

# RE[CREATE]tion

Revealing the agency of recreational spaces in the township of Mamelodi East through architecture as a “dispositif” for the everyday

Denambaye Martine Demba

16070713

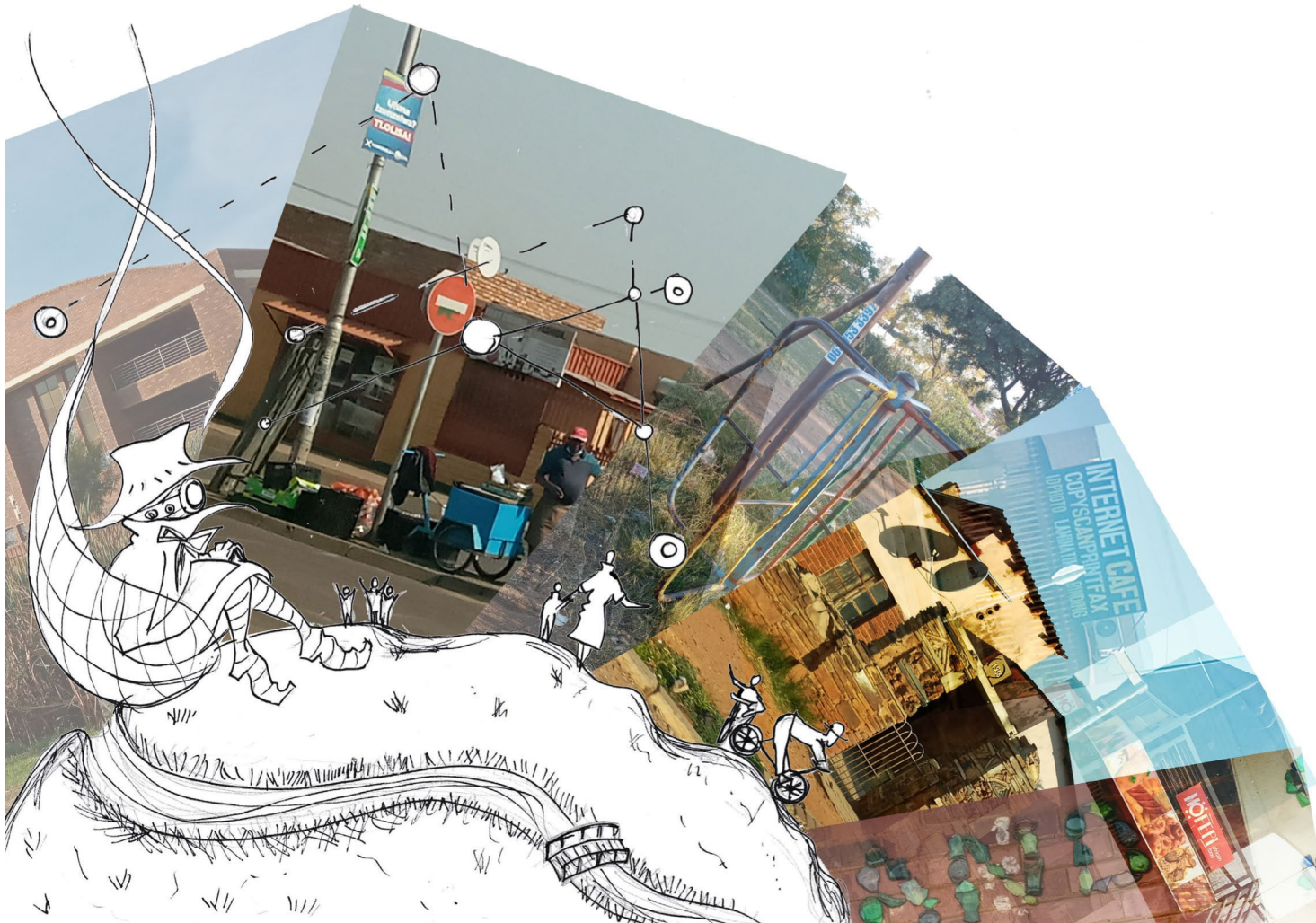




Figure a: Thandanani basketball court (Author 2021)

RE[CREATE]tion: revealing the agency of recreational spaces in the township of Mamelodi  
East through architecture as a “dispositif” for the everyday

by

Denambaye Martine Demba

Submitted in partial fulfilment of the requirements for the degree

Master of Architecture (Professional)

in the

Faculty of Engineering, Built Environment and Information Technology

University of Pretoria

November 2021

Course Coordinator: Prof. Arthur Barker

Study Leader: Paul Devenish

Editor: Debby Dewes

## DECLARATION

---

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

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

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



.....  
15/11/2021

## DEDICATION

---

To God, my Lord and Saviour who never fails me and whose joy is my strength.

To my family whom I love dearly, thank you for the never-ending support, love, joyful moments, encouragement and understanding. You all never cease to amaze and inspire me.

## ACKNOWLEDGMENT

---

To my old and the new friends I made along the way, thank you for your overflowing cheerfulness, humour and positive attitudes. To the fellows in studio, these last days in there will really be missed but I wish you all the best for the years to come.

