

A SENSE OF RESOLUTION

A SENSE OF RESOLUTION
A Restorative Facility for Fleurhof

Natalie de Abreu

Submitted in fulfillment as part of the requirements for the degree Masters in Architecture (Professional), in the Faculty of the Engineering, Built Environment and Information Technology.

PROJECT SUMMARY

TITLE

A Sense of Resolution

THE SITE

Corner of Smelt Ave and Winze Dr,
Fleurhof, Johannesburg
26°11'50.72"S, 27°54'41.62"E

FUNCTION

A Restorative Facility for Fleurhof

RESEARCH FIELD

Human Settlements and Urbanism

STUDY LEADER

Derick de Bruyn

YEAR CO-ORDINATOR

Dr. Arthur Barker

DECLARATION

In accordance with Regulation 4[e] of the General Regulations [G.57] for dissertations and theses, I declare that this thesis, which is hereby submitted for the degree Masters 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 thesis has already been, or is currently being, submitted for any such degree, diploma or any other qualification.

I further declare that this thesis 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.

NATALIE DE ABREU

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ABSTRACT

In-between the contrasting shades of black and white Johannesburg, we find Fleurhof. Fleurhof is defined by diversity, characterized by the contrasting identities that make up this suburb. The stark juxtaposition between rich and poor is typical of the nature of South African suburbs due to their spatial legacies¹. What makes Fleurhof's location unique is the recent application of an Integrated Housing Model², the largest integrated housing development in Gauteng. Fleurhof's relevance as a laboratory for the author's dissertation stems from its distinguishing nature as a heterogeneous mixture of diverse territories. Residents from diverse backgrounds, contrasting financial situations and conflicting beliefs find themselves struggling to share this place they all call home. Through observation and contextual mapping, one can argue that Fleurhof's residential and industrial stagnant urban fabric has failed to represent these diverse identities. The non-existence of governmental social infrastructure and municipal presence contributes to a lack of a resolution. This dissertation views the conflict amongst the diverse residents as a 'breach in relationships', and justice as a process of coming together to repair that breach. Furthermore, it investigates developing a 'sense of resolution' for Fleurhof by changing perceptions and establishing common ground among the residents. This dissertation will provide a new typology for conflict resolution as the driver and programme to function as the vehicle to define 'common ground'.

Keywords:

Contrasting identities, conflicting residents, common ground, Johannesburg, integrated housing model, conflict resolution, alternative typology.

¹ South Africa has encountered a number of social engineering projects (colonization, apartheid and more recently democratization) leaving "profound spatial implications and left significant legacies in the geography" of uneven development (Christopher, 2000, p. 2).

² The referenced Integrated Housing Model in Fleurhof, has developed through a public-private relationship between Calgro M3 and the City of Johannesburg. The integration lies with its focus on providing mixed-income social housing with a focus towards the low-middle income bracket within South Africa. The different types of units are fully subsidized RDP/BNG housing, Gap, Social rental, Open market rental and Entry level housing. Each type of unit is aimed at a different economic market.

ISISONGO

Phakathi kokwehluka phakathi kwabantu abamnyama nabamhlophe eGoli, sithola indawo ekuthiwa i-Fleurhof. I-Fleurhof indawo eyehlukile ngoba nayo ihlanganise abantu abangefani. Phela ukuhlaliswa noma i-kanjani phakathi kwabadla izambane likapondo nabentulayo ngenxa yokwehluka kwamazinga abo kanye nengecebo abanayo into eyejwayelekile ezindaweni zokuhlala eNingizimu Afrika. Okubanga ukuthi i-Fleurhof yehlukile kwenezinye izindawo, isicelo sakamuva nje esimayelana nohlelo lokuhlaliswa oluhlanganisiwe (i-Integrated Housing Model), nokuwuhlelo olukhulu kakhulu eGoli. Ugqozi lombhali ukuba abhale ngaloludaba lususwe ukubona ukwehluka kwabantu ngokwezindawo abadabuka kuzo bezohlanganiswa bonke e-Fleurhof. Izakhamizi eziqhamuka ezimweni zenhlalo ezahlukene, izimo ezinzima zezimali kanye nezinkolelo ezehlukene zizithola zihlangabezana nobunzima ukuhlala ngokuhlanganyela kulendawo bonke abayibiza ngekhaya. Ngakho ngokubuka nje, kanye nokuhlaziya isimo umuntu angasho ngaphandle kokungabaza ukuthi lendawo i-Fleurhof yehlulekile ukuqhakambisa izizwe ezahlukahlukene ngenxa yokuthi iyisilungu kakhulu futhi ayiguqukile. Ukungabikhona kwenqalasisinda yahlumeni kanye nokungabikhona kuka masipala nako kunomthelela obangela ukuba singatholakali isisombululo. Lolucwaningo lubheka ingaxabano ephakathi kwezakhamizi ezahlukene nokuyishlava esiqeda ubudlelwane, kanye nezobulungiswa eziza njengohlelo lokuhlanganisa abantu ukuze kulungiswe lapho konakele khona. Luphinde lufune indlela engaba isisombululo sase-Fleurhof ngokuthi siguqule imicabango engafanelekile nokuthi kube khona ukuvumelana phakathi kwezakhamizi. Lolucwaningo luzoletha isisombululo esisha sokuxazulula izingxabano kanye nendlela yokuthi kube khona ukubona ngaso linye kubantu.

*ZULU TRANSLATION BY: Thabani Robert Khumalo

FIGURE A : Photo collage of the Pop-Up Story Booth held by Counterspace on 2 July 2017. As well as some of the residents' comments and thoughts presented in Counterspace's Fleurhof and Surrounds Urban Development Framework. Photographs and mapping by the Counterspace team. UDF obtained from the Counterspace Team (Counterspace, 2017)



A

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UNDERSTANDING

terminology

sense of resolution//

The title of this dissertation, 'a sense of resolution' describes the investigation of an alternative typology for resolving conflict. The product of a 'sense of resolution' involves a process whereby diverse individuals begin to share collective perceptions under the guidance of a new architectural typology. (These ideas are further explained through the sequence of the document).

sense of place//

For the purpose of this dissertation, 'a sense of place' refers to a place with a stable identity and character. One can argue that a vulnerable 'sense of place' has occurred in Fleurhof due to an absence of social services and accessibility in the forms of social spatial justice.

a breach in relationships//

For the purpose of this dissertation, 'a breach in relationships' is viewed as a broken connection between individuals or collectives.

uitvalgrond//

'Uitvalgrond' is defined as 'surplus ground' by Clive Chipkin in his book *Johannesburg Style: Architecture and Society 1880s-1960s* (Chipkin, 1993).

Integrated Housing Model//

The referenced Integrated Housing Model in Fleurhof, has developed through a public-private relationship between Calgro M3 and the City of Johannesburg. The integration lies with its focus on providing mixed-income social housing with a focus towards the low-middle income bracket within South Africa. The different types of units are fully subsidized RDP/BNG housing, Gap, Social rental, Open market rental and Entry level housing. Each type of unit is aimed at a different economic market.

zama zamas//

Zama Zamas is the South African colloquial term for illegal miners.

defensible space//

Defensible space, as described by Oscar Newman, is an area defined by clear indications of territoriality, surveillance activity and ownership (Newman, 1996). Newman's theories build on Jane Jacob's argument of natural surveillance. His theory introduces the interplay between territoriality and surveillance, stating that observers are more likely to intervene when they feel a sense of responsibility for the area.

place based crime theory//

Place Based Crime Theory involves the study of Situational Crime Prevention through the Role of Place. Brantingham & Brantingham 1991, in their book *Environmental Criminology*, introduce Routine Theory. Routine theory investigates the context between offender, environment and victim (Brantingham & Brantingham, 1991).

Embodied practice or ritual //

For the purpose of this study, when the word 'ritual' is referred to, it is viewed as an 'embodied practice', rather than exclusively through the traditional ties that the word 'ritual' is usually associated with. An embodied practice refers to any physiological, physical activity or engagement involving the conscious movement of the body (examples include dancing, exercising, performing, painting, sculpting etc.).

Alternative forms of dialogue//

These refer to forms of alternative modes of communication that introduce physiological activity (examples include dancing, exercising, performing, painting, sculpting etc.).

heterotopia//

Foucault explains that unlike utopias, which are fundamentally unreal spaces, heterotopias are a combination of mythical space and the everyday space in which we live (Foucault, 1984, p. 4). Heterotopias exist in cultures across the world; they are spaces that puncture the norm, and they are places of refuge from our everyday lives, acting as sanctuaries from the dominant narrative of our everyday.

inter-subjectivity//

Maape (2017) explains inter-subjectivity as the term used to represent the relation between people, the common perspectives between people.

FIGURE B : Photograph from the UDF Concept Public Presentation held by Counterspace on 2 July 2017. As well as the some of the residents comments and thoughts presented in Counterspace's *Fleurhof and Surrounds Urban Development Framework*. Photographs and mapping by the Counterspace team. UDF obtained from the Counterspace Team (Counterspace, 2017)



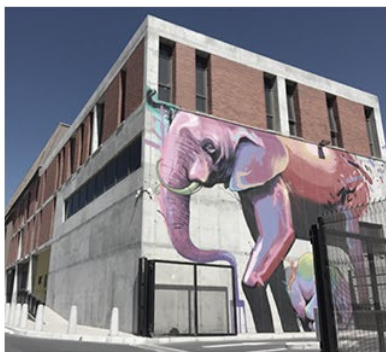
B

ROAD TRIP

As a point of departure, my dissertation began during December 2017 and January 2018. The research involved a countrywide road trip, as an architectural field research trip through developed and developing contexts in South Africa, with close attention paid to the 'gaps' between them. The focus of the trip began as a broad overlook on contemporary social architecture within a South African context, further narrowing it down to analyzing and criticizing architectural interventions along the periphery of urban areas as well as the perimeters of rural settlements, and noting the gaps between them. A visual analysis and criticism of these precedents formed part of the research.

The road trip covered Gauteng (Johannesburg) through to Kwa-Zulu Natal (Durban), the Eastern Cape (Grahamstown, Port Elizabeth, Transkei, Hogsback, Jefferys Bay) and the Western Cape (Cape Town, Woodstock Khayelitsha, Dunoon, Gugulethu, the Garden Route: Knysna + Wilderness Plett).

FIGURE C : Photo series of road trip (Author, 2017)



isiviana centre,
khayelitsha

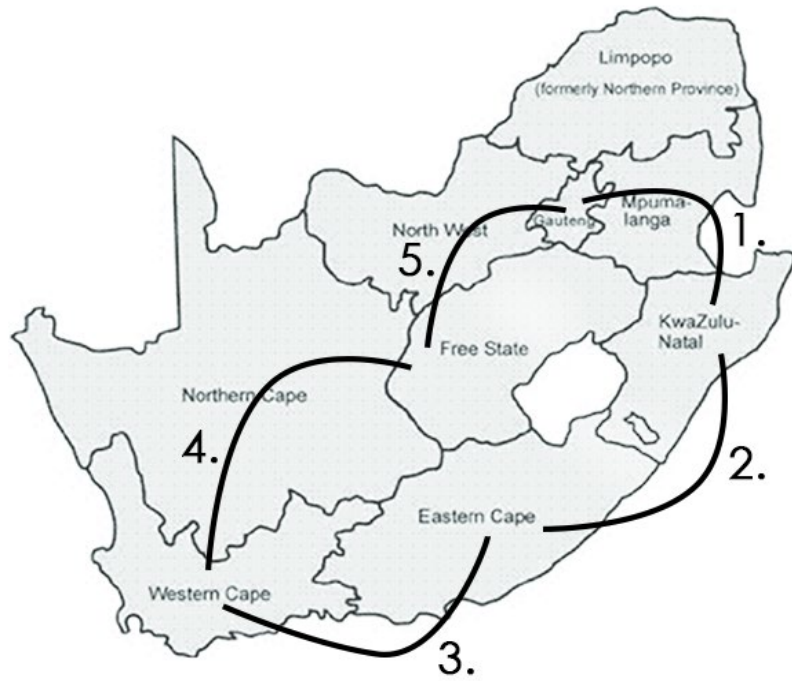


VPUU,
khayelitsha



thusong service centre,
khayelitsha





sports chamber complex,
dunoon



inkwenkwezi school,
dunoon



red location,
port elizabeth

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01 //



fleurhof dam

1.1 PREFACE
1.2 ISSUES + INTENTIONS
1.3 RESEARCH



This chapter seeks to ground the project in a clear understanding of the issues and intentions that frame the dissertation. The site is briefly discussed on a macro level, highlighting the main social, urban and architectural informants the dissertation will be investigating. The overarching theme, a sense of resolution, is unpacked with reference to a series of research problems, questions and methods. This chapter concludes by stipulating the delimitations, assumptions and contributions the dissertation wishes to make.

1.1 PREFACE

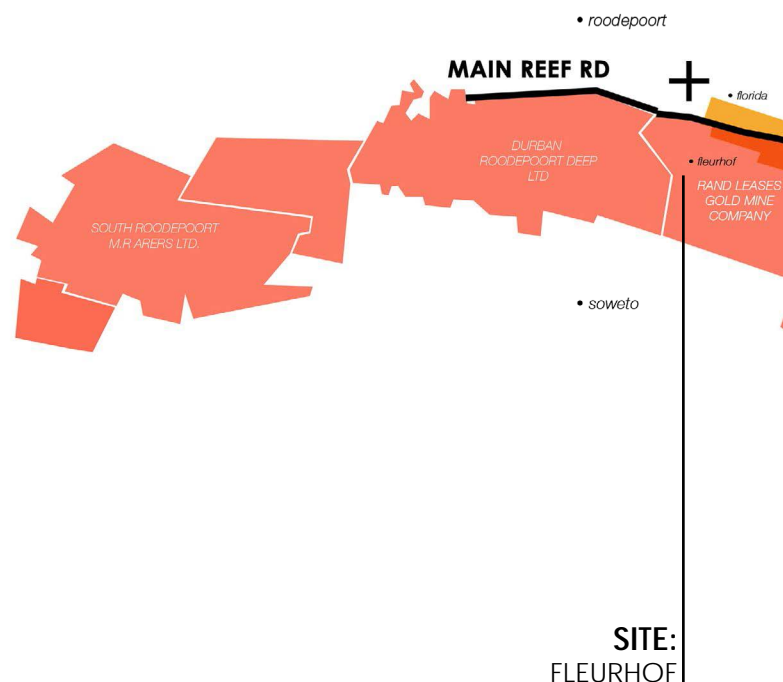
In 1886 gold was discovered in Johannesburg and the 'City of Gold' was born. Johannesburg was originally positioned on the central 'uitvalgrond'¹, where the meeting point of southerly trade routes was relocated to cross the east-west horizon of the gold-bearing reef (Chipkin, 1993: 12). The grid progressed along two directional pulls: the north-south direction, shaped by the political economy, and the east-west direction, shaped by geology, the consistent axis of the Main Reef (Kreutzfeldt and Malcomess, 2013: 29) (FIG 1.1).

Fleurhof sits on the edge of surplus ground along the east-west passage and in-between the previously socially included and excluded, the northern and southern suburbs. Sexwale (2013) describes Fleurhof as the "no man's land" between Johannesburg-Soweto, resulting in an area lacking public amenities and facilities"² (Sexwale, 2013). This town, serving as a buffer between Johannesburg's affluent suburbs and Soweto, provides a laboratory for this dissertation. It is an area knitting together 'white' and 'black' Johannesburg across apartheid's 'no man's land', the mining belt.

The stark juxtaposition between rich and poor is typical of the nature of South Africa's suburbs due to their spatial legacies³. What makes Fleurhof's location unique is the recent application of an Integrated Housing Model⁴, the largest integrated housing development in Gauteng. Fleurhof's relevance as a laboratory for the author's dissertation stems from its distinguishing nature as a palimpsest of diverse territories. Residents from diverse backgrounds, contrasting financial situations and conflicting beliefs, find themselves struggling to share this place they all call home.

Through observation and contextual mapping, one can argue that Fleurhof's residential and industrial stagnant urban fabric has failed to represent these diverse identities. An absence of governmental social infrastructure and municipal presence, contributes to a lack of a 'sense of resolution'.

This dissertation views the conflict amongst the diverse residents as a 'breach in relationships', and justice as a process of coming together to repair that breach.



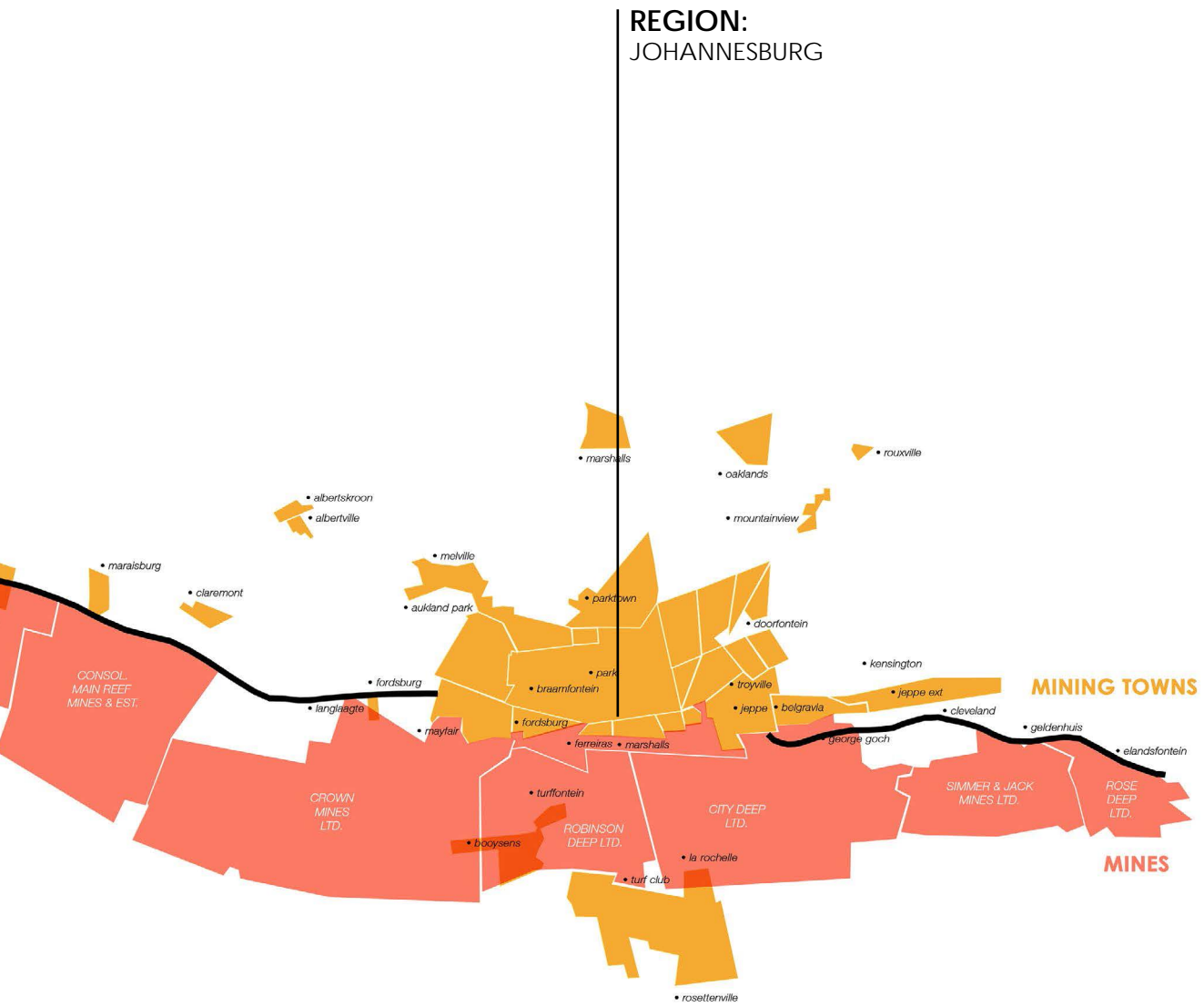
SITE:
FLEURHOF

¹ 'Uitvalgrond' is defined as 'surplus ground' by Clive Chipkin in his book Johannesburg Style: Architecture and Society 1880s-1960s (Chipkin, 1993).

² Sexwale elaborated in his National Budget Vote Speech: Gigantic Effort Needed to De-Racialize Residential Spaces "The evil utilization of land as a buffer by the architects of apartheid resulted in the creation of "no man's land" between Johannesburg-Soweto, resulting in the areas having little or no amenities and facilities" (Sexwale, 2013).

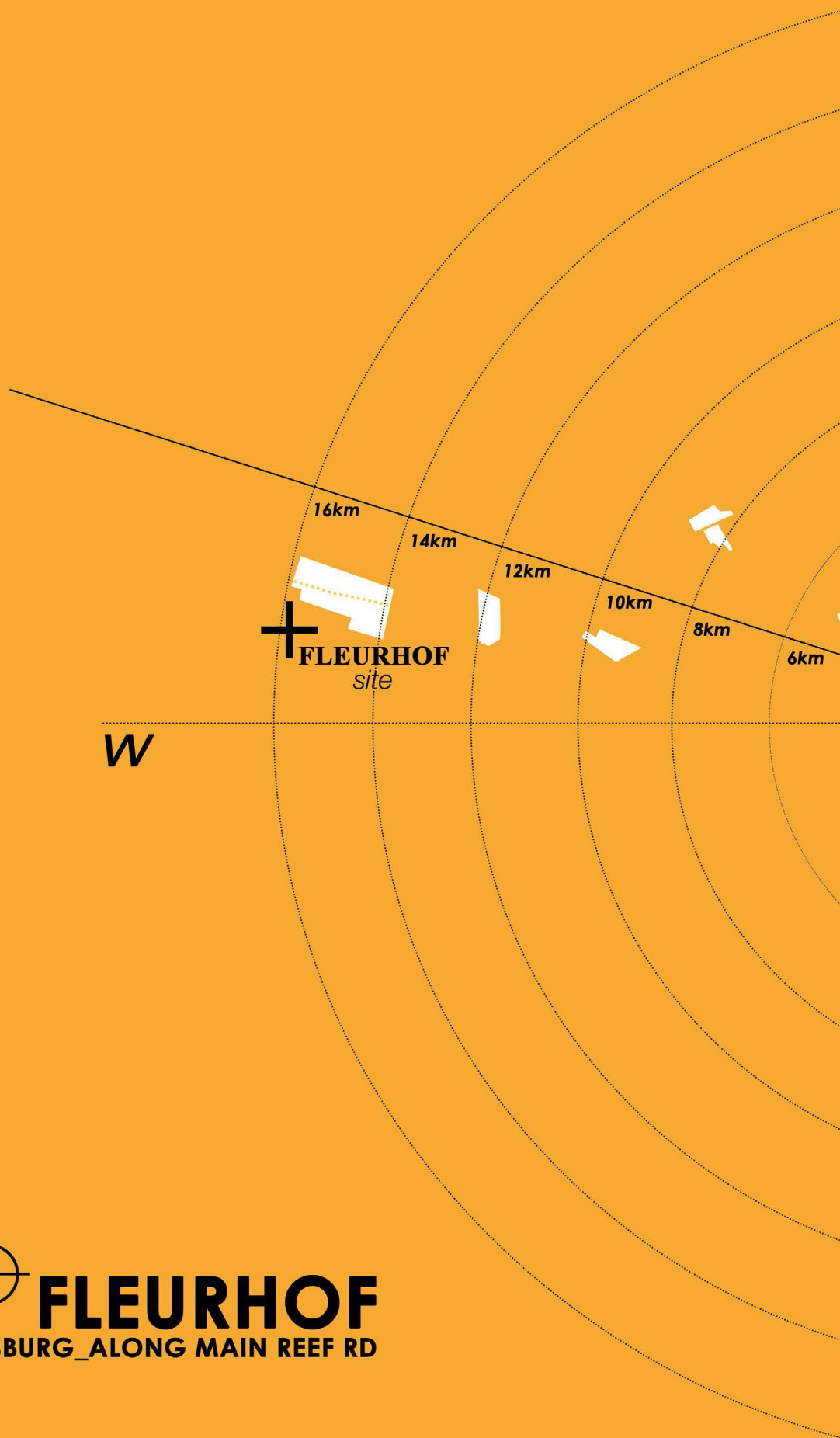
³ South Africa has encountered a number of social engineering projects (colonization, apartheid and more recently democratization) leaving "profound spatial implications and left significant legacies in the geography" of uneven development (Christopher, 2000:2).

⁴ The referenced Integrated Housing Model in Fleurhof, has developed through a public-private relationship between Calgro M3 and the City of Johannesburg. The integration lies with its focus on providing mixed-income social housing with a focus towards the low-middle income bracket within South Africa. The different types of units are fully subsidized RDP/BNG housing, Gap, Social rental, Open market rental and Entry level housing. Each type of unit is aimed at a different economic market.



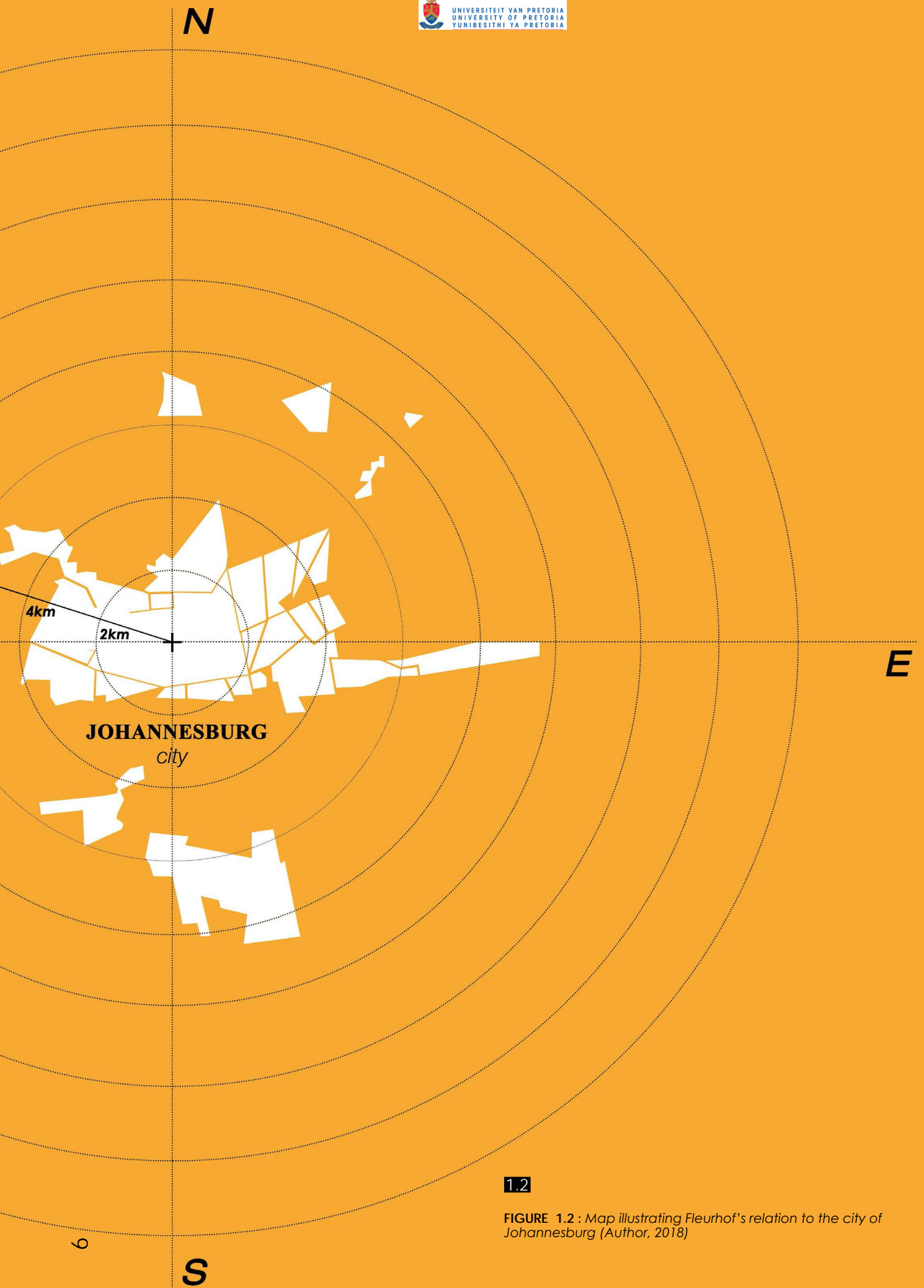
1.1

FIGURE 1.1 : Map illustrating Fleurhof's position along Johannesburg's east-west passage, Main Reef road, the gold mining belt (Author, 2018)



FLEURHOF

MACRO_JOHANNESBURG_ALONG MAIN REEF RD



1.2

FIGURE 1.2 : Map illustrating Fleurhof's relation to the city of Johannesburg (Author, 2018)

1.2 ISSUES + INTENTIONS

1.2.1 social issue

In order to contextualize Fleurhof's current identity, the nature of the resident in relation to his or her urban fabric is viewed through fragments of time relating to apartheid's spatial legacy. The fragments of time are translated for the purpose of this dissertation as: *before*, *during* and *after* (these fragments of time are further explained in chapter 2, under the political situation).

Contextualizing Fleurhof's current identity using the lens of: *before*, *during* and *after*, raises the assumption that Fleurhof's geological, political and social ties have resulted in an amalgamation of vulnerable identities within contrasting territories due to an overarching lack of a 'sense of place'⁵. By mapping these diverse identities, it becomes apparent that they are defined by contrasting territories where differing forms of ownership are illustrated. However, when overlapping these territories, points of convergence are revealed. The intersection of these territories maps a site of vulnerability, a 'no man's land', created by this diversity (these territories are further explained in chapter 2, under overlapping territories and vulnerable points of convergence).

Through observation and contextual mapping, it is apparent that Fleurhof's residential and industrial stagnant urban fabric has failed to represent these identities (mapping found in chapter 2, under physical situation). An absence of governmental social infrastructure and municipal presence has contributed to a lack of a 'sense of resolution'. Increasing internal unrest and a decreasing sense of security have necessitated the formation of a Community Policing Forum⁶. This issue is exacerbated by an influx of residents, without 'place identity', without urban upgrade or provision of social infrastructure. The result is a community characterized by vulnerable identities and increasing conflict amongst residents.

⁵ One can argue that lack of a 'sense of place' has resulted due to an absence of social services and accessibility in the forms of public, social and socio-economic forms of security.

⁶ Fleurhof's Community Policing Forum (CPF), have been identified as community stakeholders through the use of Counterspace's (Johannesburg based architecture firm) socio-spatial research towards an Urban Development Framework for Fleurhof and its surrounds (Counterspace, 2017:52).

before, during + after

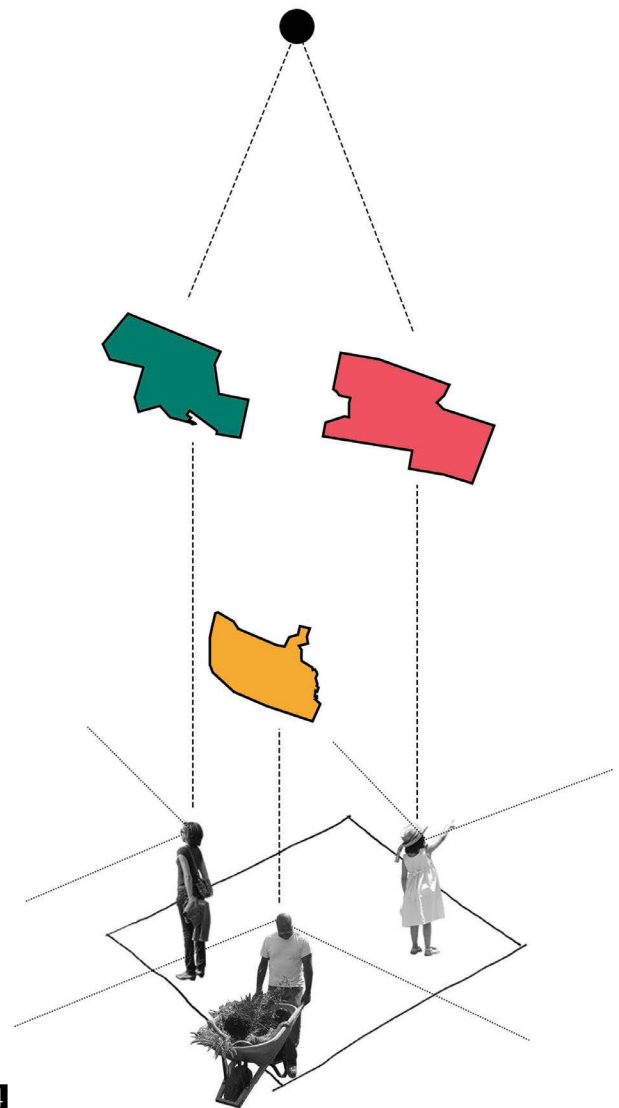


1.3

1.2.2 social intention

The primary intention of this dissertation involves rethinking the way in which protection, representation, and resolution⁷ contribute to restoring a 'breach in relationships'. This dissertation aims to investigate the social issues that contribute towards conflict rather than the conflict itself.

The analysis of the governmental provision of services and the accessibility of services becomes an important investigation in this dissertation (these aspects are explained in chapter 2, under forms of social justice). Additionally, the intention is to critically analyze the hierarchy of protection, representation, and resolution in South Africa in order to situate the intervention within the context of social justice and in an attempt to possibly explore a new typology for conflict resolution. The investigation of identity, individual and collective, plays an integral part. Identity becomes important when striving towards a common ground of resolution, a place of restoration (these investigations are unpacked in chapter 2, under the social situation).



1.4

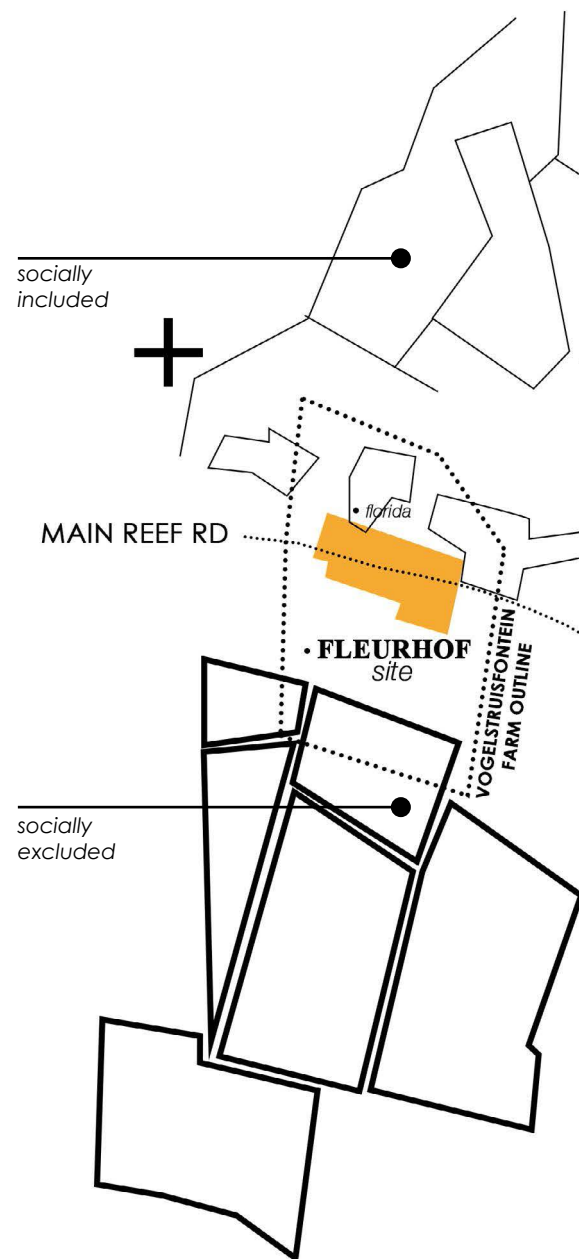
FIGURE 1.3 : Visual representation of the diverse character of residents in relation to their location within Fleurhof (Author, 2018)

FIGURE 1.4 : Illustration of the diverse residents in relation to their 'footprints' in Fleurhof (Author, 2018)

⁷ Forms of Protection, representation and resolution and their relevance within the South African context are further explained in the chapter 2, under forms of social justice.

1.2.3 urban issue

Contextually, Fleurhof occupies the gap between the previously included and excluded, bordering the affluent northern suburbs and the previously disadvantaged Soweto (FIG. 1.5). The derelict mines, the wetland, and the industrial island that form the physical boundaries of Fleurhof continue to act as buffer zones, reinforcing the segregation between the north and the south, reinforcing the spatial injustices of the past. These buffer zones, acting as variances in the urban fabric, contribute to a feeling of disorientation and lack of ownership amongst the residents.



1.5

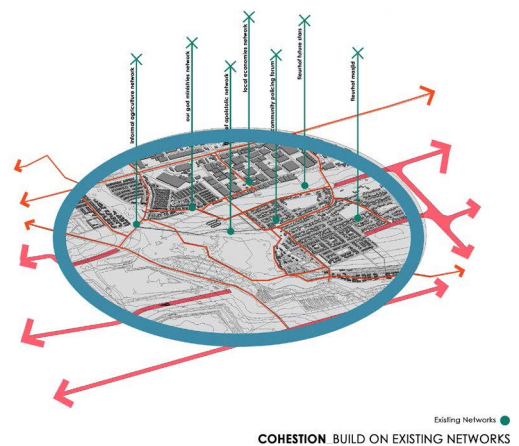
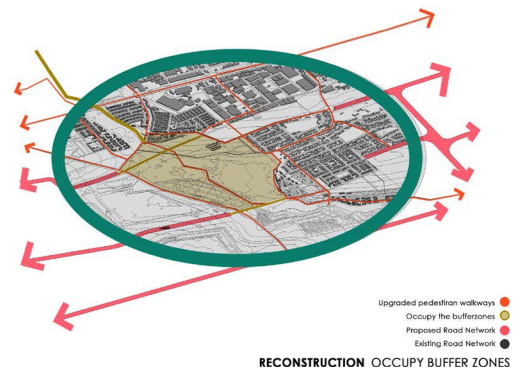
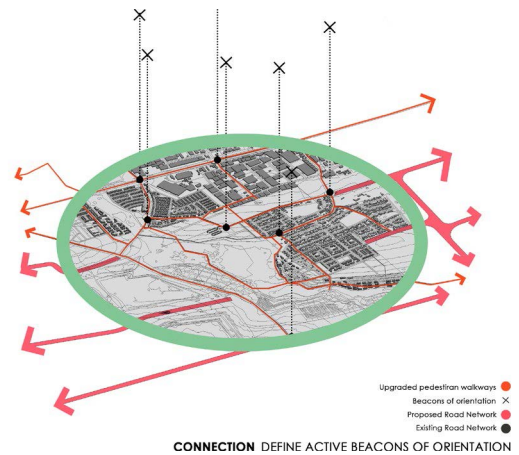
FIGURE 1.5 : Visual representation of Fleurhof's position in-between Johannesburg's socially included and excluded (Author, 2018)

FIGURE 1.6 : Illustration of the study's urban vision: Connection, Reconstruction and Cohesion (Author, 2018)

1.2.4 urban intention

In an attempt to rehabilitate a sense of place for Fleurhof, an investigation into forms of orientation, ownership and territorialisation will be explored through a relationship between the residents and their urban fabric (this relationship is explored in chapter 2, under the social situation). Urban design theories of defensible space⁸ and place-based crime⁹ will be used to address the process of conflict resolution. In order for this to be explored, an understanding of various aspects that define a 'sense of resolution' and how they govern human interaction is necessary.

The urban intentions are framed by three principles that address place identity to create a sense of security: urban connection, urban reconstruction, and urban cohesion (FIG. 1.6). These principles will be further outlined through the use of an urban vision for Fleurhof on a macro, meso and micro scale (this study is unpacked in chapter 2, under urban vision).



1.6

⁸ Defensible space as described by Oscar Newman, is an area defined by clear indications of territoriality, surveillance activity and ownership (Newman, 1996). Newman's theories build on Jane Jacob's argument of natural surveillance. His theory introduces the interplay between territoriality and surveillance, stating that observers are more likely to intervene when they feel a sense of responsibility for the area. Newman's work on defensible space include *Defensible Space: People and Design in the Violent City* and *Creating Defensible Space*.

⁹ Place Based Crime Theory involves the study of Situational Crime Prevention through the Role of Place. Brantingham & Brantingham 1991, in their book *Environmental Criminology*, introduce Routine Theory. Routine theory investigates the context between offender, environment and victim (Brantingham & Brantingham, 1991).

1.2.5 architectural issue

The architectural issue addresses two integral components.

Firstly: Fleurhof's current built environment is one that heightens divisions of territory and conflict and fails to represent a common ground amongst the residents. To date, Fleurhof's social and public infrastructure is made up of architecture that produces; there is an absence of architecture that assists. The ideals of identity and belonging have been compromised and become vulnerable without architecture that represents them. Through narratives, people construct and communicate their identity to the world; without the means of infrastructure to communicate and construct identity, identity becomes vulnerable¹⁰ (Kerby, 1991: 7-12). Vulnerable identities and contrasting territories contribute to an increasing internal conflict amongst residents.

Secondly: The architectural issue includes the critical analysis of how conflict resolution is traditionally addressed, in order to understand how an alternative typology for conflict resolution might function.

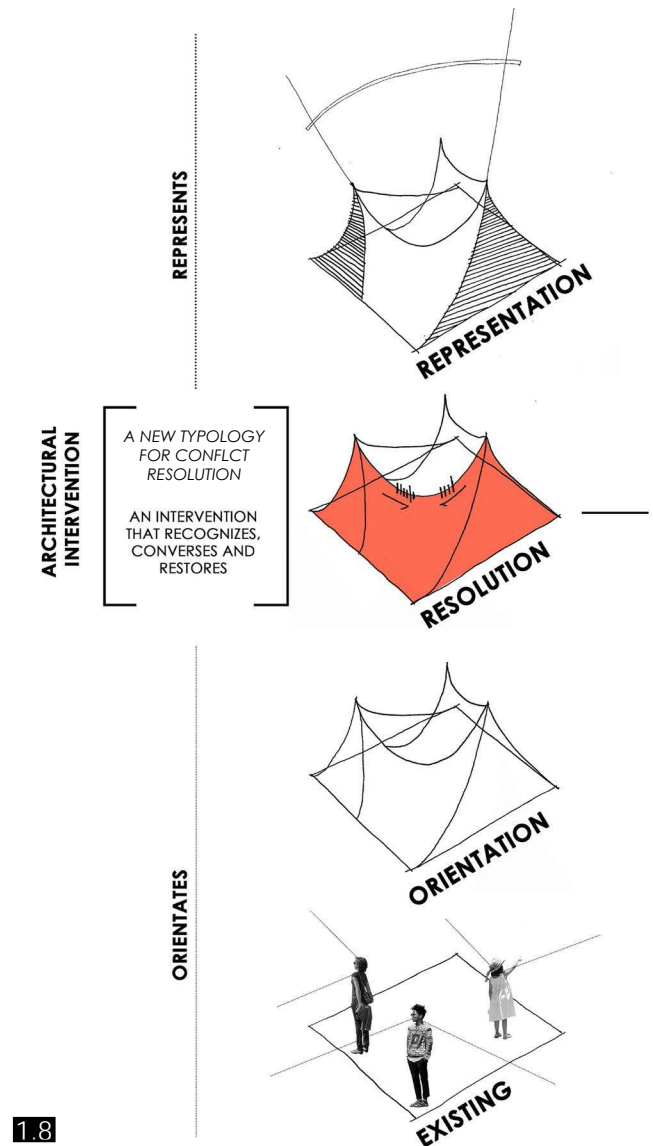


¹⁰ Kerby, in her book, *Narrative and the Self* speaks about the relationship between the spaces we occupy and our identity (Kerby, 1991:7-12)

1.2.6 architectural intention

The presence of architecture that facilitates the process of resolution is proposed through an intervention that initiates alternative forms of dialogue amongst the residents. An alternative approach to conflict resolution is investigated by treating the conflict as a 'breach of relationships', and justice as a process of coming together to repair that breach.

The architectural intention includes investigating the notions of an alternative typology for conflict resolution through introducing a puncture in the norm. By inserting new condition into the context, the architectural intervention intends to introduce new relationships and a shift in perceptions amongst the residents. The architectural intention aims to animate embodied practices that allow the user to transcend from their everyday into an *extraordinary space*, a space that facilitates the process of integration and defines common ground. (These intentions are further outlined in chapter 3, under the theoretical review).



1.8

FIGURE 1.7 : Photo collage by a range of unknown photographers, edited by author(Author, 2018)

FIGURE 1.8 : Illustration of the study's intention: to understand existing, to orientate, to resolve and to represent (Author, 2018)

1.3 RESEARCH

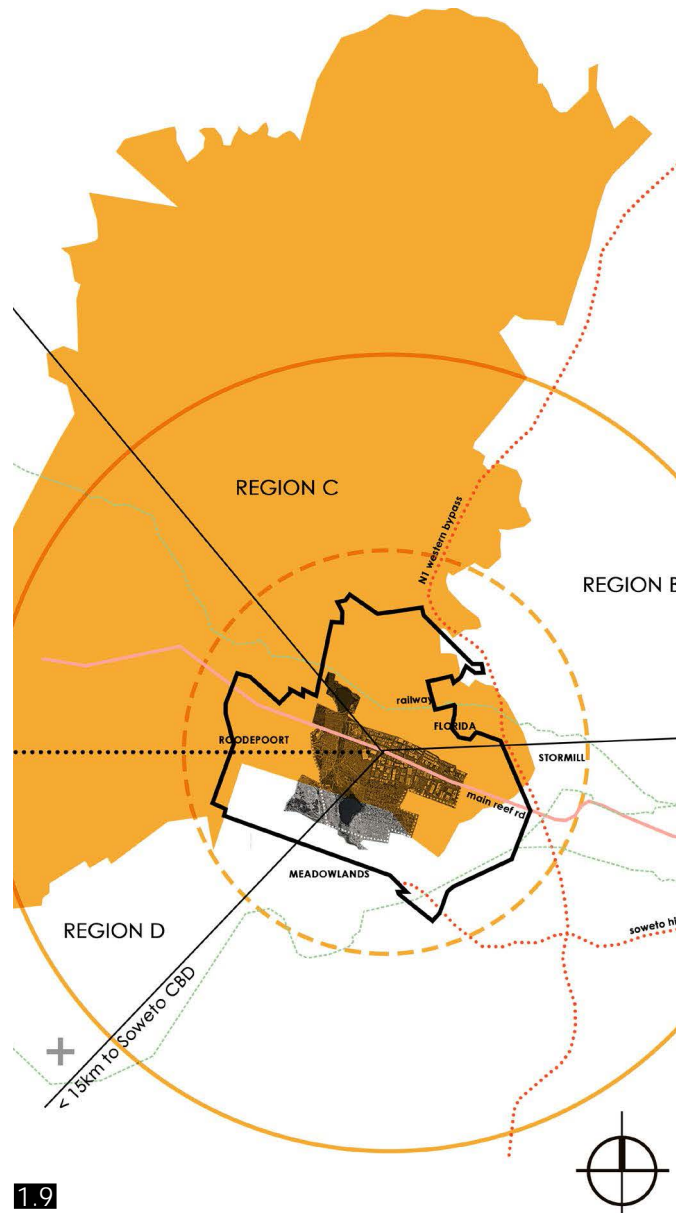
1.3.1 research problem

In this dissertation it is argued that Fleurhof's geological, political and social ties have resulted in an amalgamation of diverse, vulnerable identities and contrasting territories. The lack of a provision of social and public architecture in Fleurhof perpetuates conflict amongst residents, contributing to the vulnerable overarching need for a 'sense of resolution'.

This dissertation aims to focus on Fleurhof's history as a mining town, the implementation of Integrated Housing, the conflict amongst a diverse set of residents and its nature as a buffer between Johannesburg's privileged and underprivileged. Without addressing the rise in conflict amongst the residents through a 'sense of resolution', Fleurhof is under threat in becoming yet another Southern African suburb that bears the scars of a segregated society.

1.3.2 research question

'How can the implementation of an architectural intervention, provide an alternative typology for conflict resolution?'



1.9

FIGURE 1.9 : Illustration of Fleurhof's relation within the regions of Johannesburg, inspiration drawn from Counterspace's socio-spatial mapping Urban Development Framework (Author, 2018)

1.3.3 research methods + methodology

This qualitative research is one of mixed methods and methodologies as follows:

a. *Critical analysis*

Using critical analysis to assess design informants such as the historical overview, macro and micro-mapping, the analysis and criticism of local precedent¹¹, social theory¹² relating to the architectural intervention, urban theory¹³ relating to the urban intervention, construction theory relating to the making of architecture and the existing built context of Fleurhof. As an initial point of investigation into identity within Fleurhof, observation and the critical analysis of participatory socio-spatial mapping done by *Counterspace*¹⁴, will be analyzed as a secondary source of socio-spatial mapping (Fleurhof and Surrounds Urban Development Framework).

b. *Hermeneutics*

To explore the intangible design informants, hermeneutics¹⁵ will be used as a research methodology. This methodology will be used as a guideline to translate the phenomena of identities within Fleurhof.

c. *Dialectics*

Using a dialectical methodology to weigh up multiple theories of identity in an attempt to formulate a synthesis on social theory that relates to identity.

d. *Iterations*

Using an iterative method of design to develop an architectural intervention that explores an alternative approach to conflict resolution.

e. *mapping*

Using a mapping approach in order to further understand the political, social and physical situation of Fleurhof.

¹¹ Local precedents include alternative models of providing public social infrastructure within a local context. Traditional models of public, social and socio-economic security will be also be investigated. Examples include: police stations, court typologies, legal aid organizations and social grants access points.

¹² Social theory including themes of a sense of security: place identity, sense of place, place attachment and identity as story.

¹³ Urban theories include 'Place based Crime Prevention: Crime Prevention through Environmental Design and Situational Crime Prevention'.

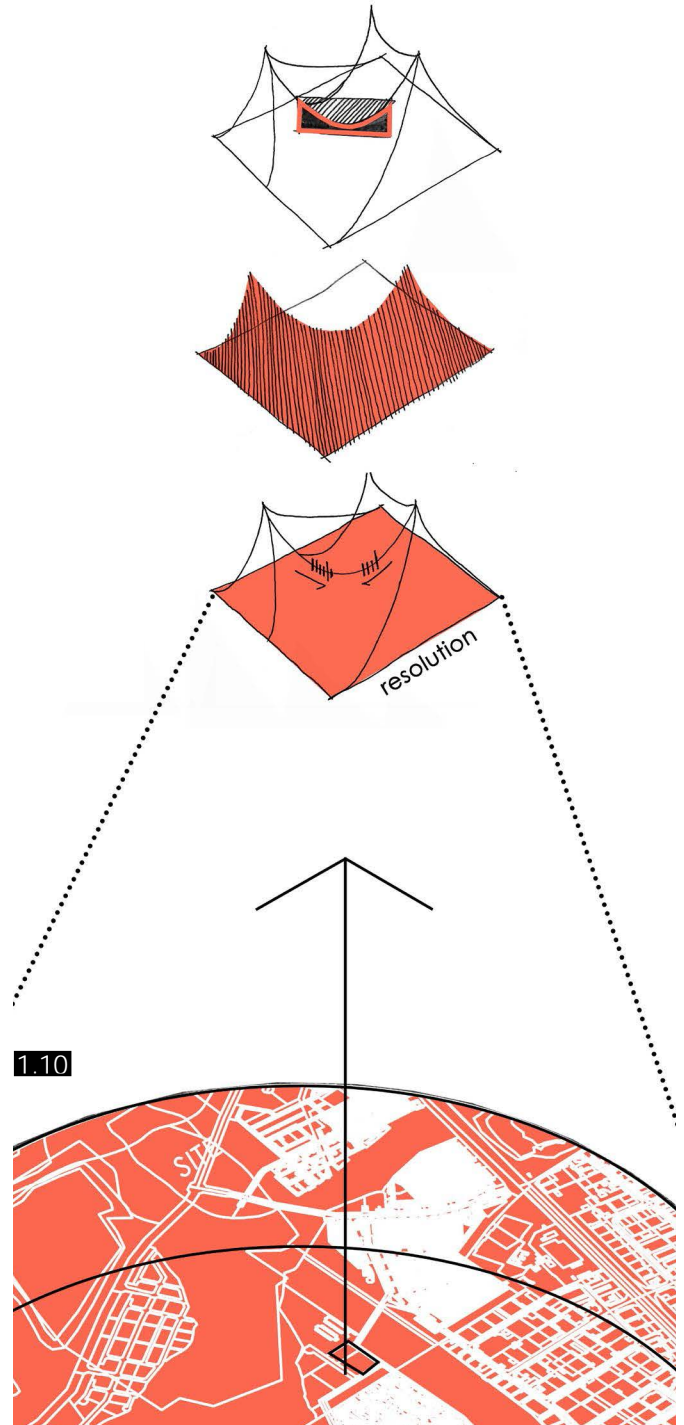
¹⁴ Counterspace, is a Johannesburg based Architectural Firm, dedicated to both Architecture and Spatial Research.

¹⁵ Kafle describes this methodology as the translation of the individual interpretation of a particular experience into a collective interpretation of the event, by situating the experience within its context (Kafle, 2011:1-20)

1.3.4 delimitations

The scale of a lack of a 'sense of resolution' within the South African framework stretches far beyond the capabilities of a master's dissertation, and the dissertation steers away from attempting to establish common ground through a sense of resolution for the entire South African context. But rather, it wishes to define the scale of intervention. The three forms of social justice investigated in this dissertation are: protection, representation and resolution. These exist on a national, provincial, municipal and district scale. The dissertation concerns itself with the district scale. There is a possibility that this type of alternative typology for conflict resolution could be seen as a catalyst that could perhaps be implemented elsewhere, with the right contextual considerations. The dissertation steers away from replacing current forms of conflict resolution but rather investigates the possibility of a typology that could be implemented within the current system of resolution in South Africa.

The dissertation steers away from dealing with 'crime' within Fleurhof but rather looks at the social implications of everyday minor conflict. The study does not aim to represent an individual 'identity' in Fleurhof in the traditional sense of the word. Instead, the dissertation explores the presence of 'sense of resolution' as a collective identity, to establish common ground amongst the diverse identities.



1.3.5 assumptions

It is assumed that the site vision for the study will be implemented successfully within the current development and changes within Fleurhof. The proposed urban vision considered previous urban design masterplans and current future proposals for Fleurhof (these are explained further in chapter 2, under urban vision).

1.3.6 contribution

The architectural contribution involves assessing the value of a new architectural typology for conflict resolution. As previously mentioned, conflict resolution has been traditionally treated as a private affair that deals strictly with oral forms of communication; the proposed new typology introduces alternative forms of communication as a means of guiding the process of resolution and integration amongst the residents of Fleurhof. Conducted by the principles highlighted in the theoretical review, the project aims to introduce the *extraordinary* to the *everyday* through the process of embodied practices, as an initial step towards integration.

This dissertation aims to investigate the communicative nature of architecture through geometries of harmony, proportion, and rhythm to provoke physiological activity and expression as an alternative form of dialogue. It aims to introduce a new typology as the driver and programme, which will function as the vehicle to define 'common ground'. It will recommend treating an absence of 'resolution' as a breach of relationships and use justice as a process of coming together to repair that breach.

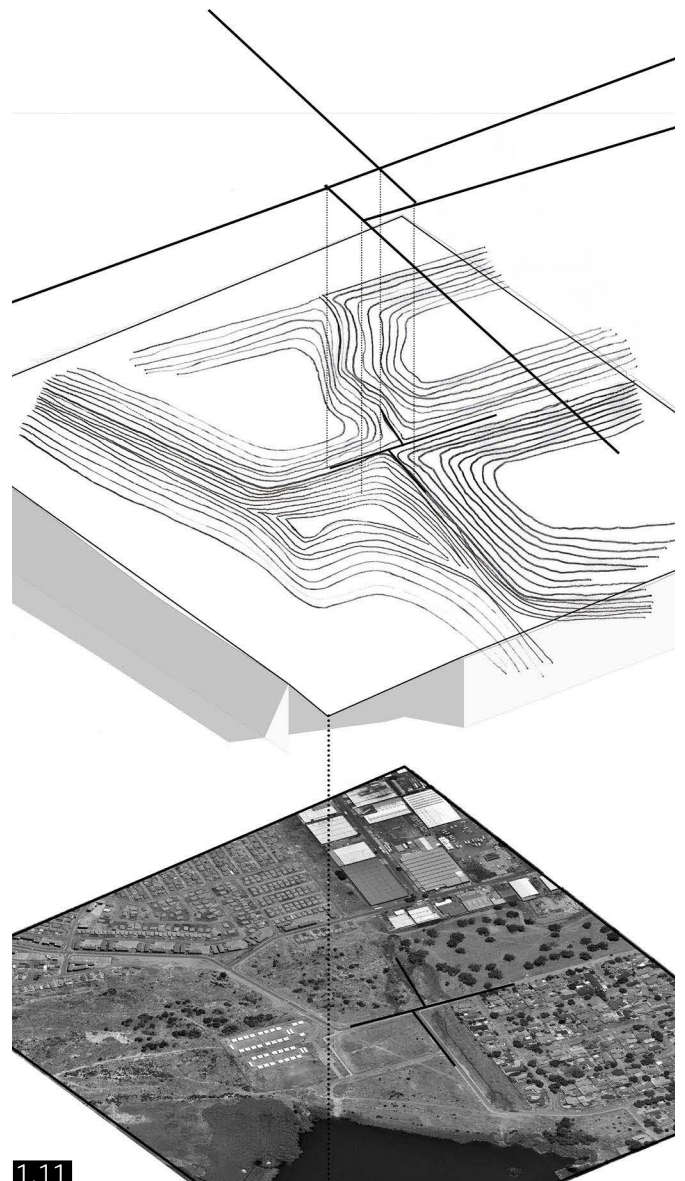


FIGURE 1.10 : Conceptual diagram illustrating the chosen site (Author, 2018)

FIGURE 1.11: Conceptual illustration depicting the study's contribution (Author, 2018)

02 //



2.1 SOCIAL JUSTICE
2.2 CONTEXT
2.3 POLITICAL SITUATION
2.4 PHYSICAL SITUATION
2.5 SOCIAL SITUATION
2.6 URBAN VISION



This chapter strives to contextualize the issues and intentions discussed in the previous chapter. The scale of the intervention is situated within the relevant forms of social justice in South Africa, focusing on protection, representation and resolution. The study focuses on the analysis of three situations: the political situation, the physical situation and the social situation. The chapter concludes by outlining the urban vision which exists on two scales, a neighbourhood vision and a site specific vision.

2.1 SOCIAL JUSTICE

A visual analysis of the relevant forms of social justice in South Africa, with an indication of where the architectural intervention would fit in.

2.1.1 protection structure

For the purpose of this study, protection is viewed as forms of tangible security in South Africa (FIG. 2.1).

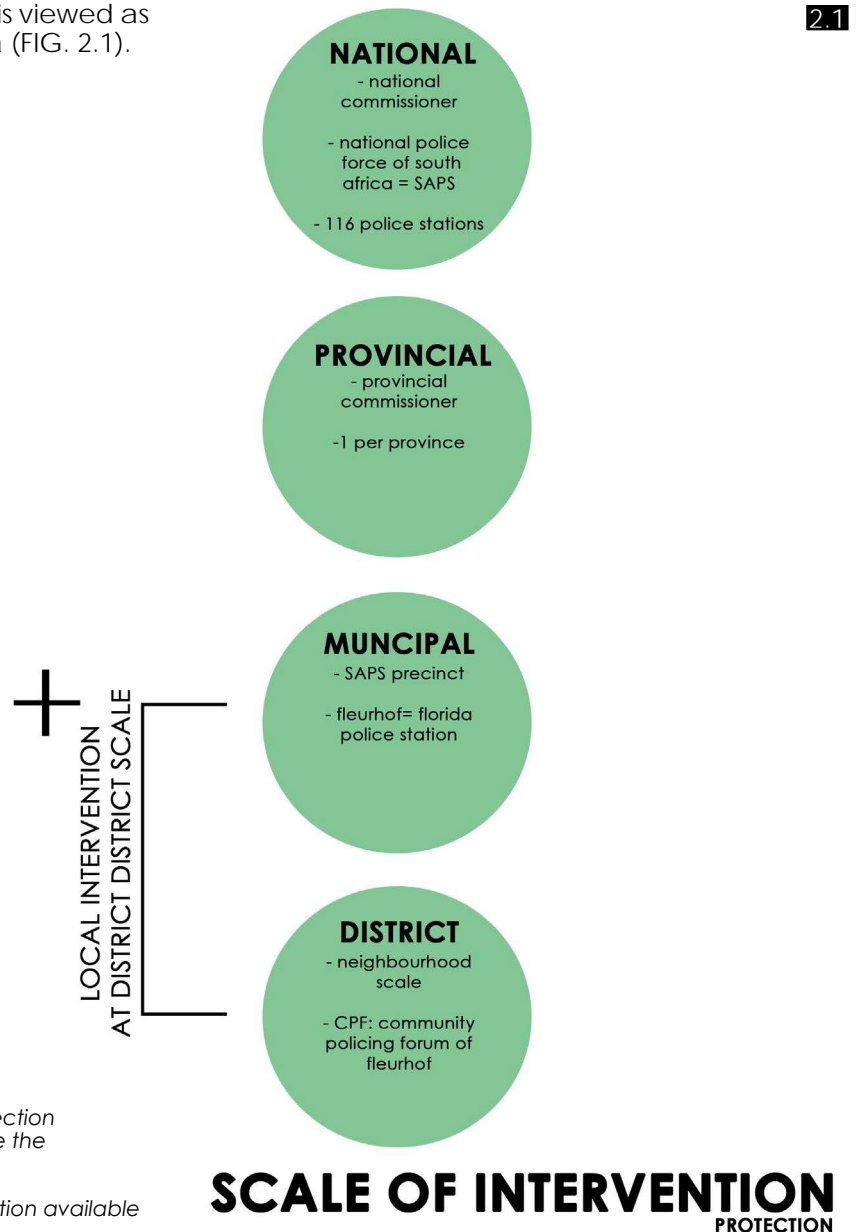
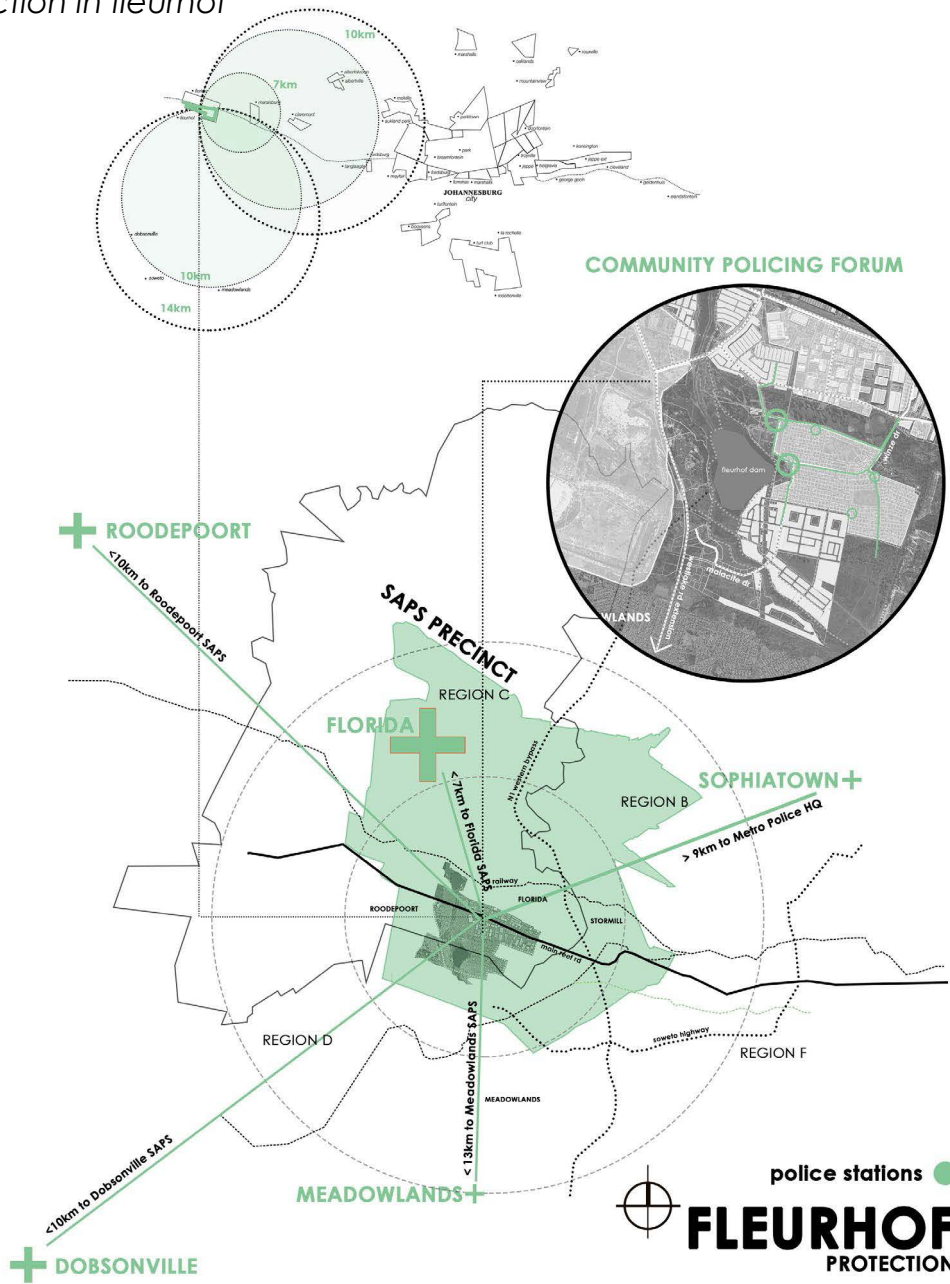


FIGURE 2.1 : Diagram illustrating the current protection structure in South Africa, with an insertion of where the intervention might fit in (Author, 2018)

FIGURE 2.2: Diagram mapping the current protection available in Fleurhof (Author, 2018)

2.1.2 protection in fleurhof

22



2.1.3 representation structure

For the purpose of this study, representation is viewed as legal assistance and the education of basic human rights in the constitution of South Africa (FIG 2.3 + 2.4).

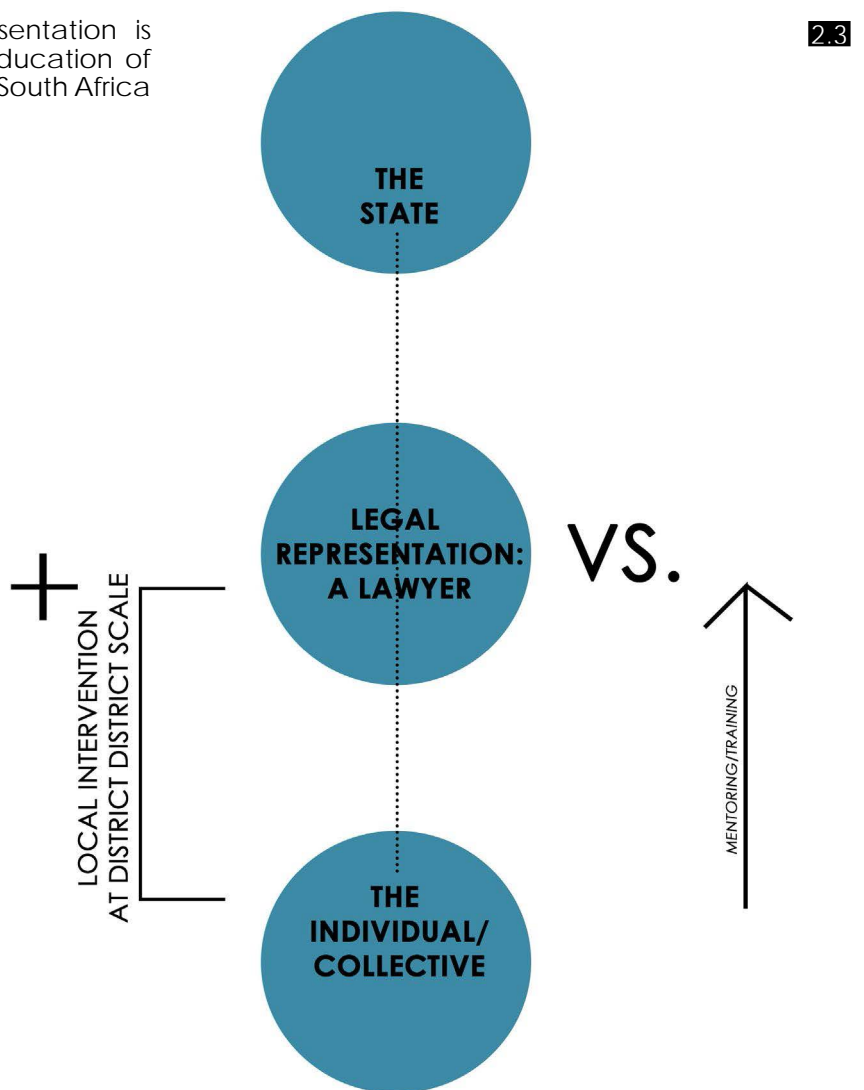


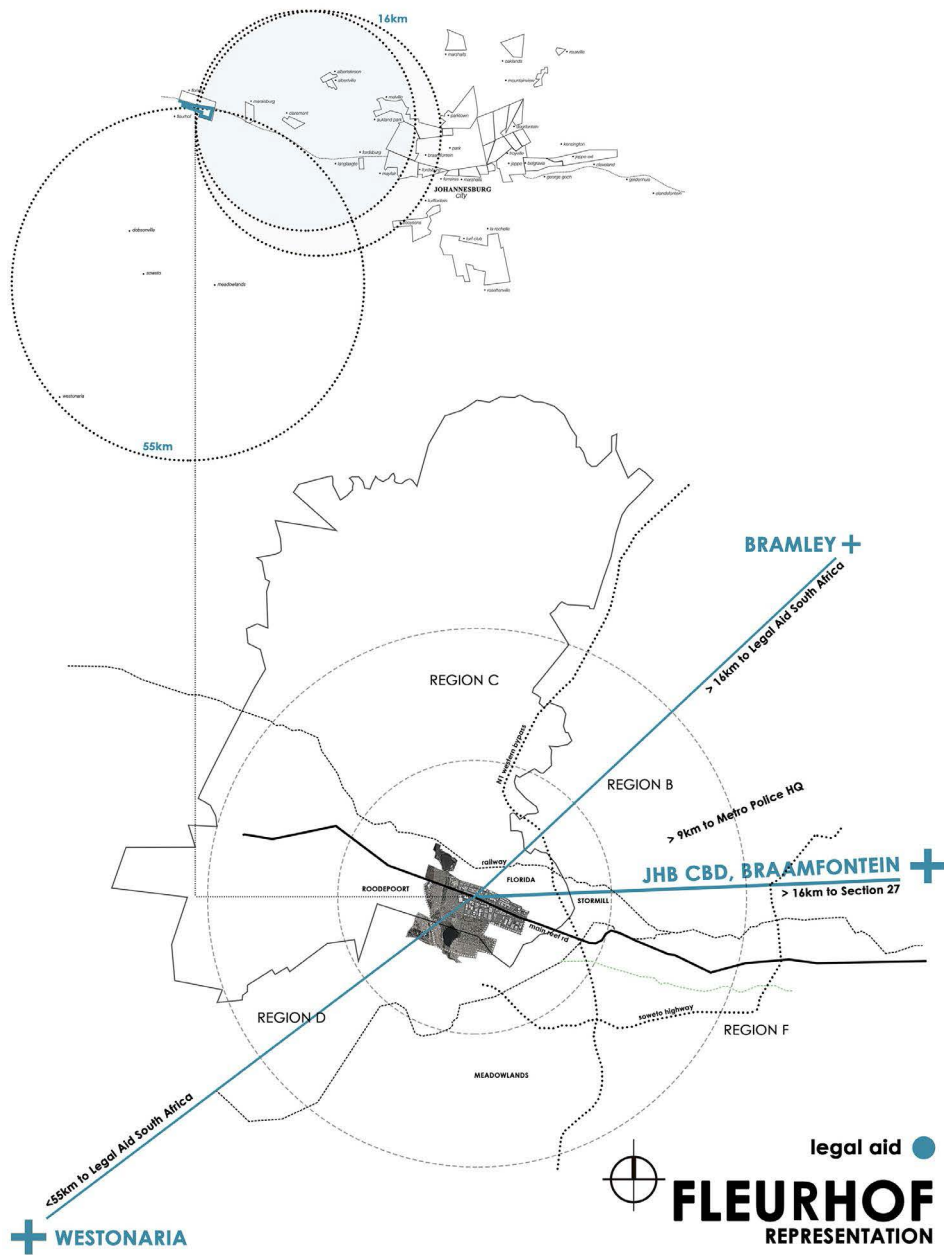
FIGURE 2.3 : Diagram illustrating the current representation structure in South Africa, with an indication of where the intervention might fit in (Author, 2018)

FIGURE 2.4: Diagram mapping the current representation available in Fleurhof (Author, 2018)

SCALE OF INTERVENTION
REPRESENTATION

2.1.4 representation in fleurhof

24



2.1.5 resolution structure

For the purpose of this study, resolution is viewed as traditional court typologies set out to resolve conflict in South Africa (FIG. 2.5 + 2.6).

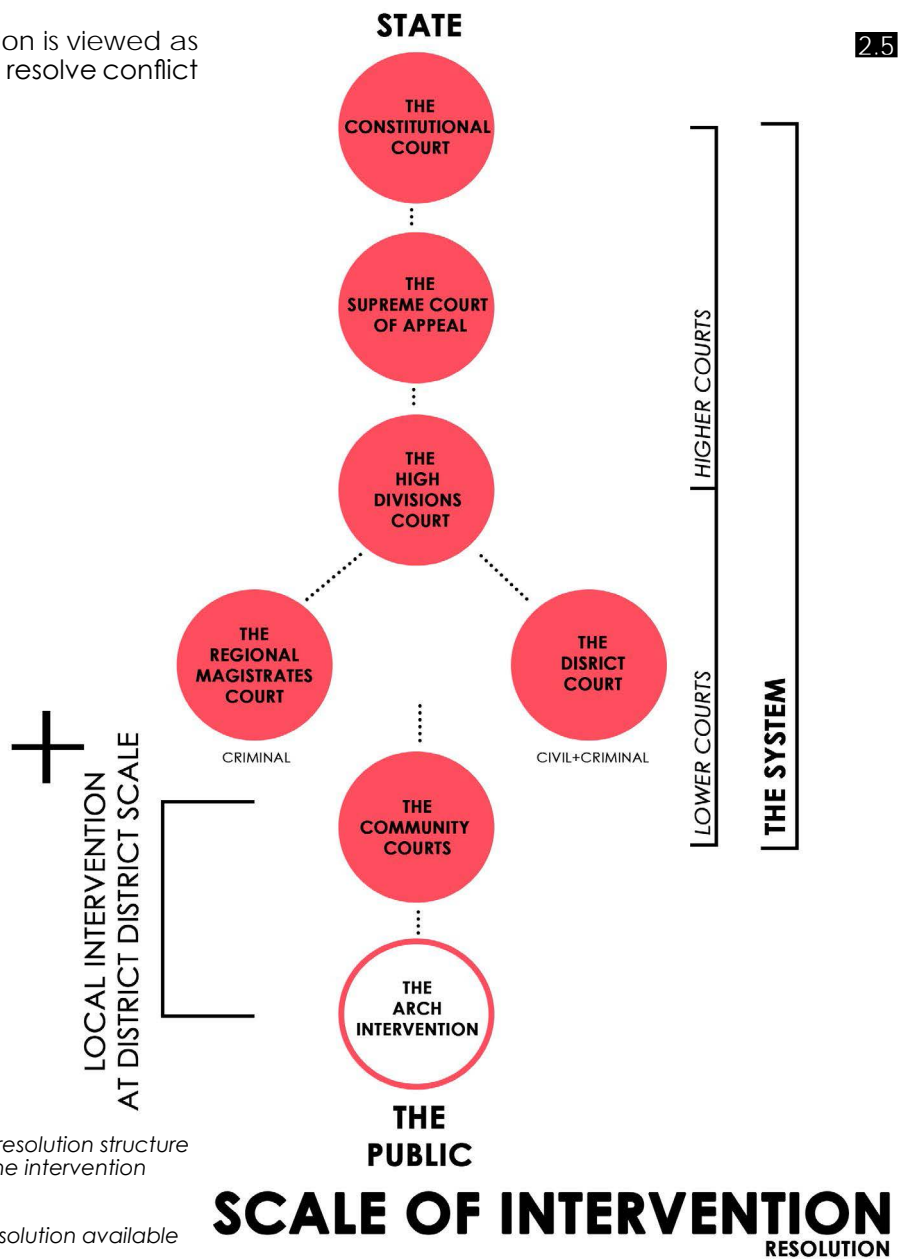


FIGURE 2.5 : Diagram illustrating the current resolution structure in South Africa, with an indication of where the intervention might fit in (Author, 2018)

FIGURE 2.6: Diagram mapping the current resolution available in Fleurhof (Author, 2018)

2.1.5 resolution in fleurhof

26



2.2 CONTEXT

In contrast to many other South African cities, Johannesburg's existence was created by commercial opportunity as opposed to a political or colonial intervention (Brodie, 2014). The City of Gold, in this instance, becomes the macro laboratory for my dissertation proposal. The foundation of the cultural landscape we have come to know was built around the discovery of gold, and its link to industry and commercial activity.

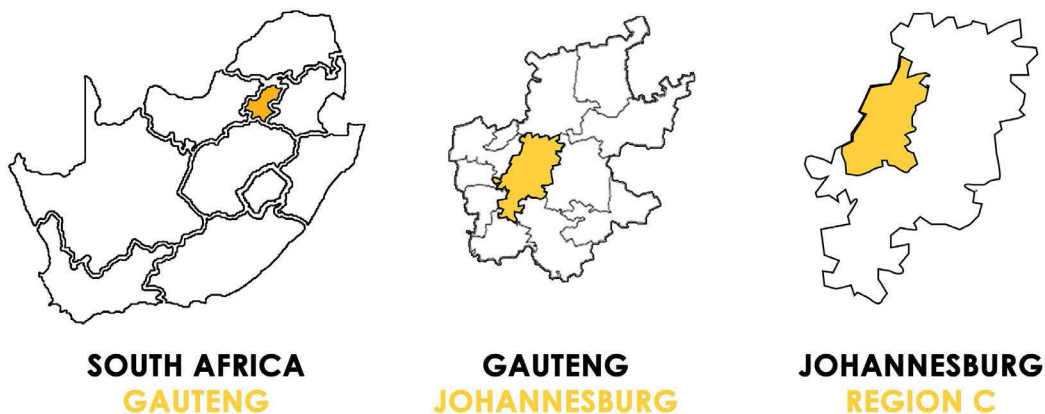
With the discovery of gold in the early 1880s and the proclamation of public diggings on the farms Paardekraal, Vogelstruisfontein, Luipaardsvlei, Witpoortjie, Klipplaat, Heuningklip and Wilgespruit in 1886, mining towns were established along the east-west passage, Main Reef Road (du Plooy, 2000: 1). Fleurhof falls within the original Vogelstruisfontein Farm boundaries.

Johannesburg developed as a city due to the gold rush of the 1800s. Thenceforth, the city was ruled by the mining 'iron fist', a feature of white supremacy, and, later the apartheid government. The mine associated with the Vogelstruisfontein Farm was the Rand Leases Gold Mining Company established in the early 1900s. After closing in 1971, followed by ownership changes and re-opening, the industry officially shut down in the 1900s due to a decreasing gold price (PGS Heritage, 2009:1). The Rand Leases Gold Mining Company currently exists only in the form of derelict mining infrastructure, a vacant mining compound and a playground for Zama Zamas¹ (Rensburg, 1986).

2.7



2.8



¹ Zama Zamas is the South African colloquial term for illegal miners.

2.9

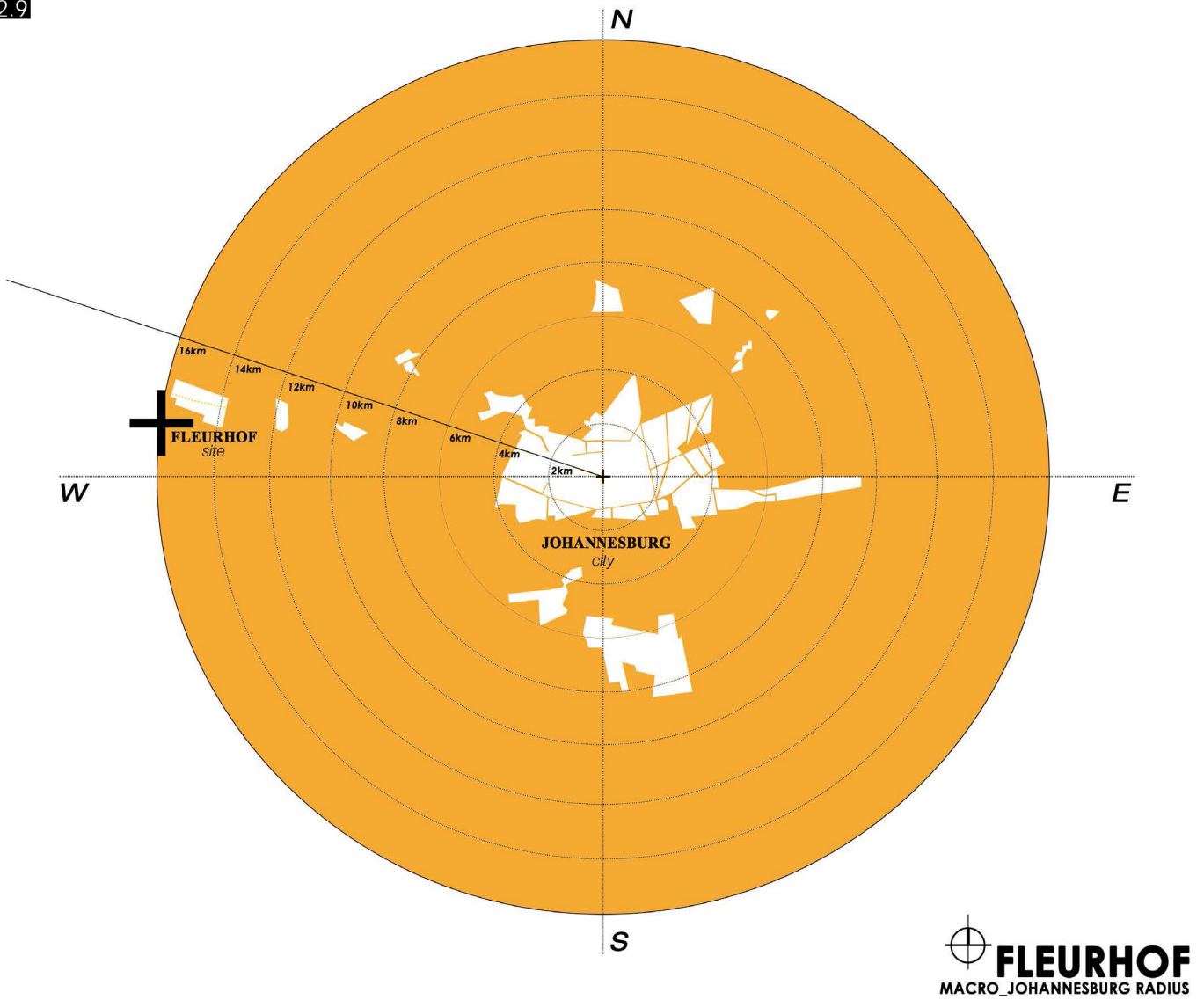
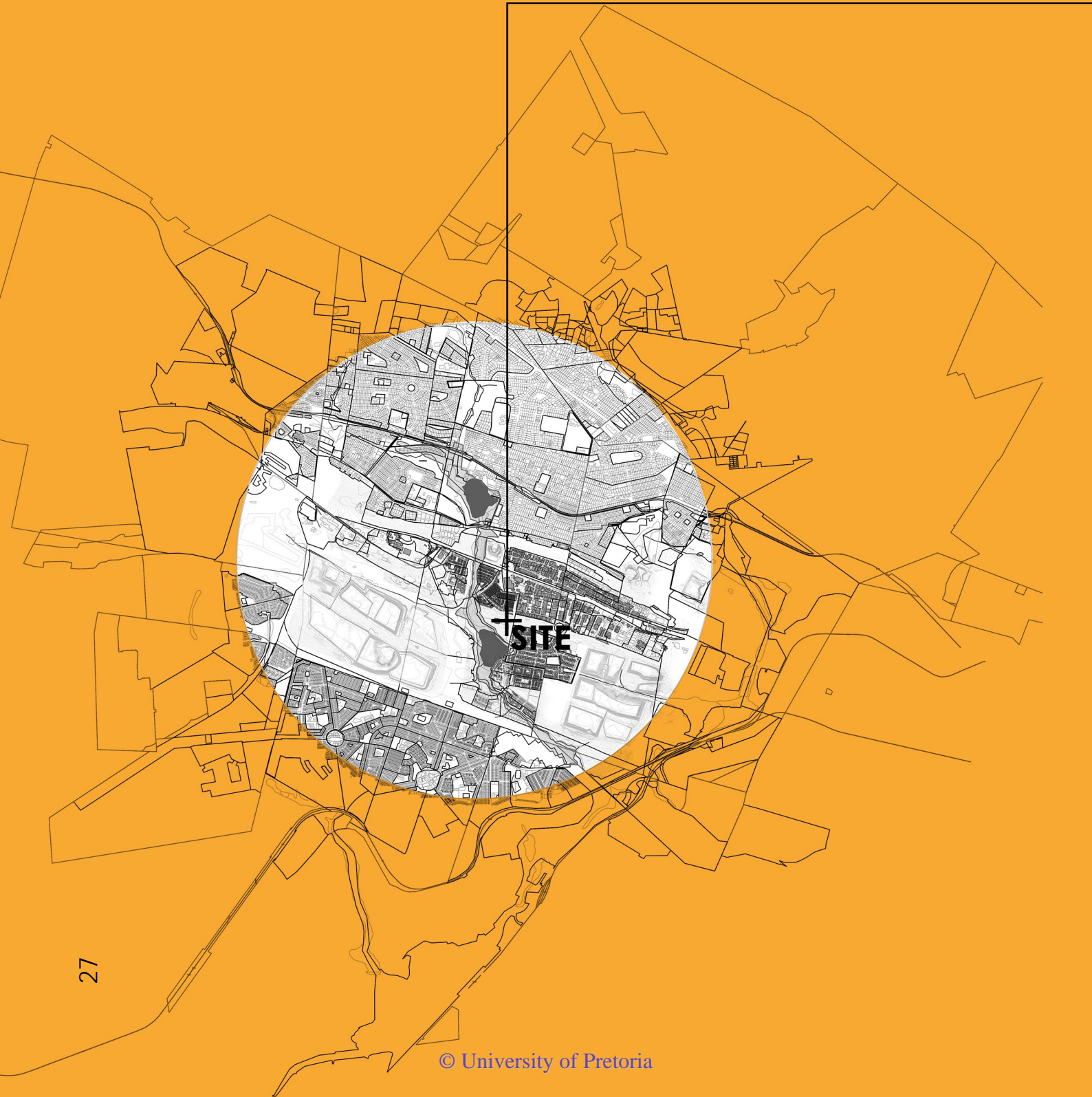
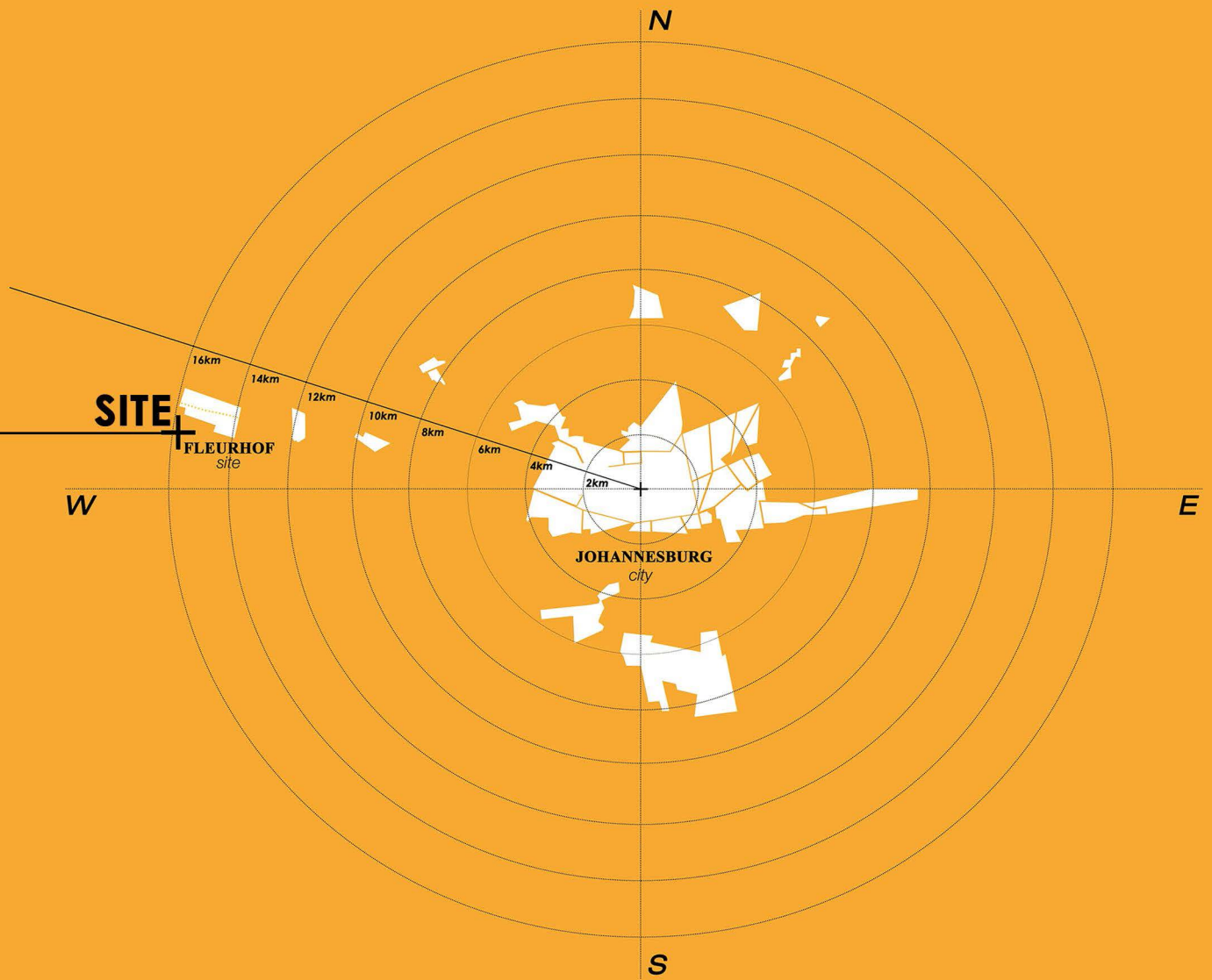


FIGURE 2.7 : Photographs of the site (Author, 2018)

FIGURE 2.8: Illustrations of the site within it's larger context (Author, 2018)

FIGURE 2.9: Illustrations of Fleurhof within Johannesburg's radius (Author, 2018)

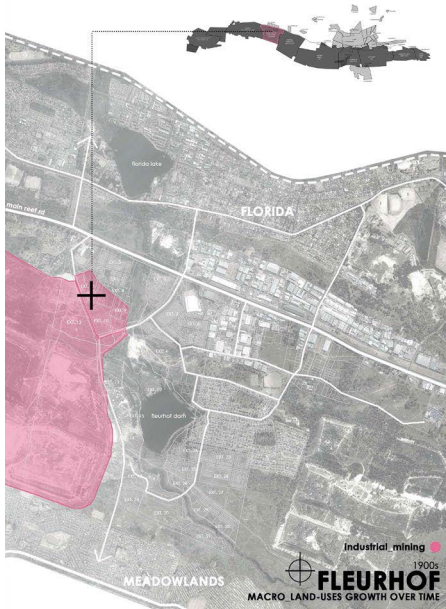




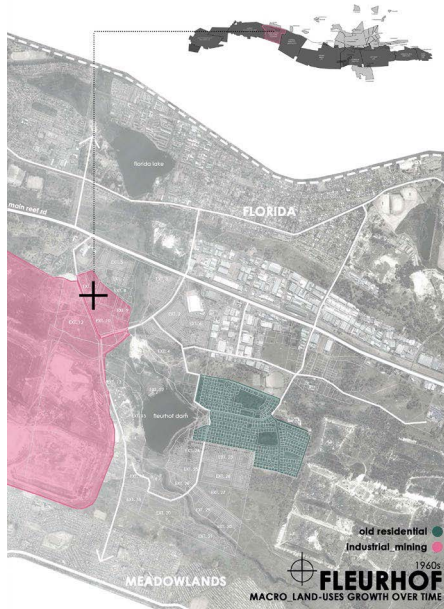
2.10

FIGURE 2.10 : Illustration where the meso mapping is situated within the macro mapping (Author, 2018)

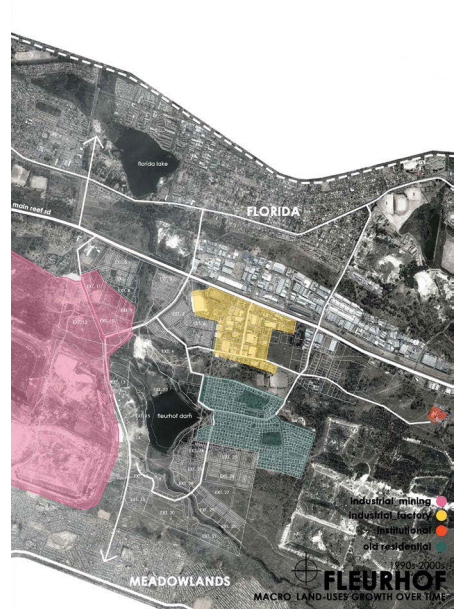
1900s



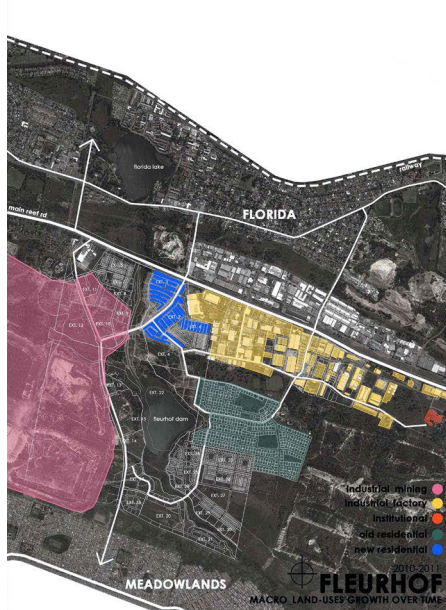
1960s



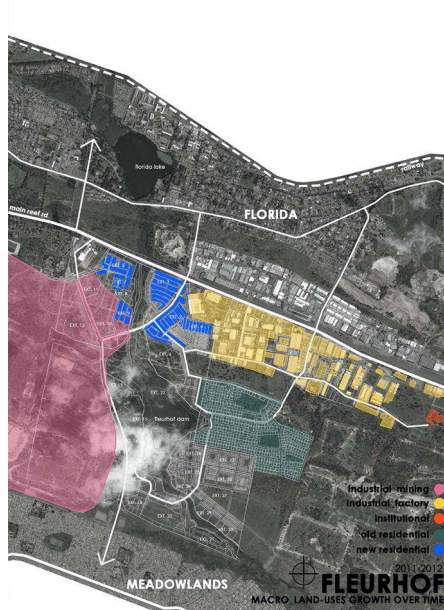
1990s-2000s



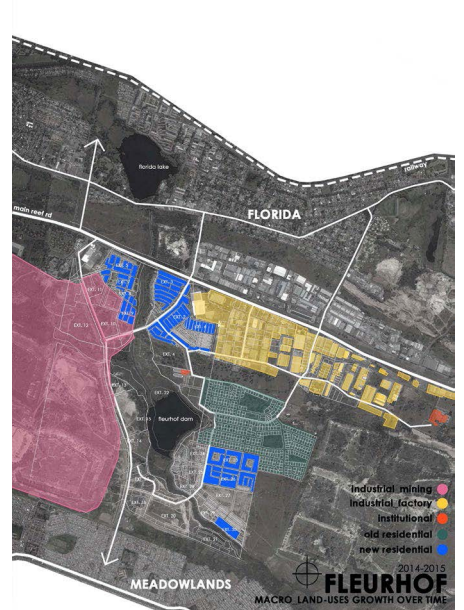
2010-2011



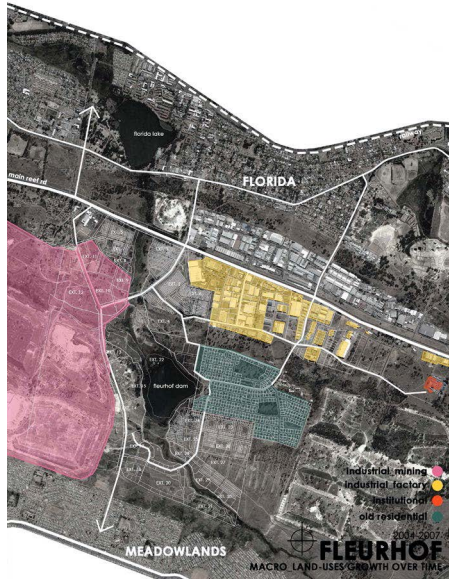
2011-2012



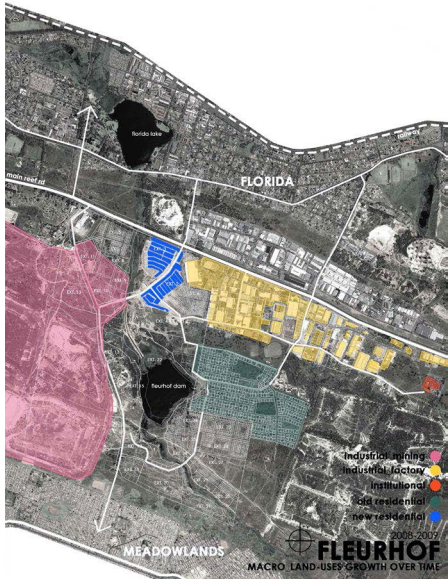
2014-2015



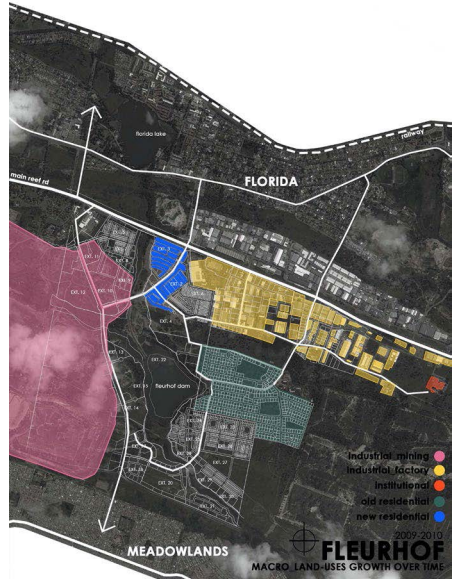
2004-2007



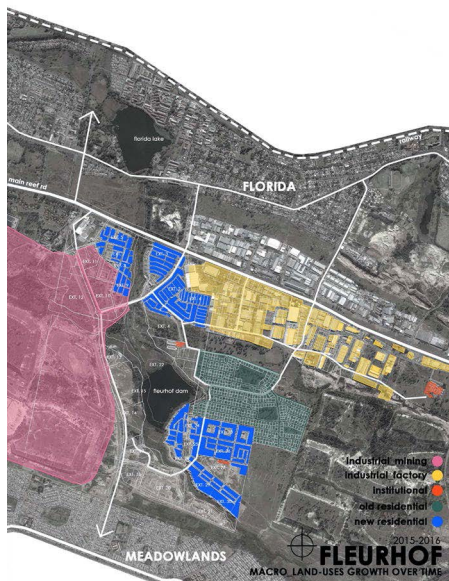
2008-2009



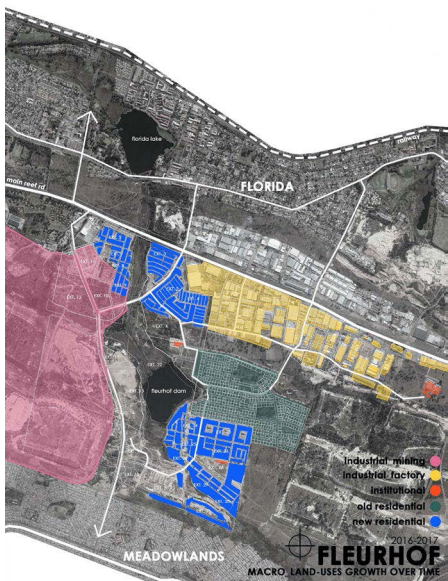
2009-2010



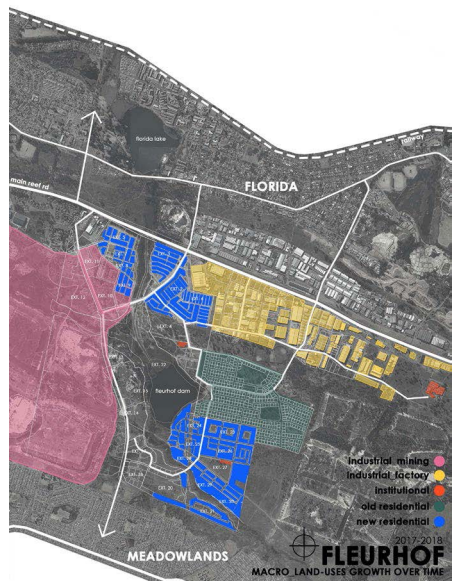
2015-2016



2016-2017



2017-2018



2.11

FIGURE 2.11 : Mapping done of the development of Fleurhof from the 1900s - 2018 (Author, 2018)

2.3 POLITICAL SITUATION

As introduced in the first chapter and in order to contextualize Fleurhof's current identity, the nature of the inhabitant in relation to their urban fabric is viewed through fragments of time relating to apartheid's spatial legacy. The fragments of time are translated for the purpose of this dissertation as: *before*, *during* and *after*.

