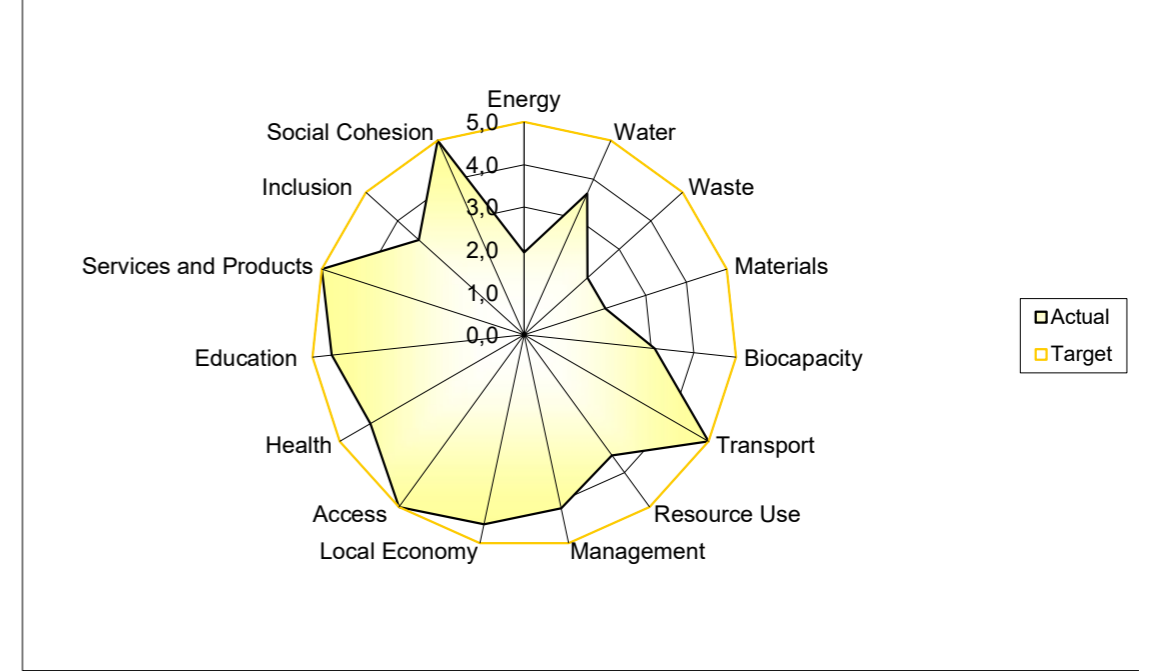
Achieved
3,8

SB SBAT REPORT

SB1 Project 0

SB2 Address 0

SB3 SBAT Graph



SB4 Environmental, Social and Economic Performance

	Score
Environmental	2,5
Economic	4,4
Social	4,4
SBAT Rating	3,8

SB5 EF and HDI Factors

	Score
EF Factor	3,2
HDI Factor	4,1

SB6 Targets

	Percentage
Environmental	51
Economic	89
Social	88

SB7 Self Assessment: Information supplied and confirmed by

Name _____ Date _____
Signature _____

SB8 Validation: Documentation validated by

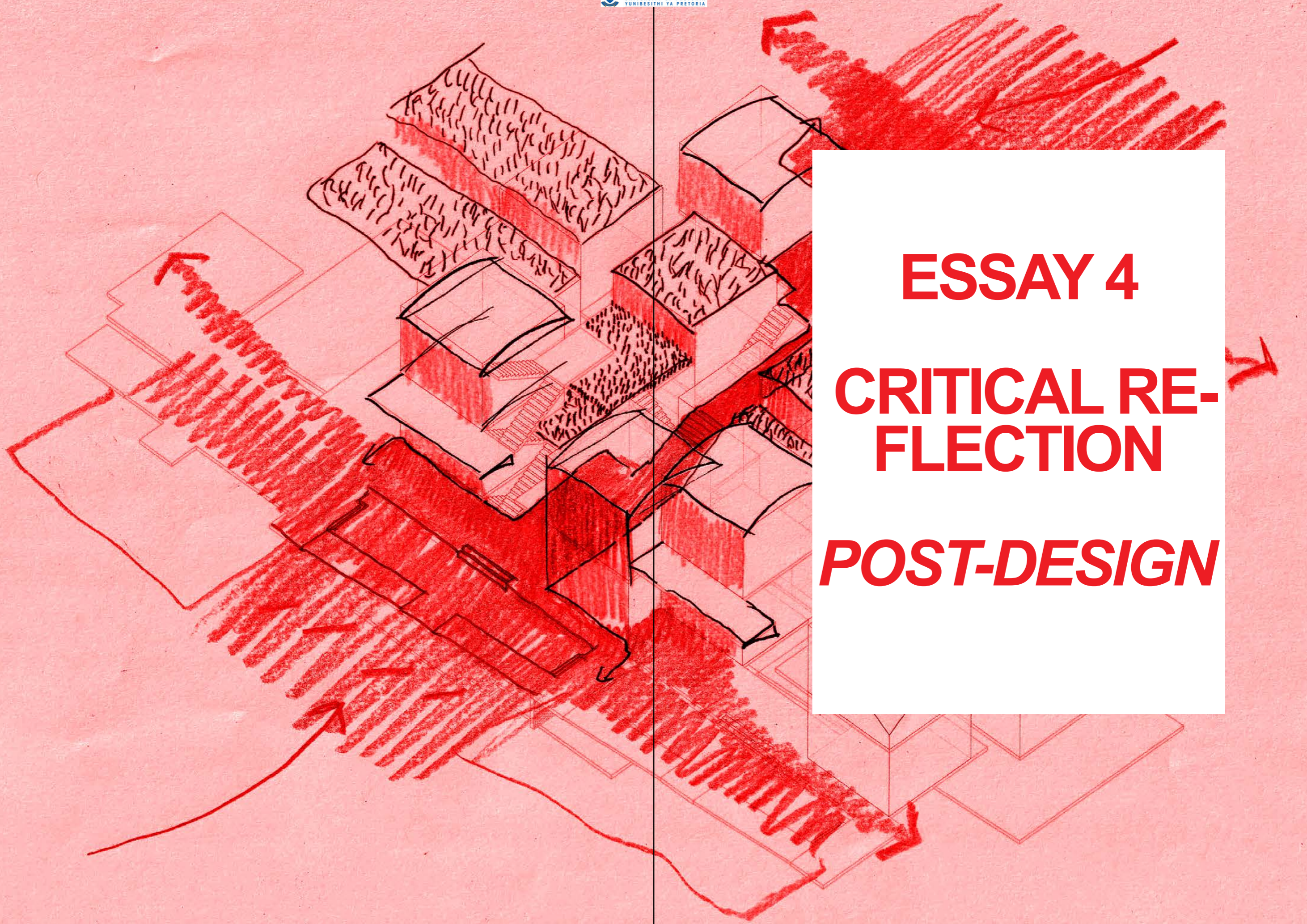
Name _____ Date _____
Signature _____

SB9 Validation Report Version

IVR

3.4. SCENARIO TESTING





ESSAY 4

**CRITICAL RE-
FLECTION**

POST-DESIGN

4.1. A PRE-RAMBLE

(not the end, but the beginning)

This dissertation felt like the battleground, before the battleground.

An important battleground upon which the student-architect sought to scrutinize the disposition of architecture through the lenses of lived and academic experience. The underlying aim has always been to pave an understanding of the world – upon which a critical position as architect may become visible.

Architecture is not the answer, dare I say?

Regrettably, this reflection begins with critique over the lack of willingness for transformation in the architectural profession. This was rendered more as an observation of the unforgiving incompatibility of my process against that of the building-centric ideal of architecture upheld by institutions and practices alike, than as something pertaining to the outcomes of the design project itself.

Soberingly, the expectation of producing a built object, to justify the MArch(Prof) outcome as being adequately complex enough to be considered a valid architectural response – has simulated and made visible some of the significant hurdles that lie ahead as obstructions to transformation in practice.

Operating in this environment has been a reminder of how self-inflated the importance of this narrow definition of the profession is - ironically at the expense of the industry's relevance.

In an industry fixated with architectural answers: dare she, the architect, pose a question?

which excludes in order to defend its relevance: dare they, the outsider/other, suggest an answer?

In a world where the built output of the 'act of shaping our environment' is construed as an artificial, time-defying, symbolic commodity: dare they, the socio-economically marginalised city dweller, visibly shape urbanity in the image of transience and scarcity?

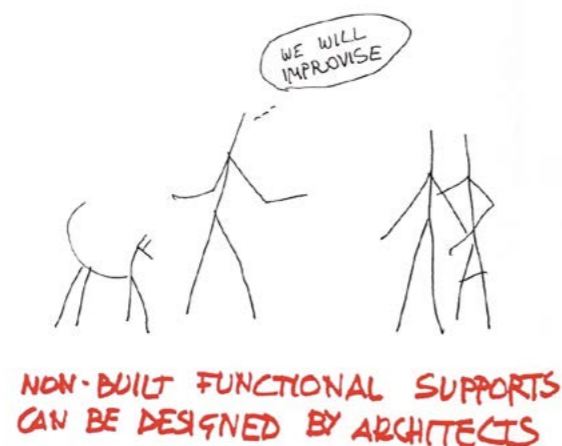


Figure 4.1.1. (previous spread) *Exploring the in-between dwelling spaces as part of the iterative design process* (Author 2021).

Figure 4.1.2. Non-built support functions can be designed by architects, an excerpt from *Architecture without Building* (Friedman 2012).

The process promises conflict; it knows exactly how to set off a brewing existential crisis.

This process has proven that we cannot deny the merit of the architectural process, and the power it holds in making things visible on more than just a spatial level.

“Exciting but plagued by relentless conflict” is perhaps an honest reflection of my own individual experience of the research and design process – the conflict brought about by the incessant reminder of a common truth:

the
ordained architect's
act of shaping an artificial environment
is both
admirable
and
increasingly
shameful.

Why do we build?

Why is building so harmful?
Why do we build walls?
Why is paradise a walled garden?

What does society expect from the architect, and what does the architect enable society to expect?

It is telling that even in an MProf academic environment, where we, as future architects of a rapidly changing world, who are subsequently meant to nurture new ideas and ways of thinking - are required to limit and distort our contributions as to not compromise the integrity of what is arguably not a sustainable definition of architectural practice.

As architects, we disregard that which does not fit on the self-proclaimed pedestal that defines “architecture” – limiting its definition and potential to that which is built.

Impressions from the research and site engagement process support this notion, further highlighting how futile it is to qualify the architect as “expert” based primarily on technical proficiency. We are groomed to fit the mould of conventional practices that don't even have the room to employ us

A year spent confronted by the baneful consequences and limitations of the built environment – especially with respect to the role architecture performs in spatially preserving the legacies of harmful socio-political ideologies – only added ammunition to my firm belief that architecture is a social product.

This is not a question of what constitutes “good” or “bad” architecture. It is a question of what architecture is to begin with.

In a world where causes and effects of socially constructed scarcity and the physical consequences thereof are mutually exacerbated, bringing with it the insecurity, conflict, and transactional cultural models that propagate injustice, exploitation, and division (often secured by way of architecture) – one is compelled to question whether we are worthy of this responsibility.

Do we allow ourselves the room to seize agency over the default values and agendas our projects serve?

Is there space to better understand the relationship between architectural norms, and the social systems they are constructed from?

This became the project’s point of entry with respect to the polarised and fragmented context of Moreleta Park, where gated communities, are confronted by the emergence informal settlements. To assist in this, the project asked: “how does the social construct of scarcity manifest itself in the architecture of Moreleta Park?”. The theoretical and contextual explora-

tion, both individual and collaborative, can be considered a success, as it had assisted in satisfying the primary intention of framing a position and architectural intention which transcends its application as a masters mini-dissertation. The angle of enquirey, which draws a parallel between socially constructed scarcity, time, power, the act of “dwelling”, building, divided cities, the schism between policy and practice, and socio-spatial dichotomies of sprawling cities - has proven a valuable and necessary lens through which further research on gated communities and informal settlements could be undertaken.

This experience has:

- established and motivated a strong direction for my future contribution as an architect, guided not by a decidedly full-proof recipe or answer to what the architecture of our city should be, but rather, how to look at the world, so that I am better equipped to produce positive architectural gestures.
- proven, persistently, the inherent power of collaboration, as a tool for reciprocal knowledge transfer, a way to foster long-lasting connections with other architect-humans, and as a generator of more authentic design-research responses.

In order to galvanise the translation of the exciting, emerging theories and findings of the research, the project asked: “how can the co-making of architecture transform the relationship between scarcity and architecture to promote spatial healing in the polarising context of Moreleta Park?”

Finding it within myself to justify any kind of physical, built, architecture has always been a challenge. The historical, theoretical, and architectural context of this project lends itself to my belief that architecture is robbed of the opportunity to “live” in harmony with our ever changing physical and social contexts, when it rejects the inevitability of its death. As much in the discipline/profession of architecture as in the architec-

ture we create, we need to rethink our compulsive inclination towards of self preservation.

The notion that the architect’s intervention can be framed as an answer is incredibly dissonant when viewed against South Africa’s complex urban potential.

Architecture is not the answer, I do dare say!

At the conclusion of my masters year (2021), I stand firmly by my third year (2018) normative epiphany - and increasingly so.

Architecture is not the answer. It is the act of making things visible by asking questions through interventions.

The resulting architecture, is but one of many possible gestures that could embody an architecture of scarcity. By seeking to engage with the essence of what motivates us to shape the world the way we do, the proposed architecture and technology meets Moreleta Park’s spatial exclusion and polarisation with design gestures that are relational, rather than transactional.

The opportunity of scarcity, became the rethinking of the gated community.

Figure 4.1.3. *Reflecting on the architecture* (Author 2021).



With this deep contextual and personal probing, a **valuable lesson on the futility of simply demonising the gated community**, was learnt - providing itself as one of the major drivers of the architectural response. This may seem counter-intuitive, given that the architectural intention and process of this project advocates for those marginalised by our city; outside the confines of these urban walls.

In reality, such a shift in thinking is incredibly valuable towards more realistically achieving spatial justice. To consider the often misplaced motivations behind such problematic defensive gestures in relation to scarcity and architecture, within the design itself, allowed the proposal to resemble something that would be more positively received by those most likely to oppose change (those in favour of gated communities). It becomes the starting point of the architectural strategy, whereby the act of compartmentalising space is utilised, but subverted to secure the interests of those on the outside.

From the developer's point of view, space is divided, and boundaries are etched.

On a less obvious spatial and programmatic level, the hidden complex conditions already present within the context, that hold the potential to propagate more integrated cities, are un-

covered and harnessed. The power to dissolve these boundaries lies contently at the mercy of time and change - in the hands of those living within the architecture.

On a technical level, this necessitates a phased, multi-scalar approach, whereby each layer is distinguishable and materialised differently as a function of its respective lifespan; ultimately designed for (instead of actively opposing) its eventual demise.

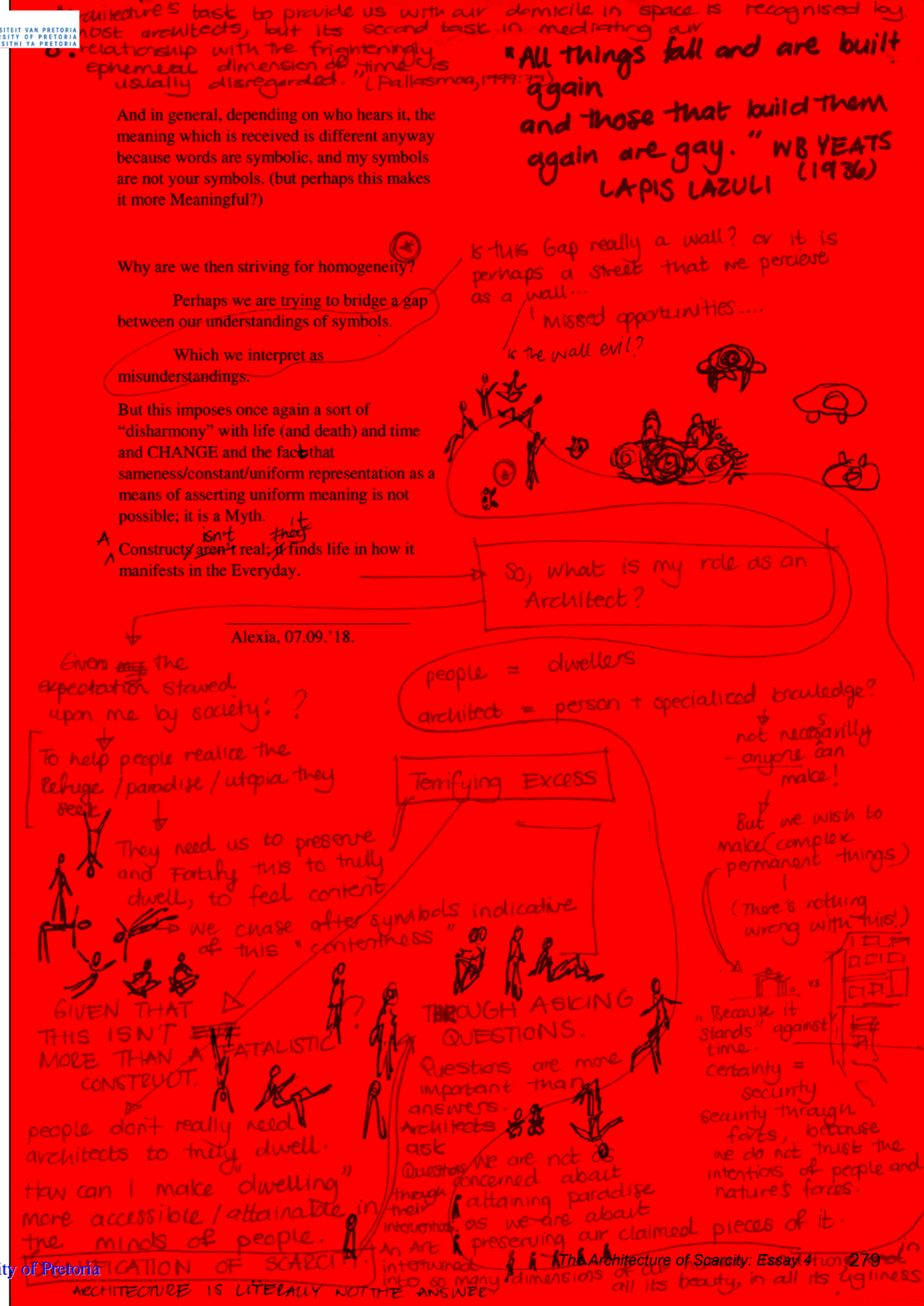
I believe there exists a large amount of room for exploration, optimisation, improvement, and resolution of the final design outcome (or rather, the most recent iteration at the time of examination), especially on a technical and systematic level.

I do, however, walk away from this project feeling more secure about my potential role and contribution as an architect - having paved a way to (mostly) reconcile my own intentions with the expectations of the industry.

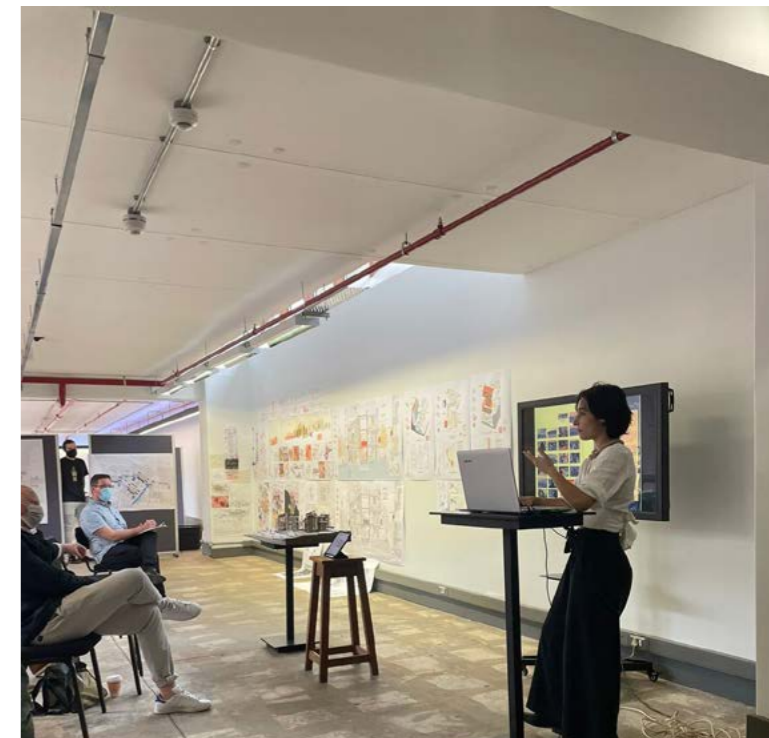
Until my next architecture induced existential crisis, I depart through this "pre-ramble" to the rest of my career.

Thank you for sharing in these ideas.

Figure 4.1.4. Excerpt from rapid speculation (Author 2018).







