INVISIBLE PRACTICES WITHIN VISIBLE SPACES

Exploring Manifestations of Collective Life towards the design of a Co-Operative Living Model in Cornubia. Durban

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DECLARATION

I hereby declare that this dissertation is my own unaided work except where it has been otherwise acknowledged. It is being submitted The School of the Built Environment and Development Studies, University of KwaZulu-Natal, Howard College Campus, in partial fulfilment of the requirements towards the degree of Masters of Architecture. This dissertation has not been submitted before for any degree or examination at any other university.

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Uncertainty is an uncomfortable position, but certainty is an absurd one

- Voltaire -

ABSTRACT

South Africa's post-democracy housing question has led to adopting a megaproject approach to address the socio-spatial inequalities of former exclusionary planning. The megaproject aimed to address these lingering inequalities as a large scale organisational strategy that is at once pro-growth and pro-poor; yet as illustrated through the literature appear to further perpetuate them through the production of homogenous and fragmented spaces that highlight the disparities between planning and people's ways of living. Lacking the means to make a living within the formal built environment, the urban poor develop their own informal spatial practices within their new context – these practices as manifestations of collective life.

This dissertation will aim to motivate a conceptualisation of architecture as a manifestation of collective life, intermingling the abstract logics deployed by the planning of the megaproject with that of the specific urban tactics of residents within the housing settlement. The theoretical framework, underpinned by the practice of everyday life, defined the specific logics of people as they 'make do' and 'make with' within Cornubia by focusing on the micro-spatialities of the place – re-appropriating the space through their own practical intelligence. Walking together, *Masihambisane*, as a research methodology enabled a better understanding of the everyday life of people within the case study area; revealing the seemingly invisible tactics and socio-spatial networks to meet their unmet needs and aspirations within the visible place.

Through the unpacking of the concepts behind collective life, both through the literature and within the realities of the case study area itself, three primary considerations have been defined – domesticating the pavements, personalising towards dignity, and revealing the hidden networks – each serving to make socio-spatial suggestions towards the proposed design intervention - a Co-Operative Living Model.

Keywords:

Megaproject , invisible practices, visible spaces, the everyday, existing networks, micro-spatialities, domesticating, personalising, dignity.

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DISSERTATION DOCUMENT

DEFINITION OF TERMS

Collective Life: Within the context of this dissertation, the term refers to temporal associations setup by people due to particular everyday needs or because of the contingent situations – socially or economically – that people find themselves in. This mode of existence highlights the ways people have being jointly changing their built environments to address their everyday needs.

Co-Operative Living Model: Is a response to the shortcomings of the megaproject's large scale approach in accommodating alternative living conditions. Regarded as an upgrade strategy that aims to retrofit existing housing and urban spaces with social and commercial opportunities - through a catalogue of architectural possibilities.

Entrepreneurial Urbanism: Considered a theoretical paradigm, explaining cities' role and mandate as promoting economic growth through strategies of capital accumulation. As such, cities seek to reach global competitive advantage by attracting capital through space-based interventions such as megaprojects.

Global South: Refers to developing countries, which are located primarily in the Southern Hemisphere, which include Africa, Central and Latin America, and most of Asia. While socio-political and economic upheaval are widespread in many of these nations; at the same time, the populations of the global South and their emerging markets offer opportunities for economic growth, investment, and cultural contribution.

Invisible Practice: Within the context of this dissertation, the term refers to practices exercised by people which are not recognised by policy makers or institutional frameworks as legitimate practices and thus remain disregarded by conventional norms and policies. Examples include the home-based spazas or the self-built process – housing extensions.

Livelihoods: The material and social resources and activities required for a means of living.

Modes of production: Refers to the methods that human beings collectively use to produce the means of subsistence in order to survive and enhance social being.

Network: Refers to an interconnecting structure or lattice that has been intricately or complexly formed – between human and non-human things.

Participatory Practice: A method of engagement that is fundamental to building community which is equivalent to building an economy of assets necessary for well-being and for sustainable livelihoods. This way

of practice is fundamental for human development as it seeks to expand people's choices and their capacity to lead lives that they value.

Pro-Growth: Refers to economic growth. **A** pro-growth agenda seeks to increase property values, which generate both public gains, in the form of higher taxes, and private gains to property developers.

Pro-Poor: Refers to growth that is deemed to benefit the poor.

Spaza: Refers to a micro-convenience store, which predominantly operates in township residential areas, selling groceries, bread, sweets, cigarettes and cool drinks.

Visible Spaces: Within the context of this dissertation, this term refers to a clearly demarcated spatial territory - through visible walls or other separating built element – defined by formal, institutional frameworks and policies - thus rendering the space tangible and clearly visible.

CHAPTER 01

RESEARCH BACKGROUND AND
METHODOLOGY

1.1 INTRODUCTION

1.1.1 Research Background

"As long as urban inequality and conflict still exists in the city, we will witness bottom-up resistance and resilience in the shape of counter-urban tactics of adaptation, and in some cases transgression to imposed urban, economic and political agendas."

(Teddy Cruz, 2015:3)

Under the influence of an entrepreneurial urbanism paradigm, urban development has progressively been appropriated by the private sector. This means that the space of the city and the process of urbanisation becomes increasingly "beyond the apprehension, use and affiliation of all but those whose capacities enable them to manipulate a "bird-eye" view of the city" (Simone, 2004:78). What this presents is a situation where different modalities of existence –economically rich and poor - see themselves operate in parallel to each other setting up dissimilar spatial development trajectories. Moreover, as these trajectories begin to actively shape the functional, social and aesthetic nature of city spaces what becomes notable is the increasingly privatised make-up they assume (Simone, 2004).

Figure 1. Privatising the city. Image illustrating the R1.8 Billion Cornubia Mall in Durban - under construction. Source: http://www.ilovedurban.co.za/cornubia-r1-8-billion-shopping-centre/

As cities further develop, with areas accommodating increasingly heterogeneous populations, the traditional role of public spaces as sites of civic formation and political life requires a recalibrated definition in order to

assimilate broader socio-cultural transformations (Madanipour, 2010). The need for such recalibration becomes ever more relevant in cities of the Global South as the nature of the role of public spaces in this geographical context does not necessarily bear the normative values conceived in the Global North (Qian, 2014). The development and use of these spaces resemble the organisation of societies which are largely shaped by irregular distribution of power and resources, creating tension and conflict as well as vast possibilities for negotiation and collaboration (Madanipour, 2010).

In South Africa, many of the contemporary urban challenges can be traced back to the "legacy of the Apartheid Spatial Planning System in which racial segregation had largely geopolitical representations" (Cole, 2015:2). However, according to Massey (2005), attributing responsibility to the relational link between people, groups and the spaces they occupy and create can address this type of historical relationship between space and inequality, power irregularity, identity and exclusion. This attributed responsibility Cole (2015) states, alludes to the social transformational potential of public space because it has the potential to provide previously marginalised people with essential urban assets, which is especially relevant within the South African fragmented context.

Positioning the notion of *collective life* within a recalibrated definition of public space seeks to place emphasis on the social production of spaces underlining spatial practices as being constitutive of social processes, and "contributing to the relational construction of identities and subjectivities (Qian, 2015:834)." As manifestations of collective life take place within these socially constructed spaces, they assimilate more temporal and flexible rhythms towards livelihood opportunities and collective recognition (Amin, 2008).

As such, this research argues that this much more practice orientated approach to the definition of public space allows for the recognition of socio-spatial practices commonly suppressed by dominant preconceptions of public spaces. Evidence alluding to this suppressive-dominant relation is found in the case study of Cornubia for instance, where spatio-temporal practices such as the Spazas have silently manifested within the housing mega-project. Moreover, as this orientation bases its understanding on more grounded descriptions of existing realities, it can offer more specific indications of the diverse knowledges constituting the fine grain of urban spaces. This dissertation will aim to unpack a conceptualisation of architecture as 'manifestations of collective life' - subversive urban tactics in housing mega-projects.

1.1.2 Motivation/Justification of the Study

Literature (Harvey, 2001, 2006; Olivier, 2008; McFarlane 2011, Sutherland et al, 2014; Kennedy et al, 2014, Strauch et al, 2015), has illustrated that urbanisation paths have commonly been dictated by capitalist trends in the search of cities attaining a global competitive advantage. These trends suggest the shaping of urban spaces in an abstract manner that emphasises a materialistic and 'birds-eye view' approach to spatial development. Furthermore, this capitalist, panoptical vision fails to acknowledge the grounded presence of the everyday socio-spatial practices or recognise their relevance towards the shaping of city spaces.

As cities assimilate this birds-eye view approach they become sites of mere display and commodification - not only turning spaces into commodities but also treating people as quantities. What has been further highlighted in the literature is that these spaces – such as malls for instance- become increasingly privatised and therefore offer either very little possibility for a sense of 'togetherness' or they offer extensively regulated accessibility. Either way, this suggests the need to revaluate the role and nature of public spaces and intrinsically, public life.

The increasing presence of privatisation and commodification further suggests a shift towards a more strategic purview on spatial development. This proliferates the continuation of larger scale planning solutions such as mega-projects - which tend to operate mainly on a longer term basis as well as supposedly have longer lasting socio-economic impacts.

For South Africa and in particular the city of Durban, the emergence of a market based approach to urban development has led to the adoption of a strategic purview by government. This suggests large-scale solutions to socio-spatial issues through the proliferation of infrastructure and basic needs megaprojects. In the case of Cornubia, these are considered as a 'new generation' because of their supposed ability to address both pro-growth and pro-poor imperatives (Sutherland et al, 2014). In other words, these megaprojects are meant to resemble consolidated and inclusively planned environments advocating access to opportunities towards livelihoods and public life – for all.

This research is motivated by the discourse that promulgates the superficial nature by which megaprojects tend to address pro-poor imperatives in the South African context, and that arguably, such an approach still leads to replicating socio-spatial inequalities.

1.2 DEFINITION OF THE PROBLEM, AIM AND OBJECTIVES

1.2.1 Definition of the Problem

The research conducted in this dissertation is located within the context of Cornubia, a mixed-use megaproject development in Durban, South Africa. The development has been defined by the Department of Human Settlements as an 'Integrated Human Settlement' that seeks to address the lingering socio-spatial inequalities of the former Apartheid planning system through a megaproject strategy that is both pro-growth and pro-poor. The strategy, however, has been identified throughout literature (Sutherland et al, 2014, Kennedy, 2015) as exacerbating the inequality agenda by reproducing similar built environments that generate the same issues – isolation and a lack of services, amenities and livelihood opportunities - which the strategy aimed to address in the first place. Evidence of this paradoxical relation is suggested by literature, primarily, as a result of the economic focus which appears as the key driver for the large scale organisation and division of people and resources. This large scale approach, albeit important at a strategic level, when implemented produces commodified spaces that resemble homogenised and fragmented solutions - used towards addressing peoples' everyday needs and aspirations.

The urban poor, in particular, are the most negatively affected by these solutions since they often lack the formal means to operate within the resultant built environments. Subsidised housing recipients - who are displaced from township and other marginalised locations and relocated to these megaprojects - for instance, not only face the challenge of having to build new social networks but now have to operate within a formal construct that is governed by normative visions of what a place should functionally and aesthetically be like . As a result, peoples' everyday needs and aspirations are addressed in a twofold manner. On the one hand, presumed to be compensated for by large scale, generalised solutions which remain in contradiction with the recipient's means, while on the other, these are met by peoples' own informal spatial practices - defined as tactics.

Given the aforementioned, the primary problem identified within this research is the shortcomings of the megaproject's large scale approach in accommodating alternative living conditions - the existing housing typologies and settlement layout are saturated with mono-functionality and lack a connection to urban life.

1.2.2 Aim

This dissertation seeks to explore manifestations of collective life in Cornubia's housing settlement that builds upon the ways in which people have informally transformed the housing settlement. Proposing a Co-Operative Living Model, conceptualised as a continuation of this informal growth.

1.2.3 Objectives

- To explore collective life within the context of Cornubia's housing settlement.
- To explore how these informal practices have spatially transformed Cornubia's housing settlement.
- To define design guidelines that can inform the development of a Co-Operative Living Model.

1.3 SETTING OUT THE SCOPE

1.3.1 Delimitation of the Research Problem

The researcher acknowledges that ideas of rethinking issues of urban contestation and inequality extends beyond the scope of architecture and the built environment. The problems postulated in this study are underpinned by deep socio-political and economic agendas that have been instrumental tools for electoral campaigns and multi-scale growth. Therefore the researcher seeks to research at best the interpretations of the defined problem situated within the fields of architecture and the built environment.

While this dissertation does critique the existing Cornubia Framework, it must be noted that it is not the intention of the researcher to postulate a definitive outcome to the particular problems pertaining to the framework. In contrary, this dissertation endeavours to understand existing forms of knowledge from grounded contact and observations with the hope to suggest a qualitative approach that can accompany and in some ways subvert the nature of these housing megaprojects.

As shall be explored in the following chapters of the literature review, the associational networks temporarily setup by people play a significant role in unifying communities as they depict manifestations of collective life inherent in their everyday practices. Therefore this dissertation further seeks to validate the tactical practices that have been employed by the research sample in order to mitigate the homogenising and quantitative effects that these developments have produced.

The explorations of these tactics along with an understanding of the strategies employed by high order institutions provides the opportunity for architecture to assume an agentic role capable of mobilising

negotiations between these two forms of knowledge for the purposes of achieving more heterogeneous form of spatial representations.

1.3.2 Stating the Assumptions

This dissertation assumes that this quantitative development approach continues to exacerbate socio-economic polarisation by implementing technocratic planning strategies that have persevering divisive effects on people. The scale of the multi-scale growth agenda reinforces this notion by paying particular attention to economic growth which rather superficially addresses pro-poor goals.

1.3.3 Primary Question

- How can the understanding of collective life lead to the development of a Co-Operative Living Model?

1.3.4 Secondary Questions

- What is collective life - how is it practised within Cornubia's housing settlement?
- How are people transforming Cornubia's housing settlement?
- Can this transformation process lead to defining design guidelines towards the conceptualisation of a Co-Operative Living Model.

1.4 THEORETICAL AND CONCEPTUAL FRAMEWORK

1.4.1 Introduction

The following theories and concepts have been included for the purpose of supporting the primary and secondary research questions. They represent the specific framework that the researcher will take in analysing and interpreting the gathered data.

1.4.2 Theories

1.4.2.1 The Social Production of Space

In the 'The Production of Space' Henri Lefebvre (1991) argues for a more accurate and inclusive concept of spatial representations. This argument stems from a critique of the dominant logic that has largely been proliferated by the Westernised industrial world. Here he argues that such a logic is widely governed by

abstraction and therefore even the sensory and everyday aspects of human life are represented in terms of quantities, commodities and categorisation (Lefebvre, 1991).

Furthermore, with experts promulgating such panoptical views of human life an asymmetrical representation of social space is formulated which is deemed to stand as the one 'true space.' This means that other representations, even those grounded in the experiences of the everyday, are not recognised because they are perpetually suppressed by a predetermined culture that has, in other words been, officially and professionally conceptualised. With this critique, Lefebvre highlights the stark relationship between space that is conceptualised/abstracted – most commonly performed by the expert – and space that is embodied/differential – notably so by the 'inexpert' on the ground (Lefebvre, 1991;Carp, 2008:).

Lefebvre's *conceptual triad* offers an analytical tool for discerning the irregularities in relations between abstraction and difference in social space. The social production of space is then represented by each element of the triad and the relations between each element reveal clues about the processes by which people produce space and are influenced by space in everyday life. The triad is composed of conceived space, perceived space and lived space. (Lefebvre, 1991; Carp, 2008).

The case of Cornubia presents the opportunity to explore and recognise other 'truths of space.' In other words, other spaces of representation that reflect existing social differences in built form and social use patterns. Spaces such as the Spazas identify and reflect peoples' own peculiarities through their physical manifestation in the predetermined and conceptualised housing mega-project. The possibility of the Spazas existence not only undermines the dominant logic which officially terms their existence 'illegal' but also suggests the validation of lived experience in the production of physical space.

1.4.2.1 The Practice of Everyday Life

> *"The question at hand concerns modes of operation…whose models may go as far back as the age-old ruses of fishes and insects that disguise or transform themselves in order to survive, and which has in any case been concealed by the form of rationality currently dominant in the Western culture."*

(de Certeau 1984:xi)

Everyday life stems from studies of popular culture. Its investigation has continued to postulate interest in ways users (consumers) operate (consume) within a dominant economic order. For de Certeau (1984), it concerned the exploration of an operational logic derivative of active movement through space. This logic embodies a certain inventiveness that becomes explicit by the way consumers 'make do' as well as 'make with' a ready-

made culture. In other words, through acts of appropriation and re-employment by consumers in spaces organised by techniques of sociocultural production (Highmore, 2002). De Certeau registers everyday life as a sphere of resistance, but this resistance is synonymous with *difference* not with opposition. This is closer to the ways the dominant social order is deflected through the practice of tactics, highlighting a re-organisation of the functioning of power. - "it is a common and silent, almost sheeplike subversion" (Highmore, 2002:200).

1.4.3 Concepts

1.4.3.1 Assemblage

As a verb, assemblage focuses attention on processes of connecting: connecting people to each other; people to buildings; public to private space (Dovey and Wood, 2015). As a noun, an assemblage is a cluster of interconnections or autonomous bits of a system whose parts can be detached out of one system and plugged into another rather than a "thing" (DeLanda, 2006, Dovey, 2011, McFarlane, 2011, Farias, 2011). It is similar to a "place", in the sense that it is a socio-spatial territory with some form of identity, however fluid. DeLanda (2006) further explains, the identity of an assemblages at any particular scale is always a product of a process; either of a process of territorialisation, which explains how sharply defined, unchanging or homogenous the identity of an assemblage is; or the opposite process, deterritorialisation, which defines how blurred, open to change and heterogeneous the identity of an assemblage is.

Assemblage is fundamentally dynamic and productive, a dynamism based primarily in horizontal networks of connectivity such as people networks, yet also stabilized by hierarchical structures such as policies, planning codes, laws (Dovey and Wood, 2015). Assemblage seeks to collapse the subject-object binaries; it is fundamentally socio-spatial, with the spatial and social parts mutually constituting each other. Assemblage is multiscalar and interconnected. This means that the large scale is not valorised over the small scale and that ground/local conditions cannot be reduced to institutional or governmental strategies. Lastly, assemblage suggests the distribution of power and agency occurring not from top-down but across networks. (Dovey and Wood, 2015; Dovey, 2010, Dovey, 2011, McFarlane, 2011)

1.4.3.2 Tactics

> *"If, for Certeau, strategies work through spatial domination, setting up resistance to time by asserting permanence, tactics derive their productiveness from time and timeliness."*

> (Sheringham, 2006:216)

Sheringham (2006) notes that De Certeau viewed tactics as an operational logic or practical intelligence. These, were context specific and enabled modes of subversive agency towards the re-appropriation of spaces organised by superior power. This translated to what Certeau termed *the art of rusing* which implied the ability to seize "opportunities located within the temporal configuration of a situation" (ibid, 2006:219).

In this sense, tactics as a product of everyday practice, reflects manoeuvres which are able to manipulate the mechanisms of discipline and conform to them in order to evade them – i.e. escaping it without leaving it (de Certeau, 1984). In the context of this research, the manifestations of the 'illegal' micro-trading stalls i.e. Spazas, within the technocratically planned housing megaproject as well as the different ways people have come to domesticate the streets and pavements on a temporal basis – bringing the house into the street and vice versa – are considered as tactics employed by the residents towards meeting everyday needs and aspirations.

Here we see what Highmore (2002) refers to as different forms and logics working within the same space, "but their non-symmetrical combination results in the friction of 'rubbing along', rather than in direct conflict" (2002:159) and in essence highlighting how society resists being reduced to the grid of discipline which De Certeau (1984) noted "is everywhere becoming clearer and more extensive" (ibid, 1984: xiv).

1.5 RESEARCH METHODOLOGY

1.5.1 Introduction

This dissertation can be considered to be within a transformative research paradigm. The nature of this dissertation is that of an empirical study towards a qualitative exploratory research design.

1.5.2 Research Methods

The procedures of data collection included:

1.5.2.1 Semi-structured interviews

Doung Anwar Jahangeer: co-founder of Dala, an interdisciplinary creative collective that believes in the transformative role of creativity in building safer and more liveable cities. This dissertation intends to include this candidate for the possibility of a semi-structured interview because of his 'bottom- up -tactical' approach towards spatial interventions. Dala has been working with the relocated community of Cornubia since 2015 and has managed to build up significant trust with the community leader and majority of the residents.

<u>Catherine Sutherland:</u> Geographer/Lecturer at the University of KwaZulu Natal. She works at the interface between social and environmental systems with a focus on sustainable developments. Catherine's input is valuable because her work highlights the various discourses indicative to the various role players involved in the development of megaprojects. This is beneficial because it highlights the large scale strategies that are implemented - such as public-private partnerships - in the attempt to address both pro-growth and pro-poor imperatives. It also highlights the various attempts existing non-profit organisations (NGO) have made in order to protect relocated community benefits in the midst of expanding capitalist interests.

1.5.2.2 'Masihambisane': Process of Unlearning

Masihambisane, isiZulu word for 'walking together' was an alternative architectural pedagogy that was initiated in the Masters Year One (2015) design course. This will be continued as a method used towards data collection. The process can be described as follows:

1. **Establishing contact:** with Dala, currently involved in the case study of Cornubia Pilot Phase; the Community Leader; and residents.
2. **Recognising networks:** through the engagement with Dala, community leader and residents and with ethical clearance to work within the case study area, existing networks are excavated and made familiar.
3. **Recognising the potential of architecture** in three ways:

   3.1 **As Dialogue** – a process of storytelling and chat sessions with residents and community leader; to discuss everyday realities that are experienced such as how people manage to negotiate livelihood opportunities, how do they access small conveniences and what of the relation between domestic and public life – how do they engage with allocated public spaces, how have they adapted the houses to suit their needs? The findings obtained from this will be used towards informing the research with regards to how formally constructed contexts serve peoples' everyday needs, and if not, how then, do people negotiate this shortcoming?

   3.2 **As Event** – Co-operative work with Dala on their projects of defamiliarisation of public space towards recognising these as performative spaces. Architecture as event is realised in the form of screenings – occupying the streets and the bare walls of the housing units. The findings here will be used to inform the research with regards to how appropriation of space can happen at a small scale.

3.3 **As Participation** (workshop) – participatory practice with research sample towards fostering continuity through engagement.

Figure 2. Masihambisane poster. Source: JP D'Ahl, 2015.

1.5.2.3 Spatial Mapping and Photographic Record

Spatial mapping –a map based spatial analysis – and photographic record will be used as a tool to capture the following:

- Location of any networks that might have been setup by residents within the housing project.
- Location of temporary structures that house the current school existing within the housing mega-projects
- Adaptations of houses.

1.5.2.2 Research Sampling Technique:

1.5.2.2.1 Sampling Strategy

Non-probability sampling; snowball method. This strategy was chosen because the researcher intends to engage Dala for the purposes of setting up initial contact with the community leaders and other relevant parties pertaining to Cornubia Pilot Phase community. Once introductions have been achieved, the researcher will strive to continue to get to know relevant members on the basis of suggestions made by already known residents.

1.5.2.2.2 Population

Relocated Community of Cornubia Phase 1A: Pilot Phase

1.5.2.2.3 Sampling Frame and Sample:

Residents that have setup spazas. 8 spaza owners.

1.5.2.2.4 Ethical Considerations

This dissertation will engage in a study that seeks to obtain results using methods and techniques only discussed in the methodology component of the dissertation. It is not the intention of the researcher to fabricate results in order to compensate for lack of answers obtained during the course of the study. The process of engagement with the Community leaders and residents would be ethical and through informed consent, providing anonymity where required.

1.5.2.2.5 Case Study

Purposive sampling was used to select the case study, and the selection process needed to follow a particular set of parameters. The case study was used to gain direct and first-hand information and better understanding of the issues relating to the research topic.

The set of parameters used to select the case studies were:

They had to represent the space in which the community used on a day to day basis revealing their everyday practice. The case studies further needed to support the theoretical and conceptual framework towards the research intentions. A local case study was selected to be more immediately accessible and the findings thereof contextually relevant and applicable to the intended conceptualisation of the proposed marketplace.

Cornubia Pilot Phase Housing in KwaZulu Natal. The case study chosen would be the same place as the proposed built form. The researcher intends on visiting the location of the study at least twice every two weeks. The aim is to make observation of the daily life interaction of people with their allocated public spaces (or lack thereof); where are the spaces that people predominantly gather in and what might instigate that; how do people manage to create economic livelihood opportunities – are there any existing networks that the community might have already setup; are people appropriating their allocated spaces through some form of personalisation, if so, how and why are they doing this? The community will be engaged with the assistance of Dala, who are presently operating within the area. The initial engagement with the community will be done through the community leader. Observations, spatial mapping, photographs and semi-structured interviews will be used as tools to aid the recording and capturing of the information on-site

1.5.3 Research Materials

The research material in this research is presented in the form of a literature review and it focuses on producing analysis and presentation of theoretical and methodological information from organisations and academics in the fields of creative arts and geography. This information will include the use of books, peer review journals, academic papers, documentaries and the internet on topics such as collective life, mega-projects, assemblage, tactics, the everyday life and community. Moreover, the concepts and theories together with arguments found in the primary research and the literature review highlighted in chapter one have been reinforced through the use of precedent studies. Recommendations are then made for the proposal of Co-Operative Living Model for the relocated community of Cornubia Phase 1A, KwaZulu Natal.

1.5.3.1 Literature Review

The literature review has been consolidated in chapter 2. This is determined by the interrelated questions outlined by the Key and Sub Questions and supported by the Theoretical and Conceptual Framework. The literature review outlines the following:

Abstract Logics/Visible Spaces

The theme unpacks an understating of representations of space derived from capitalist logics. In doing so it frames the capitalist modes of production as the organising principles of the city. In planning, these principles drive and generates top-down approaches that remain unsuited to the particularities of the inhabitants' ways of living.

Specific Logics/Invisible Practices

This chapter serves as the **antithesis to Abstract Logics/Visible Spaces.** The conversation is continued by drawing from the theoretical works of Lefebvre and de Certeau. Their theoretical frameworks provide the underlining tone for the conversation in this chapter and unpack it –towards the recognition of the *everyday*. More specifically, the recognition of both the inhabitant's and the practitioner's bottom-up ways of dealing with imposed, top-down solutions.

1.5.3.2 Precedent Studies

The three precedent studies discussed in this dissertation were selected from existing international examples. The selection was based on wanting to draw a discussion between the theoretical framework and literature review towards an architectural response. These precedent studies are to be discussed and analyse in Chapter 3 and like the case study were selected using a purposive sampling method.

Cidade De Deus | Working With Informalised Mass Housing

This study is geographically located in the global south. The context of this study resembles precarious conditions and an informal economy that demands a rethink to the means of engagement in order for architects to facilitate inclusive planning processes and produce responsive architecture. This includes the understanding of the informal economy, rethinking the former physical limitations of contemporary architecture, and shifting the emphasis from form-driven to purpose-oriented social architecture.

Casa Familiar: Living Rooms at the Border

This study is also located in the global south. The context of this study resembles similar socio-economic conditions present in the previous precedent study. The focus of this study is to illustrate how architects can facilitate inclusive planning processes between top-down strategies and bottom up interventions and in the process highlight other ways producing alternative living models. This alludes to the concept of *tactics* as the informal economy through their 'illegal' building adaptations give rise to new forms of land use and creative ways to fulfil needs.

Empower Shack

Located in South Africa, this study aims to tackle informal housing upgrade in a manner that does not require the relocation of the inhabitant – and thus the breaking up of existing social networks. This signals an alternative approach to housing that makes use of local resources, participatory design processes and an architectural solution that responds to existing conditions.

1.6 SUMMATION

In conclusion, this chapter has outlined the research problem as pertaining to the lack of other forms of spatial representation within the technocratically planned housing project in Cornubia. This disregards the socio-spatial patterns, which albeit, being rooted in existing experiences, continue to remain invisible because their manifestation is not authorised by the dominant culture or even recognised spatially. However, such patterns remain critical towards countering these panoptical spatial representations and in the context of this dissertation are highlighted as the subversive tactics that people perform in order to produce spaces that reflect their own daily needs.

The above mentioned serves as justification for the research. Furthermore, the methods that the researcher intends on employing suggest the need to engage in the process that aims to reveal clues about the processes used by people to produce counter spaces in these homogenously conceived urban environments.

CHAPTER 02

THEORY AND LITERATURE

2.1 Introduction

"Today, private capital chooses to build environments that are insulated from their context, without the burdens of facilitating citizenship or place-making necessary in a real city (Mehrotra, 2013:243)." Amidst these insulated environments emerges a fragmented, parallel economy that silently weaves itself through the static urban landscape. This form of economy exists as 'forms-in-circulation' that produces transient urban imaginaries - signalling a temporal articulation and occupation of space – and suggests how spatial limits can be expanded to include formerly unimagined uses in homogenised urban conditions.

The following chapter aims to expand on the aforementioned through the use of two subsequent themes, namely *Abstract Logics/Visible Spaces and Specific Logics/Invisible Practices.*

Abstract Logics/Visible Spaces unpacks an understating of representations of space derived from capitalist logics. In doing so, it frames the capitalist modes of production as the organising principles of the city. With this serving as the underlining tone of the first theme, the conversation moves towards unpacking the development of a 'new generation' megaproject in the city of Durban - providing a contextualised account of the urban spaces that are consequently being shaped by this top-down approach. Lastly, as a way to connect the conversation with the following theme, the conversation turns towards displacing the standard capital notion of accumulation by expressing a different understanding of capital – social capital.

Specific Logics/Invisible Practices serves as the antithesis to *Abstract Logics/Visible Spaces* – alluding to both the inhabitant's and the practitioner's bottom-up approach. The conversation is continued by drawing from the theoretical works of Lefebvre and de Certeau. Their theoretical frameworks provide the underlining tone for the conversation in this chapter and unpack it –towards the recognition of the *everyday*. More specifically, the recognition of spatio-temporal practices that operate 'invisibly' within the homogenised built environment. Moreover, the concept of tactics is introduced as a manifestation of collective life that occurs on a temporal basis. This is employed by the people on the ground as a way to address the shortcomings – both socially and economically - of the housing megaproject.

## 2.2 Abstract Logics/ Visible Spaces

2.2.1 The Abstraction of the Everyday

"Abstract space is not just a perceived product of capitalist spatial practices and a projection of the representations of space conceived by planners, but that the lived practices of those inhabiting this space are themselves abstract."

(Stanek, 2008:70 in Goonewardena, 2008)

... abstract space..."*sets itself up as the axis, pivot or central reference point of knowledge,* "*government, and professional authority—privileges the element of* "*conceived space* "*and represses the element of* "*lived space,* "*thereby forcefully producing homogenous built and social environments*

(Lefebvre, 1974/1991: 6)
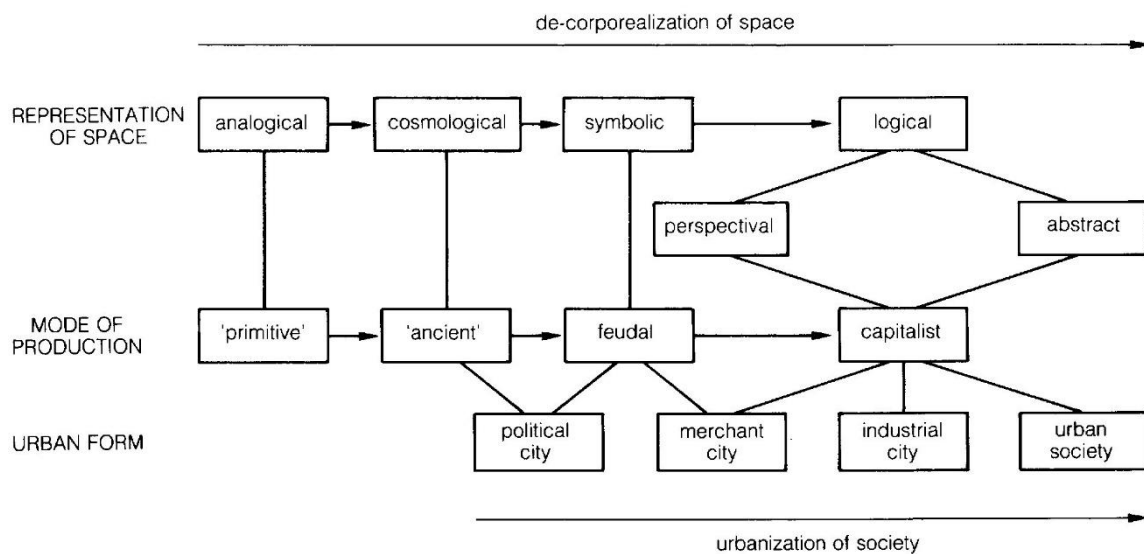
production of space *1: The production of space* (Gregory, 1993; after Lefebvre)

Figure 3. The production of space. Source: Gregory, 2009.

Abstract space alludes not only to the mobilization of space in consumption, distribution and the line of production, but a transformation of space itself into a commodity: consumed, distributed, and produced. For Lefebvre, this twofold character of abstract space translated, at the same time, into homogeneity and

fragmentation (Lefebvre, 1991; Goonewardena et al 2008:71). Abstract space as a mode of production - facilitated by capitalism - enables the spaces of the city to be segregated, broken and fragmented – by street networks and hard infrastructure for instance – in order to produce order, unity and homogeneity – of state power. "Thus there is a unity of the whole despite division of parts (Shields, 1999:176)." This mode of production is primarily dominated by a visual logic, which seeks to reduce solids into spectacles and simulations, the practice of 'dwelling' into housing, and space to the object of planning and urbanism. Shield (1999) notes that under the influence of capitalism space engenders an exchangeable characteristic through the social relations of private property along with the technocratic capacity to treat space as quantities – and only becomes legible through systems of representation imposed by the forces who control the production of these spaces.

"Private property…as a spatial element and a clearly demarcated territory, demonstrates the phenomenon of rendering space tangible and, in particular, visible. This rational and visual bias whereby space is reduced to a void or 'space of possibilities' between boundaries is a clear trend under the regime of abstract space."

(Shields, 1999:177)
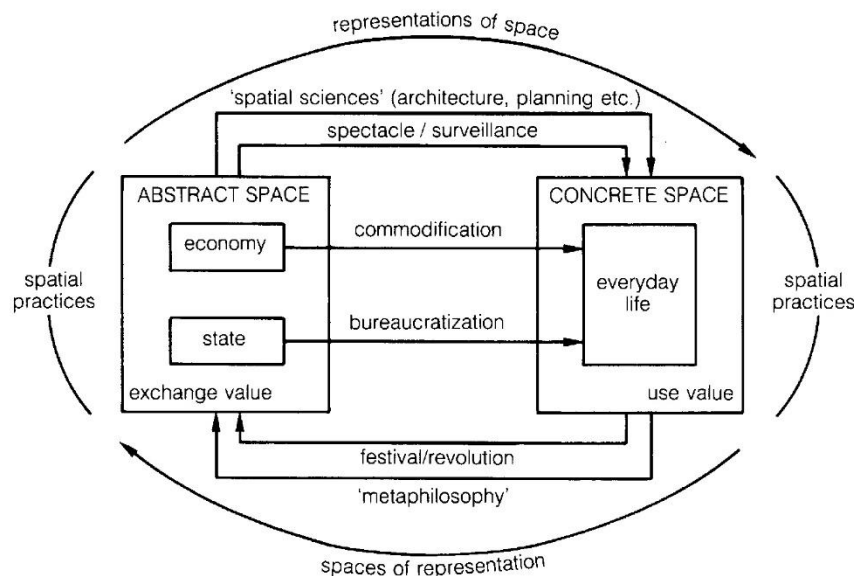
Figure 4. The abstraction of the everyday. Source: Gregory, 2009.. Source: Gregory, 2009.

The reduction of space to systems that can quantitatively measure, divided and capture: distances, areas and volumes, not only absolve all humane understandings of space but it further endows space with tendencies towards homogenisation and fragmentation – tendencies which Lefebvre argues are interdependent. For

instance, when space appears as fragmented, it appears as an aggregate of independent, distinct areas and volumes because the systems used to represent and measure it strip it of existing humanist qualities of differences and peculiarities. Stripped from these qualities, space subsumes a quantitative, homogeneous description that much like a commodity is subject to being bought, sold and exchanged.

> *"Formal boundaries are gone between town and country, between centre and periphery, between suburbs and city centres, between the domain of automobiles and the domain of people . . . And yet everything ("public facilities," blocks of flats, "environments of living") is separated, assigned in isolated fashion to unconnected "sites" and "tracts"; the spaces themselves are specialized just as operations are in the social and technical division of labour"*
>
> (Lefebvre, 1991:97-8)

In planning and urban governance, James Scott in Murray (2007) also states that these systems of representations are created by the forces who control the production of spaces - in this case the state power - in order to produce a 'language' designed to render the social 'legible'. Scott refers to this as 'statecraft' and argues that this is achieved through a series of state practices of surveillance and control which include the establishment of cadastral surveys and population registers, freehold tenure and so on – practices that attempt to rationalise and standardise people and their everyday practices.

> *"The government's current proposal for reforming the planning system amount to tinkering with the mechanics rather than facing up to the need for fundamental change"*
>
> (Campbell and Cowan, 2002:28)

Urban space that is thought about and thus formed in this manner is subjected to top-down forces of privatisation and competitive entrepreneurialism (Goonewardena et al, 2008; Harvey, 2003). This reiterates the suggestion to mobilise urban space as a commodity for the sole purpose of creating surplus value. Subsequently, what one starts to engage in is a process that consciously erodes any other forms of spatial differentiation. In other words, engaging in planning strategies –masterplans – which fall under the category of social regeneration/revitalization and are driven by private-public partnerships. While these, to a certain extent, fulfil the regeneration imperatives, they do so in a manner that signals a preoccupation with political and economic

agendas - producing 'visions' which primarily provide aesthetic responses to an otherwise social problem. This 'conscious' approach arguably perpetuates homogeneity and fragmentation of both space and society.

"Today plans are called 'spatial development strategies' in the hope of distancing from them the failures of the past. There is very little 'spatial' in them, though. They are still words with abstract diagrams."

(Campbell and Cowan, 2002:28)

It should be noted that both homogeneity and fragmentation are spatial aspects well entrenched in countries like South Africa where there exists a long history of Colonial and Apartheid systems of representation - developed with tendencies to socio-spatially exclude and segregate, see Figure 1 (Edwards, 1994; Murray et al, 2007). Systems like the 'Group Areas Act' and 'Native Urban Areas Act' in the Apartheid era for instance, can be noted to have acted as abstract regulatory systems dictating spatial fragmentation and homogeneity on the basis of abstract things like race, class status and mobility. Mbembe and Nutall (2004) recognise that socioeconomic fragmentation and homogeneity is widely visible in the built environment of South African cities and argue that this alludes to "a geography of fortifications and enclosures; increasing demand for spatial and social insulation; and reliance on technologies of security, control, and surveillance (ibid, 2004:365)".
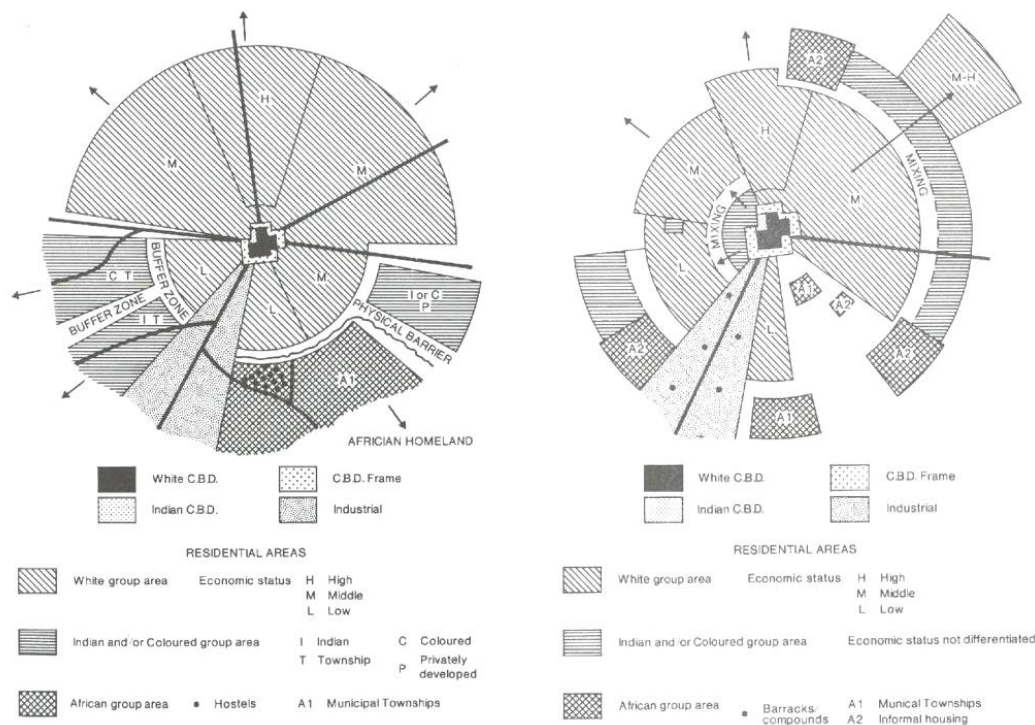
Figure 5. Image on the left shows Apartheid City model. Image on the Right shows Segregated City model. Source: Rosenberg, 2011.

AbdouMaliq Simone (2004) notes that the South African urban landscape, saturated with contention and disparity, has become highly privatised as systems are devised to simultaneously deal with Apartheid's legacy of social engineering and for these urbanisms to emerge as global economies. However, Simone (2004) also recognises that while this is apparent in cities, particularly in the global south, it is not limited to this geographical positioning. Nevertheless, the capacity of cities to act as public domains, to proliferate a national belonging and to facilitate social cohesion has significantly eroded.

Mela (2014) argues and in many ways reiterates that in most urban contexts along the global south positioning, the emergence of these systems imply the fragmentation and privatisation of public spaces. In other words, "the increase of zoning practices that do not correspond to a public plan but more to the demands of the market – urban sprawl and the commercialisation of places (Mela, 2014:6)." Moreover, these systems propose two different and seemingly opposing versions. Firstly, they create spaces with capsule-like configurations suited to particular forms of consumption – shopping malls for instance. Secondly, they guarantee the security of the consumers using those spaces by denying the behaviour and presence of social groups which are not compatible with the needs of the private-market economy (ibid, 2014).

> *"Strategies of this nature have a top-down character, or rather they are the result of a process of governance of the city and its public spaces that starts from a network of public and private actors."*
>
> (Mela, 2014:6)

Madanipour (2003) has signalled similar thinking but also includes aspects of behaviour which are attributed to particular categories of space – that of private/public. He states that these strategies, devised as means to privatised public space, provokes territorial behaviour which indicates the idea that spaces 'belong' to or are controlled by individuals for their exclusive use – keeping people out or moving them somewhere else.

This has certainly been the case for many cities in South Africa; what has been witnessed in most of these cities are types of urbanisms emerging from, on the one hand, the privatisation of spaces and basic services - which has and is continuing to mould a landscape filled with contention, disparity and exclusive use. On the other hand, Mbembe and Nutall (2004) note that this has fostered the emergence of parallel economies – rather informal in nature - which cannot 'speak' the language setup by the privatised realm yet try to work within the limitations setup by those systems. However, Mbembe and Nutall argue that the "inequality in the

concentration of strategic resources and activities between the different segments of the city has sharpened (ibid, 2004:365)" resulting in the gap between these economies broadening as their definition lacks to evoke questions of simultaneity and hybrid forms of co-existence.

This is apparent in the city of Durban, as the urban conditions created here stems from a legacy of segregationist planning derived mainly from racial exclusivity. The segregated morphological construct has created a polarised image between these parallel economies that immediately highlights a fragmented urbanism - constituting unintelligible and abstract urban conditions. Moreover, this highly polarised image, bifurcated by the insulated relations between spatial logics – of the private/formal and informal - illustrates the explicit discontinuity between these dualities. For Myers (2011), the discontinuity emerges from the manner in which the two logics are defined and subsequently the manner in which they are considered to co-exist. He further highlights that the gap will remain starkly apparent as long as the relationship between them is considered as two separate entities; unintelligible and disconnected (Myers, 2011)
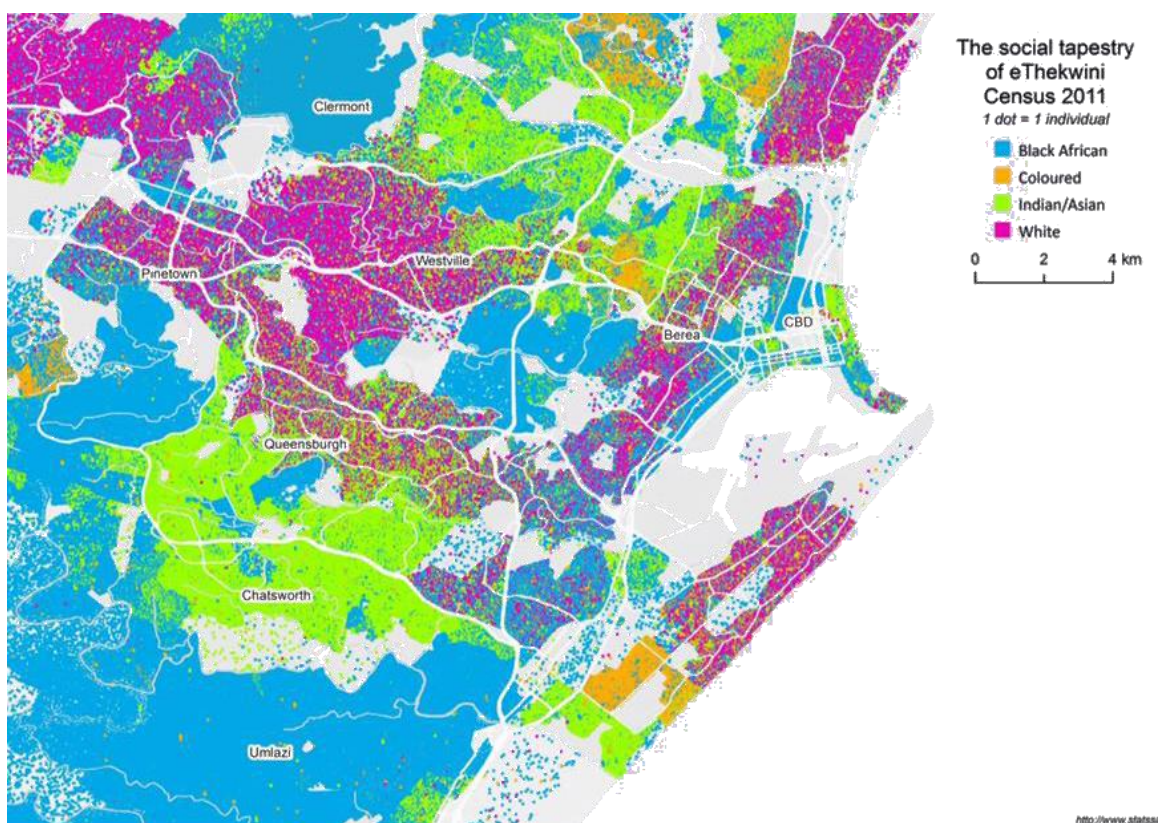
Figure 6. Map illustrating the social tapestry of eThekwini Municipality. Source: http://www.statssa.gov.za

2.2.2 The City Commodified

"In large cities, megaprojects are used as a "strategy of international competition to attract capital" and they leverage the potential of cities as growth engines."