2.3.1 before

Before refers to Fleurhof in a time preceding the effects of apartheid's spatial legacy and relating to the geology of Fleurhof. The discovery of gold in the late 19th century led to the formation of the town. Fleurhof's geological condition initiated its birth as a mining town on part of the original Vogelstruisfontein Farm along Johannesburg's Main Reef² (Rensburg, 1986: 4). Exclusively a white area under apartheid, the original layout excluded provision for the accommodation of people of colour. The black miners were housed in mining compounds, making it easy for the mining officials to control their workforce. However, families of mineworkers and migrant laborers seeking jobs began to squat along southeastern peripheries of the mining compound towards Soweto (Beall, 2002). The urban fabric was formed by an arrangement of mining infrastructure and a mining hostel³. In response to its formation as an industrial node, post-90s medium-industrial infrastructure became the next layer of Fleurhof's urban fabric. The shift towards a post-industrial society has resulted in a decline in the manufacturing sector and a rise in the provision of services sector, leaving many of these warehouse vacant (FIG. 2.12).



2 The Rand Leases Gold Mining Company was established in the early 1900s, upon the discovery of gold in the region. (Rensburg, 1986: 4).

3 Fleurhof's mining compound was the Rand Leases 'B' Compound.

2.3.2 during

During refers to Fleurhof in a time in-between the effects of apartheid's spatial legacy. Following the gold rush, there were clear racial distinctions due to the initial Land Act of 1913, which led to The Native Urban Areas Act of 1923 and was later formalized by The Group Areas Act of 1950. All non-whites were driven out of the city center. The eastern and western peripheries of the city were occupied by working-class whites, northern suburbs were home to the affluent white classes and non-whites were housed in the southern peripheries of the city (City of Johannesburg, 2002). Fleurhof and its northern suburbs remained white areas under apartheid until the 1976 Soweto uprising when the white residents moved up north and the coloured communities from Westbury and Bosmot were relocated to the suburb (City of Johannesburg, 2002). This relocation could be seen as the exit of the superior and the arrival of the inferior through the lens of apartheid. With the departure of the superior, and the arrival of the inferior, Fleurhof's development in any other way but residential, was stifled. Fleurhof's urban fabric remained residential, without the build-up of additional typologies such as socio-economic facilities (FIG. 2.13).



FIGURE 2.12 : Illustration of the 'before' residents in relation to their place (Author, 2018)

FIGURE 2.13: Illustration of the 'during' residents in relation to their place (Author, 2018)

2.3.3 after

After refers to a time post the effects of apartheid's spatial legacy. With the development of The Integrated Housing Model (Mixed-Income Social Housing units) over the past decade, Fleurhof has become home to low-to-middle-income black residents. This has transformed Fleurhof's Urban Fabric. These rapidly developing housing units fail to address the industrial remains of a post-industrial society and fail to relate to the existing residential urban fabric.

Fleurhof, as a town, represents a diverse set of identities; geographically, a white mining suburb, politically, home to a coloured community and, more recently, home to an economically focused mixed-income black community (FIG. 2.14).



FIGURE 2.14 : Illustration of the 'after' residents in relation to their place (Author, 2018)

FIGURE 2.15: Illustration of the 'before, during and after' residents in relation to their place (Author, 2018)

2.15



2.4 PHYSICAL SITUATION

Firstly, Fleurhof is investigated as 'no man's land'. A condition of uncertainty permeates the town on all scales: the historical, the political, the economic and, perhaps most significantly, the scale of diverse identities.

A meso mapping exercise was undertaken in an attempt to understand Fleurhof's conception and development and more specifically to understand its lack of social relationships and diverse identities. Data collected by Albonico Sack Metacity Architects and Urban Designers' Urban Development Framework and Counterspace's Fleurhof and Surrounds Urban Development Framework.

2.16

MESO_BUILT FORM



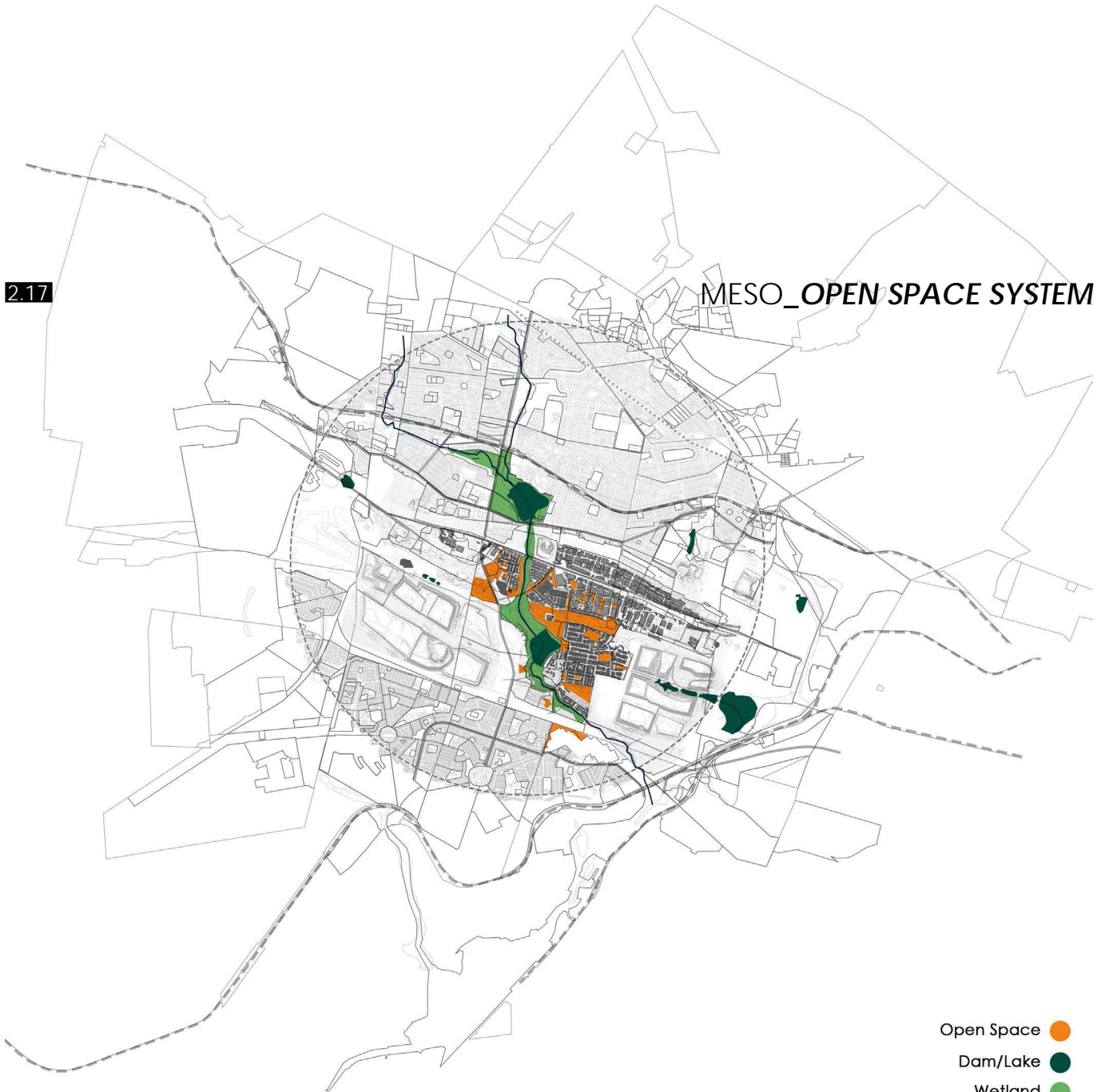
FIGURE 2.16 : Meso mapping of the built form in Fleurhof (Author, 2018)

FIGURE 2.17: Meso mapping of the open space system in Fleurhof (Author, 2018)

Built Form ●
Informal Settlement ●

2.17

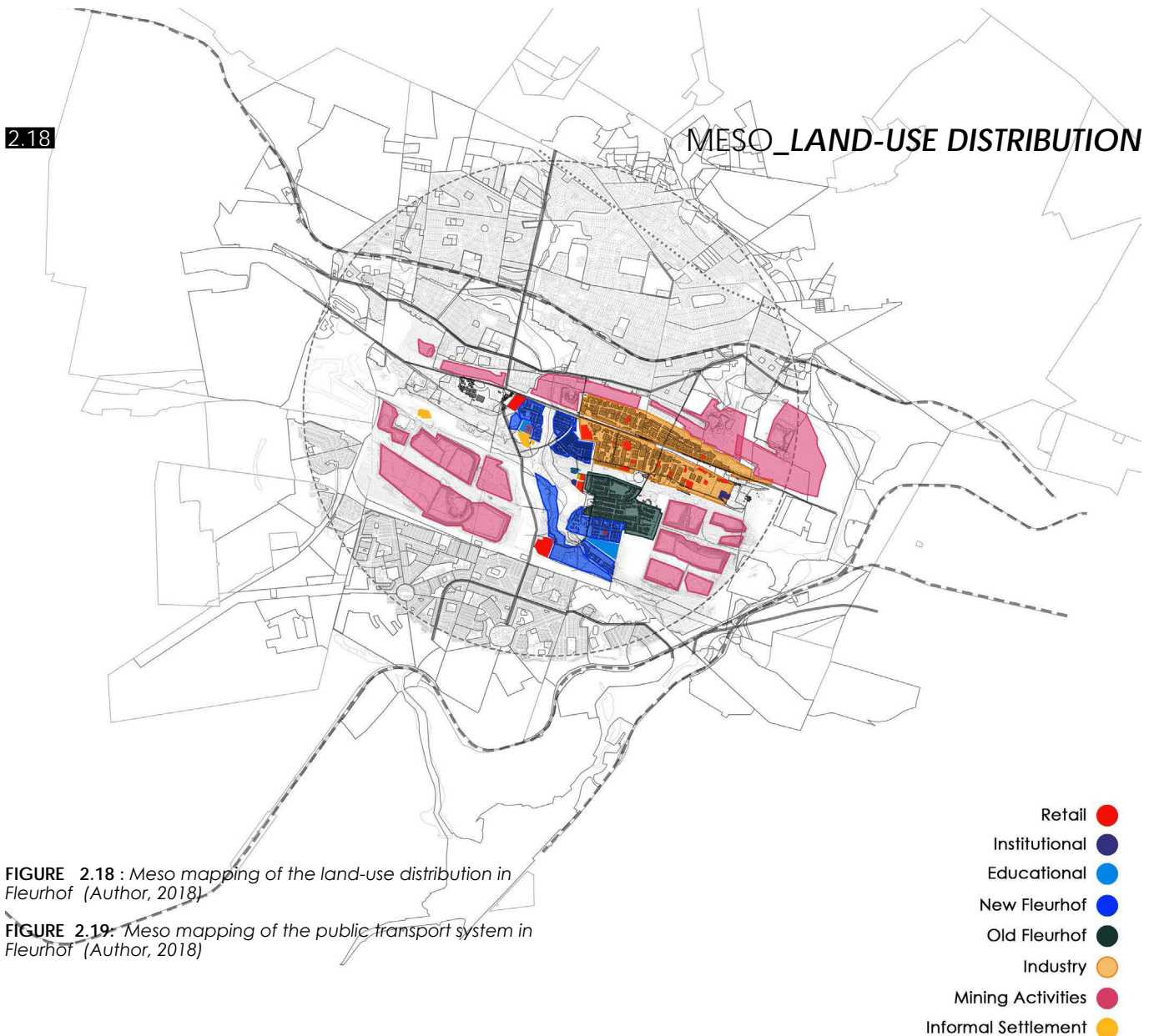
MESO_OPEN SPACE SYSTEM



- Open Space ●
- Dam/Lake ●
- Wetland ●
- River ●
- Built Form ●

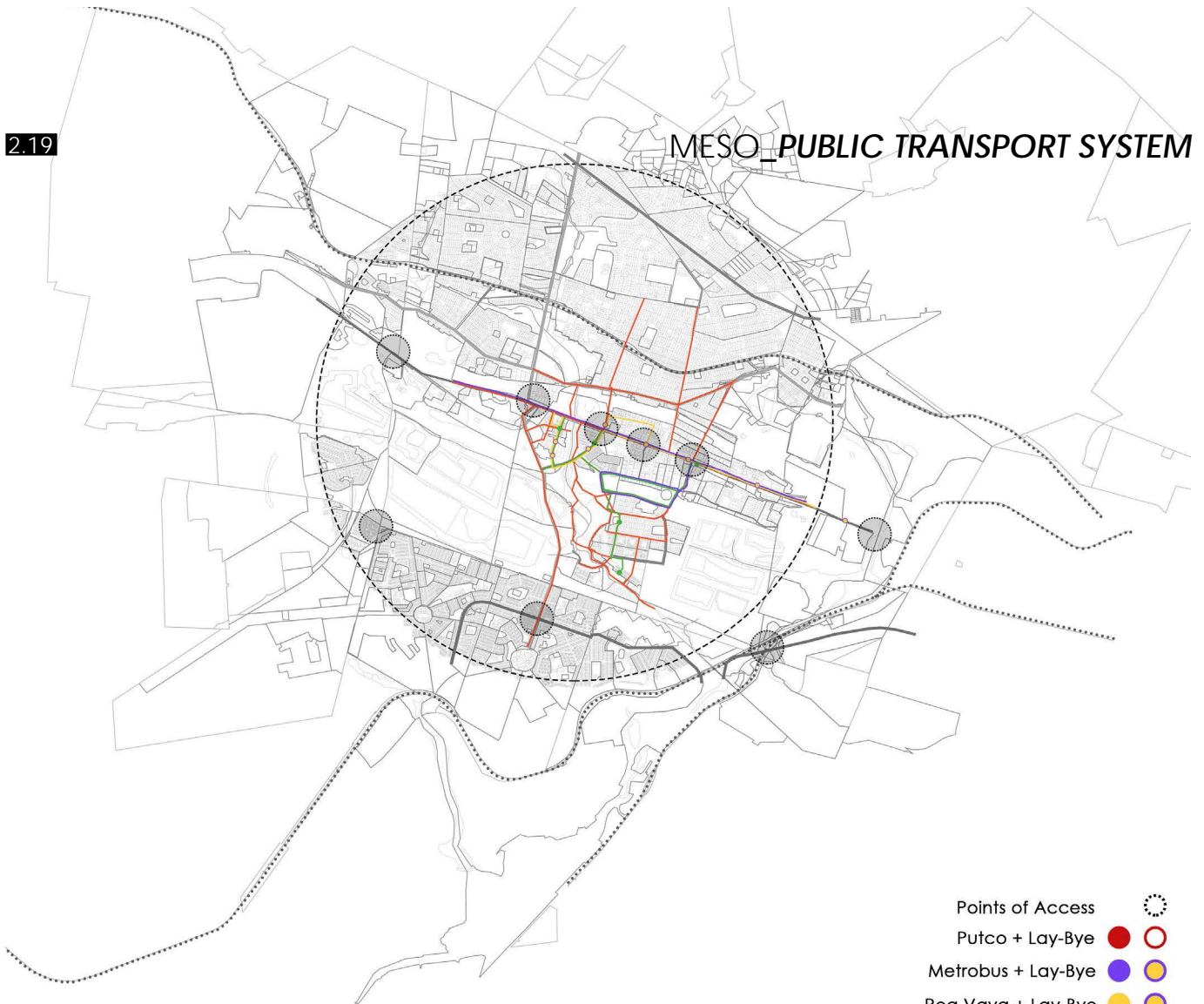
2.18

MESO_LAND-USE DISTRIBUTION

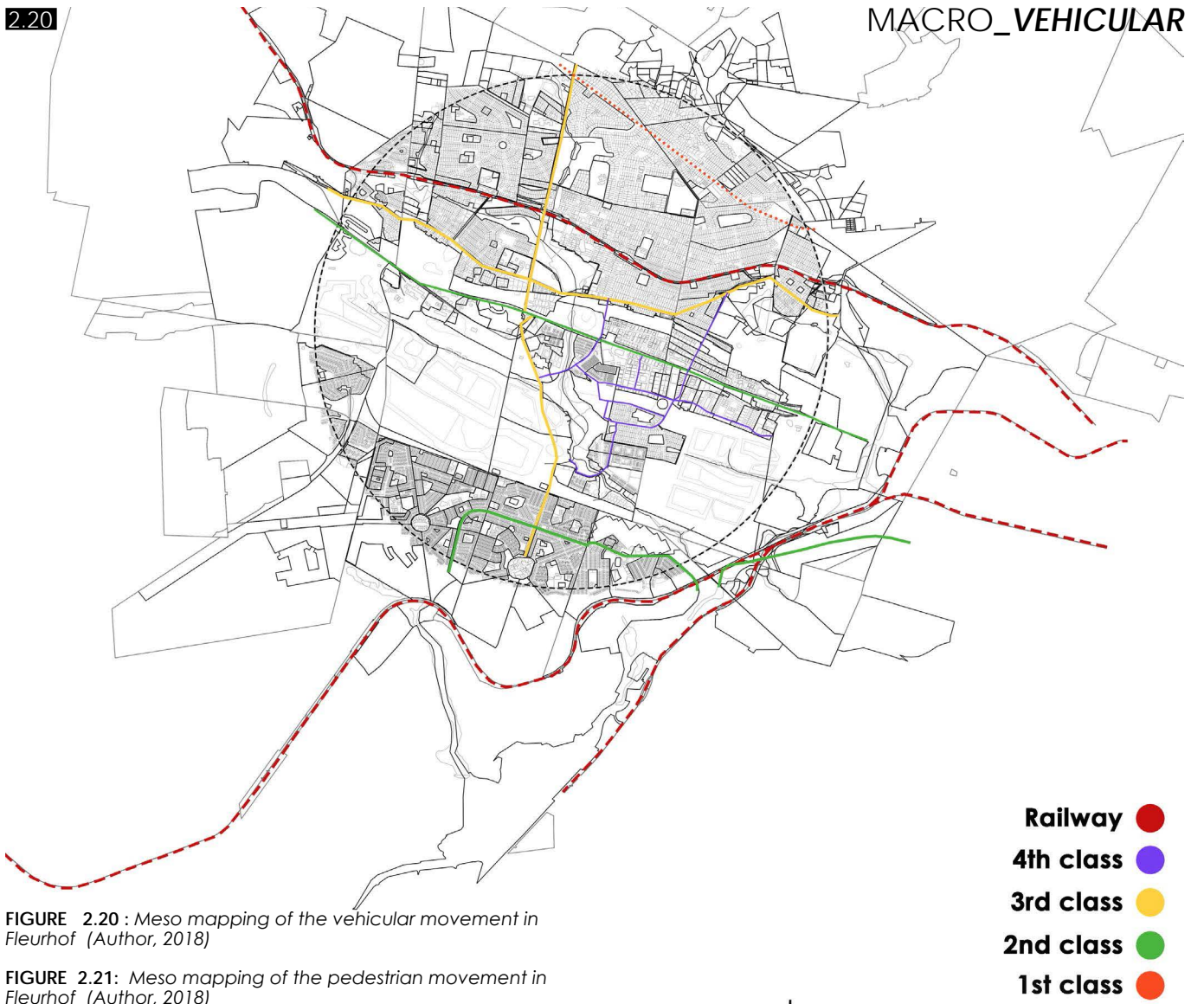


2.19

MESO_PUBLIC TRANSPORT SYSTEM

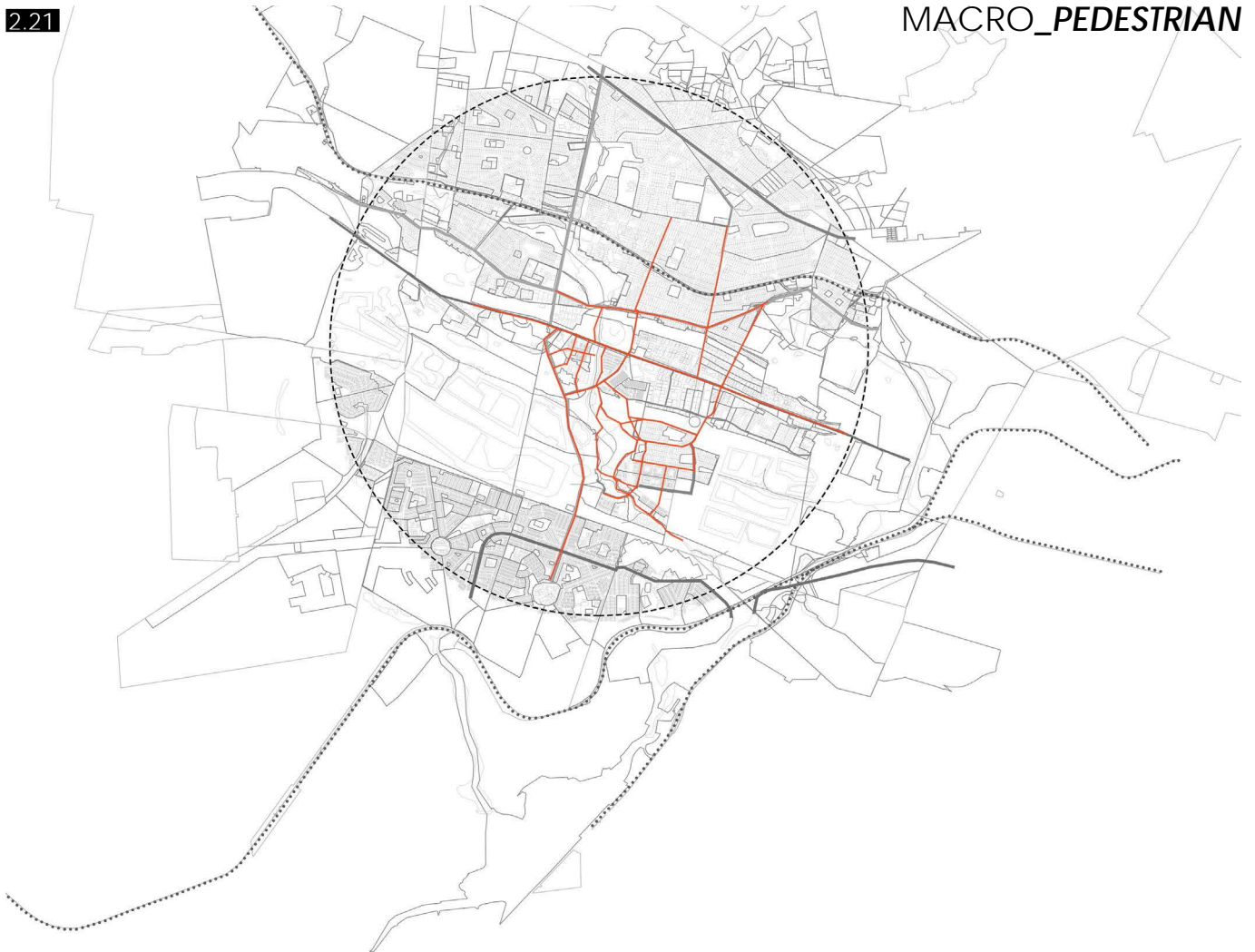


- Points of Access
- Putco + Lay-Bye
- Metrobus + Lay-Bye
- Rea Vaya + Lay-Bye
- Taxi Routes + Stops
- Pedestrian movement



2.21

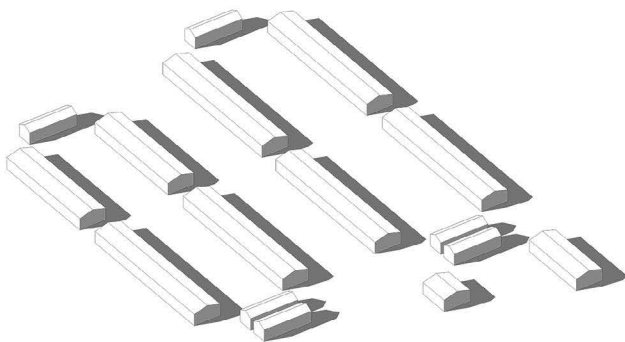
MACRO_PEDESTRIAN



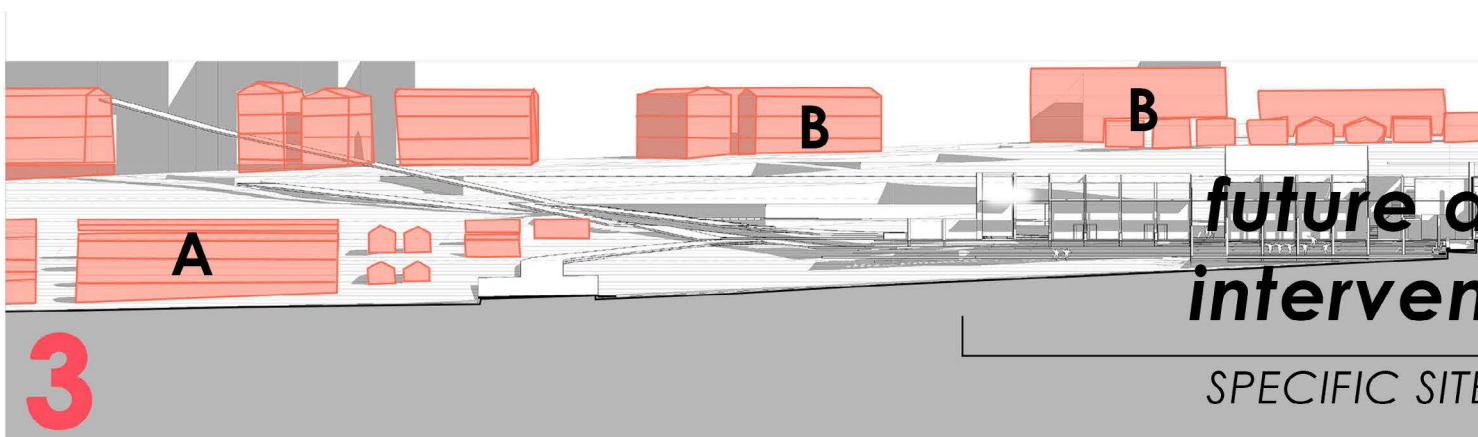
Pedestrian movement ●



A new integrated housing: mixed income



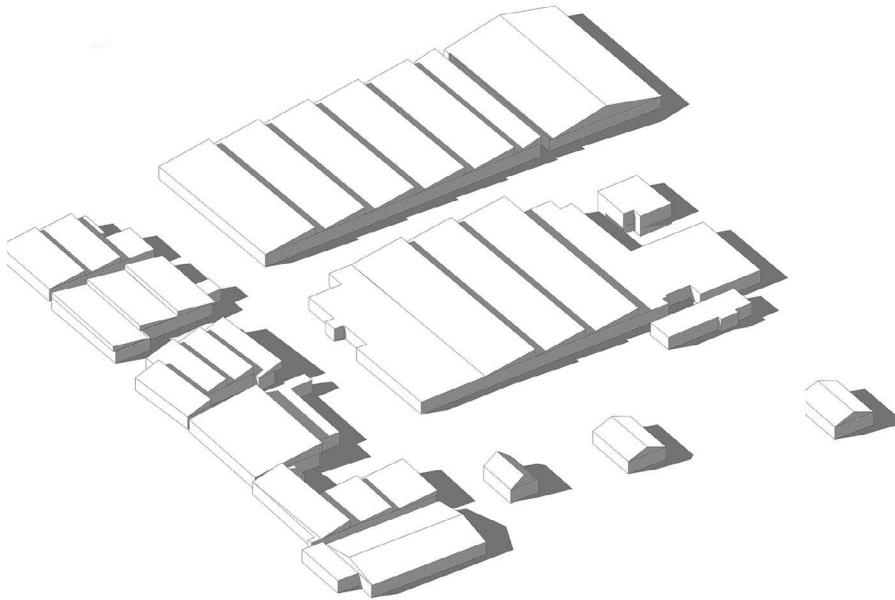
A fleurhof primary school



future of
intervention

SPECIFIC SITE

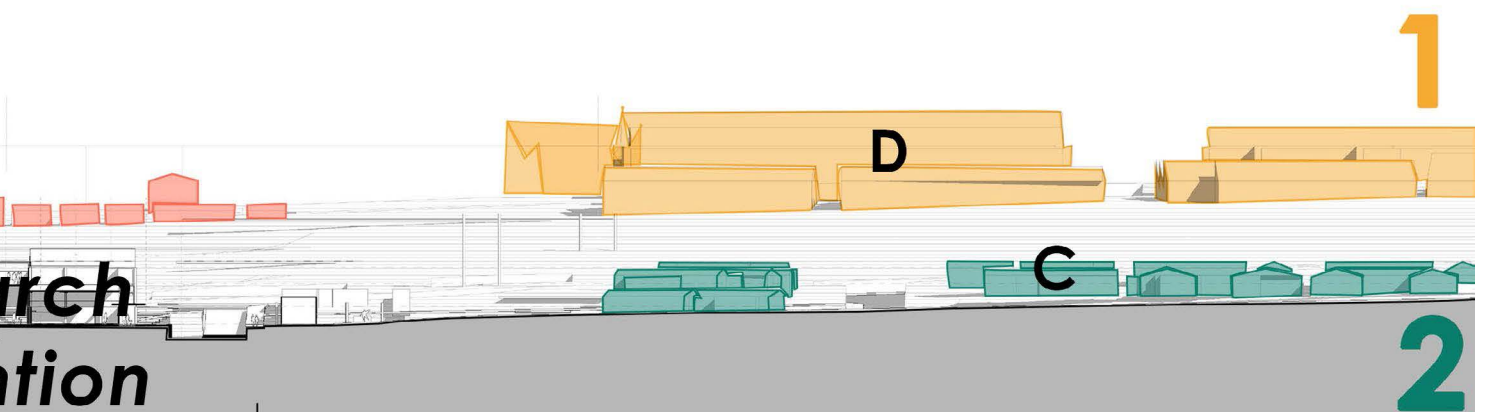
3



D industrial fabric



C old residential fabric



2.22

FIGURE 2.22 : Micro mapping of the specific site and it's surroundings with the use of an e-w context section (Author, 2018)

2.5 SOCIAL SITUATION

2.5.1 diverse identities

As described earlier and to contextualize its current identity, Fleurhof is viewed through the relationship between the inhabitant and his or her urban fabric. In understanding Fleurhof through the fragments of time (*before, during and after*) created by apartheid's spacial legacy, it is evident that particular, diverse identities can be attributed to these time periods.

Bremner (2004:3) highlights that:

Today, apartheid has ended and its boundaries have been redrawn'. While, policies speak of an integrated future the social and built environments are being shaped by 'new politics of closure, by new divisions and separations' (Bremner, 2004: 3). She goes on to say that 'democracy has produced new citizens, new collections demanding new rituals of integration (Bremner, 2004: 11).

In order to understand the nature of rituals of integration that Fleurhof demands, it is important to understand the identities with which it is associated. The mapping below illustrates the identities within the fragments of time: *before, during and after* (FIG. 2.24-26). The diverse identities are illustrated in reference to their location (houses and streets) in Fleurhof: the people, the place and their story (FIG. 2.27-2.30).

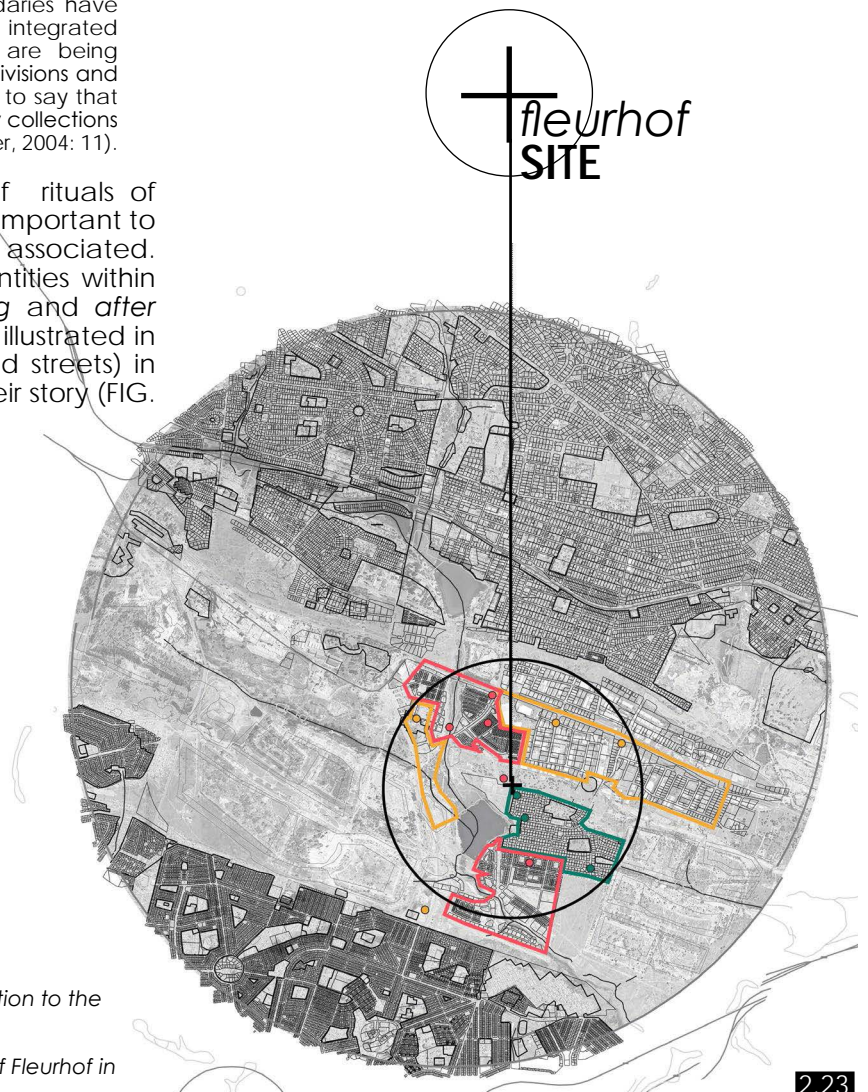


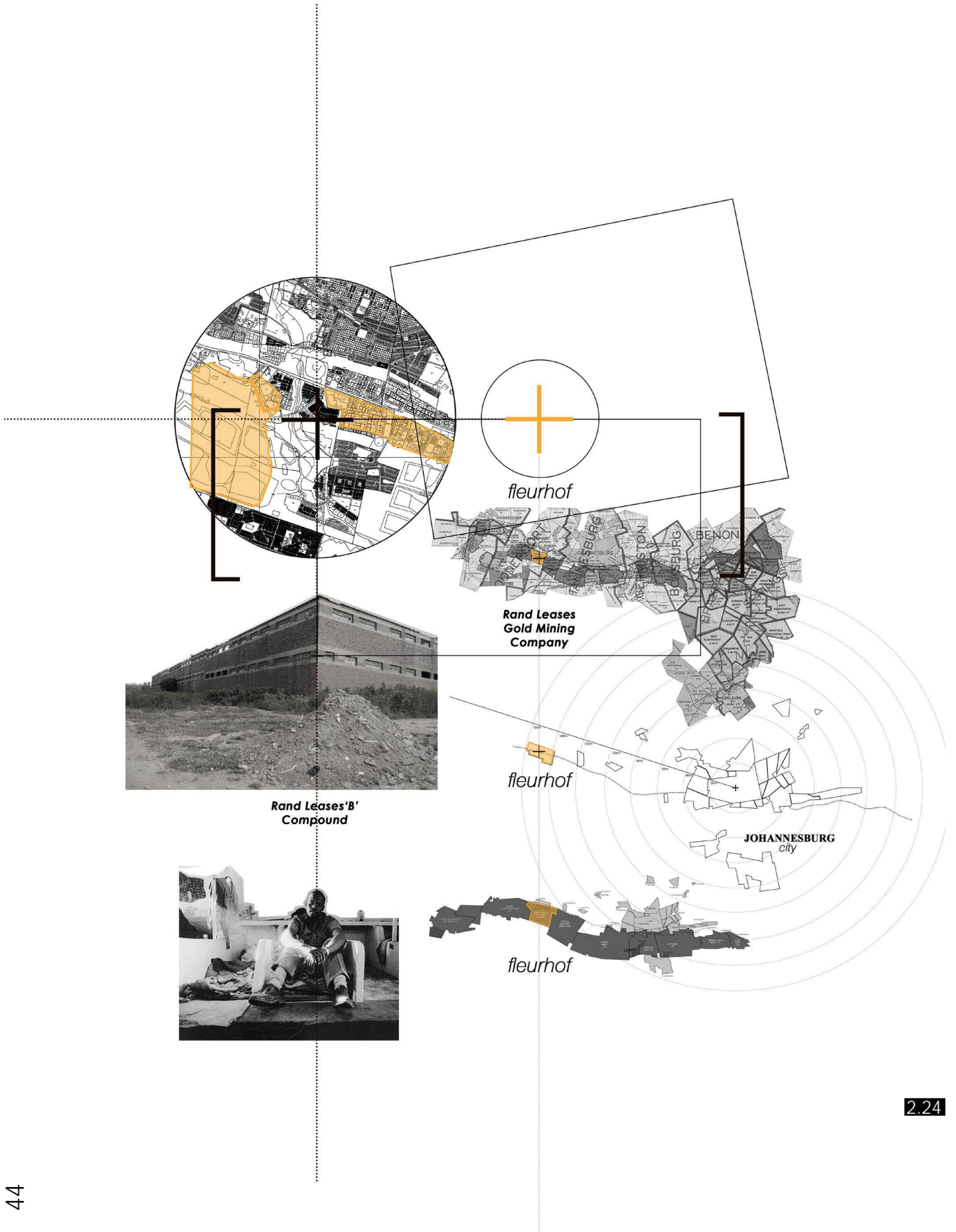
FIGURE 2.23 : Mapping of the specific site in relation to the diverse identities (Author, 2018)

FIGURE 2.24: Diagram of the 'before' residents of Fleurhof in relation to their urban fabric (Author, 2018)

2.23

before

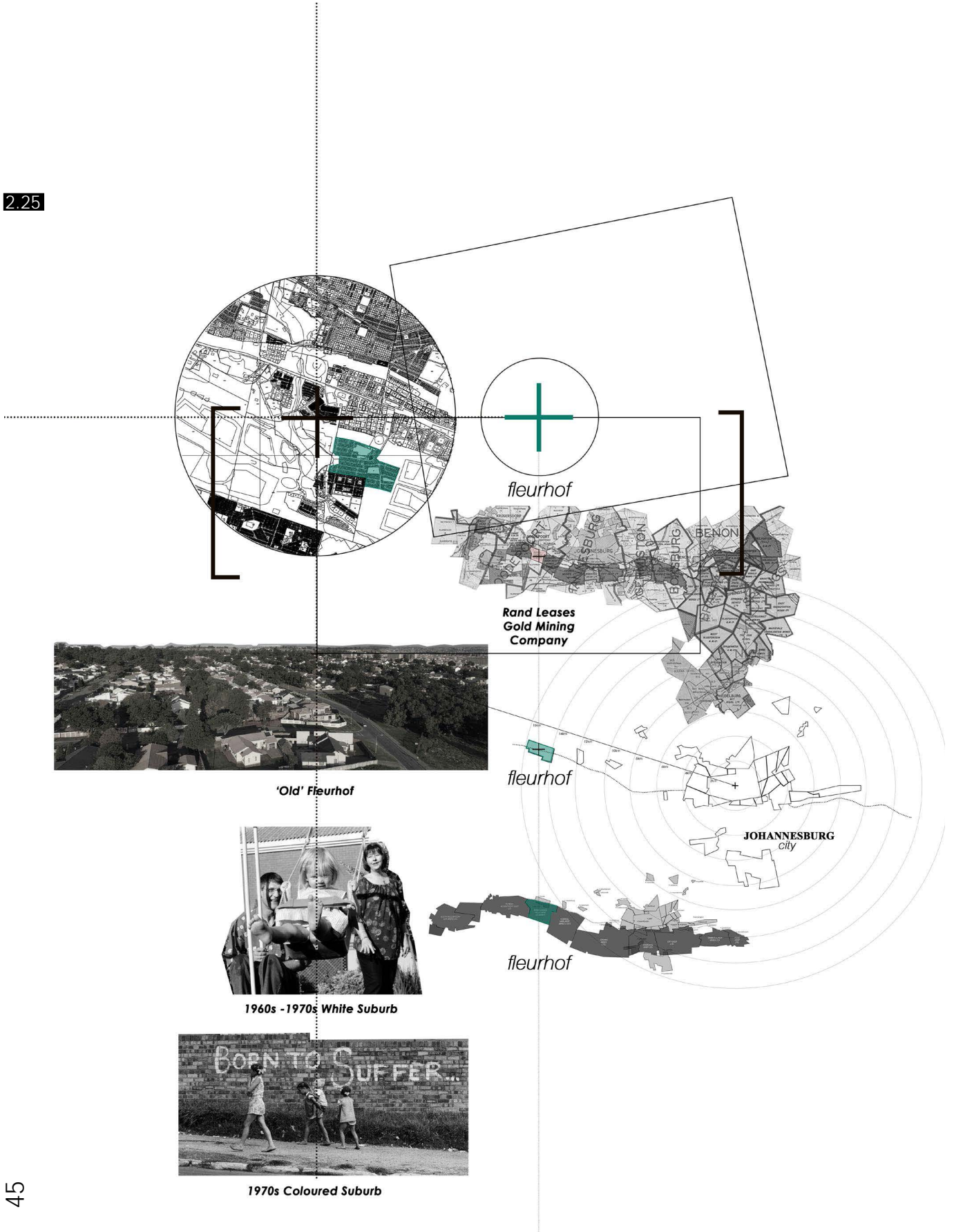
yellow earth + industrial vacancy
>1886 fleurhof in amongst dust + digging



during

socially included/excluded
>1960s-2009 departure of the included and arrival of the excluded

2.25



after
integration
>2009-now integrated housing scheme

2.26

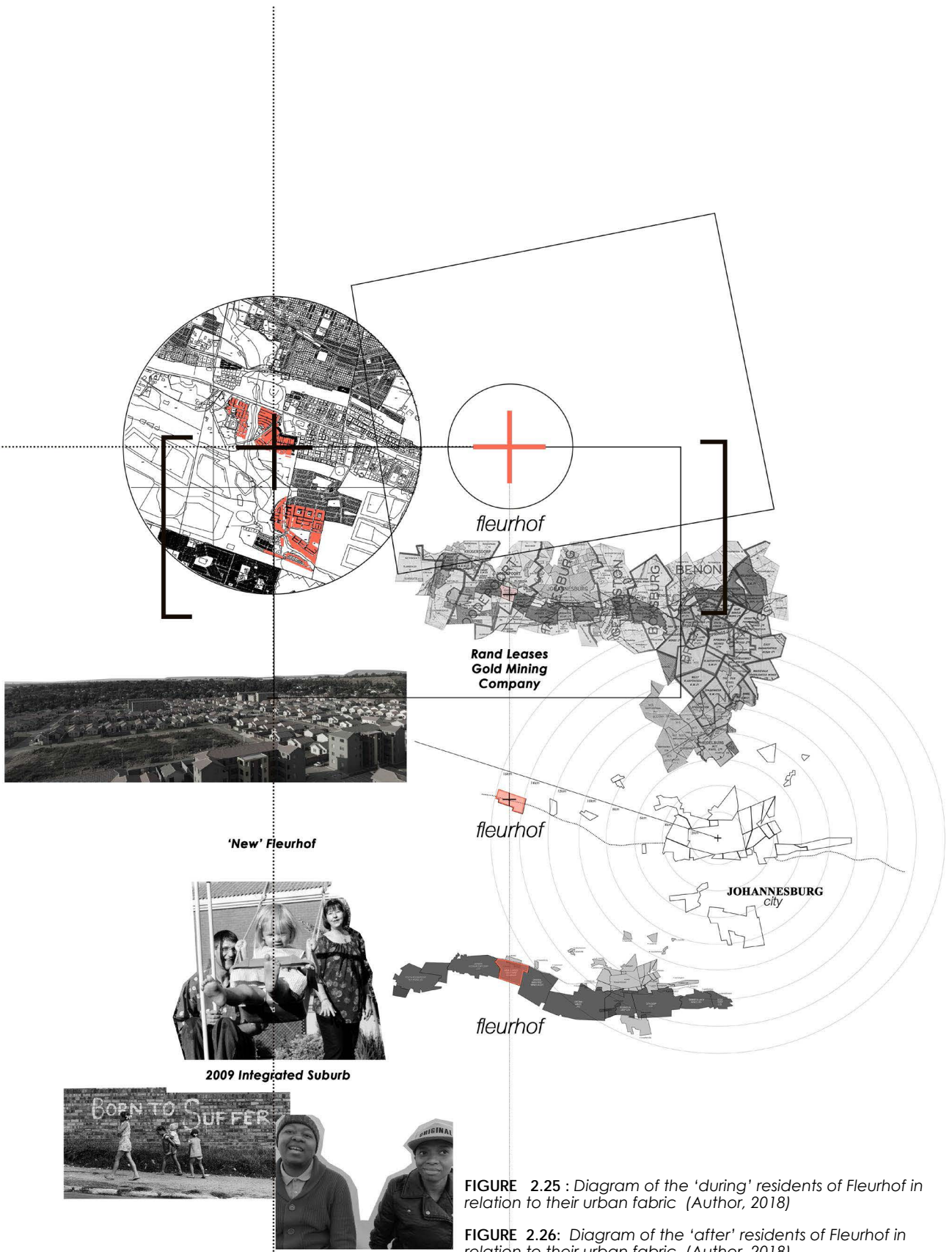
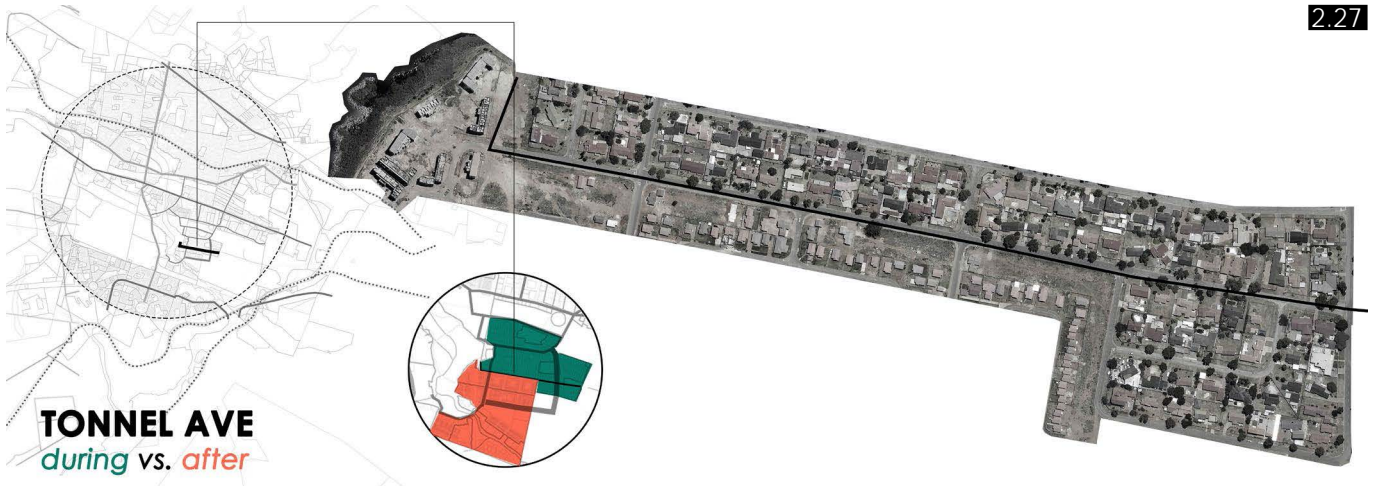


FIGURE 2.25 : Diagram of the 'during' residents of Fleurhof in relation to their urban fabric (Author, 2018)

FIGURE 2.26: Diagram of the 'after' residents of Fleurhof in relation to their urban fabric (Author, 2018)





2.28



FIGURE 2.27 : Mapping of the diverse residents along Tonnel Avenue, note the change in density and vegetation on opposing sides of the road, RDP houses 'after' vs 60s residential fabric 'during' (Author, 2018)

FIGURE 2.28: Mapping of the diverse residents along Wildplum Street, note the change in density on opposing sides of the road, Old mining compound 'before' vs integrated housing 'after' (Author, 2018)



2.29



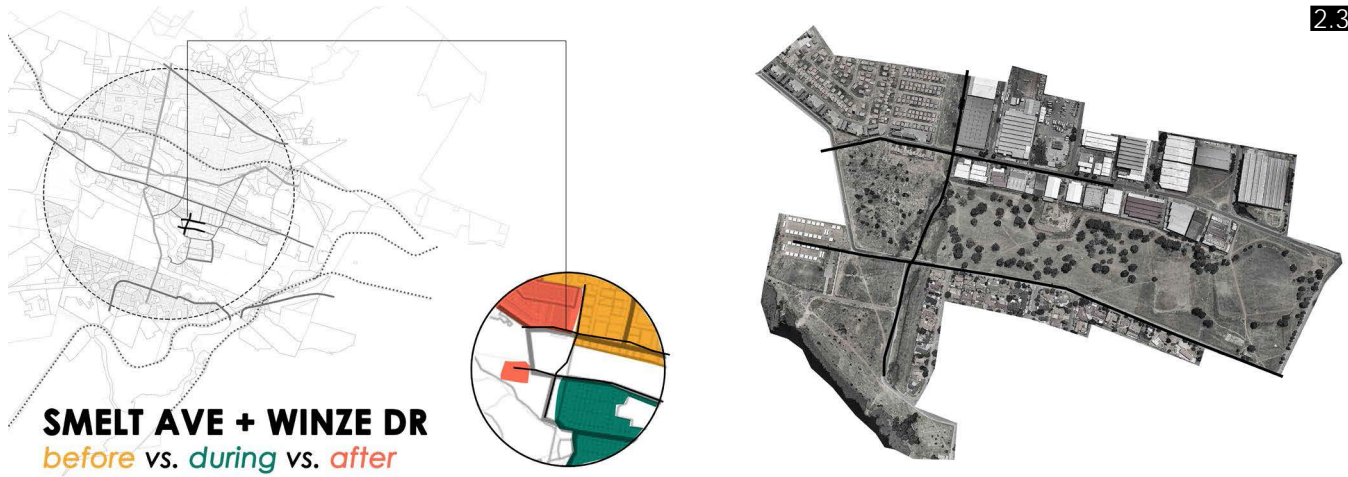


FIGURE 2.29 : Mapping of the diverse residents along Helpmekaar Road, note the change in density on opposing sides of the road, 3-storey walk-ups 'after' vs RDP houses 'after' (Author, 2018)

FIGURE 2.30: Mapping of the diverse residents along Smelt Avenue and Winze Drive, note the change in destruction to the old community hall, on the bottom left, rumour has it that it was burnt down by angry residents (Author, 2018)

2.5.2 overlapping territories

To further understand the diverse identities in Fleurhof, a mapping was done to understand how each collective expressed ownership and belonging within their locations. This study defined territories amongst the identities.

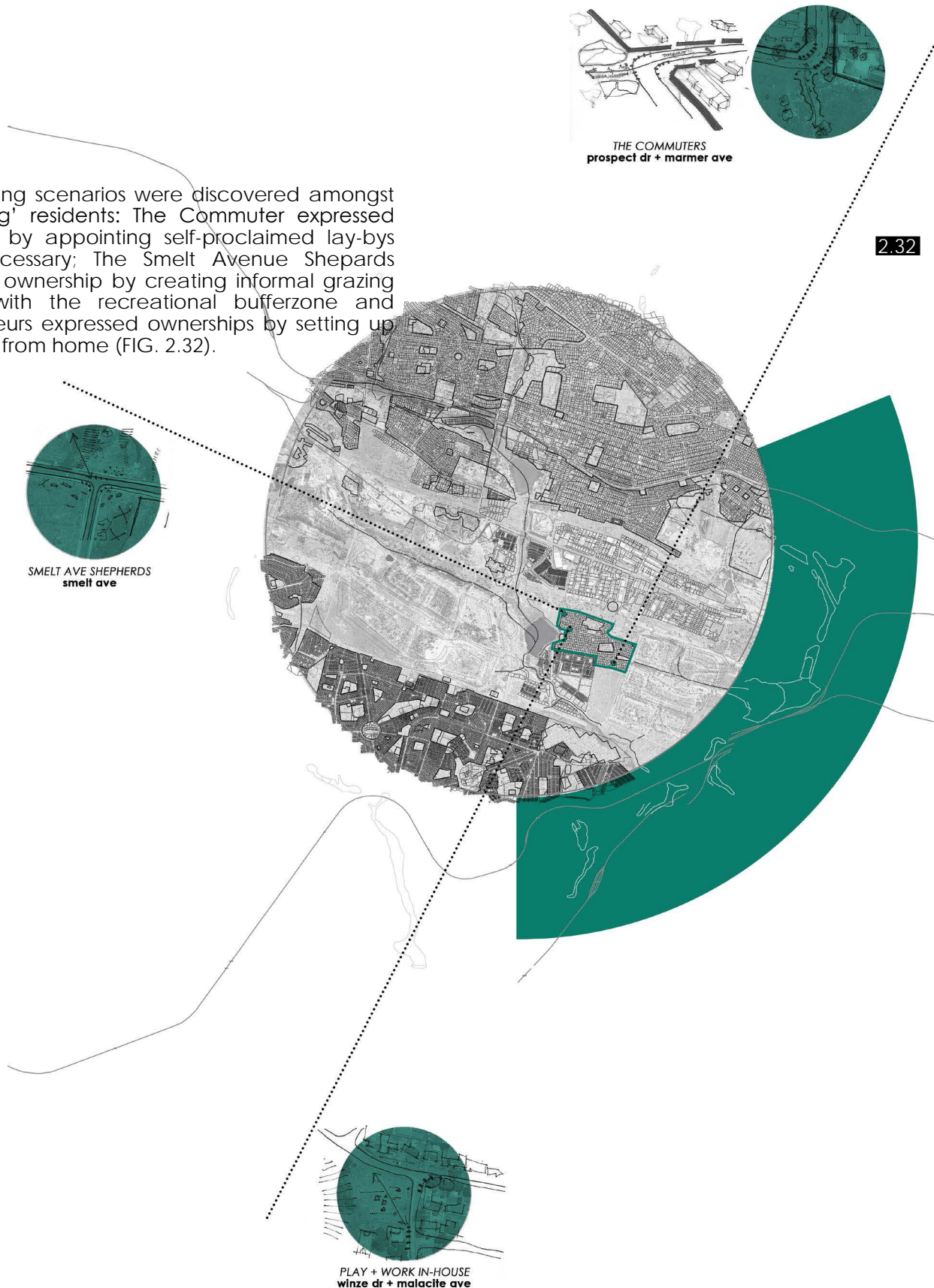
The following scenarios were discovered amongst the 'before' residents: The Blue Collar workers expressed ownership by propping up street trade stalls during lunchtime; The Compound Residents expressed ownership by creating informal retail hubs at busy intersections and make shift Border Patrol agency took it upon themselves to block Odendaal street after the increase of road accidents along that road (FIG 2.31).



FIGURE 2.31: Mapping to illustrate how the 'before' residents expressed ownership and belonging on the corner of Granville and Main Reef Road, Plum Street and Odendaal Street (Author, 2018)

FIGURE 2.32: Mapping to illustrate how the 'during' residents expressed ownership and belonging on the corner of Prospect Drive and Marmer Avenue, Smelt Avenue and the corner of Winze and Malacite Drive (Author, 2018)

The following scenarios were discovered amongst the 'during' residents: The Commuter expressed ownership by appointing self-proclaimed lay-bys where necessary; The Smelt Avenue Shepards expressed ownership by creating informal grazing grounds with the recreational bufferzone and entrepreneurs expressed ownerships by setting up businesses from home (FIG. 2.32).



The following scenarios were discovered amongst the 'after' residents': The permeable vegetation edge along Helpmekaar and Main Reef Road; The Traders along Helpmekaar Road and Smelt Avenue; The Informal Agricultural Farmers on Helpmekaar Road, The Scholars on Smelt Avenue bend and; the in-betweeners along Tonnel and Malacite Avenue (FIG. 2.33).

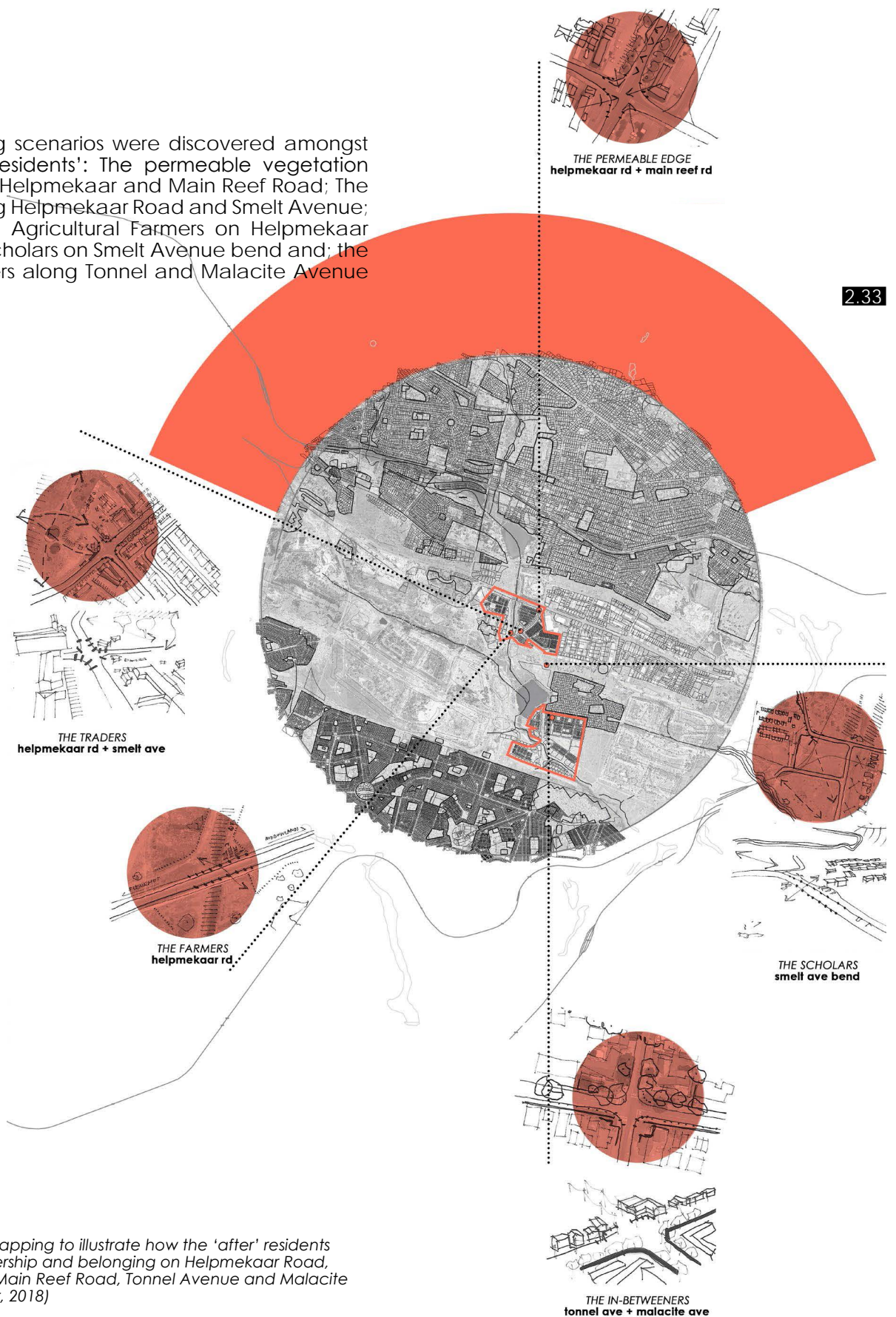
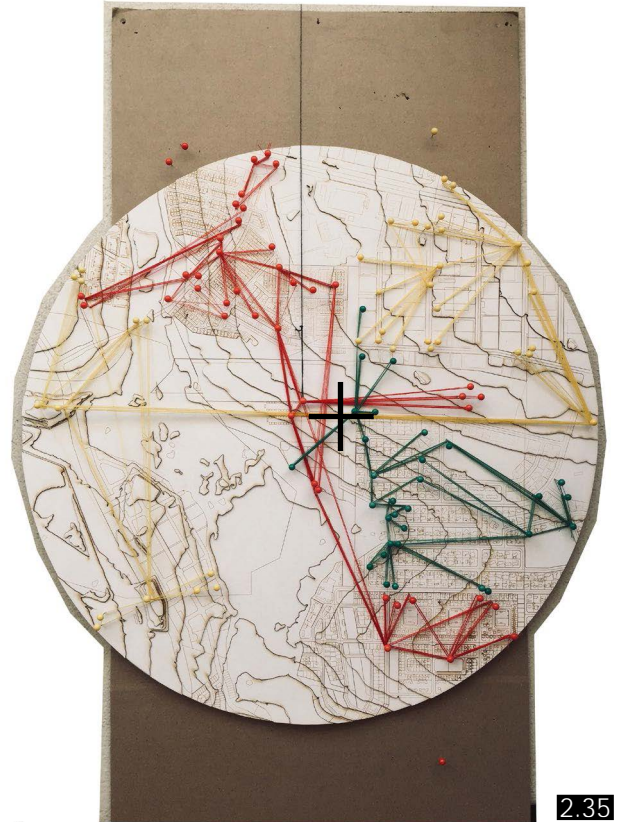


FIGURE 2.33: Mapping to illustrate how the 'after' residents expressed ownership and belonging on Helpmekaar Road, Smelt Avenue, Main Reef Road, Tonnel Avenue and Malacite Avenue (Author, 2018)

2.5.3 vulnerable points of convergence

In order to move towards a new ritual of integration it became important to understand how these territories relate spatially to one other, to highlight spaces of vulnerability and to illustrate points of convergence where territories share boundaries. Through this mapping exercise, it became clear as to where the architectural intervention should lie (FIG, 2.34-35).

2.34



2.35

FIGURE 2.34: Mapping to illustrating how the decision of where the intervention should be was made (Author, 2018)

FIGURE 2.35: String Model made to understand where the point of convergence lies amongst the diverse territories, x marks the spot (Author, 2018)

2.5.4 social insecurities

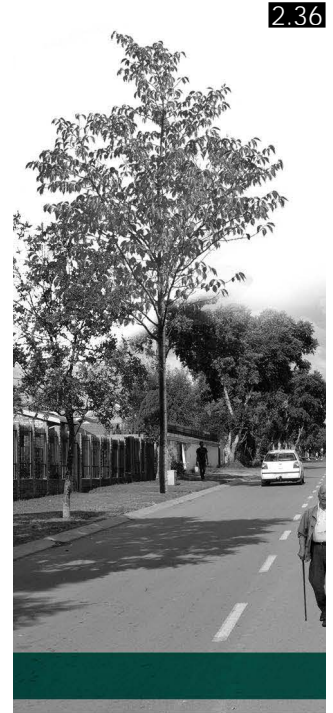
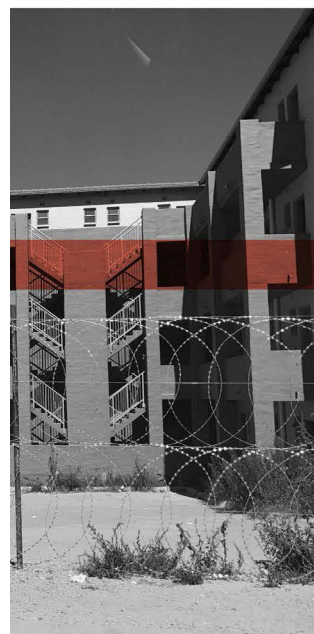
In addition to other necessities, the city of Johannesburg faces the urgent epidemic of the delivery of equitable housing in the aftermath of apartheid (Donaldson, 2001). Over the past two decades, South Africa has faced the need for a mass delivery of government-subsidized houses. However, the delivery of housing has not represented what has been stated in the policies of transformation (Huchzermeyer, 2003: 591-612). For example, researchers such as Huchzermeyer and Donaldson believe that the current pattern of housing delivery continues to represent the spatial inequalities of the past.

Over the past two decades, there have been various policies implemented to address socio-economic development in South Africa. The Breaking New Ground Policy (BNG) has attempted to address social cohesion within the diverse community of Fleurhof with the introduction of Fleurhof's Integrated Housing Model, a mixed income housing initiative. This initiative is an example of South Africa's new approach to social housing.

The failure of providing social cohesion is fundamentally linked to the lack of infrastructure to support it, resulting in conflict amongst residents. Despite the implementation of appropriate land uses for public social infrastructure, the sites have yet to be occupied and developed (Khan, 2014: 98). This dissertation focuses on providing social cohesion in the form of an architectural intervention.

The social insecurities experienced by the residents stem from discrepancies in socio-economic status, linked to diversity of race, income, religion and education. Such socio-economic differences tend to cause conflict amongst residents due to the different lifestyles and value systems associated with these socio-economic variances (Kleinmans, 2004: 19).

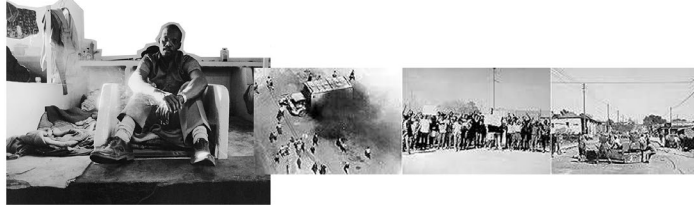
This dissertation investigates the provision of social cohesion through the resolution of conflict and the social implications of such. The following images illustrate the community engagement led by Counterspace in 2017. These engagements highlight some of the issues and conflict amongst the residents, as well as the some of the diverse organizations identified in Fleurhof.



2.36

BEFORE

people



place



people



place



people



place



2.37

DURING

AFTER

FIGURE 2.36: Photo collage of the diverse urban fabric (Author, 2018)

FIGURE 2.37: Photo collage of the social insecurities (Author, 2018)

What's Up Fleurhof

Fleurhof and Surrounds Urban Development Framework





NOTE: Figures 2.38- 2.43 are from Counterspace's Fleurhof and Surrounds Urban Development, obtained directly from the Counterspace team. This UDF included partnerships with the JDA, the City of Johannesburg, as well as Albonico Sack Metacity.

FIGURE 2.38: Photo collage of the Public Meeting Launch held by Counterspace on 3 June 2017 and the Co-Production Workshop held by Counterspace on 24 June 2017. Photographs taken by the Counterspace team. UDF obtained from the Counterspace Team (Counterspace, 2017)



1. ASPIRATIONS MAP



2. PERCEPTIONS MAP



3. COLLATED DATA

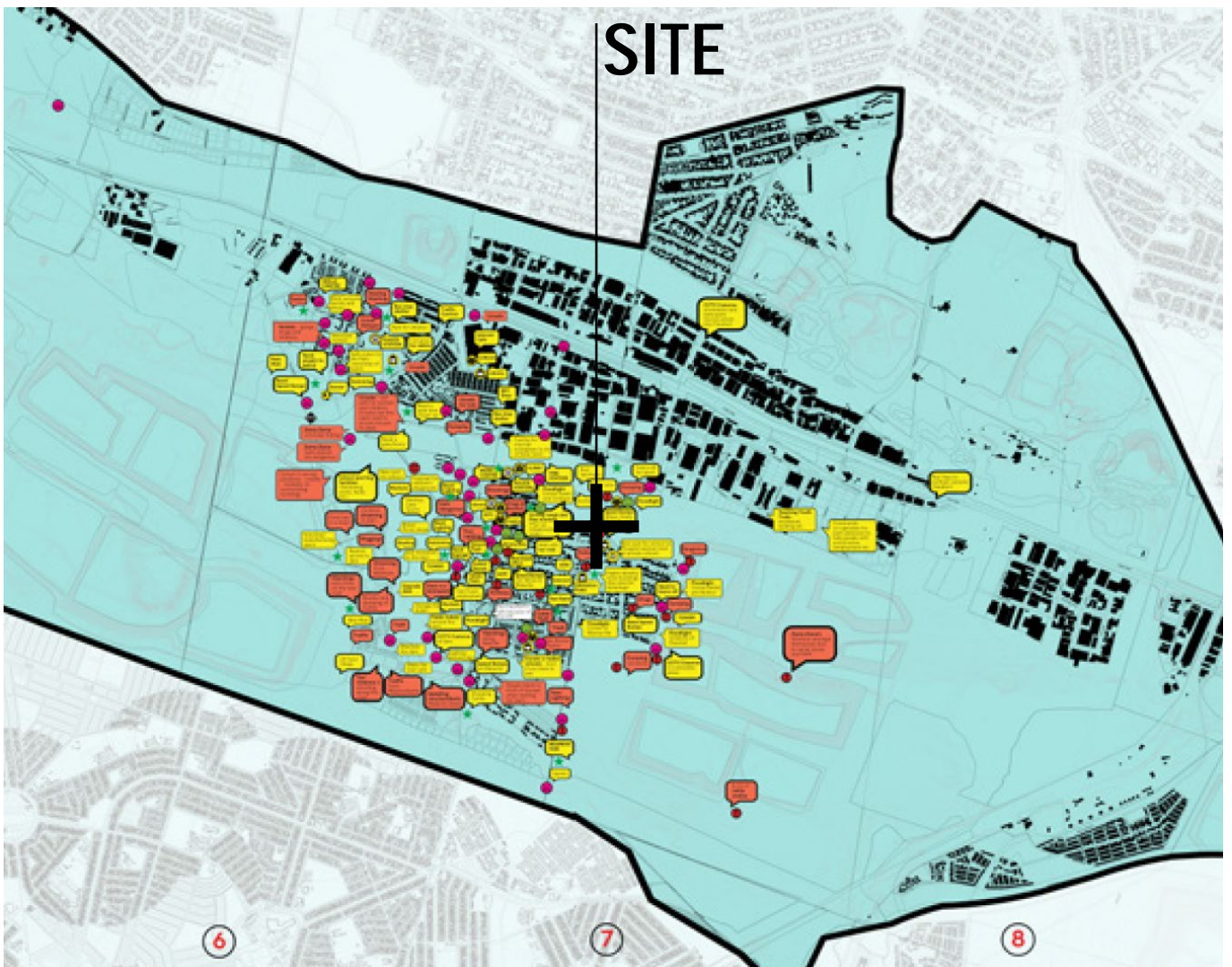
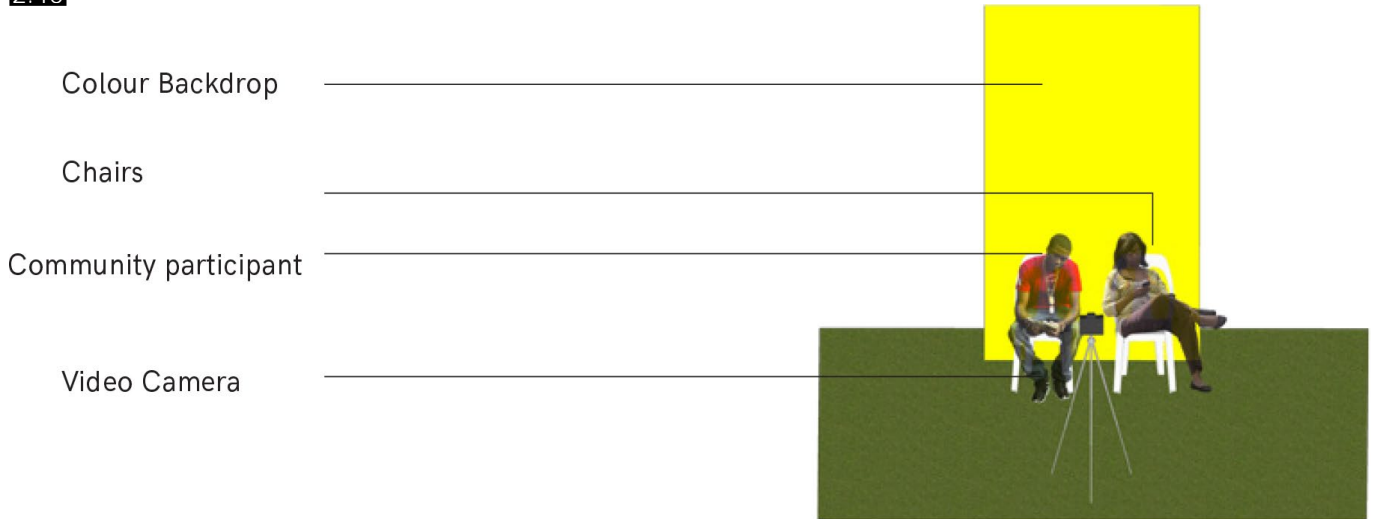


FIGURE 2.39: Photo collage of the community meetings held by Counterspace during 2017, as well as the mapping done for their Fleurhof and Surrounds Urban Development Framework. Photographs and mapping by the Counterspace team. UDF obtained from the Counterspace Team (Counterspace, 2017)



2.40



"...Fleurhof is also such a mix of cultures and influences"
"..with the new housing development, there is segregation.."
".. i think the communities should unite and not be so segregated.."
"...the crime level has also risen, and now that there has been more development the crime has risen again.."
"..Fleurhof is a growing township, but there are still a lot of things that is needed, especially things like amenities.."
"..if we give people a proper platform for activities to take place, it will be a better place"

FIGURE 2.40 : Photo collage of the Pop-Up Story Booth held by Counterspace on 2 July 2017. As well as the some of the residents comments and thoughts presented in Counterspace's Fleurhof and Surrounds Urban Development Framework. Photographs and mapping by the Counterspace team. UDF obtained from the Counterspace Team (Counterspace, 2017)



What's Up, Fleurhof?

Fleurhof and Surrounds URBAN DEVELOPMENT FRAMEWORK

Survey conducted by: _____
Survey time: _____
Survey Location _____
Representative of which group of user? _____

What is your name?
What age bracket do you fit within?
 7-18yrs
 19-30yrs
 31-40yrs
 41-50yrs

Where do you live?
 Number/unit _____
 Street _____
 Suburb _____
 What is your occupation/s?

What is your gender? M F
Where do you work? _____

Why did you choose to live in Fleurhof?

Do you like living here? Why?

Do you make use of the following:
 private transport

On the map indicate where you park your car, bicycle/bike

public transport

On the map indicate where you get picked up and dropped off by bus or taxi.

On the map indicate:

- where you park your car, bicycle/bike
- your daily route to work or public transport stop
- where you hang out
- where you do daily shopping (eg. milk and bread)
- where you do monthly shopping

Do you participate in any community activities (Church group, religious organisations, sport activities, community groups?)
 If so when and where?

Are there any areas in Fleurhof that you avoid?
 If so when and where?

Are there any areas you feel unsafe in?
 If so why?

Do you make use of any of the parks?
 If so which one(s)?

Do your children make use of any of the parks?
 If so, which one(s)?

Where do your children go to school? How do they get there?

Are there any improvements you can think of for any of the waiting areas (transport pick-up points) or recreational (parks, sport facilities) that you use?

What facilities do you think Fleurhof needs?

- Community facilities?
- Commercial (shops/restaurants)?
- Transport facilities?
- Recreational facilities?
- Other? (Please Specify)

Do you have any suggestions of improvement for the route/areas/places you frequent in and around Fleurhof that would make your journey more pleasant? (eg security, lighting, vehicle vs pedestrian movement, facilities)

Movement Pattern Survey pg 1

Movement Pattern Survey pg 1

Movement Pattern Survey pg 2

2.41



2.42

FIGURE 2.41 : Movement Pattern Survey by Counterspace during 2017. Presented in Counterspace's Fleurhof and Surrounds Urban Development Framework. Photographs and mapping by the Counterspace team. UDF obtained from the Counterspace Team (Counterspace, 2017)

FIGURE 2.42 : Photo collage of the UDF Concept Public Presentation held by Counterspace on 2 July 2017. Photographs and mapping by the Counterspace team. UDF obtained from the Counterspace Team (Counterspace, 2017)

2.43

FIGURE 2.43 : Photograph from the UDF Concept Public Presentation held by Counterspace on 2 July 2017. As well as the some of the residents comments and thoughts presented in Counterspace's Fleurhof and Surrounds Urban Development Framework. Photographs and mapping by the Counterspace team. UDF obtained from the Counterspace Team (Counterspace, 2017)



"...my biggest issue is the community hall that was burnt down.."

"..I'd like to see a place for events, to bring people together.."

".. I believe it has the potential to be a very beautiful place if the community works together.."

"...we need activities to keep our young people busy, and off the streets.."

"..Fleurhof is a growing township, but there are still alot of things that is needed, especially things like amenities.."

"..if we give people a proper platform for activities to take place, it will be a better place"

"...Fleurhof is also such a mix of cultures and influences"

"..with the new housing development, there is segregation.."

".. i think the communities should unite and not be so segregated.."

"...currently there is no place that exists to host events.."

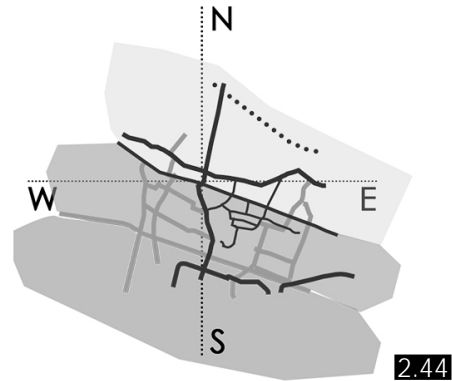
"..all the people from Fleurhof come from smaller communities (Bosmot, Coronationville, Albertsville, Sophiatown and Riverlea.."

"..brothers, we must stand up to those coming into our areas"

2.6 URBAN VISION

The urban vision for the study exists on two scales, a neighborhood scale, and a site-specific scale, with the common intention of improving a 'sense of place' in Fleurhof. Urban design theories of defensible space and place-based crime will be used to envision an integrated Fleurhof.

The neighborhood vision is framed by four principles: urban connection, urban reconstruction, urban cohesion and urban education.



2.6.1 neighbourhood vision

a. urban connection

Urban connection strives to address and improve orientation in Fleurhof. The goal is to provide safer, more well-defined movement corridors with established beacons of functional surveillance. Conceptually, the urban design would include: providing and upgrading walkways and lighting along pedestrian desire lines, providing access to public transport, identifying derelict spaces and proposing active programmes to define beacons along these routes.

This urban upgrade builds on the research and principles carried out by the Violence Prevention through Urban Upgrade (VPUU) centers in Khayelitsha.

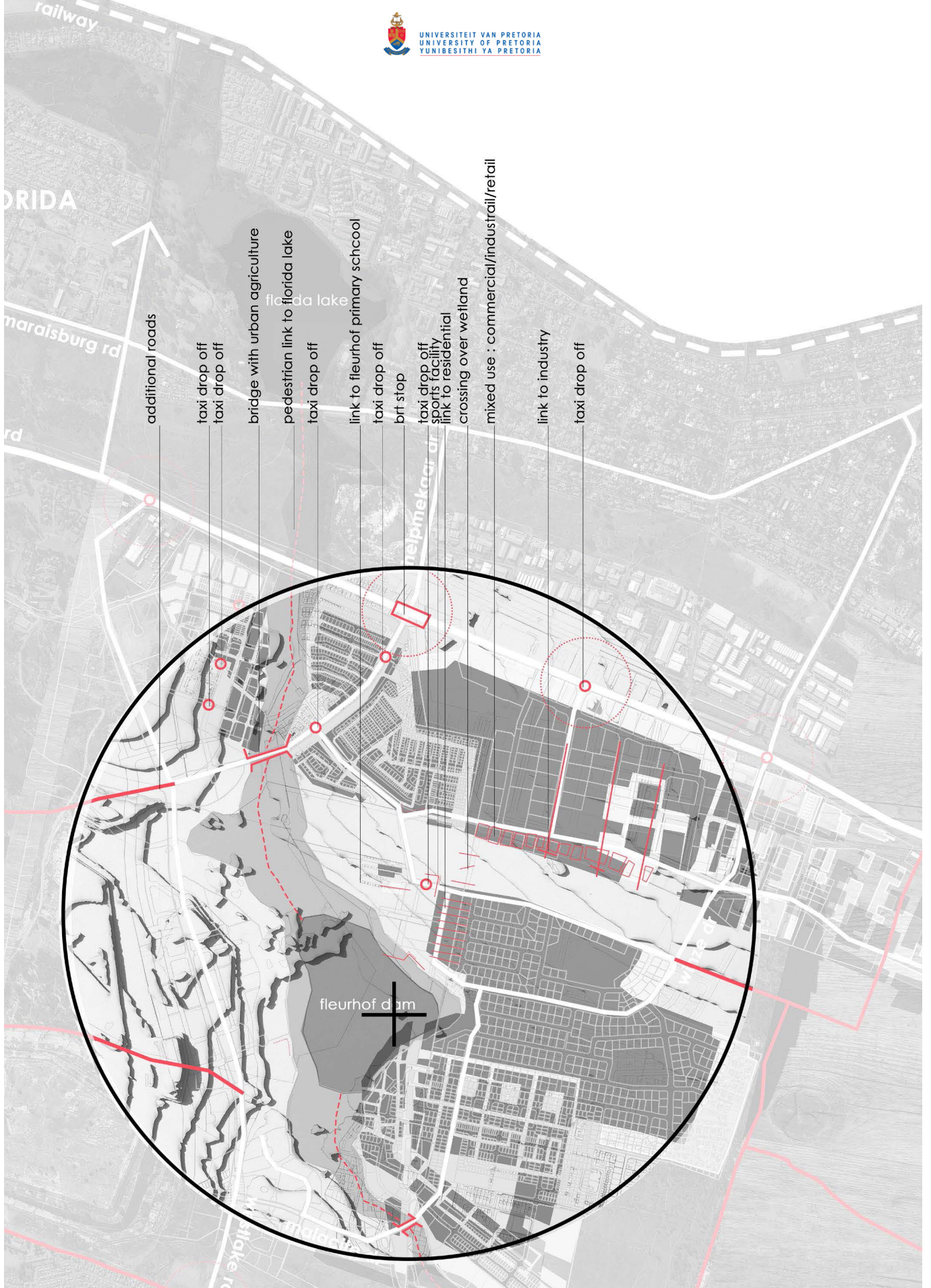
b. urban reconstruction

Urban reconstruction aims to use Fleurhof to bridge the gap between Johannesburg's privileged northern suburbs and underprivileged southern suburbs. The goal is to address the segregated structure of the town through occupying the buffer zones. Conceptually, the urban design would include the proposal of a new road network from the mining buffer zone, to well-defined and lighted pedestrian walkways across the wetland, improving pedestrian routes to and from the industrial buffer zone.

c. urban cohesion

Urban cohesion involves specific representation of the networks in Fleurhof. The goal is to identify stakeholders who will potentially take ownership of the architectural intervention. Stakeholders will be identified by using Counterspace's socio-spatial participatory mapping. The initial stakeholders include the Community Policing Forum (CPF) of Fleurhof. Conceptually, the urban design will include infrastructure for the CPF, promoting community mobilization.

The study's urban upgrade critically analyzes the proposed Urban Development Framework (UDF) set out by Counterspace and Albonico Sack Metacity in 2017.