REFERENCES

- Architective 2015. Building Construction Standards for South Africa. 1st ed.
- Architecture Sans Frontieres International (updated July 31, 2012.). Discrimination & Theoretical Frameworks. In *Challenging Practice: Essentials for the Social Production of Habitat* (chapters 2 & 9).
- Awan, N, Schneider T & Till, J. 2011. *Spatial Agency: Other ways of doing architecture*. Routledge Press
- Bader, V. S. 2014. *From Italy to Brazil: From Vernacular Building to Modern Architecture*. Lina Bo Bardi 100. Berlin: Hatje Cantz Verlag
- Ballard, R, Hamann, C, Joseph, K, Mkhize, T. 2019. *Social Cohesion in Gauteng*. Gauteng City-Region Observatory (GCRO).
- Becerra Santacruz, A. 2010. *Architecture of Scarcity. PhD thesis: University of Sheffield*.
- Calame, J & Charlesworth, E. 2009. *Divided Cities: Belfast, Beirut, Jerusalem, Monster, and Nicosia*. Philadelphia: University of Pennsylvania Press.
- Chalmers University of Technology & University of Pretoria. 2020. ukuDoba Methodology.
- City of Tshwane 2007. Guidelines for the design and construction of water and sanitation systems. Pretoria: City of Tshwane.
- City of Tshwane 2018. Regionalized Municipal Spatial Development Framework: Region 6. Pretoria: City of Tshwane.
- Climate-Data 2021. Climate of Pretoria, South Africa. Accessed via <<https://en.climate-data.org/africa/south-africa/gauteng/pretoria-154/>>
- Cordell, T. 2019. Retrospective Peter Barber. *The Architectural Review*, (6):98-108.
- Daoud, A. 2010. Robbins and Malthus on scarcity, abundance, and sufficiency: the missing sociocultural element. *The American Journal of Economics and Sociology*, 69(4):1206-1229.
- Dodman, D., Leck, H., Rusca, M. & Colenbrander, S. 2011. African Urbanisation and Urbanism: Implications for risk accumulation and reduction. *International Journal of Disaster Risk Reduction*, 26:7-15.
- Du Plessis, C. & Peres, E. 2013. The threat of slow changing disturbances to the resilience of African cities. *Proceedings: CIB World Building Congress*, 5-10 May, Brisbane, Australia.
- Friedman, Y. 2012. *Architecture without building*. Chatou: cneai=.
- Guba, E.G. & Lincoln. Y.S. 1988. Do inquiry paradigms imply inquiry methodologies? In D.M. Fetterman. (ed.) *Qualitative approaches to evaluation in education: The silent scientific revolution*: 89-115, London, Praeger.
- Guedon, J. 1977. Michel Foucault: the knowledge of power and the power of knowledge. *Bulletin of the History of Medicine*, 51(2):245-277.
- Hamann, C. 2015. *Socio-spatial change in the post-apartheid City of Tshwane Metropolitan Municipality, South Africa. Masters Dissertation: University of Pretoria*.
- Hamdi, N. 2010. The place-maker's guide to building community. 1st ed. London: Earthscan.
- Harries, K. 1982. Building and the terror of time. *The Yale Architectural Journal*, 19:59-69.
- Harvey, D. 2008. The Right to the City. *New Left Review*, 53(5):23-40.
- Heidegger, M. 1993. Building Dwelling Thinking. *Basic Writings*: 343-364.
- Herr, C. M. 2017. Action Research as a Research Method in Architecture and Design. *Department of Architecture, Xi'an Jiaotong-Liverpool University*.
- Hillgren, P, Seravalli, A, Emilson, A. 2011. Prototyping and infrastructuring in design for social innovation. *CoDesign*, 7(3-4):169-183.
- Horn, A. 2020. Growth, exclusion and vulnerability: evaluation of the sociospatial transformation of post-apartheid Pretoria-Tshwane (South Africa). *Boletín de la Asociación de Geógrafos Españoles*, (87).
- Howard, Z. & Somerville, M. M. 2014. A comparative study of two design charrettes: implications for codesign and participatory action research. *CoDesign*, 10(1):46-62.
- Janse Van Rensburg, A. 2009. Comparing altars and agendas - using architecture to unite?. *SAJAH*, 24(1):33-49.
- Jordaan, J. 2015. *Constructing Place: towards a phenomenological framework for architecture in the twenty-first century*. PhD thesis: University of Pretoria.
- Katumba, S, Cheruiyot, K, Mushongera, D. 2019. Spatial Change in the Concentration of Multidimensional Pverty in Gauteng, South Africa: Evidence from Quality of Life Survey Data. *Social Indicators Research*, 145:95-115, Springer Nature.
- Kivunja, C. & Kuyini, AB. 2017. Understanding and Applying Research Paradigms in Educational Contexts. *International Journal of Higher Education* 6(5)26-41.
- Landman, K. 2004. Gated communities in South Africa: The challenge for spatial planning and land use management. *TPR*, 75(2):151-172.
- Landman, K. 2006. Privatising public space in post-apartheid South African cities through neighbourhood enclosures. *GeoJournal*, 66:133-146.
- Lee, Y. 2008. Design participation tactics: the challenges and new roles for designers in the co-design process. *CoDesign*, 4(1):31-50.
- Lefebvre, H. 1968. *Le droit a la ville*. Paris: Anthropos.
- Lianto, F. 2019. Grounded Theory Methodology in Architectural Research. *Journal of Physics: IOP Conference Serries*, 1179 012102.
- Martens, D. M. 2015. *Research and Evaluation in Education and Psychology*. 4th Edition. Los Angeles: Sage.
- Mashika, _ . 2019. _____
- Mehrotra, R. 2020. *Kinetic City*. ORO Editions.
- Mollard, M. 2019. Revisit Aranya low-cost housing. *The Architectural Review*, (6):114-123.
- Moreleta Park Integration Project. 2020a. Moreletapark Integration Project_Phase 1 -Community Mapping. Pretoria: University of Pretoria.
- OMM Design Workshop. 2007. The Sophia Grey Lecture. *Architecture South Africa*, 2007, (1):14-21.
- Pallasmaa, J. 2000. Hapticity and time: notes on fragile architecture. *The Architectural Review*, 207(1239):78-84.
- Peberdy, S, Harrison, P, Dinath, Y. 2017. *Uneven Spaces: Core and Periphery in the Gauteng City-Region*. Gauteng City-Region Observatory (GCRO).
- Philip, K. 2014. A History of Townships in South Africa, from Mahajan, S, ed. 2014. *Economics of South African Townships: Special Focus on Diepsloot*. World Bank Studies. Washington, DC: World Bank: 31-49.
- Pieterse, E. 2011. Rethinking African urbanism from the slum. Cities, health, and well-being conference Hong Kong, November 2011.

Republic of South Africa. 1993. Occupational Health and Safety Act, Act 85 of 1993.

Republic of South Africa. 1996. Constitution of the Republic of South Africa, Act 108 of 1996.

Richard, H. 2019. What Kind of Research is Research through Design? The International Association of Societies of Design Research Conference 2019, Manchester School of Art.

Salat, S. 2011. *Cities and Forms: On Sustainable Urbanism*. Trieste: Graphart Printing. Urban Morphology Laboratory.

Saldana, J. 2013. *The Coding Manual For Qualitative Researchers*. SAGE Publications Ltd.

SANRAL 2013. *Drainage Manual*. 6th ed. Pretoria: SANRAL.

Schneider, T. & Till, J. 2009. *Beyond Discourse: Notes on Spatial Agency*. Footprint, 4:97-111.

Schulze, N.E., Maharaj, M., Lynch, S.D., Howe, B.J. and Melvil-Thomson, B. 2001. *South African Atlas of Agrohydrology and Climatology*. CSIR. Accessed via: http://fred.csir.co.za/project/tmg/agrohydrology_atlas/atlas_toc.htm

Sennet, R. 2009. *The craftsman*. London: Penguin.

Simone, A. 2005. The Right to the City. *Interventions*, 7(3):321-325.

Strauss, M. and Liebenberg, S. 2014. Contested spaces: housing rights and evictions law in post-apartheid South Africa. *Planning Theory*, 13(4):428-448.

Till, J. 2014. Scarcity and Agency. *Journal of Architectural Education*, 68(1):9-11.

United Nations Human Settlements Programme, 2003. *The Challenge of Slums: Global Report on Human Settlements*

Vaajakallio, K. & Mattelmaki, T. 2014. Design games in codesign: as a tool, a mindset and a structure. *CoDesign*, 10(1):63-77.

Veikos, C. 2014. *The Hands of the People: Sesc Pompeia*. Lina Bo Bardi 100. Berlin: Hatje Cantz Verlag

Williams, R. J. 2009. *Brazil*. 1st edition. London: Reaktion.

Xenos, N. 1989. *Scarcity and Modernity*. 1st ed. London and New York: Routledge.

LIST OF FIGURES

Figure 0.1: (cover page) Architecture of Scarcity (Author 2021).

Figure 0.2: (background) Activate the wall (Author 2021).

Figure 0.3: (above) Position and Situation (Author 2021).

Figure 0.4: (right) Summary of Issues (Author 2021).

Figure 0.5: (previous page) collage of theoretical exploration (Author 2021).

Figure 0.6: (right) Theoretical sketch of architectural approach (Author 2021).

Figure 1.0.1: (right) Boundary wall in Cemetery View, Moreleta Park (Author 2020).

Figure 1.1.1: (below) View of gated communities from Plastic View informal settlement, Moreleta Park (Kriek 2021).

Figure 1.2.1: (below) Poetry displayed on the wall of a home in Plastic View, Moreleta Park (Herbst 2021).

Figure 1.3.1: (below) Claim street in Johannesburg under violence by allegedly Zuma supporters (Muchave 2021).

Figure 1.3.2: (right) The relationship between scarcity and the making of our cities (Author 2021).

Figure 1.3.3: (right) Sophiatown removals (Schadeberg b. 1931; printed in 1999).

Figure 1.3.4: (far right) Standard pattern sequence of division (Author 2021, after Calame & Charlesworth 2012:205-236).

Figure 1.3.5a: (below) Sectarian division lines in Belfast (Calame & Charlesworth 2012).

Figure 1.3.5b: (below) The Israeli 'security fence' in East Jerusalem (Calame & Charlesworth 2012).

Figure 1.3.5c: (below) The Green Line in Nicosia, Cyprus (Calame & Charlesworth 2012).

Figure 1.3.5d: (below) Boundary wall in Cemetery View, Moreleta Park (Author 2020).

Figure 1.3.6: Locating Pretoria, the divided city (Author 2021).

Figure 1.3.7: (above) Graph comparing City of Tshwane's gini-coefficient to the averages of three unequal countries: South Africa, Brazil, Zimbabwe. South Africa has the highest gini-coefficient, an indicator of inequality, in the world (Author 2021, after Gauteng Provincial Government 2021).

Figure 1.3.8: (right) Women gather in a street in Plastic View, Moreleta Park (Kriek 2021).

Figure 1.3.9: A timeline of the City of Tshwane's development - with reference to the standard division pattern sequence (Chalame & Charlesworth) and the Social spatial Heuristic (see fig. 1.3.11 on page. 24) (Author 2021).

Figure 1.3.10a: (far left above) Apartheid City (redrawn after Davies, as adapted by Napier et. al 1999, & Landman 2006).

Figure 1.3.10b: (left above) Gated communities and the new apartheid city (redrawn after Landman 2006).

Figure 1.3.11: (left) Right: A socio-spatial heuristic for assessing conceptions of power and scarcity with respect to social constructs (paradigm, world-view) legislation (political paradigm, policy, frameworks) physical constructs (architecture, urban morphology) (Author 2021 after Wildavsky 1957:6).

Figure 1.3.12: (right above) Gated communities in Pretoria east (Author 2021, adapted from author in Moreleta Park Integration Project 2020).

Figure 1.3.13: (left above) Houses in Woodhill Golf Estate, Moreleta Park (Kriek 2021).

Figure 1.3.14: (left) Socio-spatial heuristic broadly displaying the social, political, and spatial values that manifest gat-

ed communities and informal settlements (Author 2021 after Wildavsky 1957).

Figure 1.3.15: (above) Houses in Plastic View informal settlement, Moreleta Park (Kriek 2021).

Figure 1.3.16: (far left) Key values and intentions of relevant policy and legislation (author 2021).

Figure 1.3.17: (far left) Preamble to the Constitution of the Republic of South Africa No 108 of 1996 (RSA 1996).

Figure 1.3.18: (left) Gumpole roof and support structure in Plastic View, Moreleta Park (Kriek 2021).

Figure 1.3.19: (left) Gated community and informal settlement in Moreleta park, site plan sketched (De Bruin & Katranas (author) & Kriek 2021)

Figure 1.3.20: (right) Locating Moreleta Park (Author 2021, adapted from author in Moreleta Park Integration Project 2020).

Figure 1.3.21: (left) Chosen site indicated in red, De Villebois Mareuil Road, Moreleta Park (Author 2021, Google Earth Image).

Figure 1.3.22: (pg 40-41) Scarcity in Moreleta Park (Author 2021 after Moreleta Park Inte-

graton Project 2021).

Figure 1.3.23: (pg 42-43) Site photographs, De Villebois Mareuil Road, Moreleta Park (Author 2021, Kriek 2021, De Bruin 2021)

Figure 1.4.1: (below) A spazashop window in Plastic View, Moreleta Park (Kriek 2021).

Figure 1.4.2: (right) Excerpt from 'A Socio-Spatial Lexicon for the Future City' showing the hyper-optimisation of space, as well as threshold and boundary conditions (Author in Moreleta Park Integration Project 2021).

Figure 1.4.3: (left) The tower of Babel (Breugel the Elder 1564).

Figure 1.4.3: (right and below) Architecture as domicile in space, and boundary condition (Adapted from author 2020).

Figure 1.4.4a: (far right) Locating spatial agency discourse (Author 2021 after Wildavsky 1957).

Figure 1.4.4b: (far right) Locating phenomenology in architecture discourse (Author 2021 after Wildavsky 1957). Figure 1.4.4c: (below) Locating the ecological paradigm (Author 2021 after Wildavsky 1957).

Figure 1.4.5: (right) The Adaptive Cycle (Author 2020 after Holling 2001).

Figure 1.4.6: (far right) A Nicely Built City Never Resists Destruction (Kentridge 1995).

Figure 1.4.7: (above) Site Plan (De Bruin & Katranas (author) & Kriek 2021).

Figure 1.4.8: (right) Schematic diagram of street and programme application (Author 2021).

Figure 1.4.9: (above) Site exploration and analysis (Author 2021).

Figure 1.4.10: (below) Capabilities approach (CA) (Author 2021 after ASF 2012:104-5).

Figure 1.4.11: (left) Locating the research paradigm (Author 2021).

Figure 1.4.12: (right) Locating the research methodology (Author 2021).

Figure 1.4.13: (above) *Engagement during the prototyping phase* (Zorn 2021).

Figure 1.4.14: (right) *An architectural methodology for the Scarce City* (Author 2021 after Saldana 2013, Howard & Somerville 2014, Jordaan 2015, Mang et. al 2016).

Figure 1.4.15: (pg 54-55) *The emancipation of the boundary* (Author 2021).

Figure 1.4.16: (left) Plastic View Streetscape (Ramsey 2020).

Figure 1.4.17: (above) Summarized conceptual approach (Author 2021).

Figure 2.0.1: (right) A DSTv satellite dish spotted above a roof made covered with plastic sheeting in Plastic View (Kriek 2021).

Figure 2.1.1: (below) The plastered brick front facade of a Plastic View spaza-shop, with timber eaves that awaits roof sheeting for shading (Author 2021).

Figure 2.1.2.a: (right, above) An example of an activated street-facing threshold space in Plastic View, taken in 2020 (Moreleta Park Integration Project 2020).

Figure 2.1.2.b: (right, below) The same activated street threshold exactly one year later (2021), now built of brick. The timber from the tree that used to feature is now used as part of the roof structure (Moreleta Park Integration Project 2021).

Figure 2.1.3: (far left, below) Interior of a classroom at Gando Primary School, Burkina Faso, designed by Fancis Kere (Duchoud 2009).

Figure 2.1.4: (top left) Sol Plaatjie University by Wilkinson Architect, Norther Cape, South

Africa (Wilkinson Architects 2014).

Figure 2.1.5: (left middle) Concept Sketch by 26'10 South Architects (Deckler 2020).

Figure 2.1.6: (bottom, middle) Scarpa's courtyard seen from the lower level, with its steel frame acting as a clerestory, bringing light down to surrounding spaces ('Ambiente' Exhibition; period photograph 1968).

Figure 2.1.7: (bottom, far right) Timber detailing in Peter Zumthor's Caplutta Sogn Benedegt (Stani 2020).

Figure 2.1.8: (above) Colourful isometric sketch, characterising and contextualising Plastic View Informal settlement (Katranas & De Bruin 2020)

Figure 2.1.9: (far right, below) Diagram contextualising the research output of the Moreleta Park Integration Project honours students 2020, with QR codes that link to the respective open source content (Katranas 2020).

Figure 2.1.10: (top) South Africa context brochure prepared for prospective reality studio group members (Kriek 2021, featuring sketches by De Bruin 2020 and Jordaan 2020)

Figure 2.1.11: (left) MArch students from the University

of Pretoria and Chalmers University of technology involved in the Participatory Action Research (PAR) process, as well as the names of honours students involed (Moreleta Park Integration Project 2021).

Figure 2.1.12: (above) Diagram summarising the various stakeholders and researchers involved in the Moreleta Park Integration project since February 2020, highlighting various outputs alongside a timeline (Author 2021).

Figure 2.1.13: (above) Reality Studio virtual Miro exhibition (Moreleta Park Integration Project 2021).

Figure 2.1.14: Moreleta Park Integration Project Framework Methodology (Diagram by Author 2021; Adapted from Howard and Somerville 2014, Sanders and Stapers 2014, Saldana 2013).

Figures 2.1.15a-f: Photographs from the numerous site visits, during the field research process between February and June in Plastic View (Moreleta Park Integration Project 2021).

Figure 2.1.6: (page 82-83) Two community leaders play a boardgame outside of the community initiated office in Plastic View (Zorn 2020).

Figure 2.2.1: (left) Isometric map of Moreleta Park, the case study area (Author 2020)

Figure 2.2.2a: (left) 2016 Population distribution according to race in City of Tshwane - indicating lack of socio-spatial integration (De Bruin 2020).

Figure 2.2.2b: (left) Major transport routes in the City of Tshwane (De Bruin 2020).

Figure 2.2.2c: (left) Apartheid spatial planning model superimposed onto a map layer indicating patterns of development in City of Tshwane (De Bruin 2020).

Figure 2.2.2d: (left) 2016 Population Density in City of Tshwane (De Bruin 2020).

Figure 2.2.3: (above) Superimposed map layers (see figures 2.2.2.) locating Plastic View and Cemetery View (De Bruin 2020).

Figure 2.2.4: (above) Alongside 2.2.3. for comparison, locating gated communities and urban informality in City of Tshwane (Author 2021).

Figure 2.2.5a: (left) Contextual meso map layer (Katranas 2020).

Figure 2.2.5b: (left) City of Tshwane Region 6 zoning (Katranas 2020, adapted from CoT RSDP 2018).

Figure 2.2.5c: (left) City of Tshwane Region 6 nodes and corridors (Katranas 2020, adapted from CoT RSDP 2018).

Figure 2.2.5d: (left) Amenities within a 1km-5km radius of Plastic View (Katranas 2020).

Figure 2.2.6. (above) Superimposed meso map layers (see figures 2.2.5.) locating the Moreleta Park case study area (Katranas 2020).

Figure 2.2.7: (above) Alongside 2.2.6. for comparison, locating gated communities and urban informality in City of Tshwane Region 6 (Pretoria East) (Author 2021).

Figure 2.2.8a: (left) Contextual micro map layer (Katranas 2020).

Figure 2.2.8b: (left) City of Tshwane Region 6 - Moreleta Park and Wingate Park nodes and corridors (Katranas 2020, adapted from CoT RSDP 2018).

Figure 2.2.8c: (left) micro context land parcels and ervens (Author (Katranas) 2021).

Figure 2.2.8d: (left) External job opportunities from the perspective of Plastic View and Cemetery View (Katranas 2020).

Figure 2.2.8e: (page 91)

Servitudes and infrastructure reticulation (Katranas 2020)

Figure 2.2.9. (above) Superimposed micro map layers (see figures 2.2.8) locating the Moreleta Park case study area (Katranas 2020 & 2021).

Figure 2.2.10: (above) Alongside 2.2.9. for comparison, locating gated communities and urban informality in Moreleta Park (Author 2021).

Figure 2.2.11: (left) Series of isometric maps highlighting the dominant urban morphological characteristics of the Moreleta Park study area: Nolli map, figure ground, and ortho-photo topography map (Author 2020 & 2021).

Figure 2.2.12: (right) Series of isometric maps highlighting the environmental considerations and characteristics of the Moreleta Park study area: seasonal wind-rose and sun angles, fluvial systems and green areas, and ortho-photo topography map (Author 2021).

Figure 2.2.13: (page 98-99) A Socio-spatial Lexicon for the Future* City (Author 2021).