Thank you to my supervisor Paul Devenish for the support and patience, for sharing your knowledge and for challenging me to dig a little deeper.

To all the lecturers and the staff of Boukunde, thank you for all the help and for making this year possible for us.

Finally, thank you to Thandanani Drop Inn Centre and SOS Children's Village for your generous hospitality, time and accommodation. You have truly inspired this dissertation.

## ABSTRACT

---

In South African townships, the realities of the scarcity of public spaces or poorly maintained and derelict recreational sites, are a continuous phenomenon. Additionally, the scars left from the apartheid spatial planning resulted in a perpetuated fragmentation in the urban fabric engendering further issues of public facilities' accessibility. This research-led dissertation, aims to rethink the function of public spaces in townships by acknowledging their multi-layered facets and their transcendence beyond mere services. Through a mixed-method of enquiry and a pragmatic approach, the study takes on a contextual discovery of the narratives and networks emerging from the sites; linking to the importance of socio-cultural sustainability in design. The results are then used to generate a 'dispositif'-architecture as a set of architectural explorations, using the polyvalence of the notions of the in-between and twin-phenomena to articulate recreational spaces at different scales (urban to human) in a holistic manner. The scope of the research is to explore ways to reveal the agency of recreational spaces in townships and their contribution towards urban cohesion. The study turns towards the regeneration of neglected existing cultural and recreational sites to transform them into places with meaning for people rather than afterthoughts of development schemes, so that they not only fit within their context but also showcase the diversity and values of the community using them.

**Key words:** *Mamelodi East, Township, Recreation, Public Space, Urban Cohesion, Socio-cultural Sustainability, "Dispositif", Mixed-method approach, Networks.*