<div align="right">(Sutherland et al, 2014:186)</div>

…characteristics of a 'new generation' of megaprojects …the focus is flexible and diverse rather than singular and monolithic and involves the creation of mixed-use spaces; there is a shift from collective benefits to a more individualized form of public benefit; such projects simultaneously re-inscribe and reinforce socioeconomic divisions; the diversity of forms and uses employed inhibits the growth of contestational practices

<div align="right">(Kennedy, 2015:165)</div>

The influence of entrepreneurial urbanism at the start of the millennium has further propelled the city of Durban towards global economic restructuring and rescaling processes, bringing about a shift in the way capital shapes territories - trickling down from national to urban scales (Kennedy et al, 2014). This shift reflects an adjustment in urban governance which results in the city emerging as a key node of capital accumulation and centre of consumption - as capital investments and resources are mobilised towards achieving a global competitive status.

The continuum of this neoliberalist approach prescribes a market economy that emphasises the need to develop systems that can "negotiate and implement both global economic and local imperatives." (Sutherland, 2014:186). Public-Private Partnerships (ppp) are used precisely as these systems, setup to negotiate and implement such imperatives. However, with exacerbating levels of socio-economic inequalities their potential to simultaneously address both social distribution and economic growth is considered as particularly challenging (Sutherland et al, 2014; Kennedy et al 2014). Regardless, as a response to these exacerbated pressures, in countries such as South Africa, both housing and social infrastructure projects are elevated by the state to the level of megaproject. Sutherland et al (2014) assert that while these aspects are elevated to such levels, post-apartheid socio-economic issues in South Africa require a 'new generation' mega-project - "required to address both pro-growth and pro-poor imperatives" (Sutherland et al, 2014:186).

Due to their ambitious scale as well as state growth objectives these megaprojects are made to assume a "much broader and more responsive socioeconomic frameworks" (Lehrer and Laidley 2008:800; Sutherland, 2014; Kennedy, 2015). Hence, they emerge as a 'new' generation of megaprojects postulating a type of development where diversity and mixed-use are seen as key drivers (Jordhus-Lier, 2014). However, what this also implies is a re-adjustment in the state's influence on these types of development which affords greater leeway to private actors in decision making - further enabling the shaping of city spaces in ways that start to suggest privatised economic gain and the exclusion of the socio-spatial practices of the poor and marginalised.

The tension between social distribution and economic growth is clearly apparent given the country's tendencies toward a neoliberal approach and its continuous exacerbated levels of social inequality and poverty. As a consequence, the development of urban mixed-use spaces amidst these kinds of contentious relations has a tendency to resemble competing interests and added agendas.

"The diversity and complexity of these mixed-use spaces simultaneously address and re-produce socio-economic segregation, enabling the state and the private sector to promote social justice, while at the same time protecting the interests of capital and the elite"

(Sutherland et al, 2014:187).

Nonetheless, the new generation megaprojects propose the construction of new cities; framing them as 'diverse' places that promote integrated human settlements where there is 'something for everyone.' However, beyond this speculative slogan Sutherland et al (2014) and Kennedy (2015) have highlighted an asymmetrical relationship that manifests from these developments; primarily evident in the lack of pro-poor investments and public participation in project planning versus the pro-growth priorities of the megaproject. (Kennedy, 2015; Sutherland et al, 2014).

"...there is a tendency to rely almost exclusively on expert based knowledge together with an extensive use of global and domestic consultant advisors; city residents, including those directly affected by megaprojects, are largely excluded from decision-making and implementation processes; there is minimal integration of community-based knowledge, usually only considered in the event of organised resistance or in the context of formal consultation processes..."

(Kennedy, 2015:166)

Figure 7. Cornubia's Megaproject - dislocated: Image showing Phase 1A and Pilot Phase housing. Adapted by author Source: http://196.11.233.27/gis_website/publicviewer/

Cornubia in the city of Durban is an example of a megaproject approach that has been translated as a 'mixed-use' urban development, detached from the city and framed by a vision of density and growth around existing and future transit corridors. The development provides the scope for exploring the various aspects that are attributed to the 'new generation' of mega-projects which includes: a public-private led initiative that proposes the zoning of land into various segments constituting housing, retail, industrial and commercial activities - with aspirations to address post-apartheid socio-economic and spatial segregation. Despite the attempts at 'social cohesion', the idea is generally to mix these uses, regardless of context, viability and interdependencies of these particular uses.

"Too often the results is not integrated, mixed-use places but isolated, mixed-use projects."

(Campbell and Cowan, 2002:29).

2.2.3 Towards Other Ways of Assembling the City

While Cornubia offers the possibility of new places for living and working, there is a reluctance by people to willingly relocate to these types of places as livelihood opportunities and social networks are difficult to attain – specially for the urban poor (Sutherland et al, 2014). This is so, primarily because of its detached location from the city – see figure 7 - and secondly because informality is not recognised by the megaproject approach – albeit 'new' – as a praxis capable of accommodating other socio-spatial practices. Mbembe and Nutall (2004) argue that the lack to recognise a different socio-spatial logic points towards an instrumentalist and functionalist account of the city which is reminiscent of a post-apartheid urban development paradigm - "concerned with whether the city is changing along the lines of institutional governance, deracialization of service provision and local politics (ibid, 2004: 358)." The concerned is primarily based on the spatial restructuring of the city which places emphasis on the perspective that recognises the city as a *problem to be solved* and not necessarily as reading the contradictory nature - that truly governs most cities - as the starting place *to work from.*

It is argued in this dissertation that in order to counterbalance these instrumentalist and functionalist accounts of the city a process of defamiliarisation/dislocation of the dominant spatial logics needs to happen. This process seeks to displace the nature of the instrument that gives rise to such accounts and in doing so reveal a different actuality. Mbembe and Nutall (2004) recognise one of the main instruments as capitalism and call for it in to be understood, particularly in African cities, not simply as social relations of production but as 'forms-in-circulation'. Something that Simone (2004) acknowledges as an opportunity; resulting from the fragmented nature of post-apartheid cities.

> ..[the] persistent legacy of fragmentation which marked the apartheid city offers unforeseen opportunities
> to those who live in the cities now and are engaged in daily struggles for survival and mobility. Ironically,
> such multiple and discrepant orders of urban life can be seen to characterize, increasingly, many cities
> around the world.

(Simone, 2004:321)

Filip de Boeck (2009), has termed it as displacing the capital notion of accumulation. De Boeck describes the praxis of capturing and seizing, expenditure and circulation as being far more important than accumulation of profit - as accumulation suggests a specific directionality that is in contradiction to the temporality and unforeseen moments of the everyday (de Boeck in Vyjayanthi, .2009). He suggests that the city is a space for the sudden and the unforeseen and thus in order for people to survive in it they must know how to capture the

moment and make it known. In this regard, where things are seized and immediately spent, where "everything you have or everything that is sold in the market is everything that can be contained by one's belly, everything that can be eaten and digested immediately in the moment" (de Boeck in Pieterse and Edjabe 2009:29) - suggests the fact that there is no accumulation of any surplus and thus the city space cannot solely function according to capitalist logics. Capital in this manner refers to something else, something that is neither visible nor tangible.

Robert Putnam (2000) plainly puts it as 'social capital' which he refers to as the social connections between individuals - the "social networks and the norms of reciprocity and trustworthiness that arise from them –see figures below - (Putnam, 2000 in Parker 2004, 85)." As such, the term 'social capital' is easily defined but not easy to measure because it is not about accumulation - which is tangible in nature.
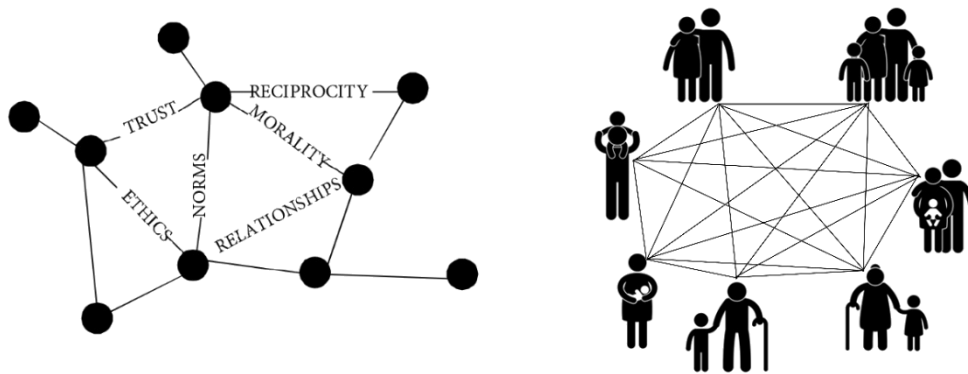
Figure 8. Image on the left: Building blocks of Social Capital. Image on the right – diverse connections. Source Author, 2016.
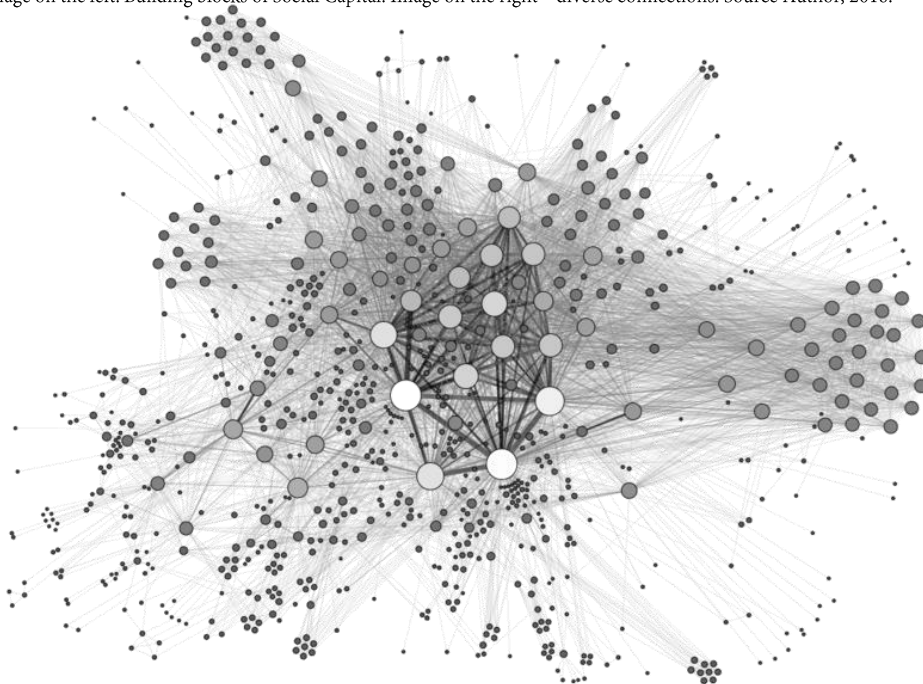
Figure 9. Visualisation of a social network Source: Adapted by Author: https://interestingtalks.in/London/event/computers-people-real-world/

Equating the intangible nature of this form of capital to social capital, Hamdi (2010) refers to it as social networks that people build in spaces towards a particular need. These networks act as support systems and by virtue of their membership, groups and associations they are able to equip people to deal with shocks and stresses induced by unforeseen circumstances (Hamdi, 2010; Blokland and Savage, 2008).

Simone (2001) provides a similar strand to the notion of social capital referring to it as ephemeral social formations: networks of associations that people form on a temporal basis in order to acquire the capacities to deal with the socio-spatial and economic deficiencies which they are subjected to. These networks of temporal associations incorporate large measures of fluidity and changeability but also manage to "generate regularised practices of getting things done, of lending a measure of stability and confidence to precarious environments" (ibid, 2001:104). These formations act as capacity building mechanisms which suggests that they can balance the need to depend on external sources for opportunities to livelihood access while at the same time preserve local solidarity. However, Simone (2001) does not suggest that these social formations replace the need for formal institution building, nor does he suggest that they compensate for the limitations of these developments. Instead he sees them as more informal means of collaboration running parallel to and at times intersecting with municipal strategies.

Through the literature the notion of social capital, a collective of the intangible networks built by people to effectively make and remake their lives despite the precarious physical environments in which they find themselves, illustrates an intermingling process between people and place. As this day to day making and remaking is exercised, the intersecting trajectories of both people in place and the place itself form associations between them. The complexity and topological nature of this intermingling process makes reference to the concept of assemblage - a relational thinking of coherent components including people and place that seek to collectively define multiple forms of associations (McFarlane, 2011; Simone, 2011; Farias, 2011).

"If we consider that urban landscapes are not simply just the urban fabric of the tangible, but a hybrid of relationships between people and the landscape, it could be said that what constitutes the abstraction of the city are layers of networks each containing complex relationships between each other."

(Crysler, 2003:2)

If the city is considered as constituting multiple and complex layers of intangible networks amidst tangible ones, how does one begin to negotiate and assemble contexts given their fragmented make-up? In other words, how can practitioners utilise the notion of social capital towards building the social economy of place? Nabeel Hamdi (2010) asserts that, certainly in the planning profession, *participatory practice* - a process of community engagement – can facilitate this assemblage process. Hamdi notes that this form of practice seeks to bring together various stakeholders that operate at various scales towards initiating relational dialogues between them.

This process seeks to discover alternatives by excavating the networks that lie hidden within places - towards empowering people to exercise those alternatives. Furthermore, the process provides continuity by encouraging the mobilisation of resources which according to Hamdi (2010) are already in place, but just need to be harnesses to reduce dependencies on external sources. However, before engaging in such a practice, it is essential to understand the word 'community' and unpack it in a manner that alludes to the multiplicity and complexity – of tangible and intangible networks – that makes up the city.

Figure 10. Unpacking the many layers of participation. Source: Screenshot, https://www.youtube.com/watch?v=7r9IYl4CtKI

Unpacking 'community' within a context understood as multiple seeks to connect the many networks that are created from multiple parts in order to represent a more complex and layered view of community without reducing the understanding of it to merely common functions between people and spaces. It also seeks to describe the potentiality of those relations remaining the same and transforming as they "become expressed through new spatio-temporal interactions" (McFarlane, 2011:733; Dovey, 2011; Farias, 2011).

'Community' as assemblages gives the appearance of functioning as a whole, but in actuality, are autonomous bits of a network whose parts can be detached out of one assemblage, plugged into another, and still remain functional (DeLanda, 2006; McFarlane, 2011). As a result, assemblages characteristically have functional capacities but do not necessarily resemble one thing. This means that assemblages can further serve as component parts in larger assemblages - for instance as DeLanda (2006) describes: interacting persons yield institutional organisations; these organisations interact and yield cities; in turn these cities organise the space in which nation states emerge and so on.

As DeLanda (2006) further explains, the identity of assemblages at any particular scale is always a product of a process; either of a process of territorialisation, which explains how sharply defined, unchanging or homogenous the identity of an assemblage is; or the opposite process of deterritorialisation, which defines how blurred, open to change and heterogeneous the identity of an assemblage is.

Thinking about 'community' as an assemblage alludes to thinking about what connects one component of that assemblage to another – for example the interactions between people and people, and those interactions connecting to place. This type of thinking is essential if one is to consider and indeed 'excavate' the hidden networks and tap into the social capital that exist within particular places and possibly beyond them.

2.3 Specific Logics/Invisible Practices

"an invisible city—with its own rules of the game, values, and prescriptions—maintains an uneasy presence beneath the surface of the visible city."

(Pitcher and Murray, 2007:144)

"beneath the visible landscape and surface of the metropolis, its objects and social relations, are concealed or embedded other orders of visibility, other scripts that are not reducible to the built form, the house façade, or simply the street experience…"

(Mbembe and Nuttall 2004 in Murray, 2007:9)

"the world beneath, the figure of the migrant, the unfinished city, the salience of imagination and desire: all of these imply the possibility of more open readings."

(Pitcher and Murray 2007:10)

Figure 11. Invisible Cities, Ersilia: Source: Screenshot, https://vimeo.com/14995528

2.3.1 The Social Production of Space

Henri Lefebvre's 'The Production of Space' (1991) argues for a more accurate and inclusive concept of spatial representations. His argument seeks to critique the dominant logic that has largely been proliferated by the Westernised Industrial world. Lefebvre argues that such a logic is widely governed by abstraction and therefore the sensory and everyday aspects of human life are represented in terms of quantities, commodities and

classification – noted earlier in the literature. Lefebvre further criticizes the extent to which abstraction, supported by capital logics, dominates *everyday* life by imposing homogeneity on the formation and use of places and restricts the possibility of these places to emerge and transform via their own specificities (Lefebvre, 1991; Carp, 2008).

In The Production of Space, Lefebvre pursues the liberation of *everyday* life from the abstraction of capital logics by advocating the recognition and acting on sensory knowledge and experience, which results in the production of spaces where socio-spatial differences are evident (Lefebvre, 1991; Shields, 1999; Carp, 2008). Moreover in assuming a standardised and static social structure there is a tendency to overlook aspects of people's everyday lives which leads to the suppression of the diversity of populations. As a way to better explain this dialectical relationship of space and distinguish the irregularities produced as a result thereof, Lefebvre offers the idea of a 'conceptual triad.'

> *"The conceptual triad puts conceptualizing (mental activity or the life of the mind) in conscious, interactive relationship with both sensation (the life of the body) and meaning (unmediated lived experience)."*

(Carp, 2008:130)

The conceptual triad is made up of the following:

Spatial practice/Perceived space, refers to people's practices – habits, patterns of movements, routines and sequences- in physical space. These are spatio-temporal patterns that exist – physically –can be empirically observed and (re)produce space that can be perceived by the human body (Lefebvre, 1991; Shields, 1999; Prigge in Goonewardena et al, 2008). In other words, "the perceiving dimension of spatial practice refers to why and how we move our bodies in traceable patterns (collective rhythms, individual routines, incidental deviations) that manifest the socio-spatial patterns of a given location (Carp, 2008: 132)."

Representation of Space/Conceived Space, refers to 'mental' ideas about physical space, which are created by scientist, planners, architects, social engineers and technocratic subdivides who associate reality –what is lived and perceived - with what is conceived by them (Lefebvre, 1991). "Representations of space—though they may

exist perceptibly on paper, in words, or on screen—stand as interpretations of material reality but are not in themselves "physically extant" (Carp, 2008:134)."

Representational Space/Lived Space, refers to symbolic meaning that people instil on space through their appropriation and experiencing of it (Lefebvre, 1991; Shields, 1999). "Representational space is recognizable as a matter of lived experience where it is infused with meaning that cannot be adequately expressed without verbal, visual, and/or kinaesthetic symbolism (Carp, 2008: 135)."

Jana Carp (2008) argues that in order to formulate appropriate socio-spatial interventions the *planning* process needs accurate representation of context. In most cases, however, representations of social space remains rather one-dimensional as they are "significantly limited by the distinct purposes of discipline, expertise and policy domain (Carp, 2008:129)." Carp proposes the use of Lefebvre's conceptual triad as a method for setting-up a more inclusive understanding of planning solutions that involve recognising socio-spatial differences.

> *"In planning-related terms, although physical places have social authority that affects socio-spatial practices in their environs, it is people who sustain and transform places through their productive interrelationship with space.*
>
> (Carp, 2008:132)

For Carp (2008) the conceptual triad offers the opportunity to focus on the intermingling of relations between the top-down formulated knowledge and local initiatives that arise from grounded experience. This is possible because as the three dimensions take form in real situations- as in the case of planning for instance, they enable an awareness towards the material and experiential dimensions of social space. In other words, they recognise that people –through their active occupation- shape space, and that *lived* reality, can be taken across to inform and possibly transform the top-down planning process. Thus, Carp's interpretation of the triad suggests a method of co-dependence where the planning process is continuously shaped by the interaction between planners and people's physical reality.

Hamdi (2004) refers to this kind method of co-dependence as *action planning;* where the planner weighs street level activity against taking the bird's eye view approach towards finding a middle ground – see figure 12. Primarily, this means finding natural scales and limits so that opposites can co-exist in harmony – where one is

not recognised as having more validity than the other. However, as long as planning insists on dictating what organisation people must follow and not allow for a certain spontaneity and self-organisation, creativity will be inhibited, resources will be lost and the dominant forces will benefit - "only if there are centrally guaranteed limits to private action can equitable access to resources be maintained and exploitation avoided (Turner, 1976 in Hamdi, 2004:95).
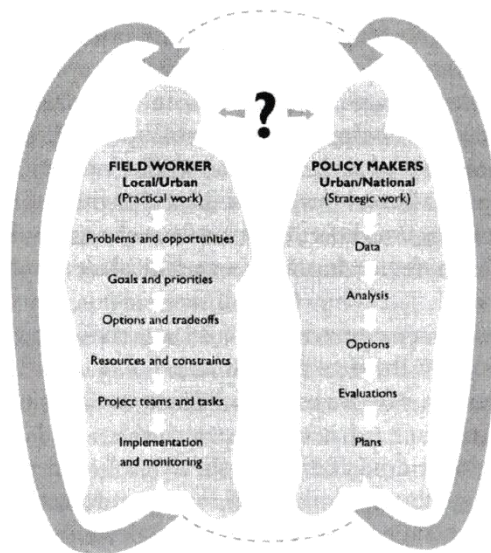
Diagram B *Conventional planning*
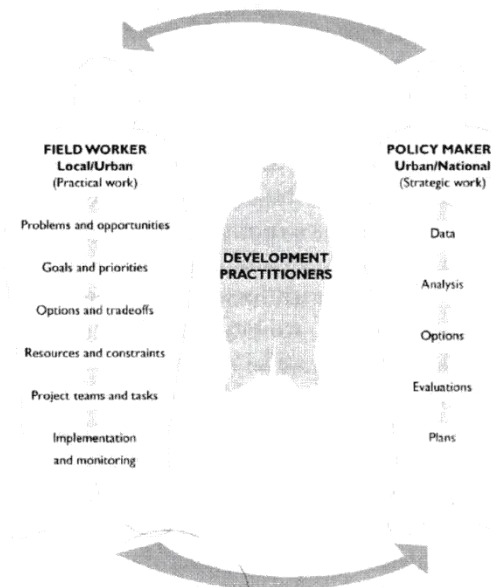
Diagram C *Action planning*

Figure 12. Diagram illustrating the difference between conventional planning and action planning. Source: Adapted by author (Hamdi, 2004)

Hamdi (2004) makes reference to John Habraken's concept of 'support/infill' to highlight the attempt by architects to find a middle ground, most notably within housing. Habraken recognised the importance of

balancing the scales of organisation, and thus proposed that the larger framework of organisation, notably conceived by collective and public authorities, would be referred to 'supports' and the 'infill' to the bits, which people would add later on the basis of what they were prepared and willing to do at the time, in order to turn the 'support' into a home (Hamdi, 2004).

The process of *action planning* in community building situations - where environments are disturbed by practice and triggered by events/interventions - requires that there be a "certain openness...a willingness to be disturbed in order to set the process in motion" (Capra, 2002 in Hamdi, 2004:96) and this openness must be nurtured and embraced through trust building and active networks of communication – a reciprocal process between designer and participants. The process is non-linear and progressive in the sense that new organisations of people emerge as communication and feedback happens; because certain issues might be pertinent to various individuals. Therefore as new networks emerge new design ideas are needed. The cyclical nature of action planning brings forth the "relationship between the structures that designers design and those that are enabled to emerge (Hamdi, 2004:97)

"The design structures are the formal structures of the organisation (city) ...the emergent structures are created by the organisations' (city) informal networks and communities of practice...the issue is not one of discarding designed structures in favour of emergent ones. We need both."

(Capra, 2002 in Hamdi, 2004:97)

2.3.2 Specificity of Everyday Practices

"Is the everyday a realm of submission to relations of power or the space in which those relations are contested (or at least negotiated...?)"

(Highmore, 2002:5)
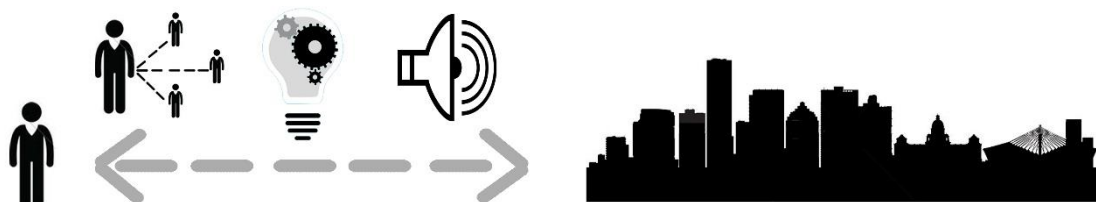
Figure 13. Actively negotiating city spaces. Source: Author, 2016

Barac (2007) argues that in order to accommodate the conflict of everyday life cities must account for a more intricate landscape of institutions and urban phenomena. A city's transformation should be based on individuated writings of the city – or what Mbembe and Nuttall (2004) term *voice lines* - enacted in public spaces. In today's South Africa, cities provide the backdrop for change's enactment. In these public spaces, or 'sites of adjustment', the everyday traffic of people, cash and ideas about what can work, unfolds. The voice lines are performed accordingly, drawing out the "extent to which cities must be negotiated and how citiness has to do with motion- not just traveling from one point to another, "but the negotiating of disparate sites and zones (Barac, 2007:238 in Murray, 2008)" in which one makes those sites, temporarily, work for them in different ways. This initiates a process of exchange between self and city; an exchange that Edgar Pieterse (2011) has acknowledged exists along the spectrum of the aesthetic and the functional in the banal, mundaneness of the everyday practices in cities - which allows for the navigation between existing urban conditions and urban possibilities.

Urban designer, Teddy Cruz (2015) and political scientist Fona Forman (2015), talk about these urban possibilities or spaces of 'becoming' as instigating a new civic imagination, one that begins with a critical intervention into the *professional's* own practices – "to speak in languages that communicate beyond our own professional knowledge silos, and learning to listen and recognise the value of alternative ways of seeing and doing (ibid, 2015:1)." They argue for theory and practice to become instruments to build specific strategies to overcome the conception of spaces as a top-down procedure – consciously excluding any other forms of knowledge, in particular, bottom-up processes. The recalibration of power relations becomes necessary for the purpose of urbanisms to emerge as sites of collaborative knowledge between top-down and bottom-up negotiations – and in doing so, start developing new forms of social contracts between them.

Firstly, this would entail recognising that both actually need each other – as has been noted by Capra in Hamdi (2004) - but in a manner that registers a certain compromise. As the bottom up processes change, communities very quickly start to demand the need for some form of governance – in the form of services, infrastructure and livelihood opportunities. Bottom up needs top down, just a better form of top down. For urbanist, Kelvin Campbell (2011) the compromise has to come from the top-down systems - See Figure 14 and 15

"It demands that our complex rules are replaced with simple rules. Our rigidly deterministic place-making

models are replaced with condition-making models that lead to more responsive environments. Restrictive

command-and-control practices are replaced with permissive enabling leadership that facilitates a greater level of bottom up activity. The new top-down gives the 'light touch'"

(Campbell, 2011)
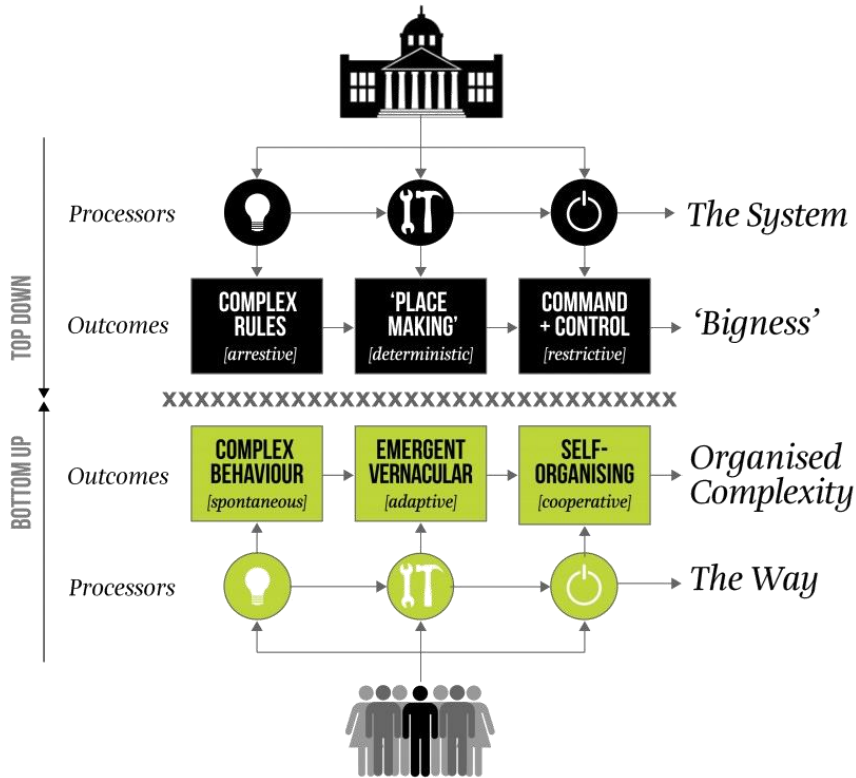
Figure 14. The conflicts between top-down and bottom-up. Source: http://www.smarturbanism.org.uk/
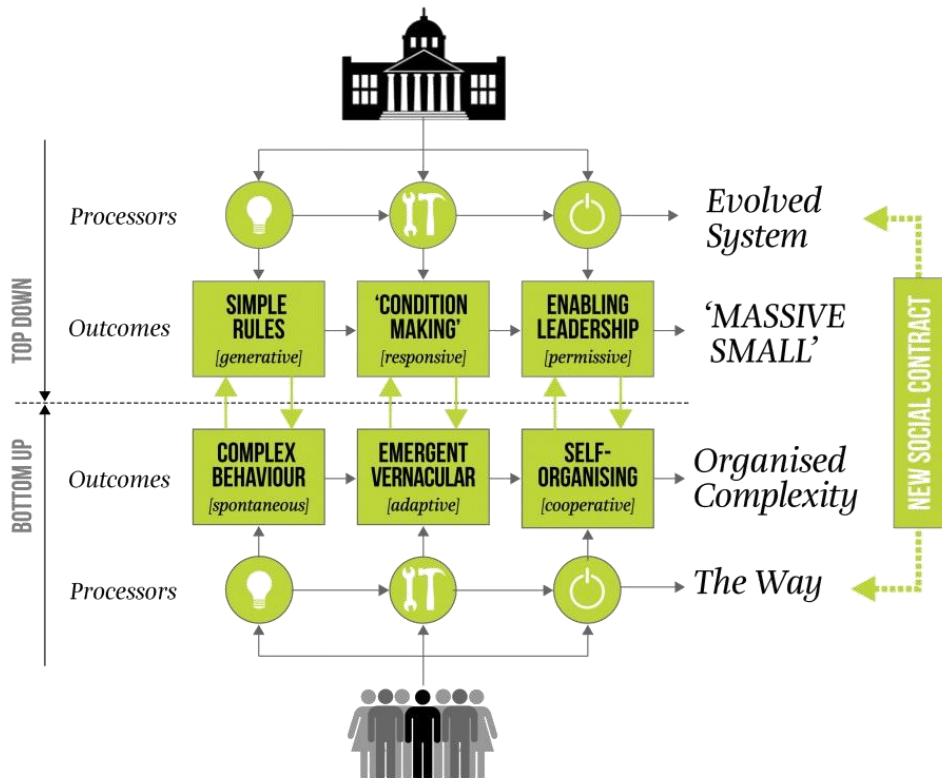
Figure 15. The potentials that could be realised if top-down systems evolve to be conducive to bottom-up. Source: http://www.smarturbanism.org.uk/

For architect Lucien Kroll, this similar notion has applied. Kroll argues for starting with the everyday lives of human populations when thinking about space, rather than focusing on abstract ideas. Kroll works in a manner that is non-hierarchical, calling for concerns to be addressed as they become identified, rather than assigning priorities to issues (Milgrom, 2008 in Goonewardena et al. 2008). Milgrom (2008) suggests that in Kroll's work "the configuration of urban spaces must adapt to meet the changing needs of dynamic populations and recognizes that design is an integral part of the processes of habitation that should involve all human urban dwellers (Milgrom, 2008:265 in Goonewardena et al. 2008)." As such, the urban forms that manifest emphasise the differences present in the resident communities and the specificities of local contexts, while inviting change over time –spaces of 'becoming'. See Figure 16 below.
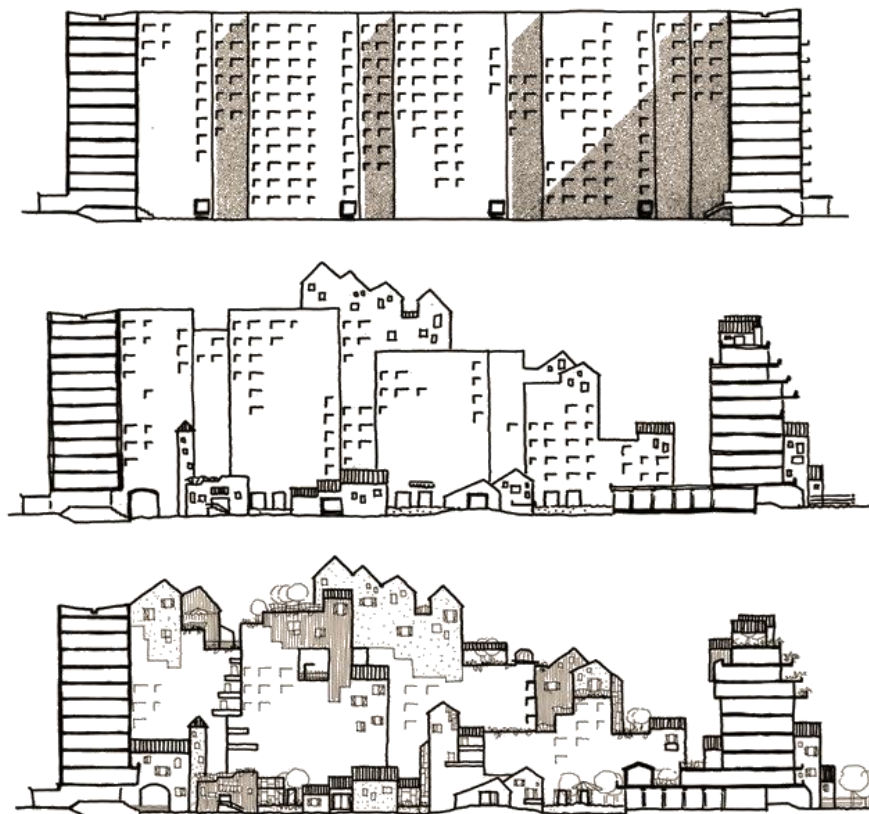
Figure 16. Image illustrating La MéMé, student accommodation by Lucien Kroll. Shows evolution of formal constructs to meet the changing needs of people. Source: https://www.amc-archi.com/photos/l-anti-spectacle-de-lucien-et-simone-kroll,1718/lucien-kroll-enfin-chez-soi.11

Moving towards these spaces of 'becoming' requires addressing the disparities and discontinuities between the formal and informal which suggests the discourse of recognising differences and alternatives – what Mehrotra considers as an inverse relationship between the formal and informal city; a complete collapse of the these dualities into a singular but multi-faceted entity that has the possibility to create a space where both of these forms of urbanism can co-exist (Mehrotra, 2013). Mehrotra's inverse urban condition proposes an

understanding of urban landscapes as metaphorical representations – a contemporary city model made up of intertwining physical manifestations. "In these urban conditions, the physical manifestations of the city is reversed and here, the 'static' or the formal city is most often situated in the temporal landscape of the 'kinetic' or informal city (Hernandez et al, 2010: xi).

"The Kinetic City is a temporal articulation and occupation of space that not only creates a richer sensibility of spatial occupation but also suggests how spatial limits are expanded to include formerly, unimagined uses."

(Mehrotra, 2013: 243)

City spaces highlighted in this manner express a condition of motion – with bazaar like qualities, constantly evolving, weaving, interpenetrating, reinventing and modifying. Informality recognised in this manner does not rely on its architecture for representation but instead on its spatial practices – spaces highlighting representations of social practices that fetishizes the local and tactically mobilises resources for the purpose of compensating for their imbalanced distribution (Hernandez et al, 2010). Such a socio-spatial possibility is one that is derived from challenging the formal productions inherent to the formal city, considering it not as a place to add-to but rather as a place to work-with and modify. "The idea of a city is an elastic urban condition, not a grand vision, but a 'grand adjustment' (Hernandez et al, 2010: xi)."

2.3.3 Tactics and Networks of Social Contingency

"The place of the tactic belongs to the other... Whatever it wins, it does not keep. It must constantly manipulate events in order to turn them into "opportunities"."

(De Certeau 1984: xix)

"A tactic infiltrates the totality, subverting it from within, while never claiming a functional or identifiable space."

(Mould, 2014:533)

'Grand adjustments' / 'sites of adjustment', this is something that for Cruz and Forman (2015) appears to exist at the intersection between formal and informal socio-spatial developments, where negotiations between top-down policy and bottom-up 'social contingency' intermingle towards urban possibilities that redefine "existing

norms of ownership in the city (ibid, 2015:3)." In their publication they provide an example that highlights such a case, where *tactics* is seen as a practice employed by the occupant to transgress imposed socio-political boundaries and top-down capitalist modes of production.

> *"Take the example of two women, responding to lack of child care, who rent a three-bedroom apartment and transform it into a day-care facility, which in turn is recognised by a community-based organization that camouflages that activity, while supporting it with knowledge and economic resources."*

> (Cruz and Forman, 2015: 5)

The case of the two women highlighted above is indicative of a social creativity and an informal intelligence that produces new urban configurations from the women's particular needs and their capacity to shape spaces according to their own economic possibilities and social networks. These are tactics which manifest within an existing infrastructure; they insinuate manipulation and seizing of this infrastructure towards an opportunity but cease to claim that territory for its own, for that is what top-down strategies seek to do. Consequently, "the aspatiality of the tactic renders it elusive to appropriation by strategic control, as strategies occur through the claiming of space (Mould, 2014:533)."

Tactics, within the urban context, alludes to people attempting to operate more resourcefully in urban spaces that appear 'under-resourced'. In other words when the strategies of top-down processes lack the means, interest or legitimacy to accommodate people, whom, because of their economic instability, cannot operate within such defined, formal boundaries, take it upon themselves to find ways to manipulate the situation to make it work for their existing needs. Simone (2005) refers to this as a form of *piracy*, "the act of taking things out of their normal or legitimate frameworks of circulation and use (ibid, 2005:357)," towards seeking out and managing more diversified ways to operate within the city. This is a process of adjustment that produces spatial experiences of disorientation which is simultaneously used by people as the very resource mobilised towards transgressing defined and conceptualised boundaries.

The persistent tension that exists between the resourcefulness that *tactics* alludes to and the 'under-resourced' spaces of cities temporarily assembles different economies of scales and "multiply the uses that can be made of resources of all kinds and this means the ability to put together different combinations of people with different skills, perspectives, linkages, identities and aspirations (Simone, 2005:357). These assemblages propose

intersections where structure and agency intermingle - where power relations are constantly negotiated/recalibrated/contested (Simone, 2011; Dovey, 2011).

> *"examples …are found across the inner city—from the use of underground parking garages as sites for new mega-churches; the use of hotel kitchens as daycare centres; and even indoor swimming pools as butcheries."*

(Simone, 2005:362)

Mbembe and Nutall in Murray (2007) suggest that the notions of 'citiness' and a sense of lived experience, manifests at these intersections, where the city appears somewhat unfinished but it is precisely this unfinished nature that allows one to better understand it. They argue that close attention needs to be paid to the "imbrication of city and township… where the 'township is both of the city and not of the city', attention should be directed to 'township dwellers' practices and imaginations of citiness or the place of the township in the making of the city's many identities' (Mbembe and Nutall in Murray 2007:9)."

However, as one draws back to the conversation of the megaproject in Cornubia, how should the notion of 'citiness' be understood in a place that has detached itself from the city and in many ways now experiences the very shortcoming of the township – isolation, detachment and lack of services. As has been noted by Sutherland et al (2014) and Kennedy (2015), this planning approach seeks to eradicate these shortcomings but more often than not just ends up shifting them along to another place –as is the case of Cornubia. The urban imaginaries being created here have thus far emerged from a mono-functionality of land use – which is indicated by the planning - instead of the imbrication process that Mbembe and Nutall (2004) have alluded to. On the contrary, the dwellers' practice are subdued by the homogeneity of space- which to the detriment of the idea of 'citiness' has impeded people, particularly the urban poor, to 'legally' participate in the shaping of their own spaces.

2.5 Conclusion

The literature review has explored how the negotiation of urban landscapes can occur in a manner that does not allude to a process of remaking or erasing of space but instead to a process of readjusting existing urban conditions in order to *work with* the contradicting practices that make up the city. What this alludes to is a more intricate landscape of institutions and urban phenomena - where the capital notion of accumulation is displaced by the transient and topological notions of social capital – and in the process producing urban possibilities that acknowledges and makes room for the intermingling of disparate practices.

However, what has been further noted in the literature is that policy makers in South Africa continue to view 'the city' as a *problem to solve* and therefore practitioners continue to engage in a process of spatial restructuring. While this process is producing 'results' – relieving the housing backlog, contributing to economic growth- questions have to be asked: At what cost is this being done? Who is really benefiting? When a city such as Durban, decides to implement an entrepreneurial approach to urbanism the results are masterplans and megaprojects – solutions that are more politically and economically driven than socially responsive. This is the case with the Cornubia megaproject, with the only difference being the title of 'new generation'. But even this has caused more contested discourses than possibilities towards an 'integrated human settlement' – a term assimilated by National government.

The contestation that emerges from these megaproject developments are largely due to the amplitude of interests from the bulk of stakeholders involved in the realisation of such developments. This puts tremendous pressure on the planning process to happen as efficiently as possible so that nobody loses out. However, somebody always does and at different degrees, but most notably the public – even if there is such a thing as 'public participation'- this happens so superficially that it ends up resembling more of a political agenda than a grounded implementation. Thus, as city spaces manifest along these imposed lines driven by institutional and technocratic governance, the everyday life of the public becomes further inhibited; possibilities for the urban poor to actively shape these spaces appear to diminish as public spaces remain neutral arenas incapable of providing rather what is desired than imposed. *Collective life* as such becomes a thing alluding to 'invisible' practices that operate within these visible spaces – ironically providing a more open reading of the city.

CHAPTER 03

PRECEDENT STUDIES

3.1 Introduction

The precedent studies discussed in following pages, while international are geographically located within global South. They were selected in an effort to draw parallels with the way in which socio-spatial inequalities manifest and are addressed in similar contexts to that of the case study area of this research. While both precedent studies focus on generating alternative living models through the recognition of informal growth, they each serve to support themes discussed in both theoretical framework and literature review sections of this dissertation.

3.2 Cidade De Deus | Working With Informalised Mass Housing

Rio de Janeiro, Brazil

Design Collaboration: ETH Zurich MAS Urban Design

Year: 2013

3.2.1 Justification of Study

This precedent study was selected to illustrate how the conventional role of architects can be eschewed towards enabling connections between opposing forces of top-down planning and bottom-up practices. This intermingling process aims to translate a society's need for equal access to housing, livelihoods, education, services and resources – fundamental city dweller's rights – into spatial solutions. This research will place emphasis on how government housing programmes on the periphery of the city – much like Cornubia – has been gradually adapted by people in order to account for the social and functional shortfalls of these built environments. The aim of the study is to unpack an alternative model for improving these types of housing programmes using the ingenuity and resourcefulness of people's informal practices.

3.2.2 Location of Study

Lat: -23.5475000
Lon: -46.6361100

Figure 17. Image showing location of precedent study. Source: http://brazilglobal.net. Adapted by author.

Cidade de Deus was constructed as a commuter settlement. The settlement was built in the 1960s to provide housing to residents from favelas demolished by the state. Today, it is located in the centre of the greater metropolitan area of Rio de Janeiro, Brazil.