Figure 2.2.14: (top left) Extract from the Moreleta Park Integration Project Website (Moreleta Park Integration Project 2021)

Figure 2.2.15: (left) Group members involved in each mapping stream, with the Socio-spatial lexicon consisting of Delani and Alexia from the University of Pretoria, and Lina from the Chalmers University of Technology (Moreleta Park Integration Project 2021).

Figure 2.2.16: (above) Spatial Lexicon for the Future City Methodology (Author 2021, Adapted from Saldana 2013).

Figure 2.2.17: (left) The inherent act of hyper-optimisation (Kriek 2021).

Figure 2.2.18: (left) Third spaces and places (Kriek 2021).

Figure 2.2.19: (left) Safety, surveillance, and (in)security (Kriek 2021).

Figure 2.2.20: 1:500 Sketch of urban conditions at the entrance of Plastic View (Katranas, Kriek, De Bruin 2021).

Figure 2.2.21: 1:250 Sections of urban conditions at the entrance of Plastic View (Author 2021).

Figure 2.2.22: 1:500 Sketch of urban conditions at the Taxi-rank South of Plastic View, on the corner of Wekker Rd and Brabham Street (Katranas, Kriek, De Bruin 2021).

Figure 2.2.23: 1:500 Sketch of urban conditions on either side of de Villesbois Mareuil Dr, North of Plastic View, including Woodlands Lifestyle estate (Katranas, Kriek, De Bruin 2021).

Figure 2.2.24: 1:500 Sketch of urban conditions on the Southern site of Plastic View, depicting a Sunday morning soccer match on the soccer field, the netball field, the ECD, and neighbouring dwellings (Katranas, Kriek, De Bruin 2021).

Figure 2.2.25: 1:500 Sketch of urban conditions on the Southern site of Plastic View, depicting the busy intersection of De Villesbois Mareuil Drive and Garsfontein Road, as well as the hard-edged boundaries of Woodhill Golf Estate, Woodlands Lifestyle Estate, and Woodlands Boulevard Mall (Katranas, Kriek, De Bruin 2021).

Figure 2.2.26: Isometric map highlighting Plastic View and Woodlands Lifestyle estate, and indicating the site of interest in yellow (Author 2021).

Figures 2.2.27: Site photographs conveying key insights on boundary, hyperoptimisation of space, and third spaces in Moreleta Park (Moreleta Park Integration Project 2021).

Figure 2.3.1: (left above) Locating the physical and socio-spatial context of the works of Lina Bo Bardi (Author 2021).

Figure 2.3.2: (left below) Interior stage and audience space of the Teatro Oficina - blurring the boundary between actor and audience; embodying a literal theatre of the everyday (Bujedo Aguirre).

Figure 2.3.3: (left above) Drawing of the MASP (Author 2021).

Figure 2.3.4: (above) Street entrance to the Teatro Oficina (Bujedo Aguirre).

Figure 2.3.5: (right) Sketch Explorations of various works of Lina Bo Bardi (Author 2019).

Figure 2.3.6: (left above) Street condition at the Sesc Pompeia (Bujedo Aguirre).

Figure 2.3.7: (left) Interior public space at the Sesc Pompeia (Bujedo Aguirre).

Figure 2.3.8: (above) Teatro Oficina (Bujedo Aguirre).

Figure 2.3.9: (left above) Locating the physical and socio-spatial context of the works of Balkrishna Doshi (Author 2021).

Figure 2.3.10: (left below)

Aranya Housing in the 90's (SANGATH).

Figure 2.3.11: (Right) Aranya Housing conceptual sketch (Vastushilpa Foundation).

Figure 2.3.12: (below) Photograph of Aranya from a rooftop in the early 90's (Vastushilpa Foundation).

Figure 2.3.13: (right above) Aranya Housing kit of parts (Vastushilpa Foundation).

Figure 2.3.14: (right below) Aranya Housing base-plan (Vastushilpa Foundation).

Figure 2.3.15: (far right below) Aranya Housing conceptual sketch (Vastushilpa Foundation).

Figure 2.3.16: (left above) Locating the physical and socio-spatial context of the works of Cohen and Garson Architects (Author 2021).

Figure 2.3.17: (left below) Courtyard at UMP Student Residences (Cohen and Garson Architects).

Figure 2.3.18: (Right) UMP Student Housing design principles (Author 2021, after Cohen and Garson Architects).

Figure 2.3.19: (left above) UMP Student Residence elevations (Cohen and Garson

Architects).

Figure 2.3.20: (left middle) ground floor plan (Cohen and Garson Architects) indicating organisation of private, semi-private, circulation, and courtyard spaces (Author 2021).

Figure 2.3.21: (left below) ground floor plan (Cohen and Garson Architects) indicating vertical circulation and service spaces (Author 2021).

Figure 2.3.22: (far above) Seven Houses (Cohen and Garson Architects).

Figure 2.3.23: (above) Seven Houses plan (Cohen and Garson Architects) indicating organisation of private, semi-private, circulation, and courtyard spaces (Author 2021).

Figure 2.3.24: (immediate left) Comparative study of an 800m² portion of land in Woodlands Lifestyle Estate and Plastic View, indicating organisation of private, semi-private, circulation, and courtyard spaces (Author 2021).

Figure 2.3.25: (left above) Locating the physical and socio-spatial context of the works of Peter Barber (Author 2021).

Figure 2.3.26: (left below) Upton Village Proposal sketch (Peter Barber).

Figure 2.3.27: (left above)

Excerpt from notes taken on Peter Barber (Author 2018).

Figure 2.3.28: (left below) Entrance to council home in Ilchester road (Peter Barber).

Figure 2.3.29: (below) Section and plan of Ilchester road project (Peter Barber).

Figure 2.3.30: (right) Ilchester road project, view from street (Peter Barber).

Figure 2.3.31: (right) Ilchester road project, view towards street (Peter Barber).

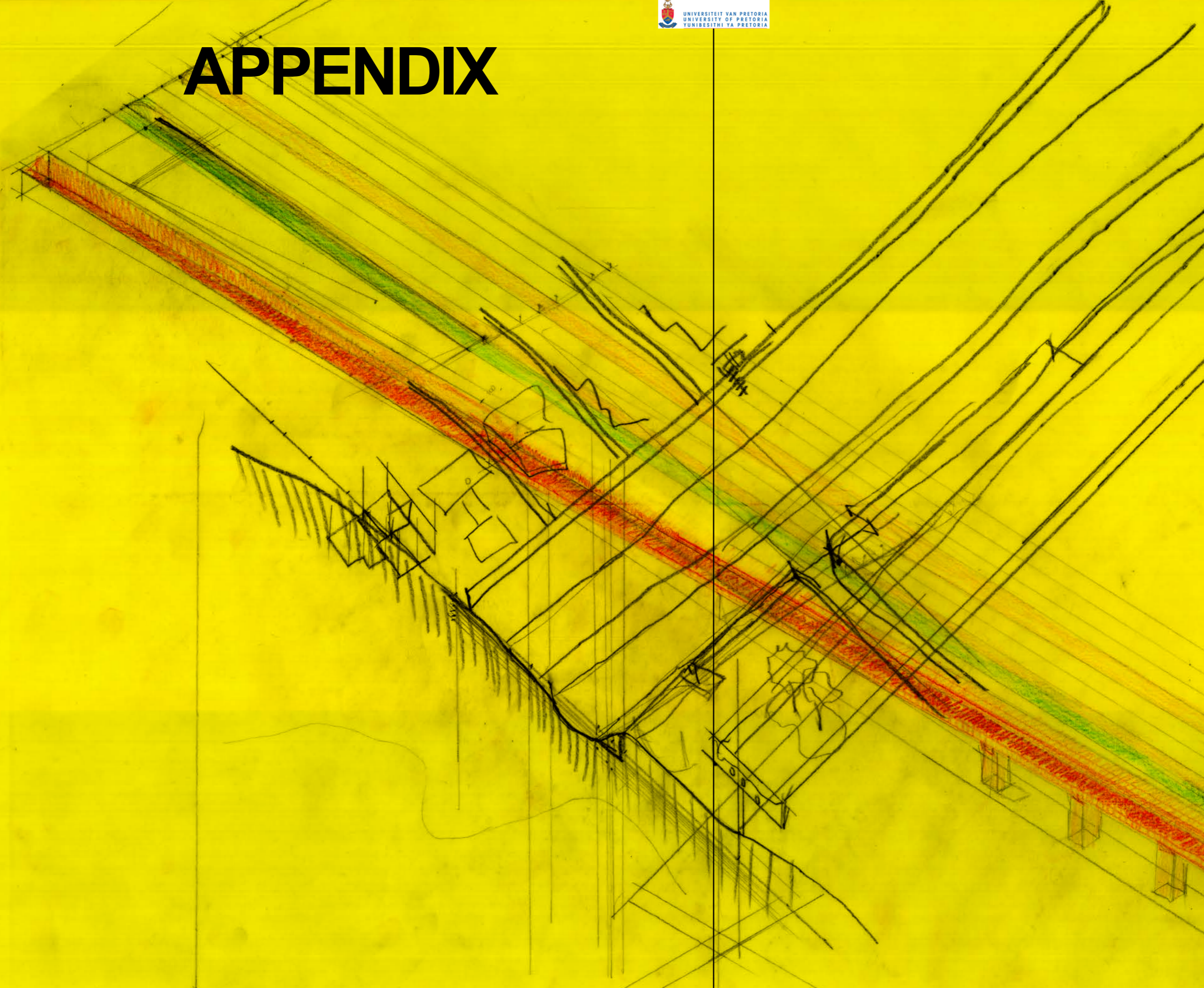
Figure 4.1.1: (previous spread) Exploring the in-between dwelling spaces as part of the iterative design process (Author 2021).

Figure 4.1.2: Non-built support functions can be designed by architects, an excerpt from Architecture without Building (Friedman 2012).

Figure 4.1.3: Reflecting on the architecture (Author 2021).

Figure 4.1.4: Excerpt from rapid speculation (Author 2018).

APPENDIX



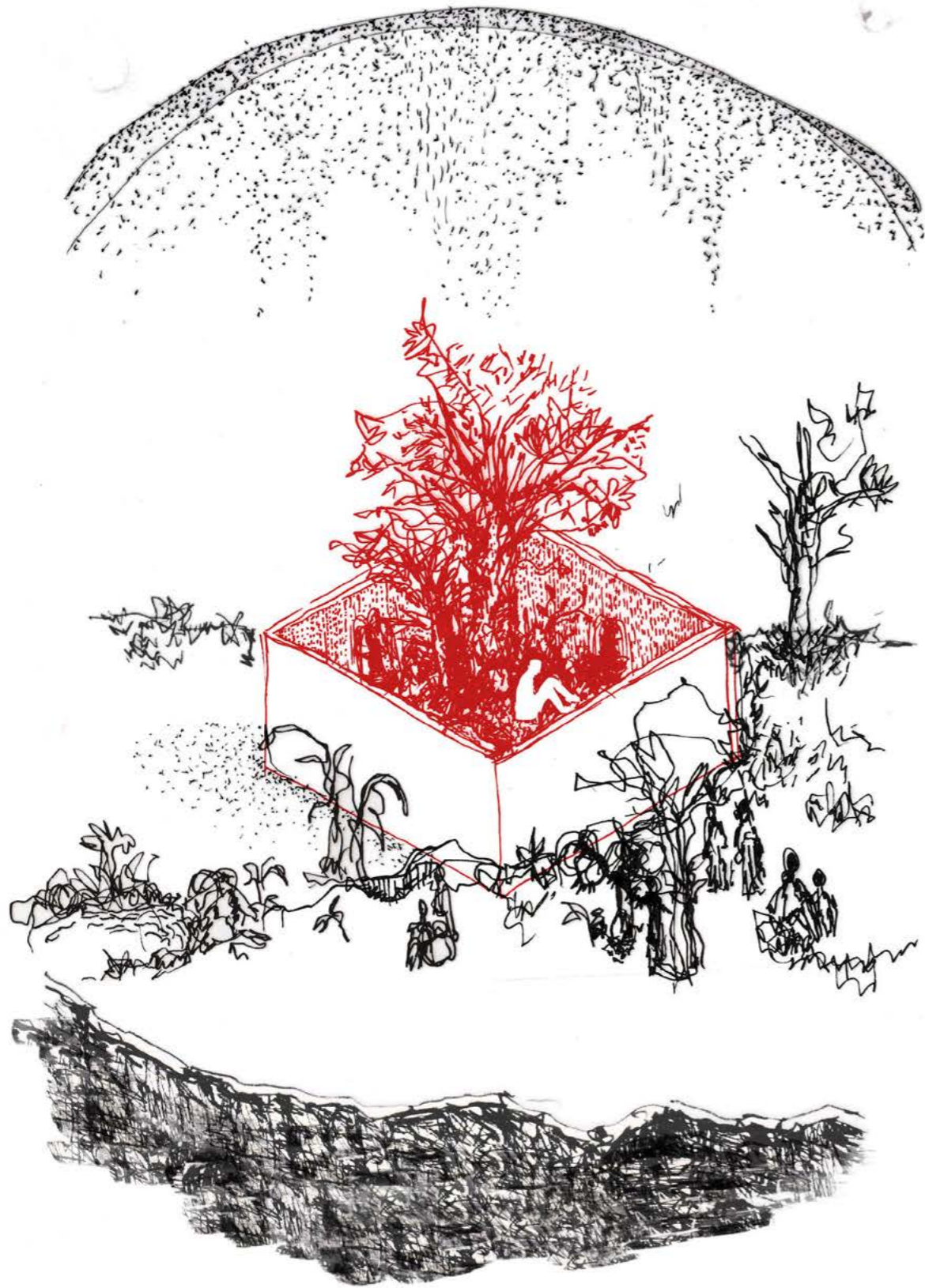
(a)
rapid speculation
2018

(b)
rapid speculation
2021

(c)
platform for
engagement
march 2021

(d)
reality studio
feb-june 2021

(e)
ethics approval
2021



(a)
**rapid specula-
tion**
2018

We wish to make tangible and transferable the awe we are subjected to by the thoughts of our own minds.

Man is constantly amazed by his own thoughts.

"I wish you could see what I see".

How do I preserve this?

Architecture is not virtual, but it can be.*

What is meant by "virtuality"?

We are all spiced differently.

What does architecture mean to the sad man?

Reconciling our diverse realities.

in between

As an architect, your reality becomes another person's playground.

"Architecture is really nothing until people have breathed life into it." – Peter Barber at the AZA on permeable architecture – "how people might behave – architecture forms itself around that." He continues to speak about how the street is the basic building block of a city. Jane Jacobs methodology- looking at something and understanding how it's working. Streets tend to compress social activity – bring different people together and make them visible to one another. The building being the eye of the street. To go see: 'Arrival cities' and "The social life of small intimate spaces".



Read Prinsloo

US vs THEM.

Boundary

What is it?

Why is paradise a walled garden?

Identity is a product of a person feeling as though they belong in a place. Architecture attains the identity assigned to it by those who experience it.

Does man and nature reject or embrace it?

Is this reaction as result of symbolism or experience, or both?

Architecture – it is a landscape, right?*

self actualisation.

dialogues

SLIDING IN AND OUT OF SPACE SKY

in between two different

EARTH

OMNI DESIGN Workshop

TENSIONS

- if we are aware of its ephemerality, perhaps we wouldn't feel the need to build a wall.

ALDO VANI EYCK TWIN PHENOMENA.

Adrian – Black man's Utopia.

SUPERIMPOSITION.

What distinguishes it from people and nature?
It is artificial.
What is artificial?
What is something that is artificial compared to that which is natural?

Materials manipulated by man? Yes, perhaps.

But artificial as its connotative meaning (which tends to surpass its literal meaning) resides in our minds, is negative.

It's plastic straws. It's an "un-decomposable" object – it is an obsolete waste of space and resources.

It compromises life in its inability to cooperate with systems and cycles within and around it. It is abandoned and shoved aside until it grows into an unavoidable ghost that haunts our contemporary, living conditions.

We know we are obsolete, but we don't care?*

We only care for the repercussions.*

We build a wall around ourselves because we know that our paradise is another man's contested space. Dystopia.

Our paradise, or rather our position in paradise.

Through whose eyes?

DEATH
Do you want to die gracefully and peacefully, or do you want to fight the world, killing pieces of its innocence and identity until it may finally overcome your challenge and kill you?

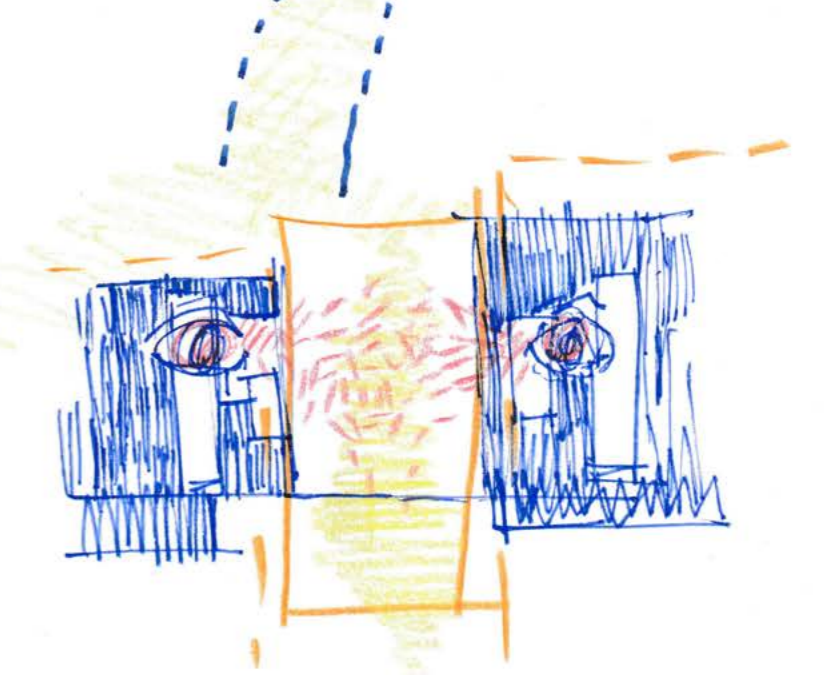
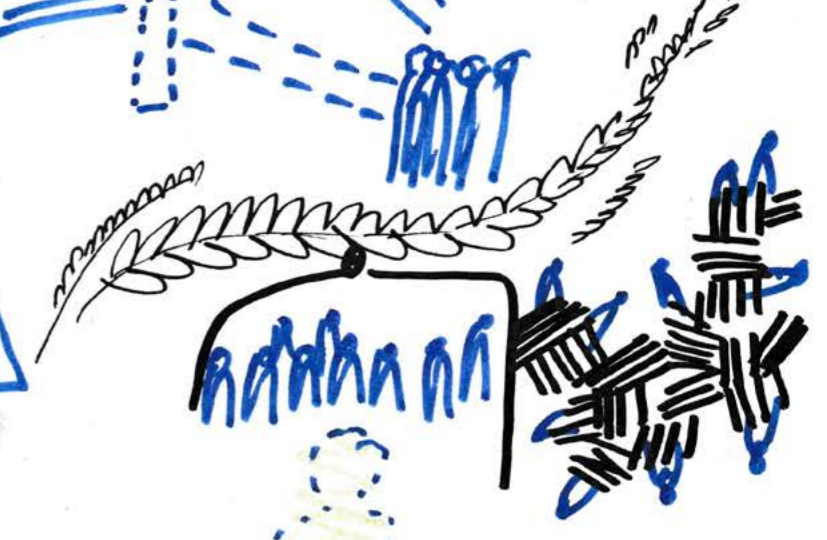
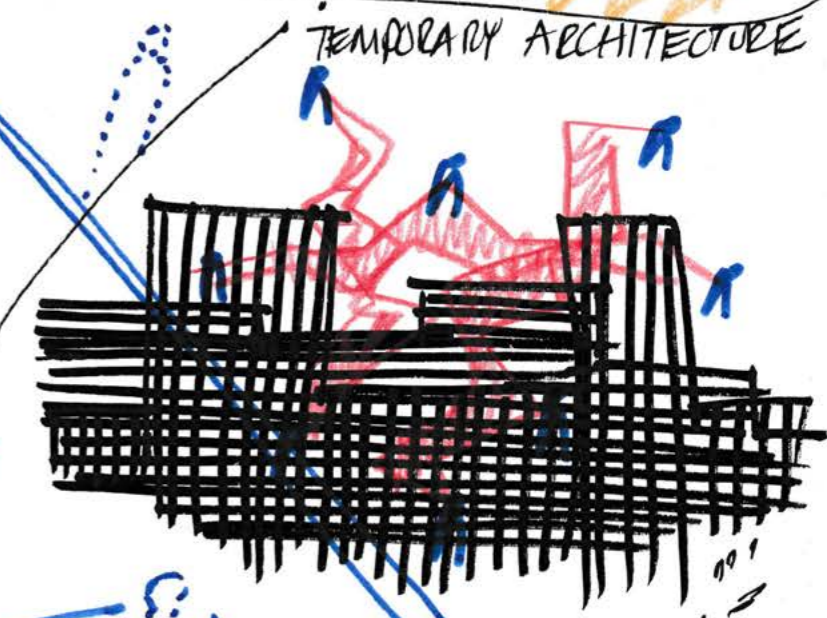
Save you from your own obsolescence.