## PROJECT DESCRIPTION

**PROGRAMME:** Outreach Precinct (hybrid recreational precinct)

**SITE:** Tsomo street, Mamelodi-YMCA and Rethabile Sports Grounds, Mamelodi East, Region 6, Pretoria, South Africa

**LATITUDE:** : 25,7095 S

**LONGITUDE:** 28,3716 E

**RESEARCH FIELDS:** Smart Cities and Neighbourhoods; Inhabitation of Place; Regenerative and Resilient cities

**CLIENT:** City of Tshwane (Department of Sports and Recreation)

**THEORETICAL PREMISE:** Networks, the “dispositif” and the twin-phenomena

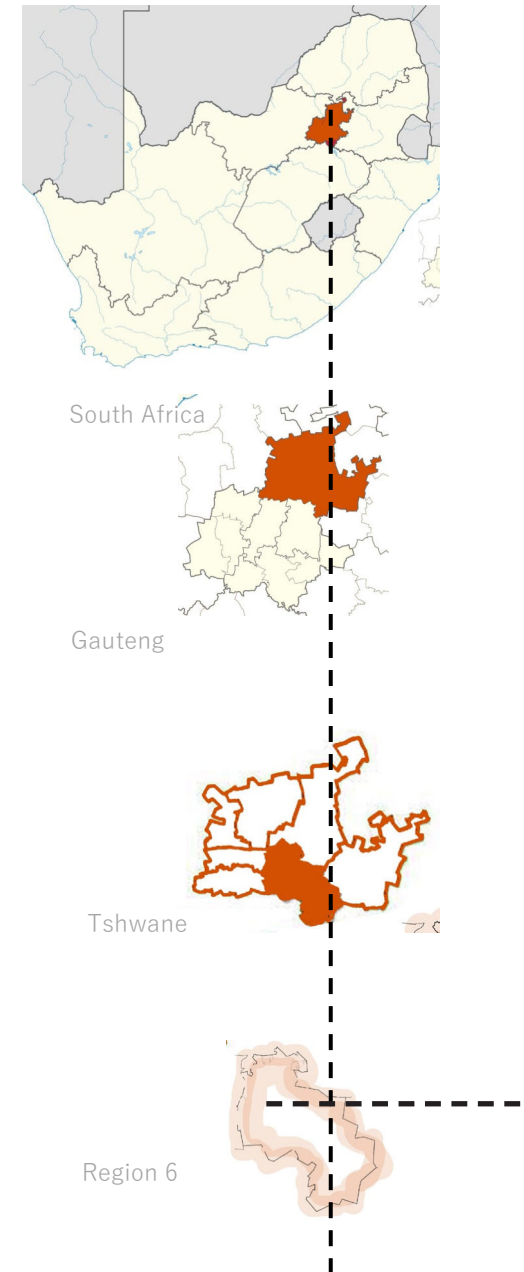
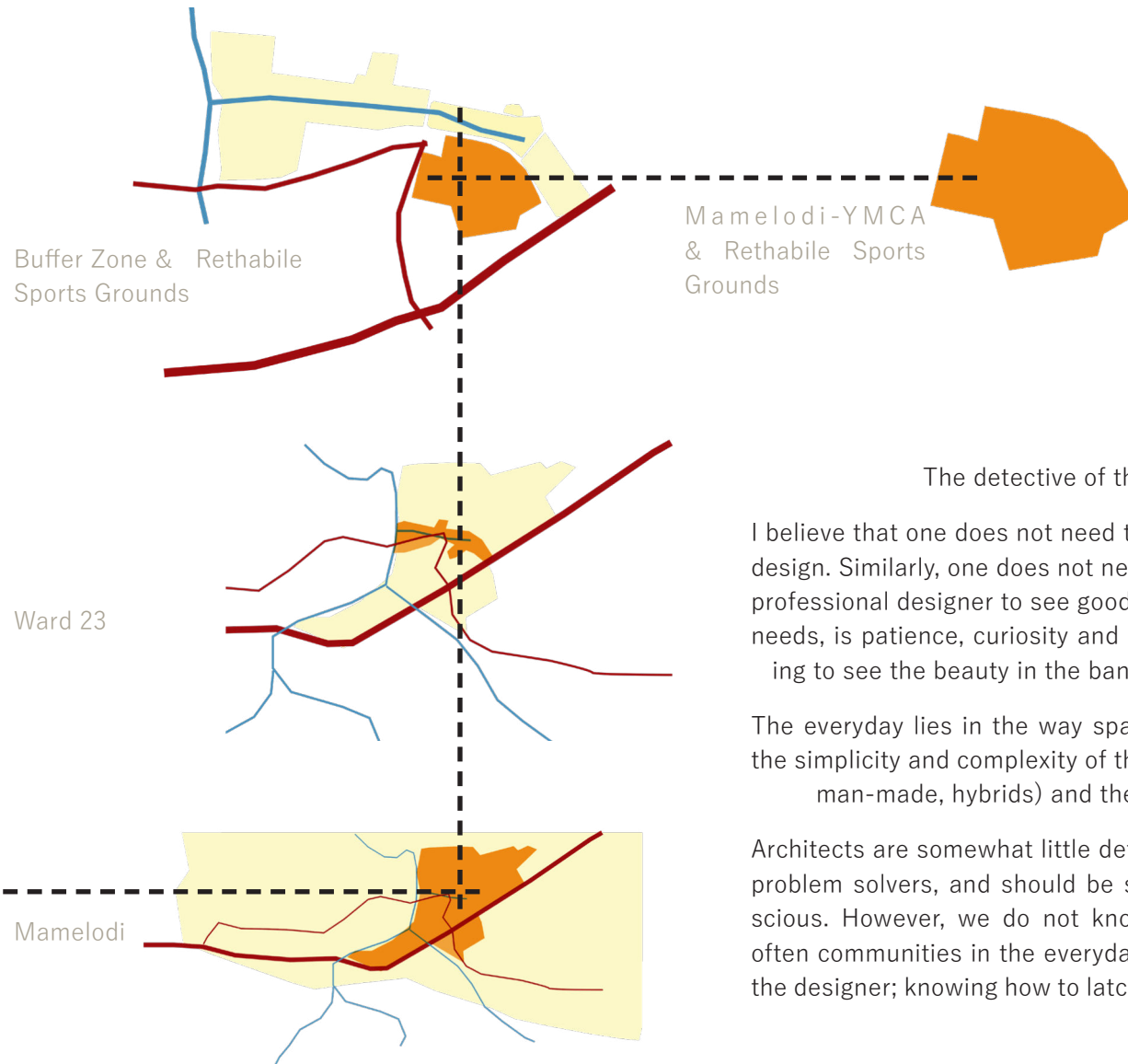


Figure b: Site location (Author 2021)





### The detective of the 'everydayscape'

I believe that one does not need to travel far to find design. Similarly, one does not necessarily require a professional designer to see good design. What one needs, is patience, curiosity and eyes that are willing to see the beauty in the banal of the everyday.

The everyday lies in the way spaces are occupied, the simplicity and complexity of thresholds (natural, man-made, hybrids) and the course of nature.

Architects are somewhat little detectives as well as problem solvers, and should be sustainability conscious. However, we do not know everything and often communities in the everyday provide cues for the designer; knowing how to latch onto these is the key.

