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Waste Age - living in a throwaway society: searching for sustainability in eastern Johannesburg

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University of the Witwatersrand, Johannesburg

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WASTE AGE living in a throwaway society

searching for sustainability in eastern Johannesburg



Figure 1: Foraged discarded objects (Photo by author)

DECLARATION

I, Clare Chappel student number 8553786, am a student registered for the course Master of Urban Design in the year 2023.

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

This document is submitted in partial fulfillment for the degree:
Master of Urban Design at the University of the Witwatersrand, Johannesburg, South Africa, in the year 2023.



_____

Signature of Candidate
13 February 2024

DEDICATION

To my husband and daughters – thank you for your love and support over the past two years. I will forever be grateful for the opportunity to immerse myself in my passion for the city.

Thank you to Dr Solam Mkhabela, my supervisor, for your guidance and support, and for your constant efforts in trying to reign in my erratic and chaotic approach to my work.

This thesis is dedicated to the people of the inner city of Johannesburg.

I will always see you.

ABSTRACT

The ever-increasing urban population worldwide, particularly in Africa, reinforces the pressing need for compact mixed-use neighbourhoods. My chosen study area, Bertrams and the greater Bez Valley, are ideally situated as inner-city suburbs close to the CBD. The area currently has residential, institutional, industrial and commercial zones and is occupied by a diverse range of multi-cultural residents.

As experienced in many parts of Johannesburg, the infrastructure challenges of collapsing streets and pavements, lack of effective waste management, illegal dumping, decaying buildings, and neglected public space are realities that the residents navigate daily.

Various creative nodes, NGOs and outreach programs are active in the area, enabling residents to participate and benefit from initiatives to uplift and empower the community. The privately developed complex of Victoria Yards serves as a creative centre, with artists' studios and programs occupying space in refurbished industrial buildings. This complex is physically isolated from the community, however much of the community orientated initiatives are spearheaded from here, and from the adjacent Nando's Head Office. The ongoing restorative work being done to the Jukskei River, which is initially exposed to daylight close to the complex, begins outside Victoria Yards.

This vital work, implemented by employed community members, is spreading along the valley, clearing and cleaning the banks of the Jukskei River and reintroducing indigenous plants and grasses.

My proposal looks at the development of a journey along the river, using its path as a connector between the existing creative programs and public spaces, and new adaptive waste-based interventions, stitching together a continuous urban experience that will focus awareness on the river, and highlight the forgotten beauty of this inner-city space.

'Yesterday's road has led
To yesterday's destination.
Today is a new chaos.
A new journey. A new city.
Needing new paths. And new standards.'

Ben Okri, "The Ruin and the Forest," Wild, 45

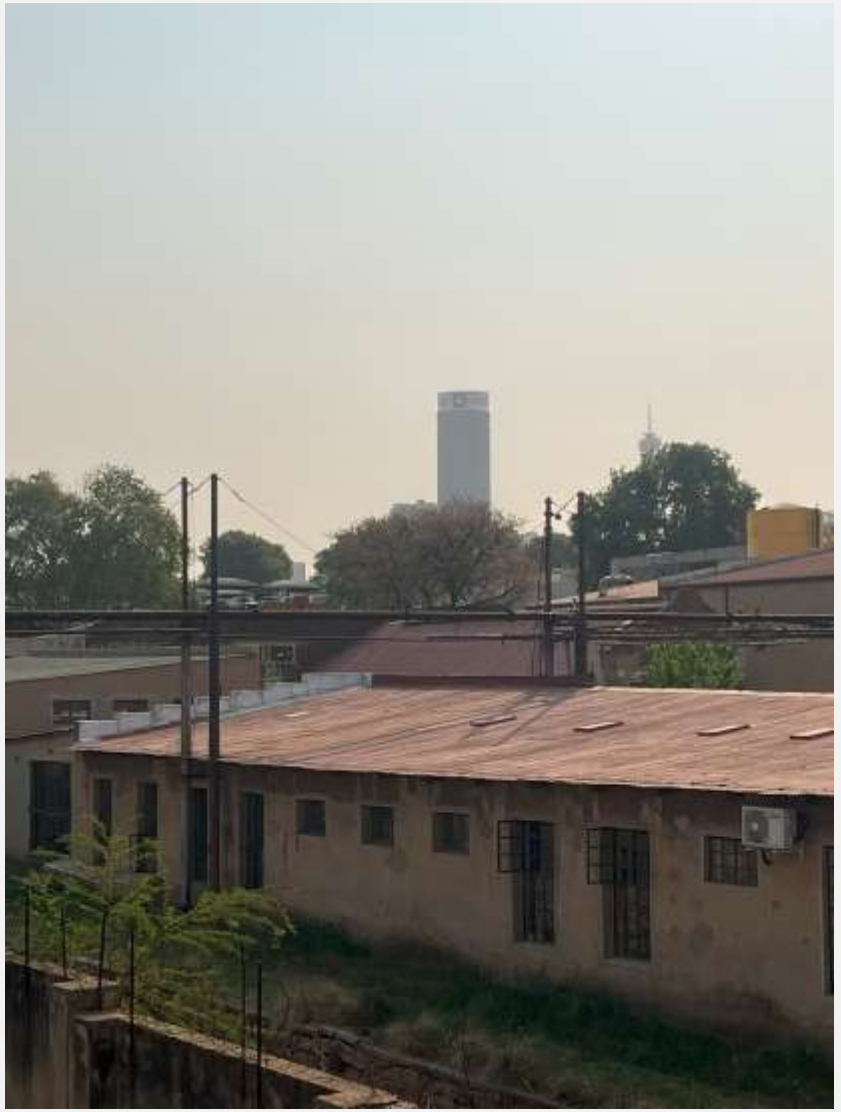


Figure 2: Victoria Yards with Ponte visible through the haze in the background (Photo by author)

LIST OF CHAPTERS

Declaration and Dedication

Abstract

List of Chapters

Chapter 1 – Overview 5

- Introduction
- City of Gold
- Background
- Aerial View of the Study Area
- Problem Statement
- Research question and Aims
- Theoretical Framework
- Proposal and methodology
- Ethical Considerations

Chapter 2 - Literature Review and Theory 15

- Regenerative urbanism
- Waste Collection and Recycling
- The Creative City

Chapter 3 - Conceptual Framework 19

- Reclaiming the City
- Stitching the City
- Responsive Environment
- Sustainable Urbanism
- Circular Economy
- Reflections

Chapter 4 – Observations 25

- Recycled Waste as Creative Resource
- Exploratory Mapping
- Drawings
- Visual Survey
- Towers of Waste
- Looking at Texture and Pattern
- Mending, Stitching, Darning
- Assemblage
- Photography as Research Method
- LOCK
- Waste Collection Field Notes
- Waste Collection Mapping
- Views
- Aerial Views – East and West
- Green Space – The Trees
- Green Space – Aerial View
- The River

Chapter 5 – Precedent Study 43

- Creative Space – Victoria Yards and Drill Hall
- Public Space - Tapas Rouge and Blucher Square
- Waste Space - Kamikatsu Centre and Rewoven
- Community Space - Cissie Gool House and Jewel City

Chapter 6 – Existing Proposals 52

- City of Johannesburg SDF
- Inner City Eastern Gateway
- Urban Farming – City Parks proposal
- Urban Marketing Centre
- Regeneration Proposals – Makers Valley/JDA

Chapter 7 – Status Quo Analysis 61

- Regional Context: Metropolitan
- Locality and City Region Context
- Study Area
- Natural Environment - Topography, Green Space and Jukskei River
- Built Environment - Land Use, Infrastructure, Commercial Activity, Typologies, Industrial, Heritage, Aerial Views and Public Transport
- Community Environment - Social Housing, NGOs and Outreach Programs, and Sporting Facilities

Chapter 8 – Urban Design Concept 84

- Study Area
- Design Exploration – Reframing the Valley
- The Street as Living Urban Space
- Looking at the Streets
- Reclaiming the Streets as Public Space
- Reclaiming the Streets – First Street,
- Fifth Street, Frere Road
- Looking at the Grid
- Mapping Waste Collectors Routes
- Reclaiming the Valley as Public Space
- Natural Environment
- Residential Space
- Urban Design Elements
- Towers
- A Chain of Hubs and Towers
- Hubs as Growth Points
- Natural Hub

Chapter 9 – Design Development 103

- Assemblage of Diary Pages
- Conceptual Layout
- Design Explorations
- Natural Hub
- Creative Hub
- Presentation Explorations
- Design Explorations

Chapter 10 – Design Proposal 117

- Presentation Images
- Design Story
- Natural Hub - Layout
- Natural Hub - Section
- Creative Hub - Layout
- Creative Hub - Section
- Residential Hub - Layout
- Residential Hub - Section
- Recycling Hub - Layout
- Recycling Hub - Section
- A String of Connections

Chapter 11 – Reflections 133

- Reflection
- Conclusion
- A String of Connections

References 136



chapter 1 OVERVIEW

1.1 INTRODUCTION 6

1.2 CITY OF GOLD 7

1.3 BACKGROUND 8

1.4 AERIAL VIEW OF THE STUDY AREA 9

1.5 PROBLEM STATEMENT 10

1.6 RESEARCH QUESTION AND AIMS 11

1.7 THEORETICAL FRAMEWORK 12

1.8 PROPOSAL AND METHODOLOGY 13

1.9 ETHICAL CONSIDERATIONS 14

Figure 3: Cement floor repaired with gold (Fussner, 2019)

INTRODUCTION

Johannesburg is my city – the chaotic, beautiful, restless, traumatized, creative place I call home. During my lifetime, I have witnessed her gradual and troubled transformation from a post-colonial, segregated and Eurocentric city to a multicultural, bustling, energetic African city.

The city has always exposed herself to me – allowing me glimpses of the people, the streets, the colours, textures and patterns – her layered and elusive reality. Or perhaps I have allowed myself to see her and the sparks of hope and beauty evident in a neglected, crumbling and often dangerous place.

Ferial Haffajee's words in a recent Daily Maverick article resonated deeply with me. She wrote 'How do I begin to understand my city of such duality? So much pain. And so much beauty. There is so much neglect and mediocrity in leadership. And so much exquisite human attention to detail globally heralded culture and art.' She turned to Chimamanda Ngozi Adichie's Danger of a Single Story in an attempt to understand the layers and complexities of Johannesburg, noting that Adichie encourages us to 'embrace complexity, duality and multiplicity of meaning'. Our city is crying out for us to do this. So many stories fill the streets, neglect and decay are one but an abundance of creative energy, art and culture is another. Many people only see the city through a single lens, knowing only one of her stories. To understand and to give meaning to her urban spaces and her people, you need to see her layers, her memories, her stories. (Daily Maverick, 2023).

I was inspired by Adichie's writing when I was working on my response to our Maputo studio last year. I wrote of the the significance of the everyday, the beauty of the abandoned, and the potential that the forgotten and worn can have in creating something of value. The discarded telling a story of purpose fulfilled, and the limits of single use.

The collection of faded and filtered photographic images, explorations and drawings that follow tell the story of finding beauty in the unexpected, of scratching and uncovering the layers of the city. The images and words also highlight the danger of knowing a place through a single story. Marks made on the city are exposed – both as scars and as embellishments. These marks are evident in Johannesburg, if you look, and show the tenacity, texture, growth and contrast that reveal the identity of the city, describing my story and memory of the city, and the stories of others.

> Stories have been used to dispossess and to malign. But stories can also be used to empower, and to humanize.
>
> Stories can break the dignity of a people. But stories can also repair that broken dignity.
>
> Chimamanda Adichie



Figure 4: Jukskei River flowing in a stone channel (Photo by author)

THE CITY OF GOLD

Johannesburg, one of the most sizable cities in the world not built near water, is primarily defined by the discovery of gold on the Witwatersrand. Built on greed, characterised by the pursuit of riches as the city grew from a tented mining settlement to a colonial town and then to the sprawling, contradictory city that it is today. People still flock to the city, searching for the elusive gold. Dinath notes that this migration fuels the conflict between permanent and temporary and has characterized the city since inception. 'The centre of Johannesburg has been the site of entering and leaving, staying put and moving on'. (Dineth, 2014). The layers of the built fabric seen reflected in the city today show not only physical form, but also the rapid and everchanging socio-political and economic qualities of the city. 'Most urbanites and migrants still see the city as a big promise – a promise that seems to refute all warnings and gloomy predictions. Obviously, the imagination of the city is much stronger than the harsh realities of urban life.' (Forster, 2018:397).

Johannesburg's inner city today is largely neglected and decayed, characterised by failing or non-existent infrastructure, vacant or 'dark' (hijacked) buildings, with unsafe streets and public areas – a melting pot of inequality and vulnerability. Businesses and residents have moved to the suburbs and the resulting gaps have been filled with alternative occupation of buildings and spaces for residential and trading purposes. Bremner (2010) notes that new everyday practices were seen in Johannesburg from 1980s onwards 'which rearranged difference and privilege and produced new ways of imagining and being in the city' (Bremner,2010:75). Pockets of regeneration have had varying degrees of success – Maboneng, Jewel City and Newtown, but the true city is seen in a chaos of contradiction that exists everywhere else.

The extreme inequality that characterises Johannesburg is obvious. Luxurious green suburban sprawl contrasts with decaying high-density inner-city buildings, informal structures jostle alongside gentrified attempts at regeneration, thousands of residents navigate dangerous pavements or walk in the streets while the elite few drive cars along highways built for the minority. 'Every time they walk it is not only a weight on their feet but a slight on their dignity. The rest of us drive.' (Gevisser, 2014:36).

This urban inequality is one of the results of Johannesburg's apartheid policy which used the urban environment to enforce racial segregation through urban planning. These patterns linger and persist in the urban fabric today. A new approach is needed to inform policy and to drive inclusive, community centred urban growth. Dineth notes that 'Insurgent urbanism will always be a force of transient change in cities, and the impulse in planning to fix, order and house will always be met with resistance in the spaces of everyday city life'. The challenge of regeneration is to 'find a mediated approach' which allows all participants to embrace and live with the uncertainties of the built and the transient, with sustainable and flexible procedures and policies. (Dineth, 2014).



Figure 5: Johannesburg's mining waste belt (Trangos, 2015)



Figure 6: Collage – Authors own (Adapted Trangos, 2015)

BACKGROUND

Johannesburg is a sprawling transient city - gaps between the enforced formality of colonial and apartheid era structures are gradually being filled with informality as people find ways to live in the city.

An overburdened and dysfunctional waste management system has created an ever increasing and unmanageable urban waste problem. An acute housing shortage and high employment are continuing challenges.

I am drawn to the eastern side of the city – my first home as a young architectural student was in Bertrams. We lived there for about five years, and I have always felt a deep connection to the valley between the ridges of Observatory and Kensington.

My chosen study area is part of the eastern gateway to Johannesburg – the greater Bez Valley including the suburbs of Bertrams, Lorentzville and Judith's Paarl. The area is close to the city, with good transport connections, existing fine grain blocks, a regular street grid, and a mix of residential, commercial, retail, and educational facilities.

My research will examine how these existing neighbourhoods can transition into being more sustainable and resilient. I will look at existing circularity practices and explore the materiality and meaning of waste as a resource and a source of potential income, a building material and a creative medium.



Figure 7: Map of Johannesburg (Recoloured by author)



Figure 8: Street scenes in the valley (Photos by author)

AREAL VIEW OF THE VALLEY between Observatory and Kensington Ridges

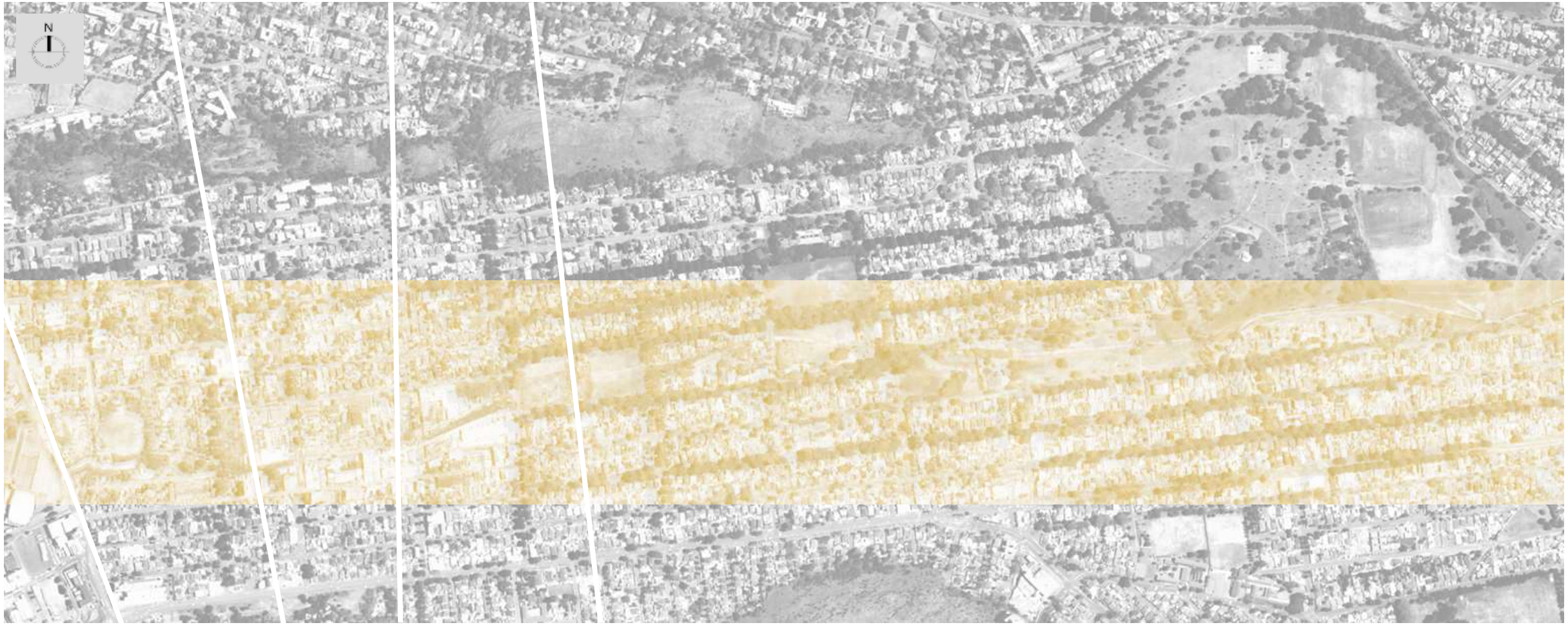


Figure 9: An aerial view of Bertrams, Lorentzville, Judith's Paarl and Bez Valley (Google Earth – adapted by author)

PROBLEM STATEMENT

Increasing urbanisation, particularly in the global south, is negatively impacting the natural environment.

People move to the city seeking employment, housing, education, in search of better opportunities.

Current growth and form of cities is unsustainable – urban sprawl and the resultant transport implications impact quality of life and degrade the natural environment.

South African cities in the post-apartheid era face rapid urbanisation with increased demand for housing, facilities and infrastructure.

These challenges should be dealt with through innovative and responsive urban strategies and principles to improve residents wellbeing and protect the environment.

Social, economic, historical and spatial studies will inform my research and resulting frameworks.

An initial visual comparison during a walk through the study area shows the stark contrast between the Victoria Yards complex and Nando's buildings, and the surrounding blocks. Crumbling pavements and roads, refuse dumped everywhere, houses and buildings decaying and collapsing – a unique urban design response is required to enable this area to fulfil its potential.

Inclusive growth based on waste recycling, creative programs and residential densification that nurtures community cohesion and tolerance will be explored.



Figure 10: Focusing on the waste crisis (Image sourced via whatdesigncando.com/product/never-waste-a-good-crisis/)



Figure 11: Looking at a street in Bertrams (Drawing by author)

RESEARCH QUESTION and sub-questions

How can recycled waste be transformed creatively to stimulate urban regeneration, and benefit communities living and working close to the city?

How can the existing NGOs and creative nodes in the valley, such as Victoria Yards and Nando's Head Office, be maximised for inclusive growth?

How can creative recycling nurture and strengthen community cohesion and tolerance?



Figure 12: River explorations (Drawing by author)

Research Aims and Objectives

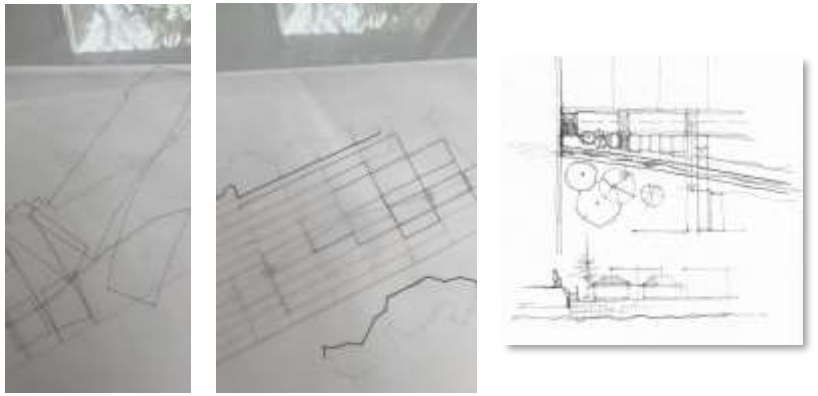


Figure 13: Process (Drawing and photos by author)

The aim of this proposal is to investigate waste collection practices and the effects of waste recycling, or the lack thereof, on the greater Bez Valley area. Further research will be conducted on existing creative spaces in the community and the intersection between recycling and creativity. The presence of creative hubs in the valley creates the opportunity to research their effect on people living and working there.

I propose using these hubs to create a linear thread of community space and places linking creative nodes that could initiate further regeneration along the valley's length – a journey that explores creative expression through sustainable urban development and inclusive growth.

The project aims to examine nodes of development, in particular ones with a creative arts emphasis, investigating whether regeneration, and partial gentrification, results in community building, economic opportunity, cultural and creative expression, sustainability and dignity for all who live and work in the study area.

My design proposal will investigate the transformation of existing, well located urban space in greater Johannesburg, with the aim of creating resilient, livable neighbourhoods through the adoption of sustainable urban design practice.

THEORETICAL FRAMEWORK -Redistribution

	IDENTIFY	ANALYSE	AIM	PROPOSE
PUBLIC SPACE	Open, underutilised land – streets, parks, vacant stands	Observe use, patterns and texture	Public space for better quality of life	Reclaiming the streets and parks for the community
STRUCTURES	Industrial, institutional and residential	Occupied/vacant Used/abandoned	Densify and populate new and existing dwellings	Temporary and permanent structures
NATURAL ENVIRONMENT	Urban ecosystems	Water, land, vegetation, creatures	Restore and protect, return green space to the people	Green lung for the city Focus on the river
WASTE FOOD MATERIALS SKILLS	Sources and reasons for waste	Existing systems – waste collection and recycling	Waste as a resource	Collection and reuse as creative material
ART	Art made in the studio vs art made in the street	Existing creative facilities	Accessible to everyone not exclusive	Art as a unifier and educational method

Figure 14: Redistribution diagram (Drawing by author)

PROPOSAL

My design proposal will look at refocusing and reframing the Jukskei River as the connecter in the greater Bez Valley area. The existing creative and outreach nodes will be enhanced by intervention hubs placed along the valley.

- the interaction between the environment, economic activity and community through the adoption of creative recycling practices.
- the primary objective will be to establish realistic intervention nodes that can inform the regeneration of existing, well located urban space in greater Johannesburg.
- creating resilient, liveable, denser neighbourhoods through a sustainable urban design approach.

METHODOLOGY

My process will embrace the notions of seeing and interpreting, the art of drawing and redrawing, and the reduction of images through layering and tracing, leaving or erasing memories of marks made.

I will explore the following processes :

Assemblage – a way of recording through imagery using photographs, found items and drawing

Drawing and tracing over existing images, distilling and reworking until only the essence remains

Photography – recording the site to capture the unique spirit of the place

An observational method of research will underpin my work, investigating a range of explorations and sources to gain an understanding of the study area and the people who live there.

My site exploration will be photographic and observational - taking photos either from my car or while walking.

I will conduct research on the area and on existing creatives and NGOs via websites, online media articles and social media.

Typology and built form studies will be executed using photography and sourced images.

Online surveys of existing proposals and frameworks will be recorded.



Figure 15: Collection of drawings and photographs (Images by author)

Ethical Considerations

An Ethics Waiver application will be submitted to the University of Witwatersrand's Human Research Ethics Committee (HREC Non-Medical) as I will have no interaction with any human participants. This research can be classified as 'no risk' as the following procedures will be used:

Literature review

Studies based on theoretical or secondary analysis alone

Use of non-human, quantitative datasets (like economic data)

Observations and notes taken during walks and drives through the site area

Visual surveys through photographs

Review of previous proposals

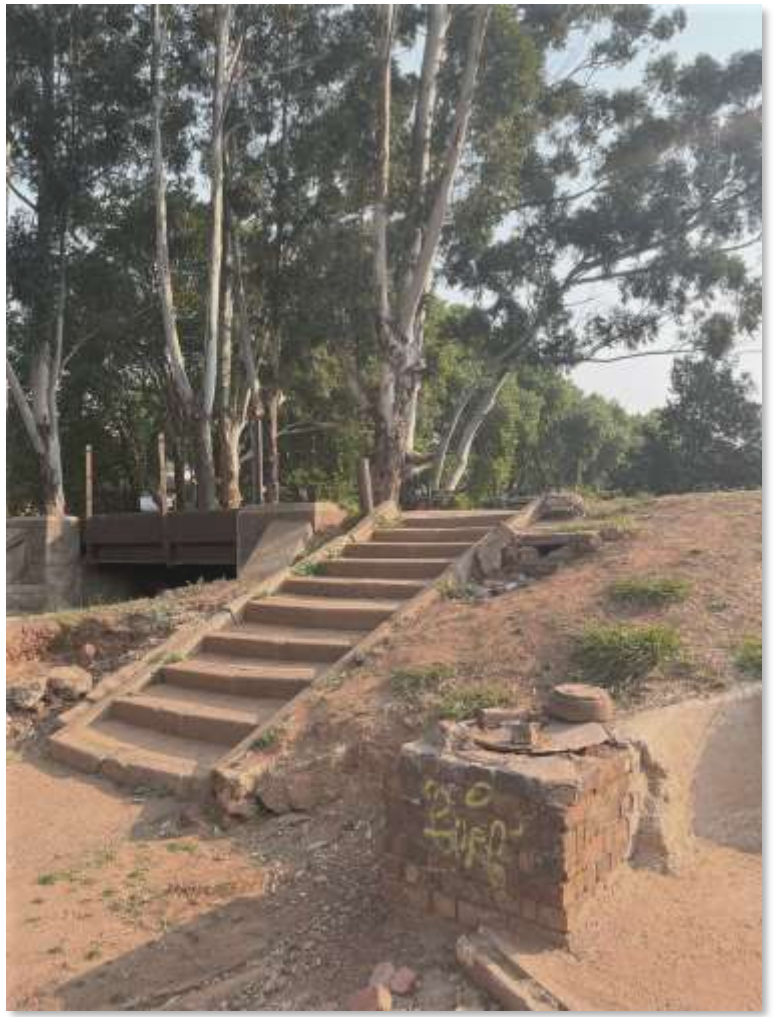


Figure 16: Staircase to link streets at different levels – pedestrian route alongside the path of the river (Photo by author)



chapter 2 LITERATURE REVIEW

2.1 REGENERATIVE URBANISM 16

2.2 WASTE COLLECTION AND RECYCLING 17

2.3 THE CREATIVE CITY 18



Figure 17: Bertrams (Photo by author)



Figure 18: Recycled bricks (Dameron, 2019)



Figure 19: Recycled building materials at Reset exhibition, Copenhagen (Frearson, 2023)

REGENERATIVE URBANISM

Regenerative urbanism is an emerging urban design approach that aims to enhance the capacity of cities to regenerate both natural and built urban elements, creating positive impacts for people and the planet, and enhancing co-evolution and resilience. This approach has been called the "new wave of sustainability, and it represents a necessary world view and paradigm shift for sustainability" (Gibbons, 2020:3).

This approach, based on ecological urban methods and recognising both human and natural need, is a holistic response to rapid urbanisation, particularly in the global south, as well as a reaction to the growing global climate dilemma.

Regenerative development attempts to restore the balance between urban growth and natural ecosystems, through the creation of resilient, inclusive and integrated systems that result in a better urban quality of life for residents. Gibbons (2020) states that "regenerative sustainability sees humans and the rest of life as one autopoietic system in which developmental change processes manifest the unique essence and potential of each place or community" (Gibbons, 2020:3).

This urban design approach proposes Regenerative Urban Goals (RDGs) as opposed to Sustainable Development Goals (SDGs). Gibbons (2020) believes that SDGs have been slow and difficult to achieve, and have sometimes led to unsustainable results. In contrast to this, the proposed RDGs "synergistically guide human thinking and action to more fully align with life's principles and to manifest thriving communities from the scale of individuals to the entire earth system" (Gibbons, 2020:8).

The ultimate aim of regenerative urbanism is to create communities that grow and thrive, using ecologically sound methods that encourage harmonious, interdependent relationships with the natural environment. This approach is particularly relevant in urban environments of the global south, where rapid sprawling urbanisation, ever increasing population growth, and a lack of economic opportunity pose significant challenges for resource management and infrastructure maintenance and delivery, particularly in Johannesburg the challenge of waste management.

Waste Collection and Recycling

Johannesburg's waste crisis is evident in the piles of discarded litter and debris seen on the pavements and roads throughout the city and the suburbs. Many municipal areas do not offer kerbside separation and collection of recyclables, and drop off points are often difficult to access.

Waste recyclers pulling their trolleys filled with plastic and cardboard are a common sight while traversing Johannesburg's roads. A vast and widespread network of informal waste recyclers have used the waste management crises to create a collection and recycling system that provides an income for thousands, and helps to solve a crucial urban waste challenge. Petco, an organisation representing the South African plastics industry, aims to link the formal and informal waste sectors to resolve our waste crisis, with particular emphasis on the collection and recycling of plastic bottles after use. (Petco, 2004).

The lack of economic opportunity, amongst other factors, in the eastern part of Johannesburg has caused gradual degeneration, resulting in decaying, dilapidated and dangerous districts. Isolated attempts at regeneration and urban salvage can be seen throughout the city. Victoria Yards in Bertrams/Lorentzville is one of these regeneration districts, marketed as a unique urban complex prioritizing "social development and business growth". This complex includes artists' studios, retail outlets, eating places, a monthly market and clothing workshops. Makers Valley, a Civil Society Organisation, has its office and workspace there, focussing on creative social entrepreneurship and community building. (Victoria Yards, 2018).

Victoria Yards has adopted a more integrated and carefully considered approach to urban regeneration, as opposed to other inner-city interventions which have amplified rather than improved inequalities. Their focus on creative enterprise has highlighted existing creative studios and workshops in the valley, and the increased exposure through markets and open days has brought new economic opportunities to the valley and its residents. (Campbell, 2021)



Figure 20: Streetscape – Bertrams (Photo by author)





Figure 21 and 22: Found objects (Photos by author)



Figure 23: Waste Collector (Pretorius, 2021)



Figure 24: A bundle of wire found at the recycling centre (Photo by author)

THE CREATIVE CITY

Creative expression in the city can be found in the most unexpected places – a tyre used as a planter, colourful paint applied to a crumbling wall or brightly coloured clothes worn to church on Sunday.

The concept of the 'creative city' is one that is gaining increased exposure - UNESCO has documented this concept through the UCCN (UNESCO Creative Cities Network) program, which encourages links between visionary cities from around the world to encourage creative dialogue between them. Three South African cities are currently included in the program– Cape Town, Overstrand and Durban.

South African Cultural Observatory: Creative cities in metropolitan areas. January 2021, is a research document that examines the context of creative cities in South Africa, focussing on the opportunities, challenges and socio-economic benefits associated with them. The document looks at infrastructure, the provision of urban space for cultural and artistic use, and economic assistance for participants.

"Creativity cannot be really regulated, but it can be encouraged. The redevelopment or revitalization of a city is an art. It depends on the individual strengths of a place and the will of the leadership to bring about change." (Erlandsen, 2021).

Humans are creative beings and our creativity is integral to all that we do. It is the underlying power that enables us to realise an immense range of achievements including the art of urban design. Haynes (2022) referring to Johannesburg, notes that 'there is art in the details and textures of this city which simultaneously renews and devours itself'. (Haynes, 2022:ix).

Creativity lives and thrives in humans and thus it does the same in the places that we inhabit. The varied and unique ways in which people respond to urban spaces and the way they live in them can be seen in obvious and unexpected places all around us – you just need to look carefully.



chapter 3

CONCEPTUAL FRAMEWORK

3.1 RECLAIMING THE CITY 20

3.2 STITCHING THE CITY 21

3.3 RESPONSIVE ENVIRONMENT 22

3.4 SUSTAINABLE URBANISM 23

3.5 THE CIRCULAR ECONOMY 24

3.6 REFLECTIONS 24

RECLAIMING THE CITY



Figure 25 Diagram by author

Intention - to reclaim the suburbs closest to the city, the greater Bez Valley area in particular, through a series of sustainable, inclusive interventions. The objective is to create a neighbourhood that offers residents a good quality of life in a liveable, dense, well-designed environment with the inclusion of a vibrant, safe and integrated public realm along the length of the valley through the revitalisation of the Jukskei River and the existing open space network adjacent to its course.

This intention will be realised through regenerative processes and urban design principles to reimagine a historically rich, well-situated and diverse neighbourhood.

- Reimagining the site from a neglected, decaying area into a place of opportunity and growth
- Integrating the area into the greater Johannesburg through improved accessibility and connectivity
- Diversifying the housing options available in the area to cater to all needs and incomes through densification and improved social housing offerings
- Emphasizing and consolidating the existing open space network with its residential surroundings
- The integration of existing creative nodes, and the creation of additional nodes, for the improved benefit of the community
- Expanding opportunity through economic circularity emphasizing opportunities offered by waste recycling



Figure 26: Illustration of the concept of the 15 minute city. (Dessin, 2020)

STITCHING THE CITY

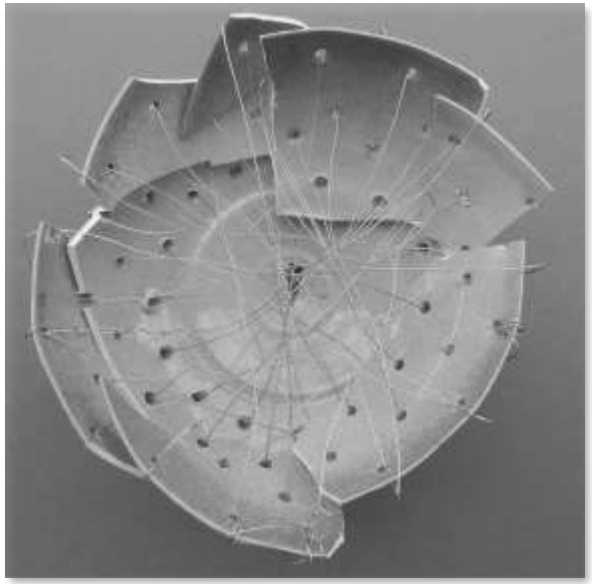


Figure 27: Broken porcelain stitched together with wire (Taylor, 2023)

The existing grid structure to all four suburbs included in the study site reinforces regularity, repetition, order

When viewed from above the observer feels distanced from the street level challenges.

The streets, built form and natural growth create patterns and symbols.

Introduction of a finer, denser grid, vertical and horizontal, using leftover space particularly the wide road reserve.

Scaffold like structures as residential/retail/studio space – temporary, quick to build and easy to move.

Individual structures inserted into existing industrial buildings and/or 'tacked on' as staircases, balconies, skywalks.

System of single structural elements that can be stitched or quilted together using recycled elements and discarded materials.

Making visible what appears invisible through threading and connecting.



Figure 28: Drawing in the gaps left by broken shards of porcelain (Strati, 2023)

Responsive Environment

The proposed urban design intention will use the following urban design principles to create a people-orientated neighbourhood. These principles, as detailed by Bentley et al (1985), will be examined and integrated into the proposal:

Permeability and connectivity refer to movement patterns and routes – the aim is to create a compact, accessible neighbourhood where people can utilise public transport or non-motorised forms of transport like walking, cycling or skateboarding. The emphasis is on the pedestrian rather than the car, resulting in appropriate streetscapes adjusted to "the human scale".

Legibility – the pursuit of an easy to understand and unobstructed environment defined by five key elements: paths, edges, districts, nodes and landmarks

Variety – a combination of uses and forms offering a range of choices characterised by the integration of housing into commercial and community zones resulting in easy access to services for residents, and ensuring continuous activity at all times.

Robustness – buildings and spaces should be adaptable and suitable for more than one purpose, allowing for future changes in use should social or economic needs alter.

Visual appropriateness – strong distinction between public and private realms, denoted by clear edge characteristics using walls, trees and other vertical elements to emphasize movement patterns, safety and a sense of enclosure.

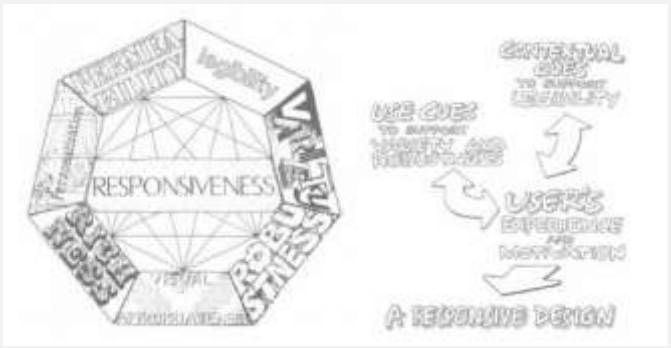


Figure 29: Responsiveness graphic (Bentley, 1985)

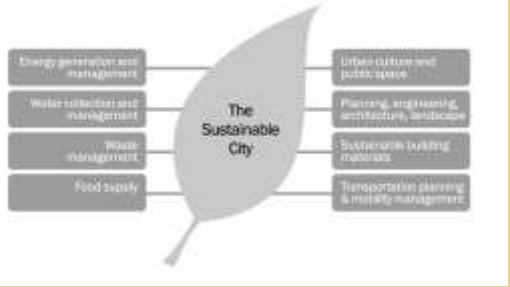


Figure 30: Urban sustainability (Lehmann, 2011)

Sustainable Urbanism

More than half the people in the world now inhabit urban spaces, driving an increased focus on understanding and designing cities as sustainable environments, while managing the impact of world urban growth.

The core principles of sustainable urban design reinforce the idea of a comfortable quality of life for the current generation without compromising future generations. These principles embody the creation and support of human, social, economic and environmental systems, all individual but interdependent. Breckenridge notes that urban sustainability "requires looking at how cities fit within ecosystems and how they depend on ecosystem dynamics both within and outside of city boundaries." (Herring, 2012).

The recently published UN Habitat World Cities Report 2022 Envisaging the Future of Cities offers insight and guidance to the future metropolitan spaces, based on research, current obstacles and the opportunities offered by these. This report includes chapters on issues like poverty and inequality, resilient urban economies, climate change and environmental solutions, sustainability and technology.

Johannesburg has adopted various policies and plans that align with the principles of sustainability, such as the Growth and Development Strategy 2040 (GDS 2040), which promotes a city that is adaptable, liveable, sustainable, smart, caring, and productive; the Joburg 2030 Vision, which outlines a roadmap for achieving a low-carbon, resource-efficient, and climate-resilient city; and the Inner City Transformation Programme, which seeks to revitalise and regenerate the inner city through improving infrastructure, services, amenities, and socio-economic opportunities. This program includes strategies for the Eastern Gateway to Johannesburg, which includes my focus area.