Death will save you from obsolescence.

Ideas, symbols, and memories are stronger when they exist in the manifestation of other things.

Reproduction: biologically our sole purpose?

TRANSCENDS TIME
TEMPORARY PEOPLE
TEMPORARY CONDITIONS
TEMPORARY ARCHITECTURE



PERFORMANCE — PROGRAMME
temporary (permanent) expression.

Maybe we do fear obsolescence?*

Maybe the meaning of life is to make more life and not overstay your welcome by preserving the idea of your existence in an attempt to live vicariously through objects your rudely render obsolete, by possessing them with your cursed obsolescence.

The act of trying to preserve the idea of oneself physically is an attempt to ease one's mind of the uncertainty following death with the myth of material permanence.

PERMANENCE IS A MYTH.

You may only live on through breathing life into new or other life. Anything is alive if it is aware of its unavoidable approaching demise.

The mere instinct "to survive", present at birth, shows that one is psychologically aware of the risk or possibility of their own death before they can conceive or attach an image to what "death" or "to die" looks like.

You rob architecture of the opportunity to live if you do not consider the inevitability of its death.

The clay brick is constantly in the process of returning to dust. It is dying.

The building wishes to return to dust so that it may become reborn.

The physical body is not afraid of death.*

Death is the only thing it is sure of.
Aging and death ^{are} what drives rebirth and life! Time promises Life, Death. Everything is in a constant state and process of dying.

Only the conscious mind attempts to refuse death of an individual.

When the physical body instinctively resists death - natural selection - it attempts to preserve the collective conditions of life.

Are we Born alone. Do we Die alone.

Are - cannot control, it is. Do - subject to action, choice?



Transient identity.

I am because you are.
You live through me, gracefully, because my death will propagate new life.

Is religion allegoric?

To reiterate,
Why the damn, wall?

If I deny that I Am through virtue of you, that all which I deposit into the world is the new conditions from which I withdraw - then You and I become mutually exclusive in the perceptions of My mind - and for Me to have means to deprive you of.

For you to have means for me to have lost.

You become the ghost of my own obsolescence.

Us vs Them.

I am because you're not.

Day and night; 1's and 0's.

To grant me Utopia, is to subject you to Dystopia.

I contest you, and you contest me.

The world and nature contests me

I need to impose my right to Paradise and enclose it to protect it from the "Terror of Time".

I conspire to protect my memory from the world.

If only I could see, my memory is the world.

In dying, I am living; in living, I am dying.

life is not the antithesis of death.

(to be or not to be?) To have meaning or not to having meaning?

GLAUBER ROCHA
"A Estética da Fome"
Makes visible -> those people that the middle classes fear the most.

culture developing through out of a context of scarcity rather than abundance.

Museu de Arte de São Paulo
"Instead of imagining an architecture in which the past had been simply erased, Brutalism assumed that the urban context had already existed, but was in a state of ruin."

Magical Realism
Gabriel Garcia Marquez
one hundred years of solitude
Abundance Excess

LINA BO BARDI

Can the world be shared?

There is a thin line between the act of "having meaning" and the act of "having no meaning at all".

Is "to be meaningless" not to assign meaning? Is the idea of meaning not a meaningless construct?

Same same but different but same.

"The only way to do it is to let museums should open their doors and let pure air and new light in."

Matter allows symbols and ideas to manifest. Matter is not the idea or symbol. Do not treat it like one.*

Let it house your ideas, but do not expect that it will eternally perpetuate your ideas.

What is "Your Idea" anyway?

Isn't it just a manifestation of all ideas.

What makes your ideas, yours?

The Idea.

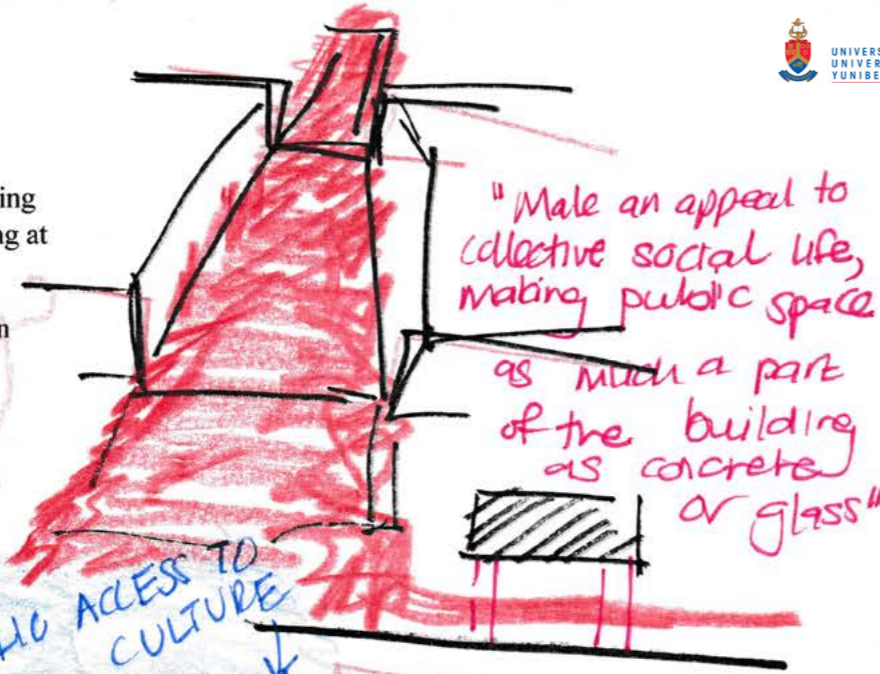
Your idea is not a "thing" or an "invention". It is subject to things.

"the thingness of things."*

You do not need to know what death looks like. Death is not an image.

My ideas are the memory of the ideas of those before me, through living the life they left behind, and using the same language of words they used to understand the same (different) world.*

These words of people live through me. I do not recite them word for word. If I did so, it would be obsolete and void of meaning.



"GIVING BACK TO THE CITY AS MUCH SPACE AS IT TOOK FROM IT" "SITE DESTINED TO REMAIN OPEN - NOT BUILT ON"



Change in life and representation breathes life into ideas.

A symbol is a mere representation of an idea. Do not mistaken it for a reservable meaning.

I write because you wrote.

In essence, I am you; and you are me. But only because we manifest differently.

Actually!

My reaction to a thing is as much a thing as the thing is.*

If I love the world, the world loves you, and it loves me.

A building is an opportunity to engage with endless people, to love them, so that they may love the world. To offer a "gift" of your ideas so that people may "marvel in it", but your ideas are really everyone's same ideas and amazement at the world, anyway.

These ideas should never be reliant on perpetuating the manifestation of the symbols you assign to it; the words which assist you to conceptualise it.

ORIGINAL SITE OF HARD LABOUR SCARCITY → SPARSE RELAXATION CREATIVE RELAXATION

WHAT IS BEAUTY? WHAT IS TRUTH?

All meaning is the same, everyone assigns different symbols to this meaning, and it manifests itself into a multitude of truths. ... Different meaning?

A truth can have many meanings and manifestations.

A meaning can have many truths and manifestations.

A manifestation can have many truths and meanings.

There is hardly a hierarchy here in sight. So why the Hierarchy?

Maybe its us assigning things to things, understanding what meaning means to us, how manifestations... manifest. (teehee)

Hierarchy isn't universal. But maybe the act of assigning hierarchy is.



"CIVILIZING ARCHITECTURE THROUGH THE DIGNIFICATION OF HUMAN LIFE THROUGH ACTIVE PARTICIPATION IN COLLECTIVE PROCESSES OF ARTISTIC COMMUNICATION, OF THE COLLECTIVE"

7. MANAGEMENT OF KNOWLEDGE, OF THE CREATIVELY COGNITIVE MANAGEMENT OF A CREATION OF A COLLECTIVE IDENTITY.

Why do we ask, "why?"
Why?
It helps us understand ourselves. Justify ourselves in order to live with ourselves.

(why?)
Maybe this is my truth.
A manifestation of your truth.
Do symbols and manifestations change, but life essentially stays the same? or vice versa???

--- also, a random observation ---
I've noticed that much of the architectural readings or anything related to conceptualising stuff - always begins with a brief historical background. Without it, we would have no idea of what the writer is reacting or responding to.

Without context it is meaningless
What is to come, is the past. It represents all that has happened. It is the past and the present and the future.

The future is a projection of the past.
Perhaps this is how time can be transcended. (although this thought is even subjected to it.)
To transcend time, you must first be a part of time or subject to it. But this also implies that it must be a simultaneous relationship that has and always will exist as to not be subjected to it.

--- back to the context thing ---
If I were to say, pretty much anything in this writing extravaganza, in isolation... it may be confusing and have no meaning.

The context assigns the meaning. (ha-ha, in this sense, the architect has less power than previously implied.)

Similarly, to put the same words in a different context, may result in it projecting a different meaning.

"At best, the walled garden can remind us that we long for Paradise by rendering our desire for it unfulfilled. This in itself is poetic, for when we enter the garden gate and our experience becomes merely phenomenological, strangely we long for a place beyond the walls; strangely we experience (Prinsloo, 2015)"

Why the need to justify?
once again you to use the word "why"...

LINA BO BARDI - Anke Marais
"I was looking for simple architecture, that could immediately communicate that which in the past was known as monumental... sketches -> children's section of society blurs with LINA'S MANIFESTATION IN ARCHITECTURE."

"These are the original mergers of the earth, in which invested, as sparks in fire, they will produce a green wealth tapping a trick they do by dying, by decay..."
Howard Nemerov
A Cabinet of Seeds Displayed

"strangeness of meaning" - use of technical words out of context.
Barfield through Prinsloo
CHANGE OF CONSCIOUSNESS
"When thinking of these moments, or longing for them, this 'ex situ' appreciation of landscape is always poetic, because a memory always involves a felt change of consciousness" - Prinsloo (2015)

The selfish Giant (1888) Oscar Wilde.
The nun.
Strangeness = poetic "sensory strangeness"
(Even so, the architect still has less power!)
"A poetic experience within the liquid landscape would therefore require a moment in which part of what is, is not."

Building as landscape - what about "Erosion of difference" of experience.
"MYSTIC"

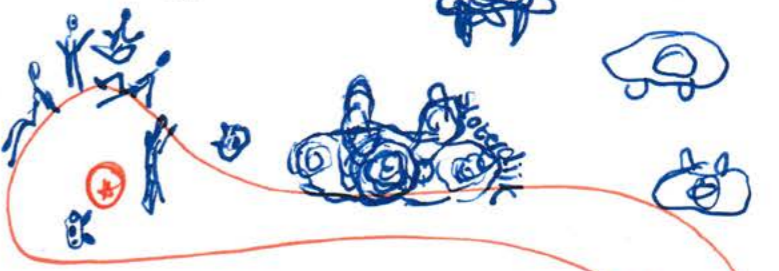
"Architecture's task to provide us with our domicile in space is recognised by most architects, but its second task in mediating our relationship with the frighteningly ephemeral dimension of time is usually disregarded." (Pallasmaa, 1999: 79)
"All things fall and are built again and those that build them again are gay." WB YEATS (1936)
LAPIS LAZULI

Why are we then striving for homogeneity?
Perhaps we are trying to bridge a gap between our understandings of symbols.

Which we interpret as misunderstandings.
But this imposes once again a sort of "disharmony" with life (and death) and time and CHANGE and the fact that sameness/constant/uniform representation as a means of asserting uniform meaning is not possible; it is a Myth.

A Construct is not real; it finds life in how it manifests in the Everyday.

Is this Gap really a wall? or it is perhaps a street that we perceive as a wall...
Missed opportunities...
Is the wall evil?



So, what is my role as an Architect?

Alexia, 07.09.'18.
Given the expectation staved upon me by society: ?

To help people realize the Refuge / paradise / utopia they seek

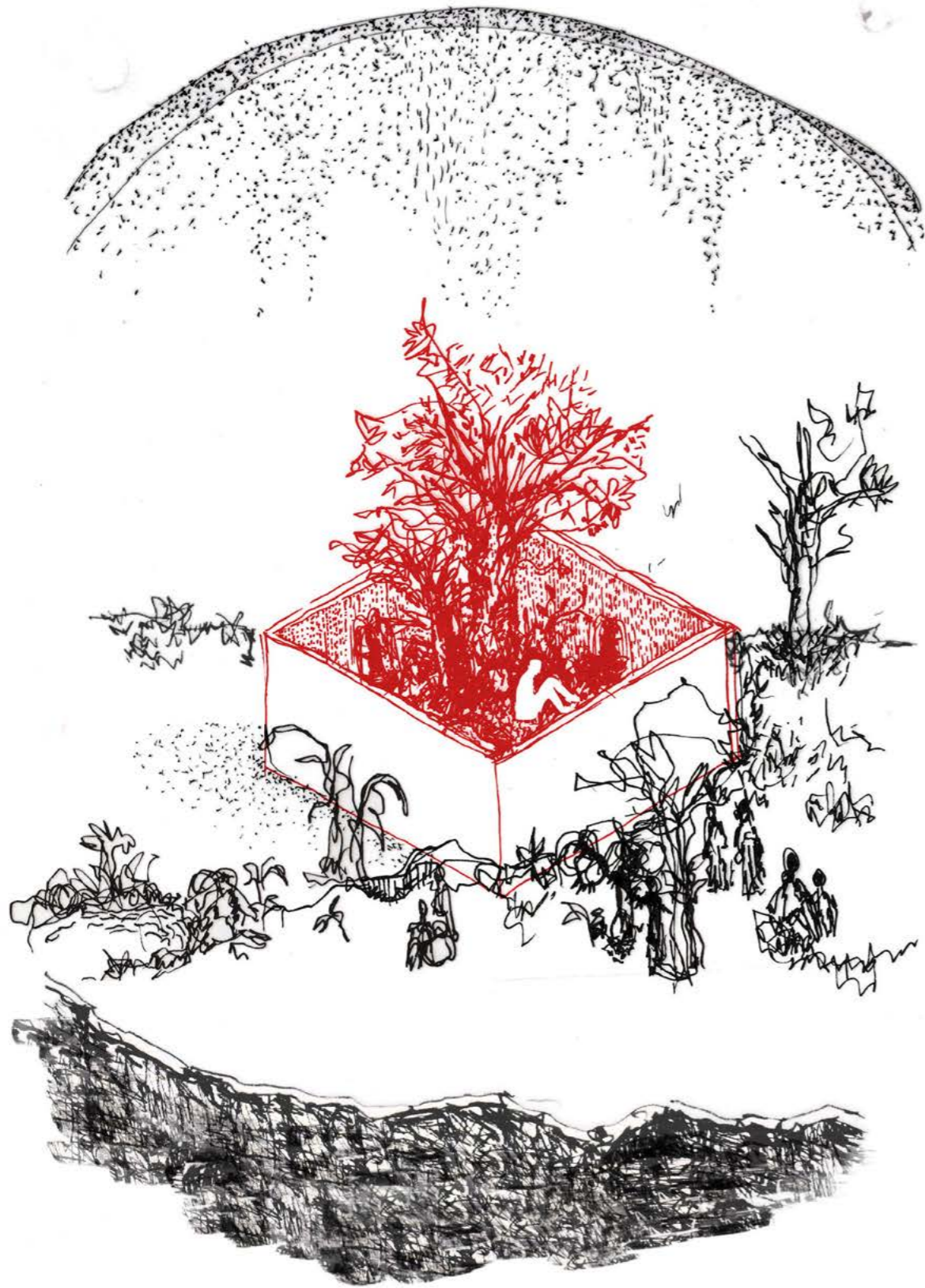
They need us to preserve and fortify this to truly dwell, to feel content
we chase after symbols indicative of this "contentness"

GIVEN THAT THIS ISN'T MORE THAN A FATALISTIC CONSTRUCT.
people don't really need architects to truly dwell.
How can I make "dwelling" more accessible / attainable in the minds of people.

people = dwellers
architect = person + specialized knowledge?
not necessarily anyone can make!
But we wish to make (complex permanent things)
(There's nothing wrong with this!)

Terrifying Excess
Questions are more important than answers.
Architects ask questions we are not concerned about attaining paradise as we are about preserving our claimed pieces of it.

THROUGH ASKING QUESTIONS.
Questions are more important than answers.
Architects ask questions we are not concerned about attaining paradise as we are about preserving our claimed pieces of it.
"Because it stands" against time.
Certainty = security
security through forts, because we do not trust the intentions of people and nature's forces.
ARCHITECTURE IS LITERALLY NOT THE ANSWER.
An Art intertwined into so many dimensions of our human conditions, all its beauty, in all its ugliness



(b)
**rapid specula-
tion**
2021

PROLOGUE?

The problem of Scarcity and Architecture.

Why do we enclose?

Why is paradise a walled garden?

How do we interrupt the binary?

What is the binary?

Us vs them? Inside vs outside?

Is interrupting necessary?

What does the alternative look like?

What do we want?

What can we actually do, or contribute?

Who am I to decide what needs to be done?

Can we universally access what is "good"?

Can we universally access what is "good"?

What would the universal criteria be?

I would say that relationships should be perceived differently.

- That the way we see the world is toxic.

To be toxic, is to be harmful to the world around you.

But toxicity for the sake of what?

We believe we are entitled to the world; we believe this promise can only be one-sided.

We fear ephemerality.

We fear the promise of scarcity.

FEAR

EPHEMERALITY

SCARCITY

By retreating within our enclaves, we retreat into paradise.

Paradise is where there is no scarcity*

Scarcity is why we suffer*

The suffering of some becomes necessary for others to achieve paradise.

The ultimate goal.

Paradise

paridaēza

Walled garden,

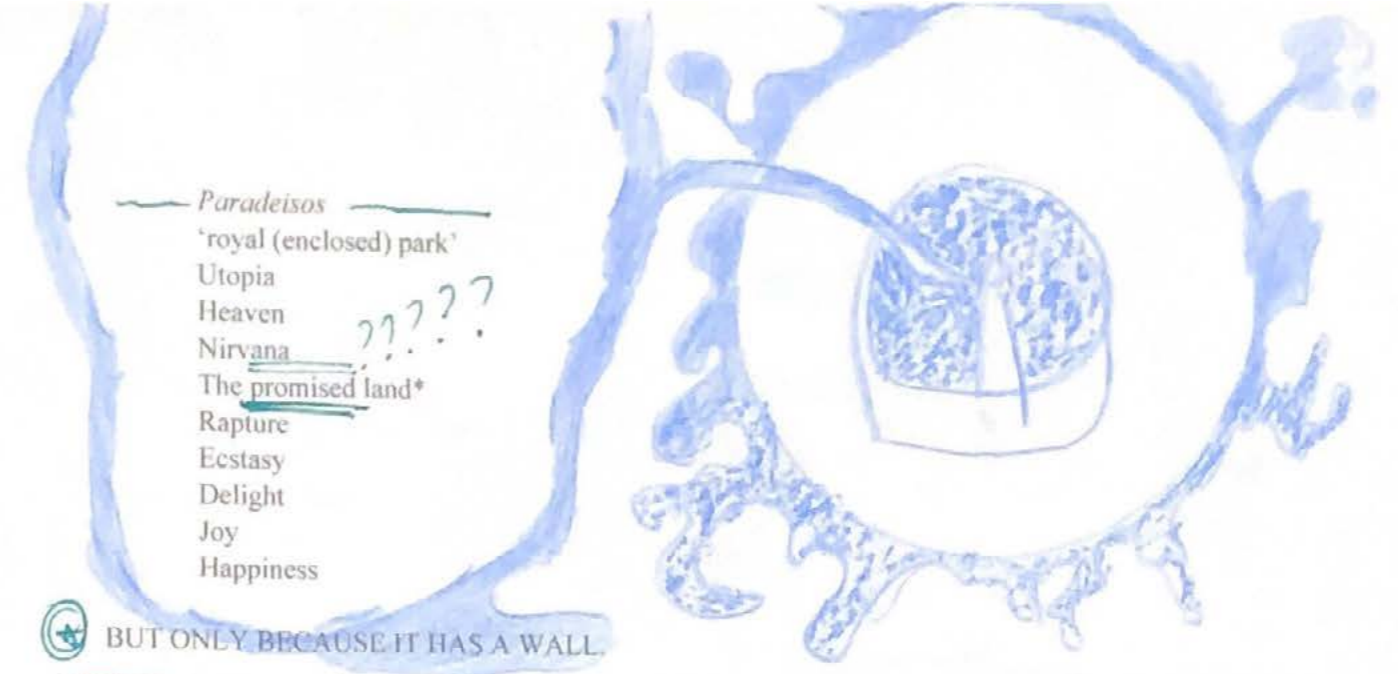
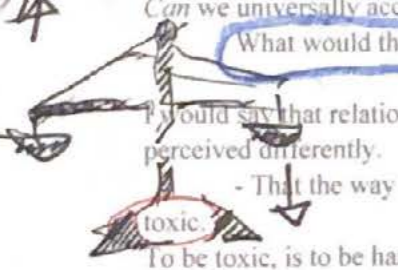
'enclosure, park'

* The world without outside

enclaves of

PARADISE? ↑?

