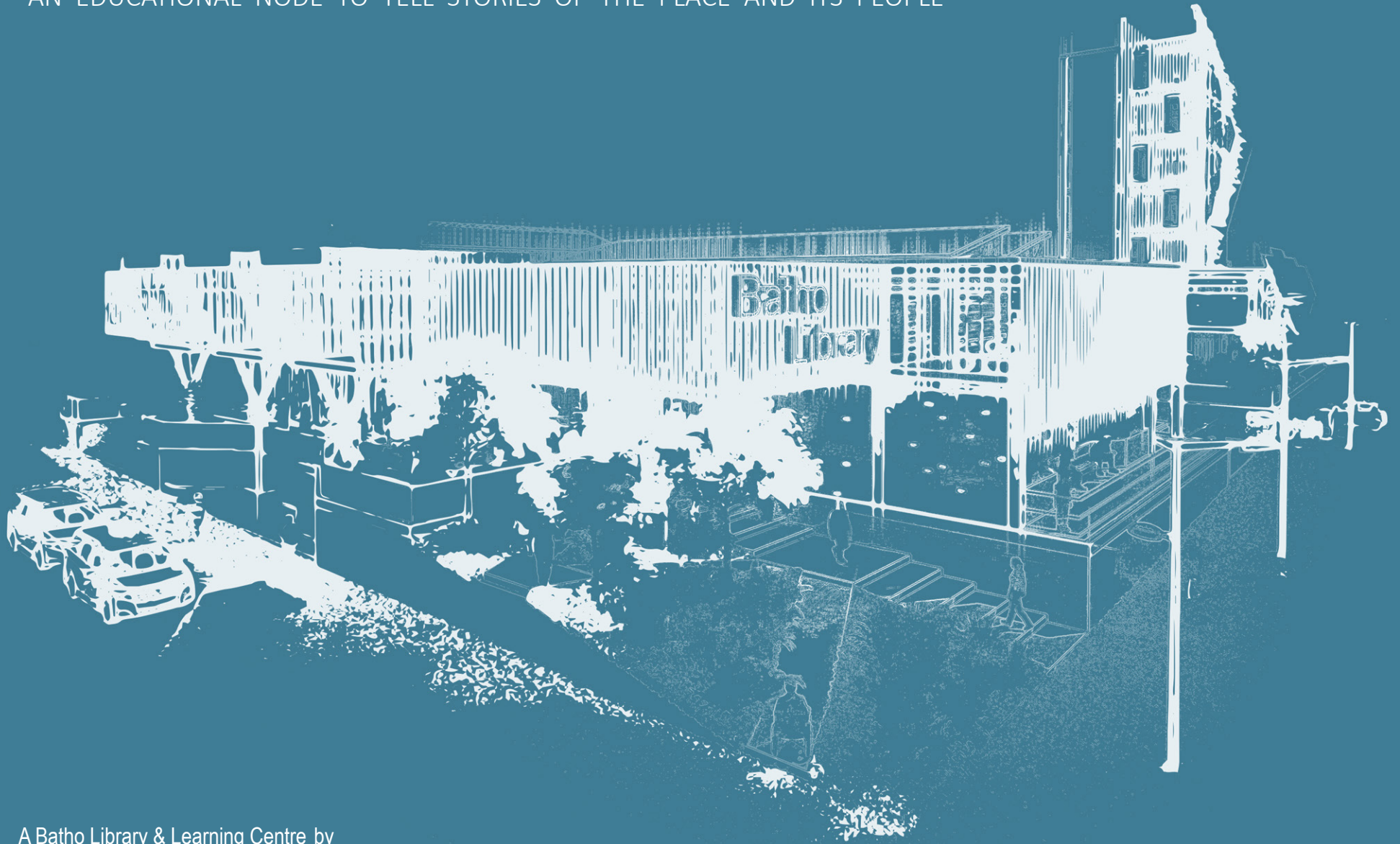


# BATHO BOOK HOUSE

“AN EDUCATIONAL NODE TO TELL STORIES OF THE PLACE AND ITS PEOPLE”



A Batho Library & Learning Centre by  
**NICHOLAS WILD | 2012029571**







Fig 1.

**SCARS ON THE LANDSCAPE**

**THRESHOLD**

**EDUCATION**

**BATHO**

**RE-CONNECT**

**SEGREGATION**

**THE PEOPLE HAVE A VOICE**

**DIVERSITY**

**CULTURE**

**YOUTH DEVELOPMENT**

**COMMUNITY**

**A NODE FOR THE PEOPLE**

**CATALYTIC URBAN DEVELOPMENT**

**SAFE HAVEN**

**UPLIFT**

**INFORMATION**

**LEARN & SHARE**

Fig 2.

# BATHO BOOK HOUSE

A BATHO LIBRARY & LEARNING CENTRE

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This dissertation is submitted in partial fulfillment of the requirements for the degree M.Arch.(Prof).

Department of Architecture, Faculty of Natural and Agricultural Sciences  
University of the Free State

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22 November 2019

## **Supervisors**

Prof. J.D Smit, Prof. P. Smit, J. Ras, A. Wagener and K. McDonald

## **Declaration of original authorship**

The work contained in this document has not been previously submitted to meet requirements for an award at this or any other higher education institution. To the best of my knowledge, this document contains no material previously published or written by another person except where due reference is made.



## **Acknowledgments**

A huge thank you to my mother and father for their encouragement and upliftment throughout my studies.

Appreciation must also be cast upon my lecturers and facilitators this year for all their guidance.

Special mention must go to Jessica Willemse for all her love and support.

This thesis is dedicated to her late sister, Natasha Du Preez Victor.



# PROJECT SUMMARY

WHERE [SITE] : Cnr. of Fort Hare Rd and Hamilton Rd ; Batho ; Bloemfontein ; South Africa

WHAT [PROPOSAL] : Batho Library & Learning Centre

WHO [CLIENT] : + N.Y.D.A - National Youth Development Agency  
+ National Museum Bloemfontein

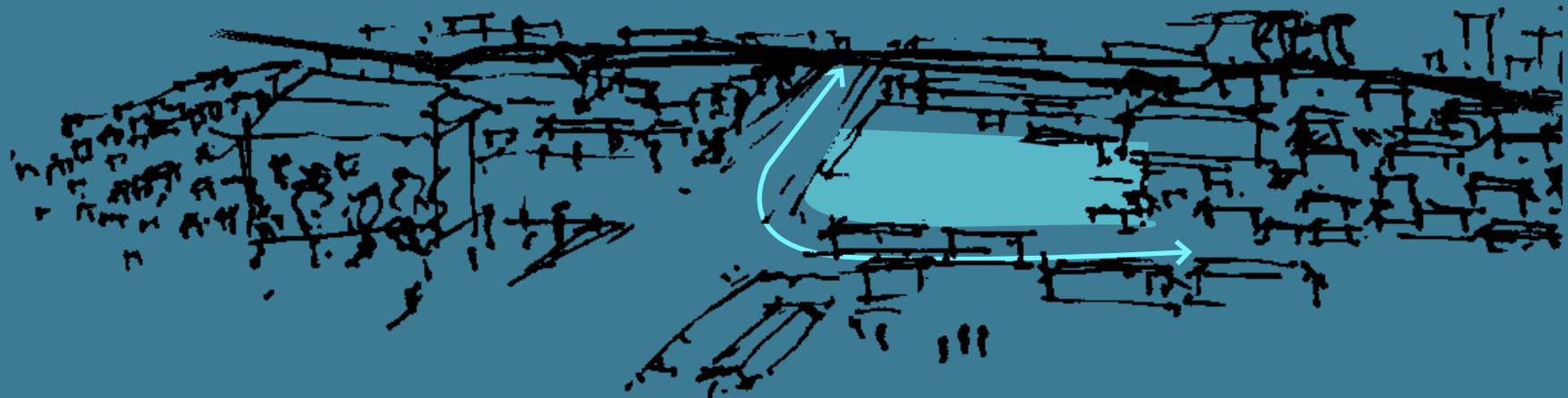


Fig 3.

# P R E A M B L E

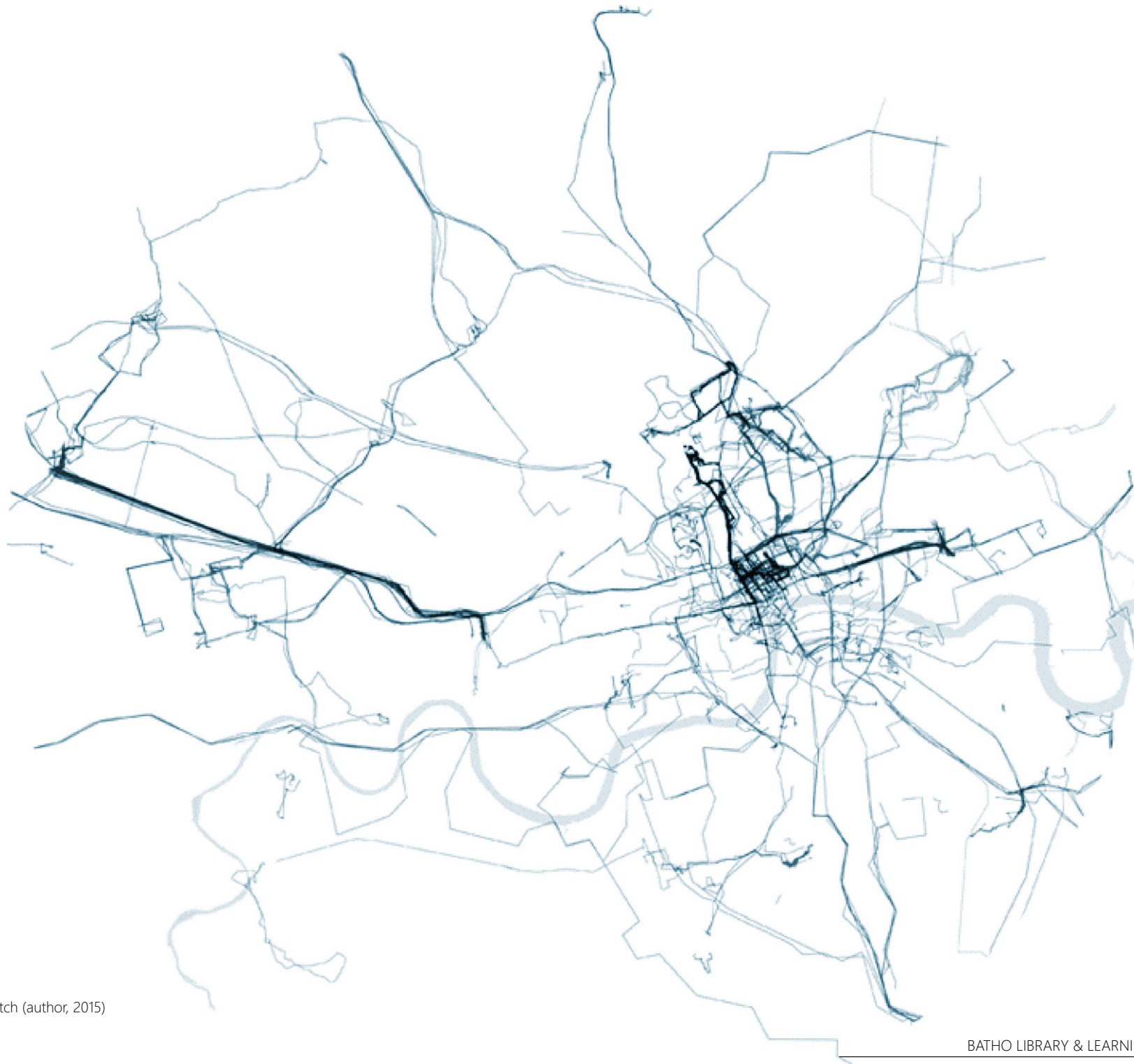
Thesis Title: Unveiling the Art of Storytelling, A Batho Book House.  
Batho Library & Learning Centre  
"An educational node to tell stories of the place and its people"

Batho, one of South Africa's oldest townships has been known for its rich culture through its people and it's history. It has become a place in Bloemfontein that one can explore and find extraordinary tales of how the past has impacted a community to the point of shaping an entire micro-society.

This dissertation proposes the investigation of Batho and its residents through the implementation of a new Library and Learning Centre. The dissertation will come to describe the concepts of "connection", "identity" and "reflection" as a way of driving the design for the thesis proposal. This research will examine the chosen site within Batho, as well as exhibit Batho's history and social spectrum through its local vernacular identity.

This is all in effort for creating design drivers that contribute culturally, socially and appropriately within the existing context. The thesis proposal is exhibited in an attempt to stitch itself into the existing urban fabric whilst complimenting the existing local narrative through historical studies and modern adaptabilities.





**Fig 5.** Bloemfontein Sketch (author, 2015)

# RESEARCH METHODOLOGY

An exploratory research method is used for this dissertation. The document is constructed in a way to contribute toward four main terms - topology, morphology, typology and tectonics, which can be understood as the following:

**Topology:** An investigation of the responsible engagement with the complexity of the surroundings, and determining the best location for the design intervention.

**Morphology:** An investigation of how meaningful place is made by exploring how the form and form-giving factors of the design will be influenced by the animate and inanimate other.

**Typology:** An investigation of a functional design and organisation for the client and specifically the different users' needs as well as the functional character of the proposed project.

**Tectonics:** An investigation of a technical design of building methods and materials for the proposed intervention. It plays an important role since it expresses the conceptual underpinning upon which the project is based. These terms are critically investigated to generate a proposed structural answer to the proposed design.

**Fig 6.** BW Township (online, 2019)



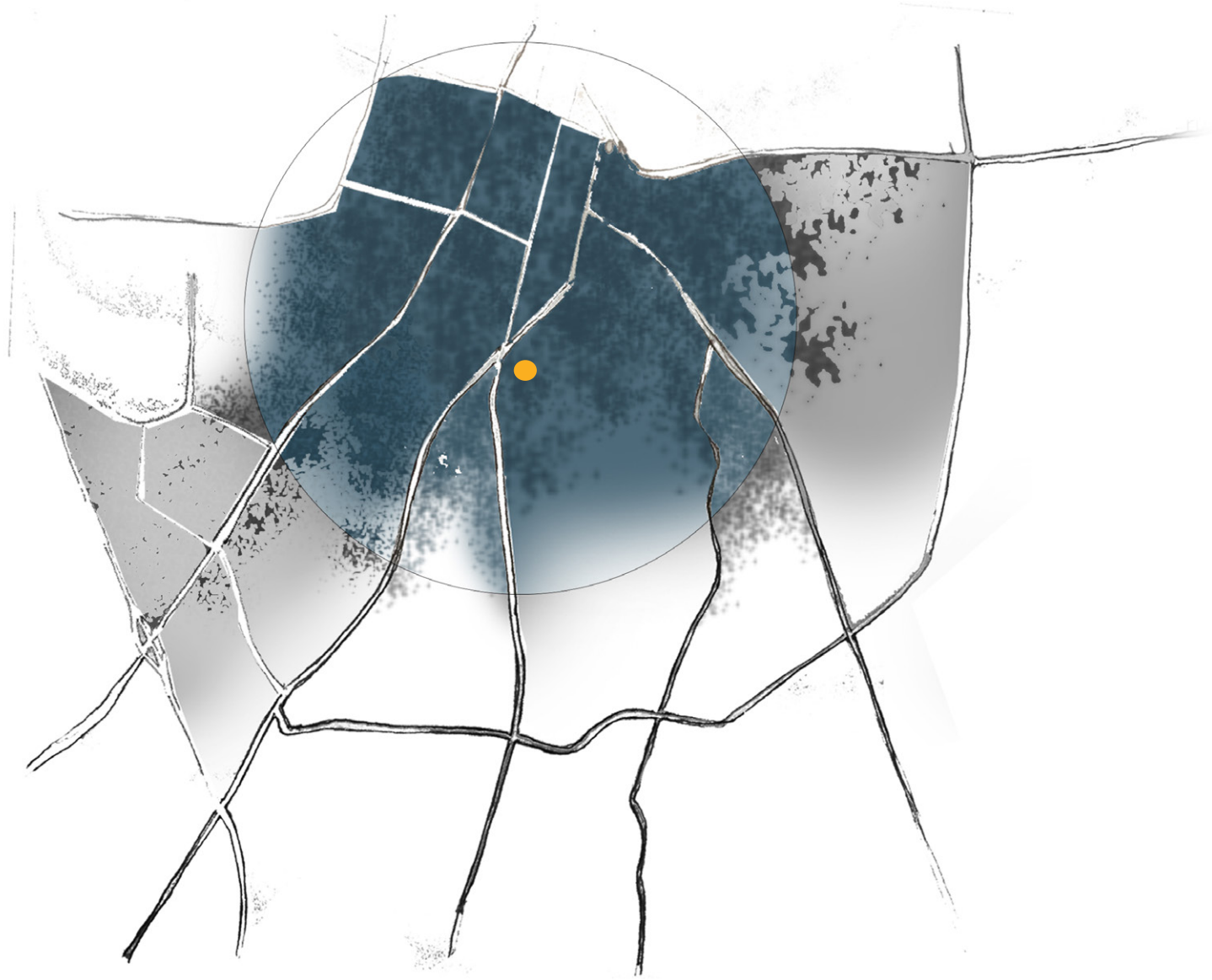
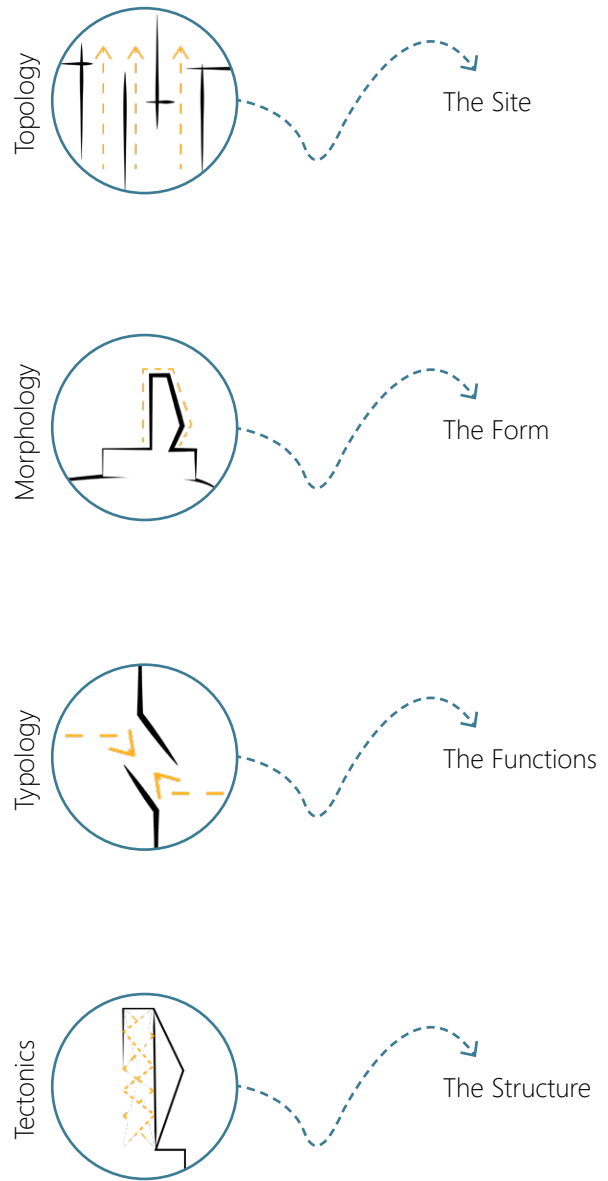
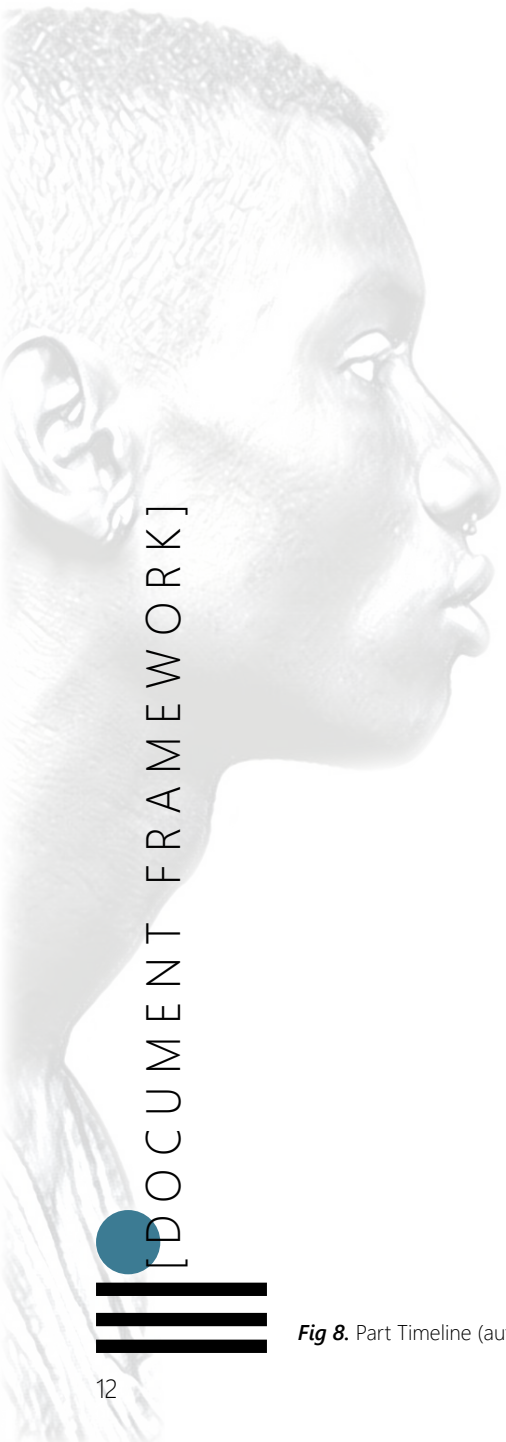


Fig 7. Bloemfontein Art Sketch (author, 2019)



[DOCUMENT FRAMEWORK]

ORIENTATION

CONTEXT



POINT OF DEPARTURE

An Introduction to the proposed thesis by defining the problem statements through an understanding of the projects history, parameters, and design challenges / aims



EXPLORATION AND GROUNDING

An initial investigation process, where the main theoretical stand point, combined with initial design development schemes, is explained and then explored within the proposed design process

INVESTIGATIVE PROCESS

Fig 8. Part Timeline (author, 2019)

**UNDERSTANDING**

**PART  
3**

**DESIGN AND TECHNICAL  
SYNTHESIS**

A analysis of the design process that attempts to convey the different aspects of the development with the aim of moving toward a final thesis proposal

**EXPLANATION & ANALYSIS**

**ELEMENTS**

**DEFINING**

**PART  
4**

**EVALUATION AND  
REFLECTION**

Utilizing the gained knowledge during the investigation process to formulate a designed outcome

Then reflecting on the proposal as a whole in an attempt to identify and further understand the challenges and conclusions within the proposed thesis

**CONCLUDING & REFLECTING**

- DECLARATION
- PROJECT SUMMARY
- PREAMBLE
- RESEARCH METHODOLOGY
- DOCUMENT FRAMEWORK

PART 1

# 1

POINT OF DEPARTURE

- 1.1 Introduction**  
Project Rationale  
History of Batho  
Upliftment through Education
- 1.2 Topology Aims**  
Context & Site
- 1.3 Morphology Aims**  
The Form
- 1.4 Typology Aims**  
Client & User Functions
- 1.5 Aims of Dissertation**  
Research Question

PART 2

# 2

THE CONTEXT

- 2.1 Site Analysis**  
  
**Locality | Macro-context**  
Place  
Man  
Culture  
  
**Batho as a Settlement | Micro-context**  
Demographics  
Building Types  
Places of Influence  
Nodes in the City  
Pedestrian Routes  
Site Photos

# 3

EXPLORATION & GROUNDING

- 3.1 Conceptual Approach**  
Touchstone  
Concepts
- 3.2 Theoretical Response**  
Introduction  
- Theoretical Framework  
  
Stephen Kite | Modernity and the threshold  
- Psychologizing the Places in-between  
  
Threshold through Narrative | Batho Perspective  
  
Libraries Creating Relationship | Modern libraries: Moving from a transactional to a relational library

# 4

BRIEF & PROGRAMME

- 4.1 Precedent Studies**  
Topology Precedents  
Typology Precedents  
Morphology Precedents
- 4.2 Project Brief**  
Programme Functions

5

DESIGN METHODOLOGY

**5.1 Development Phases**

Phase 1 |

Initial Design Exploration

Phase 2 |

3D exploration

Phase 3 |

Transforming basic massing  
into basic plans

Phase 4 |

Plan and Section  
Development

Phase 5 |

Sketch Plan phase with  
structural development

6

DESIGN SYNTHESIS

**6.1 Final Design**

Site Plan

Ground Floor Plan

First Floor Plan

Typical Node Plans

Sections

Elevations

Perspective Renders

7

TECHNICAL EXPLORATION

**7.1 Technical Report**

Introduction - Tectonics

Site Information and geology  
| Topographic Analysis

Sustainability aims and theory

Investigation into Structures  
and MaterialityCompliance with Health &  
Safety Requirements

8

CONCLUSION &amp; REFLECTION

**Conclusion****Project Reflection****Reference List****Annexure Pages****Turn-it-in Report**

9

TECHNICAL DOCUMENTATION

[APPENDIX]

**9.1 Documentation Drawings**

Locality Plan

Site Plan

Ground Floor Plan

First Floor Plan

Typical Node Plan

Sections

Elevations

Details

Structural Exploded views

# POINT OF DEPARTURE



*Fig 9.* Batho Sketch (author, 2019)