Standardised mass housing was adopted as the solution to illegal construction and uncontrolled urban growth for this settlement. However, the programme was successful in merely shifting the problem of informal development from the centre to the periphery of the city, where it was exacerbated by its isolated and detached location. As a way to compensate for the inadequacies of the housing conditions, residents gradually transformed the settlement and continue to do so through their own informal ways.
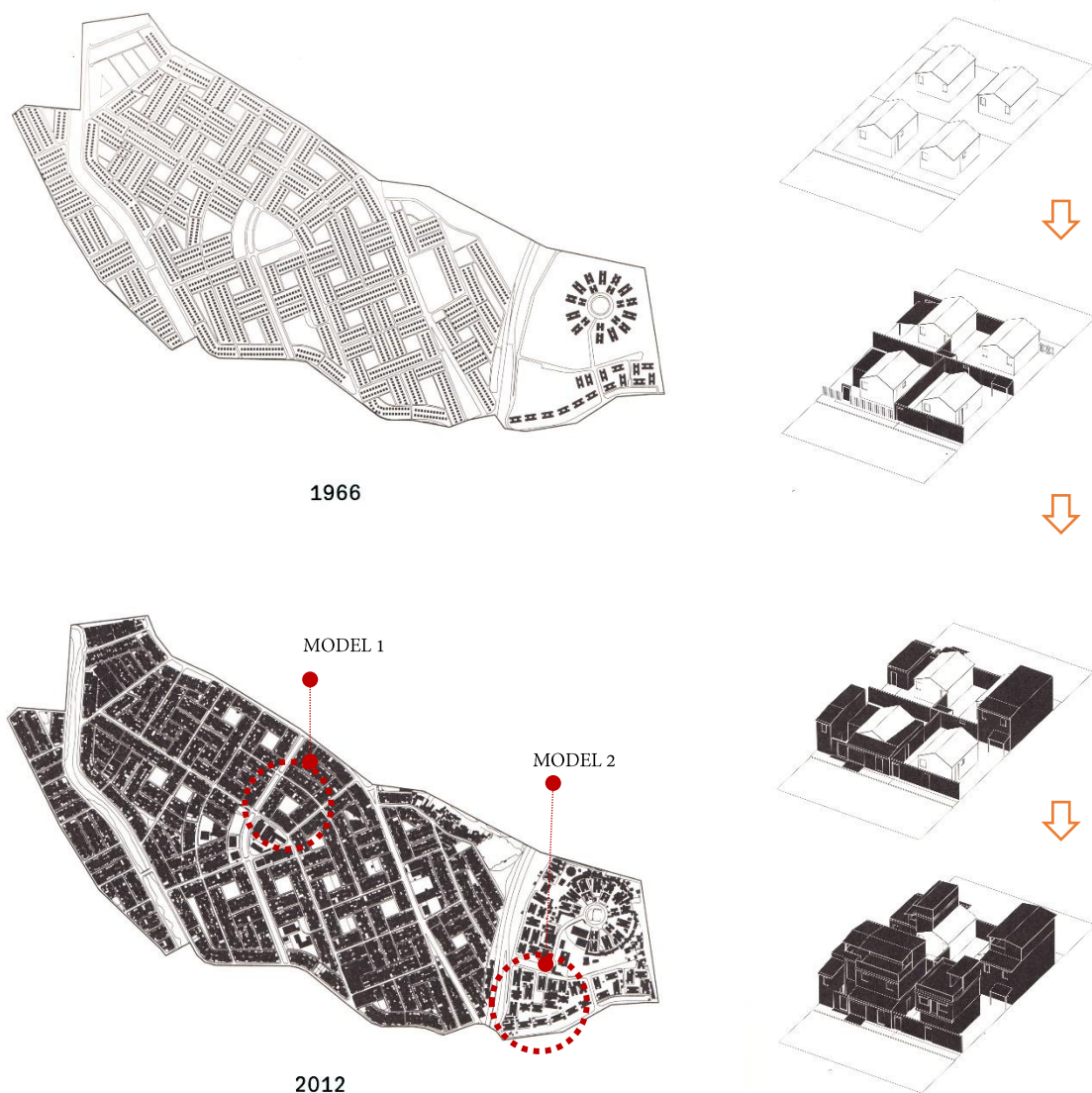
Figure 18. Plan showing settlement transformation from 1966 – 2012. Source: Angeli and Hehl, 2013.

Cidade de Deus served as the case study for the Master of Advanced Studies in Urban Design at the ETH Zurich. The purpose of the study was to investigate the gradual transformation – appropriation and personalisation – of standardised mass housing and use that towards developing hybridised models for improving these housing programmes.

Like Ameican suburbs, multiple similar houses were arranged in neat rows and blocks surrounding an open field
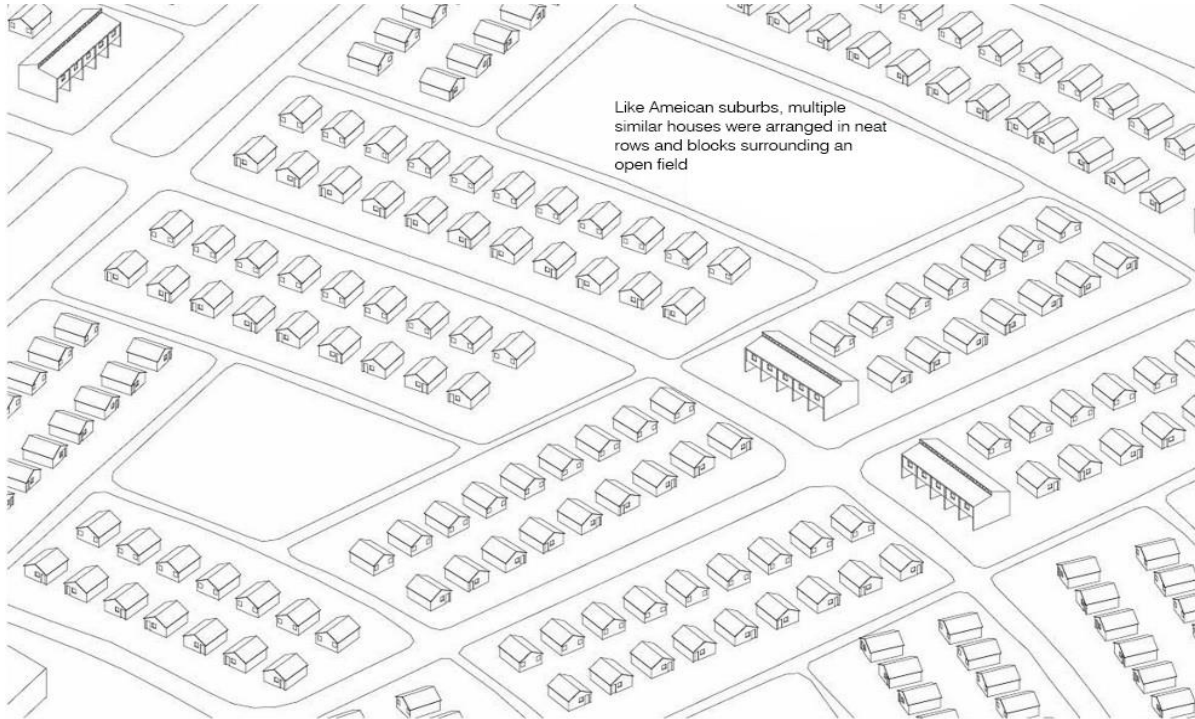
Figure 19. Image showing the transformation of the standardised mass housing units over time. Source: Angeli and Hehl, 2013.

3.2.3 Model 1: Upgrading the Multi-Family House | Co-Operative Living

Figure 20. Images illustrating densified living. Source: Angeli and Hehl, 2013.

Figure 21. Image illustrating the strategy for hybridised, cooperative living model. Source: Angeli and Hehl, 2013.
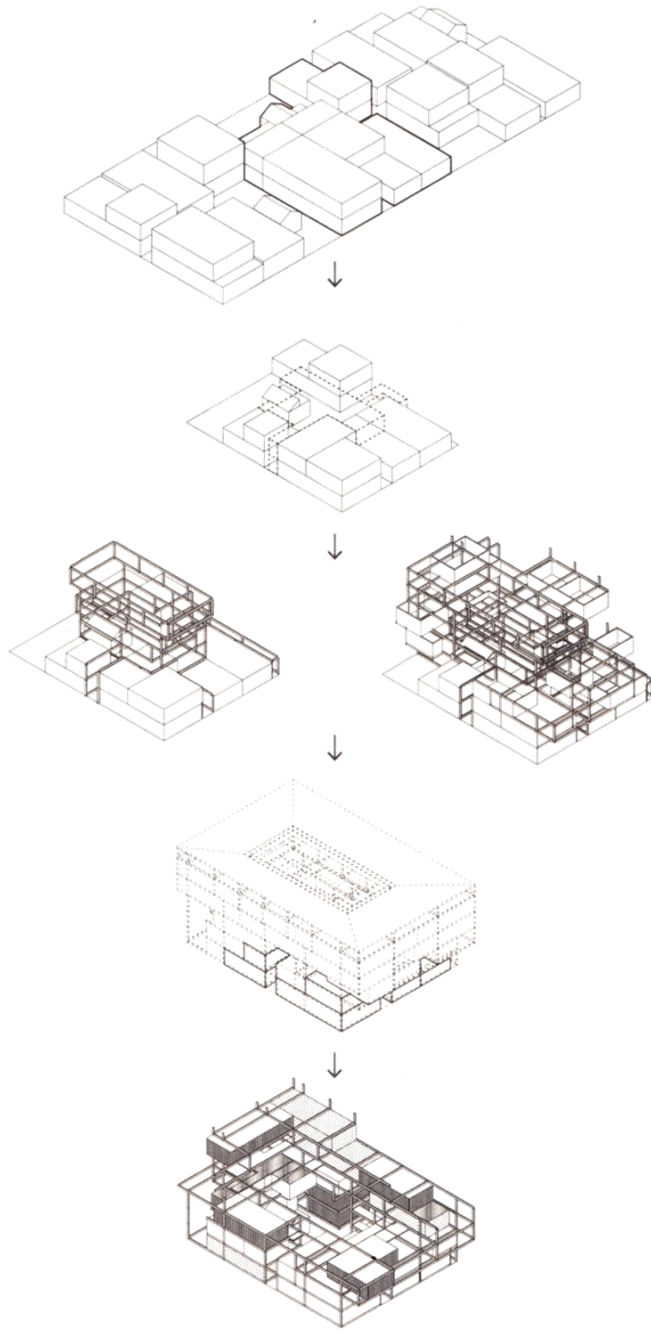
Actions	
Encourage (Communalising	Build a co-operative across six plots
Negotiate (Voiding)	Carve a central courtyard out of existing urban fabric
Provide (Adding)	Protect permanent open spaces using a structural framework
Formalise (Regulating)	Zoning and regulating desired architectural outcomes
Informalise (Filling)	Allow for filling. Gradually build new residential units, communal facilities and commercial spaces for micro-commerce.

Figure 1. Image illustrating the build up of residential and communal facilities. Source: Angeli and Hehl, 2013.

3.2.4 Model 2: Upgrading the Modernist Slab | Co-Operative Living

One-story ground floor additions introduce a new scale to the housing complex. While apartments from the first floor up are confined to the original, standardized layout, the ground floor is increasingly modified according to the spatial logic of the favela.

Figure 22. Image showing modernist, multi-storey residential units, constructed in the Cidade de Deus. Source: Source: Angeli and Hehl, 2013.

The modernist layout implemented in Cidade de Deus failed to accommodate the population's needs both functionally and socially. The multi-storey buildings constructed were mono-functional residential units lacking any connection to the urban life. During the years the inhabitants struggled to make this space suitable for their lives, extending their houses to accommodate growing families and adapting the empty spaces with shops, workshops, verandas, taverns and garages.

Actions

Future Shelves

Current Informal

Past Modern

Activate (Programming)	The city programs outdoor collective spaces with specific themes.
Commit (Distribution)	Responsibilities are distributed and assigned.
Participate (Organising)	Residents establish co-operatives that manage and maintain public spaces
Mediate (Effect)	Between the multi-storey and collective spaces, transitional zones creates semi-private and semi-public situations,
Personalise (Filling)	Gradually, this transitional zones are filled with new residential units, small businesses, interior + exterior spaces.

Figure 23. Image showing spatial transformation over time with infill shelving system as future development model. Source: Angeli and Hehl, 2013.

The informal pattern of add-ons and extensions was translated into a different scale to develop a formal framework that could address the sharp boundaries between private and public, built and void – a consequence of the modernistic layout. The project proposes the upgrade of the existing multi-storey structures in order to transform theses boundaries into transitional zones - fundamentally conceived as a continuation of the informal growth. To achieve this a set of rules and tools were initially developed which setup the urban and architectural parameters for the project – see figure below.

LONG FAÇADE EXTENSIONS

Upper floors
- light
- self-supported structure
- max width 3m
- apartment extensions
- balconies
- additional living space

LONG FAÇADE EXTENSIONS

Ground floor
- light/self-supported structure
- apartment extensions
- terraces
- max built area 50%

DOUBLE SLAB REPROGRAMMED

Ground floor
- 25% common facilities (laundry)
- 75% housing exterior space
- 50% gardens
- 50% workshops upper floors
- 100% housing

LONG FAÇADE: GREEN FACE

Upper floors
- 50% balconies
- 50% additional living space

BLIND FAÇADE EXTENSIONS

Upper floors
- new housing units
- max. width 5m
- apartment extensions

BLIND FAÇADE EXTENSIONS

Ground floor
- open access to existing staircases

DOUBLE SLAB APARTMENT REDEFINED

- reorganized floor plans
- new types of apartments
  - duplex
  - studio
  - combined apartment

FREE STANDING VOLUMES

- public facilities
- accessible rooftops
- min height 2 floors

URBAN ROOMS

- ground floor pocket rooms
- hidden facilities
- creating exterior spaces in the interior
- public access

PLAN ADAPTABILITY

- respecting the existing

LONG FAÇADE EXTENSIONS

- ground floor entrances
- gardens
- workshops
- interface

URBAN ROOF

- covered public space
- shadow
- collective facilities
- public access

Figure 24. Image showing the development of guidelines/toolkit, which set the design parameters for architects and municipality. Source: Source: Angeli and Hehl, 2013.

The enclosed multi-story units are turned into micro-communities through the application of the design parameters. This facilitates a new programmatic layer for collective use of outdoor spaces and provides the framework for further densification. The ground floor is retrofitted with communal facilities such as laundry rooms, day cares, collective kitchens and playgrounds as well as commercial activities – all of which respond to the inhabitants' social and functional needs. Lastly, the upper floors are modified to produce new apartment types which are built with prefabricated and recycled materials.

Existing staircases/ service cores are enclosed to create an unused and undefined space that's buttressed by the building's apartments.

Staircases are detached from the main building to allow all residents universal access and free circulation.

Ground floor communal facilities (laundry room, day care, kitchen) face the courtyard, thus increasing the feeling of safety.

Interstitial space between the units is programmed and developed into thematic squares maintained by the cooperative.

Figure 25. Image showing the development of guidelines/toolkit, which set the design parameters for architects and municipality. Source: Source: Angeli and Hehl, 2013.
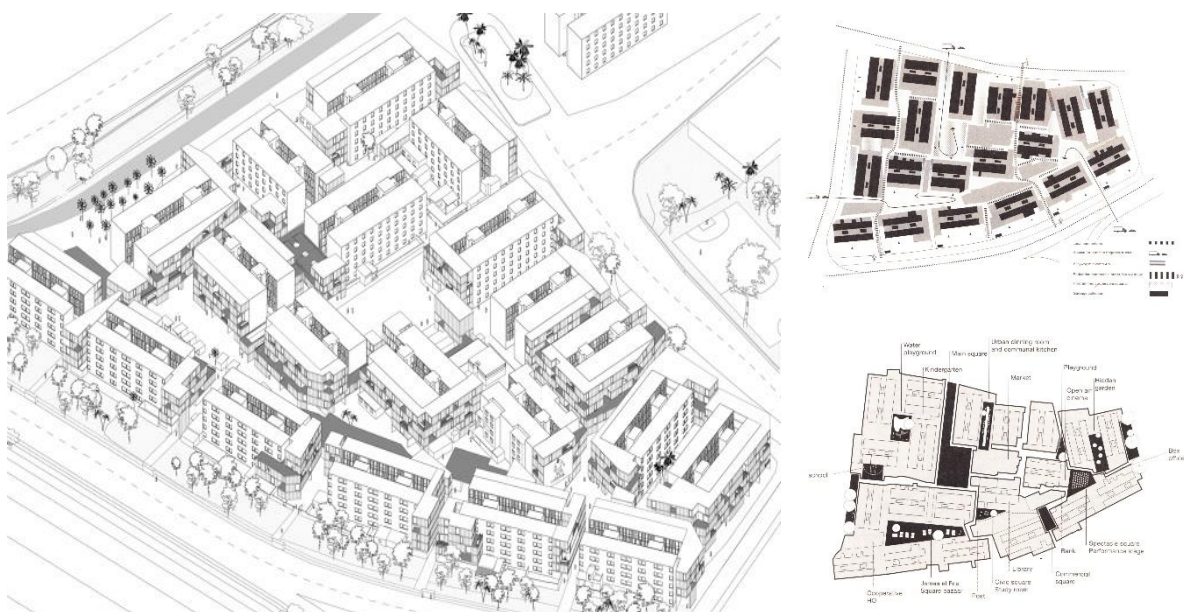
Figure 26. Image showing the application of the design framework conceptualised as the continuation of informal growth. Source: Source: Angeli and Hehl, 2013.

3.3 Casa Familiar: Livingrooms at the Border

San Ysidro, California.

Architect: Estudio Teddy Cruz

Client: Casa Familiar

Year: 2001- Present

3.3.1 Justification of Study

This precedent study was selected to illustrate how architects can facilitate inclusive planning processes between top-down strategies and bottom up interventions and in the process highlight other ways of constructing city spaces. The precedent study highlights the creative possibilities that can emerge when working with a small parcel of land. In this study, Estudio Teddy Cruz, proposes a complex system of housing, with integrated shared spaces in an abandoned and underutilised suburban parcel of San Ysidro, California - that acknowledges the dense, multiuse and often illegal spatial practices present in this area. Moreover, the study illustrates that density and housing are no longer sustainable as the amount of objects per acre and instead they should be redefined respectively as the amount of social exchange per acre and as a system of economic and cultural interactions. This research will place emphasis on how this redefinition affects the way city spaces are constructed and consequently how neighbourhoods can be conceived as producers of new housing policy and economy.

3.3.2 Location and Socio-Spatial Conditions of Study

The parcel was acquired by Casa Familiar, a community based non-profit organisation (NGO) whose role - could evolve from social service provider to alternative developer of affordable housing. The site is an abandoned and undeveloped suburban parcel in San Ysidro – A community in San Diego, California, less than a mile from Mexico. The existing socio-economic conditions resemble shanty town qualities which is overpopulated and poverty stricken. This formerly homogenous suburban area allowed Teddy Cruz to study various ad hoc uses of land in order to create the system of housing that would acknowledge and exploit the informal practices responsible for the creative multi-functionality and density.

"According to Casa Familiar, around two-thirds of San Ysidro households are multifamily and the medium income in this area is sixty percent less than the rest of San Diego County"

(Teddy Cruz in Lepik, 2010:93)

Figure 27. World Map indicating the location of San Ysidro. Source: https://openclipart.org/download/19481/shokunin-world-map-more-detail.svg

Figure 28. Locality map of San Ysidro. Source: Google Earth
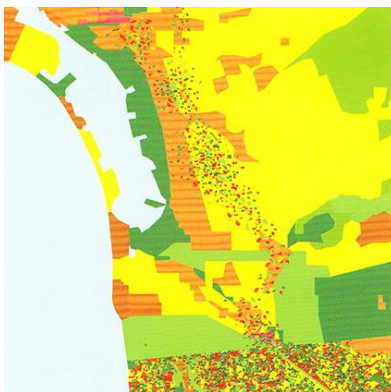
Figure 29. Image showing Tijuana's mixed-use density infiltrating South California. Source: (Lepik, 2010)
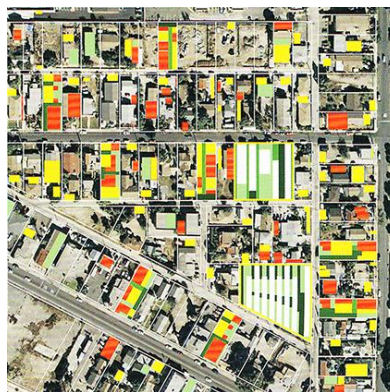
Figure 30. Image indicating Parcel-by-Parcel investigation of land use in San Ysidro. Source: (Lepik, 2010)

Figure 31. Image showing street view of existing land use. Source: (Lepik, 2010)

3.3.3 Other Ways of Assembling the City

 Teddy Cruz aims to redefine the role that Casa Familiar plays in the production of housing by creating a micro-policy that enables the NGO to act as 'city hall' and facilitate construction permits, alternative mixed uses and densities. The design of the parcel can be conceived as small infrastructures that mobilise social entrepreneurship into new spaces for housing, cultural production and political participation. The Micro-Policy aims to show the development of a zoning policy for the area of San Ysidro. This policy is a product of the collaboration between top-down institutions and bottom-up practices and shows how the role of the architect can be expanded to mediator - between the intermingling of the two forces.

Figure 32. Image illustrating Micro-Policy for the development of the neighbourhood parcel in San Ysidro. Source from (Lepik, 2010).

The following pages describe how the micro-policy can be spatialized within the confines of a small parcel in the marginal neighbourhood of San Ysidro. Estudio Teddy Cruz assert that this form of spatialisation can enable alternative ways of constructing the city and in fact point towards other ways of performing citizenship and ownership. The policy also acts as a device to rethink zoning – as a generative tool that enables the design of new social contracts. The Micro-Policy Co-operative Model: consists of four steps:

a. Siting the Informal: Casa Familiar (CF) coordinates mapping and records the illegal transformations/ non-conforming additions and mixed uses. b. The municipality legalises the non-conforming units through a new housing overlay zone. c. The new category facilitates the plug-in additions which enables new possibility for housing different economies d. Casa Familiar manages subsidies and micro-credits by breaking large construction loans. Residents then partner with CF to co-own resources.
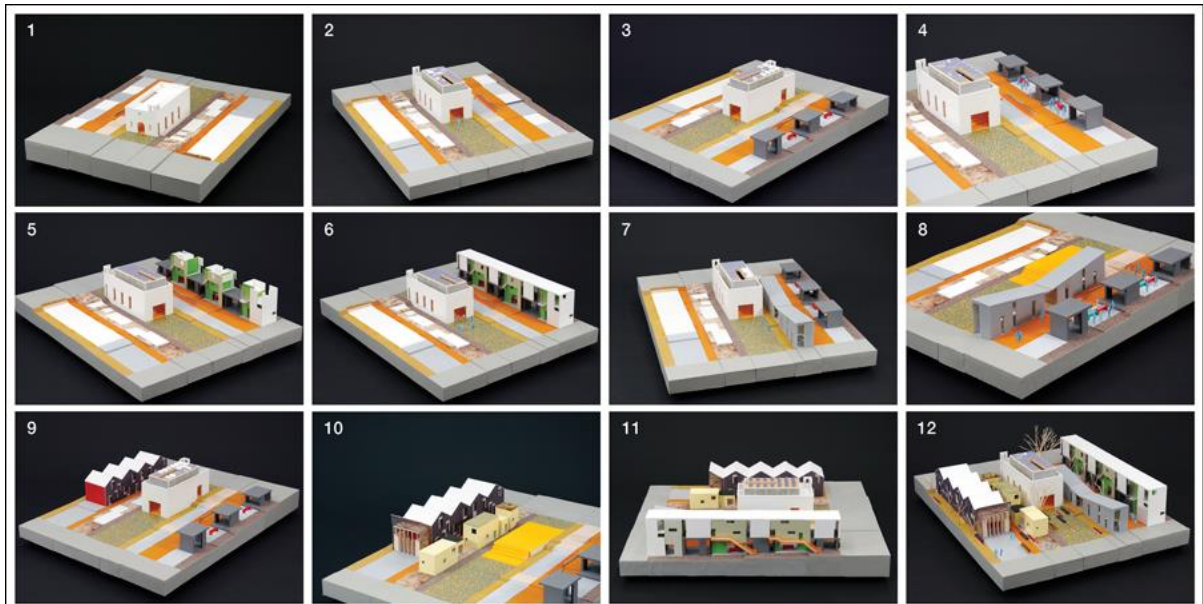
Figure 33. Image illustrating Estudio Teddy Cruz affordable housing and zoning concept for a neighbourhood parcel in San Ysidro. Source: http://blog.ted.com/architect-teddy-cruz-shares-5-projects/

Steps towards conceptualising a neighbourhood parcel.

1. Casa familiar acquired a small parcel with an existing church. The parcel is subdivided into thin oblong divisions in anticipating a finer grain of property and circulation.

2. The Church is retro-fitted into Casa Familiar's offices and at the same time becomes an incubator of cultural production. This provides Casa Familiar the opportunity to generate new categories of socio-economic programmes.

3. Open/support frames are equipped with electricity, collective kitchens and movable urban furniture.

4. Casa Familiar can inject these frames with specific cultural and economic programming which can produce a new interface with the public. As such, these frames can take on different functions on different days. For instance, on Thursdays it can facilitate community workshops, and on Saturdays they can facilitate informal markets. On an everyday basis these support frames can host collective kitchens which in turn are able to support entrepreneurship.

5. Housing is not sustainable as units only, it needs to be plugged with economic and cultural support systems. The church, social rooms, collective kitchens and community gardens act as the support systems – the small infrastructure for the housing.

6. **Housing Type 1** can be designed to accommodate young couples and single mothers with children. These dwellers as participants can then co-manage alongside Casa Familiar the socio-economic programs.

7. **Housing Type 2** can be designed as Live-Work Duplex units for artists, who can exchange rent for social services. This integrates the artists towards new models of financing, social contracts and unconventional mixed uses.

8. The artists along with Casa Familiar setup pedagogical interfaces with children and families, plugging the site with educational services, art and social practices. Through this process, the artists together with the dwellers and Casa Familiar act as co-producers.

9. **Housing Type 3** can be designed to house large families with grandmothers. This housing type can be equipped with shared kitchens to support two small extended families.

10. **Housing Type 4** can be designed as accessory buildings – alternative housing. Casa familiar can subsidise a small room for the gardener who can then collaborate with the dwellers to maintain the community gardens.

11-12. The parcel is designed to accommodate alternative mixed uses and densities; co-production and com-managing by dwellers, artists and Casa Familiar.

3.4 Empower Shack

Khayelitsha, Cape Town, South Africa

Architect: Urban Think Tank

Client: BT Section Site C in partnership with Ikhayalami

Year: 2013-Ongoing

3.4.1 Justification of the Study

The project was selected because it stands as an alternative response to housing megaprojects – much like Cornubia. The project was developed as an adapting response to urban informality, offering a strategy that enables citizens to engage in a self-built process - gradually re-structuring their urban environment as a response to their needs. The project aims to develop a comprehensive and sustainable informal settlement upgrading strategy centred on four core guidelines: a two-story, modular housing prototype, participatory spatial planning, ecological landscape management, and integrated livelihoods programming.

3.4.2 Location of Study

Figure 34: Image showing world map location of project. Source: https://www.google.co.za/search?q=world+map. Adapted by author, 2016.

3.4.3 Tactical Upgrade
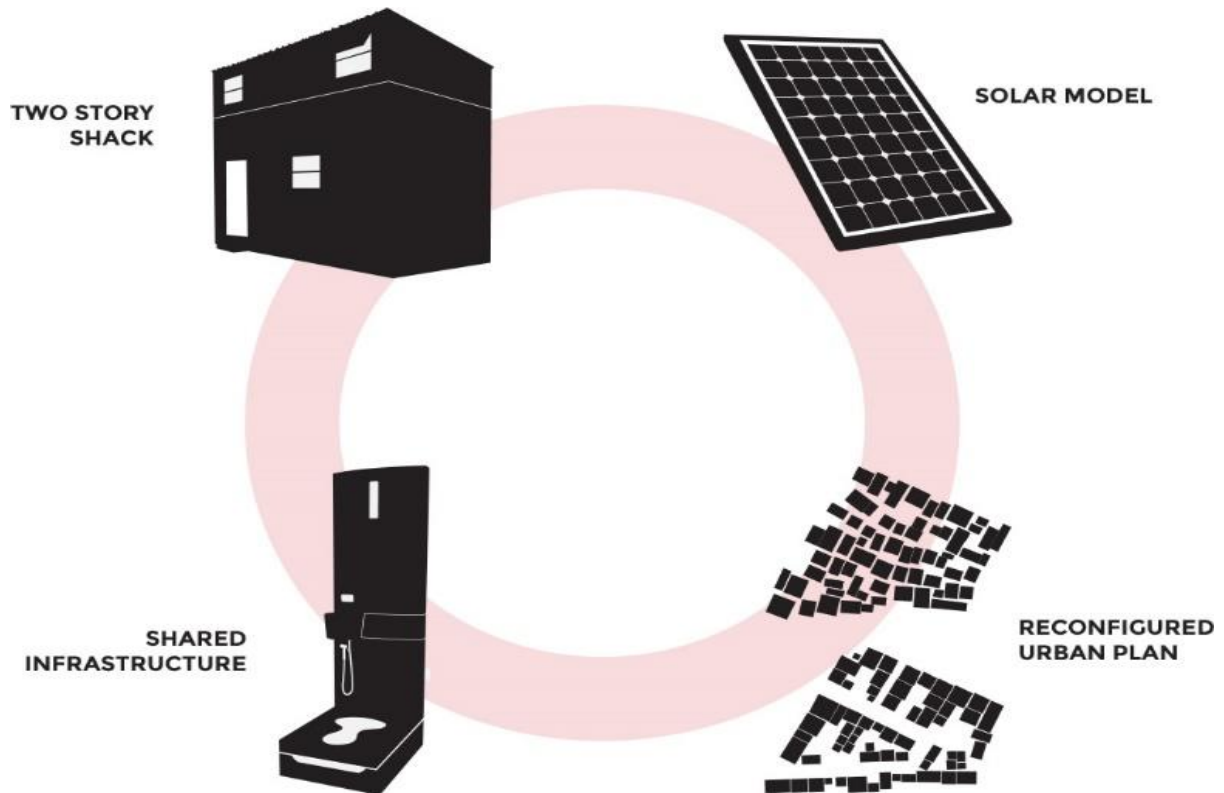
Figure 35. Image above illustrates Built project. Below: Empower shack's integrated design system. Source: http://u-tt.com/project/empower-shack/

The design strategy for the project is based on an incremental process of devising and testing a series of prototypes to identify the optimum mix of structural elements and materials. The development of the prototype constituted a two story metal-clad modular wood frame structure that is economical for the residents and can be self-built.
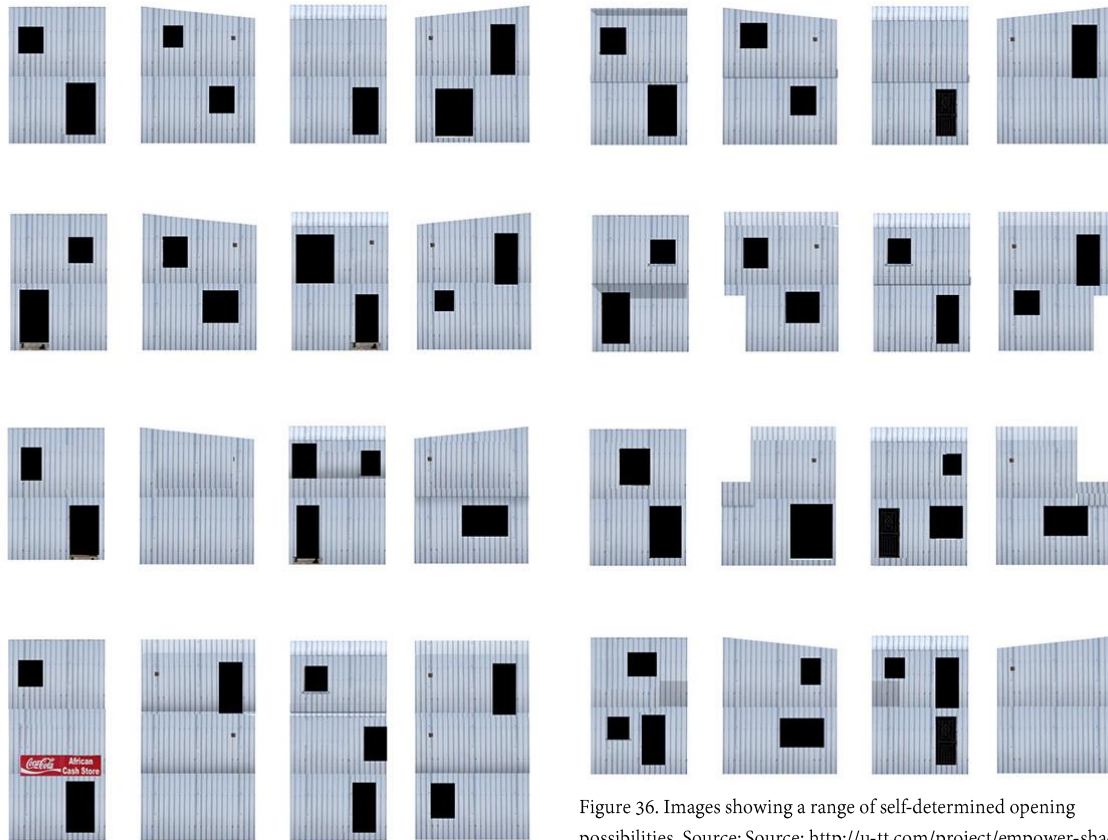
Figure 36. Images showing a range of self-determined opening possibilities. Source: Source: http://u-tt.com/project/empower-shack/
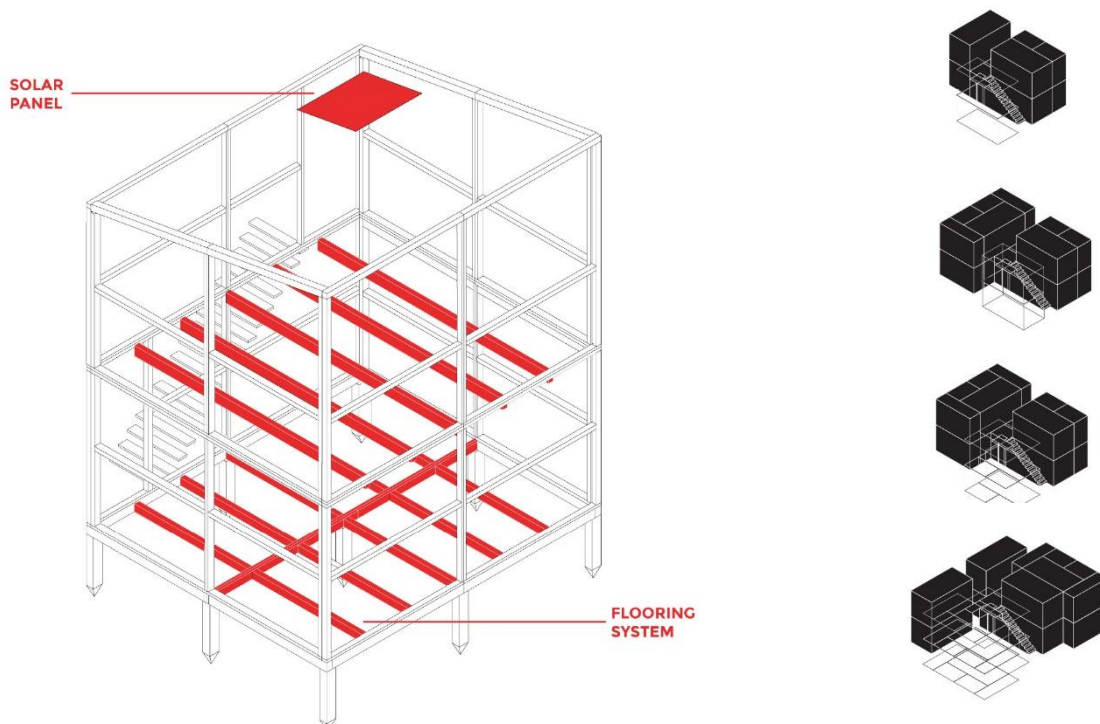
Figure 37. Images showing modular design. Source: Source: http://u-tt.com/project/empower-shack/

The urban framework combines the prototype design with a re-blocking strategy to provide a controlled trajectory to densification - producing newly carved courtyards, interstitial space for firebreaks, the laying of basic infrastructure as well as the possibility of retrofitting the ground floor with working spaces or small enterprises.
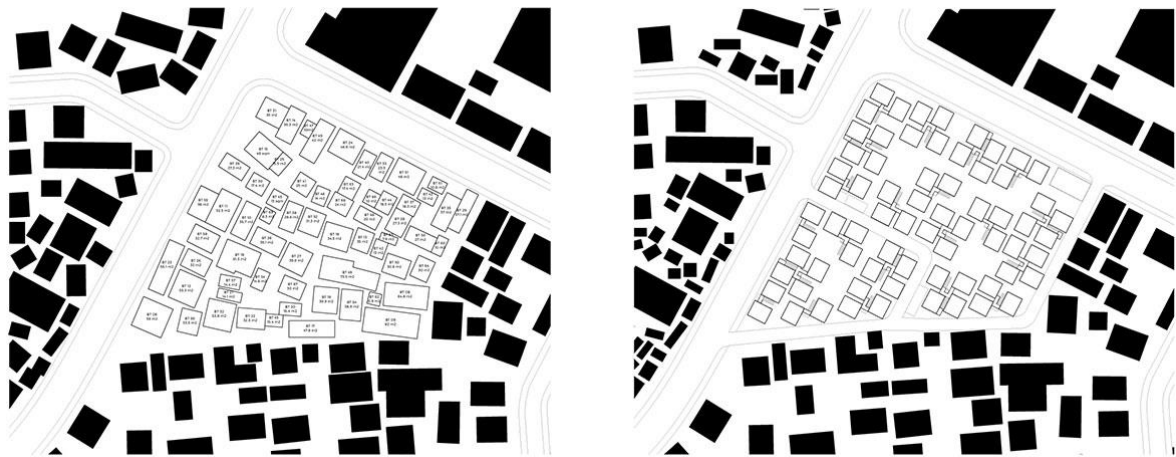
Figure 38. Left: Plan showing existing informal settlement. Right: Upgrade plan/re-blocking possibility.
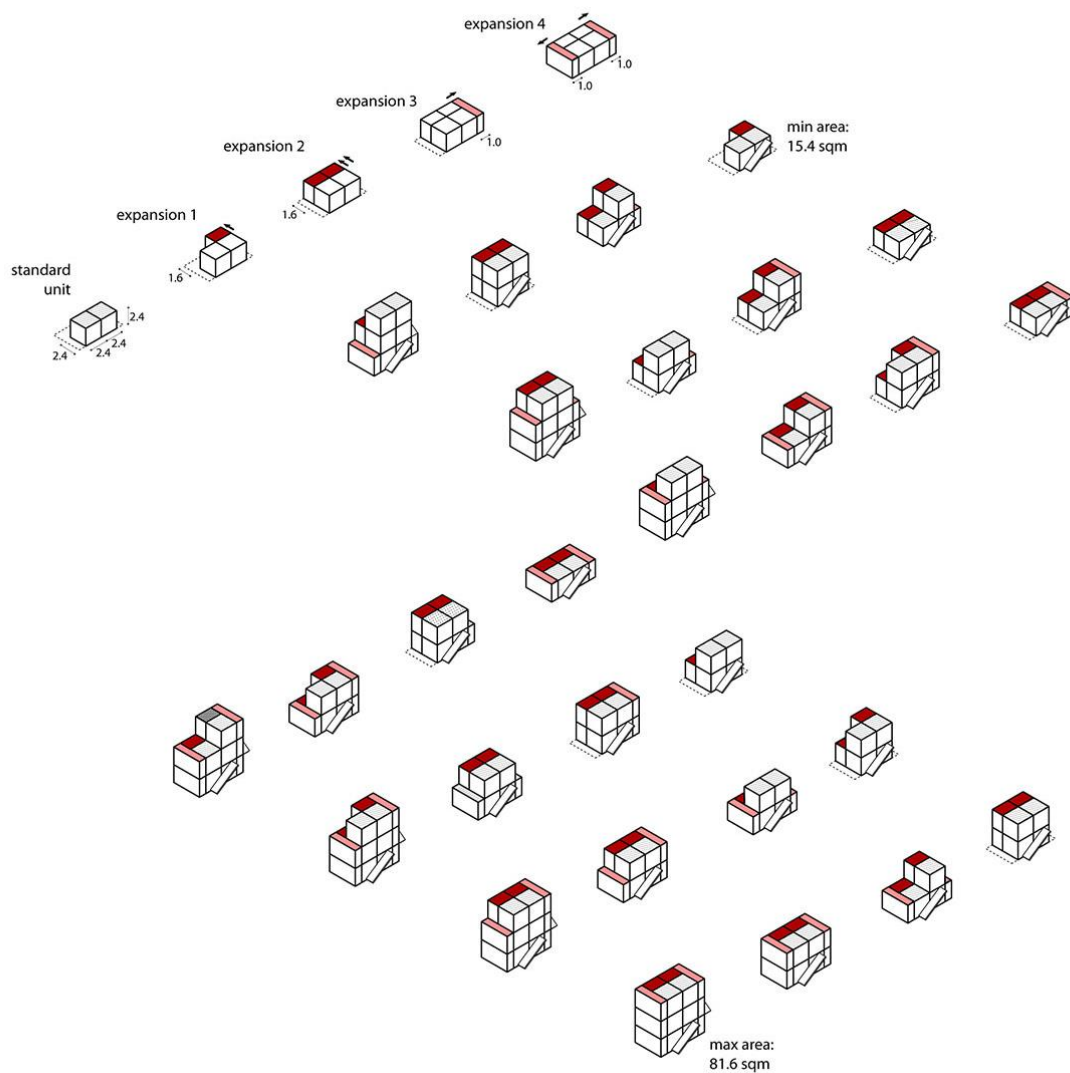
Figure 39. Image showing addition/expansion possibilities. Source: Source: http://u-tt.com/project/empower-shack/

3.5 Conclusion

This precedent studies have indicated how the architect's role can shift from purely constructing new buildings to affecting environments through a readjustment/an upgrade of existing structures and policy. This has revealed that by positioning practice between two highly polarised contexts can serve as a point of entry to investigate zones of conflict and marginality – towards developing creative responses to homogeneity and fragmentation of urban spaces.

The three studies highlight an appropriation of space that emerges from people's socio-economic contingencies and 'non-conforming uses' together with a participatory approach - pointing towards a different and rather mutated urban fabric. In *Cidade de Deus*, the research design team investigates the ways these different illegal uses start to setup multiple interfaces that break the stark boundaries between solid and voids –private and public – and use this to inform their design interventions. With the *Livingrooms at the Border,* as these illegal uses gradually infiltrate the largeness of San Diego they begin to retrofit it with difference – challenging the mono-culture and mono-use of San Diego in a more complex system of socio-economic relations. Lastly, Urban Think Tank's *Empower Shack* project seeks to provide an alternative housing response to an informal settlement by developing a self-built modular design system. This approach encourages active participation in the upgrade process and points towards a solution that is responsive to existing conditions, does not break existing social networks through the relocation of inhabitants, and builds agency and capacity.

Key Overlapping Concepts

- Intermingling of Top-Down-Bottom-Up approach.
- Working with/learning from existing conditions.
- Incremental growth.
- Upgrading existing structures.
- Design prototypes for multiple possibilities.

The retrofitting – alterations and extensions – propose, silently and invisibly the possibility of people's practices-out-of-need along with top-down technical support could in fact provide the DNA required for the transformation of top-down design processes into more inclusive models of urbanisation.

CHAPTER 04

CASE STUDY: CORNUBIA PILOT PHASE

4.1.1 Introduction and Justification of Study

Cornubia was selected as a case study primarily because it serves as the location for the researcher's design intervention. The case study was also selected because it illustrates a type of spatial organisation and scale that is indicative of a mega-project solution which is meant to respond to increasing urbanisation trajectories - alleviate the housing backlog and generate economic growth in South Africa, particularly in the city of Durban. It has been highlighted in the literature review chapter that mega-project solution to socio-economic issues while being a national government goal is easier said than done as these issues are often compounded by paradoxical views from the multiple actors involved in the development.

This research will place emphasis on how these paradoxical views have managed to shape what is supposed to be a 'new city' for approximately 100 000 people. The research will focus on the Pilot Phase – which only constitutes housing - of this development which has been occupied since 2013. Within this phase the research aims to analyse the spatial pattern provided and how the residents have staked their own claim on these patterns in order to make it work for their everyday needs.