AS someone implied in the architecture?



- Paradeisos
- 'royal (enclosed) park'
- Utopia
- Heaven
- Nirvana
- The promised land*
- Rapture
- Ecstasy
- Delight
- Joy
- Happiness

BUT ONLY BECAUSE IT HAS A WALL.

We fear scarcity, but abundance is equally as terrifying.

BUILDING AND THE TELL OF TIME (HARRIES)

We fear the inevitability of time's transience. We believe in the inevitability of earth's scarcity.

INEVITABLE ENTITLEMENT

Paradise, through abundance, is inherently ephemeral. Let architecture be the time-opposing, artificial barrier I protect myself and worldliness from.

PRESERVATION SURVIVAL

An act of self-preservation. To dwell.

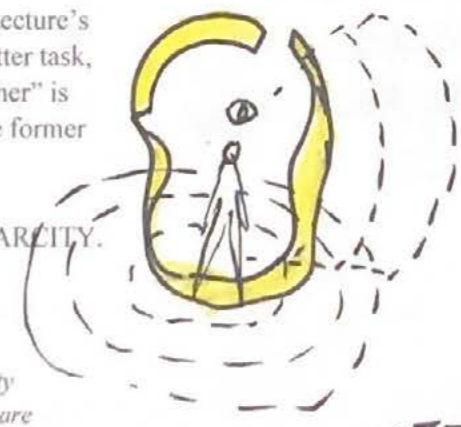
DWELLING

"Architecture's task to provide us with our domicile in space is recognized by most architects, but its second task in mediating our relationship with the frighteningly ephemeral dimension of time is usually disregarded." (Pallasmaa 1999:79)



It can be further argued, that Architecture's current attempts at satisfying the latter task, results in a system whereby the "other" is defined, and is deprived even of the former task.

SOCIALLY CONSTRUCTED SCARCITY. SCARCITY POSTULATE!



Xenos (1989) describes this "Scarcity Postulate" as the belief that our needs are unlimited, and that the unavoidable, absolute existence of scarcity is what restricts the satisfaction of these needs. (Excerpt from essay)

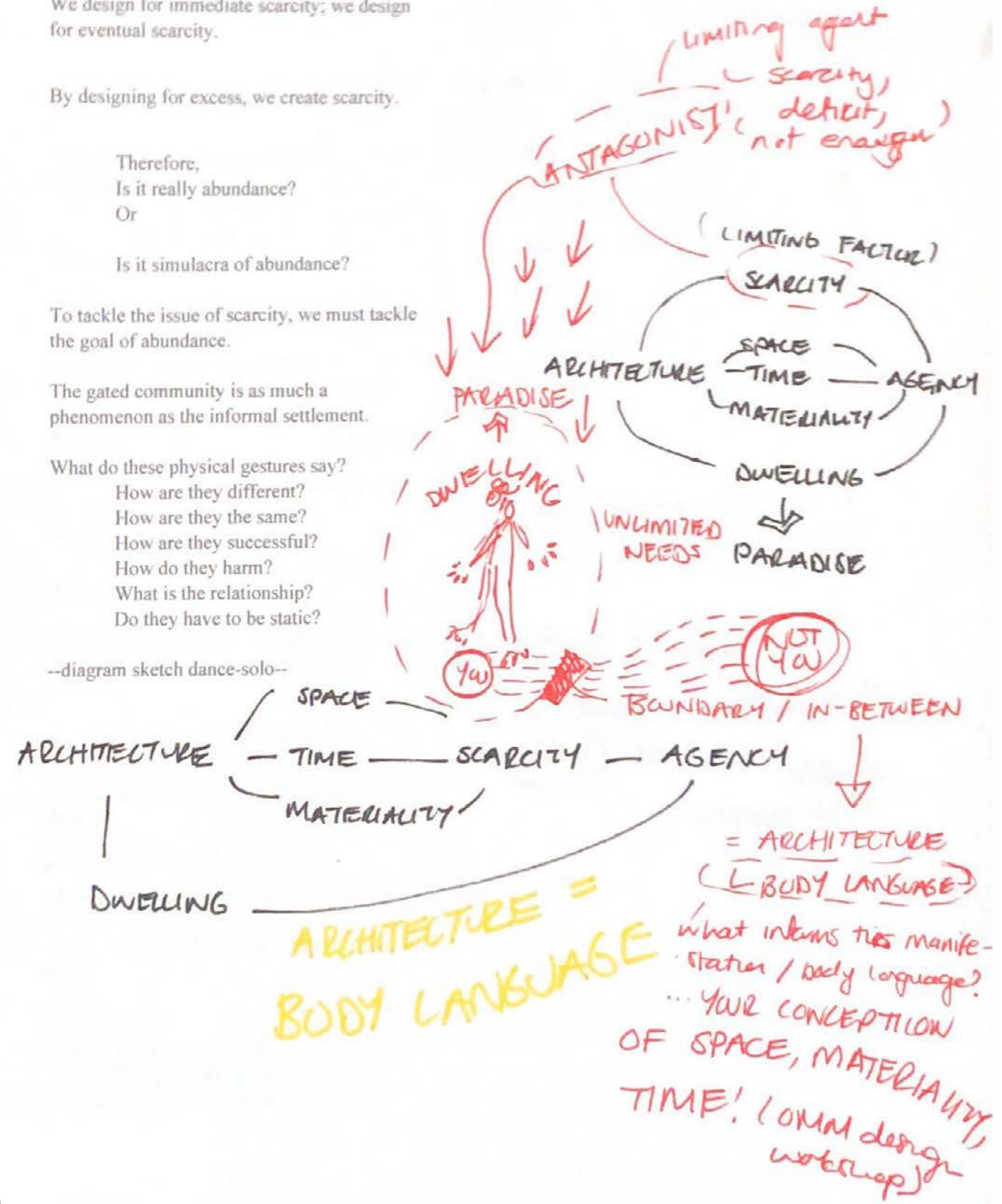
A SYSTEM THAT PRODUCES SCARCITY.

Why do we build?
 Is architecture driven by fear?
 Is fear the prerequisite of survival?
 Is to live, to survive?
 We design for immediate scarcity; we design for eventual scarcity.
 By designing for excess, we create scarcity.

Therefore,
 Is it really abundance?
 Or
 Is it simulacra of abundance?
 To tackle the issue of scarcity, we must tackle the goal of abundance.
 The gated community is as much a phenomenon as the informal settlement.

What do these physical gestures say?
 How are they different?
 How are they the same?
 How are they successful?
 How do they harm?
 What is the relationship?
 Do they have to be static?

--diagram sketch dance-solo--



To dwell is to actively seek paradise; an assertion of agency over the unpredictable outside.
 To have, is to survive?
 What drives us to exist?
 What do we value?
 How do we assign value?

Everything is perceived.
 To exist, is to perceive, and be perceived.

Life is defined by your lens.
 Life defines your lens.
 Architecture is a social product.

What does it tell us about our needs?
 -about what architecture's role is?
 -about what architecture's role could

Can architecture internal socio-spatial dichotomies instead of preserve their legacies?

(CAN THE WORLD BE SHAVED?)

Architecture tells us what our spatial needs are. To understand architecture is to understand ourselves. To understand the lens through which we view the world beyond ourselves is to understand the things we build.

To live, is to build.
 To see/perceive, is to live.

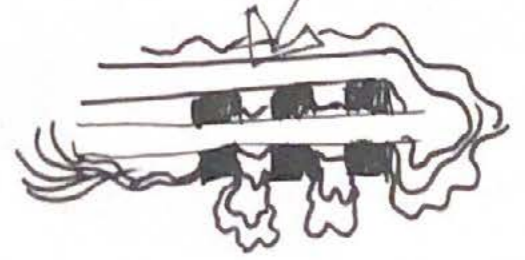
(ARCHITECTURE MAKES THINGS VISIBLE.)

Can architecture be honest, without being destructive?

Sometimes architecture becomes a visual tool for preserving meaning.
 How honest is this to the everyday experience?

I suppose it is honest to the lens/ideology it attempts to celebrate.

Is it inherently wrong to want to preserve ideas through architecture?



SUSTAINABLE LIVELIHOODS FRAMEWORK (SLF)
 DFID RESILIENCE FRAMEWORK
 RIGHTS BASED APPROACH (RBA)
 CAPABILITY APPROACH (CA)

I suppose the keyword is "preserve".

--to come back to the question of "what is good"?

...it becomes important to acknowledge that nobody can assume the authority to know what is good.

Especially not a singular, 'hero author'.

Especially not the lone architect; With all her thoughts, All her ideas;

Her furious hand...

Nothing is static.

Architecture's sole purpose should not be artefact.

Architecture is dwelling. Architecture is agency.

Needs, thoughts, and ideas are constantly in flux.

But still, we are scared of time. We are scared of change.

Especially when we are in the process of grasping onto what little piece of paradise we were able to muster.

We seek paradise by accumulating commodified materials; drawing territories through space; building enclaves around ourselves to preserve the simulacra of abundance against time's uncertainty.

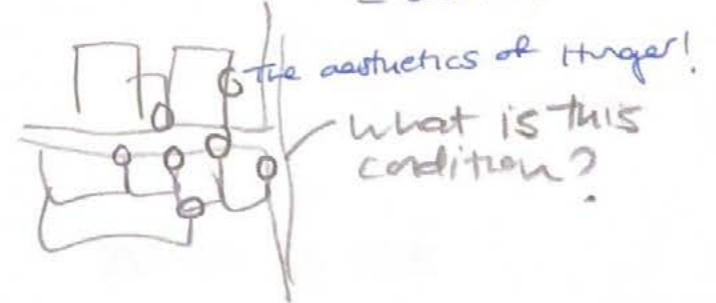
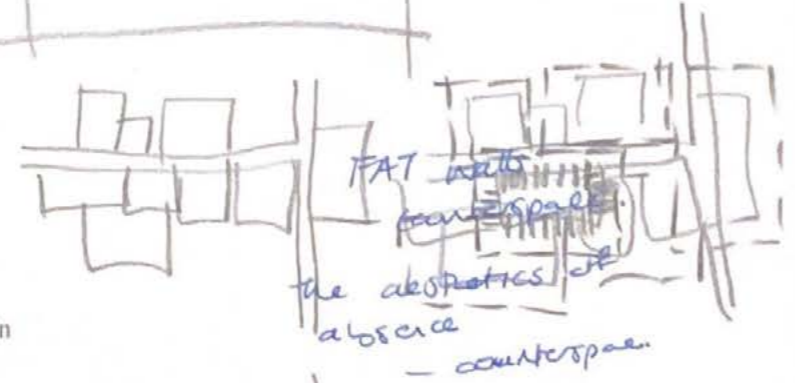
The only certainty is death.

The idea of 'end' or 'death' is terrifying, and subsequently, our relationship with time's ephemerality is turbulent.

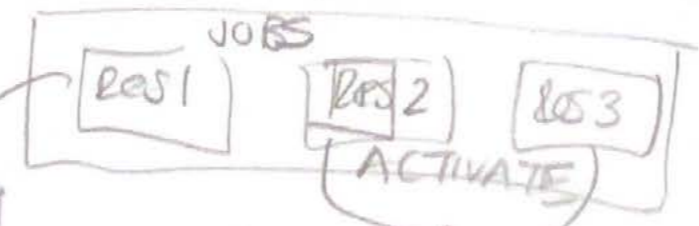
To dwell is to be greedy.

To acquire abundance is to steal from the world; the outside.

To have, is to subject the world outside, to not have.



SCALE 2: THE BUILDING / PROGRAMME EDGE / OVERLAP → A BUILDING



Existing
↓
adjust

antipoint
↳ design / allocate

We are living on borrowed space, borrowed materiality, borrowed time.

We violently assert power and assume control over these elements to secure survival.

We violently shape and build our world around our needs.

We deprive others of this agency because we see it as a threat to our own agency.

To have agency is to see paradise within one's reach.

When agency, dwelling, and time is transactional -

The more you have, Is the more you have, to lose.

TERRIFYING EXCESS.

I build walls to ease this suffering. The fear of my impending suffering.

The hunger, deficit I see/perceive around me, qualifies this suffering (the fear of my impending suffering).

I build walls to ease this suffering. But the higher the wall, the more violent its demise.

Would architecture, then, be fulfilling its role, if the wall is still what man needs?

A wall fails when it becomes obsolete.

The world fails, until the wall becomes obsolete.

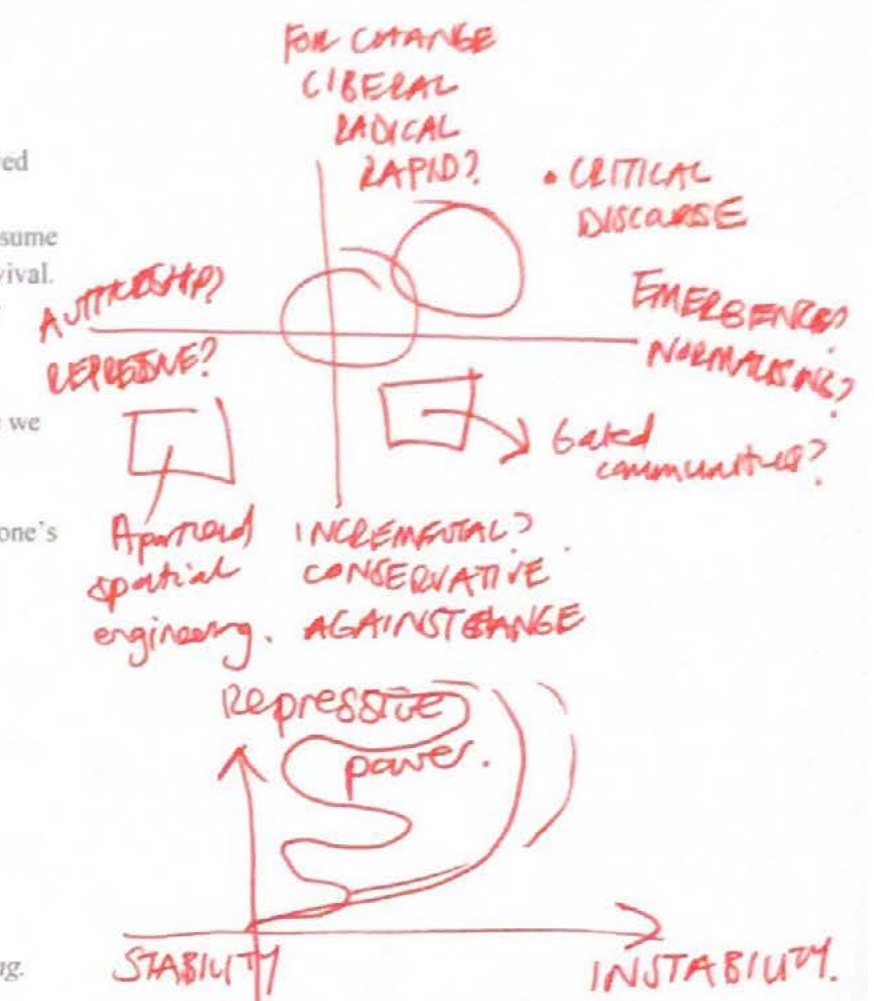
Are we building the world we wish to dwell in?

What makes the world I build today so toxic?

What drives us?

How do we judge our success?

Why does monument accompany accumulation and abundance?



residents as experts of their own living condition.

What is the "Metal residue"? WHO is the "metal residue"?

Architecture's language is greedy.

To assume the outside to be dangerous is to acknowledge your own toxicity.
"it's a dog eats dog world"

By actively avoiding conditions of 'scarcity', we build systems which create conditions of scarcity. By living in a simulacra of abundance we fulfil the prophecy we fear.

Architecture, the dwelling, and the in-between, is absolutely a way of navigating scarcity.

Instead of protecting paradise/abundance from its impending ephemerality, a cause and product of the outside deficit we perceive and fear -
Maybe - architecture could be a means of harnessing "deficit" so that it no longer threatens survival/dwelling/domicile.

Making something from nothing -
By seeing the something that exists in socially constructed nothing, and letting our reframed perceptions filter through to our intentions; to our architecture - how we shape our interface with the outside world.

Rescripting architecture; agency; dwelling.

Engaging the ephemerality, the scarcity, we fear - by leveraging the full potential of making:

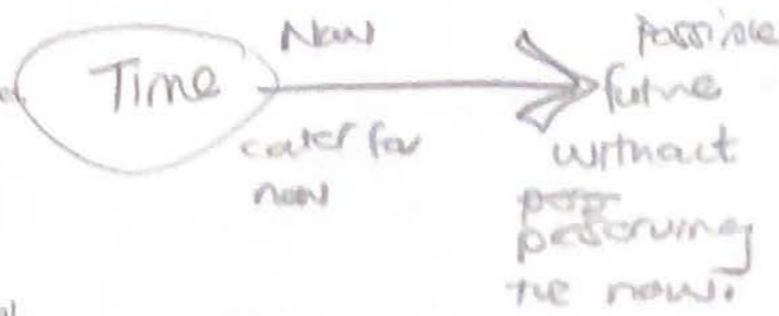
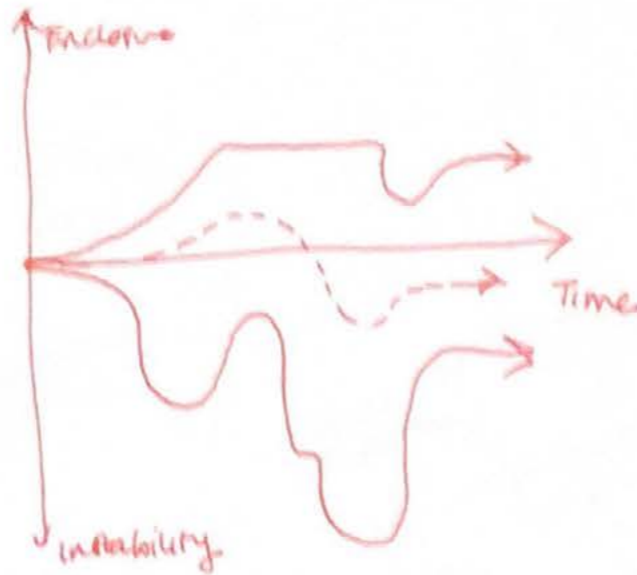
As an ongoing process that evolves, as needs shift
Emerge
And die.

No losers, because there are no winners.
No dwelling in paradise through the unequal distribution of space, resources, and power.

