



CATALYTIC NEXUS

*Architecture as an interconnected resilience hub towards
independence and self-efficiency in a complex socio-ecological
landscape*

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PROJECT SUMMARY

DISSERTATION TITLE

Catalytic Nexus: Architecture as an interconnected resilience hub towards independence and self-efficiency in Melusi informal Settlement

SITE LOCATION

Melusi Informal Settlement, Abandoned quarry

PRIMARY PROGRAMME

Community food scheme and basic services

RESEARCH FIELD OF STUDY

Urban Citizenship

CLIENT

City of Tshwane Municipality

YEAR CO-ORDINATORS

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KEYWORDS

Quarry, Informal settlement, Socio-ecological landscapes, biophilic architecture, co-design, participatory design

DECLARATION

In accordance with Regulation 4(e) 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 or other qualification.

1. I understand what plagiarism is and am aware of the University's policy in this regard.
2. I declare that this mini dissertation is my own original work. Where other people's work has been used (either from a printed source, Internet, or any other source), this has been properly acknowledged and referenced in accordance with departmental requirements.

Jua Greeff



Date

30-07-2021

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Abstract

Since independence in 1994, informal settlements in urban areas became a regular phenomenon with an exponential growth pattern and a lack of effective, proactive town planning. This phenomenon is described as an *Urban Crisis*. Informal settlements in South Africa are the result of spatial injustice and an imbalanced political atmosphere and therefore described as complex landscapes. Informal settlements exist most of the time on vacant land, inadequate for development such as abandoned post-industrial landscapes, wetlands, floodplains, and near rivers which are high-risk areas and contain environmental disadvantages which is the case with the Melusi informal settlement consisting of three post-industrial quarry holes.

Complex landscapes such as informal settlements ask for a shift in the mainstream architectural practices and due to the rapid urbanization, post-industrial abandoned landscapes have the potential of being rehabilitated and functioning as healthy public spaces especially in informal conditions.

The mini dissertation aims to develop a framework when working in informal conditions with layered complexities of socio and ecological nature. Through understanding the application of co-design and participative workshops this dissertation aims to apply architecture to find a (nexus) or mediation between the socio and ecological landscapes towards independent and self-functioning communities of growth, this dissertation aims to apply architecture to function as the backbone of the community and by using didactic methods will empower the community towards self-improvement. Due to the current alienation of the natural quarry hole the architecture aims to transform the quarry from object to resource in a vulnerable community towards independent from external resources.

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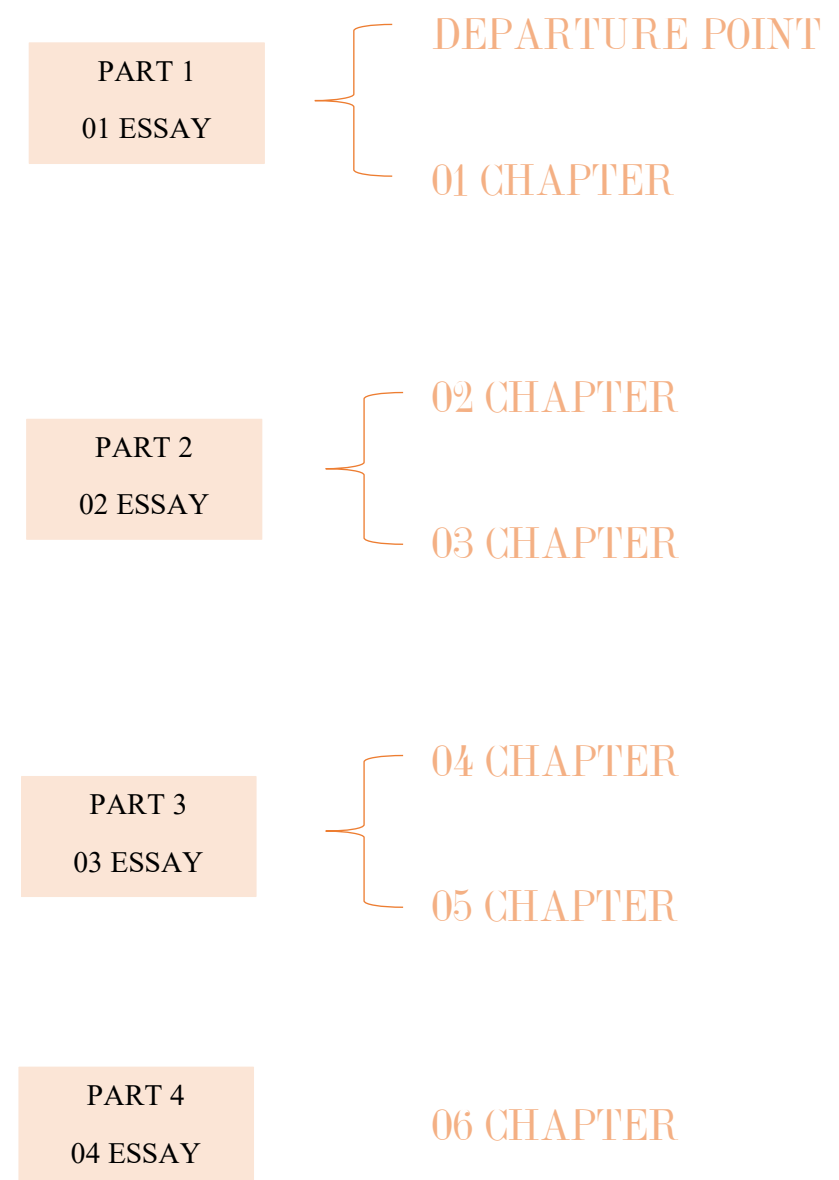