This development is a joint venture between the National Department of Human Settlements, the KwaZulu-Natal Department of Human Settlements, eThekwini Municipality and Tongaat Hulett Development (THD), and it is set to be eThekwini's largest sustainable integrated human settlement initiative (Mtshali and Xundu from Department of Human Settlements, 2014).
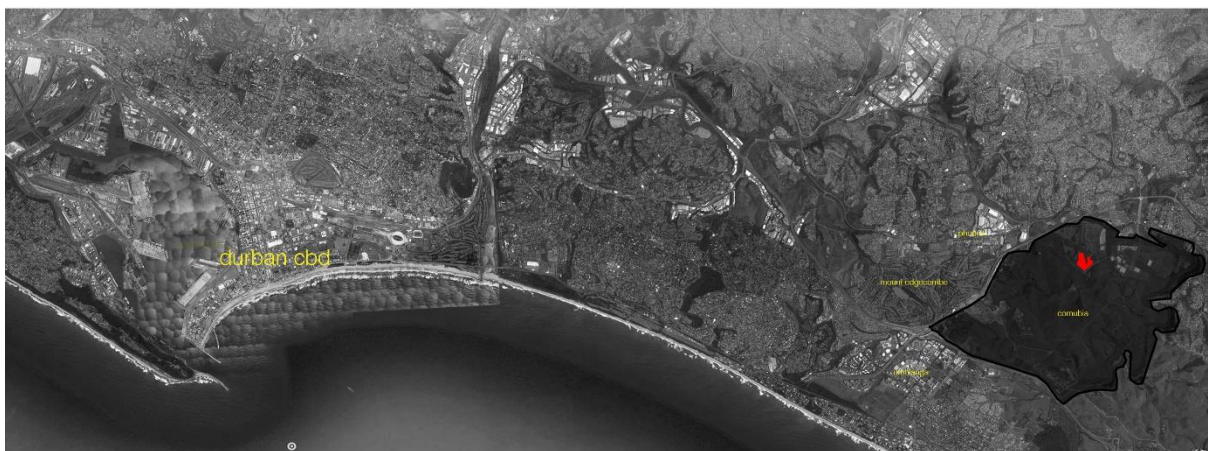
Figure 40. Image illustrating Cornubia's detached position and scale relative to Durban's City Centre. Source: Google Earth

4.1.2 Location and Project Plan

Formerly a sugar can field, Cornubia is located within the Northern Corridor of Durban, within the eThekwini Municipality, approximately 25km from the Durban CBD. It is bordered by the N2 freeway and M41 arterial as well as the Ohlanga River, 15km south of King Shaka International Airport and Dube Trade port megaproject. The development is situated between historically disadvantaged townships, new post-modern high income housing estates, regional shopping centres and the decentralised offices parks of the Umhlanga Ridge (Sutherland et al, 2014). According to Sutherland et al (2014) Cornubia has been strategically situated at different scales within a number of development corridors since 2006 in local and provincial government plans for the north of the Municipality. The project consists of five phases - the pilot phase that consists of 488 subsidised housing units, followed by phases 1-4, which involved the development of a mix of land uses. Sutherland et al (2014) state that by January 2014, 482 units of Phase 1A had been built and 151 beneficiaries where relocated from informal settlements across the city into Cornubia.
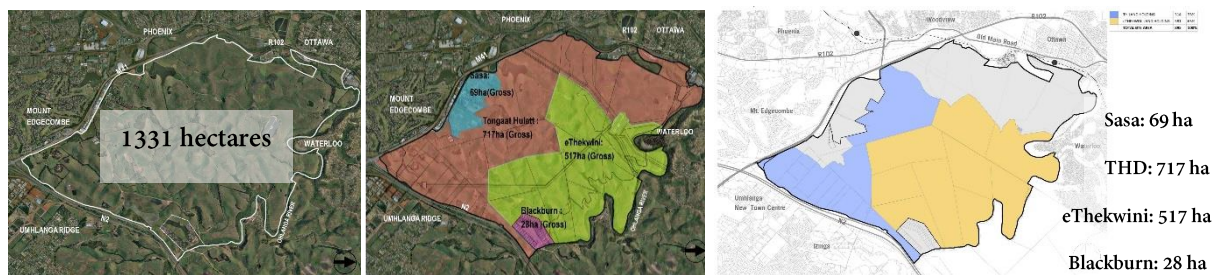
Figure 41. Images illustrating land boundary and ownership. Source: Iyer Urban Design Studio, 2014
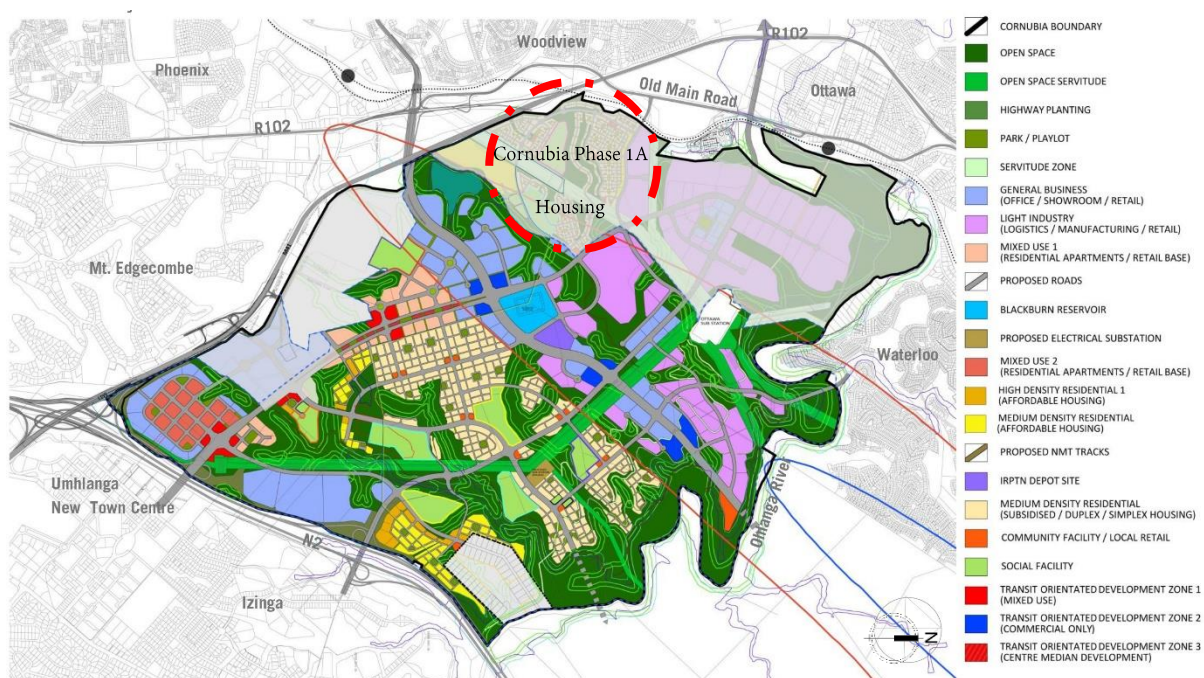
Figure 42. Plan Illustrating Cornubia's Project Plan. Source: Iyer Urban Design Studio, 2014

4.1.3 Cornubia: The New Generation Mega-Project

The Department of Human Settlement has termed Cornubia as an 'Integrated Human Settlements Development', first conceptualised within the National Department of Human Settlements' Breaking New Ground (BNG) programme. Sutherland et al (2014) assert that the BNG programme gave rise to large scale human settlement projects, resembling a mega-project approach with the intention to overcome the shortcomings of the post-democracy national housing programme - *reconstructed development programme (RDP)*. As such, the mega-project was intended to address sub-standard housing along with persistent urban segregation in South African cities (ibid, 2014:185). Subsequently, Cornubia has been identified as a possible 'Greensite' mega-project solution to these shortcomings. It has also been identified as a national priority project "to exemplify this new approach to housing the poor (ibid, 2014:185)." The Cornubia initiative is an expression of a partnership between the public and private sectors.

The image below highlights Cornubia's Planning Objectives and Principles. They are as follows:

- Integrate surrounding context via a hierarchy of roads and permeable internal network.
- High Density Mixed-Use development around Bus Rapid Transport Stations.
- Promote walkability.
- Arrange land use around appropriate locations to promote economic opportunities.
- Pursue Higher Densities in order for the development to be sustainable.
- Efficient use of green spaces.
- Promote Social Clusters as part of neighbourhood structure.
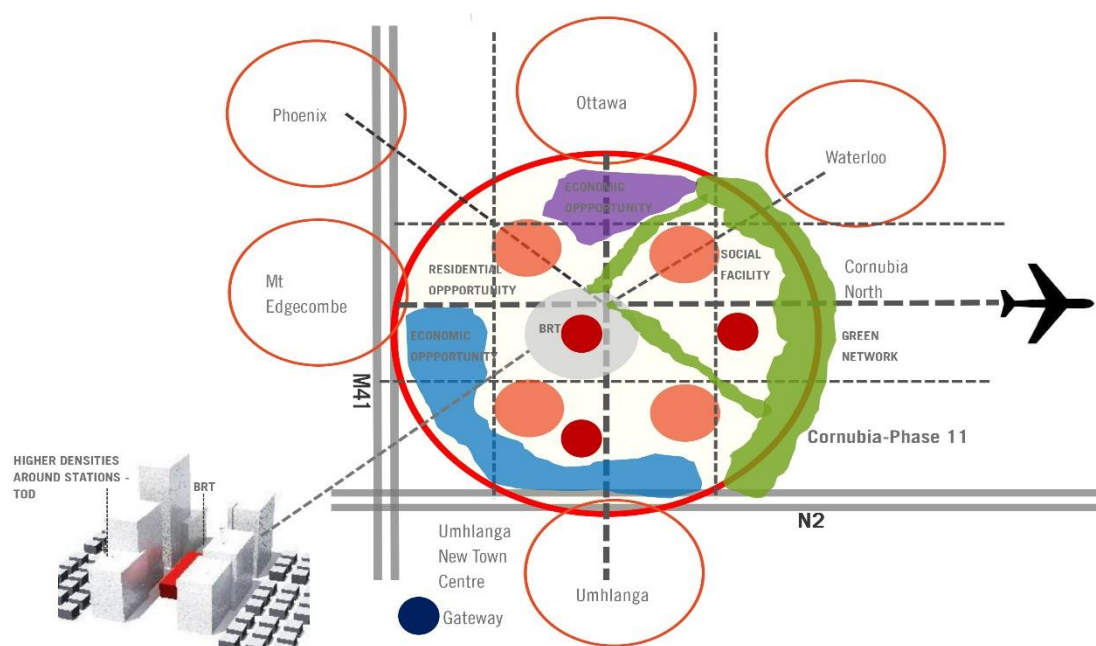
Figure 43. Image illustrating Cornubia Planning Objectives and Principles. Source: Iyer Urban Design Studio, 2014

"The Cornubia Development will contribute to the integration of the City and seeks to end the legacy of spatial and economic imbalances of historical planning by bringing communities close to job opportunities, social amenities, major services and public transport"

(Mtshali and Xundu from the Department of Human Settlements, 2014).

In contrast to the quote above, Sutherland et al (2014) state that such ambitions - to address Apartheid's legacy of socio-economic imbalances - at such a large scale is often easier said than done as there exist a wide spectrum of stakeholders' interest which have the tendency to overshadow social agendas. Therefore the question remains as who actually benefits? Sutherland et al (2014) have explored precisely how the new megaproject approach in Cornubia "reveals the multiple ways in which space is constructed in a megaproject that is intended to address both pro-growth and pro-poor goals" (ibid, 2014:175)

The Mega-project strategy in Cornubia has led to multiple views by the various actors involved in the project highlighting the struggle of competing interests and agendas in a mixed–use megaproject.

Pro-Growth   **Pro-Poor**
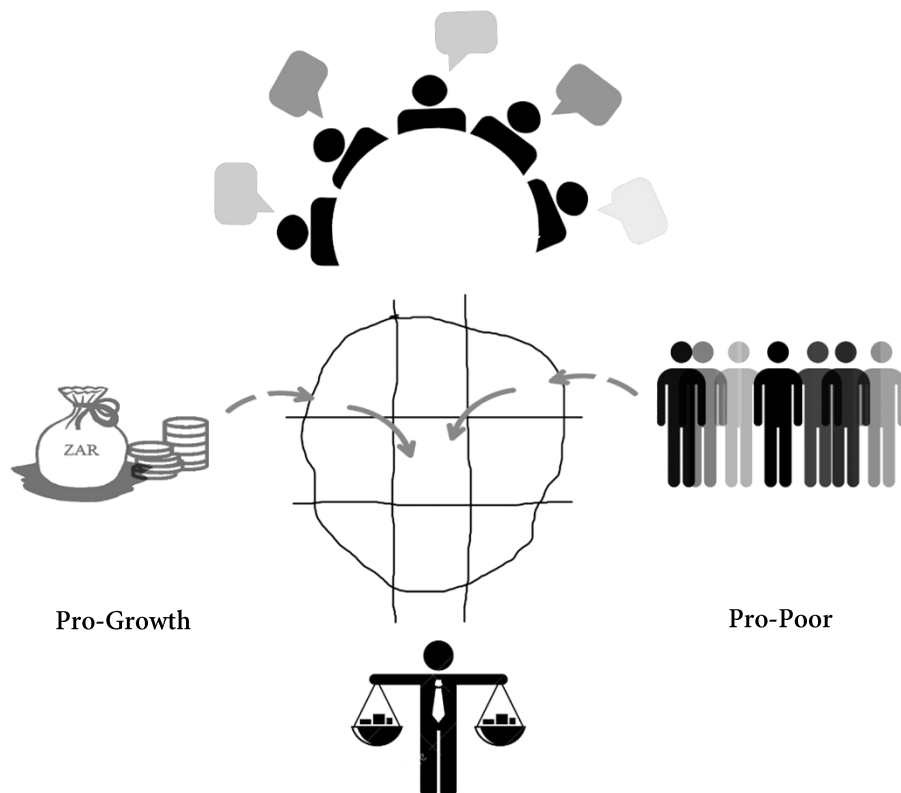
Figure 44. Image illustrating the megaproject multiple views and competing interests. Source: Author, 2016

The views of local civil societies such as Abahlali baseMjondolo (AbM), for instance, reflect a concern for the considerable land holdings by private ownership which compromises - and has compromised - housing provision by public parastatals - and further reiterates a bifurcated relationship between the rich and the poor as planning resembles separate gated worlds. In contrast, views from private ownership, Tongaat Hulett Development (THD), appears to reflect a continuous interest in economic development as they promote strong linkages with existing commercial enterprises, such as the Umhlanga Gateway Mall Development (Sutherland et al, 2014).

Another view that is significant to mention is that of the technical experts involved in the conceptual development; since the planning of Cornubia was contended between two partially disjunctive plans. These two plans were conceived by two different consulting teams, whose ideas, albeit aligning in most cases, showed some notable divergences. The first of these plans was developed by planning consultants from SSI – an engineering and consulting firm – as the Verulam-Cornubia Local Area Plan (LAP), and the other was developed by Iyer Urban Design Studio, as the Cornubia Framework Plan (CFP). Sutherland et al (2014) note that both of these plans where at the time approved – on the same day - by the Municipality of Economic Development and Planning Committee albeit their contradictive and misaligned resemblance in key areas – see Figure 45 below.
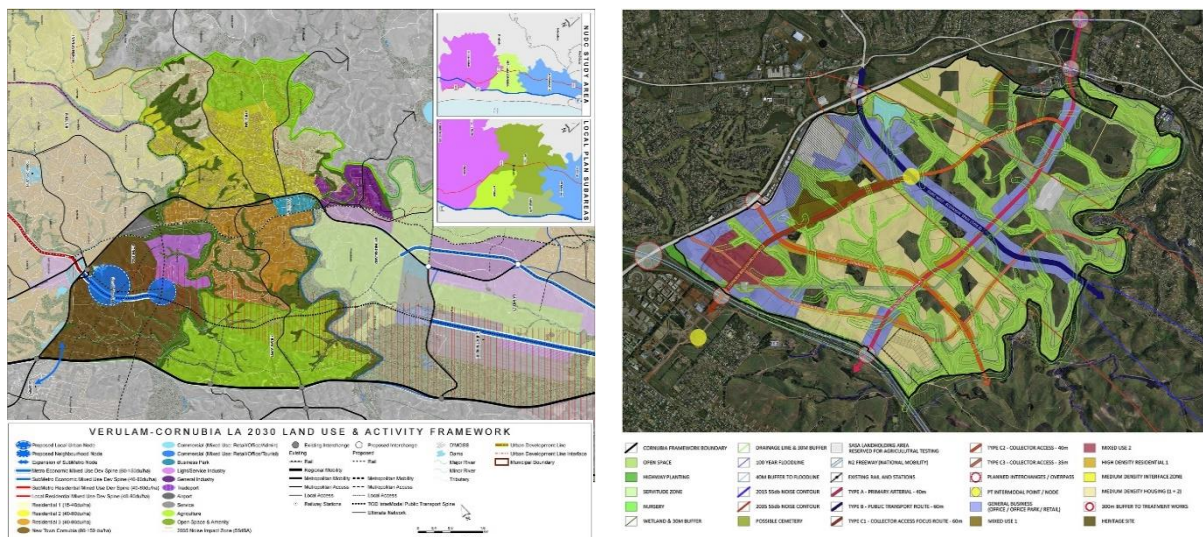
Figure 45. Image illustrating the Verulam-Cornubia Plan on the left and the Cornubia Framework Plan on the right. Source: Sutherland et al (2014)

The plans main areas of divergences where around the conceptual nature and location of the developmental nodes and the amount and location of main land uses. With regards to developmental nodes, the LAP proposed a new town centre in the south central part of the site and a neighbourhood level centre located further north. This town centre was conceptualised as a public transport hub that would provide social and commercial

services and residential development. The CFP proposed two nodes – a mixed-use one in the south-eastern corner of the site with a bridge connection with the Gateway Mall across the N2 highway and a public transport hub in a similar position to the LAP's proposed town centre. As with the latter area of divergence, the LAP disputed the need for large scale single function office park developments bordering the N2 highway, promoting instead the development of mixed-use spaces. However, the CFP opted for areas bordering the N2 to be zoned for General Business use and surround the mixed-use node, reflecting THD's interest of "maximising large scale business development" (ibid, 2014:192).

The CFP recognised the potential of Cornubia as an integrated human settlement which Sutherland et al (2014) argued echoed the "integration discourse of housing officials from all three spheres of government" (ibid, 2014:191). Moreover, the development was seen as having the potential to 'stich communities together' though the proposed road networks - that would link the surrounding communities-and create community cohesion through "a series of residential clusters surrounding social facilities" (ibid, 2014:191) – see Figure 1 below. While this alignment with state's discourse alone did not guarantee the CFP being chosen as the spatial structure to translate the development into reality, it did have a wavering impact. But ultimately the decision to choose the CFP over the LAP came down to the power of the partnership between the Municipality and THD.

SHARED & CLUSTERED SOCIAL FACILITIES

2 PRIMARY S. + 1 SECONDARY S. + 4 SPORTSFIELDS + CLINIC + SWIMMING POOL

COMM. HALL + CLINIC + 2 PRIMARY S. + 1 SECONDARY S. + 4 SPORTSFIELD + GOVERNMENT OFFICES + LIBRARY

2 PRIMARY S. + 1 SECONDARY S. + 4 SPORTSFIELDS

2 PRIMARY S. + 1 SECONDARY S. + 4 SPORTSFIELDS + COMM. HALL

2 PRIMARY S. + 2 SPORTSFIELDS + LIBRARY + CLINIC + SWIMMING POOL

2 PRIMARY S. + 2 SPORTSFIELDS + LIBRARY + CLINIC

CHC   COMMUNITY HEALTH CENTRE

FS   FIRE STATION

P   POLICE STATION

- PS 1: Primary School with 960 Learners
- SS: Secondary School with 1000 Learners
- PS2: Primary School with 960 Learners
- HALL: Community Hall seats 500 People

Figure 47. Plan illustrates the Social Cluster for Cornubia Phase 1A. Source: http://www.eastcoastarchite-cts.co.za/

Figure 46. Plan showing allocation of Social Clusters for the complete Cornubia Development illustrated in green. Source: Iyer Urban Design Studio, 2014

4.1.4 Encountering Cornubia

"The framework makes provision for 24 320 units, of which 14 544 units are proposed for subsidised and partially subsidised housing, 4400 units identified for social and GAP housing market, and the balance earmarked for mixed use development. A diverse typology of housing has been proposed for the Cornubia Development."

(Iyer, 2014:8)

With approximately 25 km distance between Cornubia and Durban's CBD, the location certainly appears detached and to a certain extent quite dislocated - particularly the Pilot Phase. If travelling via the M41 metro route, the initial signs of new human occupation in this development start to reveal themselves as somewhat repetitive rhythms of muted expressions, denoted not by people, but by the very houses that occupy the hilly terrain of the former sugar cane fields. While their incessant appearance immediately casts a stark contrast with the now, rather barren fields, it also evokes a sensation of mass-production - of 'ticky-tacky' little boxes.

However, it should be noted that before this image is revealed, the opportunity to speculate on this development is also provided by the billboards on the road - expressing 'opportunities' yet to come. Their presence of course, alludes to bigger forces at hand that have ownership of these fields and are now offering promises of new places for people to exercise their daily routines, create new memories, invest, expend, work, live and presumably play. Once the billboards disappear from the rear view, the image of this place becomes ever more engrained.

As a closer perspective is assumed what starts to unfold is a process of territorialisation that has been entrenched and is deeply 'on its way' - as demarcations between exterior and interior become ever more distinct. The representation is a twofold. On the one hand, the image of more platforms being prepared for the arrival of the rest of the 'ticky-tacky' houses is a signal of things yet to come, and on the other, the physical presence of already built houses, particularly the Pilot Phase, denotes human occupation attempting to work with and make do with this new built environment.
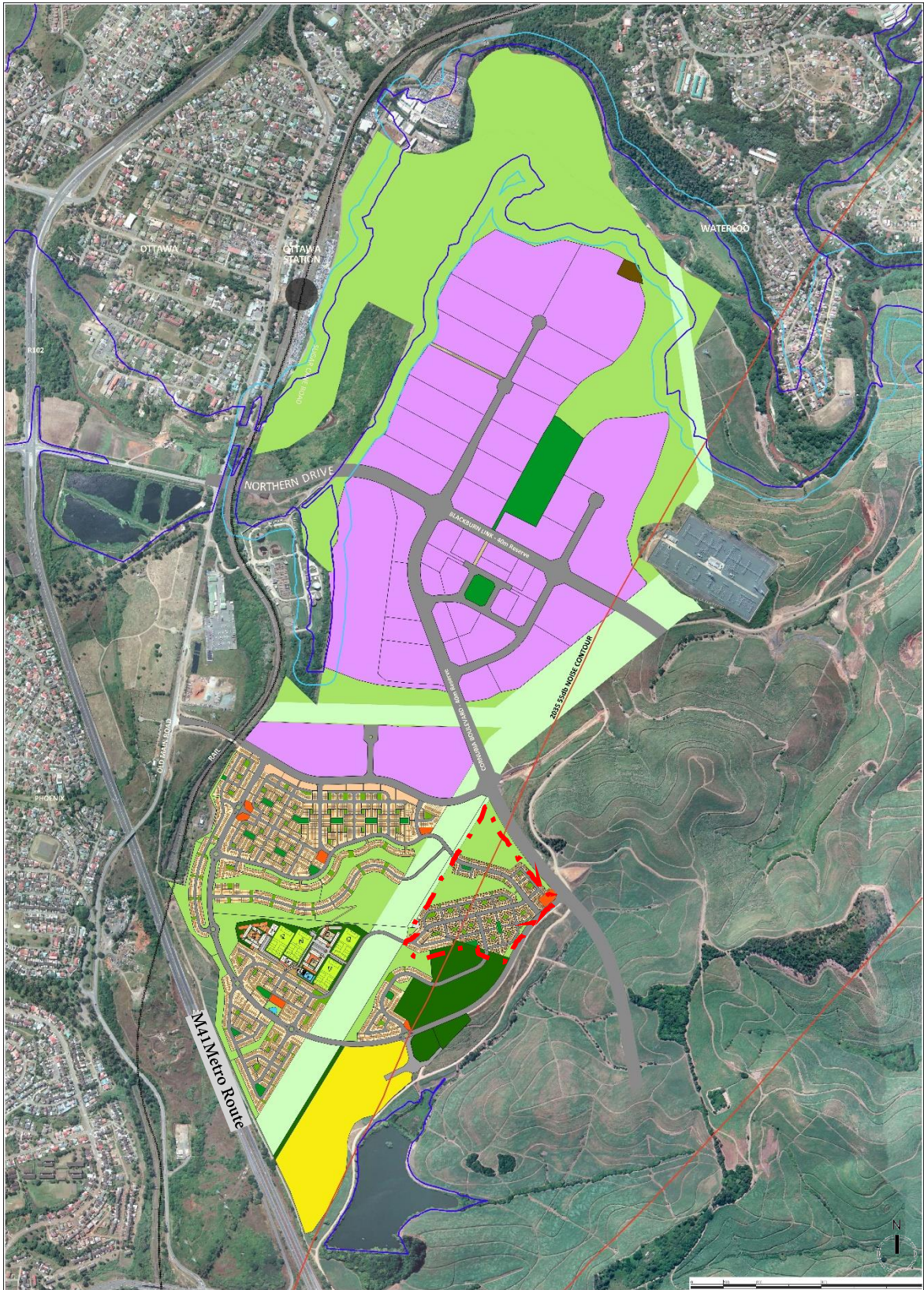
Figure 48. Plan illustrating Pilot Phase, highlighted in red, in relation to the rest of Cornubia Phase 1 proposed development which includes light industrial, hatched in purple, medium rise residential, hatched in yellow and the social cluster positioned in the middle. Source: Iyer, 2016.

Figure 49. Image illustrating Cornubia Phase 1A: Housing, June 2016. Source: Google Earth

Figure 50. Image illustrating Pilot Phase: Housing June, 2016. Source: http://196.11.233.27/gis_website/publicviewer/

Figure 51. Ticky-tacky little boxes along the M41 metro road. Source: Author, 2016.

Figure 52. Image illustrating billboards. Source: Author, 2016.

Figure 53. Image illustrating billboard announcing the opening of Cornubia Mall in 2017. Source: Author, 2016.

Figure 54. Territorialisation of the landscape. Source: Author, 2016

Figure 55. Between completion and things yet to come. Source: Author, 2016

Figure 56. Cornubia Pilot Phase: working with and making do - with the new built environment. Source: Author, 2016

4.1.4.1 Pilot Phase: Socio-Economic Profile of Homeowners.

	Beneficiaries in Sample study	Male Beneficiaries	Female Beneficiaries		
Population Sample	265	114	151		
Age	**Average Age**	**Ages 17-25**	**Ages 26 – 40**	**Ages 41 – 60**	**Ages 61 - 80**
	39	12%	49%	31%	8%
Gender	**Males**				
	43%	57%			
Race	**African**	**Indian**	**Coloured**		
	94%	5%	1%		
Education	**Nil**	**Primary**	**Secondary**	**Matric**	**Post matric**
	7%	20%	50%	6%	17%
Employment	**Unemployed**	**Employed**			
	72%	28%			
	Looking for jobs	**Looking for any job**	**Looking for semi-skilled jobs**	**In need of training**	
	85%	62%	7%	81%	
Income source	**Employment**	**None**	**Social grants**	**Self-employed**	**Other**
	16%	27%	29%	6%	22%?
Marriage	**Single**	**Married**	**Living with a partner**	**Divorced**	**Widowed**
	90%	8%	32%	1%	1%
Dependents	**Total**	**Below 18**	**Above 18**	**Male**	**Female**
	527	63%	37%	46%	54%

Figure 57. Table illustrating Socio-economic profile of homeowners in Cornubia phase one housing project. Source: Real Consulting, 2014.

The report produced by real consulting – as part of a social impact assessment report - asserts that the residents who have been living in Cornubia phase one: pilot phase – since 2013 – manage to raise the following concerns.

- Gratitude for having been prioritised for housing.
- Concerns about issues related to living in the middle of a building site – dust, noise, safety of children from construction vehicles.
- Concerns about being at a distance from amenities and services such as schools, clinics and shops, without access to regular transport options.
- Concerns about employment.

4.1.4.2 Negotiated Spaces: Temporary Structures with Plug-in Programs

The maps below highlight in red, temporary structures, which originally were meant to only accommodate a primary school. However, as a response to the needs of the residents of Cornubia's Pilot Phase and through conversations with the school management the temporary structures took on the additional roles of a crèche and place of worship. These temporary spaces highlight the only *visible* signs of multi-functionality of land use within immediate proximity to the housing units. The primary school, the crèche and place of worship are housed in pre-fabricated units and are supposed to be in operation until the new, permanent school – which was meant to be operational in January 2016 - and 'social clusters' are constructed.

Without venturing into the politics of why the schools have not yet been constructed, it is important to note that these spaces albeit temporary show how different programs can be plugged into one space which starts to suggest timely, pragmatic solutions to the lacking of services. While existing rather non-descript, these prefab units offer the residents an outlet to perform daily-weekly routines at convenient proximities; the possibility to engage with people from other disciplines – however small that might be – and to continue living life in a more holistic manner – with some access to educational and religious 'facilities'.

Prefabricated units
for classrooms

Containers used for Toilets
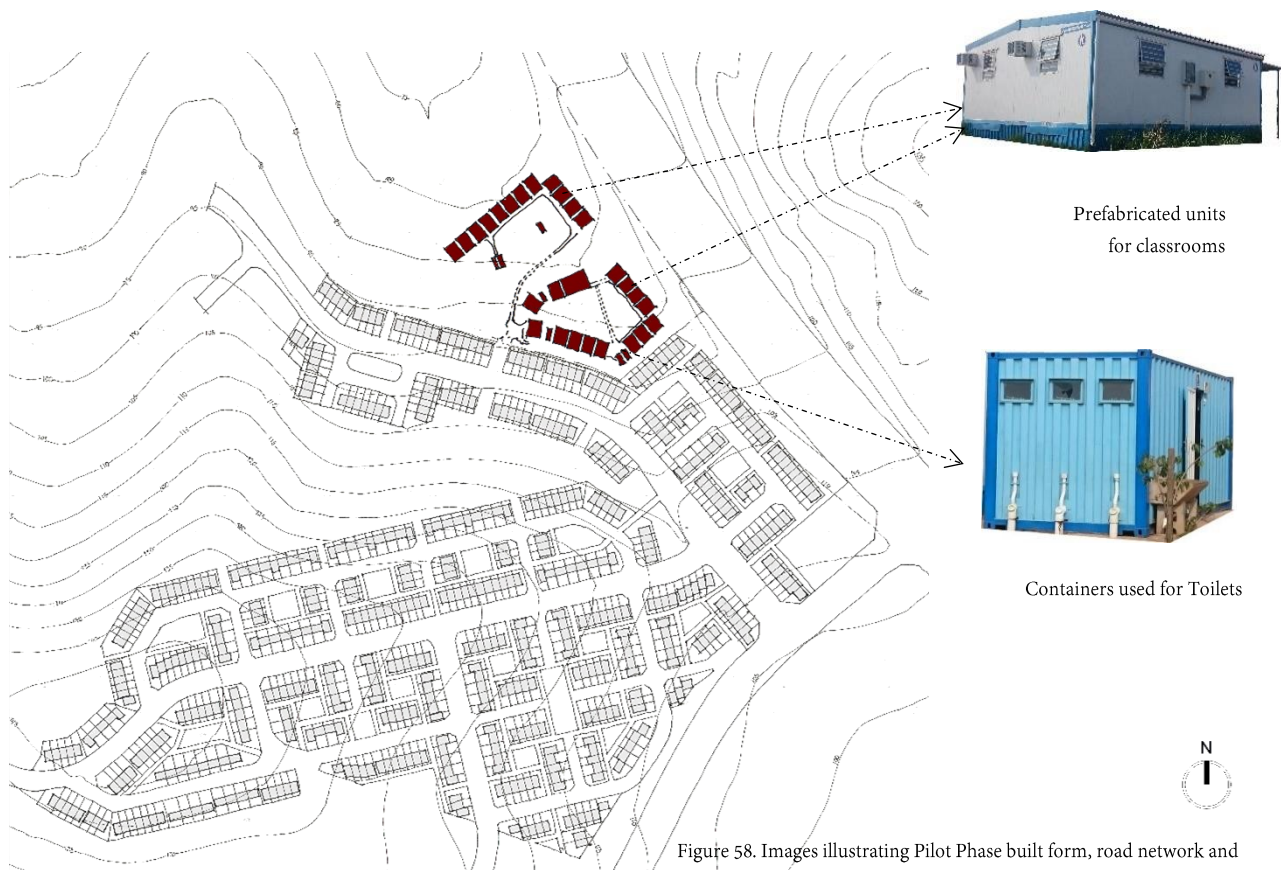
Figure 58. Images illustrating Pilot Phase built form, road network and location of temporary structures – in red. Source: Author, 2016.

Figure 59. Image illustrating the proximity of temporary structures to existing housing units. Source: Author, 2016.

Figure 60. Images illustrating Pilot Phase school courtyard framed by temporary structures and housing behind.
Source: Paulo Menezes, Dala, 2016

Figure 61. Images illustrating children in temporary crèche. Source: Author, 2016.

4.1.4.3 Invisible Practices: Domesticating the Pavement

Amin (2008) asserts that the movement of humans in public spaces is not random, but it is something that is guided by habit, purposeful orientation and by the instructions of signs and objects. Amin further notes that the repetition of these rhythms - of use and passage - result in the patterning of public spaces in order for people to make sense and find ways to become active participants in such spaces. Through this patterning public space becomes domesticated; "as an experience of freedom through the neutralization of antipathies of demarcation and division—from gating to surveillance—by naturalizations of repetition….The lines of power and separation somehow disappear in a heavily patterned ground, as the ground springs back as a space of multiple uses, multiple trajectories and multiple publics (Amin, 2008:12)."

Cornubia Pilot Phase has no visible street names nor does it have those municipality 'can and can't do' signs one would commonly find in public spaces – there is no one watching and if they do it's always from behind their tinted sedan windows during a drive-by. The absence of these orientating tools potently signals a rather indifferent attitude to things/nuances that people in urban contexts, for instance, use on a daily basis to orientate themselves and their behaviour with others. Where is the urban here? A very desolate, non-descript image is instead projected, which only reiterates what one of the residents, Louis from house number 501, mentioned: "it just feels like we've been dumped here."

So what do people make/do of those allocated public spaces? Very little. These spaces lack functionality and purpose. This lacking either transforms these spaces into 'dead' zones – repositories for rubbish, broken cars and unwanted items or turns them into another private edge - which generally happens because of the way the majority of the houses are configured; with the service ends/backyard looking onto them.

The pavements in Cornubia Pilot Phase were observed as acting as the most accessible and populated of public spaces. The domestication in this instance happens almost organically as people extend their living rooms, customs and routines into the pavements with a very natural ease. Whether it is playing, idling, conversing, playing music, drawing, cutting hair or even walking out with just a towel on, it's the pavement that facilitates it.
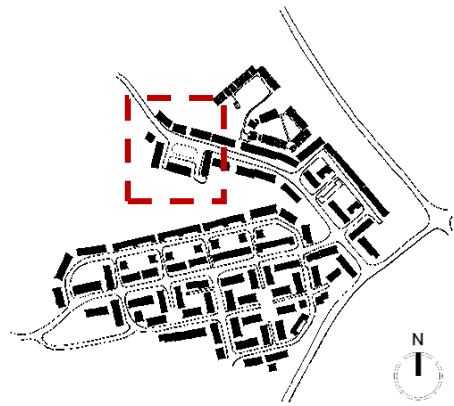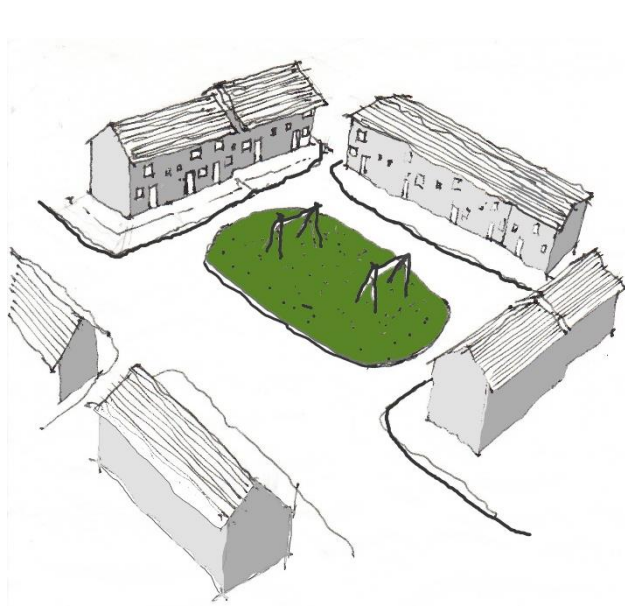
Figure 62. Field drawing. Allocated public space illustrated in green and edges illustrated in grey. Source: Author, 2016

Aside from the occasional kids who do play in this space, no one else uses it. It remains largely unoccupied.
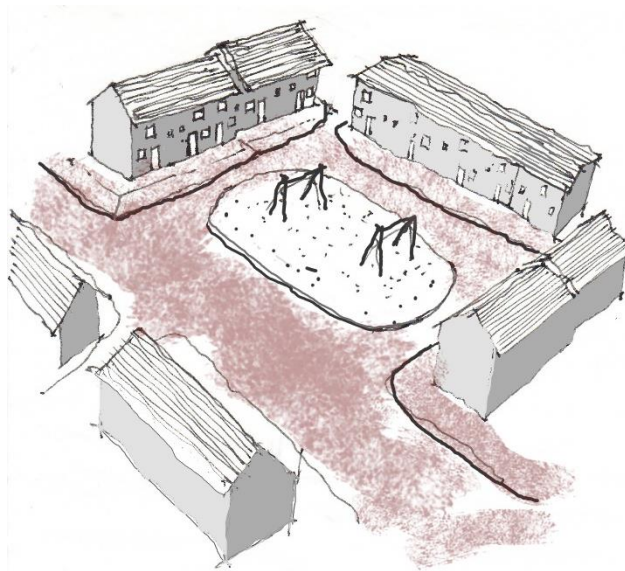
Figure 63. Field drawing. Pavements as the public spaces. Source: Author, 2016.

The red marking illustrates activity – conversing, exchanging goods, sitting - happens on the streets and pavements.
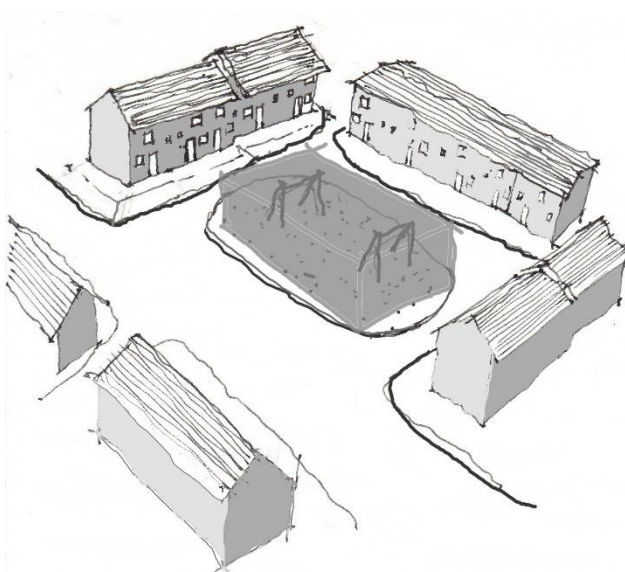
Figure 64. Allocated public space becomes an 'edge' Source: Author, 2016

If these spaces do not have a particular purpose, they can eventually become another private edge or dead spaces.
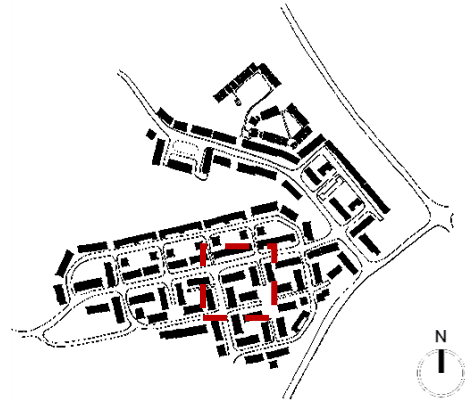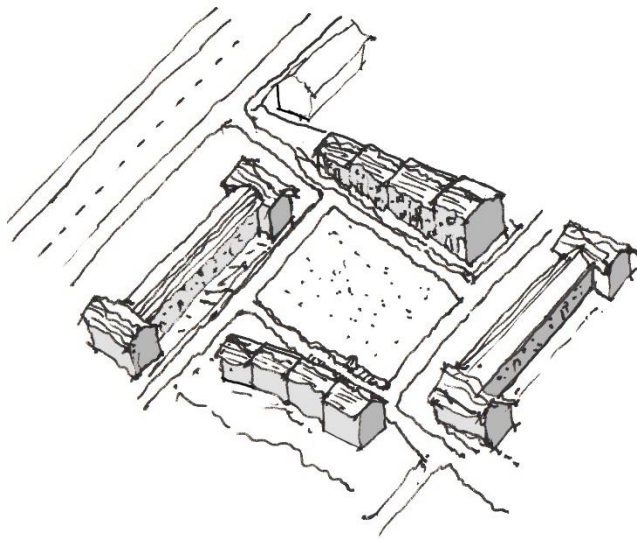
Figure 65. Field drawing. Non-Descript Public Spaces
Source: Author, 2016

The allocated public spaces or courtyards do not serve as the focus for community identity – as has been alluded in the projected plans.
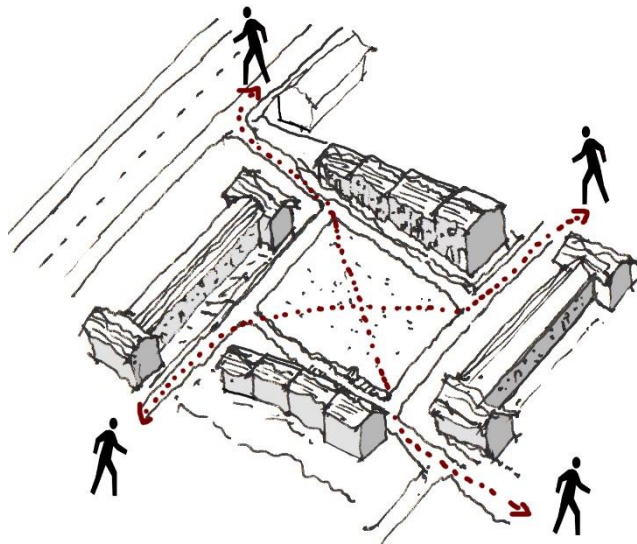
Figure 66. Field drawing. Spaces for traversing and shortcuts. Source: Author, 2016

The Spaces are not for gathering/ performing collective activities. They rather serve as spaces that can be traversed in order to reach destinations quicker – shortcuts.
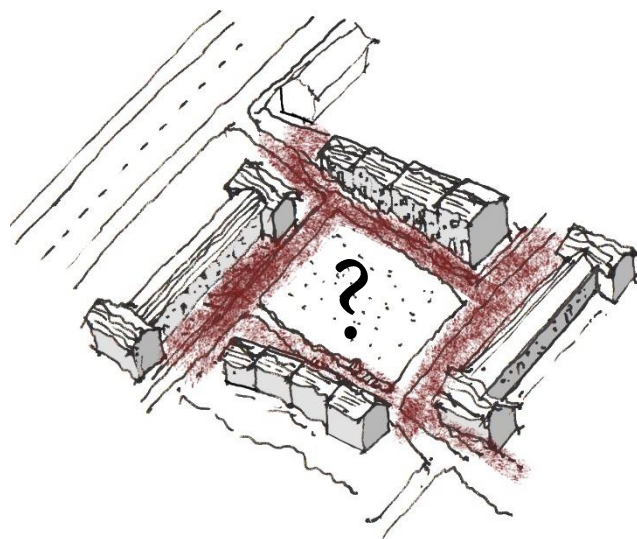
Figure 67. Field drawing. Dead Zones. Source: Author, 2016

The allocated public spaces remain non-descript – with very little to no incentives for people to use it. Take the topography of these spaces for instance, it is not flat as it was made to appear in the plans – rather inclined and uneven - making it very difficult and uncomfortable to even put a chair on the ground surface.

Another pragmatic example is shade. These spaces are constantly exposed to the sun - making them undesirable, if at all destinations. Thus activities such as washing clothes, conversing, idling, playing - all happen on the

Figure 68. Image showing allocated public space – courtyards. It highlights, in red, a footpath that has become engrained onto the uneven topography – showing signs of what this space is actually used for which is moving through it. Source: Author, 2016

Figure 69. Image showing allocated public space – courtyards – dead zone with service end of houses – kitchen, bathrooms looking onto it. Source: Author, 2016

Figure 70. Image showing allocated public space – courtyards – another dead zone. This example has blank walls and service ends of houses looking onto it. This indicates poor surveillance and an underutilisation of space. Source: Author, 2016

Figure 71. The pavement as a place of encounter, play and gathering. Source: Author, 2016.

Figure 72. The pavements as children's canvas. Source: Dala, 2016.
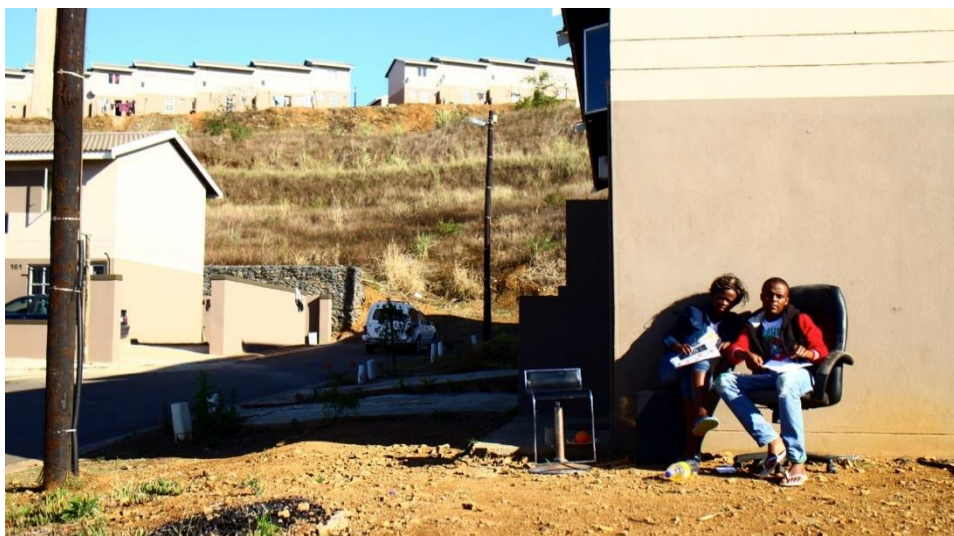
Figure 73. The pavement for making yourself at home: Source: Dala, 2016.

4.1.4.4 Invisible Practices: Personalising Towards Dignity

The Pilot Phase was built with the clause that the *"beneficiaries of houses within the Cornubia Development will not be permitted to extend their houses as the design of the housing units is not suitable for this. Permission to extend will not be granted* (eThekwini Municipality)." In other words, these spaces are comfortably suitable for families constituting four members. Anything beyond this number becomes a contingency that residents have to cope with in 'creative ways'. What this reveals is construction of housing typologies that resemble a typical Eurocentric model of a family of four – mom, dad and their two kids – disregarding existing socio-cultural patterns of living.

While the residents are the day-to-day custodians of these houses, their ownership of the houses is restricted by policy. This perpetuates the description of these houses just as 'houses' and very rarely are they acknowledged as 'homes'. In spite of these policy restrictions there are signs of some efforts being made towards the transformation of those houses into homes.