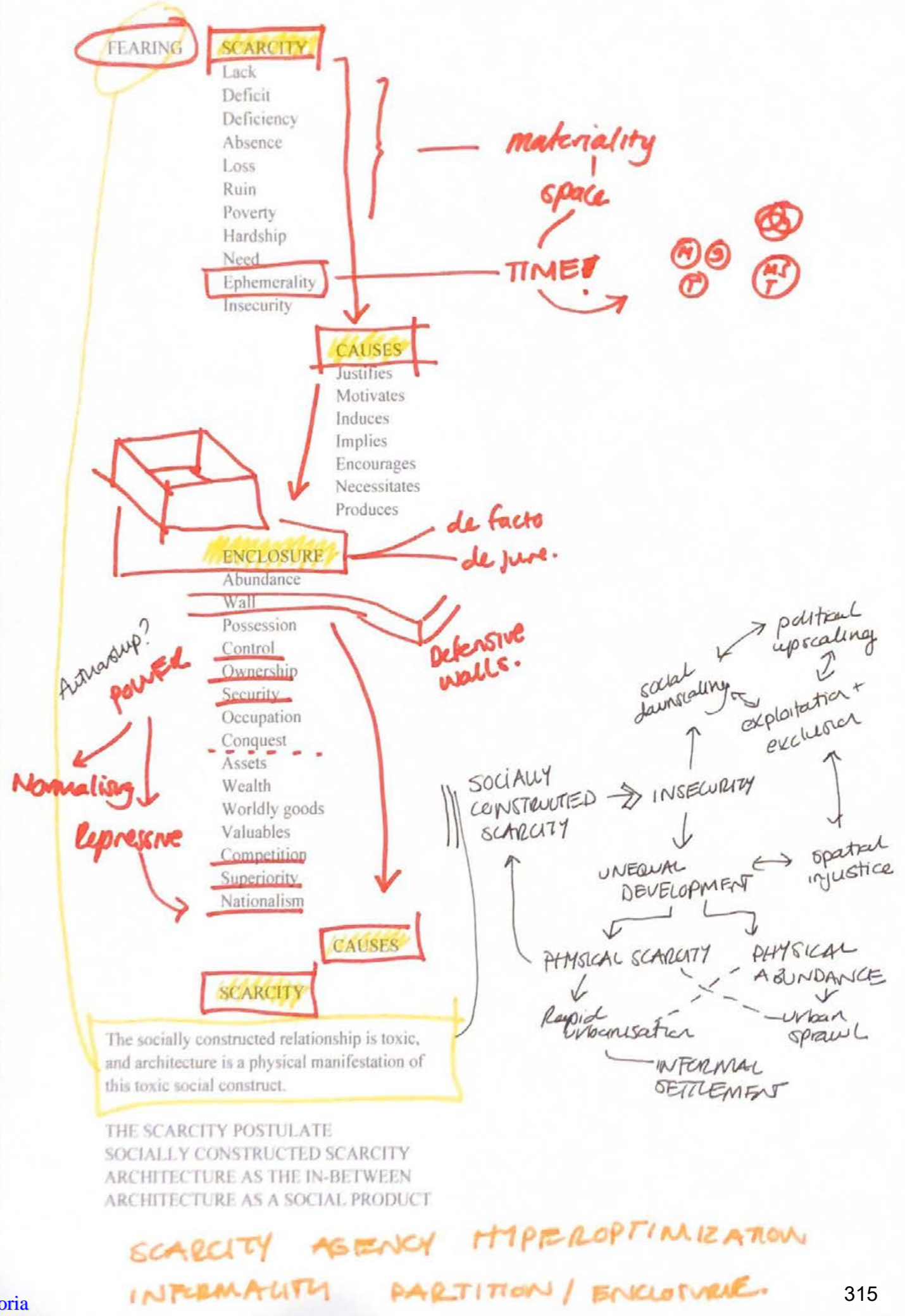
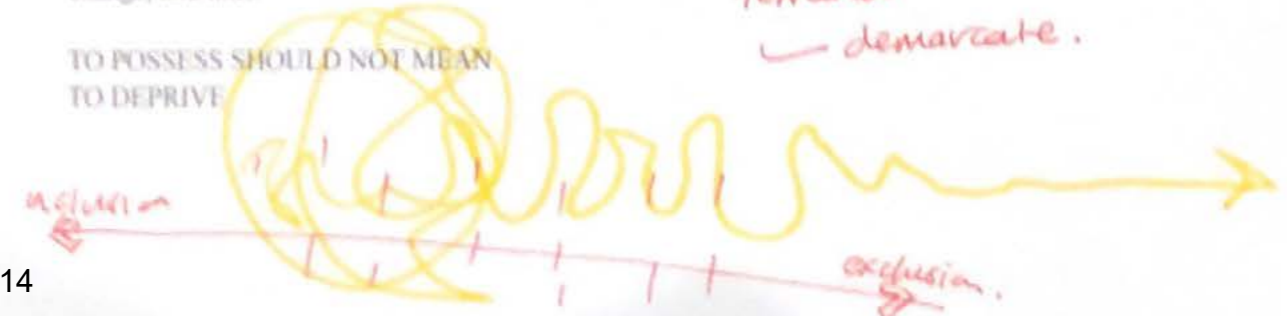
No fearing the would-be deficit you create, enclosing yourself from eventuality, change, and time.

TO POSSESS SHOULD NOT MEAN TO DEPRIVE

AUTHORSHIP
TIME
BOUNDARY
AGENCY
POWER



temeros
demarcate.



THE IN-SITU, INCREMENTAL UPGRADING OF GATED COMMUNITIES.



Scarcity is seen to limit agency.
What if scarcity could induce agency?

Scarcity has already shown the potential to catalyse massive change

Scarcity has already shown itself to promote the subsequent ingenuity necessary for survival.

Architecture can successfully provide the need for domicile in wake of socially constructed, as well as physically manifested conditions of scarcity. But can architecture better engage our turbulent relationship with time?

opportunity 1
new developments
↳ consider activating boundary condition.

opportunity 2
design a boundary that dissolves

If architecture does not fear and oppose time, transience, change...
...then maybe change (by making or breaking) does not have to be as violent.

Yeats.
"All things fall and are built again, and those that build them again are gay."

Architecture that dies, is architecture that is reborn.
To dwell, we must live and let die.

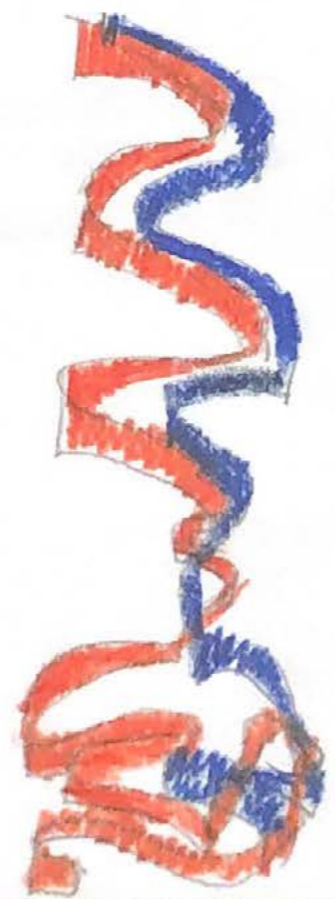
SCARCITY IS A MYTH
SCARCITY IS A SOCIAL CONSTRUCT

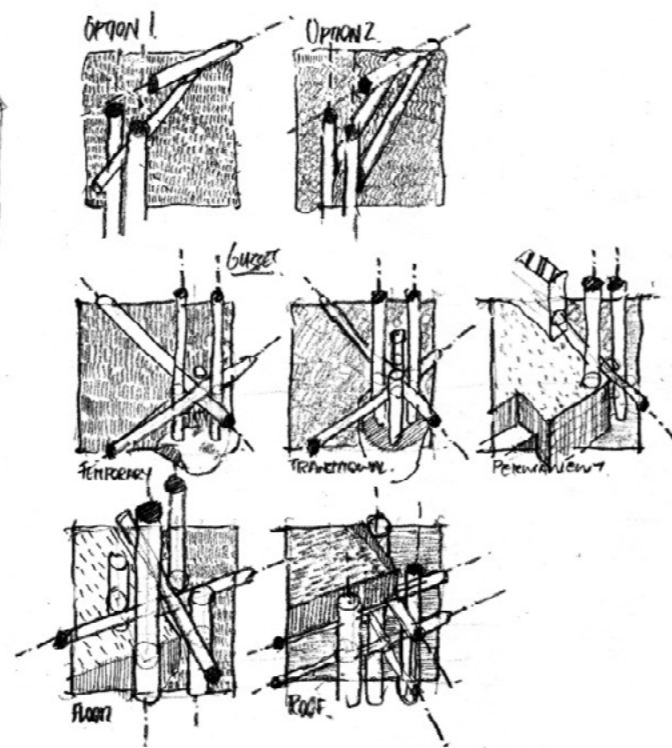
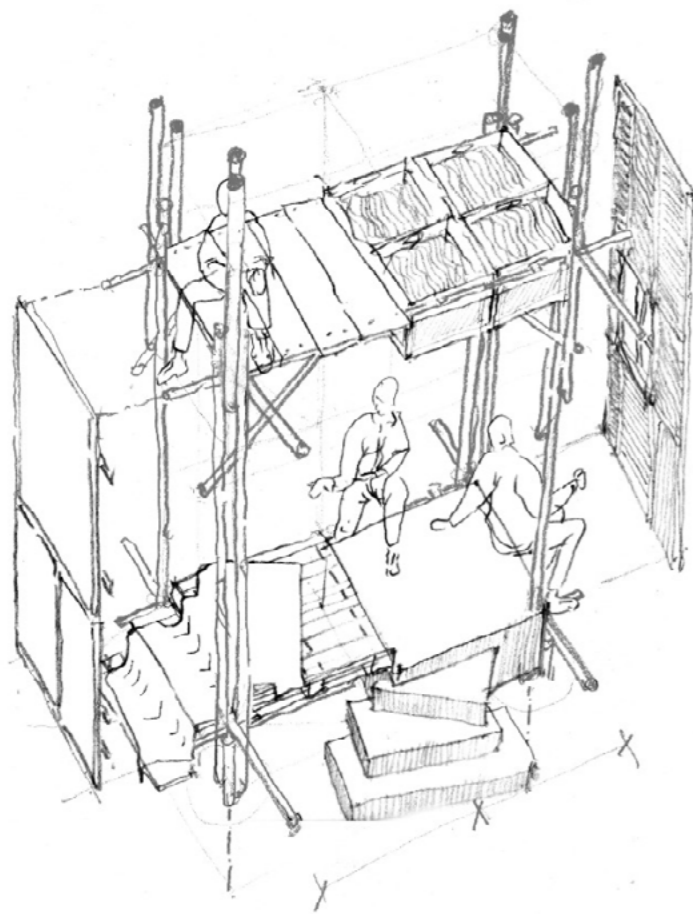
Reframing the way we see the world, and the way we shape it, may emancipate us from our own violence and toxicity.

The opportunity of Scarcity and architecture.

"A construct isn't real; it finds life in how it manifests in the Everyday."***

Alexia, 12.05.'21.

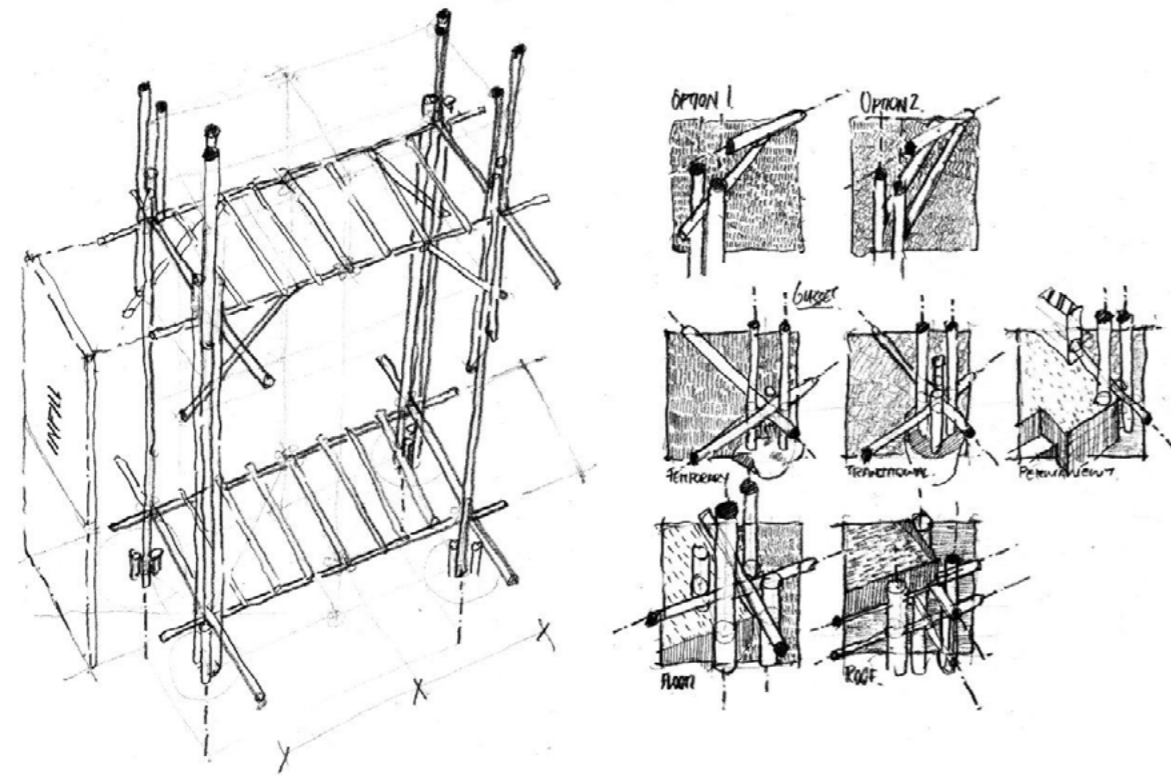




(c)

**platform for
engagement**

april 2021



3. To support **agency** (Awan, Schneider & Till 2011), whereby the production of a flexible, easily adaptable structure, promotes future appropriation by the community according to their needs.

The proposed placement of this temporary structure is alongside or within close proximity to the community Centre, located across from the SA Cares For Life ECD centre.



Architectural Research Prototype

The Honours and Masters students from the *Unit for Urban Citizenship, Department of Architecture, University of Pretoria*, as well as two students from the *Reality Studio, Chalmers University of Technology* - are embarking on an Architectural Research Prototype within Plastic View informal settlement, Pretoria.

The build outcome will take the form of a 1.5 m x 2.5m *temporary structure* with a structurally sound second storey, pinned to the ground by planted columns.

Conceptualized as a **“Platform for Engagement”** - supported by the discourse of Spatial Agency, and guided by Participatory Action Research (PAR) (Howard & Somerville 2014) and Community Action Planning (CAP) (Hamdi 2010) methodologies - the purpose of the structure and the associated engagements can be understood in terms of three main roles:

1. A designed **response** to the contextual conditions outlined through our ongoing mapping process of the settlement. These ideas are constructed into a live prototyping exercise by students.
2. To **enable**, to “encourage open dialogue and explore ideas primarily through the act of making by drawing or prototyping” (Smith 2012, in Howard & Somerville 2014). The resulting temporary structure is to be erected on site and serve as a platform for dialogue between the university and community, where reciprocal knowledge transfer may take effect.



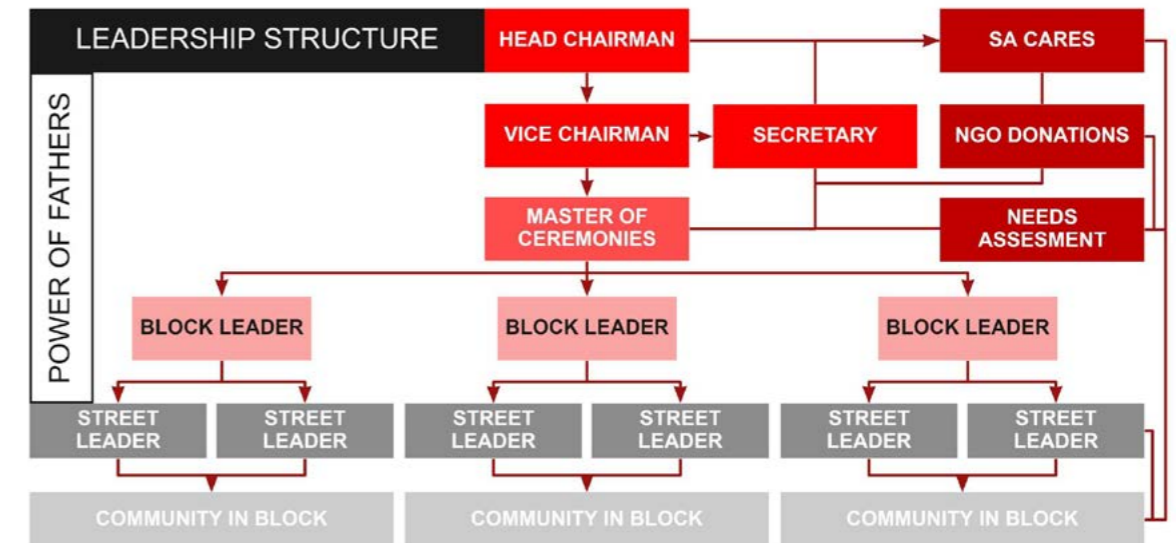
University of Pretoria
 Faculty of Engineering, Built Environment and Information Technology
 UNIT FOR URBAN CITIZENSHIP
 Department of Architecture



University of Pretoria
 Faculty of Engineering, Built Environment and Information Technology
 UNIT FOR URBAN CITIZENSHIP
 Department of Architecture



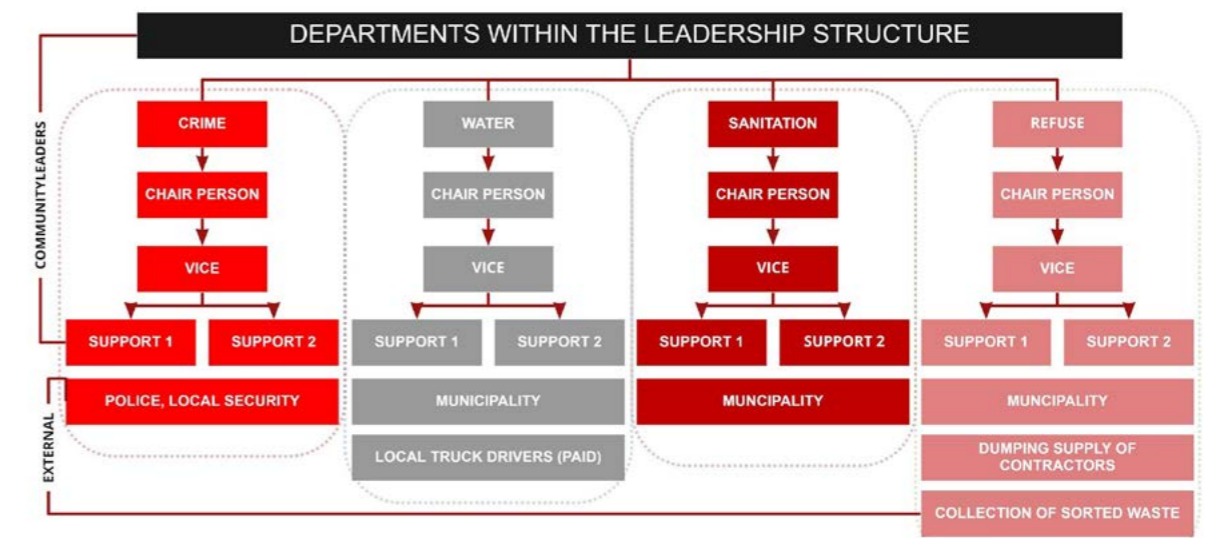
The leadership structures identified in Plastic View are indicated in the tables below. Our engagement on site is with respect to these networks.



We have begun our construction process off site at the University of Pretoria, and wish to begin the process of preparing the groundwork for the temporary structure on Thursday 22 April, and for the full assembly to take place on Friday 23 April. This assembly will be followed by a workshop whereby the community is invited to participate in discussions surrounding the prototype so that the research by design process can be set in motion. Our existing networks of connection with various individuals and leaders on site, as well as with the affiliated external stakeholders, will form an important foundation for this engagement process.

We hope to establish shared ownership of the prototype with the community for the remainder of the 2021 academic year, during which we will continue the research and design process with an emphasis on knowledge and skill transfer. The documentation of this process, within a variety of subsequent research booklets and dissertation projects, is aimed at further supporting the notion of knowledge transfer, beyond the scope of the community and research team.

The conclusion of this process will mark the official transition of ownership to the community, with a transference of agency. This transfer may take place through the initial design response, which intentionally placed emphasis on designing for appropriation. In addition to designing for agency, the set-up of a platform which enhances community participation will assist in achieving the “community partnership” recommended for successful project implementation and handover, as outlined in the UISP (SA 2009).



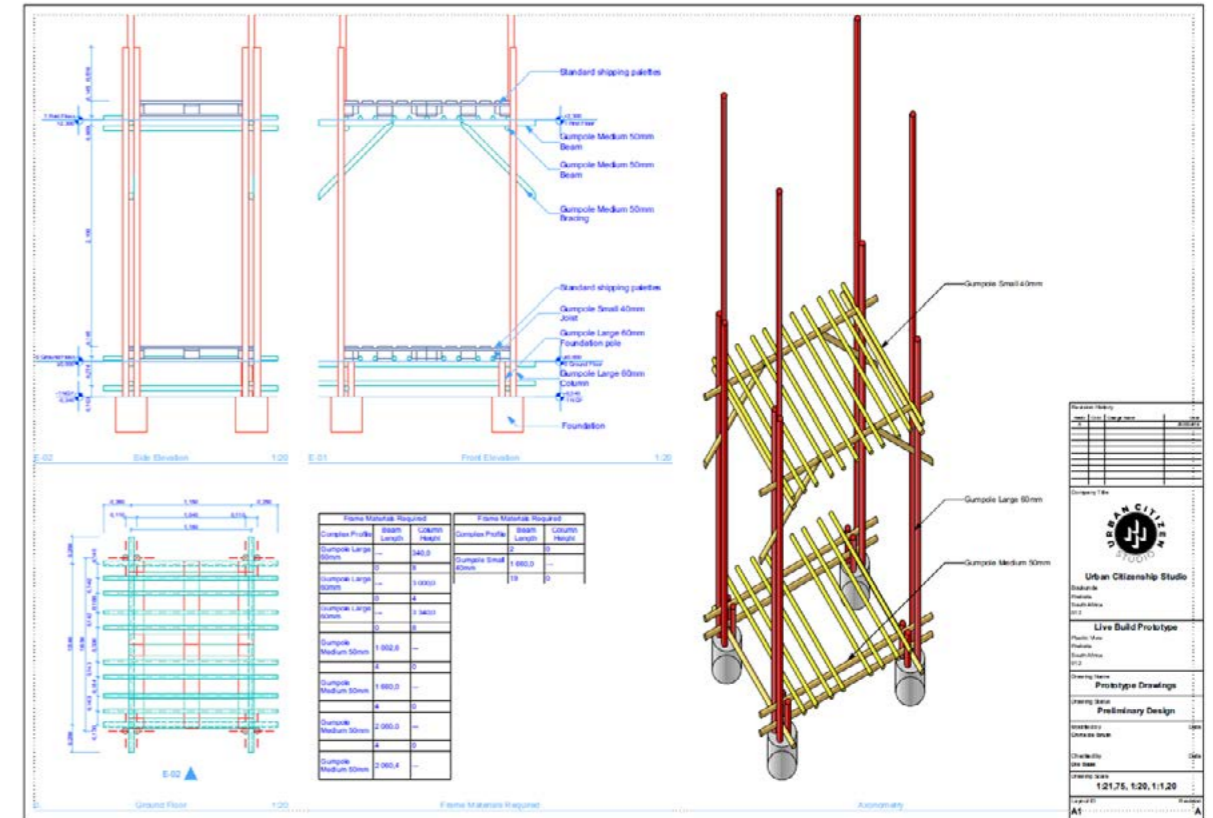
Below are photographs of the process thus far, as well as some preliminary construction drawings. Please note that no concrete or permanent construction materials and techniques will be used for this project.