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Figure 31: Urban sustainability graphic (©https://www2.helsinki.fi)

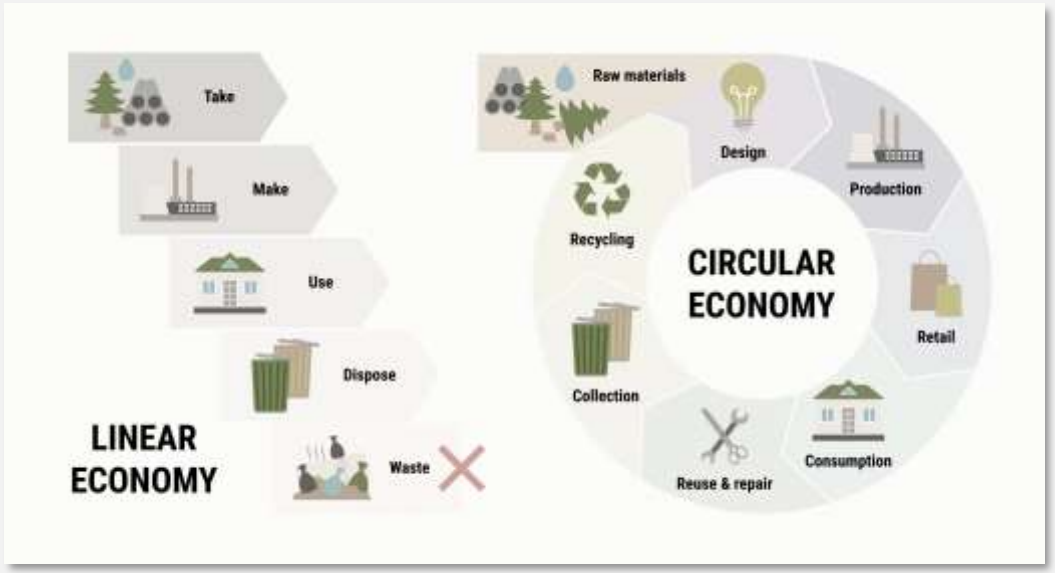


Figure 32: Diagram illustrating circular vs linear economy (Shutterstock)

CIRCULAR ECONOMY

The systems-based approach of the circular economy offers opportunities to tackle pressing global issues like climate change and environmental crises such as waste and pollution. Fundamental to this approach are three principles: the reduction of waste and pollution, keeping items and components in use, and restoring natural systems. Circulatory aims to design out waste through the creation of materials and products that can have continuous use. Waste becomes an asset and a resource, rather than a threat.

The Ellen MacArthur Foundation, along with ICLEI Africa, has researched circular economy focus areas on the African continent. One of their research papers examines the implications of the single use of plastics.

Plastics were initially seen as having great benefits, particularly to the global south. Low cost, versatile and strong, making plastics and plastic packaging vital in increasing accessibility to clean water and food products. Plastic packaging is hygienic and protects against contamination. It is, however, increasingly obvious that plastics are wasteful and polluting our world. Over 85% of plastics end in landfills after a single use. The informal sector plays a crucial part in plastic collection and recycling, which significantly reduces plastic pollution. Our wasteful linear model of consumption needs to be reworked to reduce, and ultimately, eliminate single use plastics.



Figure 33: Illegal dumping of building rubble in Bez Valley (Photo by author)

REFLECTIONS

The waste problem in Johannesburg has far reaching consequences. The obviously apparent ones like the piles of refuse and overspilling garbage bags visible in the streets, to the less obvious but equally significant ones – the polluted urban waterways and rivers, and the possible health risks for people living in filth.

A multifaceted approach based on waste collection and recycling strategies, creative programs and residential densification that nurtures community cohesion and tolerance could offer an improved quality of life for people, and provide a sustainable urban environment for current and future residents.



chapter 4 OBSERVATIONS

4.1 RECYCLED WASTE AS CREATIVE RESOURCE 26

4.2 EXPLORATORY MAPPING 27

4.3 DRAWINGS 28

4.4 VISUAL SURVEY 29

4.5 TOWERS OF WASTE 30

4.6 LOOKING AT TEXTURE AND PATTERN 31

4.7 MENDING, STITCHING, DARNING 32

4.8 ASSEMBLAGE 33

4.9 PHOTOGRAPHY AS RESEARCH METHOD 34

4.10 LOCK 35

4.11 WASTE COLLECTION FIELD NOTES 36

4.12 WASTE COLLECTION MAPPING 37

4.13 VIEWS 38

4.14 AERIAL VIEWS – EAST AND WEST 39

4.15 GREEN SPACE - THE TREES 40

4.16 GREEN SPACE - AERIAL VIEW 41

4.17 THE RIVER 42

RECYCLED WASTE as creative resource

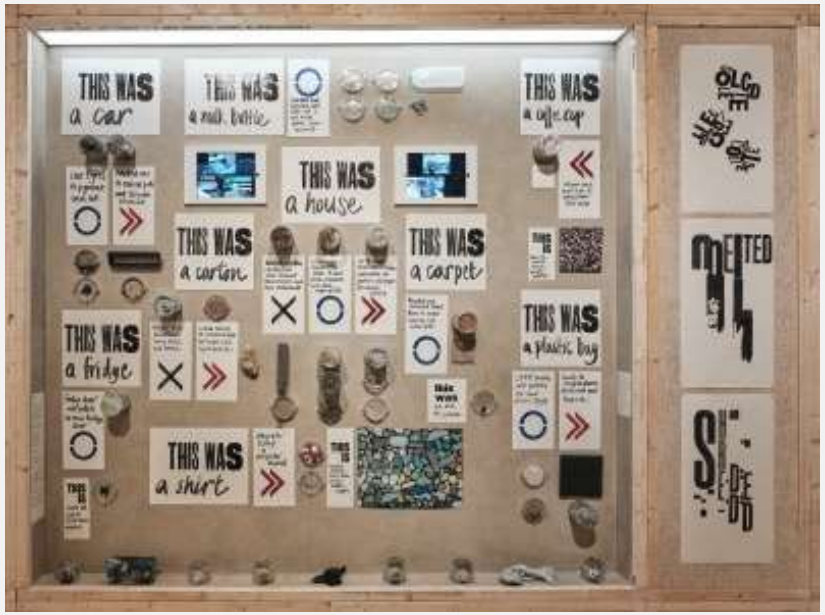


Figure 34: Art at the Design Museum exhibition exploring how design can tackle waste (Design Museum, 2021)



Figure 35: Fadama 40 by Ibrahim Mahama using old TV sets as sculptural pieces (Chan, 2021)



Figure 36: Foreign Smell by Moffat Takadiwa using found perfume lids (Tyburn Gallery, 2015)



Figure 37: Aurora by Arthur Mamou-Mani using recycled materials (Speller, 2021)

EXPLORATORY MAPPING



Figure 38: Interpretive map of the study site (By author)

"The uncertain and imprecise way of constructing a drawing is sometimes a model of how to construct meaning .. the ethical and moral questions .. in our head seem to rise to the surface as a consequence of the process" William Kentridge







Figure 39: Photographs and drawing of streetscape (Photo and drawings by author)

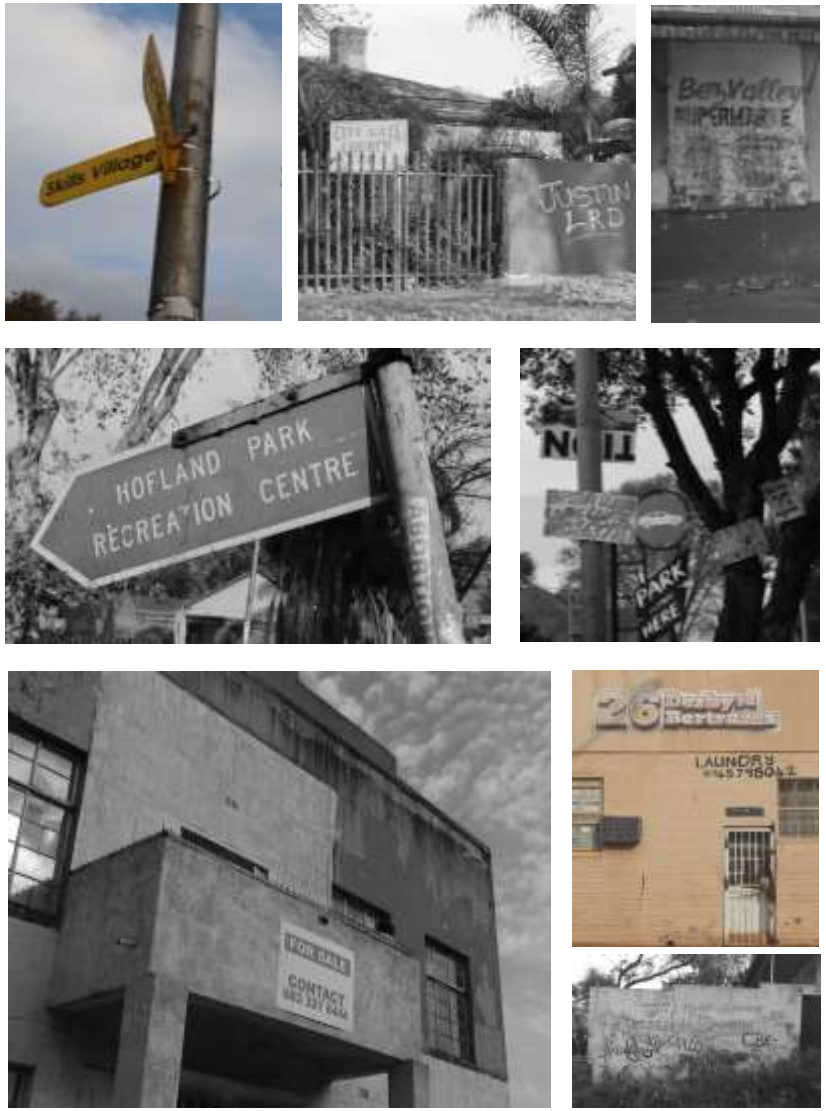


Figure 40: Photos taken in the study area (Photos by author)

Images and words showing the texture and richness of a faded and forgotten place

VISUAL SURVEY





Figure 41: "Tableau vivant" (2007-2008). All images © Thierry Mandon, shared with permission via This is Colossal

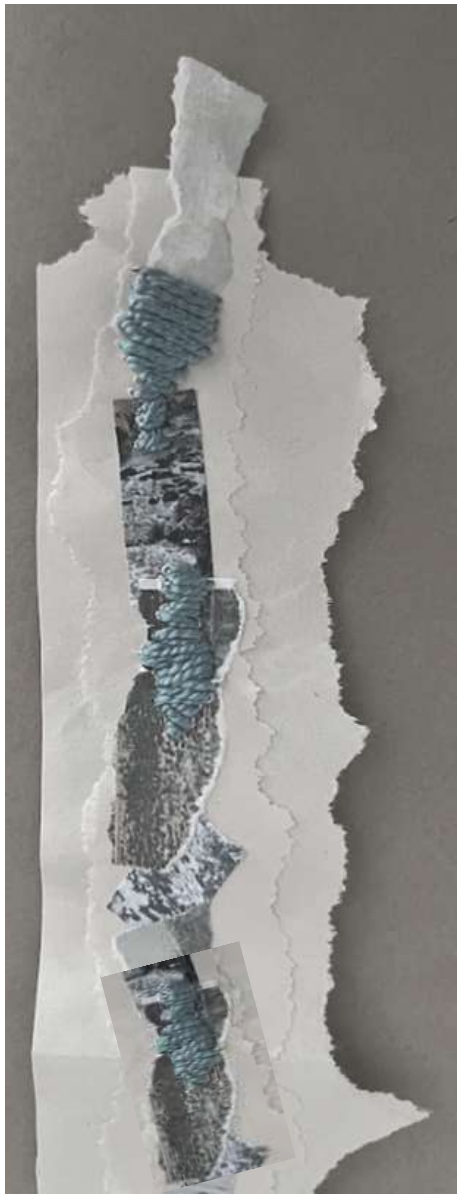










Figure 42: Tower explorations using waste items foraged and found in the study area (Explorations and photos by author)

LOOKING AT TEXTURE AND PATTERN

My observations in the study area have been instinctively defined by my experiences, my processes and my frames of reference. I use texture and pattern to make sense of what I see, and my photographs and drawings reflect this. When I review and analyse my photographs, the reductive process of structuring my observations into an order helps me to understand and interpret what I have seen. My response to what I have seen and recorded is both physical and emotional, representing images in either an untangled form or a more complex one.

Tansy Hargan's work resonates with me – making colourful marks, capturing what she sees around her in a spontaneous and inventive way through observation, research and experimentation. She often works with recycled textiles, unpicking used garments to source fabrics. Hargan's process is often instantaneous, working 'live', sketching and colouring her surroundings in real time,

Hargan's choice of materials is an important competent in her work. She explains her selection process as follows: 'My mixed media palette, especially in textiles, is an allusion to the materials and mechanisms of landscape: it is layered and adapted, diverse and inventive'. (Hargan,) She works in stages – layering, adding and taking away, leaving traces and memories of previous marks in her work. I have used Hargan's method of working with a viewfinder to frame and isolate a range of vision, and a certain aspect of the vista I am looking at. I will share the results of this method in my final presentation.

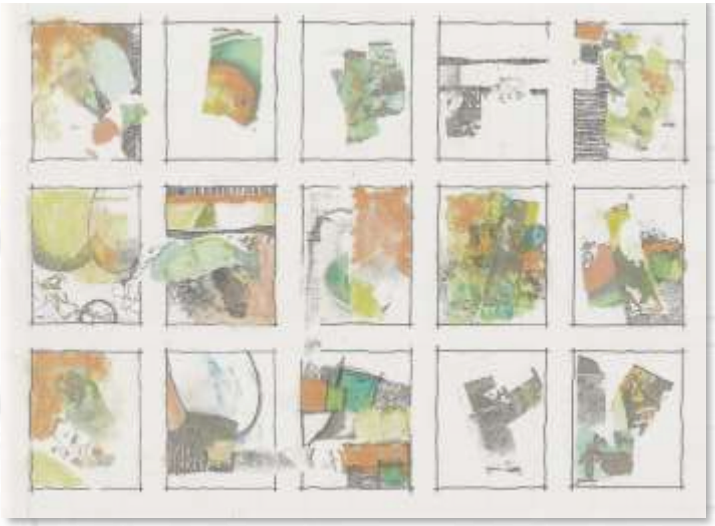


Figure 43: Drawing the grid – an extractive and interpretive process (Drawing by author)





Figure 44: Colours and textures painted on recycled fabrics (Hargan, 2023)



Figure 45: Exploration (Drawing by author)



Figure 46: Recording my process (Photos by author)



Figure 47: Textile work exploring textile dumping in Africa. By Zohra Opuku – Queens and Kings (Opuku, 2017)

MENDING, STITCHING, DARNING

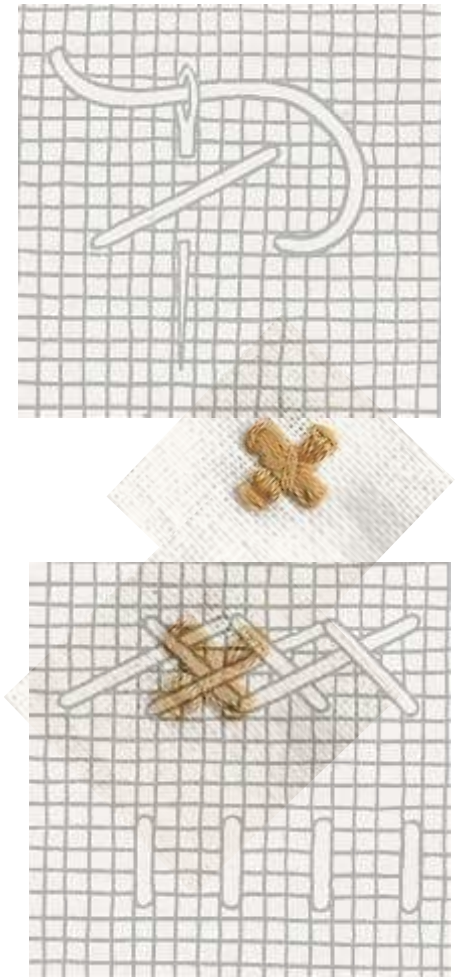


Figure 48: Process (Photo by author)

Interconnectedness, at the intersection of people and place, stitches and layers the fragments of memory that we all have. Treasuring what exists, repairing and caring and reinventing, finding new purpose for the discarded. Objects .. and places .. should be respected for their worth and the memories that they hold, for their layers and patina and the value they add to our lives. Old things hold stories, reflecting lived experience and memory. Places should be adapted and repaired to find new uses rather than discarded as worthless.

I am a maker – I need to use my hands creatively. Making encompasses the practices of mending, stitching, darning, quilting. Once dismissed as a necessary skill that less affluent people needed, this process is now embraced as part of a sustainable lifestyle.

This process of mending and repurposing what already exists can become a choice, limiting waste, adding value to the discarded and contributing to a more sustainable society.

ASSEMBLAGE



Figure 49: Assemblage study (Image by author)

The art of assemblage refers to a method more inclusive than the familiar term 'collage'.

This art form involves the combining and curating of found items and objects – flat, like paper, textile, newspaper and photographs, as well as three dimensional pieces like metal, wood, utensils and components.

The symbolism associated with these pieces is as significant as their materiality. The marks and textures on the assembled pieces, as well as the composition and layering of individual elements inform the final piece.

The inclusion of found and foraged pieces in my exploratory work adds a cultural reference to my process. Photographs and drawings are layered and superimposed with three dimensional objects as an alternative way of seeing and learning from the study area. (The Art of Assemblage, 1961)

a work of art created by combining torn fragments of paper, newspaper cuttings, photographs, pieces of cloth, found and gathered objects. The symbolic meaning of these pieces is as significant as their physical properties.

PHOTOGRAPHY as research method

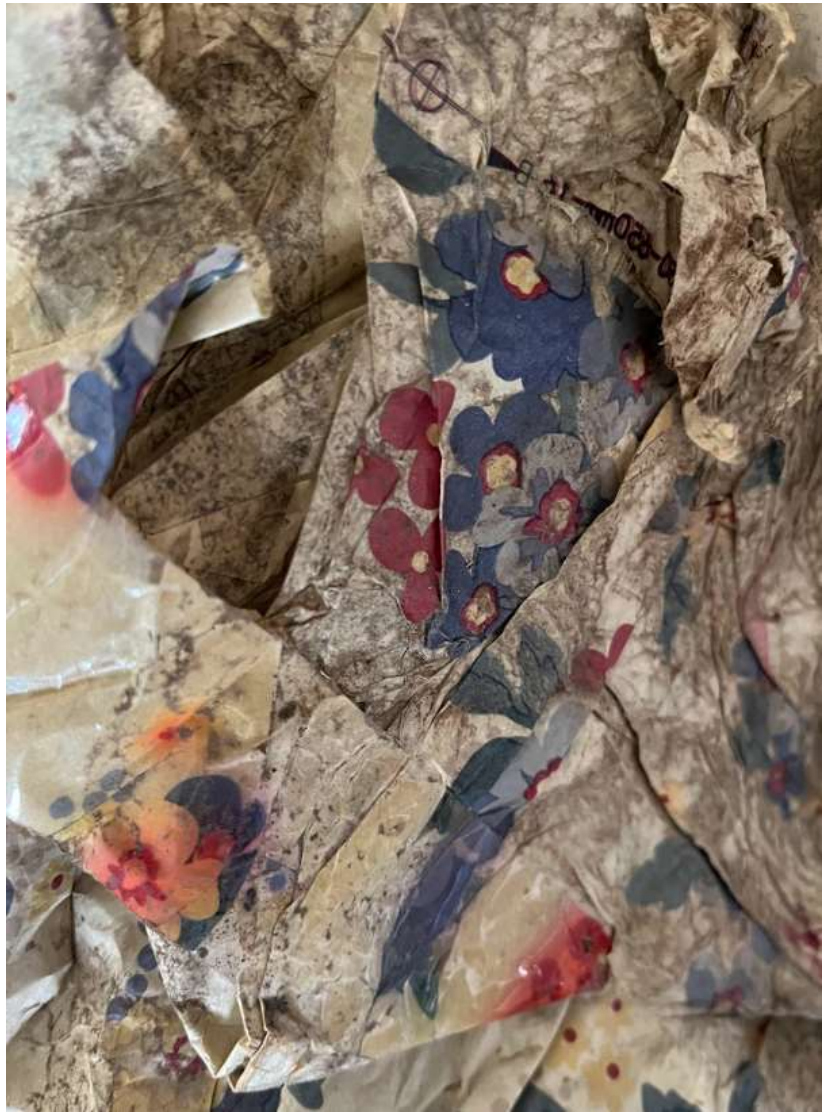




Figure 50: Collage of photographs (By author)

Photography is the only language that can be understood by everyone, anywhere in the world

Paraphrased from a quote by Bruno Barbey

Photography can be a method of observing from a distance, hiding behind a camera – a non-confrontational engagement with people and place.

Dr Collier notes that photography can be the starting point for various observations – both of subject and context. He details his practical experiences and offers guidance for using photography to stimulate activity rather than supplementing it.

His work looks at ways that the photographer can examine everyday life and use photographic imagery as a means of collecting data. In addition, photographs can be used to generate a reaction. (Collier, 1967)

The challenge of reviewing, processing, analysing and deciphering photographic data is for me, an intuitive and personal one.

Memories of time, light, sound and smell hover as I view the images captured, adding to the depth and context of each image.

I have used my IPhone as my camera, allowing me to record place, date and time of each photograph.

Static images are favoured, rather than video recordings – the textures, tones and colours of a still image allow me to review the data gathered and to reduce the photographic layers into patterns, shapes and grids.













Figure 51: Photographic visual survey at LOCK Waste Bank, Bez Valley (Photos by author)

LOCK

a recycling facility in the valley

a place to store, sort and redistribute discarded things

The LOCK Waste Bank in Bez Valley is a treasure trove of discarded bits – paper, plastic, books and vinyls, electronic waste and even a pair of old shoes. Taking care of the space that you live in can add to a sense of community and ownership – this is the spirit that the owners of LOCK are encouraging through their recycling program.

The facility encourages artists and locals to collect and reuse the discarded items, which are neatly displayed in categories, on shelves and in containers. This initiative is raising awareness of waste and discarded items as a resource and a creative material that can be used in reinvented forms and in new creative ways.

The objects that I found at the recycling station represented a way of recording life in the valley – a display of what is used and discarded at varying scales, depths and angles.

My proposal will look at expanding this facility to include building materials and other waste - a resource bank that can double as a storage facility for builders, a place where residents can access affordable materials to build or add onto their homes and businesses. Workshops, exhibition space and learning areas will be included to form a complex devoted to waste as a resource.



Figure 52: Discarded scraps of plastic and paper (Photos by author)

WASTE COLLECTION – Field Notes

Specimen no: 1
Collection date: 29.04.2023
City and suburb: Bez Valley, Johannesburg
Locality description: Pavement on 3rd Avenue, between 3rd and 4th Street
Lat/Lon coordinates:
Description: Lays Chip Packet, red, Thai Sweet Chilli flavour, torn, covered with sand from the pavement



Specimen no: 2
Collection date: 29.04.2023
City and suburb: Bez Valley, Johannesburg
Locality description: Pavement on 3rd Avenue corner of 4th Street
Lat/Lon coordinates:
Description: Cardboard egg tray with crushed egg dimples, clean
Might have been made from recycled material



Specimen no: 3
Collection date: 29.04.2023
City and suburb: Bez Valley, Johannesburg
Locality description: Recycling depot , 5th Street
Lat/Lon coordinates:
Description: Glass jar with an orange residue at the base, a worn label, grooves for a screw on top, no top found, sand particles and other dirt on the bottle



Specimen no: 2
Collection date: 29.04.2023
City and suburb: Bez Valley, Johannesburg
Locality description: Pavement on 5th Street
Lat/Lon coordinates:
Description: Gift wrapping paper, worn in parts but still showing faded colour and floral design, dirty and sandy



Specimen no: 5
Collection date: 29.04.2023
City and suburb: Bez Valley, Johannesburg
Locality description: Recycling depot , 5th Street
Lat/Lon coordinates:
Description: Bundle of thin wire



Specimen no: 6
Collection date: 29.04.2023
City and suburb: Bez Valley, Johannesburg
Locality description: Recycling depot , 5th Street
Lat/Lon coordinates:
Description: A box of old slides, dated 1976, family holiday images



Specimen no: 7
Collection date: 29.04.2023
City and suburb: Bez Valley, Johannesburg
Locality description: Pavement on 3rd Avenue, between 3rd and 4th Street
Lat/Lon coordinates:
Description: Plastic and paper scraps, worn and dirty



Specimen no: 8
Collection date: 29.04.2023
City and suburb: Bez Valley, Johannesburg
Locality description: Pavement on 4th Street
Lat/Lon coordinates:
Description: A range of rusted metal tin can tops, various coins and other rusty metal washers and pieces

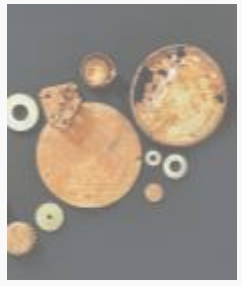


Figure 53: Photographs of foraged discarded objects by author

WASTE COLLECTION – Locality of found specimens

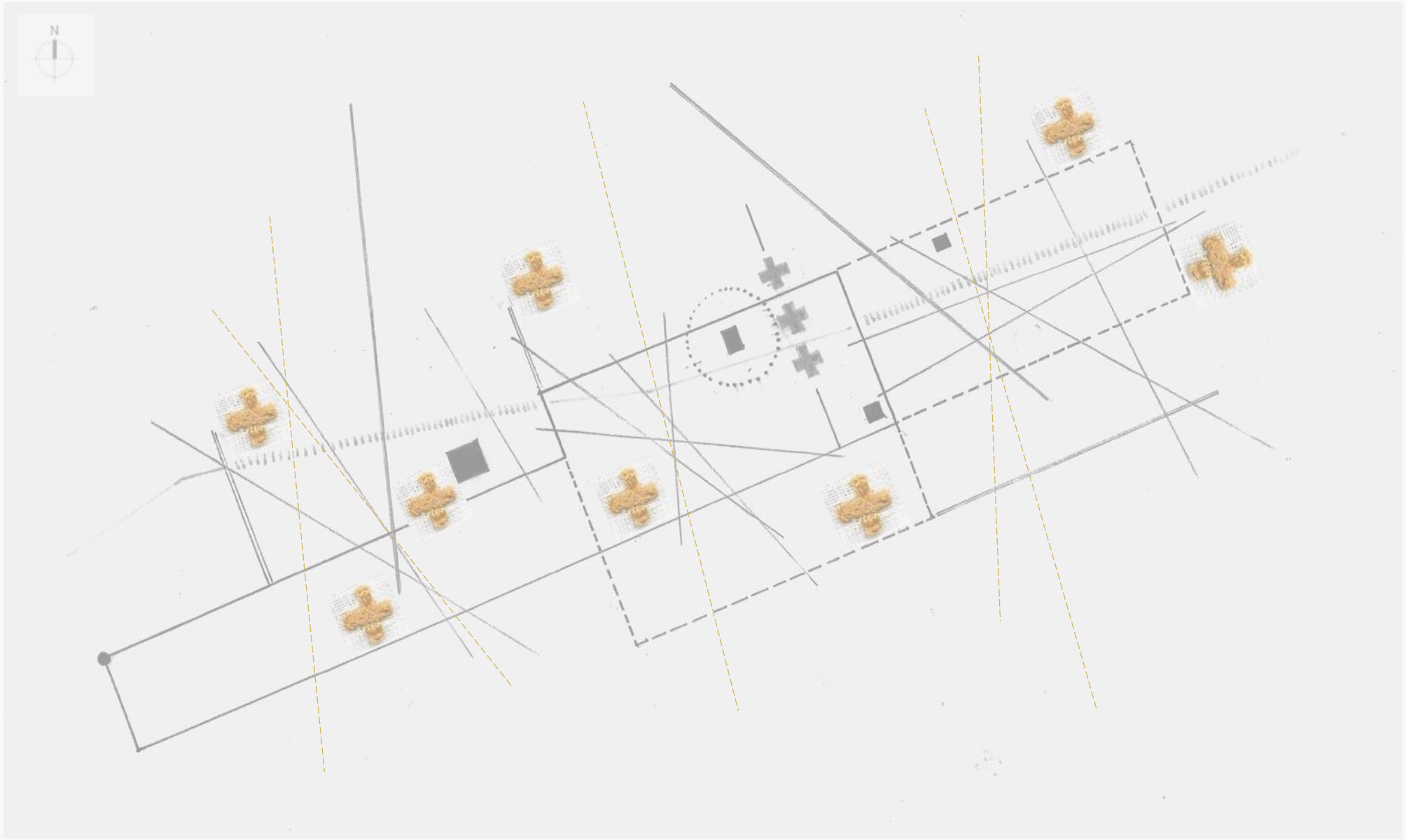
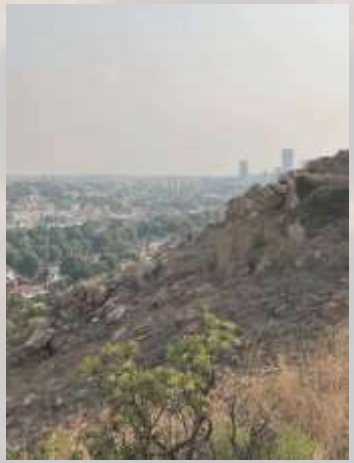


Figure 54: Interpretive map (By author)

V I E W S

Figure 55: Yeoville Water Tower (Heritage Portal)







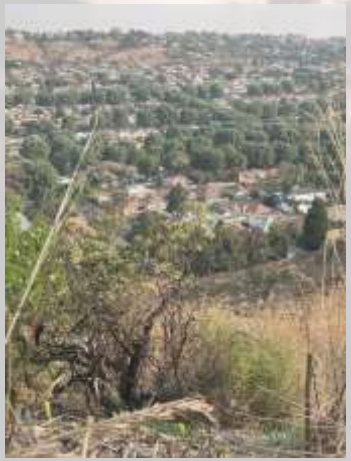


Figure 56: Views of the valley from Observatory Ridge, the city skyline from Langermanskop, Victoria Yards with Ponte in the background (Photos by author)

The city skyline dominates the western horizon when travelling from the east towards the valley. The multistorey buildings and towers of varying heights and shapes pop up and disappear along the route, sometimes hidden and then suddenly exposed again.

The same structures can be seen from the base of the valley when looking up and around – the iconic Johannesburg skyline, Ponte and the Telkom Tower always dominant.

The telecommunication masts and the Yeoville water towers on the Observatory Ridge to the north are faded reminders of the past. Kensington Ridge and Langermanskop can be viewed to the south.



Figure 57: Looking west up the valley towards the city (Moon Valley Studios, 2019)

V I E W S



Figure 58: Looking east down the valley towards the Bruma and the eastern suburbs (Moon Valley Studios, 2019)

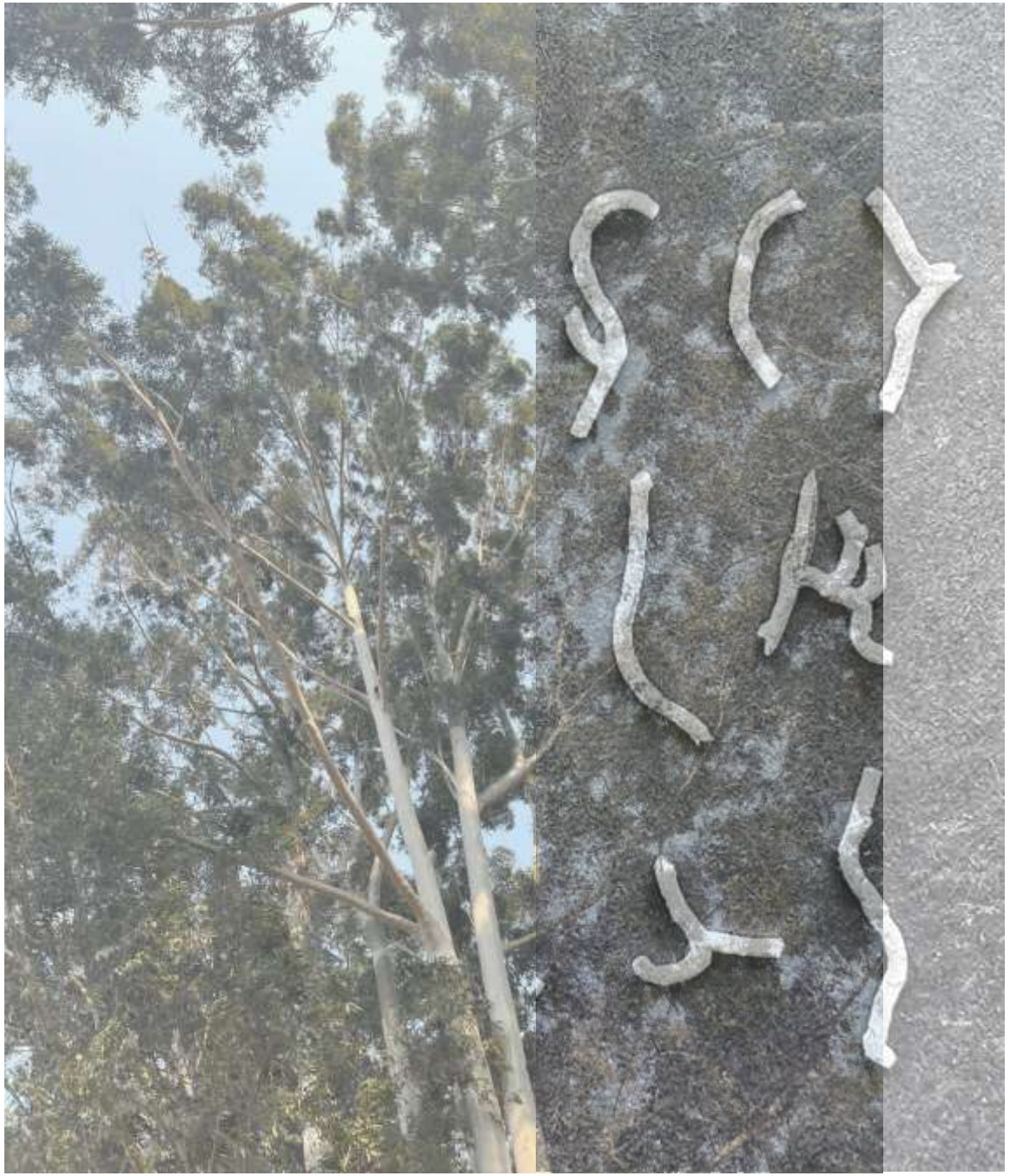


Figure 59: Looking up at the sky through the blue gum leaves (Photo by author)

Figure 60: PSHB tunnel porcelain moulds (Coetzee, 2022)

GREEN SPACE - the trees





Figure 61: Blue gum Trees in the valley (Photos by author)

Johannesburg's leafy green tree-lined streets could soon be a thing of the past. Most of the trees planted in public spaces are exotic – jacarandas, English plains and oaks, and thirsty Eucalyptus or Blue gums. Now classified as alien invasives, these trees are being invaded and slowly killed by the Polyphagous Shot Hole Borer beetle.

Hannelie Coetzee is a visual artist with a passion for the environment. She is a founder of the Water for the Future NGO and was awarded the Social Impact Prize in 2022 for her work on the PSHB beetle tunnels and explorations into the state of health of Johannesburg's trees.

Coetzee has recently published a list of suitable indigenous trees to plant as replacements for the exotics which are dying out – these indigenous trees will be more suitable to Johannesburg's environment and will be resistant to the PSHB beetle. (Coetzee, 2022)

Green Space – a string of green nodes along the Jukskei River valley



Figure 62: Aerial view of the greater Bez Valley, recoloured by author (Google Earth)



Figure 63: Prior to the discovery of gold and the establishment of the city of Johannesburg, the valley would have been grassland (Random Harvest Nursery)





Figure 64: Indigenous trees resistant to PSHB beetle (Coetzee, 2023)

LOOKING AT THE RIVER



Figure 65: The Jukskei River as it journeys through the valley constricted within stone walls and channels until it is released and flows freely from Bruma to the Indian Ocean (Photos by author)



Figure 66: Sketch of green open space in the valley (Drawing by author)



Figure 67: The river flowing through the valley, choked with litter and plastic, the stench of industrial waste and sewerage always present (Photos by author)



chapter 5 PRECEDENT

5.1 CREATIVE SPACE 44

Victoria Yards, Johannesburg
The Drill Hall, Johannesburg

5.2 PUBLIC SPACE 46

Tapas Rouge, Haiti
Blucher Square, Russia

5.3 WASTE SPACE 48

Kamikatsu Zero Waste Centre, Japan
Rewoven, Cape Town

5.4 LIVING SPACE 50

Cissie Gool House, Cape Town
Jewel City, Johannesburg

Creative Space - Victoria Yards

Victoria Yards is a privately developed creative complex in Lorentzville, Johannesburg. Their website describes the complex as 'a fresh take on inner city development'. Originally a series of industrial buildings that housed a steam laundry on the banks of the Jukskei River, now home to a range of artists studios, food and retail offerings, and various outreach programs. The buildings and spaces have been retained and reimagined as a mixed-use precinct clustered around open areas, gardens and water features.

Property developer, Brian Green, saw the dilapidated group of buildings as an opportunity to encourage inclusive community growth and knowledge sharing, and along with the studios and creative spaces, the complex is home to NGOs and outreach programs.

Skills development programs and urban farming are ways in which the complex connects to the residents of the valley. Makers Valley, Timbuktu in the Valley, Safe Study and The People's Pantry are all based at Victoria Yards – these NGOs and outreach programs will be examined in more detail in Chapter 7.

Pop up events are held regularly, along with guided walking tours of the complex and the Jukskei River rehabilitation program. The First Sunday market attracts visitors to the area and has assisted in bringing visibility to a marginalized, inner city space.

Recycling practice is an actively promoted, core process in the complex – all waste, including food waste from the various outlets, is donated to recycling programs.

While the complex is well-used and popular, it is mainly frequented by visitors coming into the city to explore and shop in a secure, contained environment, isolated from it's surroundings. Artists and NGOs based at Victoria Yards are actively involved in upliftment work in the area, however the complex is still perceived as exclusionary in a neighbourhood characterised by poverty and decay.

I think that Victoria Yards can serve a dual purpose – as a arts and culture complex attracting a range of Johannesburg residents and visitors, and still provide opportunities for local residents, recyclers and small businesses.

"Victoria Yards has planted hope, it is easy to see why people come to it and we [are] all blown away by what has been achieved there. But visitors mostly only engage within Victoria Yards, not with the people of the valley, so they don't often see the complexity of problems or the potential in the wider community," New Frame



Figure 68: Victoria Yards before refurbishment (Victoria Yards)



Figure 69: Image of Victoria Yards, adapted by author (Daffonchio Architects)



Figure 70: Victoria Yards (Photo by author)



Figure 71: Victoria Yards (Photo by author)



Figure 72: Treason Trial 1956 (Drum photographer BAHA, 1956)

Figure 73: Art at the Drill Hall (Two Summers, 2023)





Figure 74: Art at the Drill Hall (Two Summers, 2023)



Figure 75: Drill Hall (Daily Maverick, 2021)

Creative Space – The Drill Hall

The Drill Hall, a heritage site in the city centre, was built in 1904. Used primarily as a military deployment centre by the British during both world wars, and later by the apartheid government, troops were despatched from there to the South African borders. The military vacated the precinct in the 1990s, and the structures gradually fell into disrepair.