The transformation spectrum ranges in scale. It includes anything from a different front 'porch' surface treatment and planting of flowers, to the addition of light frame canopies; to eventually more permanent solutions – extended walls to create garages and extra rooms. This enables two things. Firstly, from a functional consideration, it enables the inside to extend outwardly - as a space to gather in and under for daily conversations and sit downs. Added to this is the benefit of heat and rain protection. Secondly, from an aesthetic and legibility consideration, it starts to point towards an alternative imaginary that signals an intent to recognise this space as place and as a home.

The personalisation that has occurred and continues to occur shows a persistence by people to break free from the homogenous process that portrays them as mere quantities. These are signs - however big or small - of a humanising process - that seeks to alter this homogeneity that appears well entrenched in the built constructs.
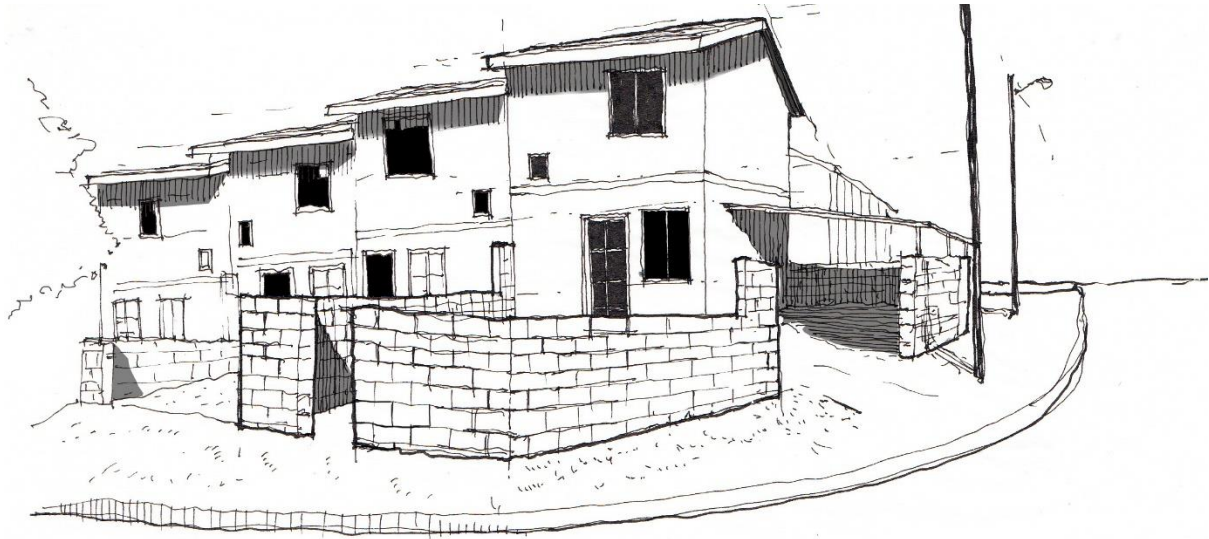
Figure 74. Field drawing illustrating additions of block external walls and canopy. Source: Author, 2016.
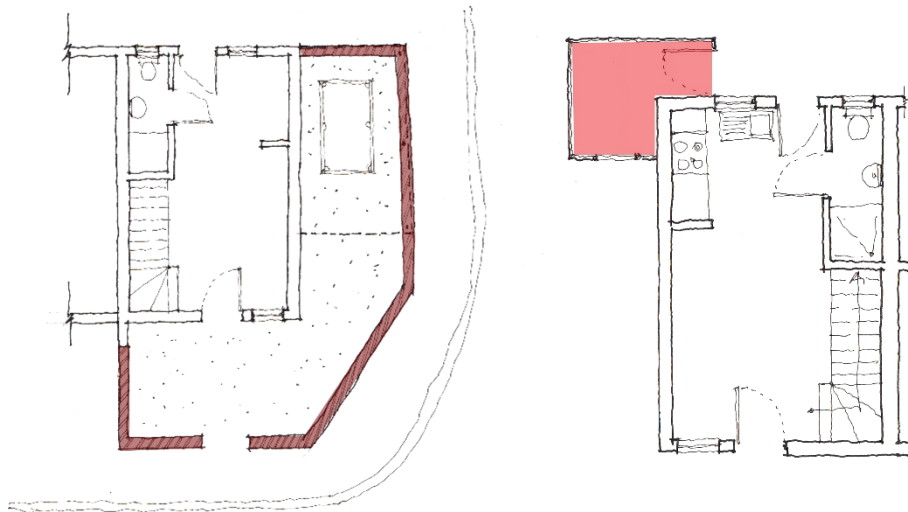
Figure 75. Field drawings. Plan on the left shows the addition of block walls to create outdoor areas. Plan on the right shows the addition of a small room to serve as a spaza shop. Source: Author, 2016.

Figure 76. Field drawing. Elevation showing addition of spaza shop. Source: Author, 2016.
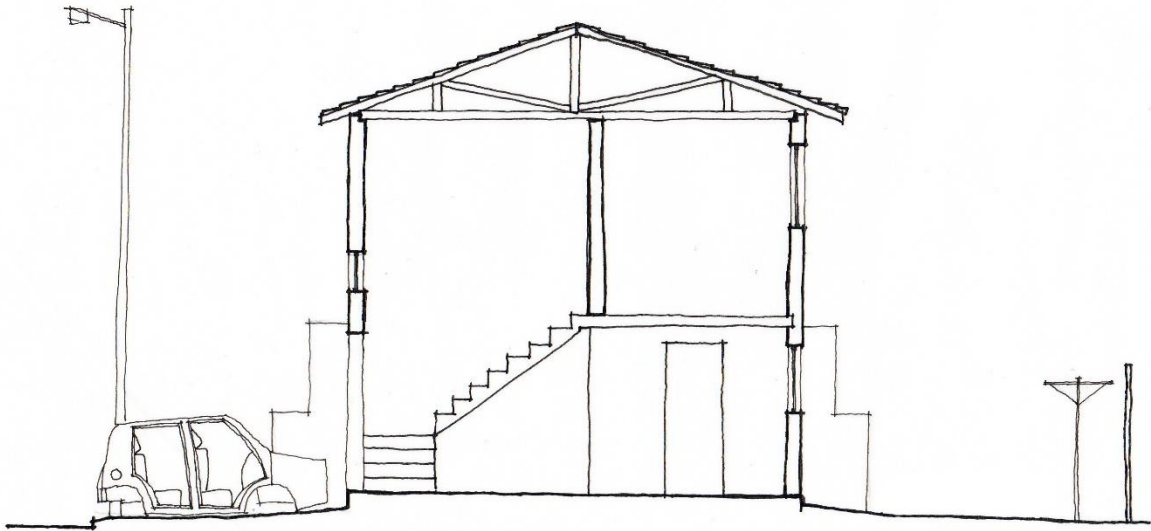
Figure 77. Field drawings. Typical House Section. Source: A, Davis. 2016
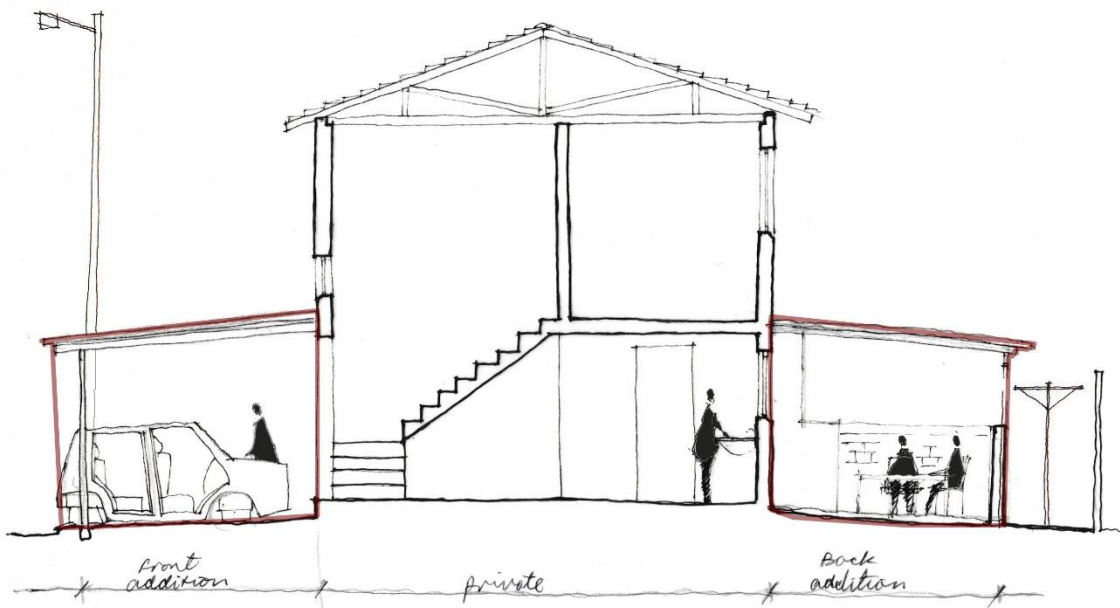
Figure 78. Field drawings. Typical House Section showing front and back additions. Source: Author, 2016

Figure 79. Signs of life. Source: Author, 2016

Figure 80. Expanding the limits. Source: Author, 2016

Figure 81. Living backyards. Source: Author, 2016

4.1.4.5 Invisible Practices: Revealing the Hidden Networks

The participatory work that *Dala* initiated in Cornubia led to the uncovering of another socio-spatial logic - the Spaza network - that had manifested within the visible housing constructs. This logic very quickly started to point towards an interpretation of space which was not governed by analysis or understood through institutional frameworks and the agendas of the state. The logic instead revealed a network paralleling the city dweller's understanding of their own space which so often remains invisible as planners and policy makers define the normative vision of city spaces. Only through this process of engaging on the ground can we begin to see beyond the surface and in doing so respond to needs and aspirations of the city dwellers.

Figure 82. Images illustrating Patrick, a resident from the Pilot Phase Housing, engaging in a drawing of how he perceives this built environment. Source: Dala http://www.dala.org.za/

Figure 83. Images illustrating Doung Anwar Jahangeer, co-founder of Dala, engaging in dialogues with some Spaza owners Source: Dala http://www.dala.org.za/
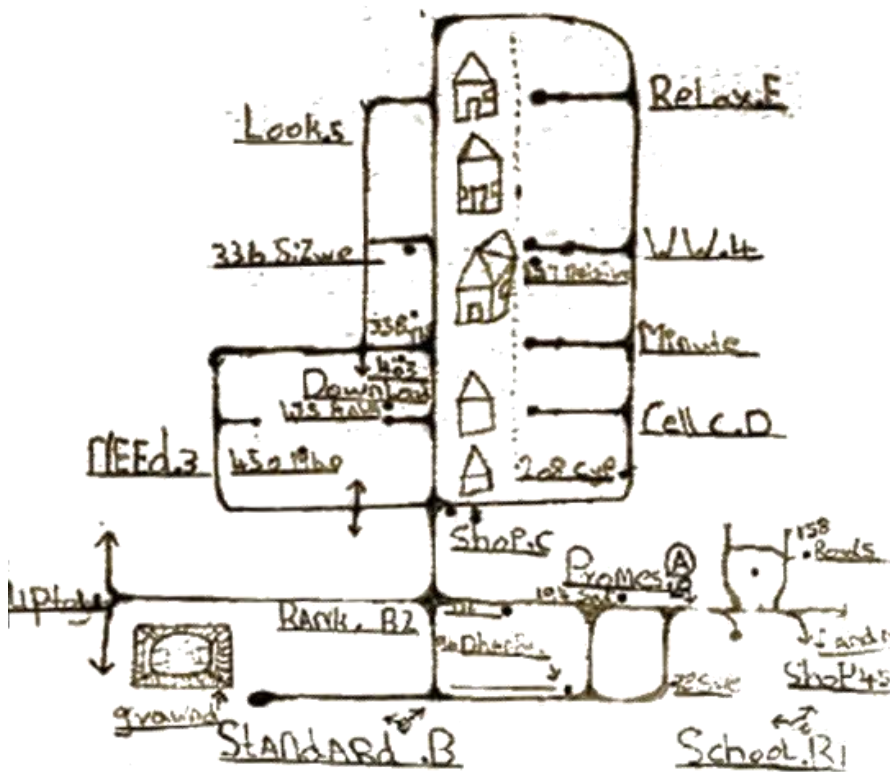
Figure 84. Image illustrating Patrick's drawing. The dots indicate the location of Spaza shops. Source: Dala. http://www.dala.org.za/
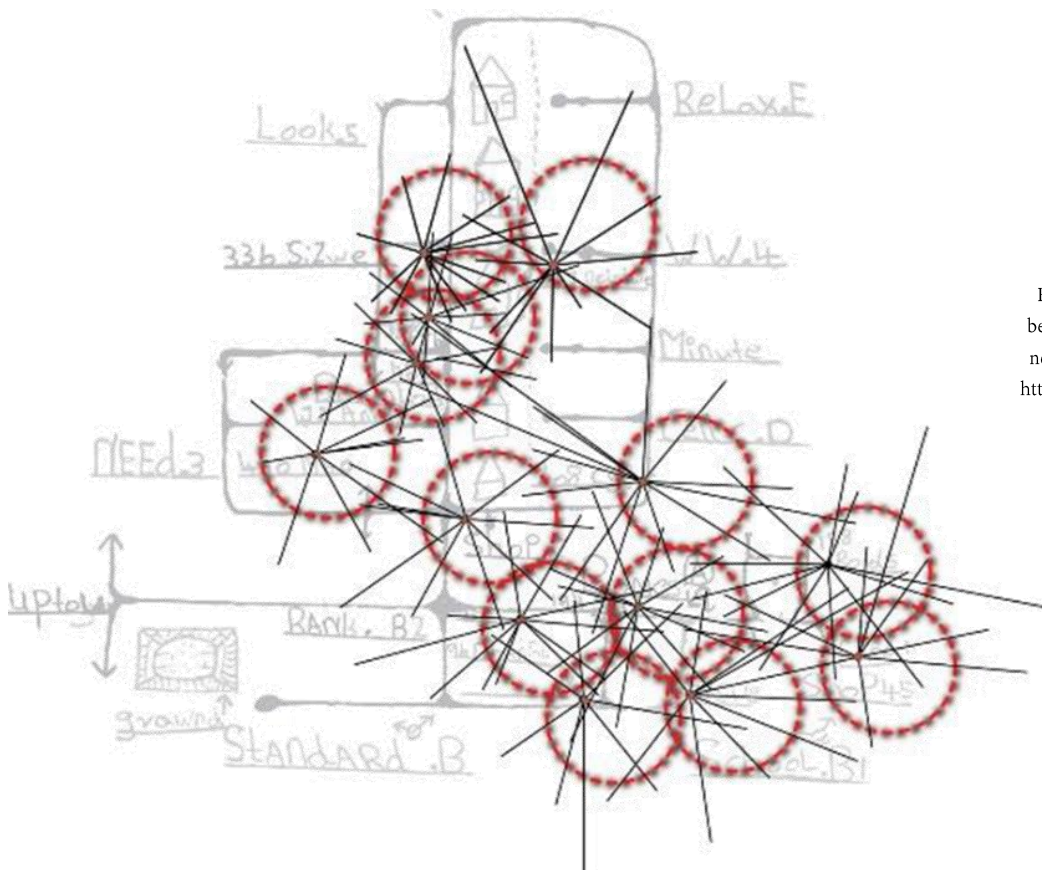
Figure 85.The Spazas, beginning to indicate a network. Source: Dala. http://www.dala.org.za/

CHAPTER 05

PRESENTATION OF DATA AND ANALYSIS

5.1 Introduction

This chapter provides a description of the data that was collected and analysed using methods discussed in the methodology section of this dissertation. While the chapter aims to unpack the data thematically – through the themes extracted from the Literature Review, Precedent Study and Case Study, it also seeks to continue the conversation towards answering the key and secondary questions of this dissertation. The conversation that has been recurring throughout this dissertation constitutes invisible practices that manifest and operate within visible spaces - operating particularly within Cornubia's Pilot Phase, a formally constructed housing megaproject.

The purpose of this discussion is to firstly, provide an understanding of the concept of Collective Life towards informing an architectural response, which entails unpacking an understanding of the concept – what constitutes it and how it manifests within these formal constructs. The discussions that have taken place in the Literature Review, Precedent Study and Case Study chapters of this dissertation have pointed towards an understanding of this concept as a space shaping logic - alluding to the invisible practices that operate within visible spaces – emphasising the potential that this logic has towards providing alternative living conditions.

Secondly, the intention of this discussion is to present findings which can be used towards recommendations and design guidelines of the proposed architectural intervention which has been described in preceding chapters as Co-Operative Living Model.

The main themes that have been selected to frame this discussion include: Cornubia Top Down; Cornubia Bottom Up. These are themes that haven been appearing throughout this dissertation and therefore have been chosen to provide continuity in the discussion.

5.2 Cornubia: Top-Down

5.2.1 Cornubia as a 'Clean Slate'

"I took advantage of the fact that it is still new and…it's just a clean slate. Yeah, so I took that advantage, that's how I saw it, 'cause your perception is your reality" ….

(Interviewee One, Cornubia)

…there are a lot of people that have said that. People like Bantu and Louis [another resident], say that 'we can do what we want; we can try things…if we relinquish those assumptions of ours and 'go on the ground' you see that people are intuitively connected to what development is right or wrong for them.

(Doung Anwar Jahangeer, Co-Founder of Dala, 2016).

When asked, why a city like Durban would choose to implement a megaproject approach, Sutherland's (2016) response indicated that the intention of such an approach was to primarily address the shortcomings of previous low cost housing projects, such as the *Relocated Development Programme*, which focused on delivering houses without access to work opportunities. "…the problem with all of those low cost housing projects was the notion of just delivering houses rather than thinking about the possibility of creating human settlements. In other words, people were dislocated from any kind of work opportunities. So the megaproject became the possibility to address that (Cathy Sutherland, 2016)." However, the space of Cornubia quickly became a catchment for the multiple agendas of the many stakeholders involved and this subsequently shifted the focus towards the megaproject's twofold ideology. On the one hand, the notion of a megaproject has always been about bringing economic growth and competitiveness to the city, while on the other, "this by large, is a huge displacement of the poor (Cathy Sutherland, 2016)."

The pro-poor agenda behind the megaproject approach brings to the fore the question of planning and how this top-down approach has been implemented in order to cater for this. Support from literature, along with observations made on the ground within the Case Study has shown that this agenda has been poorly prioritized and executed.

"You can see how those goals have been traded off because as time has gone by the amount of housing units has decreased – quite dramatically - and probably will decrease further."

(Cathy Sutherland, 2016).

What has been found is that the spaces themselves are specialized just as operations are in the social and technical divisions of labour, suggesting large sections of mono-functional zoning that do not correspond to a public plan but more to the demands of the market – resulting in urban sprawl and the commodification of places, as seen in *Figure 86* below. Most pertinent to this dissertation are the zones of subsidised housing, where it has been found that as a result of this top-down planning approach peoples' lives have been largely reduced to their allocated 50 m^2 houses. "We've just been dumped here, there is nothing to do, no job - nothing" (Louis, from house number 501).
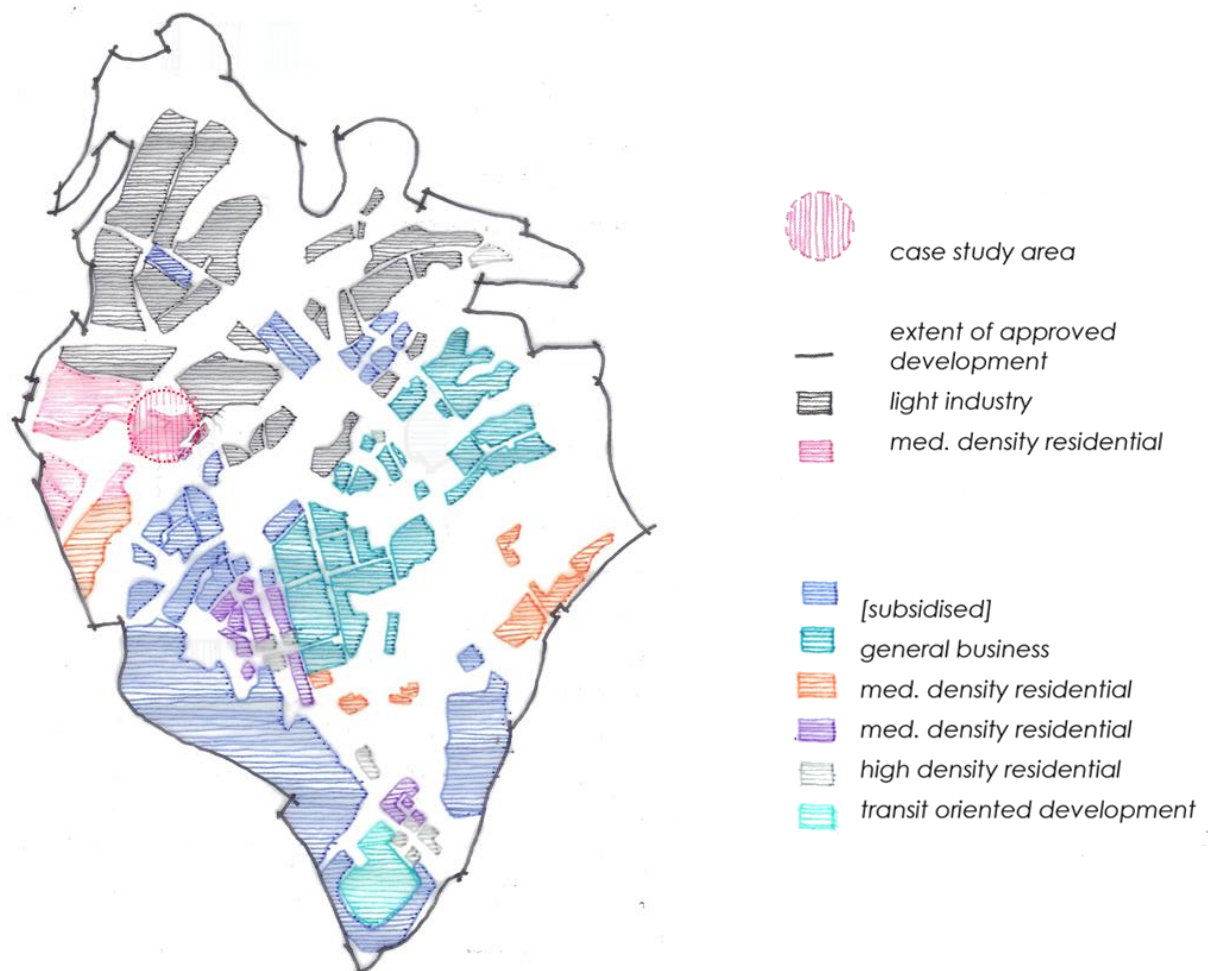
Figure 86. Plan highlighting the fragmented zoning. Source, Author, 2016.

LIGHT INDUSTRIAL   SOCIAL CLUSTER   SERVITUDE

MEDIUM RISE RESIDENTIAL   BUS TERMINAL
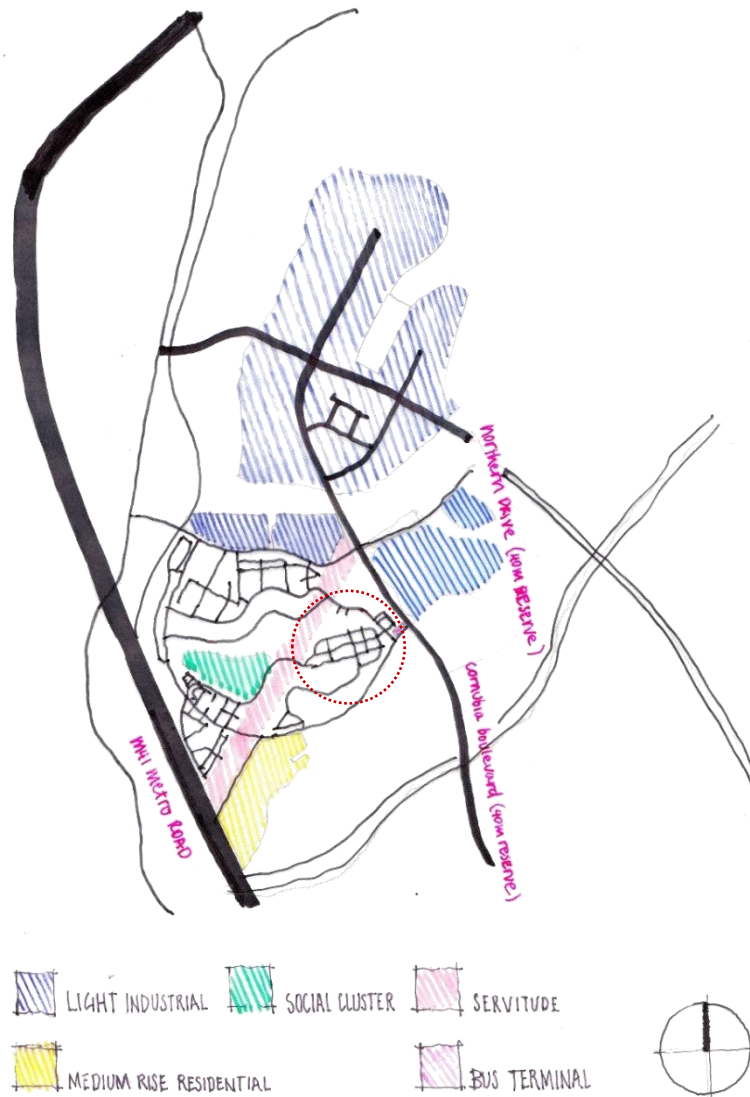
Figure 87. Plan highlighting mono-functional zoning. Source, Author, 2016.

Zooming into the housing settlement from the greater development framework, we see the sheer scale of the mono-functional zoning is problematic, dividing the places in which the elements of life in the city can occur – working, living and playing – dividing the opportunities for meaningful engagement between people and place. See *Figure 87,* above.

What has been intended as an integrated human settlement has been revealed as an isolated environment on the ground, that rather than eradicating the previous practices of socio-spatial fragmentation, recreates it. The pro-poor agenda has materialized as fulfilling a quantity of housing in response to the municipal backlog thereof post-Apartheid, reducing the principles of designing an integrated human settlement. Through the

observations on the ground, and the data collected through interviews conducted, the deviation of each of these principles are evident.

"Some people over here are like hey, it's really boring over here, it's just in the middle of nowhere blah blah blah – that's how it's going to be for you. So yeah basically what you see is what you get."

(Interviewee One, Cornubia)

The principles towards creating an integrated human settlement for Cornubia Phase 1A: Pilot Phase Housing Settlement and their manifestation in reality are as follows:

- **Integrate surrounding context via a hierarchy of roads and permeable internal network.**

  With the scale of the megaproject, these roads become so vast and as a pilot project, implemented before most of the greater development, without public transport the networks do not serve to connect people to places of opportunity. The location of the pilot phase itself comes into question here, the isolated environment is located deep within the old sugarcane plantations and furthest away from any existing networks of access. Within the settlement itself, the intended permeable internal network defining the row upon row of clustered houses without much differentiation in their character create a continuity of anonymity and no opportunity to truly belong.

- **High Density Mixed-Use development around Bus Rapid Transport Stations.**

  The proposed BRT stations are simply that, proposed for some point in the future and as a result cannot impact the residents of the pilot phase. On the ground, a network of taxis has sprung up providing a way of connecting the isolated residents to the larger context outside of the development in search of opportunities promised within. This network however prevalent it may be, does not sit within the proposed transport network and is deemed illegal.

- **Promote Walkability.**

  Again, the question of the location of the pilot phase, principles of walkability are great when implemented within a context of varying opportunities. For the residents, their present location is isolated, and walking is not particularly safe in areas awaiting activity, through sugarcane plantations and across highways towards neighbouring areas in the hopes of accessing day to day opportunities of

learning, working and playing.

- **Arrange land use around appropriate locations to promote economic opportunities.**

  As a response to the housing backlog, the agenda of delivering houses before the presence of amenities or opportunities for economic development simply do not exist.

- **Pursue Higher Densities in order for the development to be sustainable.**

  The housing settlement is medium density zoning.

- **Efficient use of green spaces.**

  The pilot phase faces untouched open green spaces that serve more as buffers between them and any surrounding opportunity rather than serving as the active/operational green spaces intended within the development. The topography exacerbates the disconnect with these green spaces, leaving them unoccupied, at the scale of both the intended green spaces within the greater development, and of the smaller courtyards for communal gathering between the clusters of row houses .

- **Promote Social Clusters as part of neighbourhood structure.**

  The social clusters which were meant to be operational now are still not built. As discussed previously, the priorities of the development remain questionable as industrial land and the isolated housing settlement came first before the much needed amenities that could serve to address the concerns raised within the pro-poor agenda. Now over three years into the residents occupying the settlement, social clusters have been temporarily substituted by a temporary school and mobile clinic – clear indication of a mistake on the part of the development.

The reality of the place, reads as one that simply did not consider the needs nor the aspirations of the people it intended to serve, revealing the lack of communication by the top-down planning of the megaproject at the scale of the greater development, and on the ground within the settlement itself. Interviewee One's comment of *"… it's just in the middle of nowhere…"* wholly describes the settlement and the problems that arise through this lack of communication implemented by the megaproject approach.

Figure 88. Image showing houses surrounded by vast fields of sugar cane. Source: Author, 2016

For me… it became about the unjustness – the tension that lies between the reality of how much the third economy in this country does for the country and on the other hand how much they are victimised.

(Doung Anwar Jahangeer, 2016).

As a counter to this reductionist approach stands Dala's engagement on the ground – with the aim of not lingering on what has not been achieved, but instead what can be done with the existing built environment. This has translated as a participatory process seeking to reveal ways that people can actively shape their allocated spaces – a spatial appropriation through their lived experience of Cornubia's Pilot Phase. Jahangeer (2016), further describes this process as one of conscientisation:

It was through, firstly: the awakening of this context and its people, and secondly, educating the city about why Cornubia and the relevance of this blank slate in society. It was also going down on the street and meeting [Rasta] the community leader where he created a platform for us to present to the committee…So one day we just showed him an example and we did the testing of the screening. That was what really allowed us to engage in a dialogue with the community.

(Doung Anwar Jahangeer, 2016)

5.3 Cornubia: Bottom-Up

5.3.1 Appropriating Spaces: Dala's Small Scale Intervention

Do you think the residents could continue those kinds of initiatives without your presence?

"Well I think more than it being continued - whether in the form of screenings or others - it was more about consciousness...

(Doung Anwar Jahangeer, 2016).

Figure 89. Setting up the screenings, prepared by Dala. Source: Author, 2016.

Dala's screening is an example of spatial appropriation achieved through a creative act that requires the resident's participation. Events like these seek to bring forth people's mundane acts such as seeing, conversing, seating, laughing and curiosity, as performative acts. These acts immediately start to fill spaces with different narratives and when this happens, spaces are transformed, not through the imposition of a wall but through the temporality of appropriation. People gather along desired lines setting up inconsistent patterns and eagerly anticipate what is yet to come. What is arguably more important is not necessarily the movie but instead what happens during this state of anticipation: People become instantly engaged – conversations spark up, children restlessly go round-and-round and smoke quickly emerges from nearby spazas signalling the desire to capitalise on this anxious crowd. There is movement and energy – a collisions of bodies that completely transforms the character of the space. "This is about providing a space for both us and the citizen towards a critical spatial practice (Doung Anwar Jahangeer, 2016)."

Figure 90. Image showing children eagerly waiting for the screening with houses in the background, prepared by Dala. Source: Author, 2016.

Figure 91. Anticipatory state: conversation, movement, collision of bodies. Prepared by Dala. Source: Author, 2016.

Figure 92. Image showing the appropriation of space - children gathered to watch screening, prepared by Dala. Source: Author, 2016.

5.3.2 Appropriating Spaces: Spatial Transformations

Another form of spatial appropriation has been the self-built process that residents have being engaging in since the inception of the settlement. Using masonry block units along with lightweight steel and timber materials, residents have gradually being upgrading their houses to meet required needs. Most commonly, the lots have been enclosed by walls and the ground floors have been extended with canopies and extra rooms - see Figure 93 below.
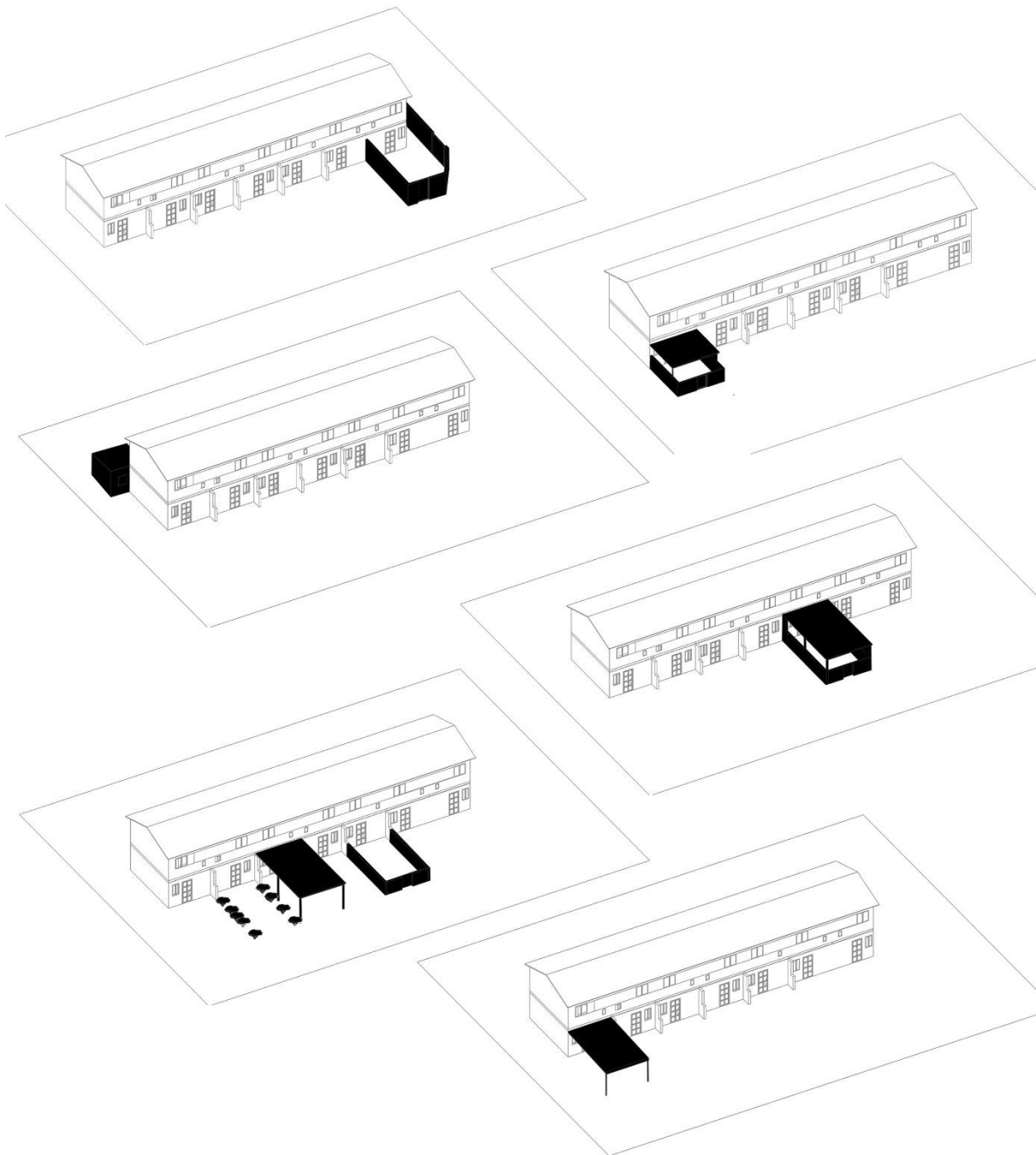
Figure 93. Spatial transformations highlighting a self-built process in Cornubia, Pilot Phase. Source Author, 2016.

5.3.3 Recognising the Specificity of Everyday Practice
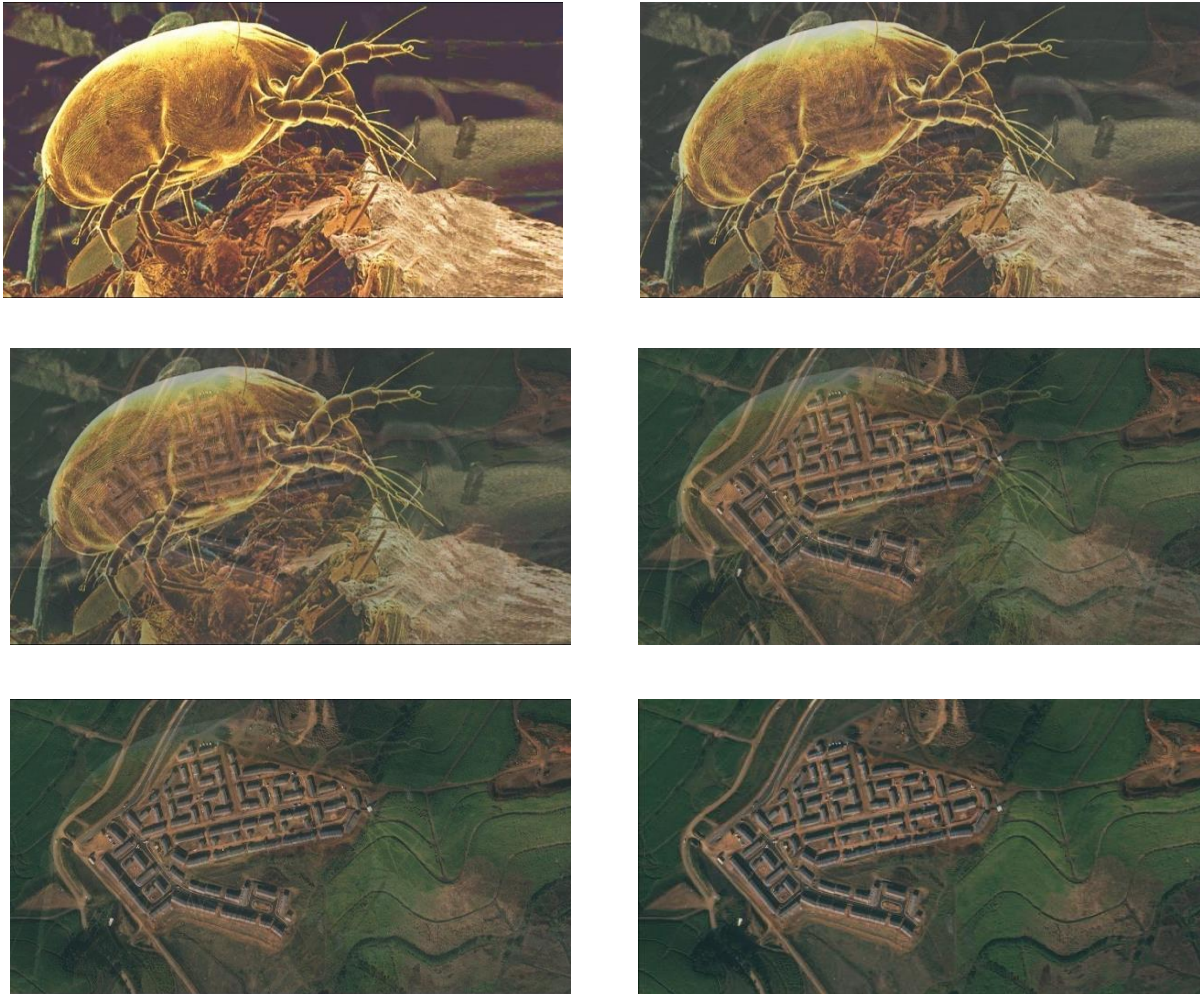
Figure 94. Cornubia: 'genus of mites' – Shifting Perceptions. Source: Dala. Adapted by Author, 2016.

The literature has revealed that recognising the specificity of everyday practice alludes to a conversation about the transformation of the city along the intersections of the technocratic assumptions made through planning and the practices manifesting on the ground – the self-built process. The recognition is about a negotiation process between the individual and the city; or as Pieterse (2011) has acknowledged it as interdisciplinary exchanges that occur along the spectrum of the aesthetic and the functional - in the banal and mundaness of the everyday practices - and for which Barac (2007) notes, allows for the navigation between existing urban conditions and urban possibilities. This navigation entails unpacking the spectrum so that the specificities can emerge. Therefore, Pieterse (2011) registers the *aesthetic* as desires and transgressions that manifest within the subconscious which anchor and orient our engagement with the world, the city and its myths; and the *functional* as the pragmatic requirements of dwelling and mobility that require urbanites to negotiate the imperatives of their livelihoods and wellbeing.

Furthermore, it entails engaging in a process of defamiliarisation in order to recognise the value of alternative ways of seeing and doing – indicative in the works of Cruz and Forman and to a large extent, Dala. The former recognise the importance as a practice of positioning themselves along the margins of geo-political and economic conflict – in which the potential to rescript socio-spatial inequalities best exist. While the latter, recognises that working in a space like Cornubia's Pilot Phase presents itself as "a fertile ground for experimentation and unlearning (Doung Anwar Jahangeer, Co-Founder of Dala, 2016)."

Dala's ethnographic work continues to point towards a trajectory that seeks to engage in processes of conscientisation - precisely towards destabilising the technocratic assumptions made through top-down planning – and suggest a co-production of knowledge based on creatively excavating the existing networks that remain untapped within formal constructs. It is of no surprise, for instance, that this mode of thinking leads to unpacking the meaning of Cornubia as a genus of mites: "mites are favoured by high organic matter content and by moist conditions, wherein they actively engage in the fragmentation and mixing of organic matter (Doung Anwar Jahangeer, Co-Founder of Dala, 2016)." In other words, this understanding takes into consideration the 'invisible' existence of mites as vitally important in the way they contribute towards the betterment of our lives.

However, it must be noted that this understanding in no way alludes to romanticising the state of deprivation that often exists among populations, particularly the urban poor. It instead seeks to direct the focus towards the rather silent, creative intelligence that manifests and operates within the formal, politicised system.

"Poor people in constrained situations often free themselves through the necessity to find experimental, creative, and innovative solutions towards the fulfillment of a humble livelihood. The result is an 'experimental' city formed on inconsistent patterns, with its own subversive logic.

(Edgar Pieterse in Doung Anwar Jahangeer, 2016)

5.3.3.1 The Spaza Network

How would you describe the spazas and their emergence?

I call it an organic intelligence. Because its form is always changing... This is largely because of limitations. When you have limitations in your life you are force into a space of innovation and imagination – as you imagine your own world all the time, every moment - you are constantly engaged.... In that construct, how people decide to activate the spazas brings out a different kind of language, or a movement; a network. This starts to suggest the potential that Spazas hold, and not just as the seller of goods (Doung Anwar Jahangeer, Co-Founder of Dala).

The intelligence that is discussed by both Pieterse (2011) and Jahangeer (2016) is a form of informality that has a twofold existence. On the one hand, it manifests as a lower-cost version of formal mechanisms setup by institutional forces and policies, and on the other, it exists rather independently – producing its own socio-economic and spatial spheres and introducing new actors, networks and configurations into an arena of emerging possibilities. This intelligence reflects people's tactics. In other words, associations that people form on a temporal basis in order to develop the means to deal with the socio-spatial and economic deficiencies which they are subjected to. In addition, these associations incorporate large measures of fluidity and changeability but also manage to "generate regularised practices of getting things done, of lending a measure of stability and confidence to precarious environments (Simone, 2004). However, while this may point towards a tension/condition enabling the emergence of intersections that Cruz and Forman (2015) have discussed throughout the literature, it also points towards power relations which are constantly fluctuating – rather schizophrenically - between enabling this intelligence to emerge and repressing it the instance it finds a way to make a living. This is why Cruz and Forman (2015) call for a recalibration of power relations so that urbanisms can emerge as sites of collaborative knowledge - integrating the formal/informal tension and rather enabling the conditions for new forms of social contracts to emerge as a result of their intermingling.

In Cornubia, these conditions while not planned, have actually aided these new forms of social contracts to emerge albeit the major difference being the rather one-way nature of the contract. This has been largely due to poor/lack of bottom-up-top-down negotiations that could have led to the implementation of actual integrated systems which in turn could have provided people with some social and economic support. Instead, what is observed is people negotiating their limitations and implementing tactics, such as the spazas, to address the deficiencies they are subjected to.

5.3.3.2 The Spaza Spatial Distribution

"There is nothing that brings people together here besides the Spazas and the road of course"

(Interviewee one).