# 1

---

## AIM OF THE CHAPTER

An Introduction to the proposed thesis through defining the problem statements through an understanding of the projects history, parameters, and design challenges / aims

# POINT OF DEPARTURE

## 1.1 Introduction

Project Rationale  
History of Batho  
Upliftment through Education

## 1.2 Topology Aims

Context & Site

## 1.3 Morphology Aims

The Form

## 1.4 Typology Aims

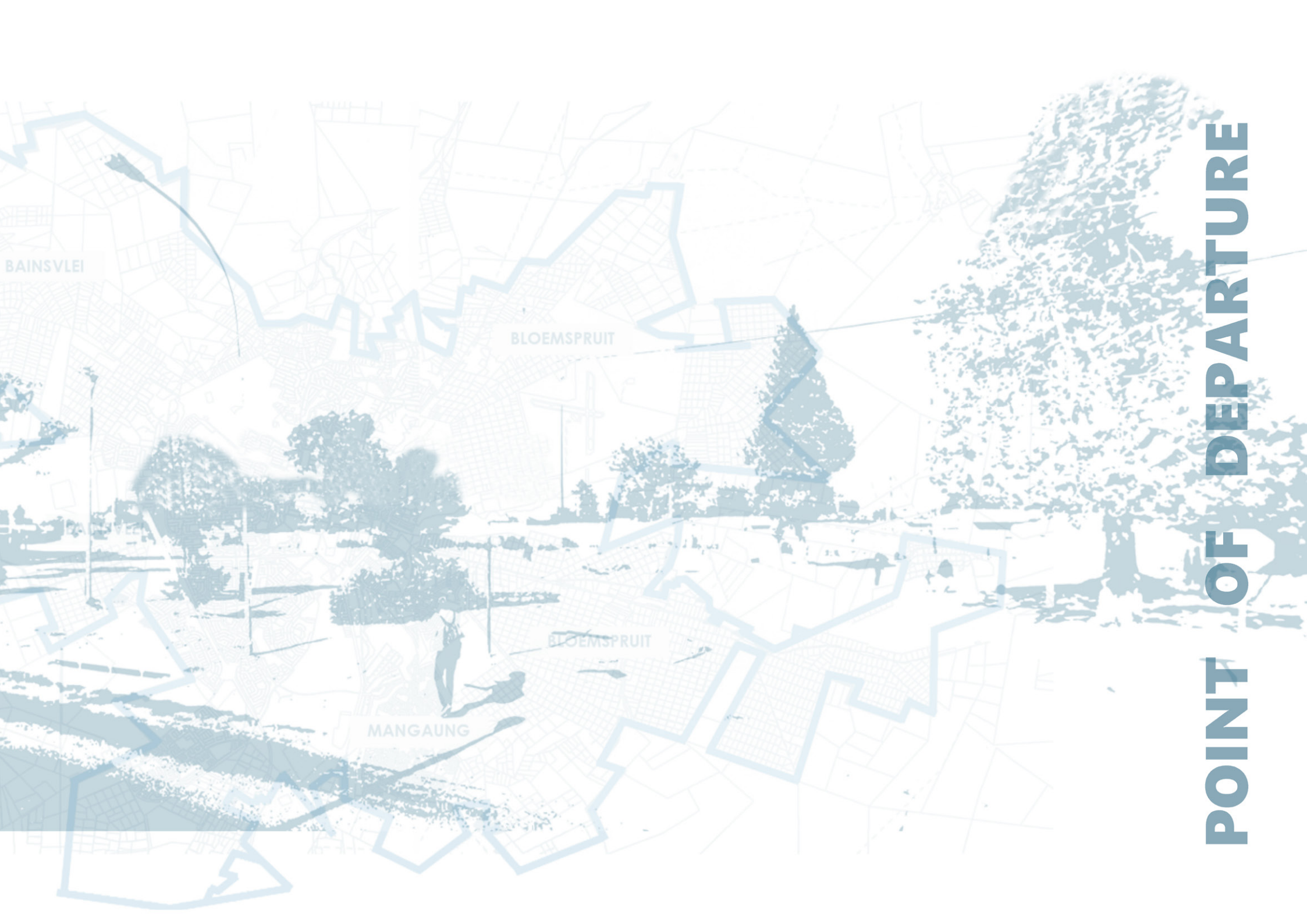
Client & User Functions

## 1.5 Aims of Dissertation

Research Question

# 1.0





# POINT OF DEPARTURE

## PROJECT RATIONALE

The thesis that is proposed as follows will incorporate many aspects surrounded around Batho, as a settlement/township, as well as theories about Threshold, the “in-between” and how these can be seen within the Batho context.

The theories and knowledge put forward about Batho will form a thesis that proposes an educational node that stitches itself into Batho's cultural fabric and becomes a space for the people of Batho and their identity.

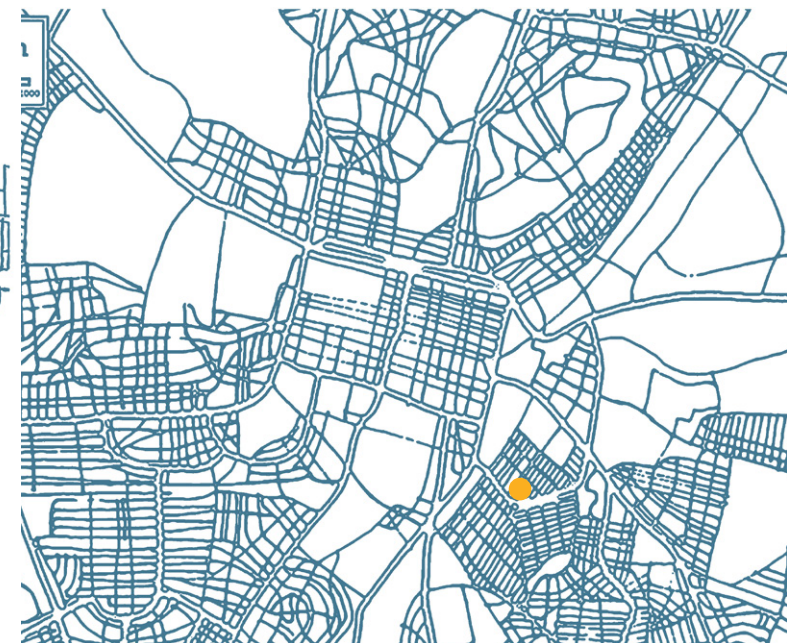
With focus put on the existing, and interpreting “Threshold” as the main theoretical approach, the thesis proposes the design of a “Batho Library & Learning Centre” that would become a rest and reflection space in close proximity to the Bloemfontein railway, and celebrate the movement of Batho people into the CBD and back every day.



**South Africa**

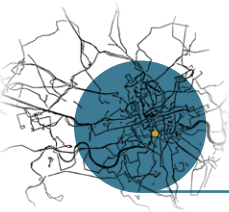


**Bloemfontein**



**Batho**

*Fig 11-13.* Maps (author, 2019)



# History of Batho

## The history and context of a segregated city

Batho, Bloemfontein's oldest existing township, was officially founded in 1918 after a decision by the Bloemfontein Town Council to move all black and 'Coloured' people from Waaihoek.

As a result, the Johannesburg-Cape Town railway line became a physical barrier between 'white' Bloemfontein and 'black' Batho.

The railway can still be seen today as a threshold that has to be crossed by pedestrians and vehicles coming to and from batho. It becomes a historical scar on the landscape in modern day Bloemfontein and presents itself as a threshold still forming an emotional division between Batho's people and the city.

## Batho as a settlement

When viewing Batho as a modern day settlement, one can see that despite the segregation and scarring that apartheid caused, Batho was still described by many as a 'model location', when compared to other locations of that time.

Batho had an orderly layout, the houses were built according to architectural plans, and many residents laid out gardens and hedges to beautify their homes. Today many of the original sun dried soil red brick houses that were built during the 1920s and 1930s may still be seen.

## Batho has a voice

Modern Day Batho is so enriched in culture and its own identity, one can clearly see a united group of people moving forward from the past. The Batho landscape therefore presents itself with a strong opportunity to exclaim Batho's identity to Bloemfontein and the rest of the world. Thus, a catalytic urban education project would become a powerful node for Batho and it's people.

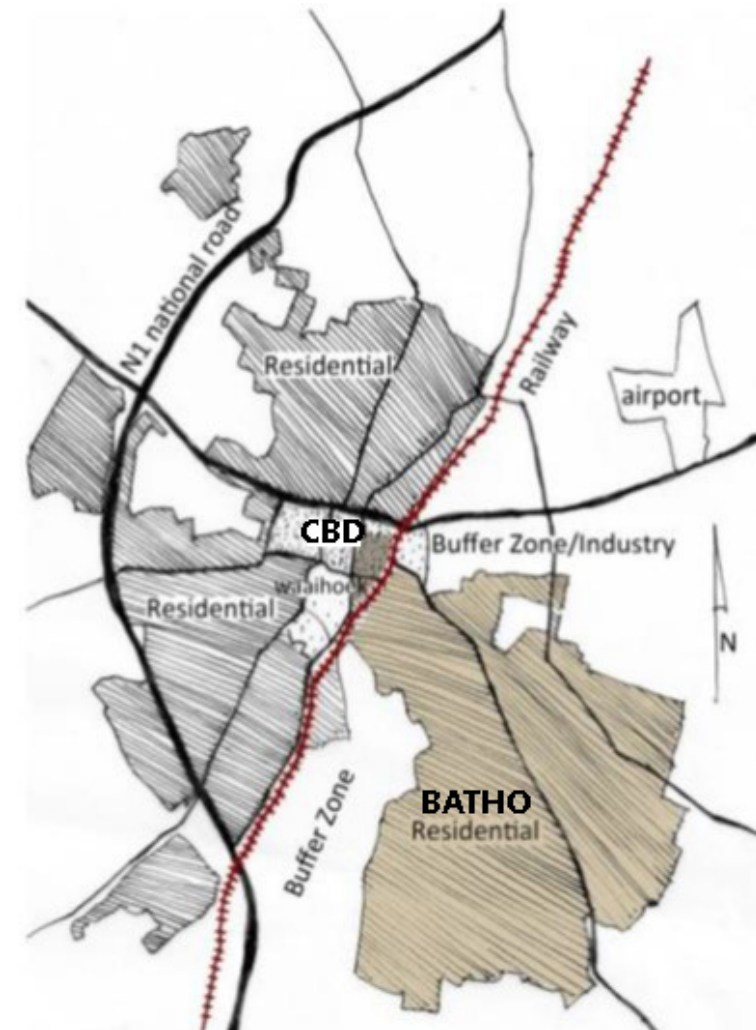


Fig 14. Bloemfontein segregated city (Wanda Verster, 2017)

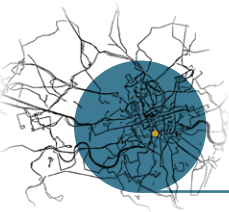
## Crossing the historical scar as a daily ritual

Today many Batho Residents walk/travel to the CBD and back everyday for work or studies. Due to Batho being such a high residential zone, it means majority of it's people cross this historical scar every single day.

The crossing of this scar could be celebrated with a public intervention that is in close proximity to the railway. This public intervention would speak of Batho and it's people, and therefore become an identity node for the people of Batho to call home.



Fig 15-16. Bloemfontein segregated city (Wanda Verster, 2017)



# Upliftment through Education | The "Library as a Proposal"

## Community Centered

A heartening new study in South Africa came out recently confirming that young people use the library at least as often as older people, and that their utilization of the resources the library provides are beneficial to the under privileged areas in our country.

Libraries offer endless knowledge, but if you look past the stacks, there is much to appreciate and discover. From in-house cafés and free tech to cozy nooks and blissful quiet, the library is still the perfect place to gather, learn, rest, or just escape for an afternoon.

The modern day library can be seen as adapting to society. Instead of only stacks of books, libraries now offer community spaces for refuge and rest for any cultural sphere.

## Fun facts about the modern day library to get anyone excited:

- + Free Wi-Fi
- + That old book smell
- + Nobody will ever tell you not to go to the library
- + There's no such thing as loitering in a library
- + It's so quiet
- + Community meeting spaces and boardrooms
- + Classes and Clubs
- + Something for the whole family

More so than a community center, town hall, or public park ever could, libraries connect their communities in a way that benefits everyone.

They contribute local resources, from educational offerings to job training to homeless outreach, and put them all under one welcoming roof for everyone to share.

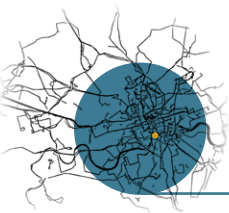
Communities come together to learn, share, and celebrate where they live, who they are, and what they want to become. The modern day library could impact Batho in a way like this to celebrate the local identity and become an upliftment tool for the people of Batho.



Fig 15-17. Library sketch (author, 2019)



**Fig 18.** BW group photo (online, 2019)



# Topology Aims

## Bloemfontein's Physical Profile - uses of space

Bloemfontein, like many other South African cities, developed very rapidly in a small amount of time. Unfortunately little thought was given to the long term future effects of the various demarcations that occurred within the city. The filing of space depended on the needs of the people, by filling all of the best areas first; they acted within their human nature.

As a result, the greater Bloemfontein lies spread across the Free State landscape, with unused or abandoned land being dispersed throughout and African residential areas on the outskirts. This has the potential to create problems with transport, inequality, water services, electrical services and infrastructure maintenance. So not only are these some of the poorest residential suburbs, but they are also farthest from the CBD, this can then result in improper upkeep of the suburbs.

At the moment, we find an active central CBD, surrounded by lush and relatively open, predominantly white residential clusters enclosed by state services (police, airport, military, fire brigade etc.), which are, in turn enclosed by overpopulated, predominantly black residential clusters.

Batho, which is predominantly residential, still finds lots of pedestrian activity in and out during the day. Batho residents move to and from the CBD everyday for work and studies.

## Bloemfontein and Batho

The metropolis of Bloemfontein is home to a population of roughly 463000 residents. As is human nature the different demographics tend to form communities within themselves and remain grouped and segregated on a certain level, even years after the segregatory laws have long since disappeared (Cranston,1998: 128).

Batho was settled as a black working class community but it has become increasingly integrated with its neighboring communities like the designated Heidedal, Oos Einde and Bochabella areas. As more than 80 % of the built environment of Batho is planned housing the prevalent trend in the area is that families owning these houses tend to pass them on to their oldest working children and so the neighbourhood mostly maintains the same families, one generation after another.

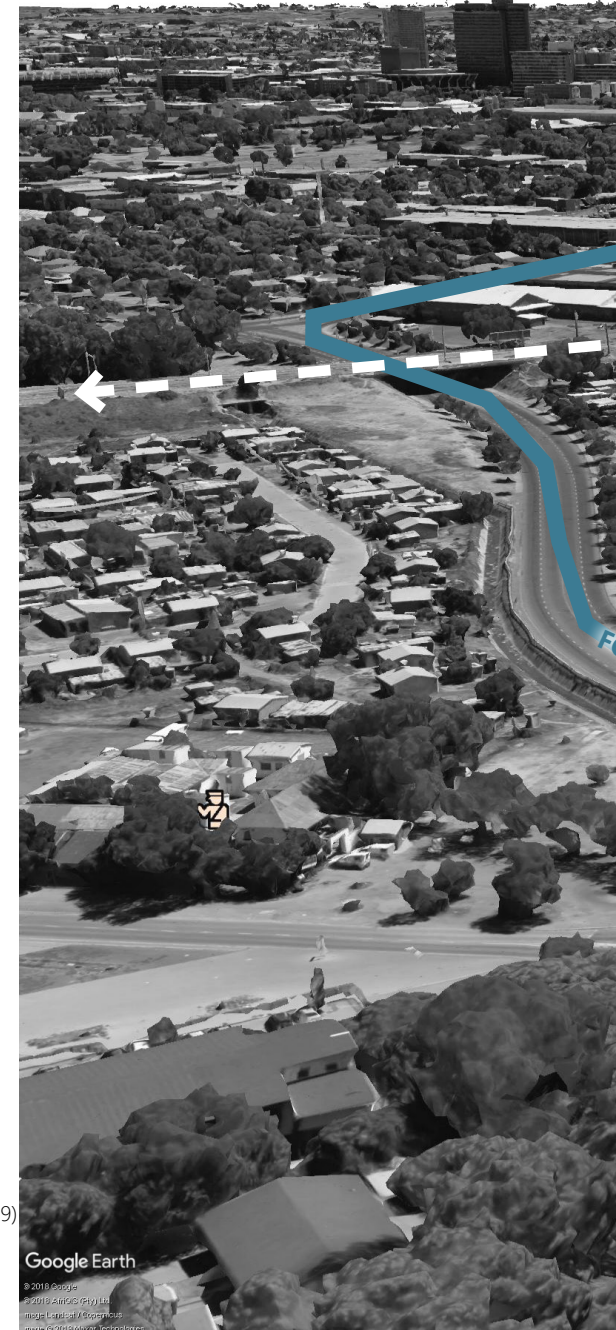


Fig 19. Site perspective (online edited, 2019)



NAVAL HILL

CBD

FORT STREET

BLOEMFONTEIN RAILWAY LINE

BATHO

FORT HARE RD

PROPOSED SITE





Fig 20. Bloemfontein site map (online edited, 2019)



BLOEMFONTEIN CBD

Fraser Ln

Bastion St

Kxell St

Obs Burger St

Hanger St

St Andrews St

Charlotte-Maxeke St

Fig

Powe

St Georges St

St Andrews St

Powe St

Rd

Bastion St

Arms/long St

Hernanus St

Pinness St

Nathan St



# Morphology Aims

## Morphology through Batho vernacular

The architecture that is found in the surrounding context can be described as a somewhat diverse, but at the same time modular. This is due to the many different types of buildings in the area (industrial, commercial, residential) but when focusing on the majority of building types it reveals the modular Batho Houses.

The architecture has a very simple feel to it without any unnecessary detail to it besides the township elements engraved on this society. The concept of "truth to materials" can be seen in these type of buildings, meaning that the true natural appearance of the material is seen without it being concealed or altered to represent something else.

All the residents of the Batho make use of the classic Batho house typology and use the elements of that to maintain their houses. Due to poverty in the community, they cannot afford expensive houses and thus follow the passed down traditions of the past. The surrounding context also includes a lot of churches. This also draws pedestrians and society along the main road Fort Hare and draws them into our proposed site as well.

## Morphology through new aesthetic adaption

With the existing context extremely prominent in the Batho area, there comes an opportunity to add to it and adapt an aesthetic that compliments the surrounding materiality.

Such materials that could add to the already existing brick and corrugated sheeting language could be the introduction of hints of steel and concrete to frame the existing and highlight it in a way.

With the tallest building in Batho (St. Johns Church) being 16m in height, another way of adding to the landscape would be to create a nodal point of hierarchy for the people of Batho to claim as an identity node within the city of Bloemfontein.



Fig 21-23. Batho sketches (author, 2015)



"Typical" Batho House

PROPOSED SITE

Batho Police Station

St. Paul's The African Church

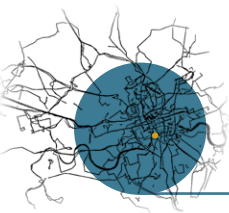
St. Johns Presbyterian Church

Kind 2 Hair Salon

Presbyterian Church of Africa

Batho Clinic

Fig 24. Batho places of influence (author, 2015)



# Typology Aims

## Clients: + N.Y.D.A - National Youth Development Agency

The National Youth Development Agency (NYDA) is a South African-based agency established primarily to tackle challenges that the nation's youth are faced with. The NYDA was established by an Act of parliament, Act no 54 of 2008. The institution was established to be a single, unitary structure, established to address youth development issues at National, Provincial and Local government level.

The existence of the NYDA should be located within the broad context of South Africa's development dynamics. Like many developing countries, South Africa has a large population of youth, those between the ages 14-35 represent 42% of the total population.

Given the youthful nature of the South African population much of the socio-economic challenges faced by the nation, i.e. poverty, inequality and joblessness, poor health, etc., are borne by the youth.

At a Community level (Meso Level), the NYDA encourages young people to be catalysts for change in their communities through involvement in community development activities, social cohesion activities, national youth service programmes and dialogues.

Client Brief: For the creation of a refuge node in Batho to initiate a catalytic urban regeneration within the Bloemfontein landscape. Ultimately to give Batho, and it's people, a voice through Architecture.

## + National Museum Bloemfontein

The National Museum has a small Batho exhibition that communicates Batho History and Culture extremely well. It explains the history of Batho in an interactive and visually exciting manner. A time line provides background information on Batho's founding and also highlights key events in Batho's history. Particularly striking is a realistic replica of part of a red brick house typical of Batho, as well as a life-size projection of a short film made in one of Batho's streets. Visitors may also listen to sound clips from interviews conducted with Batho residents, or read the transcribed text of these interviews.

It is proposed that this exhibition be moved to the Batho Library and Learning Centre to become part of its own home

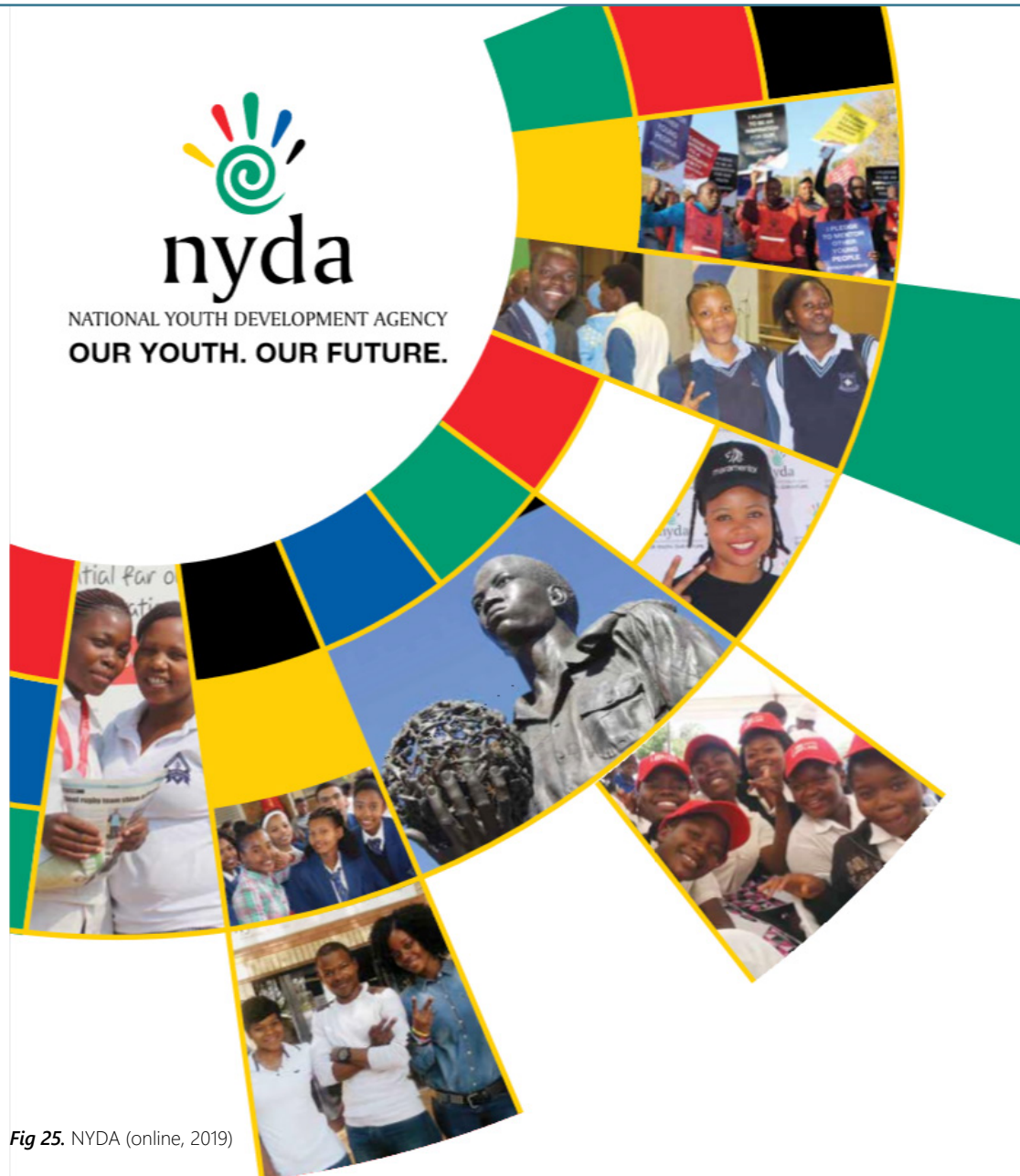


Fig 25. NYDA (online, 2019)

BLOEMFONTEIN  
NATIONAL MUSEUM

BATHO

THE CITY  
[CBD]