# TABLE OF CONTENT

---

DEDICATION	iii	2.5 DELIMITATION AND LIMITATIONS	16
ACKNOWLEDGMENT	iv	<b>3- FOUND RECREATION. . . . .</b>	<b>19</b>
ABSTRACT	v	3.1 INITIAL INSIGHT INTO FINDINGS: the value of recreation	19
PROJECT DESCRIPTION	vi	3.2 DISCUSSION	22
TABLE OF CONTENT	viii	<b>FROM NETWORKS TO BRIEF</b>	<b>25</b>
DEFINITION OF TERMS	x	<b>4- PUBLIC SPACE PLURALITY OF MAMELODI . . . . .</b>	<b>26</b>
LIST OF FIGURES	xii	4.1 SITE ANALYSIS AND INFORMANTS	26
		4.2 NETWORK ANALYSIS AND DESIGN IMPLICATIONS	33
<b>INTRODUCTION: POSITION AND SITUATION</b>	<b>2</b>	<b>5- FACES OF RECREATION: A TYPOLOGY STUDY . . . . .</b>	<b>35</b>
<b>1- THE CASE FOR RECREATION . . . . .</b>	<b>3</b>	5.1 ACCESSIBILITY, SAFETY & SECURITY	36
1.1 DEMOCRATIC RECREATION: A CASE OF SUSTAINABLE BALANCE	3	5.2 MULTIFUNCTIONALITY, DIVERSITY & ACTIVITY	38
1.2 RECREATION AND THE CITY: A CASE OF VALUES, PRIORITIES AND SERVICE PROVISION	5	5.3 ANCHORAGE, SOCIAL DYNAMICS & IDENTITY	41
1.3 RECREATION TO THE PEOPLE: A CASE OF AGENCY, PERCEPTION AND TYPOLOGY	6	5.4 FINDINGS	43
1.4 THEORETICAL FRAMEWORK: towards an architecture that facilitates recreation	9	<b>6- CONCEPTUAL INVESTIGATION . . . . .</b>	<b>45</b>
<b>2- THE SEARCH FOR RECREATION . . . . .</b>	<b>11</b>	6.1 PLACE WHERE THE NETWORKS CONVERGE: THE MEETING POINT OF CITY AND HOUSE	45
2.1 THE "MAMELODI-SCAPE"	11	6.2 URBAN FRAMEWORK & BLOCK VISION: VISIONS FOR MAMELODI AND WARD 23	47
2.2 PROBLEM STATEMENT AND RESEARCH QUESTION	14	6.3 PROGRAMMES AND CLIENTS: implications of a public space project	54
2.3 AIM AND OBJECTIVES OF THE STUDY	14	6.4 CONCEPTUAL EXPLORATION: ITERATION 1	59
2.4 METHODOLOGY	16		

<b>SHAPING THE “DISPOSITIF(S)”</b>	<b>65</b>
<b>7- FROM THE PARTS . . . . .</b>	<b>66</b>
7.1 STREET AS A LANGUAGE AND WAYFINDING: ADDRESSING ACCESSIBILITY, SAFETY AND SECURITY	66
7.2 MICROSITES: ADDRESSING DIVERSITY, MULTIFUNCTIONALITY, LAND-USE AND ACTIVITIES	69
7.3 ‘COLLECTIVE ACTION’ AND CULTURE: ADDRESSING SOCIAL DYNAMICS, ANCHORAGE AND IDENTITY	72
<b>8- TO THE WHOLE: SYNTHESIS . . . . .</b>	<b>77</b>
8.1 STRUCTURAL INTEGRITY	77
8.2 FULL ENVIRONMENTAL STRATEGY	84
8.3 SERVICES (THIRD ENVIRONMENTAL STRATEGY)	85
<b>9- DESIGN RESOLVE . . . . .</b>	<b>90</b>
<b>CONCLUDING THE JOURNEY</b>	<b>108</b>
<b>10- RECREATION AND THE ARCHITECTURAL DISCOURSE . . . . .</b>	<b>109</b>
<b>11- REFERENCES . . . . .</b>	<b>112</b>
<b>APPENDICES . . . . .</b>	<b>118</b>

## DEFINITION OF TERMS

---

**Activity and land use:** the way activities are laid out and exercised through space. This may include the aspect of appropriation and the modification of land use.

**Agency:** actions, behaviours or interventions by people or things producing particular effects.

**Affordance:** capacity or characteristics of an object or element that indicate its use to a user.

**Anchorage:** spaces “enhanced through their location and the connection they establish”. This is an important notion for the dissertation’s investigation as it also presents the idea of networks in a tangible manner; the relationships with contexts and other interventions and how to “anchor” networks in space to create places.

**Continuity, mobility, accessibility and connectivity:** set of principals addressing the ease of access to an intervention, accessibility to resources or services, the links the intervention establishes with the greater landscape and circulation (meandering, exploration).

**Comfort, safety and security:** distinct terms but also closely knit; they mainly involve the feeling of reassurance and protection within spaces.

**Dispositif:** a device capable of facilitating an action or a process and connecting elements.

**Diversity:** coexistence at different levels. A variety of elements coexisting in a space: from demographics to

processes (ecological processes such as flora, fauna or water), human interactions, biophilia or the articulation of space to “afford” people to interpret their environment and get a sense of belonging.

**Epistemic diversity:** the notion of acknowledging the value of various sources of knowledge beyond “traditional academic” knowledge.

**Flâneur:** a city dweller who experiences and interprets the everyday while walking, lingering and appropriating the urban environment.

**Floodplain:** mostly flat terrain in close proximity of a water course.

**Identity:** “Representation of space linked to the relation between users or users and the space”.

**In-between:** notion encompassing thresholds and the language emerging at the meeting point of two spaces

**Informal settlements:** sporadic and unplanned settlements often created on the peripheries or in-between spaces of the city, usually unauthorized housing.

**Infrastructure:** the basic physical and systemic services and structures important for a living environment (roads, waste or water management etc).

**Leisure:** using free time for one’s enjoyment.

**Multifunctionality:** multiplicity of functions within a

space; one can think of it as mixed use.