While the spazas spatial positioning are limited to the physical constraints of the housing units, their presence signals a spatial transformation made by operating within such constraints. The distribution of these do not necessarily highlight a consistent pattern. The spatial mapping below show that the distribution of the spazas is quite sporadic, albeit, the majority being located in housing units that have access to main streets. More importantly though, is their pixilation of the existing zoning. In most cases the spazas provide the much needed, proximity and access to day-to-day goods that would otherwise be attained kilometres away from the resident's houses. Pragmatically, this starts to address the clear shortcomings of the megaproject thus far – regarding accessibility and mobility. It also suggests multi-functionality - as residents reprogram their ground floor to accommodate these spazas - setting up home based production systems. Doing this challenges imposed restrictions of conceived fragmented zones and inherently appeals to the banal, temporal rhythms of everyday life.
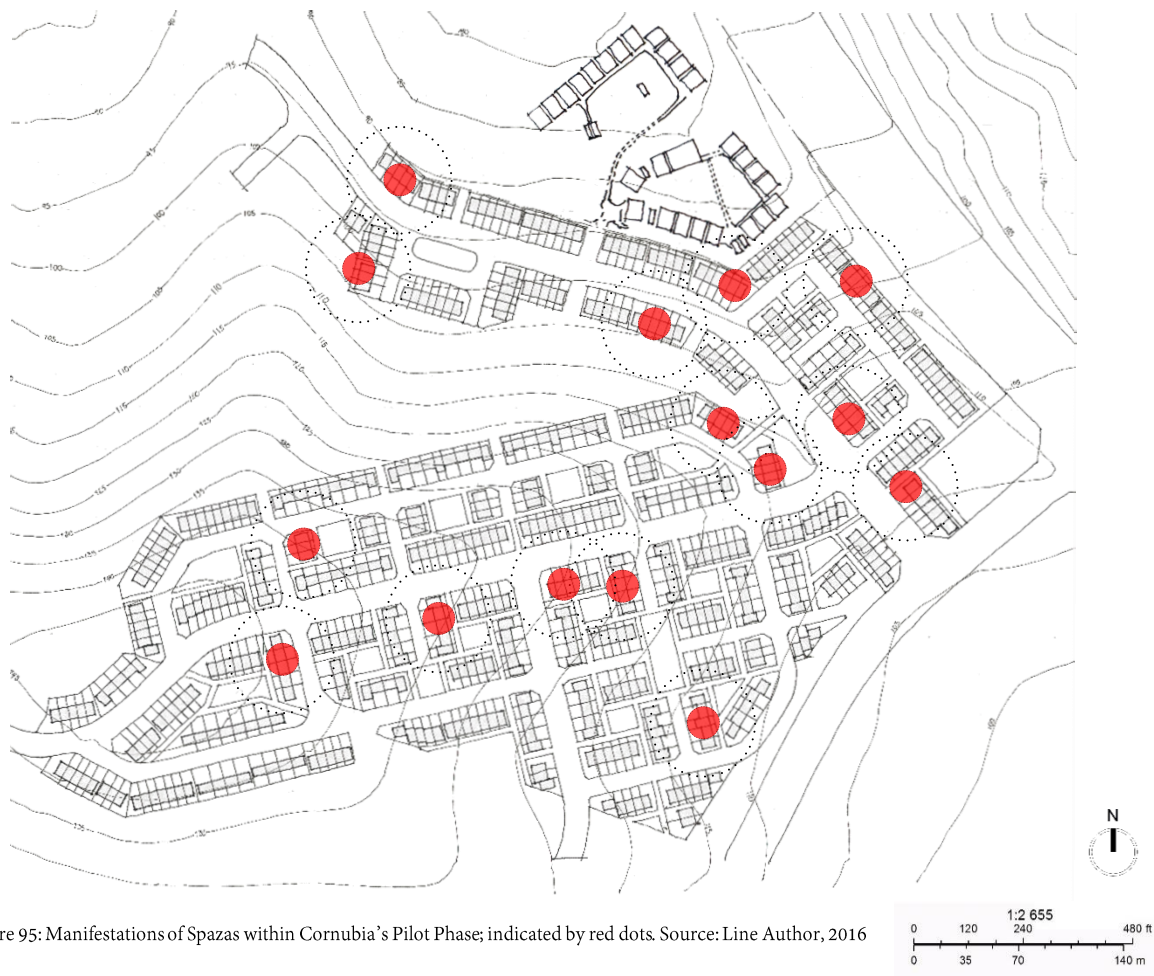
Figure 95: Manifestations of Spazas within Cornubia's Pilot Phase; indicated by red dots. Source: Line Author, 2016

HOUSE

ADAPTED

NEW TYPOLOGIES

Figure 96: Image showing spaza location and a diagram showing how people have adapted the housing units to operate the spazas. This creates new typologies. Source: Line Author, 2016.

Figure 97. Image showing F&M spaza owner, Inderlal Mothilal, House Number, 45. Source: Author, 2016

Figure 98. Image showing a discrete tuck shop sign by the window. Source: Author, 2016

Figure 99. Image showing addition to existing house unit, serving as a spaza. Source: Author, 2016

5.3.3.3 The Spaza Window as the Private-Public Interface

"The interface is a key means by which individuals negotiate the ineluctable presence in urban milieus of people who are "socially distant yet physically close"

<div align="right">(Bauman in Dovey and Wood, 2015:3)</div>

"…it is the site where back region becomes front region, where identities are performed in everyday life"

<div align="right">(Goffman in Dovey and Wood, 2015: 3)</div>

As the ground floor is attributed the new role of spaza – the elements that make up that room such as the window also assumes other roles – beyond that of the functional. In this case the window becomes the most immediate and negotiated point of contact between the home and outside world. Its rather small dimensions demands closer proximities - between the buyer/seller and the individual/material - which in turn evokes an intimacy that challenges the formal protocols of exchange. In other words, business is done with a particular ease. Furthermore, the window, for many of the spazas, serves as the only sign that they exist. The spazas are known to the residents but to 'strangers' they remain invisible. Aside from the F & M spaza, which has visible signage, their locations are revealed by 'word of mouth'. This is important to note because it reaffirms that this practice is still very much in 'stealth' mode– likely so, because policy considers them as illegal and thus people remain rather hesitant to advertise.
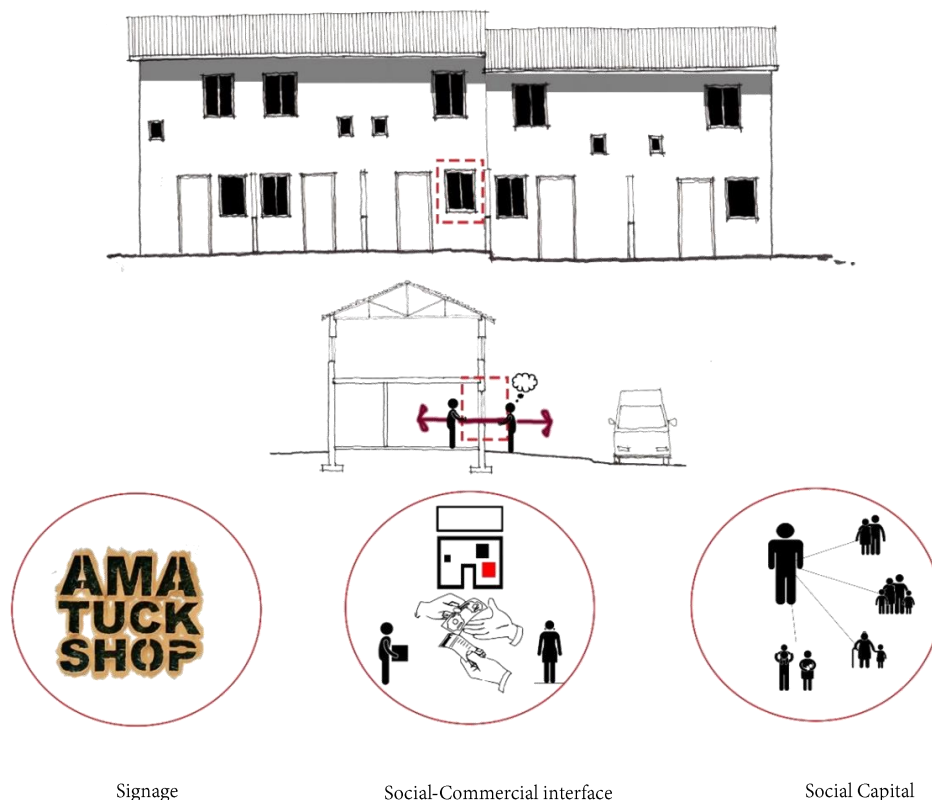
Signage   Social-Commercial interface   Social Capital

Figure 100. The Window as the Interface between Public and Private. Source: Author, 2016

5.4 Conclusion

This chapter on the presentation and analysis of data continued the thematic discussion of Cornubia Top Down, and Cornubia Bottom Up, providing not only an understanding of the mega-project development at large, but a glimpse into the everyday of the residents of the Cornubia Phase 1A: Pilot Phase Housing Settlement.

Masihambisane as a three-pronged research methodology, afforded more than a way of doing the research, but a way of seeing through dialogue, event, and participation - seeing the intentions of both the visible spaces of the mega-project, and the invisible practices of the residents within it.

The relationships between the research area and its community of residents have been unpacked through architecture as dialogue; demonstrating collective life through small scale interventions that make visible the way in which the community itself seeks to define their lives within the area through architecture as event; and suggesting urban possibilities learning from collective life, engaging all relevant role players through architecture as participation. Masihambisane has uncovered the necessity to explore a co-production of knowledge towards addressing the apparent socio-spatial inequalities that exist within our city and within Cornubia itself, supporting the conclusions made within the previous chapters, as well as the intended outcome of this dissertation, that of the Co-Operative Living Model for Cornubia.

CHAPTER 06

RECOMMENDATIONS

6.1 Introduction

The preceding chapters of this dissertation enabled unpacking an understanding of collective life as temporal associations setup by people due to particular everyday needs or contingent situations - either social, economic or recreational. As a result, these associations enabled the emergence of networks which much like the spazas - that have been setup in some of the housing units - act as one possible way of dealing with those everyday needs. The research and analysis that has been carried out in the previous chapters have made an effort to address the problem statement of this dissertation - *The shortcomings of the megaproject's large scale approach in accommodating alternative living conditions* - specifically, through the exploration of such a problem within the research area of Cornubia Phase 1A: Pilot Phase Housing Settlement. The following recommendations seek to address the findings of the preceding research in an attempt to define strategies and design guidelines that can be used towards the proposed Co-Operative Living Model.

6.2 Recommendations

The housing typologies and settlement layout have thus far failed to accommodate people's needs functionally and socially. This built environment is saturated with mono-functionality and lacks a connection to urban life - the spaces between the housing remains as empty fields - nondescript and largely underutilised. The Case Study has exposed this reality but it has also revealed the ways people have been countering it. Inhabitants here have gradually being attempting to make these spaces suitable for living: extending their houses to accommodate multi-generational families, adapting their ground floor to setup spaza shops and filling out the empty spaces with canopies to setup open garages and places to gather under shade.

As a result, the sharp separation that has been imposed by the top down planning - between private and public and the built and the void – gradually starts to overlap, turning those empty spaces into lively places. Building upon the ways people have informally transformed this housing settlement - turning borders into transitional spaces – the intervention should propose an upgrade of existing structures, conceptualised as a continuation of the informal growth.

Recommendation 1

- **Acknowledge Popular Culture:**

  Understand how people exercise their everyday practices. How people appropriate spaces to meet their functional and social needs - within their means/constraints. Use this to inform design decisions about design approach and proposed intervention: Design interventions should be site specific, targeting primarily – micro- needs – similar to what the spazas do.
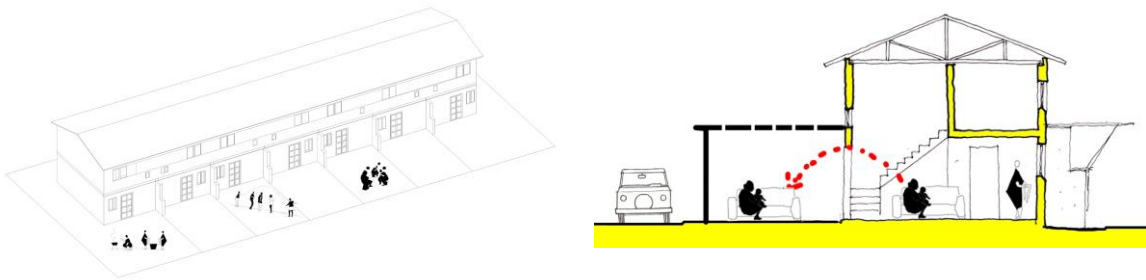
Figure 101. Daily activities are intrinsically connected to the outdoors. Source: Author, 2016

Recommendation 2

- **Support Existing Networks:** (*form is always changing*)

  The Case Study has revealed the existence of spaza shops – a localised/migrating practice. This form of micro-commerce has been identified as a migrated cultural practice that has emerged as a home-based production. The spazas have also been identified as one of many other possible networks that have been setup by people as a means to generate livelihoods. Therefore it is recommended that the intervention support the maintenance and upscale of existing networks.
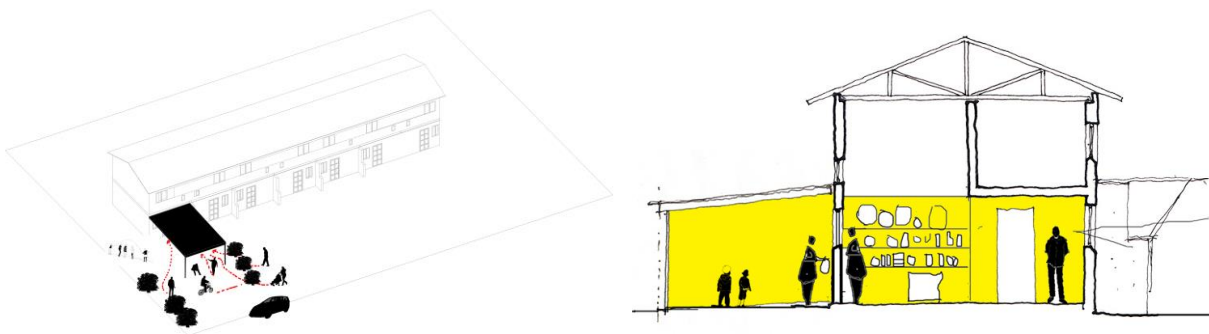
Figure 102. Focusing on the micro-spatiality of place. Spazas as place makers and livelihood generators. Source: Author, 2016

Recommendation 3

- **Recognise Incentive Towards Making:**

  The case study revealed that due to a generalised understanding of what constitutes a family and their needs there exists an incentive towards the personalisation of the housing to suit those needs. Moreover, it can be stated that this has manifested as an exercise towards dignity; an endeavour to turn those houses into homes.
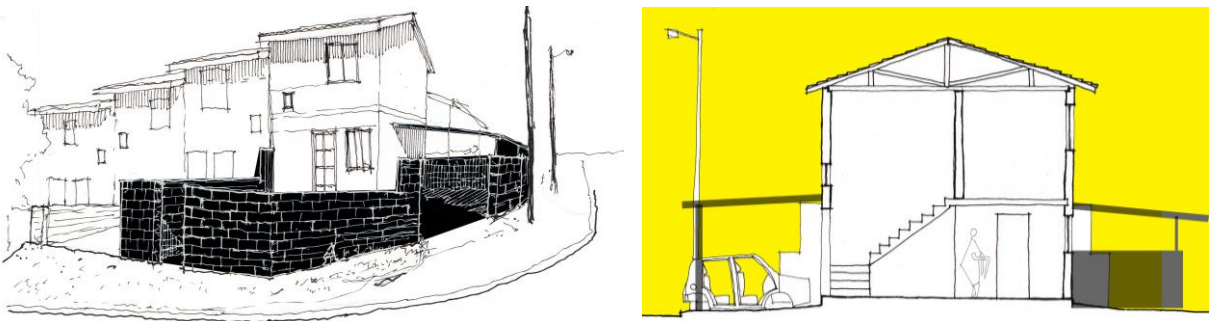
Figure 103. Transforming the house to meet functional needs- towards dignity. Source: Author, 2016

Recommendation 4: Towards the Design Development

- **Context and Approach**

  The Cornubia Framework Plan intended to create an integrated human settlement by addressing the socio-economic shortcomings of Post-Apartheid segregated planning. However, the research has revealed that this approach is to a certain extent perpetuating the shortcomings by providing solutions which do not accommodate for poorer economies and their informal spatial practices. Therefore, the proposed intervention seeks to implement an approach that is fundamentally about an adjustment of context - working within this framework and learning from existing networks, in order to provide possibilities that can bridge the gap between the large and the small.

- **Site Location**

  The location of the project should be located within the housing settlement. The site should provide the opportunity to work with the existing built form as well as the left over spaces. Moreover, the site should be considered as a medium to explore and generate site specific design responses.

- **Client: As a Collaborative**

  Working with Dala, a Non-Governmental Organisation (NGO), revealed that if the intention is to address people's specificities, appropriately, then it is of utmost importance to engage with an intermediary actor that can operate and negotiate between scales – not only initiating appropriate technical solutions to suit people's needs but also building their own capacities through the process. Therefore the process also requires that knowledge transfer between people, practitioners, non-governmental organisations and institutional authorities happens in an inclusive - participatory manner. It is important to develop a notional client that represents and can responsively address the various multi-scalar necessities. For these reasons it should be suggested that the client be a co-operative – between Dala, community leaders, and the eThekwini Municipality.

- **Public Spaces as Platforms for Opportunities**

  Discussions in the Precedent studies along with observation from the Case Study revealed that public spaces should be considered as plural and distributed platforms capable of facilitating and sustaining the intermingling of daily practices. Moreover, as the potential to initiate the process of adjusting the existing context by focusing on civic life – collective activities and the sharing of resources.

6.2 Suggested Design Guidelines

The Urban Framework

The aim of the urban framework is to define urban principles that can be used to address the monotonous and individualised nature of the existing housing typology as well as the disconnect to urban life. This framework should thus be considered as a development model that can produce new architectural interfaces between the public spaces (anonymous voids) and private housing units. The following principles have been defined as:

- **Legibility:** Address the lack of orientation that exists within the Case Study area, to provide legibility at both the scale of house and the settlement; Assemble (activities and functions) in order to develop a defined public space system that addresses its current nondescript nature.
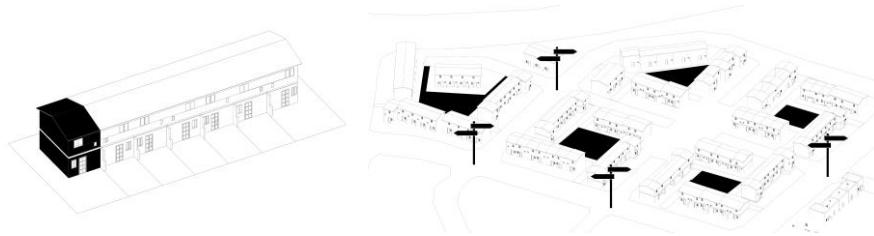
Figure 104. Legibility at both the scale of house and the settlement.

- **Hierarchy:** Invite smooth transitions (from private to public) to create interfaces that are inviting and easily accessible. Encouraging people and activities to transition from the private to the public environment.
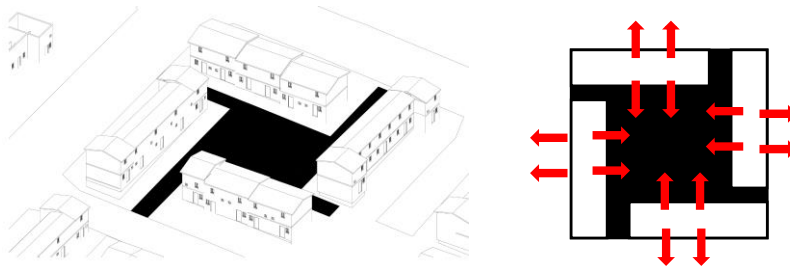
Figure 105. Encouraging private/public transitions. Source: Author, 2016

- **Figure-Ground Relations:** Invert the figure ground relations to reveal the unbuilt spaces between buildings as possibilities to be programmed and developed into thematic places.
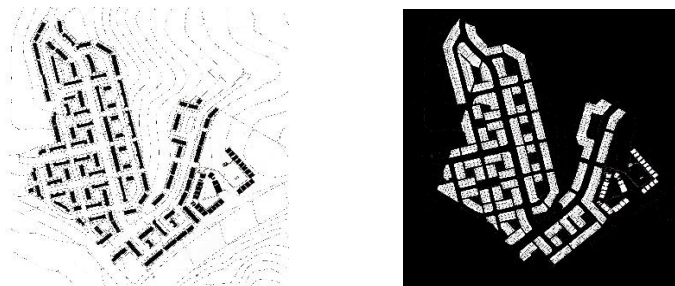
Figure 106. Images illustrating and Figure-Ground relations. Source: Author, 2016

- **Typology:** Understand typology as a heuristic response to the context, rather than through top-down approaches, this means identifying what is there as the potential for something new.

The Architectural Principles

From the aforementioned, a series of architectural principles have been suggested towards translating the recommendations.

- **Decentralisation:** The concept of assemblage calls for connections to be made across scales - suggesting the distribution of power and agency occurring not from top-down but across networks. This distributed approach has been revealed through the analysis of the spaza shops – each one establishing its own micro-spatiality of place.

Figure 107. Images illustrating Decentralisation principle Source: Author, 2016

- **Datum:** The monotonous housing facades (planes) along with the repetitive courtyards (voids) within the existing housing settlement setup a regularity (datum) that can be used to embrace/gather specific programmes – filling the gaps.
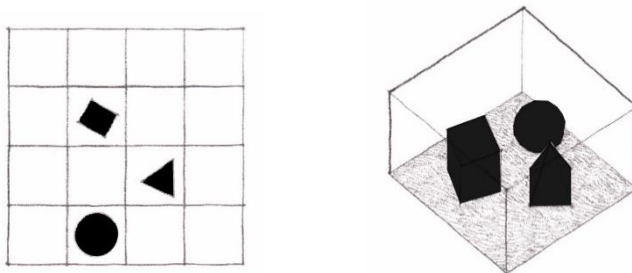
Figure 108. Images illustrating Datum principle. Source: Author, 2016
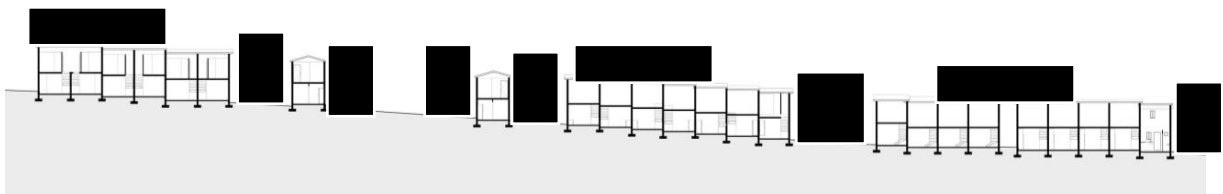
- **Transformation:** Retrofit the formal structure of existing housing typologies to accommodate growing and changing needs, through the processes of **replicability, scalability, and interchangeability.**
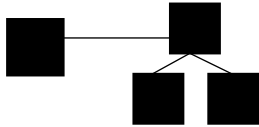
Replicability

Enables the development a generic-specific module (prototype) to be inserted into a system/network.

Scalability

To acknowledging that these practices, networks and systems will change over time in order to accommodate change.
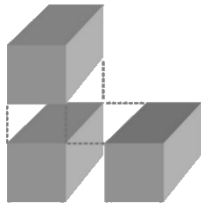
Interchangeability

Needs modular systems with standardised units/dimensions for flexibility and variety in use.

Figure 109. Images illustrating transformation principles. Source: (Campbell, 2011) Adapted by Author, 2016.
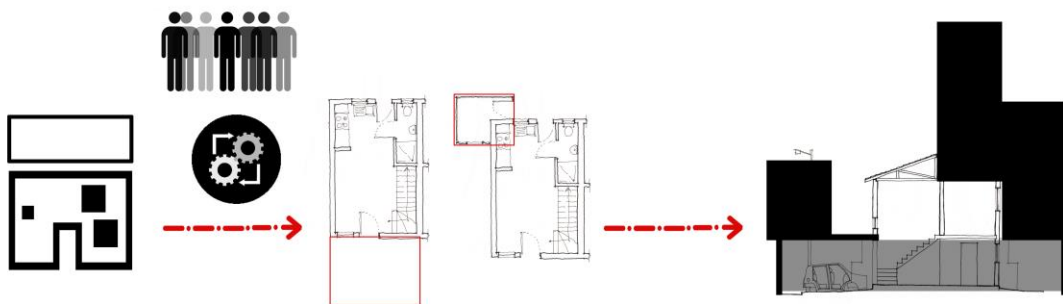
Figure 110. Images illustrating the spatial transformation of existing housing type. The grey shape shows the freeing up of the ground floor to include commercial and social activities and black shapes represent further verticalisation towards greater densification –accommodating multi-generational families. Source: Author, 2016.

- **Modulation of Building Units:**

  Where possible make the shape rectangular. The orthogonal configuration allows for space to expand and be subdivided efficiently over time. This makes it easier for architects to respond to fluctuating building uses.

- **Long Thin Structures**

  Make buildings as long and narrows as possible (maximum 7.62 m wide) – braking them up into sections which correspond to the most important social groups within the building (Alexander, 1977).

- **Connected Buildings**

  "Connected buildings forces people to learn how to adapt to the realities outside them, which are greater and more impenetrable than they are." (Alexander, 1977: pattern 108)…

  "try to form new buildings as a continuation of the older buildings" (Alexander, 1977:534).

- **Positive Outdoor Space**

  "Make all the outdoor spaces which surround and lie between buildings your building's positive. Give each one some degree of enclosure…until it becomes an entity with a positive quality" (Alexander, 1977:522).

- **Open Stairs**

  "Open stairs has in its nature the fact of independence, free coming s and goings" …Open stairs act as extensions of the public world" (Alexander, 1977: 743).

- **Thin Window Frames/ Small Panes**

  "The smaller the windows are, and the smaller the panes are, the more intensely windows help connect us with what is on the other side" (Alexander, 1977: 1109).

CHAPTER 07

CONCEPTUAL DEVELOPMENT

7.1 Introduction

Cornubia represents two distinct realities. On paper, it is a mixed use megaproject intended to provide an integrated living settlement with economic and social opportunities for all. However, the lived reality has revealed that this planning approach has actually created a built environment that perpetuates the same socio-economic issues it seeks to address by remaining starkly disparate with people's (urban poor) ways of living.

Considering the aforementioned, this chapter will unpack the project's intention to redefine this disparate relationship.

7.2 Project Description | Design Brief

The settlement layout of Cornubia's Pilot Phase has failed to accommodate peoples' functional and social needs. The double storey row houses are homogeneous, mono-functional and lack a connection to urban life – no defined public spaces exit and the allocated community courtyards remain non-descript and underutilised. Since the inception of this pilot phase, inhabitants have gradually being attempting to make this space suitable for living – extending their houses to accommodate new family members, setting up small shops like spazas and taverns and attaching light canopies to provide shade for occasional gathering and outdoor cooking. As these transformations spatially manifest the sharp separation between inside and outside gradually softens – turning imposed borders into desired, transitional spaces.

Building on from the ways people have informally transformed the settlement thus far, the dissertation proposes a retrofit strategy conceived as a continuation of this transformation. Conceptualised as a *Co-Operative Living Model*, this strategy seeks to improve the existing housing programme using the ingenuity and resourcefulness of people's informal practices – providing a contextual response to the homogenous built environment that currently defines Cornubia's Pilot Phase.

The notion of *collective ownership* together with a *catalogue of architectural possibilities* aims to produce a living model that transform a set of individually owned plots into collectively owned plots, as well as a set of design rules and tools towards defining specific design interventions. This would enable the development of a new programmatic layer for the collective use of outdoor spaces and allow for further densification of the units in the upper floors through an additional structural framework. In addition, this would also allow for the ground

floor to be retrofitted with communal facilities such as laundry rooms, learning facilities, collective kitchens and commercial activities – all of which respond to the inhabitants' social and functional needs.

7.2.1 Project Organisation

Client	**Cornubia Phase 1A Residents:** Relocated population from seven informal settlements around the eThekwini municipality.

Partners	**CORC** (Community Organisation Resource Centre) is a non-profit organisation. It is the hub of new relations between development professionals, local project workers and collective action. The centre was set up with the intention of consolidating a community-based, pro-poor platform in order to facilitate engagement of a network of community-based organisations on a settlement-wide basis. The centre continues to support community-based planning towards developing inclusive cities.	
	Dala is an interdisciplinary creative collective that believes in the transformative role of creativity in building safer and more liveable cities. Dala has been working with the relocated community of Cornubia since 2015 and has managed to build up significant trust with the community leader and majority of the residents.	
Sponsors	**eThekwini Municipality + Tongaat Hulett** The existing private-public partnership between the Municipality and Tongaat Hulett would serve to sponsor the proposal.	

7.2.2 Project Requirements

The Co-Operative Living Model's
Core Principles

Focus on Natural, Social and Cultural Resources	Use Sustainable Local Technologies	Encourage Individual + Collective Values
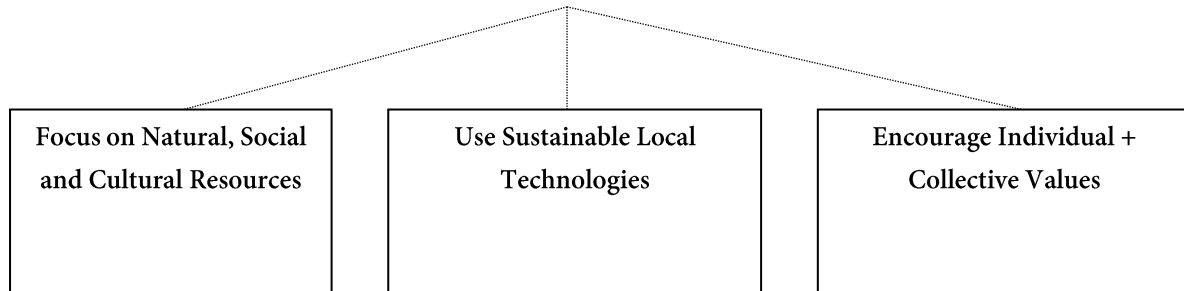
The Co-Operative Enables:

- The option for a shift from private ownership to co-operative ownership to create new plot subdivisions – allowing for three things: 1. **Further densification 2. Private to public transition 3. The consolidation of new collective assets.**

- The provision of shared facilities and infrastructure. These are based on observations made from Case Study- small scale, collective activities such as: cooking, washing, gathering, playing, car-repair, farming, and commerce-spaza.

- On ground floor: private patios facing the street are customised into commercial facilities, and those facing the courtyards are retrofitted with social activities - unifying a minimum of four plots.

- Upper floors: further vertical additions through a new modular structural framework.

New Social + Commercial Programmes

Collective Asset

Shared Facilities and Infrastructure
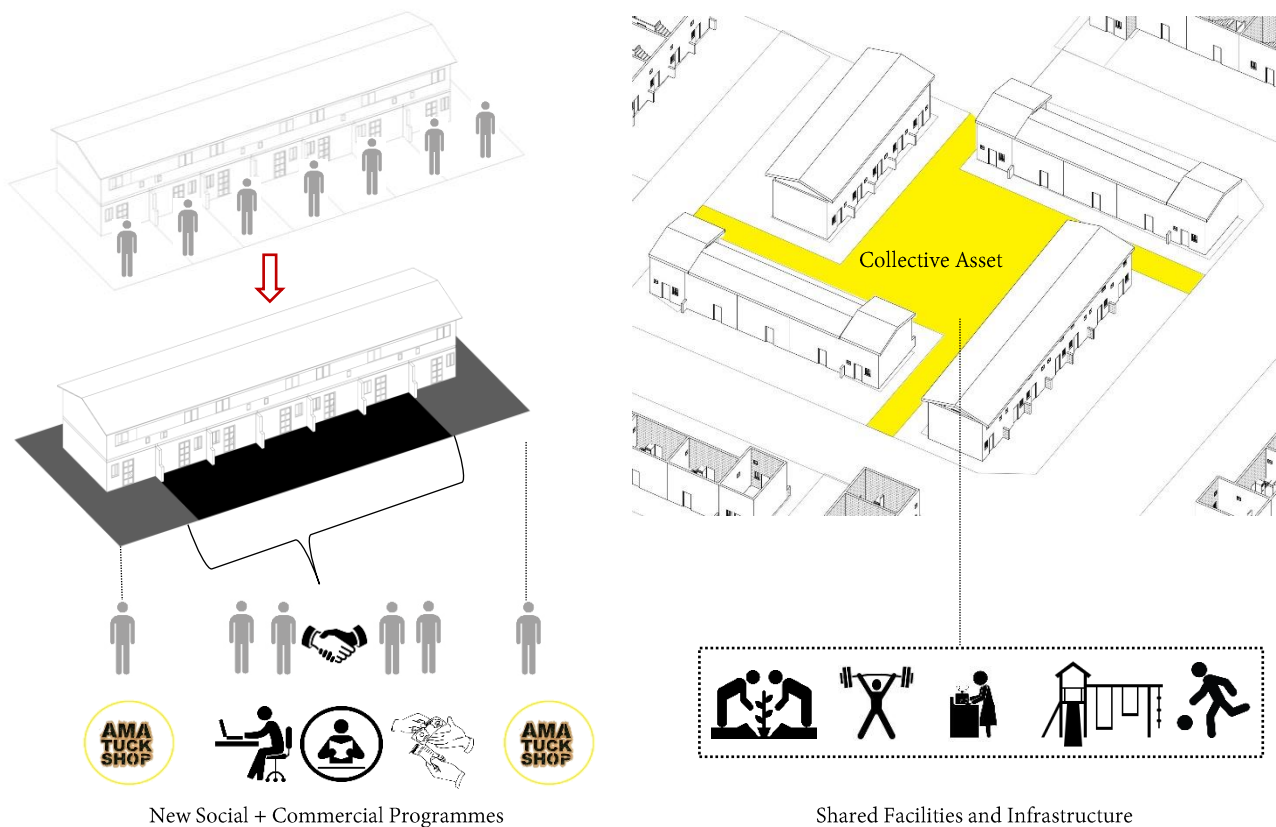
Figure 111. Image illustrating the core principles the co-operative living model and what it enables. Source: Author, 2016.

7.2.3 Schedule of Accommodation

The intention of the Co-Operative Living Model is to suggest the possibility of upgrading the existing housing type and the spaces in-between them through the insertion of site specific interventions. This approach alludes to the spatial transformation process that people have already being engaging in – depicted in both *Chapter 4 and 5*. What was revealed in the aforementioned chapters was a logic which started to point towards an interpretation of space - not governed by top-down frameworks – but one that pointed towards a network paralleling the inhabitant's understanding of their own space – see figure 84, Chapter 4. This is relevant, firstly because it meant that the spatial solutions that people were implementing were very specific to their required needs, and secondly, because it meant that people were showing how spatial limits could be adjusted/expanded to include formerly unimagined uses in a homogenised built context.

In addition, *Chapter 4 and 5,* further revealed that everyday activities such as **cooking, washing, gathering, car repairs, commerce, farming and playing**, in this context, is closely related to the urban morphology. However, the existing 'public' space system was not designed as places for exercising these activities – primary example being the courtyards. Therefore, the design accommodation seeks to identify and establish these non-descript spaces into places where people can perform their daily activities and socially interact.

Given the aforementioned, the accommodation schedule develops as such:

EVERYDAY ACTIVITIES	INTERVENTIONS
cooking	collective kitchens – shizangyama, bakery
washing	collective laundry rooms.
gathering	Micro-libary, canopies, extended facades
car repairs	workshops: wood and metal work.
commerce - spazas	market spaces, storage.
farming	livestock farming, vegetable growing.
playing	action soccer, outdoor gyms.
caring for dependents	crèche, playground, learning incubators.

These interventions would be inserted predominantly along existing courtyard and pedestrian lane spaces. In certain instances the ground floor would be adjusted – as has been the case with the spazas - to accommodate some of these interventions as well - transforming their use in the process.

7.3 The Site Analysis
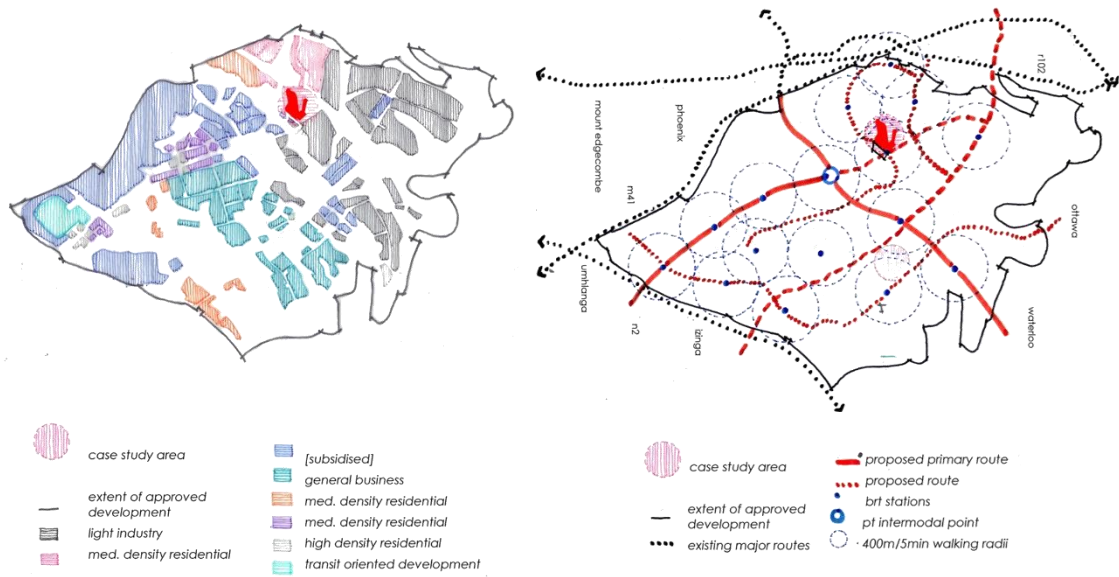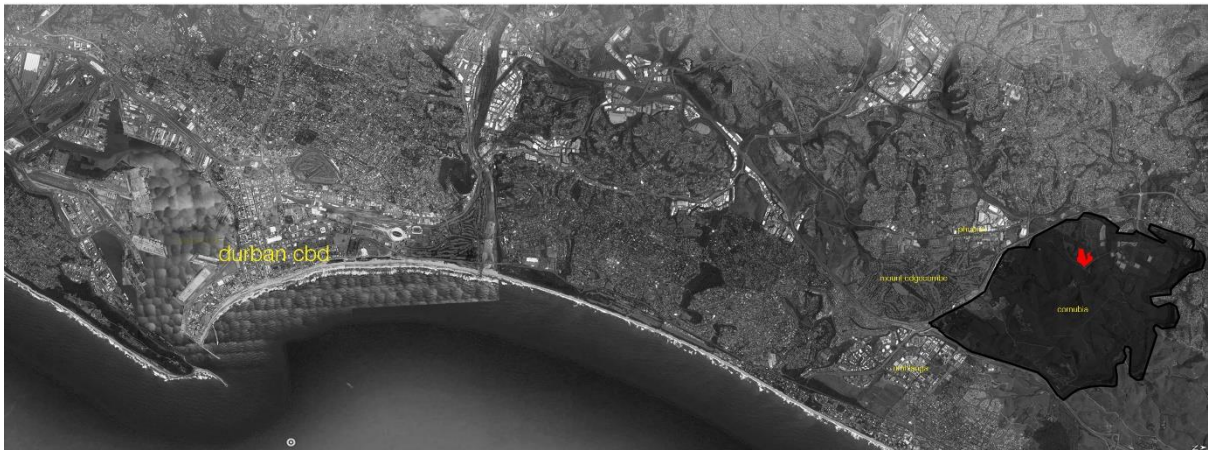
Land-Use
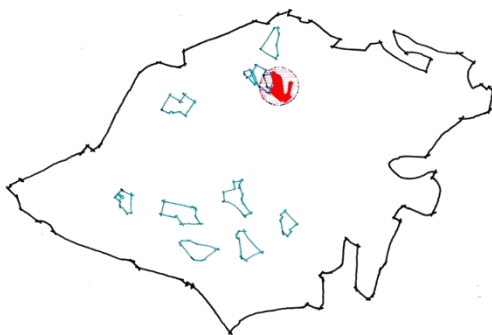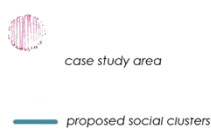
Road Network
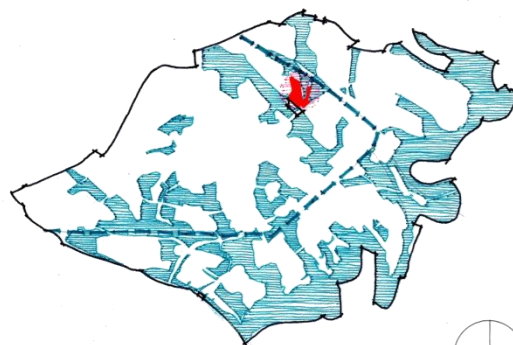
Social Clusters

Open Space

Figure 112.Top: Location of Cornubia in relation to Durban CBD. Bottom: The development's layers; land-use, road network, social clusters and open space. Source: Author, 2016.

7.3.1 The Settlement as *Site of Exploration*

Site 1 presents the opportunity to work with the housing **linear configuration**, whereas Site 2 presents the opportunity to work with the housing **courtyard configuration.** In both sites the schedule of accommodation can manifest in different ways. Site 1 holds the potential to primarily add new footprints, whereas in Site 2, the schedule can be considered primarily as a home-grown extension/production.

Figure 113. Cornubia Pilot Phase Settlement plan highlighting two site options. Source: Author, 2016.

7.3.2 The Settlement Spatial Layers

Settlement Boundary

Road Network

main connectors
20-40m Reserves

Built Form

Open Space

Figure 114. Pilot Phase settlement layers depicting: Settlement boundary, Road Network, Built Form, Open Space. Source: Author, 2016.

7.3.2 Site 1: Working on the Fringe

This sample site covers an area of 11000 m². It deals with a housing **linear configuration** and has the potential to address this particular type. The site has 46 housing units – 50 m² each – within proximity. In addition, as observed in the case study, this area also hosts a temporary primary school.
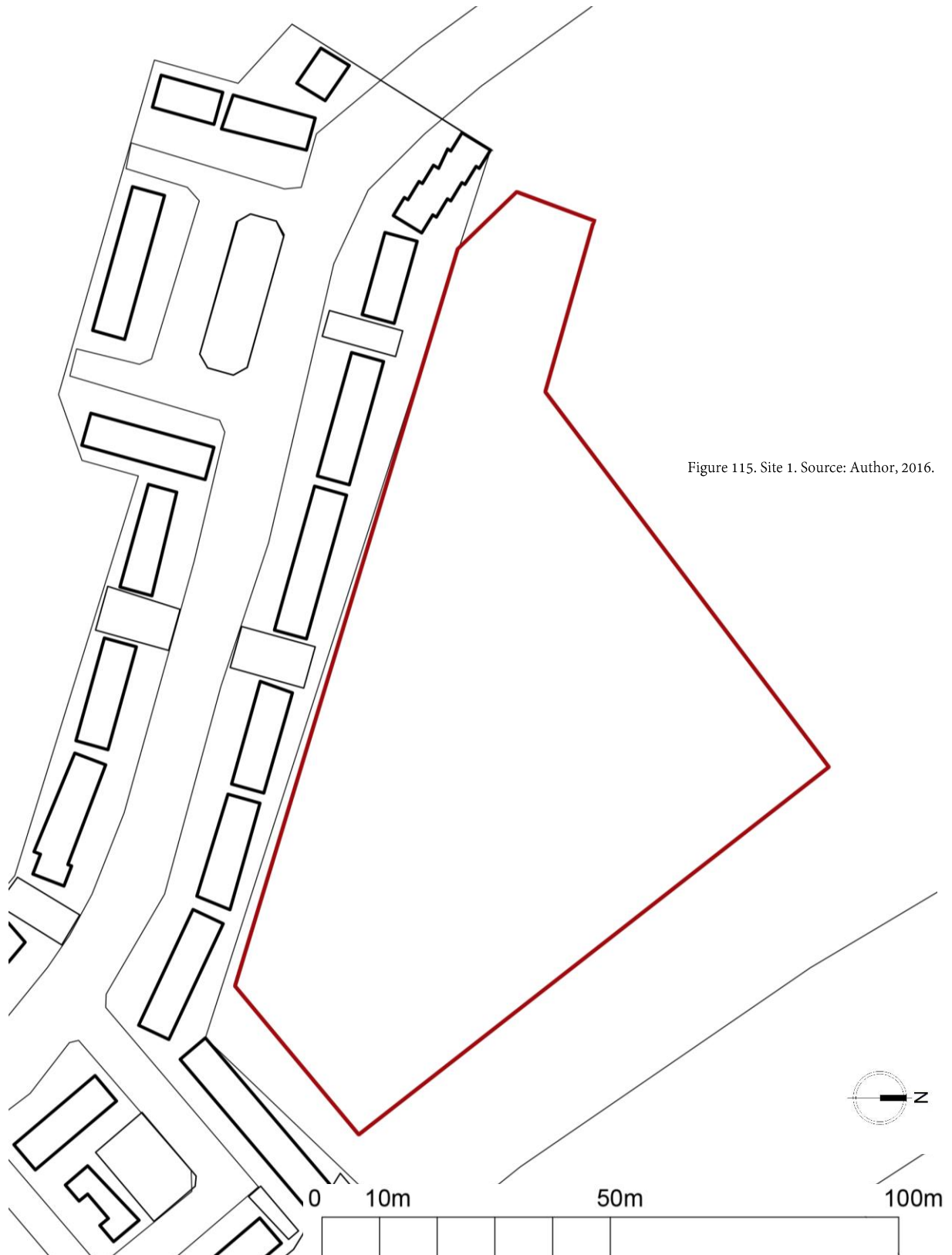
Figure 115. Site 1. Source: Author, 2016.

0   10m   50m   100m

7.3.3 Site 2: Working 'In-Between'

This sample site has an area of 14750 m². It consists of 22 lots, 108 housing units - 50 m² each. The open spaces – courtyards - sum up to 3010 m², they include the 3m 'pedestrian lanes' that connects to the grass surface courtyards. The main access roads are 8m wide and the secondary ones are 6m wide. These give access to housing units leaving the service end of the house - toilet and kitchens - facing the courtyards.