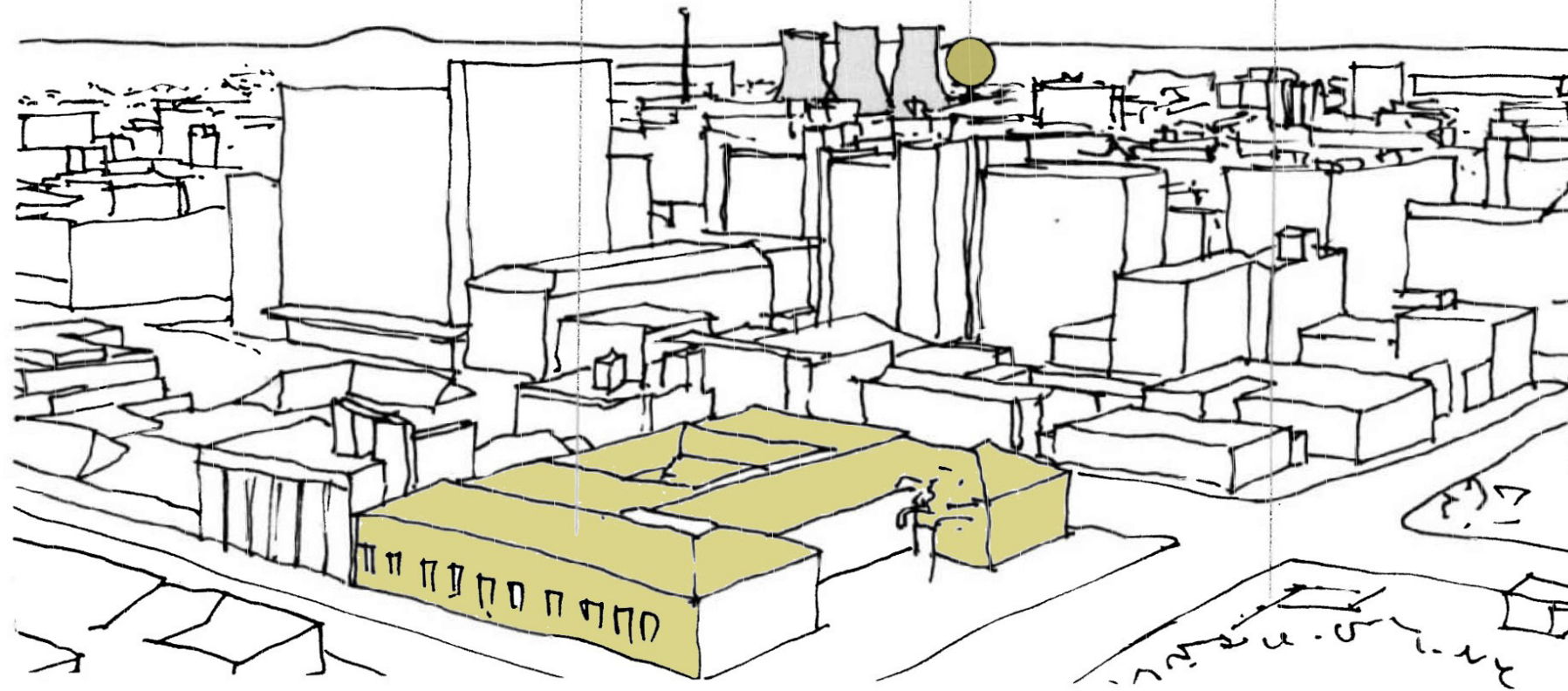


Fig 21-23. Bloemfontein museum sketch (author, 2017)



Fig 26-29. Bloemfontein museum pictures (author, 2019)

## User Functions

### 3 - TIER LIBRARY

CHILDREN'S TOY LIBRARY  
STUDENTS STUDY LIBRARY (COMPUTER ROOM )  
NORMAL LIBRARY & READING ROOMS

### LEARNING CENTRE

CLASSROOMS  
STUDY SPACE  
LECTURE HALL / AUDITORIUM

### ADMINISTRATION

SMALL OPEN OFFICE SPACES (ADMINISTRATION)  
SECURITY / GUARD HOUSE  
ARCHIVES

### SUPPORTING SPACES

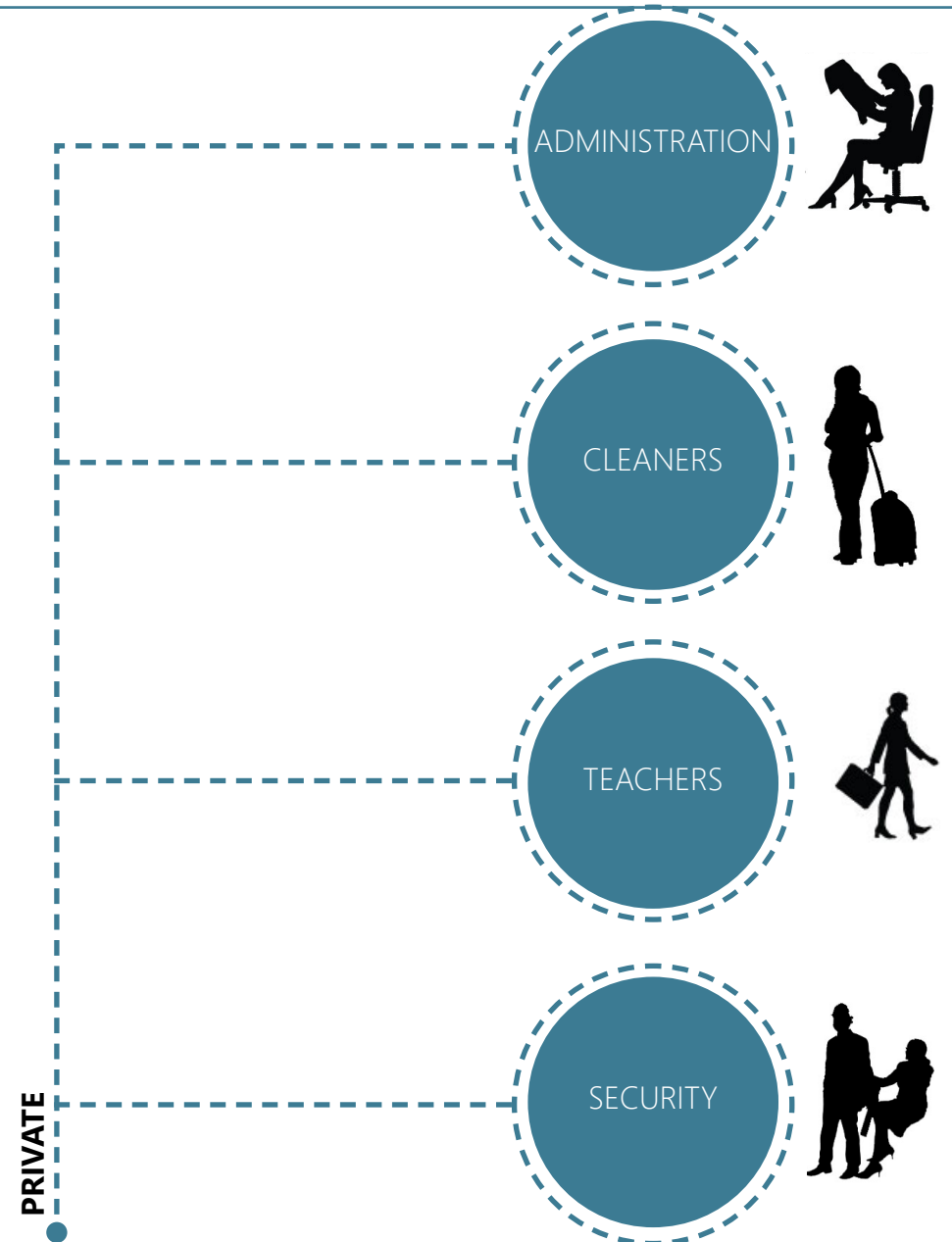
RECEPTION & WAITING  
CIRCULATION (STAIRS / PASSAGES)  
STORAGE  
ABLUTIONS  
ON-GRADE PARKING (STAFF ONLY)  
OPEN GATHERING SPACES / REST AREAS

### PUBLIC INTERFACE

CANTEEN / COFFEE SHOP / BOOK SHOP  
INFORMAL TRADE SPACE  
URBAN PARK & SOCCER FIELD VIEWING  
PERFORMANCE SPACE / AMPHITHEATER

### NODE | CONNECTION

READING / STORYTELLING NODE  
EXHIBITION SPACE FOR NATIONAL MUSEUM EXHIBITION



**PUBLIC**

CHILDREN



STUDENTS



INFORMAL  
TRADE



ANYONE



Fig 30. BW photo of children (online, 2019)



## AIMS OF THE DISSERTATION

"humanity's home realm is the in-between realm- the realm architecture sets out to articulate" (Kite 2003:177)

When focus is put on Threshold and "In-between" spaces in threshold, perspective and how one experiences space become key elements. "In-between" spaces question existing thresholds and existing boundaries as the true experience of space. "In-between" spaces on the Bloemfontein landscape can become physical and emotional boundaries to a certain group of people.

### Research Question:

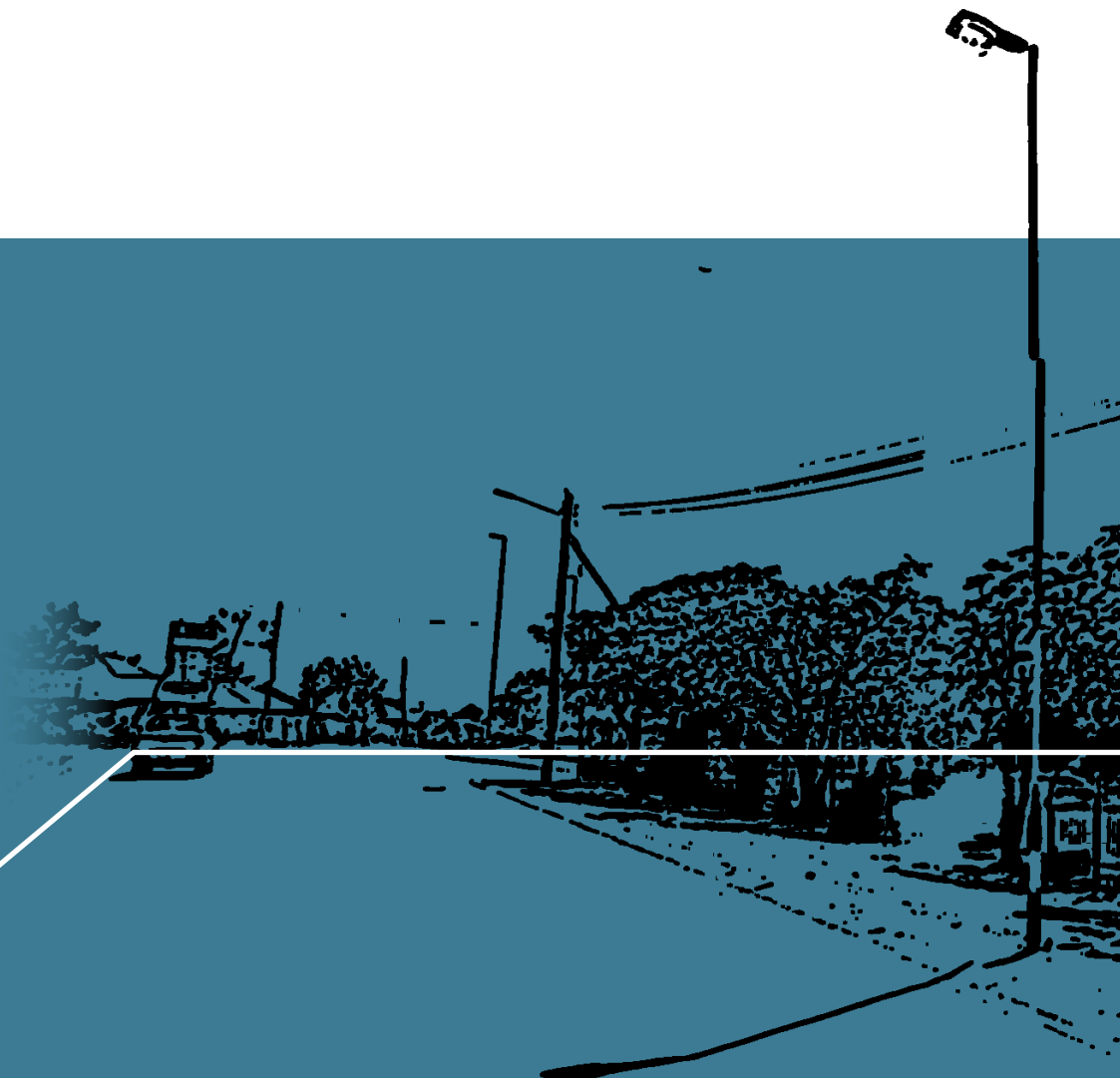
How can the understanding of "In-between" spaces and existing identity help generate the design for an educational node to tell stories of Batho and its people?



**Fig 32.** Batho sketch (author, 2019)

# THE CONTEXT

*Fig 33.* Batho sketch (author, 2019)





## CHAPTER

# 2

---

### AIM OF THE CHAPTER

The following chapter exhibits the context of Batho on a Macro and Micro scale. It depicts the surrounding culture, vernacular language and identity within its people and architecture.

Through this contextual study and the historical notes discussed in the last chapter, concepts can be unveiled and used as a design driver.

# SITE ANALYSIS

## Locality | Macro-context

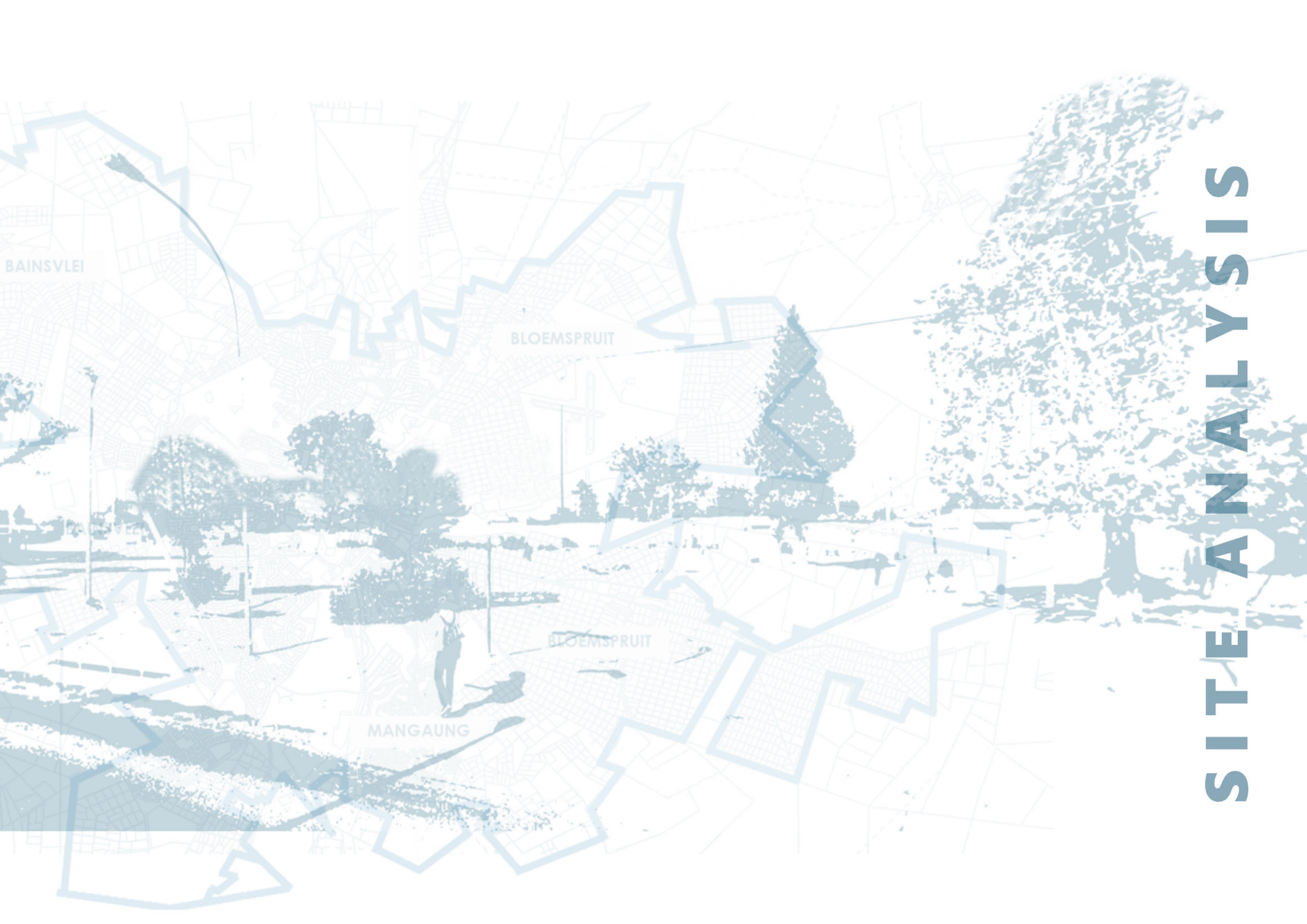
Place  
Man  
Culture

## Batho as a Settlement | Micro-context

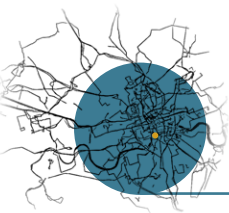
Demographics  
Building Types  
Places of Influence  
Nodes in the City  
Pedestrian Routes  
Site Photos

# 2.1





# SITE ANALYSIS



# Locality | Macro-Context

The Proposed project finds itself situated within the heart of Batho. Batho, as a settlement, is screaming out for growth and the proposed Library & Learning centre can aid Batho in finding a voice and positively influence upliftment / education in the area. The proposed site finds itself on the edge of the railway creating a connection between Batho and the city once again.

The Proposed Site - South Africa ; Bloemfontein ; Batho [Mangaung] ; Corner of Fort Hare Rd and McGregor St

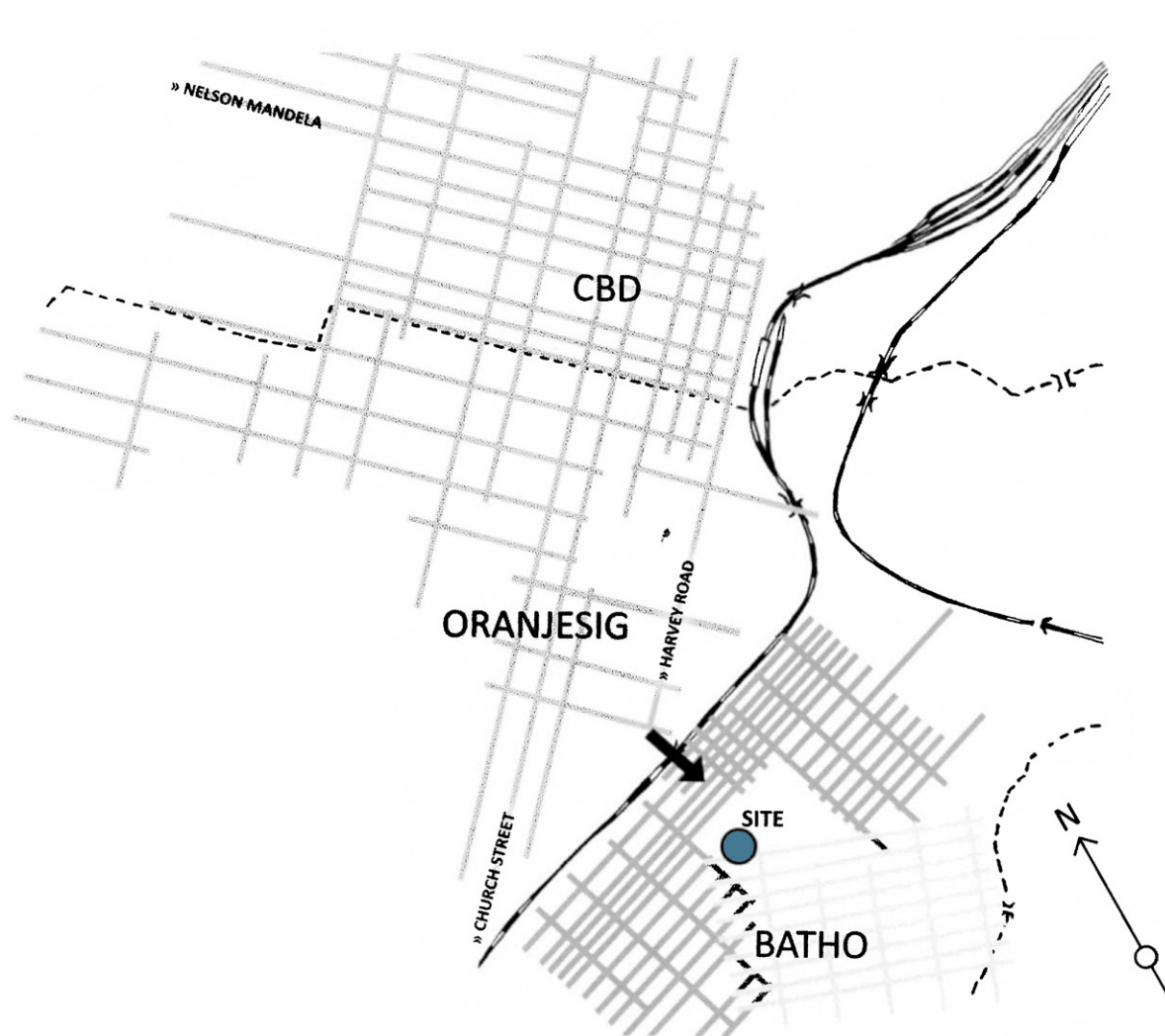


Fig 34. Bloemfontein map (author, 2019)

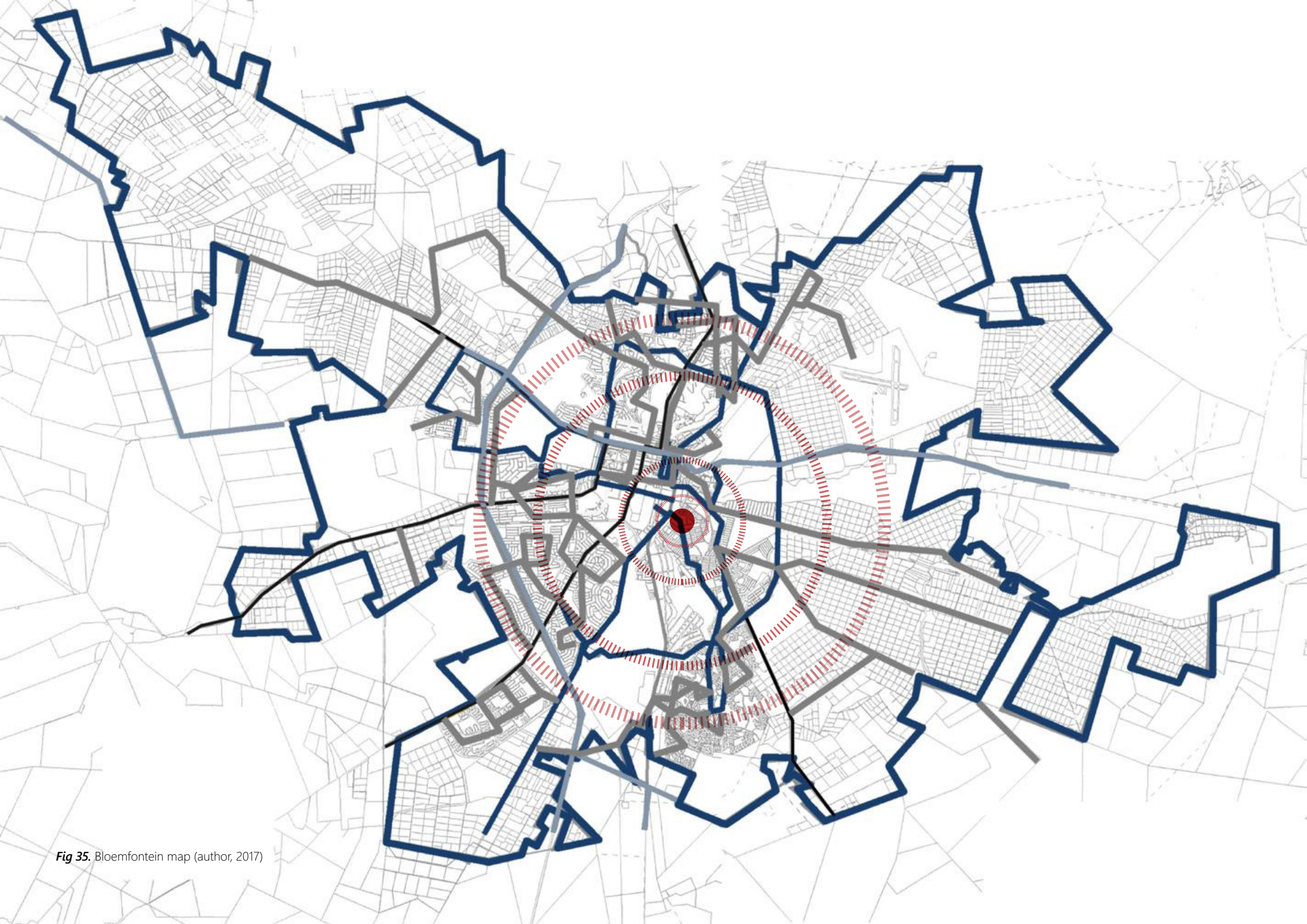


Fig 35. Bloemfontein map (author, 2017)

As a result of the segregatory nature of the town planning principles implemented by the Union government system, the Batho area falls in a location removed from the Bloemfontein city centre. The Johannesburg - Cape Town railway line that passes through the city was used as a physical barrier to separate the racial classes in the divided society. At the time the Batho settlement was considered a "model location" due to its ordered layout and architecturally designed homes and civic buildings (Willis, 2009: online).

Since its founding in 1918 as a result of the relocation of the Waaihoek precinct, the Batho neighbourhood has become significantly integrated with its surrounding urban fabric. Some years after the success of Batho as an urban settlement was discovered, the Bochabela location was conceived on the same principles as those for Batho.