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COVID-19 PANDEMIC TAUGHT ME AN IMPORTANT LIFE LESSON.



“You can’t wait until life isn’t hard anymore before you
decide to be happy and do what you love”.

- Nightbirde

DEPARTURE POINT

CATALYST

(momentum)

NEXUS

(bridge)

“...urban areas suffering from stagnation or decline, we should place a high priority catalytic development that can cause more development.” (Sternberg 2002:33)

“An important connection between the parts of a system or a group of things.”
(Cambridge Dictionary n.d)

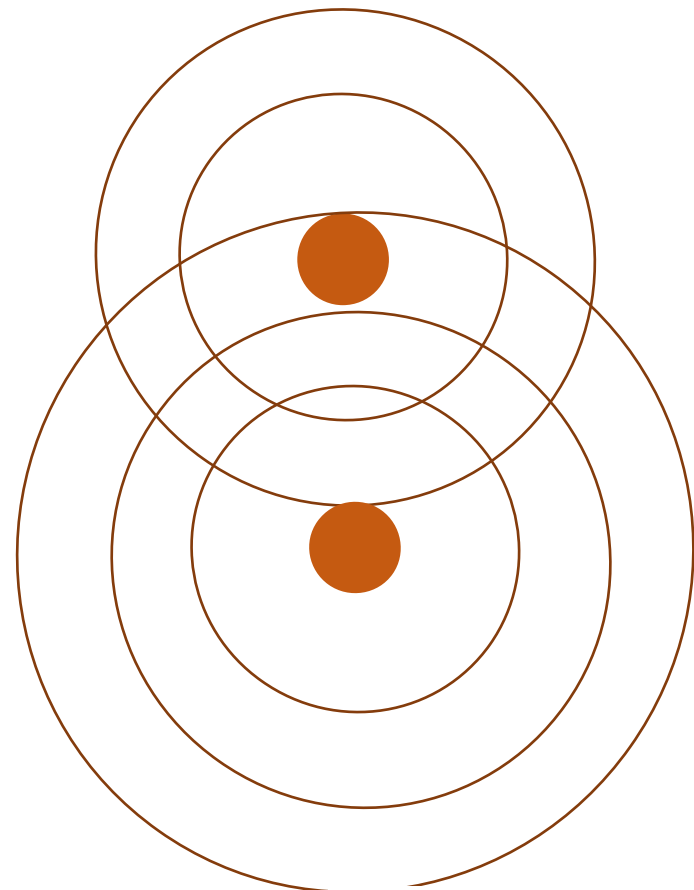


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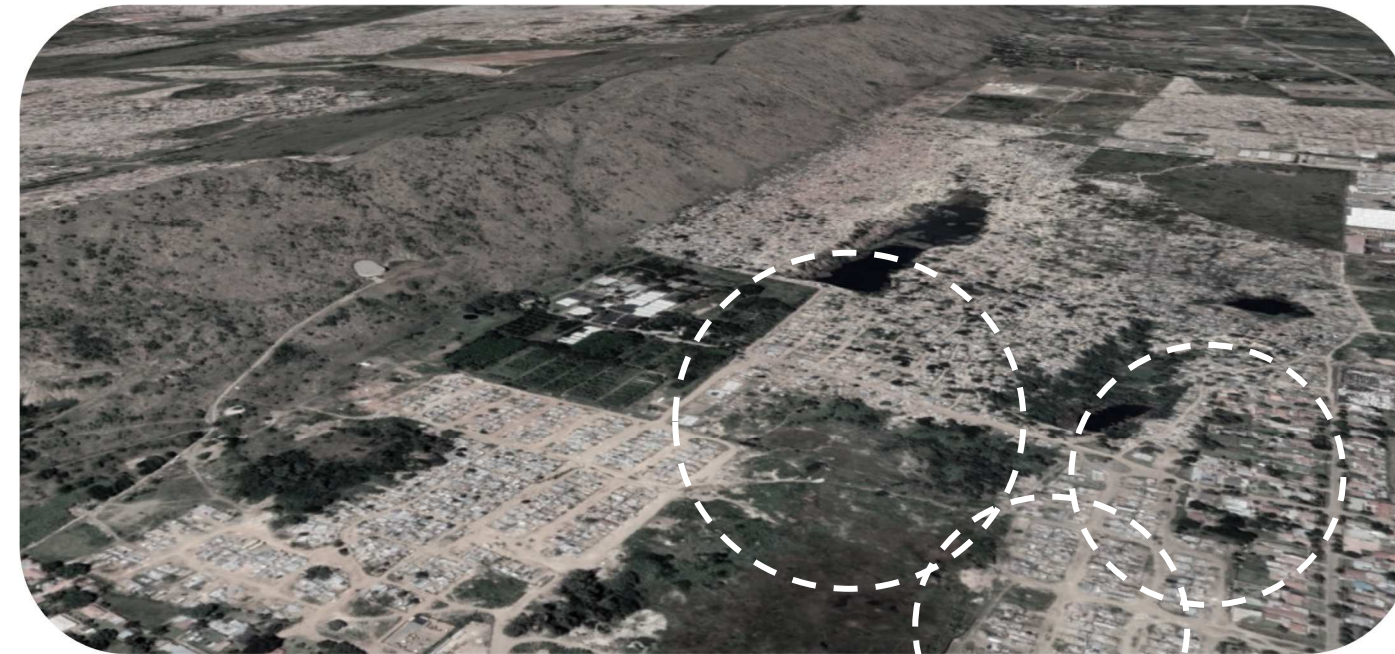
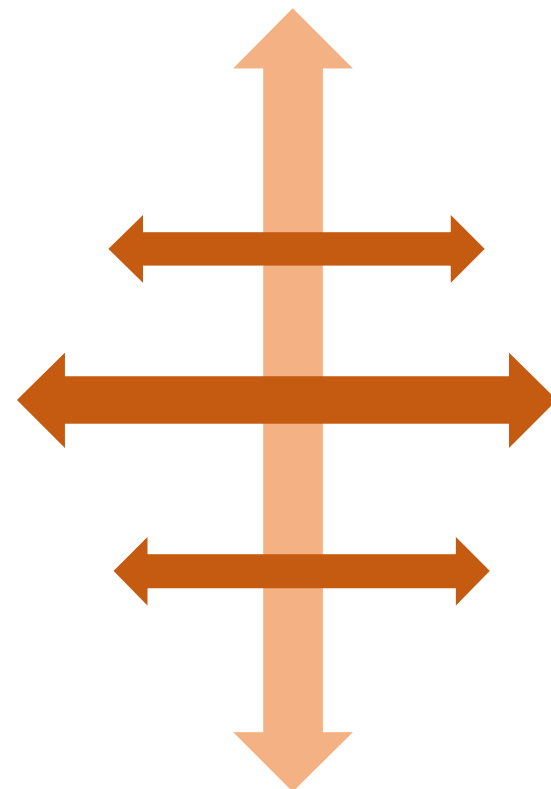


Figure ii: Google Earth image of Melusi and the three quarry holes on site (Google Earth 2021).