2.45

FIGURE 2.44 : Conceptual diagram of the study's Urban Vision ideals (Author, 2018)

FIGURE 2.45 : Mapping of the study's Urban Vision at a meso scale (Author, 2018)

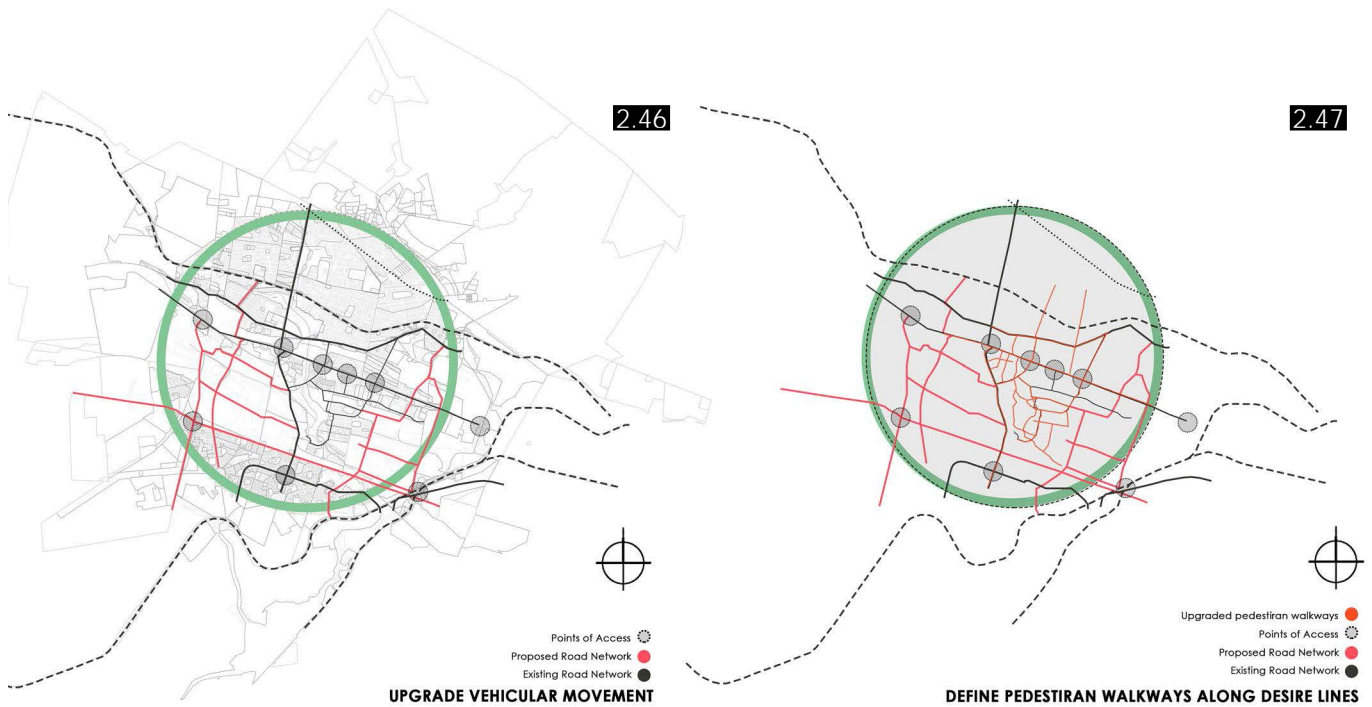
a. urban connection intentions

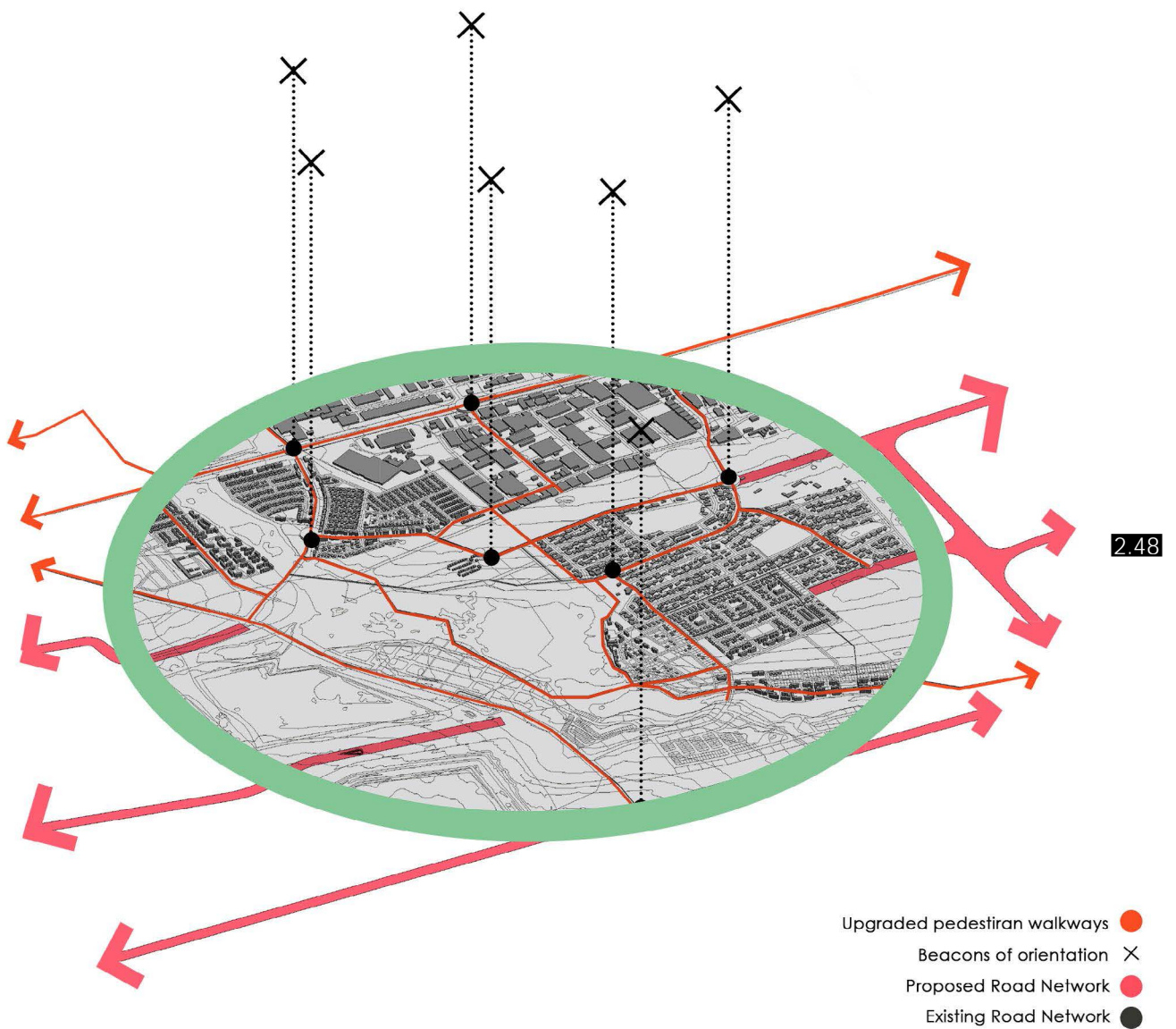
- Deals with improving orientation in Fleurhof.
- The goal is to provide safer more well-defined movement corridors with established beacons of functional surveillance. Conceptually the urban design would include: providing and upgrading walkways and lighting along pedestrian desire lines, providing access to public transport, to identify derelict spaces and propose active programs and to define beacons of functional surveillance along the routes.

FIGURE 2.46 : Mapping of the study's Urban Vision that deals with connection, by upgrading vehicular movement at a meso scale (Author, 2018)

FIGURE 2.47 : Mapping of the study's Urban Vision that deals with connection, by defining pedestrian walkways at a meso scale (Author, 2018)

FIGURE 2.48 : Mapping of the study's Urban Vision that deals with connection, by defining beacons of orientation at a meso scale (Author, 2018)





CONNECTION_DEFINE ACTIVE BEACONS OF ORIENTATION

b. urban reconstruction intentions

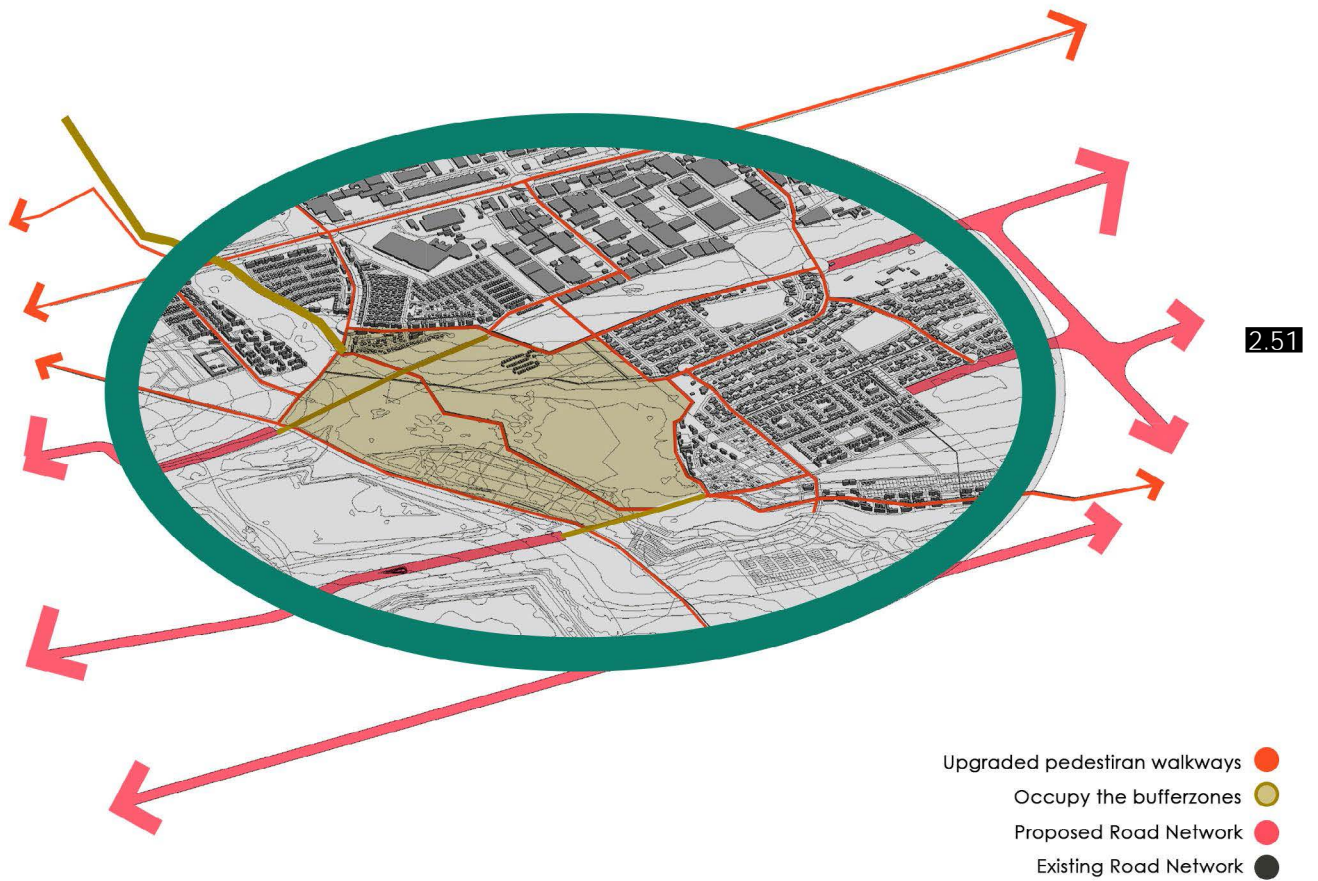
- Using Fleurhof to bridge the gap between Johannesburg's privileged northern suburbs and underprivileged southern suburbs.
- The goal is to address the segregated structure of the town through occupying the buffer zones.
- Conceptually the urban design would include the proposal of a new road network between the mining buffer zone, to well defined and lighted pedestrian walkways across the wetland, improving pedestrian routes to and from the industrial buffer zone.

FIGURE 2.49 : Mapping of the study's Urban Vision that deals with reconstruction, by upgrading occupying industrial and mining bufferzones at a meso scale (Author, 2018)

FIGURE 2.50 : Mapping of the study's Urban Vision that deals with reconstruction, by creating a pedestrian link between Florida Dam and Fleurhof Dam at a meso scale (Author, 2018)

FIGURE 2.51 : Mapping of the study's Urban Vision that deals with reconstruction, by upgrading vehicular movement at a meso scale (Author, 2018)





RECONSTRUCTION_OCCUPY BUFFER ZONES

b. urban cohesion intentions

- Deals with representation and specifically representing the networks in Fleurhof. The goal is to identify stakeholders who will become potential users to take ownership of the architectural intervention.

- Stakeholders will be identified through secondary sources, by using Counterspace's socio-spatial participatory mapping.

- The initial stakeholders include the Community Policing Forum (CPF) of Fleurhof. Conceptually the urban design will include infrastructure for the CPF, promoting community mobilization.

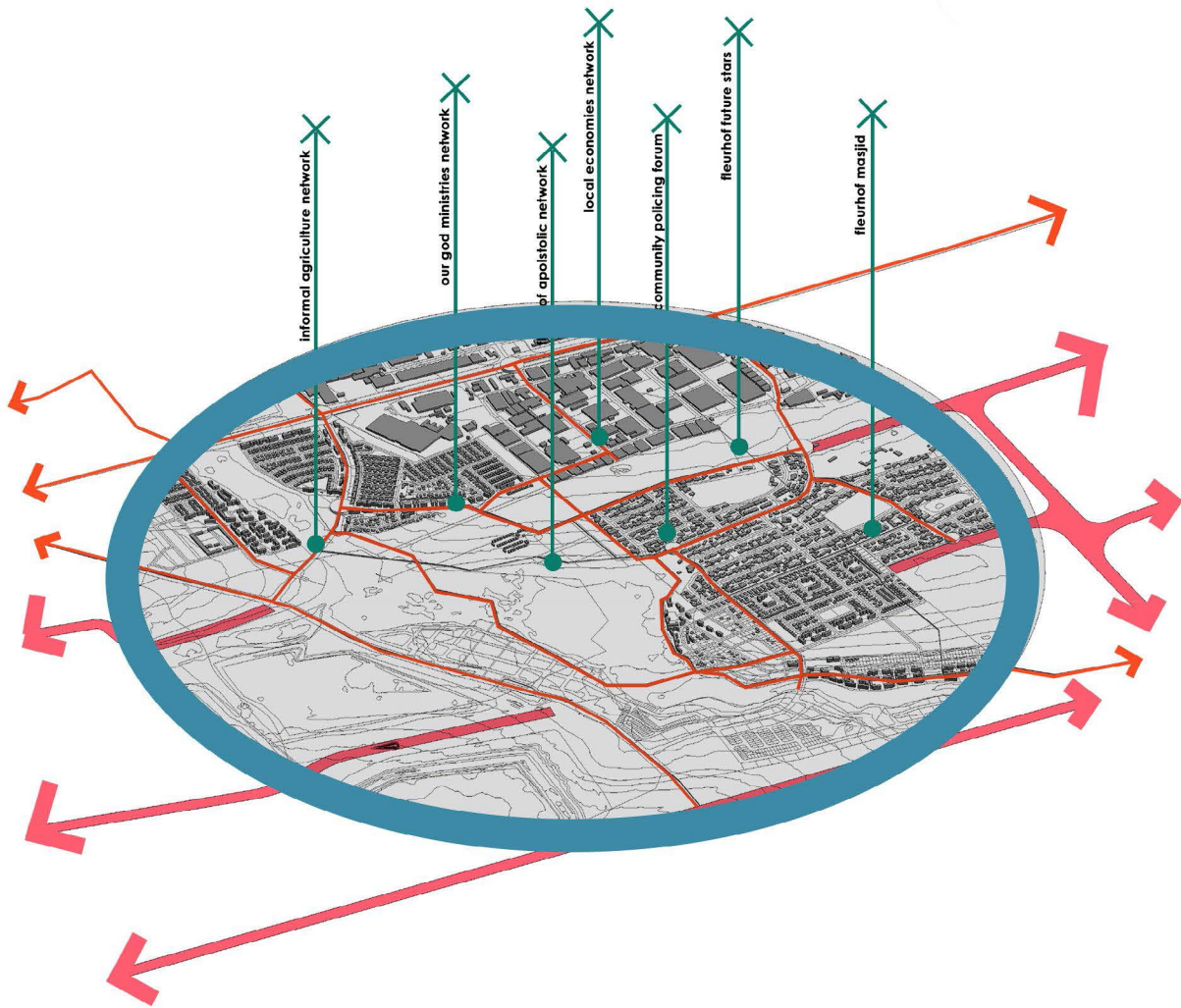
- Providing infrastructure for these networks to integrate and develop further-routes to and from the industrial buffer zone.

FIGURE 2.52 : Mapping of the study's Urban Vision that deals with cohesion, by promoting existing activity at a meso scale (Author, 2018)

FIGURE 2.53 : Mapping of the study's Urban Vision that deals with cohesion, by identifying stakeholders at a meso scale (Author, 2018)

FIGURE 2.54 : Mapping of the study's Urban Vision that deals with cohesion, by building on existing networks at a meso scale (Author, 2018)





2.54

Existing Networks ●

COHESION _BUILD ON EXISTING NETWORKS

2.6.2 site vision

The chosen site is situated at the point where the diverse territories intersect. The site is located along Smelt Ave and Winze Drive. Its northern boundary is defined by the recreational buffer zone between the industrial strip, occupied by the *before* Fleurhof community, the integrated housing scheme occupied by the *after* Fleurhof and the residential suburb occupied by *during* Fleurhof. Fleurhof dam and derelict mining landscape define the Southern boundary; its eastern edge is defined by the old residential suburb and the western edge is occupied by Fleurhof Primary School (FIG. 2.55).

The site is situated amongst the diverse identities and their territories, and therefore primarily functions as 'no mans' land, a space of vulnerability.

The 'site vision' primarily acts as the initial attempt towards establishing common ground by conceptually attempting to overlap territories in order to create points of convergence and possibly a collective identity. It aims to activate the edges of the vulnerable spaces by extending the ownership that currently exists within the confined territory.

The proposed site vision includes: proposing recreational facilities alongside Fleurhof dam; activating Minerva Avenue by proposing retail and commercial facilities alongside the industrial strip and vacant land; proposing well-defined pedestrian links between industry and old Fleurhof, between new Fleurhof and industry, and between old Fleurhof and new Fleurhof; activating Smelt Avenue by providing temporary platforms for the identified mobile economies that currently operate along Smelt avenue; as well as utilizing the green buffer zone with sports and recreational activity spaces for the neighbouring schools and residents (FIG. 2.57-58).

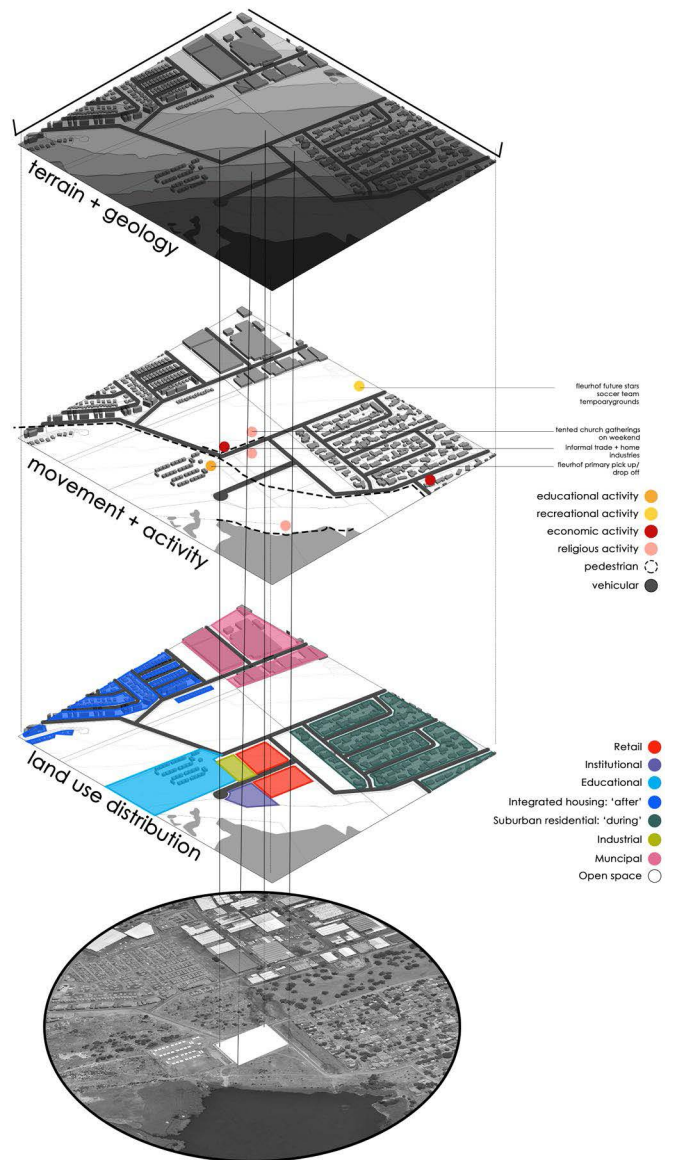
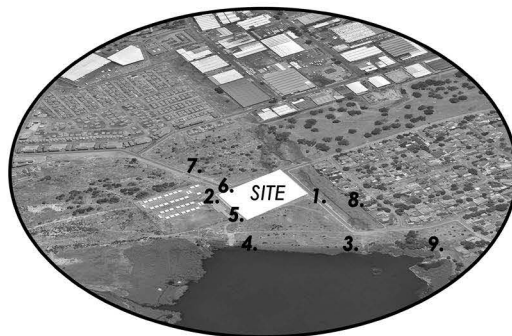


FIGURE 2.55 : Mapping analysis of the site on a micro scale. The follow aspects are illustrated: terrain + geology, movement + activity and land-use distribution (Author, 2018)

FIGURE 2.56 : Photo collage of the specific site at a micro scale (Author, 2018)

2.55



2.56

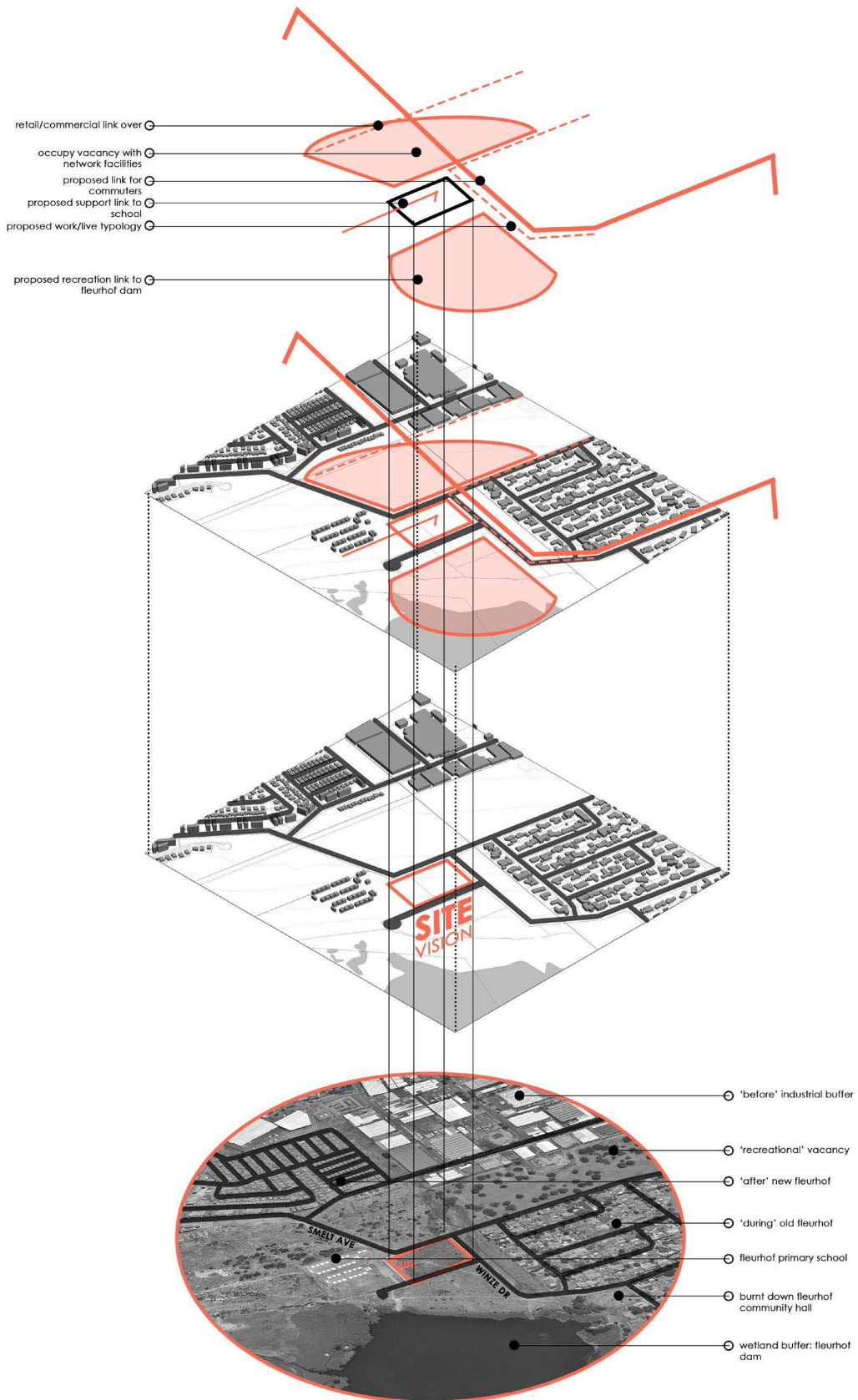
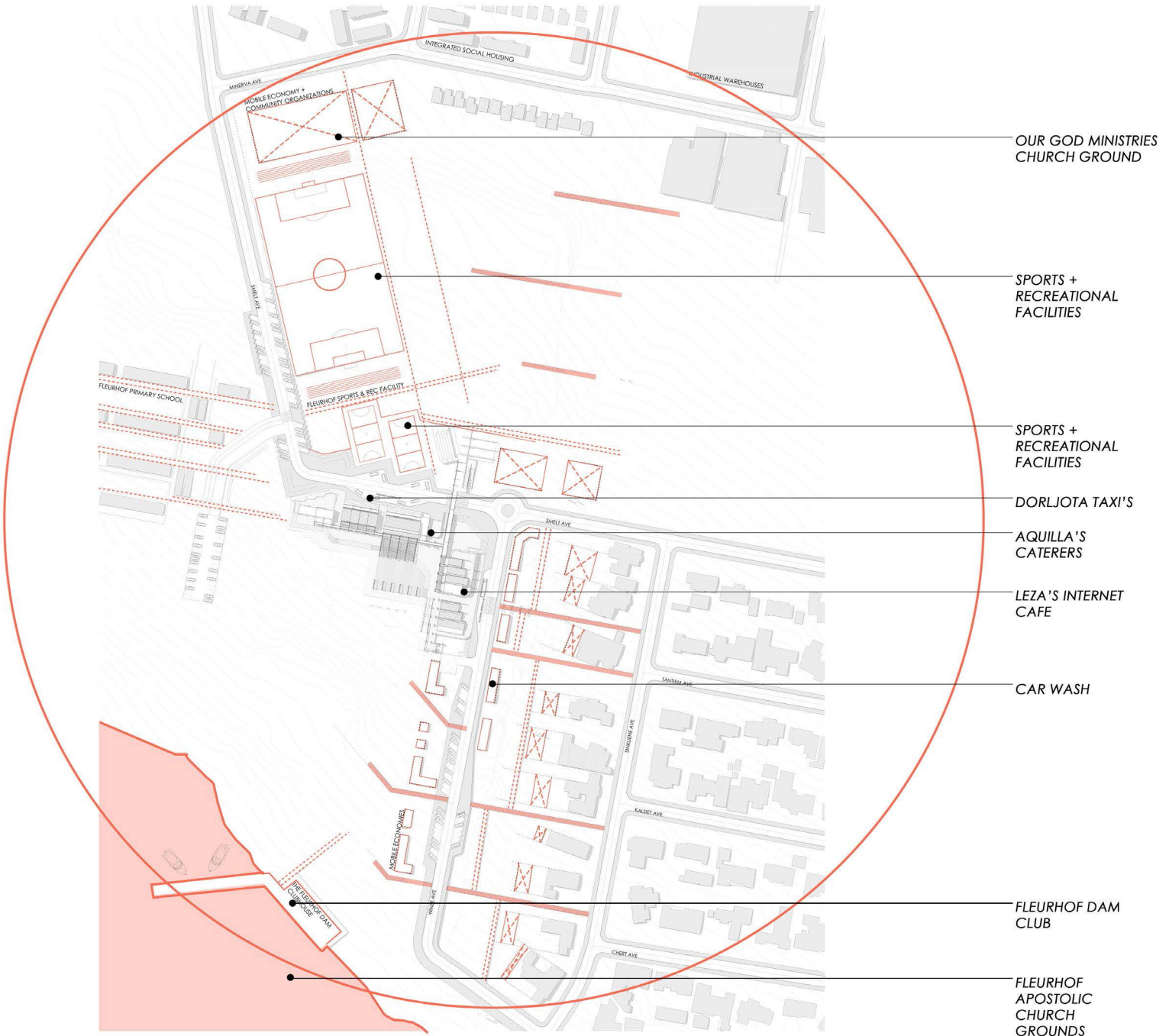


FIGURE 2.57 : Mapping diagram of the study's site vision (Author, 2018)

FIGURE 2.58 : Mapping diagram of the study's site vision, highlighting the temporary platforms for the mobile economies and community organizations of the urban intervention, further illustrated on the following page (Author, 2018)



OUR GOD MINISTRIES
CHURCH GROUND

SPORTS +
RECREATIONAL
FACILITIES

SPORTS +
RECREATIONAL
FACILITIES

DORLJOTA TAXI'S

AQUILLA'S
CATERERS

LEZA'S INTERNET
CAFE

CAR WASH

FLEURHOF DAM
CLUB

FLEURHOF
APOSTOLIC
CHURCH
GROUNDS

2.58

1

Signage
Printed signage on the side of the building advertises the business



Resources
The business requires electricity and an internet connection



Location
The business is located in part of a repurposed house on the corner of Malacite Rd. and Winze Dr.



Services provided
Leza believes he provides services that many of the residents in the area do not have access to. Most of the people in the area do not have computers and internet connections aside from mobile phones



2.59

LEZA'S INTERNET CAFE

STARTED: 2016

LOCATION: FROM HOME

RESOURCES REQUIRED: ELECTRICITY, PERMANENT SHELTER + INTERNET CONNECTION

SERVICES PROVIDED: ACCESS TO WIFI, COMPUTERS AND PRINTING

2



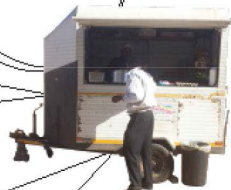
Stock Run:
Every Friday in Aquila's bakkie 8km up Main Reef Rd to Sunshine Cash & Cash Carry, Roodepoort



Overnight Storage
Every weekday afternoon

Aquila brings her bakkie to take the mobile store to the parking area next to JC Decaux (3.6km away) for storage overnight. Every morning at 06:15 the trailer is fetched again.

Gas Refill
Gas refilled within a month .



Mobile Food Cart
Parked on Malacite Rd from between 06:30 to 16:00 daily.



Walk to Work
Every weekday morning Norma walks 140m to her mobile store to begin cooking for the nearby builders and taxi drivers.

2.60

AQUILLA'S CATERER'S

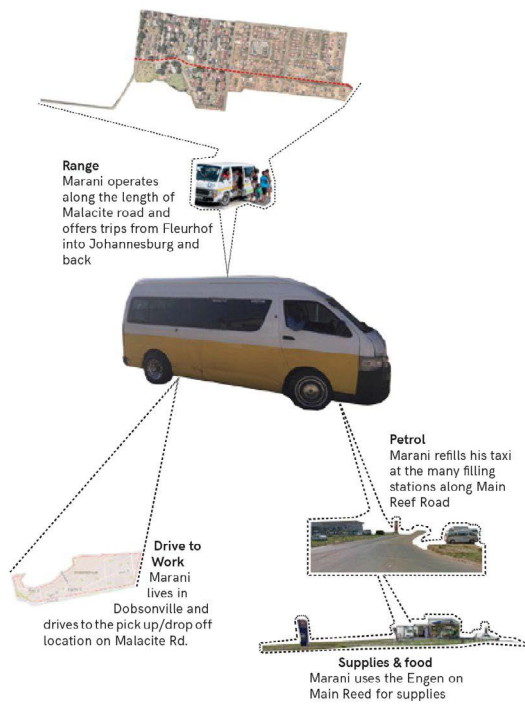
STARTED: 2016

LOCATION: FROM HOME

RESOURCES REQUIRED: ELECTRICITY/GAS, LEVEL GROUNDS/PLATFORM + PROXIMITY TO TRANSPORT NODE

SERVICES PROVIDED: ON THE GO FOOD + WANTS TO CATER FOR EVENTS

3



2.61

DORLJOTA TAXI

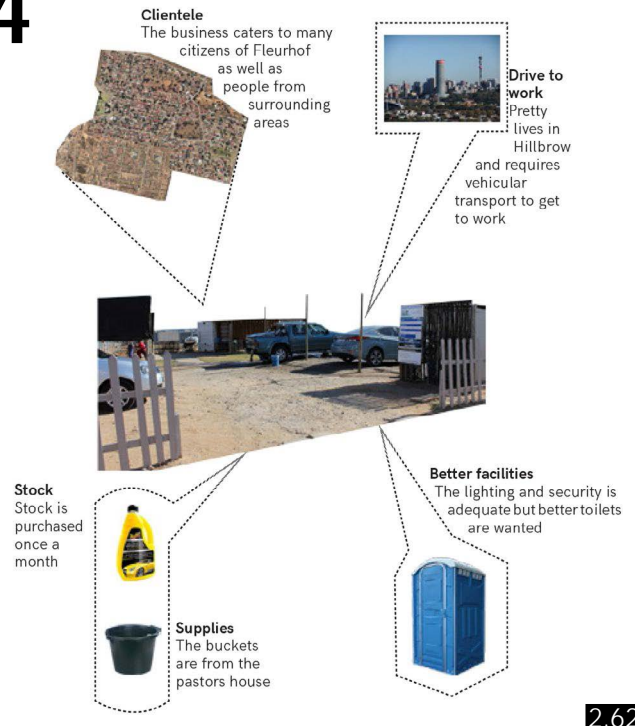
STARTED: 2015

LOCATION: OPERATES ON MAIN TRANSPORT ROUTES

RESOURCES REQUIRED: PARKING, WAITING AREA

SERVICES PROVIDED: TRANSPORT SERVICE

4



2.62

CAR WASH

STARTED: 2015

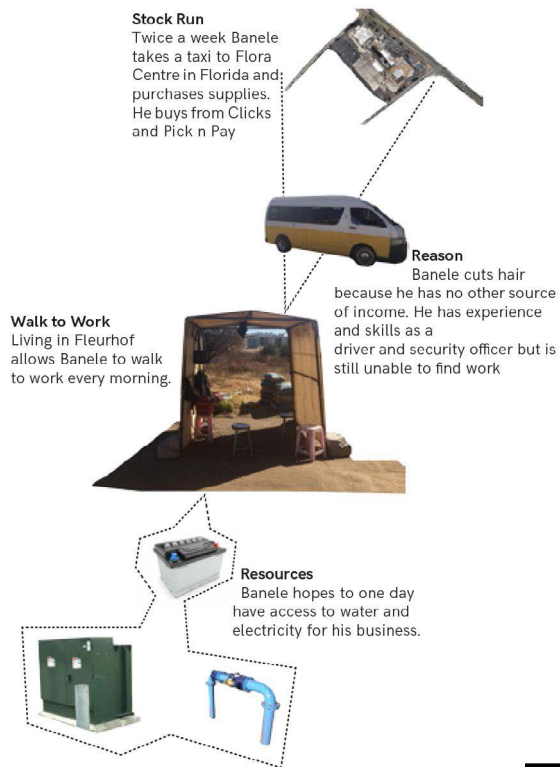
LOCATION: MOBILE

RESOURCES REQUIRED: LIGHTING, LEVEL GROUNDS, ABLUTIONS, STORAGE FACILITY + PROXIMITY TO TRANSPORT NODE

SERVICES PROVIDED: WASH + DRY CLEAN

FIGURE 2.59-62 : Illustrations of the mobile economies identified in Counterspace's Fleurhof and Surrounds Urban Development. Obtained via Counterspace team in 2018 (Counterspace, 2017)

5



2.63

BANELE'S BARBER SHOP

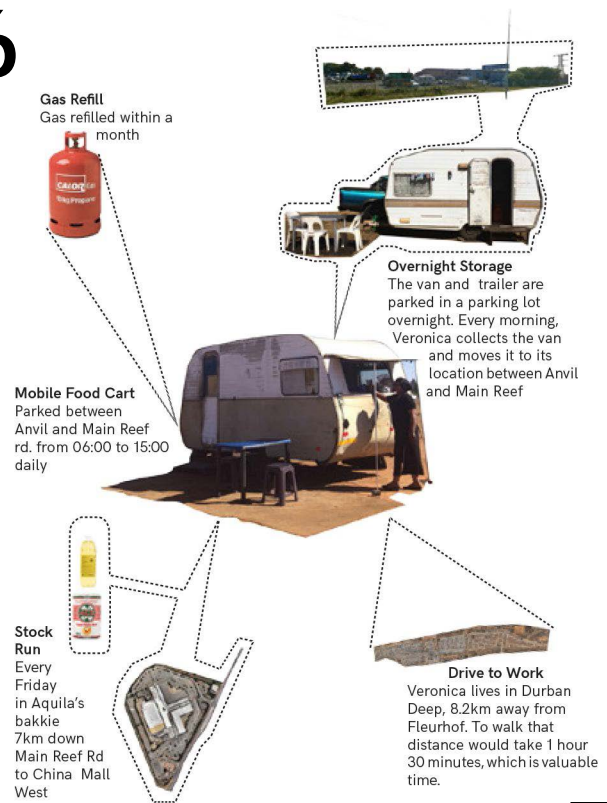
STARTED: 2015

LOCATION: TENT LIKE STRUCTURE

RESOURCES REQUIRED: ELECTRICITY, WATER + PERMANENT SHELTER

SERVICES PROVIDED: HAIR CUT + SHAVE

6



2.64

SIPHO'S TAKE-AWAY

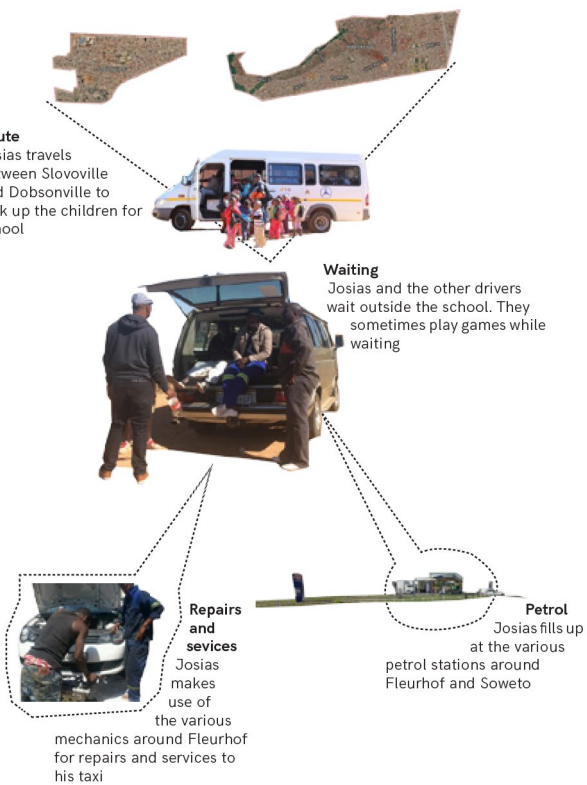
STARTED: 1999

LOCATION: MOBILE FOOD CART

RESOURCES REQUIRED: ELECTRICITY/GAS, LEVEL GROUNDS/PLATFORM + PROXIMITY TO TRANSPORT NODE

SERVICES PROVIDED: ON THE GO FOOD + WANTS TO CATER FOR EVENTS

7



2.65

NDELA SCHOOL TRANSPORT

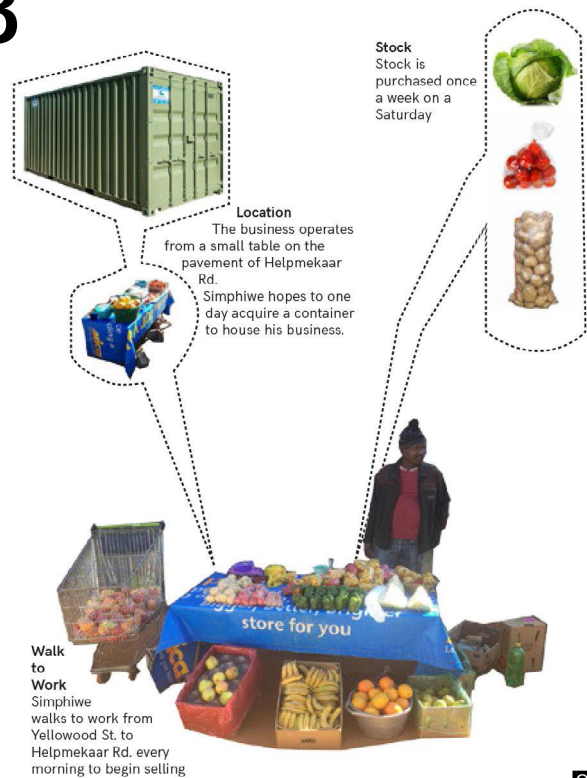
STARTED: 2015

LOCATION: OPERATES OUTSIDE FLEURHOF PRIMARY

RESOURCES REQUIRED: PARKING + WAITING AREA

SERVICES PROVIDED: TRANSPORT SERVICE, ATTEMPTS TO PROVIDE ENTERTAINMENT FOR KIDS WHILE WAITING + REPAIRS CARS

8



2.66

FRUIT + VEG SHOP

STARTED: 2015

LOCATION: ALONG MAJOR TRANSPORT ROUTES

RESOURCES NEED: LIGHTING, LEVEL GROUNDS, ABLUTIONS, STORAGE FACILITY + PROXIMITY TO TRANSPORT NODE

SERVICES PROVIDED: ON THE GO FOOD

FIGURE 2.63-66 : Illustrations of the mobile economies identified in Counterspace's Fleurhof and Surrounds Urban Development. Obtained via Counterspace team in 2018 (Counterspace, 2017)

9



FLEURHOF FUTURE STARS

2.67

AGES: 31-40

STARTED IN: 2011

SPACES USED: OPEN FIELD

RESOURCES REQUIRED: A PROPER SOCCER FIELD, STORAGE FACILITIES FOR EQUIPMENT, SPECTATORS SEATS, BETTER LIGHTING, ACCESS TO WATER + ABLUTIONS, PUBLIC TRANSPORT NODE, CONNECTION TO AFTER SCHOOL PROGRAM AND SIGNAGE

10



OUR GOD MINISTRIES

2.68

AGES: 41-50

STARTED IN: 2015

SPACES USED: TENT

RESOURCES REQUIRED: STORAGE FACILITIES FOR EQUIPMENT, PERMANENT SHELTER, ACCESS TO WATER + ABLUTIONS, PUBLIC TRANSPORT NODE.

11



FLEURHOF APOSTOLIC CHURCH

2.69

AGES: 31-40

STARTED IN: 2014

SPACES USED: DAM

RESOURCES REQUIRED: A PROPER SOCCER FIELD, STORAGE FACILITIES FOR EQUIPMENT, SPECTATORS SEATS, BETTER LIGHTING, ACCESS TO WATER + ABLUTIONS, CONNECTION TO AFTER SCHOOL PROGRAM AND SIGNAGE

12



FLORIDA LAKE BOAT CLUB 2.70

AGES: 21-40

STARTED IN: UNKNOWN

SPACES USED: DAM

THE ABOVE IMAGES ARE OF THE FLORIDA LAKE DRAGON BOAT CLUB. THE URBAN VISION FOR THE STUDY PROPOSES THAT FLEURHOF DAM ALSO PARTAKES IN THE RACES WITH A PROPOSED BOAT CLUB FACILITY TO ACTIVATE THE RECREATIONAL ASPECT OF THE DAM.

FIGURE 2.67-70 : Illustrations of the community organizations identified in Counterspace's Fleurhof and Surrounds Urban Development. Obtained via Counterspace team in 2018 (Counterspace, 2017)

03 //



3.1 SITUATING THEORY
3.2 COMMUNICATIVE SPACES
3.3 ETHICAL SPACES
3.4 TRANSITIONAL SPACES



This chapter aims to theoretically situate the project relative to the body of knowledge concerned with space, time and reality. Using themes of 'communicative spaces', 'ethical spaces', and 'transitional spaces', as a means of understanding architecture's role as a form of non-verbal communication.

3.1 SITUATING THEORY

This theoretical review is situated relative to the body of knowledge concerned with space, time and reality (FIG. 3.2). Our concern with space, time and reality stems from the enlightenment period. Maape (2017) explains that during the 19th century, the theory of objective reality was used to describe us rational beings, suggesting that our perceptions of the world exist independently of ourselves (Maape, 2017). The theory of subjectivity introduces the idea that our perceptions are affected by our experience of the world. Learning from the theory of subjectivity, this theoretical review aims to contribute to the literature concerning the theory of inter-subjectivity¹, highlighting the commonality in our perceptions.

3.1

This theoretical review is made up of three themes: 'Communicative Spaces', 'Ethical Spaces' and 'Transitional Spaces'. These themes and their respective theories were chosen in order to investigate how our spatial settings contribute towards shifting our perceptions and, more specifically, how shifting our perceptions can assist in resolving conflict and encourage integration amongst the residents of Fleurhof. This dissertation will use these theories as guidelines for designing an alternative typology for conflict resolution.

The first section will discuss 'Communicative Spaces', using Vesely's book titled *Architecture in the Age of Divided Representation*. Building on communicative spaces, the second section introduces 'Ethical Spaces' using Karsten's book titled *The Ethical Function of Architecture*. The third section speaks of 'Transitional Spaces' using scholars such as Turner, Maape, Freeman, and Foucault.

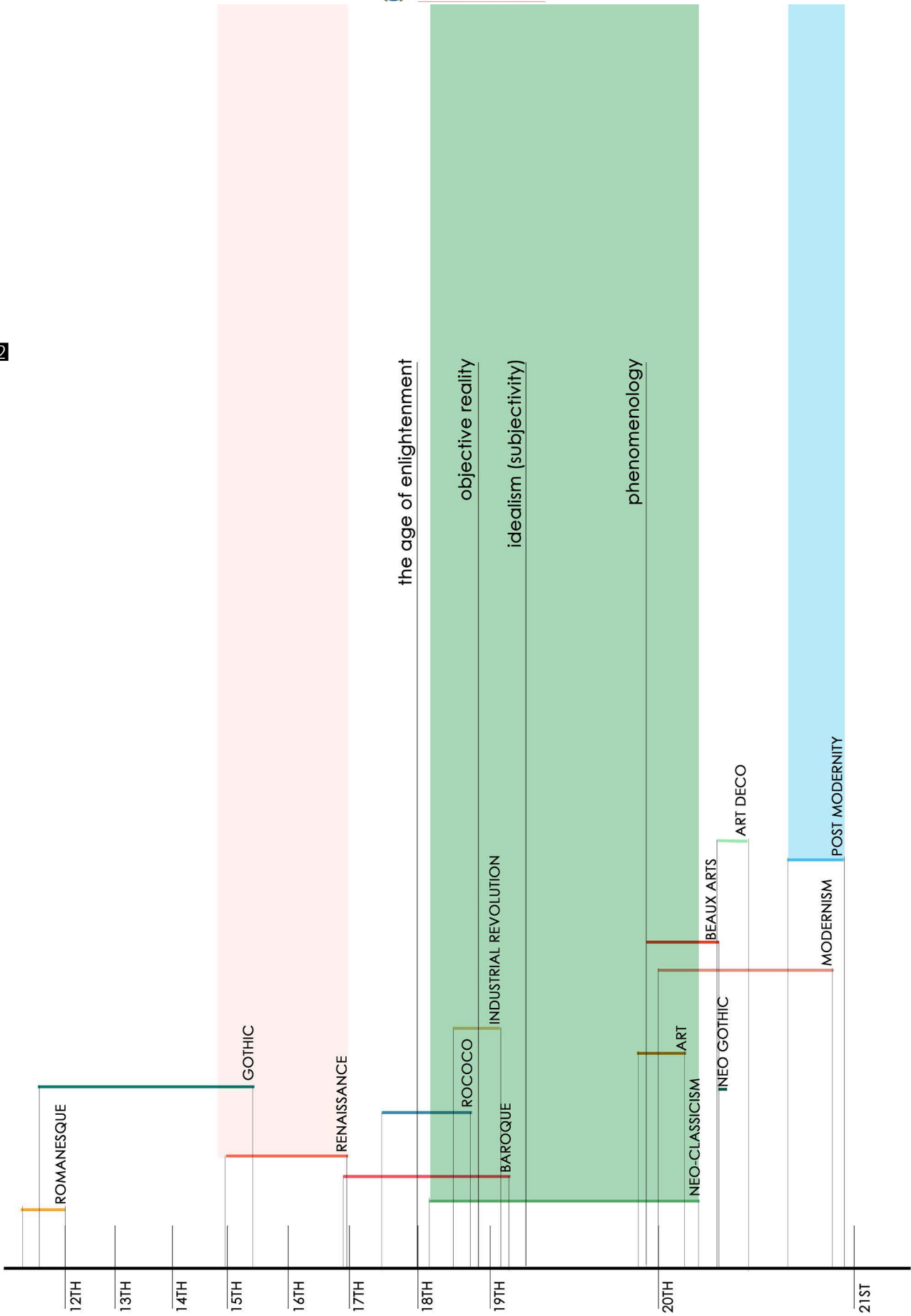
For the purpose of this study, when the word 'ritual' is referred to, it is viewed as an 'embodied practice', rather than exclusively through the traditional ties with which the word 'ritual' is usually associated. An embodied practice refers to any physiological, physical activity or engagement involving the conscious movement of the body (examples include dancing, exercising, performing, painting, sculpting etc.).



FIGURE 3.1 : *The Architect and His Shadow* (Libeskind, 2017)

FIGURE 3.2 : *Continuum of Architectural Thinking* (Author, 2018)

¹ Maape (2017) explains inter-subjectivity as the term used to represent the relation between people, the common perspectives between people (Maape, 2017).



3.2 COMMUNICATIVE SPACES

Vesely² (2004:44), in his book, *Architecture in the age of divided representation*, interprets architecture's indispensable role as a cultural force throughout history and its function as a communicative space in the age of divided representation. Two chapters are highlighted: *The Nature of Communicative Spaces* and *The Rehabilitation of Fragmentation*. In *The Nature of Communicative Spaces*, he describes "the ambiguous role of representation in the life of contemporary culture" largely due to the "problem of communication between areas of culture" (Vesely, 2004: 44). Vesely investigates if there is:

Anything in architecture that can be seen as its communicative power; if so, can it be treated, literally or metaphorically as a form of language or text (Vesely, 2004: 68).

Understanding the background of language³ leads to an understanding of the communicative role of architecture. In this "preverbal world, the reality is already structured as a communicative space" through senses of experience (Vesely, 2004: 70). Architecture, therefore, communicates through a sense of experience, relying on movement and gesture to ignite an experience. If movement and gesture are relied upon to ignite experience, it becomes important to understand how architecture can inform movement and gesture. Vesely suggests that, "What logic and grammar are to verbal language, geometry is to the visible world" (Vesely, 2004: 71). Relying on Vesely's theories, one can argue that geometries that inform rhythm, proportion, and harmony create architecture that facilitates movement and gesture. Vesely asks, "How is it possible to explain the relationship between cultural conditions, memories, expectations, the visible physiognomy of space in question and the spatial structure of a typical situation?" He goes on to explain that an understanding develops "through recourse to metaphors, analogical reasoning, and continuity of references". These aspects depend on the communicative movement brought on through architecture (Vesely, 2004: 79).

Reading architecture as a non-verbal experience introduces its attachment to memory. If architecture

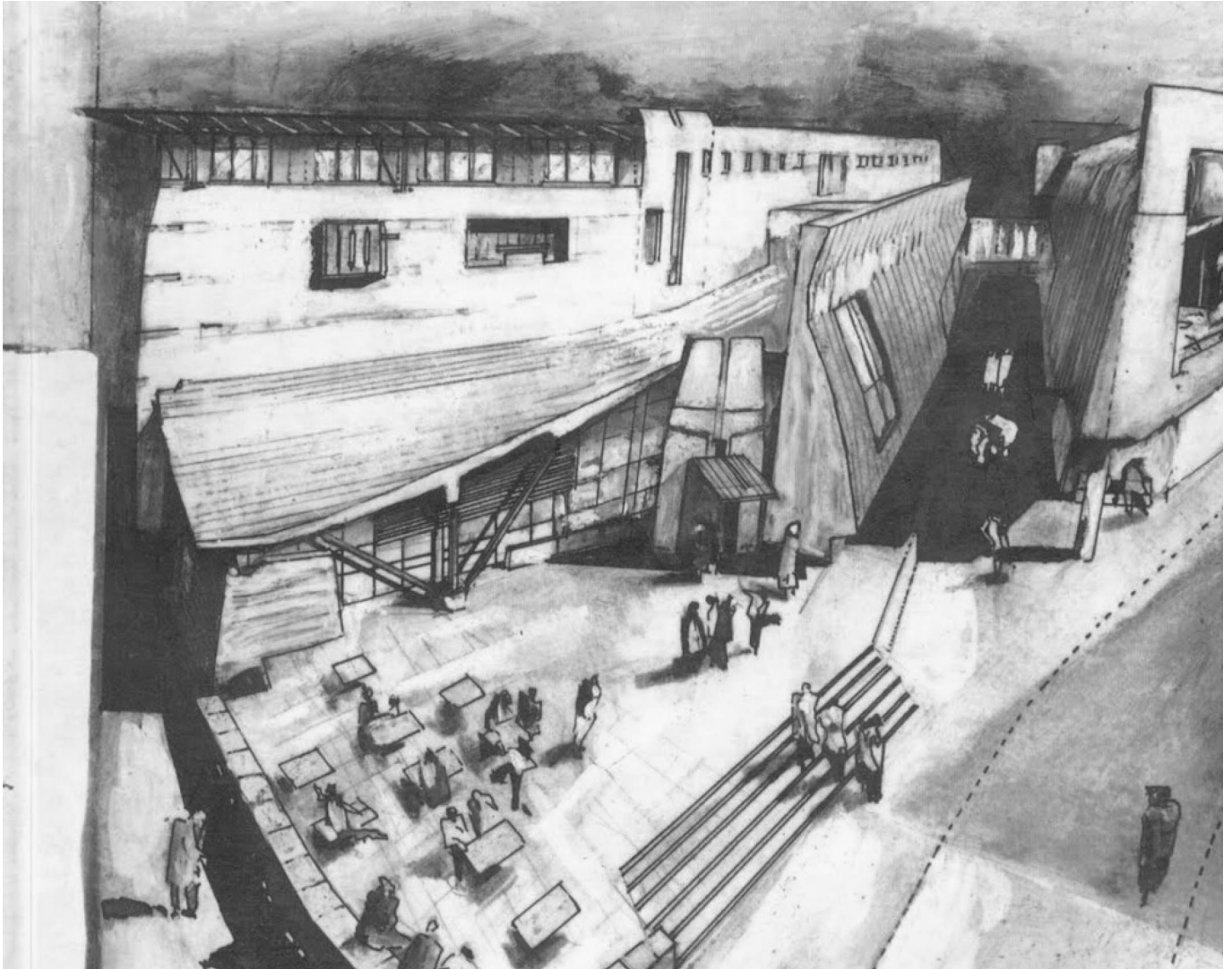
² Dalibor Vesely, the architectural theorist, and historian was influential through his understanding of hermeneutics as part of the discourse of architecture

³ Vesely (2004:69) suggests that the background of language is most clearly defined in the early stages of life, before the articulation of words (Vesely, 2004).

can contribute to memory, Vesely highlights two words of importance: temporality and spatiality. These words describe the communicative movement of architecture (Vesely, 2004: 100). It is therefore important to highlight that, although architecture cannot be read, it can be experienced and so has the power to become a communicative space through mediation. Therefore, in order for architecture to contribute to the process of conflict resolution, it needs to fulfill its communicative function.

In *The Rehabilitation of Fragmentation*, Vesely (2004:318) describes a setting much like Fleurhof's current condition, where cultural "fragmentation is a result of isolation and disintegration and thus as potential chaos" (Vesely, 2004: 318). He suggests that "the reality of the modern world is divided into isolated areas of...fragmented realities". What is common to the collective residents are reference points to their existing context (Vesely, 2004: 322). Vesely (2004:338) defines the relationship between an object and its spatial setting as one that is always rooted in the context of a particular setting, the situational understanding of space. He goes on to say that the spatial setting has the "capacity to establish the similarity between the object and as a consequence the capacity to reveal on a deeper level what is common to them" (Vesely, 2004: 338). The challenge for this dissertation would be to identify common reference points between the diverse residents. Vesely (2004:339) suggests establishing references that enable users to "recognize sameness and difference in the context of the world" as a form of establishing common ground (Vesely, 2004: 339).

Vesely (2004:346) refers to the function of architecture as a form of dialogue and legibility with the ability to reconcile. He speaks of revealing fragmentation through "dialogue with the concrete reality of space" (Vesely, 2004: 346). Here fragmentation is dissolved through establishing common ground. In contrast with the conventional design of space, communicative space is illustrated as "an imaginative dialogue with the deeper structure and content of space", where the limits of geometry are tested to articulate relationships between the users, light, comfort, and projection. Vesely (2004:350) points out the "mediating role of light" as a form of restoration (Vesely, 2004: 350).



THE NATURE OF COMMUNICATIVE SPACE

FIGURE 3.3 : Munster City Library, an example of a 'communicative space' Vesely refers to in his book, *Architecture in the Age of Divided Representation* (Bolles & Wilson Architects, 1967)

3.3 ETHICAL SPACES

Harries (1997:4) in his book *The Ethical Function of Architecture*, questions whether architecture “should not help us find our place and way in an ever more disorientating world?” In this sense, he speaks of the “ethical function”⁴ of architecture (Harries, 1997: 4). The book strives to describe architecture as a task that works towards articulating a common ethos.

Furthermore, Harries (1997:86) questions whether architecture possesses a hermeneutic function and if “the task of architecture is that of interpretation?” Architecture’s task to interpret is investigated in the sixth chapter, *The Language Problem*. In this chapter, he suggests that if there is a language of architecture then architecture must not just be “meaningful in some sense but must be intended to communicate some meaning” (Harries, 1997: 86).

Harries (1997:96) comes to the conclusion that although “buildings do not make assertions” as language does, they do communicate a way of understanding or seeing. (Harries, 1997: 88). The communication of architecture differs from that of language: “Buildings speak to us by bounding space” (Harries, 1997: 96). He reminds us that:

There is a continuing need for the creation of festal places on the ground of everyday dwellings, places where individuals come together and affirm themselves as members of the community, as they join in public reenactments of the essential: a celebration of those central aspects of our life that maintain and give meaning to existence. The highest function of architecture remains what it has always been: to invite such festivals (Harries, 1997: 365).

Like Vesely, Harries speaks of the communicative nature of architecture as one that ignites experience. Harries speculates that the architecture of experience has re-occupied the place once held by sacred architecture. Harries (1997:365) reaffirms the necessity of architecture in our contemporary society; he explains the function of architecture as one that primarily allows its user to “affirm themselves as members of the community”. In the quest to design such spaces, Harries (1997:367) suggests that we should look beyond architecture and towards the “festal quality of public spaces, of squares, streets, and parks” to identify how architecture can aid expression (Harries, 1997: 367).

3.4

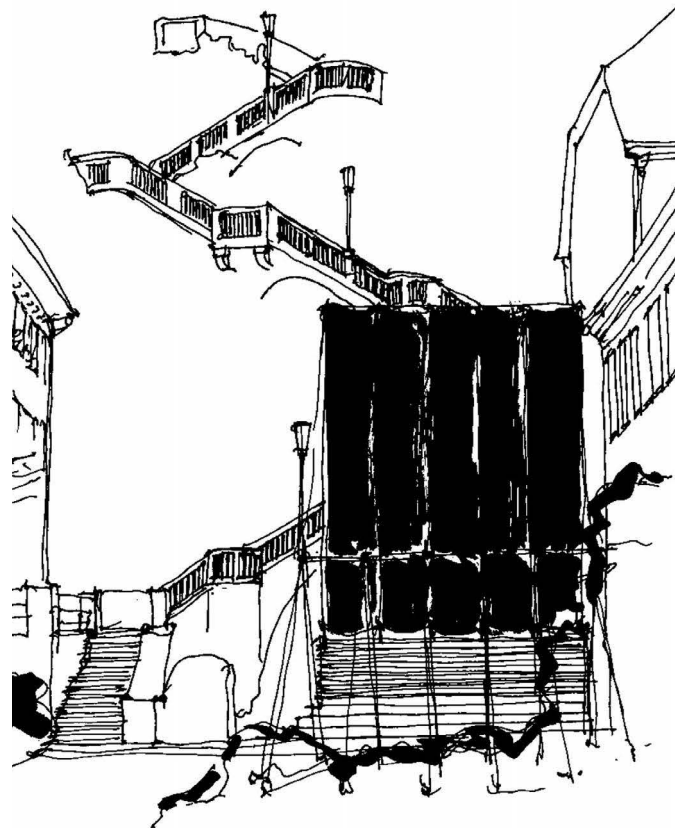


FIGURE 3.4 : *The Red Stage*, an example of the 'ethical spaces' of festal rituals that Karsten's refers to in his book, *The Ethical Function of Architecture* (Giencke & Company Architects, 1984)

⁴ The word 'ethical' is derived from 'ethos'.

3.4 TRANSITIONAL SPACES

Rituals have been well documented universally by anthropologists such as Victor Turner. Across these studies, a common characteristic of these rituals is the process of transition (Turner, 1969: 95), which has been interpreted as a transition into a new way of living. Not only is this a 'transition' from one life to another but also using 'transition' as a form of dealing with a situation. Turner speaks of a ritual's role in dealing with the collective and individual crisis. Here he argues that these 'crises' are moments where an individual or collective has to transition from one social status to another (Turner, 1967: 7).

Maape (2015:73) builds on Turner's argument by pointing out that in phenomenology:

Rituals seem to be fundamentally linked to our bodies, our body's location in space, time and the manner in which we shape and move them. Music, colours, space (volume, light, and sound), symbols or shapes, physical sensations directly experienced on the body and processes or symbolic patterns over time, all of which are acting on the body and the senses seem to give rise to the potential to transition from one identity to another or arguably induce what Freeman⁵ calls dissolution. This confluence of experiences seems to act on the brain in such a way that it suspends one's common perception of the world to make room for a shift in perception (Maape, 2015: 73).

Supporting the notion that rituals are spatially bound, Freeman (2003) mentions that removing the participant from normal social surroundings to a new spatial setting is a common characteristic of rituals (Freeman, 2003: 54-73). Turner describes this transition, based on Van Gennep's model⁶, as separation, margin (liminal phase) and aggregation.

Referring to Freeman's theory of dissolution⁷ and cultural neurophenomenology, Turner concludes that embodied practices are a state of re-formulation or diverting one from a particular outlook to another (Maape, 2015). Turner (1969:95) terms this state as liminality⁸, the transition from one identity to another or the dissolved edge between two identities (Turner, 1969: 95). One of the products of the liminal phases is what Turner refers to as 'communitas'. Maape (2015:76) explains this outcome as:

A temporary heightened sense of oneness with the other...it seems that what Turner is referring to is a state of Freeman's dissolution, a moment when the boundaries of 'self' are dissolved and in turn developing a feeling of oneness between me and other or communitas (Maape, 2015: 76)

If embodied practices provoke conditions of 'Communitas', 'Liminality' and 'Dissolution', embodied practices become tools of mediation between the "self and other" (Maape, 2015: 78). Referring back to the new spatial setting to which Freeman refers, philosopher Michel Foucault (1984:4) introduces the term "Heterotopia", to describe this new spatial setting of 'other places'. Foucault explains that unlike utopias, which are fundamentally unreal spaces, heterotopias are a combination of mythical space and the everyday space in which we live (Foucault, 1984: 4). Heterotopias exist in cultures across the world; they are spaces that puncture the norm, and they're places of refuge from our everyday lives, acting as sanctuaries from the dominant narrative of our everyday.

⁵ Walter Freeman was an American biologist, theoretical neuroscientist and philosopher.

⁶ Arnold Van Gennep was a French ethnographer and folklorist, known for his studies of the rights of passages of various cultures.

⁷ Dissolution, a process, according to Freeman (2003:154) that happens when existing thought patterns dissolve when the underlying brain dynamics become chaotic (Freeman, 2003)

⁸ Turner (1967:95) describes liminality as "...necessarily ambiguous, since this condition and these persons elude or slip through the network of classifications that normally locate states and positions in cultural space. Liminal entities are neither here nor there; they are betwixt and between the positions assigned and arrayed by law, customs, convention, and ceremonial. As such, their ambiguous and indeterminate attributes are expressed by a rich verity of symbol in the many societies that ritualize social and cultural transitions. Thus liminality is frequently likened to death, to being in the womb, to invisibility, to darkness, to bisexuality, to the wilderness, and to an eclipse of the sun or moon." (Turner, 1967, p. 95).

Maape's video series titled *How rituals help us to change our perceptions* speaks of the role embodied practices have on shifting perceptions. Building on Joseph Campbell's theories⁹, Maape proposes that in order to change our perceptions we need to transcend them, by creating spatial settings much like Foucault's heterotopias (Maape, 2017). Building on neuroscientist Anil Smith's research, Maape (2017) suggests that we do not view our world as a finite reality but rather through the filter of our own experiences. His research stems from two streams of thought: that our perceptions are bound to our emotions; and that the world is mapped temporarily and spatially by a series of good and bad traumas we experience, which rely on memory (Maape, 2017).

Maape (2015) highlights that our perceptions are restricted by the unknown. He suggests that our fears and uncertainties stop us from changing our perceptions. He builds on Freeman's theory of dissolution, describing the notion of dissolving one's own perception through 'tools of persuasion'. Maape describes these tools as embodied physiological practices pointing towards the value of ritual as a way of changing our perceptions and shifting our boundaries. Through rituals, Maape speaks of these embodied practices as an alternative form of non-verbal communication and of architecture's role in provoking physiological processes, through space (volume, light, and sound) (Maape, 2015).

In conclusion, from the theoretical review above, we begin to understand architecture's role as a form of non-verbal communication. Vesely also points out how architecture, in context, can define reference points that introduce commonalities amongst users. Like Vesely, Harries speaks of the communicative nature of architecture as one that ignites experience. He reminds us that 'there is a continuing need for the creation of festal places on the ground of everyday dwellings, places where individuals come together and affirm themselves as members of the community'. Through the works of Turner, Maape, Freeman, and Foucault we understand the value of rituals as a process of changing our perceptions, shifting boundaries and ultimately integrating diverse groups of people. We are introduced to ways in which architecture contributes to animating the physiological process of ritual by defining space (volume, light, and sound).

⁹ In Joseph Campbell's book titled *The Hero with a thousand Faces*, he speaks of being the need to be in a parallel state in order to change our perceptions.

3.5

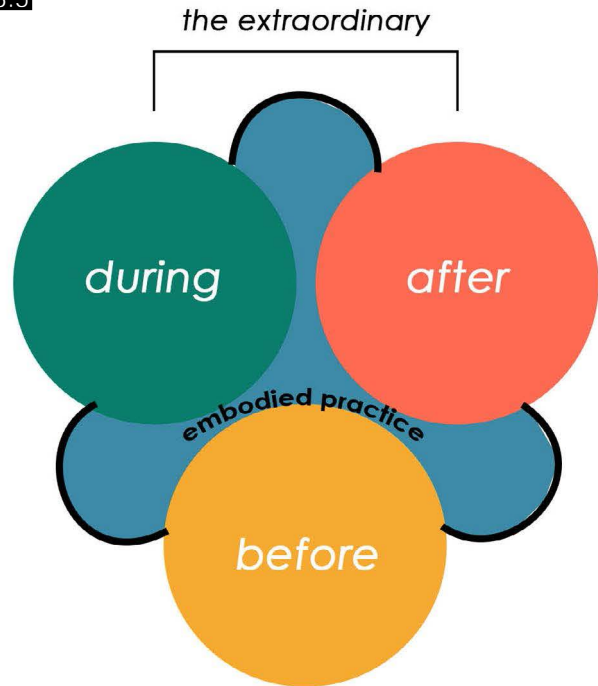
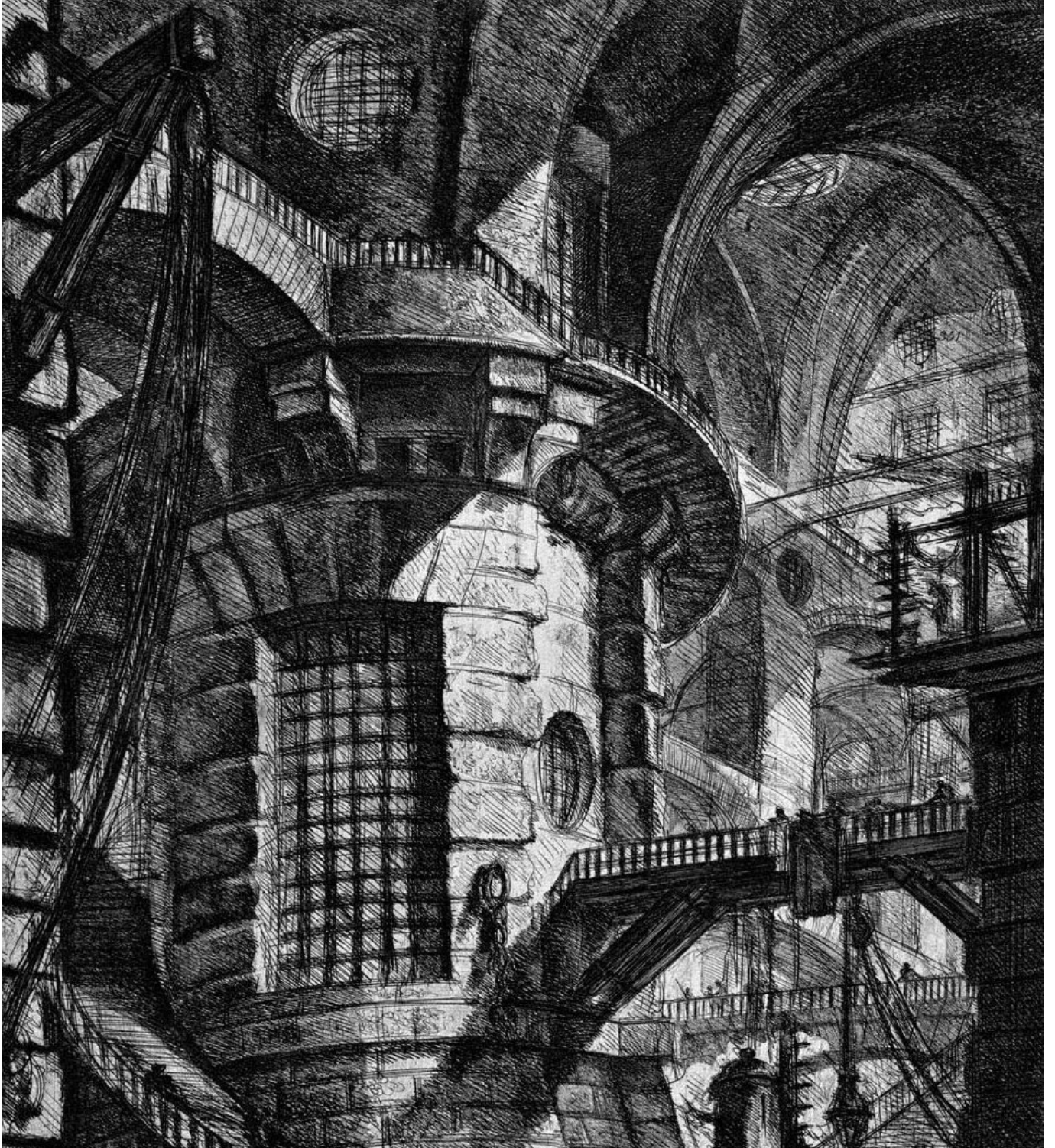


FIGURE 3.4 : Diagram illustrating how embodied practices bind three types of diverse residents through the use of embodied practice and the extraordinary (Author, 2018)

FIGURE 3.6 : *Carceri d'invenzione*, part of a series where the artist explores the heterotopias Foucault refers to (Giovanni Battista Piranesi, 1749-1750)



3.6

04 //



4.1 INTENTIONS
4.2 ALLOCATION + USERS
4.3 STAKEHOLDERS



This chapter focuses on unpacking the programme: firstly by outlining the intentions; secondly, by stating the programme requirements; and thirdly, by introducing the stakeholders of the intervention.

4.1 PROGRAMMATIC INTENTIONS

Dealing with conflict resolution and the need for a new typology was initially informed by Fleurhof's inherent diverse identities and conflicting territories. The new typology was established by analyzing how conflict is traditionally dealt with in forms of protection, representation and resolution and where the gaps are, in order to reveal where the intervention should fit in. It became apparent while looking at traditional forms of assembly that conflict resolution has always been an extremely private affair involving rigid means of communication, in the form of oral dialogue.

Building on the theoretical review proposed, a new typology for conflict resolution aims to 'unveil' spatial justice by introducing public spaces that puncture the norm. Referring to Foucault's 'heterotopias', the programme aims to create an alternative spatial setting that provides a refuge to the everyday narrative. The programme strives to ignite embodied practices that contribute towards shifting our perceptions, and, more specifically, to illustrate how shifting our perceptions can assist in resolving the conflict by creating collective perceptions (Foucault, 1984:4).

The programme aims to introduce alternative forms of dialogue: using physiological activity and creativity as a form of communication and expression. The intention of the programme primarily speaks of a 'communicative space' that facilitates restoring the breach of the relationship between users. The programme can be summarized as a restorative facility for conflict resolution. It aims to provoke three processes: recognition, conversation and restoration as a means of establishing common ground amongst the users.

In an attempt to achieve 'heterotopias', the study analyzed contemporary practices and processes that allow for participants to transcend from their every day into a temporary alternative world. Across cultures, contemporary practices such as religious gatherings, sporting events, weddings, funerals, and festivals become punctures in the norm, whereby participants undergo a process of transition. These contemporary practices facilitate an integration of people of diverse identities and contrasting territories, coming together and temporarily sharing common perceptions.

Furthermore, this dissertation aims to introduce these forms of 'heterotopias' as spatial settings that contribute to an alternative typology for conflict resolution.

The insertion of a new condition into the context encourages new relations to occur and perceptions to change. By treating an absence of 'resolution' as a breach of relationship and justice as a process of coming together to repair that breach, the intention of the programme primarily speaks of a 'communicative space'¹ that facilitates restoring the breach of the relationship between users. The role of the programme is one that allows for the process of resolution to take place. In establishing a 'sense of resolution' three processes are highlighted: recognize, converse and restore (FIG. 4.2).

¹ The notion of 'communicative space' is unpacked in through the use of theories presented in the theoretical review.

4.1

'a sense of resolution'

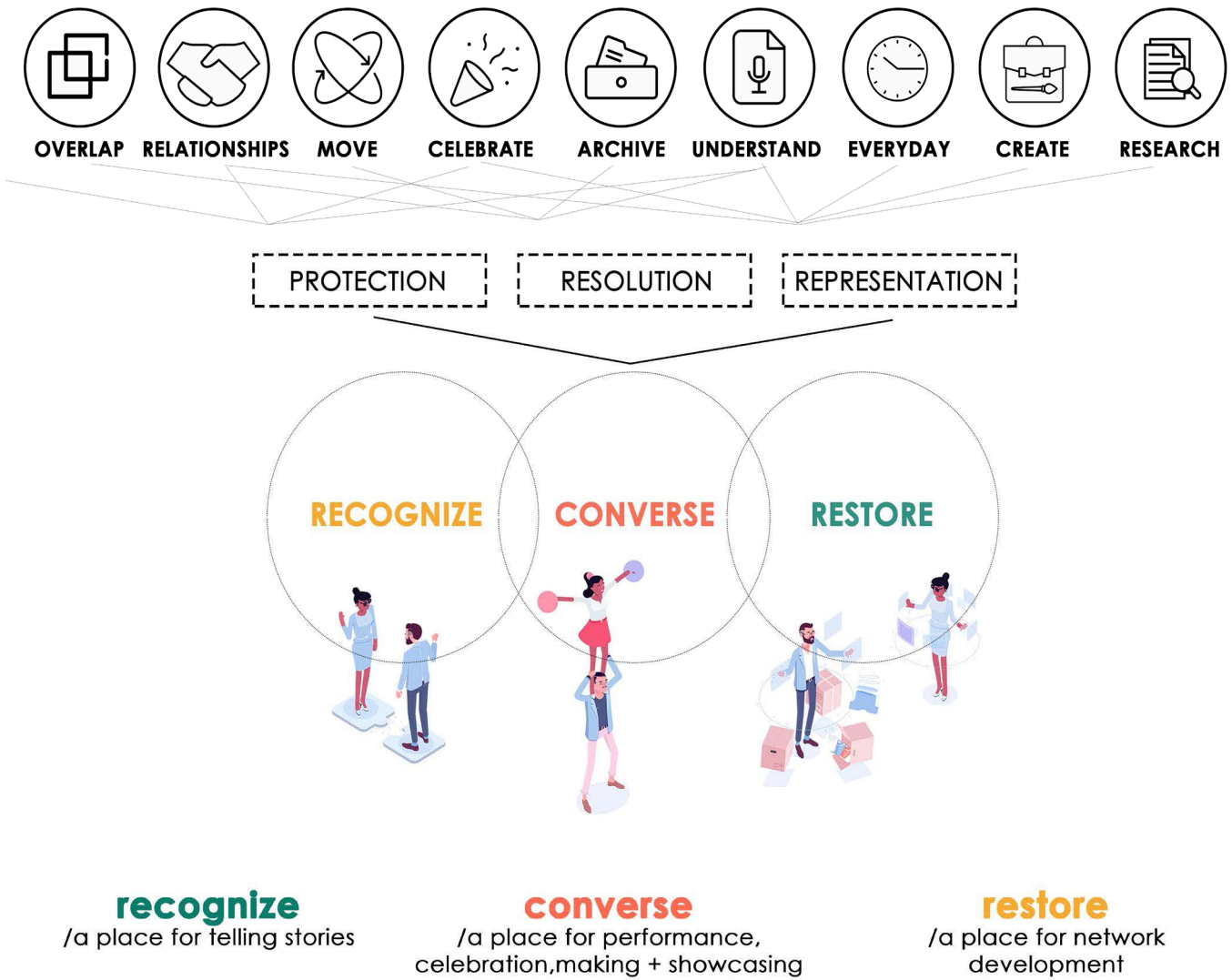


FIGURE 4.1 : Diagram illustrating the program intentions and outcomes (Author, 2018)

RECOGNIZE// a place for sharing stories

- **Points of orientation**
 - o Information/reception points
 - o Pedestrian link as gateway into Fleurhof
- **Series of narrative spaces**
 - o Mediation spaces
 - o Show and tell spaces

RESTORE//a place for network development

- o Library, resource lab and Archive.
- o The communal kitchen/corner café/tuck-shop
- o Flexible office space retail spaces rented out on a monthly basis for identified mobile economy
- o Before/After School Care facility

CONVERSE// a place for performance, celebration, making + showcasing

- **Points of festal events**
 - o Series of internal and external and spatial settings where events are hosted (religious gatherings, conferences, funerals, weddings etc.) and performances take place (music, dance and sport festivals). Includes a terraced events space with supporting amphitheater.
 - o Movement studios: series of movement studio hosting various levels of extra mural activities.
 - o Multipurpose sports grounds with supporting facility
- **Points for making and showcasing**
 - o creative therapy studios (art and hobby studio)
 - o temporary exhibition spaces
 - o infrastructure for pop up stalls

4.2

recognize

/a place for telling stories

converse

/a place for performance, celebration, making + showcasing

restore

/a place for network development

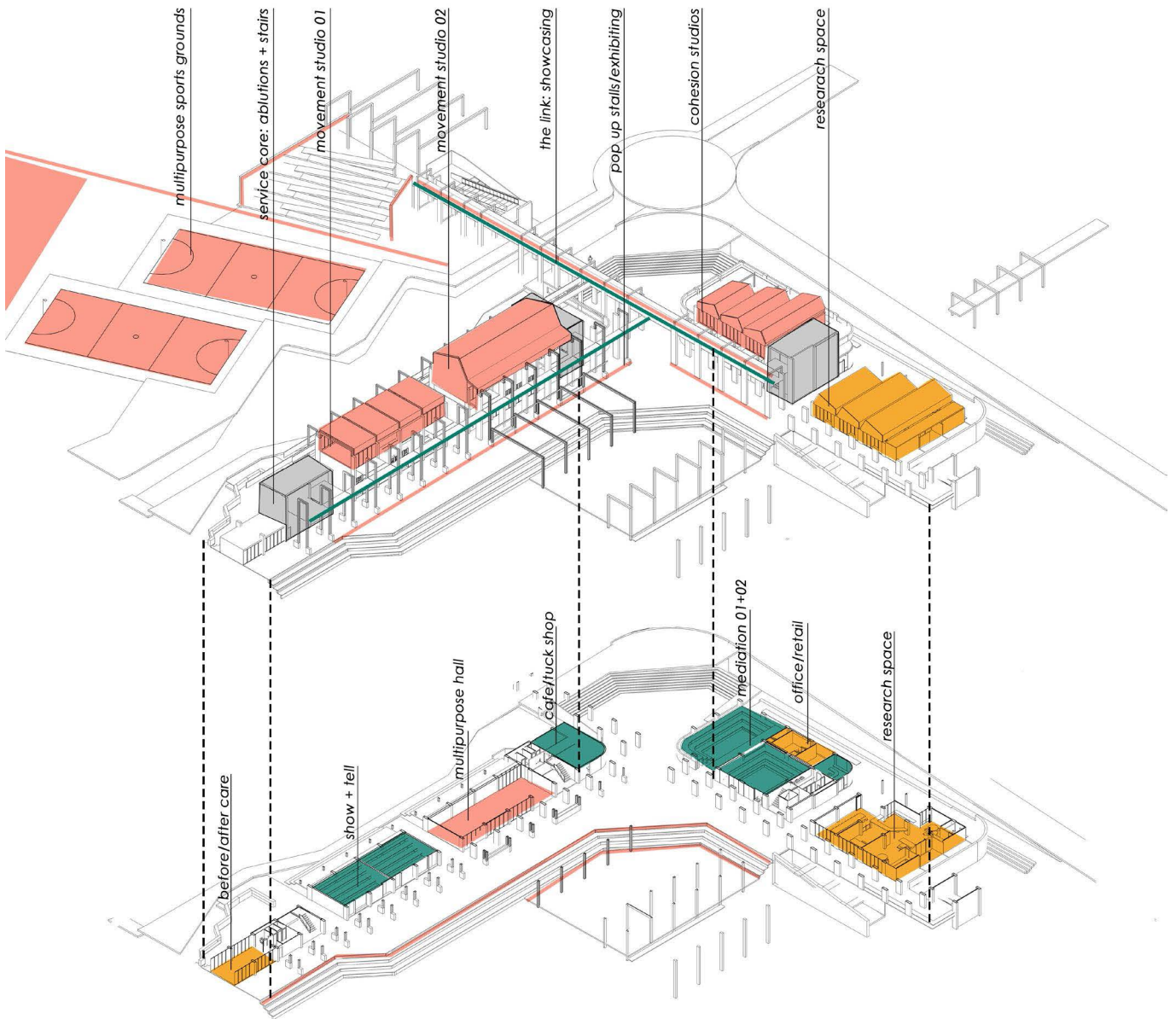
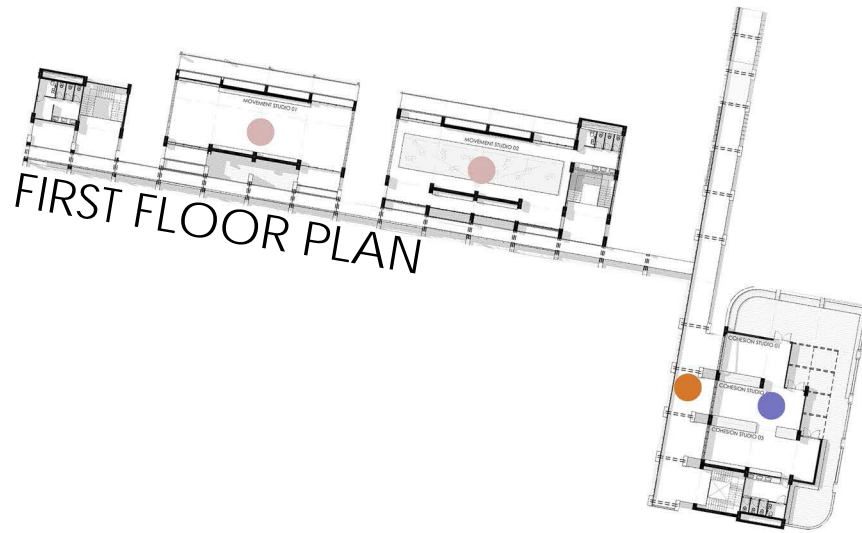


FIGURE 4.2 : Diagram illustrating the program allocations (Author, 2018)

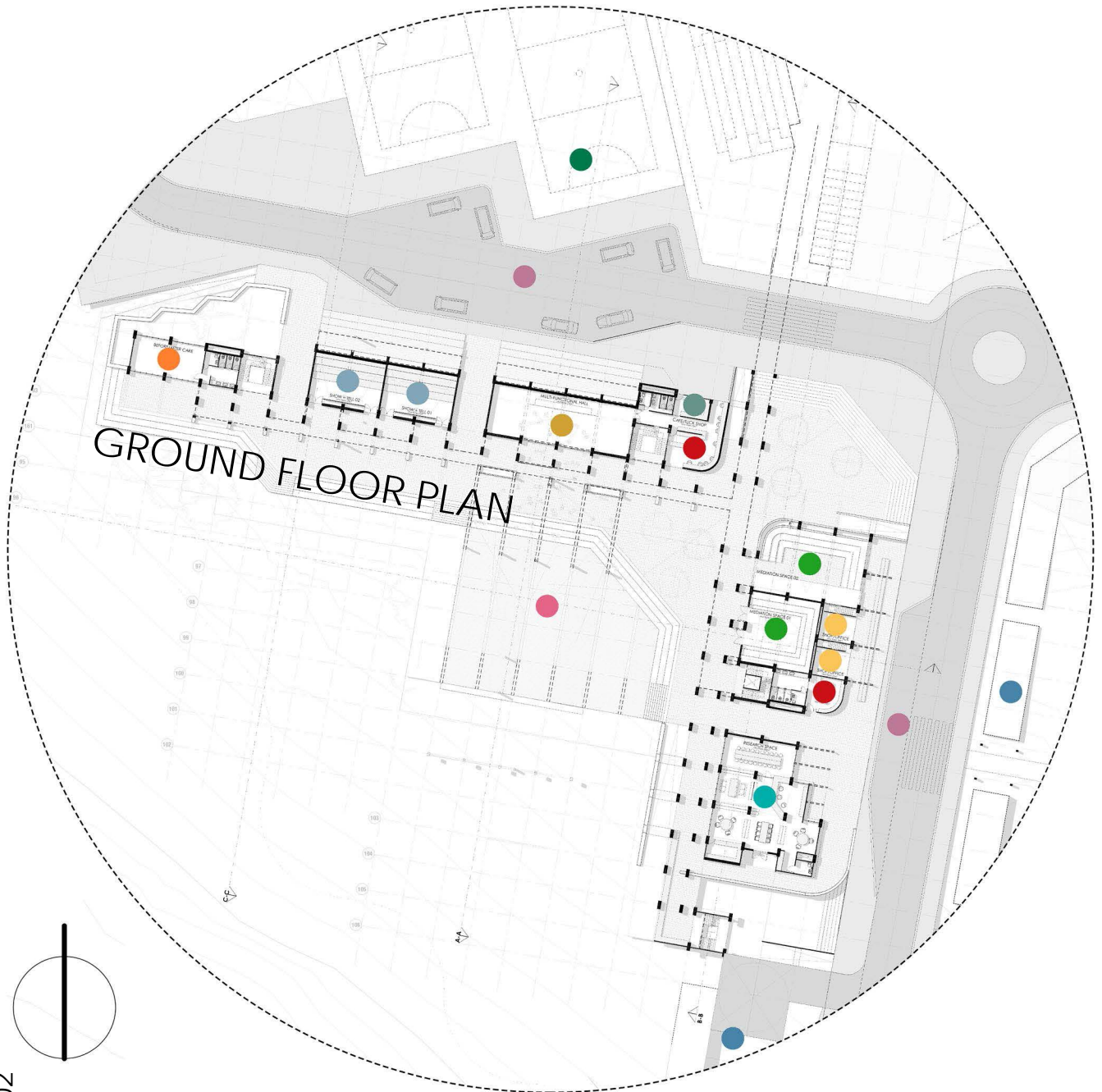
4.2 PROGRAMME ALLOCATIONS + USERS

SPATIAL	USERS
Information/reception points	The residents of Fleurhof
Lecture spaces (show + tell spaces)	The 3 defined conflicting residents: 'before, during + after' Fleurhof (including identified local organizations.
Mediation spaces	The 3 defined conflicting residents: 'before, during + after' Fleurhof (including identified local organizations.)
Terraced events space	The 3 defined conflicting residents: 'before, during + after' Fleurhof (including identified local organizations.
Multipurpose hall	The 3 defined conflicting residents: 'before, during + after' Fleurhof (including identified local organizations.
Multipurpose movement studios	The 3 defined conflicting residents: 'before, during + after' Fleurhof (including identified local organizations)
Multipurpose sports grounds	Identified local organizations; Fleurhof Primary School kids, Fleurhof Future Stars, Our God Ministries Church, Fleurhof Apostolic Group, Community Policing Forum + the greater Fleurhof residents
Art/hobby studio (cohesion studio)	The 3 defined conflicting residents: 'before, during + after' Fleurhof (including identified local organizations)
Exhibition/showcasing spaces	The 3 defined conflicting residents: 'before, during + after' Fleurhof (including identified local organizations.
Resource hub (library, labs + archive)	The 3 defined conflicting residents: 'before, during + after' Fleurhof (including identified local organizations)
Flexible office/retail space	Identified local economies
Before/After Care space	Fleurhof Primary School + Kinderjoy Angel's Paradise
Public transport nodes	Fleurhof Commuters
Platforms for mobile economies	Local economies: Leza's Cafe, Aquilla's Caterers, Fleurhof Design Salon + Fleurhof Barber shop
Corner café/tuck shop	Aquilla's Caterers, Siphon's Take Away

FIGURE 4.3 : Colour coded ground and first floor plan illustrating the placement of program (Author, 2018)

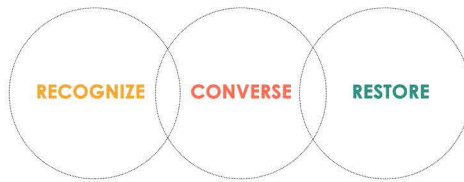


4.3

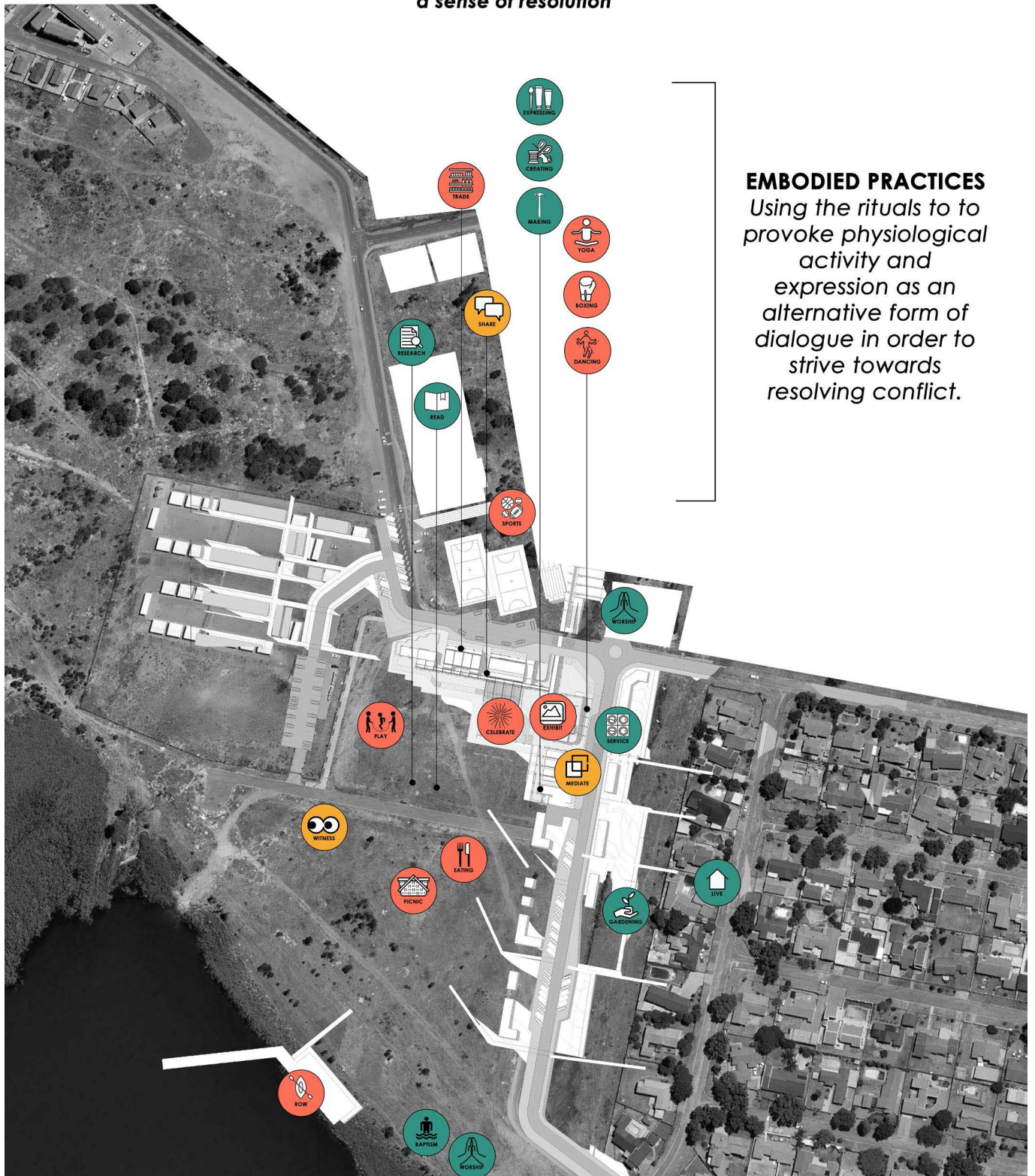


4.4

INTRODUCING THE EXTRAORDINARY

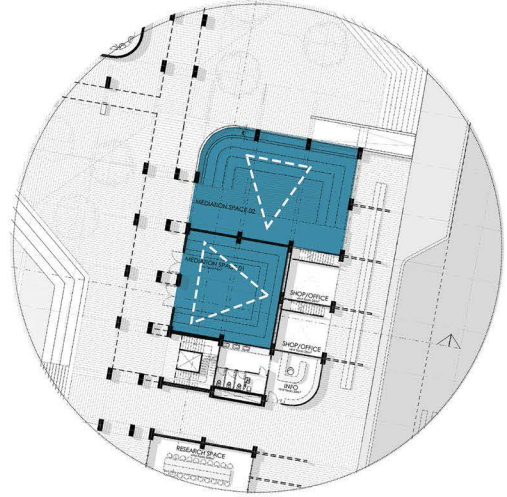
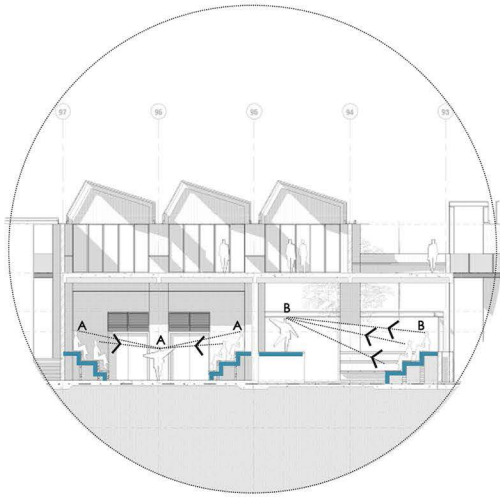


'a sense of resolution'

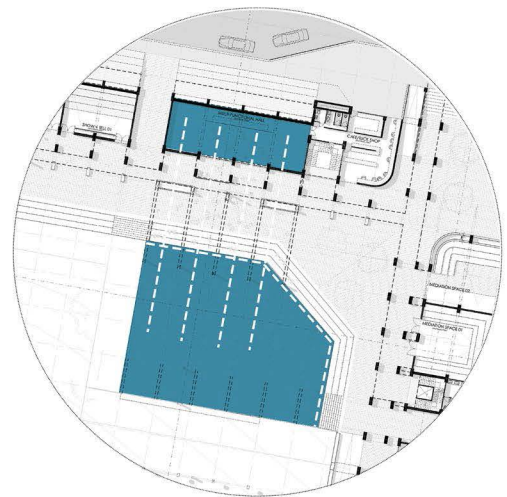
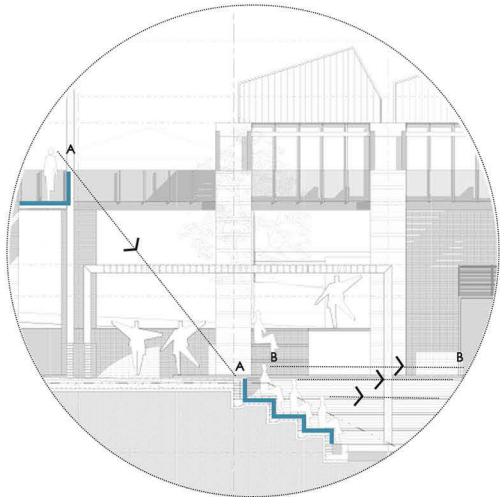


4.5

MEDIATION SPACES



PERFORMING + HOSTING SPACES



SHOW + TELL SPACES

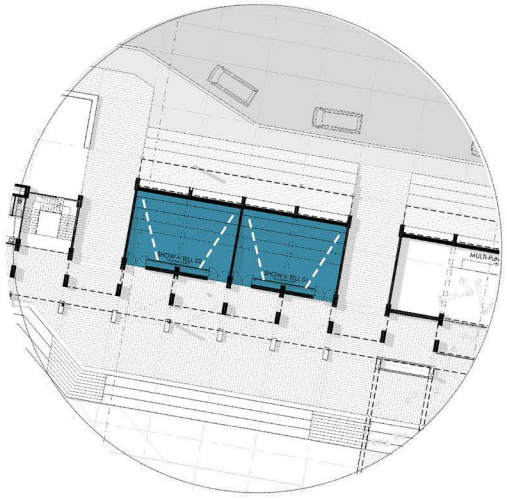
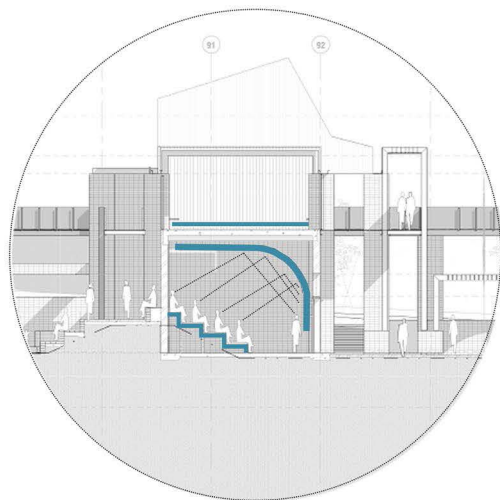


FIGURE 4.4 : Diagram illustrating the how the program intends to introduce the extraordinary through embodied practices (Author, 2018)

FIGURE 4.5 : Diagrams illustrating the types of dialogue spaces in section and on plan (Author, 2018)

4.3 STAKEHOLDERS

4.4.1 Municipality

- The Johannesburg Metropolitan Municipality
- Ward 70 Counsellors + Committee

4.4.2 Intermediary

- Public Benefit Organizations (PBOs): Legal Aid SA, Pro Bono Organization + South African Social Security Agency (SASSA)

4.4.3 Facilitators

- Community Policing Forum of Fleurhof (CPF)
- Fleurhof Primary School
- Fleurhof Future Stars Soccer Team
- Apostolic Group
- Our God Ministries Church

4.4.4 Users

- The 3 defined communities: 'before, during + after' Fleurhof

4.6

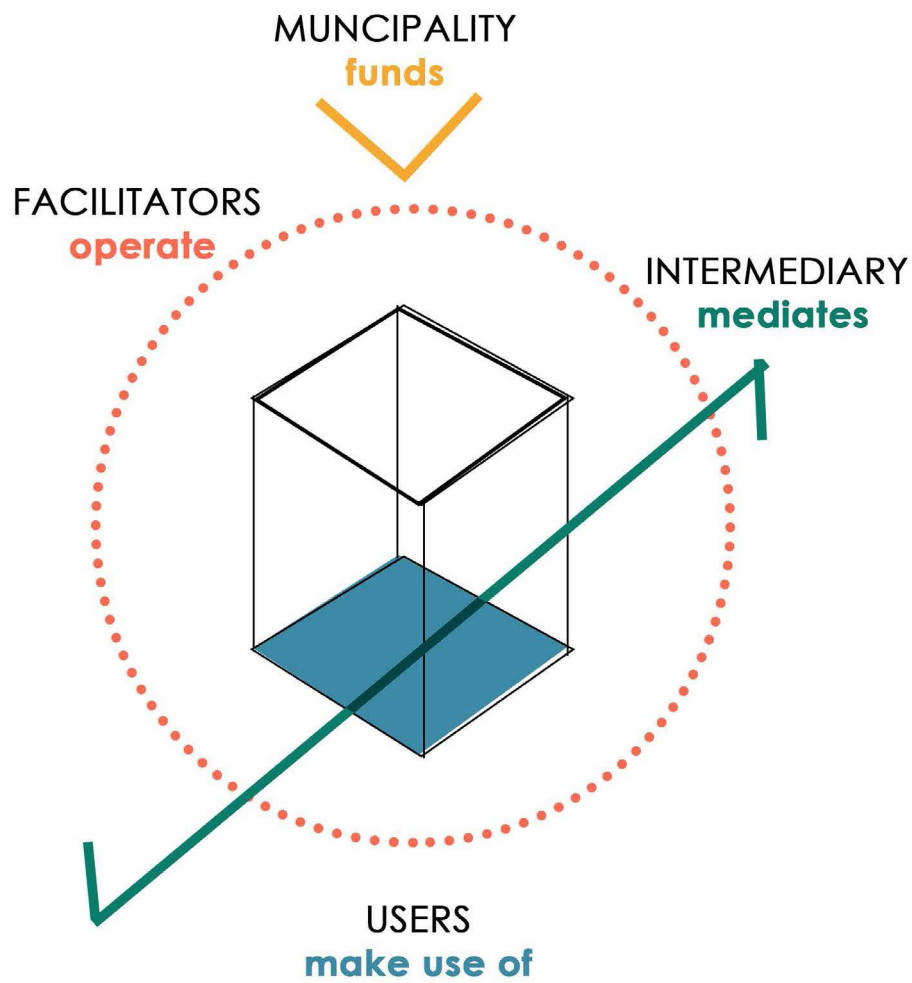


FIGURE 4.6 : Diagram illustrating the stakeholders of the intervention and their role to play within it (Author, 2018)

05 //



5.1 FUNCTIONAL PRECEDENT
5.2 FORMAL PRECEDENT
5.3 SPATIAL PRECEDENT



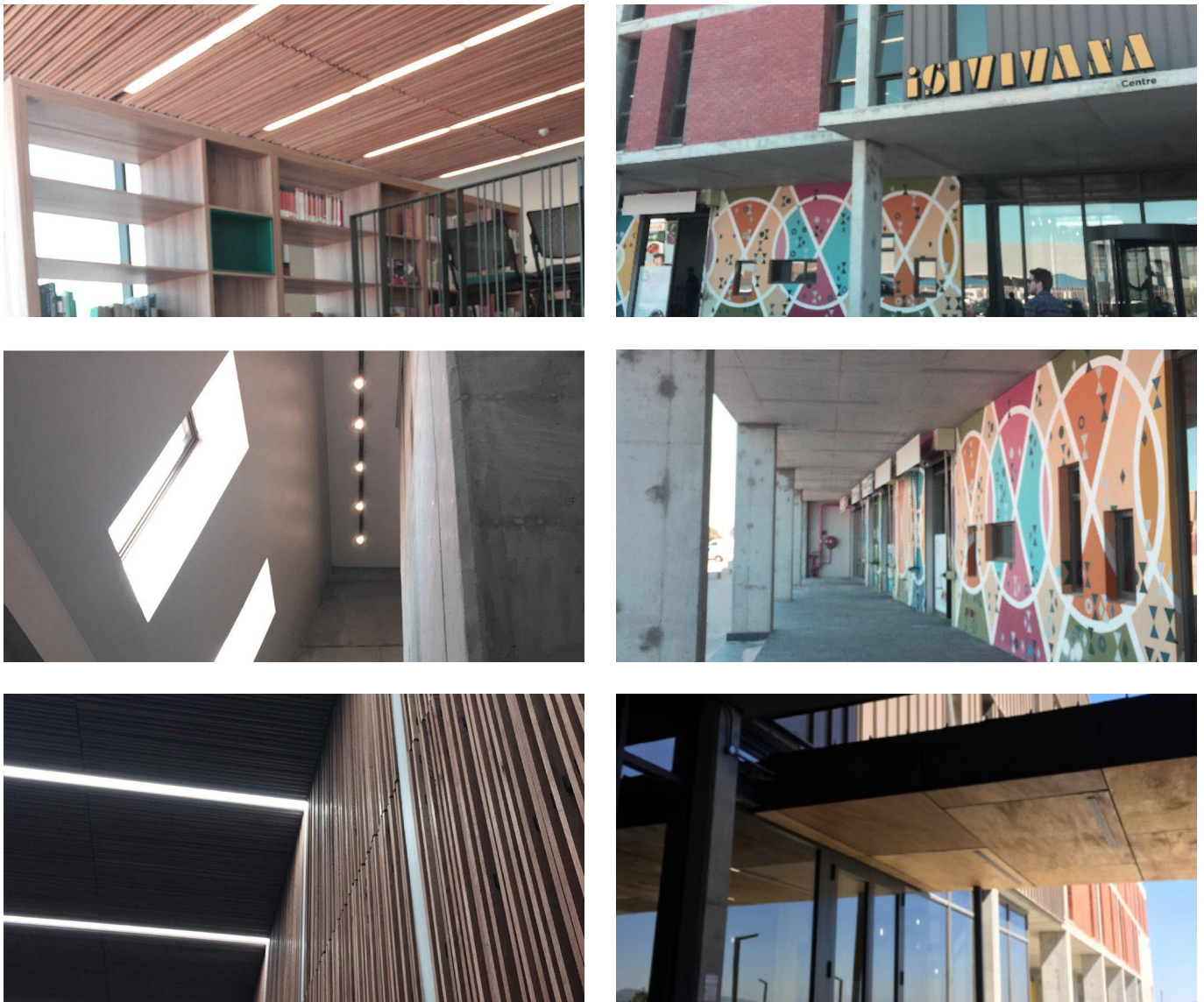
This chapter consists of three categories of precedent studies: functional, formal and spatial. The functional precedent provides an example of the type of programmes an alternative typology for conflict resolution might include. The formal precedent touches on the notions of public space. The spatial precedent that provides an example of sensory architecture that facilitates the notion embodied practices.