Figure 116. Site 2. Source: Author, 2016.
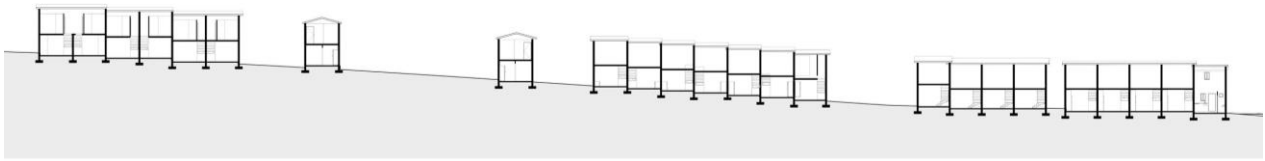
Figure 117. Site 2 Longitudinal Section. Source: Author, 2016.
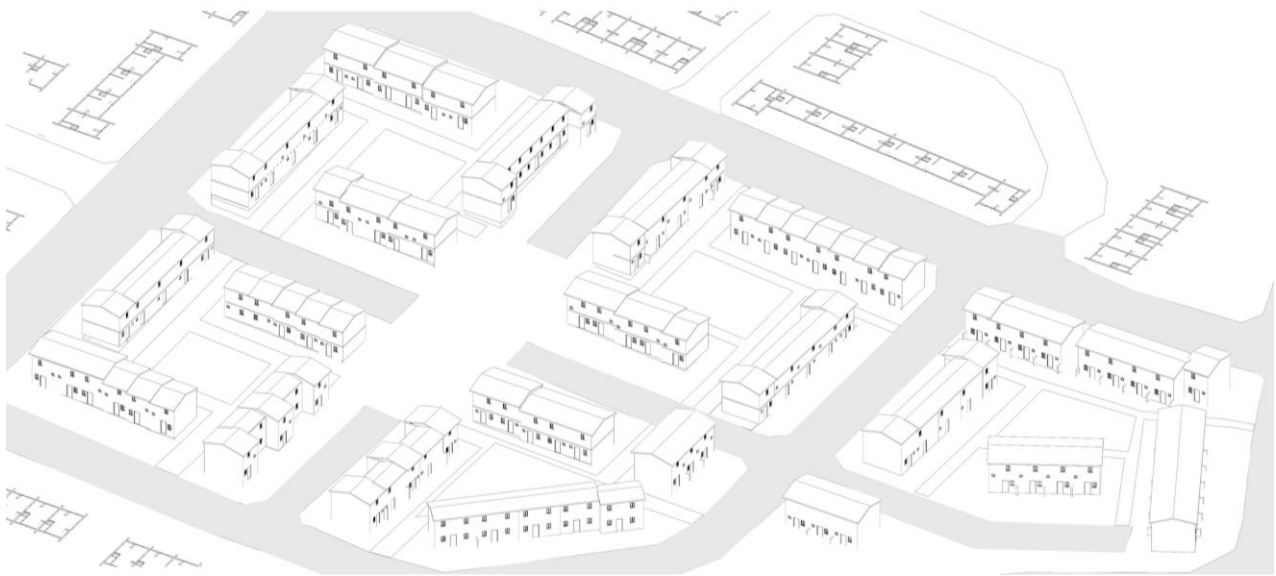
Figure 118. Site 2. Built Form: Author, 2016.
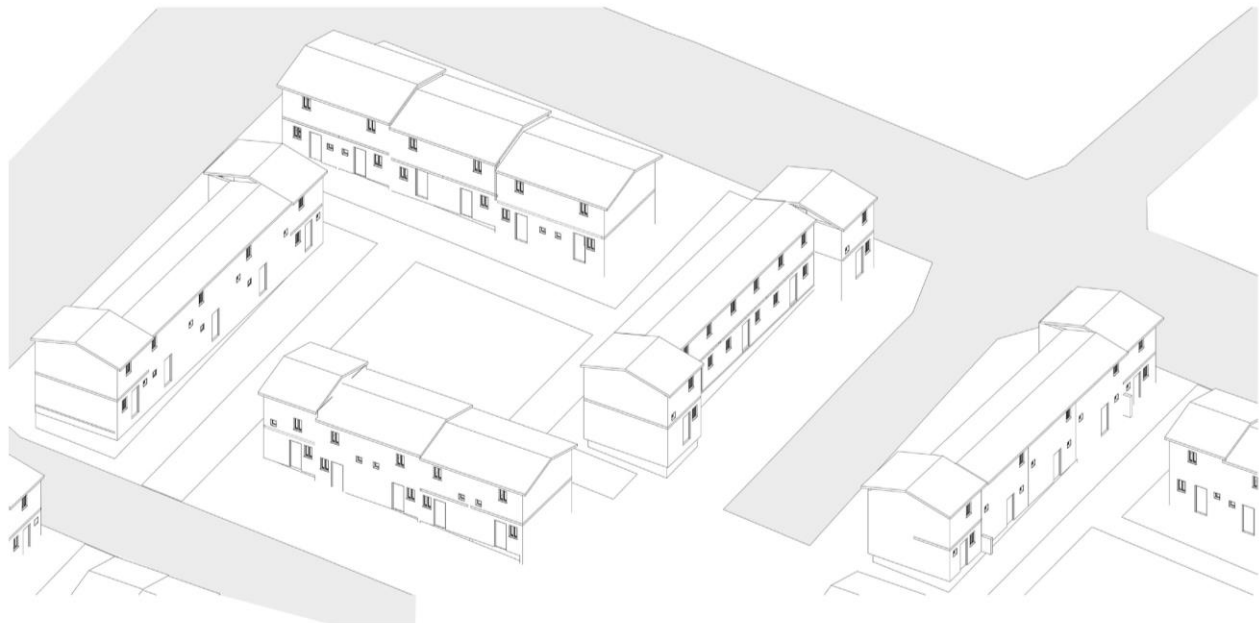
Figure 119. Site 2. Courtyard Configuration: Author, 2016.

CHAPTER 08

DEVELOPING THE CATALOGUE OF
ARCHITECTURAL POSSIBILITIES

8.1 Introduction

As has been noted in the previous chapter, the aim of developing a *catalogue of architectural possibilities* is to produce a toolkit that can help in defining specific design interventions – within a particular context. The design approach thus far has been based on investigating design solutions within an existing housing settlement. This context has been identified as an 'in-between' site – see Chapter 7.

This site presents the opportunity to address the multitude of issues present through a process of connected insertions – all of which respond and serve as appendages to existing conditions.

This approach is not big (at the beginning). It is rather about small accretions that can manifest over time within a given framework. This enables the option to test and see whether it works or not. It also allows for improved iterations – mutated forms – to be developed.

The following chapter will unpack a series of possibilities that could manifest within this context. It covers structural systems that have simple and adaptive construction assemblies; housing additions for extended living/commercial activities; public programmes inserted in the underutilised voids; and sustainable technologies which can be obtained and managed cheaply.

8.2 Structural Systems

Linear Elements   Planar Elements   Room Elements

With Frame Systems, Load-bearing elements are functionally and structurally separated from the non-load bearing elements. Planar Systems consists of planar walls and slabs and can be made to be self-supporting.
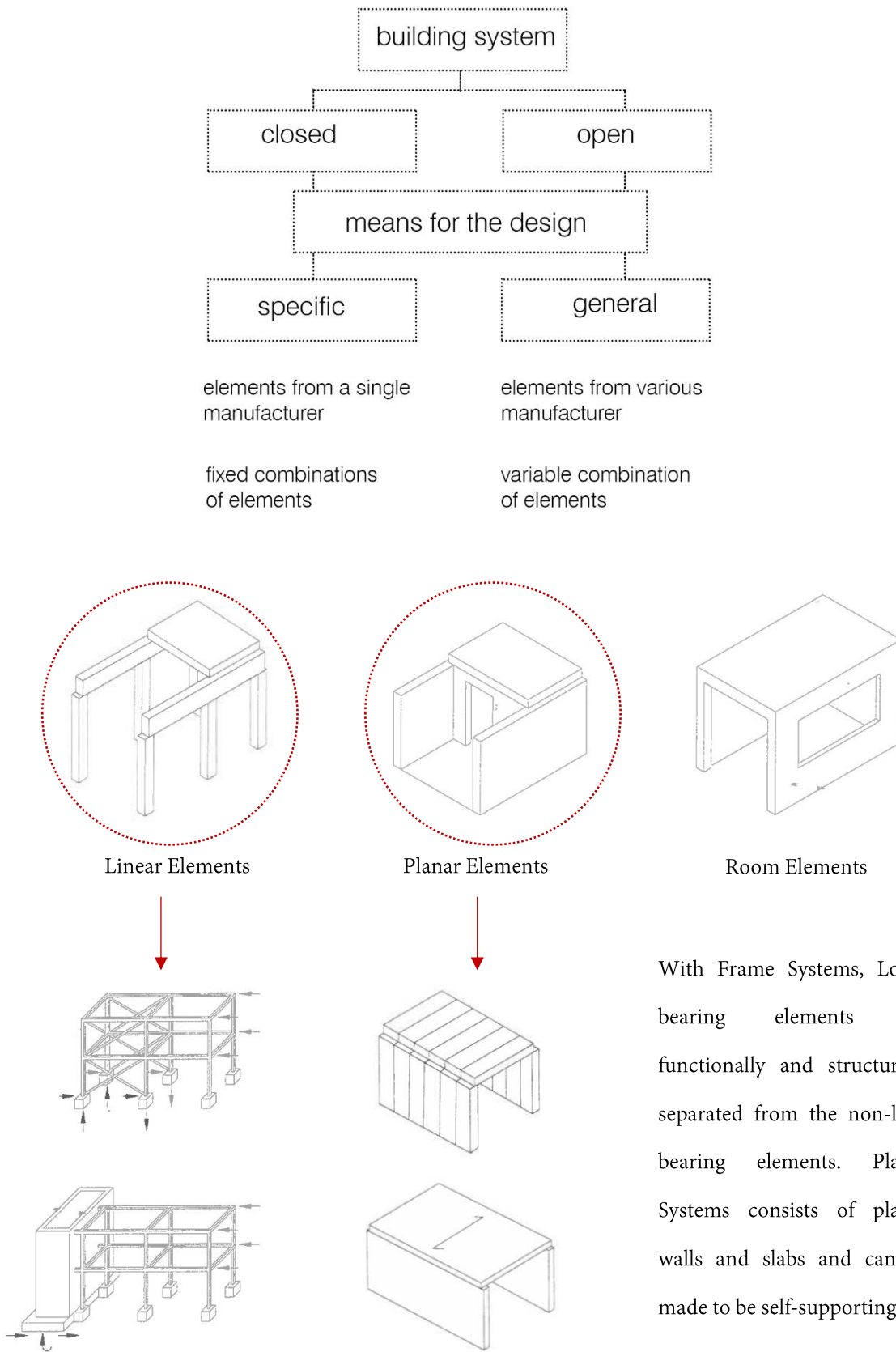
Figure 120. Top: Building Elements. Bottom: Linear and Planar Frame Systems. Source: Staib el al, 2008

Building System: [Open] Structures

The open structure system allows for interchangeability and adaptive response to changing conditions. Open source construction is based around the idea of:

a grid (universally available) which enables the development of:

- parts
- components (made from parts)
- structures (made from components)
- superstructures (made from structures)

…being easily assembled and disassembled.
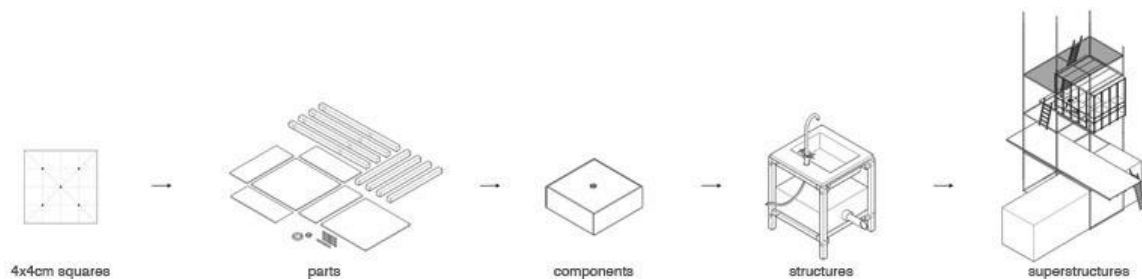
Figure 121. Structural Build Up. Source: www.openstructures.net
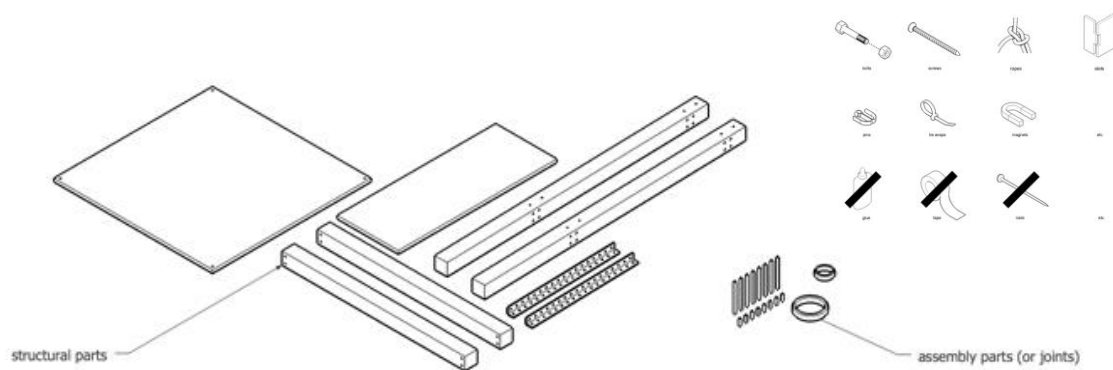
Figure 122. Image showing different part types and fastening systems. Source: www.openstructures.net

Thinking about buildings in this manner allows for practitioners to think about the interdependence, interconnections and scalability of things.

8.3 Housing + Additions

The housing additions (as modules) can provide the following

- space for extended family members
- rental as extra income
- commercial activity (single or consolidated spaces negotiated by neighbours)
- storage
- spatial orientation

Derived from dimensions of the housing unit– developing a module affords the residents a building of their own possibilities within the existing housing. Key to the development was to define a set of parameters that would make it easier for anyone to continue to learn, adapt and modify.
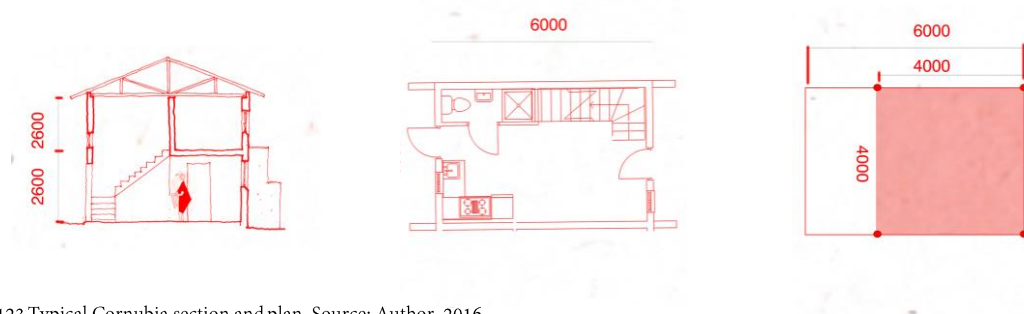
Figure 123.Typical Cornubia section and plan. Source: Author, 2016

Commercial Programmes on ground floor facing the street

Original house form transforms as people negotiate a co-operative living arrangement. This enables the addition of new structural system for further densification.

Communal activities get plugged into the courtyard facing ends of the units.
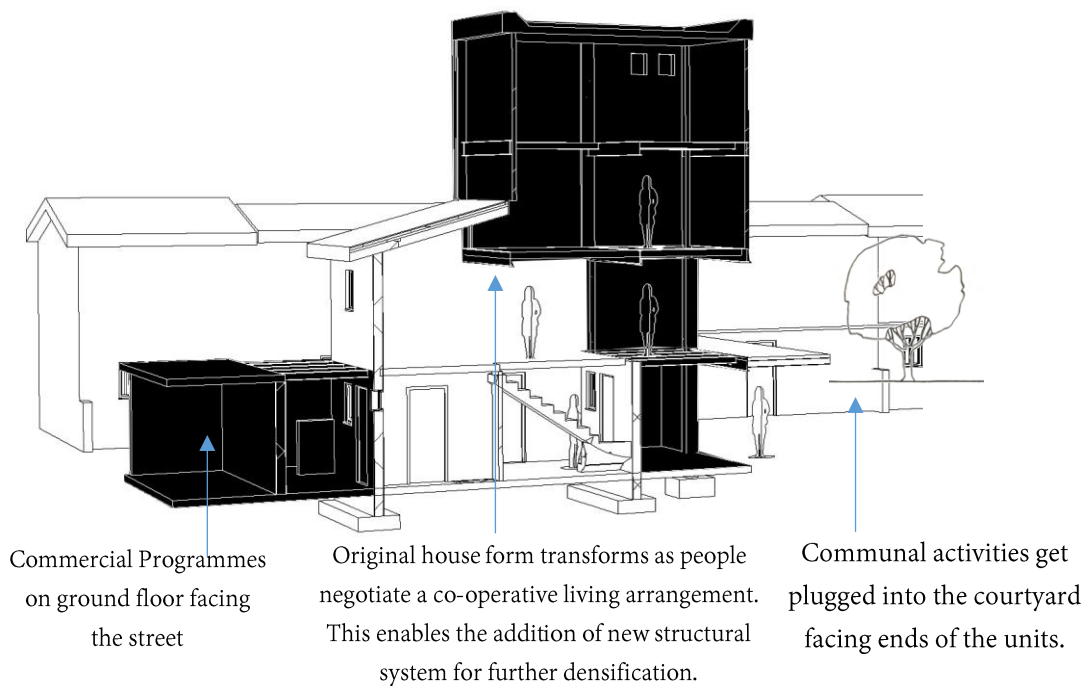
Figure 124. Possible housing unit transformation 1. Source: Author, 2016.

Housing additions possibility
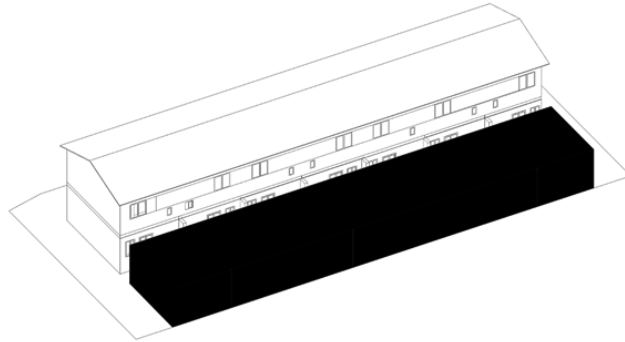
GROUND FLOOR ADDITION: COMMERCIAL ACTIVITY
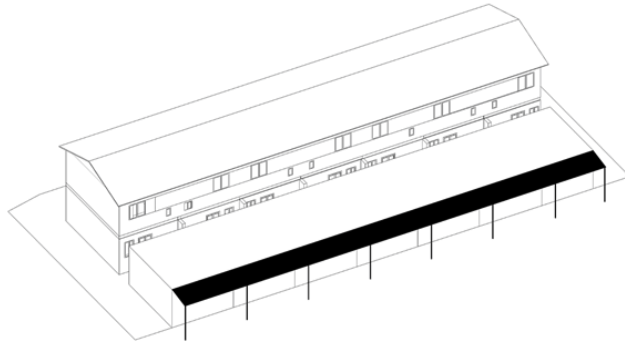
GROUND FLOOR ADDITION: PERGOLA AS PRIVATE-PUBLIC THRESHOLD; CONNECTOR
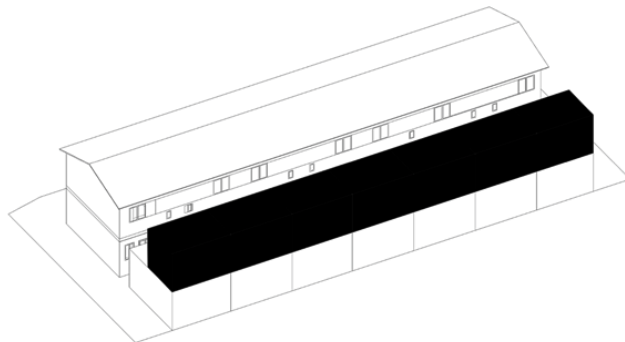
FIRST FLOOR: ADDITIONAL LIVING UNITS (EXTENDED FAMILY, RENTAL)

Figure 125. Housing Additions 1. Source: Author, 2016.
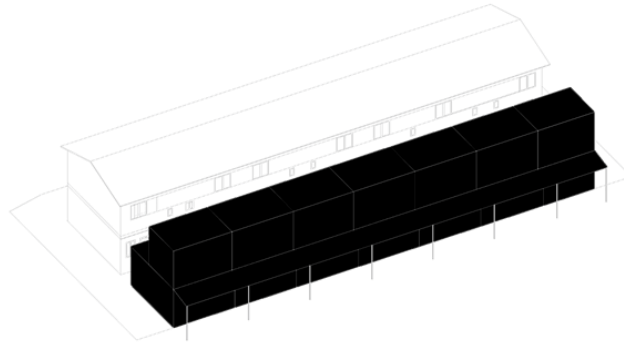
GROUND + FIRST COMBINATION
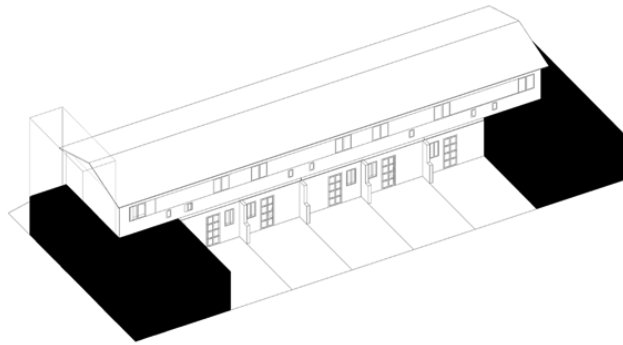
SIDE ADDITION: EXTENDED LIVING
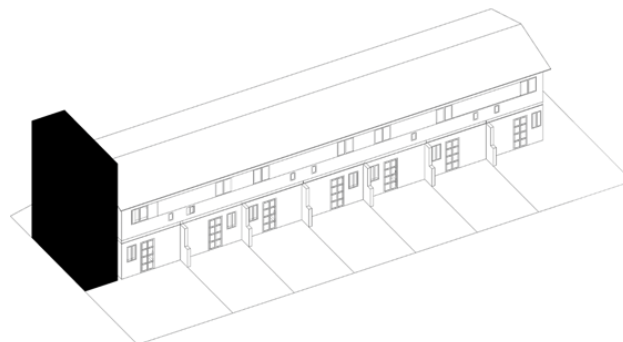
SIDE ADDITION 2 FLOORS: EXTENDED LIVING

Figure 126. Housing Additions 2. Source: Author, 2016.
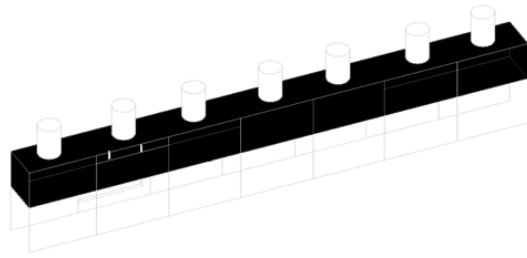
SUSTAINABLE TECHNOLOGIES
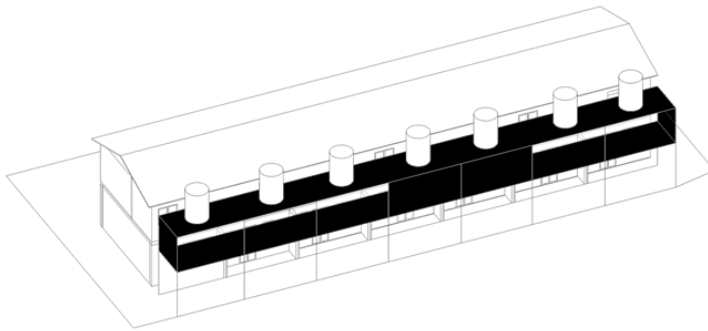
SUSTAINABLE TECHNOLOGIES: ATTACHED
TO THE SERVICE END OF HOUSE
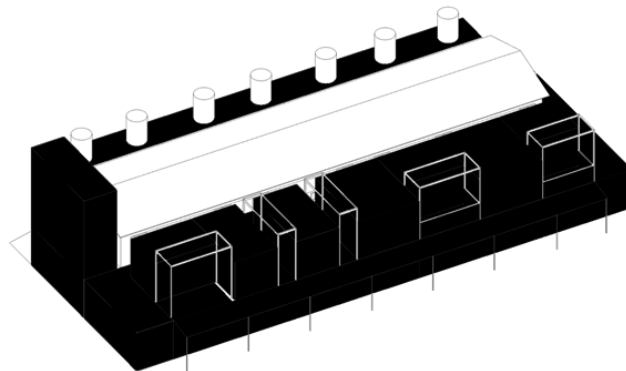
HOUSING REDEFINED

Figure 127. Housing Additions 3. Source: Author, 2016.

8.4 Void + Programmatic Insertions

Community

Office Tower

NGO Offices

Stormwater Garden

Collective Kitchen + Washing

Shizangyama + Bakery

Workshop space

Open Air Theatre

Micro-Library

Stormwater Garden

Vegetable Farming
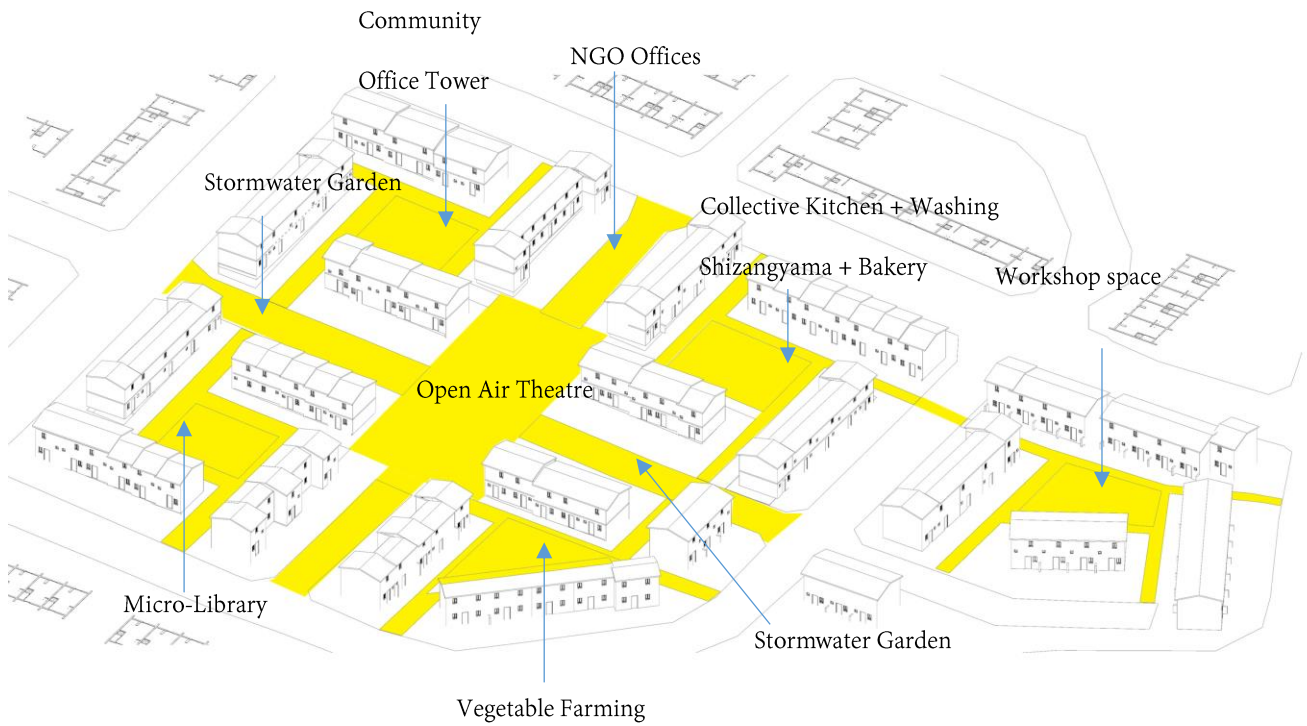
Figure 128. Identifying and establishing non-descript courtyard/lanes into places where people can perform their daily activities
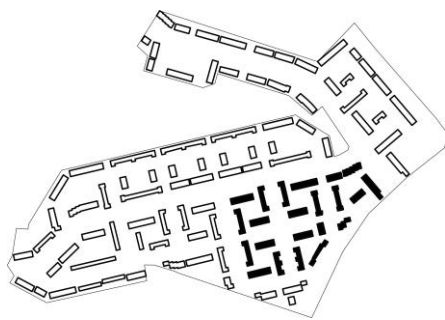
Figure 129. Site 2 Figure Ground: Author, 2016.
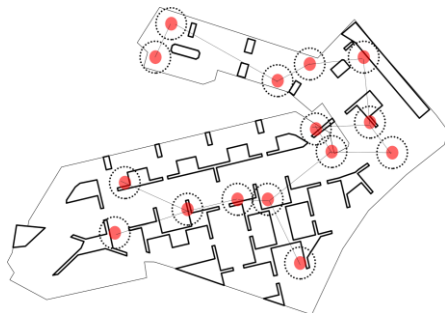
Figure 130. Spaza location + Open Space. Source: Author, 2016.
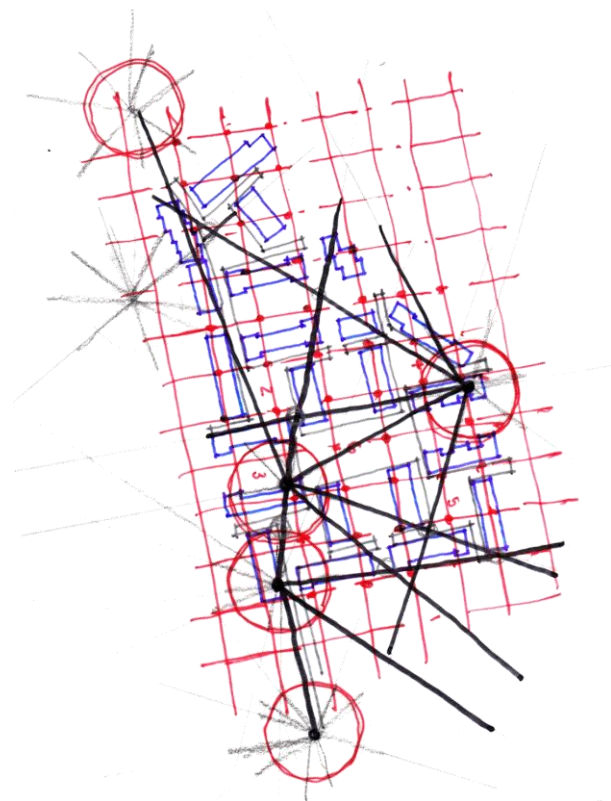
Figure 131. Void and Spaza relationship. Source: Author, 2016.
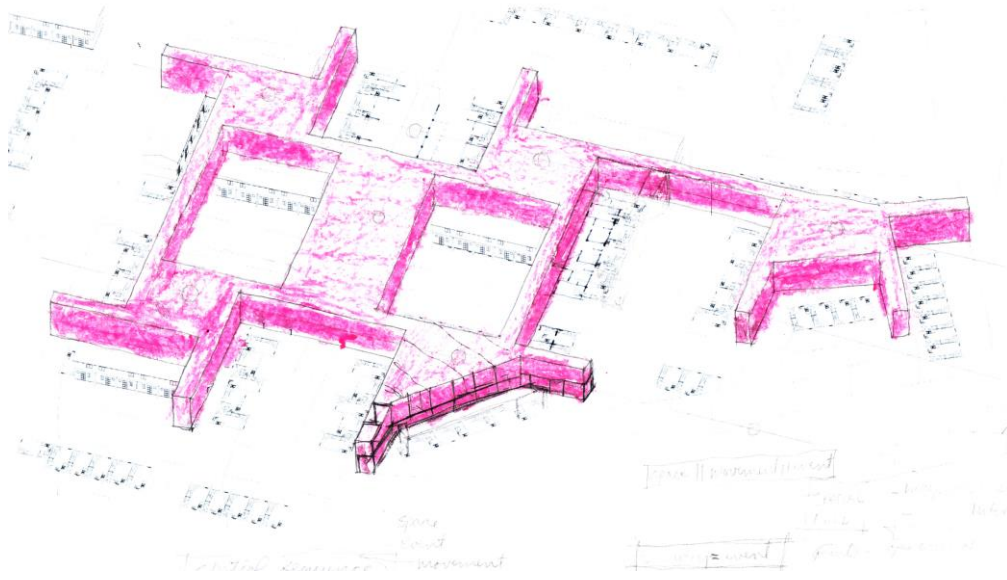
Figure 132. Filling the spaces in-between. Source: Author, 2016
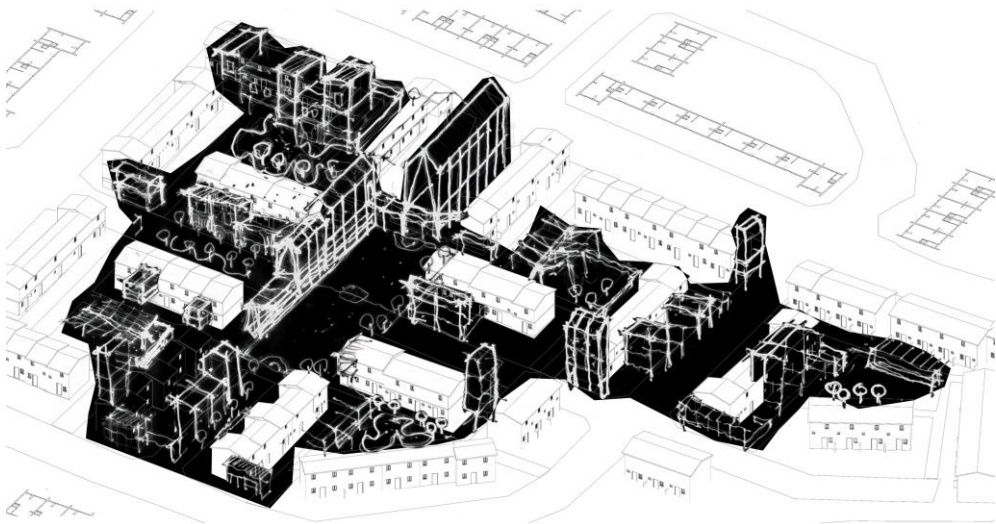
Figure 133. Filling the spaces in-between and transforming the housing units. Source: Author, 2016

COMMUNITY OFFICE TOWER

NGO OFFICE

MICRO-LIBRARY

AGORA

OPEN-AIR THEATRE

WORKSHOP

ADDITIONAL LIVING
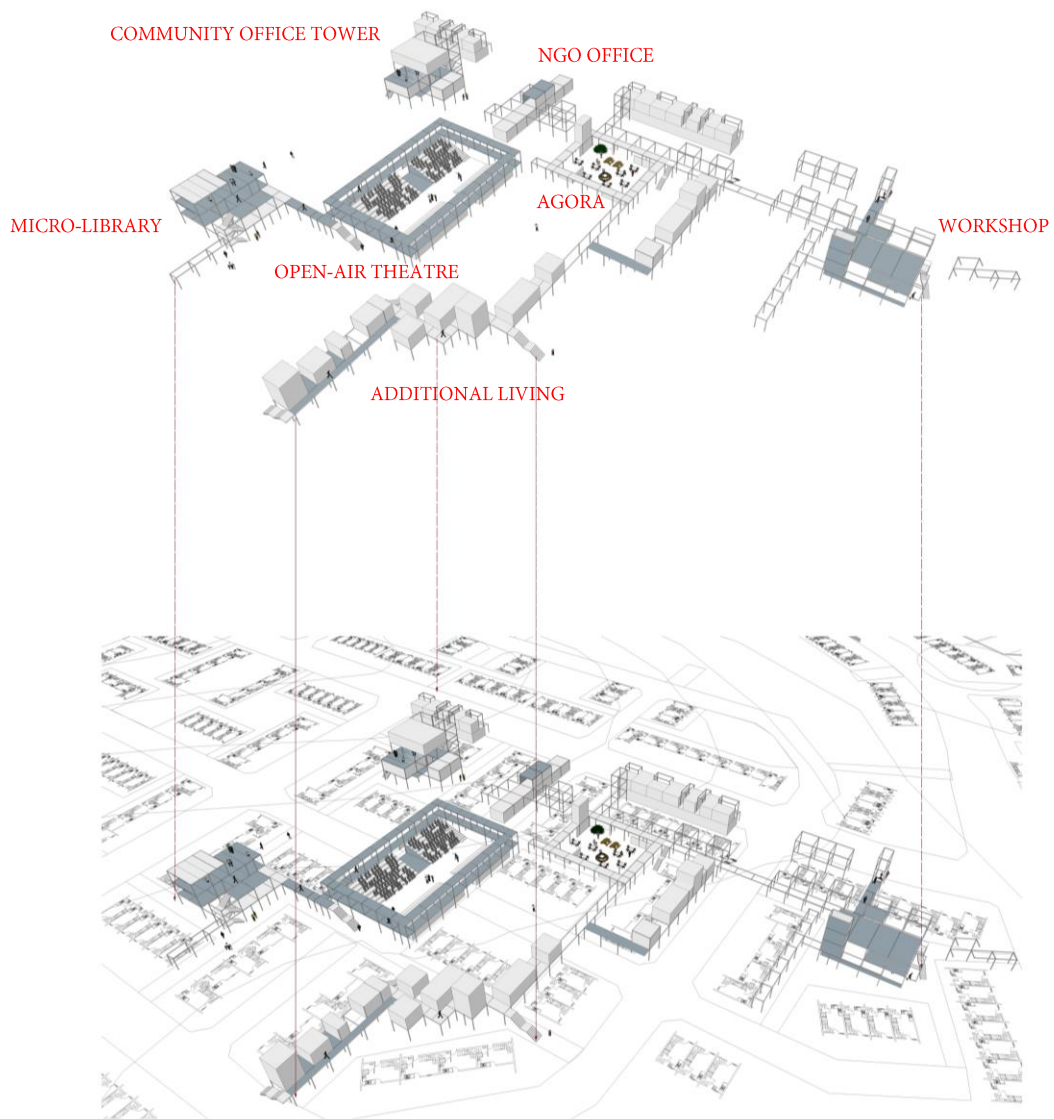
Figure 134. Applying open structure system to site. Source: Author, 2016
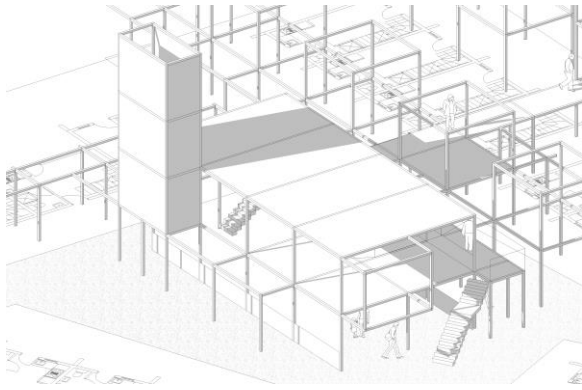
WORKSHOP
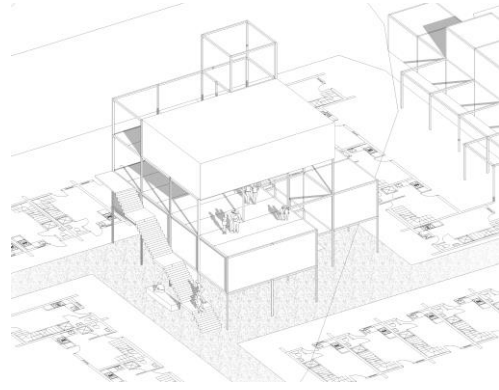
COMMUNITY OFFCIE TOWER

Figure 135. Superstructures: Workshop and Community Office Tower. Source: Author, 2016
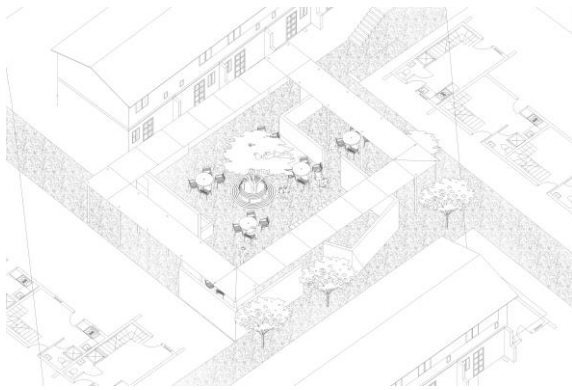
AGORA
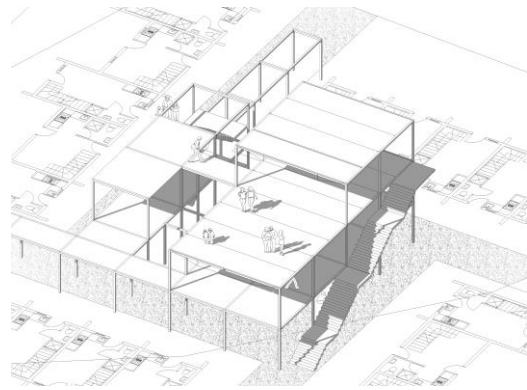
MICRO-LIBRARY

Figure 136. Superstructures: Agora and Micro-Library. Source: Author, 2016
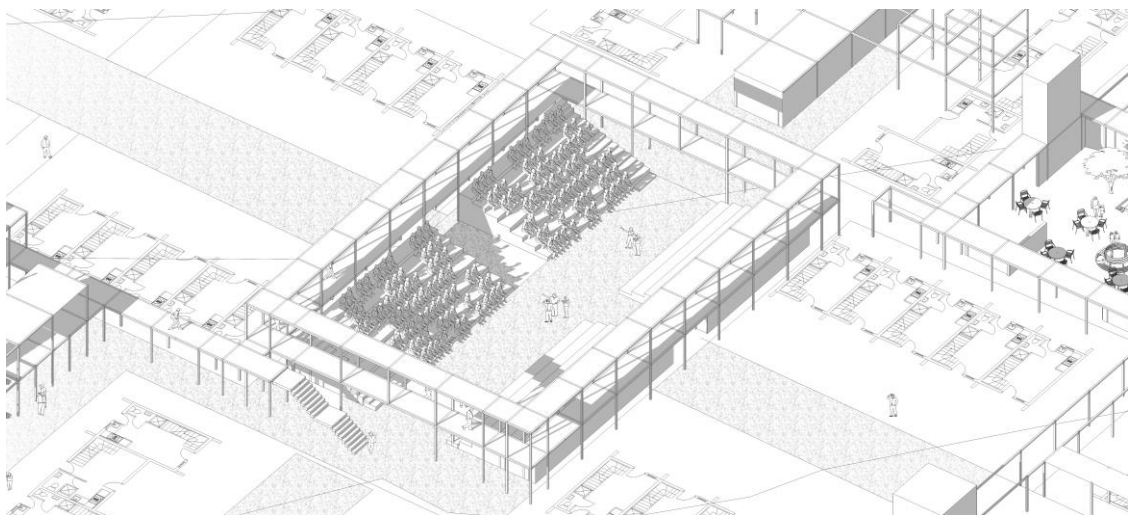
OPEN-AIR THEATRE

Figure 137. Superstructures: Open-air Theatre. Source: Author, 2016

8.5 Sustainable Technologies

Using Biogas and Simple Water Reticulation Strategies:

- Waste = Resource

- Reconnect with natural cycles

- Reconnection = Altering of perception about waste

The intention is to supplement everyday activities such as cooking, washing and growing with low cost recycling technologies. With water for instance, the roof surface area of one module has the potential of harnessing about 990 l of water per month and with the organic bio-digester: a 750 l tank that can fit in a 600x600 cupboard can provide around 1.5 kilowatts per hour which can equate to 20 mins of hot water, 15 hours of lighting and 1 hour of cooking time.
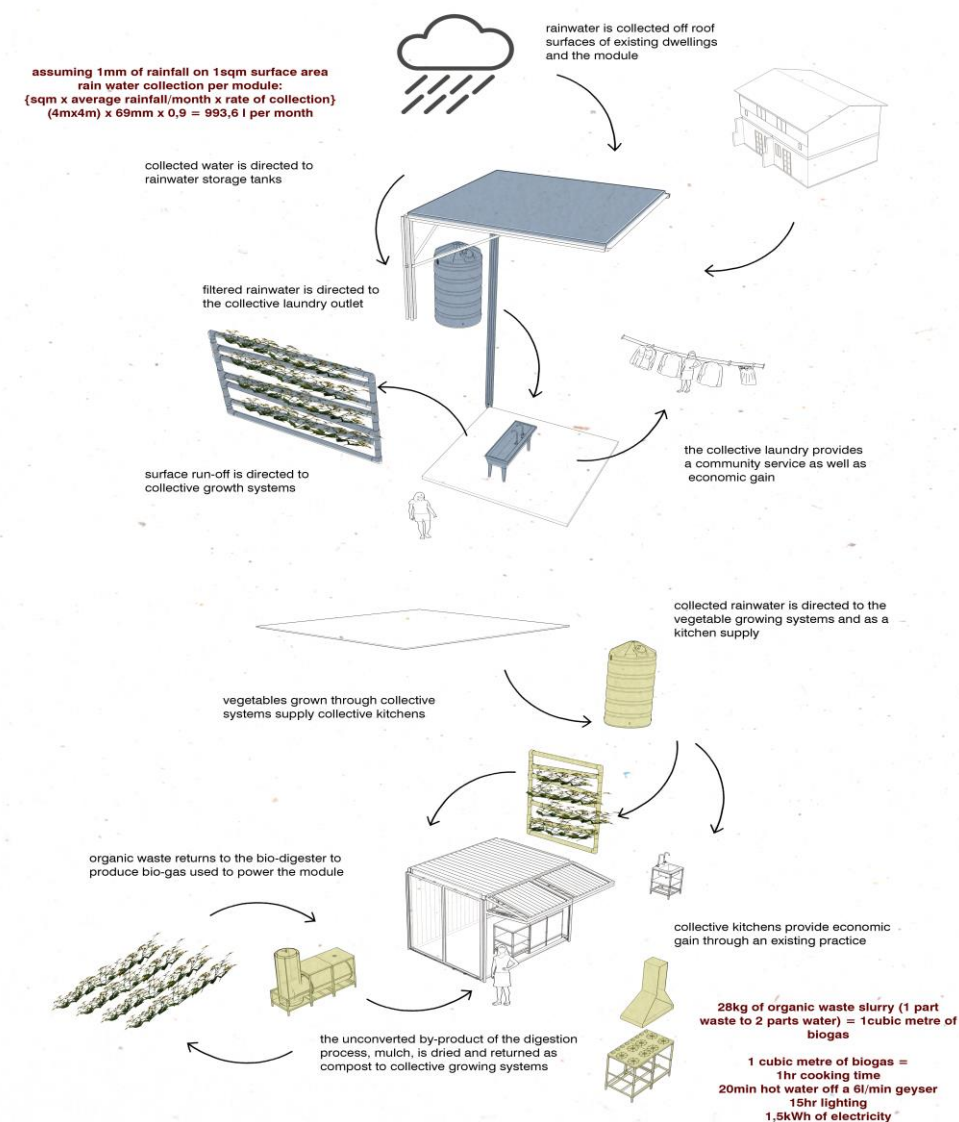
Figure 138. Exploring simple sustainable technologies. Source: Author, 2016