University of Pretoria
 Faculty of Engineering, Built Environment and Information Technology
 UNIT FOR URBAN CITIZENSHIP
 Department of Architecture



University of Pretoria
 Faculty of Engineering, Built Environment and Information Technology
 UNIT FOR URBAN CITIZENSHIP
 Department of Architecture



We believe that there is immense strength in exploring the process of full-scale prototyping towards a continued partnership that both the university and community can benefit from. The research findings and lessons learnt from the process may contribute to the wider discourse on informal settlement upgrading and community engagement, whilst providing a hyperlocal case-study which sets the stage for the discovery of unique and innovative responses to some of our most pertinent urban challenges.

REFERENCES

Awan, N, Schneider T & Till, J. 2011. Spatial Agency: Other ways of doing architecture. New York: Routledge Press.

Hamdi, N. 2010. The Placemaker's Guide to Building Community. London: Earthscan.

Howard, Z. & Somerville, M. M. 2014. A comparative study of two design charrettes: implications for codesign and participatory action research. CoDesign, 10(1):46-62.



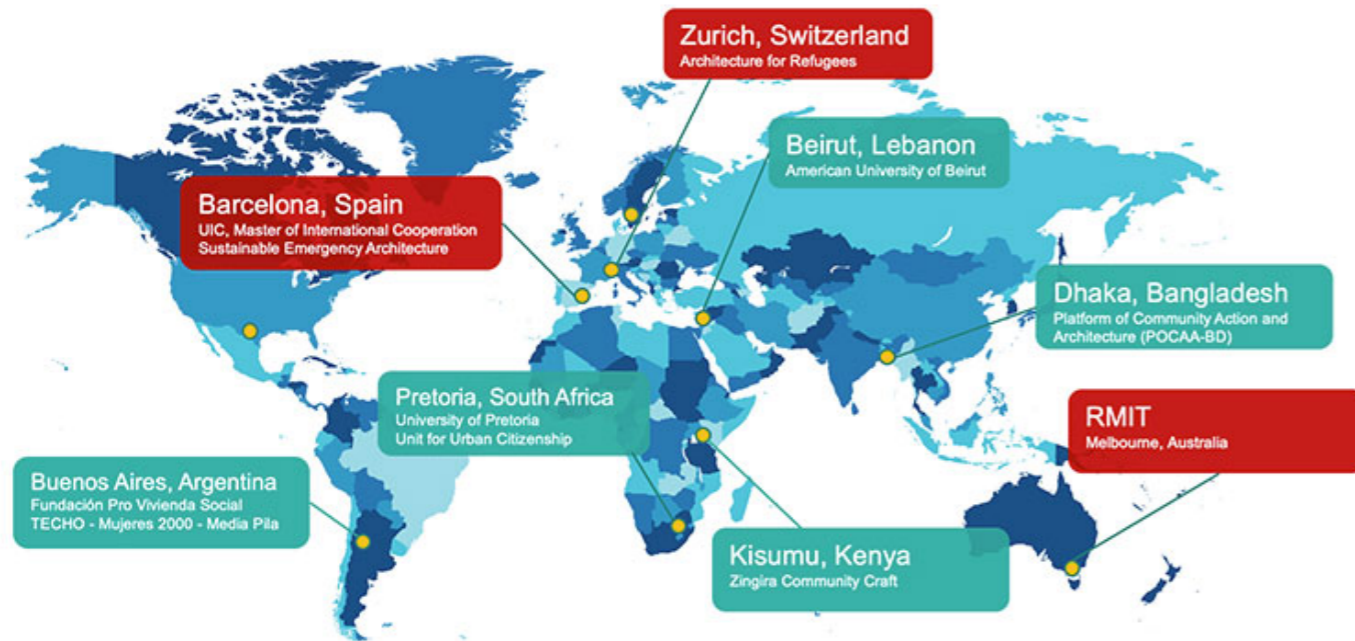
University of Pretoria
Faculty of Engineering, Built Environment and Information Technology
UNIT FOR URBAN CITIZENSHIP
Department of Architecture

South Africa. 2009. *Department of Human Settlements National Housing Code: Upgrade of Informal Settlements Programme*. Volume 4: Part 3. Available at http://www.dhs.gov.za/sites/default/files/documents/national_housing_2009/4_Incremental_Interventions/5%20Volume%204%20Upgrading%20Informal%20Settlement.pdf. Accessed 21 April 2021.

(d)

reality studio

feb-june 2021



REALITY STUDIO 2021 - 'Cross-Cultural Collaborations: Extreme Environments during Pandemics'

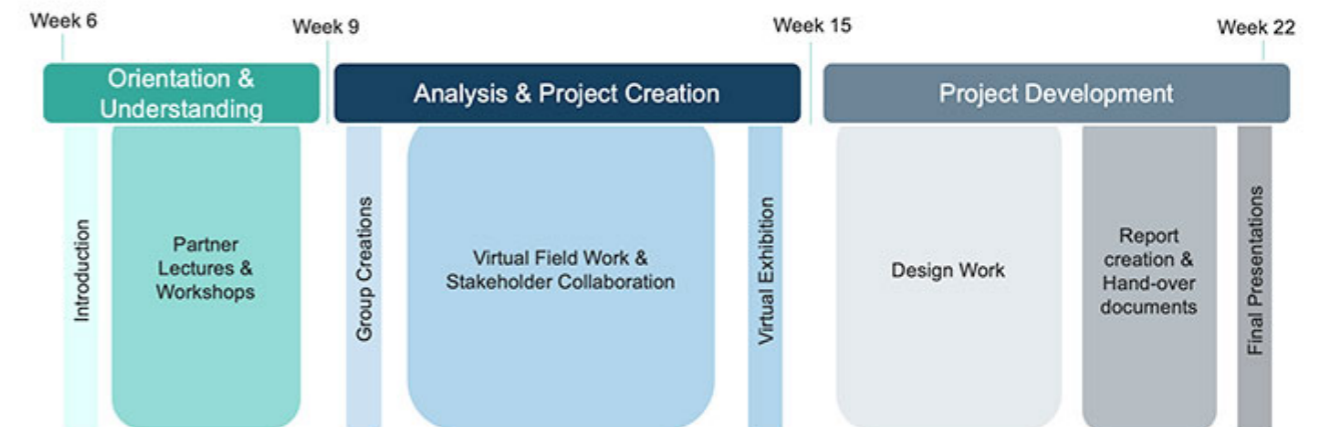
Reality Studio is an international educational platform in the Master Program Design and Planning Beyond Sustainability (MPDSD), at Chalmers University Architecture and Civil Engineering Department.

The mission of the studio is for the students, through their coursework, develop and plan for the implementation of resilient, culturally appropriate, healthy and innovative design solutions that support dignified human everyday life. These design solutions are situated in real-world extreme environments (often in a challenging foreign context), and co-created through collaboration with local communities, NGOs, universities, governmental institutions and other organisations.

Reality Studio aims to bring students into close contact with a range of global perspectives, and to learn and co-create spatial design approaches and methods to deal with challenges such as urban poverty, injustice, climate adaptation among others. The topic for Reality Studio 2021 is 'Cross-Cultural Collaborations: Extreme Environments during Pandemics' dealing with the message of 'Designing for Dignity'.

With the point of departure of the global Covid-19 pandemic, this year's Reality Studio is carried out as a collaboration between the 21 Chalmers students and local partners and stakeholders around the world (including several Universities and NGOs). The Reality Studio 2021 is working within five different contexts: Pretoria (South Africa), Dhaka (Bangladesh), Kisumu (Kenya), Beirut (Lebanon) and Buenos Aires (Argentina).

During the first 3 weeks of the course, all students and teachers from Reality Studio and the other partner universities involved (in some cases, over 70 people simultaneously connected), worked together in 5 iterations of 2-days intensive workshops about each of the contexts. Collaborative distance-based research about each context's main socio-economic and spatial characteristics and challenges was here made in dialogue with local partners digitally connected through Zoom and Miro. After that, and during 6 weeks, in a Virtual Field Study, smaller project teams of students have been working together in different assigned contexts and in collaboration with the respective stakeholders. This has been a period for developing and applying methods and tools for distanced-based communication between partners and organizations, as well as for the collection of specific information and data about the contexts and communities. This has helped to fine-grain the definition of the topics and focus for the work on the coming project proposals that will try to address specific identified challenges locally. The Virtual Field Studies will be closed with a public and online exhibition of the worked produced, to be launched on April 9th. In the last 8 weeks of the Reality Studio, the students will continue their global collaborations towards the design of their project proposals to be handed over to the respective communities and partners for eventual implementation or further development.



Below is the link to an article at UIC Barcelona, with more details about Chalmers and Reality Studio's involvement in the Beirut-case collaboration. Together, students from Chalmers, UIC Barcelona, AUB and RMIT are currently working on the planning and design components of a post-disaster recovery and reconstruction plan in Bourj Hammoud after the August 4, 2020 port explosion in Beirut, Lebanon.

[Link to article at UIC Barcelona](#)

Main partner organizations:

country	city	organizations
South Africa	Pretoria	University of Pretoria NGO: Play Africa
Bangladesh	Dhaka	NGO: Platform of Community Action and Architecture (POCAA-BD)
Kenya	Kisumu	NGO: Zingira Community Craft (Zingira)
Lebanon	Beirut	American University of Beirut (AUB) Universitat Internacional de Catalunya (IUC)
Argentina	Buenos Aires	NGO: TECHO (roof) - "roof for my country" NGO: Fundación Pro Vivienda Social (FPVS)

- Department of Architecture at the University of Pretoria
- Platform of Community Action and Architecture (POCAA) in Bangladesh
- Zingira Community Crafts in Kisumu, Kenya
- Masters Programme in International Cooperation and Sustainable Emergency Architecture at the UIC Barcelona
- American University of Beirut (AUB) in Lebanon
- TECHO in Argentina
- Fundación Pro Vivienda Social (FPVS) in Argentina

Other organisations involved:

- Master of Disaster, Design and Development (MoDDD) at RMIT
- Architecture Sans Frontières International (ASF-Int), ASF-Portugal and ASF-Sweden
- Architecture for Refugees, AfR and AfR-Switzerland
- Göteborgs Stad och Västra Götalandsregionen (Child Perspective)
- other expert-lecturers, and several NGOs, CBOs and communities in the different contexts of collaboration

FACEBOOK and INSTAGRAM updates:

All students have started working with their respective contexts since last week. For each week day, 1 context/project is being reporting 1 update from their work in progress.

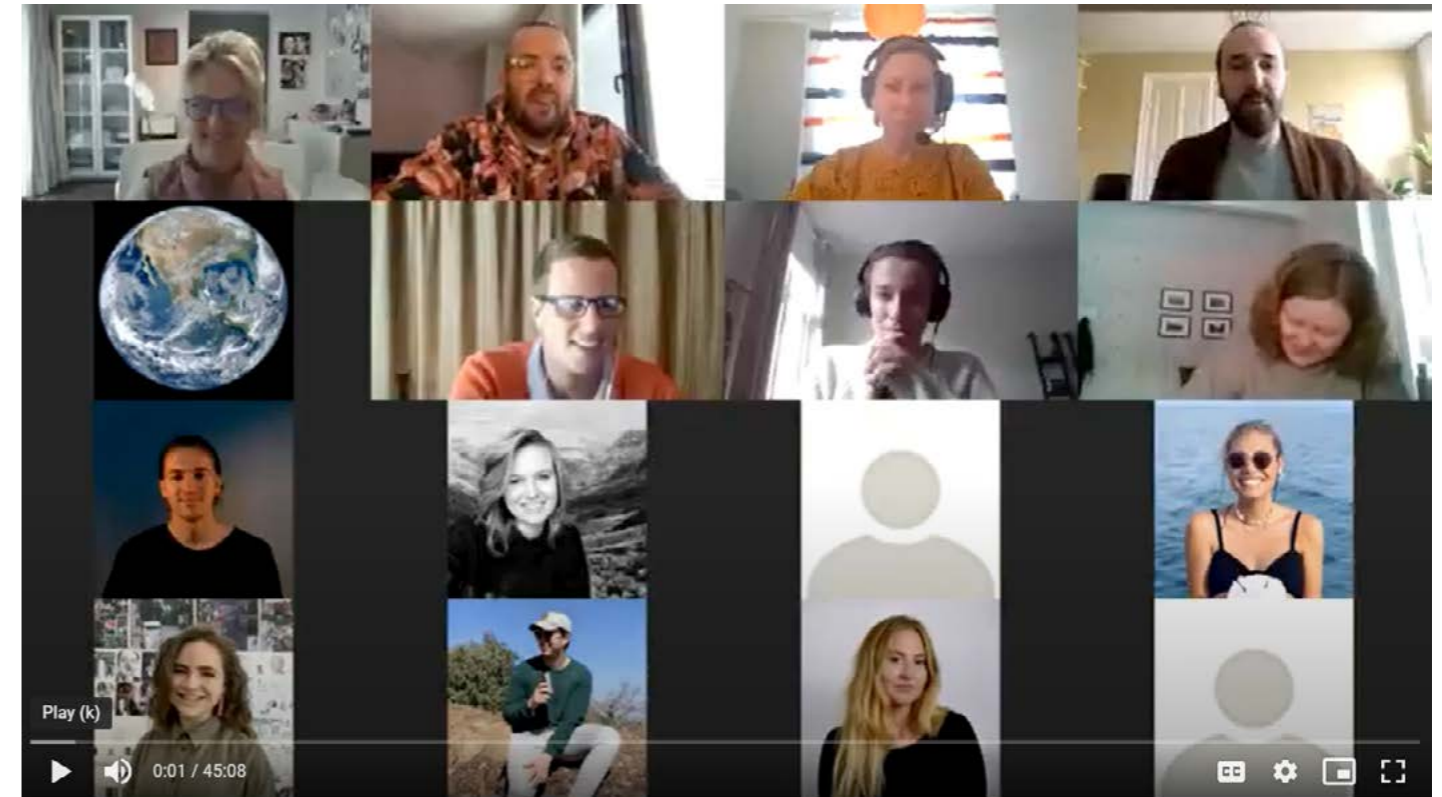
Facebook: <https://www.facebook.com/RealityStudioMPDSD>

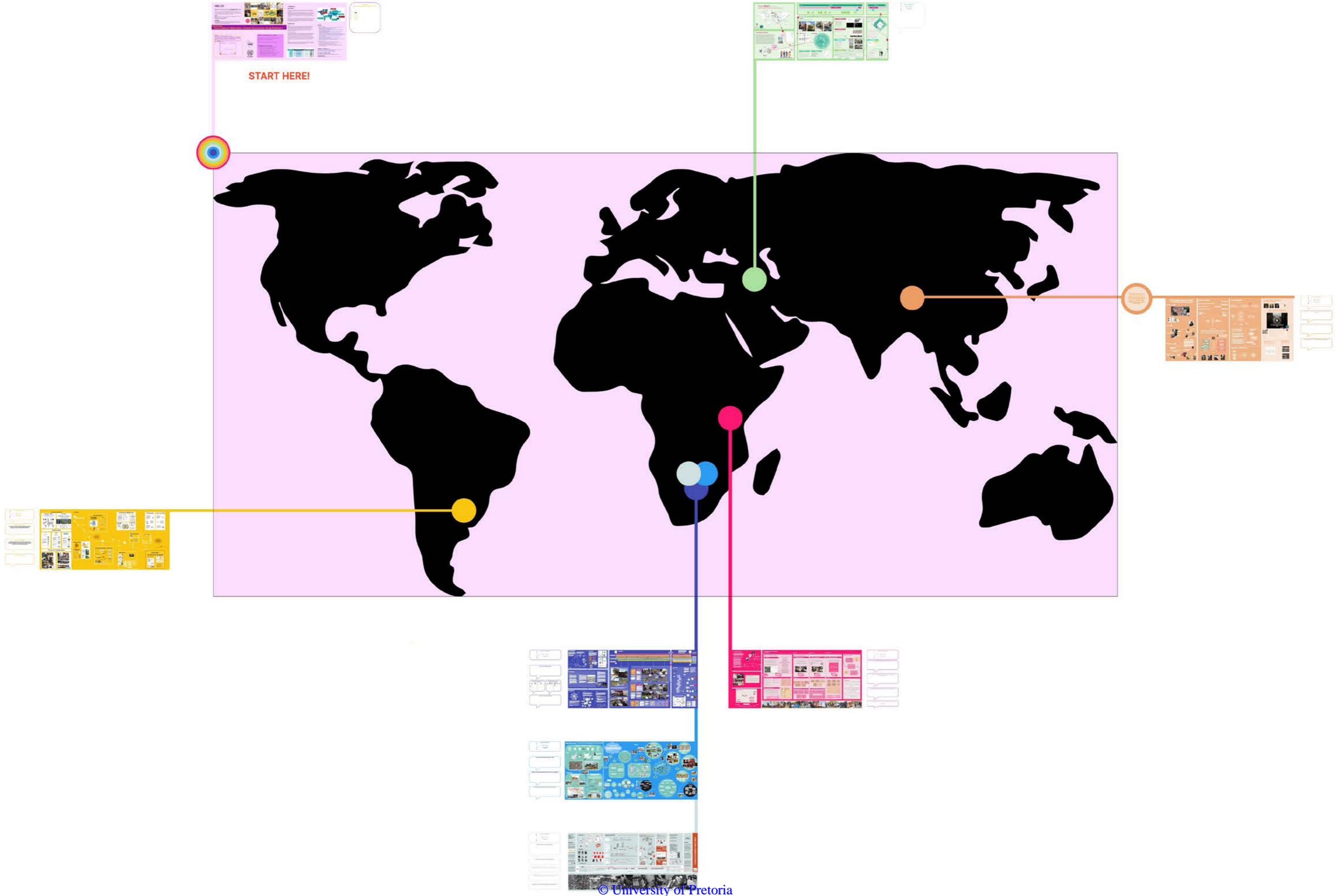
Instagram: https://www.instagram.com/reality_studio_mpdsd/

The teaching team from ACE:

Emilio Brandao, brandao@chalmers.se (examiner) and Shea Hagy, shea.hagy@chalmers.se (coordinator)

Liane Thuvander, Catarina Östlund, Larry Toups, Jonathan Edgardo Cohen





(e)
**ethics
approval**
2021



Faculty of Engineering, Built Environment and Information Technology

Fakulteit Ingenieurswese, Bou-omgewing en
Inligtingtegnologie / Lefapha la Boetšenere,
Tikologo ya Kago le Theknolotši ya Tshedimošo

9 June 2021

Reference number: EBIT/79/2021

Ms A van Aswegen
Department: Architecture
University of Pretoria
Pretoria
0083

Dear Ms A van Aswegen

FACULTY COMMITTEE FOR RESEARCH ETHICS AND INTEGRITY

Your recent application to the EBIT Research Ethics Committee refers.

Conditional approval is granted.

This means that the research project entitled "Masters Professional Mini-Dissertation in Architecture, Landscape Architecture and Interior Architecture (Group / Blanket)" is approved under the strict conditions indicated below. If these conditions are not met, approval is withdrawn automatically.

Conditions for approval

This application is approved based on the summaries provided.

Applications from each student (including application forms and all necessary supporting documents such as questionnaire/interview questions, permission letters, informed consent form, etc) will need to be checked internally by the course coordinator/ supervisor. A checklist will need to be signed off after the checking.

All of the above will need to be archived in the department and at the end of the course a flash disc / CD clearly marked with the course code and the protocol number of this application will be required to be provided to EBIT REC administrator.

No data to be collected without first obtaining permission letters. The permission letter from the organisation(s) must be signed by an authorized person and the name of the organisation(s) cannot be disclosed without consent.

Where students want to collect demographic the necessary motivation is in place.

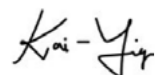
This approval does not imply that the researcher, student or lecturer is relieved of any accountability in terms of the Code of Ethics for Scholarly Activities of the University of Pretoria, or the Policy and Procedures for Responsible Research of the University of Pretoria. These documents are available on the website of the EBIT Ethics Committee.

If action is taken beyond the approved application, approval is withdrawn automatically.

According to the regulations, any relevant problem arising from the study or research methodology as well as any amendments or changes, must be brought to the attention of the EBIT Research Ethics Office.

The Committee must be notified on completion of the project.

The Committee wishes you every success with the research project.