5.1 PRECEDENTS

The precedent component includes a functional precedent that provides an example of the type of programmes an alternative typology for conflict resolution might include: a formal precedent that touches on the notions of public space as well as a spatial precedent that provides an example of sensory architecture that facilitates the notion of embodied practices.

5.1

FIGURE 5.1 : Photo collage of the iSivivana Centre, taken during the Author's road trip (Author, 2017)



5.2 FUNCTIONAL PRECEDENT

5.2.1 The iSivivana Centre, Khayelitsha | GAPP Architects

LOCATION: Khayelitsha, Western Cape

DATE: 2017

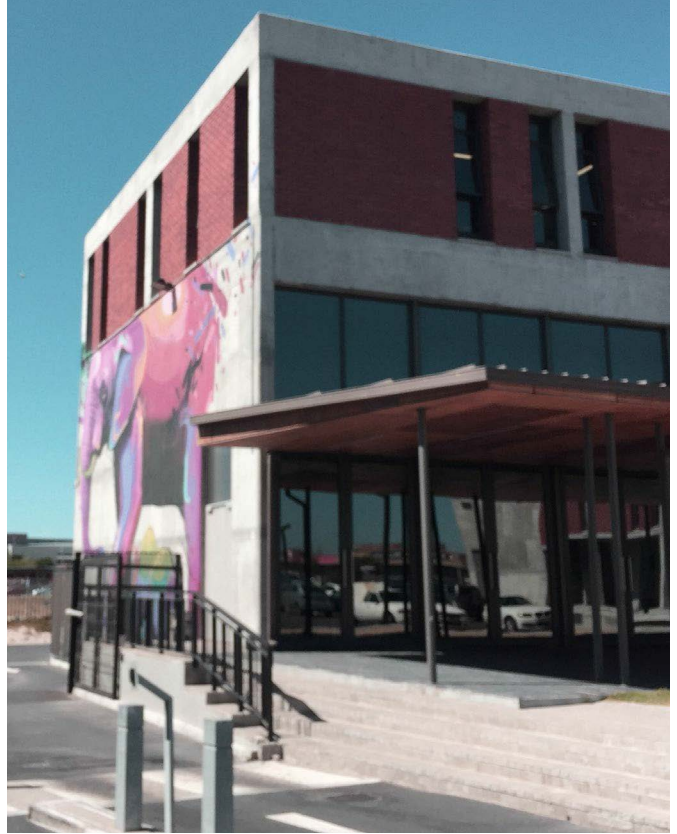
ARCHITECT: GAPP Architects

This precedent has been chosen as a functional precedent, providing an example of the type of programmes that can be incorporated when designing a new typology for conflict resolution. The centre has been chosen as an architectural example as it hosts programmes that contribute to both the *everyday* and the *extraordinary*, social support structures as well as social infrastructure.

The iSivivana Centre in Khayelitsha has recently been completed by GAPP Architects. The building is located alongside the award-winning Thusong Sports Facility designed by Makeka Design Lab. Under apartheid's grand narrative, Khayelitsha was designed as a dormitory township, where labourers came to sleep and then commuted back to the city in search of work. The iSivivana Centre is the first office block of its kind, with an infrastructure that serves its people. The centre currently houses offices for nine social justice organizations. The centre accommodates a retail edge of five shops; a restaurant; a library; an auditorium; a meeting hall; a classroom and a legal advice centre. The internal parking provides space for a netball/basketball court and an outdoor amphitheater. The local community has free access to the library and legal advice centre. The hall, auditorium and classroom are rented out at a modest fee. The legal advice centre prides itself on having many social justice organizations with overlapping areas of interest, allowing for collaborations and synergy. The centre is part of a larger urban vision within the Khayelitsha business district. Design decisions were guided by an honest approach in construction, creating a raw urban aesthetic.

The building serves as an architectural device that strives to integrate the residents of Khayelitsha through the juxta-positioning of programme. Using social justice support services, together with celebratory social programmes, the centre acts as a platform where the residents share services and experiences.

5.2



5.3

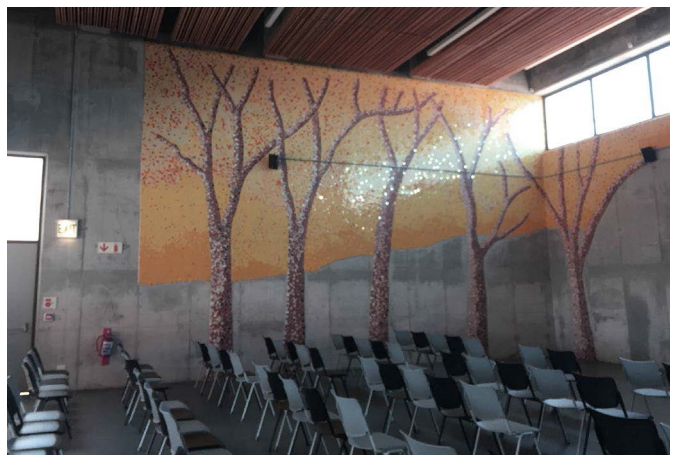


FIGURE 5.2 : Photograph of the iSivivana Centre taken during the Author's road trip (Author, 2017)

FIGURE 5.3 : Photograph of the iSivivana Centre's multi-purpose hall, taken during the Author's road trip (Author, 2017)

5.3 FORMAL PRECEDENT

5.3.1 The Sans Souci Cinema | 26'10 Architects & Lindsay Bremner

LOCATION: Kliptown, Soweto, Gauteng

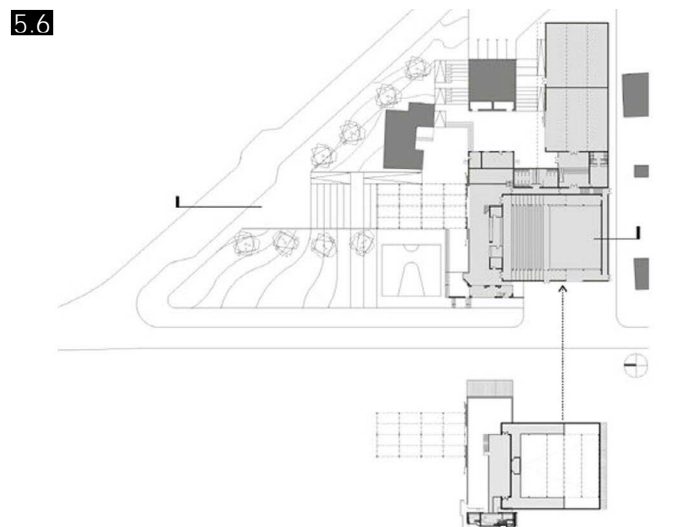
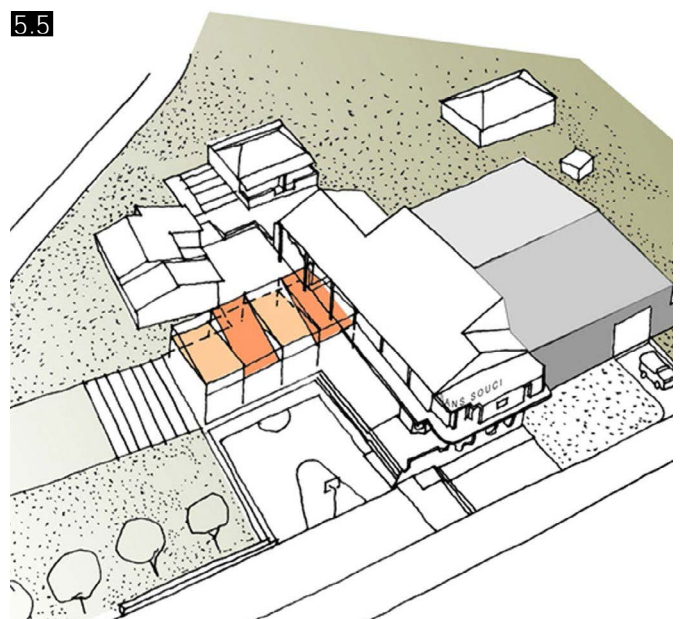
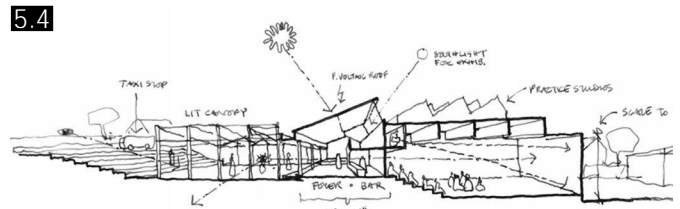
DATE: 2012

ARCHITECT: 26'10 Architects & Lindsay Bremner

This precedent has been chosen as a formal precedent that touches on the complexities of public space in Johannesburg. "The notion of public space in Johannesburg, as in many other cities, is becoming increasingly franchised and controlled, on the one hand, and neglected on the other hand." (26'10 Architects, 2012: 20). This abandonment of public space offered the intervention an opportunity to experiment with cultural networks and ways in which architecture can contribute to positive and interactive public spaces (26'10 Architects, 2012: 21). While addressing the notion of public space, this precedent provides an example of the types of forms that facilitate embodied practices and festival events.

The site is located in Kliptown, Soweto. The project entailed the rebuilding of the Sans Souci, a communal cinema and theatre burnt down in 1994. The original Sans Souci was established in 1948, hosting many historically significant South African performers in its day. The redevelopment of the cinema as a cultural and performance venue was largely due to Kliptown's lack of public and social infrastructure that facilitated expression of identity or political meetings. Through conceptualizing the rebuilding of the cinema, the team decided that "the existing ruin needed to be given a new meaning over time through events and incremental architectural intervention" (26'10 Architects, 2012: 21). Events include: film screenings; film and dance festivals; dance training; and film production.

The architectural intervention includes a flexible approach to urban informality. The building strives to accommodate local narratives and identities through the sharing of festival events. In addition, the design challenges the notion of public space by creating architecture that facilitates embodied practices.



5.4 SPATIAL PRECEDENT

5.4.1 Cristo Obrero Church | Eladio Dieste

LOCATION: Atlántida, Uruguay.

DATE: 1952

ARCHITECT: Eladio Dieste

This spatial precedent has been chosen as an example of sensory architecture that contributes towards the facilitation of embodied practices through the use of space (volume, light, and sound), geometries (rhythm, proportion, and harmony) and material.

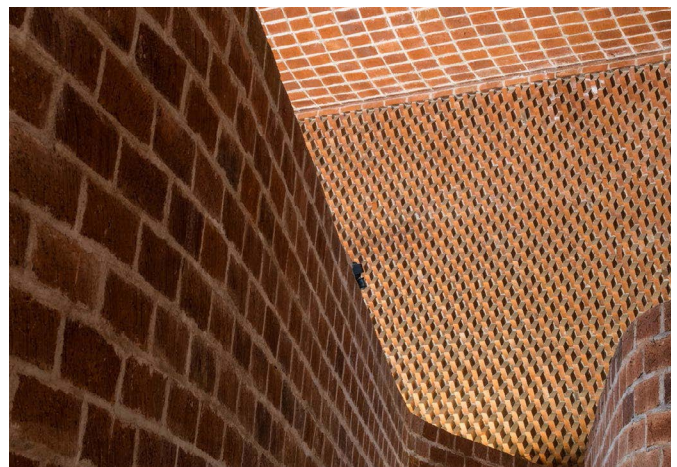
The church is located in Uruguay. The architect uses a small selection of materials, together with simple forms, to allow natural light to cast the interior spaces. Using the repetition of simple geometries, Dieste creates architecture that informs a rhythm in the space. The use of masonry allows for a wide range of spatial arrangements that facilitates a sense of harmony within the church. The use of brick allows for soft edges that mimic the movements that will occur in the space. The brickwork allows for a thermally sound space, contributing to the festal events that the architectural intervention will house.

Dieste's church is an example of the manner in which architecture can facilitate a sensory experience, and how the use of material can animate movement within a space. Festal events are animated within this space in a highly effective way.

5.7



5.8



5.9

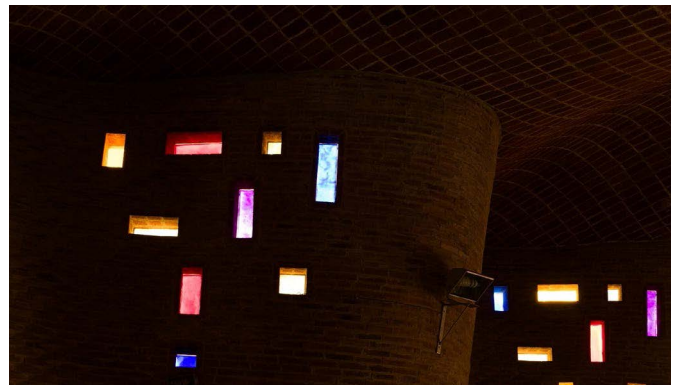


FIGURE 5.4 : *Concept Section (26'10 Architects, 2012)*

FIGURE 5.5 : *New Public Space and Performance Space (26'10 Architects, 2012)*

FIGURE 5.6 : *Plan (26'10 Architects, 2012)*

FIGURE 5.7 : *Facade Photograph (Gonzalo Viramonte, 2018)*

FIGURE 5.8 : *Interior Photograph (Gonzalo Viramonte, 2018)*

FIGURE 5.9 : *Light quality Photograph (Gonzalo Viramonte, 2018)*

06 / /



6.1 DESIGN EXPLORATION
6.2 DESIGN ITERATIONS
6.3 DESIGN DIAGRAMS



This chapter focuses on narrating the design development process: firstly, by synthesizing the design exploration; secondly, by chronologically unpacking the design iterations; and thirdly, by explaining the final iteration through a series of design diagrams.

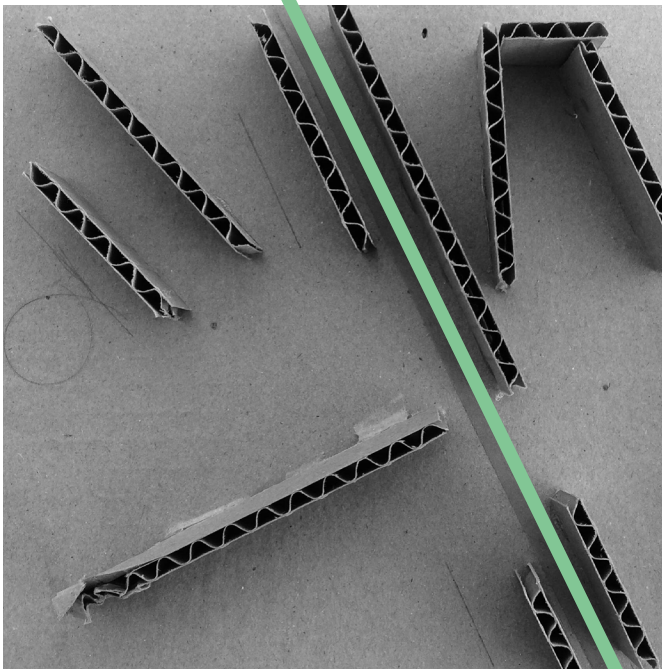
6.1 DESIGN EXPLORATION

6.1.1 design considerations

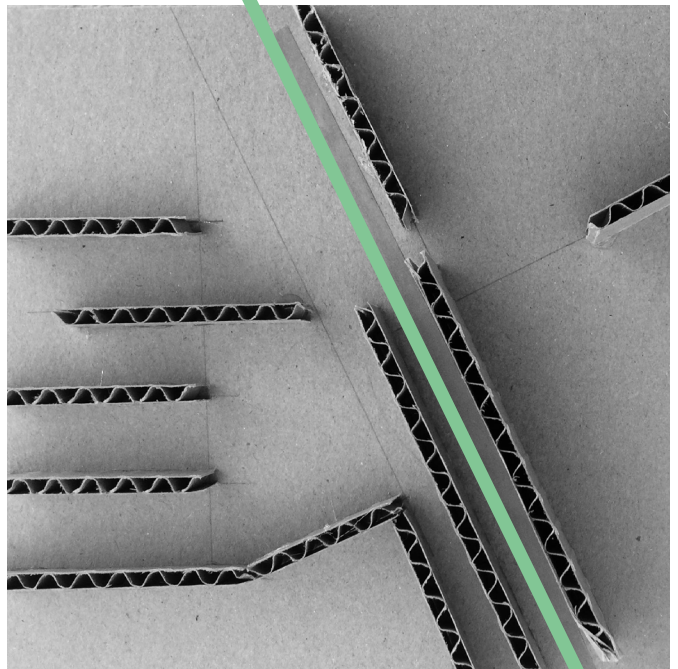
The design development process was fundamentally guided by an understanding of site, theory and programme, as explained in previous chapters. From this understanding, the following design considerations were developed:

1. Access
2. Visibility
3. Orientation
4. Threshold

6.1



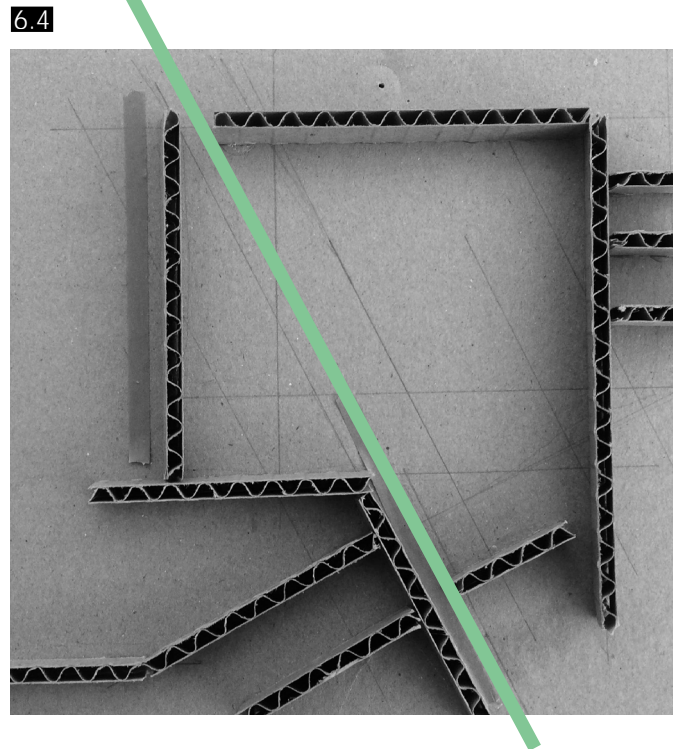
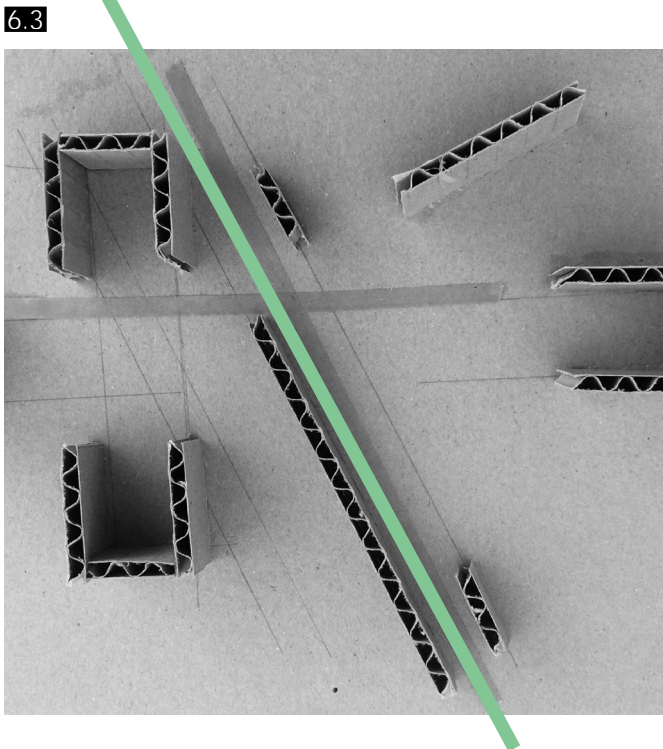
6.2



6.1.2 design intentions

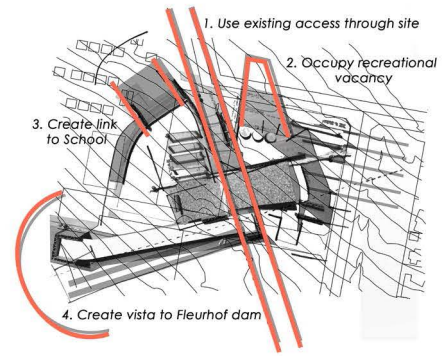
Building on the architectural intentions explained at the beginning of the dissertation, the design intentions include investigating the notions of an alternative typology for conflict resolution through the introduction of alternative forms of dialogue. By inserting a new condition into the context, the design intends to introduce new relationships, shift territories and essentially facilitate a 'collective perception' amongst residents. The design intentions include exploring ways in which an architectural intervention can facilitate the process of integration by animating embodied practices, allowing the user to transcend from their everyday to an extraordinary space.

FIGURE 6.1-4 : Initial design model explorations considering access, visibility, orientation and threshold (Author, 2018)



6.5

RECOGNIZE
existing territories



6.1.3 horizontal development

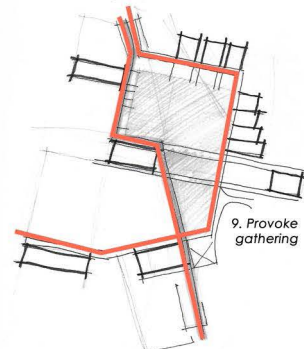
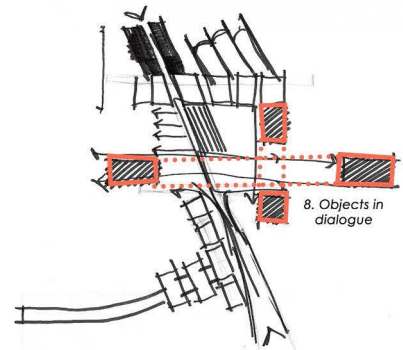
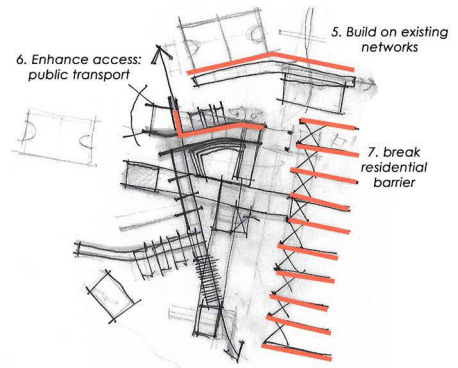
The design progressed through a series of horizontal iterations, which involved various drawings and model explorations. As shown in the images alongside, the iterations attempted to *recognize* existing territories, initiate *conservation* between objects and *restore* points of gathering.

Recognize existing territories: recognizing the existing access through site became one of the early design drivers. Through an iterative process the design developed from one that enclosed the existing access through site to one that gradually stepped away from it, in order to encourage a dialogue between the existing and the inserted condition.

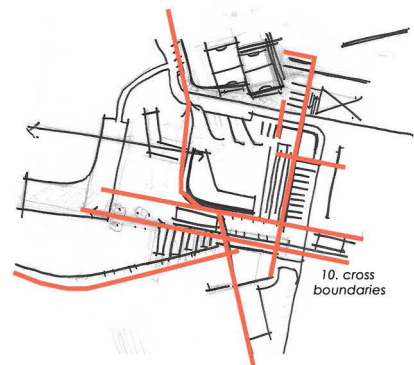
Conservation between objects: in an attempt to initiate dialogue the design initially focused on placing objects in direct relation and sight to one another. As the design developed it became apparent that the design should rather focus on creating direct sight-lines for the user as a measure of orientation.

Restore points of gathering: in order to facilitate points of gathering the iterations focused on activating neighbouring sites on an urban design scale.

CONVERSE
between objects

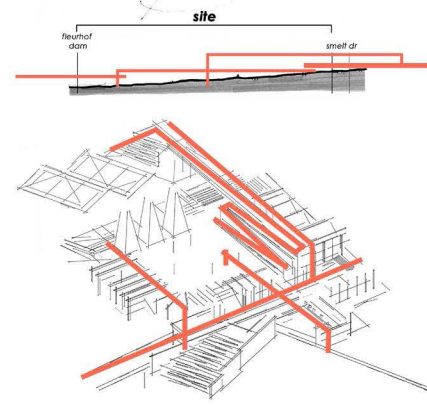
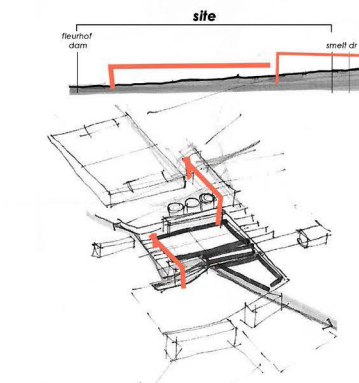
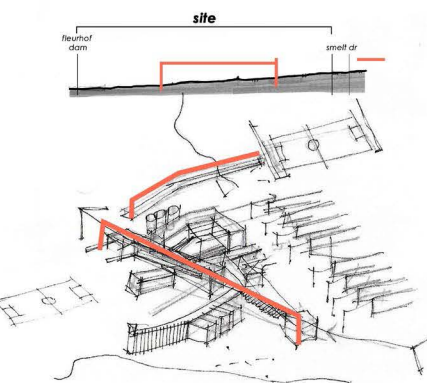
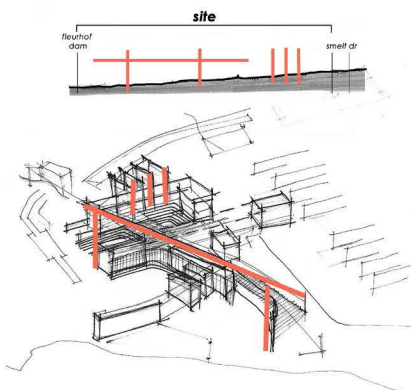
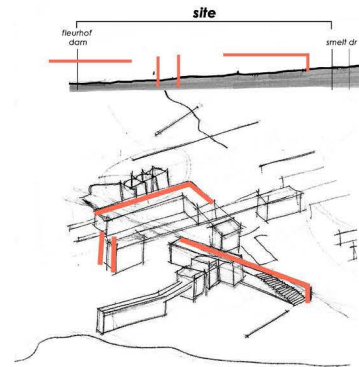


RESTORE
points of gathering

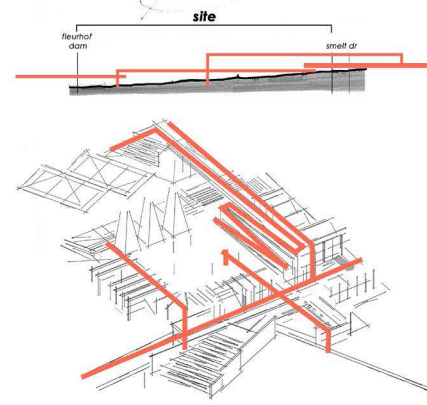
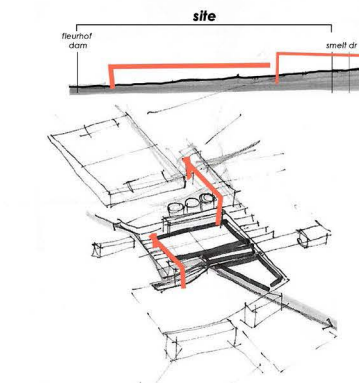


6.6

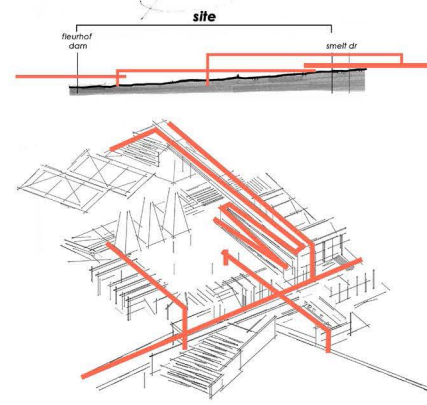
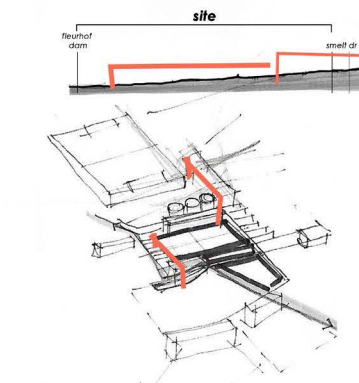
defining the
GROUND



breaking
GROUND



common
GROUND



6.1.4 vertical development

The design progressed through a series of vertical iterations, involving a series of drawings and model explorations. As illustrated alongside, the iterations developed vertically through an exploration of *defining ground*, *breaking ground* and establishing *common ground*.

Defining ground: was explored through an iterative process of demarcating and wrapping spaces.

Breaking ground: was explored through recognizing the presence and absence of space, attempting to introduce permeability to the scheme.

Common ground: was initially addressed by creating a level ground plane. Through further iterations it became clear that the building should rather step naturally with the slope.

FIGURE 6.5 : Diagram sketches of the horizontal development of the design (Author, 2018)

FIGURE 6.6 : Diagram sketches of the vertical development of the design (Author, 2018)

6.2 DESIGN ITERATIONS

As previously discussed in the methods and methodology, an iterative approach to design has been used to develop a series of informed design responses. The iterative process will now be discussed, starting with the urban design iterations followed by the design iterations.

6.2.1 urban design iterations

As previously mentioned, the chosen site is situated at the point of intersection between the diverse residents residents. Located on smelt ave and winze drive. Its northern boundary is defined by a recreational buffer zone between the industrial strip and the residential fabric. The urban vision developed by occupying that gap with a multipurpose sports ground for the neighboring schools and residents. Fleurhof dam and the derelict mining landscape define the southern boundary; the urban vision looks at introducing recreational facilities for the dam and supporting picnic facilities. The old residential suburb defines the eastern edge; the urban vision looked at proposing platforms for the identified mobile economy, introducing a work live notion. The eastern edge is defined by Fleurhof primary; the scheme developed by supporting the school with a before and after care facility as well as sports and recreational grounds.

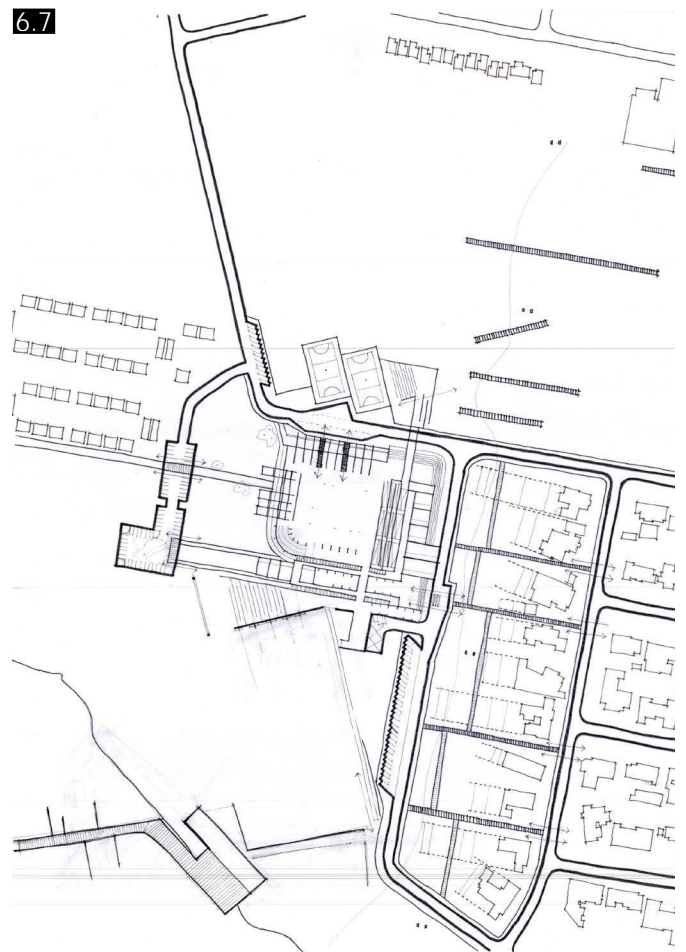
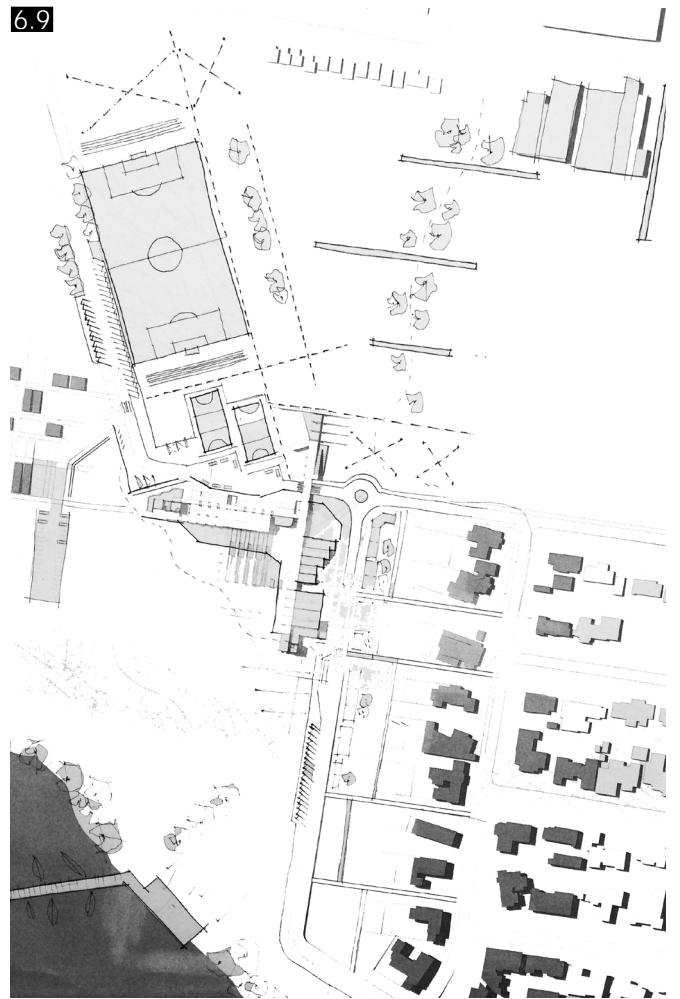
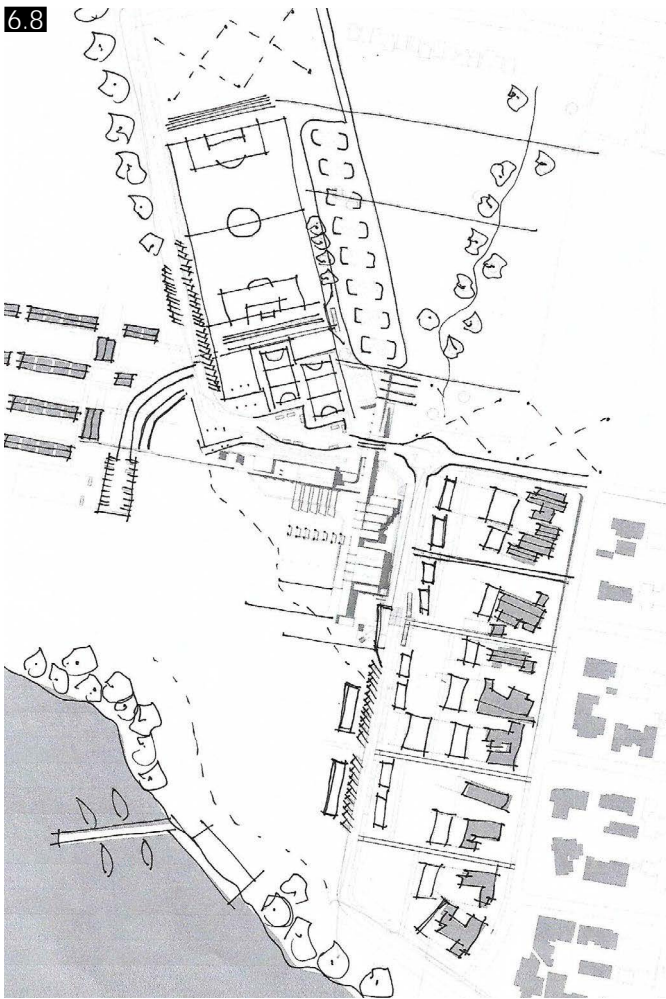


FIGURE 6.7-9 : Urban design iteration sketches (Author, 2018)



6.2.2 design iterations one to eight

01 + 02
iteration one + two

Considering the existing site conditions and the programmatic requirements for the alternative typology, the following informants guided the design explorations in the first and second iterations:

Highlighting the existing access on site as a continuous notion with activity alongside it.

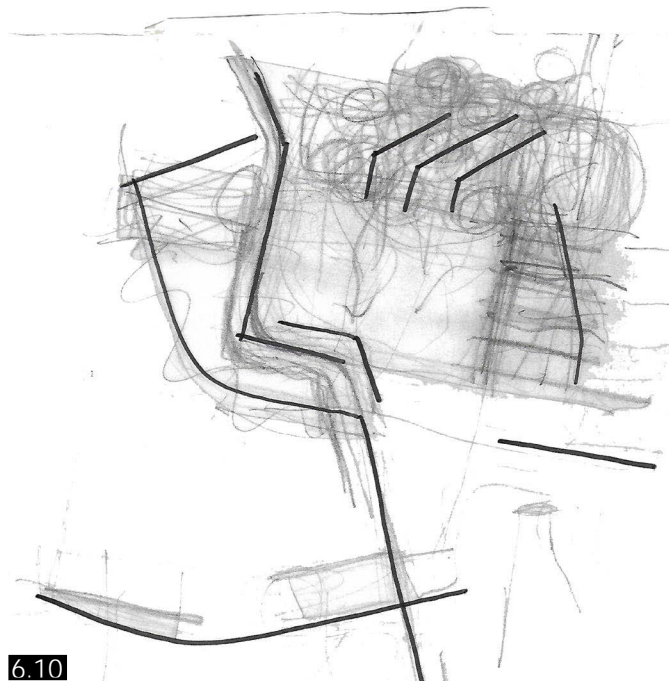
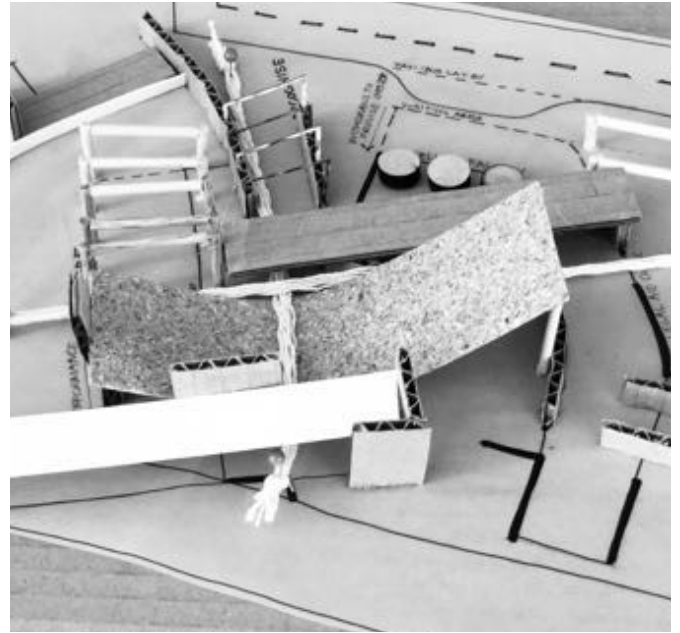
Testing the notion of building as threshold.

Exploring how an architectural intervention is able to demarcate space with the presence and absence of space.

The initial design explorations illustrated the importance of access through the site, although they explored the notion of one entry and exit point, rather than looking at multiple access points. In an attempt to create 'building as threshold' the arrangement of spaces resulted in uncomfortable leftover spaces rather than the intended layered threshold experience.

01

6.11



6.10

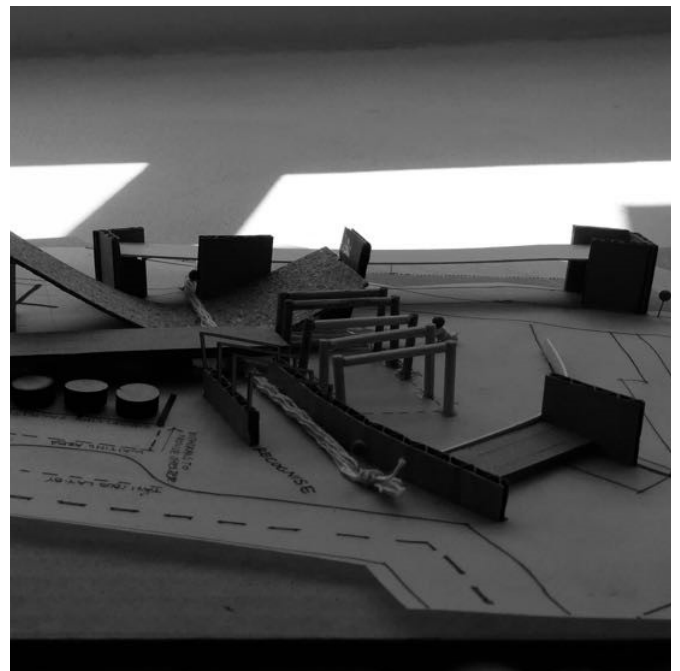
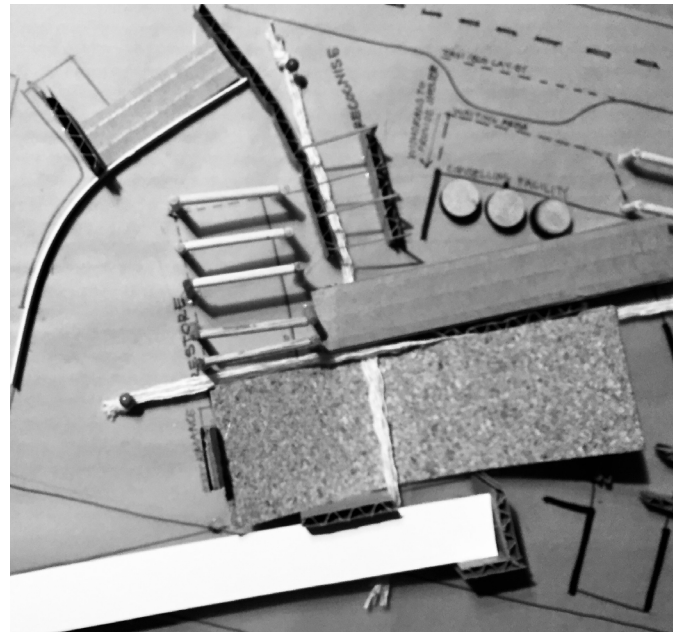
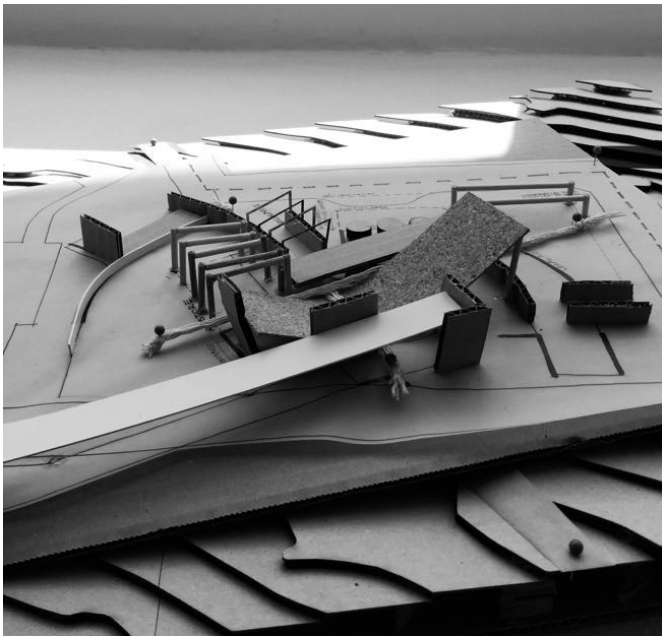


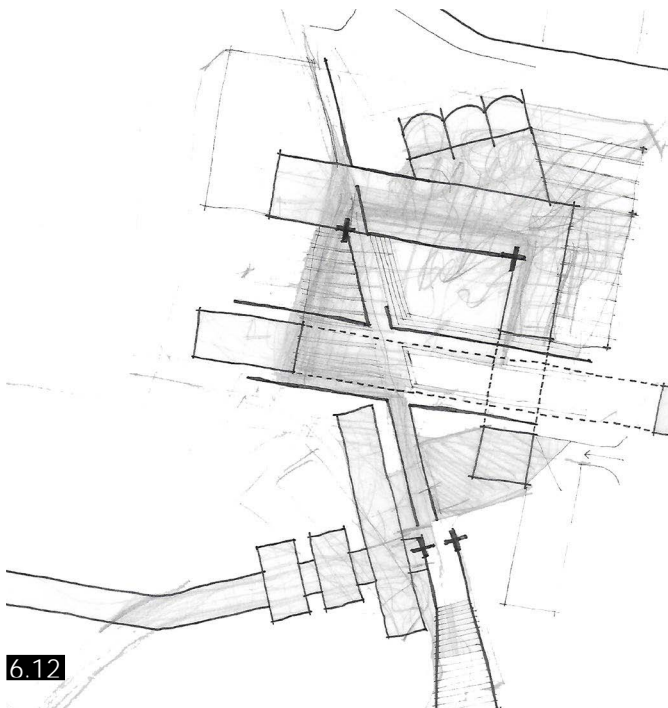
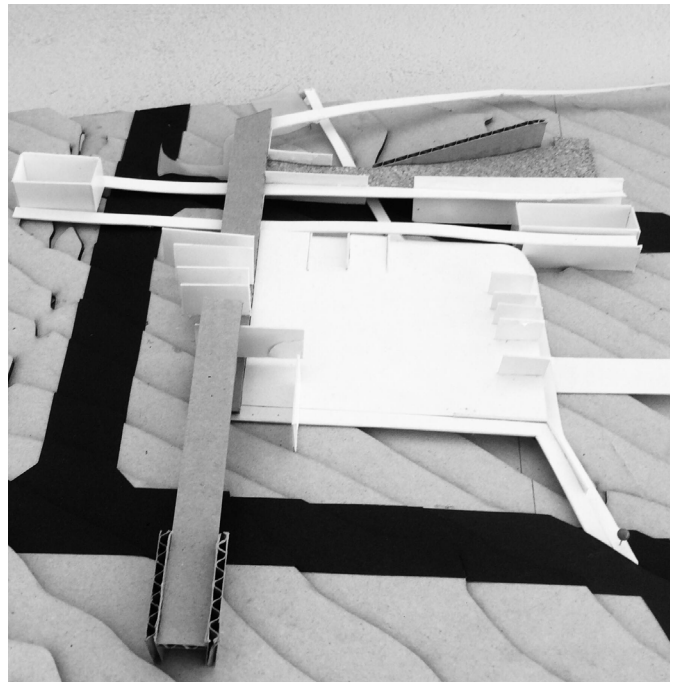
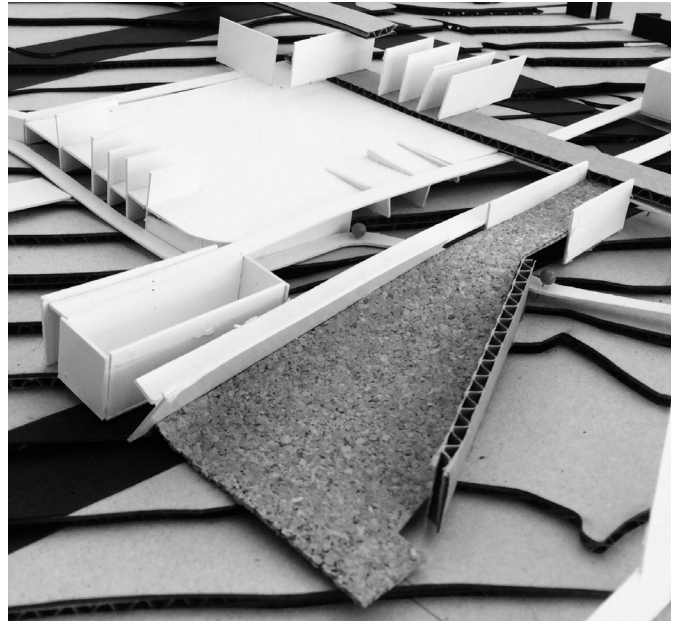
FIGURE 6.10 : Design iteration one on plan (Author, 2018)

FIGURE 6.11 : Design iteration one model exploration (Author, 2018)



02

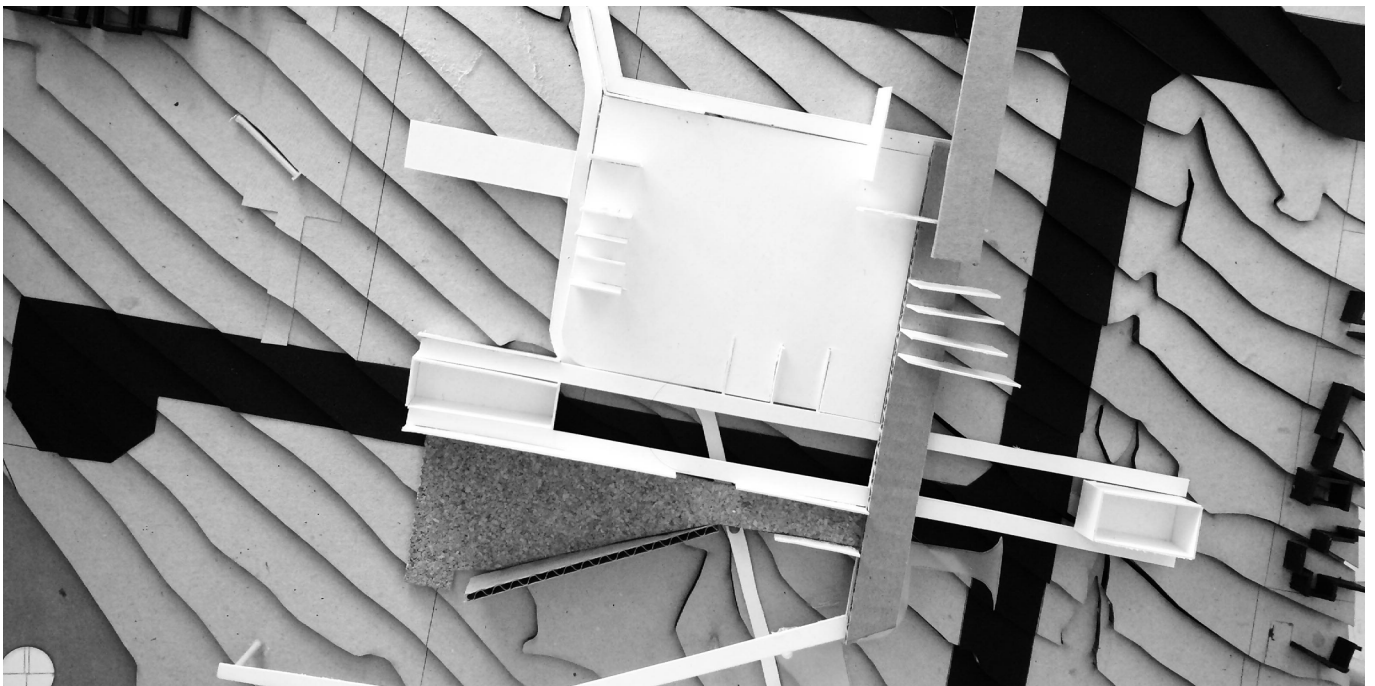
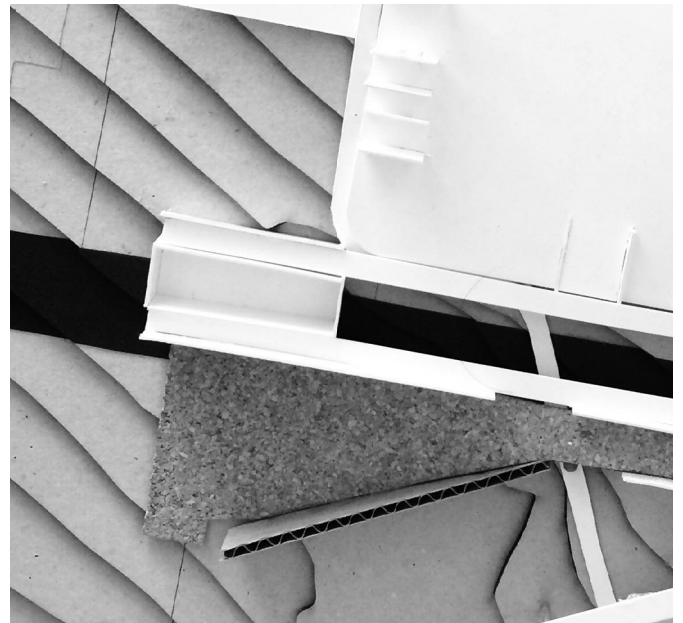
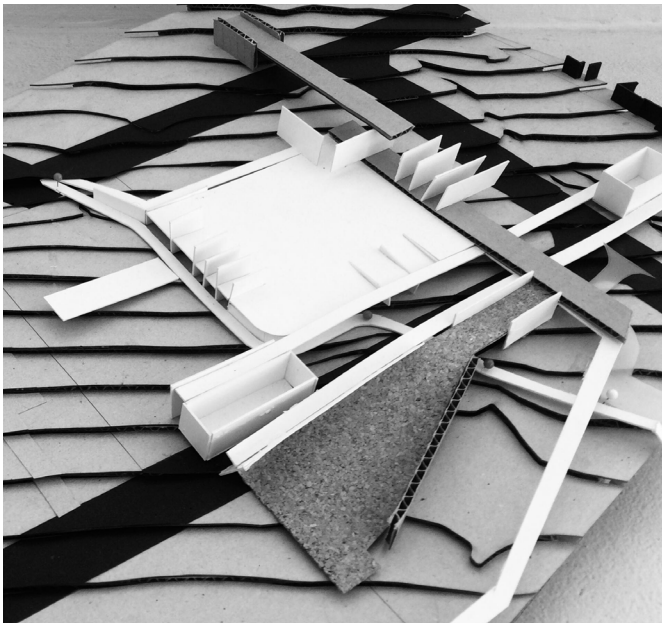
6.13



6.12

FIGURE 6.12 : Design iteration two on plan (Author, 2018)

FIGURE 6.13 : Design iteration two model exploration (Author, 2018)



03 + 04 + 05

iteration three + four + five

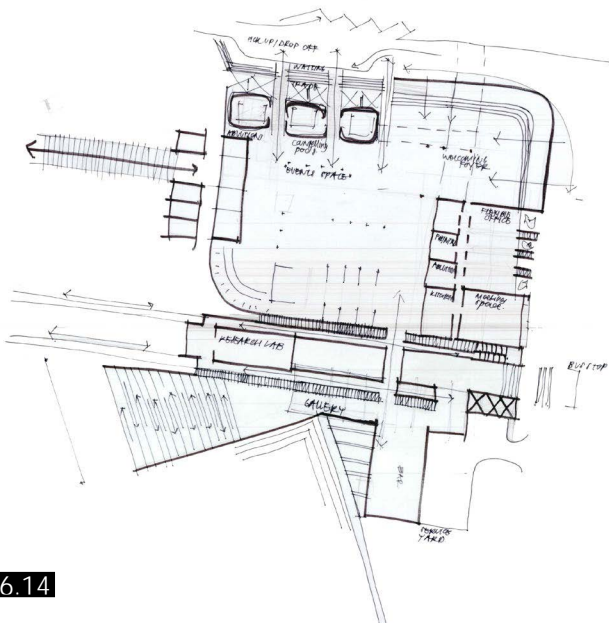
Considering the uncomfortable leftover spaces in the previous iterations, the third, fourth and fifth explorations focused on establishing common ground. These iterations focused the nature of hosting festal events with the help of the following informants:

Building as a series of separate components that define the boundary of an internal events space.

Attempting to illustrate common ground by creating a flat ground plane, serviced by central circulation service cores and ramps.

Proposing retail and commercial activity alongside the edges of the intervention in an attempt to activate an informal urbanity on site.

The spatial response resulted in an intervention that focused on the scenario of one event, rather than embracing the reality of events occurring simultaneously. Even though the exploration achieved a sense of 'common ground' through the leveling out of the ground plane, the explorations failed to represent the natural slope of the site.



6.14

03

6.15

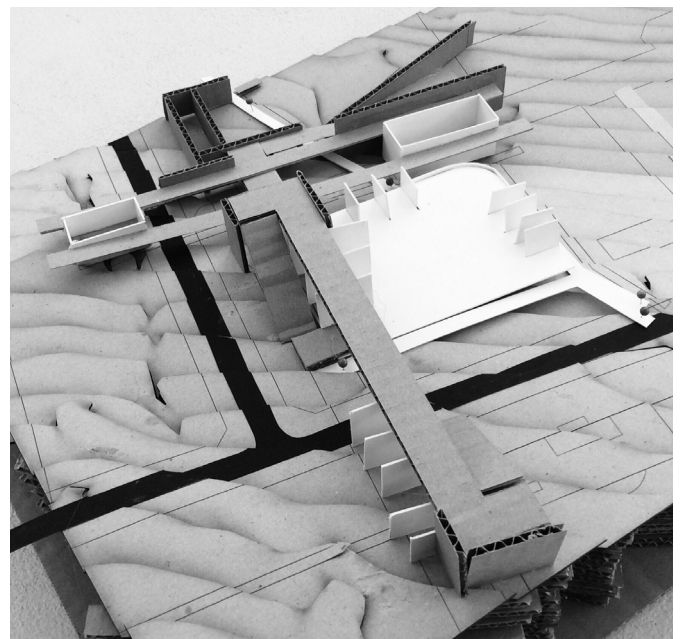


FIGURE 6.14 : Design iteration three on plan (Author, 2018)

FIGURE 6.15 : Design iteration three model exploration (Author, 2018)

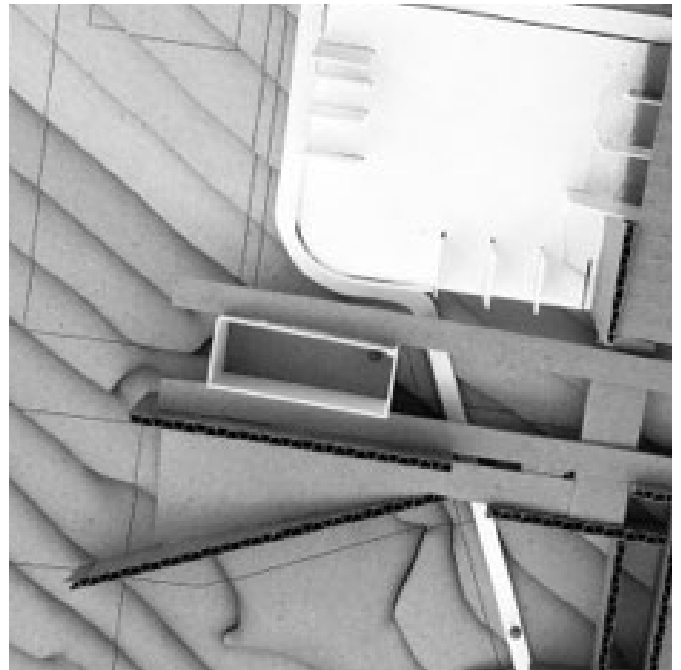
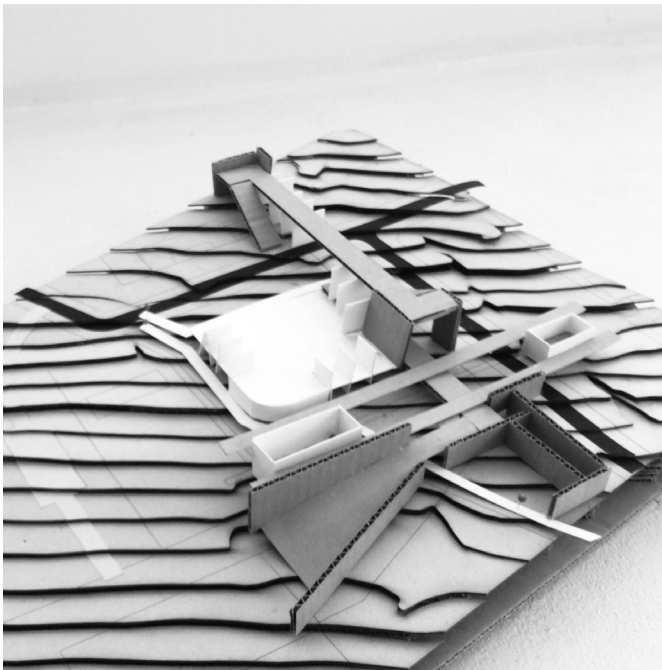
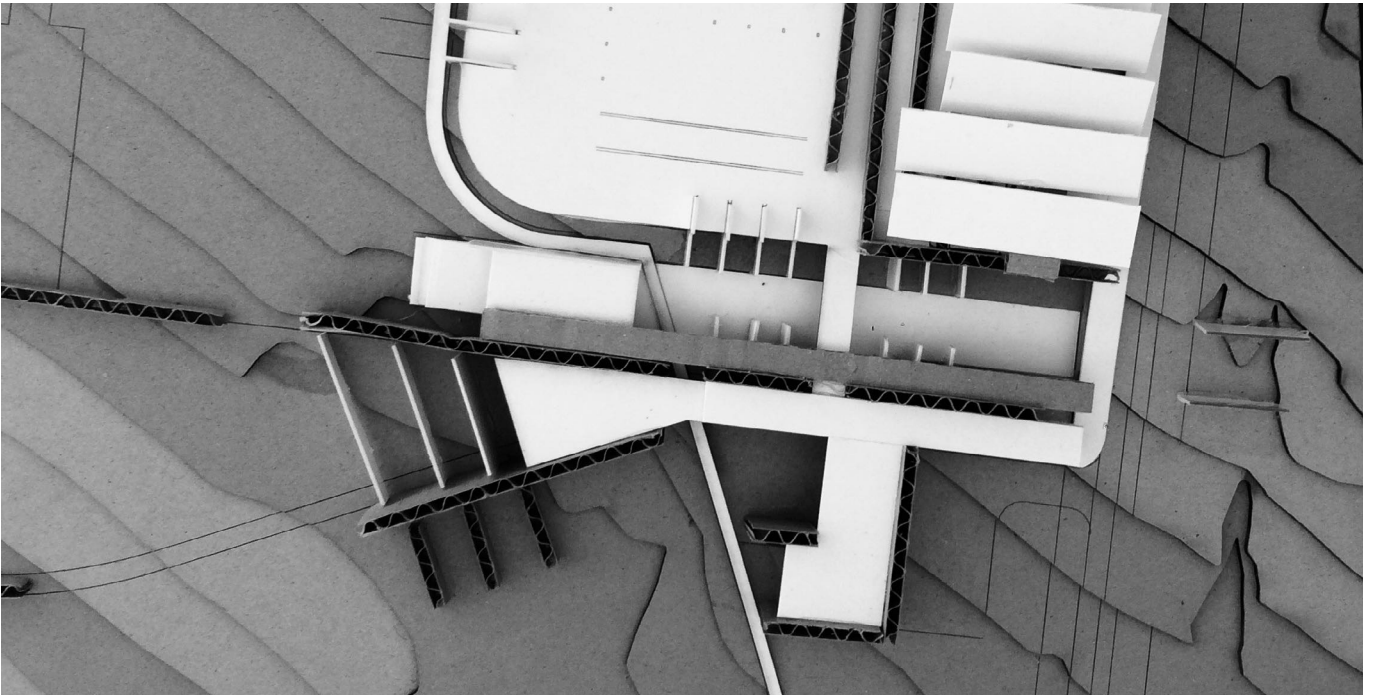
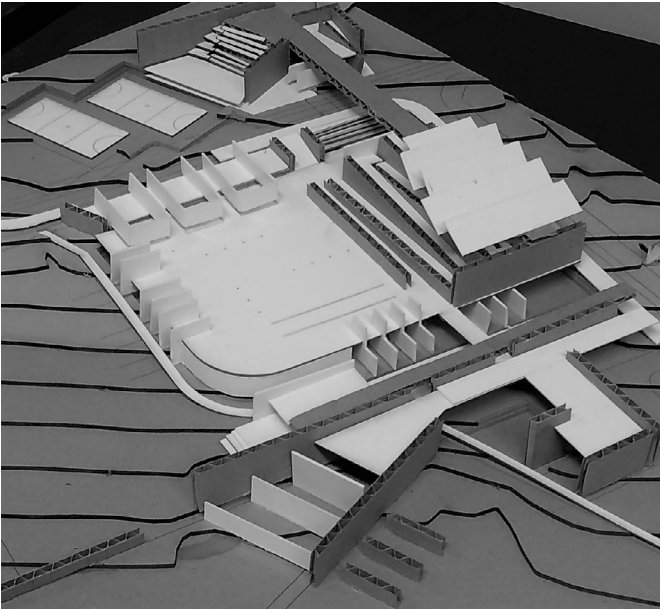


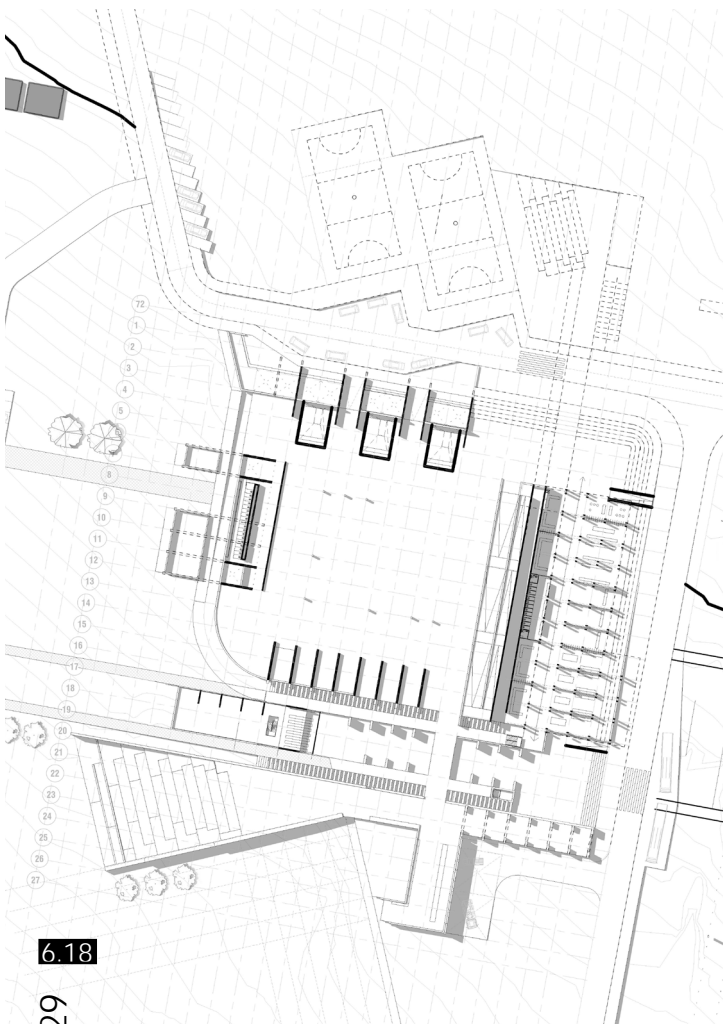
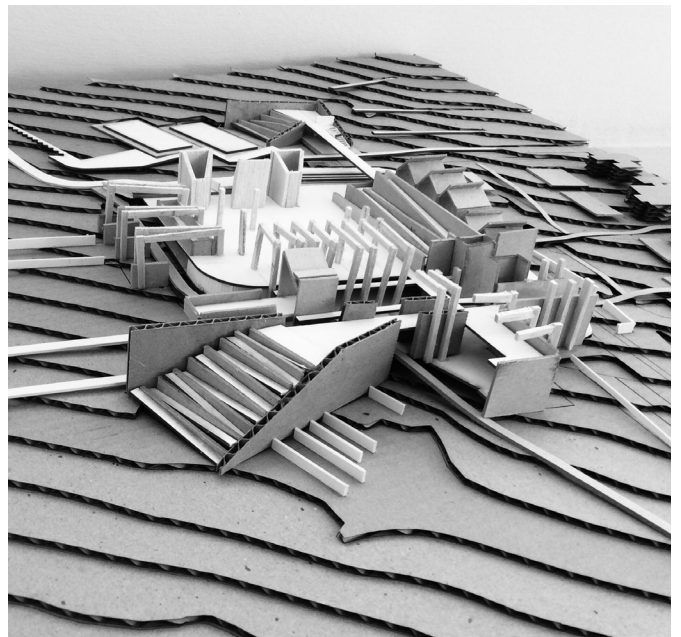
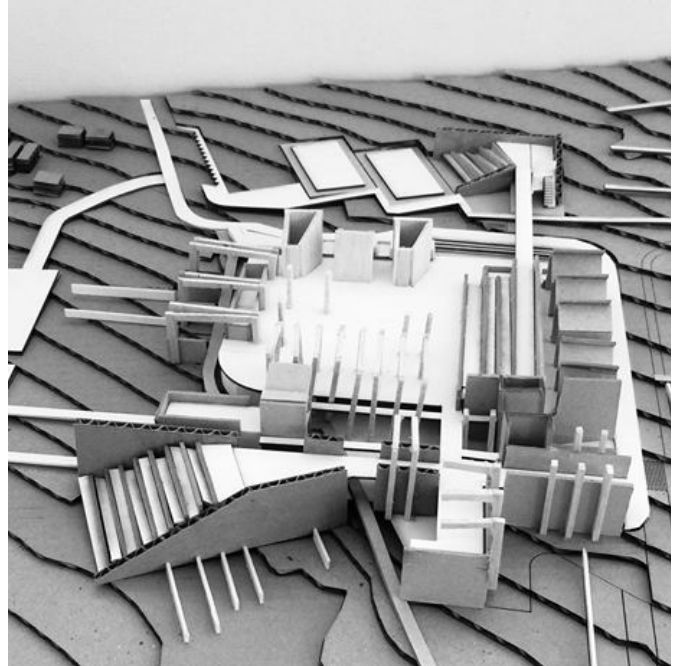
FIGURE 6.16 : Design iteration four on plan (Author, 2018)

FIGURE 6.17 : Design iteration four model exploration (Author, 2018)



05

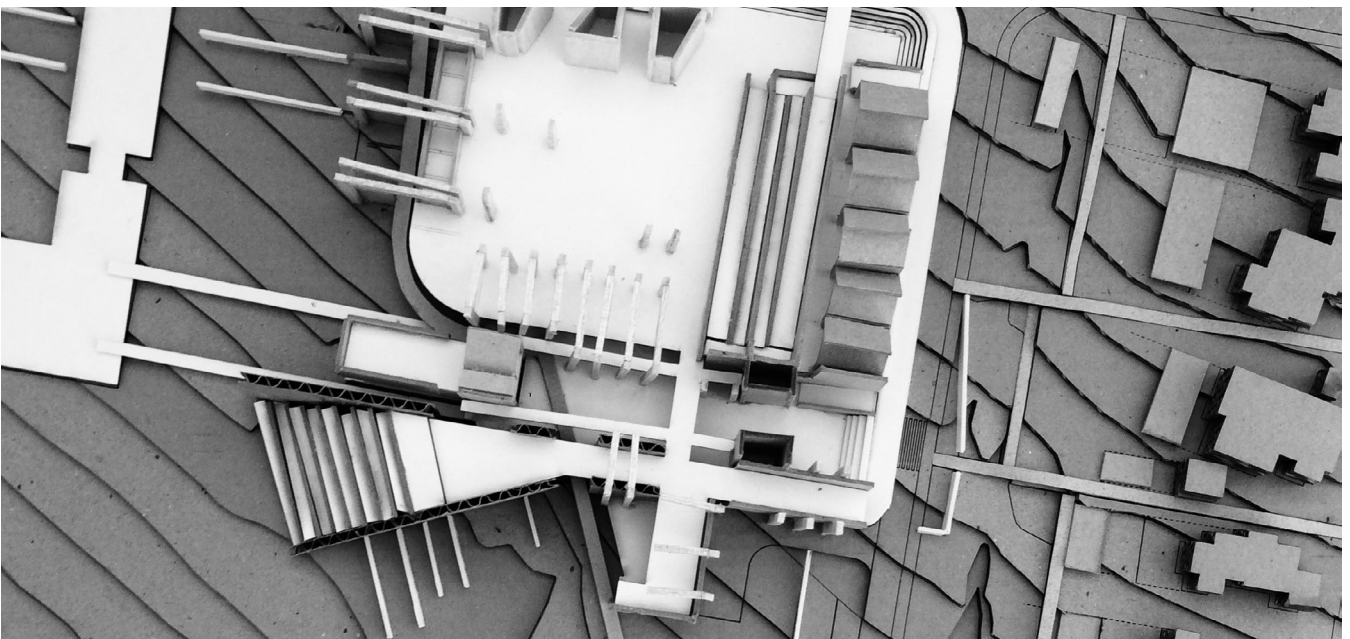
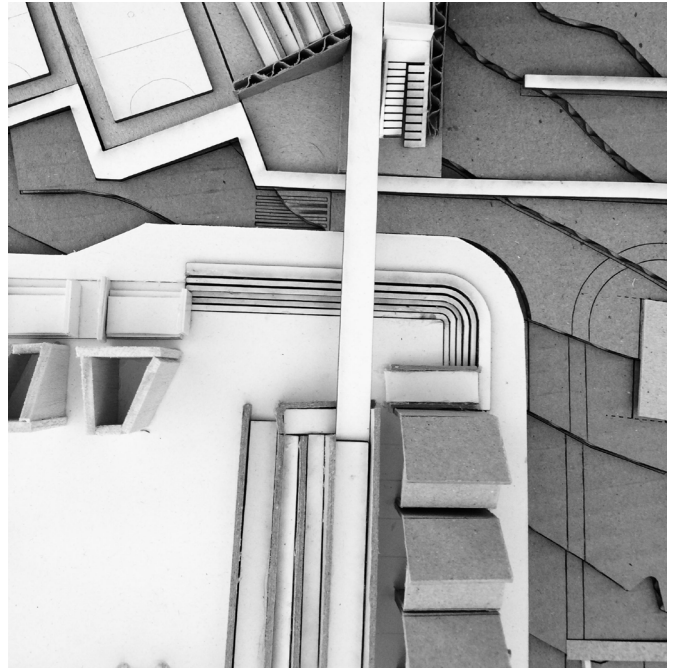
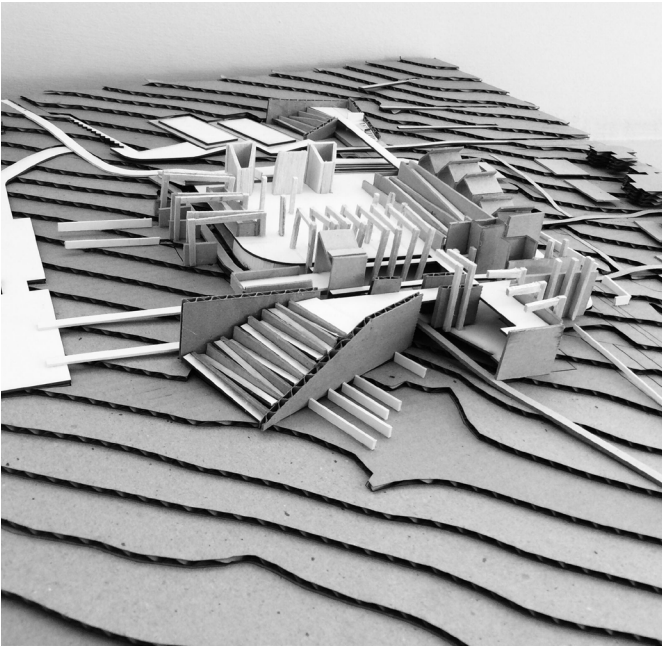
6.19



6.18

FIGURE 6.18 : Design iteration five on plan (Author, 2018)

FIGURE 6.19 : Design iteration five model exploration (Author, 2018)



06 + 07

iteration six + seven

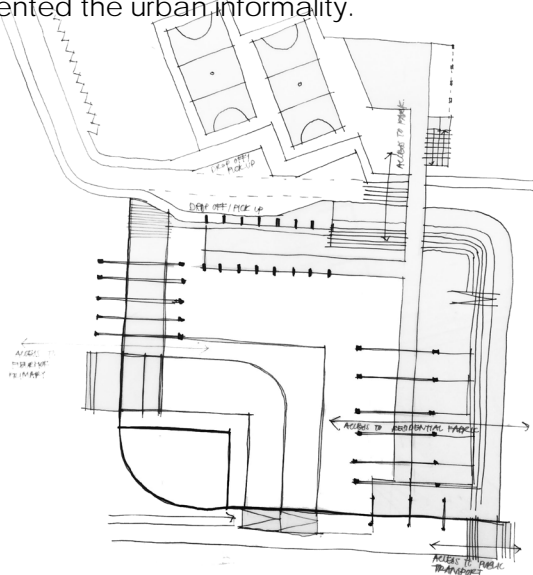
Considering the natural slope of the site and attempt to create magnets of appropriation, the following design explorations explored the following spatial arrangements which were created using the following informants, as illustrated.

Allowing the building to step down as the site steps down, embracing the natural amphitheater offered by the site.

Removing barriers created by the circulation cores in the previous iterations.

Designing magnets of appropriation through the use of seating and shading as the design steps down to the terraced events space

Although the intervention was beginning to respond to the slope of the site, the building masses failed to step down with the site. Even though the fifth and sixth iterations explored a more subtle approach with the landscape, the explorations had lost the permeability which represented the urban informality.