CHAPTER 09

DESIGN RESOULTION/POSSIBILITY

invisible practices within visible spaces

exploring manifestations of collective life towards the design of a
co-operative living model for cornubia

juan miguel dorta ruiz . 210527322 . arch808

.1.project primer

problem statement: the shortcomings of the megaproject's large scale approach in accommodating alternative living conditions.

the city makeup

the top-down, abstract planning of the megaproject has failed to acknowledge the bottom-up, grounded presence of the everyday socio-spatial practices of the community that lives within it. what manifests from this is the making of relevant spaces that address the everyday needs and aspirations of the community by and for itself - a collective making of a collective life.

the practice of everyday life

social production of space

tactics

identity

assemblage

collective life

public space

livelihood

invisible practices

informality

participation

constructing a theoretical framework

concepts   theories   core ideas
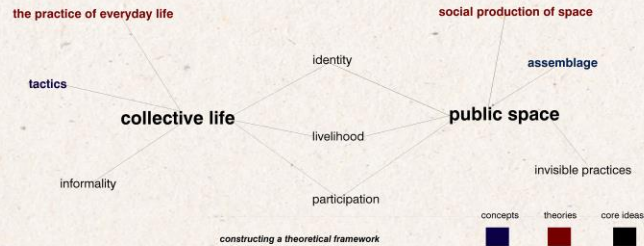
who: the relocated community of cornubia phase 1a: pilot phase housing settlement

why: to address the disparity between top-down planning and people's bottom up approach.

how: by upscaling the informal built transformations of the community

what: a co-operative living model

.2. the big idea

a retrofit strategy conceived as a continuation of informal transformation
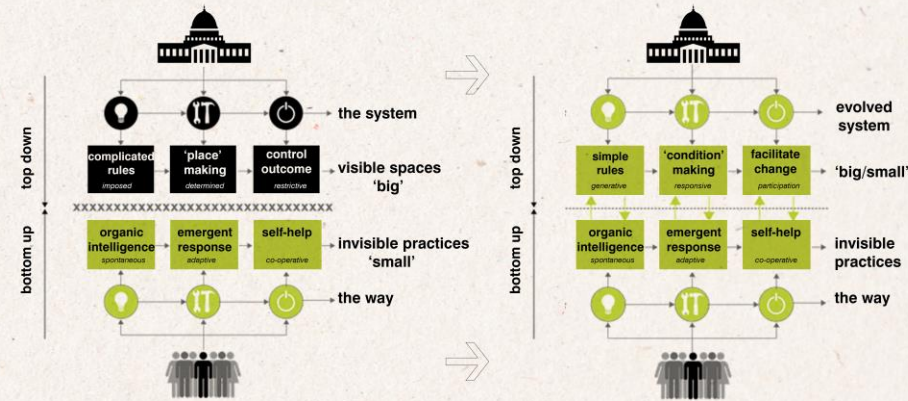
.3. brief

building on from the ways people have informally transformed the settlement thus far, the dissertation proposes a retrofit strategy conceived as a continuation of this transformation. conceptualised as a co-operative living model, this strategy seeks to improve the existing housing programme using the ingenuity and resourcefulness of people's informal practices – providing a contextual response to the homogenous built environment that currently defines cornubia's pilot phase.

client: the residents of cornubia phase 1a: pilot phase housing settlement

partners: the residents of cornubia phase 1a: pilot phase housing settlement

sponsors: the residents of cornubia phase 1a: pilot phase housing settlement

01

.4.site analysis

0 m   50 m   100 m

1:1000

built form

10 m
internal road network

40 m
primary road network
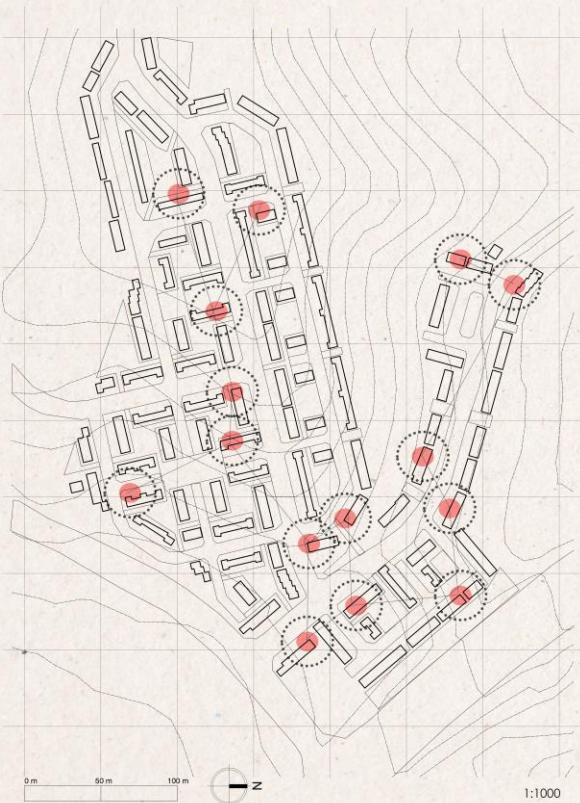
road network

voids

AMA TUCK SHOP

spaza network

.5.precedent studies

infill

investigating the gradual transformation of mass housing.

cidade de deus
brazil
mas eth zurich
2013

module

exploring self-build process and the restructuring of the urban environment

empower shack
cape town
urban think tank
2013

TWO STORY SHACK   SOLAR MODEL

SOLAR PANEL

SHARED INFRASTRUCTURE   RECONFIGURED URBAN PLAN

02

.6. encountering cornubia

distance from dbn cbd: 25 km
area: 1331 hectares (ha)
land ownership: tongatt hullett (717 ha), eThekwini municipality (517 ha)

durban cbd
umhlanga
mount edgecombe
phoenix
cornubia

	Beneficiaries in Sample study	Male Beneficiaries	Female Beneficiaries
Population Sample	265	114	151

Age	Average Age	Ages 17-25	Ages 26-40	Ages 41-60	Ages 61-80
	39	12%	45%	33%	8%

Gender	Males	Females
	43%	57%

Race	African	Indian	Coloured
	94%	5%	1%

Education	Nil	Primary	Secondary	Matric	Post matric
	7%	20%	50%	6%	17%

Employment	Unemployed	Employed
	72%	28%

	Looking for jobs	Looking for any job	Looking for semi-skilled jobs	In need of training
	28%	62%	7%	83%

Income source	Employment	None	Social grants	Self-employed	Other
	16%	27%	29%	6%	22%

Marriage	Single	Married	Living with a partner	Divorced	Widowed
	90%	8%	29%	1%	1%

Dependents	Total	Below 18	Above 18	Male	Female
	527	63%	37%	46%	54%

mbonela
450 tuck shop

158

F & M tuck shop

be come

derived from the housing unit itself - developing the module affords the residents a building of their own possibilities within the existing the 4000x4000x2600 module sets up an architecture that is interchangeable, responding to time and the changing needs and aspirations of the residents through a transformable framework - an open source grid.

6000
4000
4000

6000
4000

2600 2600

structure : infill possibilities

climate control screens

hydroponic facade

panel facade

prefabricated unit

container

structure : support possibilities

frame

frame + platform

frame + platform + 1 floor

frame + platform + 1 1/2 floors

frame + platform + 2 floors
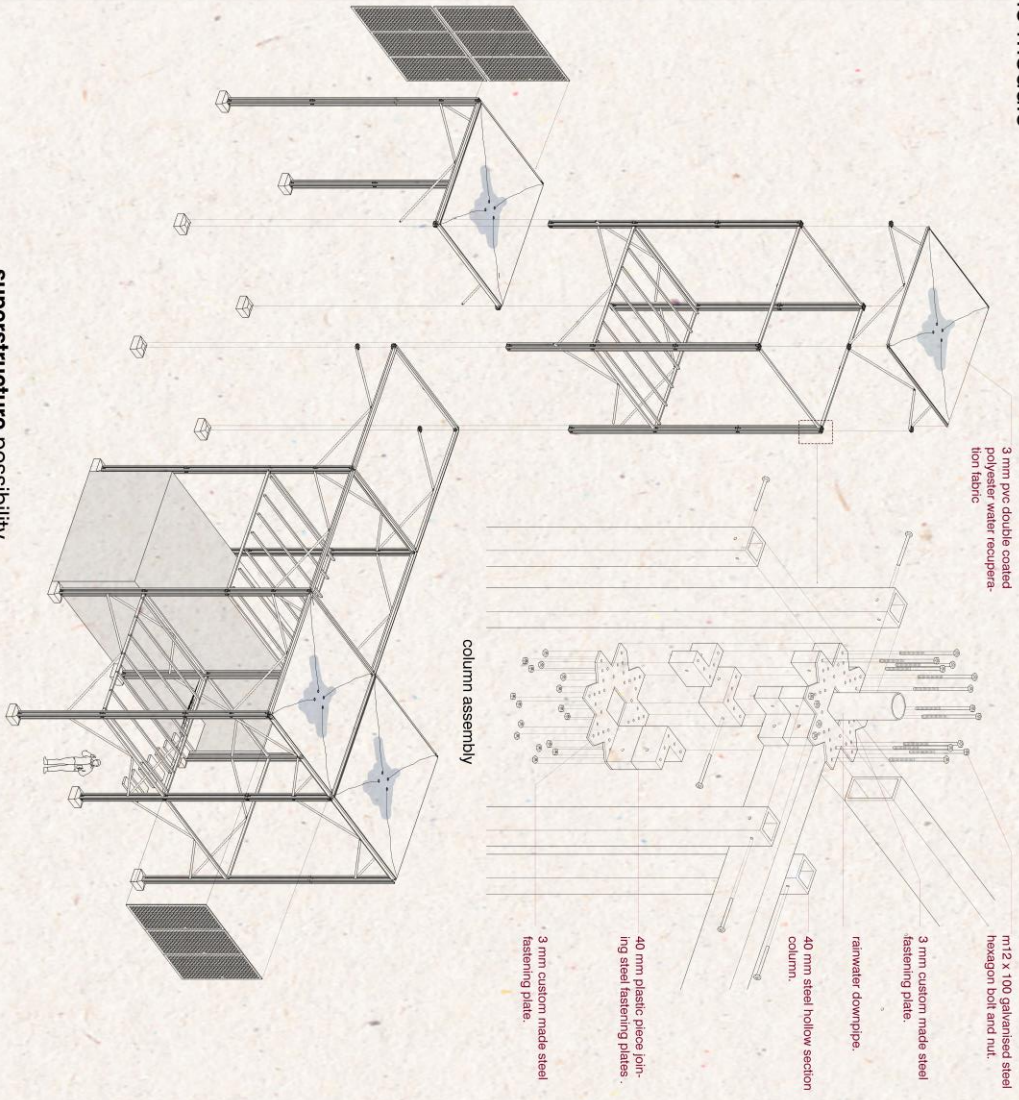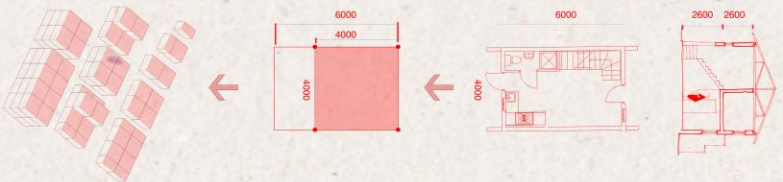
superstructure possibility

column assembly

m12 x 100 galvanised steel hexagon bolt and nut.

3 mm custom made steel fastening plate.

40 mm steel hollow section column.

rainwater downpipe.

40 mm plastic piece joining steel fastening plates .

3 mm custom made steel fastening plate.

3 mm pvc double coated polyester water recuperation fabric

04

.8.integrating the module

close system
[e.g. megaproject]

open system
[e.g. co-operative living model]
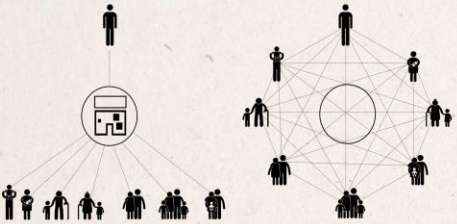
hierarchical model
top-down
centralized
deterministic place-making

network model
bottom-up
systemic
codition making

assemblage

part   component   structure   super-structure

assuming 1mm of rainfall on 1sqm surface area
rain water collection per module:
{sqm x average rainfall/month x rate of collection}
(4mx4m) x 69mm x 0,9 = 993,6 l per month

rainwater is collected off roof
surfaces of existing dwellings
and the module

collected water is directed to
rainwater storage tanks

filtered rainwater is directed to
the collective laundry outlet

surface run-off is directed to
collective growth systems

the collective laundry provides
a community service as well as
economic gain

water systems

spaza and living module

collective kitchen module

collected rainwater is directed to the
vegetable growing systems and as a
kitchen supply

vegetables grown through collective
systems supply collective kitchens

organic waste returns to the bio-digester to
produce bio-gas used to power the module

the unconverted by-product of the digestion
process, mulch, is dried and returned as
compost to collective growing systems

collective kitchens provide economic
gain through an existing practice

28kg of organic waste slurry (1 part
waste to 2 parts water) = 1cubic metre of
biogas

1 cubic metre of biogas =
1hr cooking time
20min hot water off a 6l/min geyser
15hr lighting
1,5kWh of electricity

waste to energy systems

solar panel

shared economic and living module

water schematic

shared ecological laundry module

05

.9.implementing the module
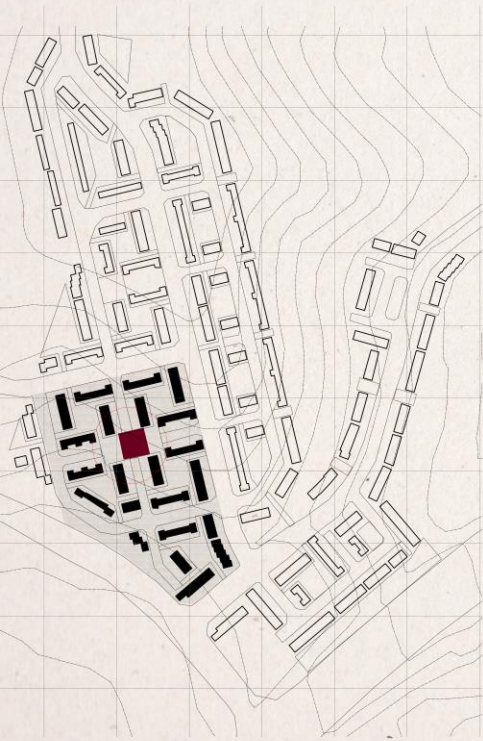
0 m   50 m   100 m
1:1000

step 1
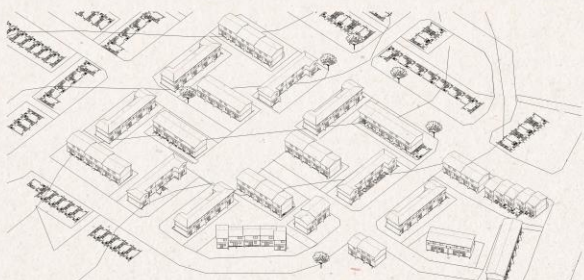
a portion of cornubia's pilot phase is considered for the possibility of an **open system approach** - a testing ground for exploring the **implementation of the module along with low-tech energy systems -** towards the development of the co-operative living model.

step 2

the first construction is a **roof structure** that can serve as both **a meeting place and as a rainwater collecting surface**. under this structure a small **workshop** and an **office space for an ngo** can be installed - serving as a place for **local recycling and construction of parts** (towards further additions). this space then has the possibility of becoming the hub for a local trade economy to develop.

step 3
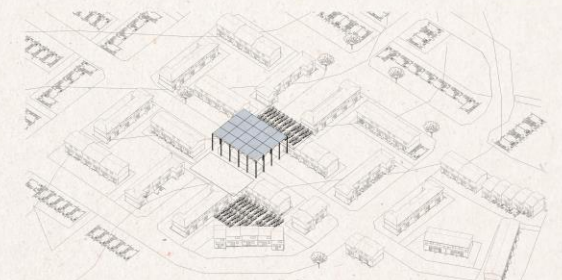
using the water collected from the roof structure **a public farming initiative** can be setup - enabling people to grow vegetables towards consumption as well as a livelihood generator.

step 4
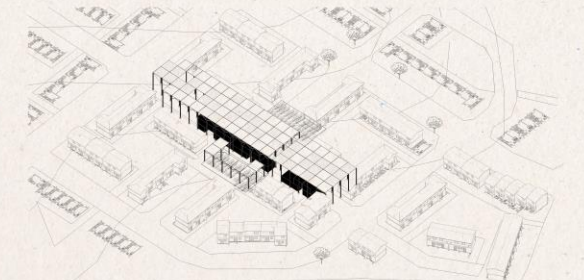
the growing needs of the community can be met with the **expansion of the programmes** highlighted in step 2. this would provide the settlement with a local economy that is based on the recycling and trading of construction materials.

step 5

as the community acquires more knowledge and skill on the construction techniques and assembly operations **additional programmes** could be inserted. a **micro library, research hub and community office tower** could be constructed and serviced with components and structures already deviced for the workshops **(in step 2)**.

step 6
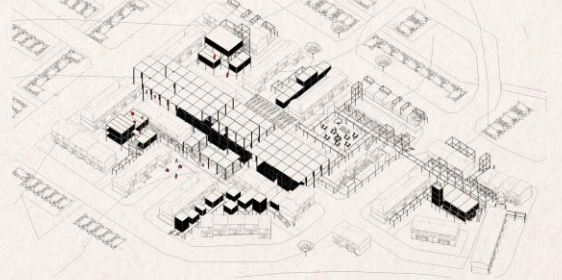
as a way **to further enhance collective life,** a multi-purpose space and a small public theatre can be built. these additions would provide more surface area to collect rainwater. the micro-library and   research hub can be expanded if needed. residents' housing can be expanded to accommodate   growing family and small shops can be built to supplement an income.

06

ground floor plan   1:100

first floor plan   1:100

future community office tower

future workshop expansion

small public farming initiative

Machine Legend
wb: workbench
mm: milling machine
gs: grinding stand
pd: post drill
sb: belt sanding machine
pc: planing machine
cs: circular saw
bs: band saw
ccs: cross cut saw
tb: toolbench

a

a

b

b

b

N

N

.11. detailing steps 2-4

perforated plywood screens fixed to steel frame.

detail a: roof detail

detail b: perspective

detail b   1:20

section a-a   1:100

ecological laundry module

spaza module

shared economic living module

3330 x 1900 dia x 1980 mm high - 6000 *l* underground rainwater harvesting tank with manhole cover for surface access.

3330 x 1900 dia x 1980 mm high - 6000 *l* underground rainwater harvesting tank with manhole cover for surface access.

section b-b   1:100

section b-b development: phase 1

section b-b development: phase 2

section b-b development: phase 3

detail b: perspective

roof
3 mm pvc shelter-rite double coated polyester fabric finished in granite grey. purpose made by manufacturer

windows:
nuklip aluminum pivot sash windows.

panel wall assembly: internal to external
12 mm commercial plywood
rainproof membrane
2 x 50 mm isoboard insulation
38 x 38 timber battens
12 mm commercial plywood
rainproof membrane
45 mm battens
18 x 76 mm corrugated metal sheeting

louvre wall
190 x 190 x 190 lg green grill block

balustrade:
60 x 10 mm galvanised steel flat bar rail with 50 x 50 x 4 dia mm welded mesh balustrade.

floor:
140 x 23 evalast tongue and groove timber decking fixed onto 38 x 220 timber joist placed at 400 c/c
50 mm mineral fibre board insulation fixed onto 219 mm parallel chord ecobeams.

ceiling:
6. 4 mm rhinoboard gypsum plaster ceiling fixed to substructure with rhinoboard sharp point screws 25 mm spaced @ 150 mm c/c

column:
4 x 40 mm steel square hollow sections bolted to 3 mm thick joining plate.

ground floor:
200 x 100 x 60 mm technicrete aquaflow precast concrete block pavers laid in a herringbone pattern. pavers to be laid on a substrate consisting a geotextile membrane with 50 mm clean stone, 100 mm upper base stone and a geogrid on top of 250 mm stone base. pavers to have a natural colour finish.

[possible programme expansion]

1

2

1 12 mm commercial plywood
rainproof membrane
2 x 50 mm isoboard insulation
38 x 38 timber battens
12 mm commercial plywood
rainproof membrane
45 mm battens
18 x 76 mm corrugated metal sheeting

2 140 x 23 evalast tongue and groove timber decking
38 x 220 timber joist at 400 c/c
40 mm steel angle
50 mm isoboard insulation
219 mm parallel chord ecobeams.

detail b   1:10

LIST OF FIGURES

CHAPTER 4 | CASE STUDY: CORNUBIA PILOT PHASE

CHAPTER 5 | PRESENTATION OF DATA AND ANALYSIS

CHAPTER 6 | RECOMMENDATIONS

CHAPTER 7 | CONCEPTUAL DEVELOPMENT

CHAPTER 8 | DEVELOPING THE CATALOGUE OF TOOLS

CHAPTER 9 | DEVELOPING THE CATALOGUE OF ARCHITECTURAL POSSIBILITIES

REFERENCES

Books

ALEXANDER, Christopher. 1977. *A Pattern Language.* New York: Oxford University Press.

ANGELIL, Marc M, HEHL, Rainer. 2013. *Cidade de Deus! Working with Informalized Mass Housing in Brazil.* Berlin: Ruby Press.

BLOKLAND, Talja, SAVAGE, Mike. 2008. *Networked Urbanism: Social Capital and the City.* Hampshire: Ashgate Publishing Limited.

CAMPBELL, Kelvin. COWAN, Robert. 2002. *Re:Urbanism.* London: Urban Exchange.

CAMPBELL, Kelvin. 2011. *Massive Small.* London: Urban Exchange.

ÇINAR, Alev, BENDER, Thomas. 2007. *Urban Imaginaries: Locating the Modern City.* Minneapolis: University of Minnesota Press.

DE CERTEAU, Michel. 1984. *The Practice of Everyday Life.* London: University of California Press.

DeLANDA, Manuel. 2006. *A New Philosophy of Society: Assemblage Theory and Social Complexity.* New York: Continuum.

DOVEY, Kim. 2010. *Becoming Places Urbanism/Architecture/ Identity/Power.* New York: Routledge.

FARIAS, Ignacio.2010. *Urban Assemblages: How Actor-Network Theory Changes Urban Studies.* New York: Routledge.

GOONEWARDENA, Kanishka, et al. 2008. *Space, Difference, Everyday Life: Reading Henri Lefebvre.* New York: Routledge.

GREGORY, Derek et al. 2009. *The Dictionary of Human Geography, 5th edition.* West Sussex: Blackwell Publishing Ltd.

HAMDI, Nabeel. 2004. *Small Change.* UK: Earthscan.

HAMDI, Nabeel. 2010. *The Placemaker's Guide to Building Community.* London: Earthscan.

HARVEY, David. 2001. *Spaces of Capital: Towards a Critical Geography.* New York: Routledge.

HARVEY, David. 2012. Rebel Cities: From the Right to the City to the Urban Revolution. London: Verso.

HERNANDEZ, Filip et al. 2010. *Rethinking the Informal City: Critical Perspectives from Latin America.* New York: Berghahn Books.

HIGHMORE, Ben. 2002. *Everyday Life and Cultural Theory: An Introduction:* London: Routledge.

HIGHMORE, Ben. 2002. *The Everyday Life Reader:* London: Routledge.

HOLSTON, James. (2010). *Right to the City, Right to Rights, and Urban Citizenship*. Berkeley: University of California Press.

KELLER, Suzanne. *Community: Pursuing the Dream, Living the Reality*. New Jersey: Princeton University Press.

LEFEBVRE, Henri. 1991. *The production of space* (Donald Nicholson-Smith, Trans.). Oxford, UK: Basil Blackwell ltd.

LEFEBVRE, Henri. (1967 original) 1996. "The Right to the City" in Writings on Cities. Kofman, Eleonore and Lebas, Elizabeth (eds). London: Blackwell.

LEPIK, Andres. 2010. *Small Scale Big Change: New Architectures of Social Engagement*. New York: The Museum of Modern Art.

LEUTENEGGER, Marius 2011. *Third Holcim Awards*. Switzerland: Fineprint AG

MADANIPOUR, Ali. 2003. *Public and Private Spaces of the City*. London: Routledge.

MADANIPOUR, Ali. 2010. *Whose Public Space? International Case Studies in Urban Design and Development*. New York: Routledge.

MURRAY, Noeleen et al, 2007. *Desire Lines: Space, Memory and Identity in the Post-Apartheid City*. London: Routledge.

MYERS, Garth. 2011. *African Cities: Alternative Visions of Urban theory and Practice*. London: Zed Books.

PARKER, Simon. 2004. *Urban Theory and the Urban Experience: Encountering the City*. London: Routledge.

SIMONE, AbdouMaliq. 2004. *For the City Yet to Come: Changing African Life in Four Cities*. Durham: Duke University Press.

SHERINGHAM, Michael. 2006. *Everyday Life: Theories and Practices from Surrealism to the Present*. New York: Oxford University Press.

STAIB, Gerald et al. 2008. *Components and Systems: Modular Construction – Design, Structure, New Technologies*. Munich: Redaktion DETAIL.

Journal Articles

AMIN, Ash. 2008. *Collective culture and urban public space* in City 12(1), pp. 5-24.

CARP, Jana. *"Ground-Truthing" Representations of Social Space: Using Lefebvre's Conceptual Triad* in *Journal of Planning Education and Research* (28) pp.129-142.

COLE, Raisa. 2015. *The Political Economy of Productive Urban Space: A Sustainable Livelihoods Approach*. Available from: http://www.osisa.org/buwa/economic-justice/regional/political-economy-productive-urban-space-sustainable-livelihoods-appr [Accessed on: 6 May 2016]

CRUZ, Teddy, FORMAN, Fonna. 2015. *Informal Public Demands* in Cityscapes [online]. Available from: http://www.cityscapesdigital.net/issues/summer-2015/ [Accessed on 30 March 2016.]

EDWARDS, Iain. 1994. *Cato Manor: Cruel Past, Pivotal Future.* Review of African Political Economy, Vol. 21, No. 61. 415-427.

DOVEY, Kim. 2011. *Uprooting critical urbanism* in City 15(3-4), pp. 347-354.

DOVEY, Kim, WOOD, Stephen. 2015. Public/Private urban interfaces: type, adaptation, assemblage in Journal of Urbanism: International Research on Placemaking and Urban Sustainability, 8:1, pp. 1-16.

FARIAS, Ignacio. 2011. *The politics of urban assemblages* in City 15(3-4), pp. 347-354.

JORDHUS-LIER, David. 2014. *Community resistance to megaprojects: The case of the N2 Gateway Project in Joe Slovo Informal Settlement, Cape Town* in Habitat International 45 (2015), pp. 169-176.

KENNEDY, Lorraine. 2015. *The politics and changing paradigm of megaproject development in metropolitan cities* in Habitat International 45 (2015), pp.163-168.

McFARLANE, Colin. 2011a. *Assemblage and critical urbanism* in City 15(2), pp. 204-224.

McFARLANE, Colin. 2011b. *Encountering, Describing and Transforming Urbanism* in City 15(6), pp. 731-739.

MCFARLANE, Colin. 2011c. *The City as Assemblage: Dwelling And Urban Space* in Environment and Planning D: Society and Space, Vol. 29, pp 649-671.

MEHROTRA, Rahul. 2013. *Working in Mumbai: The Kinetic City as Generator of Practice.* Digest, Vol. 18, 242-249.

MELA, Alfredo. 2014. *Urban public space between fragmentation, control and conflict* in City, Territory and Architecture 1(15), pp. 1-7.

MOULD, Oli. 2014. *Tactical Urbanism: The New Vernacular of the Creative City* in Geography Compass 8/8, pp. 529-539.

OLIVIER, Bert. 2008, *Architecture as consumer space* in South African Journal of Art History Vol.23, pp 93-106.

PITCHER, M. Anne, MURRAY, Martin. 2007. *Exploring Cityscapes: Kinshasa and Johannesburg* in African Studies Review Vol 50(3), pp. 143-146.

RAO, Vyjayanthi. 2010. "Urbanism Beyond Architecture: African Cities as Infrastructure: in Conversation with Filip de Boeck and AbdouMaliq Simone" in *African Cities Reader 1: Pan-African Practices.* EDJABE, Ntone and PIETERSE, Edgar (eds). Cape Town: Chimurenga and African Centre for Cities.

SIMONE, AbdouMaliq. 2001. Straddling the Divides: *Remaking Associational Life in the Informal African City* in International Journal of Urban and Regional Research 25(1), pp. 102-117.

SIMONE, AbdouMaliq. "Remaking Urban Life in Africa." In *Globalisation and Urbanisation in Africa.* FALOLA, Toyin. SALM, Steven J. (eds). 2004. Trenton: Africa World Press, Inc.

SIMONE, AbdouMaliq. 2005. *Pirate Towns: Reworking Social and Symbolic Infrastructures in Johannesburg and Douala* in Urban Studies 43(2), pp. 357-370.

SIMONE, AbdouMaliq. 2005b. *The right to the city.* Interventions: International Journal of Postcolonial Studies, 7:3, 321-325.

SIMONE, AbdouMaliq. 2011. *The surfacing of urban life: a response to Colin McFarlane and Neil Brenner, David Madden and David Wachsmuth* in City 15(3-4), pp. 355-364.

STRAUCH, Lisa et al. 2014. *Mixed-use spaces and mixed social responses: Popular resistance to a megaproject in Central Lima, Peru* in Habitat International 45 (2015), pp. 177-184.

SUTHERLAND, Catherine, et al. 2014. *Contested discourses of a mixed-use megaproject: Cornubia, Durban* in Habitat International 45 (2015), pp 185-195.

SWANTON, Dan. 2011. *Assemblage and Critical Urbanism Praxis: Part Two* in City 15(3-4), pp. 343-346.

UPTON. Dell. 2002. *Architecture in Everyday Life* in New Literary History 33(1), pp. 707-723.

Online Articles

HARVEY, David. 2006. The Political Economy of Public Space. Available online: http://davidharvey.org/media/public.pdf. Accessed on 22 April 2016.

KENNEDY, Lorraine, et al. 2014. *Megaprojects and Urban Development in Cities of the South* [online]. Available from: http://www.chance2sustain.eu/fileadmin/Website/Dokumente/Dokumente /Publications/publications_2014/C2S_TR_No05_WP2__Megaprojects_and_Urban_Development_in_Cities_ of_the_South_V2-3.pdf [Accessed 12 March 2016].

PIETERSE, Edgar. 2011. *Rethinking African Urbanism from the Slum* [online]. Available from: https://lsecities.net/media/objects/articles/rethinking-african-urbanism-from-the-slum/en-gb/ [Accessed 4 July 2016]

REAL CONSULTING, 2015. Social Impact Assessment Cornubia Phase 2 Area [online]. Available from: http://www.rhdhv.co.za/media/Cornubia%20Phase%202%20EIA/C%20-%20Specialist%20Studies/C7%20- %20Social%20Assessment/Cornubia%20Ph%202%20SIA%2017%20feb%202015%20.pdf [Accessed 7 March 2016]

Thesis

ROSENBERG, Leonard. 2011. *A City within a city: Vestiges of the socio-spatial imprint of Colonial and Apartheid Durban, from the 1870s to 1980s.* Durban: University of KwaZulu Natal.

Unpublished Work

DAVIS, Adheema. 2015. *How do women in informal economies claim their citizenship rights?* Working Paper. Durban: School of Built Environment and Development Studies, University of KwaZulu Natal.

APPENDICES

Appendix A: Walk-Chat Session in Cornubia

Interviewee One: 22 years old, living with his uncle.

Date: 6 May 2016

Juan Miguel Dorta Ruiz: So how has this place changed the way you live now?

Interviewee One: *...yeah it has made a big difference 'cause from where I come from, everybody knows me, most of the people know me, so there are too many interferences and distractions. Over here, basically, my time is my time.*

JMDR: You like to have your own time?

Interviewee: *Yeah, pretty much. Specially now 'cause I need to be responsible and be independent as much as possible. Back then it was a bit understandable because I was younger.*

(While walking, Interviewee *One points towards a congregation of people and says: look, people are going to church)*

JMDR: Where is that?

Interviewee: *At the school, and there are different services, not just one.*

JMDR: So you think this place has made a big difference personally?

Interviewee: *Yeah, it has. I took advantage of the fact that it is still new and...it's just a clean slate. Yeah, so I took that advantage, that's how I saw it, 'cause your perception is your reality. Some people over here are like hey, it's really boring over here, it's just in the middle of nowhere blah blah blah – that's how it's going to be for you. So yeah basically what you see is what you get.*

JMDR: Have you seen the plan for the rest of Cornubia?

Interviewee: *No...Well I've seen the school plans.*

JMDR: Are there any more places to gather in?

Interviewee: *No there are no other venues, or places to gather around and do activities. That's why we get into the activities of smoking.*

JMDR: Oh, so that's why you asked me earlier how would I fit in?

Interviewee: *yeah you gotta blend in some way or the other.*

JMDR: So how do you think I would fit in... if I don't smoke?

Interviewee: *I'd say you would have to be funny.*

JMDR: So what do people do for money here?

Interviewee: *Most of the people over here are employed.*

JMDR: Where?

Interviewee: *…down there by the construction sites and by the firms: Blindsmart, Denon. Yeah, but it's not luxury jobs, but yeah at least they are employed…. That's how I see it anyways, that most people here are working, otherwise where would they get money to be drunk all of the time?*

JMDR: What do you think Dala was trying to do here?

Interviewee: *Uh, they were about mobility, you know, getting people to be more hands on, to participate more in the community - but the people are not in that state of mind. They would have gotten there had it been consistent enough with all the programs that we were doing. It just wasn't consistent enough to be part of their habit. The community is also growing so there also are more distractions and other habits.*

JMDR: If you have to get things done as a collective, how do you do it?

Interviewee: *Well, what has happened before is that the women, who live here and that clean the roads weren't getting paid, for like three months, and they were fed up. So what they did, on a Friday (the bin goes out on a Friday). They took the bins and emptied them right there where you enter, until they eventually run out of dirt. I didn't understand that, we live here so who was going to pick it up again. So yeah that's how they retaliated.*

JMDR: Is that the first time you saw people here coming together towards a common cause?

Interviewee: *Yeah it was just it.*

JMDR: Do you think things would change here if people did things collectively?

Interviewee: *Well it's about what state of mind we are mobilising in, we can mobilise, but if we mobilise with a clear mind-set then we could actually get things done…I don't know…if there where activities that brought people together, like a big place where people can meet and interact, dance, whatever. There is nothing that brings people together here besides the Spazas and the road of course, but other than that, no. But that's the whole idea because in suburbs that's how it is. You know, I mind my own business, and it's like Hi…Hi. It's all part of the government plan, to divide.*

JMDR: You get the feel that this is a suburb?

Interviewee: *From where the people come from over here, it is…. This place is a suburb.*

Appendix B: Semi-Structured Interview Schedule

Doung Anwar Jahangeer, Co-Founder of Dala.

First Interview: 9 May 2016

Juan Miguel Dorta Ruiz: Why did you get involved in the Cornubia Project?

Doung Anwar Jahangeer: *Well, look I didn't know why, but what I know was that the trajectory that Dala's work had taken, and all of what we've done over the 14 years of existence has led us to kind of bring everything together in a context where we could bring all of that experience. Cornubia, specifically, not because of its housing or urban planning or architecture, but mainly because: One, it was a blank slate – a fertile ground for experimentation and unlearning. Two, because of people. It was the people that very much echoed the kind of social, psycho—pathology of a nation in this post-colonial, post-apartheid South Africa.*

JMDR: 'Blank slate' this phrase reminds me of my conversation with Interviewee One where he mentions that for him Cornubia provides the opportunity for a clean slate.

DAJ: *Yeah, there are a lot of people that have said that. People like Bantu and Louis [another resident], say that 'we can do what we want; we can try things.' So that brings me to the thinking that Frantz Fanon talks about: If you want to make yourself understood to people, you can do that by the choice of how and what language you use. So as a response to this, for me it was clear that people on the ground aren't stupid. What we assume of them is what makes them become that. But if we relinquish those assumptions of ours and 'go on the ground' you see that people are intuitively connected to what development is right or wrong for them. In fact, they are living it. Like the Spaza, it is a classic example.*

JMDR: What was the purpose of your involvement?

DAJ: *Well, from Dala's perspective, the main purpose was to develop a manual. A manual that would expose a qualitative process that could accompany the quantitative initiative of this housing project. It would be more of a manual that gives us an overall feeling as to how to engage with people, an anti-structure, not a formula.*

JMDR: How did the residents react to your presence?

DAJ: *It was overwhelmingly positive and most of it – from the response from people – was because nobody goes there. And here I was, this guy that came, and I was talking what I always talk, and people felt it, it was honest and because of that it was not a problem to have doors opened.*

JMDR: How did you engage with the residents?

DAJ: *It was through, firstly: the awakening of this context and its people, and secondly, educating the city about why Cornubia and the relevance of this blank slate in society. It was also going down on the street and meeting the community leader where he created a platform for us to present to the committee. You can imagine though, to talk about this notion of art or creative practice that could become associated with social issues is quite alien to the residents there because it's a different language. So as much as I tried to explain to Rasta (the community leader); he 'understood', but he couldn't understand. So one day we just showed him an example and we did the testing of the screening. That was what really allowed us to engage in a dialogue with the community.*

JMDR: Do you think the residents could continue those kinds of initiatives without your presence?

DAJ: *Well I think more than it being continued - whether in the form of screenings or others - it was more about consciousness. It is tapping into how we perceived ourselves in a context. If we continue thinking about 'it' being something to be replicated, then what happens is that it becomes a formula for a very specific outcome. Here it was one of many actions which I do not know what form they might take if you ask me now. It is about providing a space for both us and the citizen towards a critical spatial practice. Which I think they are doing already. They are being critical about the context they are living in, the only problem is that they are not empowered by it because they do not that this is what they are doing. They do not know that what they are doing, actually, is producing their own liberation on a daily basis. All they know is that they are illegal as human beings because everything that they do is wrong – has always being wrong. So, for me, this kind of vehicle becomes a momentum that starts to engage in this kind of critical spatial practice, it is validating.*

JMDR: What was your initial impression of the proposed Cornubia development prior to visiting the site?

DAJ: *I didn't know about it.*

JMDR: Has your impression changed over the progression of your project, if yes, how so?

DAJ: *It made me become even more reassured about how the system does not know what they are doing, on the one hand. If I then go further into that statement I could also say that maybe they know exactly what they are doing. So what they are doing there is really to maintain this oppressive regime. And then if I go back to the statement; maybe they do not know it consciously but unconsciously. But well whether they know or not there is not enough questioning that is making them responsible, to not only what they are doing, but what they are not doing. I have become even more unforgiving to these kinds of initiatives.*

JMDR: What lessons have you learnt from working with this community?

DAJ: *Well I can only tell you that when I die.*

Appendix C: Semi-Structured Interview Schedule

Cathy Sutherland, Development Studies, UKZN.

Interview Date: 17 May 2016

These questions are based on her publication: SUTHERLAND, Catherine. SIM, Vicky. SCOTT, Dianne. *Contested discourses of a mixed-use megaproject: Cornubia, Durban* in Habitat International 45 (2015), pp 185-195.

Juan Miguel Dorta Ruiz: What prompted you along with the other authors to write this paper?

Cathy Sutherland: *We had an EU project that was looking at a number of work packages. One was on water and environmental risks; one was on substandard housing and social movements and how people respond to that; another was on mega-projects and growth in cities. The fourth one was on spatial knowledge management – how spatial knowledge shapes decision making in cities. The last one was on finance, which overlapped with the fourth. There were three big themes and if you think in terms of sustainability these were trying to deal with the social which was housing. The environmental which was water and environmental risks and economic development and growth which was the mega-project.*

When we started looking across the city right at the beginning of this project, we looked at ten cities in four countries - Peru, Brazil, India and South Africa – to try and get comparative types of settlements and processes across these cities, but they also needed to be context specific to what was happening in our cities. Cornubia, popped up as the first one because it linked housing to mixed-us development and the megaproject idea. So we thought that would be a good case study to investigate. We had thought that we would work with the existing Blackburn informal settlement, on the edge of the Cornubia site, to gauge an understanding of how they related to the mega-project and this need for housing in the city. So that's why we did this first piece of research on Cornubia, to try and understand the different discourses or ways that the city, the informal settlers, ABM - all the different actors in the space - were conceiving of this particular project that became sort of like a flagship project in the city.

JM: Why do you think a country like South Africa and more specifically a city like Durban would choose to take on this type of development approach?

CS: *This was a bit unusual, because Durban had always delivered a lot of low cost housing. Back in the 1990s when the RDP housing was released – I was working in settlements – the problem with all of those low cost housing projects was the notion of just delivering houses rather than thinking about the possibility of creating human settlements. In other words, people were dislocated from any kind of work opportunities. So the mega-project became the possibility to address that.*

JMDR: In the case of Cornubia, you have highlighted the many discourses that have been constructed by the many role players involved. Why do you think there has been disputing discourses among actors involved?

CS: *Everybody is trying to achieve something different. Housing for instances, draws in a whole lot of different actors in different ways. This is because it deals with land allocation firstly, then it's the state-led approach to delivering housing. However, National government has a particular agenda. The provincial government manages that whole housing process, but at the local level – the different municipalities and cities – there are slightly different ways of dealing with housing. In Durban it's interesting because, although it has been a big deliverer of*

RDP houses it has also been quite progressive in the way it has dealt with the informal settlers by allowing them to remain and encourage some innovative work around that. This is also quite contradictory because the slums act emerged from KZN. So while they allowed settlers to remain, the housing department and provincial government wanted to eradicate slums. This eradication act was further driving the need to have large scale housing. So Cornubia obviously fitted that model because that meant that provincial government here could address their 'we need to eradicate slums idea'. Local government was 'caught' and you can see the politics of that between what the city manager said and what the mayor said – all having different agendas. Then you have National government looking for some flagship projects and the thing with Cornubia is that you have a big parcel of land, quite centrally located, relatively. So given where we can put houses now, Cornubia – especially because of the gateway and Umhlanga node and from an economic perspective- is very well situated. That leaves this large piece of land with everybody trying to achieve all of these goals. You can see however, how those goals have been traded off with time because as time has gone on the amount of housing units has decreased – quite dramatically and probably will decrease further.

The planning consultants also represented further discourse as two very different plans were conceived for Cornubia. The one was supporting Tongaat Hulett – which was capitalist driven – with the proposal to allocate the node right next to Gateway Mall, which basically meant expanding it. While the other wanted to put the node in the middle with the hope to create a more integrated settlement.

So the space of Cornubia became almost like a catchment for all of this different agendas going on in the city. At the same time, just to put into context, when we were working on Cornubia, I was working in the South Durban Basin – back of port project. The South of Durban is already an integrated, mixed land use area, and there we were working on a project where the municipality, in my mind, was actually dismantling the integration and getting it all to go over to logistics which concentrated moving people out. So now in Cornubia you are trying to recreate something you already have in South Durban - that you are dismantling.

JMDR: In your paper you mention that in large cities megaprojects are used as "strategies of international competition to attract capital and they leverage the potential of cities as growth engines" and followed it up by saying that in South Africa not only do these megaprojects need to be pro-growth but pro-poor as well. How do you think this has been achieved?

CS: *What we learnt was that you can see the mega-project ideal which is always about bringing economic growth focus and competitiveness to the city. However, this by large, is a huge displacement of the poor.*

JMDR: What have you noticed about the allocation process that comes with these types of developments?

CS: There is no transparency in the allocation process. There is this 'list' and you do not know how this thing works. The scary thing is that Cornubia has become this waiting place for everyone and in the midst of decreasing housing numbers in this project – at 17 000 currently – this is nowhere near the current housing backlog of 460 000. This will be a trade-off between the councilors and the housing department. Because the councilors promise the allocation but the housing department tells you that the councilors do not allocate, they do.

Appendix D: Semi-Structured Interview Schedule

Doung Anwar Jahangeer, Co-Founder of Dala.

Follow Up Interview: 13 June 2016

Juan Miguel Dorta Ruiz: During your work in Cornubia, you mention tapping into the Spaza network. Why did you feel like that was something you wanted to engage with?

Doung Anwar Jahangeer: *First, I didn't. It was when Patrick was doing the drawing of his own Cornubia. By his own accord he noticed the many Spazas that had manifested. Having drawn this to our attention, then with my knowledge, as well as through the people's commentary on how they are victimised and threatened by the system – always being reminded of their illegality – I wanted to engage it. For me it became more about the unjustness – the tension that lies between the reality of how much the third economy in this country does for the country and on the other hand how much they are victimised.*

JMDR: What is the potential for the Spaza network in Cornubia?

DAJ: *Coming back to the idea of the Cornubia as 'blank canvas' The Spazas anywhere else would act like a loose chicken, however the Spazas there are in a very specific world – constructed context. In that construct, how people decide to activate the spazas brings out a different kind of language, or a movement, network. This starts to suggest the potential that Spazas hold, not just as the seller of goods*

JMDR: How would you describe the spazas and their emergence?

DAJ: *I call it an organic intelligence. Because its form is always changing, it is like nature. Anything that comes its way it can absorb it, emerge again and keep on going. It is at once quite natural and equally intelligent because of its natural ways. This is largely because of limitations. When you have limitations in your life you are force into space of innovation and imagination – as you imagine your own world all the time, every moment - you are constantly engaged.*