Prof K.-Y. Chan

Chair: Faculty Committee for Research Ethics and Integrity
FACULTY OF ENGINEERING, BUILT ENVIRONMENT AND INFORMATION TECHNOLOGY



Faculty of Engineering, Built Environment and Information Technology

Fakulteit Ingenieurswese, Bou-omgewing en
Inligtingtegnologie / Lefapha la Boetšenere,
Tikologo ya Kago le Theknolotši ya Tshedimošo

Reference number: EBIT/259/2020

Dr C Combrinck
Department: Architecture
University of Pretoria
Pretoria
0083

Dear Dr C Combrinck

FACULTY COMMITTEE FOR RESEARCH ETHICS AND INTEGRITY

Your recent application to the EBIT Research Ethics Committee refers.

Conditional approval is granted.

This means that the research project entitled "Urban Citizen Studios: Public Interest Design" is approved under the strict conditions indicated below. If these conditions are not met, approval is withdrawn automatically.

Conditions for approval

Conditional approval on the understanding that:

- Applications from each student (including application forms and all necessary supporting documents such as questionnaire/interview questions, permission letters, informed consent form, researcher declaration etc) will need to be checked internally by the supervisor. A checklist will need to be signed off after the checking.

- All of the above will need to be archived in the department and at the end of the course a flash disc / CD clearly marked with the course code and the protocol number of this application will be required to be provided to EBIT REC administrator.

- Any personal and demographic data (eg gender, income, education) have provided the motivation that is acceptable based on the supervisor's evaluation.

- Students using organizations data not publicly available or collecting data from employees have the permissions in place.

- No data to be collected without first obtaining permission letters. The permission letter from the organisation(s) must be signed by an authorized person and the name of the organisation(s) cannot be disclosed without consent.

- Images and observation of people will require consent. Images and observation of minors are prohibited.

This approval does not imply that the researcher, student or lecturer is relieved of any accountability in terms of the Code of Ethics for Scholarly Activities of the University of Pretoria, or the Policy and Procedures for Responsible Research of the University of Pretoria. These documents are available on the website of the EBIT Ethics Committee.

If action is taken beyond the approved application, approval is withdrawn automatically.

According to the regulations, any relevant problem arising from the study or research methodology as well as any amendments or changes, must be brought to the attention of the EBIT Research Ethics Office.

The Committee must be notified on completion of the project.

The Committee wishes you every success with the research project.

Prof K.-Y. Chan

Chair: Faculty Committee for Research Ethics and Integrity
FACULTY OF ENGINEERING, BUILT ENVIRONMENT AND INFORMATION TECHNOLOGY

For office use only	
Assigned EBIT tracking number	EBIT/ /
Date received	

UNIVERSITY OF PRETORIA

FACULTY OF ENGINEERING, BUILT ENVIRONMENT AND INFORMATION TECHNOLOGY

FACULTY COMMITTEE FOR RESEARCH ETHICS AND INTEGRITY

(EBIT Ethics Committee)

APPLICATION FOR APPROVAL OF A RESEARCH PROJECT

This application form must be read with the relevant UP regulations, as documented in the Code of Ethics for Scholarly Activities, and the Policy and Procedures for Responsible Research. By completing and submitting this form, you declare that you have read these two documents and understand the regulations.

Important: Each item must be completed.

Complete the form in your word processor. Forms completed in handwriting are not accepted.

Where applicable, underline the correct answer (e.g. Yes or No).

1. RESEARCHER DETAILS: (Please include your Supervisor details in this section if you are a student)			
Applicant details:		University of Pretoria supervisor details:	
Initials and surname:	C Combrinck	Initials and surname:	C Combrinck
Title:	Dr	Title:	Dr
Email:	Carin.Combrinck@up.ac.za	Email:	Carin.Combrinck@up.ac.za
Phone:	012 420 6536	Phone:	012 420 6536
Employee/student number:	05075718	Employee number:	05075718
Department:	Architecture	Department:	Architecture
Are you a student (yes or no):	No		No

2. RESEARCH PROJECT TITLE (use a descriptive title)

Urban Citizen Studios: Public Interest Design in South Africa

3. RESEARCH PROJECT DETAILS

3.1 Provide a complete but concise description (no more than 5000 characters, including spaces) of the study objectives and study design, so that the relevant ethical aspects can be identified.

- From this, please identify the aspects clearly that you believe require ethics clearance.
- Please note: do NOT submit a complete research proposal. The Ethics Committee will not consider this, but will only consider the documents required for submission of an application.

The Urban Citizen Studios are situated in the Honours (NQF Level 8) and Masters (NQF level 9) level of the UP Department of Architecture. A requirement of these studios is for the students to engage with specific networks of communities that have an established relationship with the department that has existed for more than five years in the Mamelodi East area as well as Moreleta Park as part of their introduction into the field of Public Interest Design. Following on the successful conclusion of the NRF/STINT project "Stitching the City: From Micro data to Macro views", a methodological framework was developed for the collection, management and sharing of data that may continue to inform work done in these studios. This methodology is reliant on face-to-face and on-line engagement with a variety of stakeholders, that includes the following research instruments: Unstructured interviews; Workshops; Transect Walks; Surveys; Visual Journals; Observation. Data is then captured on platforms such as: Maptionnaire; Kobo Toolbox; Aerial or drone imagery; GIS and archives.

From this data, students are expected to develop Community Action Plans in collaboration with the stakeholders, followed by CoDesign processes that may include the physical implementation of prototypes. In support of these studios, students will also participate in the project documenting Public Interest Design in South Africa. The project proposes the cinematic documentation of selected architectural interventions in South Africa since 1994 that represent a paradigm shift towards Public Interest Design. In reference to Kim's (2018) Conceptual Taxonomy, nine episodes are proposed, in which the following themes will be used to categorise the work:

- Design as Political Activism
- Open-source Design
- Advocacy Design
- Social Construction
- Collective Capability
- Participatory Action Research and Practice
- Grassroots Design Practice
- Pro Bono Design Services
- Architect-Facilitator

Interviews with the architects and project team members, clients and affected communities are proposed, with specific attention to the processes that governed the inception, implementation and consequence of the interventions. Documentation of the contextual circumstances and tangible quality of these interventions will be undertaken by students enrolled for their professional Honours and Masters degrees in Architecture, Landscape and Interior Architecture, in collaboration with a professional team of documentary film-makers. Interviews with architects that have undertaken significant projects in other parts of Africa will be included to contextualise progress in the discourse on a continental level.

Why is this important? Despite the radical political transformation promised in the democratic elections of 1994, the people of South Africa remain adversely affected by the socio-spatial legacies of a segregated urban landscape. The contributions by architects to address these challenges go largely unnoticed and remain marginalised, even within the mainstream profession. The purpose of this project is to bring to the fore the significant and important work that has been done in this space, which may be seen as establishing a basis for the promotion of Public Interest Design as a legitimate and potentially mainstream pursuit of the architectural profession in this country.

The objective is to document projects that have been implemented in South Africa since 1994, to foreground the value of an emphasis on Public Interest Design, thereby establishing a sound platform for including this in mainstream architectural education and praxis. The series of documentary films will explore and illustrate how these projects were undertaken and how they have impacted on their communities over time.

3.2 Will a research questionnaire/survey be used?	Yes	No
<ul style="list-style-type: none"> If Yes, please answer the next question. If No, ignore the next question. 		

<ul style="list-style-type: none"> Please submit your questionnaire, survey questions or interview questions with your application. This will be a separate file that should be submitted as a pdf file, using this filename format: Questionnaire.pdf or Survey.pdf 		
3.2.1 Does your questionnaire/survey include any personal questions? (including ANY of the following: name, address, email address, any other information by which a respondent can be identified, gender, age, race, income, medical status)?	Yes	No
3.3 Are employees of a firm, organisation or institution questioned as informant in this study? <ul style="list-style-type: none"> If Yes, please submit letter(s) of permission from this entity to carry out this study. It should be clear that the person giving permission is authorised to do so and should be on a company letterhead and should include the date and that person's signature. Where required, your application cannot be considered without this permission. This letter should be submitted as a pdf file, using this filename format: CompanyPermissionLetter.pdf 	Yes	No
3.4 Will you be surveying or questioning UP students or UP personnel in this study? <ul style="list-style-type: none"> If Yes, you need to submit a letter or email from the Dean that provides permission for you to include UP personnel or students as participants in your study. Where this is required, your application cannot be considered without this permission letter. This letter should be submitted as a pdf file, using this filename format: DeanPermissionLetter.pdf 	Yes	No

4. RESEARCH PARTICIPANTS		
Does the project involve people as participants, either individually or in groups? If Yes, please answer questions 4.1 to 4.7. If No, continue to section 5.	Yes	No
4.1 Does the study involve people as informants, or does it involve people as research subjects? <i>Informants</i> are people of whom you require an opinion, e.g. people that are interviewed or that take part in a survey. <i>Research subjects</i> are people that actively take part in research, e.g. where biological measurements are made (e.g. heart rate) or where people take part in behavioural tasks (e.g. listening tasks)	Informants	Subjects
4.2 Describe possible safety and health implications that participation in the project may pose. None foreseen		
4.3 What is the expected duration of participation of people in the project? People will participate intermittently on a voluntary basis. The duration of the studios extends over the academic year.		
4.4 Describe the manner in which confidential information will be handled and in which confidentiality will be assured. No geographic or personal references (name, address, ID, occupation, age, income etc) that may accidentally imply the identity of the interviewees will be included in the interview/ survey/ focus group discussion. Interviewees or survey participants will be asked to give consent to be surveyed, interviewed, recorded or quoted. If they request that certain parts of the interview cannot be made known, it will be deleted and not used in the study.		
4.5 Please explain how and where data will be stored. It should be clear that data will be appropriately protected (e.g. password protected in encrypted files). Data will be stored on a password secured electronic devices.		
4.6 Is remuneration offered to subjects for participation? If yes, please expand. No		

4.7 INFORMED CONSENT/ASSENT Informed consent is a requirement for <i>all</i> studies. All participants need to provide individual informed consent, which the researcher should keep on record. An example for an informed consent form appears on the website, but this should be adapted to be very specific about your study and what you will require of participants. Please submit your informed consent form (an example of the form that you will use) with your application. This should be submitted as a pdf file, using this filename format: InformedConsent.pdf
4.7.1. Please describe what you will do to obtain informed consent/assent from your participants (or their caregivers in the case of underage participants). We will explain the research project to the interviewee and ask their permission to be surveyed, interviewed, recorded and/or quoted. If they request that certain parts of the interview cannot be made public or published, it will be deleted and not used in the study. We will explain that they will remain anonymous, that the data will be securely stored and that some information might be used for publication purposes. All discussions will include translation to ensure that communication is clear.
4.7.2 Detail the measures you will take to ensure that participation is voluntary.

We will explain to the interviewees/ survey participants that they may refrain from participation or stop the interview/ survey if they do not feel comfortable at any stage. All discussions will include translation to ensure that communication is clear.

5. ENVIRONMENTAL IMPACT and HAZARDOUS MATERIALS

5.1 Does the project have a potentially detrimental environmental impact, or are hazardous materials used in the project?	Yes	No
<ul style="list-style-type: none"> If Yes, you will need to submit a letter of approval from the Department of Facilities and services, Occupational Health and Safety division, before the Ethics Committee can consider your application. If section 5 (this section) is the only aspect of your project for which you require clearance from the Ethics Committee (i.e. no people or animals are included in your study), you should not apply to the Ethics Committee, but should apply for clearance directly to the Occupational Health and Safety division. If No, continue to section 6. 		

6. DISSEMINATION OF DATA

6.1 How and where will your results be published and/or applied?

Through architectural filmmaking, it is proposed that the dynamic field of Public Interest Design may be conveyed not only to those within the architectural profession but also to the public at large. In addition, through the publication of a printed and e-book, the academic rigour supporting the documentary film may become widely available and recognised as an educational and practice resource.

7. DECLARATION (Tick the relevant boxes)

<input checked="" type="checkbox"/>	I accept and will adhere to all stipulations pertaining to ethically sound research as locally, nationally and internationally established.
<input checked="" type="checkbox"/>	I will conduct the study as specified in the application and will be principally responsible for all matters related to the research.
<input checked="" type="checkbox"/>	I shall communicate all changes to the application or any other document before any such is executed in my research, to obtain the necessary permissions from the Ethics Committee.
<input checked="" type="checkbox"/>	I will not exceed the terms of reference of the research application or any other documents submitted to the Ethics Committee.
<input checked="" type="checkbox"/>	I confirm that I'm not seeking ethics clearance for research that has already been carried out.
<input checked="" type="checkbox"/>	I affirm that all relevant information has been provided and that all statements made are correct.
<input checked="" type="checkbox"/>	I have familiarised myself with the University of Pretoria's policy regarding plagiarism http://www.aibrary.up.ac.za/plagiarism/index.htm . Plagiarism is regarded as a serious violation and may lead to suspension from the University.
Please submit the completed Declaration By The Researcher form with your application. Please submit this as a pdf file with this filename format: Declaration.pdf	

8. SUBMISSION CHECKLIST

Each item to be submitted should be submitted as a separate pdf file, using the naming convention given earlier in this document or below.

8.1 Have you submitted confirmation that the research proposal has been approved?	Yes	No
Please submit as a pdf file with this filename format: Confirmation.pdf		

8.2 Have you submitted your application form (this form)? Please submit as a pdf file with this filename format: ApplicationForm.pdf	<u>Yes</u>	No	
8.3 Have you submitted your survey questions, questionnaire or interview questions (where applicable)? Please submit as a pdf file with this filename format: Questionnaire.pdf	<u>Yes</u>	No	N/A
8.4 Have you submitted the <i>Declaration by the researcher</i> form? Please submit as a pdf file with this filename format: Declaration.pdf	<u>Yes</u>	No	
8.5 Have you submitted the <i>Informed consent form</i> ? Please submit as a pdf file with this filename format: InformedConsent.pdf	<u>Yes</u>	No	
8.6 Have you submitted permission letters from firms, institutions or organisations where required? Please submit as a pdf file with this filename format: CompanyPermission.pdf	Yes	No	N/A
8.7 Have you submitted a permission letter from the Dean where required? Please submit as a pdf file with this filename format: DeanPermission.pdf	Yes	No	N/A

ETHICS APPLICATION: DEPARTMENT OF ARCHITECTURE
URBAN CITIZEN STUDIOS
PUBLIC INTEREST DESIGN IN SOUTH AFRICA
APPENDIX A

SECTION A: URBAN CITIZEN STUDIOS

Observation and physical mapping:

1. Social networks & nodal points of energy
2. Building fabric density and typology
3. Position, size and impact of Institutions of learning, churches, health facilities
4. Prevalence and reach of NGO's
5. Street, sidewalks and public accessibility
6. Security: Tangible and intangible systems
7. Retail stratification: Informal trade, SSME's, franchises, large retail outlets, central markets, food distribution networks
8. Densification, infill and anchoring strategies to redefine, revitalise and support distressed and isolated urban neighbourhoods
9. Intersection of formal and informal sectors as it relates to shelter, health, commerce and cultural activities
10. Opportunities for the production and processing of food (Food sovereignty)
11. Access to potable water, sanitation, electricity
12. Condition and functionality of soft and hard infrastructure
13. The role of green infrastructure in shaping environments: biodiversity, water management and harvesting, climatic conditions

Open interview/ focus group questions in support of observations and mapping:

1. Spatial perception questions:
 - a. Do you visit this part of the city regularly?
 - b. What are reasons for you to come to this area?
 - c. How do you feel about the city of Tshwane in general? Please elaborate
 - d. What activities do you typically enjoy to partake in general? Why?
 - e. Please describe the quality of the amenities you use; School, church, sport, shopping, clinic: eg. Well maintained, poor condition, easy to use, safe, scary?
 - f. What are your impressions of this space?
 - g. Have you noticed changes to this space over time? Please explain

ETHICS APPLICATION: DEPARTMENT OF ARCHITECTURE
URBAN CITIZEN STUDIOS
PUBLIC INTEREST DESIGN IN SOUTH AFRICA
APPENDIX A

- h. On a scale of 1 to 10 how will you rate these spaces? Please explain why you say so
 - i. Which qualities of the space do you find pleasant? Why?
 - j. Which qualities do you not enjoy/ would you like to change? Why?
 - k. Do these spaces remind you of anything specific? Please elaborate
 - l. Which features stand out for you? Please describe them
 - m. Do you feel safe in this space? Explain
 - n. Do you enjoy this space? Explain
2. Transport related questions:
 - a. Please describe the route between your home and amenities: School, church, sport, shopping, clinic
 - b. Please describe the route you travel between home and work.
 - c. Please describe the type of transport you use: How far (how many hours) do you walk every day/ bicycle/ car/ bus/ train?
 3. Social network-related questions:
 - a. Please describe the groups you are connected to and how often you meet, such as: family; school (friends and parents); sport clubs; church; savings groups; support groups; residents' committees; NGO's or NPO's; arts & crafts groups; any other?
 - b. Please explain your use of the internet: Do you use your cellphone or computer? How many hours a day are you connected? How do you acquire data?
 - c. Where do you prefer to do your shopping for food/ clothes/ furniture/ electronics? Please explain why you choose these places?
 4. Expenditure related questions:
 - a. How do you manage your monthly income? What are the things that you spend your money on and what do you do when you run short?
 - b. Do you own your home/ pay rent/ informal dweller?
 5. In the case of home-run businesses:
 - a. Do you conduct any type of business from your home? How did you decide to choose this type of business?



ETHICS APPLICATION: DEPARTMENT OF ARCHITECTURE

*URBAN CITIZEN STUDIOS
PUBLIC INTEREST DESIGN IN SOUTH AFRICA*

APPENDIX A

- b. What are the benefits of running your business from home?
 - c. Have you made any additions to your home to accommodate your business?
Please explain.
 - d. Did you make use of an architect/ builder/ quantity surveyor or anyone else to help you?
 - e. Did you need to have plans approved for any of the changes?
 - f. Would you be interested in moving to another premises, if so why and where to?
6. In the case of informal trade:
- a. How did you decide to choose the place where you trade?
 - b. What type of produce do you sell and why?
 - c. How do you manage your business?
 - d. What type of profit do you hope to make?
 - e. What improvements have you made to your trading stall and what are you still planning to improve?
 - f. Do you need any type of permission to trade in this place? How do you have to apply?
7. More business-related questions:
- a. Who are your main suppliers? Where are they situated and how often do you buy stock?
 - b. Who are your customers?
 - c. What times of the day do you trade?
 - d. How long has your business been operational?
 - e. How many people do you employ and how do you manage them?
 - f. Is your business registered or informal?
 - g. Is your business part of a network, savings scheme, co-operative or buying group? Please explain.
 - h. What are the biggest problems facing your business? How do you usually deal with these problems?
8. Food security questions:
- a. Do you plant your own vegetables? Explain where/ how/ why/ how much?



ETHICS APPLICATION: DEPARTMENT OF ARCHITECTURE

*URBAN CITIZEN STUDIOS
PUBLIC INTEREST DESIGN IN SOUTH AFRICA*

APPENDIX A

- b. Do you keep animals on your property for food? Explain where/how/why /how much?

SECTION B: PUBLIC INTEREST DESIGN

1. Processes that governed the inception of the project
 - a. How were you involved or included into the project?
 - b. What role did you undertake in the decision-making processes?
 - c. What is your design background?
 - d. How transparent were the power relations governing the project?
2. Implementation and consequence of the intervention
 - a. How has the intervention impacted you?
 - b. How has the intervention impacted your social networks?
 - c. How significant is this project to its socio-economic, cultural or material context?
3. Contextual circumstances and tangible qualities that are significant
 - a. Please describe any aspects of this project that have been significant to your experience of it.

Informed Consent Form
(Form for research participant's permission)

1. Project Information

- 1.1. Title of research Project:
Urban Citizen Studios: Public Interest Design in South Africa (Research Focus: Moreleta Park Integration Project).
- 1.2. Researcher's details:
Dr. C Combrinck, Department of Architecture, University of Pretoria.
- 1.3. Research study description:
This research inquires into contextual factors, historic evolution, social construction, and typology within the Moreleta Park / Pretoria area. From this data, students are expected to develop Community Action Plans in collaboration with the stakeholders, followed by CoDesign processes that may include the physical implementation of prototypes. The conversation will be recorded and data will be stored securely. Some of the results may be published and although participants will remain anonymous, some of their answers might be quoted in the publications. If it is requested that certain parts of the interview cannot be made public or published, it will be deleted and not used in the study.

2. Informed Consent

- 2.1. I, _____ hereby voluntarily grant my permission for participation in the project as explained to me by the researcher.
- 2.2. The nature, objective, possible safety and health implications have been explained to me and I understand them.
- 2.3. I understand my right to choose whether to participate in the project and that the information furnished will be handled confidentially. I am aware that the results of the investigation may be used for the purposes of publication.
- 2.4. Upon signature of this form, the participant will be provided with a copy. I will remain anonymous; my comments may be used without giving any geographic or personal references (name, address, ID, occupation, age, income etc.) that may accidentally imply my identity.

- I give permission for the interview to be recorded: Y / N
– I give permission for notes to be taken: Y / N

Signed: _____ Date: _____

Witness: _____ Date: _____

Researcher: _____ Date: _____