6.20

06

6.21

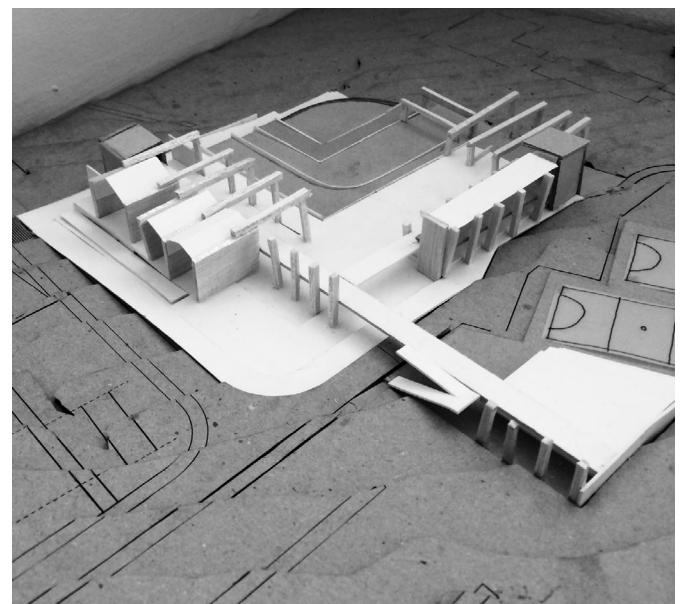
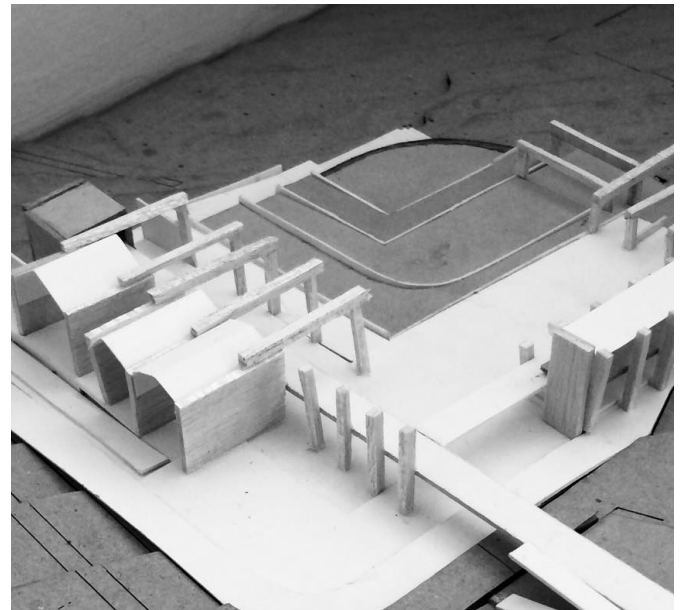
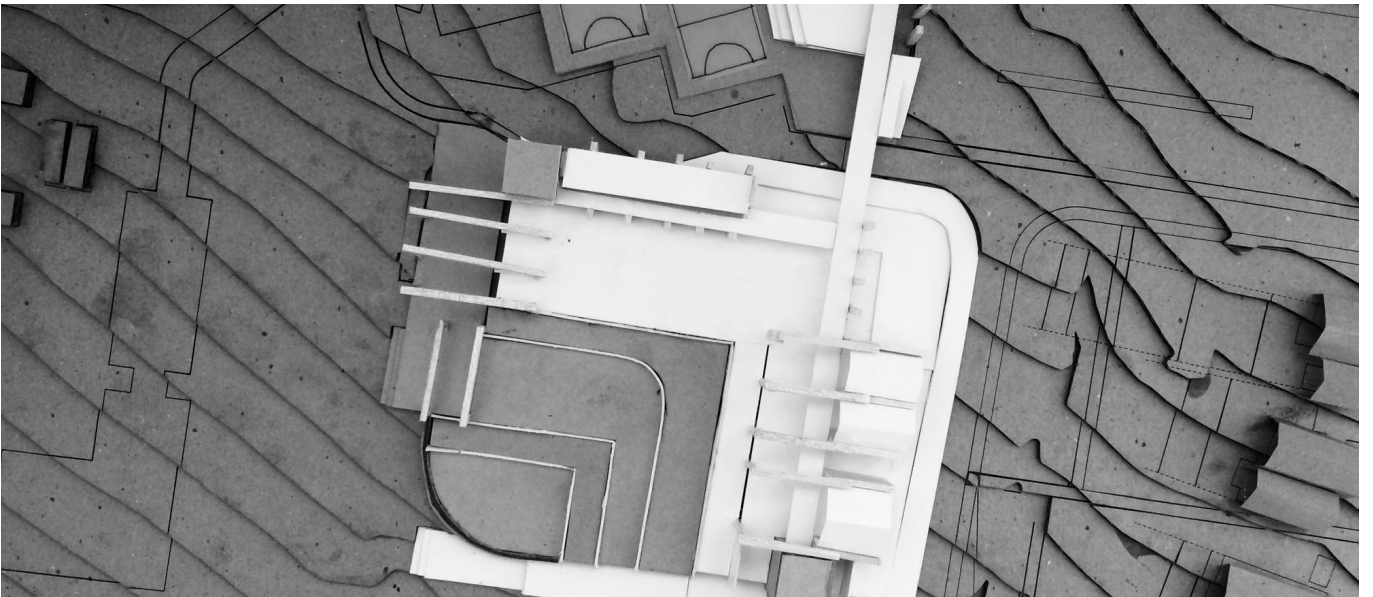
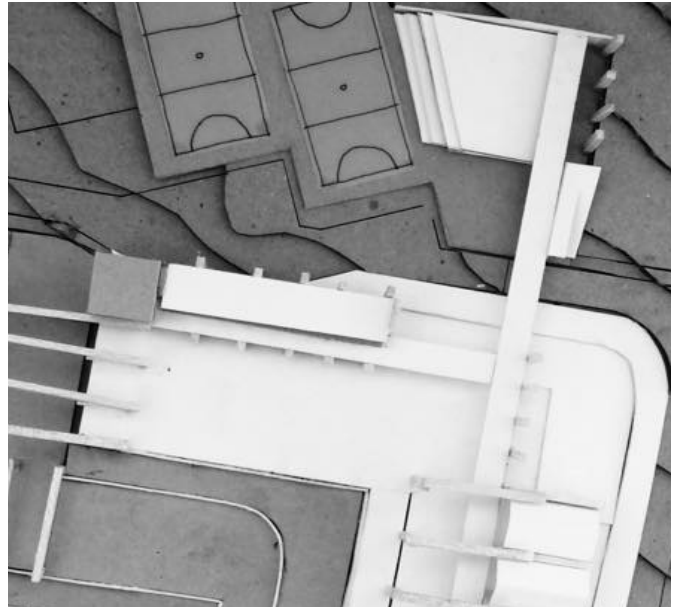
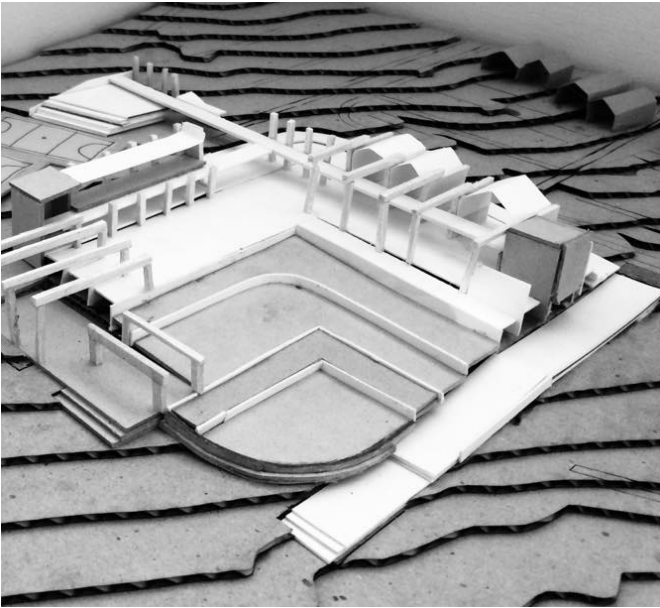


FIGURE 6.20 : Design iteration six on plan (Author, 2018)

FIGURE 6.21 : Design iteration six model exploration (Author, 2018)

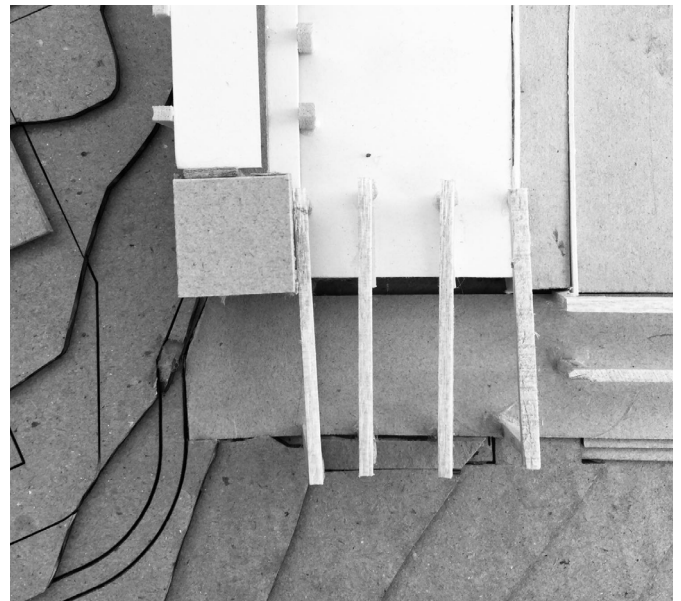
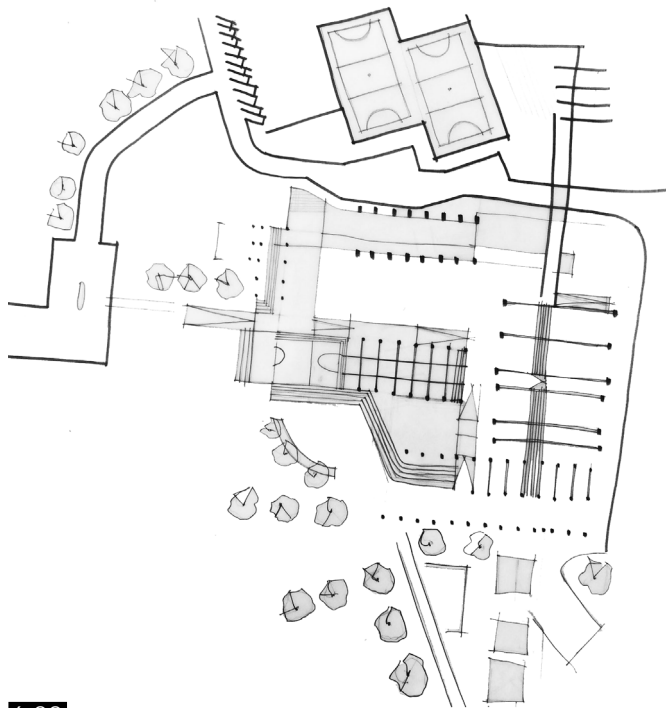
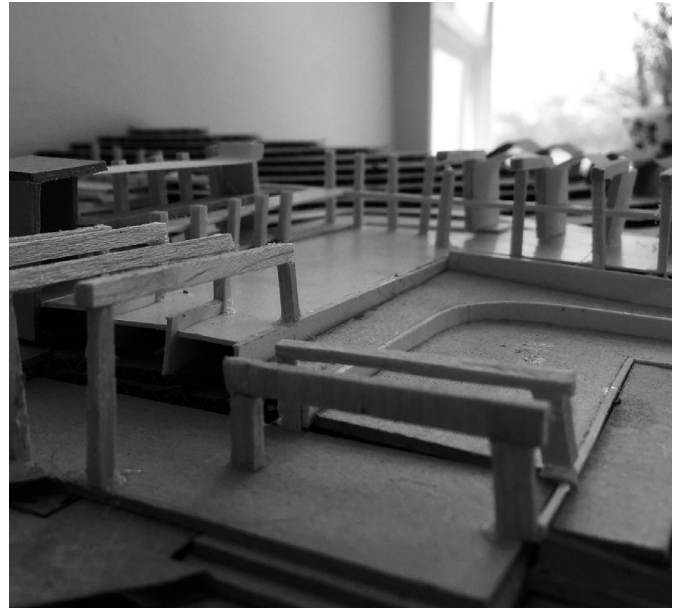


06 + 07

iteration six + seven

07

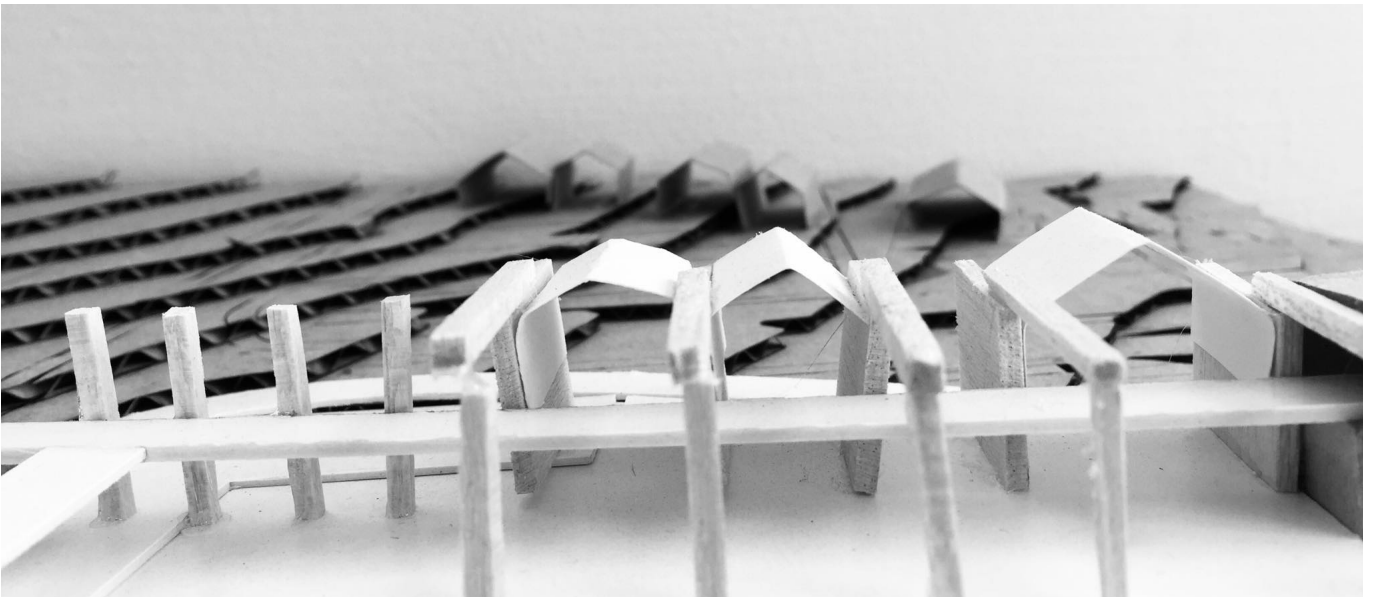
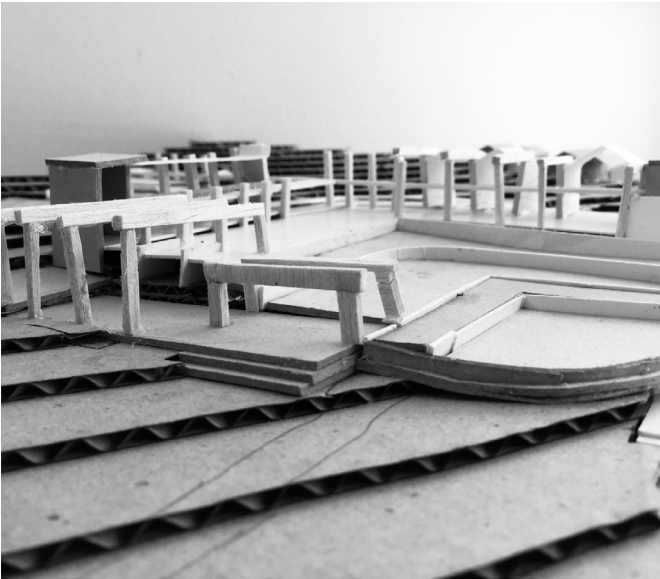
6.23



6.22

FIGURE 6.22 : Design iteration seven on plan (Author, 2018)

FIGURE 6.23 : Design iteration seven model exploration (Author, 2018)



08 + 09

iteration eight + nine

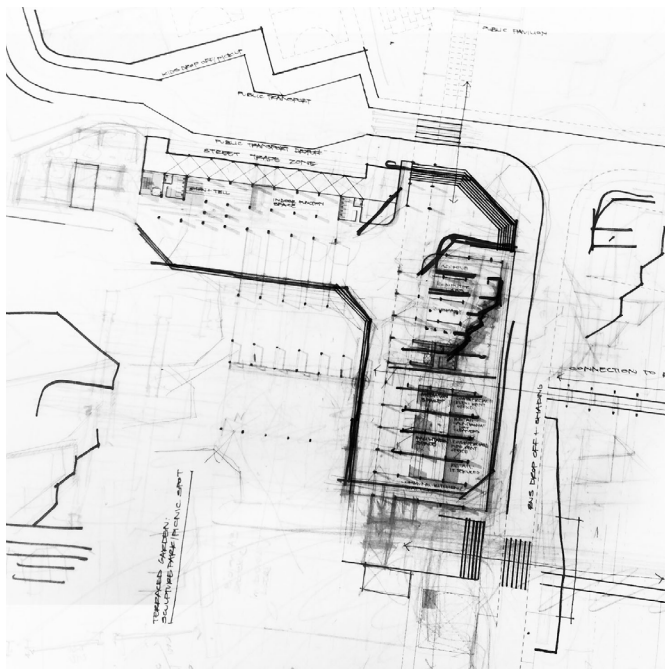
Considering the mediation between building and landscape, the seventh and eighth iteration focused on blurring the lines between building and nature by using the existing access through site and using the following informants, as illustrated.

Focusing on defining multiple approaches and thresholds into the intervention.

Addressing ease of access and visibility from all points of the design.

Exploring the idea of an expanding skin as a layered threshold in and out of spaces.

Here the explorations are beginning to illustrate the works of an intervention that blurs the lines between building and landscape.



6.24

08

6.25

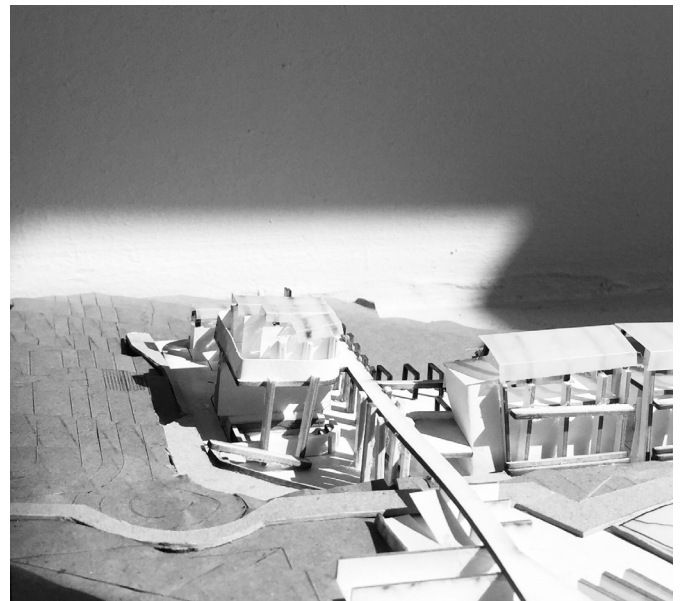
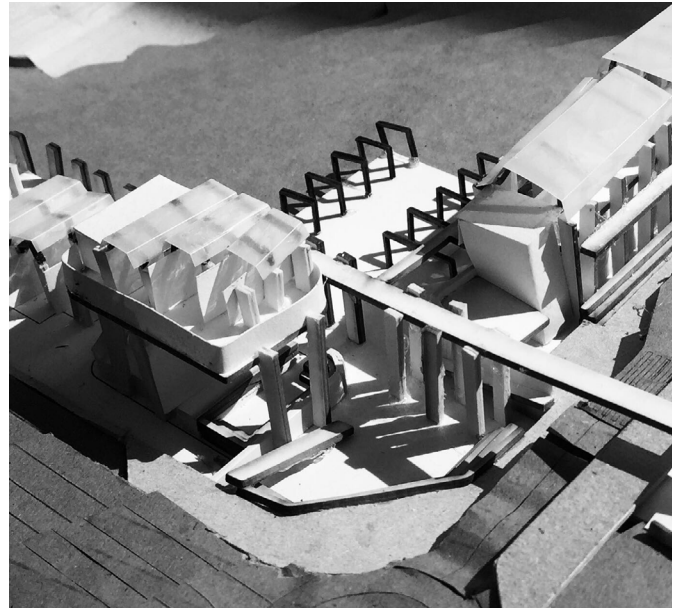
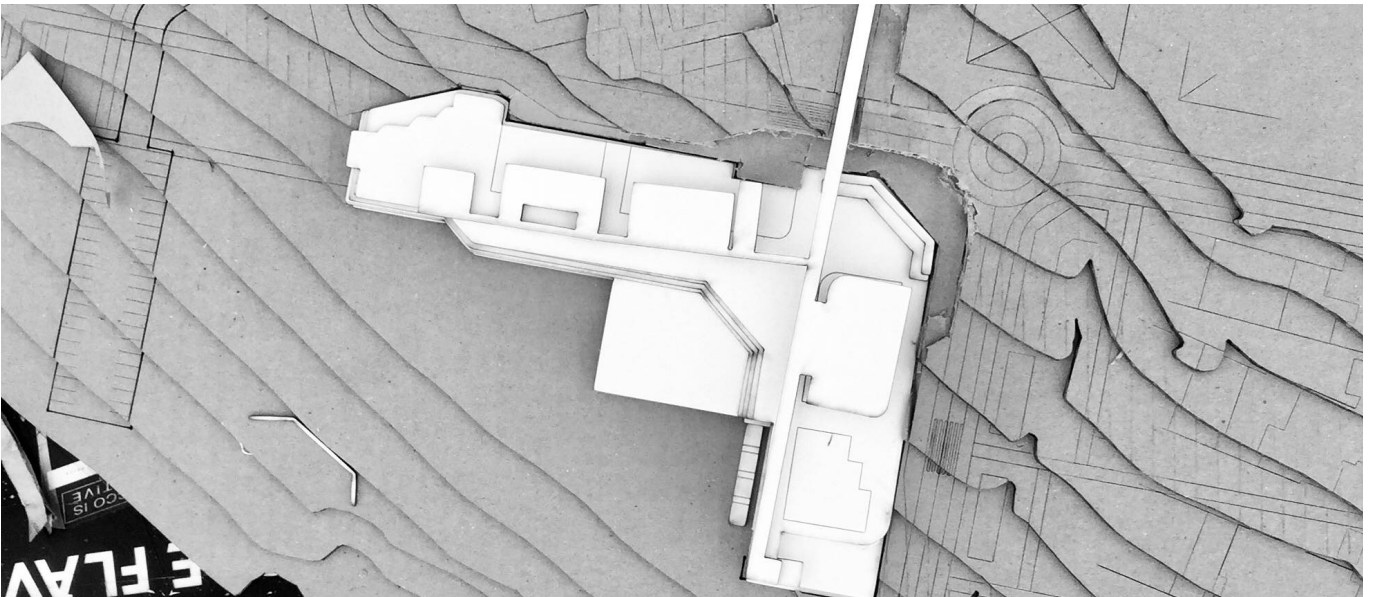
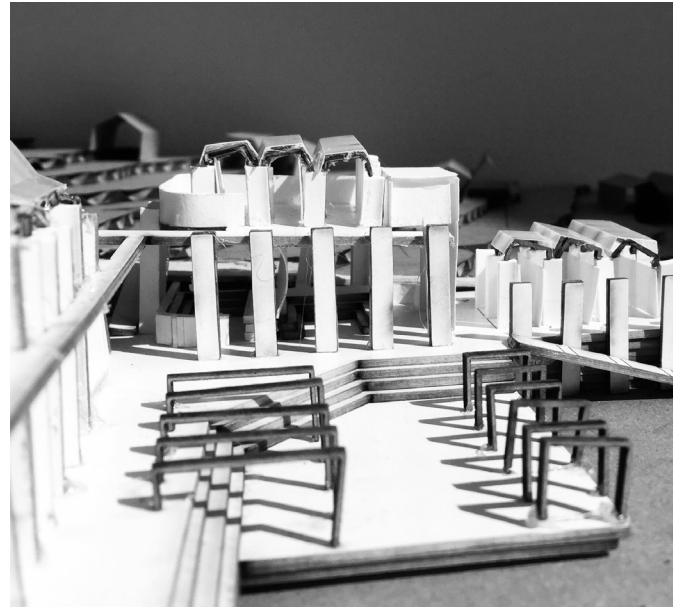
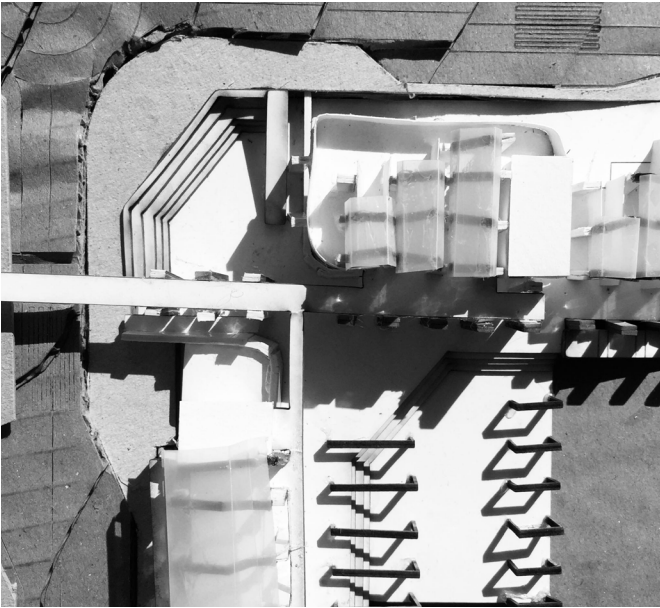


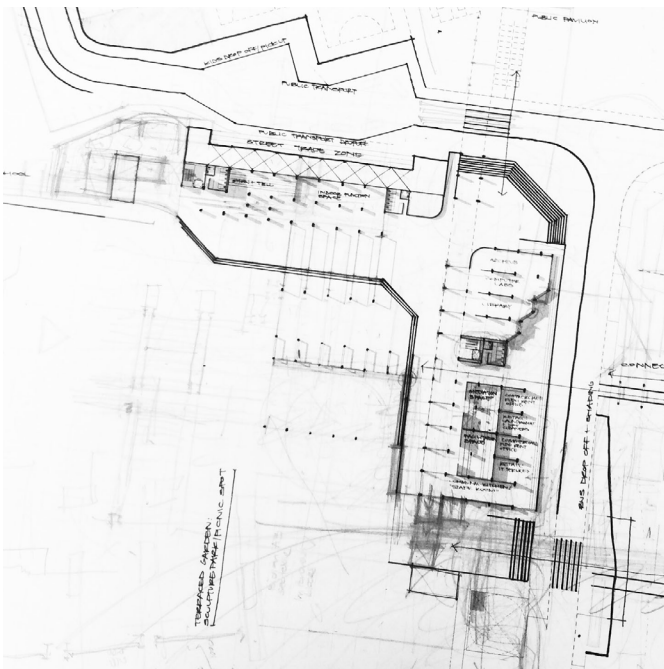
FIGURE 6.24 : Design iteration eight on plan (Author, 2018)

FIGURE 6.25 : Design iteration eight model exploration (Author, 2018)



09

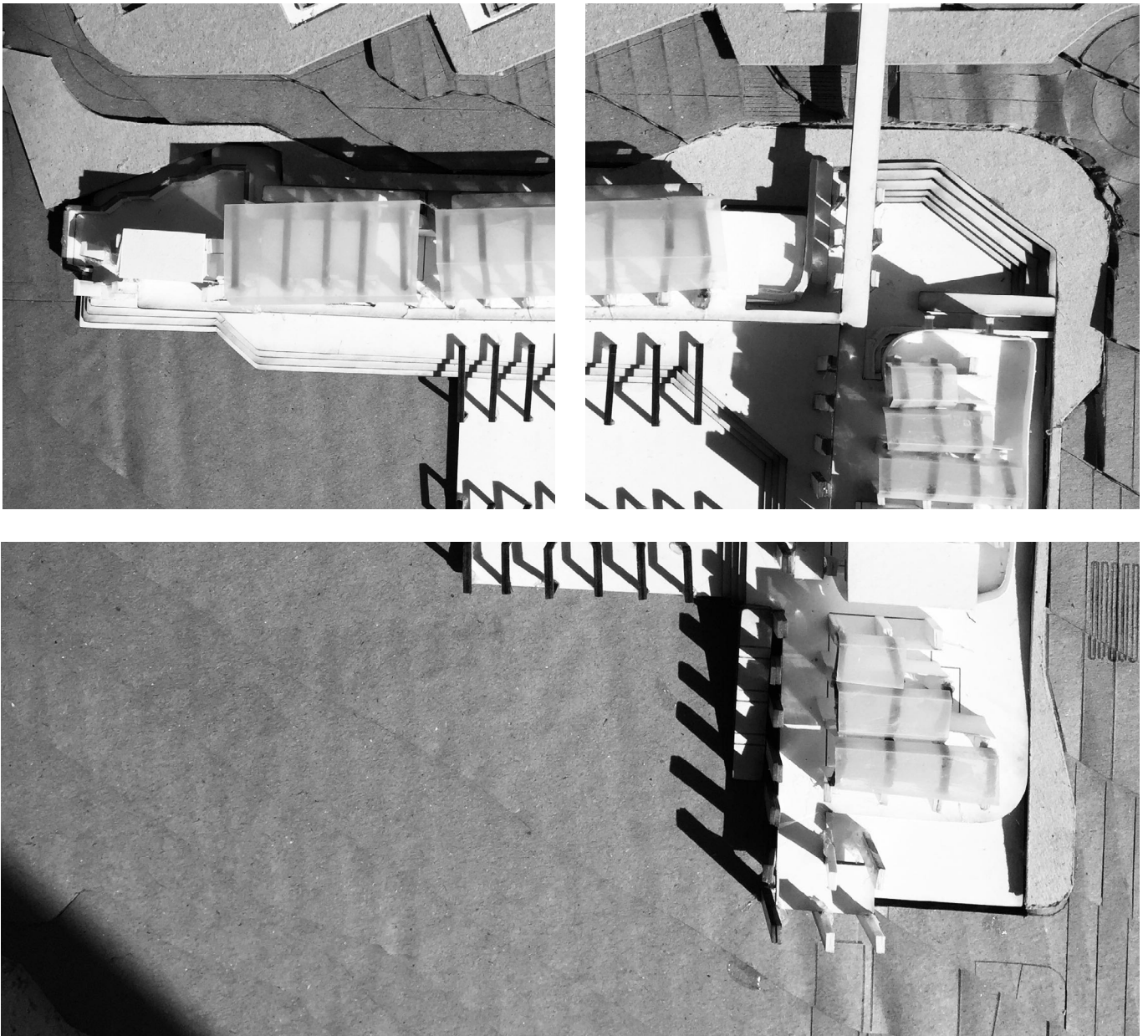
6.27



6.26

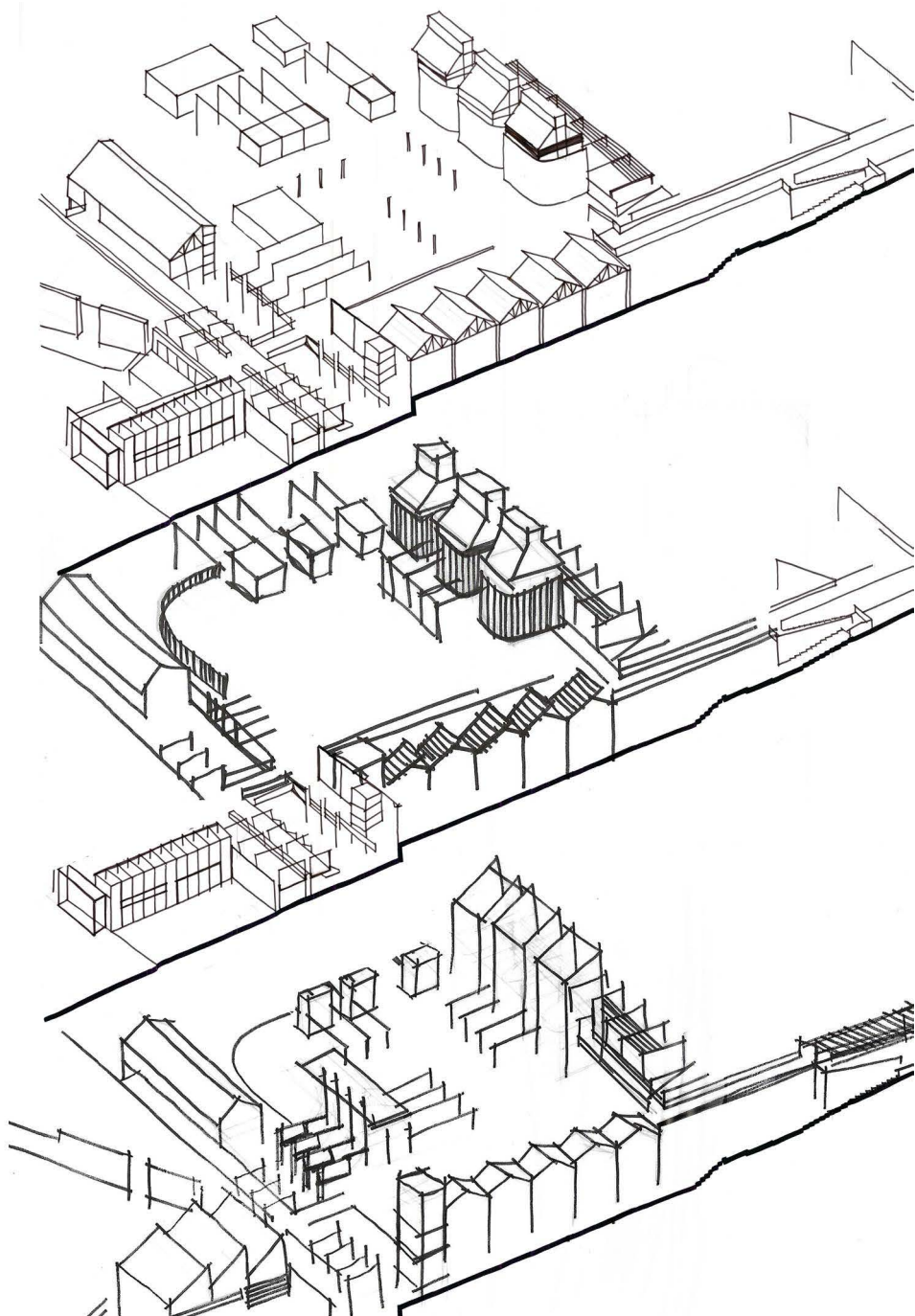
FIGURE 6.26 : Design iteration nine on plan (Author, 2018)

FIGURE 6.27 : Design iteration nine model exploration (Author, 2018)



6.2.3 N-S sectional development

6.28



6.29

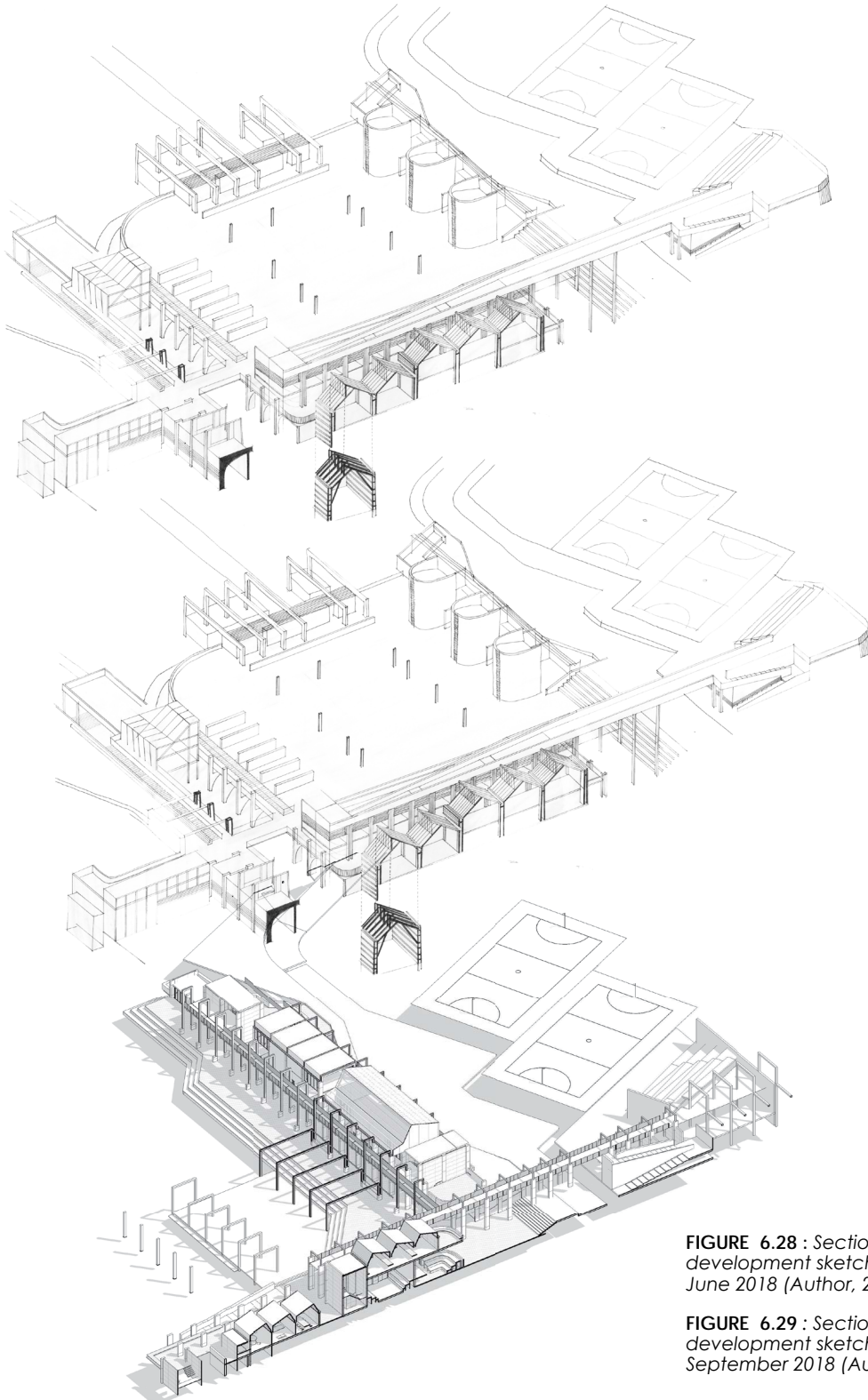


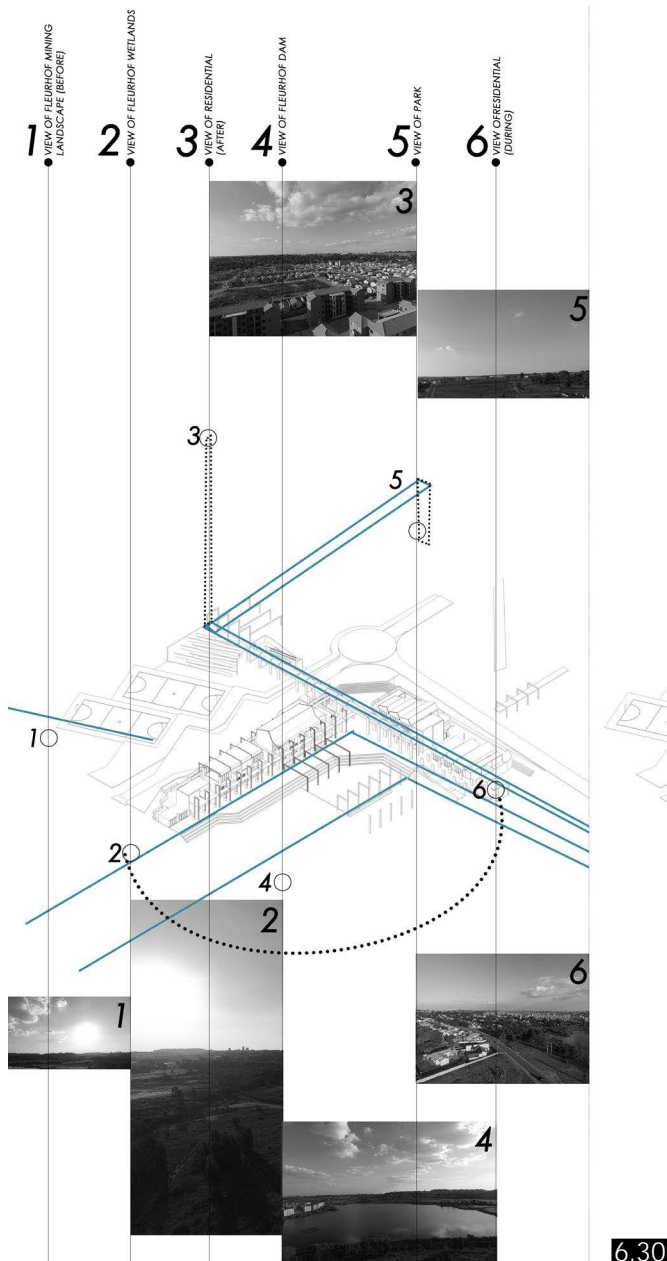
FIGURE 6.28 : Sectional development sketches from March - June 2018 (Author, 2018)

FIGURE 6.29 : Sectional development sketches from June - September 2018 (Author, 2018)

6.3 DESIGN DIAGRAMS

6.3.1 views + vistas

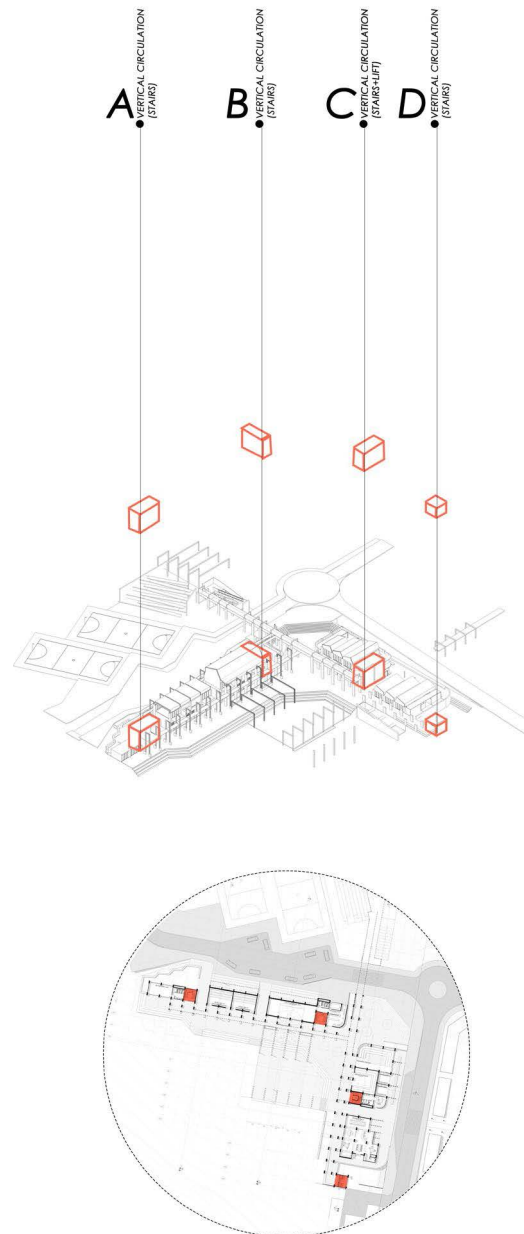
An important design consideration was to create views and vistas as vantage points to orientate users. Views include Fleurhof dam and wetland, Fleurhof 'before': the mining landscape, Fleurhof 'during' the residential suburbs, Fleurhof 'after', the integrated housing clusters. These views and vistas are illustrated below (FIG. 6.30).



6.30

6.3.2 points of orientation

In an attempt to establish points of orientation the design uses the vertical circulation as a mass that aims to orientate the viewer, making service points accessible. The mass of the circulation cores serve as beacons of orientation, as points that service the intervention, illustrated in drawings below (FIG. 6.31).



6.31

6.3.3 edges, thresholds + access

pedestrian access
vehicular access

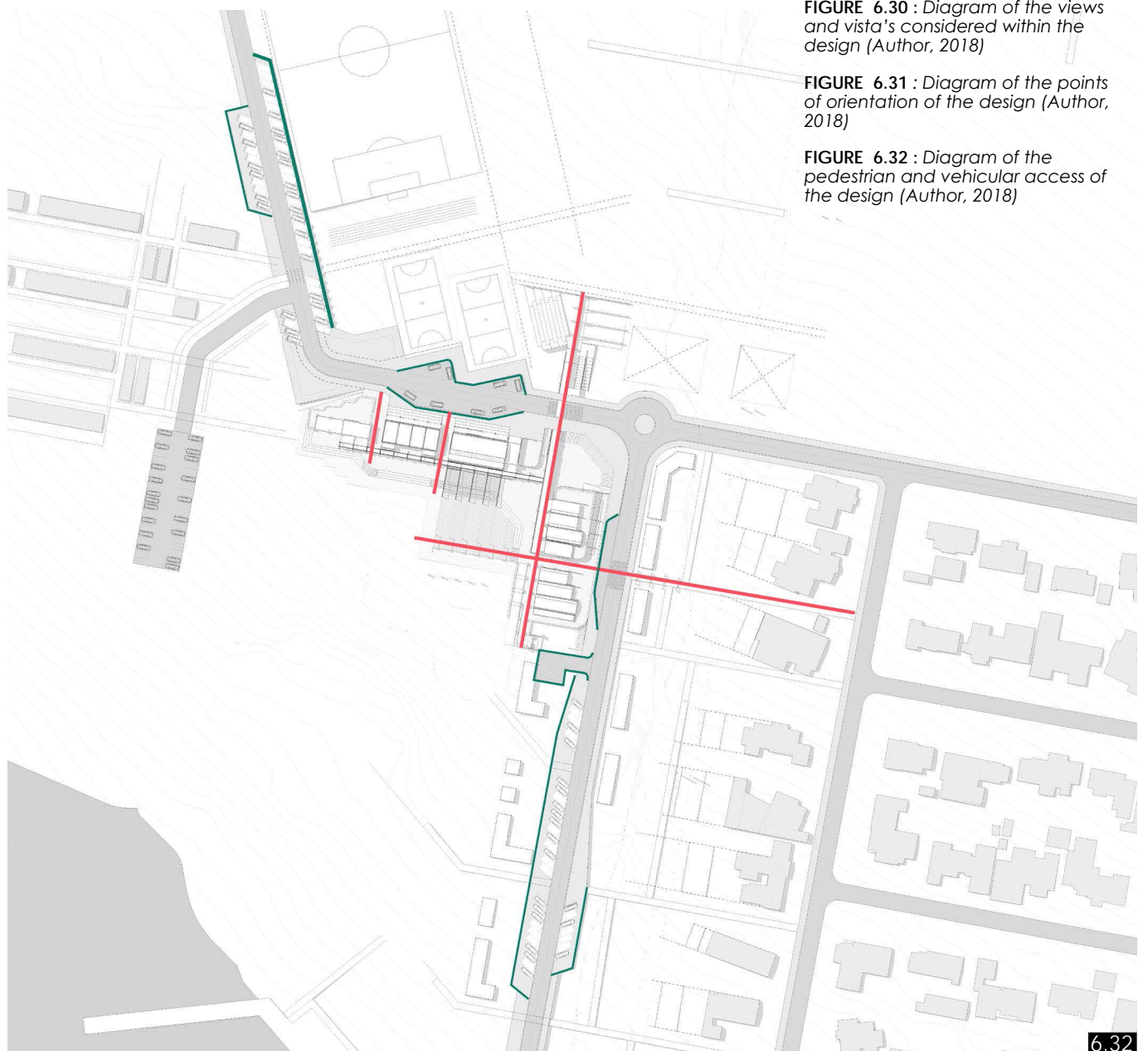


FIGURE 6.30 : Diagram of the views and vista's considered within the design (Author, 2018)

FIGURE 6.31 : Diagram of the points of orientation of the design (Author, 2018)

FIGURE 6.32 : Diagram of the pedestrian and vehicular access of the design (Author, 2018)

07 //



7.1 TECHNICAL APPROACH
7.2 CONSTRUCTION
7.3 MATERIALITY
7.4 ENVIRONMENTAL CONCERNS
7.5 ENVIRONMENTAL STRATEGIES : WATER
7.6 ENVIRONMENTAL STRATEGIES : DAYLIGHTING
7.7 ENVIRONMENTAL STRATEGIES : VENTILATION
7.8 COMFORT : ACOUSTICS + SIGHT
7.9 EXPLORATIONS



This chapter comprises of the technical explorations. The chapter is introduced by outlining the technical, structural and material approaches towards technification. The environmental concerns and strategies as well as building comfort present the technical explorations component, involving the finer details and resolution of the building.

7.1 TECHNICAL APPROACH

The design theory informs the conceptual approach to the technical resolution of the intervention. This requires animating the physiological aspects of space (volume, light and sound) and geometries (harmony, proportion and rhythm). These aspects are important in order to enhance the communicative architectural language. The following principles are considered in order to communicate a way of understanding and seeing:

Legibility

Articulation

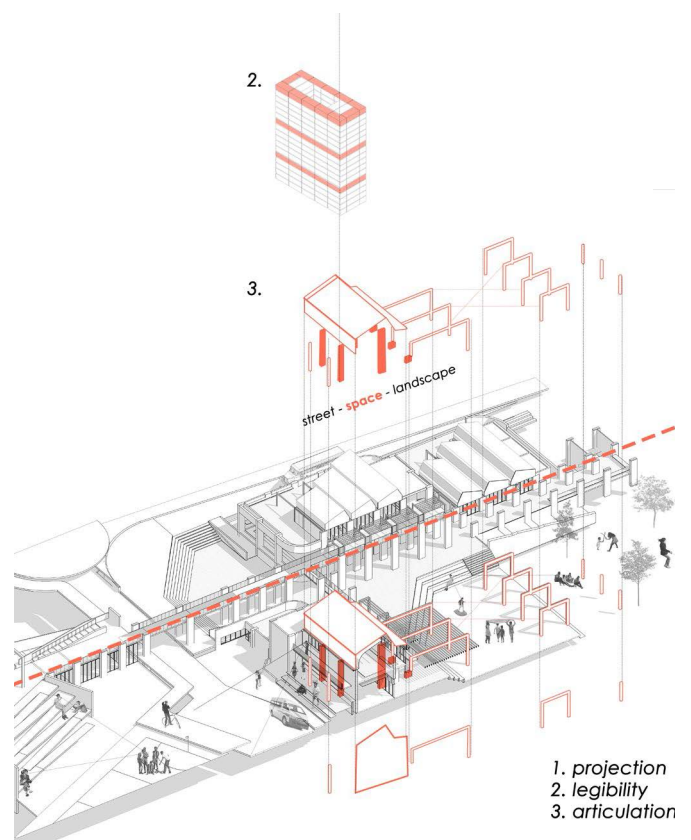
Projection

Legibility is considered by focusing on scale and familiarity of material. The choice of materials relies on a modular system that allows elements to be read at various intervals of scale, depending on the hierarchy of space.

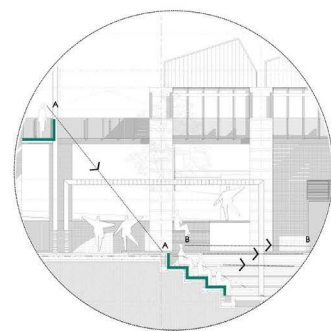
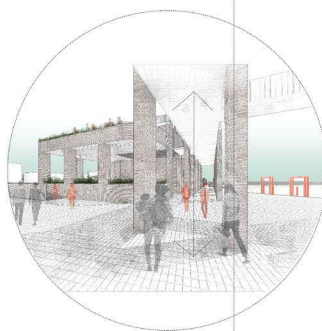
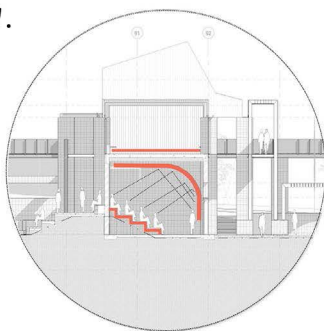
Articulation is considered by focusing on addressing thresholds as a series of intervals. The choice of materials rely on separate elements that allow thresholds to be read as an expanding skin. The idea of articulation is explored on the vertical and horizontal planes (FIG. 7.2).

Projection is considered by focusing on projecting light, sound and sight lines. The choice of materials relies on a palette that reflects activity to illustrate movement, absorbs light to ensure comfort and diffuses light to create atmosphere. Absorption and reflection of sound is considered through the use of materials for the interior condition, internal wall finishes and ceiling. A sense of rhythm is considered through the breaking up of vertical planes and horizontal planes.

7.1



1.



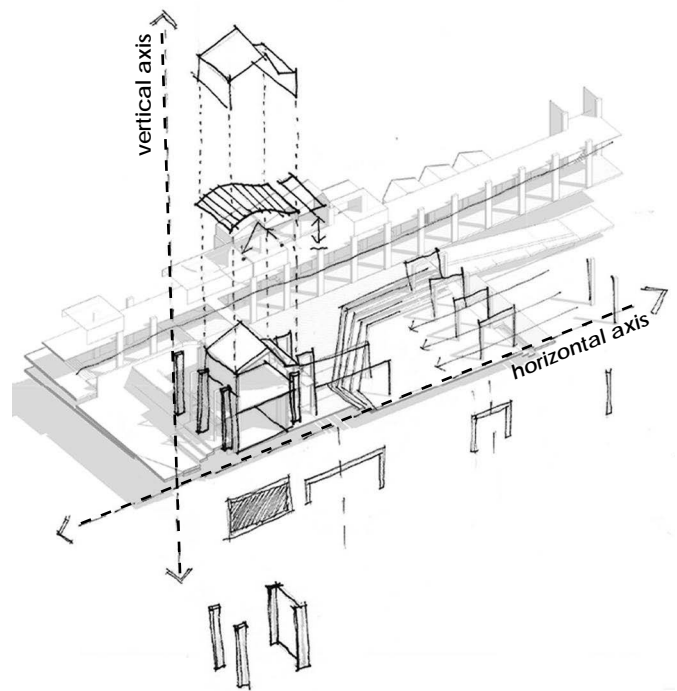
The technical approach includes viewing the building as a series of intervals that host events. The structural supports are situated along a 5x5m grid, responding to the scale of Fleurhof's residential fabric.

7.2

The choice of materials aim to communicate a way of seeing and understanding using the principles of *legibility*, *articulation* and *projection*. From the theoretical review, we understand the relevance of a material as a mode of communication.

The material palette is used as a mode of referencing the context, and therefore becomes communicative. The choice of materials represent a familiarity and aims to provoke memory.

Vesely (2004:339) suggests establishing references that enable users to "recognize sameness and difference in the context of the world" as a form of establishing common ground (Vesely, 2004, p. 339). The choice of material is considered by using context as an informant in order to represent 'the norm', the sameness, and the 'punctures in the norm', the differences.



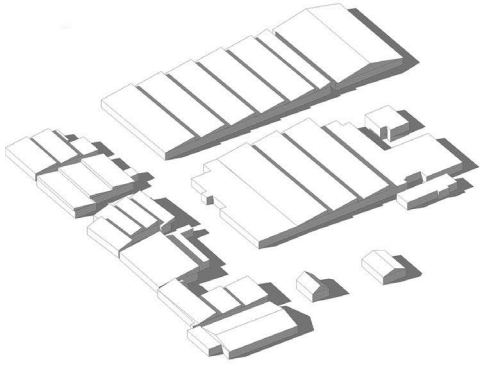
The structure unfolds under two planes.

vertical planes/ the structure becomes lighter as it reaches the sky. Beginning with the primary structure of the building, a series of brick column 'posts', form the base of the structure. These vertical elements become the hosts to the secondary structure, a 'tent like structure', the steel frame.

horizontal planes/ the structure begins to dismantle itself as it stretches along the the horizontal axis where it meets the natural landscape.

FIGURE 7.1 : Diagram of the technical approach (Author, 2018)

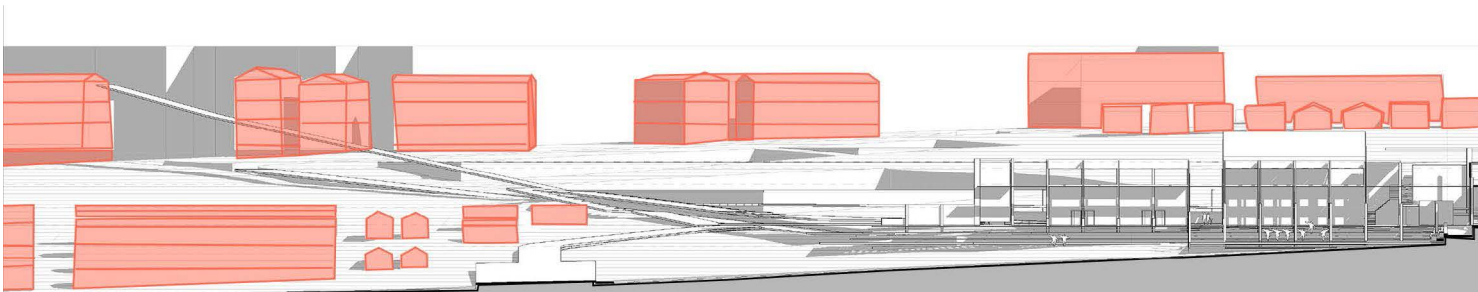
FIGURE 7.2 : Diagram of the structure unfolding under two planes (Author, 2018)



D industrial fabric



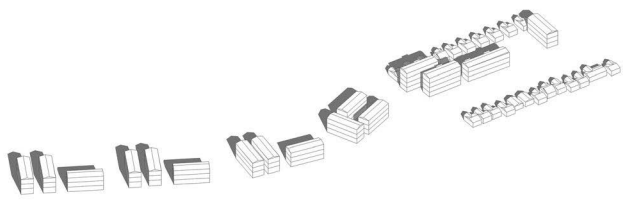
C old residential fabric



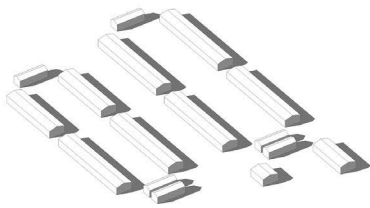
arch intervention

3

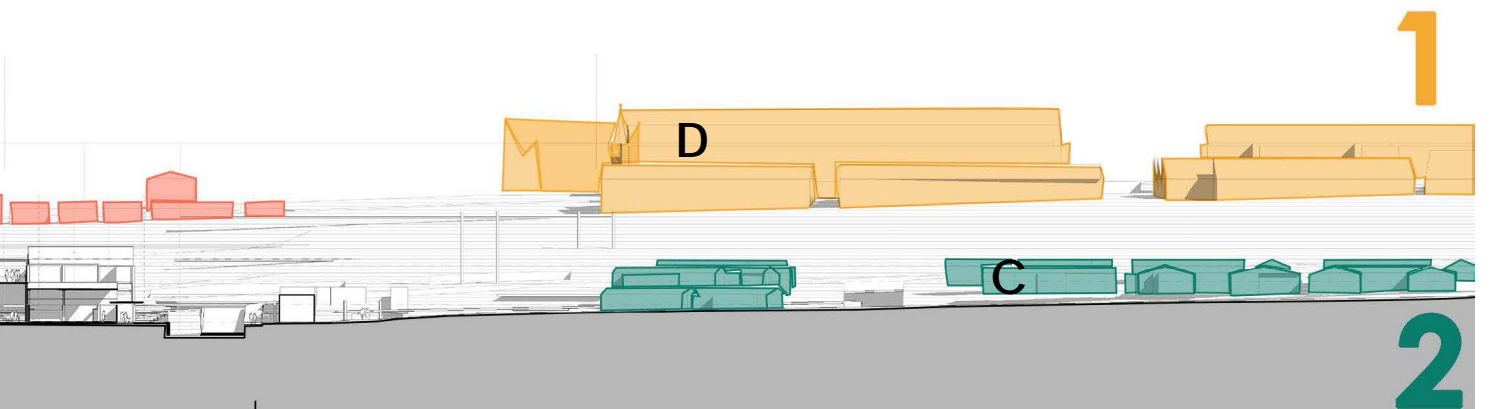
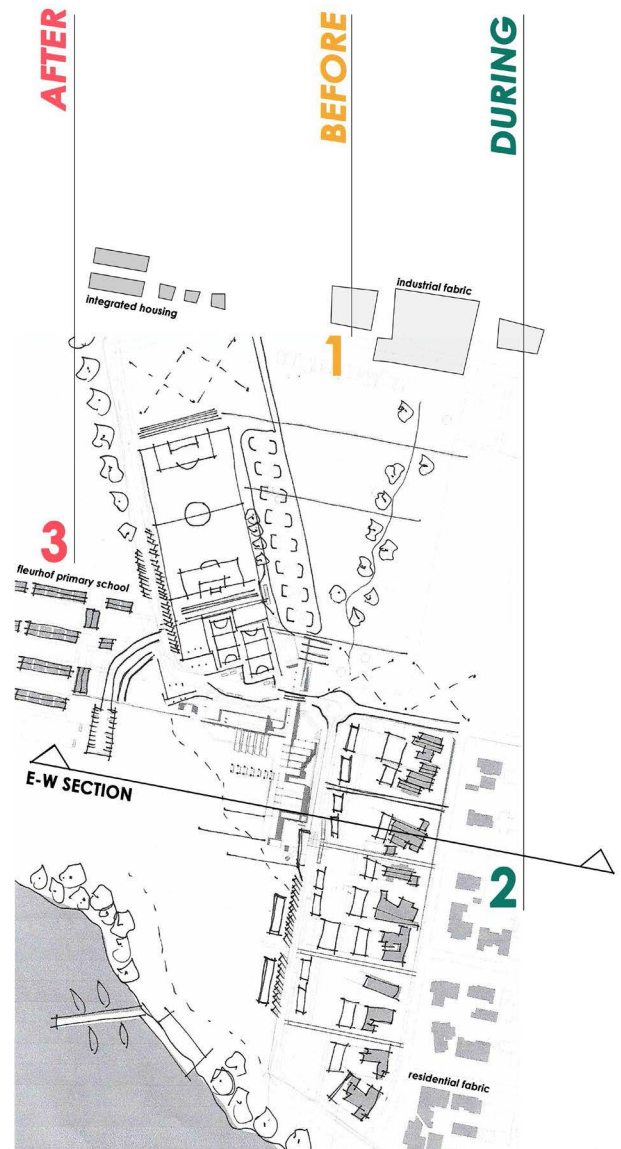
E-W CONTEXT SECTION



A new integrated housing: mixed income



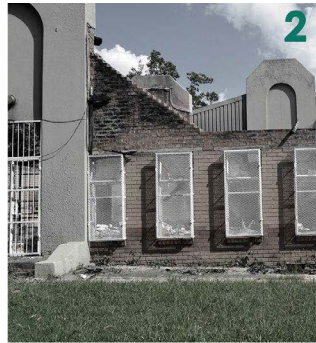
A fleurhof primary school



7.3

FIGURE 7.3 : Illustration of the architectural language and materials available on site (Author, 2018)

7.4

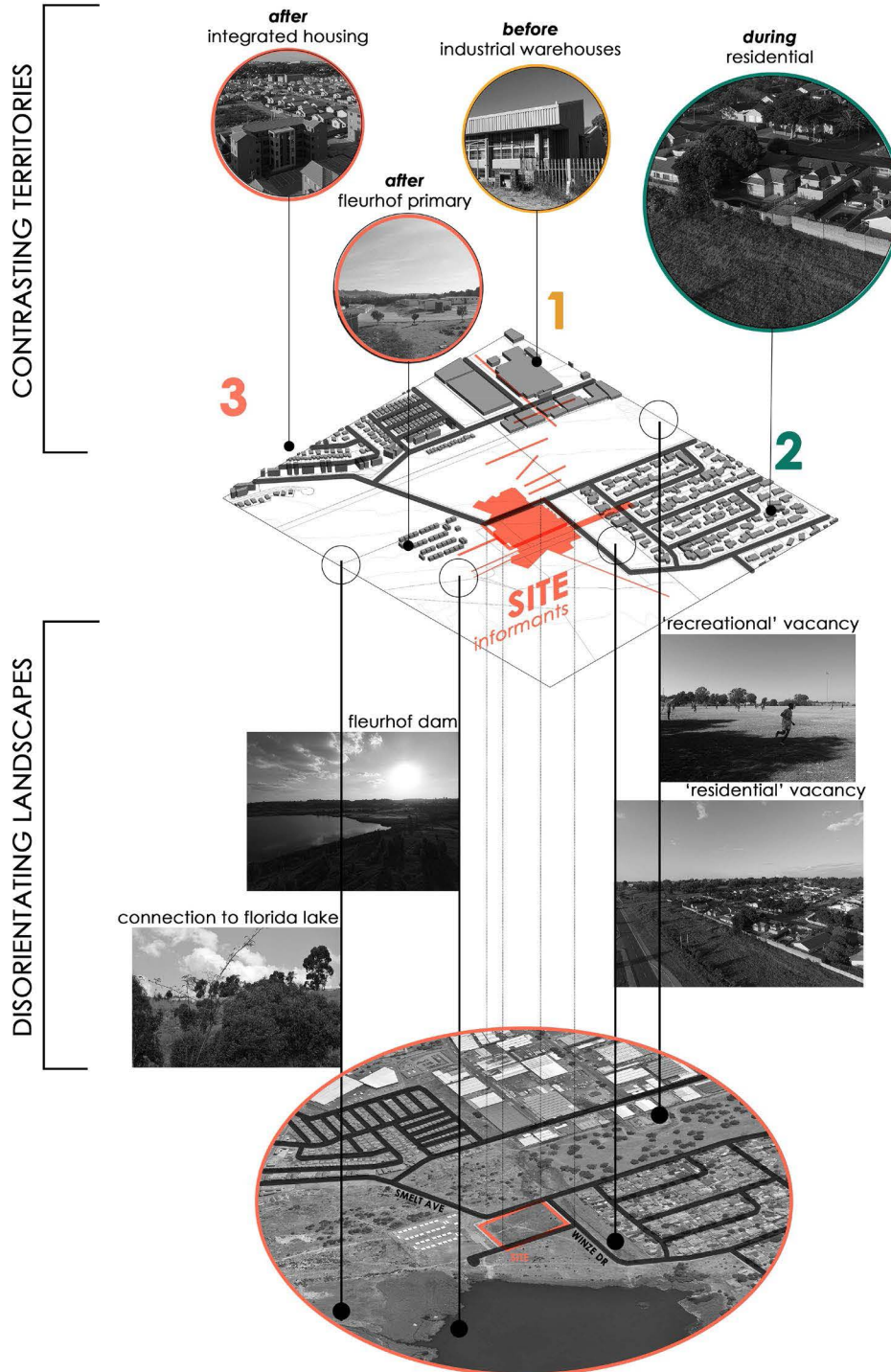


- 1. BEFORE
- 2. DURING
- 3. AFTER

FIGURE 7.4 : Photo collage of the existing architectural language (Author, 2018)

FIGURE 7.5 : Photo collage of the existing architectural language in reference to their location on site (Author, 2018)

7.5



7.2 CONSTRUCTION

The building method is essentially a framed structure with a network of load-bearing brick posts and concrete beams joined up to form the skeleton framework of the building. The elevated structure is made up of a tent-like steel frame that attaches to the load-bearing brick posts. The envelope of the building is the infill, made up of a series of masonry walls, conditioned walls¹ and glazing.

- **load-bearing structure** – supports
- **tectonic structure** – attaches
- **envelope** – fills

load-bearing structure | BRICK + CONCRETE

LOAD BEARING POSTS: BRICK COLUMNS

- series of service posts
- informs ducts: wet services + ventilation

CONCRETE FLOOR SLABS + BEAMS

- together with the load bearing posts, make up the skeleton framework of the building

tectonic structure | STEEL

STEEL FRAME

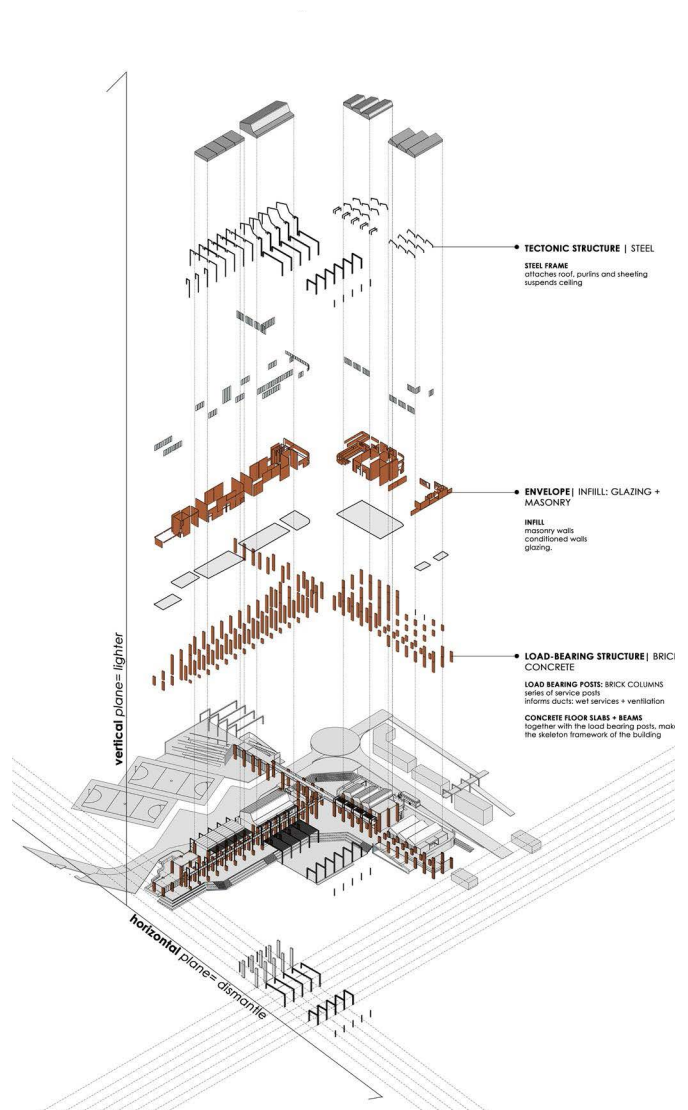
- attaches roof, purlins and sheeting
- suspends ceiling

envelope | FILL

INFILL

- masonry walls
- conditioned walls
- glazing.

7.6



¹ For the purpose of this study, conditioned walls refer to various masonry wall combinations. These include: glass brick walls and ventilated brick facades.

load-bearing structure | BRICK+CONCRETE

Apart from the structural integrity of the framed structure, the structure strives to represent the existing residential fabric and serve as service posts for the structure. The load-bearing brick columns are made up of Corobrik bricks. A 510mm brick scale is used to introduce legibility. Reclaimed bricks from the old burnt down community hall are used at every 6th interval. 510mm concrete down stand beams rest one brick wall width within the columns (220mm), forming the support of the floors.

The load-bearing posts support the lateral imposed loads of the steel structure and allow for the alignment of wet, ventilation and electrical services.

tectonic structure | STEEL

The use of steel represents the industrial fabric of Fleurhof. The steel structure is made up of hot rolled steel portal I profiles (IPE). The steel components are valued for their versatility in form, easy to erect, and their ability to attach to and from, the idea of a tent-like structure that attaches. The kit form structural frame is used to allow for dismantling and re-purposing. The external steel frame is pre-drilled at 510mm intervals on column flanges, to allow for the attachment of structure, highlighting it's adaptability.

envelope | FILL

The infill between the load-bearing brick posts and the structural steel frame becomes an integral investigation in the detailing section of the chapter. The infill between the structure is regarded as the envelope of the building. These include various masonry walls, glazing and sheeting. This envelope aims to represent the puncture in the norm, therefore focusing on animating spaces by controlling light and sound. The connections represent a primary relationship between user and building. The materials were selected for their robustness, engagement and manipulation (exhibition spaces, pop up stalls, pinning up posters etc.)

FIGURE 7.6 : Exploded axonometric of the structure and envelope of the building (Author, 2018)

7.3 MATERIALITY

LOAD-BEARING STRUCTURE | BRICK+CONCRETE

- load bearing posts: 450x1140mm brick columns

new = Roan FBX Corobrick

old = reclaimed brick from old burnt down community hall (at every 6th interval, 510mm brick scale)

- 255mm concrete floor slab

- 510mm concrete downstand beam



TECTONIC STRUCTURE | STEEL FRAME

- The structural steel is made up of hot rolled steel sections : 254X146mm hot rolled steel profiles that make up the structural steel

- The supporting steel is made up of cold formed steel : 150 x 75mm cold formed lip channels that make up the purlins and raised walkway support.



ENVELOPE | INFILL

- 220 - 340mm various masonry wall combinations (masonry + glass brick)

- glazing

- polycarbonate sheeting

- expanded metal sheeting

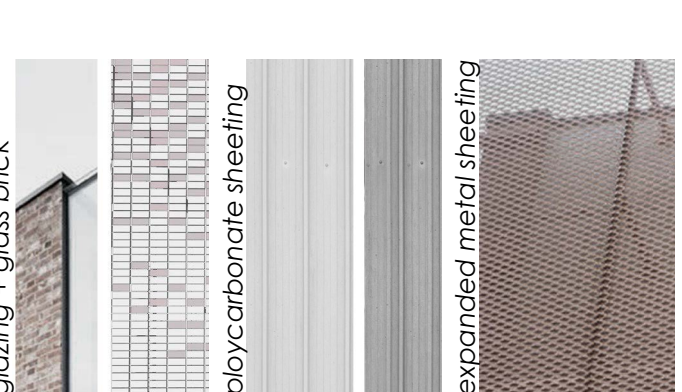


FIGURE 7.7 : Proposed material palette for the load bearing structure, tectonic structure and building envelope (Author, 2018)

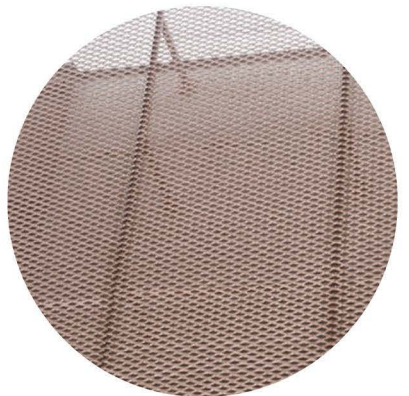
FIGURE 7.8 : Existing vs proposed material palette (Author, 2018)

EXISTING

PROPOSED



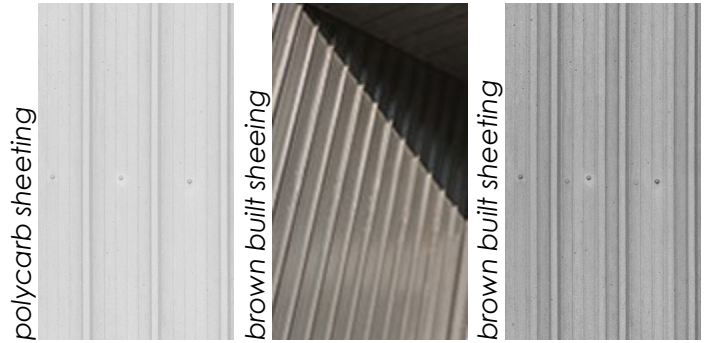
7.8



ROOF COVERING

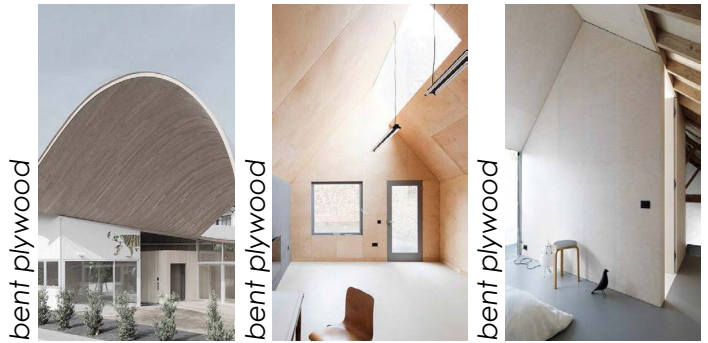
- BROWNBUILT secretfix roof sheeting
- BROWNBUILT secretfix roof sheeting in translucent panels

7.9



CEILINGS

- 22mm bent plywood suspended ceiling (with added absorption and reflection panels for acoustics where applicable).
- 6-8mm gypsum ceiling fixed to flat aluminum batten strips



INTERNAL SURFACES: FINISHES

- vinyl floors on screed
- raised timber floor on SA pine timber structure

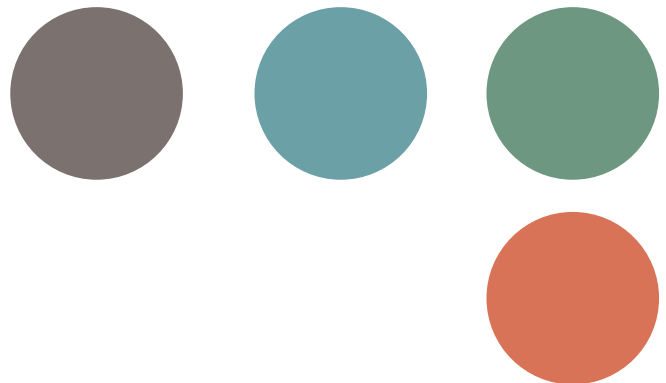
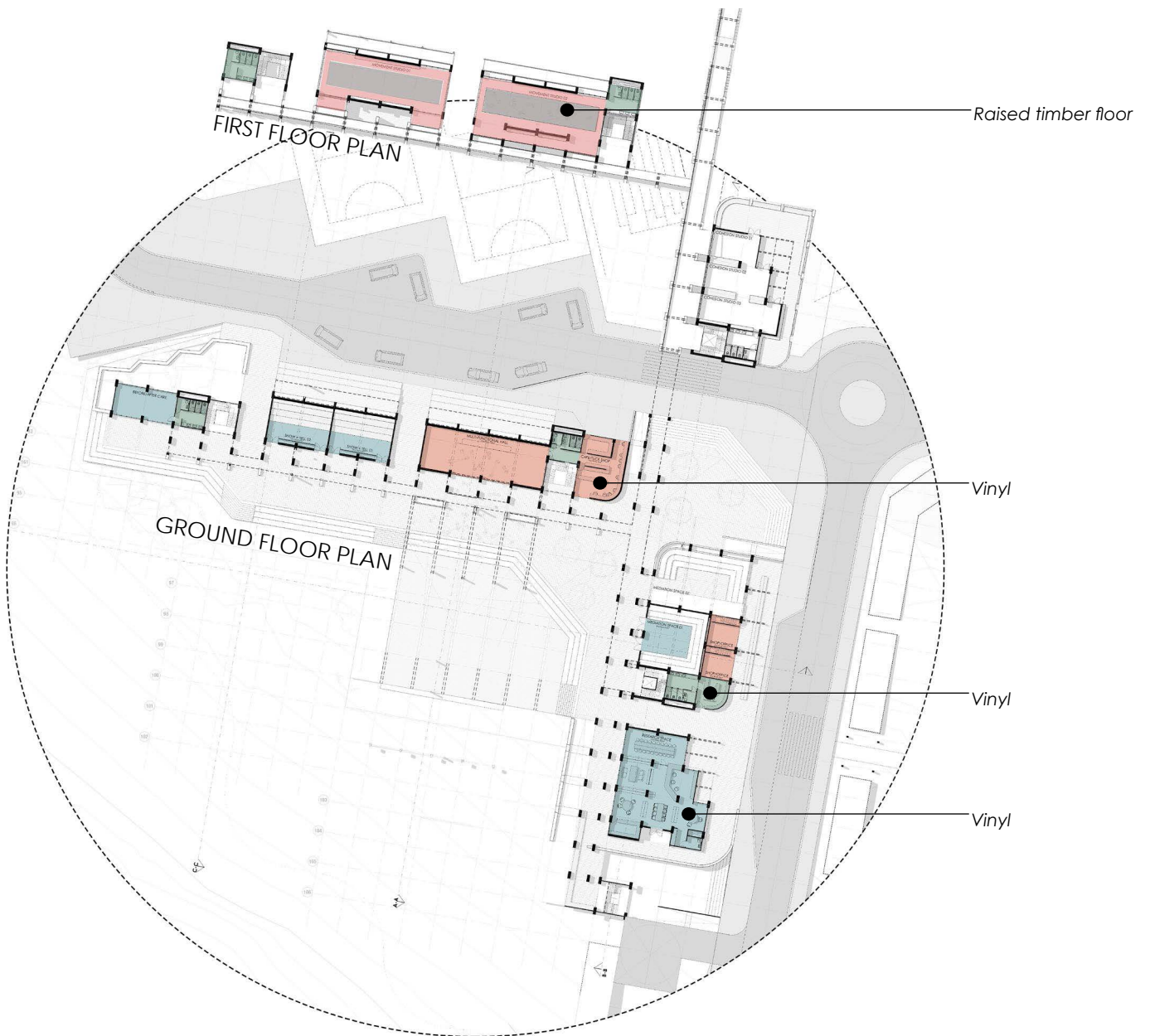


FIGURE 7.9 : Proposed material palette for the roof covering, ceilings and internal surfaces : finishes (Author, 2018)

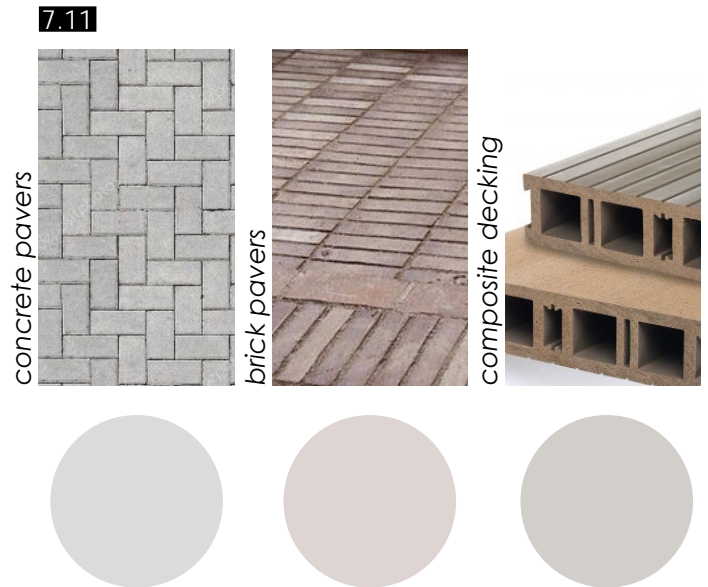
FIGURE 7.10 : Diagrammatic plan illustrating the allocation of materials on ground and first floor (Author, 2018)

7.10



EXTERNAL WORKS

- corobrik concrete pavers
- corobrik clay brick pavers
- Lunawood thermowood plastic composite decking



PLANTING

- marginal species as depicted alongside for bioswale (refer to environmental strategies : water for details)
- permeable pavers with grass

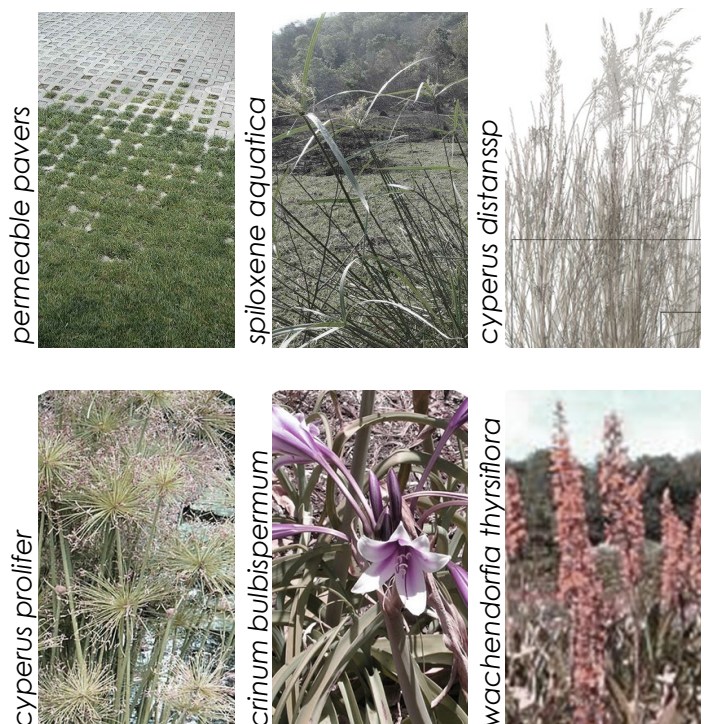
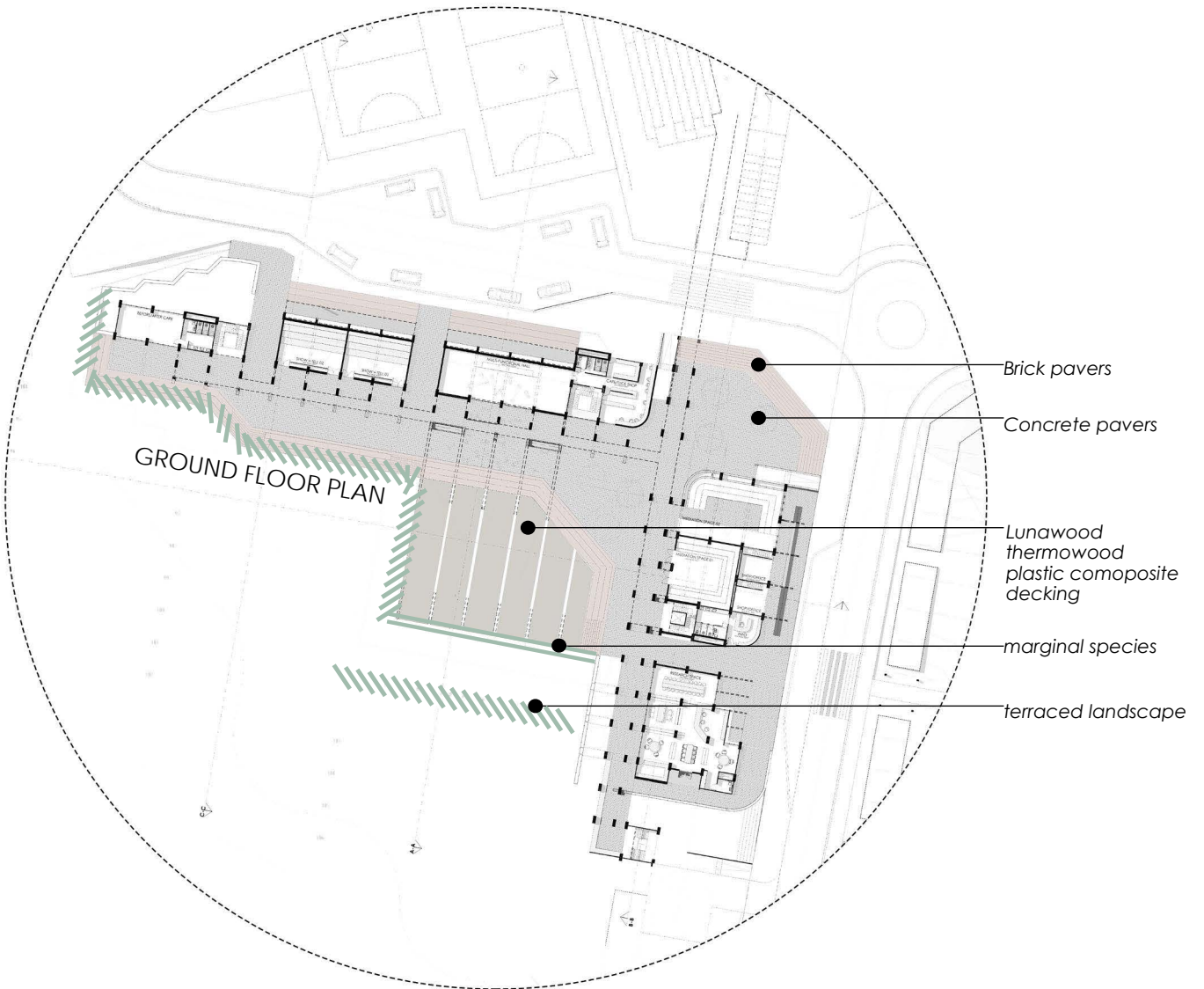


FIGURE 7.11 : Proposed material palette for the external works and planting (Author, 2018)

FIGURE 7.12 : Diagrammatic plan illustrating the allocation of materials on ground floor (Author, 2018)

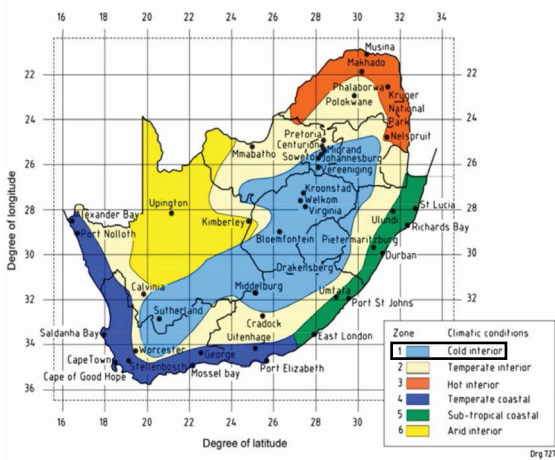
7.12



7.4 ENVIRONMENTAL CONCERNS

7.4.1 climate characteristics

Annexure A: Climatic Zones Map



LOCATION: 26°11'50.72''S 27°54'41.62''E

HEIGHT: 1676m

SUMMER RAINFALL: 125-375mm

WINTER RAINFALL: 62-250mm

SUMMER TEMPERATURES: 20-25 degrees

WINTER TEMPERATURES: 10-15 degrees

PREVAILING WINDS: N-E (summer) + N-W (winter)

RELATIVE HUMIDITY: 30-50 in E

HOURS OF SUNSHINE: 60-80

CLIMATE DESIGN CONSIDERATIONS

- high insulated thermal mass
- maximize north facing openings
- minimize east and west facing glazing
- make use of natural ventilation, using prevailing winds

Table B.1

Locations in the climatic zones of South Africa (Extracted from the full table)

Climatic Region	Description	Major centre
Region 1	Cold interior	Johannesburg, Bloemfontein
Region 2	Temperate interior	Pretoria, Polokwane
Region 3	Hot interior	Makhado, Nelspruit
Region 4	Temperate coastal	Cape Town, Port Elizabeth
Region 5	Sub-tropical coastal	East London, Durban, Richards Bay
Region 6	Arid interior	Upington, Kimberley

7.13



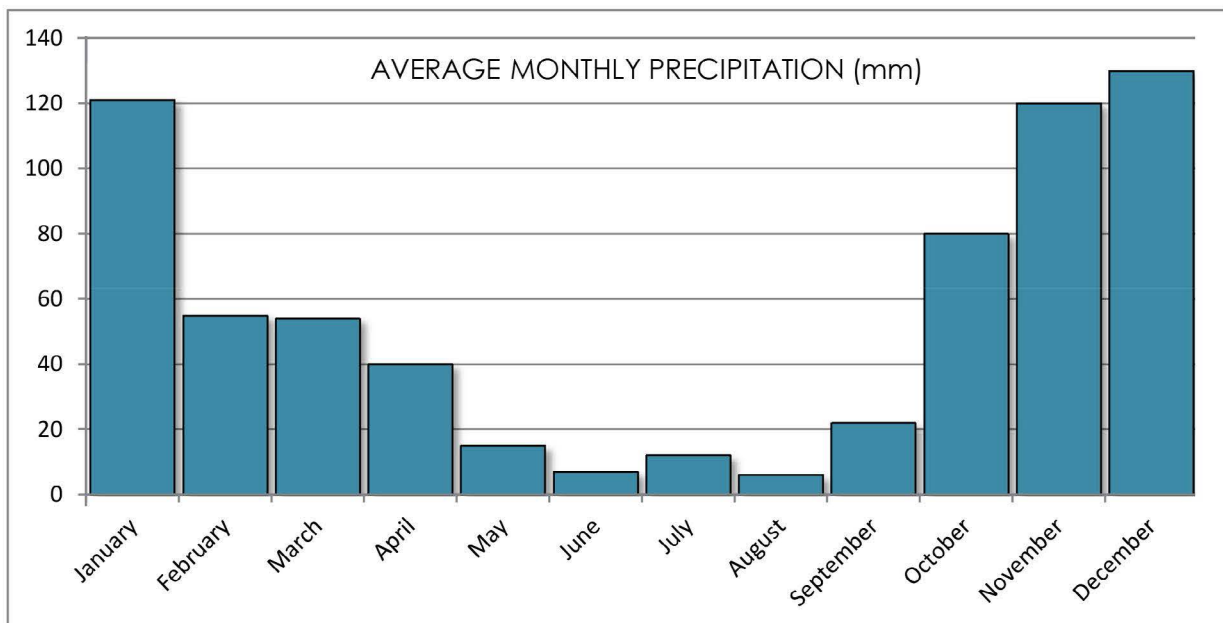
7.14

FIGURE 7.13 : Climate Zones Map and Table (Safintra, 2017)

FIGURE 7.14 : Illustration of site (Author, 2018)

FIGURE 7.15 : Temperature and Precipitation Data collection, filled in by Author (Author, 2018)

MONTH	Temperature				Precipitation		
	Highest Recorded	Ave. Daily (max)	Ave. Daily (min).	Lowest Recorded	Ave. Monthly (mm)	Ave. no of Days >1mm	Highest 24hr rainfall (mm)
1. January	36	29	18	8	121	14	160
2. February	36	28	17	11	55	11	95
3. March	35	27	16	6	54	10	84
4. April	33	24	12	3	40	7	72
5. May	29	22	8	-1	15	3	40
6. June	25	19	5	-6	7	1	32
7. July	26	20	5	-4	12	1	18
8. August	31	22	8	-1	6	2	15
9. September	34	26	12	2	22	3	43
10. October	36	27	14	4	80	9	108
11. November	36	27	16	7	120	12	67
12. December	35	28	17	7	130	15	50
YEAR	36	25	12	-6	662	87	160



7.15

7.5 ENVIRONMENTAL STRATEGIES : WATER

7.5.1 water collection, treatment + harvesting process

Water is collected with the help of two catchment surfaces: roofs + pavings. The water collected on site is to be used for irrigation and domestic (toilet flushing only). After the water is collected on the respective surfaces, it passes through a first flush system to get rid of any floating debris, the water then enters the bioswale, here the minerals are removed, after that process the water is directed to subsurface water tanks. The illustrations below represent the processes, areas and calculations taken into consideration.