**NPO:** Non-Profit Organisation

**Park:** open public space, often a green landscape intended for social and recreational purposes.

**Place-making/placemaking:** the multi-layered process of creating a good environment for people to enjoy in their daily lives.

**Play:** activity engaged in for enjoyment and recreation, can also be relevant to work

**Public spaces:** areas accessible to the public including streets, recreational facilities and open spaces (in this dissertation the term may be used interchangeably with recreational spaces).

**Open public spaces:** spaces with ecological and socio-economic functions, predominantly free of built forms and encompassing parks, streets, plazas and squares.

**Recreation:** a voluntary act, encompassing but not limited to leisure and play, usually executed during one’s free time. Its Latin roots: “to refresh” or to “restore” (McLean & Hurd 2015: 40).

**RDP Housing:** Reconstruction and Development Programme (RDP) housing scheme.

**Social dynamics:** the way interventions foster networking through providing platforms or occasions for people to gather or collaborate.

**Spatial Agency:** a design position challenging space production, knowledge and skill hierarchy by advocating bottom-up approaches and the collaboration between “experts” and other people.

**Sustainability:** the systemic and equitable management of resources (ecological, economic and socio-cultural) to avoid their complete depletion in the future.

**Townships:** Segregated suburbs created during apartheid, formerly for black occupation.

**Twin-Phenomena:** concept delving into the idea that opposite elements can mutually exist in the same space or form part of the same structure while forming a symbiotic relationship. Often linked to the notion of relativity.

**Urban cohesion:** urban identity and the physical form of the city along its planning processes, socio-economic and socio-cultural factors as it aims to challenge existing inequalities (Pinto & Remesar 2012)

**Urban sprawl:** the rapid, uncontrolled growth and spread of built elements (often housing) over large areas with no urban planning strategy.

# LIST OF FIGURES

---

Figure a: Thandanani basketball court (Author 2021). . . . .	ii	Figure 1.15: Pinto & Remesar (2012) urban cohesion best practice (Author 2021) . . . . .	10
Figure b: Site location (Author 2021) . . . . .	vi	Figure 2.1-2.2: People agencies in the Public realm (Author 2021). Tent used for events between houses and small garden along Tsako Thabo School' fence. . . . .	11
Figure 1.1: Quote on recreation broken down into concepts showing recreation's agency (Author 2021) . . . . .	1	Figure 2.3: Poster of cultural and community events in Mamelodi (Author 2021). Mamelodi is well known for its recreational endeavours such as its annual jazz festival, dances and its famous soccer team Mamelodi Sundown's (Breed 2012: 28). It is also home to heritage sites such as Solomon Mahlangu Square and the rondavels and hosted several important freedom struggle role-players. . . . .	11
Figure 1.2: Infographics of goal 11, the environment and public spaces (United Nations c2021) . . . . .	3	Figure 2.4: Housing , decorated fences and streetscape (Author 2021) . . . . .	11
Figure 1.3: White Paper 'on Sport and Recreation defining each recreation types. Above, the priorities of the "active nation" objective focusing on sports and its monofunctional approach (Author 2021). . . . .	4	Figure 2.5: Timeline of Mamelodi with a focus on recreation throughout the years. Adapted from the van der Waal collection 2000 (Author 2021). . . . .	12
Figure 1.4: (Above) Example of Tshawne's region 6 segregating organisation pattern (Author 2021) . . . . .	5	Figure 2.6: Map of Mamelodi with Ward 23 and its portions (Author 2021) . . . . .	13
Figure 1.5: (Bottom) Example of Nellmapius and Mamelodi housing zoning adapted from Tshwane RSDF 2018 (Author 2021). . . . .	5	Figure 2.8: Map showing the NPOs' locations in Ward 23 a (Author 2021) . . . . .	13
Figure 1.6 : Unspecified, public open space zoning in Mamelodi adapted from Tshwane RSDF 2018 (Author 2021). . . . .	6	Figure 2.7 Map of Ward 23 and the Khalambazo Buffer Zone with Rethabile Sports Grounds . . . . .	13
Figure 1.7: Dumping and glass recycling pile at Khalambazo, Mamelodi (Author 2021) . . . . .	6	Figure 2.9: Buffer Zone portions (Author 2021). The totality of the above will be referred to as the Buffer Zone. . . . .	13
Figure 1.8: Dumping in the Pienaars River, Mamelodi (Author 2021) . . . . .	6	Figure 2.10: Design by research methodology employed (Author 2021) . . . . .	15
Figure 1.9: Collage sequence of Home-based activities observed in Mamelodi Ward 23. Extension of services through wall breach, generational lending of spots near houses, paving appropriation, moving and stationary activities (Author 2021) . . . . .	7	Figure 2.11: Reseach timeline (Author 2021). . . . .	16
Figure 1.10: Mamelodi and Nellmapius amenities and typologies at distances of 500m radius (Author 2021) . . . . .	8	Figure 2.13: Instruments and data analysis (Author 2021) . . . . .	17
Figure 1.11: The function of the "Dispositif" in relation to networks (Author 2021). . . . .	9	Figure 2.12: Interview process (Author 2021) . . . . .	17
Figure 1.12: The affordance of Aldo van eyck's playgrounds (Withagen & Calijouw 2017). The number of ways to interpret structures . . . . .	9	Figure 3.1: NPO comparisons (Author 2021) . . . . .	19
Figure 1.13: (Collage) Affordance of everyday elements in Mamelodi (Author 2021) . . . . .	9	Figure 3.2:Thandanani Drop Inn Centre , matrix collage of activities and site and assets . . . . .	20
Figure 1.14: Spatial Agency, beyond the site, collaborations, epistemic diversity (Author 2021). . . . .	10	Figure 2.3:Thandanani Drop Inn Centre , matrix collage of activities and site and assets . . . . .	21
		Figure 3.4: Zoning map around the site, information from Tshwane GIS (Author 2021) . . . . .	22
		Figure 3.5: Voices from the volunteers (Thandanani focus group 1,2 2021) . . . . .	23