The precinct is most famous as the location of opening session of the Treason Trial of 1956-1961 was held at the hall, with 156 prisoners accused of anti-apartheid activity being held there. The trial eventually moved to Pretoria and all accused were acquitted, although Nelson Mandela and several others were later convicted at the Rivonia Trial in 1964.

Over the years, the site has been neglected, restored and neglected again, and intermittently inhabited by a diverse range of people– artists, homeless migrants, sex workers and addicts. Despite the neglect and decay, people desperate for shelter find spaces to sleep, camping out on the floor and occupying the library, gallery and stairways. The Drill Hall is close to the Noord Street taxi rank and taxis often use the open areas as off-street parking, adding another layer to the complexity of the

The Johannesburg Development Agency reconstructed the site in 2004, declaring it a Heritage site. However administrative obstacles, lack of funding and neglect have resulted in the Drill Hall area

"What we brainstormed with the city was that we needed to take it from an insular military stronghold to an open, public, social-cultural place within the city," said Michael Hart, the architect who was instrumental in renovating the complex. "The principle was that it needed to be a public space."

The open square, designed as a memorial to the people accused in the Treason Trial, is now used by young people as a skateboard park, an after-school activity for the inner city children to do in a safe space. The artists group Exotically Divine have inhabited some of the buildings, transforming the spaces into a treasure-trove of creativity using items found on the streets of the city, and an abundance of thriving plants and vines.

A bold and admirable approach to finding a space to live and create in the city. A site of historical violence and oppression has now been transformed into an evolving symbol of hope.

'It is rare for a piece of apartheid heritage to have been appropriated by a new generation of South Africans who have implemented programming that benefits the surrounding community directly.' (Daily Maverick, 2022)

Public Space – Tapas Rouge

Tapas Rouge in Carrefour-Feuilles, Haiti is a multidimensional public space funded and built by the American Red Cross and Global Communities.

Created as a response to the lack of public facilities in the area, this space forms part of an informal neighbourhood that was initially a tented camp for residents displaced by the catastrophic 2010 earthquake in Haiti. The area sits on the slopes of a ravine and has limited infrastructure services – no piped water, sanitation or electricity.

The camp has slowly evolved into a more established settlement with residents building permanent structures within a network of windy, narrow lanes. The area is dense and compact, with no public open space. People socialise and connect in the alleys and corridors between houses, and children have limited access to play areas.

Tapas Rouge was designed as a community-oriented public space to allow for gathering, pausing and playing. An inclusive and participatory approach was key to the process with the aim of empowering the local community and to give residents "a sense of ownership, identity and pride."

An open-air amphitheatre is at the core of the design – a gathering place for the community. Trees were planted to create shaded seating areas. The concentric radiating rings demarcate and define various zones within the space – outdoor exercise equipment is placed in one, and terraced planted gardens grow in others.

Water storage tanks supplying a water distribution station are hidden behind a grove of palm trees. These tanks are fed from a underground well. Water is sold and the revenue generated will be used to maintain the public area.

A brightly coloured mural has been painted on one of the walls running along the perimeter of the site, reinforcing the value of public art in the community. Haiti has a valuable painting tradition, and children, their parents and artists brought this mural to life as an affirmation of that practice.



Figure 76: Tapis Rouge, Port-au-Prince, Haiti (Eva Studio, 2016)



Figure 77: Tapis Rouge, Port-au-Prince, Haiti (Eva Studio, 2016)

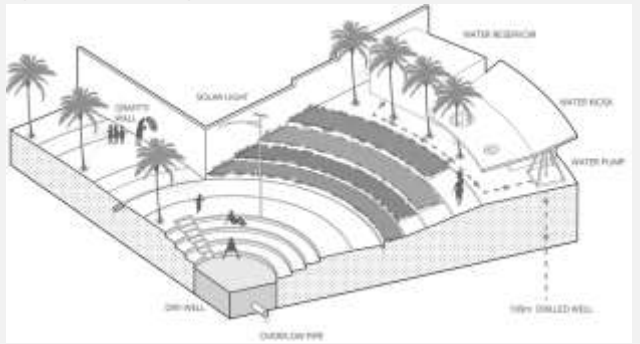


Figure 78: Tapis Rouge, Port-au-Prince, Haiti (Eva Studio, 2016)



Figure 79: Aerial view of Blucher Square (Landezine AFA, 2023)



Figure 80: Blucher Square follows the path of an underground river (Landezine AFA, 2023)

Public Space – Blucher Square

Blucher Square is a public square developed in an existing park in Khabarovsk, Russia. The square is centrally located, close to other public facilities and attractions, and forms part of a pedestrian route through the city. A river runs through the park but is concealed underground – the designers have celebrated this path through the inclusion of a green belt, celebrating the rivers journey.

After analysing the surroundings and researching how people were using the existing space, the designers divided the park into three zones – an outdoor entertainment and events area, a children and teens playground, and a quieter, relaxation zone.

Green sectors with planting and trees separate the park from the surrounding busy, noisy street activity. A pedestrian walkway runs along the length of the park, serving as a connector to other parts of the city.

Quieter green zones act as buffers between the busier parts of the park and the surrounding residential buildings, allowing residents to enjoy the open space without noise and continual activity.

A brick wall is used as a connector in the park and references the brick heritage buildings in the city – the wall undulates through the park creating higher and lower mounds and depressions. The designers have used this to demarcate functional play zones for various age groups.

A water feature runs along the length of the play area, with misting and fountain features. This stream references the Amur River that flows through the city. A café and ablution facilities separate the events and play areas, allowing child minders to sit and relax while watching children explore and play.





Figure 8!: Relaxation and play areas (Landezine AFA, 2023)

Waste Space – Kamikatsu Zero Waste

The Kamikatsu Zero Waste Centre in Japan is a recycling hub constructed from recycled materials. The 700 windows that make up the façade of the building were donated by the community, and all building materials were sourced locally – saving transport costs, packaging and fuel.

The town of Kamikatsu aims to become a zero waste community, and currently recycles 80% of the waste it produces. Rubbish is sorted into 45 different categories and then recycled in various ways. The community tackle waste issues at source, aiming to minimise the production of waste material, and then to recycle and reuse the essential waste generated, viewing waste as an income generating resource.

The centre is multi-faceted – a drive through option simplifies drop-off or collection, a public hall operates as an educational facility to increase awareness about recycling practices, and a retail space sells repurposed items made from waste.

A series of waste sorting and storing rooms are strung together along the length of the structure, with the internal space used by residents and waste collectors, and the external zone used by visitors.

A holistic approach to the waste problem has been adopted - the entire community is involved from factories and production facilities to schools and individual households, all committed to the creation of a sustainable environment.

The complex includes a small hotel allowing for visitors to stay over and to learn about recycling practices – the site was once a waste dump and landfill zone, and now attracts tourists wanting to experience the unique centre and celebrating its natural surroundings.

Shards of broken glass and ceramics were broken into small pieces and used to create the flooring. Old furniture was collected in the town and used to build a bookshelf, now stocked with books on the environment and sustainability. A glass bottle chandelier is the focal point in the reuse retail space. Every detail of the building incorporates either a recycled item, or a natural one – from the river pebble door handle to the beer crate bar counter.

Community involvement at all stages of the design and building process has created a sense of pride in the centre, residents are connected through a common goal and the benefits to the town are felt by everyone.

'We wanted the town's residents to realise that recycling waste is a creative act .. '



Figure 82: Aerial view of the Waste Centre (Dezeen, 2021)



Figure 83: Drive through drop off zone (Dezeen, 2021)



Figure 84: Retail Space (Dezeen, 2021)



Figure 85: Retail Space (Dezeen, 2021)

Waste Space – Rewoven



Figure 86: Images of the recycling process (Rewoven)



Figure 87: Diagram of the waste recycling process (Rewoven)

Rewoven was formed as a response to the ever-increasing quantity of textile waste that ends up in landfills, particularly in Africa. Textile waste is dumped in African countries, with the premise that it will be utilised as second-hand clothing, however more than half of what is received is unusable and exacerbates the compounding waste challenges in the global south.

"Textile waste accounts for approximately 6,5% of total waste in landfills in South Africa. This amounts to approximately 6 million tons of textile waste in landfill"
- *Department of Environmental Affairs (Rewoven website)*

Only about 1% of textile waste worldwide is recycled – the balance lies in landfill sites, decomposing and releasing methane gas into the atmosphere, contributing significantly to the climate crisis. Discarded used clothing is not the only textile waste problem. Leftover fabric from clothing manufacturing processes is also discarded and this is the waste that Rewoven is targeting.

Rewoven collect waste fabric, sort it, compact it and then on sell it for use in down cycled processes like carpet underfelt, insulation and disaster response blankets. Their eventual aim is to expand their reach to include upcycling which would prevent further waste textiles from being discarded in waste dumps.



Figure 88: Fabric image (@rewoven)

Living Space – Cissie Gool House

The city is a challenging place to live in for working class and low income families. The lack of centrally located social housing and affordable rental units make finding shelter, the most basic of human rights, nearly impossible.

Cissie Gool House, formerly the Woodstock Hospital in Cape Town, is a residential space occupied by people lobbying for low-cost housing in the city. Many of the residents were evicted or forced from their homes in Woodstock and the surrounds as rentals increased dramatically. The area has become increasingly sought after by private developers due to its close proximity to the city. Gentrification has forced the desperate original residents to occupy this abandoned building, described by one of the residents as being a filthy, rat-infested place when they first moved in. Slowly the residents have cleaned and restored the building, with limited resources.

Currently about 1,200 people occupy Cissie Gool House, 338 families living in former wards and offices. Communal facilities have been established – a library, a movie theatre, shops and a working kitchen that harvests fresh produce from a vegetable garden.

Contrary to the notion that city officials and planners should administer and control housing and land, activists believe that communities have the ability to self-govern, through co-operative systems run by elected representatives. A leadership structure is in place at Cissie Gool House – meetings are held and conflicts are resolved through negotiation. School pupils are supported and supplies and stationery are collected for children. The community repair and maintain the building. Walls have been painted and murals now liven up previously dark and neglected places.

Rather than seeing the occupation of abandoned buildings as unlawful, the city authorities should seize the opportunity to collaborate and engage with residents to find long-term solutions.

Cissie Gool House could be used as an example of responsive community action to resolve the serious housing crisis our cities are facing, and should encourage councils and stakeholders to engage in private/public/community collaborations to tackle the crisis.



Figure 89: Cissie Gool House in Cape Town (New Frame)



Figure 90: Scholar's bedroom (New Frame)



Figure 91: Cisse Gool House (Trenchard, 2022)



Figure 92: Repainted interiors (Trenchard, 2022)



Figure 93: Repainted interiors (Trenchard, 2022)



Figure 94: Courtyard at Jewel City (Jewel City, 2023)



Figure 95: View of the complex (Jewel City, 2023)



Figure 96: Mural by DBongz at Jewel City (In Your Pocket, 2023)

Living Space – Jewel City

Jewel City is a relatively new mixed-use development in the Johannesburg CBD, launched in 2020.This commercial, retail and residential neighbourhood is an extension of the existing Maboneng Precinct creating an sizable inner city renewal zone. The precinct covers six city blocks with Fox Street as a pedestrianised central spine.

The Absa Precinct borders the development on the western side and has also been recently renovated to include office and apartment space. Divercity Property Fund, an urban property fund, has developed both the Absa Towers and the Jewel City complex.

The developers vision was to create a energised, safe and green space for the public to enjoy – 1125 apartments of varying sizes are available, as well as a range of commercial and retail spaces. An education centre and medical facilities make this development one of the only 'live,work,play' spaces in the city.

Existing buildings and open space were regenerated and integrated into the overall scheme. The inclusion of practical elements like Shoprite Checkers and Clicks outlets as well banks, a school, play areas and sports facilities gives this precinct a more practical inner city lifestyle character lacking in the Maboneng area.

Young professionals working in the city are the main target market for the residential component of the development ,offering the opportunity to live closer to places of work, and eliminating the need for lengthy and costly commutes. Both rental and purchasing options are available.

The inclusion of public art in the precinct creates a visual connection to Maboneng and has given young street artists the change to create colourful, large scale urban murals. The additional of these artworks adds vibrancy and depth to the public spaces, while acknowledging the diverse heritage of inner city residents.

With the emphasis on regeneration and mixed-use inner city living, Jewel City provides an alternative to suburban living for low to middle-income city dwellers.



chapter 6 EXISTING PROPOSALS

6.1 CITY OF JOHANNESBURG 53

Sustainable Development Goals
The Inner City Eastern Gateway

6.2 URBAN FARMING 57

City Parks Proposal - Igadi Solwazi
Urban Marketing Centre

6.3 REGENERATION PROPOSALS 59

Jukskei River Revival Collective
Makers Valley Proposal

City of Johannesburg – SDF 2040

SDF for Johannesburg 2040 notes that the city of Johannesburg is distinguished by spatial inequality – rather than having work/home connections that are easily and reasonably accessible, many people need to travel long distances from peripheral areas in search of economic opportunity. A legacy of apartheid planning that has been reinforced by private developers creating security estates and shopping malls on open land on the edges of the city.

This urban sprawl impacts the natural environment through continuous creep into green belts and environmentally sensitive zones. The work/home disconnect is enforced, by this sprawl as is low urban density and lack of land use diversity.

SDF 2040 is a metropolitan scale policy document that aims to identify the obstacles and opportunities in the city, outlines a vision for the future, and documents strategies to achieve this vision.

The vision sets out a path towards a more spatially just city based on 'a compact polycentric growth model.' (SDF 2040) This model proposes a dense, compact urban centre with transformation zones and movement-orientated development nodes. The city is currently divisive with high density residential zones on the periphery, separated from economic activity and transport hubs. The environmental and socio-economic implications of this model are costly and far reaching. The ultimate goal is for a compact, inclusive, resilient, generative and connected city.

SDF 2040 emphasizes the natural environment, and the protection thereof, as a key element in plans for the future city. In addition to this, the importance of densifying and connecting inner city areas is noted. My study area is included in the transformation zone of the city. The need for public space is noted as a key element for transformation, as is improved social services and infrastructure.

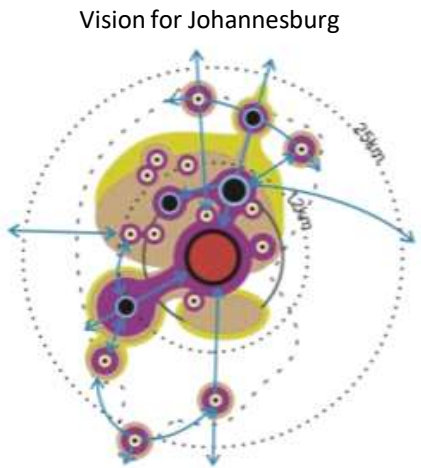


Figure 97: Vision Diagram (City of Johannesburg)

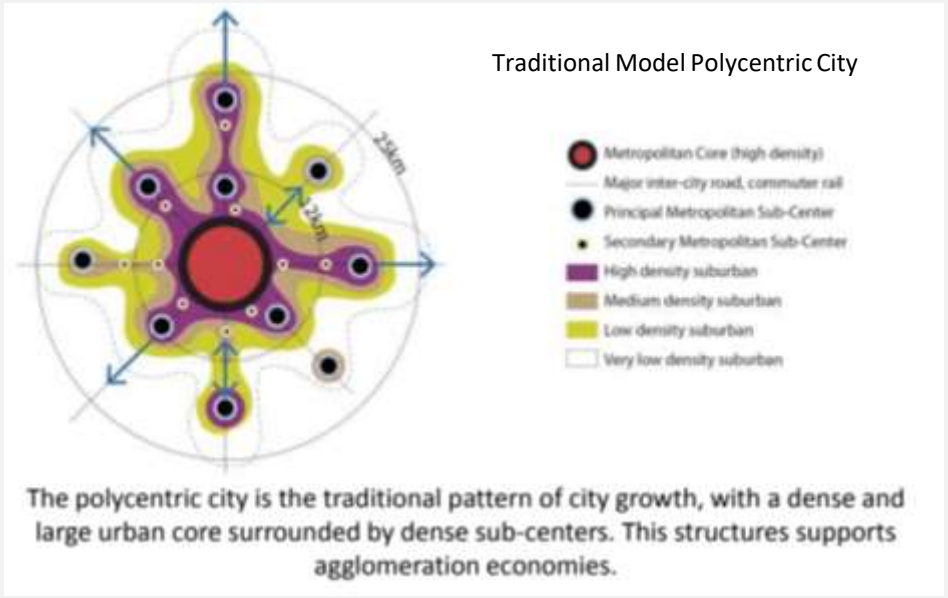


Figure 98: Traditional Polycentric City diagram (City of Johannesburg)

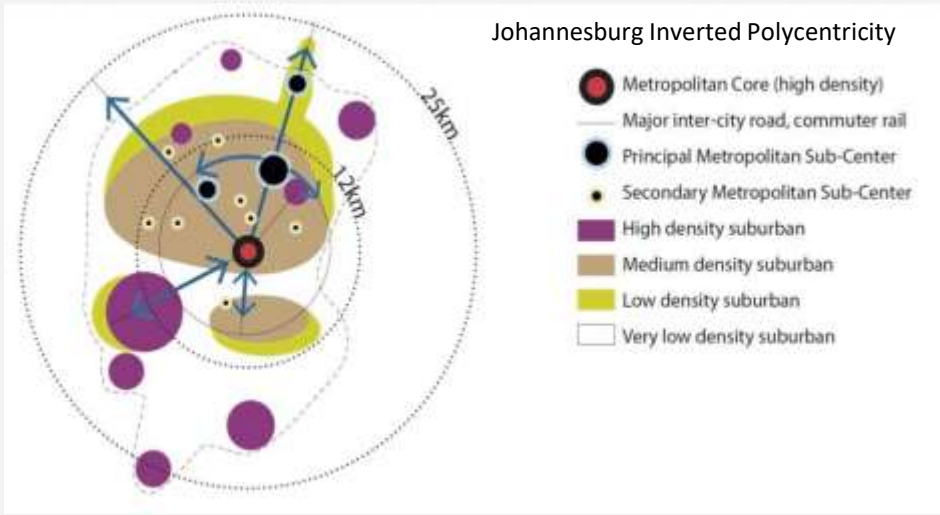


Figure 99: Inverted Polycentricity Diagram (City of Johannesburg)

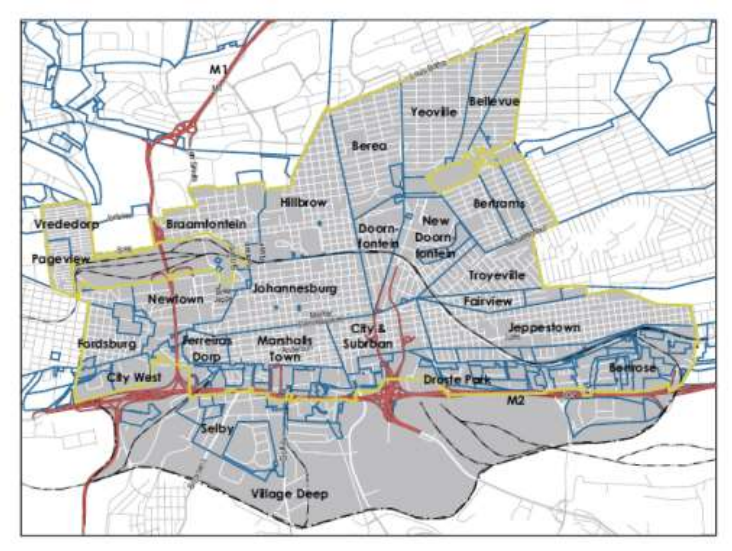


Figure 100: Inner City Transformation Zone including Bertrams (City of Johannesburg)

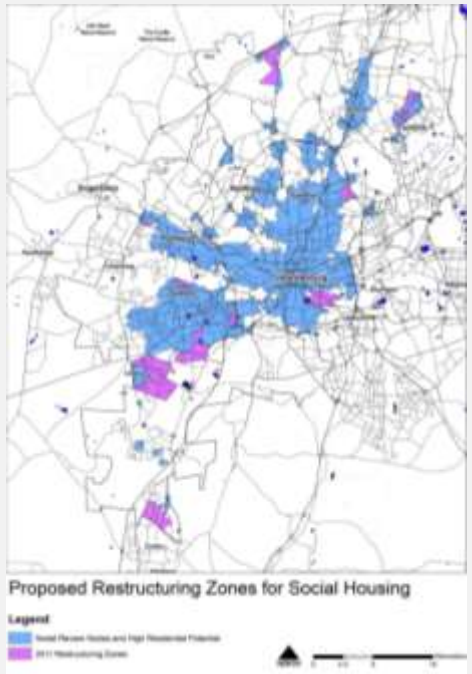


Figure 101: Proposed Restructuring Zones for Social Housing (SDF 2040)

City of Johannesburg – SDF 2040

The 'compact polycentric Johannesburg' that the SDF advocates is dependent on the strength of its metropolitan zone or CBD. The urban principals and qualities as set out in the framework are crucial to the success of this approach – to build an inclusive, resilient and dense inner city with strong transport connectors and economic opportunity.

This vision emphasized in the Inner-City Roadmap as 'A well-governed, transformed, safe, clean and sustainable Inner City of Johannesburg, which offers high quality, sustainable services; supports vibrant economic activity; and provides a welcoming place for all residents, commuters, workers, traders, investors and tourists'. (Draft Spatial Development Framework 2040 (2021/22 update, pg 94)

The SDF notes that even though the inner city has significant problems and challenges like collapsing infrastructure, ' dark' buildings and poor quality life for residents and commuters, it still has the potential to regenerate into a more resilient urban centre with improved opportunities.

The inner city is centrally located with good public transport connectivity with ease of access, particularly around the Park Station precinct. Industrial zones are close to the city centre and can be accessed using public transport. The existing high densities and regular street grid offer the opportunity to create vibrant, walkable urban communities.

Census 2011 shows that the inner city has approximately 260,000 residents with another 1 million people commuting through the city every day. These figures will be updated when the Census 2022 results are released in October this year, and are expected to have greatly increased.

Bertrams and parts of the valley have been classified as part of the city's Transformation Zone and shows all the key spatial characteristics set out in the SDF as being integral on the path to a more compact city.

These are detailed as follows:

Denser mixed-use business and residential areas
Development around public transport hubs – like BRT routes and stations
Focus on socio-economic development nodes – both current and projected, as well as an increased focus on areas within the Transformation Zone.
Growth around existing facilities like clinics and healthcare, places of education and public space like parks.

The greater Bez Valley offers all of the above, and in addition has been the focus of community based and privately funded regeneration projects like the Victoria Yards complex. The Bertrams Community Centre, currently under construction, will also add to the urban potential of the valley.

JOHANNESBURG INNER CITY URBAN DESIGN IMPLEMENTATION PLAN
(ICUDIP) 2009

In 2009 a framework for Johannesburg's CBD was published – the Inner City Urban Design Implementation Plan (ICUCIP). This framework sets out a series of guidelines for upgrade and refurbishment projects in the city focusing on both infrastructure and housing.

A focus of public open space and creating walkable movement routes is key to the vision set out in the plan. Ellis Park and Doornfontein, suburbs adjacent to my study area, have been highlighted as places of opportunity.

Character Zone 8:
Ellis Park Sports Node

- A central "Civic Square" proposed between the Johannesburg Athletics and Ellis Park Stadiums;
- "Parkways" proposed along Park Road, Erin Street, Dawe Street and Beit Street;
- A "Reception Square" proposed at the northern entrance to Ellis Park PRASA Station on Upper Railway Road;
- "Pocket Spaces" at corner of Beit Street and Sivewright Avenue, as well as the city block enclosed by Miller, Voorhout, 3rd and 4th Streets.

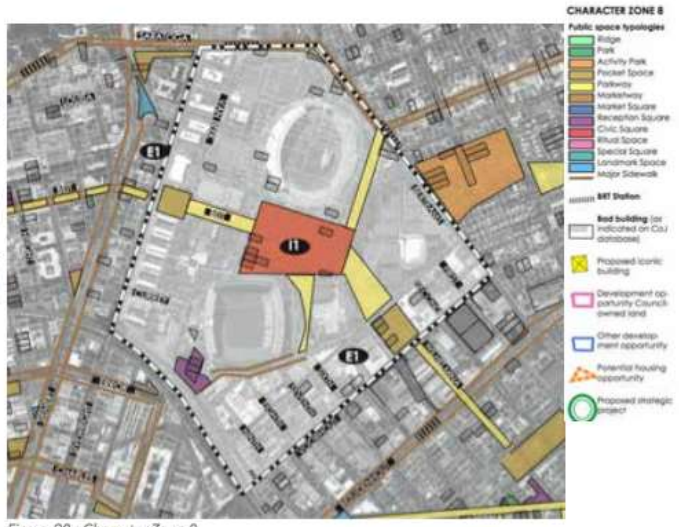


Figure 90 : Character Zone 8

Figure 102: Proposal for Ellis Park Sports Node (City of Johannesburg)



Figure 103: An inner city residential building (Edwards, 2023)

An article published recently in the Daily Maverick explains that while the city has a plan for inner-city housing (the ICUDIP) very little has been done to implement these strategies.

The lack of housing options for the very poorest in our society has been recently highlighted by the tragic loss of life in the Marshalltown fire. The complex challenge of housing, safety standards and exploitation by criminals needs an urgent and sensitive response from the city.

Private/public partnerships are proposed to address this housing crisis – the ICUDIP offers comprehensive guidelines and strategies for emergency housing, subsidized social housing options, safety, infrastructure and the challenge of hijacked buildings.

To summarize - 'the ICHIP requires the City to commit to its role as an agent as well as an enabler of development, as a provider of services, as a subsidy agent and as a provider of social and welfare support. But it recognises the need to act in concert with many partners, including inner-city residents.' DM

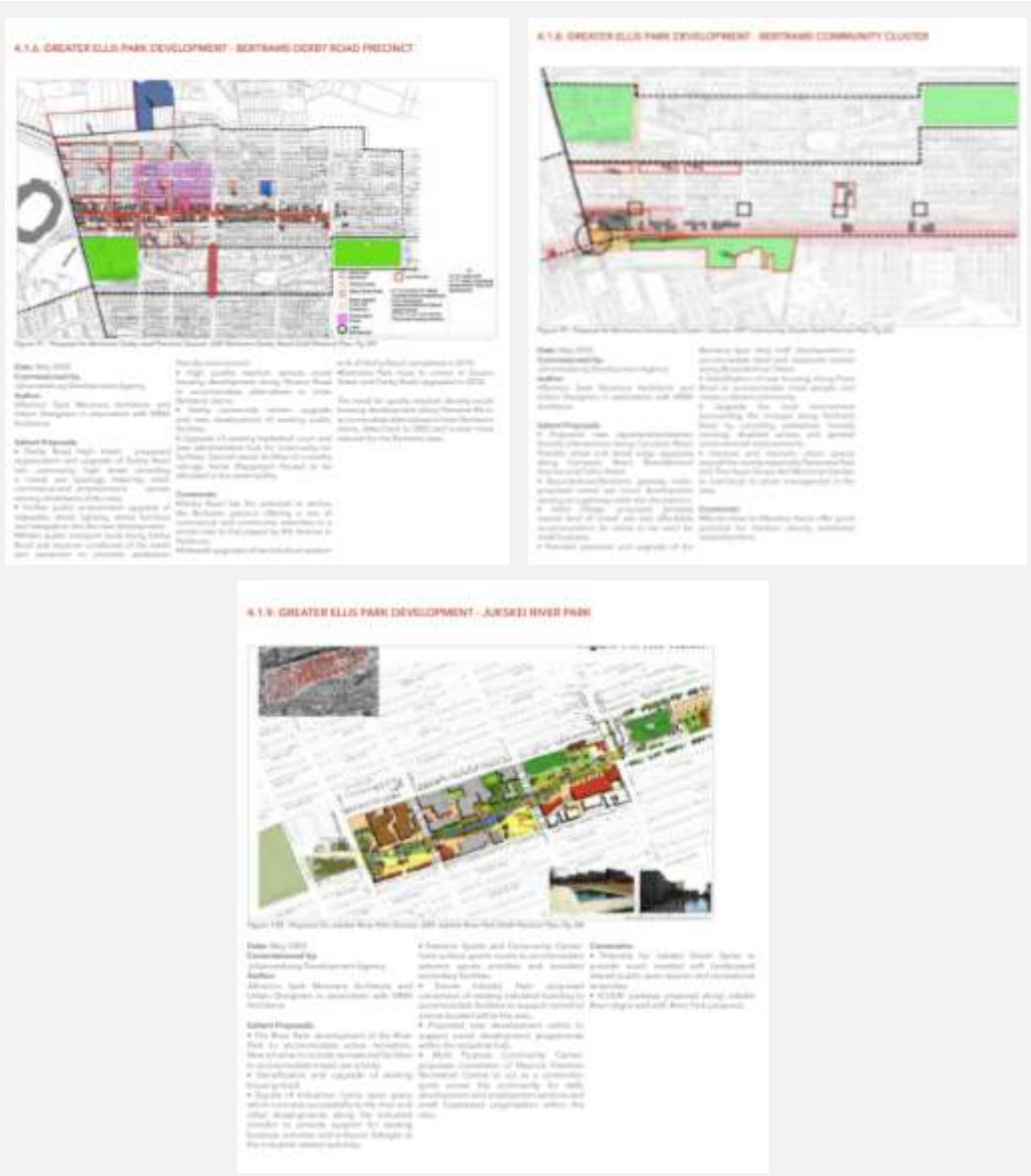


Figure 104 to 107: Proposals for Ellis Park and Bertrams (City of Johannesburg)

This Eastern Gateway framework, originally completed in 2016, notes the importance of the location of the eastern section of the inner city – conveniently positioned close to economic opportunities and with good transport links to the inner city and to the east. This strategic location gives the area the opportunity to provide housing accommodation close to the city, in line with the city's SDF 2040.

The challenges facing the area would need to be addressed, to enable the city's spatial vision:

- Informal residential densification – an increasing number of shelters being built in backyards and abandoned buildings
- Severe housing shortage for very poor people
- A growing demand for social infrastructure
- A need for safe, walkable movement routes
- Prioritizing green open public space for residents
- An active plan to tackle the infrastructure challenges – waste, crime and law enforcement, maintenance

The UDF sets out three main objectives:

- Densification of the areas surrounding the CBD
- Corridor development along main movement paths
- Development around transit nodes like BRT stations

Character Zone 14:
Bertrams / Troyeville

- "Major Sidewalks" proposed on Derby Road, Charlton Terrace, Albertina Sisulu Road and Commissioner Street;
- Fuller Park earmarked as an "Activity Park";
- Proposed "Parkways" along the Jukskei River through Bertrams, Lorentzville and Judiths Paarl, and along Wilhelmina and Op De Bergen Streets;
- Residual green space on south side of Albertina Sisulu Road in Troyeville earmarked as a "Park".



Figure 91 : Character Zone 14

URBAN FARMING – Igadi Solwazi

AEDI is a multi-disciplinary, research based design practice with a focus on environmental projects.

'AEDI builds a sense of a complex world for people and nature by providing social and environmental context. Advancing sustainable development, we uncover patterns in our daily lives, identify markers on the landscape and anticipate changes to our environment that help us transition into a new environment.' (AEDI website)

Igadi Solwazi is an urban farming project conceptualised by AEDI in collaboration with Siyakhana Growth and Development NPO and Centre for Ecological Intelligence, University of Johannesburg. an enterprise and knowledge garden in Bezuidenhout Park.

Existing green spaces in the city are key to urban resilience and the mitigation of climate change. This project focuses on urban farming for residents – this intervention will have a range of benefits for residents and urban farmers, enhancing socio-economic opportunities and improving quality of life.

The existing Siyakhana Organic Food Garden, created in Bezuidenhout Park in 2005, is a working example of inner city food gardening and sustainable practice. The site in the park was transformed from a neglecting dumping ground into a food garden providing much needed fresh produce to the community.

The Igadi Solwazi 'enterprise and knowledge garden' extends the existing food garden concept, expanding and developing into the remaining open space in Bez Park to include a knowledge-exchange and skills centre as well as tourism opportunities.

We envisage the Park inter-linked with surrounding open space systems as reservoirs for learning, education and training for scaling agroecology, indigenous knowledge, and community-based adaptation.



Figure 108: View of the Igadi Solwazi urban farming proposal (AEDI, 2021)



Figure 109: Hive Hotel (AEDI, 2021)

URBAN MARKETING CENTRE

The Urban Marketing Centre is a conceptual project by AEDI which proposes developing the existing Moon Valley Studio complex into a multi-faceted urban farming and marketing centre.



Figure 110: View of the Urban Marketing Centre (AEDI, 2019)

"Johannesburg Rural Urban Marketing Center (RUMC), located on the historical Bezuidenhout farm near the centre of Johannesburg. The development proposes to assists farmer and processors in managing the agri-value chain, supported by warehousing and cold storage facilities to enable market penetration that is part of an agri-supply community market."





Figure 111 and 112: Renderings of the Urban Marketing Centre proposal (AEDI, 2019)

JUKSKEI RIVER REVIVAL COLLECTIVE

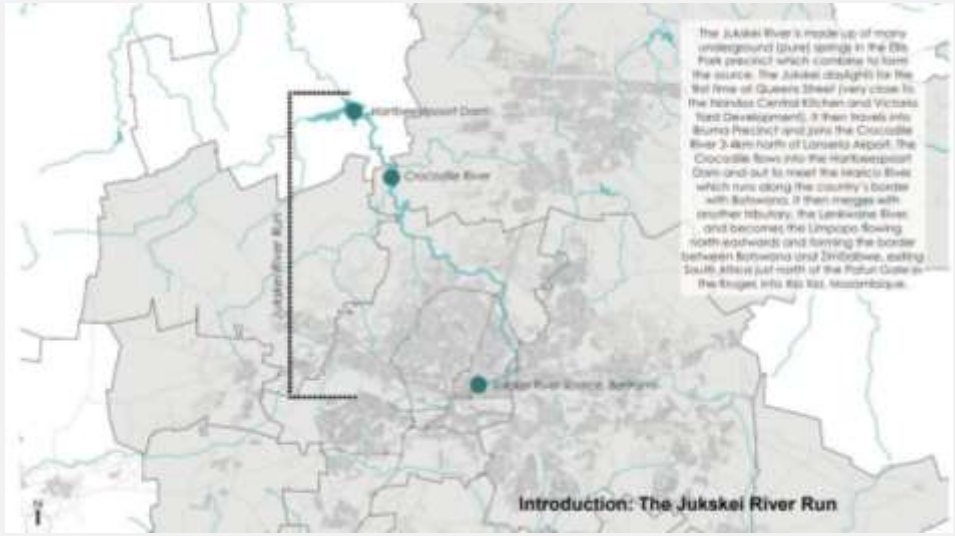


Figure 113: A strategy for the revival of the Jukskei River was proposed a few years ago, prior to the formation of Water for the Future, the NGO currently working extensively on the regeneration of the river (Makers Valley)

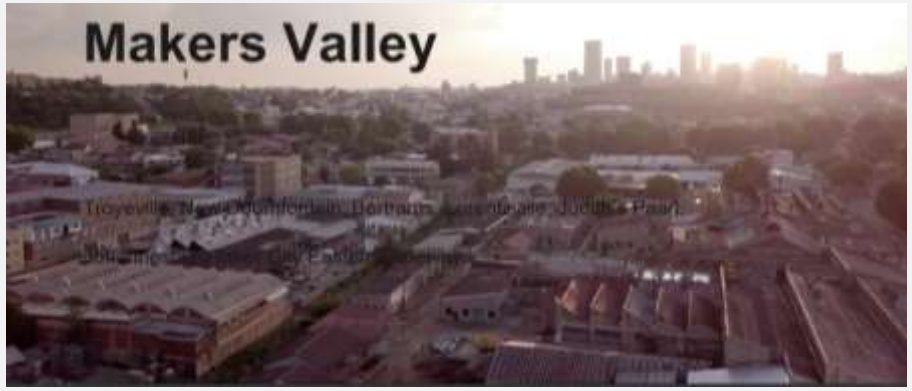


Figure 114: Makers Valley have been instrumental in spearheading many of the regeneration programs in the valley (Makers Valley)



Figure 115: The proposal envisions the Jukskei River becoming an integral part of the valley, offering quality public space to residents (Makers Valley)



Figure 116: The initial proposal could gradually grow and impact the greater valley positively (Makers Valley)

MAKERS VALLEY PROPOSAL

A proposal by Urbanworks in 2018, for the Johannesburg Development Agency and the City of Johannesburg, is entitled Makers Valley - Our City Our Block, Neighbourhood Strategies and Initiatives. This proposal reinforces many of the strategies and focus areas that I explore in my research and urban design proposal.

This research work looks at the Makers Valley, which includes the areas of Bertrams, Lorentzville, Ellis Park and Troyeville, the initiatives currently active in the valley and how best to support and develop these entities.

Urbanworks undertook a status quo study to establish an overview of the study area and to define the scope of works. Various stakeholder engagement meetings were held with neighbourhood groups to determine needs and refine the proposals.

The status quo analysis confirmed that the neighbourhood has unique social and physical characteristics and that these need to be reframed and enhanced in the development proposals. The protection of vulnerable residents was also noted, as was the importance of creating inclusivity in the area.

Existing assets and challenges were documented, including the availability of public open space and council owned land. The data and patterns revealed through this research inform the resultant development proposal.