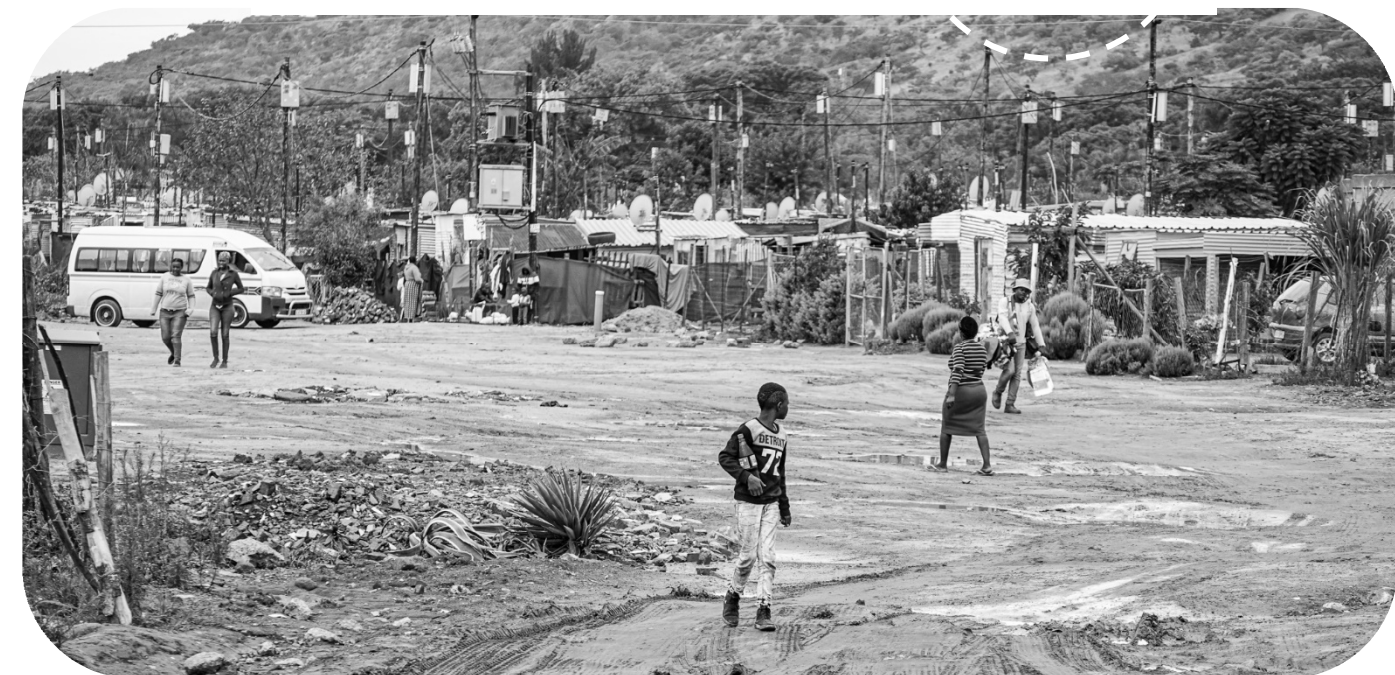


Figure iii: Landing images of Melusi informal settlement (Zorn 2021).



Figure iv: Landing images of Melusi informal settlement and a need for waste removal services (Zorn 2021).

VOICE OF MELUSI

“People of Melusi needs dignity” - CEO NGO NEW SCHOOLS FOR HOPE

“Children sometimes play with used condoms” - COPC RESEARCHERS

“Melusi needs a park where people can just be” - COPC researcher

“Children play where the pigs do their Thing” - CEO NGO NEW SCHOOLS FOR HOPE

“At 7:00 in the mornings people look down and do their thing on the rubbish dump” - CEO NGO NEW SCHOOLS FOR HOPE

“Children play on the dumping sites” - COPC RESEARCHERS