### Batho Today and Pedestrian Movement

It can be seen that the areas that attract the most use are aligned along Fort hare Rd, the main spine of Batho. It is along this main artery that one can see the mass flux of Batho residents either walking or taking public transport to the CBD and back for work / studies everyday. As can be seen on the map (to the right) the pedestrian pathways tend to flow from the residential blocks toward public areas, civic buildings and the main roads leading toward the city centre or industrial areas.

### The People of Batho Today

It is evident today that Batho has become proud of its people. The ritual of moving to and from the CBD to one's identity home can thus be celebrated with an on-route public node for the upliftment of the people. Thus the proposed site greatly impacts the proposal for a Batho Library & Learning Centre that will become a beacon of identity for the people of Batho.

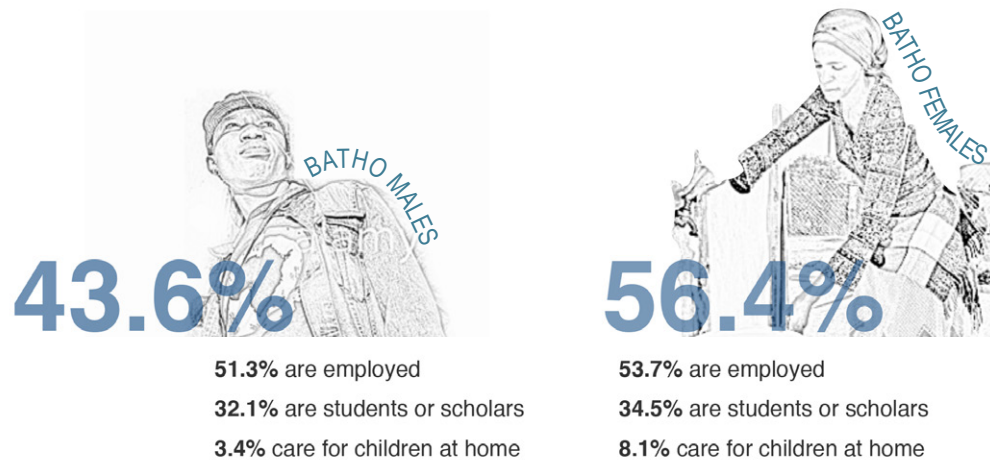
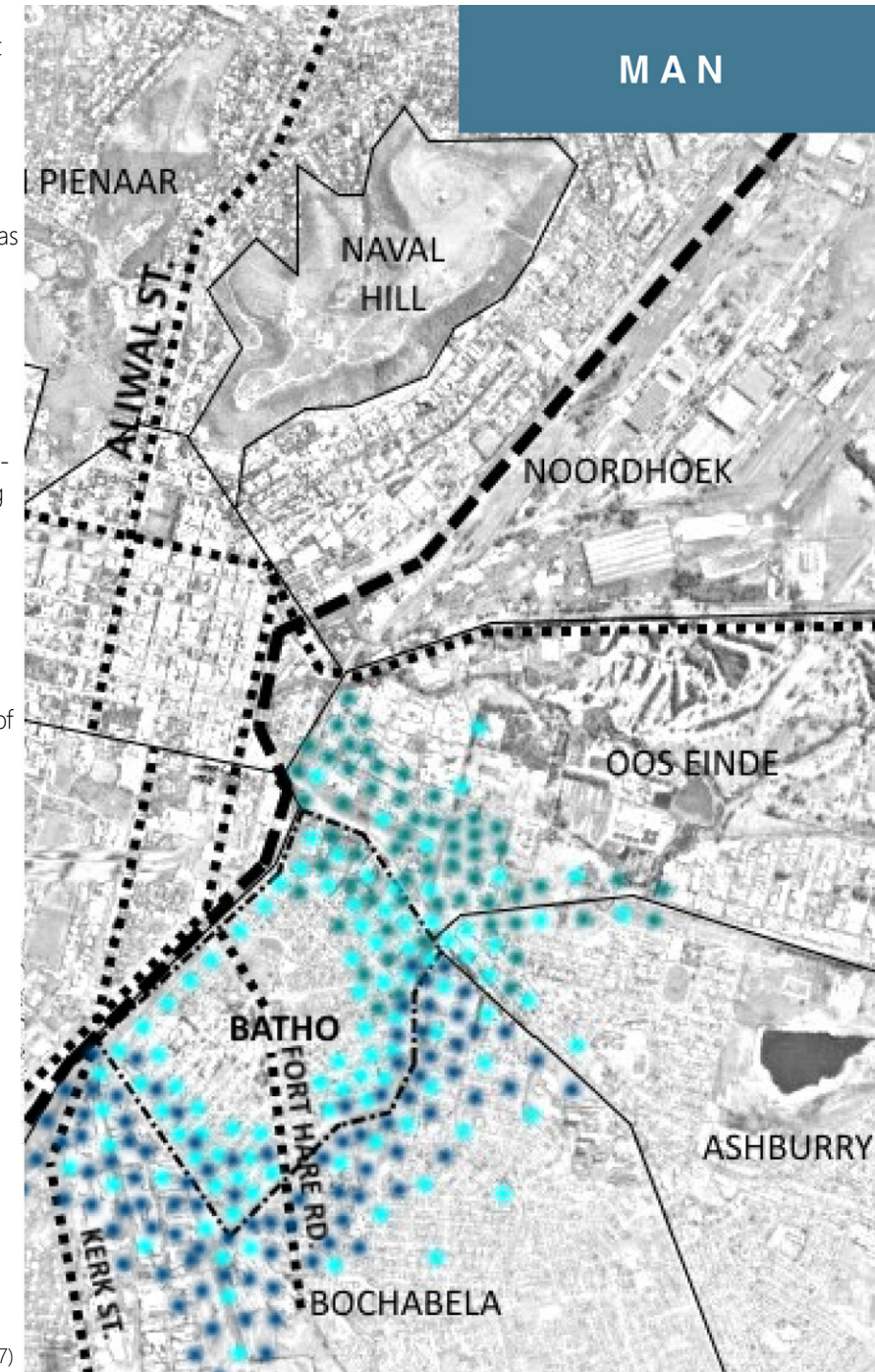
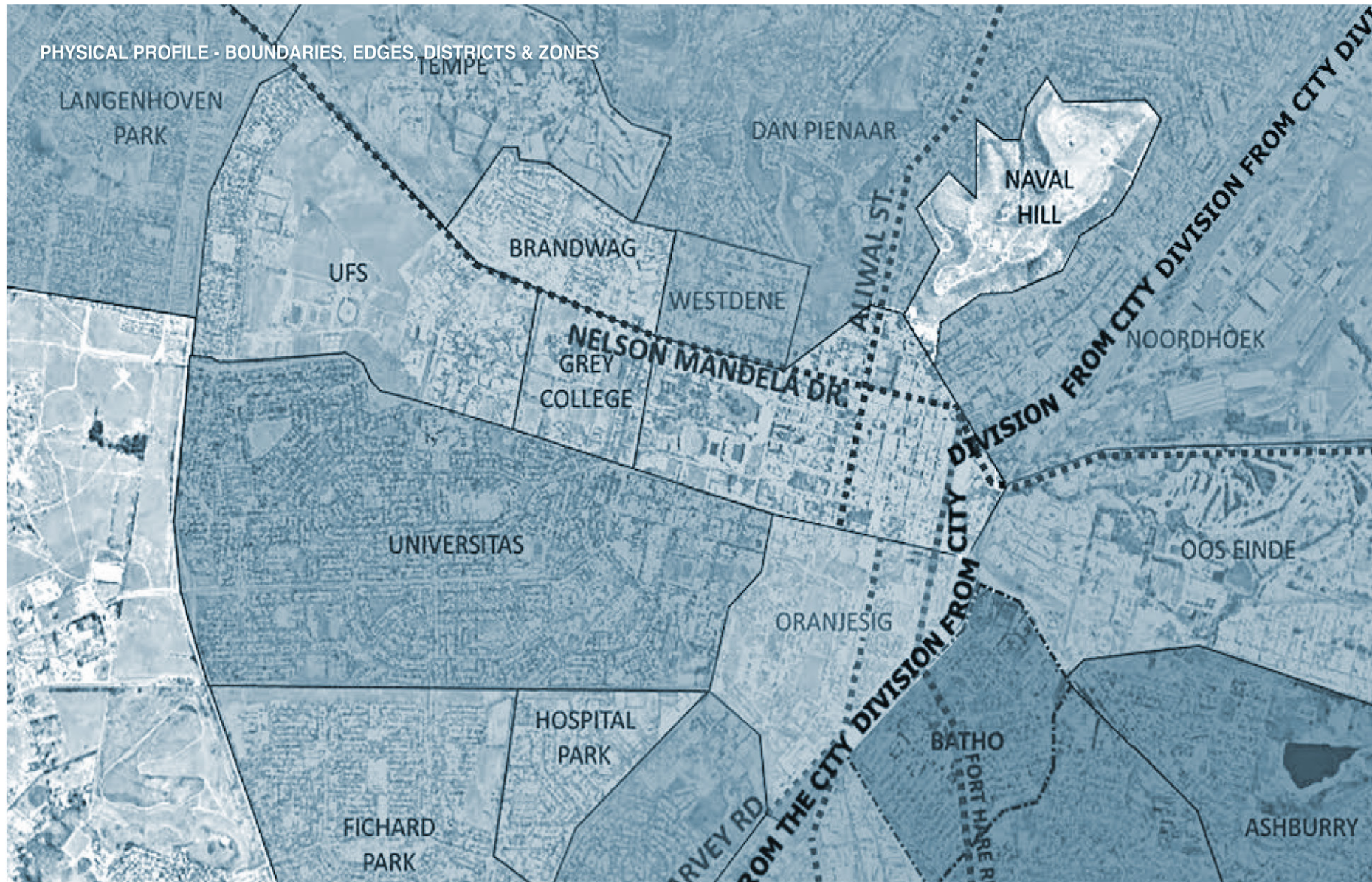
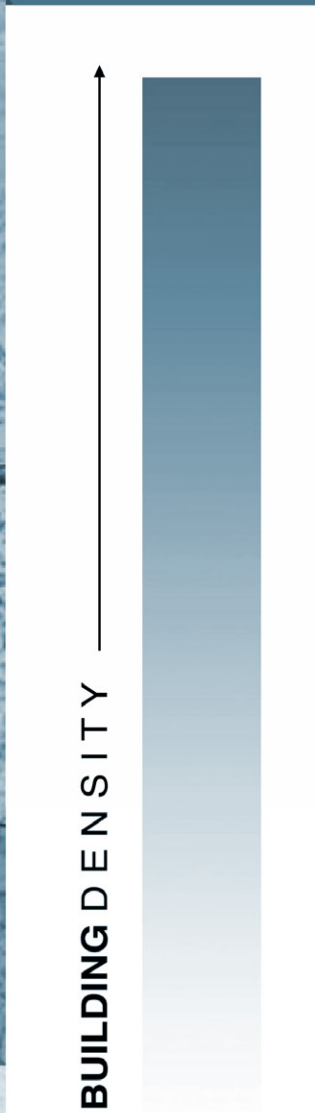


Fig 36-37. Batho demographics (author, 2017)



PLACE



Although Batho is no longer segregated from the city as it once was, the railway line still creates a barrier between the two. This puts an immense amount of reliance on roads such as Fort Hare, which become the breakers of the barrier between east and west. Districts are defined by main roads, while the greater Batho, Ashburry area is densely populated due to the complex composition of multiple RDP houses.

Fig 38. Batho demographics (author, 2017)

## POPULATION DENSITY

MAN

Map of Batho highlighting primary inlets and principal travel routes.



It can be seen that the areas that attract the most use are aligned along Fort hare Rd, the main spine of Batho

Fig 39. Batho demographics (author, 2017)



Fig 40. Batho sketches (author, 2017)



Fig 41. Social sustainability (online, 2019)

**CULTURAL SUSTAINABILITY**

When evaluating the inhabitants of Batho and their values and beliefs, the community expresses itself as a vibrant district with unique characteristics. When you look at the architecture style of the community, you can see a specific type of “typical batho house” but also how diverse the other buildings are and how the people are. Unplastered red brick is the main material used throughout the community because it is easy to obtain and can ensure a well-constructed building. The community consists of a very not so diverse population, where the occupants are mainly Sotho’s. The type of people that are found in this community are mainly entrepreneurs and self-employed informal business owners.

**ENVIRONMENTAL SUSTAINABILITY**

Pollution & immense litter is a major problem in this community because the environment is not being taken care of and they don’t have the necessary services for a well preserved environment. The government currently does not do enough to deliver quality environmental sustainability to the people of the Batho community. For example: the huge lack of water and green spaces, ineffective waste collection and disposal systems. Also, there is a lack of parks/recreation spaces which is vital in a “place making” society. Environmental improvements and sustainable living can be made by creating more green spaces and introducing more recreational spaces in the neighbourhoods.

**POLITICAL SUSTAINABILITY**

When Political Sustainability becomes a focal point it causes environmental unsustainability due to less focus being put on our environment. Instead of trying to improve the negative urban effects of apartheid, political groups are fighting for other “more important” things instead of our environment. The Batho area have a lack of professional which means they are ill equipped to establish economically programs to sort out environmental issues.

**ECONOMIC SUSTAINABILITY**

When it comes to the improvement of the economic standard of living of the population in Batho, many changes need to be made in the future. Investing in infrastructure, factories, education facilities, technology etc.. will cause economic growth through the benefits these elements reap. Economic growth is the increase over time in the capacity of an economy to produce goods and services and, ideally, to improve the wellbeing of its citizens.

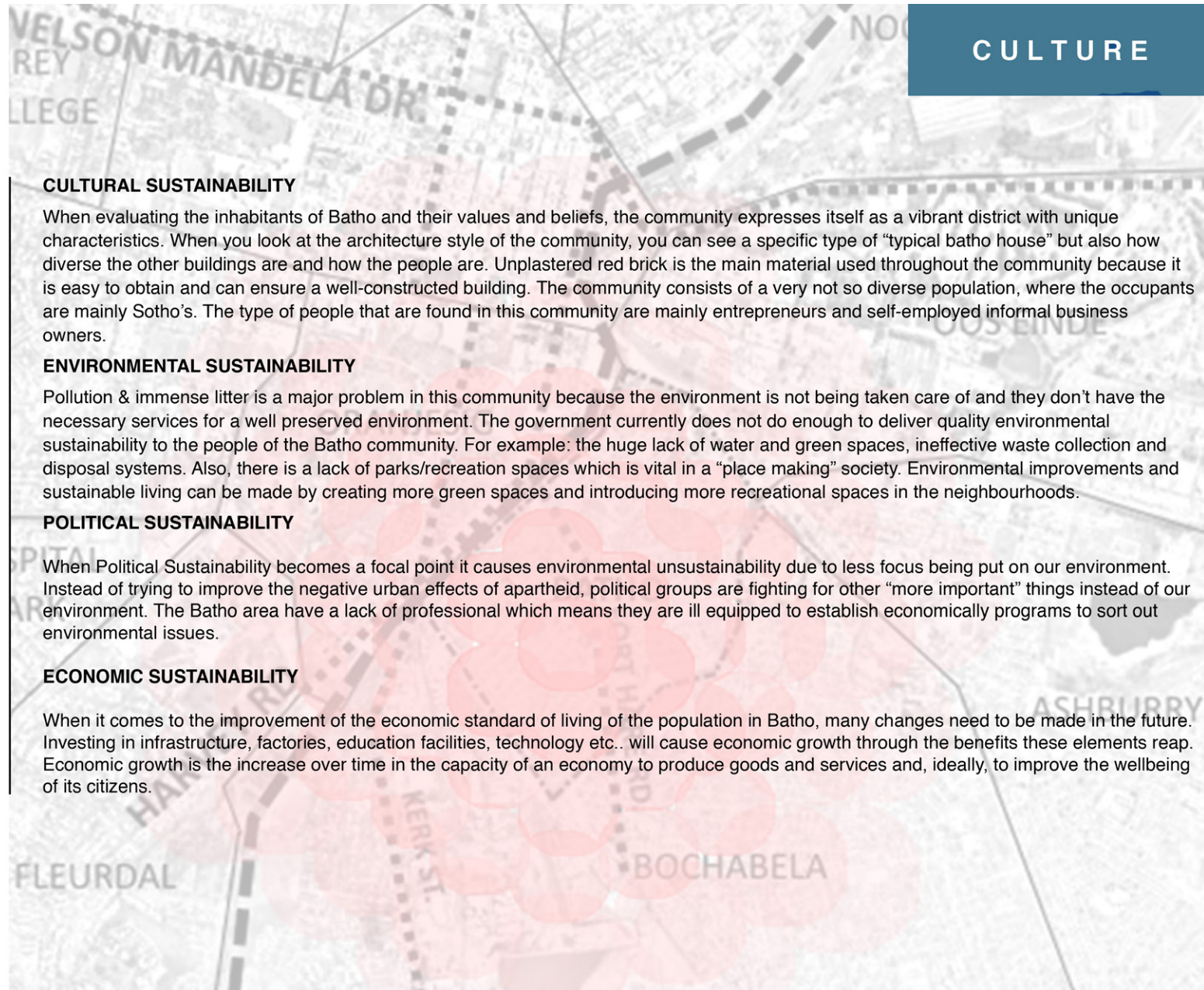
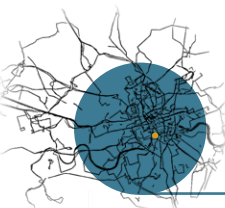


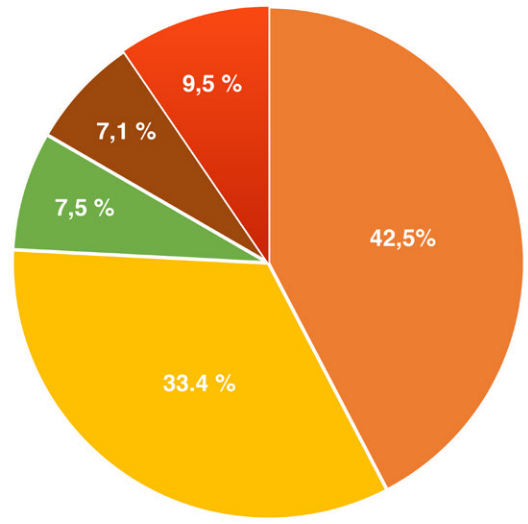
Fig 42. Batho sustainability (author, 2017)



# Batho as a settlement | Micro-Context

DEMOGRAPHICS & BUILDING TYPES

## DEMOGRAPHIC PROFILE



## LANGUAGES ACROSS BLOEMFONTEIN

- 42,5% speak Afrikaans
- 33,4% speak Sotho
- 7,5% speak English
- 7,1% speak Xhosa
- 9,5% speak another language

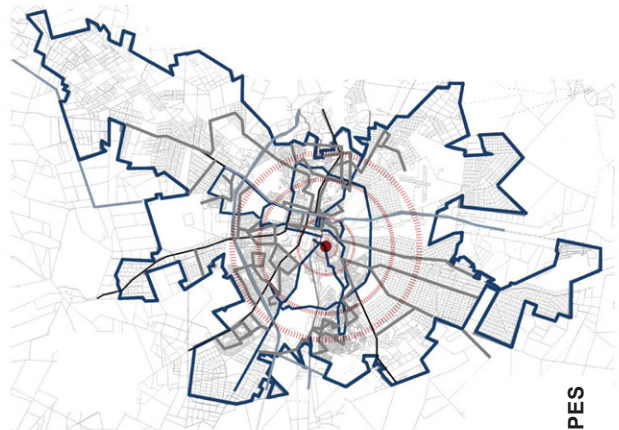
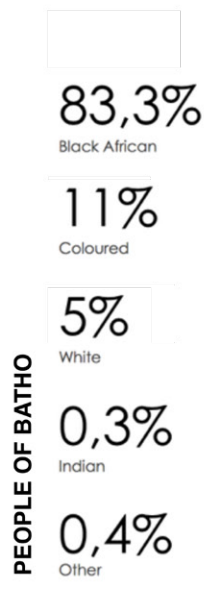
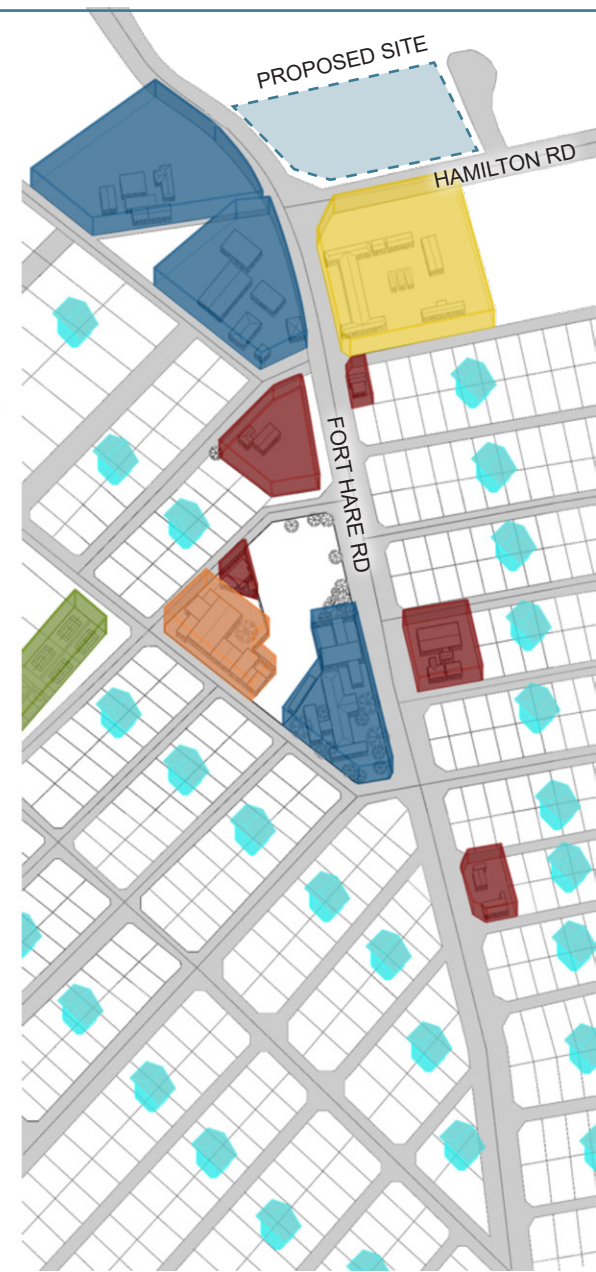


Fig 43. Batho demographics (author, 2019)



EXISTING BUILDING TYPES



## CHANGING DEMOGRAPHICS

With the disappearance of formalised segregation in the urban fabric, the areas settled East of the railway line have become homogenised but maintain a nostalgic reminder of the paradigm of political segregation in town planning.

The Batho community has seen an influx of traders, commuters, shoppers, workers and residents from the surrounding settlements but remains a self sustained neighbourhood of the original Sotho population of Bloemfontein.