Figure 117 to 120: Photos and drawings illustrating the Makers Valley proposal (Urbanworks, 2018)



chapter 7 STATUS QUO

7.1 REGIONAL CONTEXT

Metropolitan Context 62
Locality and City Region Context 63
Study Area Location 64

7.2 STUDY AREA

Study Area 65
Natural Environment:
Topography 66
Green Spaces 67
Jukskei River 68

Built Environment:
Land Use and Zoning 69
State of Infrastructure 70
Commercial Activity 71
Typologies – Residential 72
Backyard Dwellings 75
Industrial 76
Heritage Study and Aerial Views 77
Movement – Public Transport 79

Community Environment:
Social Housing 80
NGOs and Outreach Programs 81
Sporting Facilities 83

REGIONAL CONTEXT - Metropolitan

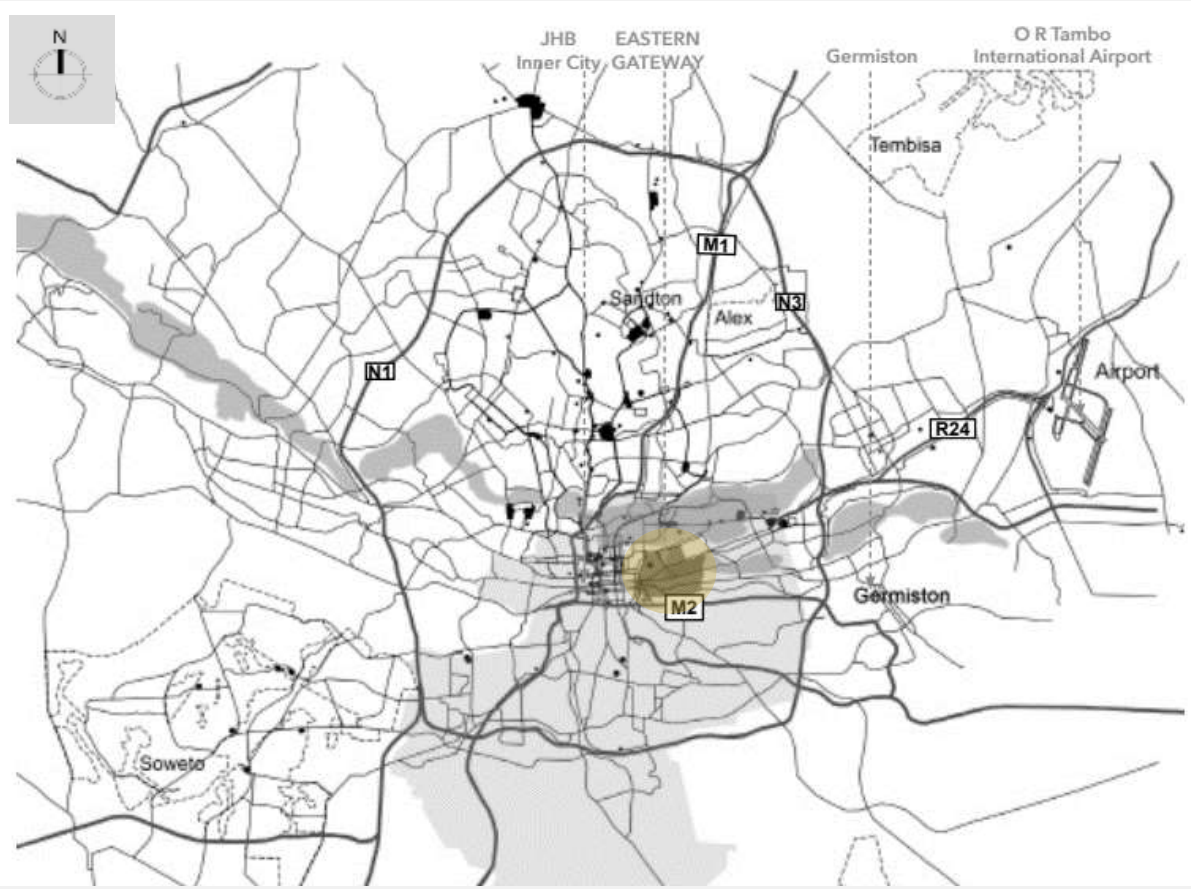


Figure 121: Map of the greater Johannesburg Metropolitan region adapted by author (City of Johannesburg)

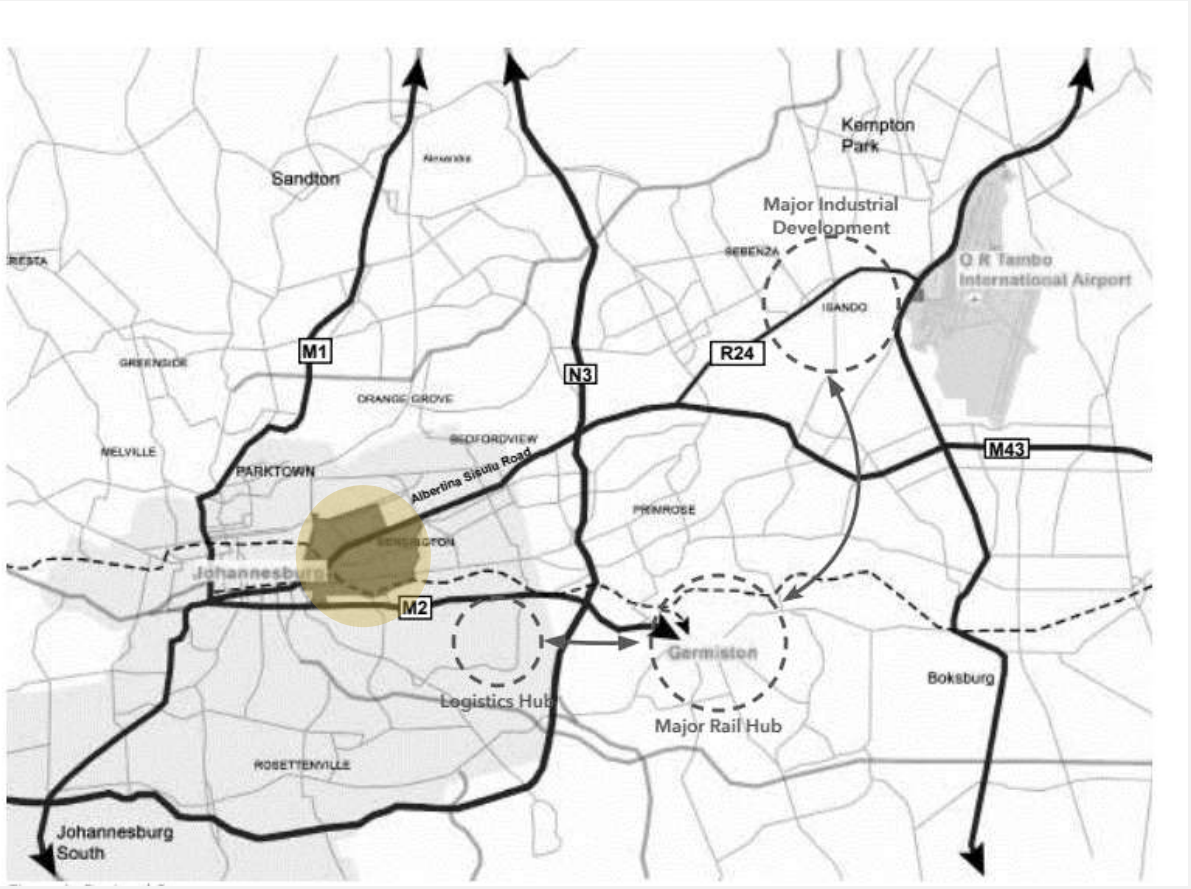


Figure 122: Regional context map adapted by author (City of Johannesburg)

The study area, the valley between Observatory and Kensington Ridges, is included in Region F of the City of Johannesburg, and forms part of the Inner City Eastern Gateway UDF 2016. The area is strategically positioned between the CBD, Germiston and OR Tambo International Airport. The M1, N3 and M2 highways can be easily accessed. Bertrams, Lorentzville, Judith's Paarl and Bez Valley are some of the older suburbs in Johannesburg, and are well placed to be 'zones of transition' between the city and suburban areas.

The Eastern Gateway is well linked to the regional transport system, via Johannesburg's highway and road network, connecting in all directions. This connectivity attracts people wanting to live close to the CBD or wanting to travel to the East Rand industrial zones. OR Tambo International Airport is a twenty minute drive away, and various modes of transport are on offer – the Rea Vaya BRT service, bus and taxi routes linking to the city centre and to Ekurhuleni to the east.

Locality and City Region Context

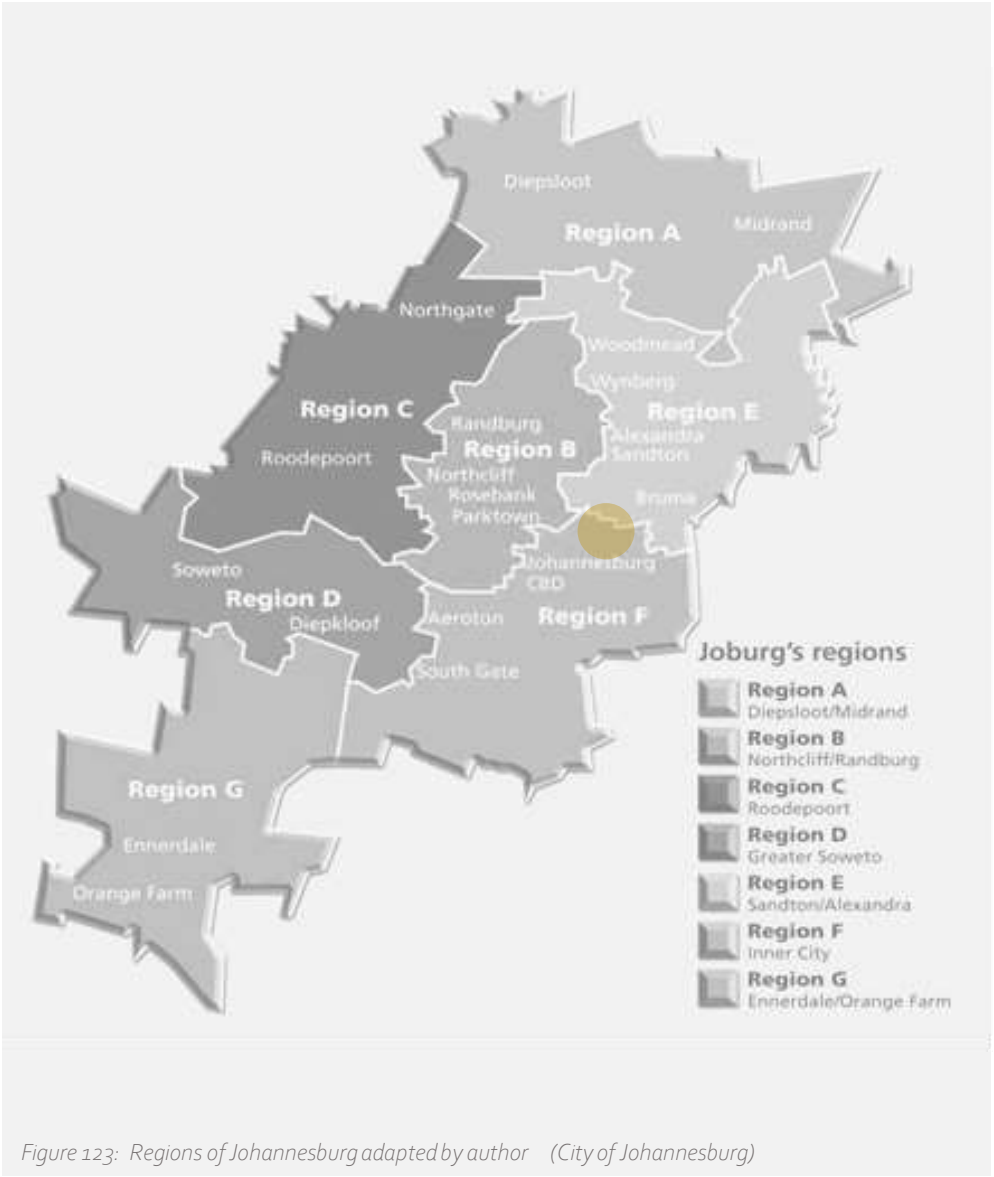


Figure 123: Regions of Johannesburg adapted by author (City of Johannesburg)



Figure 124: View of Greater Johannesburg adapted by author to show study area (Google Earth)

- Gauteng showing the study area

- Greater Johannesburg showing the study area

REGIONAL CONTEXT - Study Area Location



Unscaled

The study area forms part of the eastern inner city region of Johannesburg – Region F and has been zoned for transformation

Major regional motorways are the N3 highway to the east, the M2 to the south and the M1 to the west.

The area is characterised by narrow city blocks running along the length of the valley, with a link via Stewart Drive to Yeoville.

Bertrams Road separates Bertrams from the Ellis Park Precinct and the University of Johannesburg's eastern campus.

Albertina Sisulu Road is a main arterial running east to west linking the city centre to Ekurhuleni.

Figure 125: Regional map of Johannesburg showing the highlighted study area (Map by author)

STUDY AREA





Figure 127: Sketch Map showing the Eastern Sector (Source: Eastern Sector Development Strategy Book 3)

Key challenges facing the study area (as per ICEG UDF):

- Residential densification is occurring horizontally and informally
- Severe **housing shortage** – particularly for low income groups
- Lack of **social infrastructure**
- Car dominated streetscape – limited **walkability**
- Insufficient usable **green space**
- Urban management failures – crime, **litter**, lack of maintenance and by-law enforcement

Figure 126: Study Area Map showing the suburbs in the valley (Map by author)

NATURAL ENVIRONMENT – Topography



Unscaled

Figure 128: Topographical map of the study area (Map by author)

The study area is framed by two ridge systems running east/west – the Yeoville/Observatory Ridge along the northern boundary and the Troyeville/Kensington Ridge (including Langermanskop) along the southern edge. The high point along the Observatory Ridge is 1808m above MSL and 1789m above MSL at Langermanskop. The valley between the two ridge systems is approximately 100 metres below. The source of the Jukskei River runs eastward along the valley through Lorentzville, Judith's Paarl and Bez Valley until it reaches the Indian Ocean in Mozambique.



Figure 129: Looking up at Observatory Ridge to the north and Kensington Ridge to the south (Photos by author)

NATURAL ENVIRONMENT – Green Space and the Jukskei River



Unscaled

Figure 130: Recoloured aerial photo of the valley showing green spaces and parks (Google Earth)

NATURAL ENVIRONMENT – Jukskei River



Figure 131: Images of the Jukskei River (Photos by author)

In 2020, Hannelie Coetzee joined JRA engineers in an exploratory expedition through the tunnels that channel the Jukskei River, attempting to locate the source of the river. This search was scheduled for August, towards the end of winter and before the summer rains came – Highveld thunderstorms in the summer cause sudden and forceful flows through the tunnels, carrying away everything in the waters path.

All other rivers and streams in Johannesburg dry up in the winter months – only the Jukskei is perennial, the source of its continuous flow constricted and buried somewhere under Ellis Park. The heating effects of climate change make access to water and water sources, especially in our cities, a necessity and the work that Hannelie's NGO Water for the Future has initiated is crucial to the future of our city.

The underground expedition walked through sewerage and rats to find the eye of the river which they located after a few hours of searching. Clear flowing water was running from the piped-up eye, into the tunnel. Samples of the water were taken for testing and the results indicated that the water was clean. (Hannelie Coetzee)

BUILT ENVIRONMENT – Land Use and Zoning

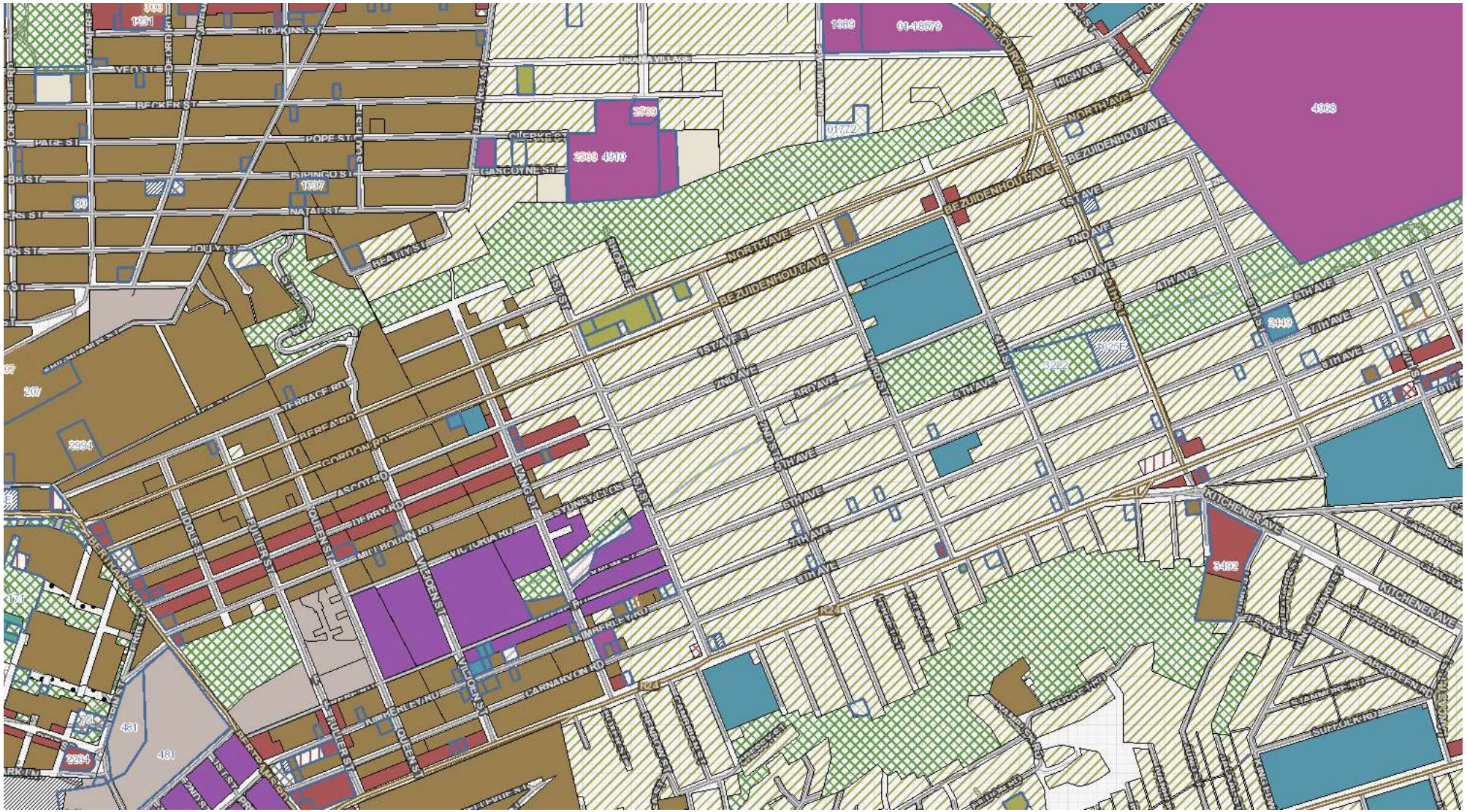


Figure 132: Land Use and Zoning map (City of Johannesburg)

STATE OF INFRASTRUCTURE

Waste is piled up everywhere, spilling over from the pavements onto the streets – the most noticeable element in the neighbourhood, defining it as discarded and neglected. Waste collection is sporadic and unreliable. I have seen a Pikitup truck driving through the streets on a Wednesday morning, collecting only the rubbish that is bagged, and then for weeks no waste is collected. Residents are forced to leave their rubbish on the pavements – sometimes bagged and other times just piled up, waiting to be blown and washed down the valley into the river. Waste recyclers work through the streets, collecting and sorting as they move, providing a vital service to the community.

Illegal electrical connections can be seen running from electrical poles and supply boxes into homes and businesses. Pavements are crumbling and collapsing, forced pedestrians to walk in the street.

Road surfaces are pot holed and patched – during one of my earlier visits to the study area, I saw a small car disappear into a rain filled pot hole so large that the driver couldn't manoeuvre it out. Stormwater drains and channels line some of the streets close to the base of the valley, however these are so overgrown with invasive plants and litter that they can't function effectively.





Figure 133: Existing stormwater runoff channels blocked by litter and alien vegetation (Photos by author)















Figure 134: Visual survey of the study area showing the state of infrastructure – decaying and unmaintained (Photos by author and Edwards, 2023)



Figure 135: View of Derby Street (Zack, 1996)









Figure 136: Images showing commercial activity in the valley (Photos by author, Edwards, 2023 and Two Summers, 2023)

Commercial Activity

A summary of commercial activity in the study area, as observed during multiple visits since the beginning of 2023:

Light industry, mechanics, tyre shops and supermarkets along Derby Street and along Bertrams Road. Activities are mixed – a mechanic works adjacent to a supermarket which is next to a cell phone store and so on.

Rocha's Hardware has been operational in Bertrams for many years and occupies several stands in the area.

Spaza shops are prolific and are distributed throughout the valley, usually as small securely barricaded rooms added onto houses.

Street vendors selling clothing, fruit and vegetables and air time line the busier streets, occupying the pavements, often forcing pedestrians to move through the streets to avoid their stands.

An informal market on the corner of Derby and Viljoen Roads has been built on a vacant stand. The market has recently been upgraded with new metal sheeting and a bright blue coat of paint.

A number of childcare centres operate in the valley, mainly from converted houses, offering an important support service to working mothers.

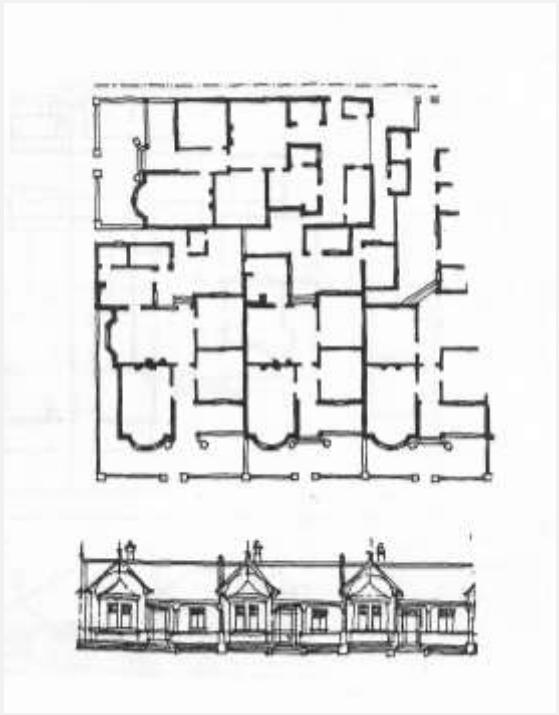
Doctor's rooms in the study area can be located via visible on street signage. A clinic is operated at Victoria Yards by University of Johannesburg students.

Victoria Yards offers a range of shopping options for visitors and tourists – shops, food outlets, artists studios and a monthly market.

Industrial premises to the south of the river, particularly in Bertrams, Lorentzville and Judith's Paarl.

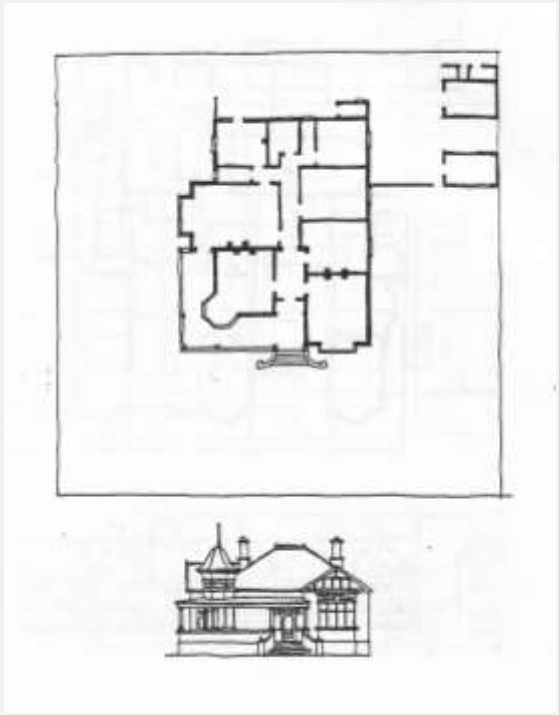
Churches of all denominations and sizes are active in the valley, particularly over the weekend.

BUILT ENVIRONMENT – Housing Typologies

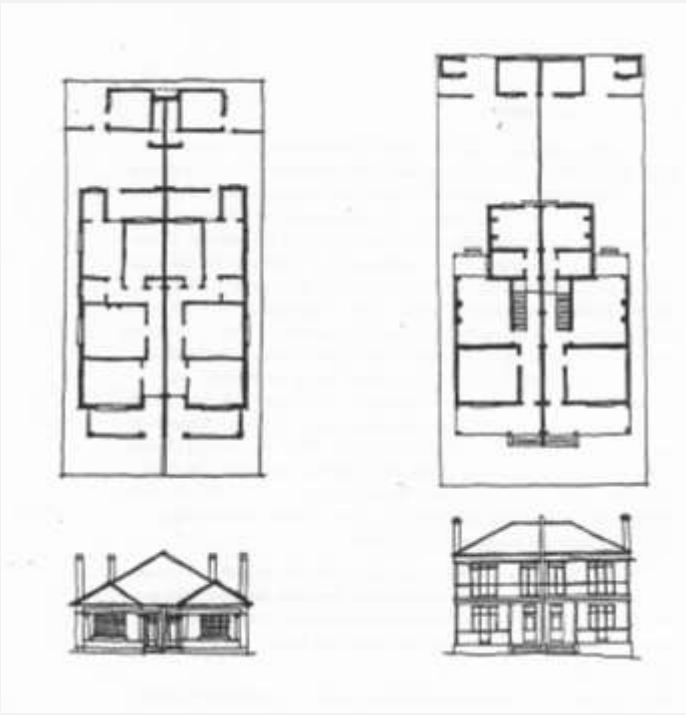


The Eastern area of Johannesburg is characterised by a range of housing types – large detached houses placed centrally on a single stand, more compact detached houses on smaller stands, semi-detached houses, row houses, blocks of flats and boarding houses. This diversity and range of housing types contributes to the densities needed for sustainable cities, and are worth examining as typologies for future urban proposals.

Row houses with small inner courtyard spaces, parking on the street.



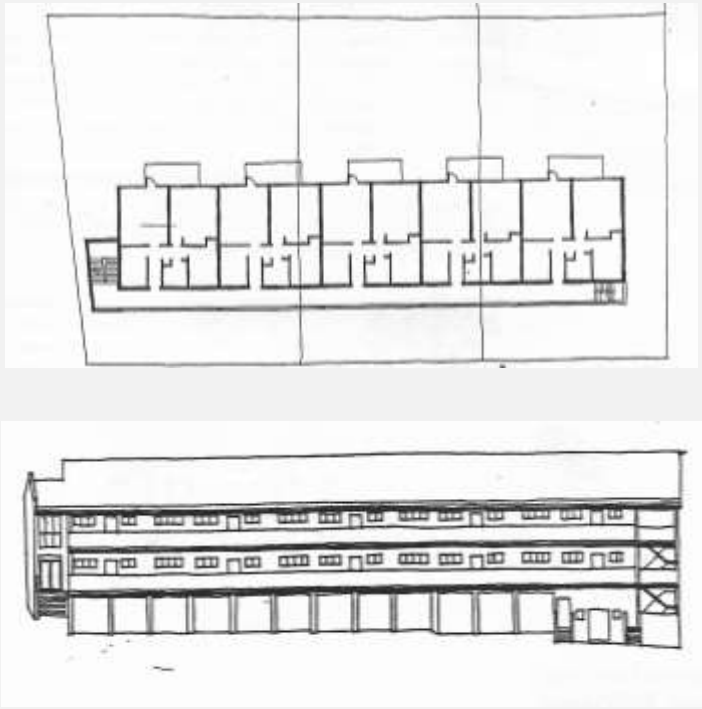
Detached house positioned centrally on the stand. Outbuildings at the back of the stand, parking can be accommodated on site. Lower density per stand but the addition of 'backyard units' in open areas increases density.



Semi-detached single and double story units positioned centrally on the stand. Outbuildings at the back of the stand, parking on the street. Smaller units so more units per stand.

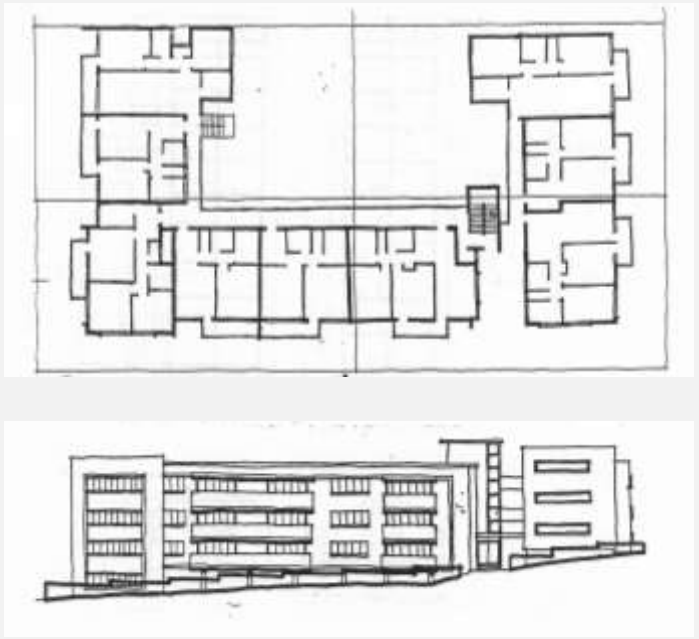
Figure 137: Sketch plans and elevations showing various housing typologies in Bertrams (Zack, 1996)

BUILT ENVIRONMENT – Multi Unit Typologies



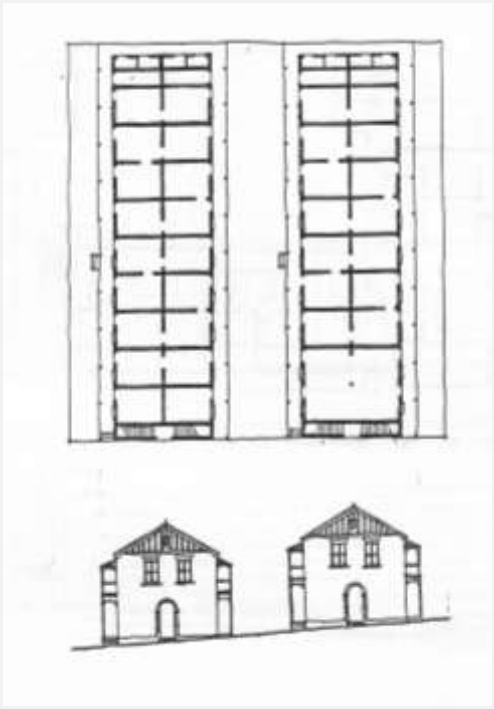
Blocks of flats can be found scattered throughout the valley although they are mainly concentrated on the northern slope close to the Observatory Ridge.

Blocks with off-street parking set close to the street offer the opportunity for secure open space at the back of the stand.



Perimeter blocks make efficient use of the stand with street facing units offering additional neighbourhood surveillance thus increasing safety and security for people in the street.

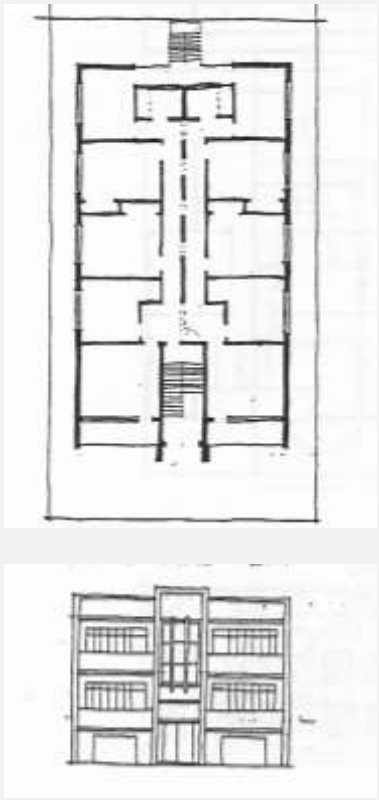
Semi-private enclosed space at the back allows residents the use of secure outdoor space.



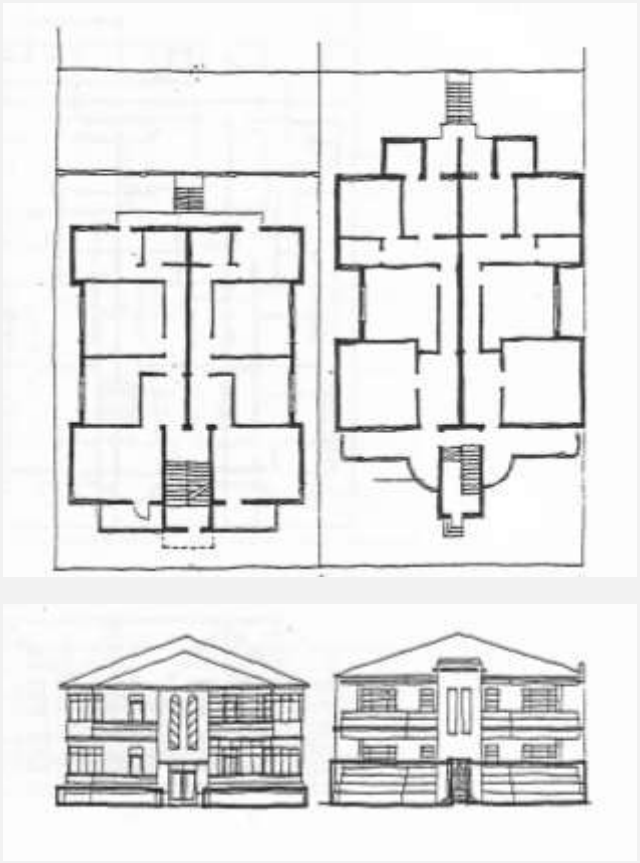
Boarding houses were built to allow for single occupancy rooms with communal facilities. This typology would be useful today as single occupancy units would allow for transitory accommodation close to the city.

Figure 138: Sketch plans and elevations showing various housing typologies in Bertrams (Zack, 1996)

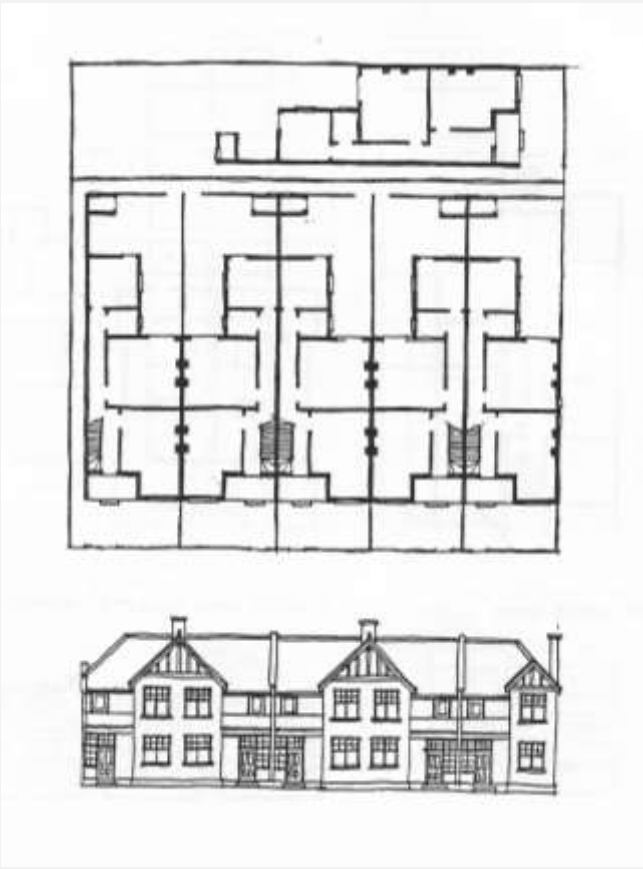
BUILT ENVIRONMENT – Multi Unit Typologies



Blocks of flats with four to six units per block – some blocks with garage space beneath. Common stairwells and passages. Limited leftover space on the stand. Higher density than single units or row/semi-detached house types.



Blocks of flats with four to six units per block – some blocks with garage space beneath. Blocks built to the front of the stand allow for semi-private outdoor space at the back.



A combination of blocks of flats and row houses allowing to increased density but limited outdoor space for the residents as the units occupy most of the stand.

Figure 139: Sketch plans and elevations showing various housing typologies in Bertrams (Zack, 1996)

BUILT ENVIRONMENT Backyard Dwellings






Figure 140: Various backyard structures in the valley (Photos by author)

Backyard dwellings can be glimpsed through openings in boundary walls, and through open gates. People building shelters wherever they can - testimony to the extreme housing shortage in Johannesburg, and the need for accommodation close to the city centre. Most of these shelters are built from found materials – corrugated iron, old doors and plastic sheeting. However, over the last few months I have noticed brick units being built on various stands.

Backyard units are a key element in contributing to the housing shortage in addition to being a source of income for homeowners, and should be prioritised as a significant contributor to addressing the urban housing backlog.



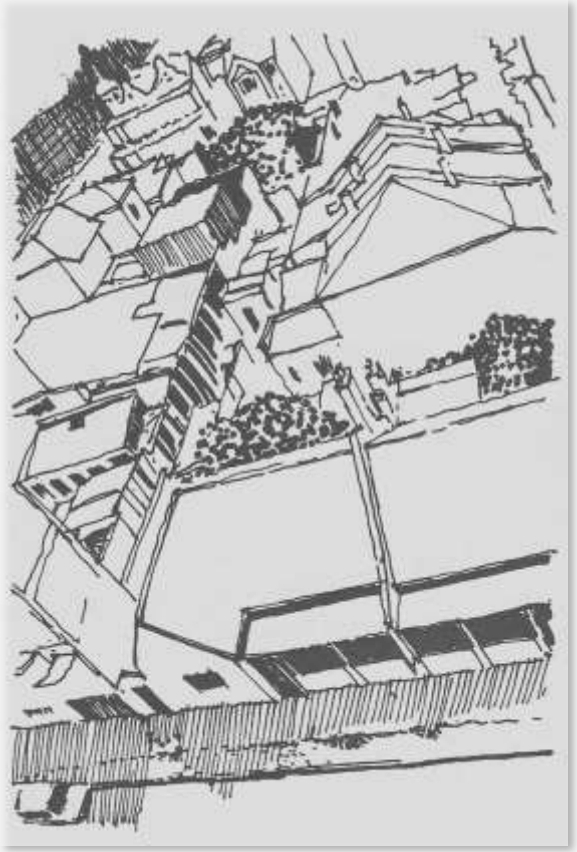


Figure 141: Sketch of backyard dwellings (Zack, 1996)

BUILT ENVIRONMENT Industrial



Figure 14 2: Visual survey of industrial buildings on the southern slopes of the valley (Photos by author)

A variety of industrial buildings can be found in the valley, mainly on the southern side of the Jukskei River. A predominance of red brick and rusted or painted corrugated iron sheeting gives a terracotta glow to the area, particularly in the late afternoon sunlight.

Most of the buildings are still in use either as industrial premises and car workshops however some of the structures have been repurposed as housing units. These buildings offer limited outdoor facilities for residents.

The complex directly across the river from Victoria Yards is being adapted to house additional artists studios and the NGOs The Peoples Pantry and Safe Study. This complex is linked to Victoria Yards via a simple metal pedestrian bridge over the river.

HERITAGE STUDY

The gold diggings in what was to become the city of Johannesburg were declared in 1886 and the South African Republic rapidly grew to become a leader in world gold production. The city transformed from 'mining camp to metropolis' swiftly, as noted by Latilla (2018:6), with a mining town developing around a central business centre.

Bertrams was established as a suburb in 1889 on land that formed part of Doornfontein, a farm that belonged to the Bezuidenhout family. The stands were originally purchased by affluent buyers as the suburb was close to New Doornfontein but by the 1930s most of the area had deteriorated into a slum. The Johannesburg City Council, reinforcing racial segregation, used this opportunity to build a social housing development, The Maurice Freeman Housing Scheme, for mainly poor white Afrikaners residents. Parts of this development still exists.

These early slum clearances paved the way for forced relocations of black and coloured residents in the 1950s – 1970s in other areas like Sophiatown and Vrededorp. Industrial premises were created along the Jukskei River which devalued the surrounding land for residential use. One of these buildings was a steam laundry which has been transformed into Victoria Yards, a creative hub for workshops and studio spaces.

Although the eastern suburbs of Johannesburg were initially sought after by affluent residents, these families eventually moved to the north, leaving the working class to occupy these areas (Latilla, 2018). Over time, the valley has gradually deteriorated into a faded, neglected space occupied by people that the city has forgotten.