Figure 3.6: Finding the dispositif (Author 2021) . . . . .	24	Figure 5.7: FRIENDS CENTRE AT ANGKOR HOSPITAL FOR CHILDREN, Cambodia, Cook + Fox Architects, 2008 (Cookfox 2008)) . . . . .	38
Figure 4.1: Roadmap to the brief (Author 2021) . . . . .	25	Figure 5.8: SESC POMPEIA, São Paulo, Lina Bo Bardi, 1986 (Finotti & Kon S.a.). . . . .	38
Figure 4.3: Map adapted from the Tshwane Open Space Framework 2005 (Author 2021) . . . . .	26	Figure 5.9: WRITERS THEATRE, United States, Studio Gang, 2016 (Studio Gang 2016) . . . . .	39
Figure 4.2: Map adapted from Tshwane RSDF 2018 (Author 2021) . . . . .	26	Figure 5.10: RDP HOUSING, Mamelodi, South African Government, c. 1994 (Author 2021) . . . . .	39
Figure 4.4: Cultural mapping generated from interviews and photographs of sites (Author 2021).. . . .	27	Figure 5.11:MAGGIE'S CENTRES, Multiple architects, Europe and China, c1996 (Maggies S.a.) . . . . .	39
Figure 4.5: Site hydrology, information from SANBI c2021 and Open street maps c2021 (Author 2021) . . . . .	27	Figure 5.12: VPUU ACTIVE BOXES , Western Cape, VPUU, 2006-14 (VPUU 2017) . . . . .	40
Figure 4.6: Map of movement and transport around the site (Author 2021) . . . . .	28	Figure 5.13: SOS CHILDREN'S VILLAGES LAVEZZARIO COMMUNITY CENTRE, Illinois, Studio Gang Architects, 2008 (Studio Gang 2008) . . . . .	40
Figure 4.7: Map of activities, unsafe zones and boundaries around the site (Author 2021) . . . . .	28	Figure 5.14: CONNECT COMMUNITY , Houston, Gulfton, Sharptown, Purpose Built Communities (Connect community S.a.) . . . . .	40
Figure 4.8: Zoomed-in site analysis and opportunities (Author 2021) . . . . .	29	Figure 5.15: NIKE FOOTBALL TRAINING CENTRE SOWETO, Johannesburg, RUFProject &Luyanda Mpahlwa DesignSpaceAfrica , 2010 (Living Space 2013) . . . . .	41
Figure 4.9: Tabulated interview (information according to emergent themes and urban cohesion principles (Author 2021) . . . . .	30	Figure 5.16: THANDANANI DROP INN CENTRE, Mamelodi, 1970 (buildings)/ 2011 (current function) (Author 2021). . . . .	41
Figure 4.10: Activity mapping of the Buffer Zone (Author 2021) . . . . .	32	Figure 5.17: GIMNASIO VERTICAL (Vertical gyms), Venezuela, Urban-Think Tank c2001. . . . .	41
Figure 4.11: Social network analysis of gathered data (Author 2021) . . . . .	33	Figure 5.18: ALEXANDRA INTERPRETIVE CENTRE, Johannesburg, Peter Rich Architects, 2010 (Peter Rich Architects 2010) . . . . .	42
Figure 4.12: Extracting data from diagram (Author 2021) . . . . .	34	Figure 5.19: SOS CHILDREN'S VILLAGE, Mamelodi, 1985 (Author 2021) . . . . .	42
Figure 5.1: Typology card game explanation (Author 2021) . . . . .	35	Figure 5.20: LEA MOBILE LIBRARY, Foro Lindbergh (Parque México), Project for Public Spaces + Lugares Públicos, 2015 (Project for Public Space c2020) . . . . .	42
Figure 5.2: Urban cohesion characteristics diagrams (Author 2021) . . . . .	36	Figure 6.2: Corner shoe tailor {Author 2021} . . . . .	46
Figure 5.3: SUPERKILEN, Copenhagen, Topotek 1 + BIG Architects + Superflex, 2012 ( Baan 2012) 37	37	Figure 6.3: Ecomuseum explanation and characteristic diagrams (Chang c2015) . . . . .	48
Figure 5.4: HIGH LINE, New York, Diller Scofidio + Renfro, JamesCorner Field Operations ,1999-2011 (Baan 2009) . . . . .	37	Figure 6.4: Mamelodi Vision Combining "Small City and "Urban interior (Elke[Bitso]) (Author 2021; Niebuhr 2021) . . . . .	49
Figure 5.5: UVA EL PARAISO, Colombia, EDU - Empresa de Desarrollo Urbano de Medellín, 2015 (Arango et al. 2015)) . . . . .	37		
Figure 5.6: EDUCATIONAL CENTER 'MONTECARLO GUILLERMO GAVARIA CORREA', Colombia, EDU - Empresa de Desarrollo Urbano de Medellín ,2012 (Arango 2012) . . . . .	38		