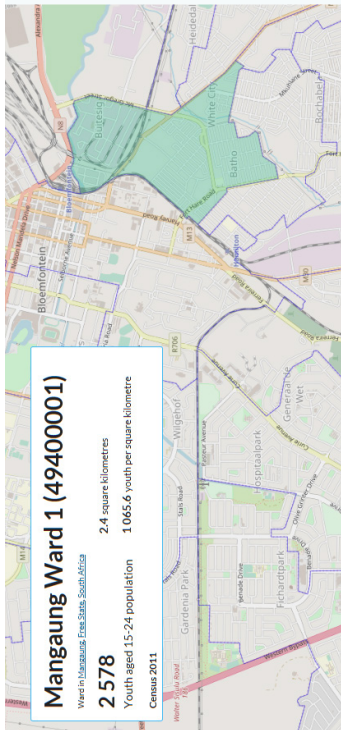


**Fig 43.** Batho sketches (author, 2019)

**Youth demographics**

NOTE: All demographics exhibited are produced by the South African census 2011

<http://www.statssa.gov.za>



**Population**

**12 277**

People

Free State: 2 728 161

South Africa: 50 929 992

**2 578**

Youth aged 15-24

Free State: 538 659

South Africa: 10 140 505

**21%**

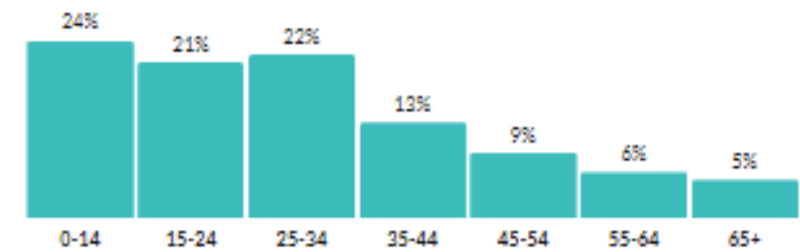
Of the population are youth aged 15-24

a little higher than the rate in Free State: 19.7%

a little higher than the rate in South Africa: 19.9%

**Total population by age group**

Chart Options



Source: Census 2011

**Youth population by race**

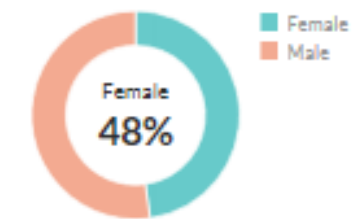
Chart Options



Source: Census 2011

**Youth population by gender**

Chart Options



Source: Census 2011

**Language**

**Sesotho**

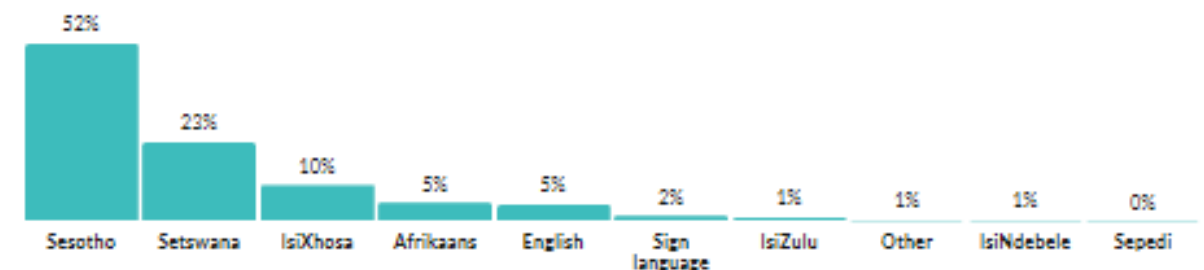
Language most spoken at home

about 80 percent of the figure in Free State: 65.96

more than double the figure in South Africa: 20.94

**Youth by language most spoken at home**

Chart Options



Source: Census 2011

Fig 47. Batho demographics (online, 2019)

Progress through school

**70.3%**

Of youth aged 16-17 have completed grade 9 or higher

about the same as the rate in Free State: 71.4%

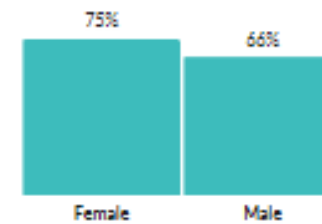
about the same as the rate in South Africa: 70%

Youth aged 16-17 by grade 9 completion



Source: Census 2011

Youth aged 16-17 who completed grade 9 by gender



Source: Census 2011

Highest educational level

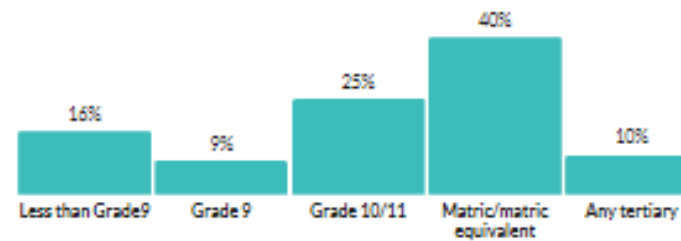
**50.4%**

Of youth aged 20-24 have completed matric/matric equivalent or higher

a little higher than the rate in Free State: 47.6%

about the same as the rate in South Africa: 49.4%

Youth aged 20-24 by highest educational level



Source: Census 2011

Educational attendance

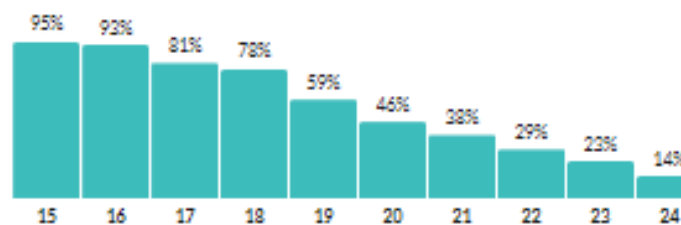
**49.8%**

Of youth aged 15-24 attend an educational institution

about 90 percent of the rate in Free State: 53.4%

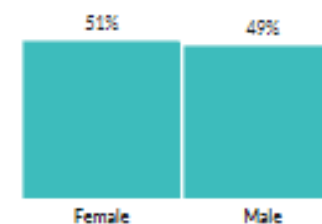
about 90 percent of the rate in South Africa: 54.3%

Youth attendance at an educational institution by age



Source: Census 2011

Youth attending an educational institution by gender



Source: Census 2011

Fig 48. Batho demographics (online, 2019)

PLACES OF INFLUENCE



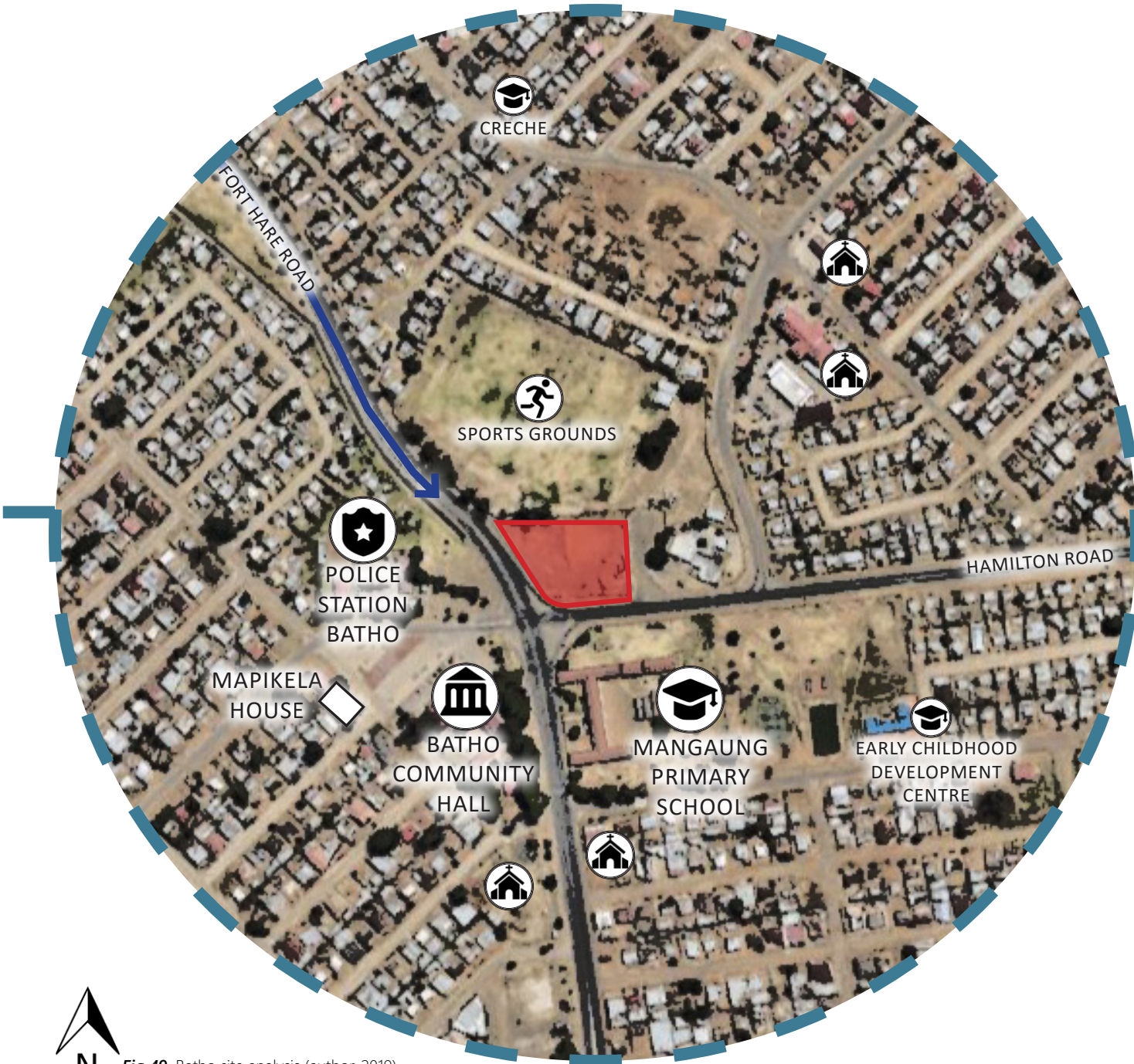
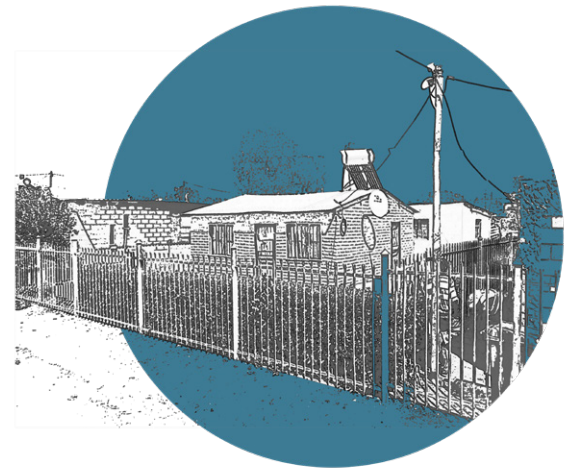


Fig 49. Batho site analysis (author, 2019)

MAPHIKELA HOUSE  
[National Monument]



TYPICAL BATHO HOUSE



MANGAUNG PRIMARY





FIDEL CASTRO BUILDING &  
FREE STATE RUGBY STADIUM

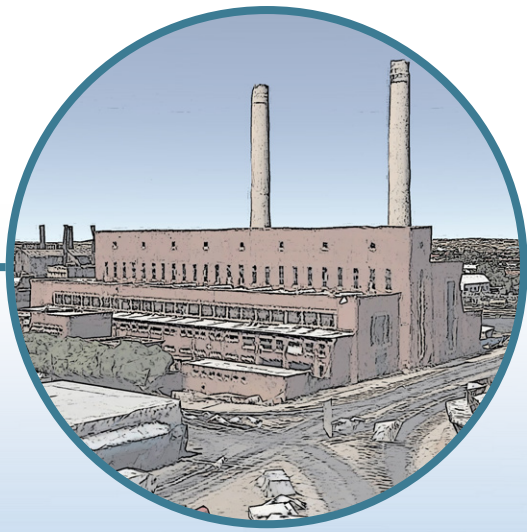


COOLING TOWERS

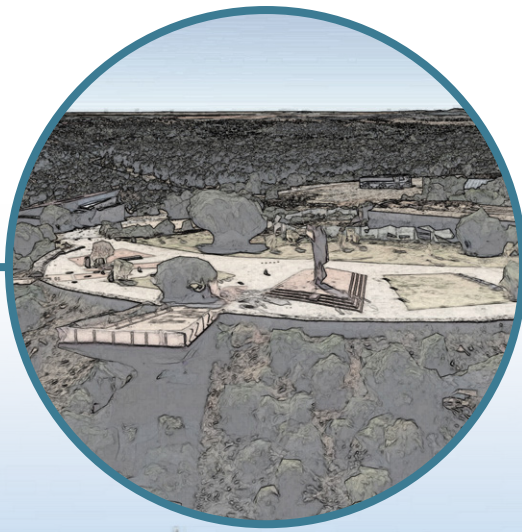


Fig 50. Bloemfontein nodes (author, 2019)

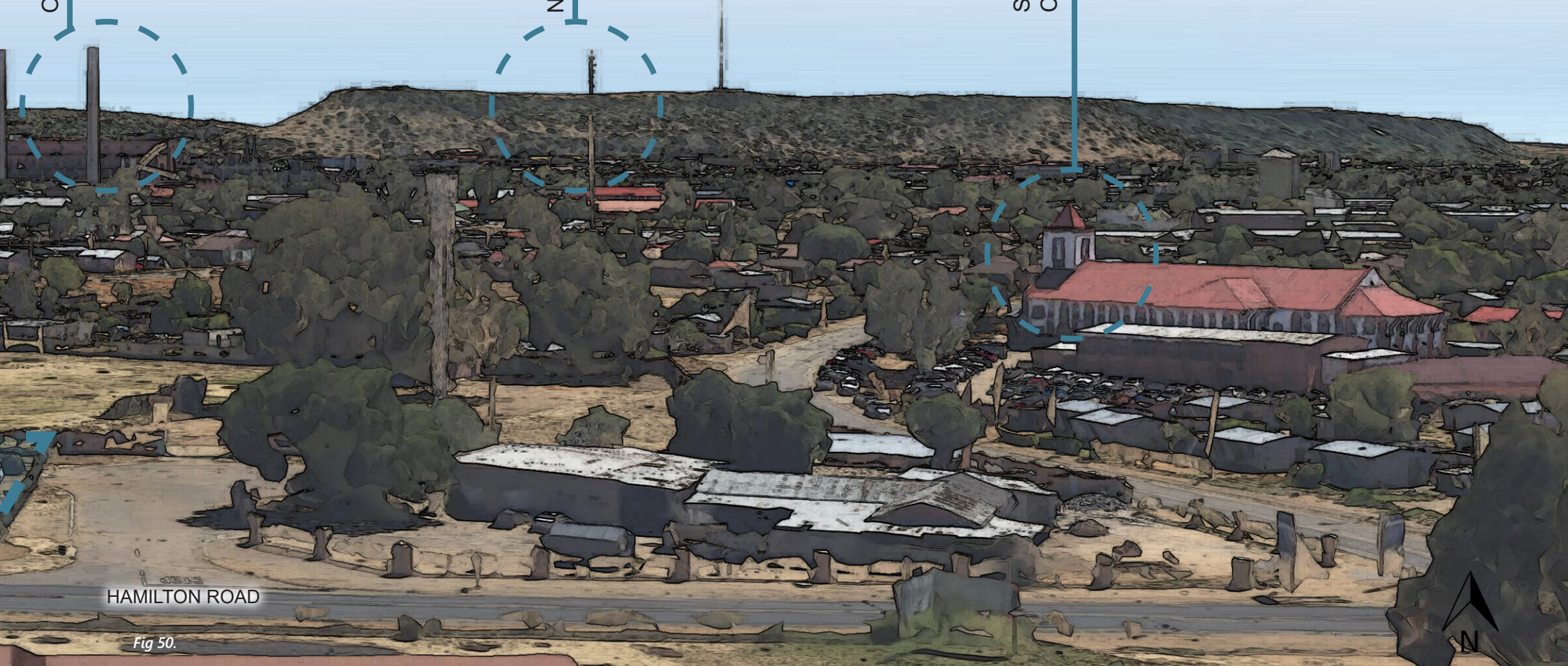
OLD POWER STATION



NAVAL HILL



ST JOHNS METHODIST CHURCH [BATHO]



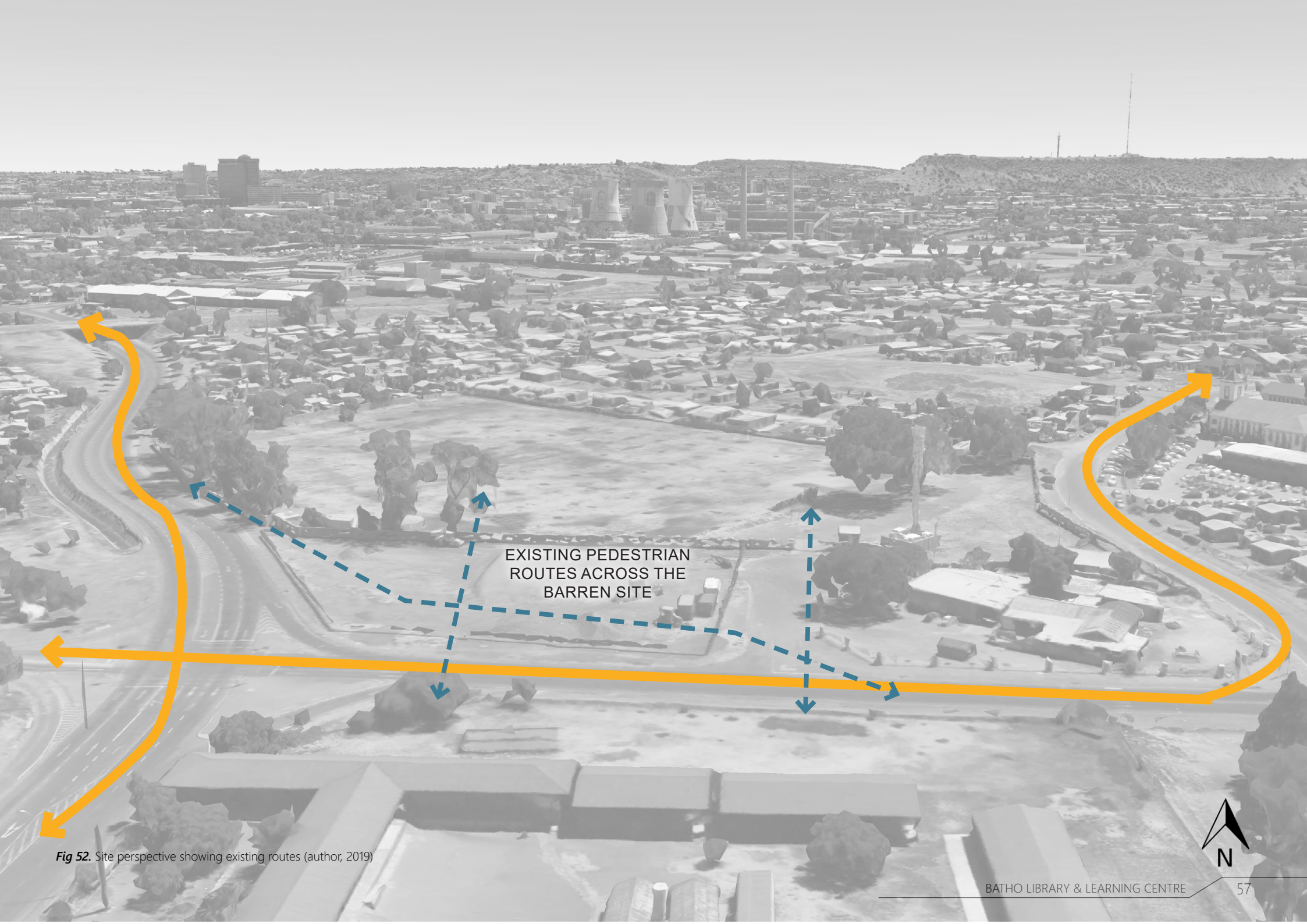
HAMILTON ROAD

Fig 50.





Fig 51. Site sketch (author, 2019)

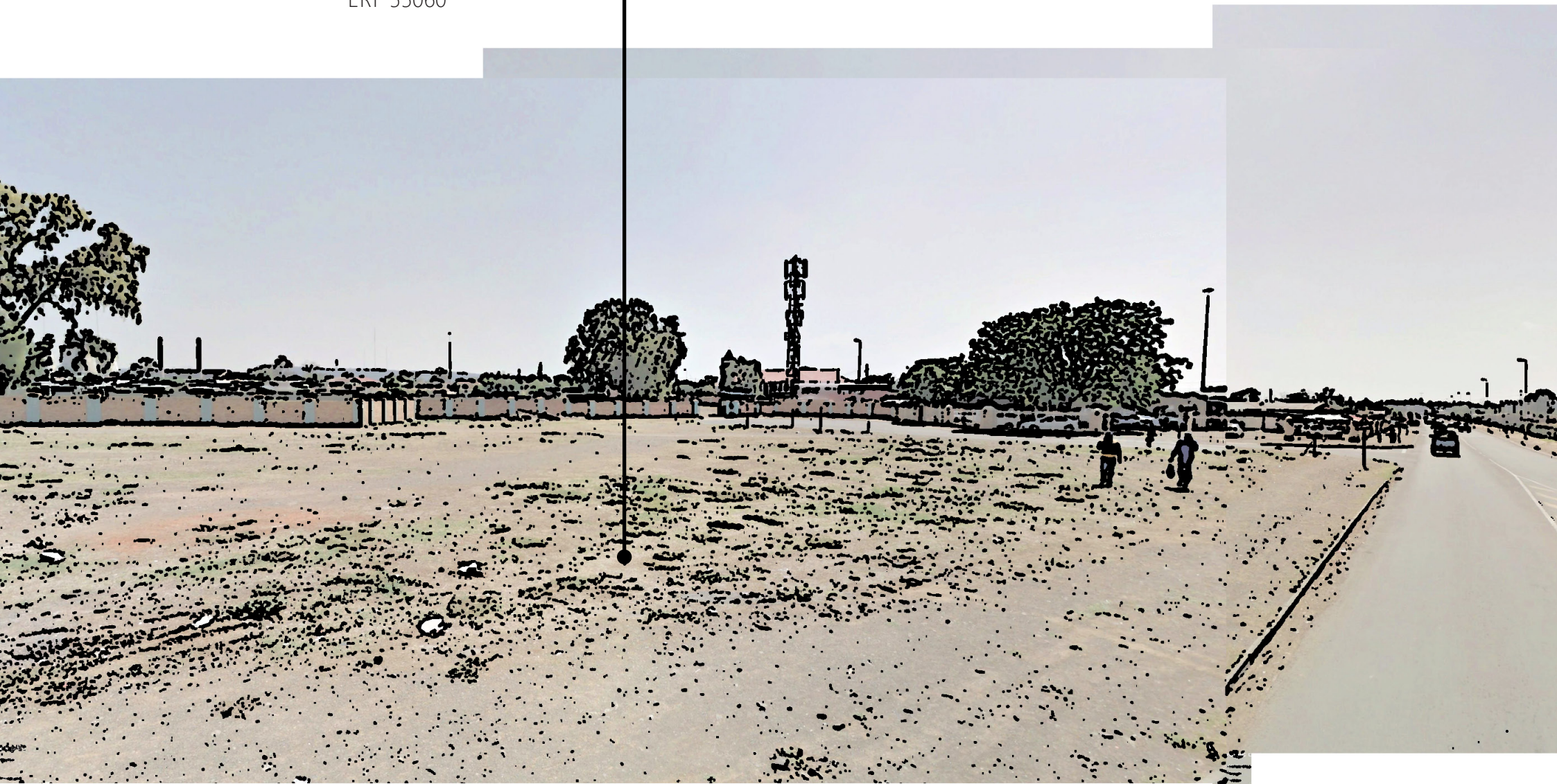


EXISTING PEDESTRIAN  
ROUTES ACROSS THE  
BARREN SITE

Fig 52. Site perspective showing existing routes (author, 2019)



PROPOSED SITE  
ERF 55060



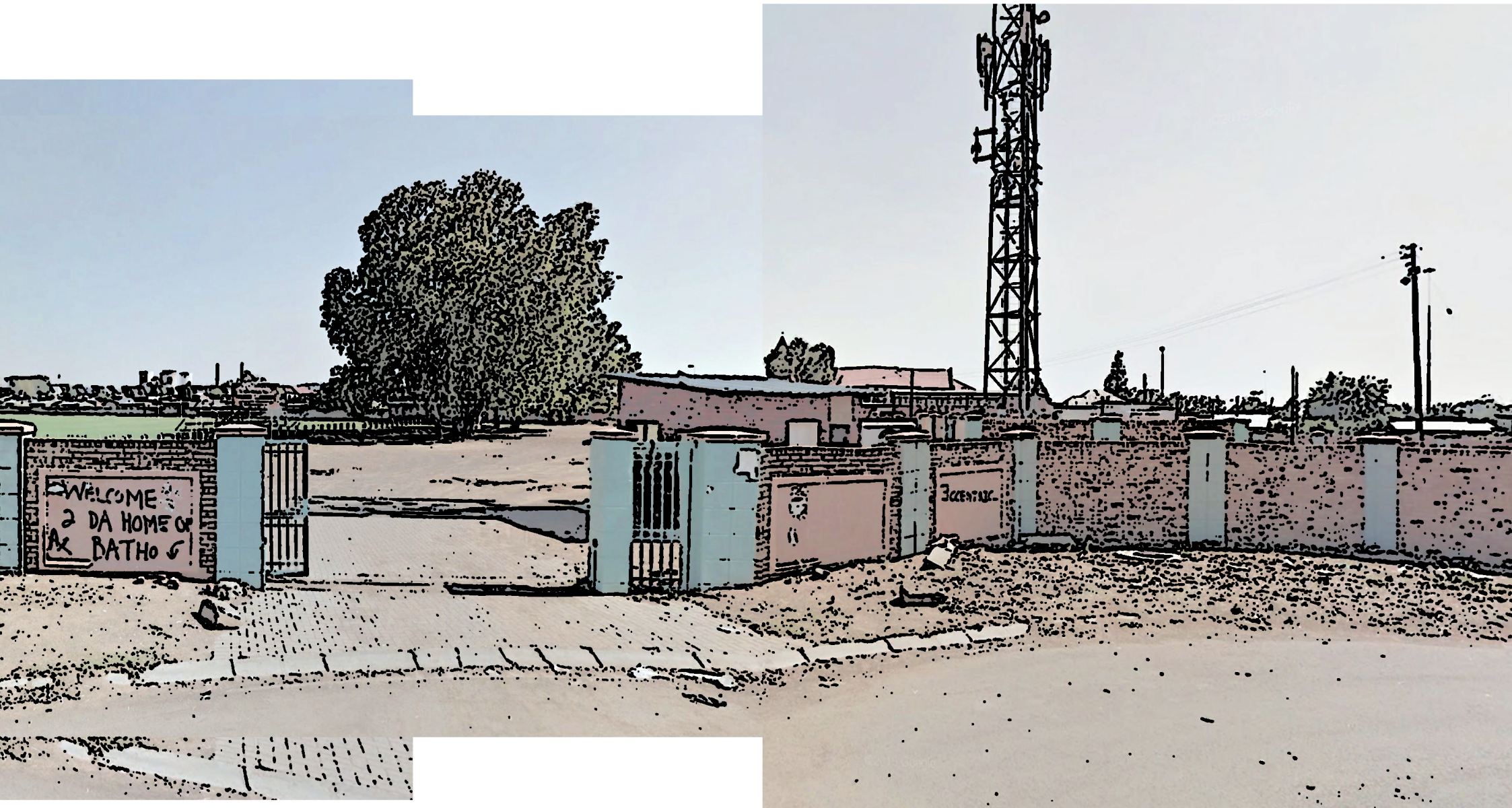
*Fig 53.* Site panorama (author, 2019)