Figure 143: Sketch of our house in Terrace Road, Bertrams (Drawing by author)



Figure 144: Early map of Johannesburg (Latilla, 2014)



Figure 145: Tin house (Photo by author)



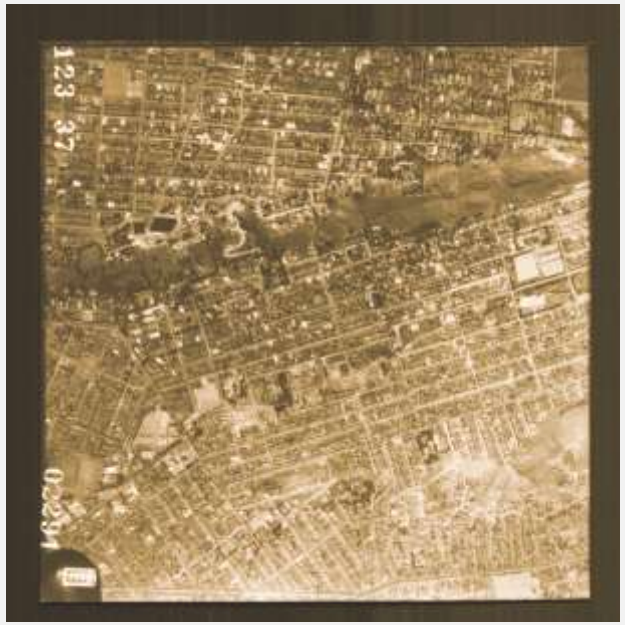


Figure 146 and 147: Early views of Bertrams (Latilla, 2014)

Figure 148: Early map of Johannesburg (Latilla, 2014)

AERIAL VIEWS OVER THE YEARS

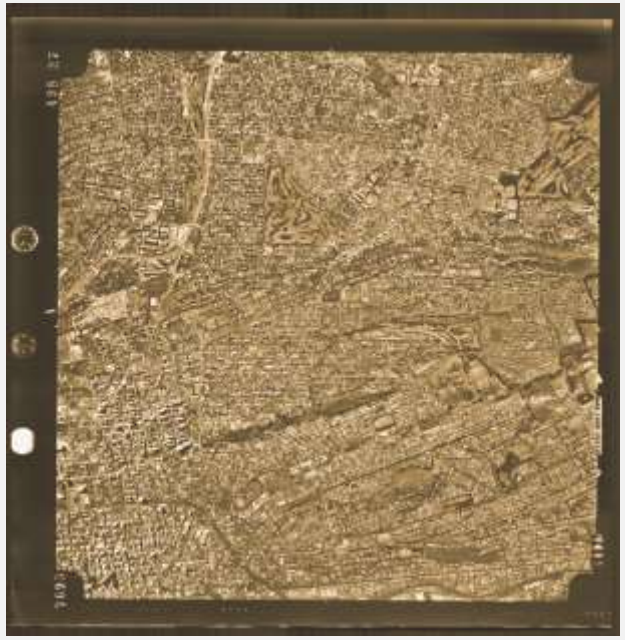
1938





1952

1973





1993

Figure 149: Historical aerial photographs of eastern Johannesburg (CDNGI Geospatial Portal)



2022

Figure 150: Aerial view of the valley adapted by author (Google Earth)

BUILT ENVIRONMENT

Public transport and movement routes

The regular street grid makes all areas of the valley easily accessible to vehicular traffic.

The area is characterised by narrow city blocks running along the length of the valley, with a link via Stewart Drive to Yeoville.

Bertrams Road separates Bertrams from the Ellis Park Precinct and the University of Johannesburg's eastern campus.

Albertina Sisulu Road is a main arterial running east to west linking the city centre to Ekurhuleni.

A Rea Vaya bus station is situated in Bertrams Road with direct access to the Ellis Park Sports Precinct and the soon to be completed Bertrams Community Centre.

Metrobus routes are indicated on their website however I have never seen a bus in the area.

Taxis use the two main east/west roads through the area – Berea Road is a one way to the east, and Gordon Road is a one way travelling west towards the city. Taxis also use Viljoen Road, First Street and Fifth Street as north/south routes.

Viljoen Street – connecting to Yeoville to the north and Albertina Sisulu in the south

First Street – connecting Berea and Gordon Roads in the north to Albertina Sisulu in the south

Fifth Street – connecting Observatory and Yeoville in the north to Albertina Sisulu in the south

All three streets are used by taxis, cars and pedestrians and are characterised by wide pavements and road reserves.

There is very little consideration given to pedestrians, cyclists or waste recyclers who all share the streets with vehicular traffic.



Figure 151: Metro Bus Routes (City of Johannesburg)



Figure 152: Rea Vaya bus terminus – Ellis Park (Photo by author)

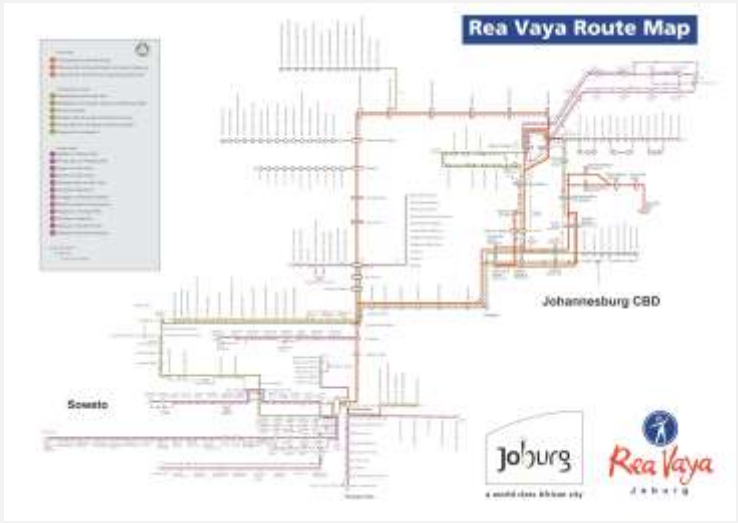


Figure 153: Rea Vaya Route Map (City of Johannesburg)

COMMUNITY ENVIRONMENT Social Housing

Maurice Freeman Housing Scheme





Figure 154 and 155: Freestanding and double story flats at the Maurice Freeman Housing Scheme (Photos by author)



Figure 156: Early view of the housing scheme showing the single houses and the blocks of flats (Latilla, 2014)

Bertrams had begun to deteriorate into a slum, after residents moved across the ridge to more affluent areas. The Maurice Freeman Housing Scheme was built in the late 1930s as a response to this. Named after the mayor who initiated the scheme, mainly poor White Afrikaner residents were settled into the houses and flats. Slum clearances occurred at around the same time in other areas like Doornfontein and Vrededorp, a precursor for the forced removals of the 1950s, 60s and 70s which moved black and coloured residents to the edges of the city. These flats and houses are still operated as a social housing scheme by the city council.



Figure 158: Springbok fan (@marklewisphotos)

NGOs AND OUTREACH PROGRAMS

Water for the Future is an NPO dedicated to rehabilitating the Jukskei River. The eye of the river is an underground spring beneath the Ellis Park Sportsgrounds and emerges into daylight near Fuller Park in Bertrams. The river flows through a stone and concrete channel eastwards along the valley – sometimes concealed below the surface and sometimes exposed. Raw sewage and industrial waste leaks into the channel, and litter is piled on the banks and along the path of the river. Heavy summer rains wash the waste and rubbish from the streets into the river, where it is carried downstream through Alexandra and later joins the Crocodile River before making its way to the Indian Ocean in Mozambique.

The work that WFTF does along the 7km length from Bertrams to Bruma Lake creates green economic employment opportunities for local residents, through the Social Employment Fund. Creative and technical skills are taught through recycling processes, like alien vegetation being used for woven screens, mulch and firewood. Scientific studies have been used to indicate the state of plant, water and soil life along the river course. WFTF are using these results to plan their restoration program with the ultimate aim of creating a green corridor to improve the quality of life for residents, while conserving fresh water resources and promoting sustainable practices. An active educational component to the program encourages young people to be water literate and to actively participate in the ecological work being done by WFTF.

As stated on their website 'Water for the Future envisions an accessible, walkable, green corridor along the waterway that enables a thriving ecosystem and the economic prosperity, health and well-being of Johannesburg's citizens.' https://www.waterforthefuture.co.za/



Figure 159: Path of Jukskei River to the sea: (Water for the Future)



Figure 160: Jukskei River (Photo by author)





Figure 161 and 162: Mosaic and photo of Urban Rangers (@makersvalley)

Makers Valley is a civil society organisation – their name refers to the abundance of creators who live and work in Bertrams, Lorentzville, Judith's Paarl and Bez Valley.

Their website notes that making "encourages creativity, sharing, giving, learning, participation, mutual support and positive change.'

MVP have a studio space and work hub at Victoria Yards and host many of their events and workshops from this space. A key focus for the group is the notion of active *placemaking in the community – ' Getting on the streets, making, sharing and working together to create cleaner, safer and more welcoming public spaces.'*

'the heart of creative and social enterprise' in the valley – working to foster community coherence in the multicultural neighborhood, through various outreach, educational and training programs, and creative events. Ongoing work by MVP Urban Warriors involves neighbourhood cleanup campaigns, with door to door information sessions advising residents on waste collection and recycling strategies. https://www.makersvalley.org.za/

Nando's Creativity is an initiative to promote and mentor young South African artists, musicians and designers. Their Design Program has assisted young creatives to achieve recognition, often globally, through projects and competitions. Tracy Lynch, Creative Director of the Nando's Design Program notes that "'be part of more" recognises that design is relevant and important to our future because it shares our stories and builds dignity linked to identity.' In addition to the program, Nando's have been instrumental in supporting and funding many of the initiatives in the valley – Victoria Yards, Water for the Future and Makers Valley amongst others.





Figure 163 and 164: Nando's Head Office and artwork (@nandoscreativity)

LOCK, or Love our City Klean, is an innovative waste management program started by two passionate young entrepreneurs, Keitumetsi and Zwelihle Magwaza. The focus of the program is on recycling and repurposing, promoting minimalism and helping to decrease the quantity of waste ending up in landfills. They run educational and awareness programs to advance their aims – the separation of waste at source, the promoting of a well-being economy, and aiding Johannesburg towards being a zero waste city. A partnership with Pikitup has seen the garden refuse facility in Bez Valley become a waste recycling centre, with glass, books, plastic and electronic goods all neatly organised and displayed, ready to be collected by creatives and reimagined into something new. Along with waste management, educational workshops and upcycling, LOCK are also involved in the creation of brightly coloured, bold murals on walls dotted around the valley, contributing to the enhancement of the street environment while conveying the importance of clean streets for the community.





Figure 165 and 166 : Zwelihle and Metsi Magwaza, vinyls at LOCK (@weloveourcityklean





Figure 167 and 168 : Afterschool program (@timbuktuinthevalley)

Timbuktu in the Valley is a knowledge and skills sharing program based at Victoria Yards, focusing on empowering the youth that live in the surrounding areas. Social and environmental awareness is a key principle of the program, and young people are encouraged to explore their talents and interests in a secure and loving space. This community-focussed initiative assists learners with school work, offers food and nutritional workshops, teaches artwork classes with a recycling and environmental focus, as well as performance and dance sessions.





Figure 169 and 170 : Herbs and motivational words (@thepeoplespantry.jhb)

The People's Pantry was started in 2020 during lock-down as a ' a community recycling and surplus-based swop shop' and operates out of Victoria Yards. TPP supports eight community kitchens with access to donated food that would otherwise be discarded. They also manage a swop shop whereby local community members can swop collected recyclable waste for points. These points can then be used to buy food items from the shop. Using waste as a resource and a currency adds dignity to the food distribution and sharing process. TPP has a long term goal of establishing a sustainable network of culinary enterprises and urban food growers, reducing waste and creating opportunity for the people of the valley.

SPORTING FACILITIES











Figure 171: Visual survey of existing sporting facilities in the valley (Photos by author)



chapter 8 URBAN DESIGN CONCEPT

8.1 STUDY AREA 85

8.2 DESIGN EXPLORATION– Reframing the Valley 86

8.3 THE STREET AS LIVING URBAN SPACE 87

8.4 LOOKING AT THE STREETS 88

8.5 RECLAIMING THE STREETS AS PUBLIC SPACE 89

8.6 RECLAIMING THE STREETS – FIRST AVENUE 90

8.7 RECLAIMING THE STREETS – FIFTH AVENUE 91

8.8 RECLAIMING THE STREETS – FRERE ROAD 92

8.9 LOOKING AT THE GRID 93

8.9 MAPPING WASTE COLLECTORS ROUTES 94

8.10 RECLAIMING THE VALLEY AS PUBLIC SPACE 95

8.11 NATURAL ENVIRONMENT 96

8.12 RESIDENTIAL SPACE 97

8.13 URBAN DESIGN ELEMENTS 98

8.14 TOWERS 99

8.15 A CHAIN OF HUBS AND TOWERS 100

8.16 HUBS AS GROWTH POINTS 101

8.17 HUBS 102

STUDY AREA – Bertrams, Lorentzville, Judith's Paarl, Bez Valley



Figure 172: Aerial view of the study area (Photo sourced from Google Earth and adapted by author).

Unscaled

DESIGN EXPLORATION – reframing the valley

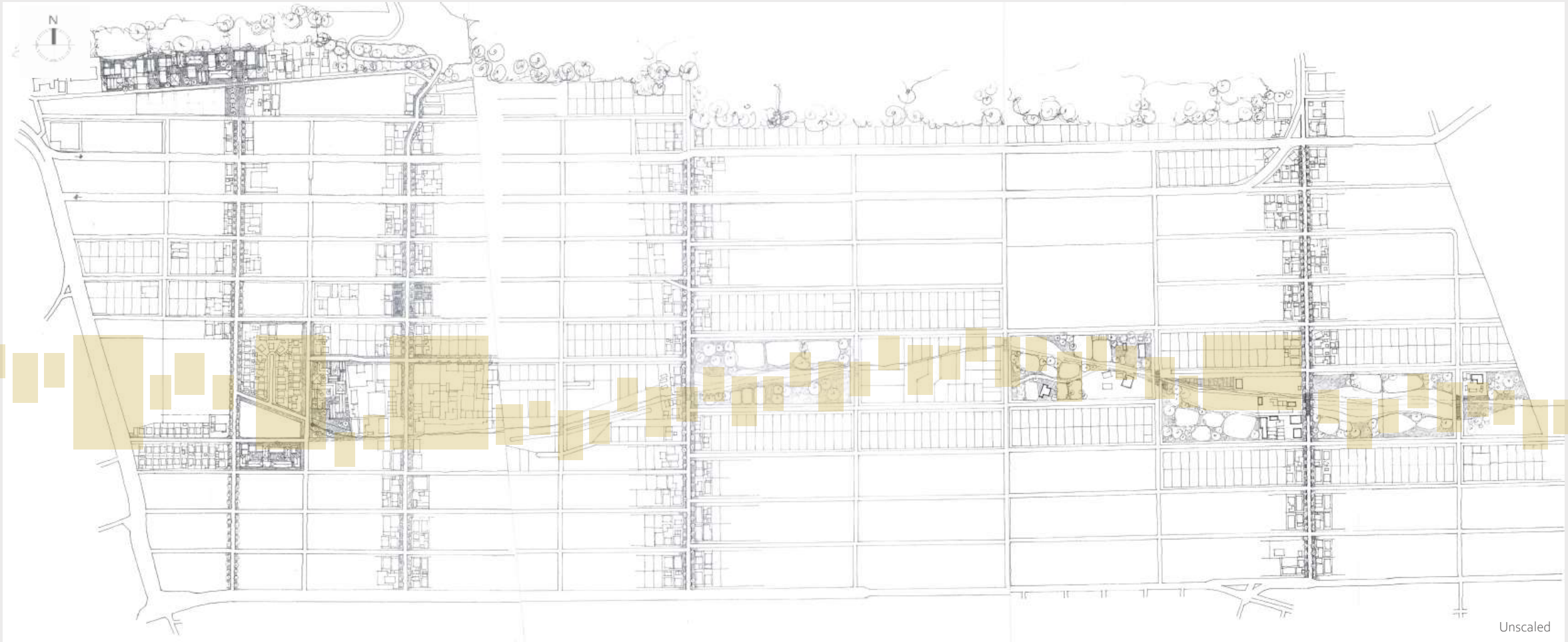
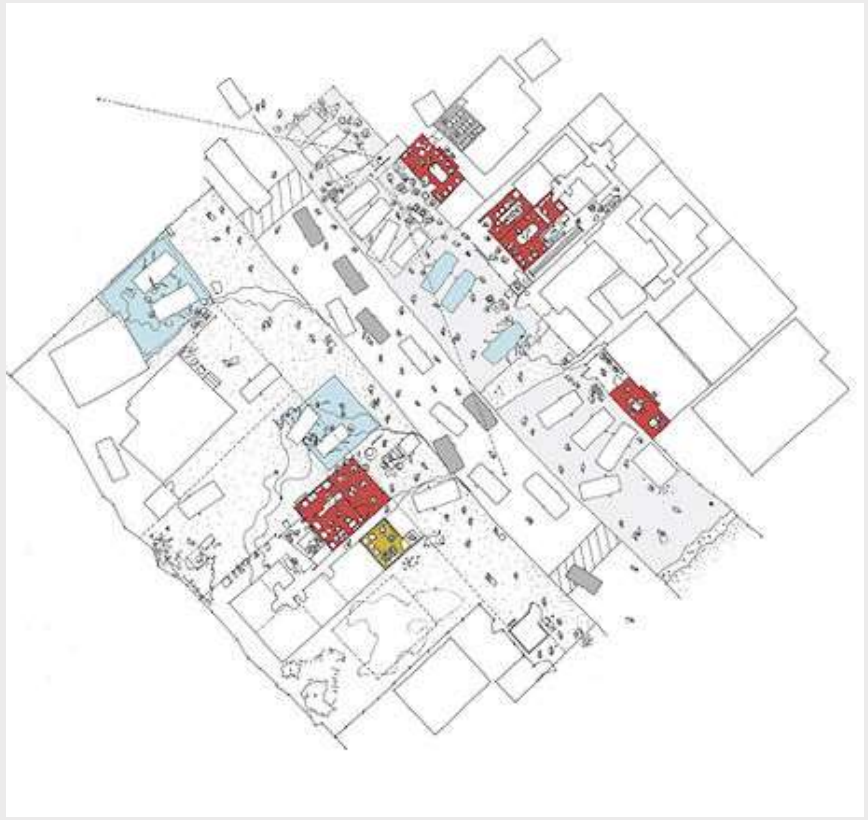
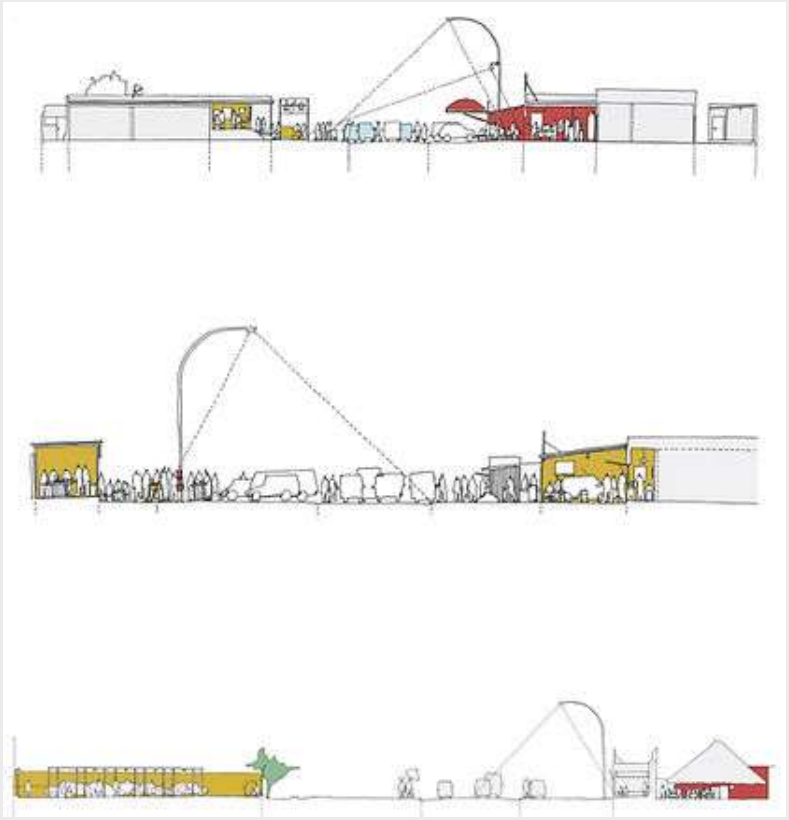
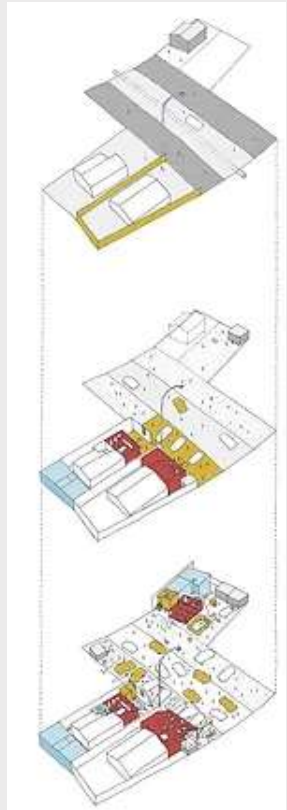


Figure 173: Drawing by author showing initial design explorations looking at the ribbon of the river as a connector, the streets as public space and movement routes, recycling and creativity nodes to generate community involvement and outside interest – reframing the valley as a unique everyday experience or a place to visit and explore.

THE STREET AS LIVING URBAN SPACE







Research was carried out by Urbanworks, in conjunction with Sustainable Livelihoods Foundation, to investigate the commercial and social activity along Eveline Street in Katutura, Namibia. Careful and considered documentation of existing conditions and dependencies through drawings and photographs informed this research. The street winds its way through various activity nodes, with bars and taverns, as well as hairdressing, car washing and other businesses, clustered along its length.

Over time, increased private investment and policy adjustments have resulted in a range of incremental changes to the urban fabric, transforming the spaces that people use – residential units have been elevated to the upper floors, freeing the space below for other activities with direct access to the street, boundary walls have been removed so more integrated public and semi-public zones, small structures have been erected on the street and ablutions for patrons have been added. These adaptations all contribute to a vibrant, well-used street and pavement space in a socially cohesive and unique urban transformation. (Urbanworks – Transformative Leisure Economies)

Figure 174 to 176: Katutura, Namibia (Urbanworks, 2016)

LOOKING AT THE STREETS



Viljoen Street – connecting to Yeoville to the north and Albertina Sisulu in the south

First Street – connecting Berea and Gordon Roads in the north to Albertina Sisulu in the south

Fifth Street – connecting Observatory and Yeoville in the north to Albertina Sisulu in the south

All three streets are used by taxis, cars and pedestrians and are characterised by wide pavements and road reserves.

Plans and sections show reduction of road width and the use of pavements for additional movement routes, economic activity and residential units.

Pedestrianizing quieter streets to allow for additional public space outside houses and flats.

Planting to allow for better drainage.

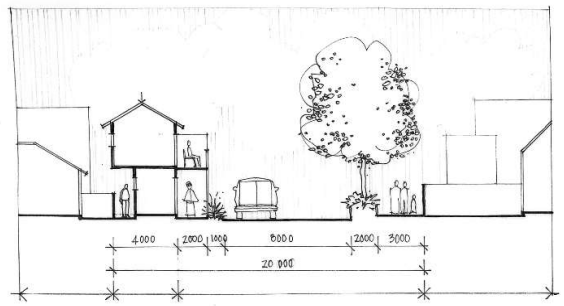
Trees for shade and to gather under.

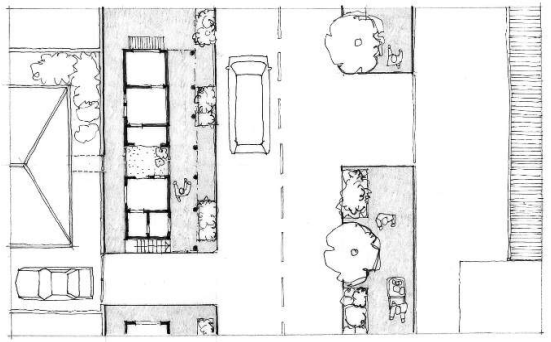
Adequate lighting for security.

Backyard dwellings and house extensions dominate small stands – play and relaxation space on the street will improve quality of life for residents.

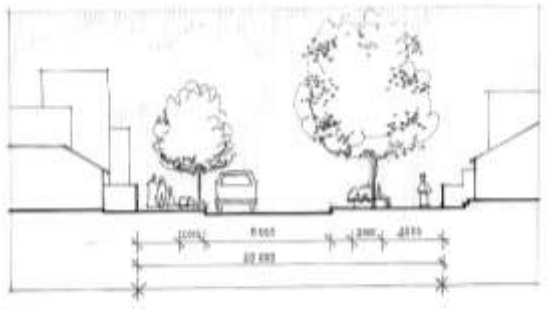
Figure 177: Series of street plans focusing on three busy transverse streets running north/south across the valley (Drawings by author)

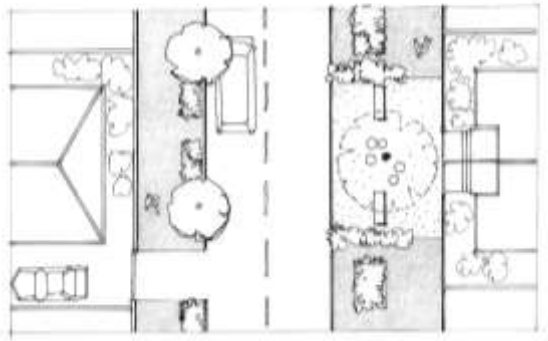
RECLAIMING THE STREETS AS PUBLIC SPACE



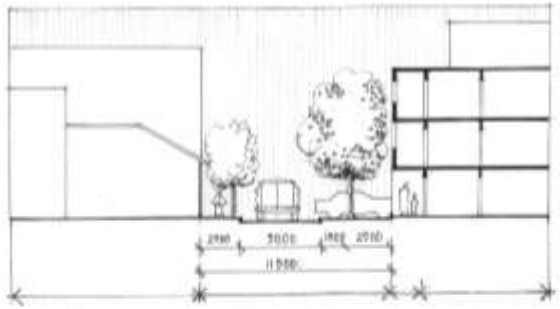


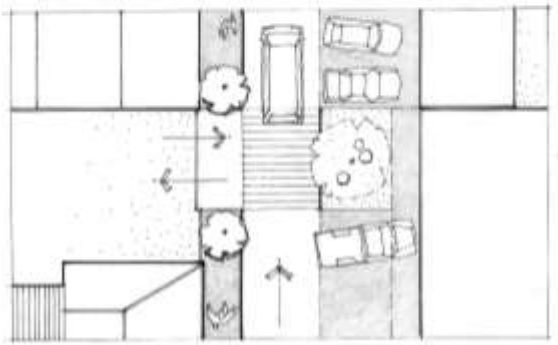
FIRST STREET



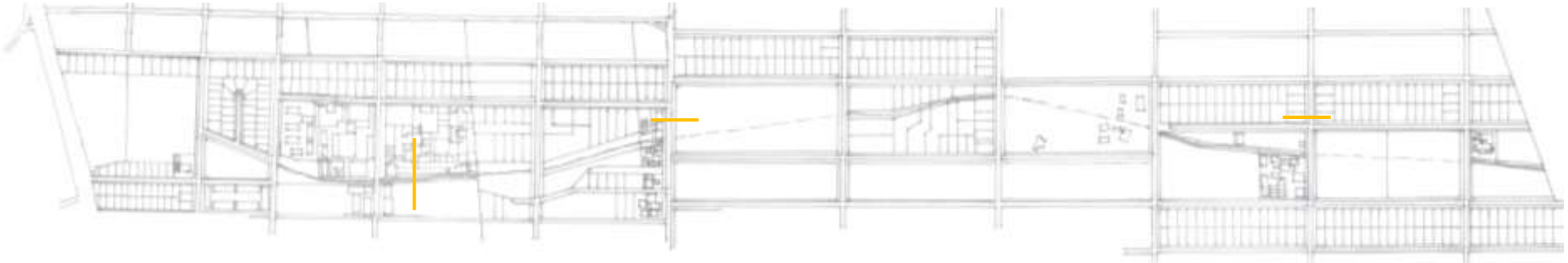


FIFTH STREET





FRERE ROAD



LOCATION OF SECTIONS

Figure 178: Street plans and sections showing narrower streets and improved public space on wider pavements (Drawings by author)

RECLAIMING THE STREETS



Figure 179 Scaffold temporary housing solutions (Sherratt)

The existing wide streets and pavements in the study area, between 20 and 22 metres on north/south streets, offer the opportunity to reclaim space that is currently dominated by vehicular movement.

The street width can be reduced, while still adequately accommodating vehicular traffic. Pavements can be widened to allow for streets to become public space – streets and pavements are currently busy and well-used, especially on the weekends and in the afternoons, with limited space for people to gather or move.

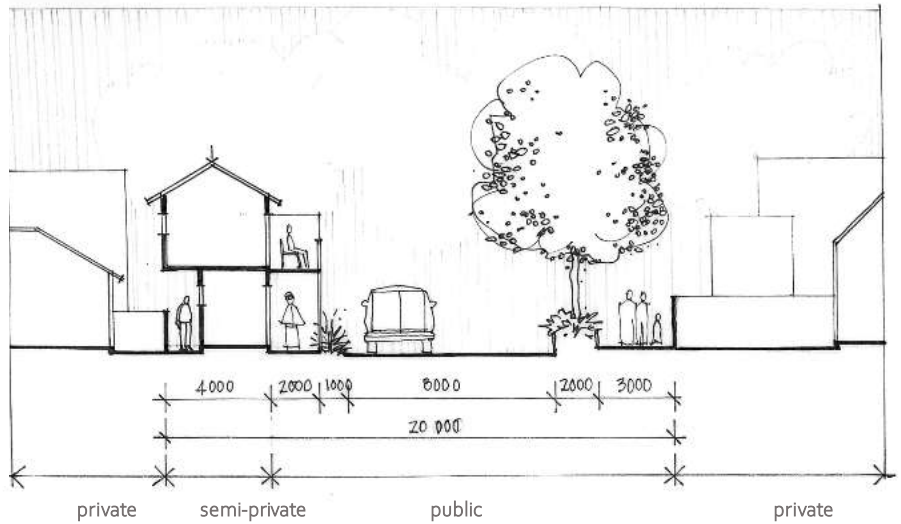
Wider pavements can allow for a range of functions and accommodate various users including waste recyclers with trolleys and cyclists.

Narrow double storey units can be built along one side of the street, adding residential units above and retail opportunities below.

Planting strips can be included to improve water runoff and drainage during the rainy season.

Quieter streets can be temporarily closed off on weekends to allow for residents to enjoy outdoor activities in a safe space. Residents currently gather and socialise on the streets without adequate space to occupy safely.

First Street



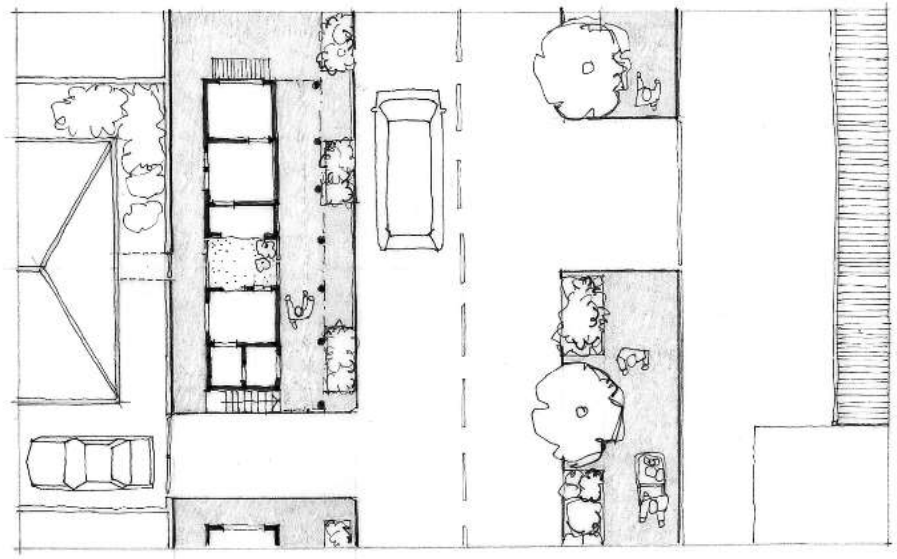


Figure 180: Street plan and section through First Street, Bez Valley showing narrower streets, residential and commercial units and wider pavements accommodating a range of users (Drawings by author).

RECLAIMING THE STREETS

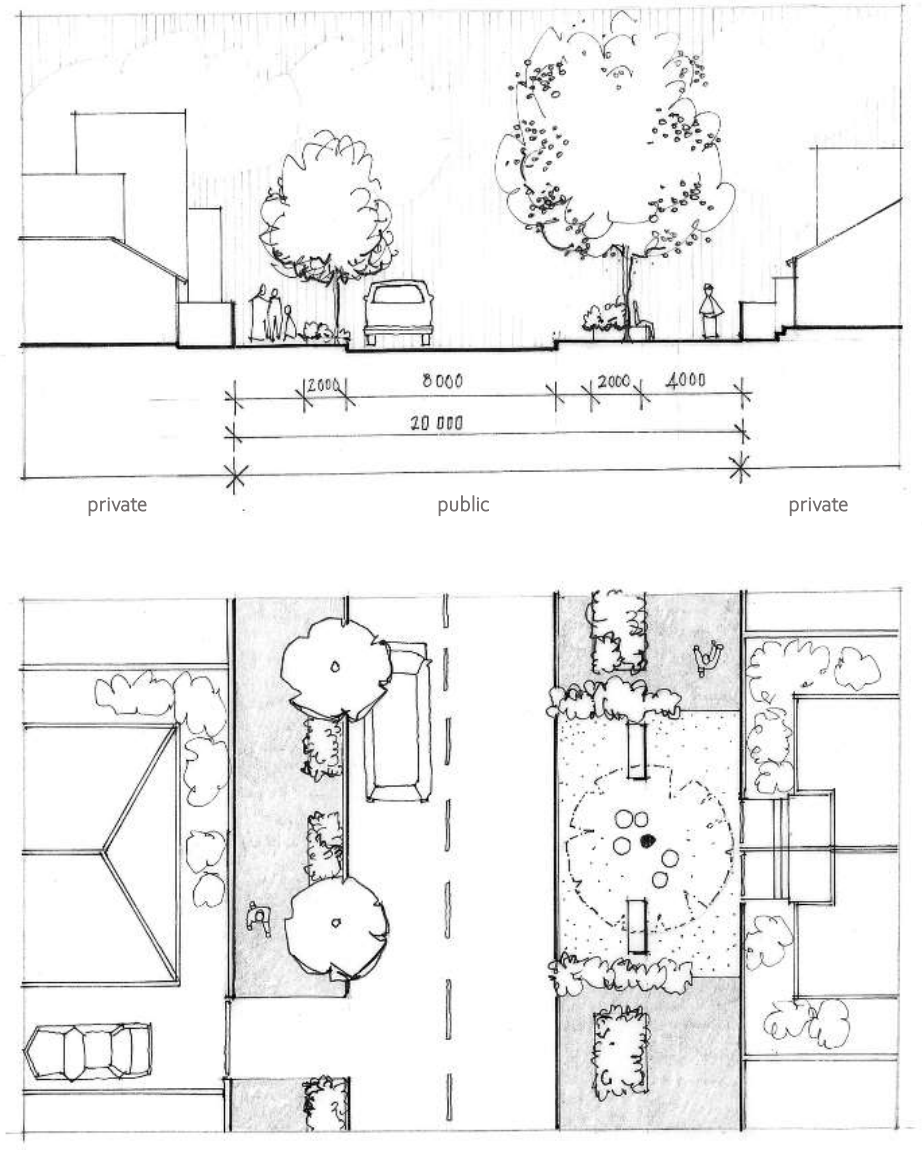


Figure 181: Street plan and section through Fifth Street, Bez Valley showing narrower streets, improved public space on wider pavements and shady areas to gather and rest (Drawings by author).

Fifth Street

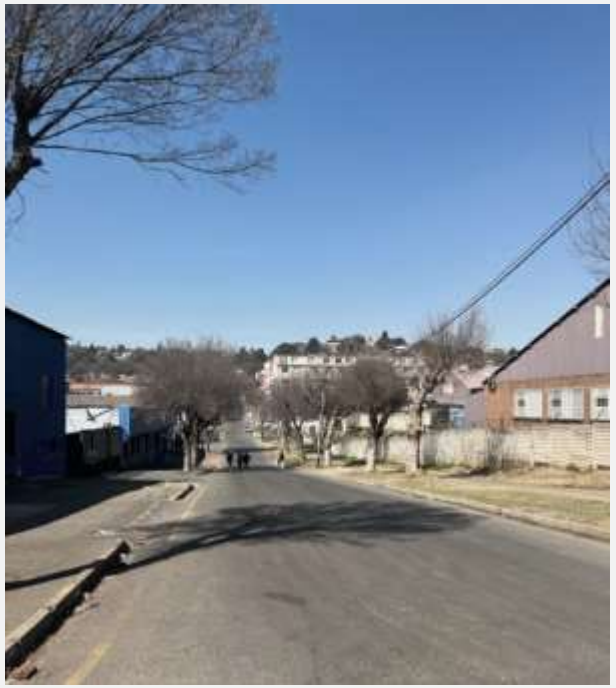


Figure 182: Street view looking south towards the river and Kensington Ridge (Photo by author).

Wide streets can be reclaimed for residents and pedestrians becoming urban public space.

Planting strips can be included to improve water runoff and drainage during the rainy season.

Gravel surface or porous pavers to allow for improved drainage.

Litter catchers at existing stormwater drains and runoffs.

The gradual replacement of existing trees with indigenous options as shot hole borer beetle and other diseases kills them. The planting of a single tree in the centre of an open square on the wider pavement side will create a gathering and resting space for residents and pedestrians, and a place for children to play.

RECLAIMING THE STREETS



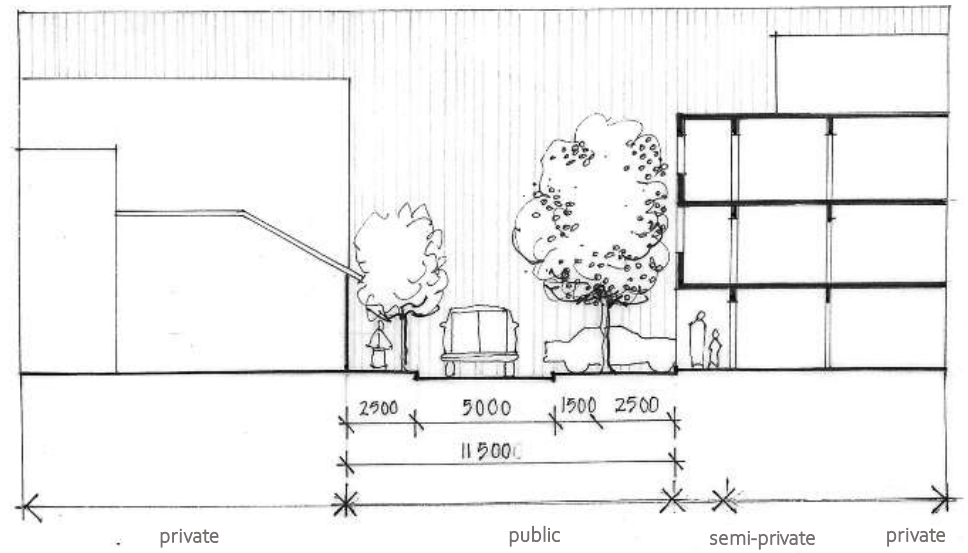
Figure 183: Street view looking east along Frere Road with industrial buildings to the left and residential to the right (Photo by author).

The streets on the southern slope of the valley are less generous than to the north – busy and active with pedestrians often having to walk in the street as the pavements are narrow.

Some streets could become one way to allow for wider pavements and safer routes for pedestrians. Off street parking can be accommodated close to buildings that have been converted into residential units.

The planting of a single tree in the centre of an open square on the wider pavement side will create a gathering and resting space for residents and pedestrians, and a place for children to play.