Figure 6.5: Urban vision objectives, strategy and informants {Author 2021} . . . . .	50	Figure 6.26: Massing model (Author 2021) . . . . .	63
Figure 6.6: Evolution of the urban framework {Author 2021} . . . . .	51	Figure 6.28: Model 1:200 (Author July 2021) . . . . .	63
Figure 6.7: Development of urban vision (Author 2021) . . . . .	52	Figure 6.27: Massing model programme combinations (Author 2021) . . . . .	63
Figure 6.8: Development of urban vision (Author 2021) . . . . .	53	Figure 6.29: Site view model 1:200 (Author July 2021) . . . . .	64
Figure 6.9: Development of urban vision (Author 2021) . . . . .	53	Figure 6.30: Water mitigation exploration and vegetation regeneration(Author 2021) . . . . .	64
Figure 6.10: Unfolding the interconnected programmes in relation to 'actors' and needs (Author 2021) . . . . .	54	Figure 6.31: Scenarios(Author 2021) . . . . .	64
Figure 6.11: Development of programmes in relation to vision and site opportunities (Author 2021) . . . . .	55	Figure 7.1: The dimensions of the in-between (including the Twin phenomena) as observed on the works of Aldo van Eyck and Kisho Kurokawa (Author 2021) . . . . .	65
Figure 12: Early speculative accomodation schedule(Author 2021) . . . . .	57	Figure 7.2: Condensing the whole (Author 2021) . . . . .	67
Figure 6.13: Stakeholders and client timeline (Author 2021) . . . . .	58	Figure 7.3: Paying attention to the natural landscape and its regeneration (Author 2021) . . . . .	67
Figure 6.14: Linking places and creating platforms of spaces (Author 2021) . . . . .	59	Figure 7.4: Landscape and architectural elements for wayfinding - gabion towers 'arrows' (Author 2021) . . . . .	67
Figure 6.15: Platform 1 . . . . .	59	Figure 7.5: Condensing the whole (Author 2021) . . . . .	67
Figure 6.16: Platform 2, 3 and 4 combined . . . . .	59	Figure 7.6: Paying attention to the natural landscape and its regeneration (Author 2021) . . . . .	67
Figure 6.17: Placing all anchors and satellites (Author 2021) . . . . .	60	Figure 7.7: Testing the amphitheatre as part of the street corner (Author 2021). (Top) closed for private performances and (bottom) open for public performances and (right) sound experience . . . . .	68
Figure 6.18: Adding the Trails and ways and desire lines . . . . .	60	Figure 7.9: Reformed plans with building facing north (Author 2021) . . . . .	68
Figure 6.21: Replacing spots with platforms, combining all (Author 2021) . . . . .	61	Figure 7.8: Gabions as directional device and space creation (Author 2021). . . . .	68
Figure 6.19: Linking all places (Author 2021) . . . . .	61	Figure 7.10: Pavilion maquettes depicting occupation of 'microsites' thresholds - movement, niches and sustainable services incorporated into the design (i.e., rainwater harvesting, planters etc). Design devices include: stairs, corridors, stoeps, roofs, change of levels . . . . .	69
Figure 6.20: Extracting the axes (Author 2021) . . . . .	61	Figure 7.11: Shop-front threshold, local stones and storage as display (Author 2021) . . . . .	71
Figure 6.23: Sights lines exploration platform 5 (Author 2021) . . . . .	62	Figure 7.12: The threshold that "breaths" . . . . .	71
Figure 6.22: Sights lines exploration platform 4 (Author 2021) . . . . .	62	Figure 7.13: Material experimental cube, testing transparency, colour and shading as devices (Author 2021) . . . . .	72
Figure 6.24: Sights lines exploration workshop (Author 2021) . . . . .	62		
Figure 6.24: Sights lines exploration workshop (Author 2021) . . . . .	62		
Figure 6.25: Sights lines exploration workshop above(Author 2021) . . . . .	62		