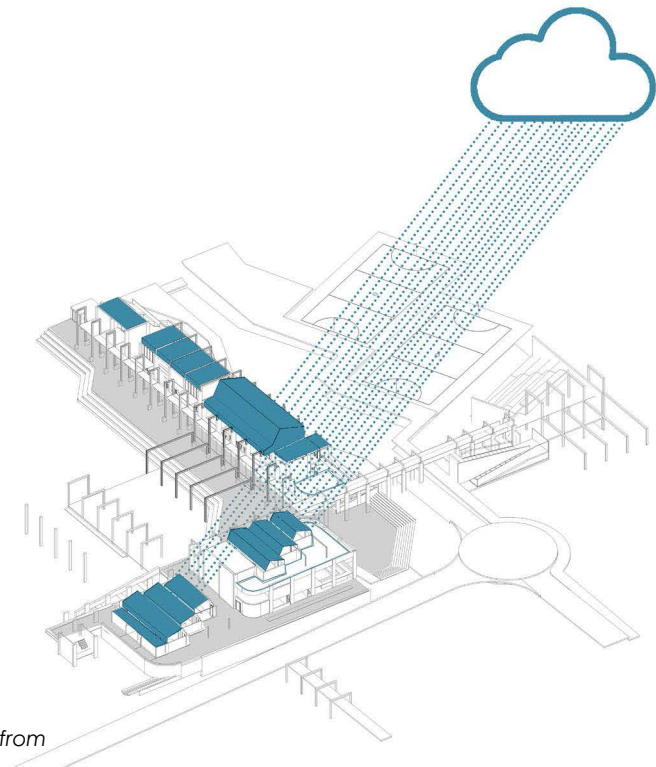
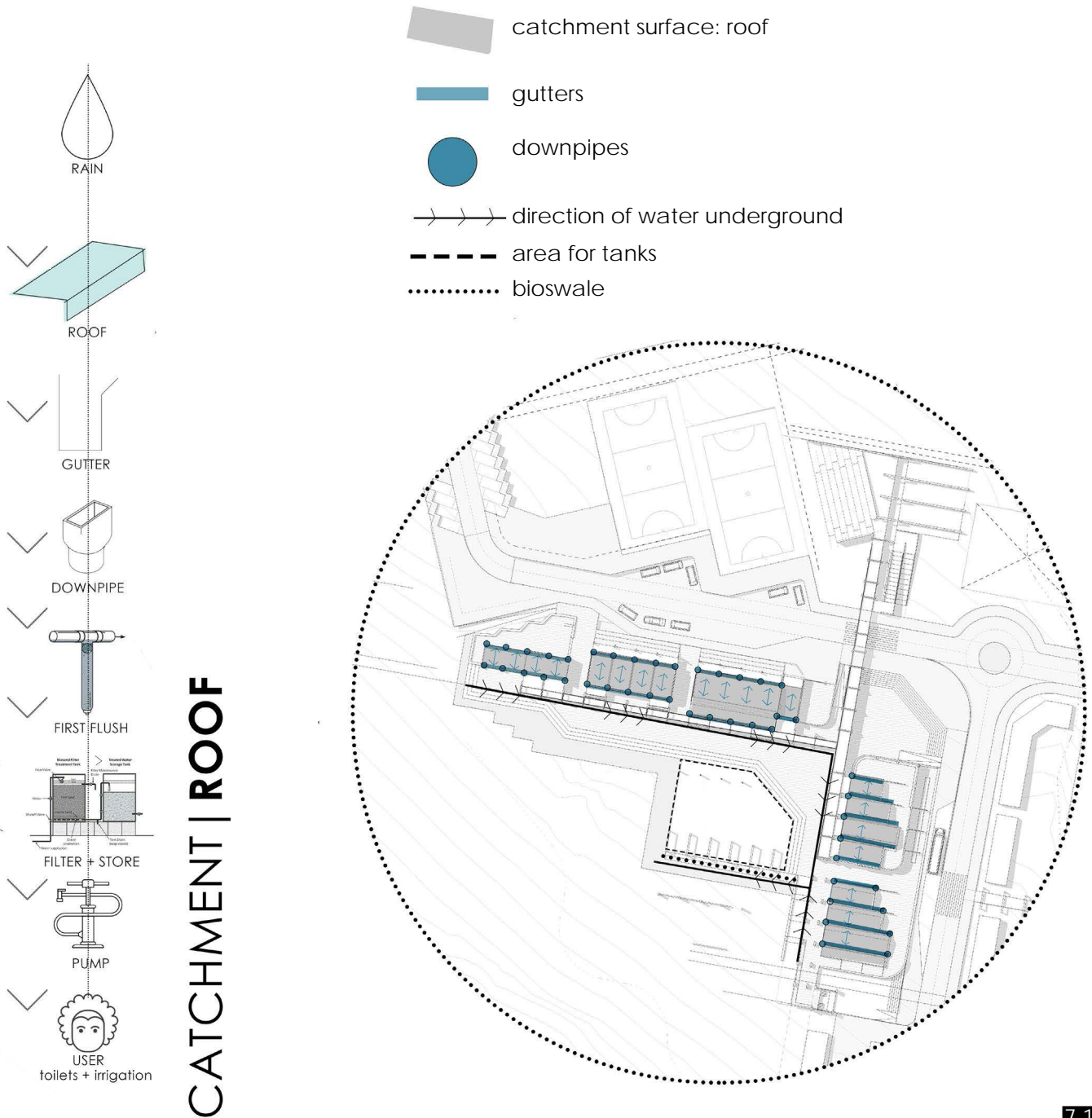


FIGURE 7.16 : Diagram illustrating the water catchment surfaces: roof and paving (Author, 2018)

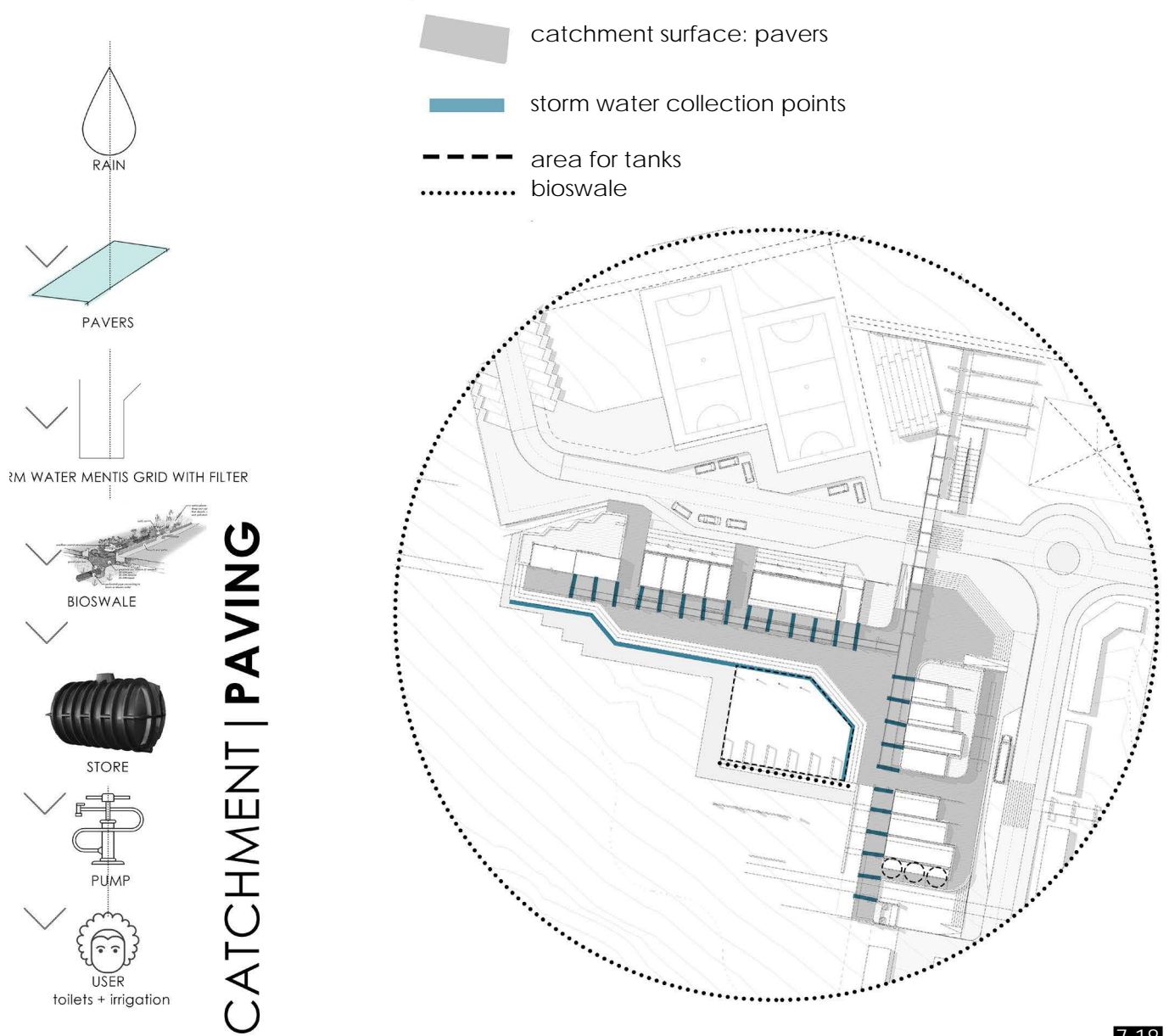
FIGURE 7.17 : Diagram illustrating the movement of water from the roof catchment surfaces (Author, 2018)

7.16

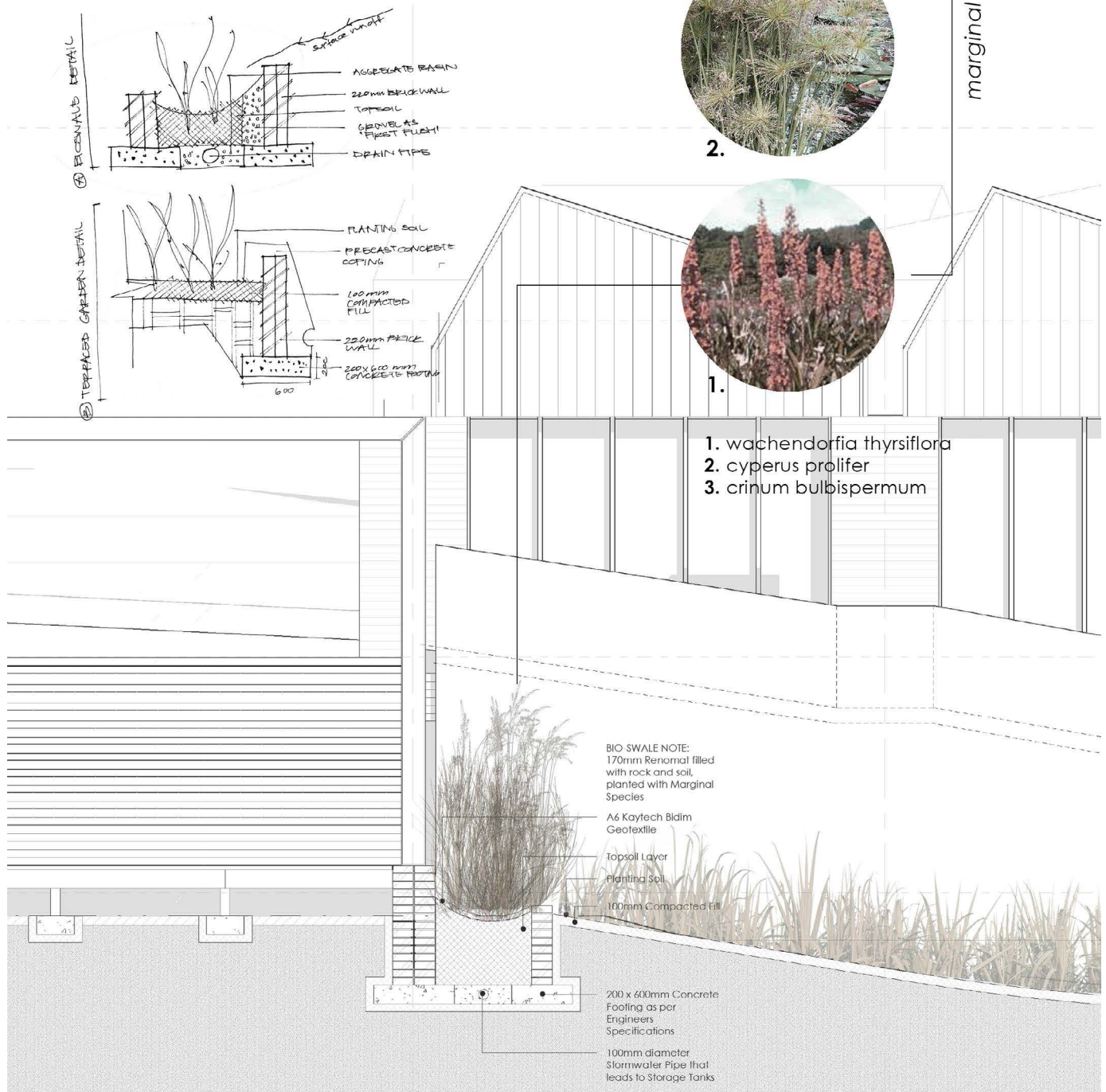
7.5.2 water collection on roof surfaces



7.5.3 water collection on paving surfaces



7.5.4 water filtration system



7.19

FIGURE 7.18 : Diagram illustrating the movement of water from the paving catchment surfaces (Author, 2018)

FIGURE 7.19 : Diagram illustrating bioswale filtration system (Author, 2018)

7.5.5 water collection

YIELD CALCULATIONS

Per surface (Per surface)	Area (m ²)	Run-off Coefficient
Paving Surface Runoff	2 500.00 m ²	0.63
Rooftops	920.00 m ²	0.8
TOTAL:	3 420.00 m²	0.68

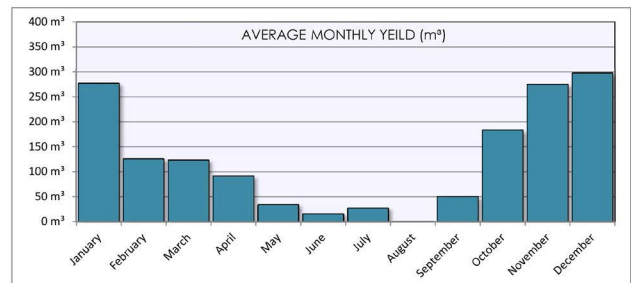
$$\text{Yield (m}^3\text{)} = P \times A \times C$$

P= precipitation (m)

A= area (m²)

C= run off co-efficient

MONTH	Precipitation Average Monthly (mm)	Area (m ²)	Run-off Coefficient (†)	Yield P(m) x A(m ²) x C
1. January	121 mm	3 420 m ²	0.67	277 m ³
2. February	55 mm	3 420 m ²	0.67	126 m ³
3. March	54 mm	3 420 m ²	0.67	124 m ³
4. April	40 mm	3 420 m ²	0.67	92 m ³
5. May	15 mm	3 420 m ²	0.67	34 m ³
6. June	7 mm	3 420 m ²	0.67	16 m ³
7. July	12 mm	3 420 m ²	0.67	27 m ³
8. August	6 mm	3 420 m ²	0.67	1 m ³
9. September	22 mm	3 420 m ²	0.67	50 m ³
10. October	80 mm	3 420 m ²	0.67	183 m ³
11. November	120 mm	3 420 m ²	0.67	275 m ³
12. December	130 mm	3 420 m ²	0.67	298 m ³
YEAR	662 mm	41 040 m²	0.67	18 203 m³



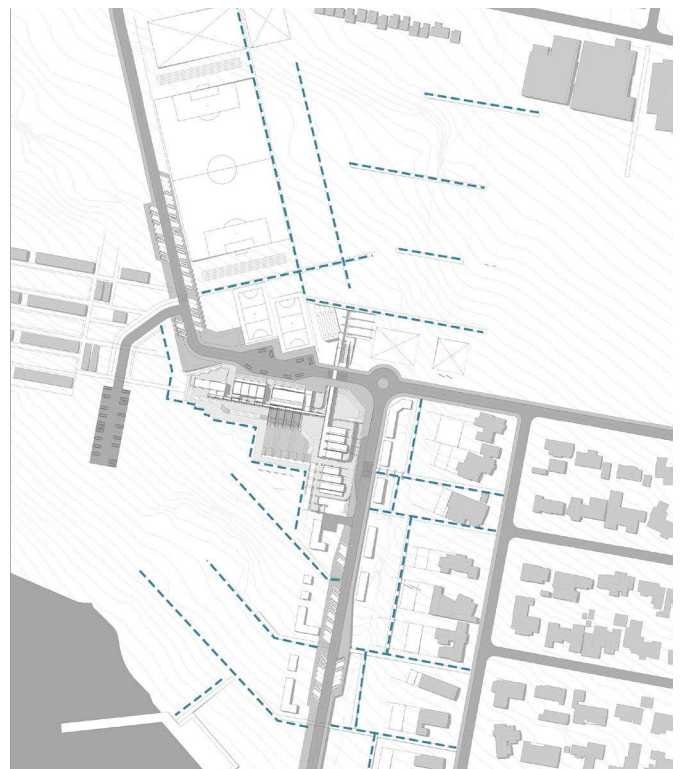
DEMAND CALCULATIONS (IRRIGATION + DOMESTIC)

IRRIGATION DEMAND

	Planting Area (m ²)	Irrigation Depth per week (m)	Irrigation Depth per month (m)	IRRIGATION DEMAND (m ³)
January	20 000 m ²	0.001 m	0.004 m	89 m ³
February	20 000 m ²	0.001 m	0.004 m	89 m ³
March	20 000 m ²	0.001 m	0.004 m	89 m ³
April	20 000 m ²	0.001 m	0.004 m	89 m ³
May	20 000 m ²	0.001 m	0.004 m	89 m ³
June	20 000 m ²	0.001 m	0.004 m	86 m ³
July	20 000 m ²	0.001 m	0.004 m	89 m ³
August	20 000 m ²	0.001 m	0.004 m	89 m ³
September	20 000 m ²	0.001 m	0.004 m	86 m ³
October	20 000 m ²	0.001 m	0.004 m	89 m ³
November	20 000 m ²	0.001 m	0.004 m	86 m ³
December	20 000 m ²	0.001 m	0.004 m	89 m ³
YEAR	20 000 m² (Average)	0.001 m (Average)	0.053 m (Total)	1 054 m³ (Total)

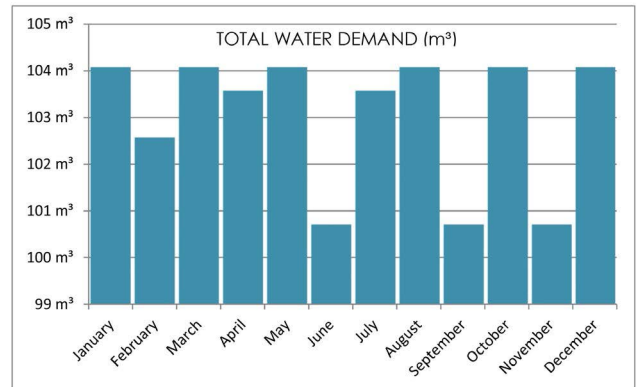
IRRIGATION DEMAND

	Planting Area (m ²)	Irrigation Depth per week (m)	Irrigation Depth per month (m)	IRRIGATION DEMAND (m ³)
January	20 000 m ²	0.001 m	0.004 m	89 m ³
February	20 000 m ²	0.001 m	0.004 m	89 m ³
March	20 000 m ²	0.001 m	0.004 m	89 m ³
April	20 000 m ²	0.001 m	0.004 m	89 m ³
May	20 000 m ²	0.001 m	0.004 m	89 m ³
June	20 000 m ²	0.001 m	0.004 m	86 m ³
July	20 000 m ²	0.001 m	0.004 m	89 m ³
August	20 000 m ²	0.001 m	0.004 m	89 m ³
September	20 000 m ²	0.001 m	0.004 m	86 m ³
October	20 000 m ²	0.001 m	0.004 m	89 m ³
November	20 000 m ²	0.001 m	0.004 m	86 m ³
December	20 000 m ²	0.001 m	0.004 m	89 m ³
YEAR	20 000 m² (Average)	0.001 m (Average)	0.053 m (Total)	1 054 m³ (Total)



TOTAL DEMAND

	IRRIGATION DEMAND (m ³)	DOMESTIC DEMAND (m ³)	TOTAL WATER DEMAND
January	89 m ³	16 m ³	104 m ³
February	89 m ³	14 m ³	103 m ³
March	89 m ³	16 m ³	104 m ³
April	89 m ³	15 m ³	104 m ³
May	89 m ³	16 m ³	104 m ³
June	86 m ³	15 m ³	101 m ³
July	89 m ³	15 m ³	104 m ³
August	89 m ³	16 m ³	104 m ³
September	86 m ³	15 m ³	101 m ³
October	89 m ³	16 m ³	104 m ³
November	86 m ³	15 m ³	101 m ³
December	89 m ³	16 m ³	104 m ³
YEAR	1 054 m³ (Total)	182 m³ (Total)	1 236 m³ (TOTAL)



BUDGET

	YIELD from onsite runoff (m ³)	DEMAND total onsite water demand (m ³)	MONTHLY BALANCE	STORAGE Water in Tank/ Reservoir (m ³)
January	277 m ³	104 m ³	173 m ³	541 m ³
February	126 m ³	103 m ³	23 m ³	565 m ³
March	124 m ³	104 m ³	20 m ³	584 m ³
April	92 m ³	104 m ³	-12 m ³	572 m ³
May	34 m ³	104 m ³	-70 m ³	503 m ³
June	16 m ³	101 m ³	-85 m ³	418 m ³
July	27 m ³	104 m ³	-76 m ³	342 m ³
August	1 m ³	104 m ³	-1 03 m ³	239 m ³
September	50 m ³	101 m ³	-50 m ³	188 m ³
October	183 m ³	104 m ³	79 m ³	0 m ³
November	275 m ³	101 m ³	174 m ³	174 m ³
December	298 m ³	104 m ³	194 m ³	368 m ³
YEAR	19 886 m³ (Total)	1 236 m³ (TOTAL)		
Greatest volume of water in tank/reservoir at any time is the minimum capacity of the tank				584 m ³
Safety Factor:	1.5	Final Tank/Reservoir Size:	877 m ³	

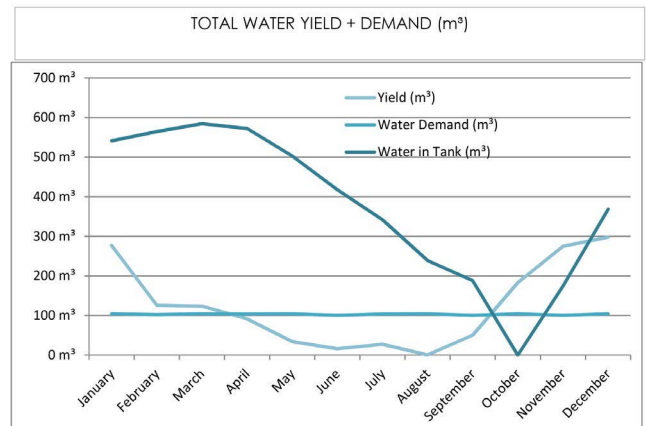


FIGURE 7.20 : Diagram illustrating irrigation demand on an urban scale(Author, 2018)

7.6 ENVIRONMENTAL STRATEGIES : DAYLIGHTING

7.6.1 natural light

As introduced in the technical approach, the language of architecture becomes the driver of this chapter, architecture that facilitates a way of seeing and understanding.

As mentioned in the theoretical review, the use of light contributes to animating the physiological process of ritual by defining space.

The manipulation of light will be utilized to enhance visibility, ensure comfort and safety as well as create atmosphere.

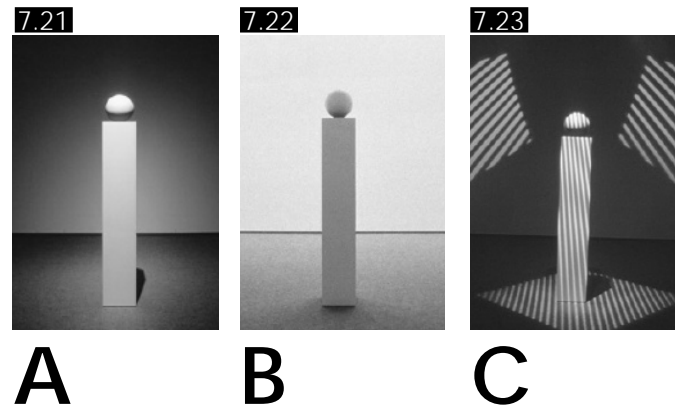
These principles are implemented using American lighting designer Richard Kelly's 'three elemental kinds of light' (Kelly, 1952:24-30).

1. FOCAL GLOW *visibility*
2. AMBIENT LUMINESCENCE *comfort + safety*
3. PLAYS OF BRILLIANTS *atmosphere*

"Focal glow is the campfire of all time...Focal glow is the follow spot on the modern stage. It is the pool of light at your favorite reading chair. It is the shaft of sunshine that warms the end of the valley. It is candlelight on the face, and a flashlight on the stair" (Kelly, 1952:24-30).

"Ambient luminescence produces shadowless illumination. It minimizes form and bulk. It minimizes the importance of all things and people. It can suggest the freedom of space and can suggest infinity. It is usually reassuring. It quiets the nerves and is restful" (Kelly, 1952:24-30).

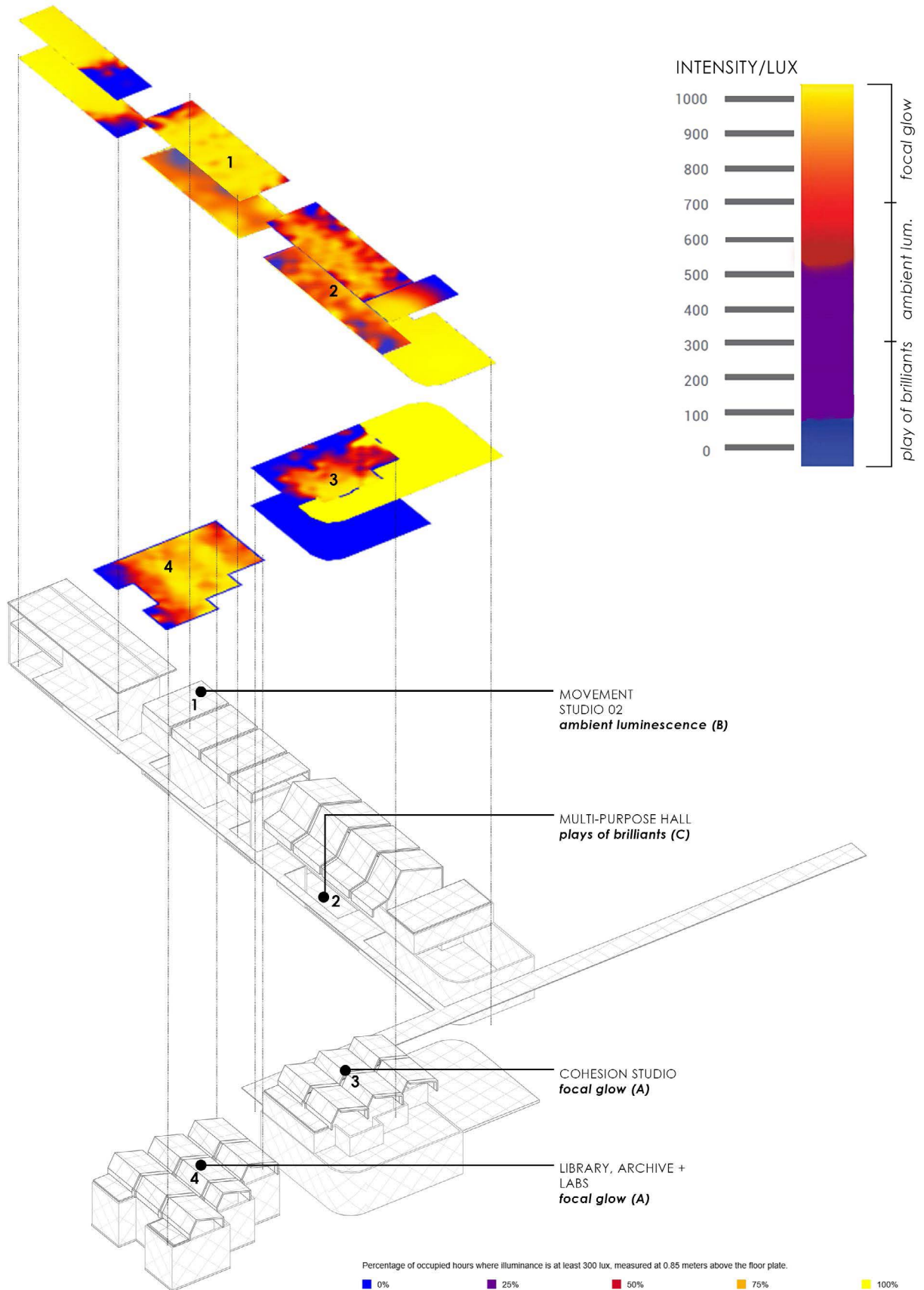
"Play of brilliants is Times Square at night. It is the eighteenth century ballroom of crystal chandeliers and many candle flames. It is sunlight on a fountain or a rippling brook. It is a cache of diamonds in an opened cave... It is a sparkling cabinet of fine glassware. Play of brilliants excites the optic nerves, and in turn stimulates the body and spirit, quickens the appetite, awakens curiosity, sharpens the wit. It is distracting or entertaining"(Kelly, 1952:24-30).



SITUATION	INTENTION	SPACES	REQUIREMENTS
A	VISIBILITY [enhances]	RESEARCH CENTRE (Library, archive + labs + cohesion studio)	LIGHT INTENSITY 700-100 Lux
B	COMFORT +SAFETY [ensures]	RESEARCH CENTRE (movement studio 02)	LIGHT INTENSITY 300-700 Lux
C	ATMOSPHERE [creates]	RESEARCH CENTRE (multi-purpose hall)	LIGHT INTENSITY 0-300 Lux

FIGURE 7.21-3 : Illustrations depicting the various light quality experience in focal glow, ambient luminescence and play of brilliants (David Aloï, 2008)

FIGURE 7.24 : Analysis of the illuminance within the building. Analysis done on Sefaira (Author, 2018)



7.7 ENVIRONMENTAL STRATEGIES : VENTILATION

7.7.1 passive cooling and heating

Ventilation is considered by making use of N-E and N-W prevailing winds. The 'expanding skin' functions both as a shading device as well as a ventilated facade. Most spaces make use of natural ventilation: cross and single sided ventilation. When natural ventilation is not available, the design incorporates the use of geothermal heating and cooling.

WARM MONTHS:

As illustrated in the diagram below, hot air enters the building on the southern side (coolest point and near vegetation), after passing through the sub-surface geothermal pipes, the cooled air is released at a fan outlet at the lowest point of the room, as the temperature rises the air escapes the room through the louvres at a higher point.

SANS 204:2011
Edition 1

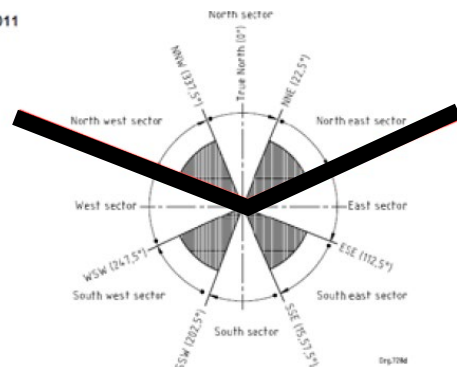
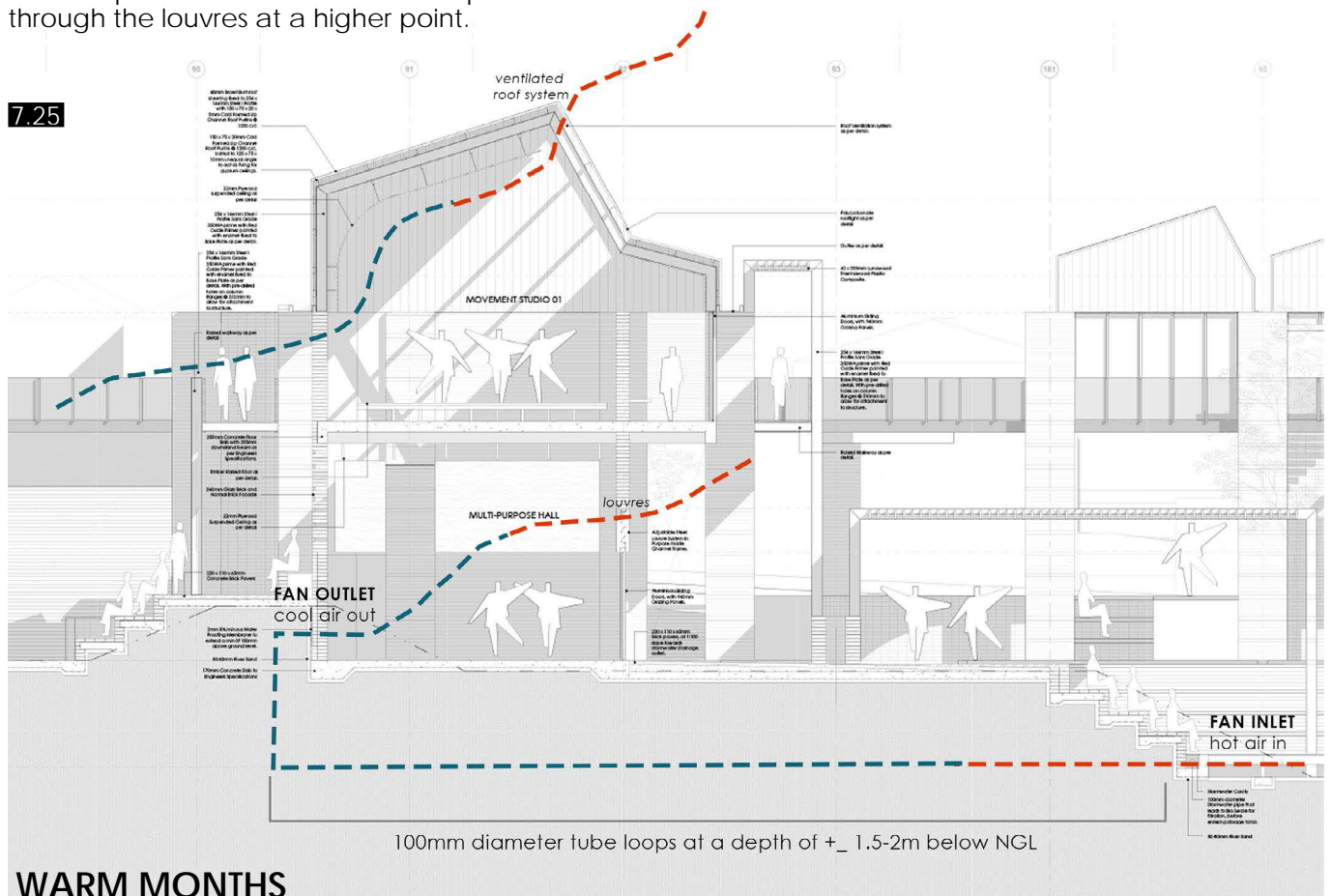


Figure 1 — Orientation sectors



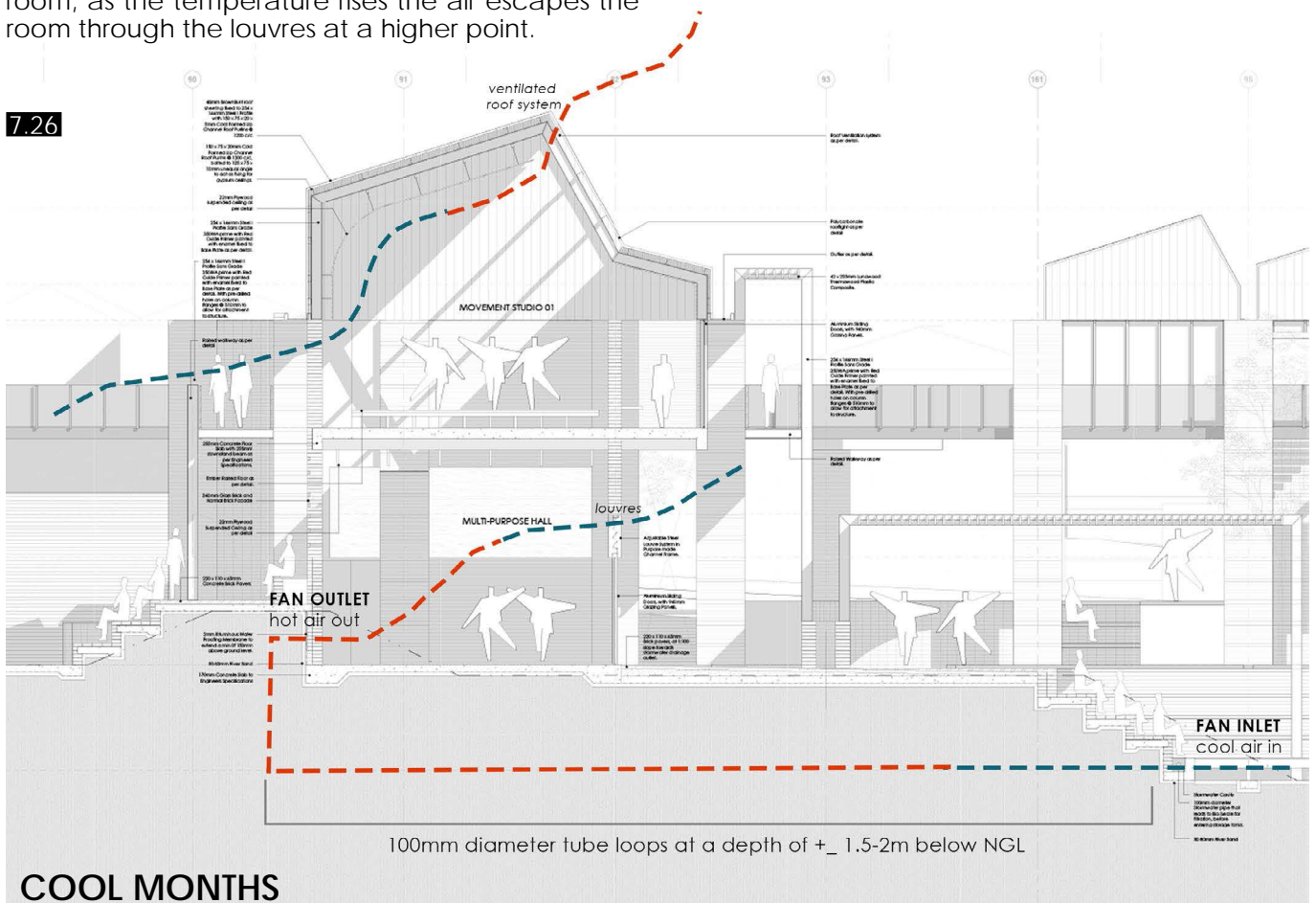
WARM MONTHS

FIGURE 7.25: Diagram illustrating the geothermal system during the warm months (Author, 2018)

FIGURE 7.26 : Diagram illustrating the geothermal system during the warm months (Author, 2018)

COOL MONTHS:

As illustrated in the diagram below, cold air enters the building on the southern side (coolest point and near vegetation), after passing through the sub-surface geothermal pipes, the heated air is released at a fan outlet at the lowest point of the room, as the temperature rises the air escapes the room through the louvres at a higher point.



7.8 COMFORT : ACOUSTICS + SIGHT

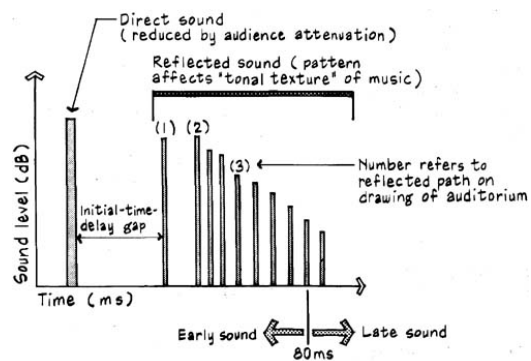
7.8.1 Acoustic and sight projection

Following on from the theme of 'the language of architecture', the technical approach introduces the aspect of projection as a driver of the technical investigation.

Projection is considered by focusing on projecting light, sound and views.

1. SIGHT LINES

2. ACOUSTICS



7.27

1. VIEWS | SIGHT LINES

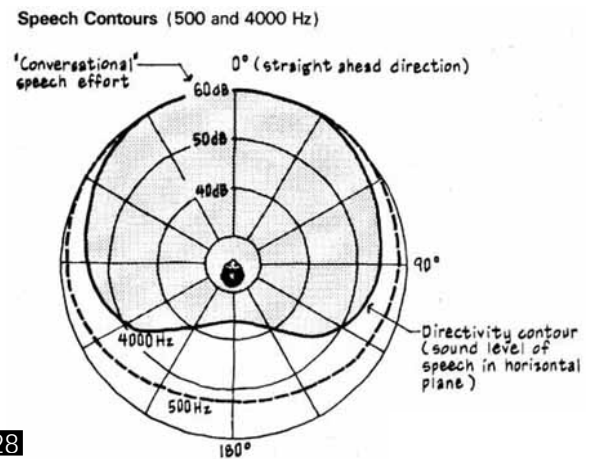
The approach to sight projection included maximizing the visual connection between:

- audience + performer
- listeners + speakers
- exhibition + viewer.

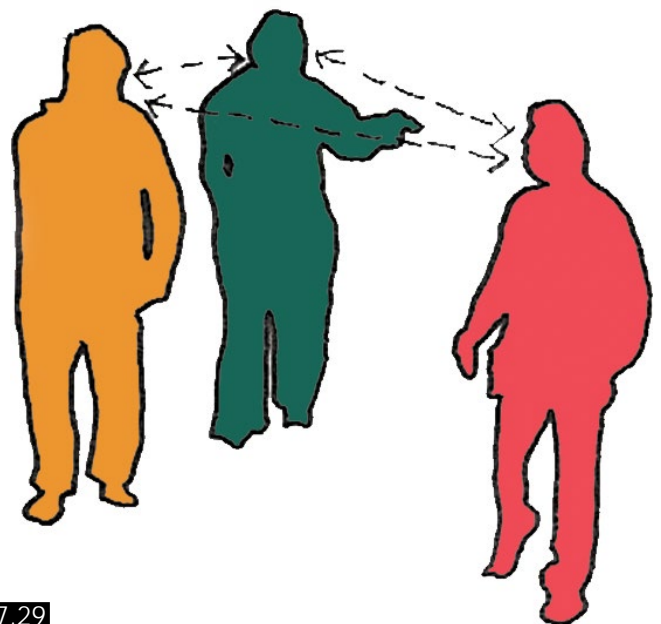
2. SOUND | ACOUSTICS

When dealing with acoustics, the following aspects were considered:

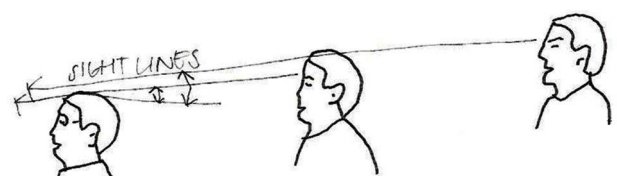
- sound absorption
- sound reflection



7.28



7.29



7.30

FIGURE 7.27: Graph illustrating the sound level vs time (Beranek, 1979)

FIGURE 7.28 : Speech Contours (Fitzroy, 1973)

FIGURE 7.29 : Comfortable conversations (Author, 2018)

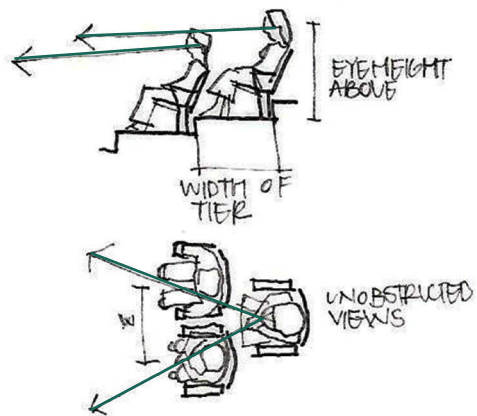
FIGURE 7.30 : Sight Lines, (Author, 2018)

FIGURE 7.31 : Eye Heights and Views, sketch inspired by Architectural Acoustics 03 2010 (Author, 2018)

FIGURE 7.32 : N-S Section 01 sight lines exploration (Author, 2018)

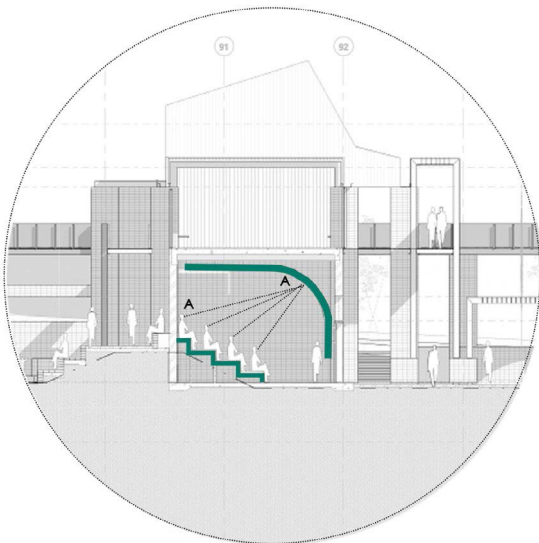
VIEWS | SIGHT LINES 01

Scenario's 01' and 01'' illustrates the sight line situation in the show + tell spaces. A-A illustrates a situation where the audience is viewing a film projected on the suspended ceiling. B-B illustrates a situation where the speaker demands the audience's attention. The space is designed with sloped tiered seating (min 20 degrees), creating ideal sight lines and less audience attenuation. The suspended ceiling is curved, acting as a projection surface. The diagrams alongside represent the design considerations.

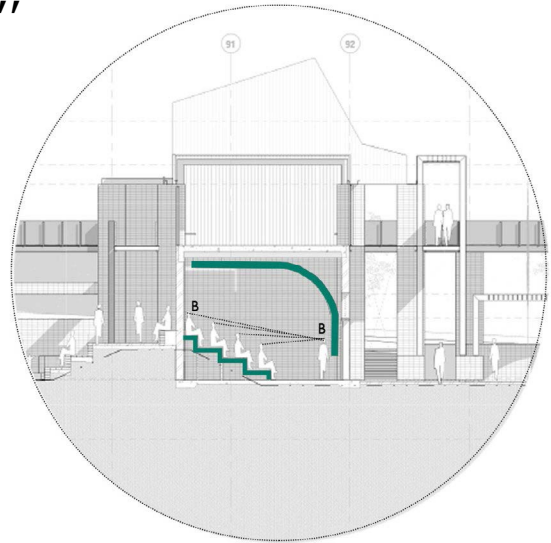


7.31

01'



01''



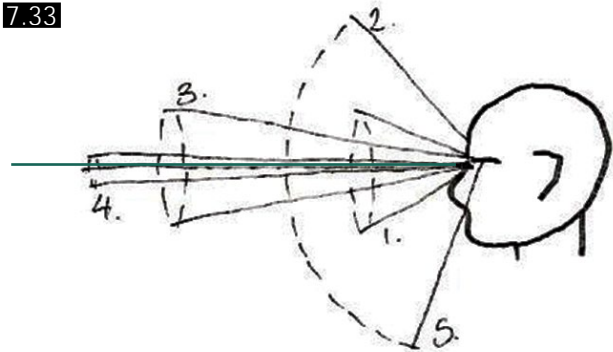
N-S SECTION 01

7.32

VIEWS | SIGHT LINES 02

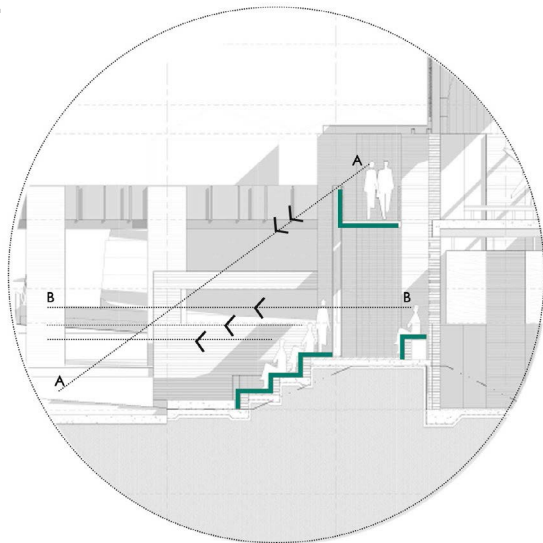
Scenario's 02' and 02'' illustrate the sight line situations on the northern edge of the building (02') and the terraced events space (02''). In 02' A-A illustrates the views from the building to the street, and vice versa, creating a passive form of surveillance. In 02' B-B illustrates the views created for the commuters awaiting public transport. In 02'' A-A illustrates the views from the raised walkway to the events space, and vice versa, creating an opportunity for a large audience. In 02'' B-B illustrates the views created for the audience enjoying a performance on the terraced events space. The diagrams alongside represent the design considerations.

7.33

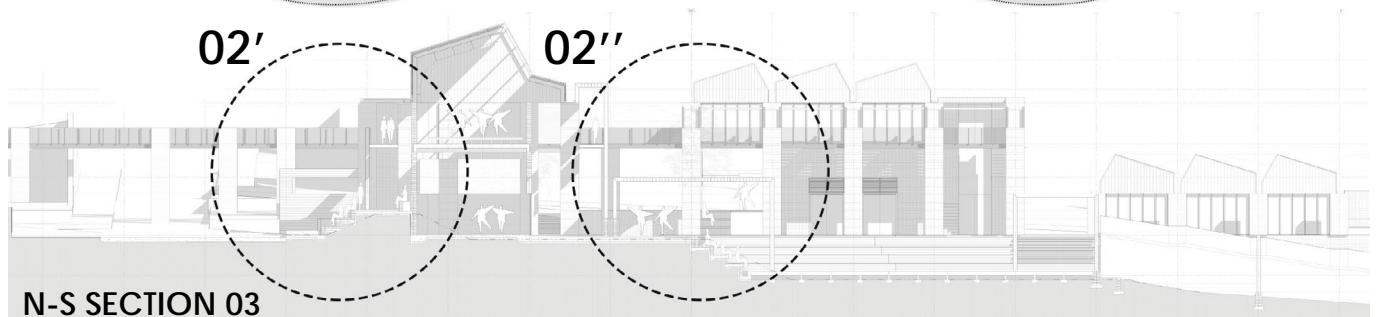
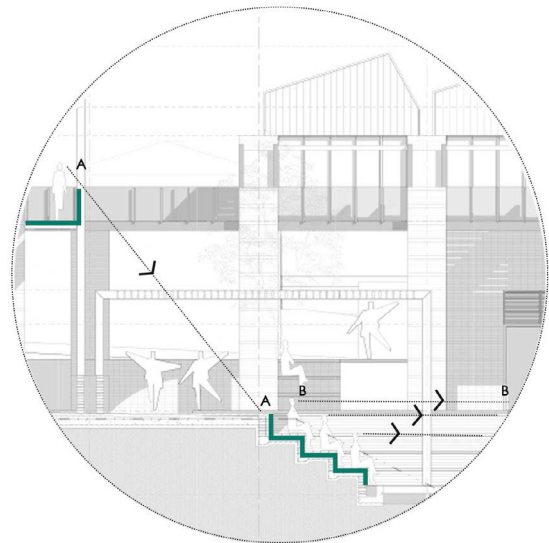


1. 30' Limit for secondary displays
2. 50' Limit for detecting objects above sight line
3. 15' Limit for primary displays
4. 2' Limit for focused vision
5. 70' Limit for detecting objects below line of sight

02'



02''



7.34

FIGURE 7.33: Sight lines and limits, sketch inspired by Architectural Acoustics 03 2010 (Author, 2018)

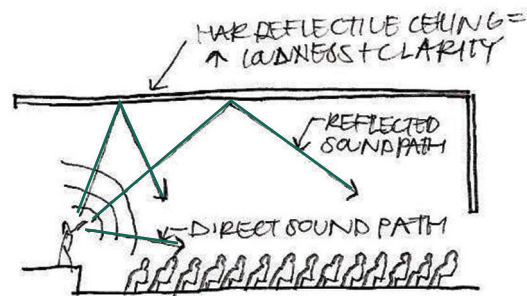
FIGURE 7.34 : N-S Section 03 sight lines exploration (Author, 2018)

FIGURE 7.35 : Audience vs speaker with direct line of sight scenarios, sketch inspired by Architectural Acoustics 03 2010 (Author, 2018)

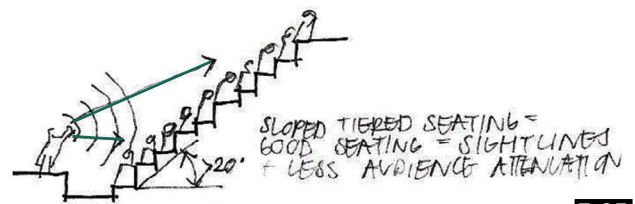
FIGURE 7.36 : N-S Section 02 sight lines exploration (Author, 2018)

VIEWS | SIGHT LINES 03

Scenario 03' illustrates the sight line situation in the mediation spaces. A-A illustrates a situation where a mediator stands below a congregation of conflicting residents. B-B illustrates a situation where the performer demands the audience's attention. The space is designed with sloped tiered seating (min 20 degrees), creating ideal sight lines and less audience attenuation. The suspended ceiling is curved, acting as a projection surface. The diagrams alongside represent the design considerations.



03'



7.35

03'



N-S SECTION 02

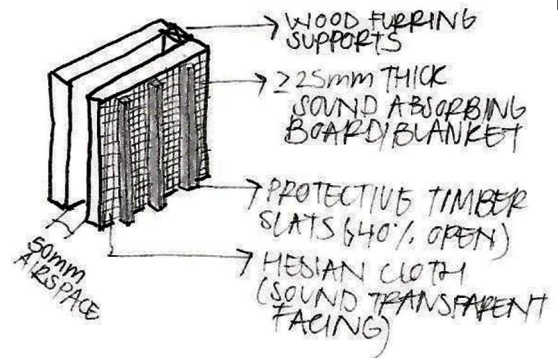
N-S SECTION 02
B-B

7.36

SOUND | ACOUSTICS 01

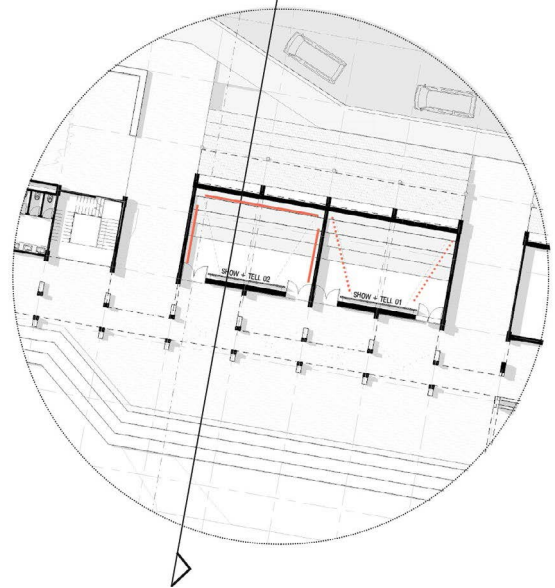
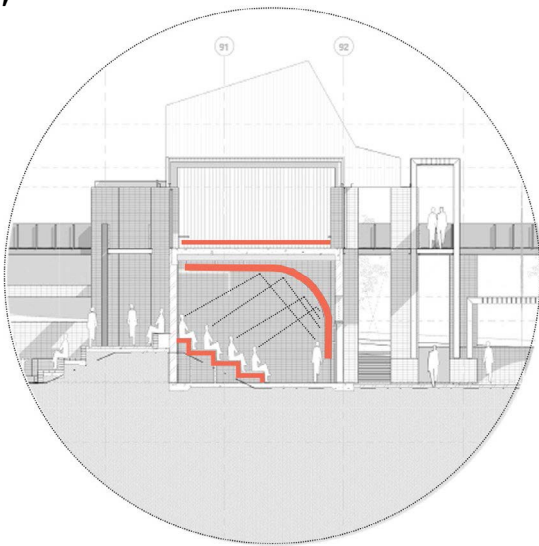
Scenario 01' illustrates the acoustic considerations within the show + tell spaces and movement studios. The show + tell spaces are designed with sloped tiered seating (min 20 degrees) with a reflective curved suspended ceiling (plywood), creating ideal sound reflection paths lines and less audience attenuation. The suspended ceiling is curved, acting as a reflective surface. The back wall (directly opposite speaker) of the show and tell space is designed with absorbing panels, as shown in diagrams on the left. The suspended ceiling and the raised floor between the two spaces, act as a sound barrier between the two spaces. These details will be further illustrated in the technical drawings.

7.37

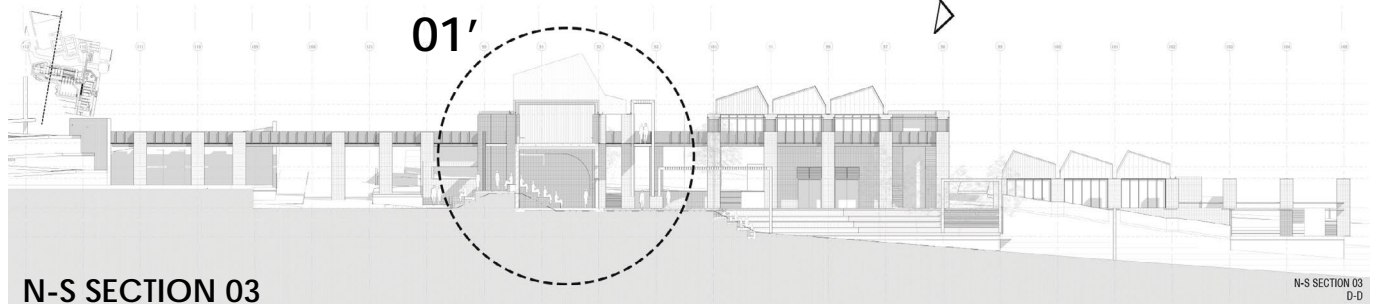


ABSORBING PANELS

01'



01'



N-S SECTION 03

N-S SECTION 03
D-D
1:100

7.38

FIGURE 7.37: Sound Absorbing Panels, sketch inspired by Architectural Acoustics 03 2010 (Author, 2018)

FIGURE 7.38 : N-S Section 03 sight lines exploration (Author, 2018)

FIGURE 7.39 : Sound Reflecting Panels, sketch inspired by Architectural Acoustics 03 2010 (Author, 2018)

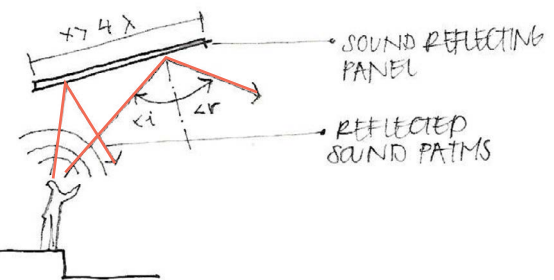
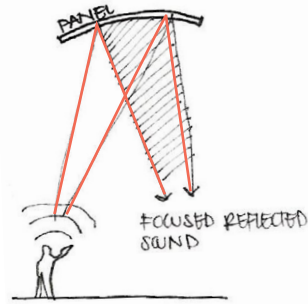
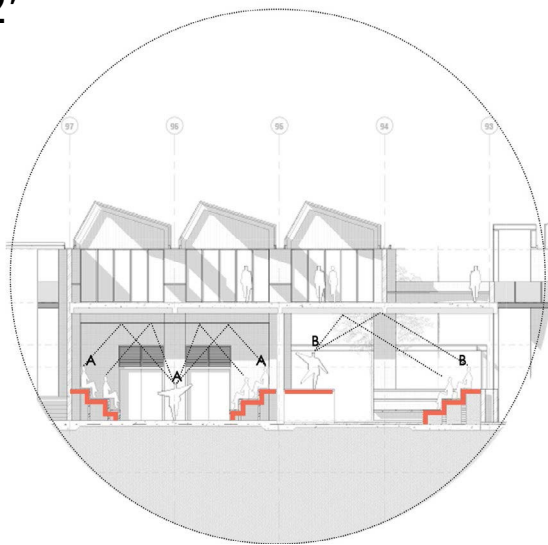
FIGURE 7.40 : Sound Reflecting Panels and Sound Absorbing Panels, sketch inspired by Architectural Acoustics 03 2010 (Author, 2018)

FIGURE 7.41 : N-S Section 02 sight lines exploration (Author, 2018)

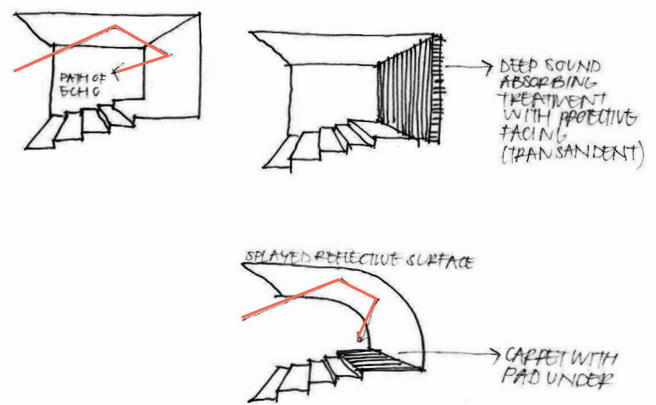
SOUND | ACOUSTICS 02

Scenario's 02' illustrates the acoustic considerations in the mediation spaces. In A-A illustrates a reflective curved ceiling (plywood) that ensures multiple reflected sound paths (as shown in diagrams alongside). B-B illustrates the views from the concrete slab as a reflective surface for the performance that occurs within the space. The diagrams alongside represent the design considerations.

02'



7.39



7.40

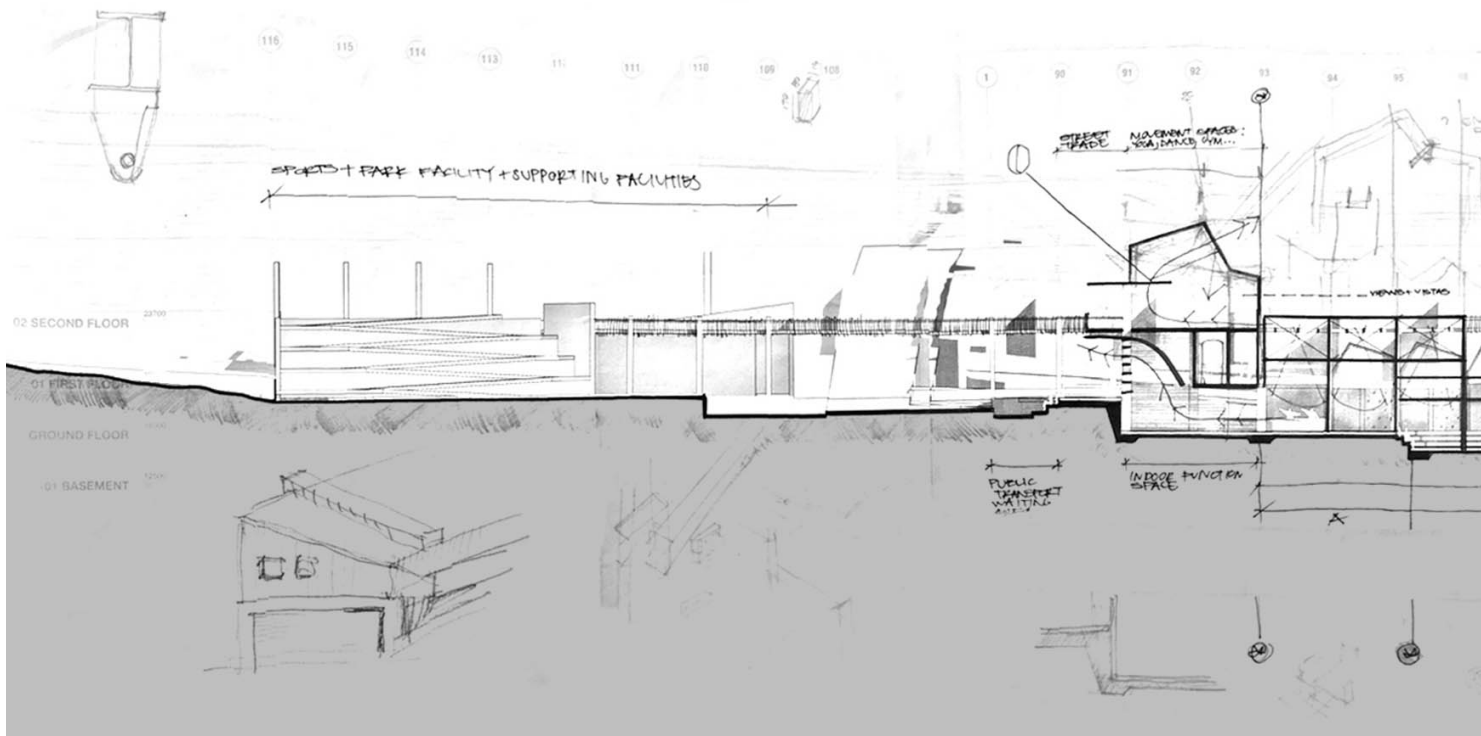
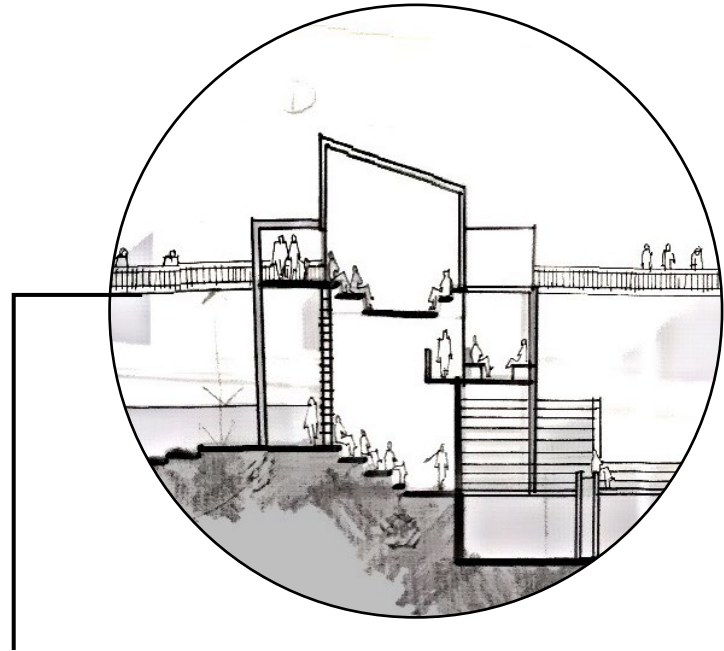
02'



7.41

7.9 EXPLORATIONS

7.9.1 N-S Section 01 explorations (A-A)



7.42

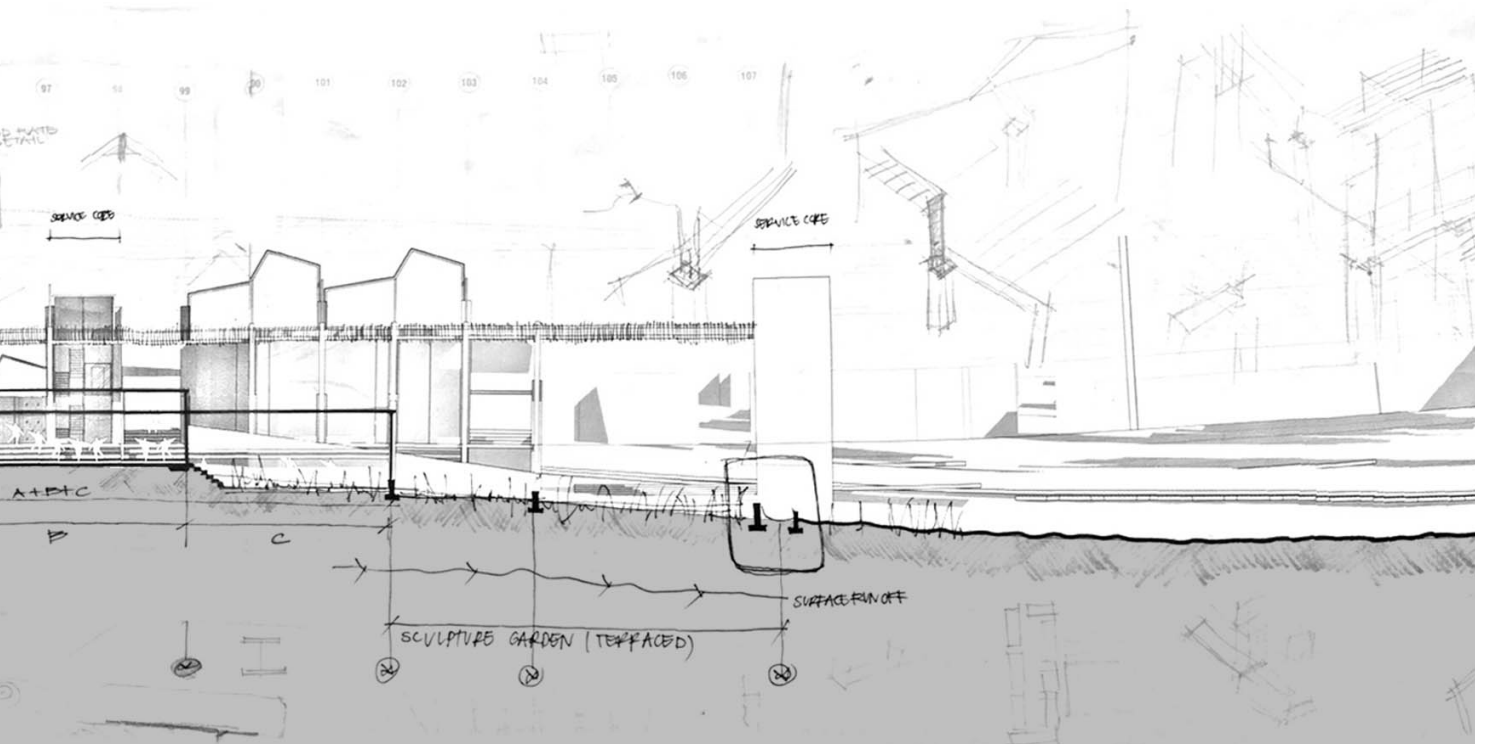
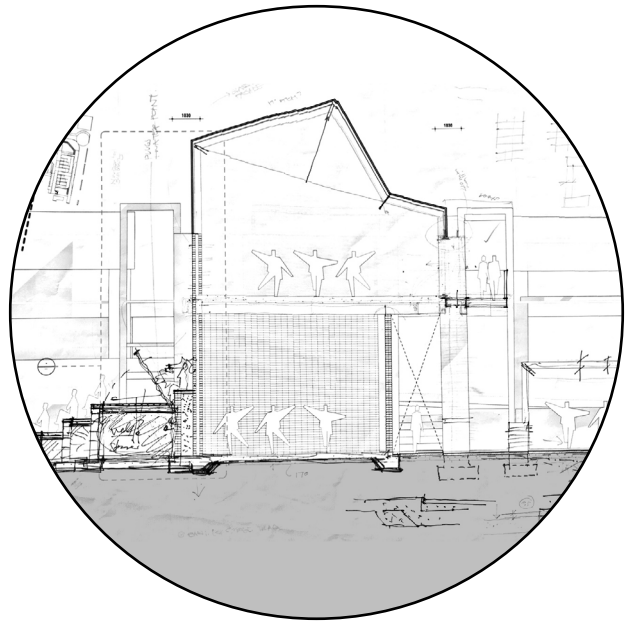
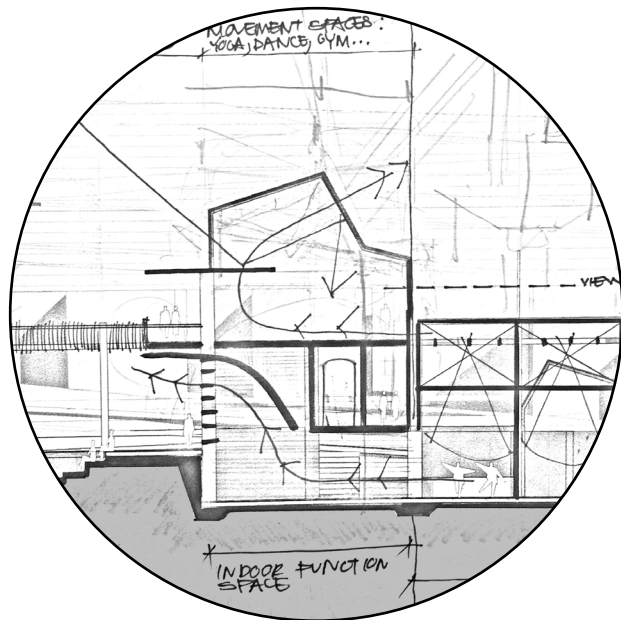
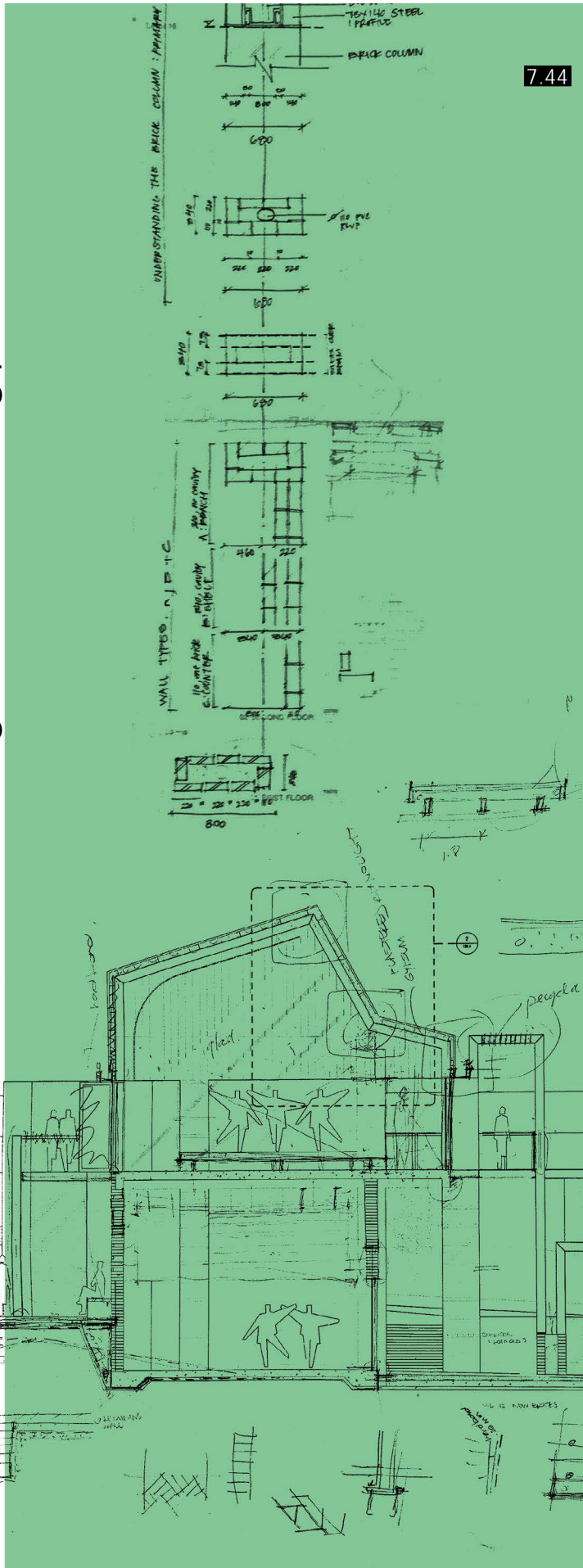


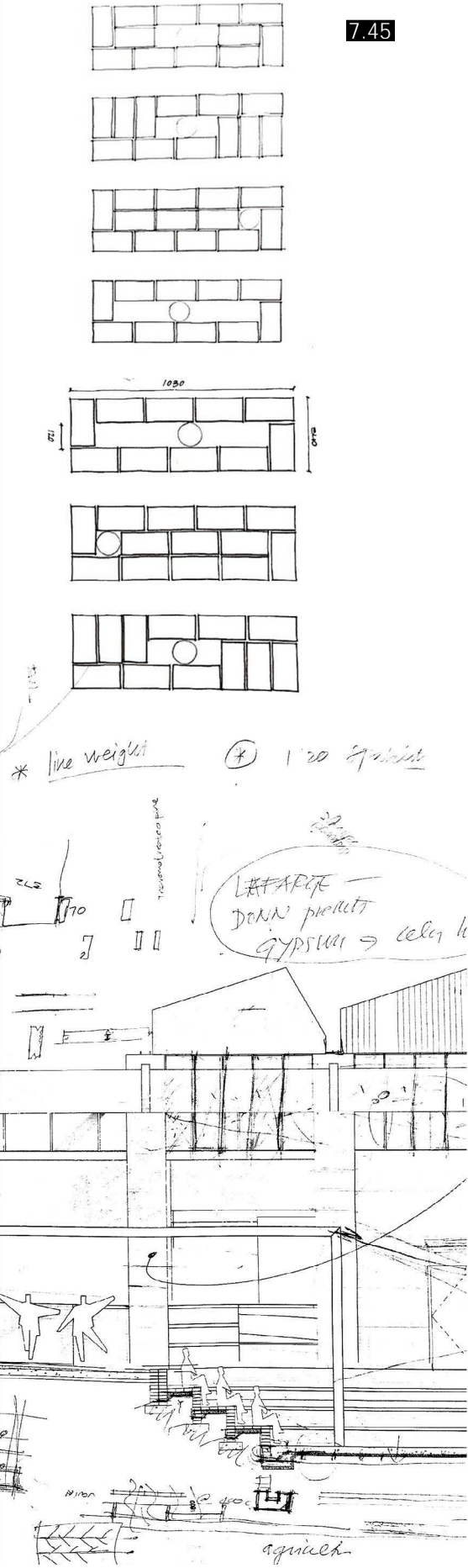
FIGURE 7.42 : N-S Section 01 (A-A) explorations, iterations in chronological order, from left to right (Author, 2018)

understanding the load-bearing posts: brick column

179
7.43



7.44



7.45

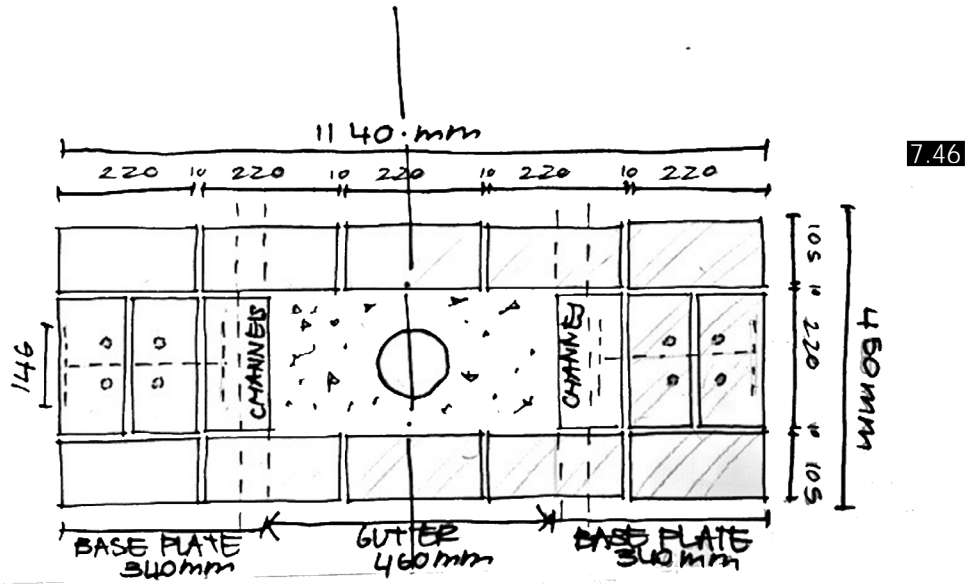
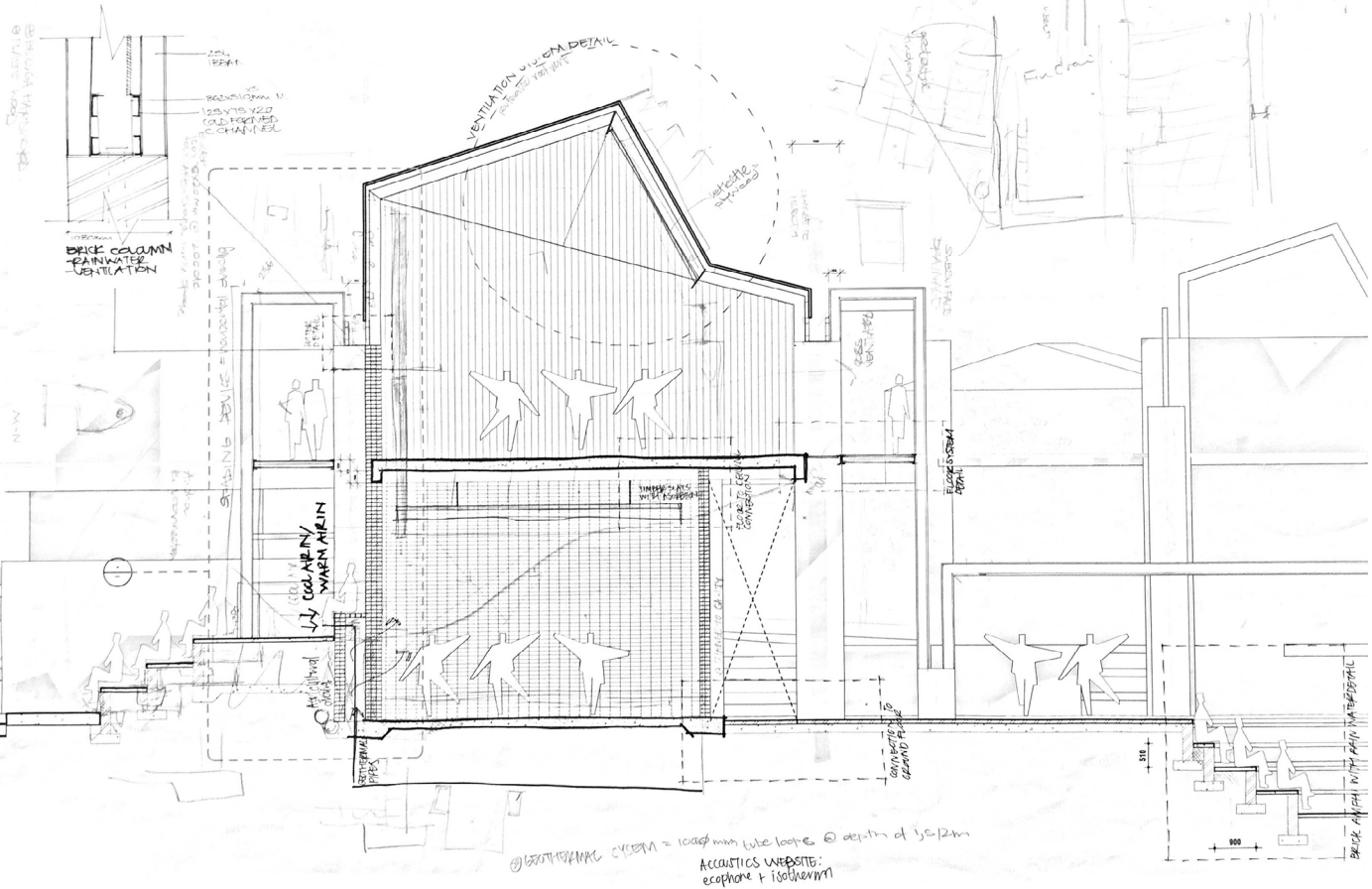
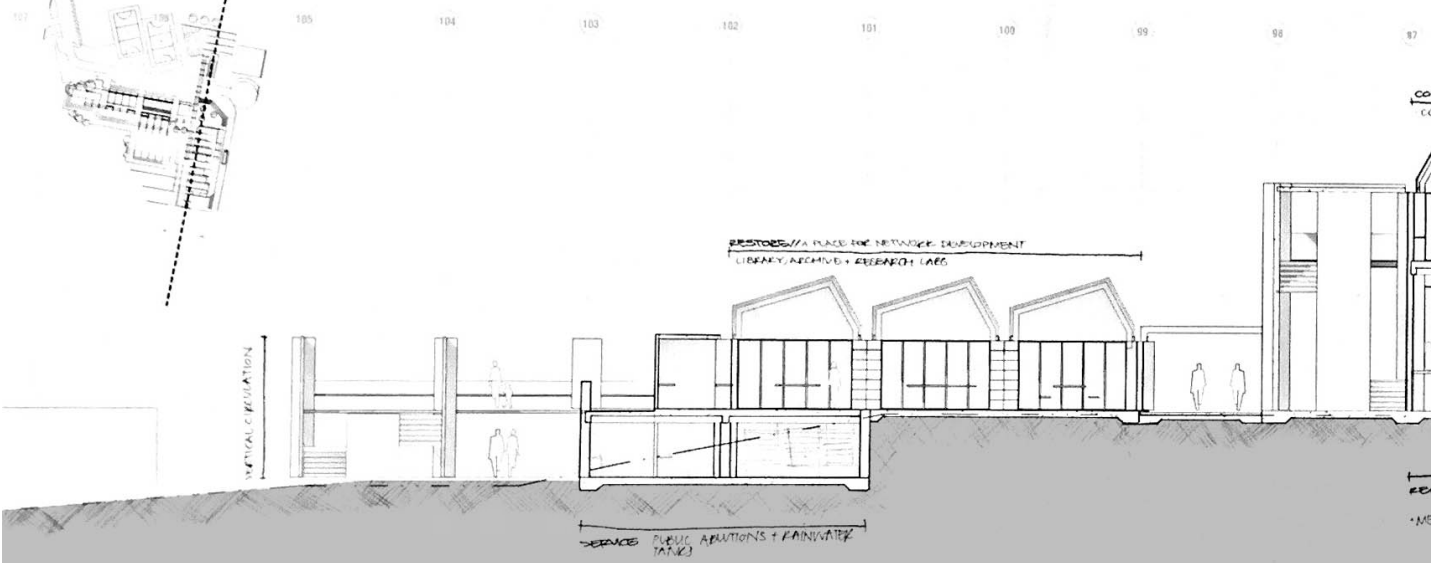
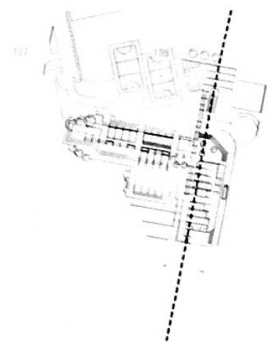
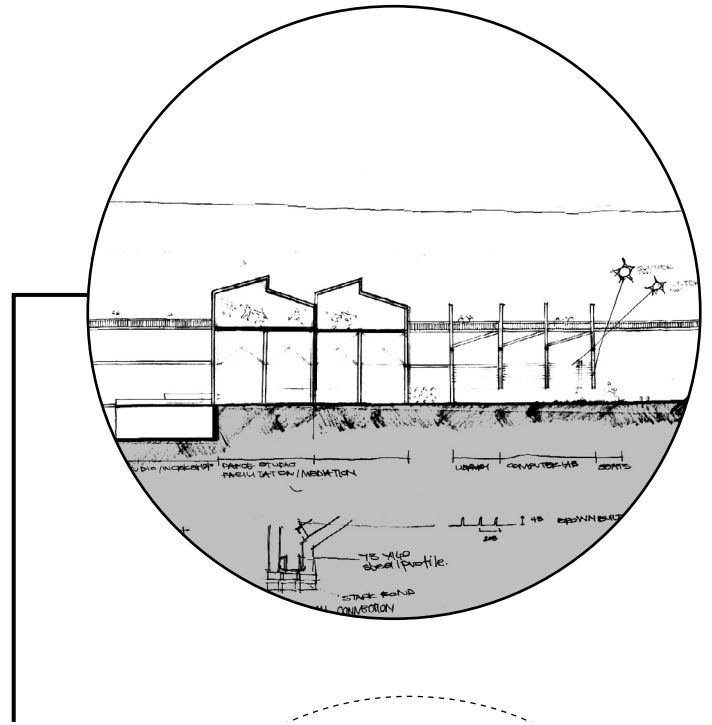


FIGURE 7.43-6 : N-S Section 01 (A-A) explorations, iterations in chronological order, from left to right. Sketches illustrating the explorations of the load-bearing posts : brick column (Author, 2018)



7.9.3 N-S section 02 explorations (B-B)



7.47

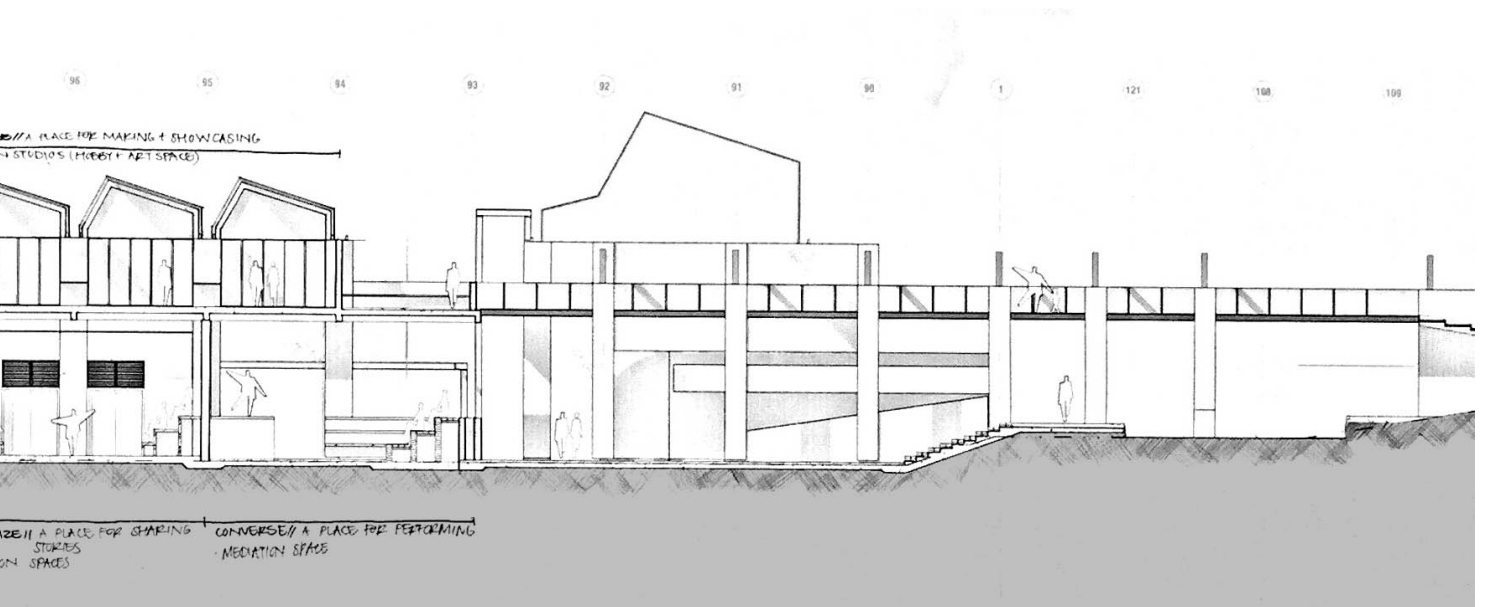
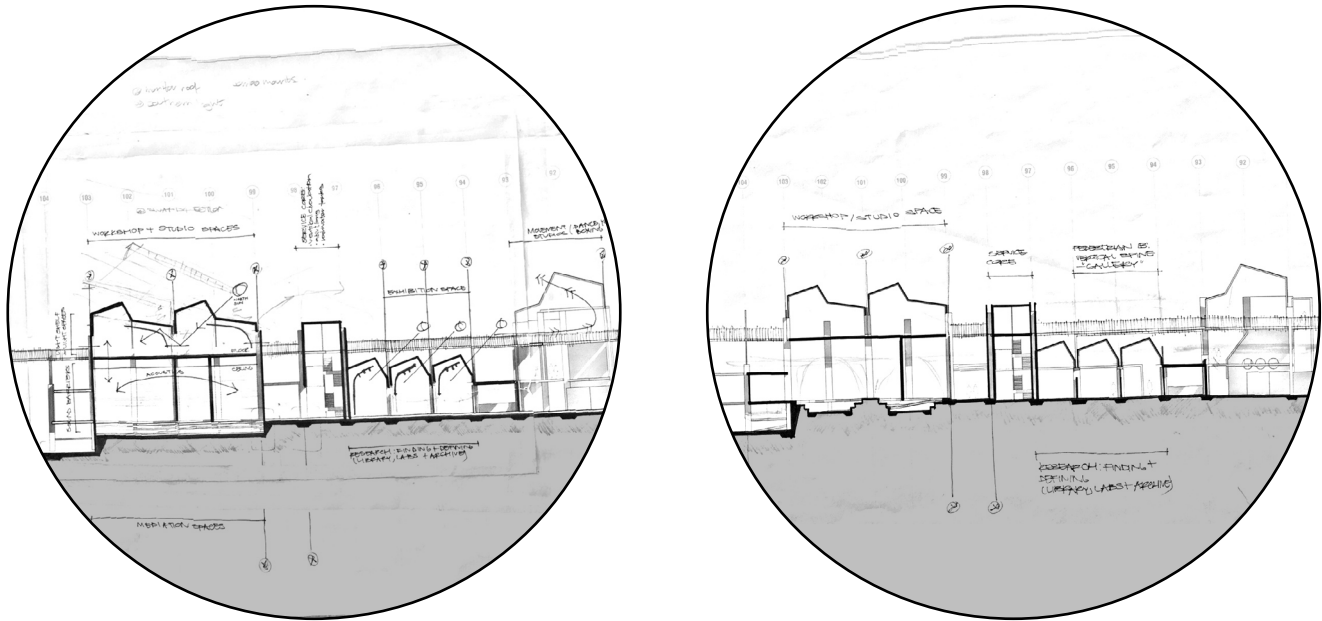
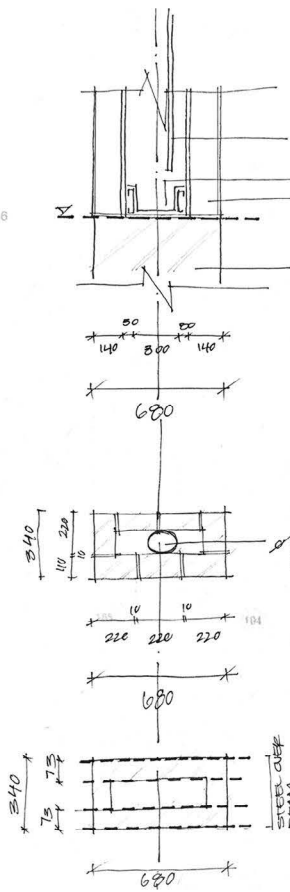
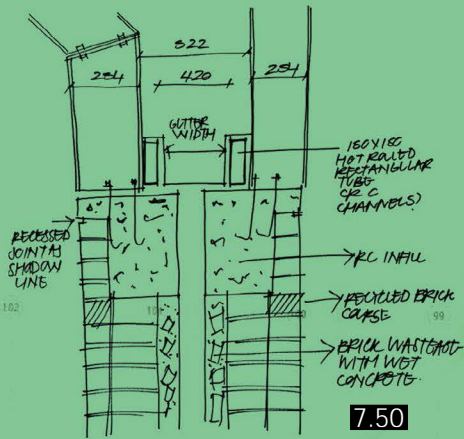
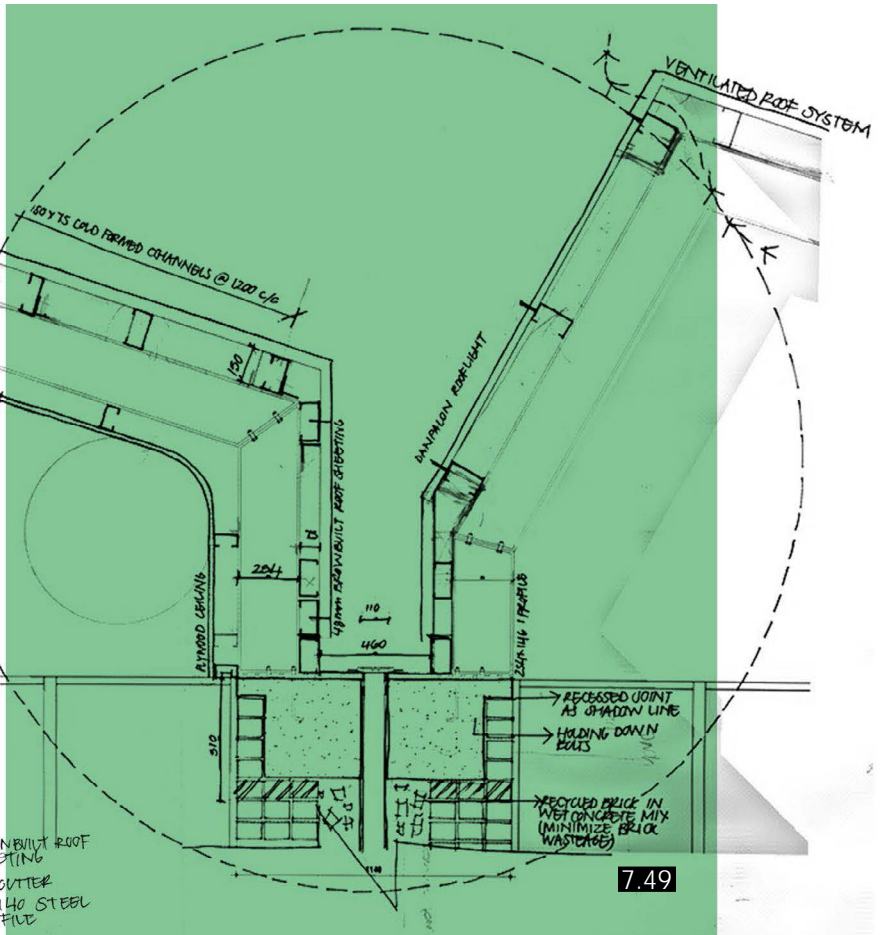


FIGURE 7.47 : N-S Section 03 (B-B) explorations, iterations in chronological order, from left to right (Author, 2018)