Frere Road



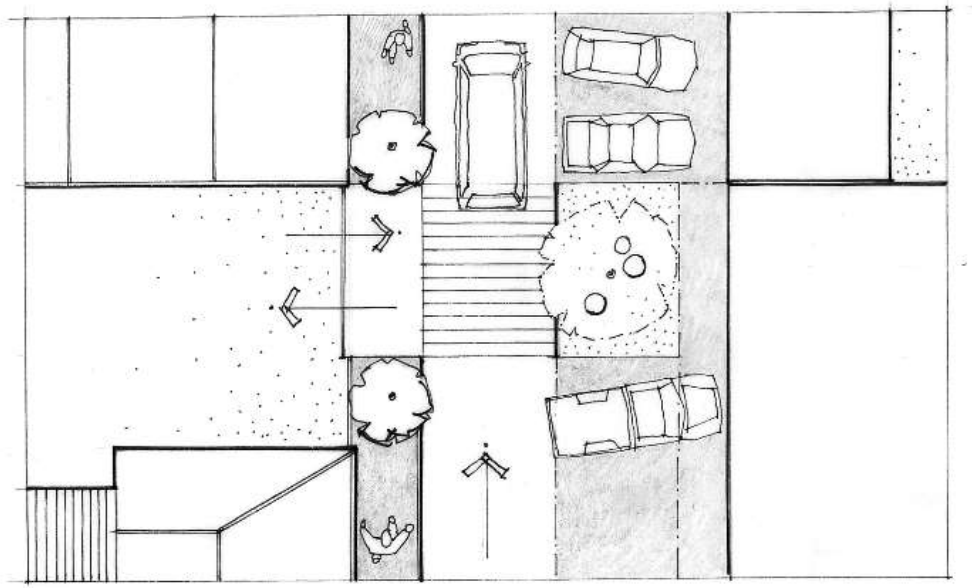


Figure 184: Street plan and section through Frere Road, Lorentzville showing a one way street, off street parking and improved public space on wider pavements (Drawings by author).

LOOKING AT THE GRID

STAND VARIATIONS

BERTRAMS

LORENTZVILLE

JUDITH'S PAARL

BEZ VALLEY

VILJOEN STREET

FIRST STREET

FIFTH STREET





LORENTZVILLE

BERTRAMS

JUDITH'S PAARL

BEZ VALLEY

Figure 185: Collage of drawings exploring the street grid and stand size variations in Bertrams, Lorentzville, Judith's Paarl and Bez Valley *(Drawings by author from information obtained via GIS Johannesburg)*

MAPPING WASTE COLLECTORS ROUTES – Pikitup and recyclers



Figure 186: Exploratory mapping and drawings reflecting on waste collection and recycling in the valley *(Drawings and stitching by author)*

RECLAIMING THE VALLEY AS PUBLIC SPACE





Figure 187 and 188: Hjalmarviksparken, Sweden (Landezine Urbio, 2022)



Figure 189: Archivio by Guiliano Mauri (Cappella, 2017)



Figure 190: Tetrapak Sculpture in Langa, Cape Town (The Maak, 2019)



Figure 191: Land Art (Strijdom van der Merwe)



Figure 192: Creative interventions in the valley (Photos by author)

NATURAL ENVIRONMENT – Green Spaces and the Jukskei River



Observatory Ridge to the north

Kensington Ridge to the south

Sports grounds and parks to the west – Ellis Park Precinct

Johannesburg Cricket Grounds

Fuller Park

Hofland Park

Max Goodman Park

Stormwater Park

Bezuidenhout Park to the east

City owned land and public open space

Figure 193: Exploratory map of green spaces in the valley (Drawing by author)

RESIDENTIAL SPACE- adapting and adding to existing buildings





Figure 196: Multistorey camping (@studiomagga)



Figure 194 and 195: Drawings for Mass Housing (Metalocus, 2014)



Figure 197: External staircase, Ellis Park (Image by author)



Figure 198: Tower houses (Image via Red House Canada)

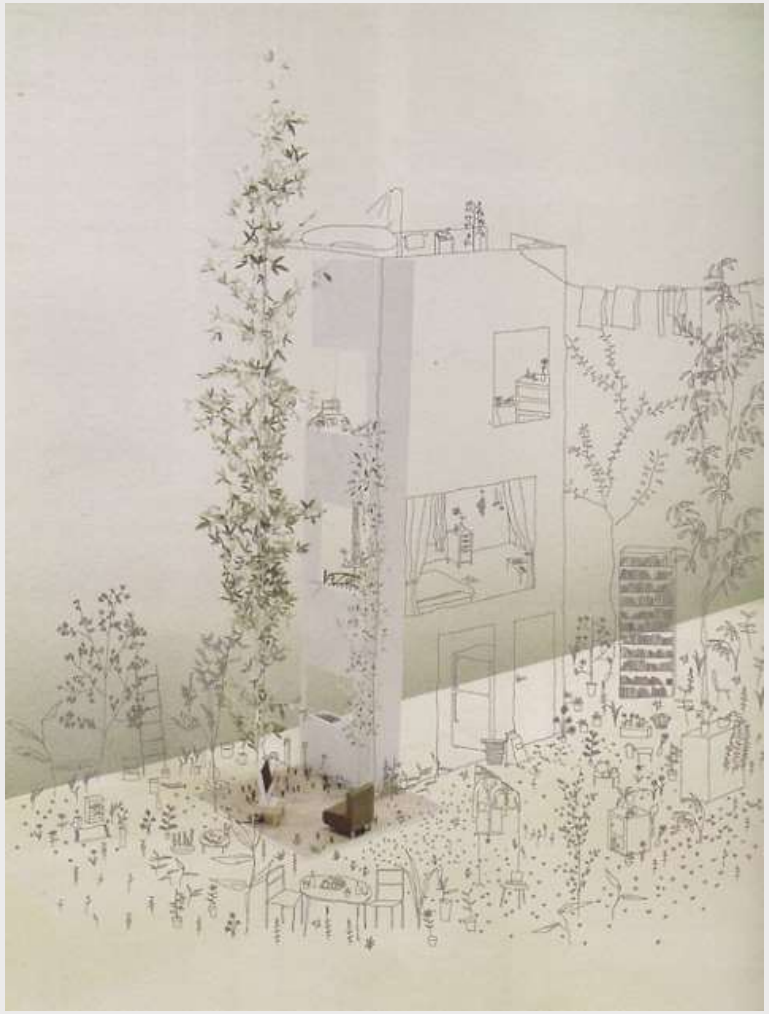
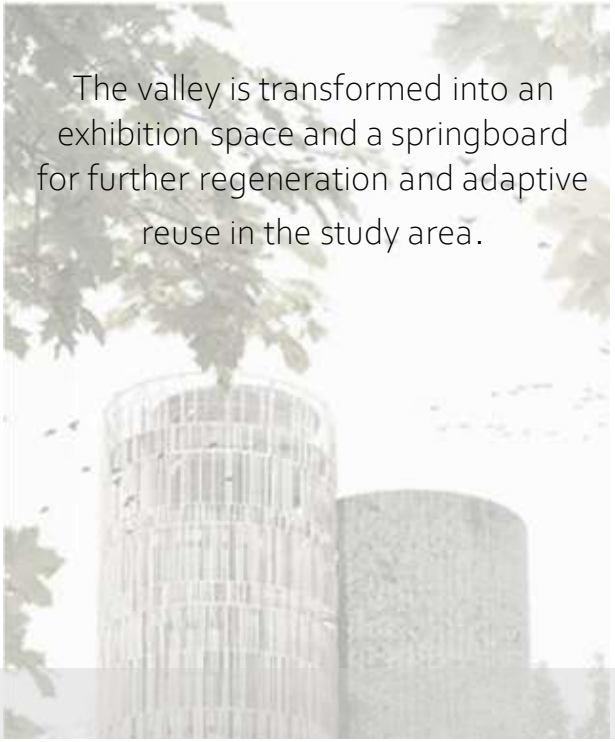


Figure 199: Stacked house drawing (Ishigami, 2013)

URBAN DESIGN ELEMENTS

The following elements will be used in the urban design proposal:

- A walking route along the path of the river from the Rea Vaya bus terminus on Bertrams Road in the west to Bez Park in the east. This path can be used by pedestrians walking to work or to transport hubs, but it can also be a path that visitors can move along as they explore the valley. The river will be reframed as the focus of the valley rather than hidden and neglected.
- View points and towers will demarcate the route – towers as works of art using recycling materials and plants growing up the structure. These structures can serve multiple functions like waste recycling stations, temporary shelters or public water and ablution points. The view points can be both looking down on the river as well as platforms that can be accessed in the river tunnels.
- Buildings can be incorporated into the walk as vertical elements – stairwells and decks can be attached to the existing building structures to allow for visitors to climb up and view the city skyline, the ridges and the valley. Vacant buildings and spaces can be occupied as temporary exhibition zones and can become a part of the walking path.
- Public space can be occupied permanently or occasionally with pop up exhibitions, educational displays and retail offerings.
- Residential 'show houses' will be created along the route – highlighting the need for a different approach to housing, communal living and temporary shelters.



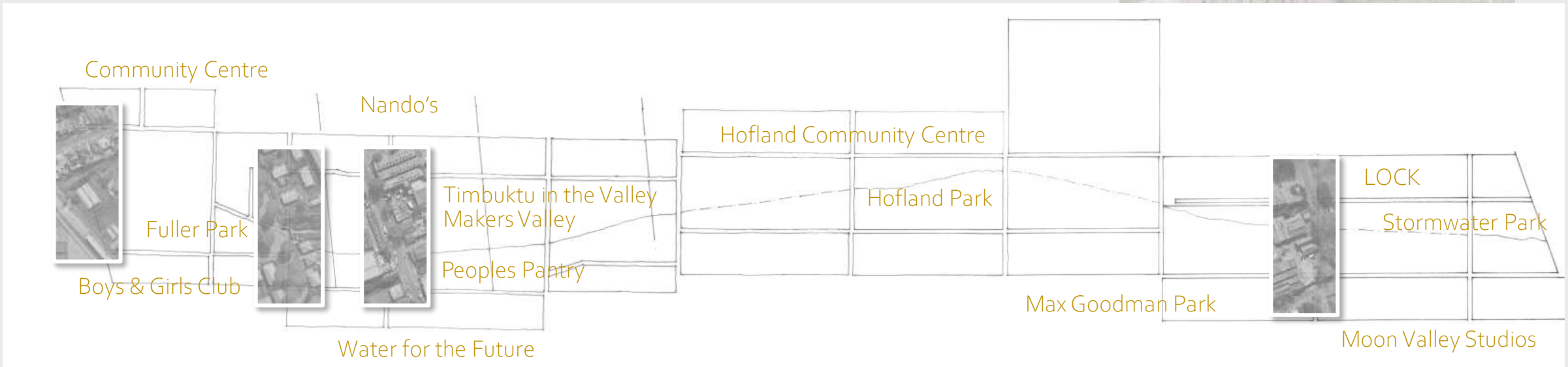


Figure 200 : Diagram showing places and hubs along the length of the valley (Drawing by author, photos adapted from Google Earth images).

TOWERS



Figure 201: Observation tower (Architecture Competitions 2003)



Figure 202: Observation tower (Architecture Competitions, 2003)





Figure 203: Observation tower (Architecture Competitions, 2003)

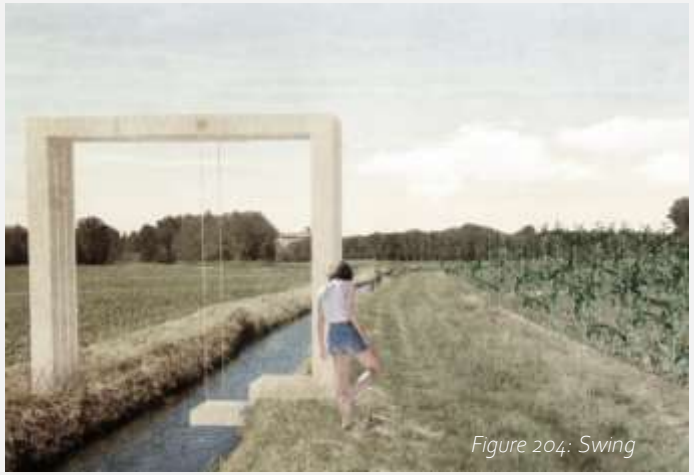


Figure 204: Swing

Aerial views from show a leafy valley with housing and apartments along the north slope of the valley and a mix of residential and industrial on the south, divided by the river and a belt of green open space. Walking the streets shows the valley in a more intimate way – the decay, texture, dumped rubbish and colours become evident.

I propose that the valley should be seen from above and below as you walk the path along the river, seeing both the decay and the beauty. A path to be walked by visitors and by the people living there – envisioning a gentler, more inclusive place with space to live, work and play.



Figure 205: Observation tower (Arch Daily)

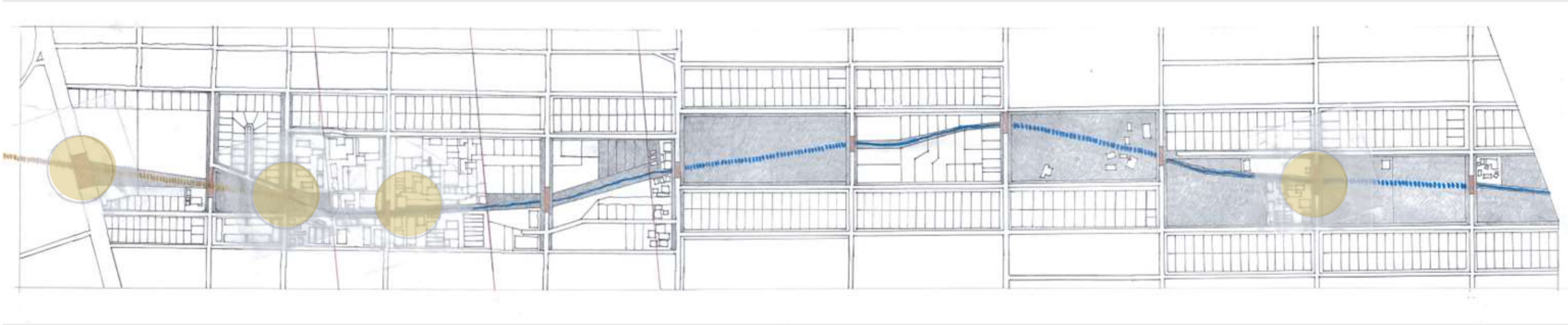


Figure 206: Observation tower (Metalocus, 2016)

A CHAIN OF HUBS AND TOWERS - connected by the river

MOVEMENT HUB

CREATIVE HUB

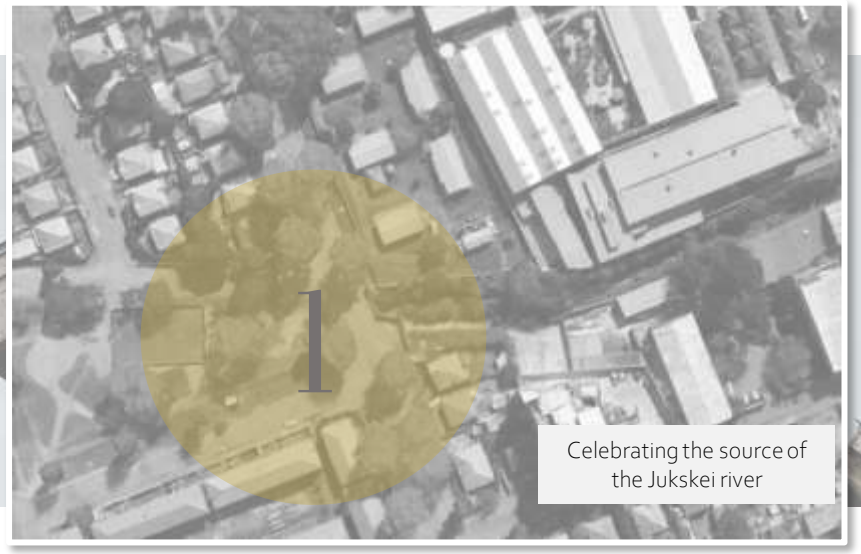


NATURAL HUB

RECYCLING HUB

Figure 207: Layout of the path of the Jukskei River through the valley showing the proposed chain of hubs and towers (Drawing by author)

HUBS AS GROWTH POINTS



NATURAL HUB



CREATIVE HUB



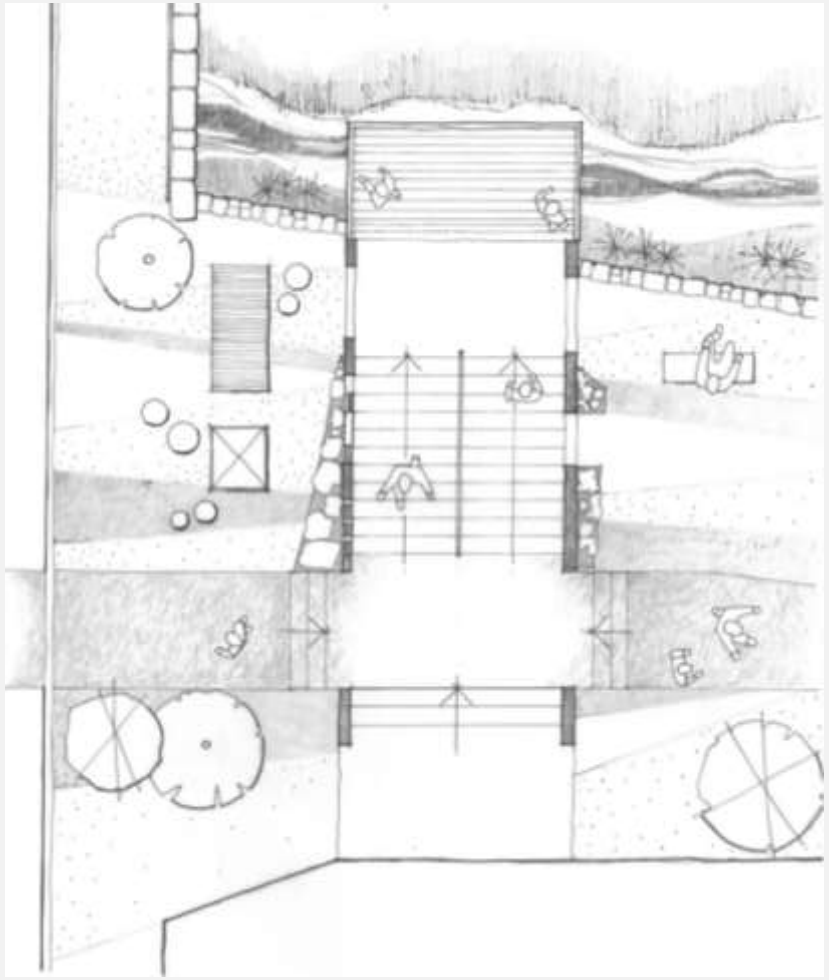
HOUSING HUB



RECYCLING HUB

Figure 208: Adapted aerial photos (Google Earth)

HUBS



'Cultures and climates differ all over the world, but people are the same. They'll gather in public if you give them a good place to do it'. Jan Gehl

Figure 209: Natural hub layout with an observation tower and public square (Drawing by author)

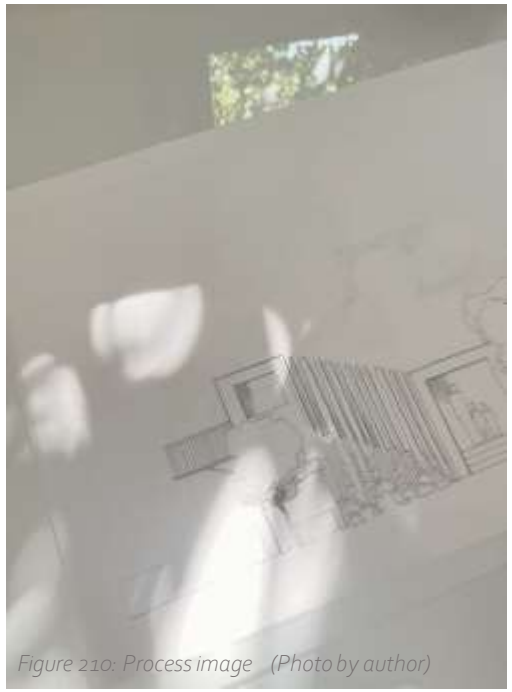


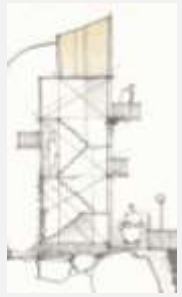
Figure 210: Process image (Photo by author)

An observation tower celebrating the eye of the Jukskei River – allowing the river to be seen from above, and giving pedestrians the opportunity to look up, down and along the valley.

The tower would be built from reclaimed materials and occupies space in a open square.

This square can be used by traders to sell goods and by residents wanting to spend time relaxing outdoors in a safe environment.

The path along the valley cuts through the tower, emphasizing it as a marker along the pedestrian route.



RECYCLED COMPONENTS



INDIGENOUS PLANTING



TREES



STREET FURNITURE



STREET TRADERS



SHELTER

Figure 211: Urban elements to be used at all hubs (Drawings by author)



chapter 9

DESIGN DEVELOPMENT

9.1 ASSEMBLAGE OF DIARY PAGES 104

9.2 CONCEPTUAL LAYOUT 105

9.3 DESIGN EXPLORATIONS 106

9.4 NATURAL HUB – site 107

9.5 NATURAL HUB – plan 108

9.6 NATURAL HUB – section 109

9.7 CREATIVE HUB – concept 110

9.8 PRESENTATION EXPLORATIONS 111

9.9 DESIGN EXPLORATIONS 115

ASSEMBLAGE looking at sketches and notes from my diary





Figure 212: Process (Photos by author)

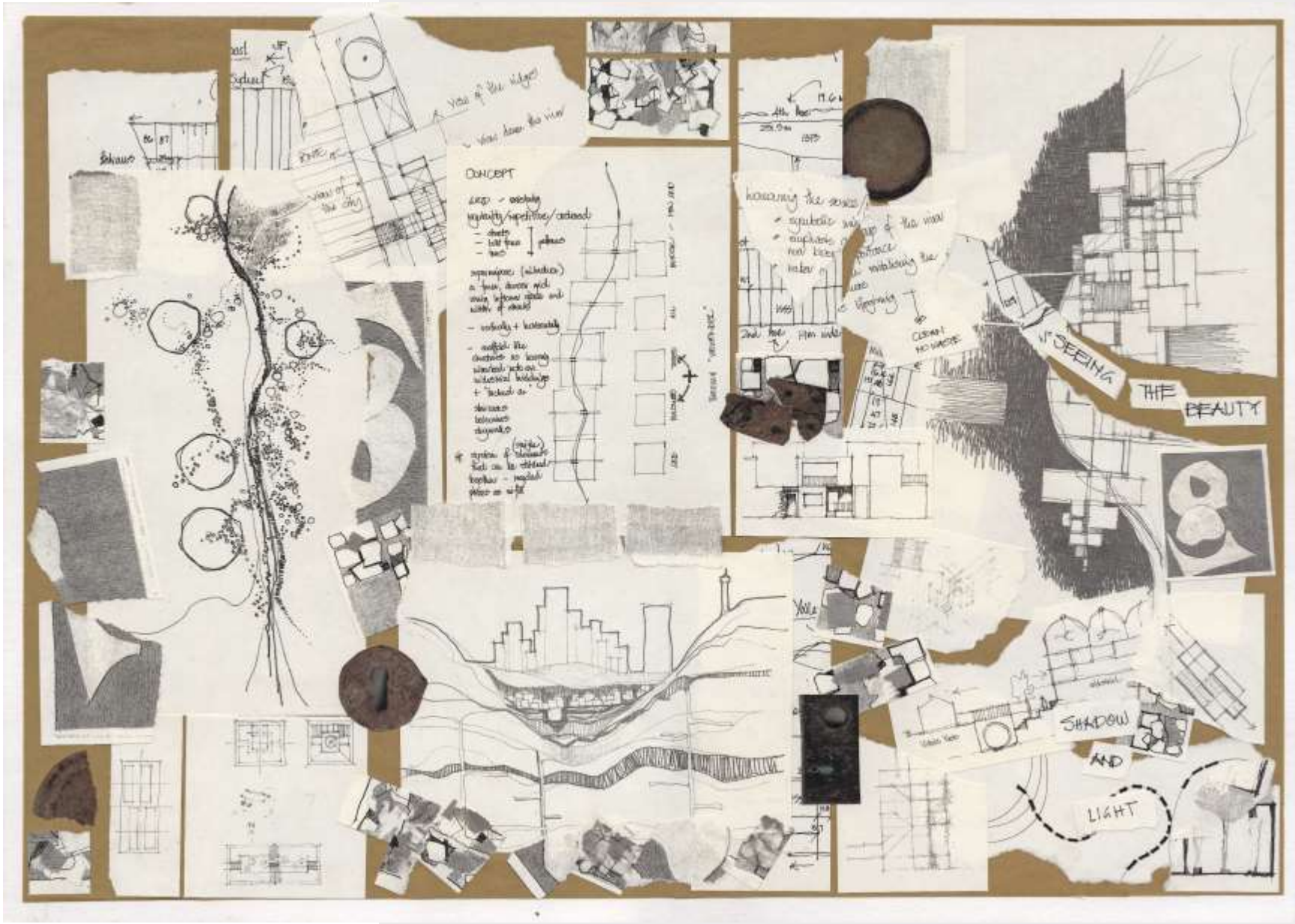
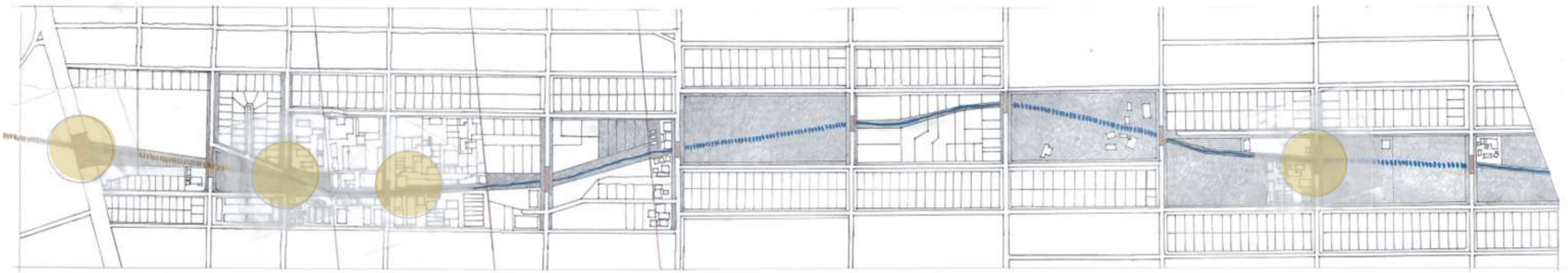


Figure 213: Assemblage of diary pages (By author)

CONCEPTUAL LAYOUT a chain of hubs and towers connected by the river

MOVEMENT HUB

CREATIVE HUB



NATURAL HUB

RECYCLING HUB

Figure 214: Layout of the path of the Jukskei River through the valley showing the proposed chain of hubs and towers (Drawing by author)

DESIGN EXPLORATIONS



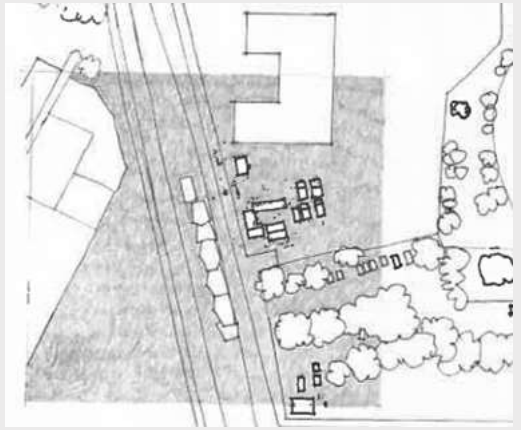
Initial layout exploring supplementary student housing options along the Observatory Ridge.

Densifying residential accommodation along the main streets running north to south.

Linking Victoria Yards to the street market on the corner of Viljoen and Derby Roads.

Densifying the Maurice Freeman Social Housing Scheme close to the eye of the Jukskei River.

Figure 215: Sketch layout illustrating various interventions along Viljoen Street (Drawing by author)



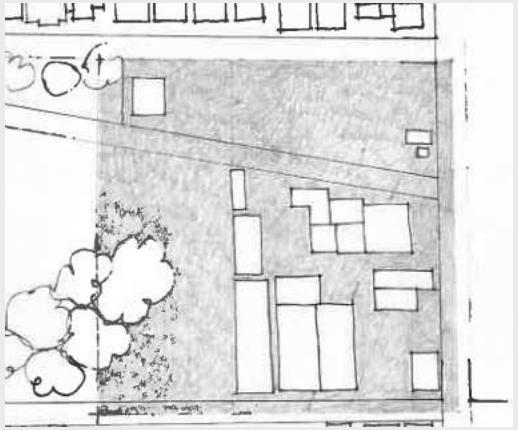
MOVEMENT HUB



NATURAL HUB



CREATIVE HUB



RECYCLING HUB

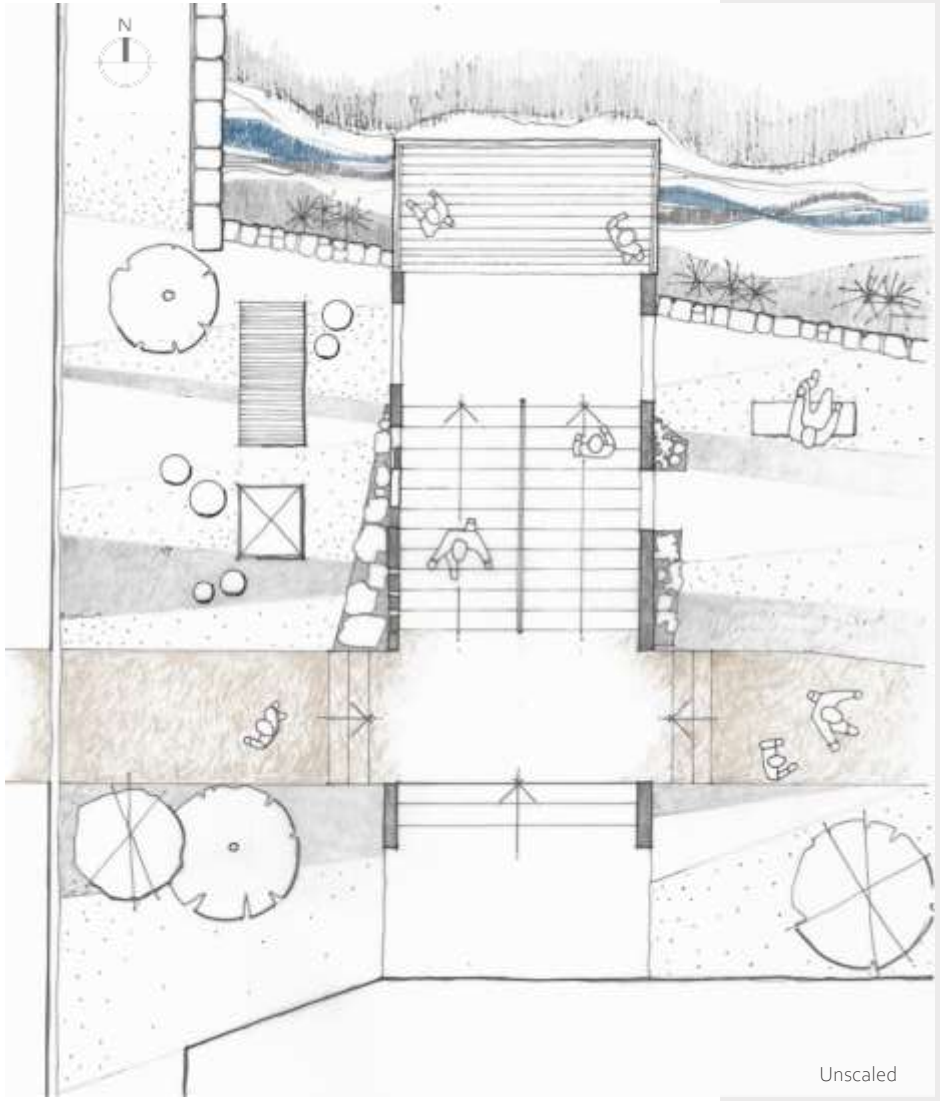
Figure 216: Figure ground studies of the four hubs highlighting the open space available to create public space for the community to enjoy (Drawings by author)

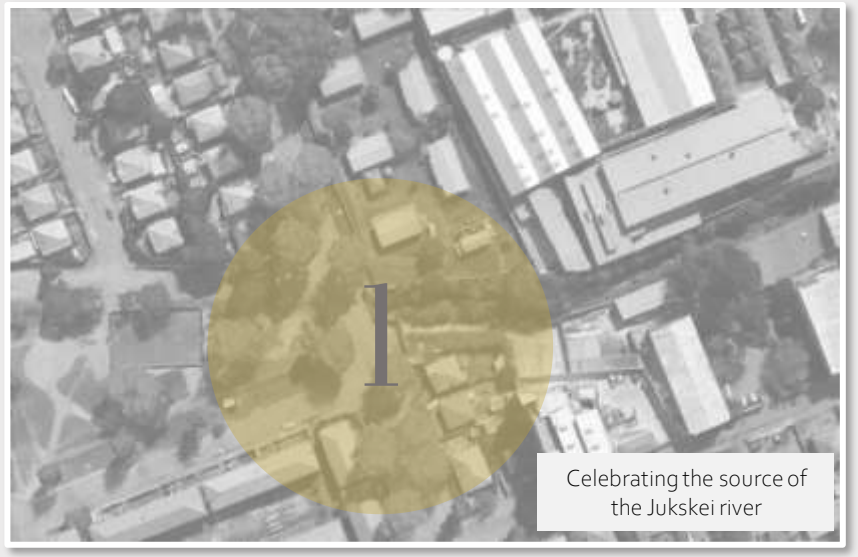
NATURAL HUB site



Figure 217: Aerial photograph of the Natural Hub site opposite Fuller Park at the eye of the Jukskei River (Photo via Water for the Future)

NATURAL HUB plan





N A T U R A L H U B

An observation tower celebrating the eye of the Jukskei River – allowing the river to be seen from above, and giving pedestrians the opportunity to look up, down and along the valley.

An open square around the tower allows for community space and trading opportunities for vendors.

The space beneath the tower can be used for shelter.

The tower and open square form a link in the river walk that threads along the valley connecting existing and new creative complexes.

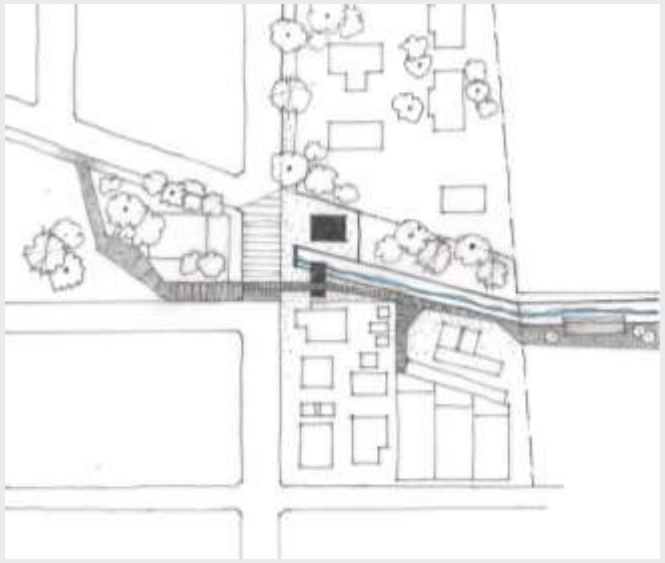


Figure 218: Plan of the open space and observation tower at the eye of the Jukskei River (Drawing by author)

Figure 219: Layout of the tower and open square (Drawing by author)

NATURAL HUB section



An observation tower celebrating the eye of the Jukskei River – allowing the river to be seen from above, and giving pedestrians the opportunity to look up, down and along the valley.

The tower would be built from reclaimed materials and occupies space in a open square.

This square can be used by traders to sell goods and by residents wanting to spend time relaxing outdoors in a safe environment.

The path along the valley cuts through the tower, emphasizing it as a marker along the pedestrian route.

Figure 220: Elevation of the tower with the observation deck cantilevering out over the river (Drawing by author)



Figure 221: Scaffold stair and deck in Rijeka (Dezeen Palagani, 2019)



Figure 222: Image of the industrial buildings on the southern bank of the river (Photo by author)



Figure 223: Scaffold stair and deck in Rijeka (Dezeen Palagani, 2019)

CREATIVE HUB

An observation tower attached to the side of an existing industrial building across the river from Victoria Yards offering views of the skyline and the complex.

Linking the existing creative studios and public space, via the existing bridge, with new spaces and facilities on the southern side of the river.

Continuing the river walk that begins at the Natural Hub running parallel to the river on the southern bank.

Widening the river walk to include open squares in front of the industrial buildings and a residential block behind the Gearhouse property to allow for shaded gathering and play places for the community.



C R E A T I V E H U B

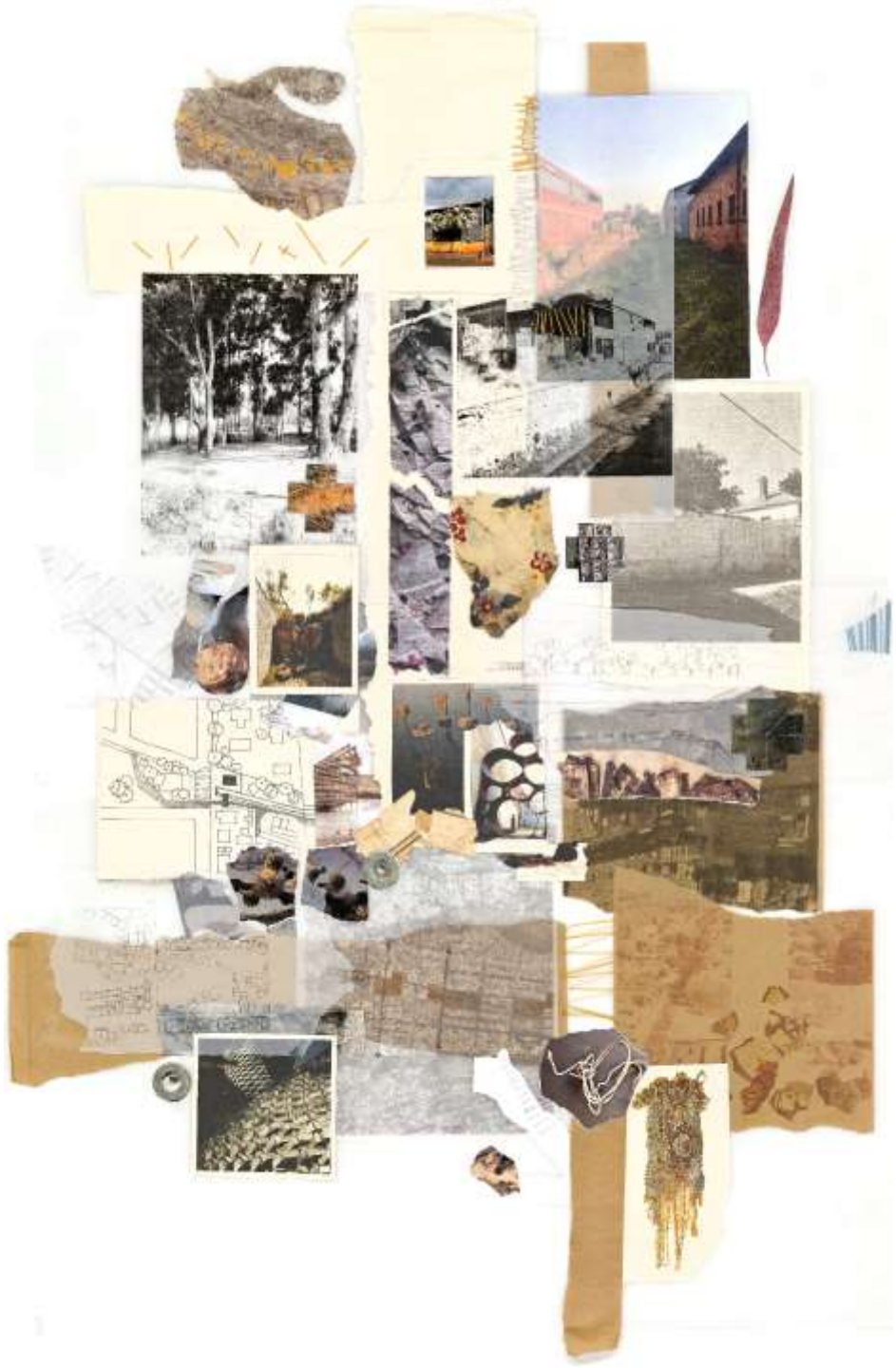


Figure 224: View over the Victoria Yards complex with the city skyline in the distance (Photo sourced via Victoria Yards website)

PRESENTATION EXPLORATIONS



Figure 225: Assemblage of drawings, photos and found items (By author)



PRESENTATION EXPLORATIONS

I was inspired by Adichie's writing when I was working on my response to our Maputo studio last year. I wrote of the the significance of the everyday, the beauty of the abandoned, and the potential that the forgotten and worn can have in creating something of value. The discarded telling a story of purpose fulfilled, and the limits of single use.