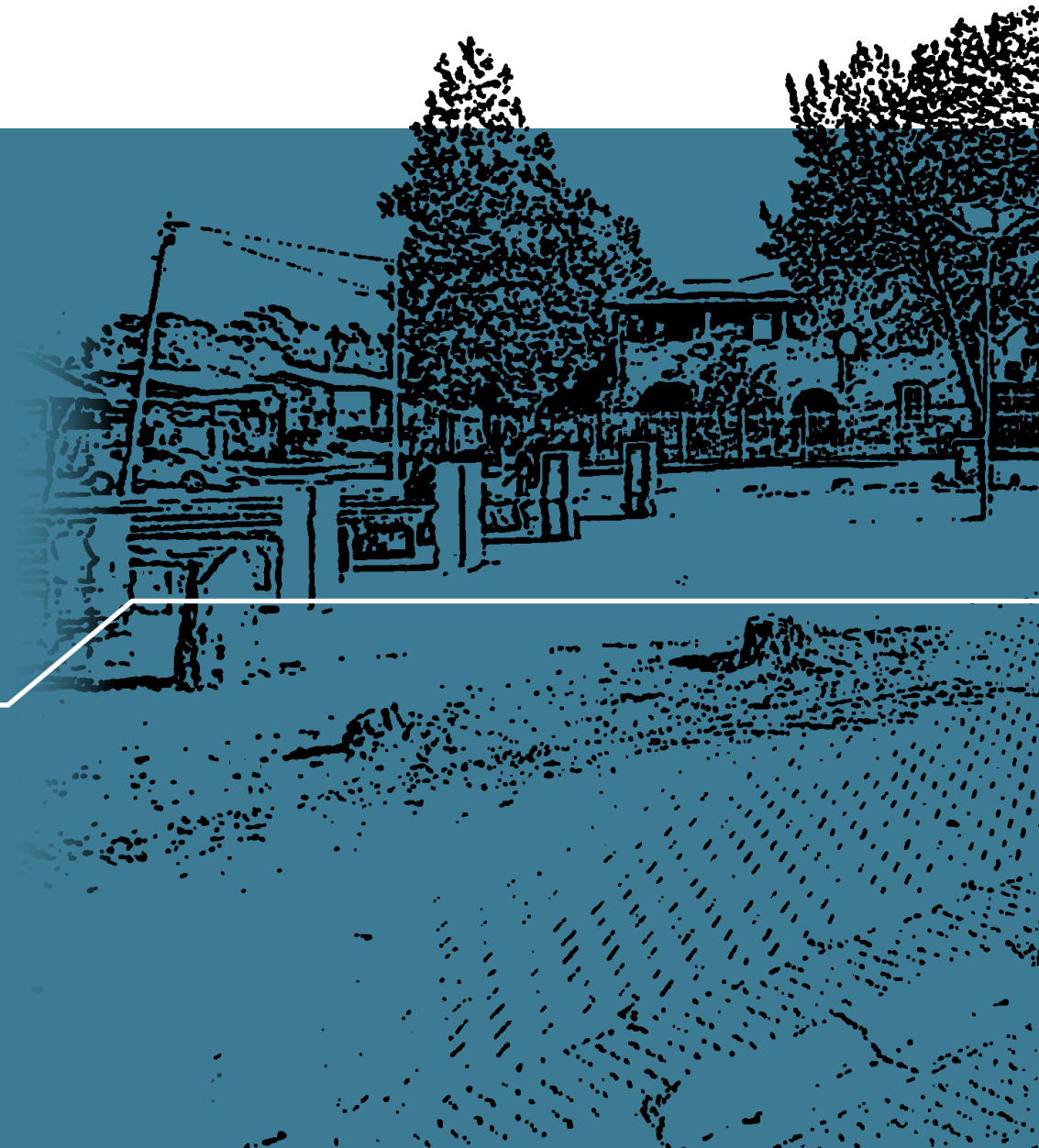
PROPOSED SITE  
ERF 55060



Fig 54. Site panorama (author, 2019)



## EXPLORATION & GROUNDING



*Fig 55.* Batho sketch (author, 2019)



# CHAPTER | 3

## AIM OF THE CHAPTER

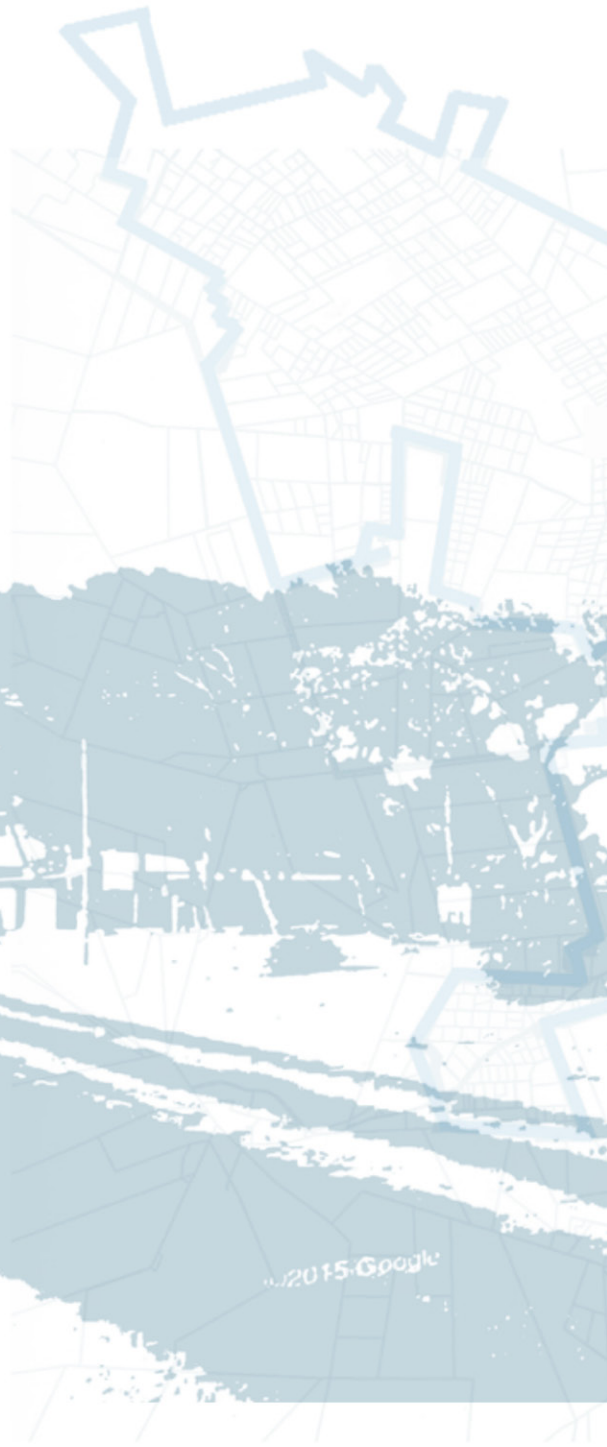
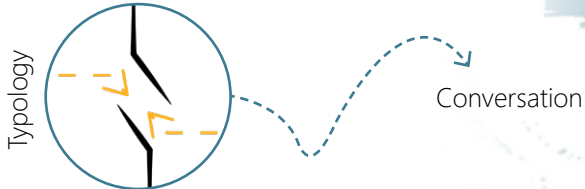
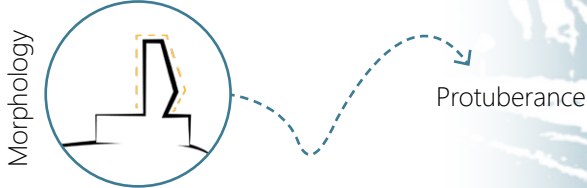
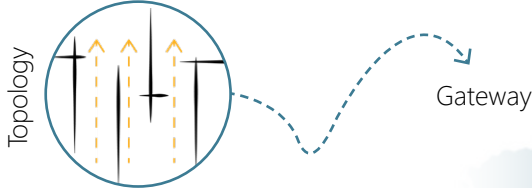
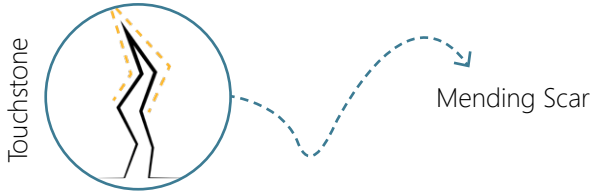
An initial investigation process, where the main theoretical stand point, which is influenced by initial design development schemes, is explained and then explored through preliminary explorations within the design process

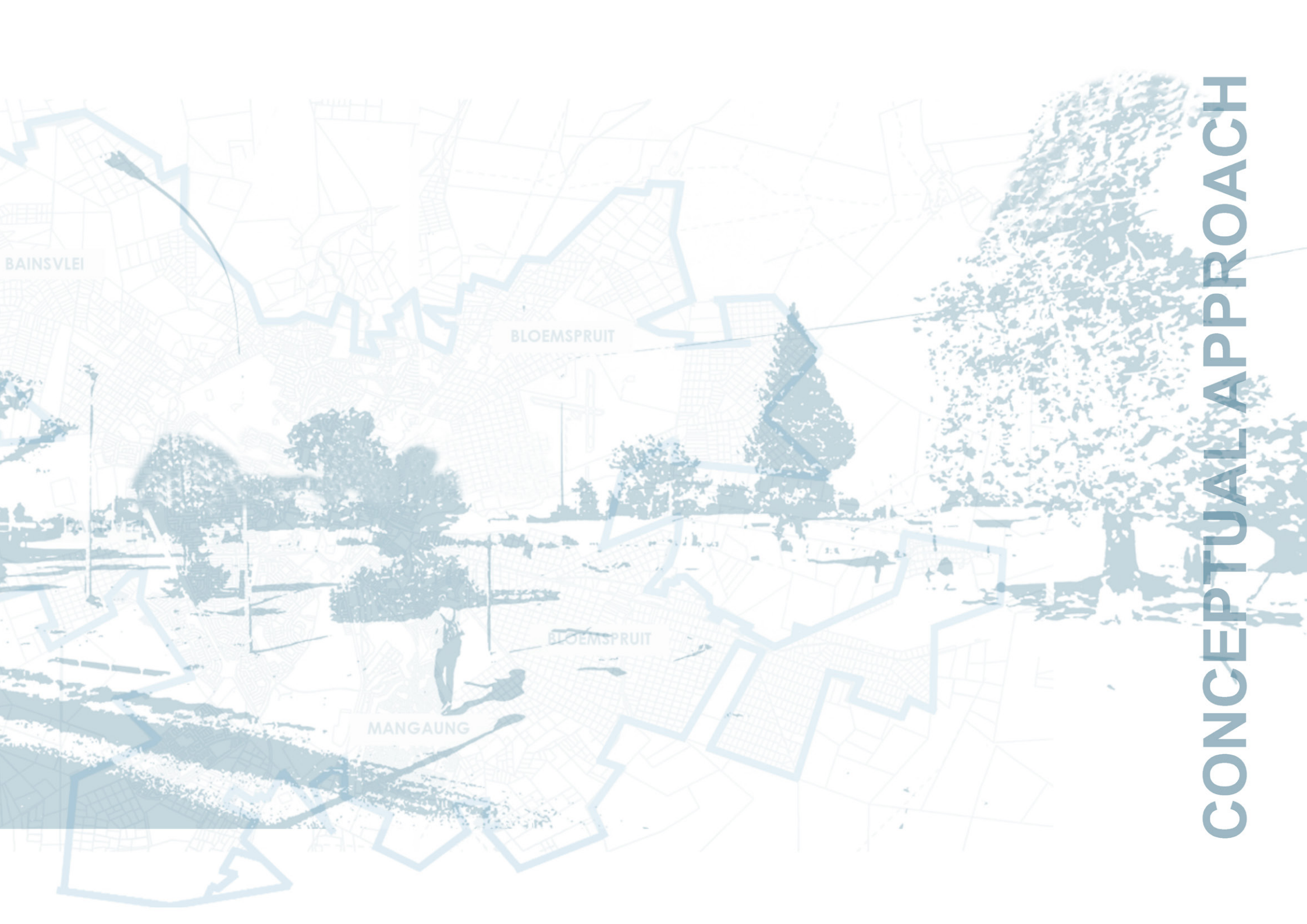
# Conceptual Approach

Touchstone

- Design Concepts
- Gateway
  - Protuberance
  - Conversation

## 3.1





# CONCEPTUAL APPROACH



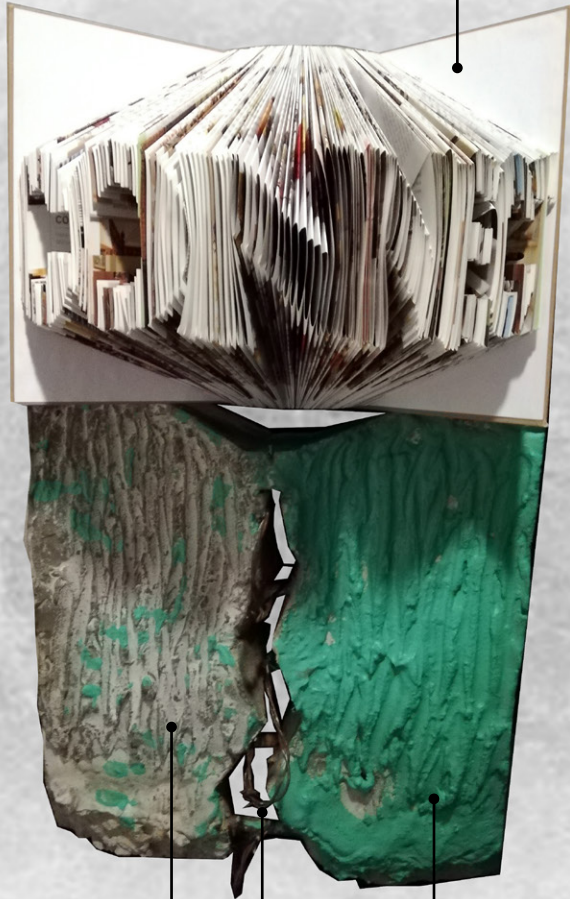
# TOUCHSTONE

The touchstone, which is one of the initial design exercises, is there as a guideline to help spark a thought or an idea around the thesis proposal. The exhibited touchstone is formed around the history of batho and how the bloemfontein railway line can still be seen as a scar on the landscape today. Therefore, the touchstone exhibits a "crack" in the landscape (railway line), splitting two sides of the model. That being Batho and the Bloemfontein CBD. The main material of the two sides is concrete with the one side painted with "Batho Green" to distinguish the two sides. The two sides are separated by a crack/scar with exhibited rusted barbed-wire and nails in between representing the old railway. The scar gets mended towards the top of the piece by a book. The books pages spell out "connect" with folded pages, suggesting that this so called scar that gets crossed everyday could be healed by education, learning and sharing. The concrete represents the two sides of the city, as well as the concrete ideologies surrounded by modern day education.

Thus, the two sides being mended and healed together by the book (representing the Batho Library & Learning Centre), it creates an opportunity for the thesis proposal to become an in-between space between these two nodal points creating a scar. The in-between proposal will become an educational node for the people of Batho to rest, learn and celebrate the crossing of this old scar everyday.

**Fig 56.** Node diagram (online edited, 2019)

Book spelling out "**CONNECT**"  
- Expressing the healing  
together of the scar as two po-  
lar opposites come together  
through education and  
information sharing



Unfinished concrete  
- Symbolizing the  
**Bloemfontein CBD**

Rusted barbed wire and nails  
- Symbolizing the  
existing **scar** on the  
landscape

Painted concrete  
- Symbolizing **Batho  
through the "Batho  
Green" colour**

Fig 57-58. Touchstone (author, 2019)



# CONCEPT 1

## GATEWAY [REFLECTION|REST]

[THRESHOLD] + [NARRATIVE]

THE LIBRARY & LEARNING CENTRE SPILLS OUT TOWARD THE SURROUNDINGS AND BECOMES A REST SPOT AND URBAN PARK, ADAPTING THE NARRATIVE OF THE EXISTING BATHO VERNACULAR USE OF THRESHOLD AND "IN-BETWEEN" SPACE

THE EXPLORATION DEPICTS THE LIBRARY BECOMING AN "IN-BETWEEN" SPACE WITHIN BATHO THAT ALLOWS FOR A SPACE FOR THE PEOPLE OF BATHO TO REST AND REFLECT WITHIN THIS CULTURAL HUB

RELATED RESEARCH QUESTION:

HOW CAN THE UNDERSTANDING OF THRESHOLD & NARRATIVE CONTRIBUTE TOWARD THE DESIGN OF A LIBRARY & LEARNING CENTRE IN BATHO THAT BECOMES A PLACE OF REST AND REFLECTION

**Fig 59.** Gateway sketch (author, 2019)

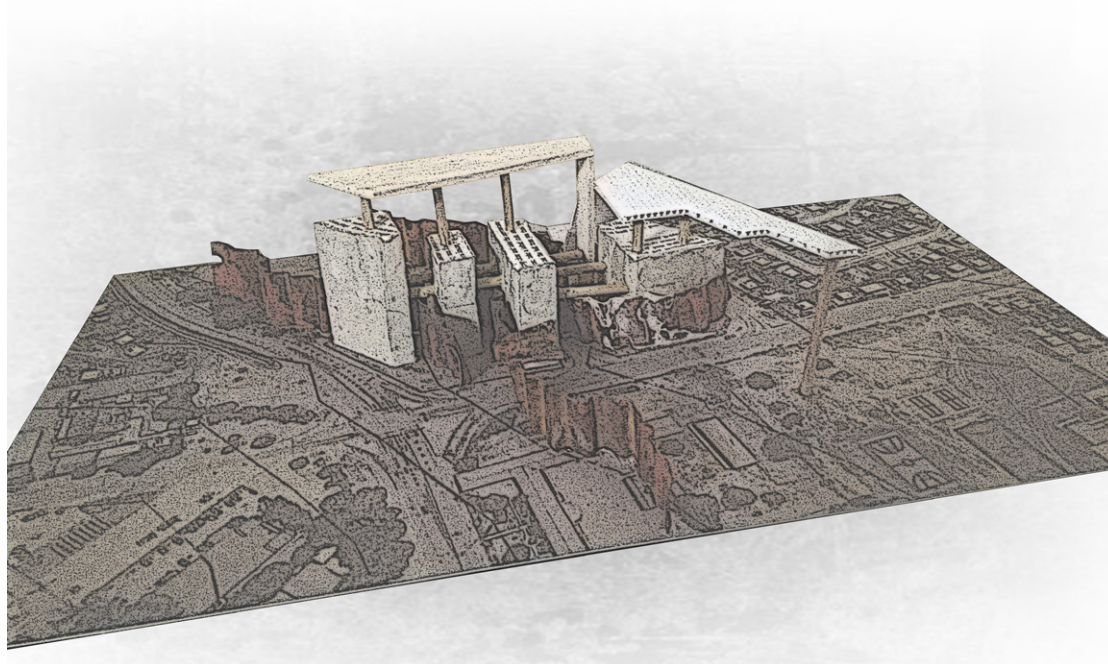
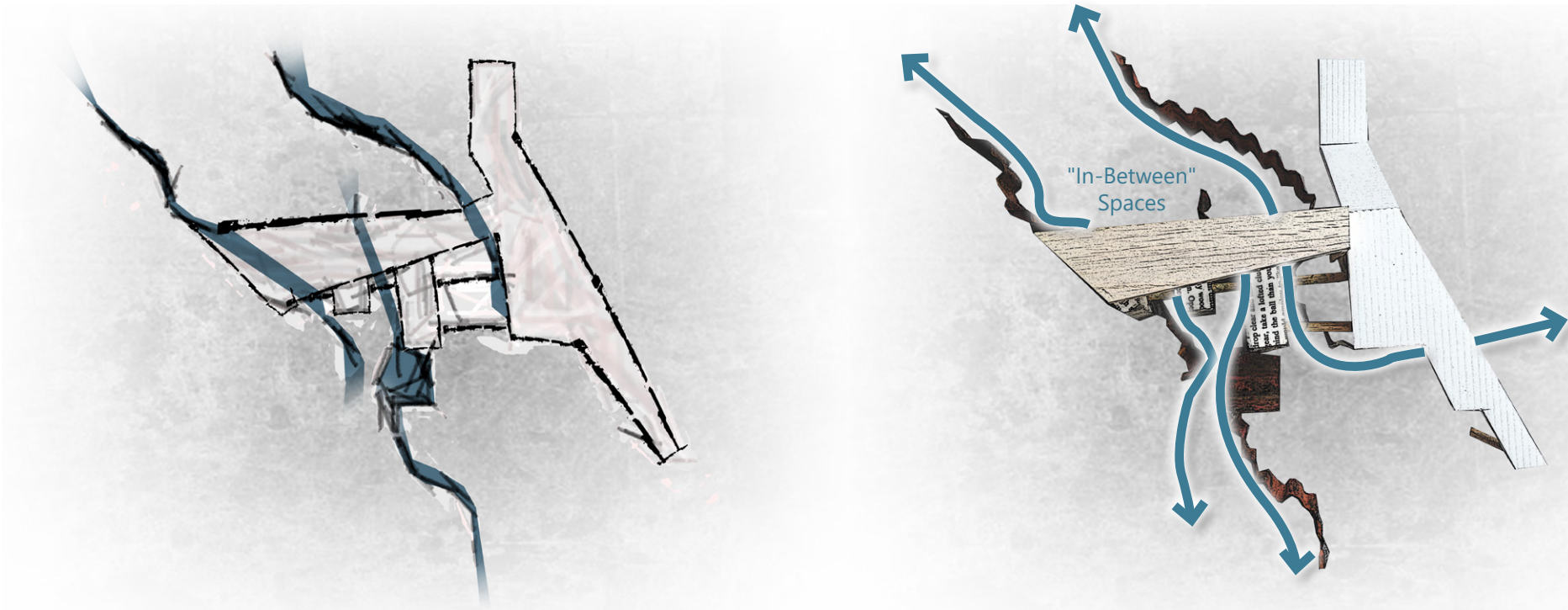


Fig 60. Concept 1 (author, 2019)

# CONCEPT 2

## PROTUBERANCE [NODE|VOICE]

[THRESHOLD]+[HIERARCHY]+[PLACE-MAKING]

GIVING THE BATHO IDENTITY A VOICE THROUGH AN EDUCATIONAL  
DEVELOPMENT NODE THAT CAN BE SEEN FROM THE CITY

THE EXPLORATION DEPICTS THE LIBRARY BECOMING A NODAL POINT WITHIN THE  
BLOEMFONTEIN CONTEXT SO THE PEOPLE OF BATHO CAN CLAIM THE LIBRARY  
AND LEARNING CENTRE AS A CULTURAL HOME WITH VERNACULAR BATHO  
CHARACTERISTICS

RELATED RESEARCH QUESTION:

HOW CAN THE UNDERSTANDING OF THRESHOLD & CITY HIERARCHY HELP  
GENERATE AN EDUCATIONAL DEVELOPMENT NODE TO GIVE BATHO AND IT'S  
PEOPLE A "VOICE" FOR IDENTITY

Fig 61. Protuberance sketch (author, 2019)