Figure 7.14: Socio-economic material palette . . . . .	73	Figure 8.10: Collage exploring the parts of the model: detached façade, outdoor rooms, shelf-windows, light-wells, bottle in walls, hammocks, boardwalks as architecture(Author 2021) . . . . .	82
Figure 7.15: Comparing bottles' colour and heights (Author 2021) . . . . .	74	Figure 8.11: 1:100 Sketch section through admin block, garden and seed bank (Author 2021) . . . . .	83
Figure 7.16: Bottle modules in relation to other traditional construction materials (Author 2021). . . . .	74	Figure 8.12: 1:50 sketch section through Maker's space and afterschool centre (Author 2021) . . . . .	83
Figure 7.17: Testing bottle combinations in relation to cuts, colour and sizes (Author 2021) . . . . .	75	Figure 8.13 : Sefaira daylight speculations (Author 2021) . . . . .	84
Figure 7.18: Building experiment, miniature bottle walls , mortar, brick and DIY glass bricks (Author 2021) . . . . .	75	Figure 8.14: Water strategy diagram (Author 2021) . . . . .	85
Figure 7.19: Sketches exploring glass in construction: 1) glass brick, 2) light device, 3) glass aggregate (Author 2021). Research found that the use of green glass in concrete can and reduce the amount of in concrete (Afshinni 2019). Green glass decreases the risk of silica . . . . .	76	Figure 8.15: Water strategy explanatory map(Author 2021) . . . . .	86
Figure 7.20: Sketches of collective action scenarios (plastic bags and clay) (Author 2021) . . . . .	76	Figure Calculations and sketch details . . . . .	86
Figure 7.21: Recycled plastic hammock . . . . .	76	Figure 8.16: Water strategy wetland and suspended wetland flow diagram (Author 2021). . . . .	88
Figure 7.22: Glass louvres example (Boukunde) for recycled glass montage (Author 2021) . . . . .	76	Figure 8.17: Green Star summary report (Author 2021) . . . . .	89
Figure 7.23: Recycled clay tiles (). Example of shading device . . . . .	76	Figure 9.2: Programme layout 3D (Author 2021). . . . .	90
Figure 8.1: First plane (Author 2021) . . . . .	77	Figure 9.1: Site plan at 1:500 . . . . .	90
Figure 8.2: Second plane (Author 2021) . . . . .	78	Figure 9.3: Greenscaping (Author 2021). . . . .	91
Figure 8.3: Third plane (Author 2021). . . . .	78	Figure 9.4 : Wayfinding and greenscape. How landscape, shops, outdoor rooms and receptions orientate users (Author 2021) . . . . .	91
Figure 8.4: Forth plane (Author 2021). . . . .	78	Figure 9.5: Parts of the precinct (Author 2021) . . . . .	92
Figure 8.6: Sketch plan First Floor at 1:200 (Author 2021) . . . . .	79	Figure 9.6: Ground Floor Plan at 1:200 . . . . .	93
Figure 8.5: Sketch plan Ground Floor at 1:200 (Author 2021) . . . . .	79	Figure 9.7: First Floor plan at 1:200 . . . . .	94
Figure 8.7: Sketch plan Roof level at 1:200 (Author 2021). . . . .	79	Figure 9.8: Section AA at 1:50. . . . .	95
Figure 8.8: 1:50 section model through afterschool centre (Author 2021). Brick columns, timber, glass bricks . . . . .	80	Figure 9.9: Section BB at 1:50. . . . .	97
Figure 8.9: Technology concept, the meeting of every planes, ventilation and daylighting - see p. 77-78 for colour-coding (Author 2021) . . . . .	81	Figure 9.10: Section 1: 20 of afterschool centre. . . . .	98
		Figure 9.11: Detail library seat at 1: 10 . . . . .	98
		Figure 9.13: Detail eave and planter seat at 1:5. . . . .	99

Figure 9.14: 3D details of afterschool walkway elements . . . . .	100
Figure 9.15: Section model 1:20, the urban room . . . . .	101
Figure 9.16: Section model 1:20, the outdoor library. . . . .	102
Figure 9.17: Section model 1:20, the raingarden/ braai . . . . .	103
Figure 9.19: Diaporama concept, technology planes, ventilation and daylighting . . . . .	104
Figure 9.18: Section model 1:20, Maker's space stoep. . . . .	104
Figure 9.21: Afterschool centre outdoor room (Author 2021) . . . . .	105
Figure 9.20: Inside the Afterschool centre (Author 2021) . . . . .	105
Figure 9.22: Maker's space's east façade - ramp and sandpit playground with view into storage (Author 2021) . . . . .	106
Figure 9.23: Afterschool centre first floor passage . . . . .	106
Figure 10.1: A conclusion - architecture , public spaces and 'dispositifs'; a pluridisciplinary and poly-directional approach. How 'dispositifs' blur the lines of what is produced and what produces- a shift in power-scaling (Author 2021) . . . . .	108
Figure 10.2: Building sharing its façade with the public and the city (Author 2021). . . . .	109
Figure 10.2: (suite)Building sharing its façade with the public and the city (Author 2021) . . . . .	110
Figure 10.3: From simple to over-designed threshold (Author 2021) . . . . .	111
Figure 10.4 : Diagram summary, the spectrum while designing for recreational spaces (Author 2021) . . . . .	111