The collection of faded and filtered photographic images, explorations and drawings that follow tell the story of finding beauty in the unexpected, of scratching and uncovering the layers of the city. The images and words also highlight the danger of knowing a place through a single story. Marks made on the city are exposed – both as scars and as embellishments. These marks are evident in Johannesburg, if you look, and show the tenacity, texture, growth and contrast that reveal the identity of the city, describing my story and memory of the city, and the stories of others.

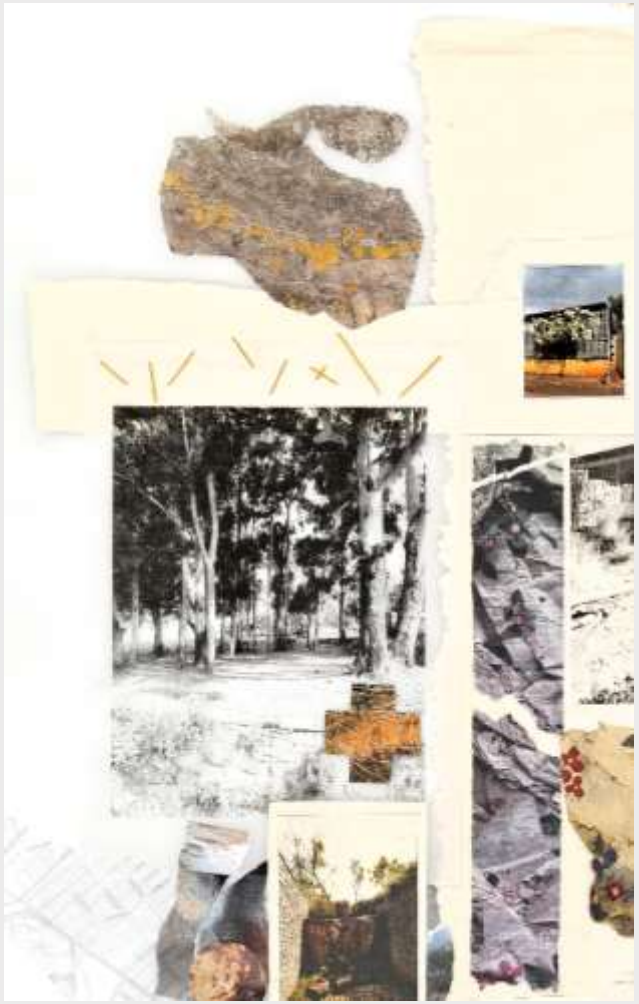
My explorations and encounters in the study area were layered – I observed and looked, not talking or engaging directly with anyone. I felt that answers to questions or discussions would have been polite and respectful, and perhaps not entirely truthful, hence my decision to observe and document through a slightly distanced, veiled approach.

I used the method of assemblage as a way of recording through imagery using photographs, found items and drawing, a work of art created by combining torn fragments of paper, newspaper cuttings, photographs, pieces of cloth, found and gathered objects. The symbolic meaning of these pieces is as significant as their physical properties. The inclusion of found and foraged pieces in my exploratory work adds a cultural reference to my process. Photographs and drawings are layered and superimposed with three dimensional objects as an alternative way of seeing and learning from the study area.

My process embraced the notions of seeing and interpreting, the art of drawing and redrawing, and the reduction of images through layering and tracing, leaving or erasing memories of marks made, until only the essence of the space remains.

My photographic work recorded the site capturing the unique spirit of the place. Images and colours showing the texture and richness of a faded and forgotten place.

PRESENTATION EXPLORATIONS





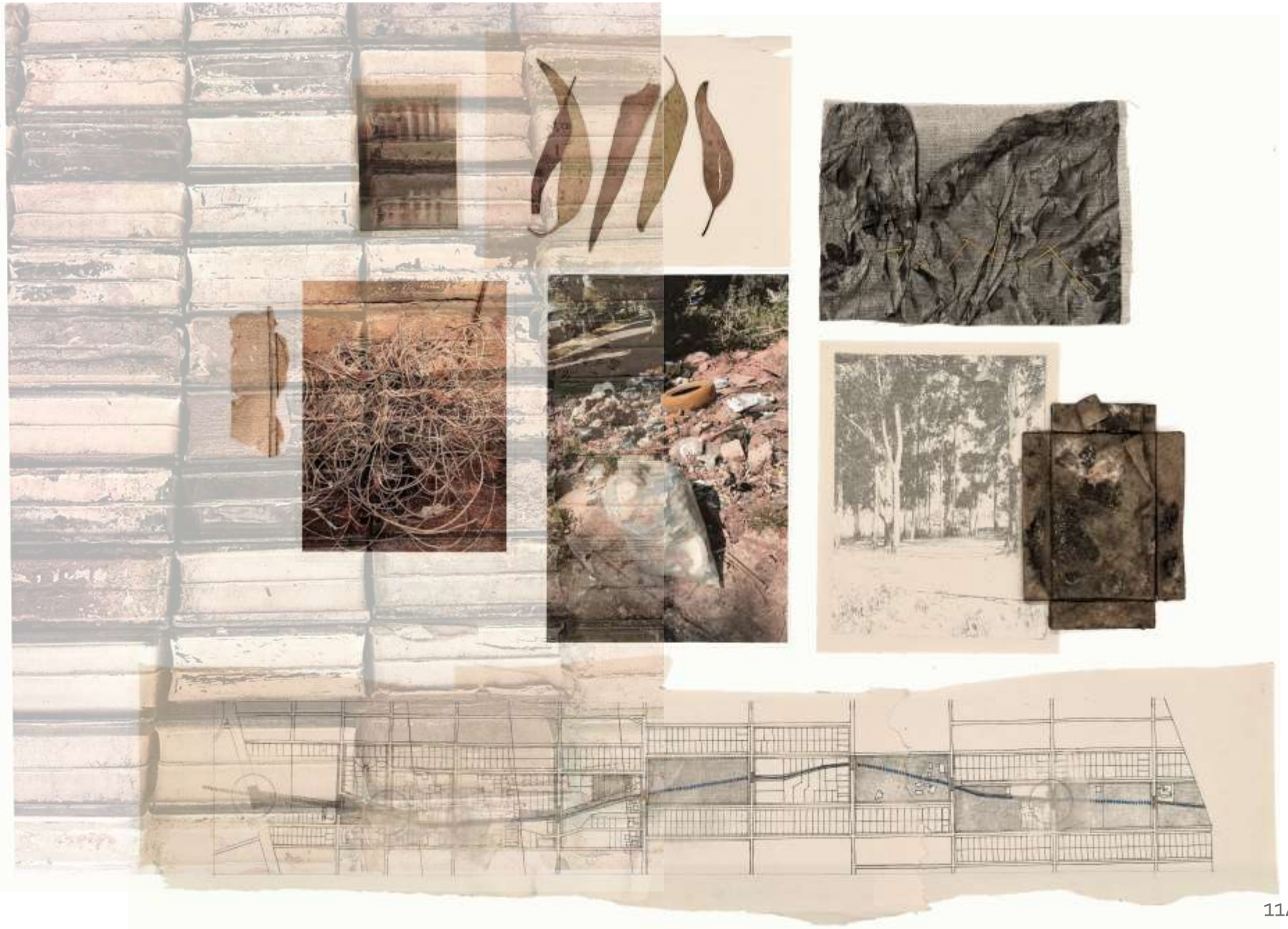




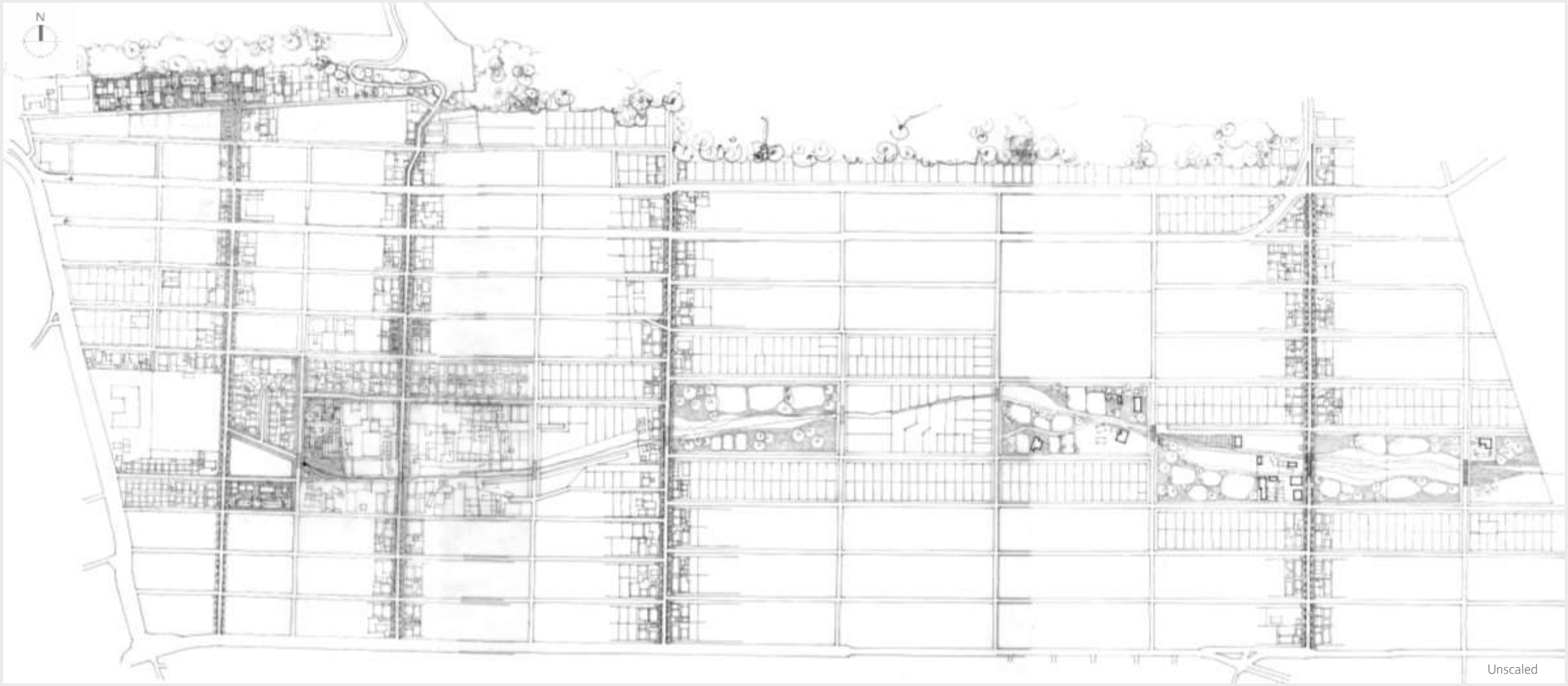
PRESENTATION EXPLORATIONS





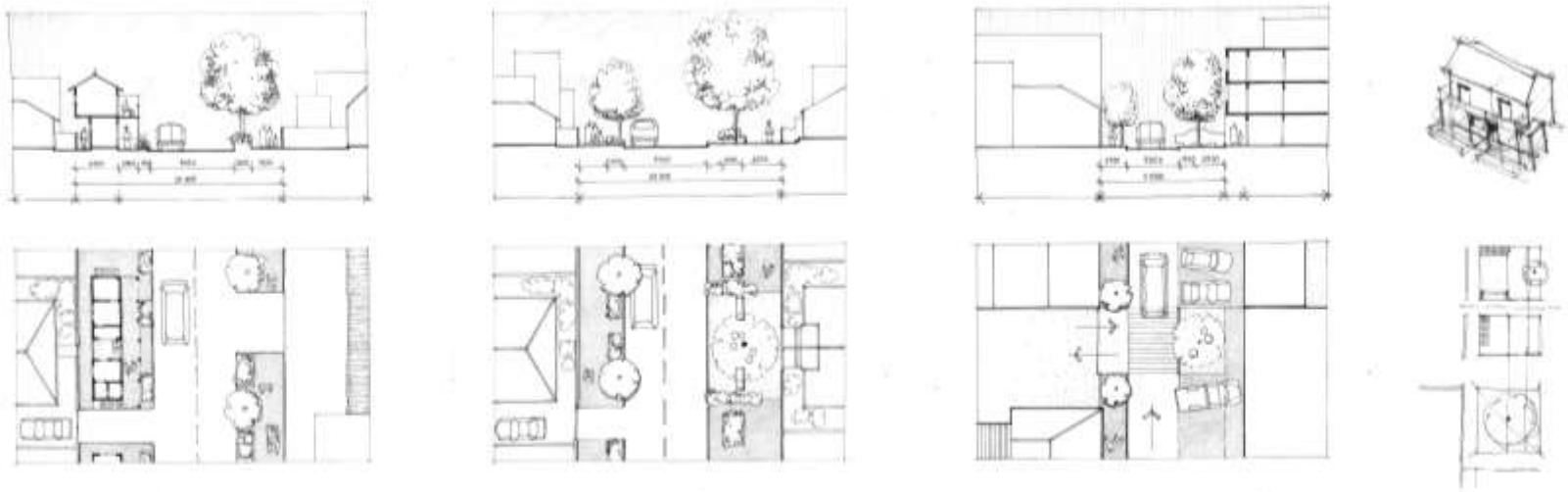


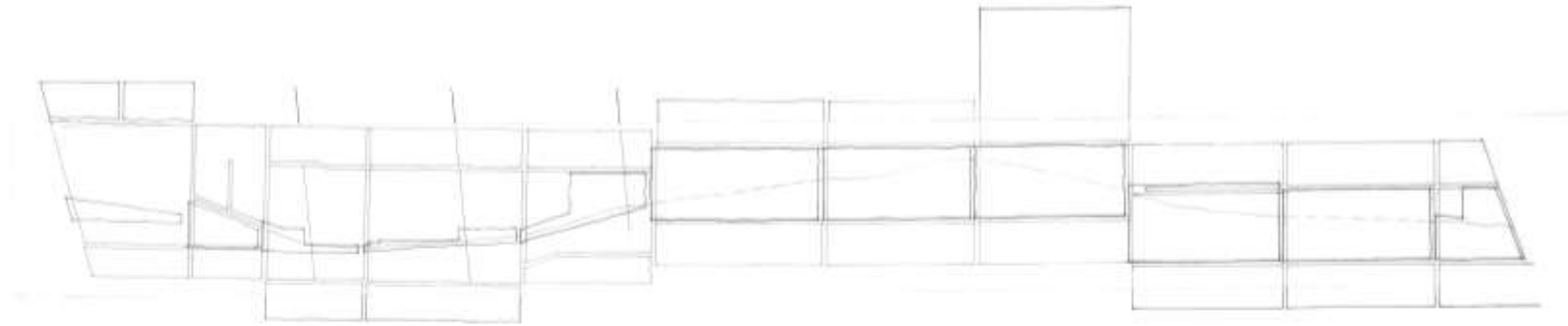
DESIGN EXPLORATION – reframing the valley

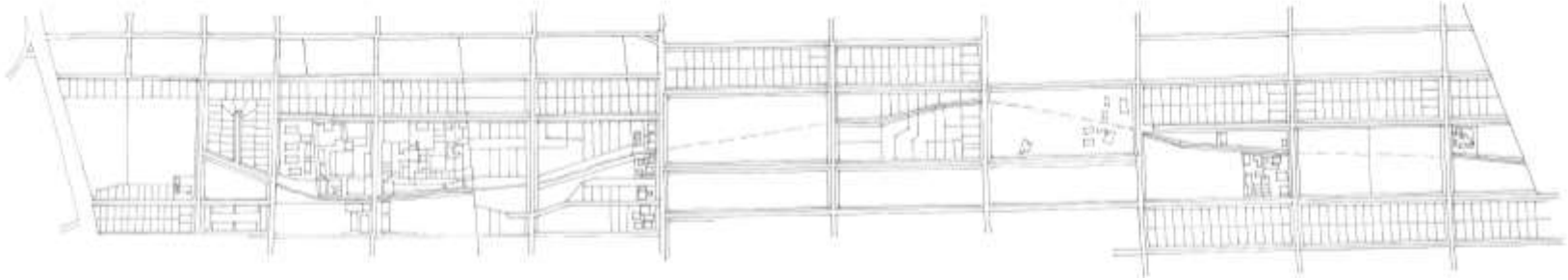


Drawing by author showing initial design explorations looking at the ribbon of the river as a connector, the streets as public space and movement routes, recycling and creativity nodes to generate community involvement and outside interest – reframing the valley as a unique everyday experience or a place to visit and explore.

DESIGN EXPLORATION – reframing the valley









chapter 10 DESIGN PROPOSAL

10.1 PRESENTATION IMAGES 118

10.2 DESIGN STORY 119

10.3 NATURAL HUB - LAYOUT 120

10.4 NATURAL HUB – SECTION 121

10.5 CREATIVE HUB - LAYOUT 123

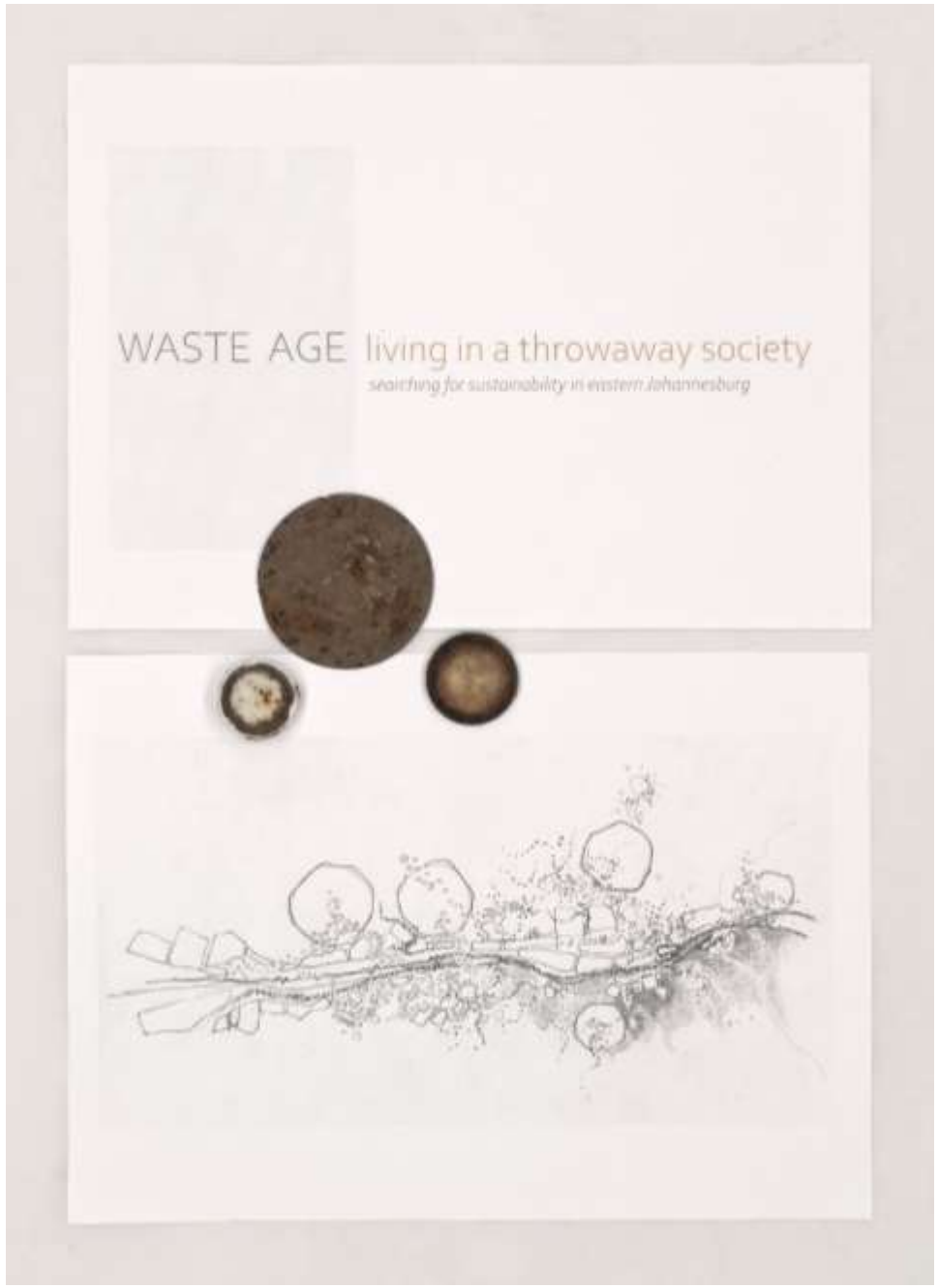
10.6 CREATIVE HUB – SECTION 124

10.7 RESIDENTIAL HUB - LAYOUT 126

10.8 RESIDENTIAL HUB – SECTION 127

10.9 RECYCLING HUB - LAYOUT 129

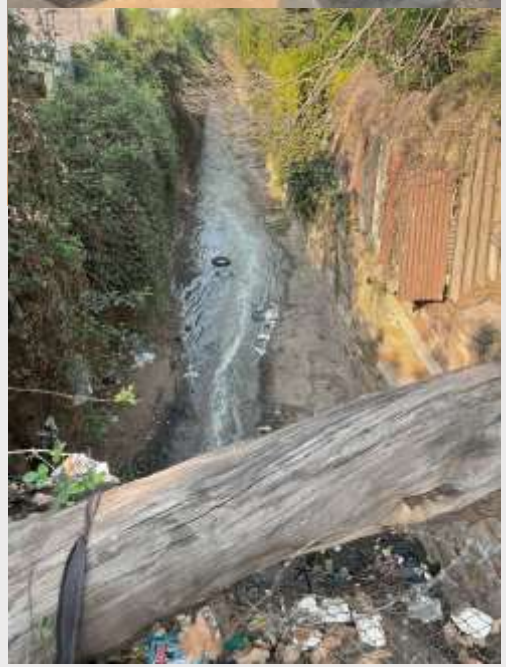
10.10 RECYCLING HUB – SECTION 130

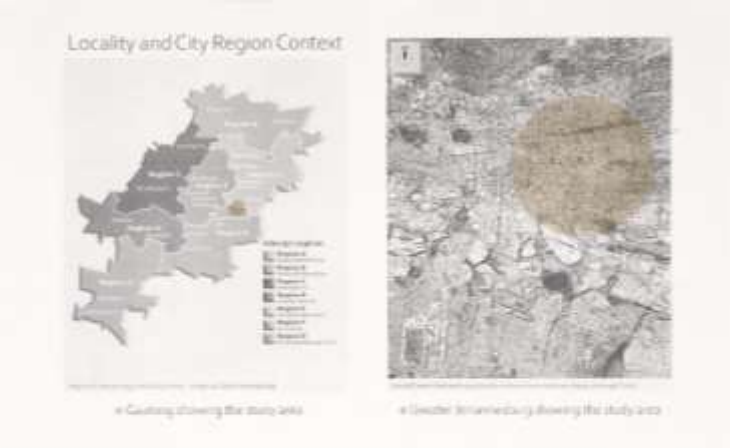


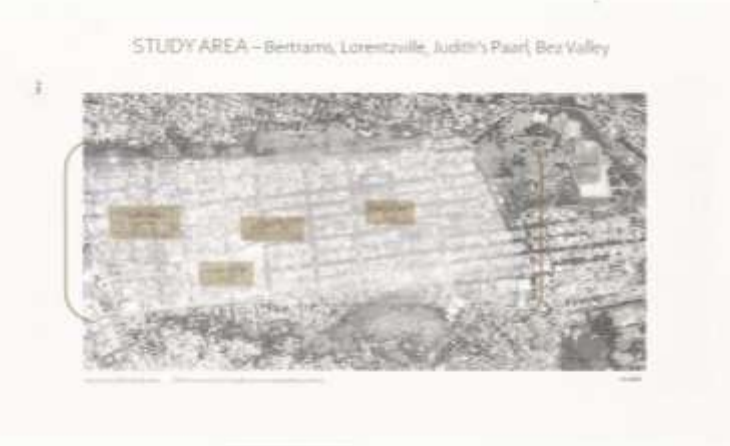
PRESENTATION IMAGES













DESIGN STORY

My design proposal will look at refocusing and reframing the Jukskei River as the connecter in the greater Bez Valley area. The existing creative and outreach nodes will be enhanced by intervention hubs placed along the valley. I will look at the interaction and linking of the environment, economic activity and community through the adoption of creative recycling practices. The primary objective will be to establish realistic intervention hubs that can inform the regeneration of existing, well located urban space in Johannesburg.

I aim to create an inner-city destination for people to explore and experience but more importantly to enhance the quality of life for the residents of the valley by providing access to employment opportunities, a safe route to connect to the city and transport hubs, and open spaces for relaxing, gathering and playing.

A strong focus on the river through to reframe it from being hidden and forgotten to being the focus of the series of linear parks and creative places. The river will be experienced from above, alongside and below. Safe well-lit walking, cycling, trolley routes along the base of the valley, with towers of light as markers, will strengthen the river's path. Historical and cultural reference along the route will be celebrated through the use of recycled building materials and the repurposing of existing places and space.

A movement route along the river will link various creative nodes, NGOs and existing open space, using the river's path as a binding thread. A tree lined journey winding along the edge of the river, with places to rest and contemplate the views of the city and the valley.

The route will meander along the base of the valley starting at the eye of the Jukskei River, where the springs that bubble up under Ellis Park find their way to daylight. My proposal ends in Bez Valley at the recycling centre but the river continues along the base of the Linksfield Ridge, through Alexandria, joining the Crocodile River meandering eastwards and eventually flowing into the sea near Xai Xai in Mozambique. My propose route could continue, becoming more of a trail, an organic experience transitioning from urban to rural.

I have focused on four hubs – a natural one, a creative one, a housing one and a recycling one. All have similar design principles and elements:

A tower structure incorporated into the movement route – freestanding or attached to an existing structure. The views from the base of the valley towards the city or eastwards are iconic – the skyline of the city centre, Ponte and the Yeoville water tower, with the Hillbrow tower in the background. Including elevated viewing points allows visitors and residents the opportunity to look up, down and along the length of the river. Towers would be made of recycled materials and would form sculptural structures demarcating the route.

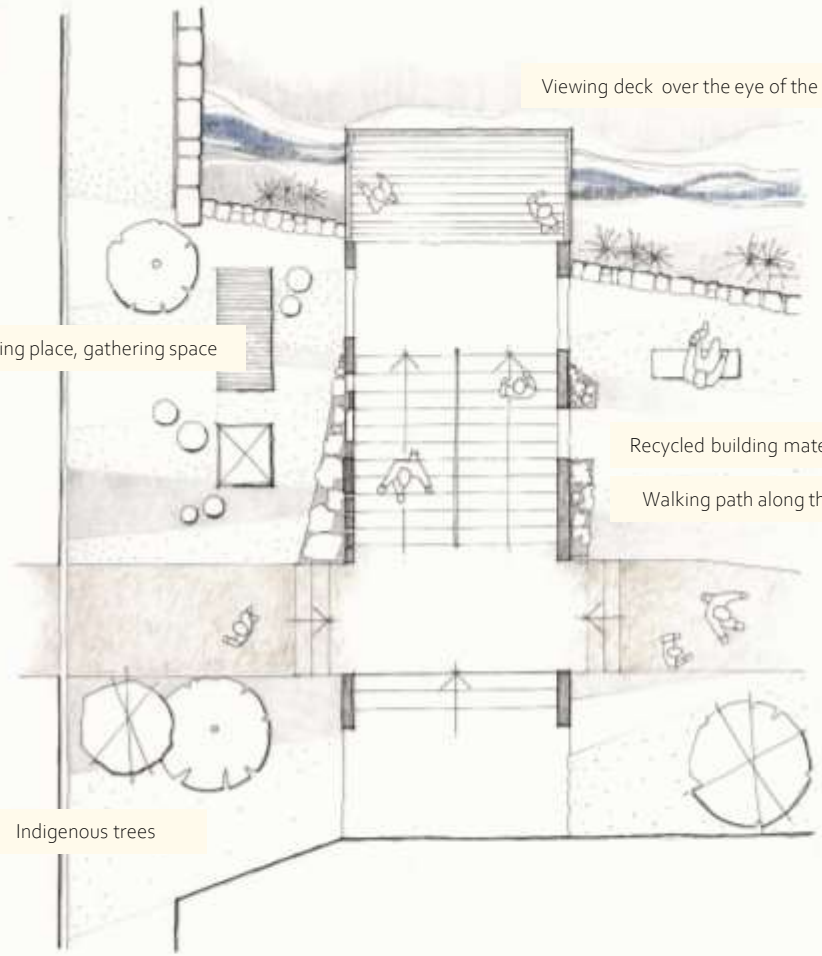
Accessible public space for traders to set up and have access to customers using the path.

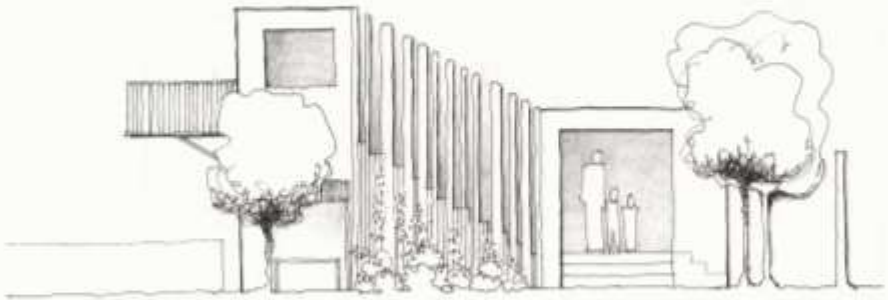
The route will be wide enough in most places for waste recyclers trolleys as well as pedestrians and cyclists.

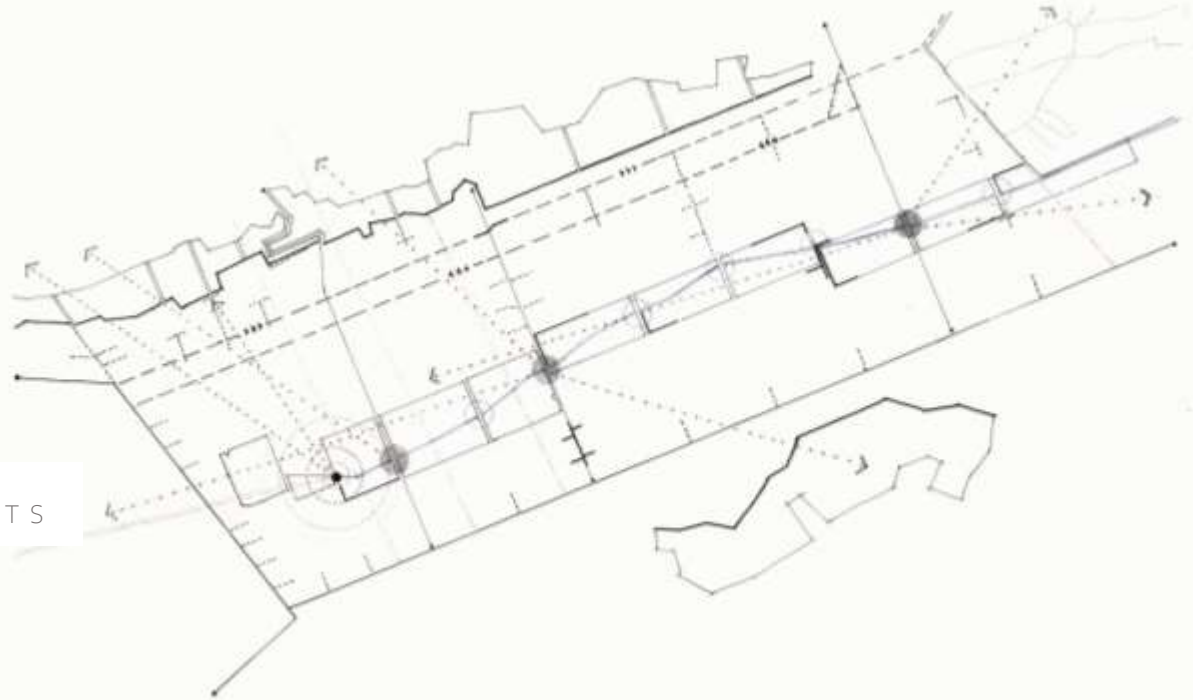
Graphics to demarcate route – a map at the start, wayfinding and information displays along the route, and a ribbon of words marked on the path that users can follow.

Junctions where the route crosses over a road will be elevated and painted , creating road art.

1

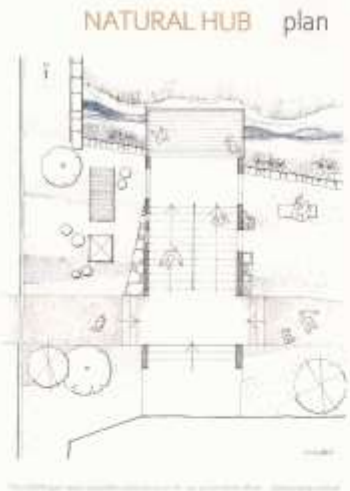






NATURAL HUB LAYOUT NTS

1



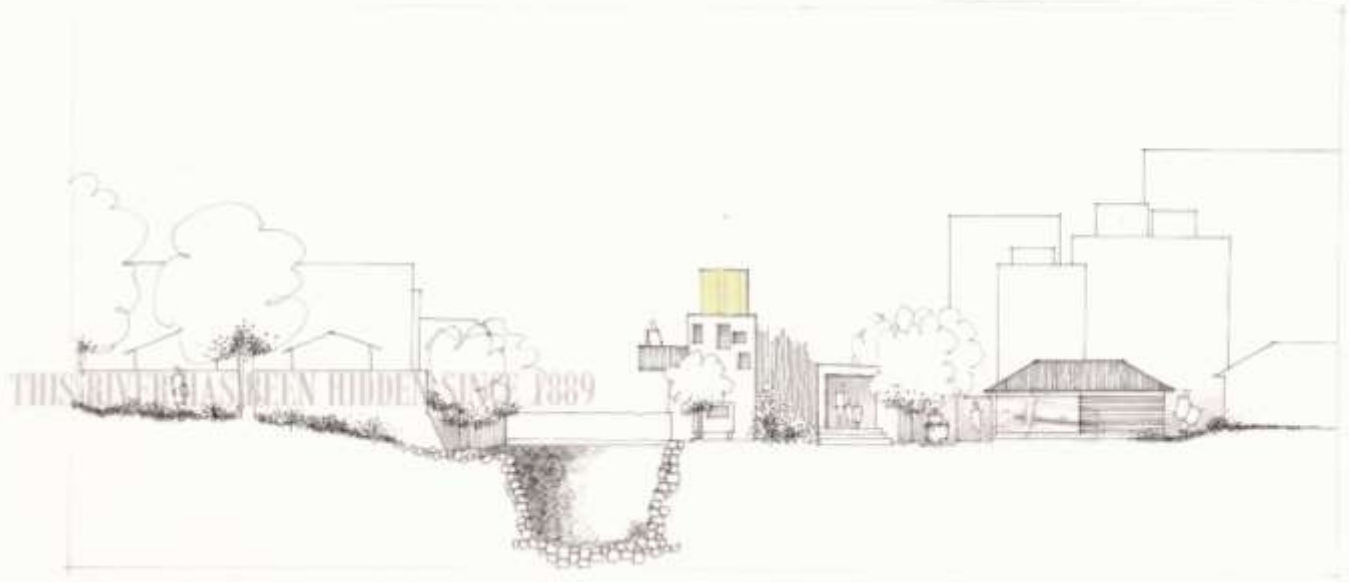












NATURAL HUB SECTION NTS

The natural hub marks the start of the proposed route and reframes the focus of the valley and its surrounds towards the river.

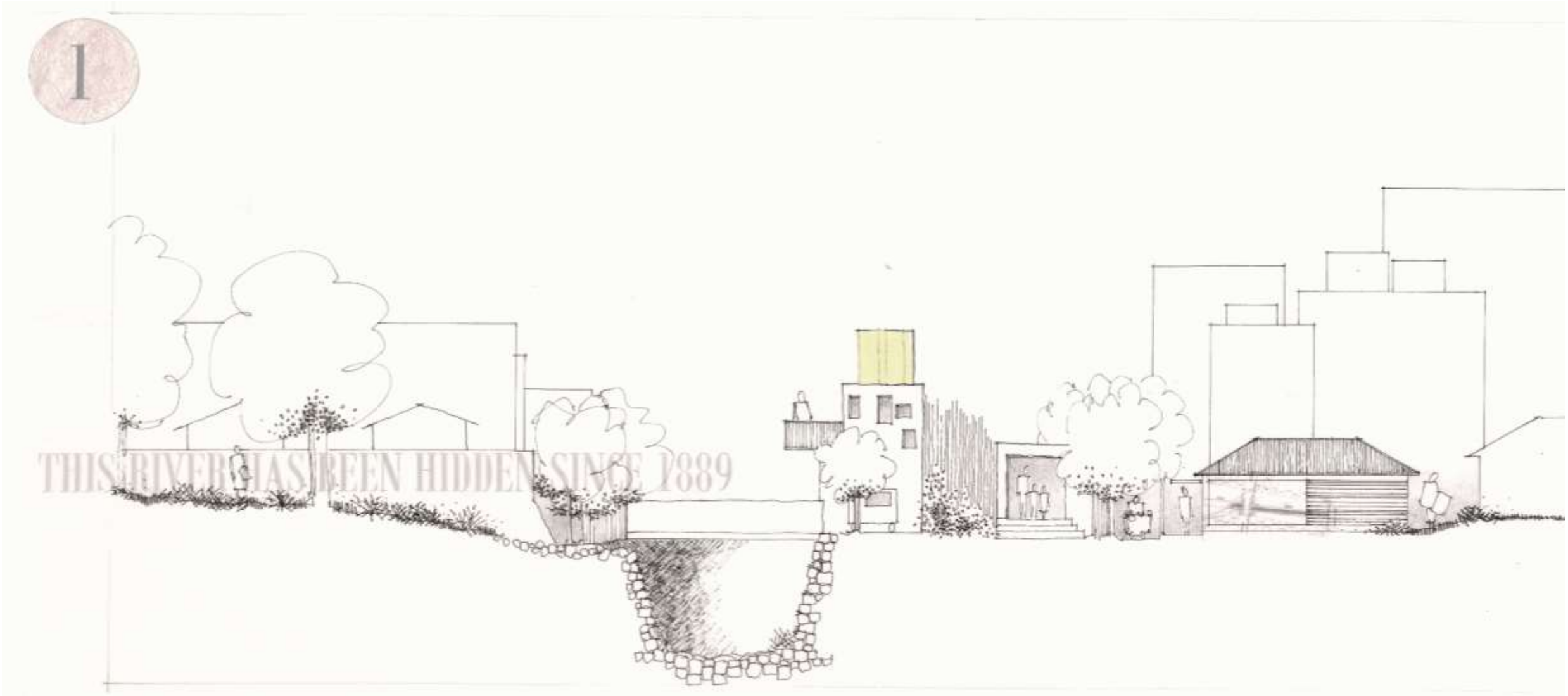
This hub is close to the Rea Vaya bus station and community centre which is currently under construction.