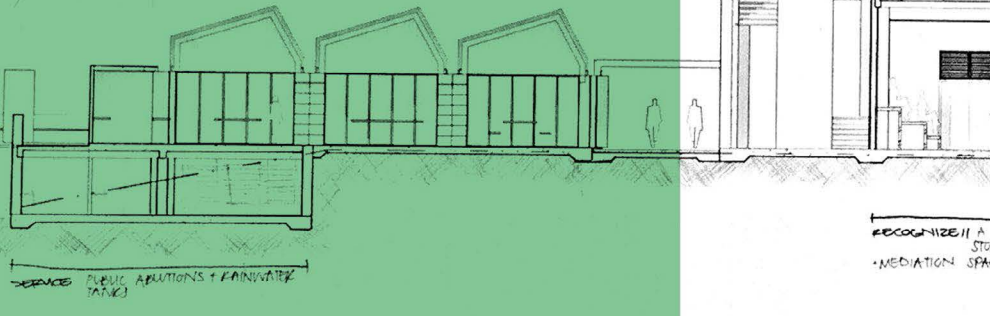
UNDERSTANDING THE BRICK COLUMN: PRIMARY STRUCTURE



understanding how the roof meets the column



RESTORES A SPACE FOR NETWORK EQUIPMENT
LIBRARY, ARCHIVE + RESEARCH LABS



7.48

183

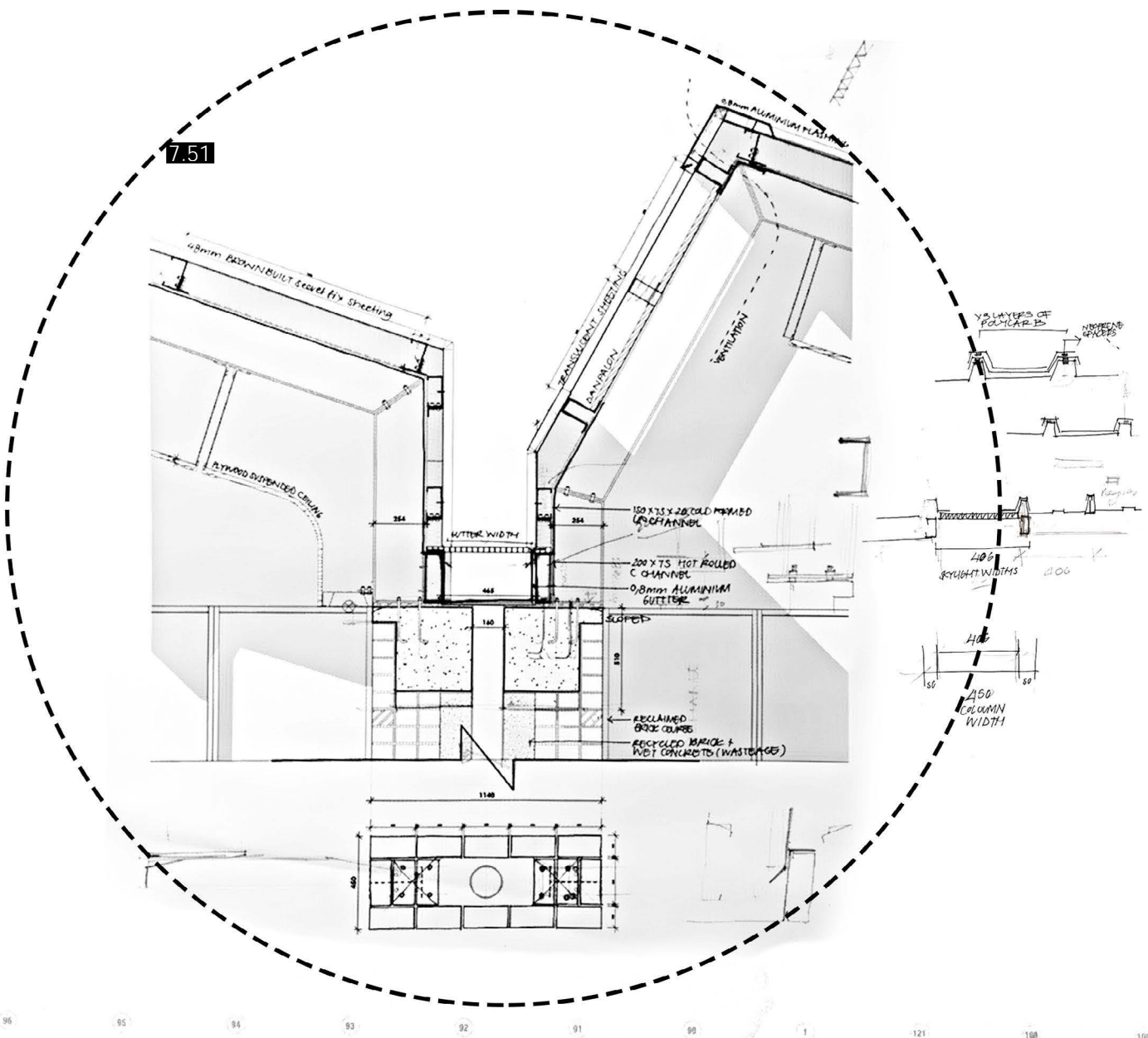
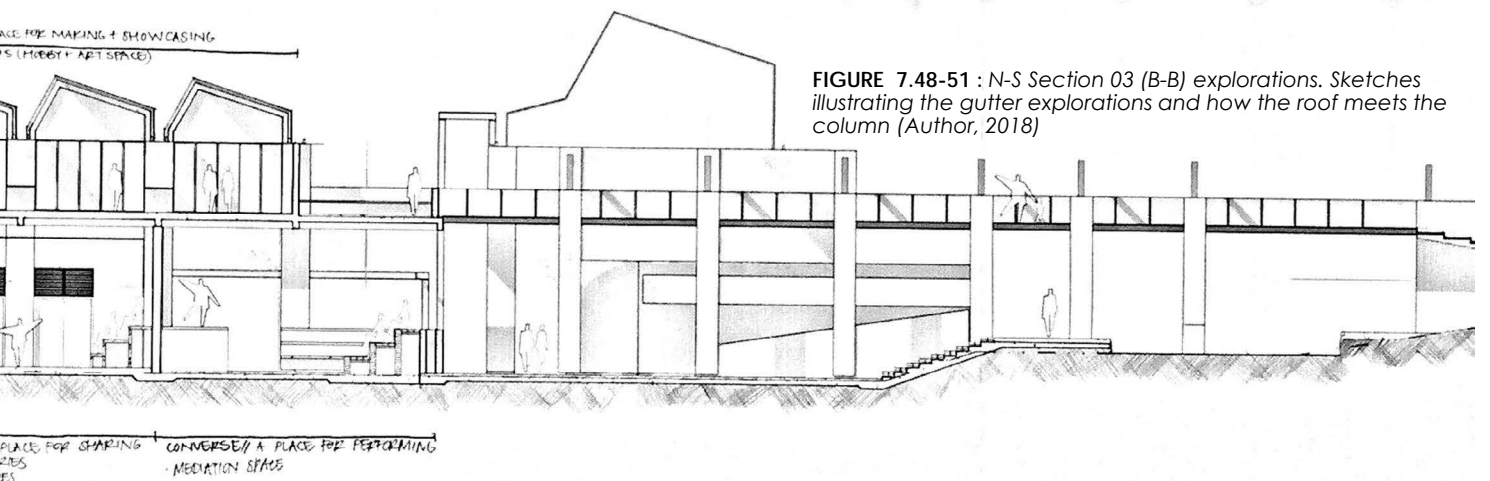
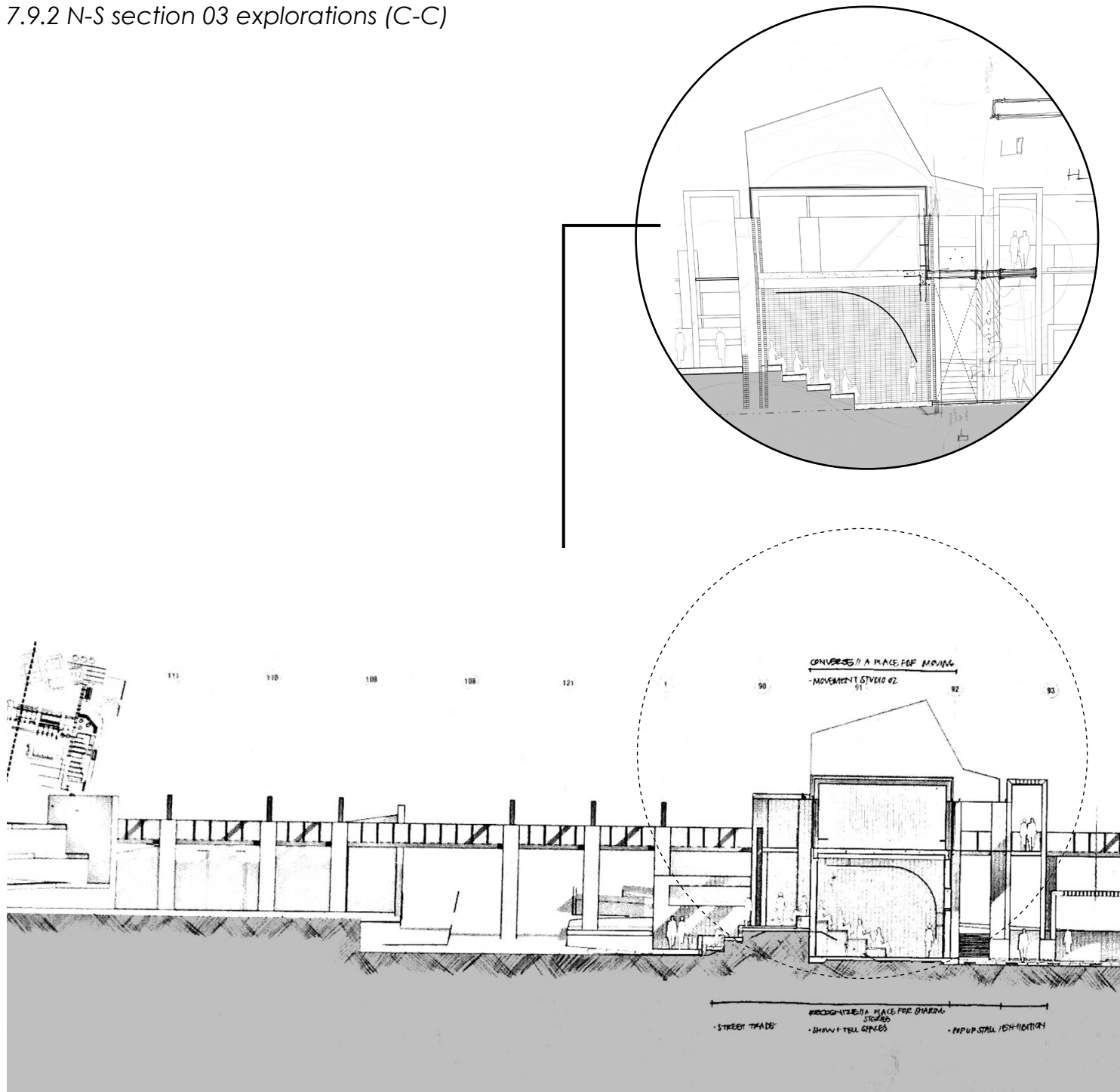


FIGURE 7.48-51 : N-S Section 03 (B-B) explorations. Sketches illustrating the gutter explorations and how the roof meets the column (Author, 2018)



7.9.2 N-S section 03 explorations (C-C)



7.52

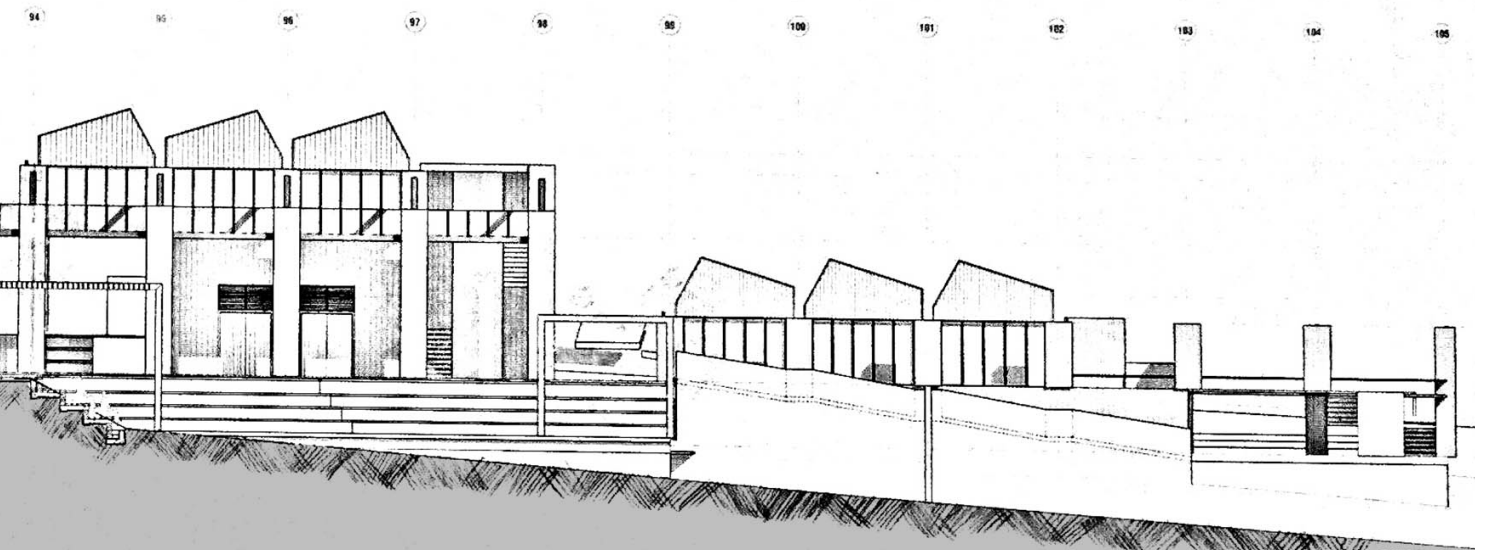
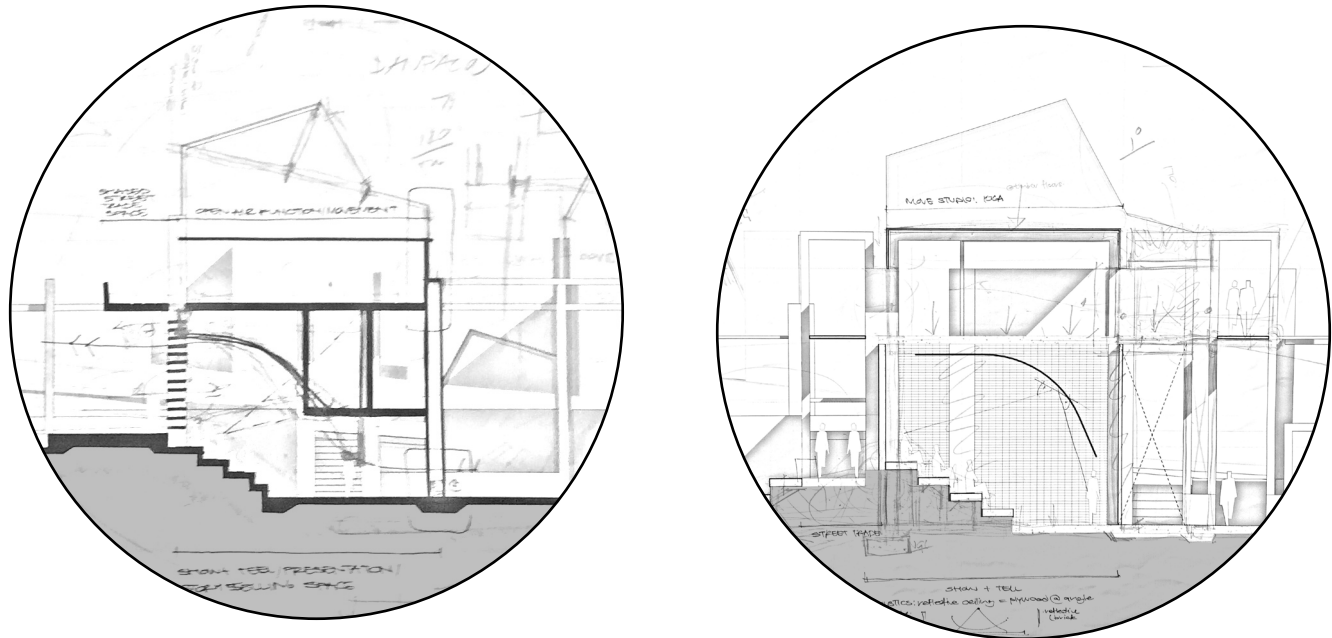
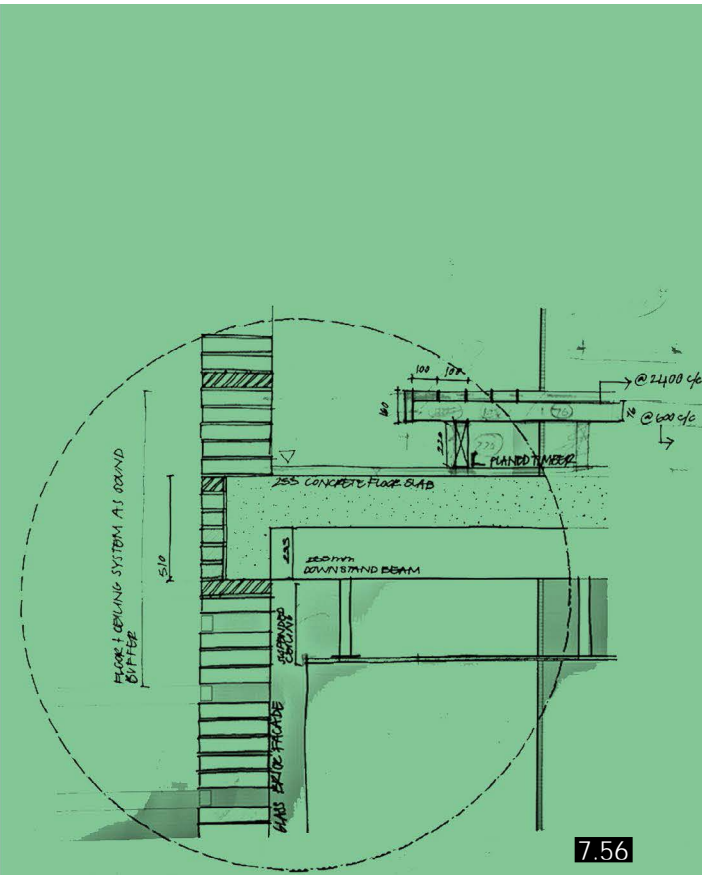


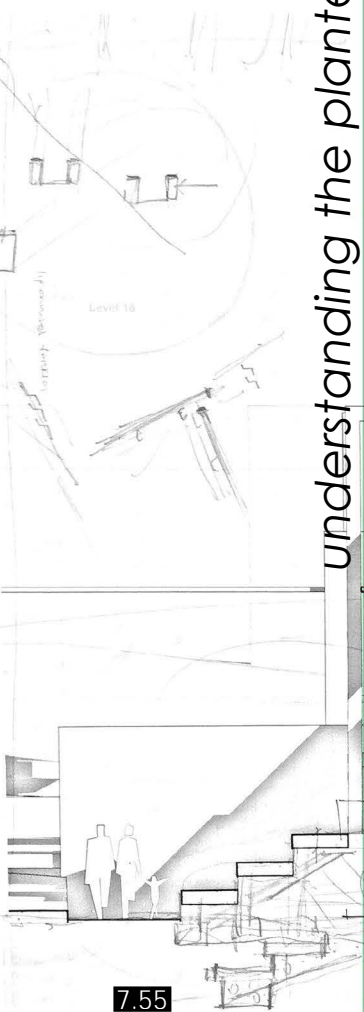
FIGURE 7.52 : N-S Section 02 (C-C) explorations, iterations in chronological order, from left to right (Author, 2018)

understanding the planter detail + the floor + ceiling system

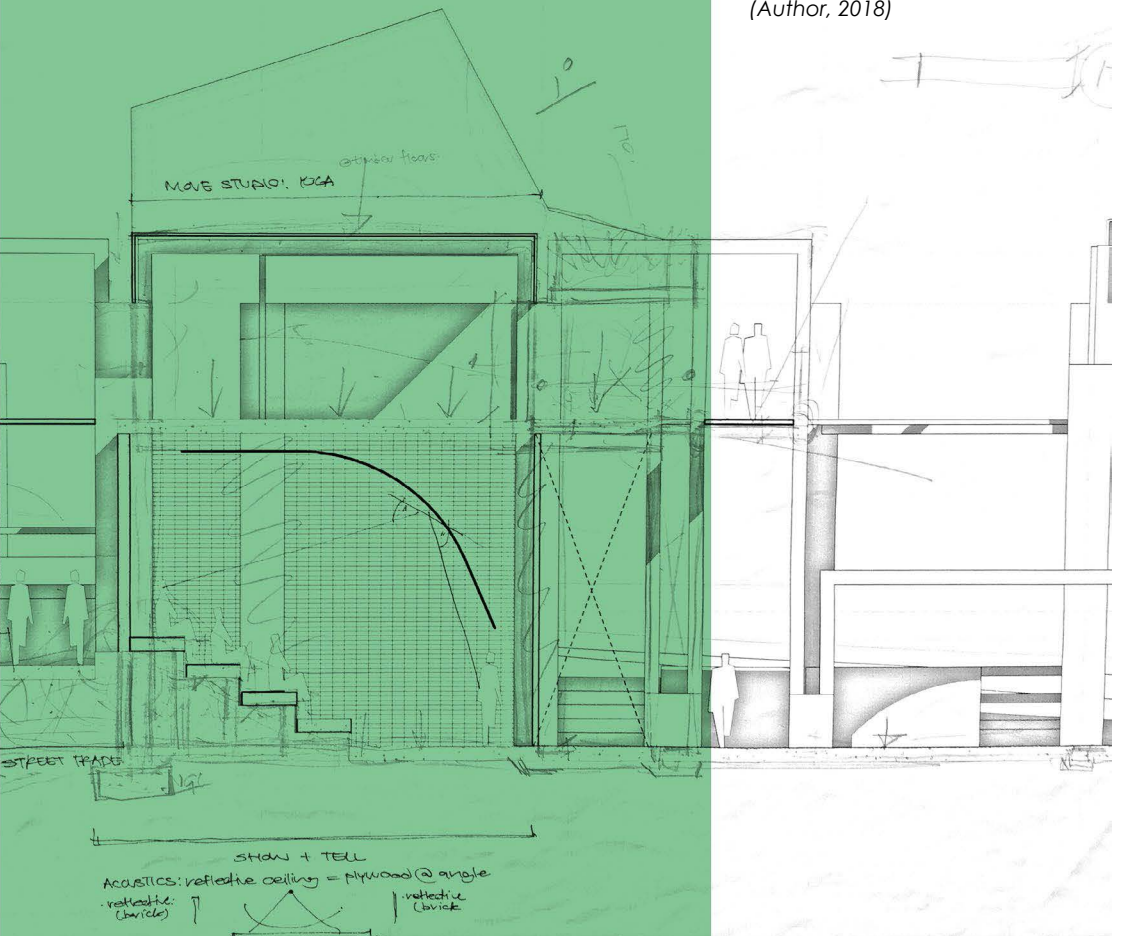


7.56

FIGURE 7.48-51 : N-S Section 02 explorations. Sketches illustrating the explorations planter detail as well as the floor + ceiling system (Author, 2018)



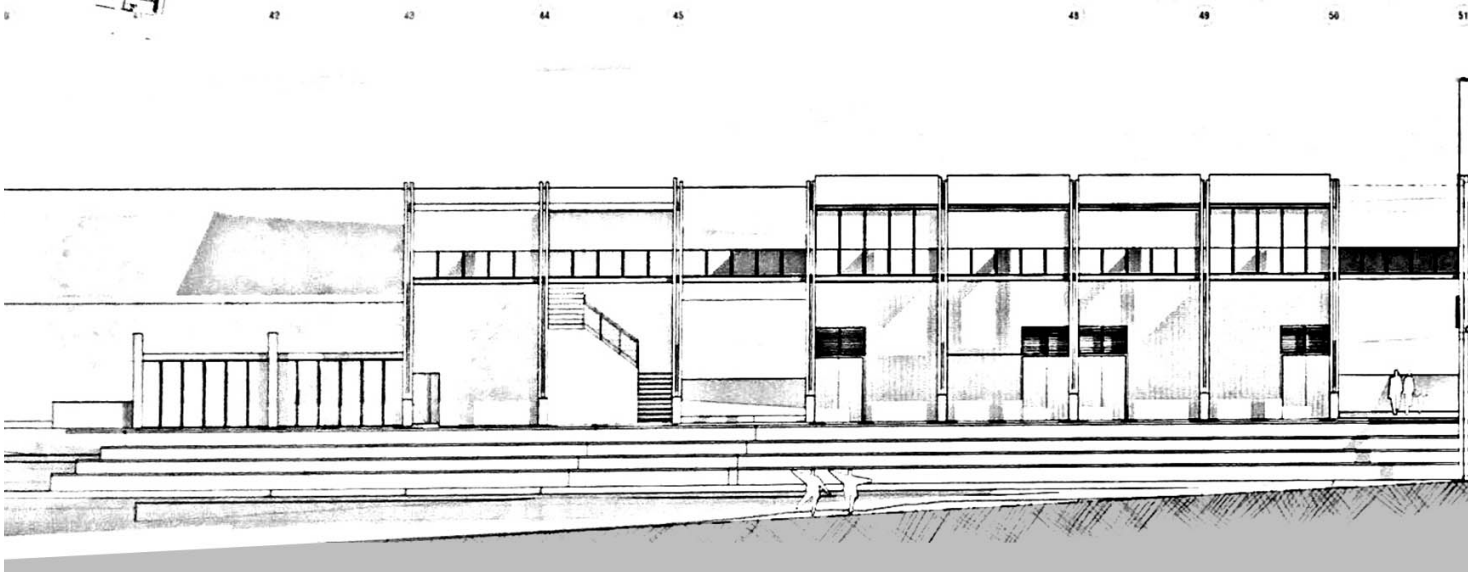
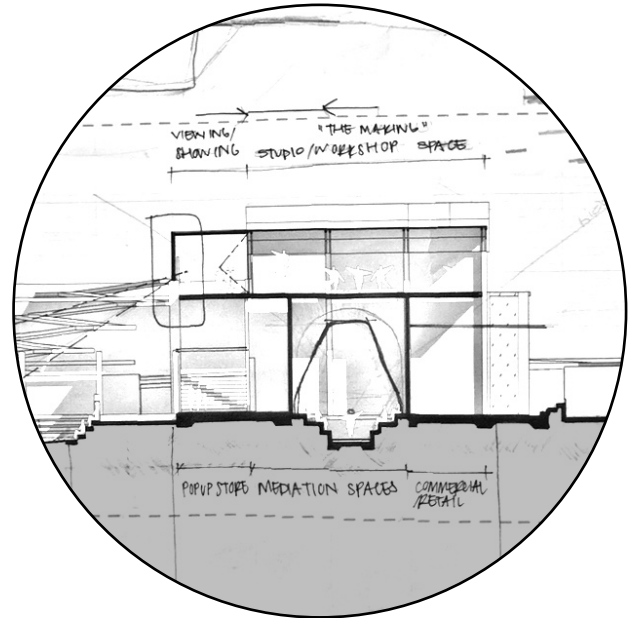
7.55



Acoustics: reflective ceiling = plywood @ angle
reflective (brick) | reflective (brick)

N-S SECTION 01
SCALE: 1 : 50

7.9.4 E-W section explorations (D-D)



7.57

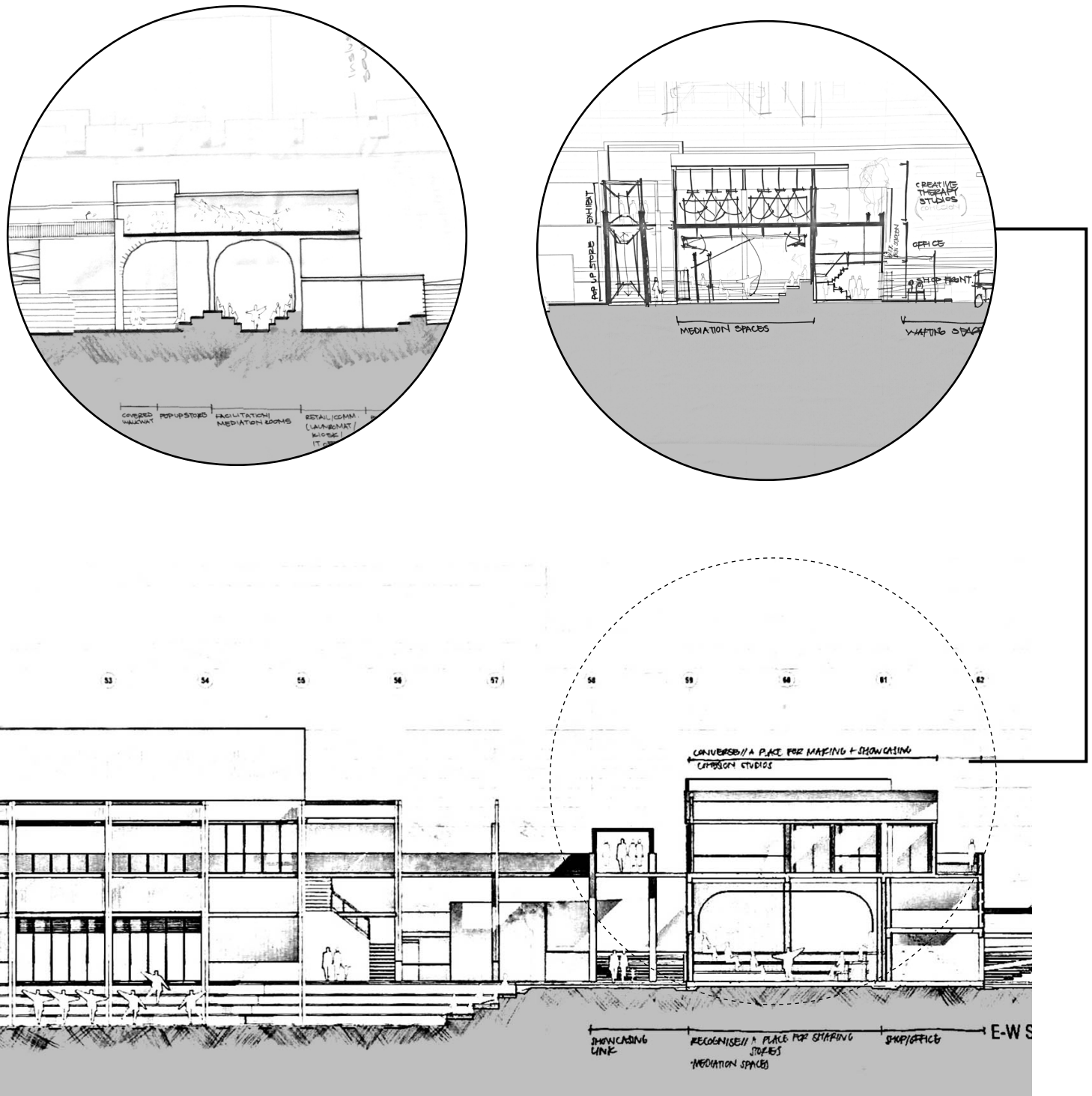
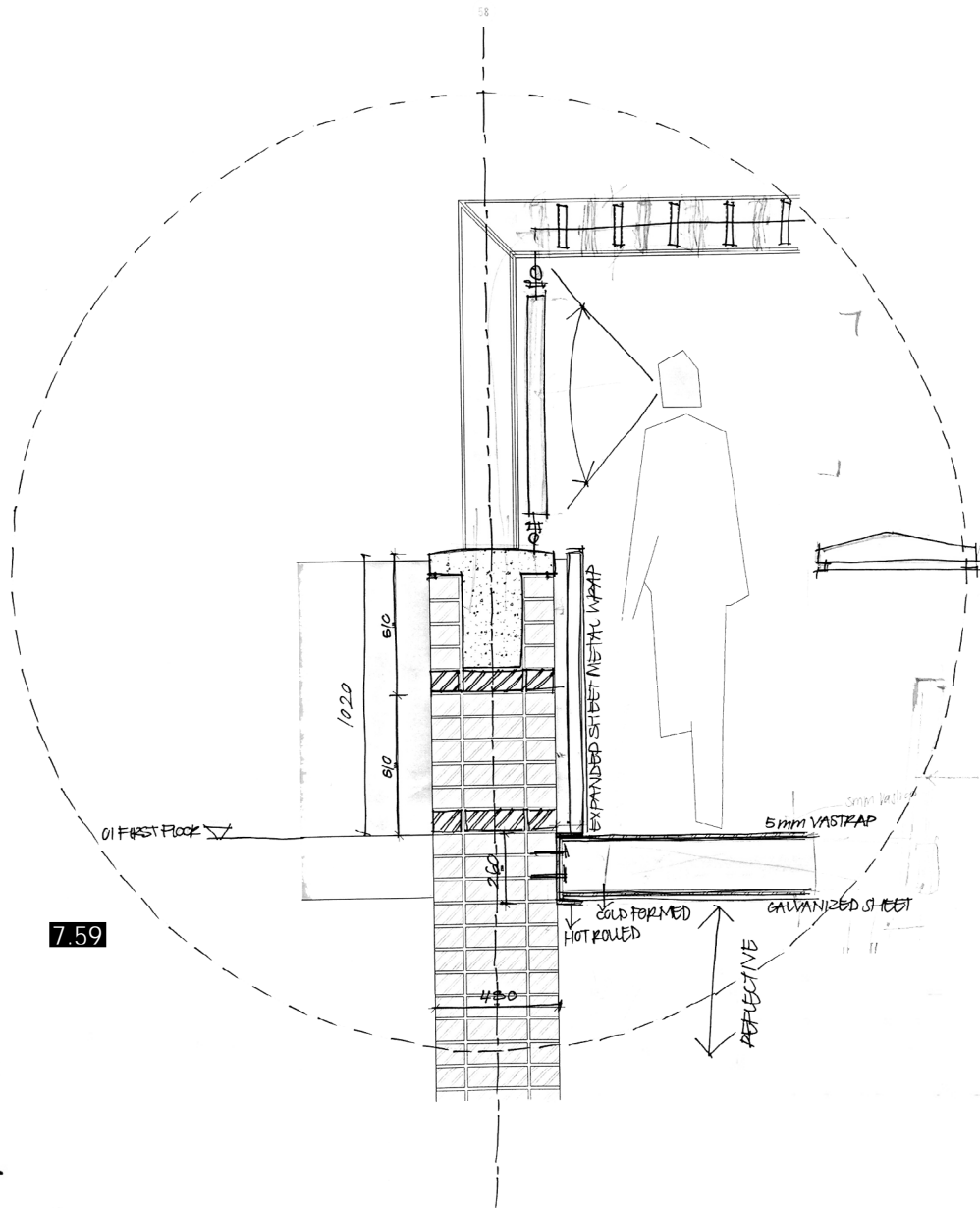
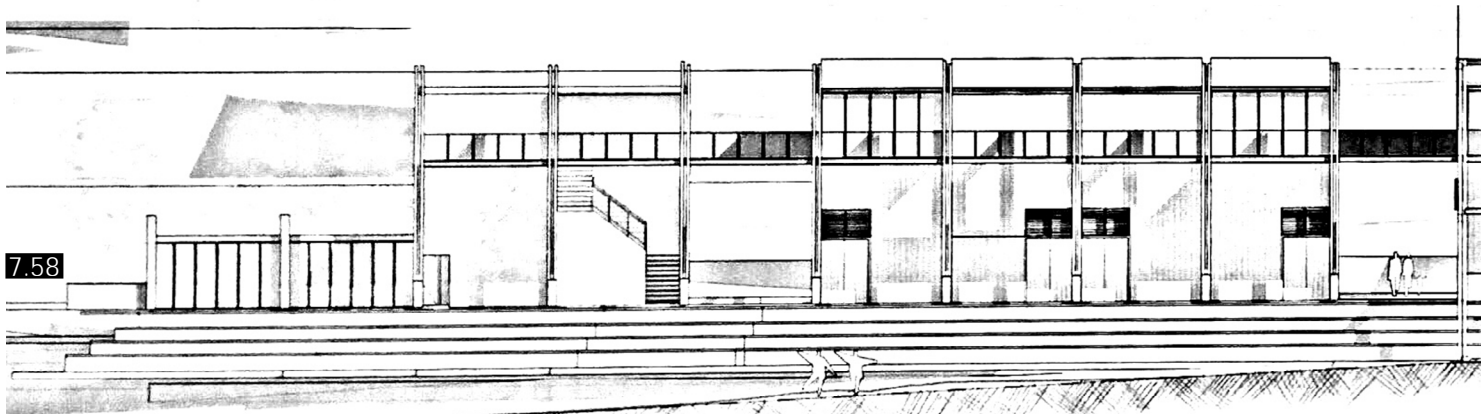
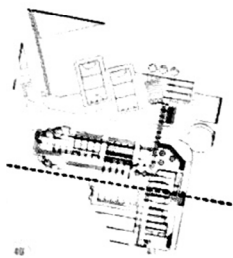


FIGURE 7.57 : E-W Section (D-D) explorations, iterations in chronological order, from left to right (Author, 2018)

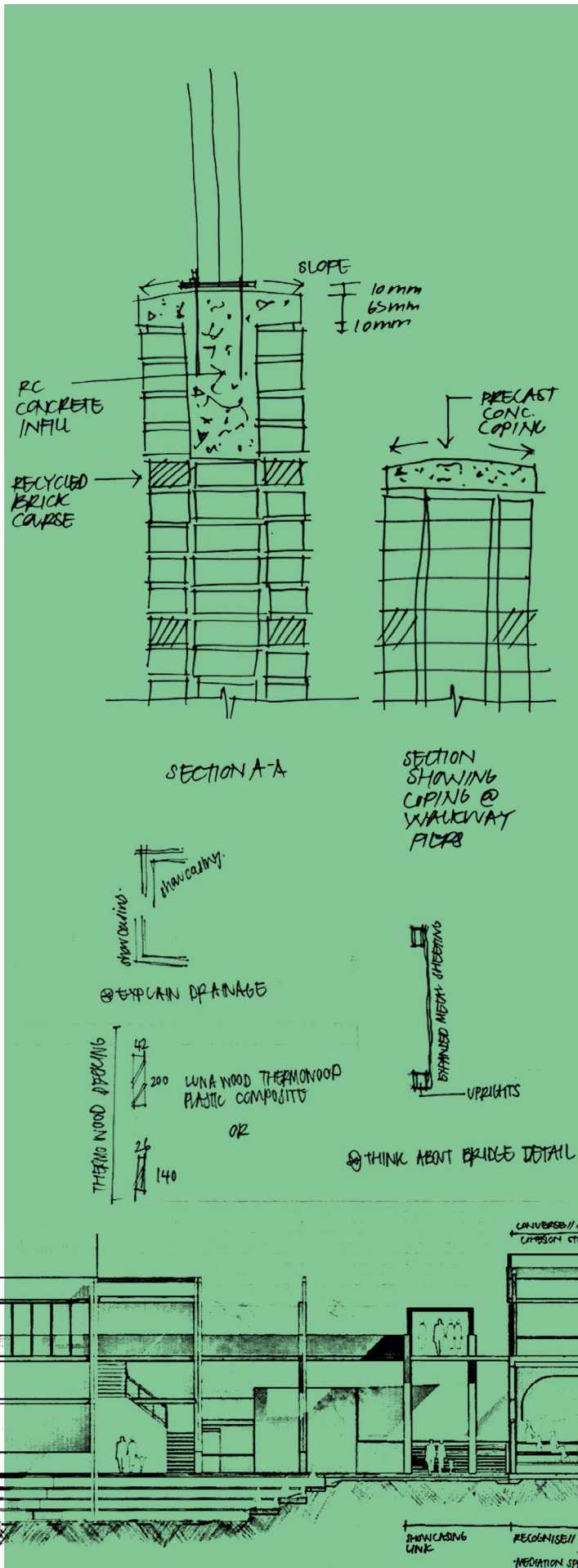


7.59



7.58

understanding the showcasing link



7.60

FIGURE 7.58-60 : E-W Section explorations. Sketches illustrating the showcasing link explorations, the raised walkway (Author, 2018)

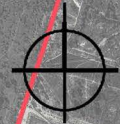
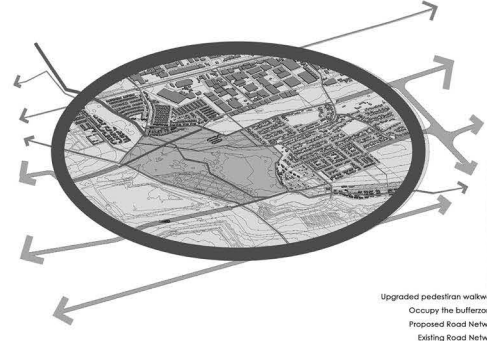
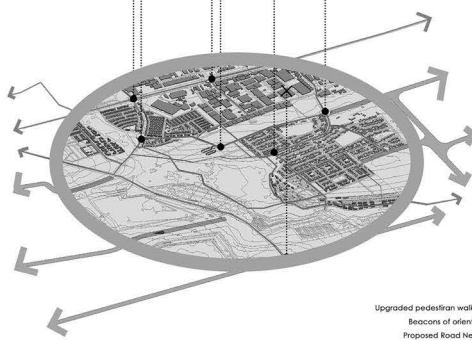
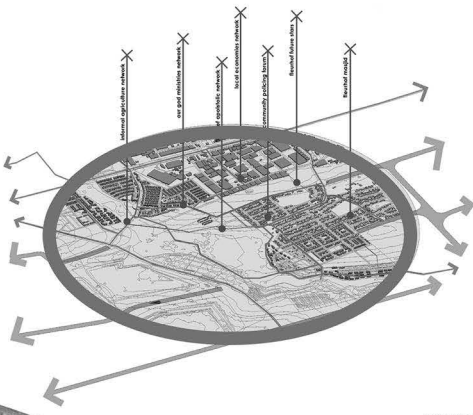
08 / /



8.1 DRAWINGS
8.2 THE CRIT
8.3 THE PIN-UP
8.4 THE DESIGN MODEL
8.5 THE SITE MODEL



This chapter illustrates the final drawings and models that make up the final product of this dissertation. This chapter also includes evidence of the final crit.

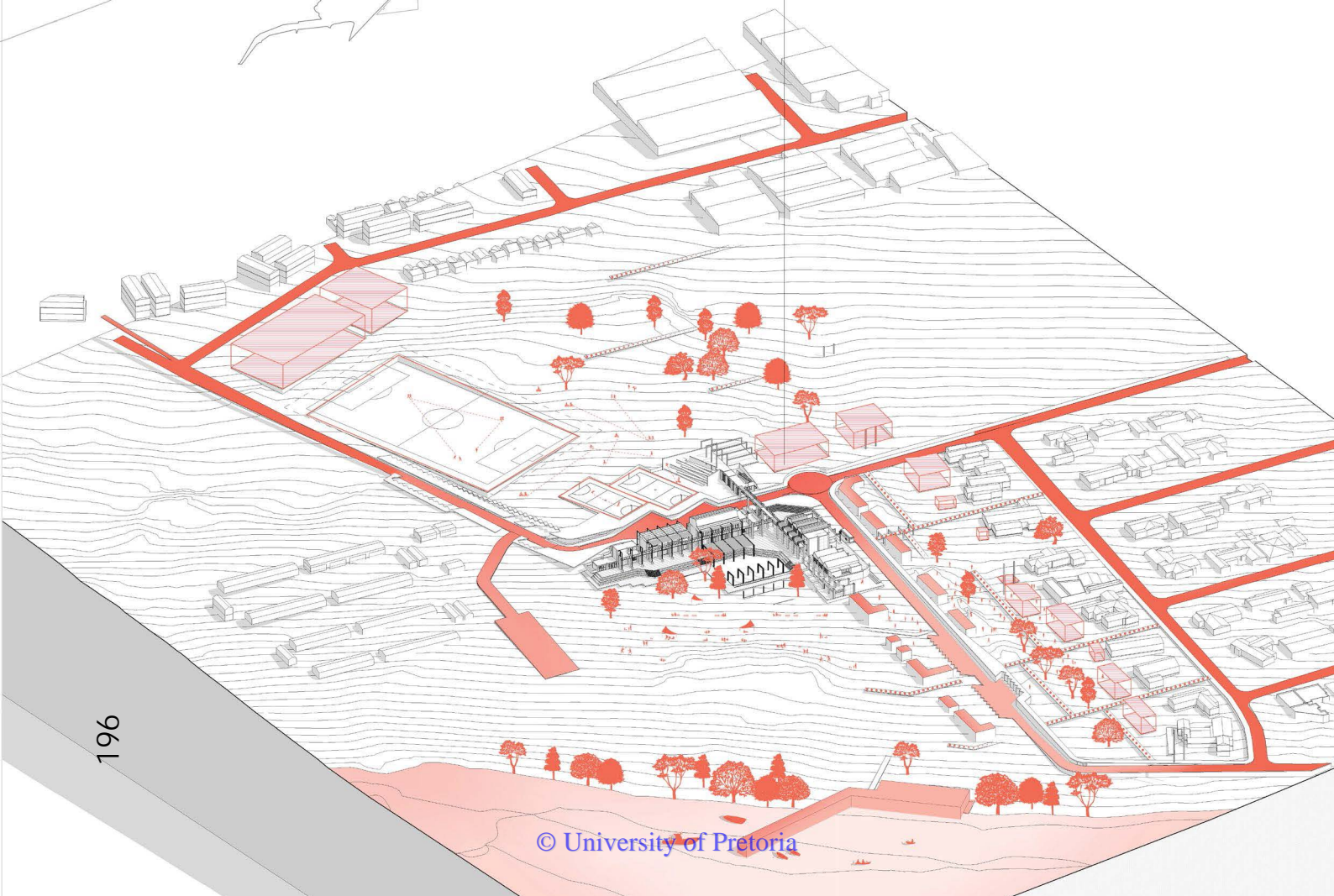




8.2

FIGURE 8.1 : Neighbourhood vision
(Author, 2018)

FIGURE 8.2: Axo of neighbourhood
vision (Author, 2018)



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INDUSTRIAL WAREHOUSES

MOBILE ECONOMY +
COMMUNITY ORGANIZATIONS

FLEURHOF SPORTS & REC FACILITY

FLEURHOF PRIMARY SCHOOL

SMELT AVE

TANTIEM AVE

SINGUENE AVE

KALSJET AVE

CHERT AVE

MOBILE ECONOMIES

THE FLEURHOF DAM
CLUBHOUSE

WINE AVE

8.3

197

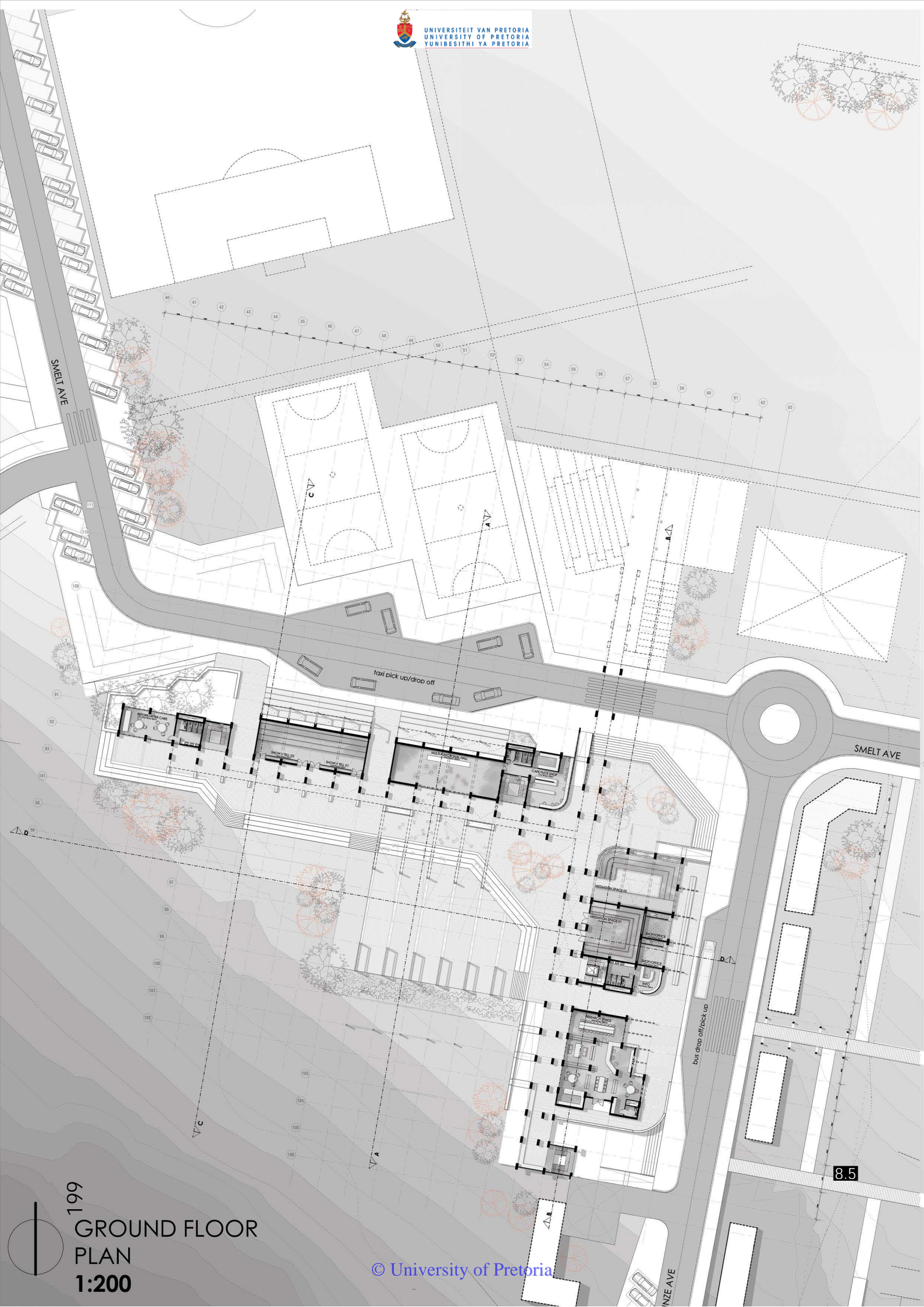
SITE PLAN
1:500



FIGURE 8.3 : Neighbourhood vision
(Author, 2018)

FIGURE 8.4: Axo of neighbourhood
vision (Author, 2018)

8.4



199
GROUND FLOOR
PLAN
1:200

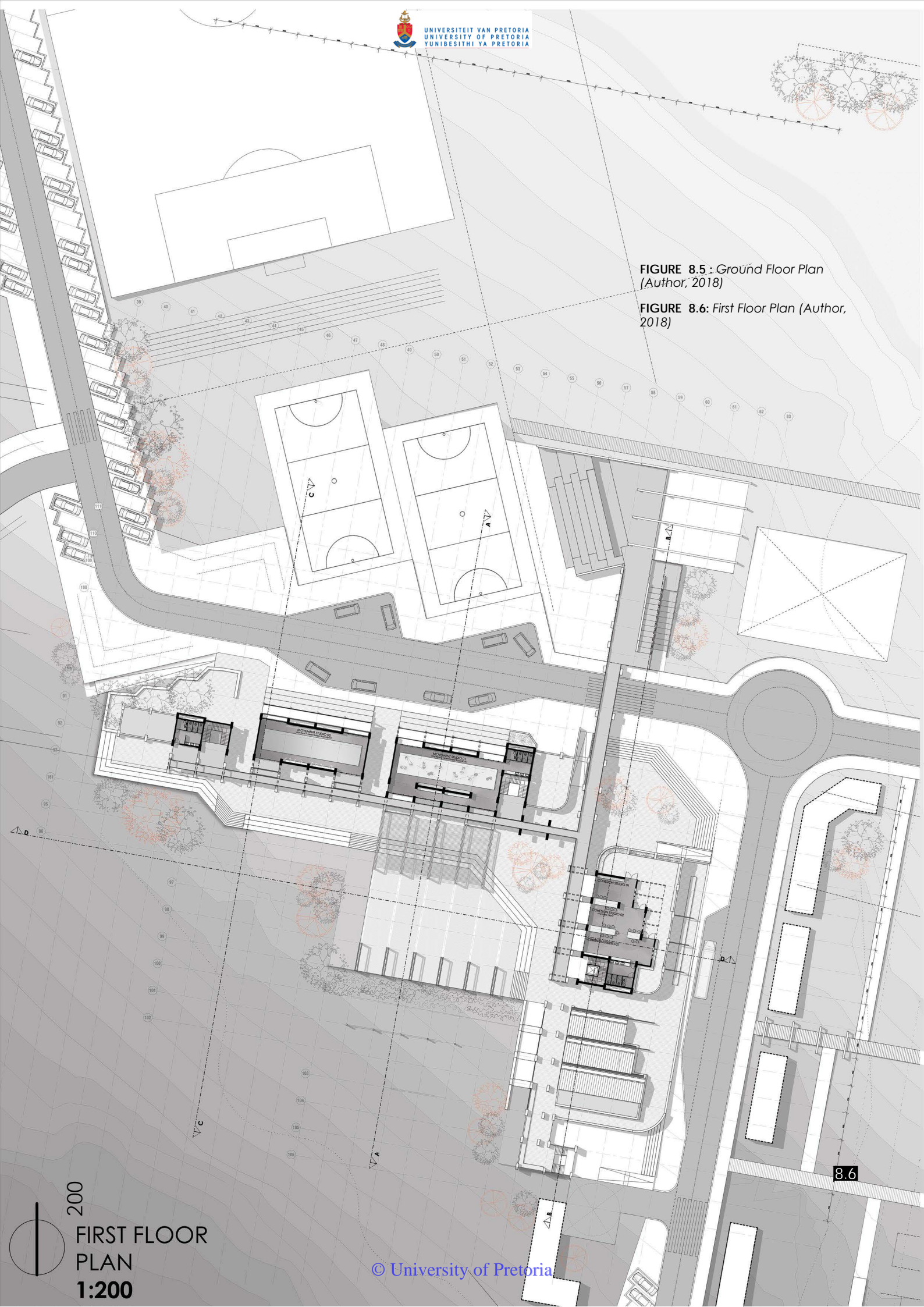
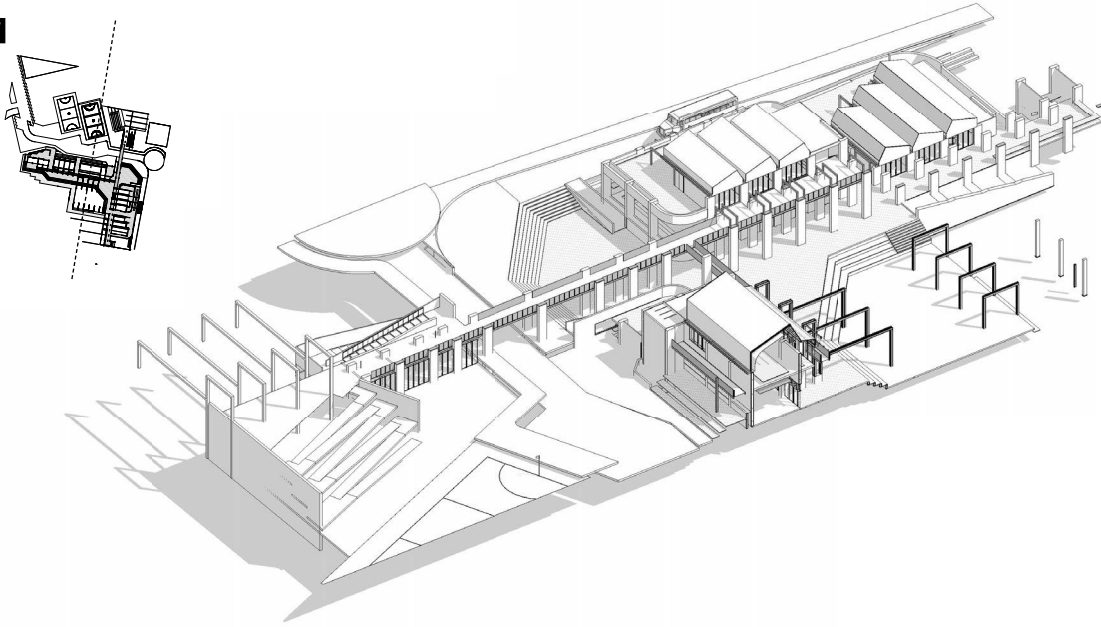


FIGURE 8.5 : Ground Floor Plan
(Author, 2018)

FIGURE 8.6: First Floor Plan (Author,
2018)

N-S Section 01 explorations (A-A)

8.7



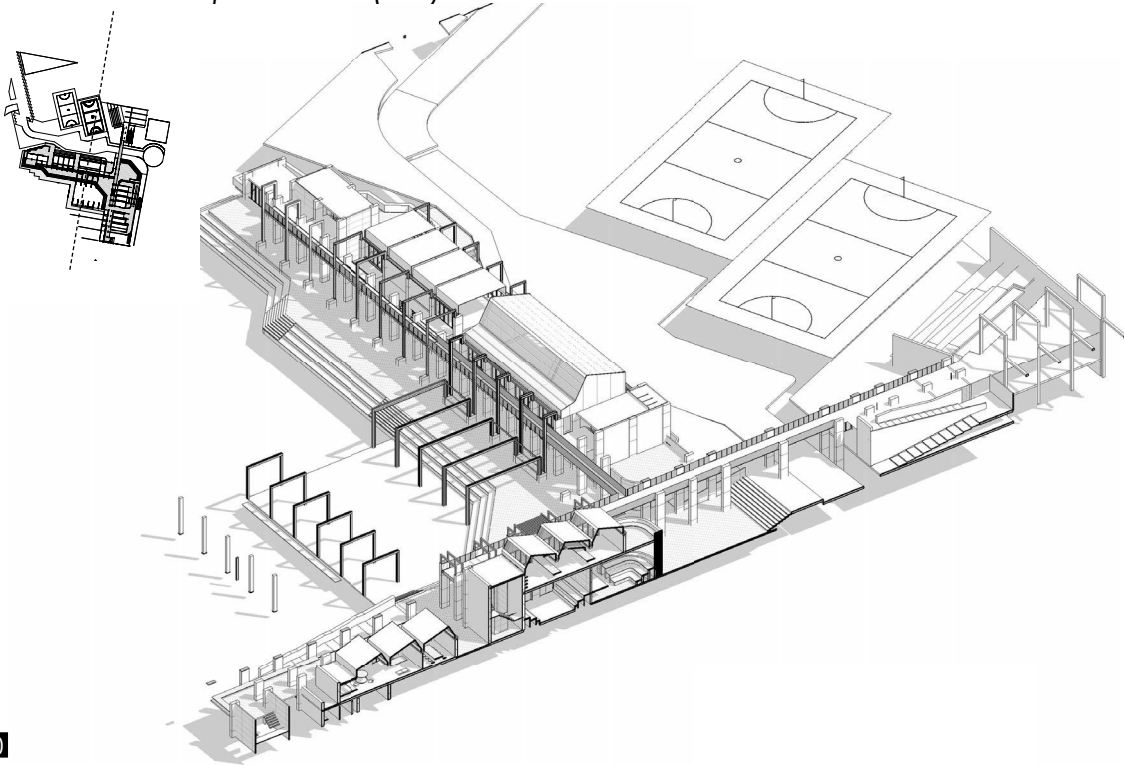
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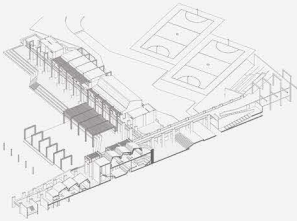
N-S SECTION A-A
1:50

N-S Section 02 explorations (B-B)

8.9



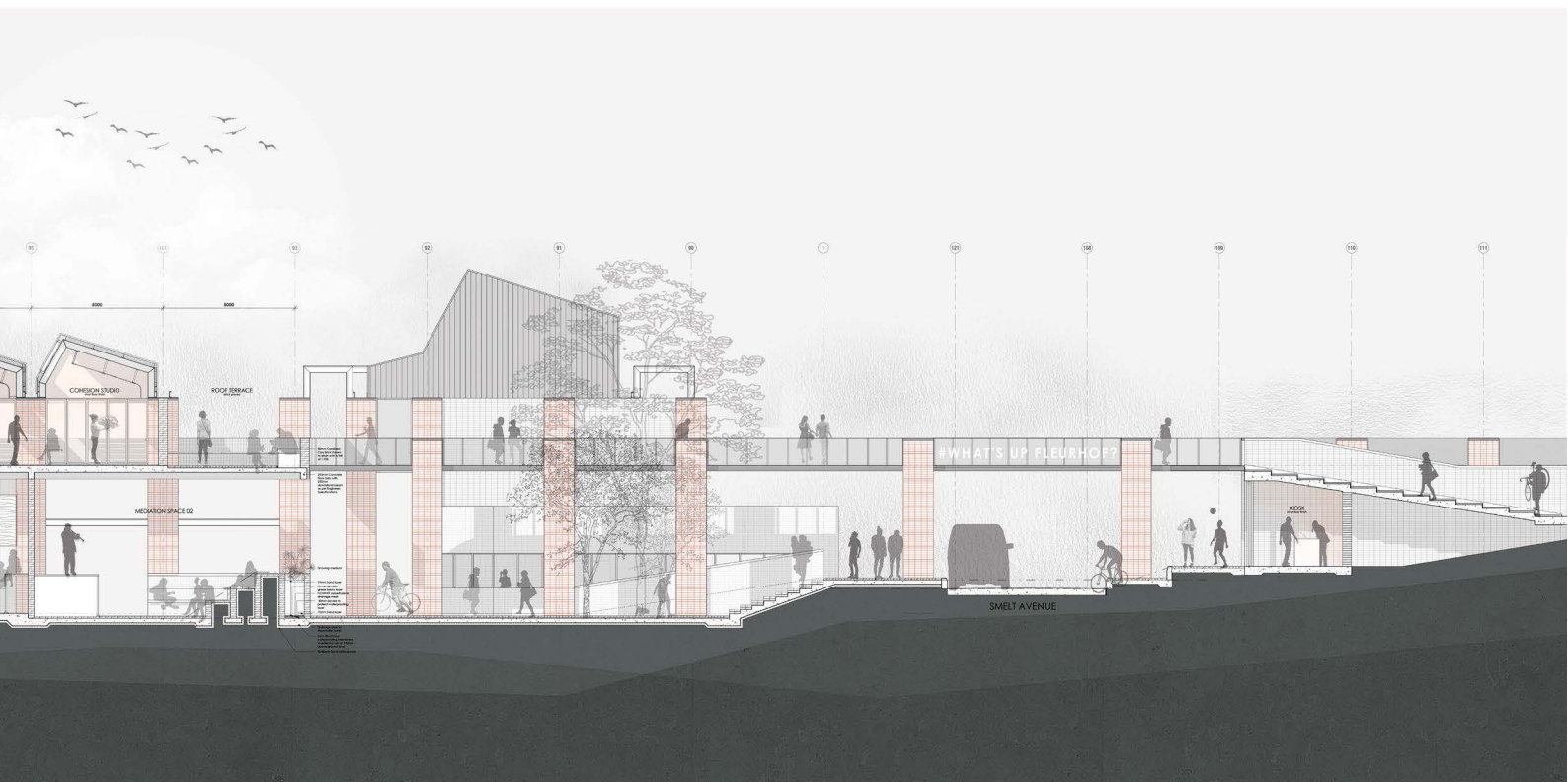
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N-S SECTION B-B
1:50

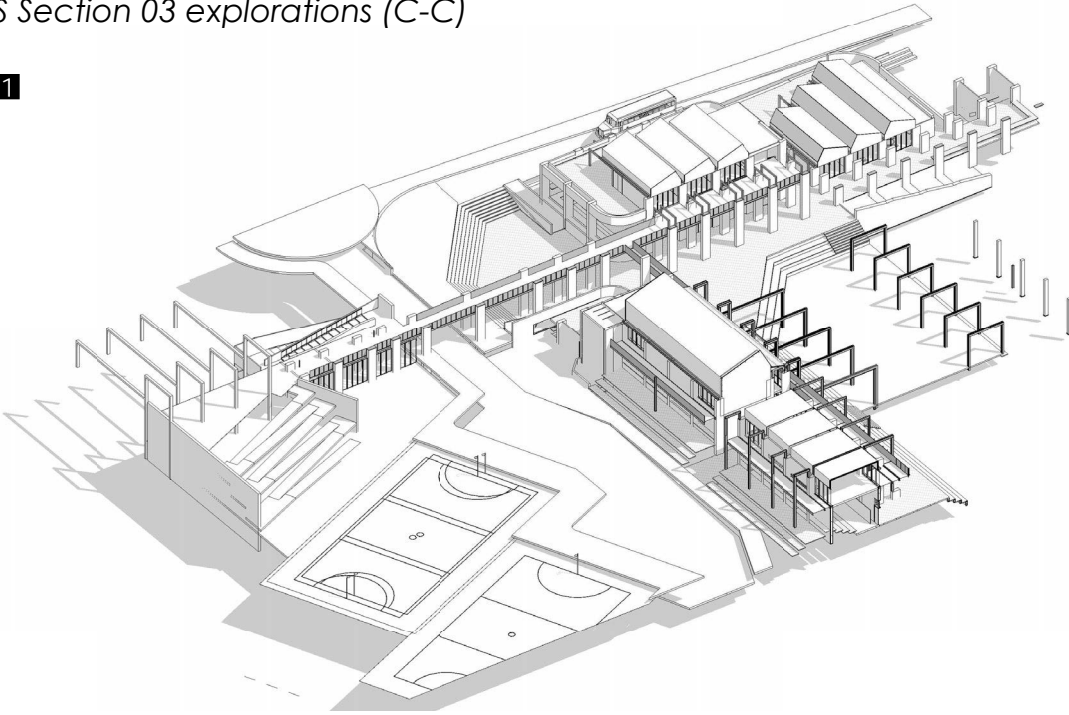
FIGURE 8.9: N-S Section 02 (B-B) axo
(Author, 2018)

FIGURE 8.10: N-S Section 02 (B-B)
(Author, 2018)

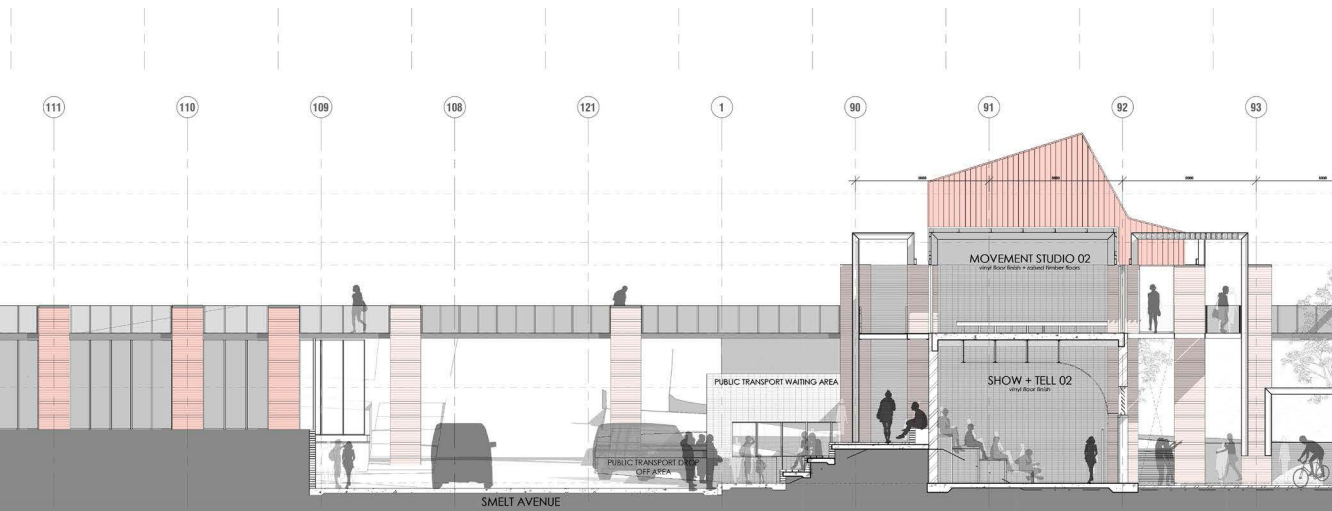
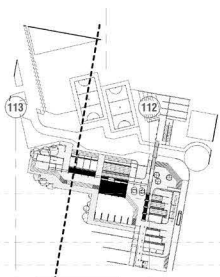


N-S Section 03 explorations (C-C)

8.11



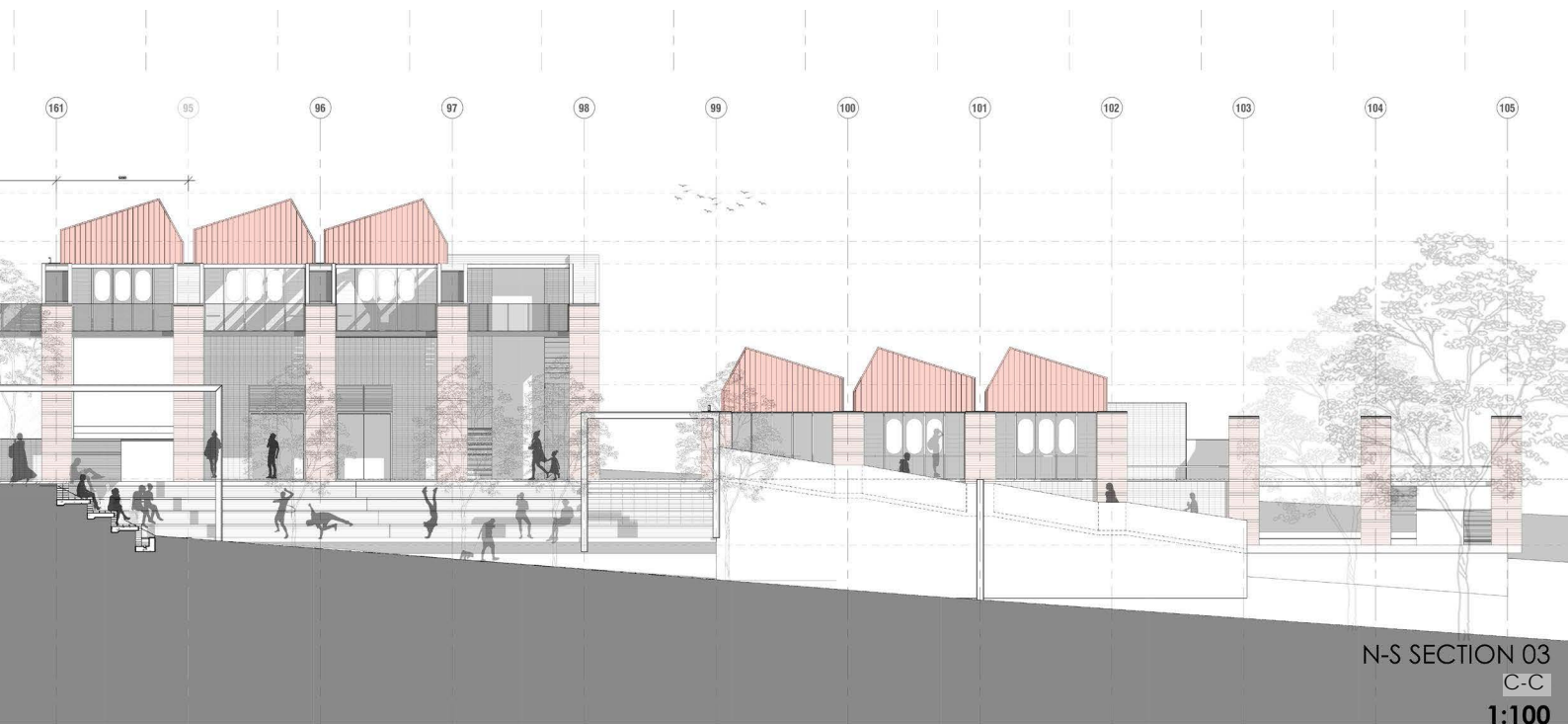
8.12



N-S SECTION C-C
1:100

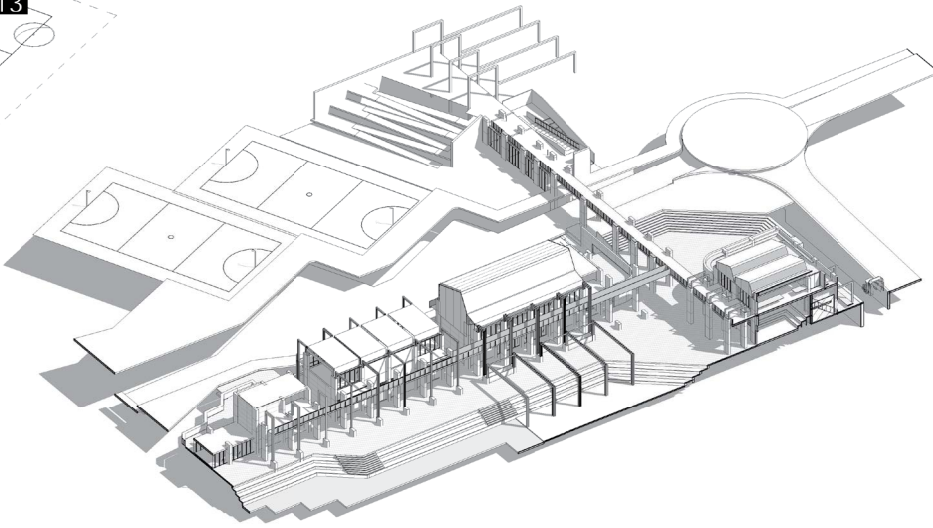
FIGURE 8.11: N-S Section 03 (C-C)
axo (Author, 2018)

FIGURE 8.12: N-S Section 03 (C-C)
(Author, 2018)



E-W Section explorations (D-D)

8.13



8.14

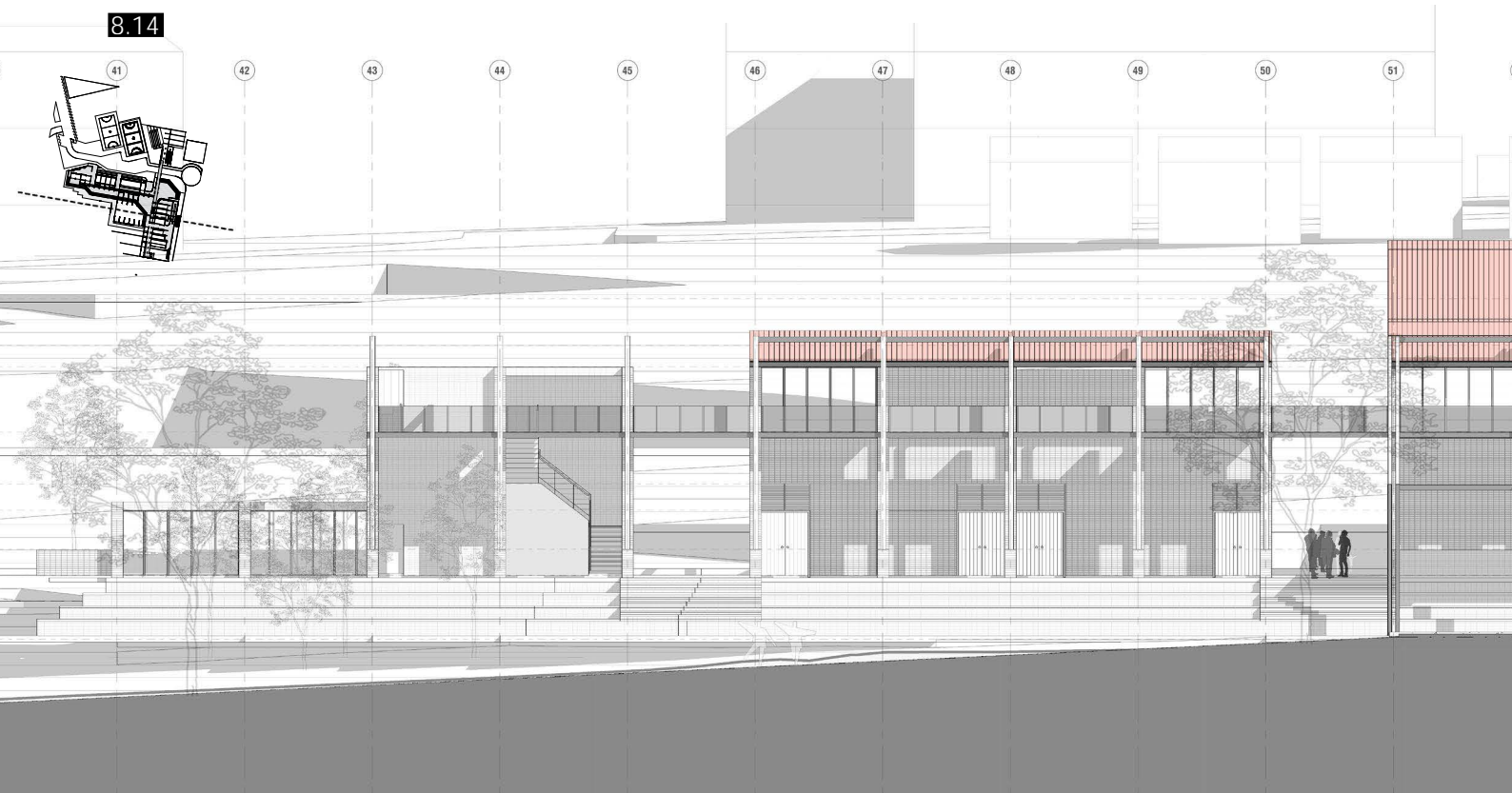


FIGURE 8.13: E-W Section (D-D) axo
(Author, 2018)

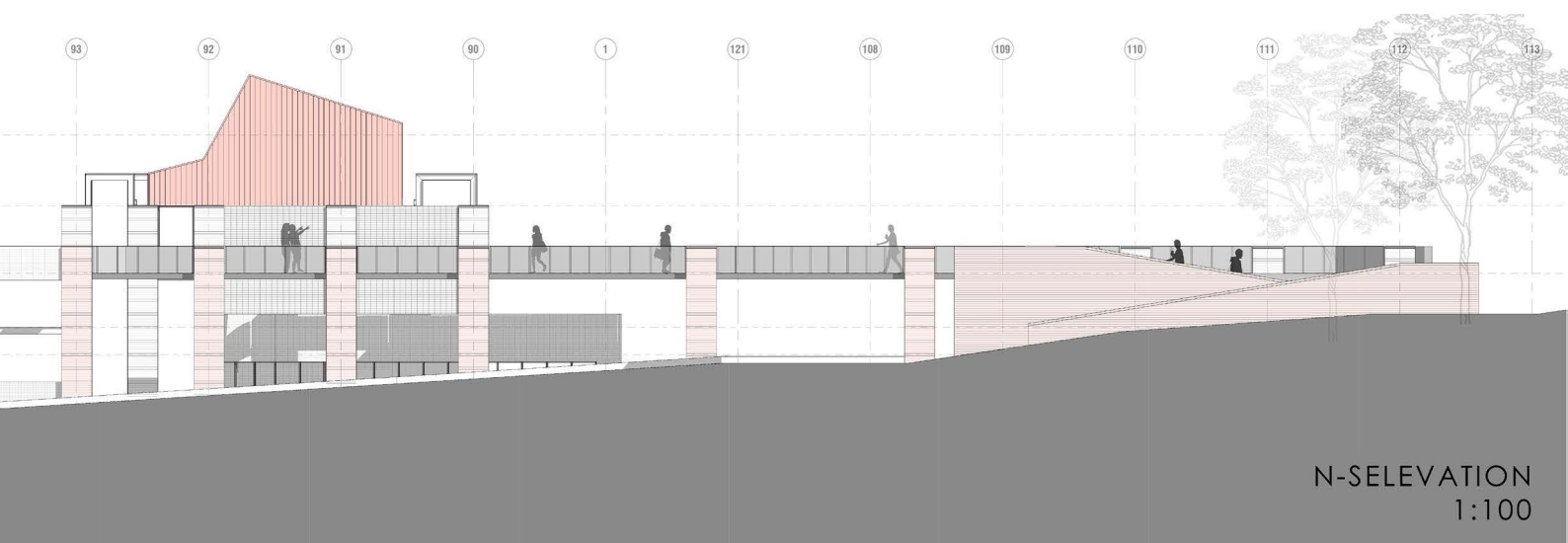
FIGURE 8.14: E-W Section (D-D)
(Author, 2018)



8.15



FIGURE 8.15: N-S Elevation (Author, 2018)



N-SELEVATION
1:100

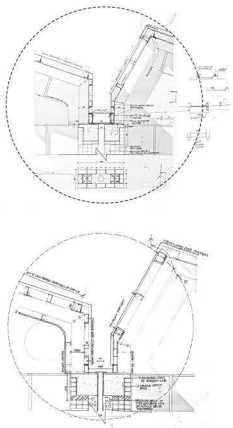


8.16

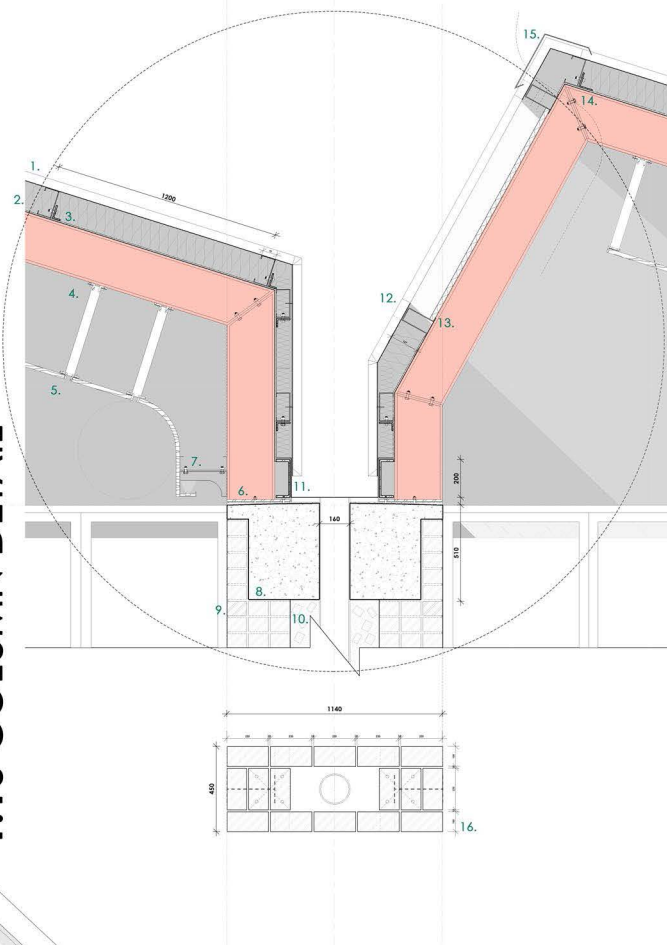
211

CONSTRUCTION DETAILS

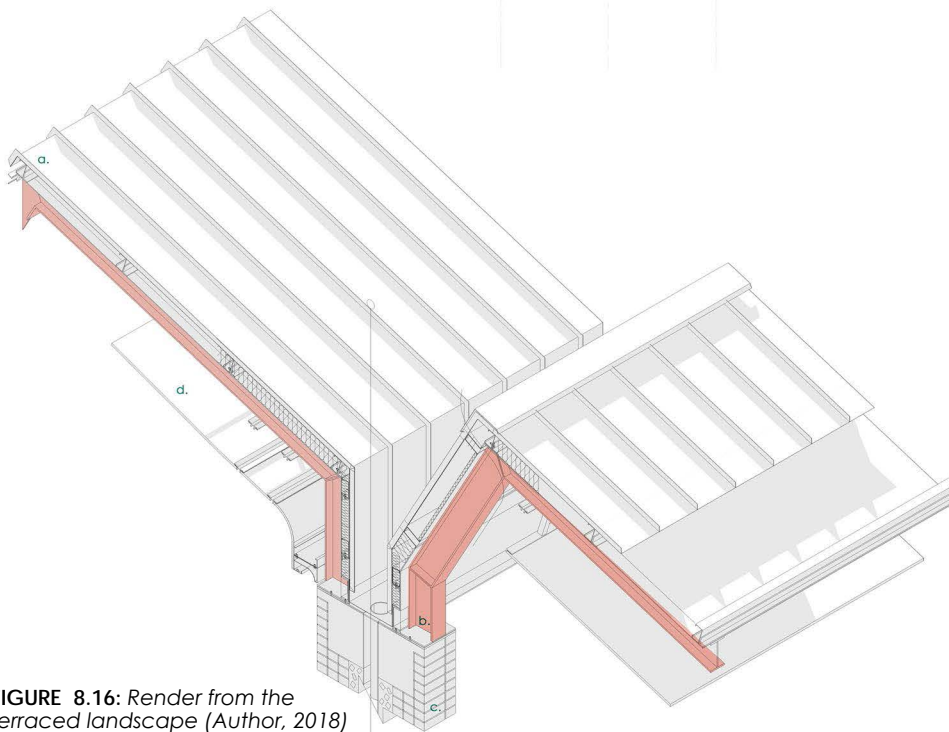
understanding the load-bearing column



1:10 COLUMN DETAIL



1. 48mm seam to BROWNBUILD (406) Secretfix roof sheeting fixed to 254 x 146mm steel I portal fixed to 150 x 75 x 20 x 5mm cold formed lip channel roof purlins @ 1200 c/c. Recommended fasteners: 10-24 x 16mm long water head, self drilling and self tapping tek screws into 4.3mm predrilled holes using a small amount of graphite grease.
2. 150 x 75 x 20 x 5mm cold formed lip channel roof purlins @ 1200 c/c, fixed with 75 x 50 x 6mm unequal angle to act as fixing for 6mm gypsum ceilings, gypsum ceilings fixed with aluminum straps.
3. 135mm AEROLIGHT THINK PINK insulation.
4. 50.8 x 50.8mm hot rolled square tubing, suspended from 254 x 146mm steel I portal with 40mm equal angles and steel base plate.
5. 22mm Plywood suspended ceiling, Acoustic reflection panels to acoustician's specifications.
6. LEDExtra 29 anodized aluminum metal edge lift profile with LED light strip as per electrician's specifications.
7. 254 x 146mm steel I profile SANS grade 350WA prime with red oxide primer fixed to steel base plate with holding down bolts as per engineer's specifications.
8. Reinforced cast-in-situ concrete infill with recessed joints as shadow line.
9. Reclaimed brick course @ 510mm brick scale.
10. Wet concrete fill with discarded bricks from building process.
11. 2mm mild steel gutter with 160mm PVC downpipe to first flush system, fixed to 200 x 75mm hot rolled channel as shadowline, gutter to slope 1:100 towards downpipes.
12. 48mm BROWNBUILD (406) Secretfix translucent roof sheeting fixed to opaque sheeting with starting clip, duplex clip and finishing clip fasteners.
13. 22mm DANPALON Multilight Glazing System, 600mm panels fixed to 150 x 75mm cold formed top hat purlins, 600mm panels joined with aluminum connectors and brackets as per specialist's details.
14. 150 x 75mm cold formed top hat purlins with pre-drilled holes to allow hot air to escape from room.
15. 0.8mm galvanized apex flashing (F83) in matching colour. Ralderf from roof sheeting with neoprene spacers to allow hot air to escape.
16. 450 x 1140mm load bearing brick columns.



a.



b.



c.



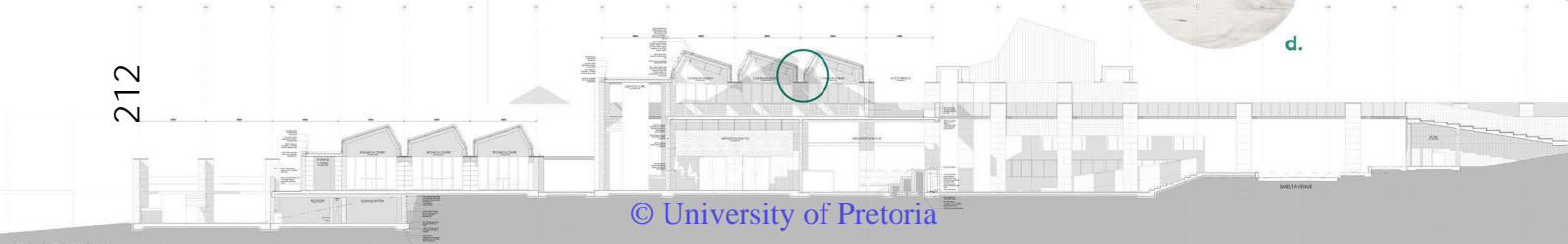
d.

FIGURE 8.16: Render from the terraced landscape (Author, 2018)

FIGURE 8.17: Understanding the load-bearing column (Author, 2018)

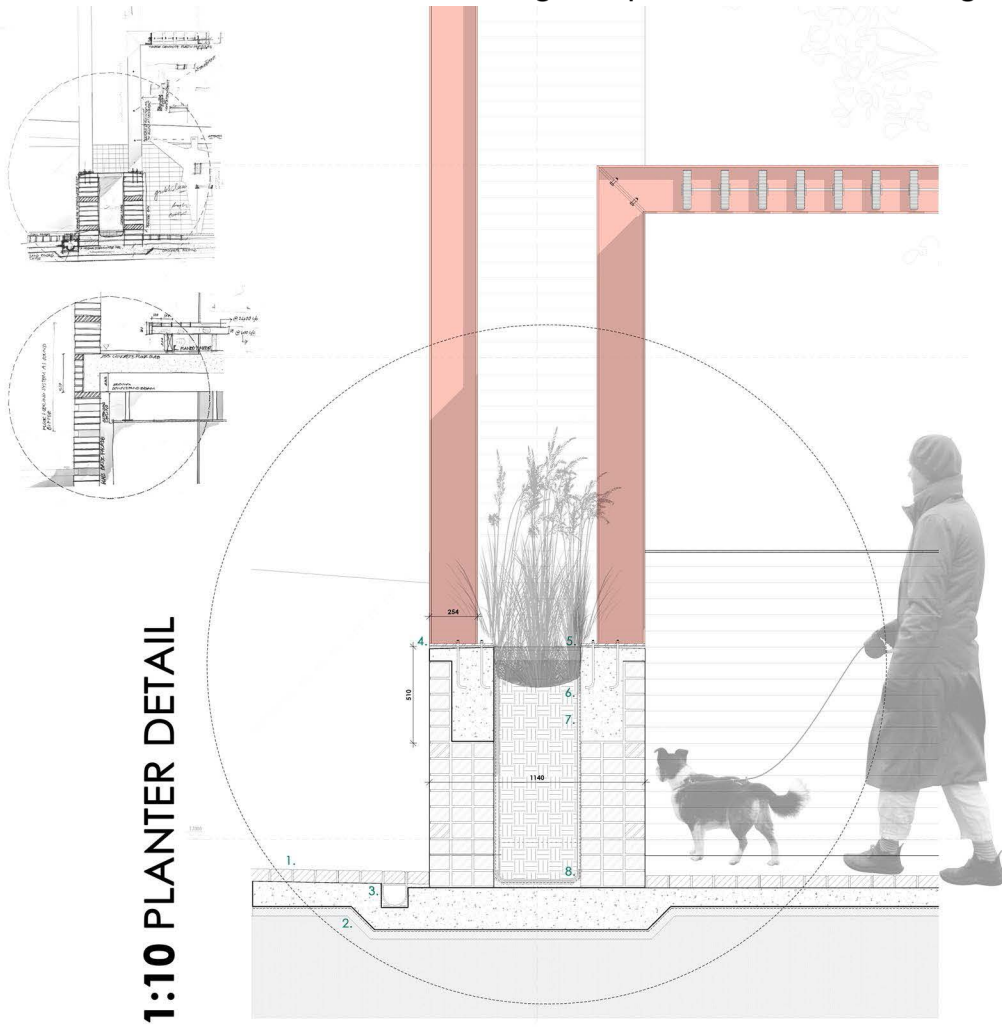
8.17

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CONSTRUCTION DETAILS

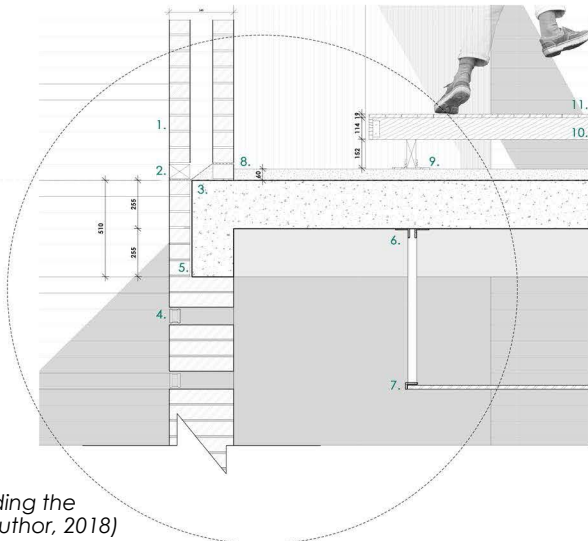
understanding the planter/floor + ceiling



1:10 PLANTER DETAIL

1. 65mm concrete pavers on 170mm concrete slab @ 1:100 slope towards stormwater drainage outlet.
2. 2mm bituminous waterproofing membrane to extend a min of 150mm above ground level on 50-80mm river sand.
3. ACO EUROLINE polymer drainage channel with 'L' shape galvanized steel brick slot to drain to subsurface drainage system.
4. 254 x 146mm steel I portal SANS grade 350WA prime with red oxide primer painted with enamel fixed to reinforced cast-in-situ concrete infill with steel base plate and holding down bolts as per engineers specifications.
5. Planting cover as per landscape architect's specifications.
6. Growing medium as per landscape architect's specifications.
7. One layer bitumen water proofing membrane, with 75mm side laps and 100mm end laps sealed to primed surface to falls and cross falls by 'torchfusion', including protection of 150mm thick layer clean top soil on High-density polyethylene (HDPE) 4mm thick drainage core and horizontally on waterproofing covered with geomesh pvc coated multifilament woven polyester bi-axial reinforcing mesh and non-woven continuous filament needle-punched polyester geotextile under topsoil. Install above screed as per detail.
8. 50mm cement screed with 75mm screed fillets on end.

1:10 FLOOR + CEILING



1. 1.340mm brick cavity wall.
2. Stepped DPC in cavity wall with weep hole in perped joint.
3. 255mm concrete floor slab with 255mm downstand beam as per engineer's specification.
4. Half brick glass brick at various intervals in 340mm brick wall.
5. Expansion joint.
6. 50.8 x 50.8mm hot rolled square tubing, bolted to concrete floor slab with equal angles and steel base plate.
7. 22mm plywood suspended ceiling. Acoustic reflection panels to acoustician's specifications.
8. 60mm polished concrete floor.
9. 50 x 152mm SA Pine timber battens @ 1200 c/c fixed to multipurpose bracket, 10mm above FL level to account for tolerances.
10. 50 x 114mm SA Pine timber floor joists @ 600 c/c
11. 19mm tongue and groove timber floor panels.