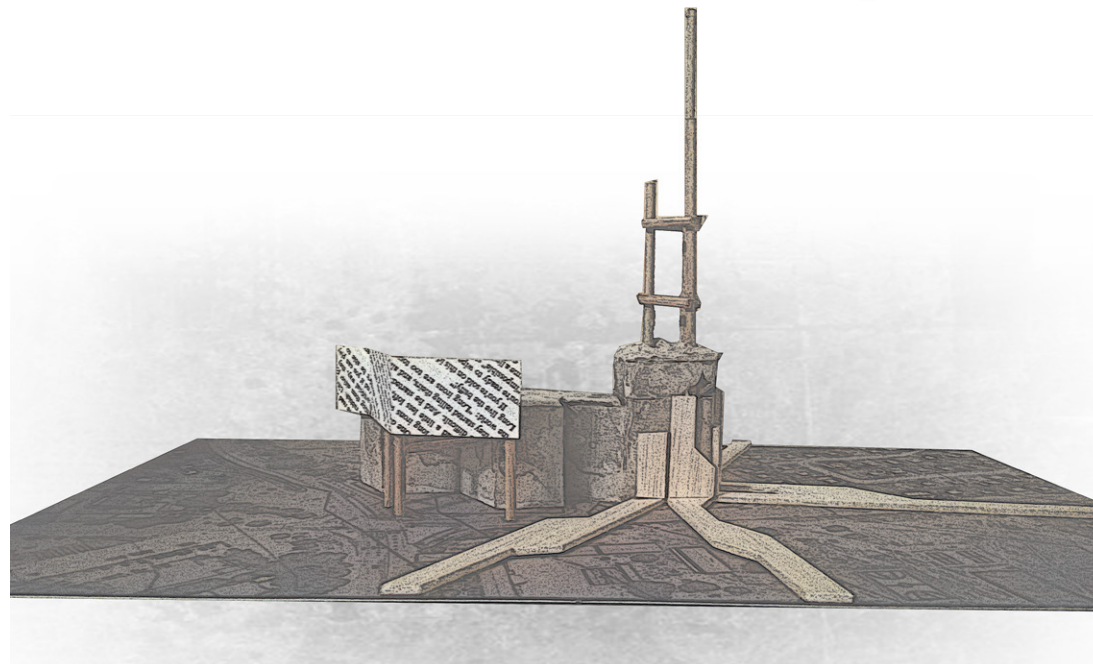
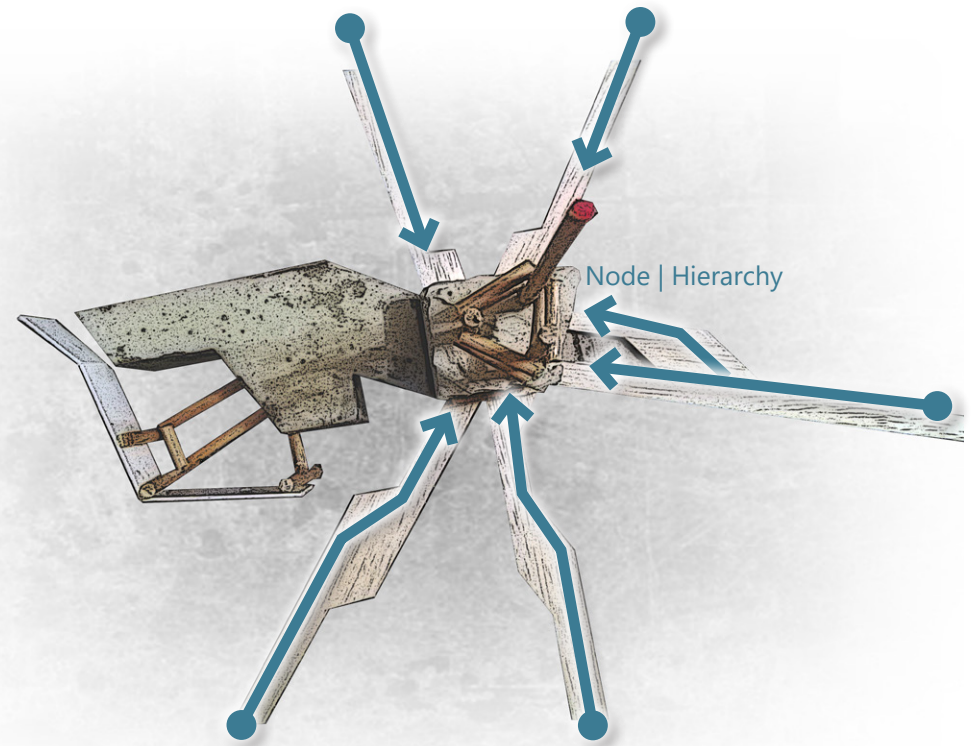
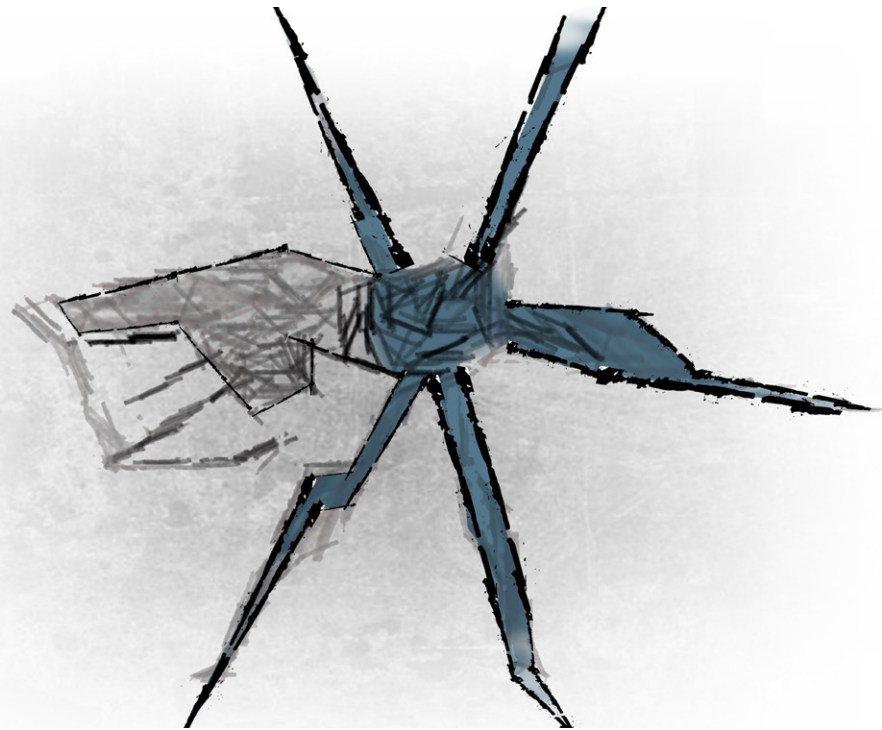


Fig 62. Concept 2 (author, 2019)

# CONCEPT 3

## CONVERSATION [CONNECTION]

[THRESHOLD]+[LIMINALITY]

A CONNECTION / RE-CONNECTION OF BATHO BACK TO THE CITY  
WITH THE LIBRARY & LEARNING CENTRE AS THE IN-BETWEEN SPACE

THE EXPLORATION DEPICTS THE LIBRARY BECOMING AN  
"IN-BETWEEN" SPACE WITHIN BATHO THAT SHOWS THE STRUCTURE  
CONNECTING ITSELF TOWARD THE BLOEMFONTEIN CBD AS WELL AS TOWARD THE  
HEART OF BATHO. THIS IS TO EXPRESS THE OLD SCAR  
(RAILWAY) BEING OVERCOME BY THE REACHING OUT TOWARD BOTH NODAL  
POINTS.

RELATED RESEARCH QUESTION:

HOW CAN THE UNDERSTANDING OF THRESHOLD & THE "IN-BETWEEN" SPACE  
HELP RE-CONNECT BATHO BACK TO THE CITY THROUGH THE DESIGN OF A BATHO  
LIBRARY & LEARNING SPACE

Fig 63. Conversation sketch (author, 2019)

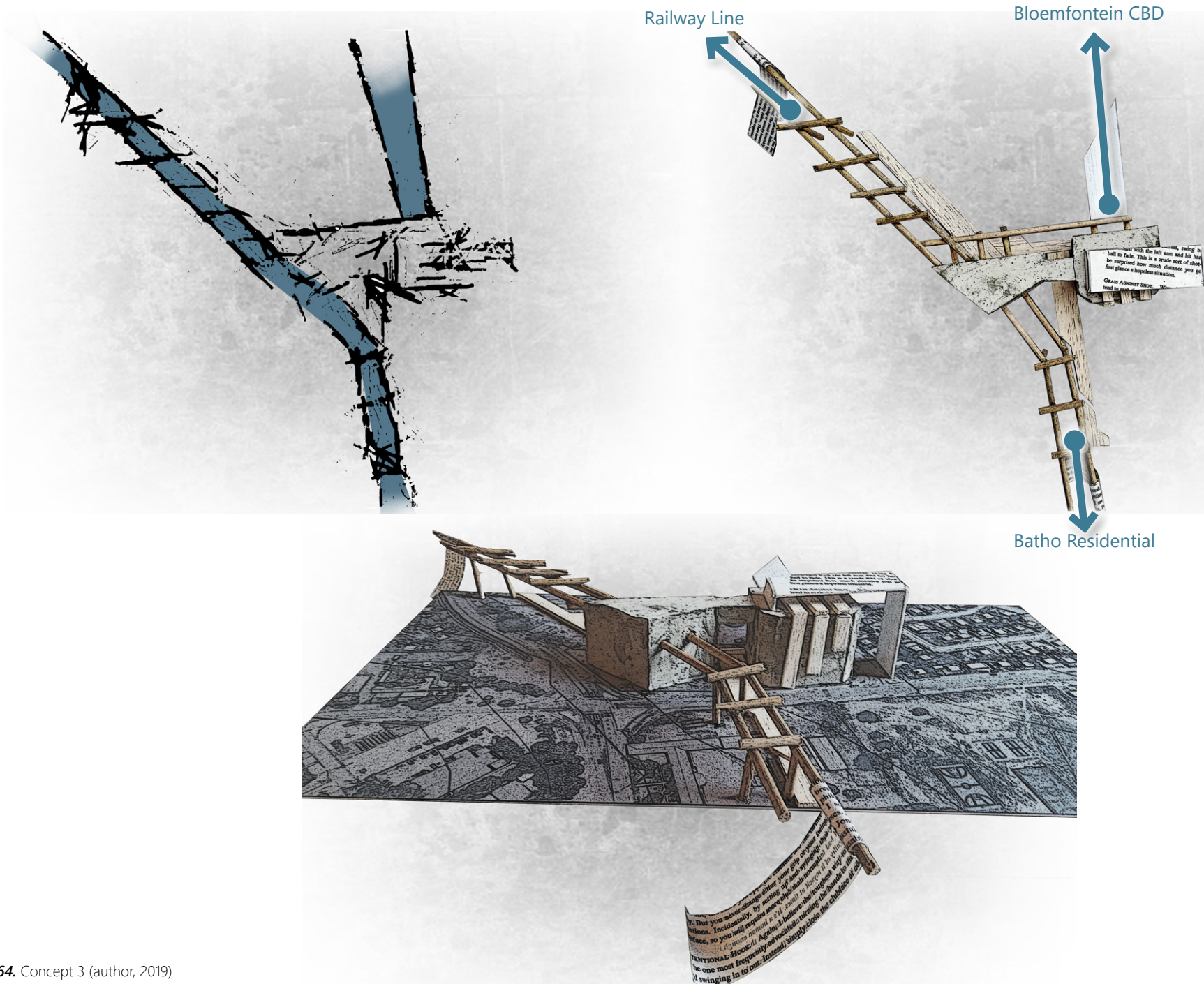


Fig 64. Concept 3 (author, 2019)

# Theoretical Response

Introduction - Theoretical Framework

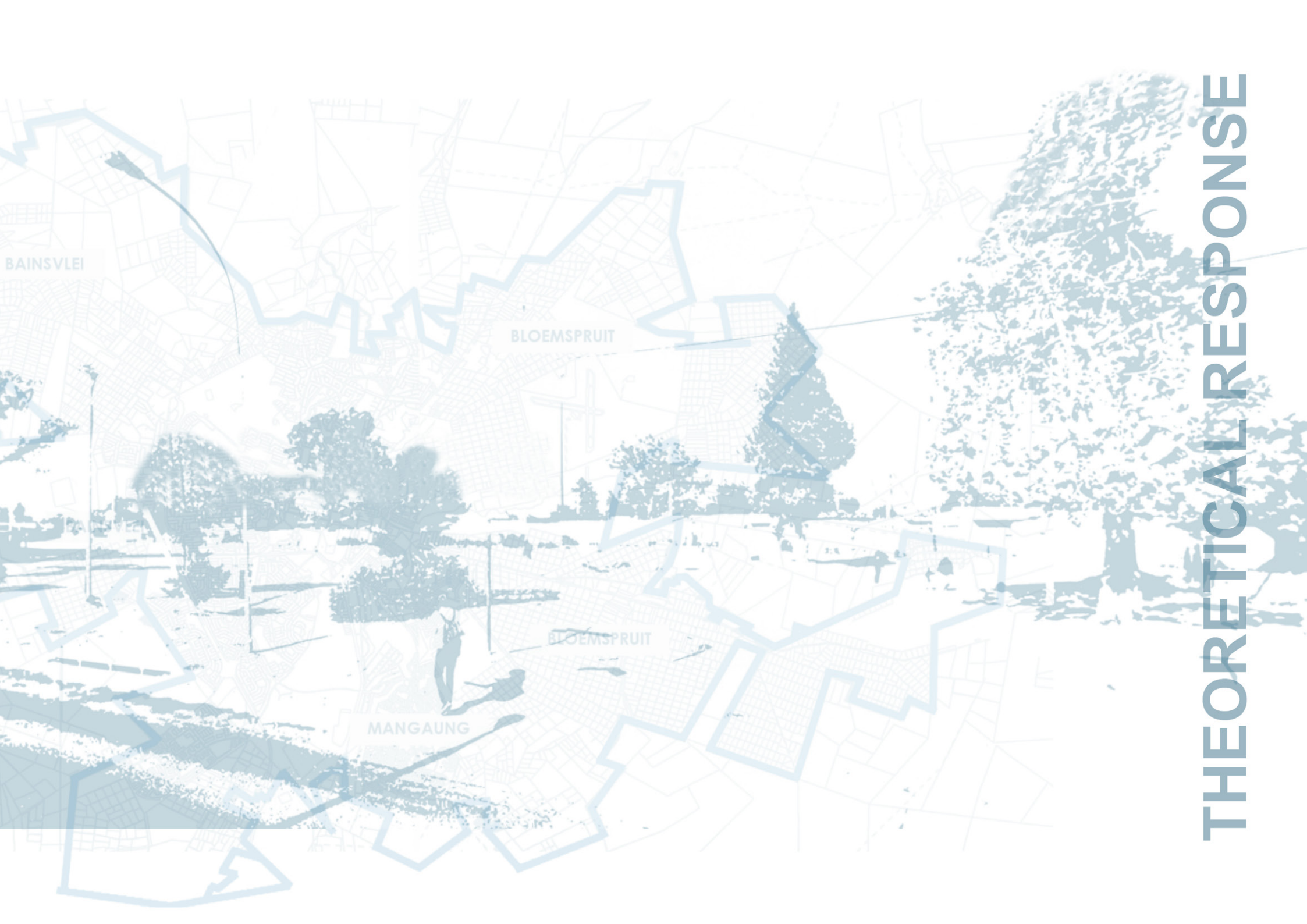
Stephen Kite | Modernity and the threshold  
- Psychologizing the Places in-between

Threshold through Narrative | Batho Perspective

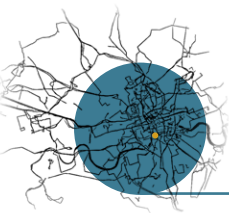
Libraries Creating Relationship | Modern libraries:  
Moving from a transactional to a relational library

## 3.2



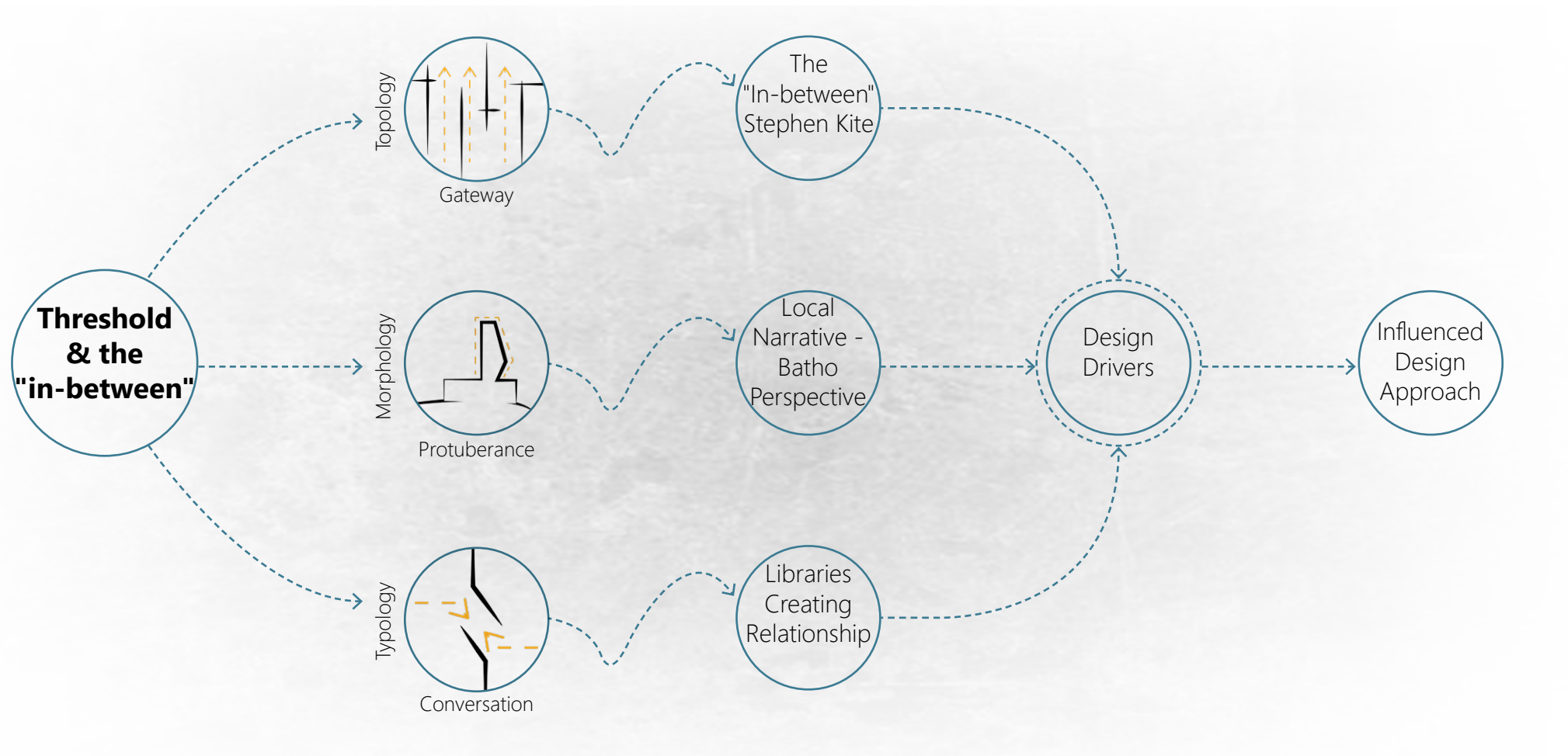


# THEORETICAL RESPONSE



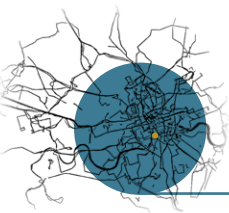
# Theoretical Framework

The discourse for the theoretical grounding of the proposed thesis takes shape around the main ideology of Threshold and the "in-between". This will be examined through different lenses that are chosen specifically in relation to the project's context, functions and proposed building type within the built environment. The lenses will be examined and certain aspects will become evident as design drivers for the proposed thesis. The three theoretical explorations were unveiled through the Concepts previously discussed. As the concepts follow on from Topology, Morphology, and Typology, so will the theories to be discussed in relation to the Concept topics.





*Fig 65.* Batho sketch (author, 2019)



# Stephen Kite | Modernity and the threshold - Psychologizing the Places in-between

## Introduction

The western world has an image of the city from the top, called an Apollonian view. An Apollonian view is represented by the God of reason and the rational. Which entails one from a western context to look down at Bloemfontein and see a grid-like set up in the CBD representing power and order. This power and order is due to apartheid and the grid structure of the Bloemfontein urban fabric becomes overpowering when it comes to division and separation in the races during the apartheid era.

This western image can be questioned though, as another point of view comes across through the methodologies of Stephen Kite. He has laid a foundation of ideologies focused around the "places in-between" and aspects can be drawn from this to propose a new way at viewing our cities. This new formulation of "Threshold" becomes a design principle to create architecture around "in-between" spaces.

Stephen Kite can therefore start to contradict the Apollonian view through his three main spatial references based on psychologizing the places in-between. The three spatial references explored hereafter would be the "Paranoid-Shizoid Spaces", "Depressed Spaces" and most importantly the "In-Between Spaces". These references will indicate and give significance to "Threshold" and its experiential understanding, as well as changes to this perspective from past to present.

## Paranoid-Shizoid Spaces

Otherwise known as "Envelopment", this spatial reference refers to "an architectural analogue in the architectural experience of interior space that is modelled rhythmic forms of flowing and merging continuity" (Kite 2006: online). This goes on to explain the metaphor of "womb-like" spaces, which elucidates identity in safety, security, protection, care and a shelter that reassures well-being. These inside experiences lead one to believe they are one with the building as the building is one with the visitor. Primary focus is placed on the visitor and the visitor is presented to the building as an infant being taken care of by its mother. The building envelopes around us and a sense of refuge is found in the epitome of the "inside".

Refuge and a sense of safe haven is felt when the synthesis of ecstasy and peaceful mind is evoked by spaces that mediate calm tranquil womb-like structures such as portico's, colonnades, arches and vault roofs that immerse you with a feeling of benign well-being.

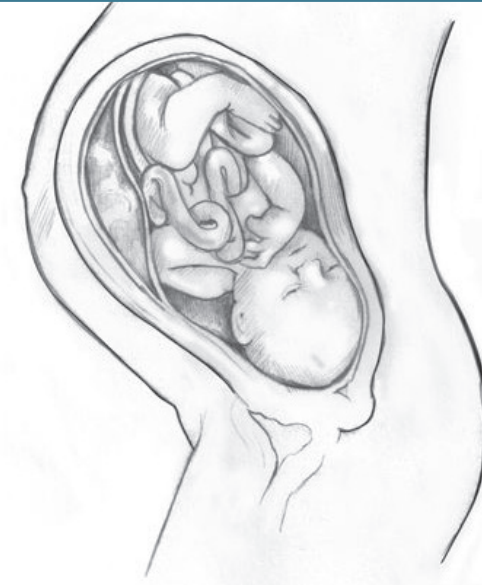
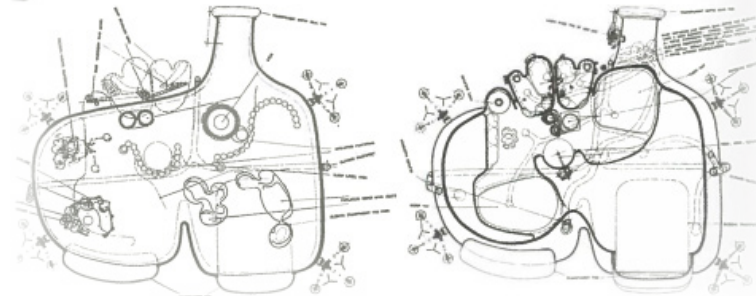
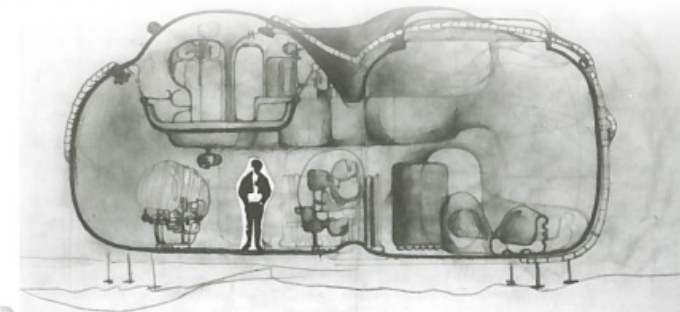


Fig 66. Paranoid-shizoid spaces (online, 2019)



Paranoid-shizoid spaces applies to Bloemfontein as a model city proposal as there is an argument around some spaces that contribute positively to the well-being of the visitor can be seen in few structures around the city. Some examples may include spaces where one feels at one with the structure and experiences wholeness in its centre.

## Depressed Spaces

Otherwise known as "Detached Spaces", it describes a visitor experiencing a separation from the spaces. The epitome explained here is "Outside" and not being of the structure clarifying the space.

This is explained through the metaphor of the depressive position of a child's later development. "The detached awareness of object-otherness demonstrated by the architectural experience of open space and the external confrontation with a building's wholeness and self-sufficiency". (Kite 2003:181)

Detached spaces experienced as being separate from the visitor starts to create hard edges and non-transparent places. These spaces start to shut society out and form a division between architecture and the user. A public interface is meant to be inviting and contribute towards wholeness and comfort in these spaces and these depressed spaces jump at negativity through archi-types off-axis, dominating hierarchy, uneven designed patterns, congested circulation and many more uncomfortable classifications of spaces.

This is also evident in Bloemfontein as a modular city as many aspects have evolved over time to decay in a way that the urban fabric is not focused on human interaction, but rather on capitalism and control through influence. The evidence lies in the hard edges and non-transparent places. Detached spaces = division between architecture and the user.

This being a negative theorised implication on modern day society, one should not try create and design purpose made depressed spaces. There is a social need for depressed spaces in such archi-types as prisons and certain institutions but with the proposal of a public building one would not want to decisively design depressive excluding spaces for the user.

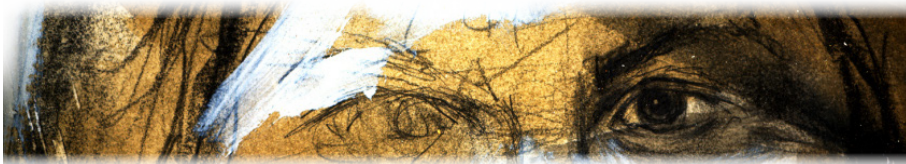


Fig 67. Depressed spaces art (online, 2019)



Fig 68. Depressed spaces art (online, 2019)

## In-between Spaces

Otherwise known as “Simultaneous inside-outside spaces”, it exhibits an experience as the whole, but also of the none. It places the visitor as both part of and separated from the space. This means that emphasis can be placed on uniqueness and influence on certain peoples characteristics. The deduction and main personification of this term is that it’s all about the experience, but it is more about humans interacting with different spaces in different ways because we are all different. As Kite gives the metaphorical explanation of rats vs hamsters in movement, we are all from the same type (rodents, humans etc..), but we tend to move around, through, on, in and even on top of different objects in different ways. (See figure to the right)

Taking this metaphor and the uniqueness of human movement, we can see that it places one in an in-between space. A space of refuge and safety, but also a space that exploits you to the busyness and uncomfortable quintessence of the outside/detached spaces. “..the masterpiece allows the simultaneous experience of the two polar modes; enjoyment at the same time of intense sensations of being inside and outside. Of envelopment and detachment, of oneness and separateness.” (Kite 2003:183)

Special attention must be awarded to In-between spaces as it seems to oppose the idea of an Apollonian Urban Perspective. The in-between spaces cannot be viewed on a map as it encompasses many important thresholds that can only be experienced and not necessarily drawn from top view. Such thresholds include brinks, rims, margins, thresholds, frames, borders, boundaries and many more that define a space as you enter it, leave it, are in it and take part in its encouraged movement. Thus thresholds, becomes a focal point when dissecting “in-between” spaces as a whole.