An information centre is proposed to share the history of the river and the importance of urban water systems.

The mosaic panel on the bridge is a recent community project to demarcate the eye of the Jukskei.

Water for the Future, one of the very active NGOs based in the valley, is committed to rehabilitating the river, and has been working on clearing the spaces around the eye of the Jukskei. WFTF employ residents from the area through the Presidential Employment Stimulus and the IDC – they are trained and upskilled through various programs. Invasive vegetation is cleared along the banks of the river and all material is recycled - saplings are used for woven screens and firewood logs are sold to generate income – a good example of circularity.

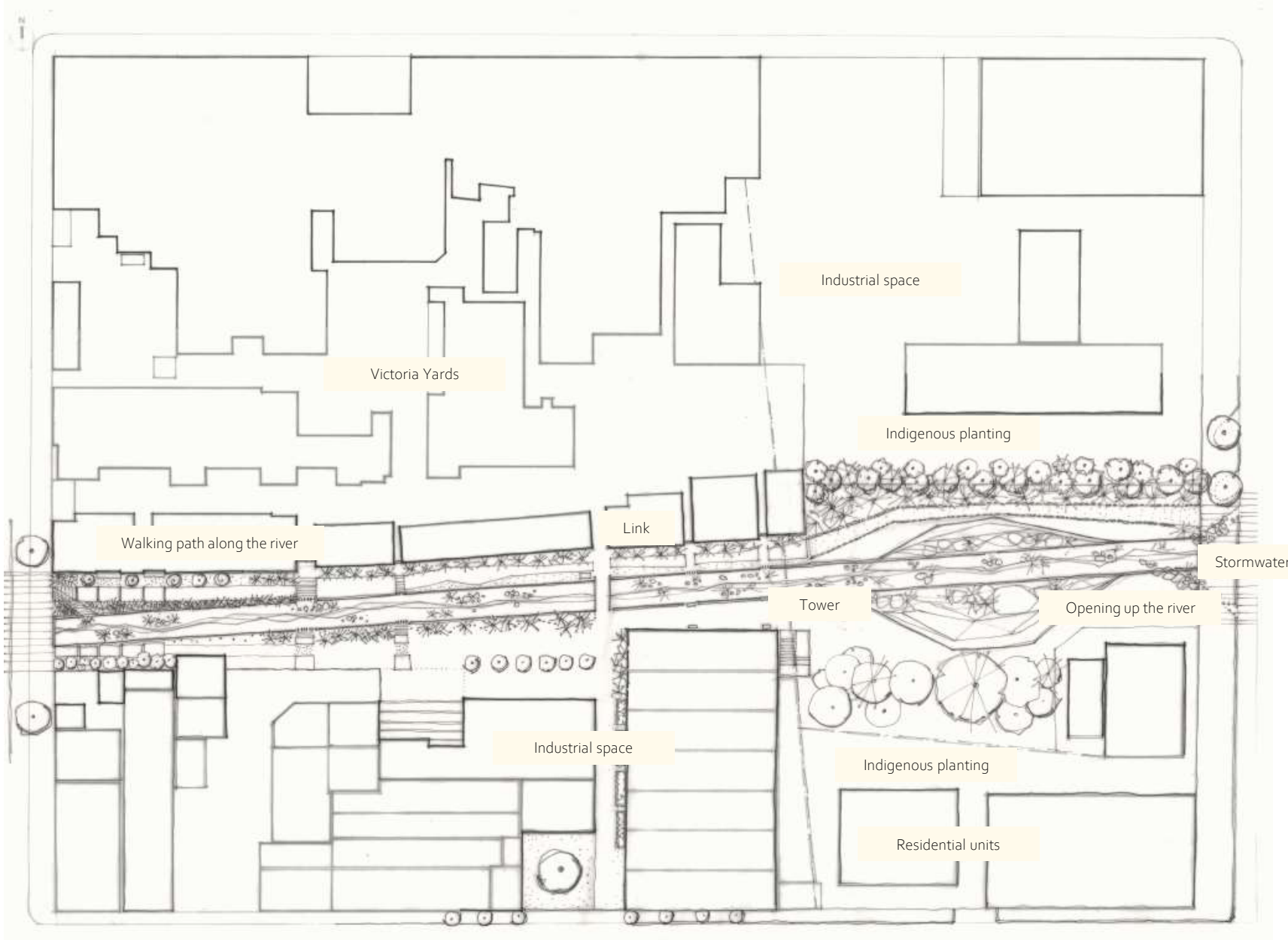
The proposed route will continue from this point past Nando's Head Office, over Viljoen Street towards the Creative Hub. The continuing presence of Nando's in the valley has been a catalyst for development and growth – many of the projects and outreach programs are funded and overseen by them.



NATURAL HUB SECTION

NTS

2

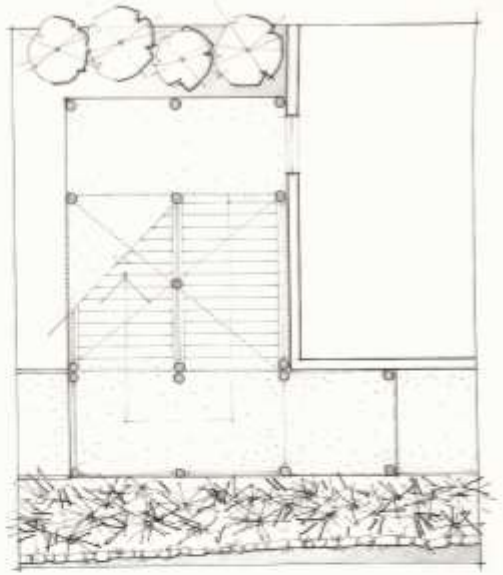


CREATIVE HUB LAYOUT

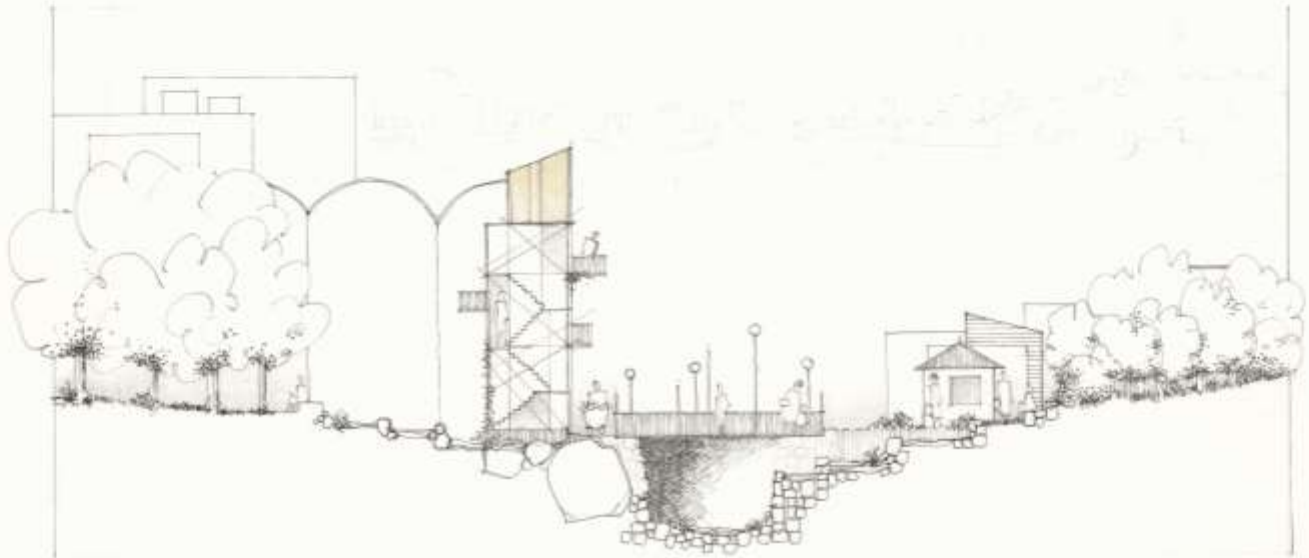
NTS

2





TOWER PLAN



CREATIVE HUB SECTION

NTS

The creative hub forms a link between the two Victoria Yards properties on the north and south banks of the river. Victoria Yards is a creative complex – home to artists studios, retail outlets and pop-up events. Many of the NGOs and programs active in the valley are based there.

An existing bridge links the two complexes.

The proposal includes the planting of Indigenous plants and trees, and green open spaces to provide a porous surface allowing water absorption rather than runoff during the rainy season.

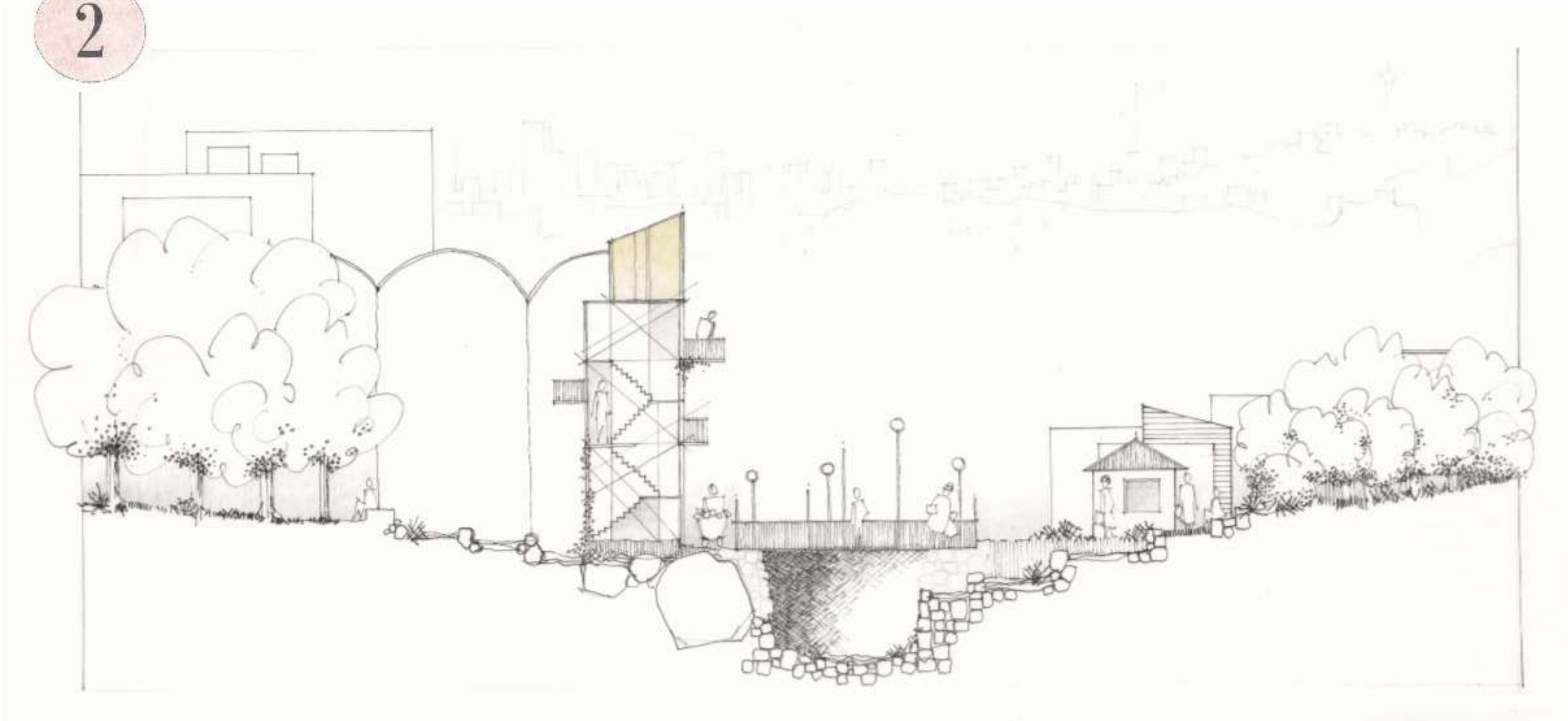
Rock lined storm water runoff channels from the street into shallow pools and then into the river acting as filters to stop litter from entering the water course.

A tower structure adds another dimension to the walking route and allows participants to view the route from above – a light feature at the top, to be made of recycled materials becomes a beacon in the dark.

Spaces to rest in the shade of trees and green gathering places to relax and play.

Open space for residents of adjacent apartments to use – no outdoor space or balconies in the converted buildings.

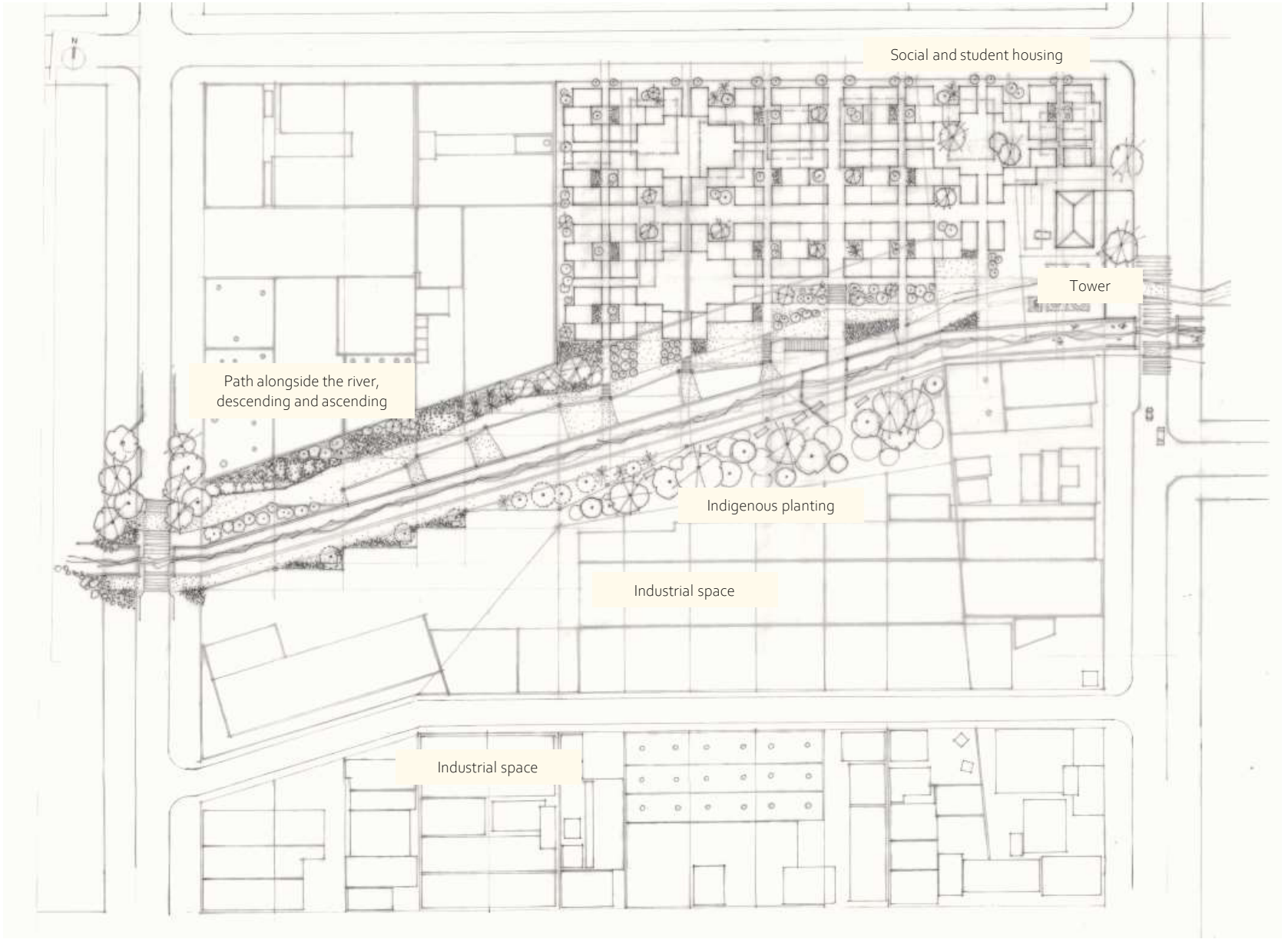
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CREATIVE HUB SECTION

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3



HOUSING HUB LAYOUT

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3

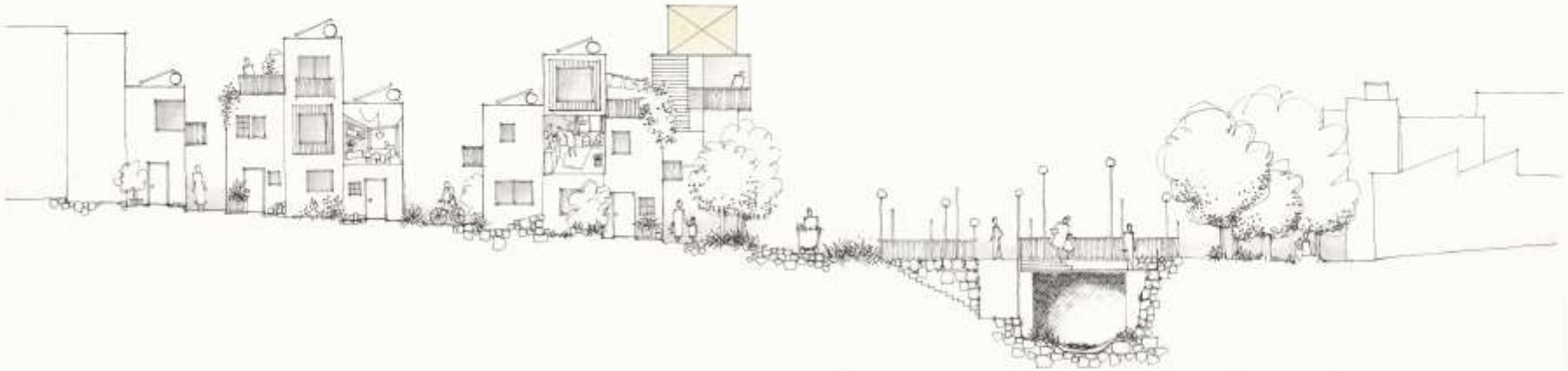












The close proximity of UJ and the Rea Vaya bus route makes the area an ideal location for student housing.

Student or social housing – clustered around open spaces, modules that can be used as singular or multiple units.

The inclusion of students adds to the dynamic, vibrant quality of an area – young people bring creative energy and innovation.

Interconnectedness, at the intersection of people and place, stitches and layers the fragments of memory that we all have. Treasuring what exists, repairing and caring and reinventing, finding new purpose for the discarded – I have expressed the memory of the houses that once occupied these sites – the fragments and ruined walls left as part of the public spaces.

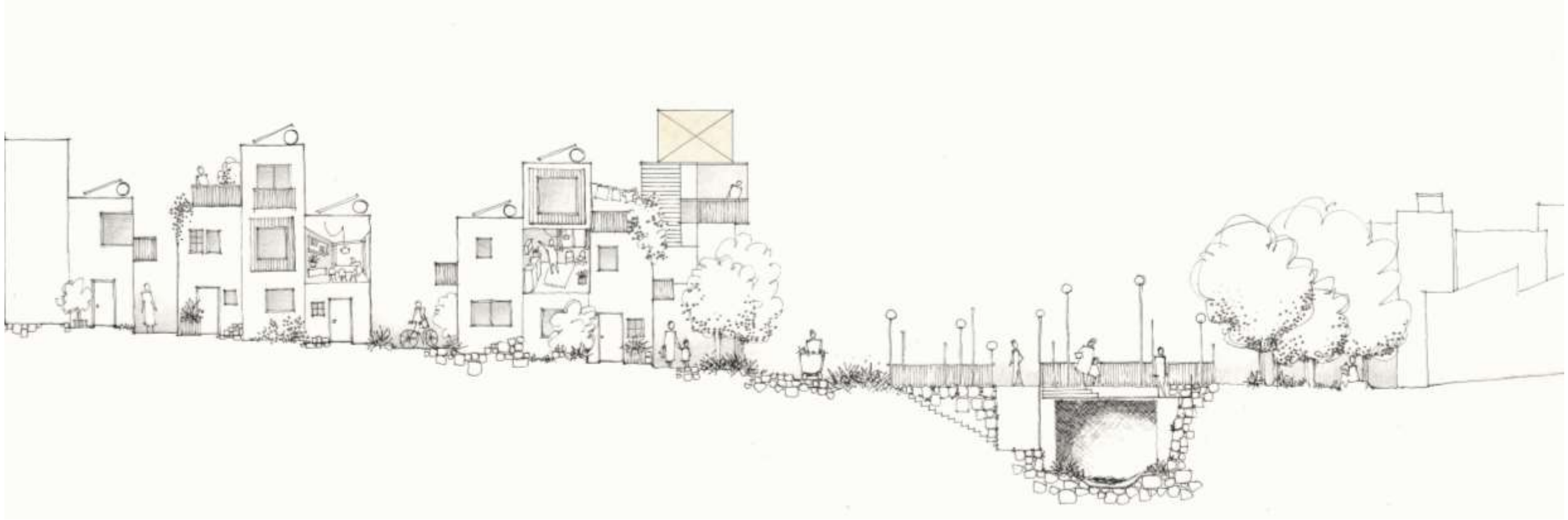
The path ramps down taking users to the level of the river and allowing an 'underground' experience. This route would need to be monitored as summer thunder storms sometimes result in dangerous flash floods, making the path unsafe.

An exploration tower allows residents and visitors to look down on the path and the river.

HOUSING HUB SECTION

NTS

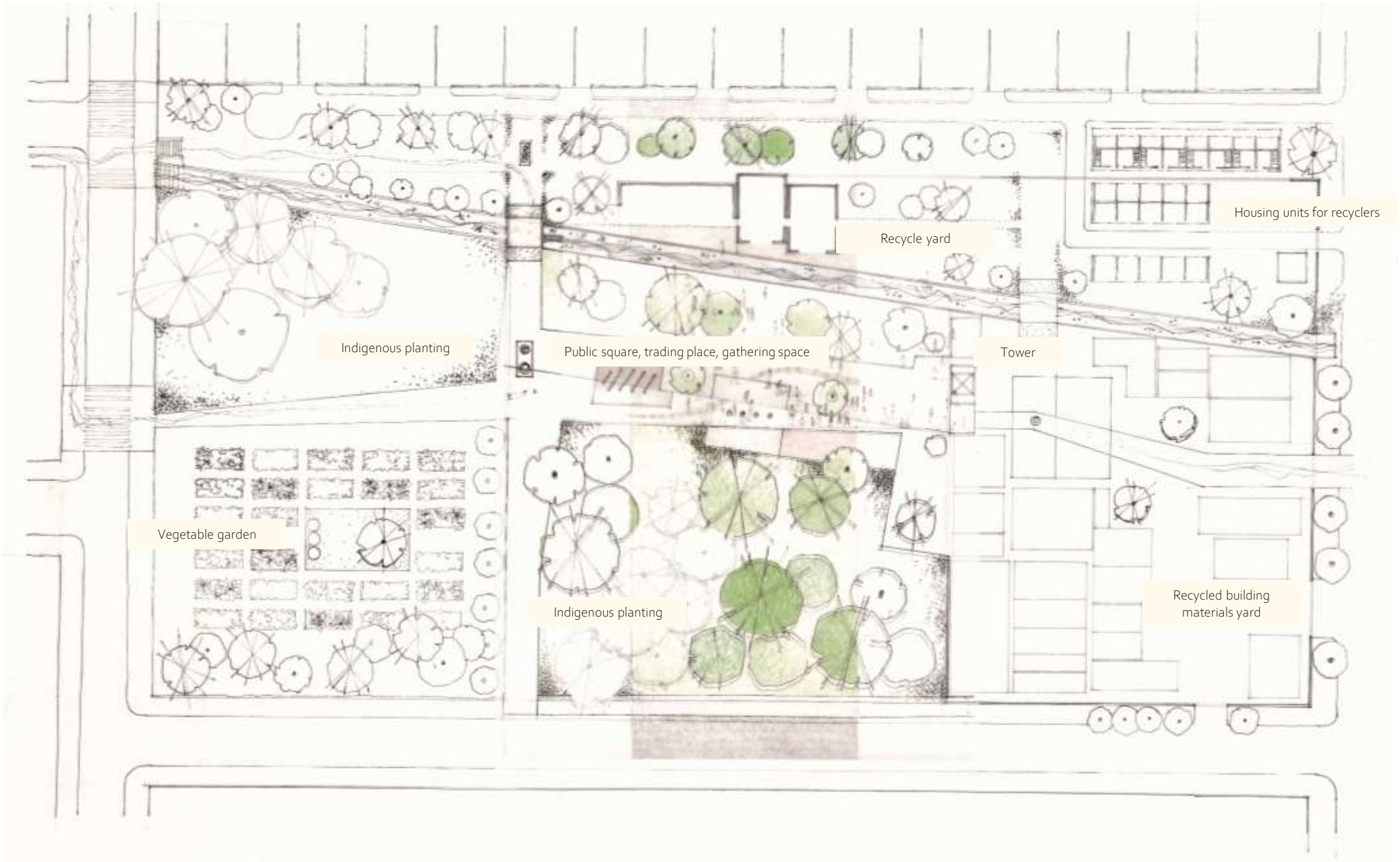
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HOUSING HUB SECTION

NTS

4

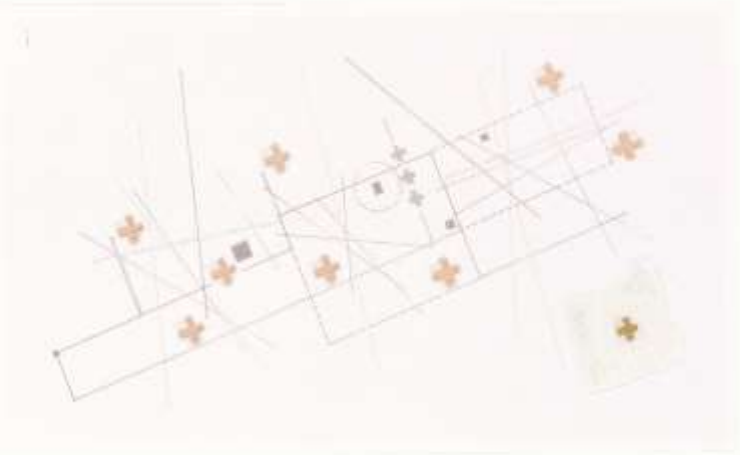


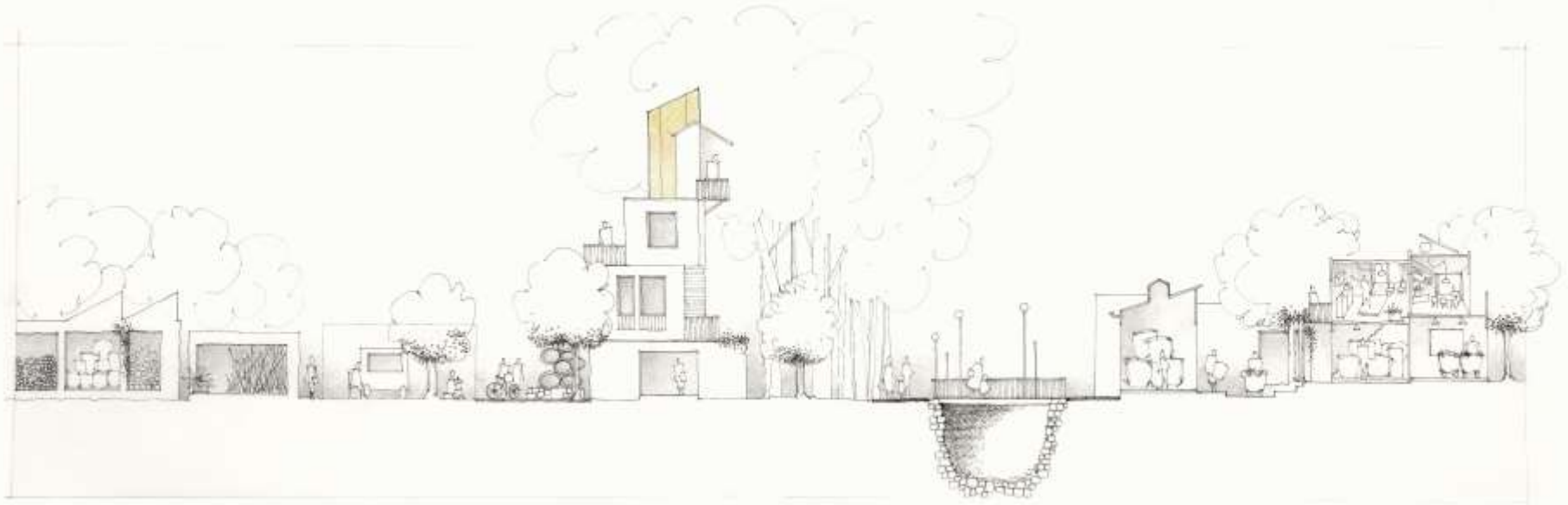
RECYCLING HUB LAYOUT

NTS

4







This hub proposes an expansion and extension of the existing LOCK facility, begun by a young couple passionate about the environment.

A recycling centre where goods can be sold to generate income, or swopped would include outdoor space for a market.

A drive through drop off point would make access to the centre easy.

Plastic waste sorting areas on ground level and residential units for waste recyclers above.

Moon Valley Studios would become a builder's yard – a space to recycle used building materials. A drop off facility, sorting and then selling or a donation system for residents in the valley. This would alleviate the need to dump building rubble on the pavement.

A tower would extend from an existing building – built using recycled materials.

Common elements used at all hubs – a path paved with recycled materials, trees, planting, public art pieces along the route.

Urban garden to be created near the recycle centre – cut flowers as a cash crop for urban farmers

Play area in the centre so that carers can watch children while they work in the garden.

RECYCLING HUB SECTION

NTS

4



RECYCLING HUB SECTION

NTS



chapter 11

REFLECTIONS

10.1 REFLECTIONS 133

10.2 CONCLUSION 134

10.3 A STRING OF CONNECTIONS 135

REFLECTIONS

My proposal explored the impact that increasing urbanisation, and the resultant ongoing generation of waste, has on the existing urban and natural environment of eastern Johannesburg. Recommendations and responses to these challenges were offered through a proposal that incorporated a multi-faceted and layered design approach using waste recycling, creative programs and residential densification to nurture community cohesion and improve quality of life for the residents of the area.

The research question *'How can recycled waste be transformed creatively to stimulate urban regeneration, and benefit communities living and working close to the city?'* led to a proposed pathway, an inner-city movement route along the Jukskei River, a linear thread of community space and places linking creative nodes that could initiate further regeneration along the valley's length – a journey that explores creative expression through sustainable urban development and inclusive growth.

'How can the existing NGOs and creative nodes in the valley, such as Victoria Yards and Nando's Head Office, be maximised for inclusive growth?' My research and observations examined nodes of development, in particular ones with a creative arts emphasis, investigating whether regeneration, and partial gentrification, results in community building, economic opportunity, cultural and creative expression, sustainability and dignity for all who live and work in the study area.

'How can creative recycling nurture and strengthen community cohesion and tolerance?' The intervention hubs introduced along the valley all incorporated communal activities – waste recycling, trading, walking and cycling, utilising accessible public space and increased connectivity between various NGOs and community facilities, both existing and proposed.

My proposal investigates the transformation of existing, well located urban space in greater Johannesburg, with the aim of creating resilient, livable neighbourhoods through the adoption of sustainable urban design practice.

Over the past year, I have seen gradual sparks of hope in the valley – brightly painted houses, wall murals, planting in the streets and clearing work being done along the river. By reimagining and reframing the river as it runs through the valley, this strategically positioned area could provide valuable lessons for the regeneration of other inner city zones desperately in need focussed attention.

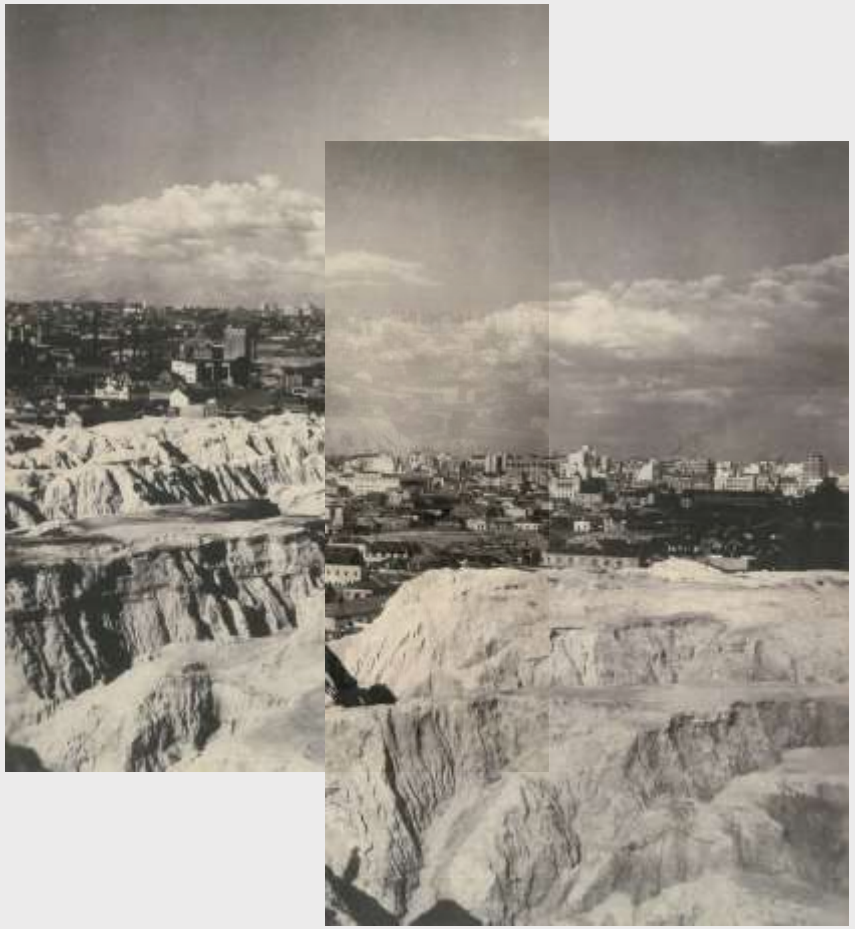


Figure 226: Collage adapted by author – original artist unknown



Figure 227: House in Bertrams with flowering bougainvillea (Photo by author)

CONCLUSION

Last year we were asked to consider our personal framework, the continuing thread that will define our identity as urban designers. The work that I have done this year has reaffirmed both my core principles – one of safety, the comfort of knowing that the place you occupy is secure – not just physically, but emotionally and mentally. To nurture, to comfort, to examine new ways of creating safe urban spaces.

The safety provided by infrastructure is crucial – maintained well-lit streets, and waste collection, the provision of institutions like schools and clinics, but the emotional security that having an adequate living space, economic opportunity and an inclusive community is equally important.

And the second – to see beauty in the every day, wherever I am.

Solam said to me at the beginning of the year that my design proposal could resemble the first sketch that I drew and it does. My instinctive scribbles and patterns have transformed into my design proposal – a string of interwoven connections.

'To never get used to the unspeakable violence and the vulgar disparity of life around you. To seek joy in the saddest places. To pursue beauty to its lair. To never simplify what is complicated or complicate what is simple. To respect strength, never power.

Above all, to watch.'

Arundhati Roy

A STRING OF CONNECTIONS

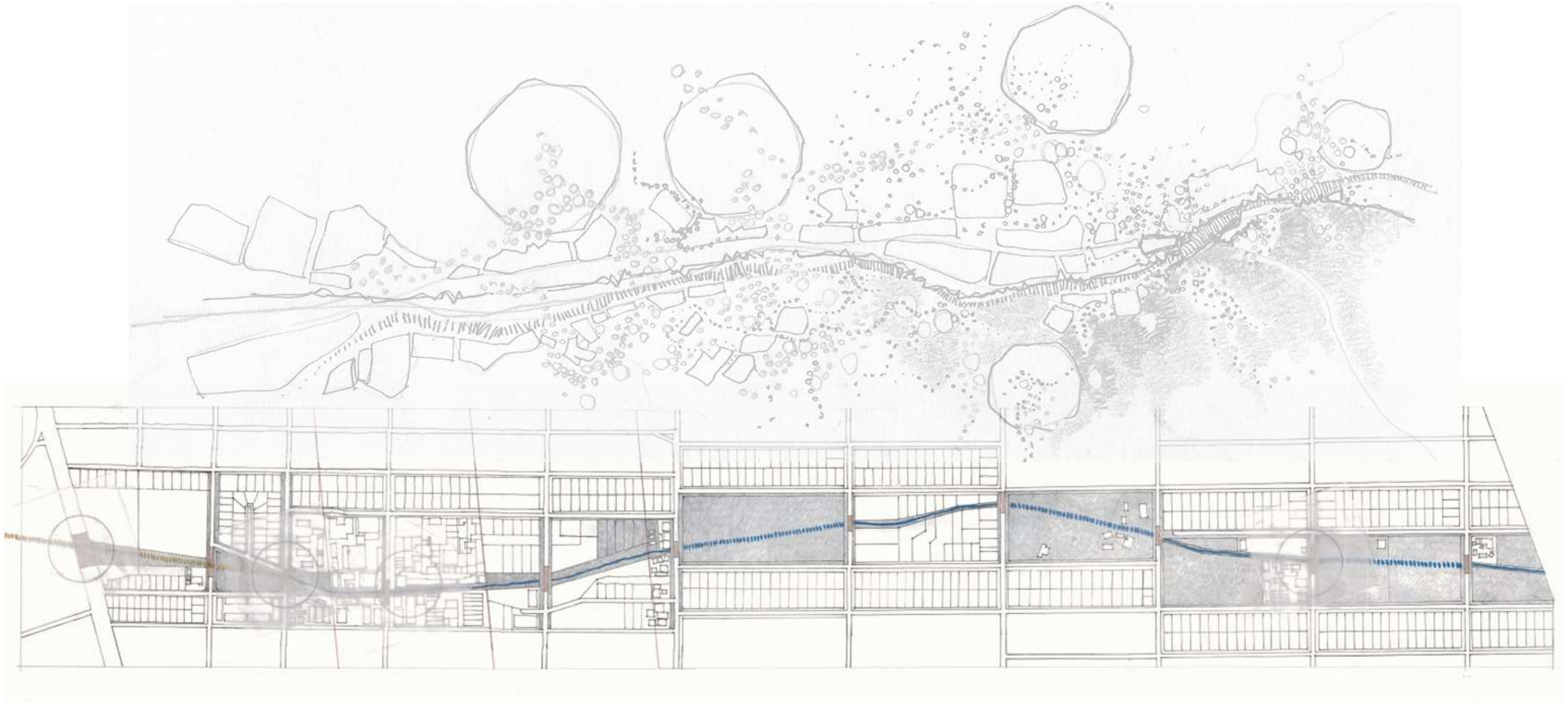


Figure 228: Hubs and towers along the thread of the river – first sketch and proposal *(Drawings by author)*

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