FIGURE 8.18: Understanding the planter + ceiling/floor (Author, 2018)

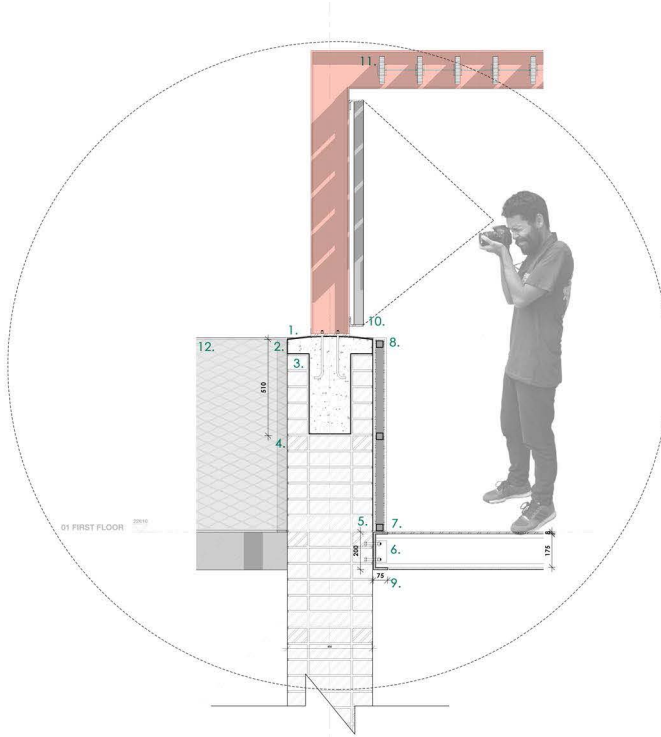
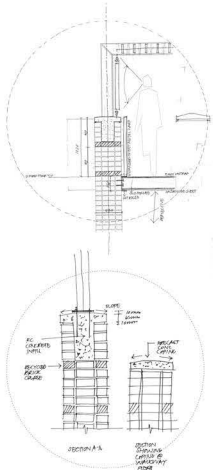
FIGURE 8.19: Understanding the showcasing walkway (Author, 2018)

8.18



CONSTRUCTION DETAILS

understanding the showcasing walkway



1. 203 x 133mm steel I portal SANS grade 350WA prime with red oxide primer fixed to steel base plate with holding down bolts as per engineer's specifications.

2. Sloped in-situ concrete infill, sloped for water runoff. Precast coping to slope (in same manner as in-situ sloped) occurs on top of brick columns where no steel is fixed.

3. Reinforced concrete infill as per engineer's specifications.

4. Reclaimed brick course @ 510mm brick scale.

5. 200 x 75mm hot rolled channel bolted to 450 x 1140mm load bearing brick posts.

6. 175 x 50 x 20 cold formed lip channel @ 1250 c/c fixed to 200 x 75mm hot rolled channel as steel walkway support.

7. 8m wastrap floor plates @ 1250 c/c, welded to 75 x 50 x 20mm cold formed lip channel. Gaps at every 5m interval to allow for surface drainage to occur.

8. 38,1 x 38,1mm hot rolled square tubing welded to 38,1 x 38,1mm hot rolled square tubing as balustrade uprights, fixed to 200 x 75mm hot rolled channel.

9. 3mm galvanized steel flat sheet fixed to 175 x 50 x 20mm cold formed purlin as reflective ceiling for walkway.

10. 75 x 50mm unequal angle bolted to 203 x 133mm steel I portal as support for steel frame pin up board as per specialist's details.

11. 26 x 146mm LUNAWOOD Thermawood Plastic Composite solar shades threaded through 8mm diameter round bar mild steel with 4mm eyebolt fasteners.

12. MENTEX 38/VEW 484 raised expanded metal sheeting bolted to steel tube uprights.

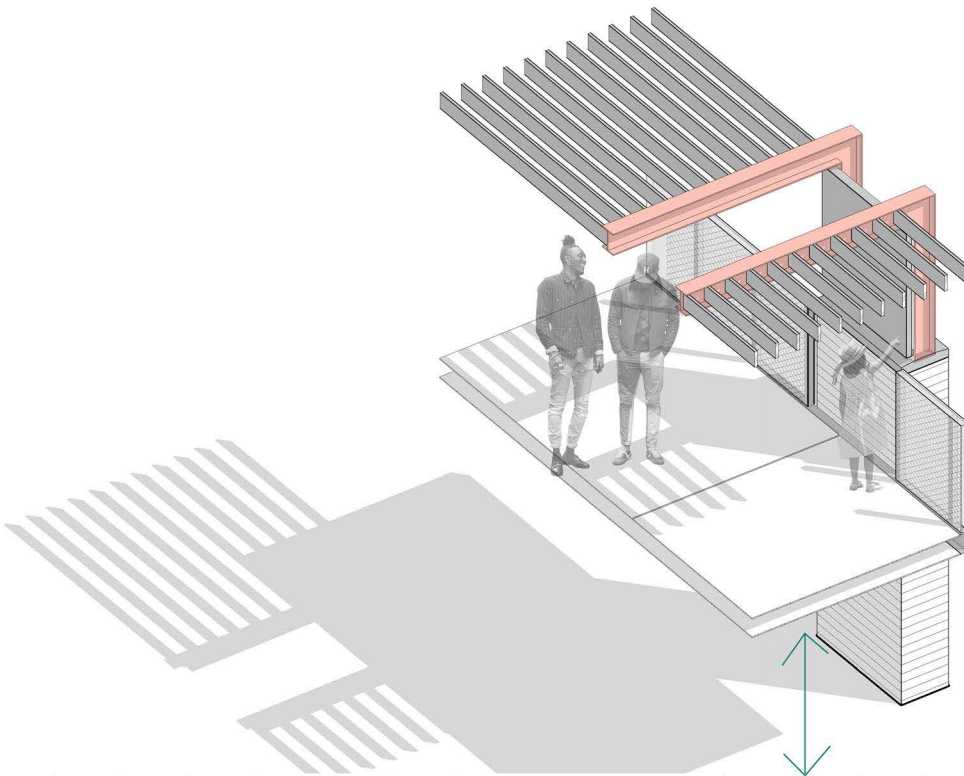






FIGURE 8.20: Render of the amphitheater (Author, 2018)





FIGURE 8.21: Render of the amphitheater + terraced landscape (Author, 2018)





FIGURE 8.22: Render of the showcasing walkway (Author, 2018)





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FIGURE 8.23: Render from the movement studios (Author, 2018)





FIGURE 8.24: Render of the street corner entrance (Author, 2018)

8.25

FIGURE 8.25: Photo series of the final crit (Author, 2018)



225 THE CRIT









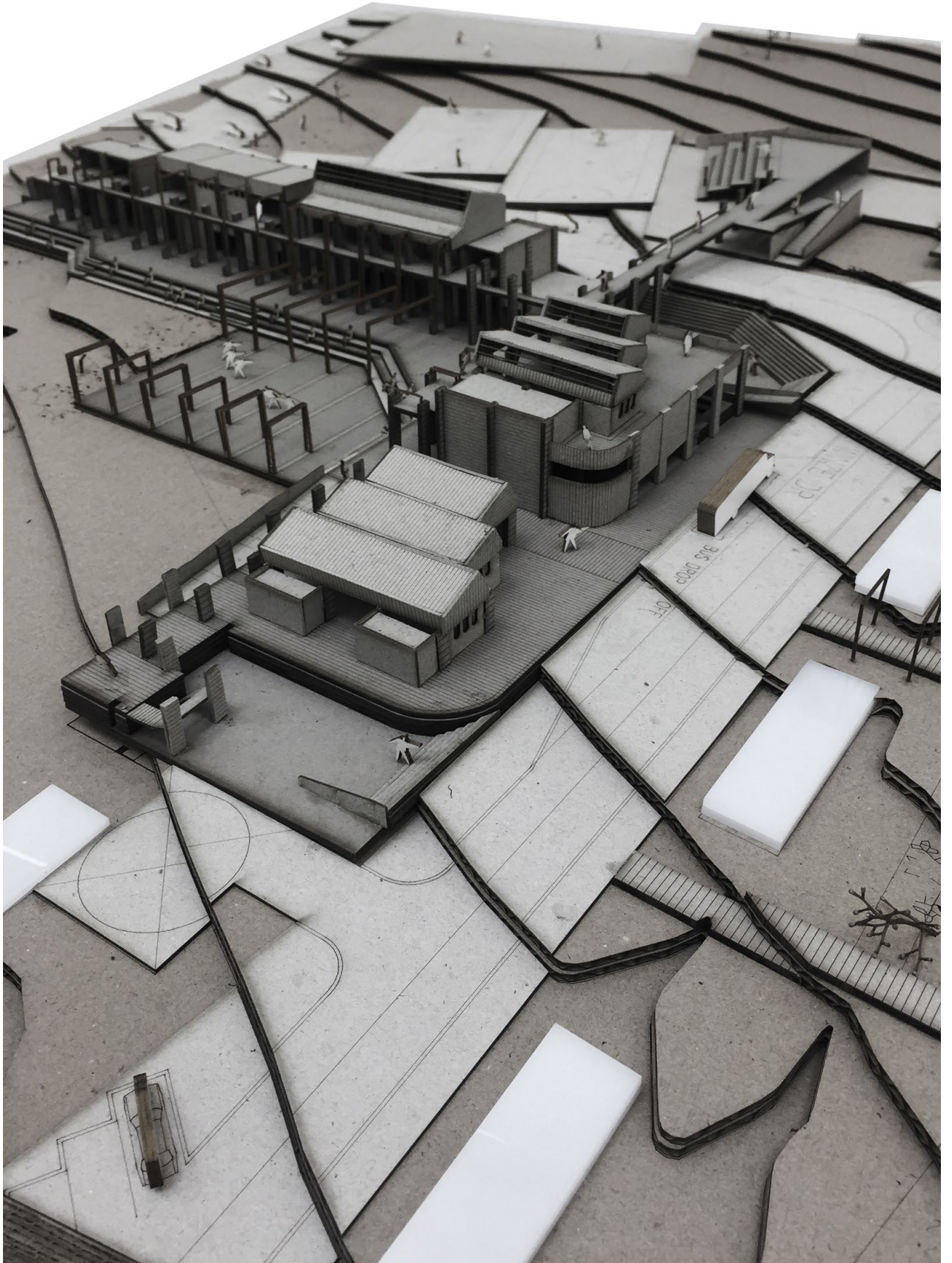
229 THE PIN UP



231 THE DESIGN MODEL

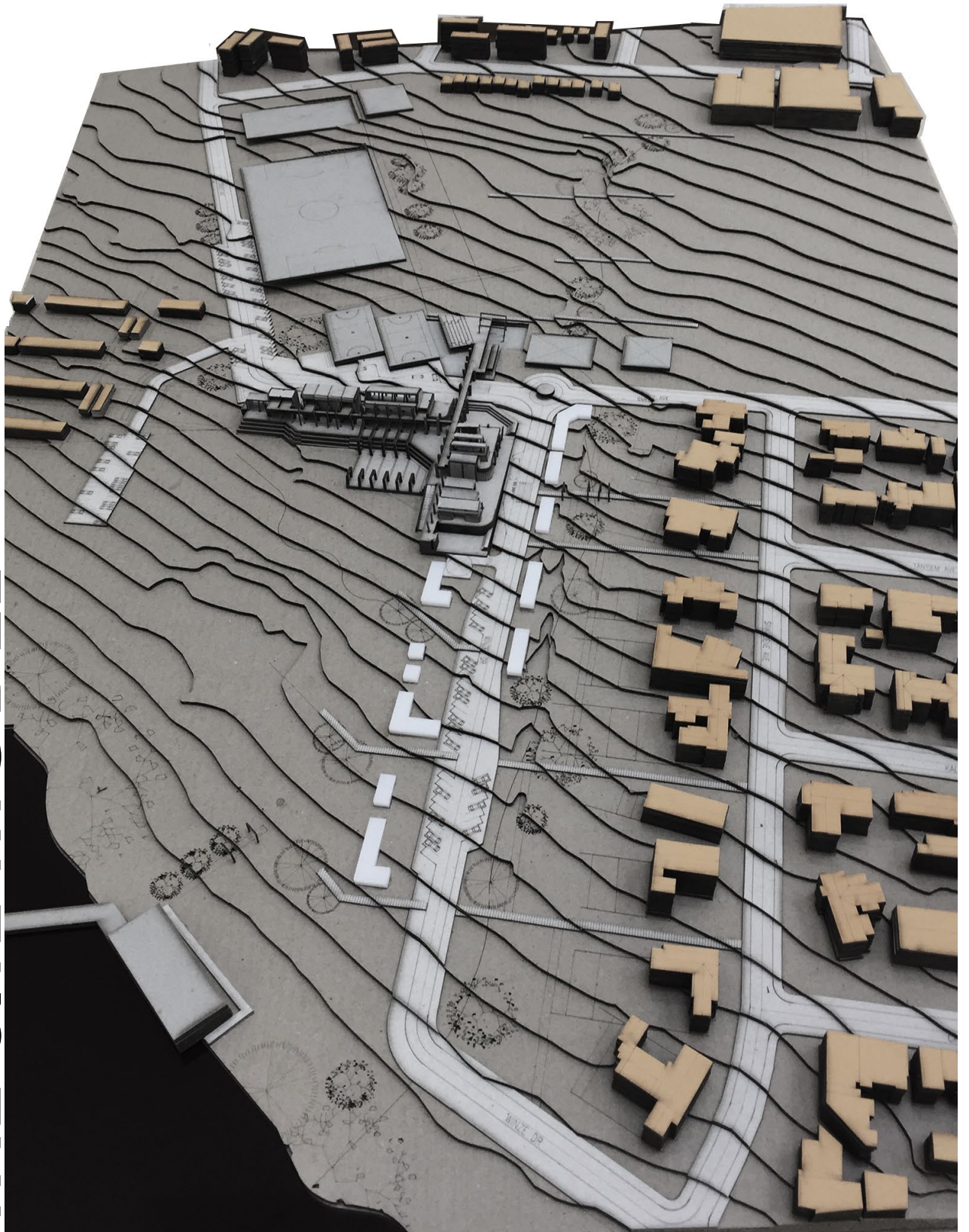


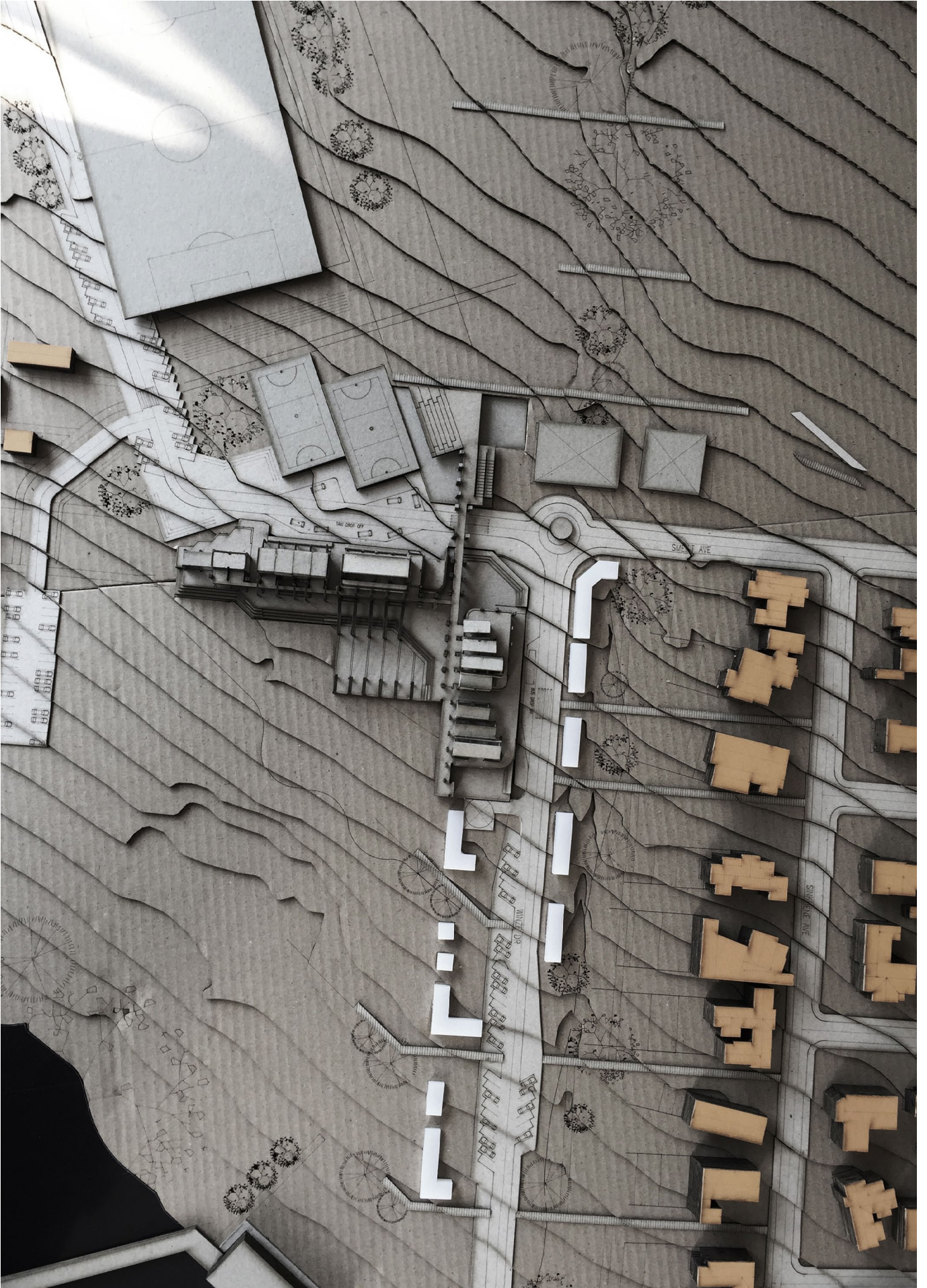


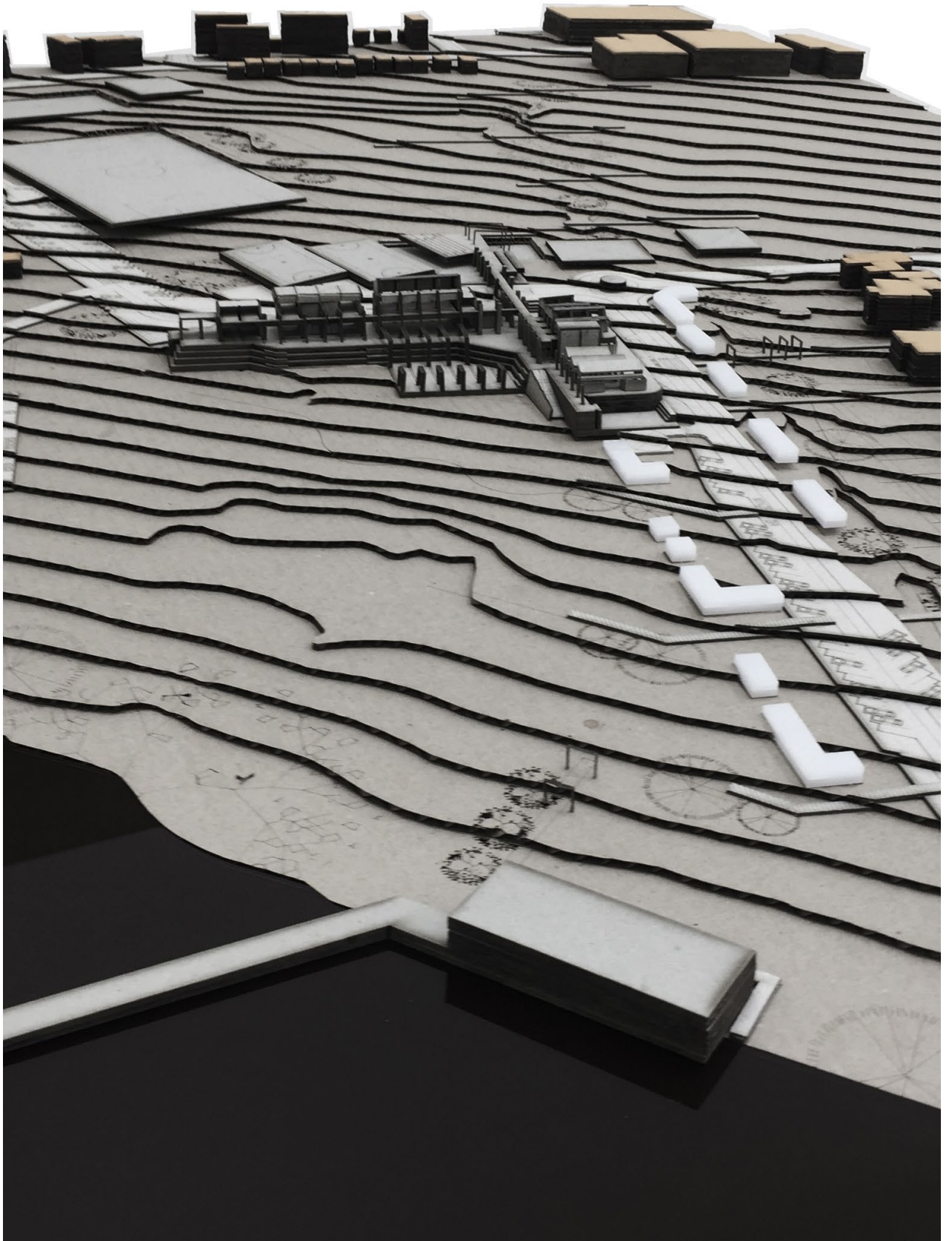


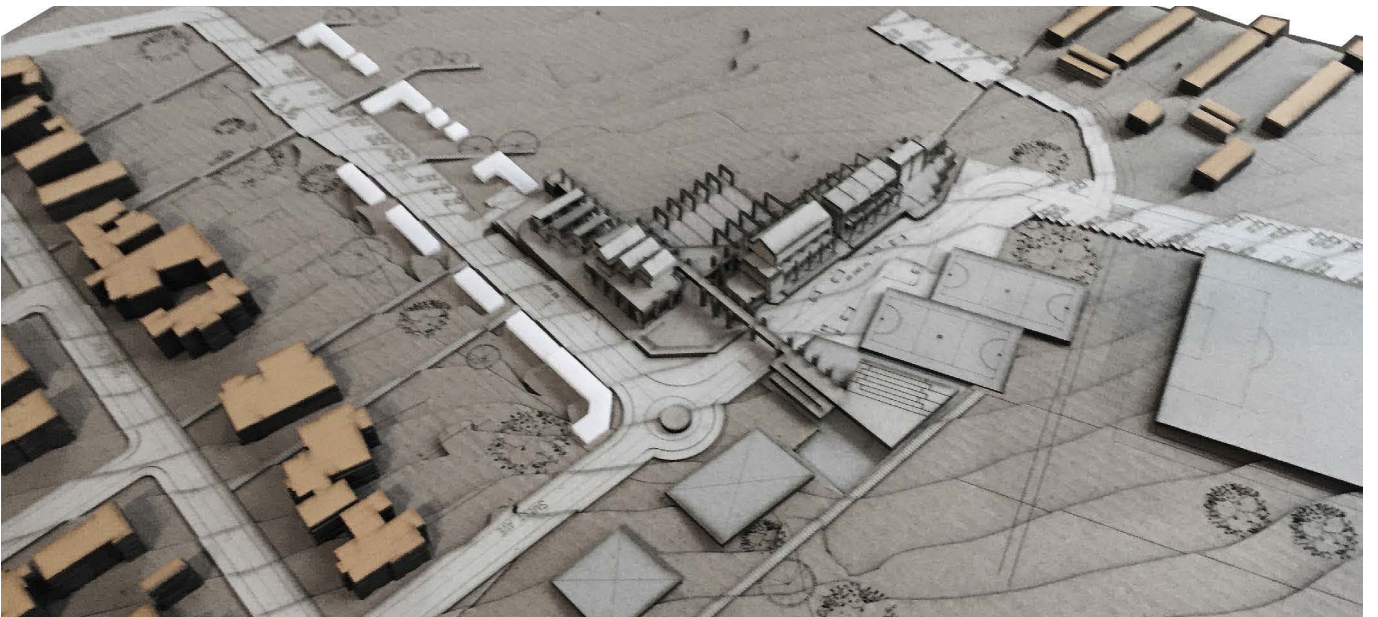
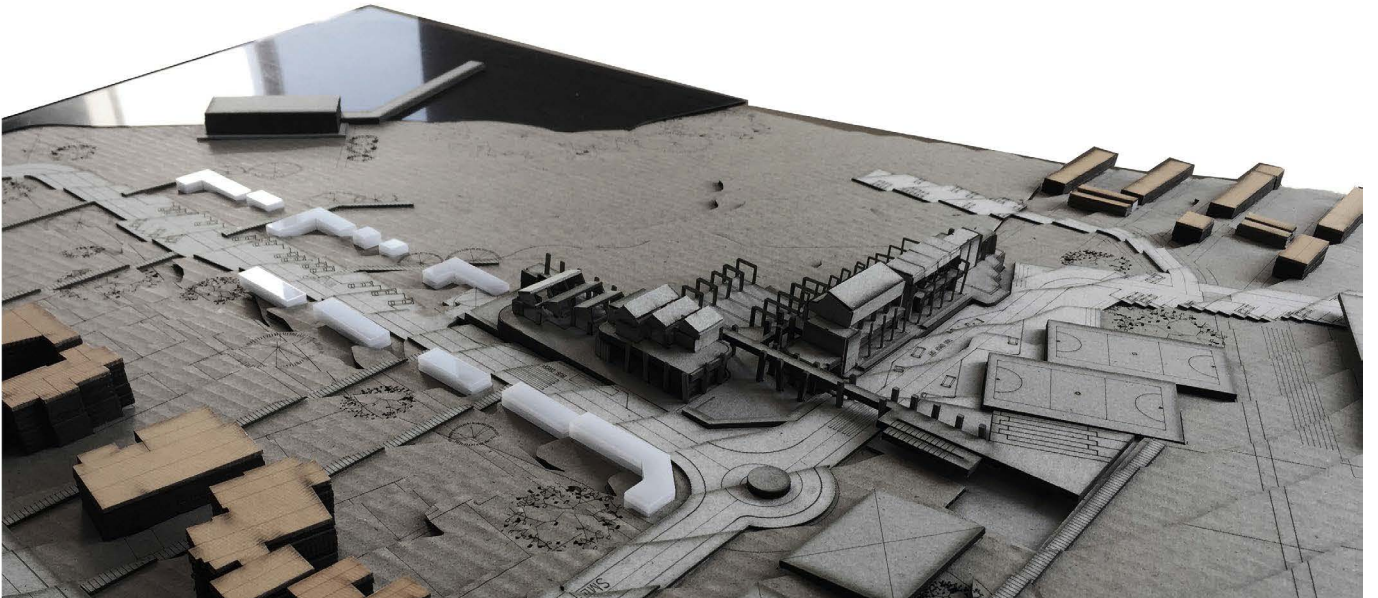


235 THE SITE MODEL









CONCLUSION

The intention of this dissertation investigated developing a sense of resolution for Fleurhof by rethinking the approach to conflict resolution and dialogue. Expressed in the research question *'How can the implementation of an architectural intervention, provide an alternative typology for conflict resolution?'* Dealing with conflict resolution and the need for a new typology was initially informed by Fleurhof's inherent diverse identities and conflicting territories. The new typology was established by analyzing how conflict is traditionally dealt with in forms of protection, representation and resolution and where the gaps are, in order to reveal where the intervention should fit in.

The dissertation is framed by social, urban and architectural issues and their relative intentions. The site is considered one of the main informants and therefore required a comprehensive understanding of people and place in order to contextualize the issues and intentions. The study focuses on the analysis of three situations: the political situation, the physical situation and the social situation. The understanding of people, place and territory highlighted the segregation amongst residents and the absence of a platform of integration.

In order to move towards a new ritual of integration it became important to understand how these territories relate spatially to one other, to highlight spaces of vulnerability and to illustrate points of convergence where territories share boundaries. Through this mapping exercise, it became clear as to where the architectural intervention should lie. The architectural intervention is supported by the proposed urban vision and it's stakeholders.

A new ritual of integration was best understood through the theoretical review. The review highlighted architecture's role as a form of non-verbal communication. Through theoretical review one begins to understand the value of rituals as a process of changing our perceptions, shifting boundaries and ultimately integrating diverse groups of people. Introducing ways in which architecture contributes to animating the physiological process of ritual by defining space (volume, light, and sound).

An understanding of site and theory provided the grounding for an alternative typology for conflict resolution. Building on the theoretical review, the proposed programme can be summarized as a restorative facility, best described by Harries

as a "creation of festal places on the ground of everyday dwellings, places where individuals come together and affirm themselves as members of the community" (Harries, 1997: 365). In an attempt to achieve this extraordinary space, the study analyzed contemporary practices and processes that allow for participants to transcend from their everyday into a temporary alternative world. Across cultures, contemporary practices such as religious gatherings, sporting events, weddings, funerals, and festivals become punctures in the norm, whereby participants undergo a process of transition. These contemporary practices facilitate an integration of people of diverse identities and contrasting territories, coming together and temporarily sharing common perceptions.

The development of programme lead to a precedent study comprising of three categories of precedent studies: functional, formal and spatial. The functional precedent provided an example of the type of programmes an alternative typology for conflict resolution might include. The formal precedent touches on the notions of public space. The spatial precedent that provided an example of sensory architecture that facilitates the notion embodied practices.

Through an understanding of programme, the design intentions include investigating the notions of an alternative typology for conflict resolution through the introduction of alternative forms of dialogue. By inserting a new condition into the context, the design intends to introduce new relationships, shift territories and essentially facilitate a 'collective perception' amongst residents. The design iterations included exploring ways in which an architectural intervention can facilitate the process of integration by animating embodied practices, allowing the user to transcend from their everyday to an extraordinary space.

The design theory informed the conceptual approach to the technical resolution of the intervention. This requires animating the physiological aspects of space (volume, light and sound) and geometries (harmony, proportion and rhythm). These aspects were important in order to enhance the communicative architectural language. The following principles were considered in order to communicate a way of understanding and seeing: Legibility, Articulation, and Projection.

In conclusion this dissertation strives to investigate the communicative nature of architecture through geometries of harmony, proportion, and rhythm in order to provoke physiological activity and expression as an alternative form of dialogue. A new typology as the driver and program as the vehicle to define 'common ground'. Treating an absence of 'resolution' as a breach of relationships and justice as a process of coming together to repair that breach.

8.25

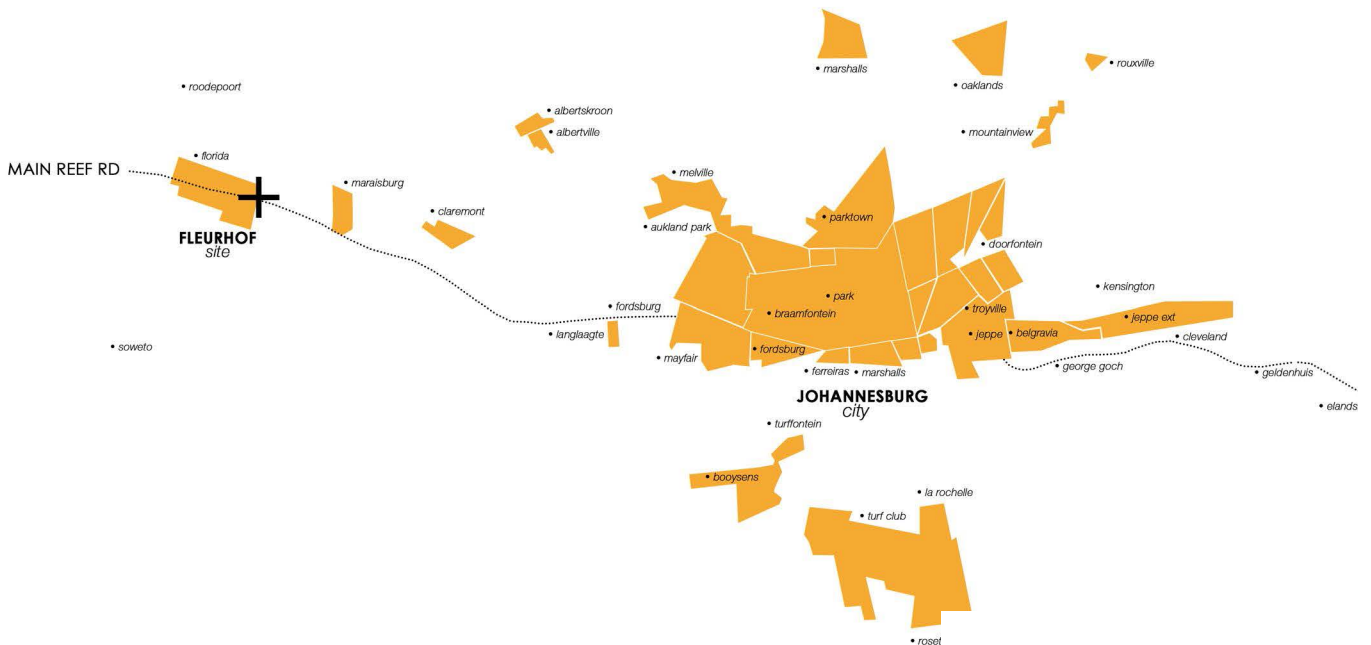


FIGURE 8.26: Illustration of Fleurhof in relation to Johannesburg city (Author, 2018)

REFERENCES

- 26'10 Architects, 2012. *The South African Informal City*. ISSU, pp. 19-21.
- Albonico Sack Metacity Architects and Urban Designers, 2017. *Fleurhof Cluster Urban Development Framework, Johannesburg*: Albonico Sack Metacity Architects and Urban Designers.
- Beall, J., 2002. *Uniting a Divided City*. London: Earthscan Publications.
- Brantingham, P. & Brantingham, P., 1991. *Environmental Criminology*. s.l.:Waveland Press.
- Bremner, L., 2004. *Bounded Spaces: Demographic Anxieties in Post-Apartheid Johannesburg*. Social Identities, Volume 10, pp. 1-15.
- Brodie, N., 2014. *The Joburg Book*. revised ed. Johannesburg: Pan Macmillan South Africa.
- Chipkin, C., 1993. *Johannesburg Style - Architecture & Society 1880s - 1960s*. Cape Town: David Phillip.
- Christopher, A., 2000. *The Atlas of Changing South Africa*. London and New York: Routledge.
- City of Johannesburg, 2002. *Vision for the City 2030, Johannesburg: City of Johannesburg*.
- Counterspace, 2017. *What's up Fleurhof, Fleurhof and Surrounds Urban Development Framework*. Johannesburg: Counterspace.
- de Certeau, M., 1984. *The Practice of Everyday Life*. Berkeley: The University of California Press.
- de Villiers, S., 2018. *Getting to know Fleurhof* [Interview] (February 2018).
- Donaldson, R., 2001. *A model for South African urban development in the 21st century*. Pretoria, In 20th South African Transport Conference "Meeting the Transport Challenges in Southern Africa.
- du Plooy, D. J., 2000. *The West Rand During the Anglo-Boer War*. World Rand Heritage Consultants, pp. 1-16.
- Foucault, M., 1984. *Of Other Spaces: Utopias and Heterotopias*. Architecture /Mouvement/ Continuité, p. 4.
- Freeman, W., 2003. *Neurodynamic Models of Brain Psychiatry*. Neuropsychopharmacology, Volume 28, pp. 54-63.
- Harries, K., 1997. *The Ethical Function of Architecture*. s.l.:Massachusetts Institute of Technology .
- Heidegger, M., 1996. *Being and Time*. s.l.:State University of New York Press.
- Huchzermeyer, M., 2003. *A legacy of control? The capital subsidy for housing, and informal settlement intervention in South Africa*. International Journal of Urban and Regional Research, 3(27), pp. 591-612.
- Kafle, N., 2011. *Hermeneutic Phenomenological Research Method Simplified*. Bodhi: An Interdisciplinary Journal, pp. 1-20.
- Kelly, R., 1952. *Lighting as an Integral Part of Architecture*. College Art Journal, pp. 23-40.
- Kerby, A. P., 1991. *Narrative and the Self*. Bloomington: Indiana University Press.
- Khan, M. M., 2014. *Creating Sustainable Human Settlements using Integrated Housing Developments on Infill sites*. The University of the Witwatersrand, p. 98.
- Kleinhans, R., 2004. *Social implications of housing diversification in urban renewal: A review of recent literature*. Journal of Housing and the Built Environment , p. 19.
- Kreutzfeldt, D. & Malcomess , B., 2013. *Not No Place: Johannesburg*. Fragments of spaces and times. Johannesburg: Fanele.
- Maape, S., 2016. *Architecture for Resilience: Dialogues with Place in the Indigenous Communities of Kuruman during the Holocene Period*, Johannesburg: University of the

Witswatersrand.

Maape, S., 2017. *Indigenous Knowledge Systems and Spatial Philosophy*. Johannesburg: YouTube.

Maape, S., 2015. *Architecture for Resilience: Dialogues with Place in the Indigenous Communities of Kuruman during the Holocene Period*. University of the Witwatersrand, Johannesburg, p. 73.

Maape, S., 2018. *Conversation about embodied practices and ritual* [Interview] (June 2018).

Newman, O., 1996. *Creating Defensible Space*. s.l.:Diane Publishing.

Orum, A. M. & Neal, Z. P., 2010. *Common Ground? Readings and Reflections on Public Space*. New York: Routledge .

PGS Heritage, 2009. *Re-development of the old Rand Leases Mine Hostel, Fleurhof, Ext 10, Roodepoort, Johannesburg, Gauteng*, Johannesburg: PGS Heritage.

Rensburg, C. V., 1986. *Johannesburg One Hundred Years*. 1st ed. Johannesburg: Chris Van Rensburg Publications.

Sexwale, T., 2013. *Giagantic Effort Needed to de-Racialise Residential Space*. Johannesburg, Department of Human Settlements budget speech in the National Assembly .

Turner, V., 1967. *The Forest of Symbols: Aspects of Ndembu Ritual*. New York: Cornell University Press.

Turner, V., 1969. *The Ritual Process: Structure and Anti-Structure*. London: Routledge and Kegan Paul.

Vesely, D., 2004. *Architecture in the Age of Divided Representation*. s.l.:Massachusetts Institute of Technology Press.

Zapiro, 1997. *TRUTH AND RECONCILIATION - THE GAP*. [Art] (Rhodes Journalism Review).

APPENDIXES

academic paper



Natalie de Abreu

A

a sense of resolution:
A Restorative Facility for Fleurhof

Investigating 'a sense of resolution' for Fleurhof through an architectural intervention that strives to alter perceptions, shift boundaries and establish a common ground amongst the conflicting residents. A new typology for conflict resolution as the driver and program as the vehicle to define common ground.

Viewing the conflict amongst residents as a 'breach in relationships', and justice as a process of coming together to repair that breach.

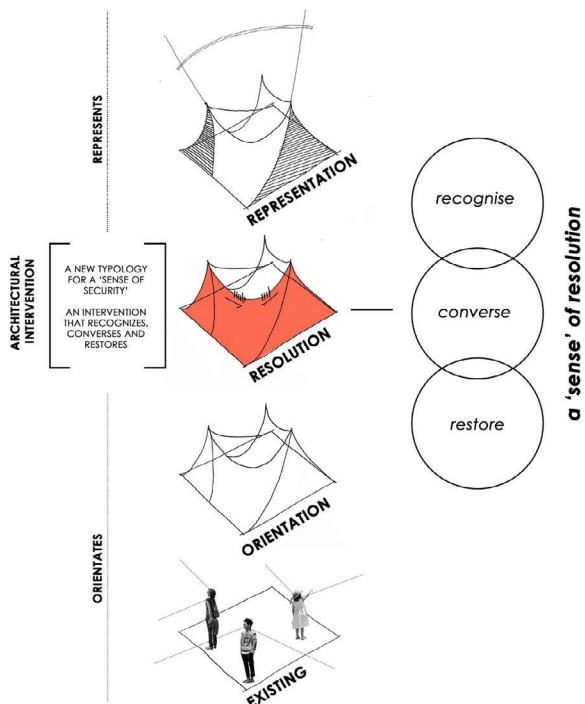


Fig. 01. Above; a sense of resolution (Author, 2018)

INTRODUCTION

In-between, the contrasting shades of black and white Johannesburg, we find Fleurhof. In Fleurhof we find identities as contrasting as its position along Johannesburg's east-west passage, the Main Reef. Fleurhof finds itself on the edge of surplus ground along the east-west passage and in-between the previously socially included and excluded, the northern and southern suburbs. Sexwale (2013) explains Fleurhof as the "no man's land" between Johannesburg and Soweto, resulting in the areas having little or no amenities and facilities¹ (Sexwale, 2013). The land as a buffer, between Johannesburg's affluent suburbs and Soweto, describes laboratory for this dissertation, Fleurhof. An area knitting together 'white' and 'black' Johannesburg across apartheid's 'no man's land', the mining belt.

The stark juxtaposition between rich and poor becomes typical of the nature of South Africa's suburbs due to their spatial legacies². What makes Fleurhof's location unique is the recent application of an Integrated Housing Model³ to a palimpsest of existing residents. Fleurhof's relevance as a laboratory for the author's dissertation, stems from its distinguishing nature as a dwelling, to a palimpsest of diverse territories. Residents from diverse backgrounds, contrasting financial situations and conflicting beliefs find themselves

struggling to share this place they all call home. Through observation and contextual mapping, one can argue that Fleurhof's residential and industrial stagnant urban fabric has failed to represent these diverse identities. An absence of governmental social infrastructure and municipal presence, contribute to a lack of a *sense of resolution*.

The article initially dissects the issues that have informed the topic of this dissertation. Following the issues, the article analyses the growing body of knowledge concerned with space, time and reality in order to understand how architecture facilitates the process of resolution. Lastly the article unpacks vehicles that have contributed to defining a new typology for conflict resolution and concludes with the contribution the project strives to make towards the architectural discourse.

1. ISSUES AS INFORMANTS

The following section unpacks the issues (social, urban and architectural) and their intentions that have defined the contextual approach towards investigating an alternative typology for conflict resolution in Fleurhof.

1.1 Social issue

In order to contextualize Fleurhof's current identity, the nature of the inhabitant in relation to their urban fabric is viewed through fragments of time relating to apartheid's spatial legacy. The fragments of time are translated for the purpose of this dissertation as: before, during and after (These fragments of time are further explained later in the article with an introduction to the context).

Contextualizing Fleurhof's current identity using the lens of: *before, during* and *after*, it is assumed

that Fleurhof's geological, political and social ties have resulted in an amalgamation of vulnerable identities and their contrasting territories due to an overarching lack of a sense of place⁴. Through mapping (see figure 5) these diverse identities, it became apparent that they were defined by contrasting territories where forms of ownership were illustrated. When overlapping these territories points of convergence are revealed. The intersection of these territories, map a site of vulnerability, a 'no man's land', defined by the boundaries of these diverse territories.

Through observation and contextual mapping (see image), it is apparent that Fleurhof's residential and industrial stagnant urban fabric have failed to represent these identities. An absence of governmental social infrastructure and

municipal presence, have contributed to a lack of a *sense of resolution*. An increasing internal unrest and the decreasing sense of security have resulted in the formation of a Community Policing Forum⁵ due to the absence of public security. The addition of a diverse income of residents, without *place identity* through urban upgrade or provision of social infrastructure, have resulted in the social issue of vulnerable identities and increasing conflict amongst residents.

1.2 Social intention

The primary intention of this dissertation involves rethinking the way in which protection, representation, and resolution contribute to restoring a 'breach in relationships'. This dissertation aims to investigate the social issues that contribute towards crime rather than the crime itself.

Fig. 02. Below Left; The Social Issue (Author, 2018)
Fig. 03. Below Middle; The Urban Issue (Author, 2017)
Fig. 04. Below Right; The Architectural Issue (Author, 2017)

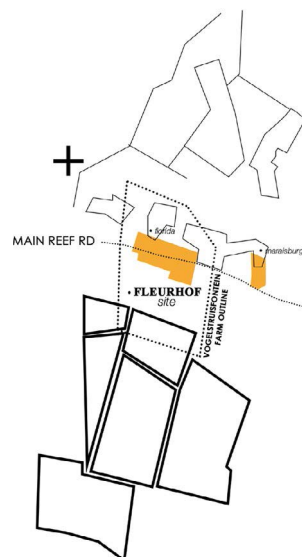
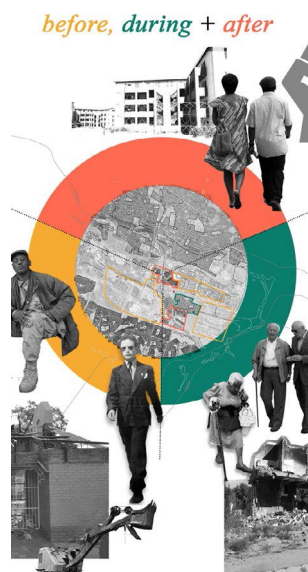




Fig. 05. Left; Diverse Identities and Conflicting Territories: Before, During and After (Author, 2017)

The analysis of the governmental provision of services and the accessibility of services becomes an important investigation in this dissertation. Critically analysing the hierarchy of protection, representation, and resolution (see figure 14) in South Africa in order to situate the intervention within the context of social justice and in an attempt to possibly explore a new typology for conflict resolution. The investigation of identity, individual and collective, plays an integral part. Identity becomes important when striving towards a common ground of resolution, a place of restoration.

1.3 Urban issue

Contextually Fleurhof occupies the gap between the previously included and excluded, bordering the affluent northern suburbs and the previously disadvantaged Soweto. The derelict mines, the wetland and the industrial island that form the physical boundaries of Fleurhof, continue to act as buffer zones, reinforcing the segregation between the north and the south, reinforcing the spatial injustices of the past. These buffer zones, acting as variances in the urban fabric and contribute to feelings of disorientation, lack of ownership and territory.

1.4 Urban intention

In an attempt to rehabilitate a sense of place for Fleurhof, an investigation of forms of orientation, ownership and, territorialization will be explored through a relationship between the inhabitants and their urban fabric. Urban design theories of defensible

space⁶ and place-based crime⁷ will be used to address the process of conflict resolution. In order for this to be explored, an understanding of various aspects that define a *sense of resolution* and how they govern human interaction is necessary.

The urban intentions are framed by three principles that address place identity to create a sense of security: urban connection, urban reconstruction, and urban cohesion. These principles will be further outlined through the use of an urban vision for Fleurhof on a macro, meso and micro scale.

1.5 Architectural issue

The architectural issue comprises of two integral components. Initially addressing Fleurhof's current built environment that heightens divisions of territory and conflict and fails to represent a common ground amongst the residents. Fleurhof's social and public infrastructure to date is made up of architecture that produces, there is an absence of architecture that assists. The ideas of identity and belonging have become vulnerable without architecture that represents it. Through narratives people construct and communicate their identity to the world, without the means of infrastructure to communicate and construct identity, one's identity becomes vulnerable⁸ (Kerby, 1991, pp. 7-12). Vulnerable identities and contrasting territories have contributed to an increasing internal conflict amongst residents.

Secondly, the architectural issue includes the critical analysis of how conflict resolution is traditionally addressed, in order to understand where the gaps lie and to inform how an alternative typology for conflict resolution might function.

1.6 Architectural intention

The presence of architecture that facilitates the process of resolution is proposed by creating architecture that facilitates alternative forms of dialogue amongst users. An alternative approach to conflict resolution is investigated by treating the conflict as a 'breach of relationships' and justice as a process of coming together to repair that breach.

The architectural intention includes investigating the notions of an alternative typology for conflict resolution through introducing a puncture in the norm. The intention includes the insertion of a new condition into the context with the intention of new relationships to occur and perceptions to change. The architectural intention aims to animate embodied practices that allow the user to transcend from their *everyday* into an *extraordinary* space, a space that facilitates the process of integration and defining common ground (further explained through the theoretical review).

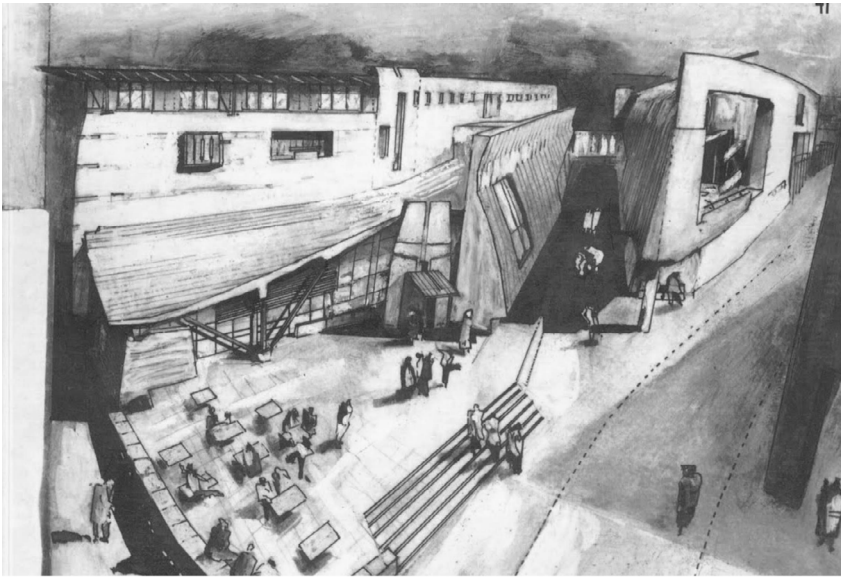


Fig. 06. Left; Münster City Library, an example of a 'communicative space' Vesely refers to in his book, *Architecture in the age of divided representation*. (Bolles + Wilson Architects, 1967)

2. THEORETICAL REVIEW

This theoretical review is situated relative to the body of knowledge concerned with space, time and reality. Our concern with space, time and reality stems from the enlightenment period. Maape (2017) explains that during the 19th century, the theory of objective reality was used to describe us rational beings suggesting that our perceptions of the world exist independently of ourselves (Maape, 2017). The theory of subjectivity introduces the idea that our perceptions are affected by our experience of the world. Learning from the theory of subjectivity, this theoretical review aims to contribute to the literature concerning the theory inter-subjectivity⁹, highlighting the commonality of our perceptions.

This theoretical review comprises of three themes: **Communicative Spaces**, **Ethical Spaces** and **Transitional Spaces**. These themes and their respective theories were chosen in order to investigate how our spatial settings contribute towards shifting our perceptions, and more specifically how shifting our perceptions can assist in resolving conflict and inform integration amongst the residents of Fleurhof. Using these theories as guidelines towards designing an alternative typology for conflict resolution.

The first section will discuss **Communicative Spaces**, using Vesely's book titled *Architecture in the Age of Divided Representation*. Building

on communicative spaces, the second section introduces **Ethical Spaces** using Karsten's book titled *The Ethical Function of Architecture*. The third section speaks of **Transitional Spaces** using scholars such as Turner, Maape, Freeman, and Foucault.

For the purpose of this study, when the word 'ritual' is referred to, it is viewed as an 'embodied practice', rather than exclusively through the traditional ties that the word 'ritual' is usually associated with. An embodied practice refers to any physiological, physical activity or engagement involving the conscious movement of the body (examples include dancing, exercising, performing, painting, sculpting etc.).

2.1 Communicative spaces

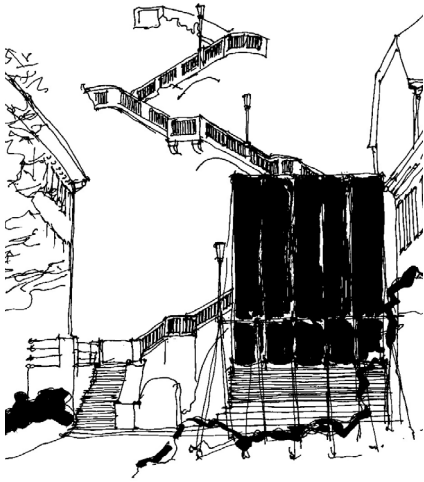
Vesely¹⁰ (2004:44), in his book, *Architecture in the age of divided representation*, interprets architecture's indispensable role as a cultural force throughout history and its function as a communicative space in the age of divided representation. Two chapters are highlighted: *The Nature of Communicative Spaces* and *The Rehabilitation of Fragmentation*. In *The nature of Communicative Spaces*, he describes "the ambiguous role of representation in the life of contemporary culture" largely due to the "problem of communication between areas of culture" (Vesely, 2004, p. 44). Vesely investigates if there is "Anything in architecture that can be seen as its communicative power; if so, can it be treated, literally or metaphorically as a form of language or text" (Vesely, 2004,

p. 68).

Understanding the background of language¹¹ leads to an understanding of the communicative role of architecture. In this "pre-verbal world, the reality is already structured as a communicative space" through senses of experience (Vesely, 2004, p. 70). Architecture, therefore, communicates through a sense of experience, relying on movement and gesture to ignite an experience. If relying on movement and gesture to ignite experience, it becomes important to understand how architecture can inform movement and gesture. Vesely suggests that "What logic and grammar are to verbal language, geometry is to the visible world" (Vesely, 2004, p. 71).

Relying on Vesely's theories, one can argue, that geometries that inform rhythm, proportion, and harmony create architecture that facilitates movement and gesture. Vesely asks "How is it possible to explain the relationship between cultural conditions, memories, expectations, the visible physiognomy of space in question and the spatial structure of a typical situation?", He goes on to explain that an understanding develops "through recourse to metaphors, analogical reasoning, and continuity of references", these aspects depend on the communicative movement brought on through architecture (Vesely, 2004, p. 79).

Reading architecture as a non-verbal experience introduces its attachment to memory. If architecture can contribute



to memory, Vesely highlights two words of importance: temporality and spatiality. These words that describe the communicative movement of architecture (Vesely, 2004, p. 100). It is therefore important to highlight that, although architecture cannot be read it can be experienced and so has the power to become a communicative space through mediation. It is highlighted that in order to provide for the process of conflict resolution, architecture needs to fulfil its communicative function.

In *The Rehabilitation of Fragmentation*, Vesely (2004:318) describes a setting much like Fleurhof's current condition, where cultural "Fragmentation is a result of isolation and disintegration and thus as potential chaos" (Vesely, 2004, p. 318). He suggests that "The reality of the modern world is divided into isolated areas of...fragmented realities" what is common to the collective residents are reference points to their existing context (Vesely, 2004, p. 322).

Vesely (2004:338) defines the relationship between an object and its spatial setting as one that is always rooted in the context of a particular setting, the situational understanding of space. He goes on to say that the spatial setting has the "Capacity to establish the similarity between the object and as a consequence the capacity to reveal on a deeper level what is common to them" (Vesely, 2004, p. 338). The challenge for this dissertation would be to define common reference points between the diverse

residents. Vesely (2004:339) suggests establishing references that enable users to "recognize sameness and difference in the context of the world" as a form of establishing common ground (Vesely, 2004, p. 339).

Vesely (2004:346) refers to the function of architecture as a form of dialogue and legibility with the ability to reconcile, he speaks of revealing fragmentary through "dialogue with the concrete reality of space" (Vesely, 2004, p. 346). Here fragmentation is dissolved through establishing common ground. Contrasting the conventional design of space, communicative space is illustrated as "an imaginative dialogue with the deeper structure and content of space", where the limits of geometry are tested to articulate relationships between the users, light, comfort, and projection. Vesely (2004:350) points out the "mediating role of light" as a form of restoration (Vesely, 2004, p. 350).

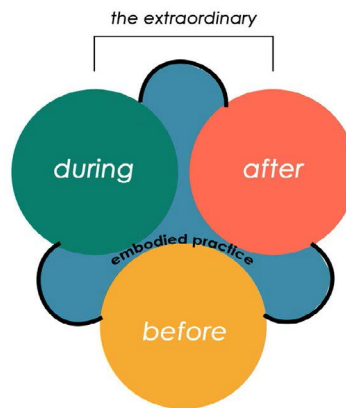
2.2 Ethical spaces

Harries (1997:4) in his book *The Ethical Function of Architecture*, questions whether architecture 'should not help us find our place and way in an ever more disorientating world? In this sense, he speaks of the "ethical function"¹² of architecture (Harries, 1997, p. 4). The book strives towards describing architecture as a task towards articulating a common ethos.

Furthermore, Harries (1997:86) questions whether architecture possesses a hermeneutic function and if "the task of architecture is that

Fig. 07. Left; The Red Stage, an example of the 'ethical spaces' of festal rituals that Karsten's refers to in his book, *The Ethical Function of Architecture* (Giencke & Company Architects, 1984)

Fig. 08. Right; Diagram explaining how embodied practices bind the three types of diverse residents through the use of the extraordinary (Author, 2018)

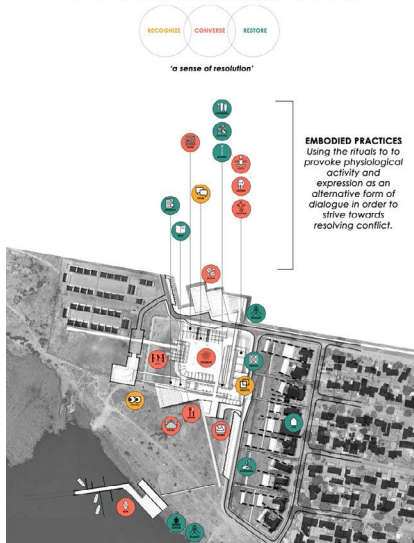


of interpretation?" Architecture's task to interpret is investigated in the sixth chapter, The Language Problem. In this chapter, he suggests that if there is a language of architecture then architecture must not just be "Meaningful in some sense but must be intended to communicate some meaning" (Harries, 1997, p. 86).

Harries (1997:96) comes to the conclusion that although "buildings do not make assertions" like language, they do communicate a way of understanding or seeing. (Harries, 1997, p. 88). The communication of architecture differs from that of language, "Buildings speak to us by bounding space" (Harries, 1997, p. 96). He reminds us that "There is a continuing need for the creation of festal places on the ground of everyday dwellings, places where individuals come together and affirm themselves as members of the community, as they join in public re-enactments of the essential: a celebration of those central aspects of our life that maintain and give meaning to existence. The highest function of architecture remains what it has always been: to invite such festivals" (Harries, 1997, p. 365).

Like Vesely, Harries speaks of the communicative nature of architecture as one that ignites experience. Harries speculates that the architecture of experience has re-occupied the place once held by sacred architecture. Harries (1997:365) reaffirms the necessity of architecture in our contemporary society, he explains

INTRODUCING THE EXTRAORDINARY



the function of architecture as one that primarily allows its user “affirm themselves as members of the community”. In the search of designing such spaces, Harries (1997:367) suggests that we should look beyond architecture and towards the “festal quality of public spaces, of squares, streets, and parks” to identify how architecture can aid expression (Harries, 1997, p. 367).

2.3 Transitional spaces

Rituals have been well documented universally by anthropologists such as Victor Turner. Across these studies, a common characteristic of these rituals is the process of transition (Turner, 1969, p. 95), which has been interpreted as a transition into a new a way of living. Not only is this a ‘transition’ from one life to another but also using ‘transition’ as a form of dealing with a situation. Turner speaks of a ritual’s role in dealing with the collective and individual crisis. Here he argues that these ‘crises’ are moments where an individual or collective has to transition from one social status to another (Turner, 1967, p. 7).

Maape (2015:73) builds on Turner’s argument by pointing out that in phenomenology “Rituals seem to be fundamentally linked to our bodies, our body’s location in space, time and the manner in which we shape and move them. Music, colours, space (volume, light, and sound), symbols or shapes, physical sensations directly experienced on the body and processes or symbolic patterns over

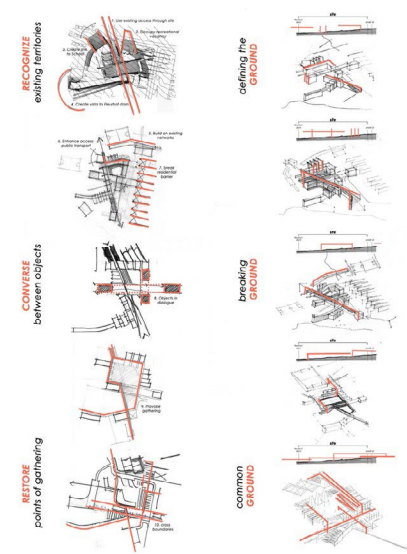


Fig. 09. Left; Introducing the Extraordinary through the use of program (Author, 2018)
Fig. 10. Right; Design development in striving towards creating communicative architecture (Author, 2018)

time, all of which are acting on the body and the senses seem to give rise to the potential to transition from one identity to another or arguably induce what Freeman¹³ calls dissolution. This confluence of experiences seems to act on the brain in such a way that it suspends one’s common perception of the world to make room for a shift in perception” (Maape, 2015, p. 73).

Supporting the notion that rituals are spatially bound, Freeman (2003) mentions that removing the participant from normal social surroundings to a new spatial setting is a common characteristic of rituals (Freeman, 2003, pp. 54-73). Turner describes this transition, based on Van Gennep’s model¹⁴, as separation, margin (liminal phase) and aggregation.

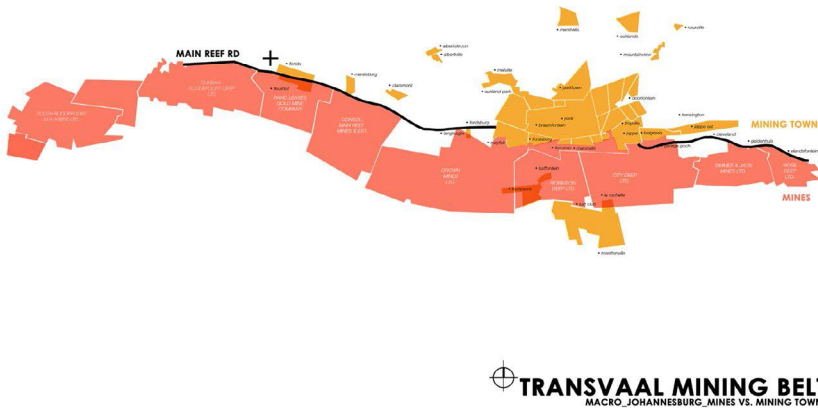
Referring to Freeman’s theory of dissolution¹⁵ and cultural neurophenomenology, Turner concludes that embodied practices are a state of re-formulation or diverting one from a particular outlook to another (Maape, 2015). Turner (1969:95) terms this state as liminality¹⁶, the transition from one identity to another or the dissolved edge between two identities (Turner, 1969, p. 95). One of the products of the liminal phases is what Turner refers to as ‘communitas’. Maape (2015:76) explains this outcome as “A temporary heightened sense of oneness with the other...it seems that what Turner is referring to is a state of Freeman’s dissolution, a moment when the boundaries of ‘self’ are dissolved and in turn developing a feeling of

oneness between me and other or communitas” (Maape, 2015, p. 76).

If embodied practices provoke conditions of ‘Communitas’, ‘Liminality’ and ‘Dissolution’, embodied practices become tools of mediation between the “self and other” (Maape, 2015, p. 78). Referring back to the new spatial setting that Freeman refers to, philosopher Michel Foucault (1984:4) introduces the term “Heterotopia”, to describe this new spatial setting, ‘other places’. Foucault explains that unlike utopias, which are fundamentally unreal spaces, heterotopias are a combination of mythical space and the everyday space in which we live in (Foucault, 1984, p. 4). Heterotopias exist in cultures across the world, they are spaces that puncture the norm, and they’re places of refuge from our everyday lives, acting as sanctuaries from the dominant narrative of our everyday.

Maape’s video series titled *How rituals help us to change our perceptions* speaks of the role embodied practices have on shifting perceptions. Building on Joseph Campbell’s theories¹⁷, Maape proposes that in order to change our perceptions we need to transcend them, by creating spatial settings much like Foucault’s heterotopias (Maape, 2017). Building on neuroscientist Anil Smith’s research, Maape (2017) suggests that we don’t view our world as a finite reality but rather through the filter of our own experiences. His research stems from two streams of thought: that our perceptions are bound

Fig. 11. Left; Transvaal Mining Belt, in relation to the site, Fleurhof (Author, 2018)



to our emotions; and that the world is mapped temporarily and spatially by a series of good and bad traumas we experience, that rely on memory (Maape, 2017).

Maape (2015) highlights that our perceptions are restricted by the unknown. He suggests that our fears and uncertainties stop us from changing our perceptions. He builds on Freeman's theory of dissolution, describing the notion of dissolving one's own perception through 'tools of persuasion'. Maape describes these tools as embodied physiological practices. Pointing towards the value of ritual as a way of changing our perceptions and shifting our boundaries. Through rituals, Maape speaks of embodied as an alternative form of non-verbal communication and architectures role in provoking physiological processes, through space (volume, light, and sound) (Maape, 2015).

In conclusion, from the theoretical review above, we begin to understand architecture's role as a form of non-verbal communication, Vesely also points out how architecture can define reference points in its context that introduce commonalities amongst users. Like Vesely, Harries speaks of the communicative nature of architecture as one that ignites experience. He reminds us that 'There is a continuing need for the creation of festal places on the ground of everyday dwellings, places where individuals come together and affirm themselves

as members of the community. Through the works of Turner, Maape, Freeman, and Foucault we understand the value of rituals as a process of changing our perceptions, shifting boundaries and ultimately integrating diverse groups of people. We are introduced to ways in which architecture contributes to animating the physiological process of ritual by defining space (volume, light, and sound).

3. VEHICLES

The following section will unpack the vehicles (context, program, and precedent) used as informants towards creating an alternative typology for conflict resolution.

3.1 Context

In 1886, Johannesburg, the city of gold, acquired its nickname upon the discovery of gold in the region. Johannesburg was originally positioned on the central 'uitvalgrond'¹⁸, where the meeting point of southerly trade routes was relocated to cross the east-west horizon of the gold-bearing reef (Chipkin, 1993, p. 12). The grid progressed along two directional pulls, the north-south direction shaped by the political economy and the east-west direction shaped by geology, the consistent axis of the Main Reef (Kreutzfeldt & Malcomess, 2013, p. 29). Fleurhof finds itself on the edge of surplus ground along the east-west passage and in-between the previously socially included and excluded, the northern and southern suburbs. Sexwale (2013) explains Fleurhof as the "no man's land"

between Johannesburg and Soweto, resulting in the areas having little or no amenities and facilities"¹⁹ (Sexwale, 2013). The land as a buffer, between Johannesburg's affluent suburbs and Soweto, describes laboratory for this dissertation, Fleurhof. An area knitting together 'white' and 'black' Johannesburg across apartheid's 'no man's land', the mining belt.

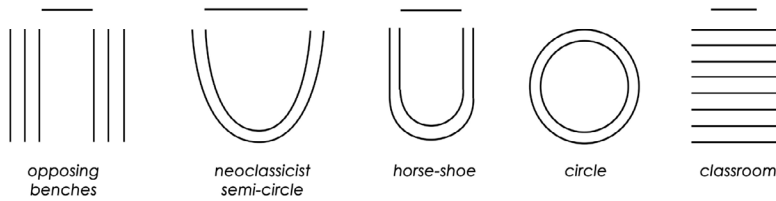
As mentioned in the introduction the stark juxtaposition between rich and poor becomes typical of the nature of South Africa's suburbs due to their spatial legacies²⁰. What makes Fleurhof's location unique is the recent application of an Integrated Housing Model²¹ to a palimpsest of existing residents. This model is currently the largest integrated housing development in Gauteng. Fleurhof's relevance as a laboratory for the author's dissertation, stems from its distinguishing nature as a dwelling, to a palimpsest of diverse territories.

In order to contextualize Fleurhof's current identity, the nature of the inhabitant in relation to their urban fabric is viewed through fragments of time relating to apartheid's spatial legacy. The fragments of time are translated for the purpose of this dissertation as: *before*, *during* and *after*.

Before refers to Fleurhof in a time, preceding the effects of apartheid's spatial legacy, relating to the geology of Fleurhof. Fleurhof developed under the establishment of Roodepoort, two major events in the late 19th century lead to



Fig. 12. Left first and second row; site surroundings (Author, 2018)
Fig. 13. Third row; Forms of Assembly (Author, 2018)



the formation of the town, the Anglo-Boer War and the discovery of gold. Fleurhof's geological condition initiated its birth as a mining town on part of the original Vogelstruisfontein Farm along Johannesburg's Main Reef²² (Rensburg, 1986, p. 4). Exclusively a white area under apartheid, the original layout excluded the provision for the accommodation of people of colour. The back labour force were housed in mining compounds, making it easy for the mining officials to control their workforce. Although families of mineworkers and migrant labourers seeking jobs began to squat along south-eastern peripheries of the mining compound towards Soweto (Beall, 2002). The urban fabric was formed by an arrangement of mining infrastructure and a mining hostel²³. After closure in the 1990's, due to a decreasing gold price, the Rand Leases Gold Mining Company currently exists in the form of derelict mining infrastructure, a vacant mining compound and a playground for Zama Zamas (Rensburg, 1986). In response to its formation as an industrial node, post-90s medium-industrial infrastructure became the next layer of Fleurhof's urban fabric. The shift towards a post-industrial society has resulted in a decline in the manufacturing sector and a rise in the provision of the service sector, leaving many of these warehouses vacant.

During refers to Fleurhof in a time, in-between the effects of apartheid's spatial legacy. Following the gold rush, there were clear racial distinctions due to the initial Land Act of 1913, which

lead to The Native Urban Areas Act of 1923 and later formalized by The Group Areas Act of 1950. All non-whites were driven out of the city center. The eastern and western peripheries of the city were occupied by working-class whites, northern suburbs were home to the affluent white classes and non-whites were housed in the southern peripheries of the city (City of Johannesburg, 2002). Fleurhof and its northern suburbs remained white areas under apartheid, until the 1976 Soweto uprising, the white residents moved up north and the coloured communities from Westbury and Bosmot were relocated to the suburb (City of Johannesburg, 2002). This relocation could be explained by the exit of the superior and the arrival of the inferior through the lens of apartheid. The removal of the superior, instructed the pause in the development of Fleurhof, with the addition of the inferior, Fleurhof's residential typology was the last of its development. Fleurhof's urban fabric remained residential, without the build-up of additional typologies such as socio-economic facilities.

After refers to a time, post the effects of apartheid's spatial legacy. Within the last decade, Fleurhof has become home to low-middle income black residents, with the introduction of the Mixed-Income Housing Units to Fleurhof's Urban Fabric. These rapidly developing housing units, fail to address the industrial remains of a post-industrial society and fail to relate to the existing residential urban fabric.

Fleurhof as a dwelling represents a diverse set of identities amongst the dwellers; geographically, a white mining suburb, politically home to a coloured residency and more recently economically home to a mixed-income black community.

Using the context as an informant the diverse identities were mapped by identifying the presence and absence of ownership, to define the boundaries of diverse territories. Analysing the existing situation to establish common ground, celebrate difference and address identity. Overlapping these territories to reveal vulnerable points of convergence, as an indication of where the intervention should lie.

The chosen site is situated at the point of intersection between the diverse territories. It is located along Smelt Ave and Winze drive. Its northern boundary is defined by the recreational buffer zone between the industrial strip, occupied by the *before* Fleurhof community, the integrated housing scheme occupied by the *after* Fleurhof and the residential suburb occupied by *during* Fleurhof. Fleurhof dam and derelict mining landscape define the Southern boundary, its eastern edge is defined by the old residential suburb and the western edge is occupied by Fleurhof primary school.

HOW IS CONFLICT TRADITIONALLY DEALT WITH?

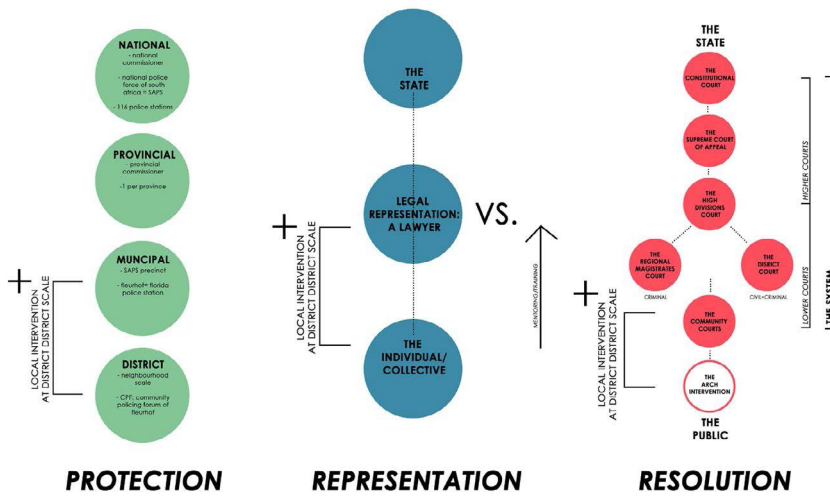


Fig. 14. Left; Form's of Protection, Representation and Resolution in South Africa, and where the architectural intervention fits in (Author, 2018)

3.2 Program: a new typology for conflict resolution

Dealing with conflict resolution and the need for a new typology was initially informed by Fleurhof's inherent diverse identities and conflicting territories resulting in internal unrest and everyday conflict. The new typology was established by analysing how conflict is traditionally dealt with in forms of protection²⁴, representation²⁵ and resolution²⁶ (refer to figure 14) and where the gaps are, in order to reveal where the intervention should fit in. Looking at traditional forms of assembly (refer to figure 13) it became apparent that conflict resolution has always been an extremely private affair with rigid means of communication, in the form of oral dialogue.

Building on the theoretical review proposed a new typology for conflict resolution aims to 'unveil' justice by introducing public spaces that puncture the norm. Referring to Foucault's 'heterotopias', the programs aim to create an alternative spatial setting that provides a refuge to the everyday narrative. The program strives to ignite embodied practices that contribute towards shifting our perceptions, and more specifically illustrating how shifting our perceptions can assist in resolving the conflict by creating collective perceptions.

The program aims to introduce alternative forms of dialogue: using physiological activity and creativity as a form of communication and expression. The intention of the program primarily

speaks of a 'communicative space' that facilitates restoring the breach of the relationship between users. The program can be summarized as a restorative facility for conflict resolution. Aiming to provoke three processes: recognize, converse and restore as a means of establishing common ground amongst the users.

In an attempt to achieve 'heterotopias', the study analysed contemporary practices and processes that allow for participants to transcend from their *everyday* into a temporary alternative world. Across cultures, contemporary practices such as religious gatherings, sporting events, weddings, funerals, and festivals become punctures in the norm, whereby participants undergo a process of transition. These contemporary practices illustrate an integration of people of diverse identities and contrasting territories coming together and temporally sharing common perceptions. Furthermore, this dissertation aims to introduce these forms of 'heterotopias' as spatial settings that contribute to an alternative typology for conflict resolution.

The insertion of a new condition into the context provokes new relations to occur and perceptions to change. By treating an absence of *resolution* as a *breach of relationship* and justice as a process of coming together to repair that breach, the intention of the program primarily speaks of a 'communicative space'²⁷ that facilitates restoring the breach of the relationship between users. The role of the program describes one that

allows for the process of resolution to take place. In establishing a *sense of resolution* three processes are highlighted: *recognize*, *converse* and *restore*.

Recognize refers to the first step towards establishing common ground. Here the intervention allows the parties to come to terms with the breach of relationships. This involves acceptance, responsibility and the desire to repair that breach. The intervention is to host dialogue rooms where narratives are shared and the exchanging of stories can occur as a method towards repairing relationships amongst the residents. As part of an informal urban edge, the intervention will house facilitation rooms with the provision of legal aid representation and education. These spaces are intended to facilitate a more private notion of mediation between smaller groups of conflicting parties.

Converse describes the second step, involving the central point of the program. Dealing with alternative forms of conversation. The spatial setting speaks of one that facilitates movement and gesture to resolve the conflict. Here the intervention allows for the extraordinary, the "heterotopias". These event spaces include: a multi-purpose sports facility with an outdoor amphitheatre and supporting ablution facilities; the interchangeable spatial constructs for various religious gatherings and ceremonies such as weddings and funerals; the necessary flexible spatial elements for music,



Fig. 15. Left; The iSivivana Centre, Khayelitsha (Author, 2017)

dance and film festivals; as well as the necessary supporting infrastructure for the insertion of food stalls, pop up stores and exhibition spaces.

Restore describes the final step. This aspect of the program deals with restoring the breach in relationships. This notion involves rehabilitation. Restoration acts as a filter to the outside world, so the program strives to enable existing networks identified in Fleurhof. This intervention includes a network opportunity facility with a library and computer lab; an after-care/ before-care facility that acts as a feeder to surrounding Fleurhof schools; as well as rent-able office/studio/shop spaces to facilitate the small businesses that make up Fleurhof's local economy.

3.3 Precedent study

The precedent component includes a functional precedent that provides an example of the types of programs an alternative typology for conflict resolution might include; a formal precedent that touches on the notions of public space; as well as a spatial precedent that provides an example of sensory architecture that facilitates the notion embodied practices.

The iSivivana Centre, Khayelitsha | GAPP Architects

This precedent has been chosen as a functional precedent, providing an example of the types of programs that can be incorporated when designing a new typology for conflict resolution. The centre has been chosen as an architectural example that hosts

programs that contribute to both the every day and the extraordinary, social support structures as well as social infrastructure.

The iSivivana Centre in Khayelitsha has recently been completed by GAPP Architects. The building is located alongside award-winning Thusong Sports Facility designed by Makeka Design Lab. Under apartheid's grand narrative, Khayelitsha was designed as a dormitory township, where labourers came to sleep and commuted back to the city in search of work. The iSivivana center is the first office block of its kind, infrastructure that serves its people. The centre currently houses offices for nine social justice organizations. The center accommodates a retail edge of five shops; a restaurant; a library; an auditorium; a meeting hall; a classroom and a legal advice centre. The internal parking provides a space for a netball/ basketball court and an outdoor amphitheatre. The local community has free access to the library and legal advice centre. The hall, auditorium, and classroom are rented out at a modest fee. The legal advice centre thrives on having so many social justice organizations with overlapping areas of interest, allowing for collaborations and a synergy to their work. The centre is part of a larger urban vision within Khayelitsha business district. Design decisions were guided by an honest approach to present the building, to create a raw urban aesthetic.

The building serves as an architectural device that strives to integrate the

residents of Khayelitsha through the juxta-positioning of program. Using social justice support services together with celebratory social programs, the centre acts as a platform where the residents share services and experiences.

The Sans Souci Cinema | 26'10 Architects & Lindsay Bremmer

This precedent has been chosen as a formal precedent that touches on the complexities of public space in Johannesburg. "The notion of public space in Johannesburg, as in many other cities, is becoming increasingly franchised and controlled, on the one hand, and neglected on the other hand." (26'10 Architects, 2012, p. 20). This abandonment of public space offered the intervention an opportunity to experiment with cultural networks and ways in which architecture can contribute to positive and interactive public spaces (26'10 Architects, 2012, p. 21). While addressing the notion of public space, this precedent provides an example of the types of forms that facilitate embodied practices and festival events.

The site is located in Kliptown, Soweto. The project entailed the rebuilding of the Sans Souci, a communal cinema and theatre burnt down in 1994. The original Sans Souci was established in 1948, hosting many historically significant South African performers in its day. The redevelopment of the cinema as a cultural and performance venue was largely due to Kliptown's lack of public and social infrastructure

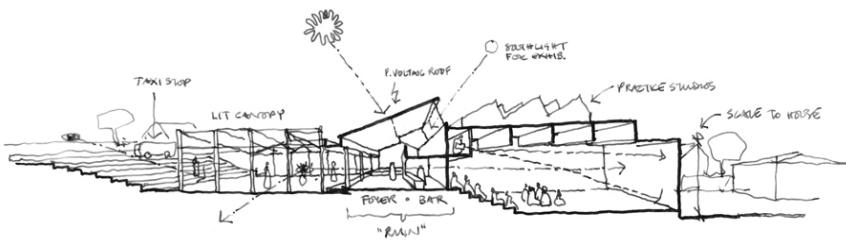


Fig. 16. Top Row; Sans Souci Cinema (26'10 Architects, 2003-2008)
Fig. 17. Bottom Row; Cristo Obrero (Gonzalo Viramonte, 2018)



that facilitated expression of identity or political meetings. Through the conceptualizing the rebuilding of the cinema, the team decided that “the existing ruin needed to be given a new meaning over time through events and incremental architectural intervention” (26'10 Architects, 2012, p. 21). Events include: film screenings; film and dance festivals; dance training; and film production.

The architectural intervention includes a flexible approach to urban informality. The building strives to accommodate local narratives and identities through the sharing of festal events. The design challenges the notion of public space by creating architecture that facilitates embodied practices.

Cristo Obrero Church | Eladio Dieste
This spatial precedent has been chosen as an example of sensory architecture that contributes towards the facilitation of embodied practices through the use of space (volume, light, and sound), geometries (rhythm, proportion, and harmony) and material.

The church is located in Uruguay. The architect uses a small selection of materials together with simple forms to allow natural light to cast the interior spaces. Using the repetition of simple geometries Dieste creates architecture that informs a rhythm in the space. The use of masonry allows for a wide range of spatial arrangements that facilitate a sense of harmony within the church. The use of brick allows for soft edges that mimic the movements that

will occur in the space. The brickwork allows for a thermally sound space, contributing to the festal events that the architectural intervention will house.

Dieste's church is an example of the manner in which architecture can facilitate a sensory experience, and how the use of material can animate movement within a space. Here the building animates festal events.

CONCLUSION: ARCHITECTURAL CONTRIBUTION

In conclusion, this article has introduced a summary of the relative theory concerned with space, time and reality that the project will be using as an initial approach towards an alternative typology for conflict resolution. The contextual summary, as well as the outlined social, urban and architectural issues, describe how the author arrived at the point of rethinking this typology as a contextually appropriate program for Fleurhof. The description of program aims to describe the approach towards analysing existing typologies and designing a new typology. The precedents strive towards highlighting some of the ways others have made an architectural contribution towards communicative spaces.

The architectural contribution involves assessing the value of a new architectural typology for conflict resolution. As previously mentioned, traditionally conflict resolution has been treated as a private affair that deals strictly with oral forms of communication, the proposed new

typology introduces alternative forms of communication as a means of guiding the process of resolution and integration among the residents of Fleurhof. Conducted by the principles highlighted in the theoretical review the project aims to introduce the *extraordinary* to the *everyday*. Through the use of embodied practices guided by architectural intervention, as an initial step towards integration amongst the residents of Fleurhof.

This dissertation aims to investigate the communicative nature of architecture through geometries of harmony, proportion, and rhythm to provoke physiological activity and expression as an alternative form of dialogue. A new typology as the driver and program as the vehicle to define 'common ground'. Treating an absence of 'resolution' as a breach of relationships and justice as a process of coming together to repair that breach.

SITE VISION

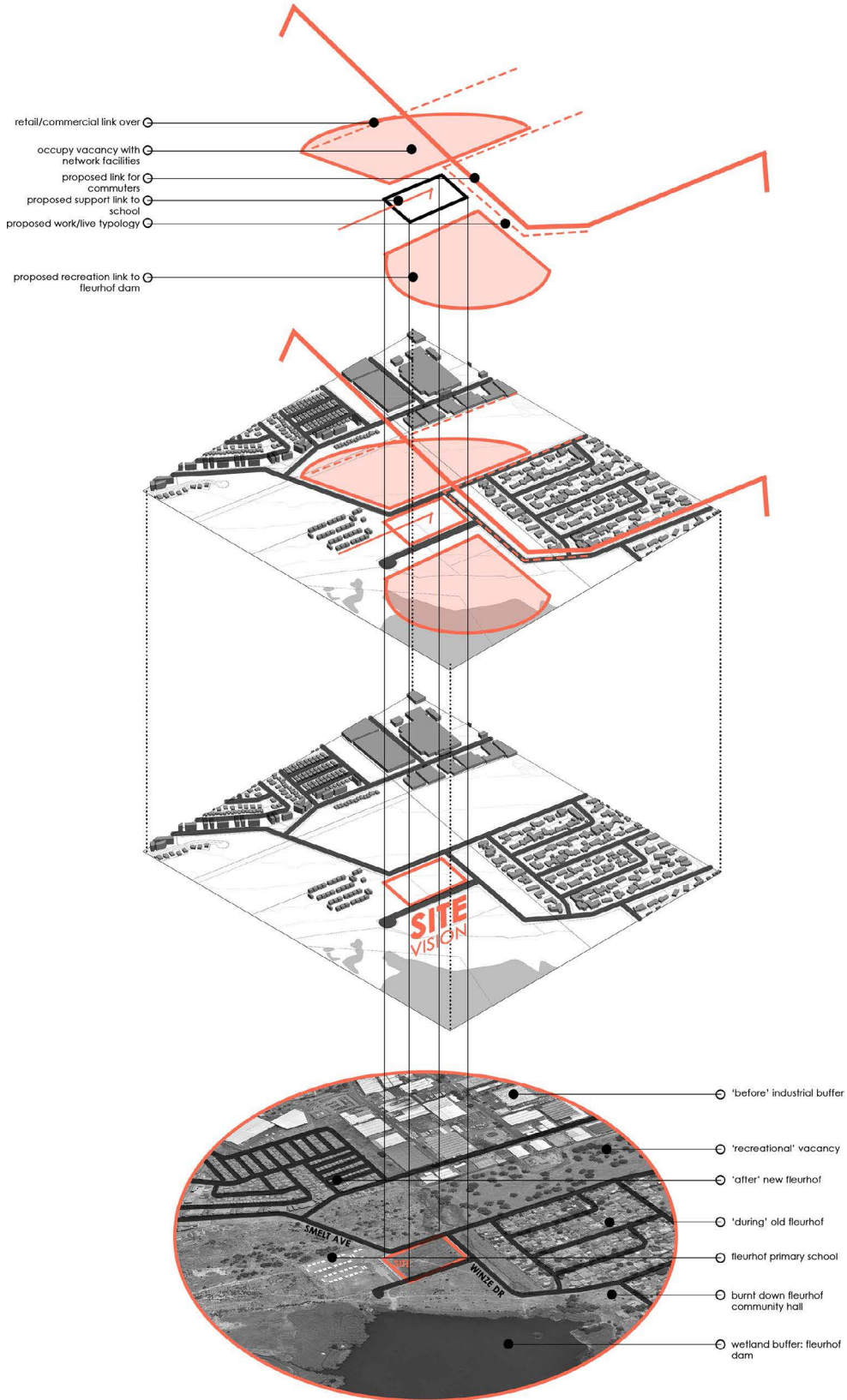


Fig. 08. Left; Site Vision (Author, 2018)

Endnotes

1. Sexwale elaborated in his National Budget Vote Speech: Gigantic Effort Needed to De-Racialize Residential Spaces "The evil utilization of land as a buffer by the architects of apartheid resulted in the creation of "no man's land" between Johannesburg-Soweto, resulting in the areas having little or no amenities and facilities" (Sexwale, 2013).
2. South Africa has encountered a number of social engineering projects (colonization, apartheid and more recently democratization) leaving "profound spatial implications and left significant legacies in the geography" of uneven development (Christopher, 2000, p. 2).
3. The referenced Integrated Housing Model in Fleurhof, has developed through a public-private relationship between Calgro M3 and the City of Johannesburg. The integration lies with its focus on providing mixed-income social housing with a focus towards the low-middle income bracket within South Africa. The different types of units are fully subsidized RDP/BNG housing, Gap, Social rental, Open market rental and Entry level housing. Each type of unit is aimed at a different economic market.
4. One can argue that lack of a 'sense of place' has resulted due to an absence of social services and accessibility in the forms of public, social and socio-economic forms of security.
5. Fleurhof's Community Policing Forum (CPF), have been identified as community stakeholders through the use of Counterspace's (Johannesburg based architecture firm) socio-spatial research towards an Urban Development Framework for Fleurhof and its surrounds.
6. Defensible space as described by Oscar Newman, is an area defined by clear indications of territoriality, surveillance activity and ownership (Newman, 1996). Newman's theories build on Jane Jacob's argument of natural surveillance. His theory introduces the interplay between territoriality and surveillance, stating that observers are more likely to intervene when they feel a sense of responsibility for the area. Newman's work on defensible space include Defensible Space: People and Design in the Violent City and Creating Defensible Space.
7. Place Based Crime Theory involves the study of Situational Crime Prevention through the Role of Place. Brantingham & Brantingham 1991, in their book Environmental Criminology, introduce Routine Theory. Routine theory investigates the context between offender, environment and victim (Brantingham & Brantingham, 1991).
8. Kerby, in her book, Narrative and the Self speaks about the relationship between the spaces we occupy and our identity (Kerby, 1991, pp. 7-12)
9. Maape (2017) explains inter-subjectivity as the term used to represent the relation between people, the common perspectives between people (Maape, 2017).
10. Dalibor Vesely, the architectural theorist, and historian was influential through his understanding of hermeneutics as part of the discourse of architecture.
11. Vesely (2004:69) suggests that the background of language is most clearly defined in the early stages of life, before the articulation of words (Vesely, 2004).
12. The word 'ethical' is derived from 'ethos'.
13. Walter Freeman was an American biologist, theoretical neuroscientist and philosopher.

14. Arnold Van Gennep was a French ethnographer and folklorist, known for his studies of the rights of passages of various cultures.
15. Dissolution, a process, according to Freeman (2003:154) that happens when existing thought patterns dissolve when the underlying brain dynamics become chaotic (Bulkeley, 2005, p. 154).
16. Turner (1967:95) describes liminality as "..... necessarily ambiguous, since this condition and these persons elude or slip through the network of classifications that normally locate states and positions in cultural space. Liminal entities are neither here nor there; they are betwixt and between the positions assigned and arrayed by law, customs, convention, and ceremonial. As such, their ambiguous and indeterminate attributes are expressed by a rich verity of symbol in the many societies that ritualize social and cultural transitions. Thus liminality is frequently likened to death, to being in the womb, to invisibility, to darkness, to bisexuality, to the wilderness, and to an eclipse of the sun or moon." (Turner, 1967, p. 95).
17. In Joseph Campbell's book titled The Hero with a thousand Faces, he speaks of being the need to be in a parallel state in order to change our perceptions.
18. 'Uitvalgrond' is defined as 'surplus ground' by Clive Chipkin in his book Johannesburg Style: Architecture and Society 1880s-1960s (Chipkin, 1993).
19. Sexwale elaborated in his National Budget Vote Speech: Gigantic Effort Needed to De-Racialize Residential Spaces "The evil utilization of land as a buffer by the architects of apartheid resulted in the creation of "no man's land" between Johannesburg-Soweto, resulting in the areas having little or no amenities and facilities" (Sexwale, 2013).
20. South Africa has encountered a number of social engineering projects (colonization, apartheid and more recently democratization) leaving "profound spatial implications and left significant legacies in the geography" of uneven development (Christopher, 2000, p. 2)
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22. The Rand Leases Gold Mining Company was established in the early 1900s, upon the discovery of gold in the region. (Rensburg, 1986, p. 4).
23. Fleurhof's mining compound was the Rand Leases 'B' Compound.
24. For the purpose of this study, protection is viewed as forms of tangible security in South Africa (refer to figure 14).
25. For the purpose of this study, representation is viewed as legal assistance and education in basic human rights in the constitution of South Africa (refer to figure 14).
26. For the purpose of this study, resolution is viewed as traditional court typologies set out to resolve conflict in South Africa (refer to figure 14).

27. The notion of 'communicative space' is unpacked in through the use of theories presented in the theoretical review.

References

- 26'10 Architects, 2012. The South African Informal City, ISSU, pp. 19-21.
- Beall, J., 2002. Uniting a Divided City. London: Earthscan Publications.
- Brantingham, P. & Brantingham, P., 1991. Environmental Criminology. s.l.:Waveland Press.
- Bulkeley, K., 2005. Soul, Psyche, Brain: New Directions in the Study of Religion and Brain-Mind Science. s.l.:Palgrave Macmillan.
- Chipkin, C., 1993. Johannesburg Style - Architecture & Society 1880s - 1960s. Cape Town: David Phillip.
- Christopher, A., 2000. The Atlas of Changing South Africa. London and New York: Routledge.
- City of Johannesburg, 2002. Vision for the City 2030, Johannesburg: City of Johannesburg.
- Foucault, M., 1984. Of Other Spaces: Utopias and Heterotopias. Architecture /Mouvement/ Continuité, p. 4.
- Freeman, W., 2003. Neurodynamic Models of Brain Psychiatry. Neuropsychopharmacology, Volume 28, pp. 54-63.
- Harries, K., 1997. The Ethical Function of Architecture. s.l.:Massachusetts Institute of Technology .
- Heidegger, M., 1996. Being and Time. s.l.:State University of New York Press.
- Kerby, A. P., 1991. Narrative and the Self. Bloomington: Indiana University Press.
- Kreutzfeldt, D. & Malcomess, B., 2013. Not No Place: Johannesburg. Fragments of spaces and times. Johannesburg: Fanele.
- Maape, D. S., 2017. Indigenous Knowledge Systems and Spatial Philosophy. Johannesburg: YouTube.
- Maape, S., 2015. Architecture for Resilience: Dialogues with Place in the Indigenous Communities of Kuruman during the Holocene Period. University of the Witwatersrand, Johannesburg, p. 73.
- Newman, O., 1996. Creating Defensible Space. s.l.:Diane Publishing.
- Rensburg, C. V., 1986. Johannesburg One Hundred Years. 1st ed. Johannesburg: Chris Van Rensburg Publications.
- Sexwale, T., 2013. Gigantic Effort Needed to de-Racialise Residential Space. Johannesburg, Department of Human Settlements budget speech in the National Assembly .
- Turner, V., 1967. The Forest of Symbols: Aspects of Ndembu Ritual. New York: Cornell University Press.
- Turner, V., 1969. The Ritual Process: Structure and Anti-Structure. London: Routledge and Kegan Paul.
- Vesely, D., 2004. Architecture in the Age of Divided Representation. s.l.:Massachusetts Institute of Technology Press
- Viramonte, G., 2018. Cristo Obrero. Uruguay: ArchDaily