“In-between spaces would not exist without edges and edges would not exist without the in-between.” (Casey)

Exploring thresholds and the “in-between”, one can see its prominence in space making as it gives characterization to what an in-between space is. This is also discovered through historical art. Such pieces depicting “In-between Space” as a middle ground between the Virgin Mary and an Angel sent from God. This is explained as two spheres disconnected through an element but also connected by that same element. This is being inside and outside and is thus positively underwriting substance that expresses “In-between”. (See Figure to the right)

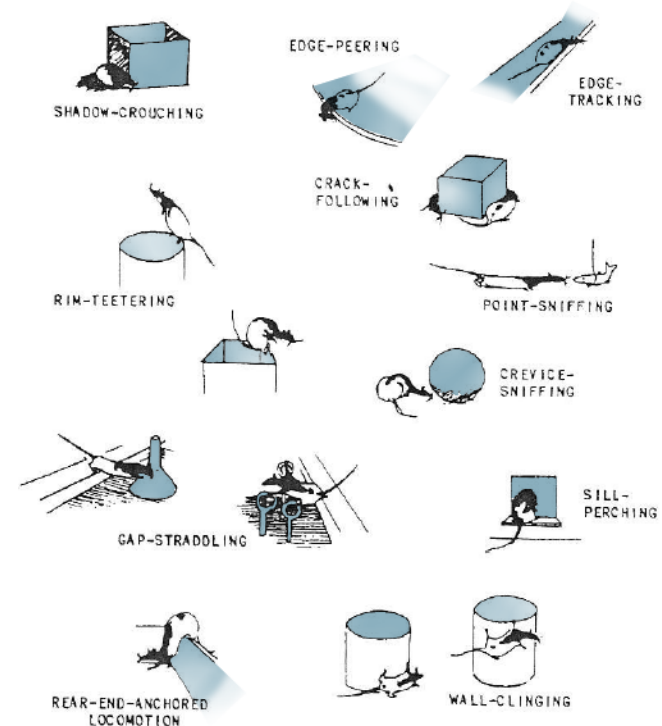


Fig 69. In-between rats movement (Kite, 2003)



Fig 70. In-between art (online, 2019)

This has changed perspective from past to present as spaces used to be defined by inside or outside. One was never part of the space and outside of the space, or in the space and not of the space. In modern day Bloemfontein, Thresholds have been stretched and some spaces have been blurred to the extent where "In-between" becomes something personal and unique. An "In-between" Space is experienced differently by different people depending on how they interact with different thresholds at different times. This is the theoretical framework Stephen Kite has laid out and will become a piece of the puzzle that is the focused theoretical stand-point around the thesis proposal in Batho.

### Important aspects of "In-between spaces"

- o "Simultaneous inside-outside spaces"
- o exhibits an experience as the whole, but also of the none
- o places the visitor as both part of and separated from the space
- o metaphorical explanation to rats vs hamsters in movement
- o appreciates uniqueness of human movement
- o oppose the idea of an Apollonian Urban Perspective
- o "In-between" Space is experienced differently by different people depending on how they interact with different thresholds at different time.

Therefore, the Batho Library & Learning Centre will become a design stitched into the fabric of Batho, and become an in-between space in the Batho landscape, as well as have its own in-between spaces within its own structure.

Note: The next theory to be discussed around existing Batho thresholds will depict in-between spaces already created in a batho building and gardening culture.

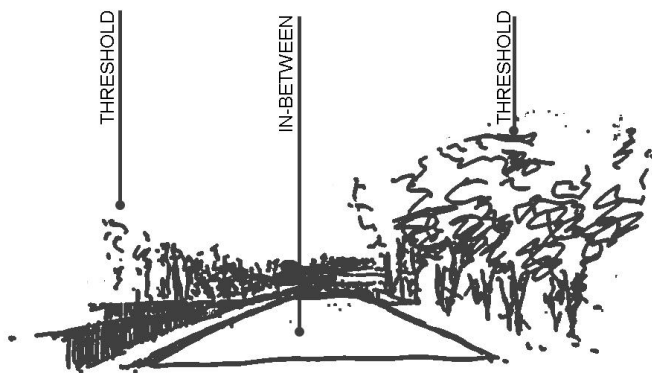
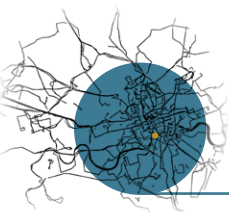


Fig 71. In-between space (author, 2019)



Fig 72. In-between space photo(online, 2019)



# Batho Perspective | A local narrative through vernacular identity

## A home, A Garden, A Story

The Bloemfontein and Batho landscape is predominantly flat and sparse. As a result, Batho has the freedom to develop however it wanted, without having to yield to an unrelenting mountainous landscape.

Despite the segregation and scarring that apartheid caused, Batho was described by many as a 'model location', when compared to other locations of that time (1920's). Batho had an orderly layout, the houses were built according to architectural plans, and many residents laid out gardens and hedges to beautify their homes. Today many of the original red brick houses that were built during the 1920s and 1930s may still be seen. Others were also painted with the turquoise colour that is known as "batho green".

The Batho house became the most important characteristic on the Batho landscape. With the inauguration of the township, the housing typology was modelled on the then popular Victorian style.

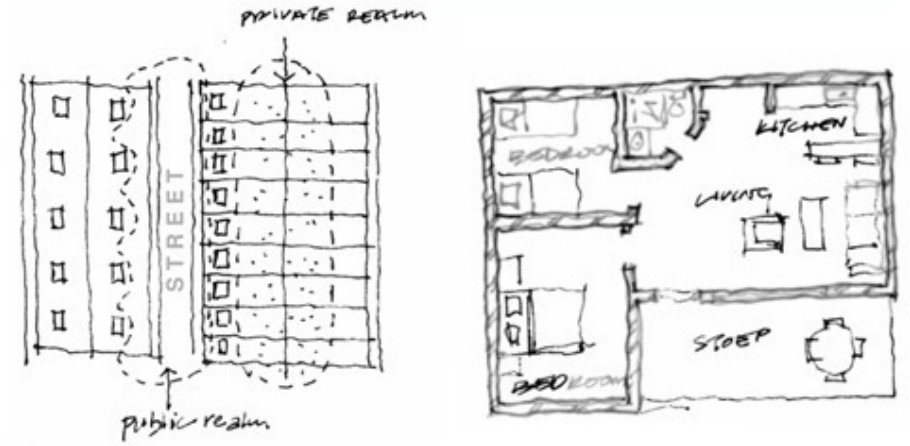
Therefore, in modern day Batho, a strong vernacular is presented through the existing structures and culture. These being the use of threshold as a guiding system from public (street) to private (house/back garden), the aesthetic utilities like shrubs, hedges, and the "batho green" (turquoise), and the identity of the people that is shown through the cultural story telling of the times.

Thus, the people of Batho and the existing architecture become a driving force behind generating a design within Batho.

## Batho Dwelling

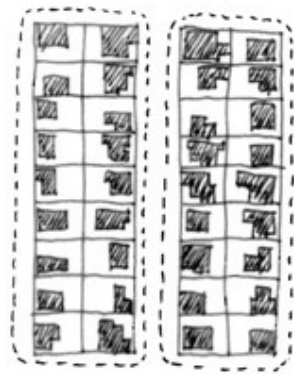
Exploring the Batho dwelling and its people, one can see that the two go hand-in-hand when it comes to the making of place. The Batho people have taken these houses made for them in the past and started to form soft thresholds that one can get guided through as part of the experience of moving from the street (most public) to one's back garden (most private).

Since its inauguration, Batho was seen as a model township, not only for Bloemfontein but also for the rest of the country. Even though it had a "modernist" planned layout, the people were encouraged to give distinctive character to their individual dwellings.

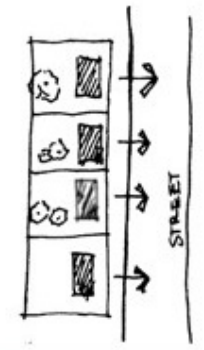


BATHO PUBLIC VS PRIVATE

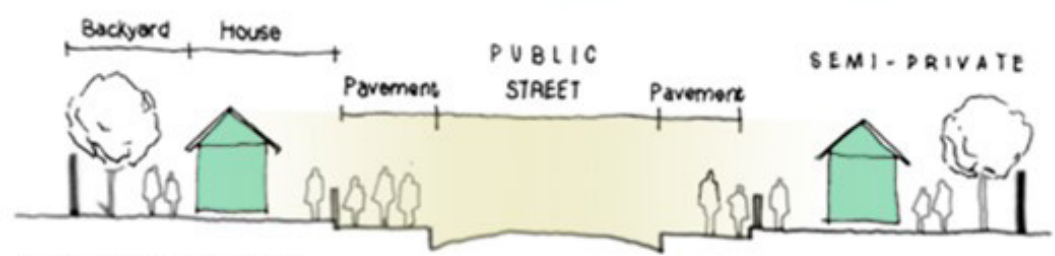
TYPICAL BATHO HOUSE LAYOUT



BATHO SPATIAL LAYOUT



STREET APPROACH



SECTION OF TYPICAL BATHO STREET

Fig 73-74. Batho thresholds(author, 2017)

The houses were built from distinguishing unbaked re-brown bricks and were mostly modelled in the English cottage fashion with corrugated iron roofs, verandas, stone plinths, wood framed doors and windows, and bay windows (du bruyn, 2011: 65-66). This distinguishing style, unique to Batho, is still present in the built fabric of the township today.

"Although most of what has been said about Waaihoek's houses is also applicable to Batho, Batho's architecture may be considered a case study of how British architectural styles and tastes influenced local architecture." (du bruyn, 2018: 431)

New houses were also modelled to follow the same principles inherent to the now called "Batho House". Together with the style of the buildings, people also fashioned their gardens after the topiary design of the Victorian Era (du bruyn, 2011: 56)

The aspects of how the people of Batho beautified their homes and how this became such a strong architectural vernacular language will be explored to help form design drivers for the thesis proposal.

### Township Topiary, a Gardening Culture

At the forced forming of Batho, Bloemfontein's 'model location' was turned into a 'garden location' with plots made big enough to allow space for the laying out of gardens. Topiary had been a feature of European gardens – particularly those laid out in the Netherlands and Britain, and was now adopted by the residents of Batho of a way of beautifying the home that was forced upon them.

Since Batho's founding, its gardening culture had been sustained by the transference of gardening knowledge and skills – including those related to 'township topiary' – from one generation of gardeners to the next.

The semi-vernacular character of Batho's topiary gardens becomes clear when the various vernacular (folk/African) and patrician (British/European) elements are identified and compared. The overwhelming majority of Batho's topiary gardens boast a combination of both types of elements, namely vernacular and patrician. (du bruyn, 2018: 473)

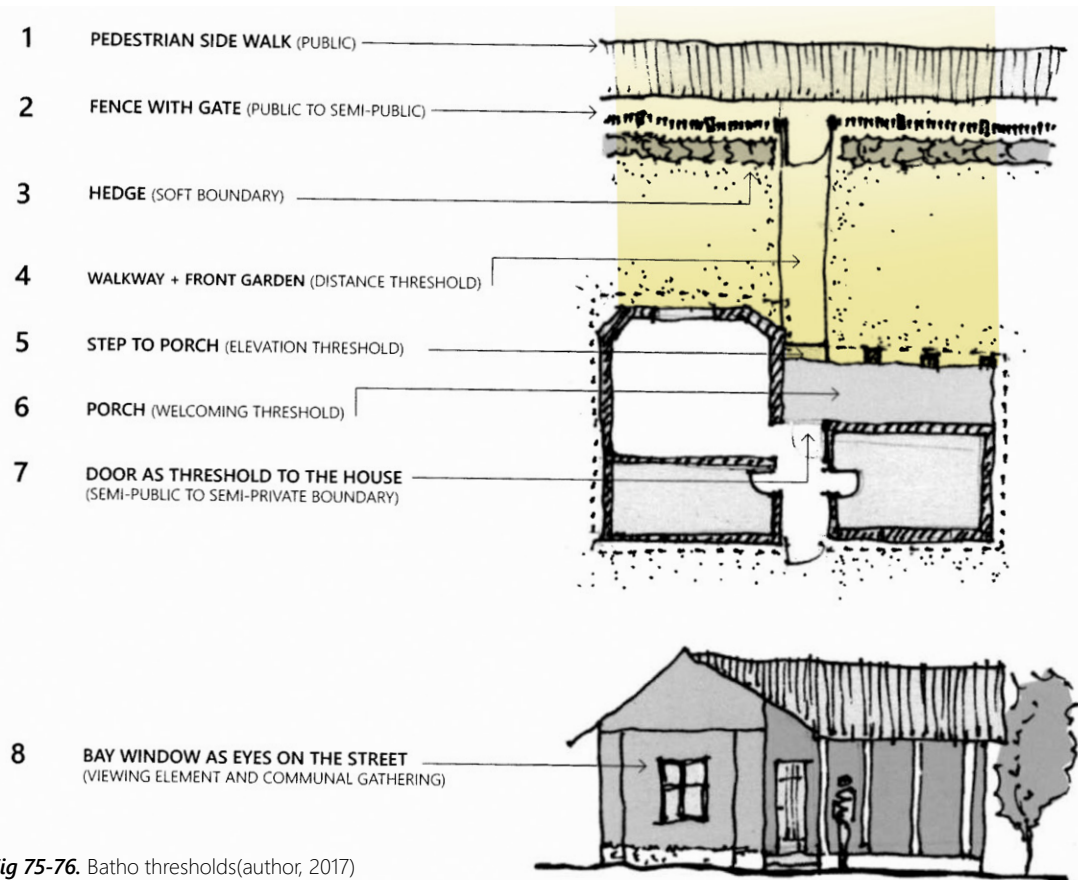
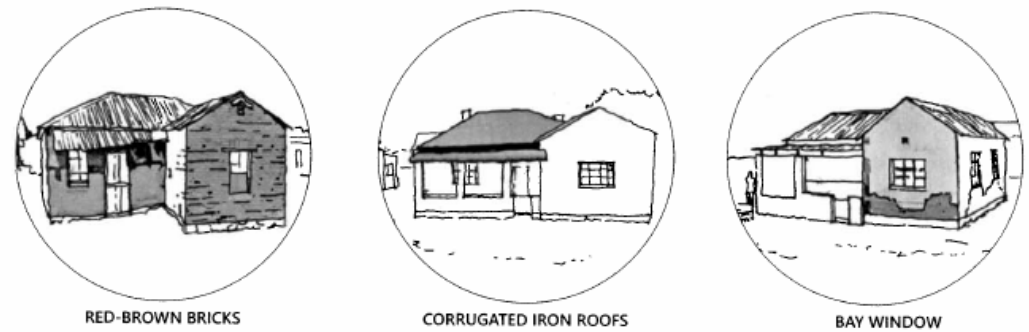


Fig 75-76. Batho thresholds(author, 2017)

Interviews and oral history statements were conducted with Batho residents as part of the "Batho Community History Project" started by Bloemfontein's National Museum in 2007. The aim was to uncover the history of Batho by making use of oral and community history. This helps one realize that a semi-vernacular gardening culture is still very prevalent in modern day Batho.

An important aspect of the interviews conducted with Batho's gardeners is the questions that relate to their relationships with their gardens, what their gardens mean to them, and their emotional and spiritual attachment to their gardens. (du Bruyn, 2018: 495)

Ultimately, Batho's topiary gardens represent much more than mere beautification because they are also expressions of human dignity, respectability and what it means to be a human being in the contemporary South African township environment. (du Bruyn, 2018: 495)

Therefore, the Batho gardening aspects and elements will be a strong driving force behind the landscaping of the proposed thesis.

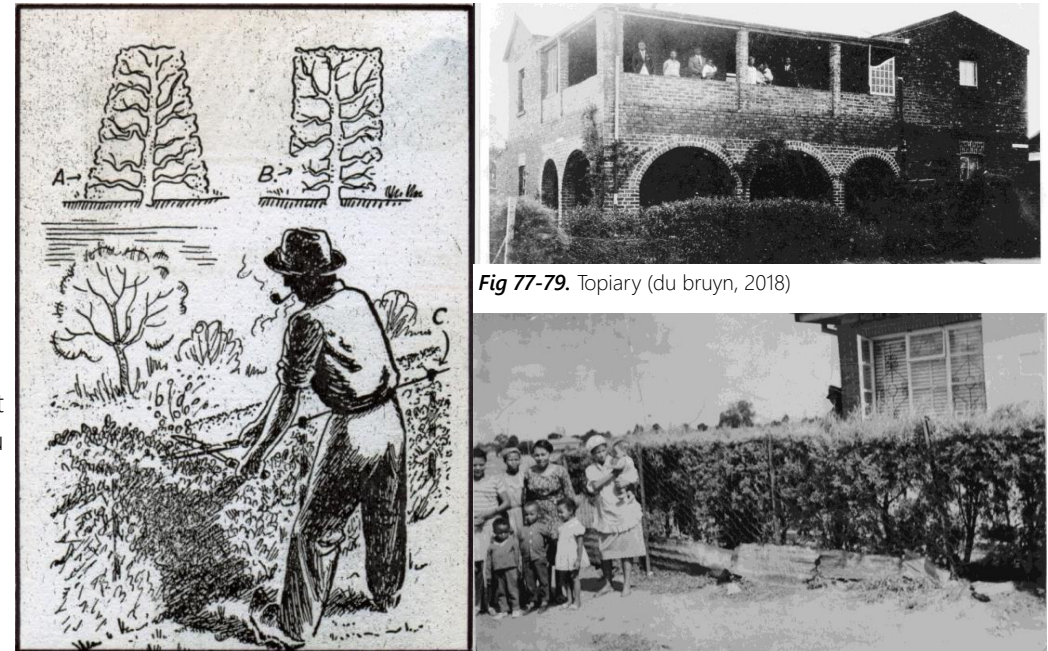


Fig 77-79. Topiary (du Bruyn, 2018)

<u>Vernacular/Folk (African)</u>	<u>Patrician (British/European)</u>
1) Swept yards	1) Lawn
2) Maize patches and informal vegetable beds (patches)	2) Flower beds and vegetable beds
3) Absence of big trees in garden (reasons: superstition & crime)	3) Presence of <i>clipped</i> trees in garden (reason: crime)
4) Backyard: use space for religious and semi-religious activities (church meetings, vigils and ancestral worship ceremonies), beer parties and storytelling sessions	4) Backyard: use space for household chores and kitchen-related activities
5) Asymmetry and informality: seeds sown and seedlings planted randomly	5) Symmetry and formality: seeds sown and seedlings planted in rows
6) Stockades and unclipped hedges	6) Topiary: clipped hedges and shapes
	7) Small vineyard
	8) Fruit trees (small orchard)
	9) Garden path
	10) Garden ornaments
	11) Containerised plants



Fig 80. Batho thresholds (author, 2017)

## A Storytelling Culture

Through the oral history taken by the National Museum, a symbol is created as that of a candle in a candlestick. Throughout the Batho exhibition at the Bloemfontein National Museum, a candle is used as a symbol. This is because in most Batho households, candles were an important light source in the days before Batho got electricity.

Therefore, many Batho residents associate candle light with storytelling evenings when grandparents and grandchildren gathered around the kitchen table. On another level the candle, as a source of light, also symbolizes hope and life.

Thus, the candle can become a great driving force for the design and symbolic meaning behind the node proposed in the thesis.

## Conclusion

Batho presents itself with so much cultural identity through its architecture, people and symbols. These aspects surrounding Batho and its existing "in-between" threshold identity will become one of the main design influences for the proposed Batho Library & Learning Centre.

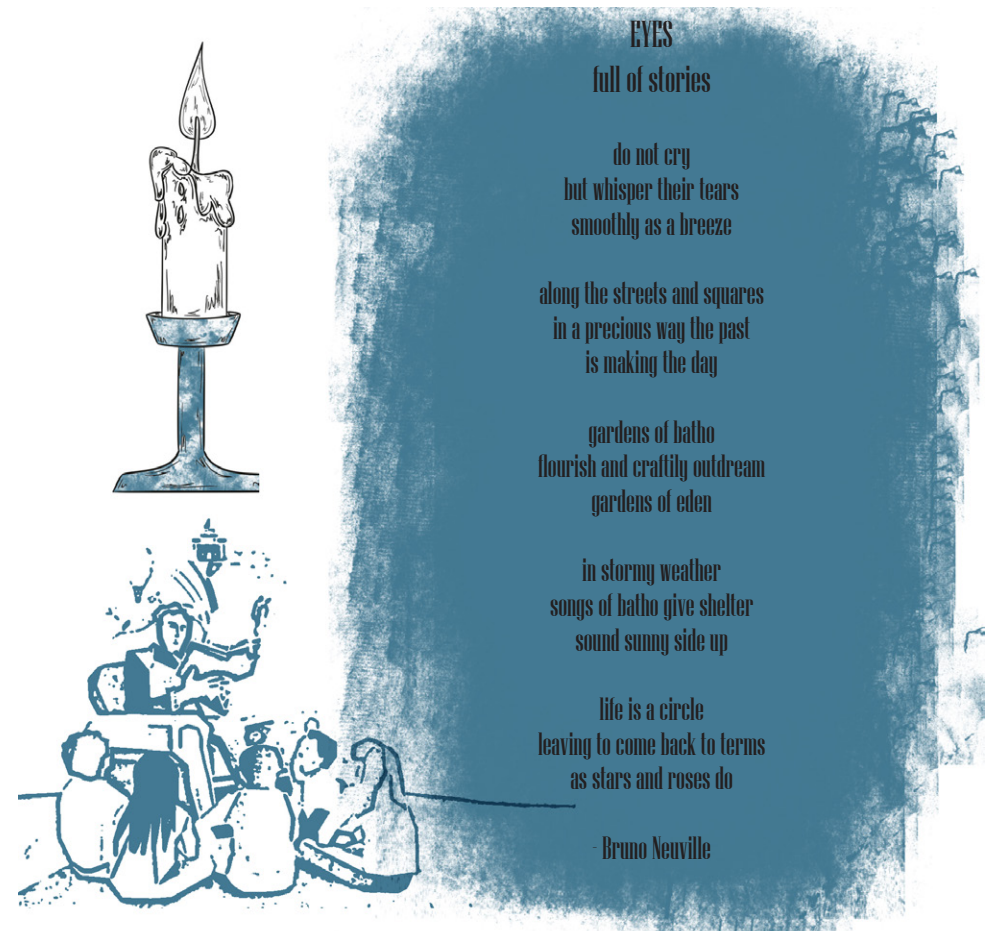
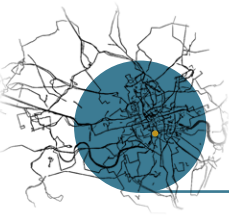


Fig 81. Batho candle metaphor (author, 2019)



# Libraries Creating Relationship |

## Modern libraries: Moving from a transactional to a relational library

### Libraries adapting to the future

The "library", in history, was defined by transactional services with the lending and returning of books for the citizens of a certain area. Yet in modern day times there is a clear shift of emphasis as the dynamics of the everyday library have changed by an addition of a relational side to all its progressions. In this way the modern libraries are shifting from focusing purely on transactional services, and have become relational which generates more personal worth for the users.

### Traditional library: a transactional library

Traditionally, the conventional libraries were well-defined by only transactional measures such as lending and returning of books and additional resources, or serving users with answers to their questions about the book collection. One can say that the only primary focus of traditional libraries was to fulfill the necessity for knowledge and education only.

Mogens Vestergaard, the author of the article this is based on, highlights that "in the old days you just came in as a user with a certain need, books or a specific question. Librarians didn't have to create a relationship in that case, they just had to create a transaction to make sure that the users got what they needed". (vestergaard, 2018:online)

Essentially the founding and implementation of public libraries to different areas was for the soul purpose of books, which extended to music, periodicals and now, to multimedia and electronic materials. However, in modern day society changes are seen within the use of a library and it is evident to adapt to this as the library as a place is becoming a place for people and their needs more than just about the information and knowledge sharing

The amount of book loans has obviously gone down over time with the advancements in technology, but the library usage has increased over time with an influx of more visitors. The library's physical location has become more important and gained more purpose. It is no longer a place to just take out a book and leave till you return it. Its become indulged in for many social human needs and activities.

"they are using in huge numbers the physical location (the computers, the maker-spaces, the study areas),they use it for gatherings, study groups, small courses on different subjects, especially technology and a lot of other things. So, the purpose of the library is not fulfilled only by the medium but also by the spaces, by having these libraries locations around." (vestergaard, 2018:online)

### The shift to a relational library

The library is no longer described by the quantity of books it has on its shelves, but rather it can now be defined by adapting as a living space for the users. When now viewing libraries through this new social lens, one must realize that libraries have always been virtuous at being aligned with what people need. Human needs are the most important aspect when it comes to modern day public libraries. It is the library's responsibility to create as space that accommodates different acts of culture and uses of technologies. Therefore, the library's physical spaces and the needs of the different target groups of the library must be highly considered when defining the library's structure.

Mogens adds that "the transactional library is where people are getting in the library, they ask for a book and the librarian gives it to them. As opposed to the relational library, where people enter the library and they are working together with the librarian. For this to happen, you have to establish a relation with the patron. The library transforms into a meeting place, and you have to facilitate that meeting. This is another way to establish relations. That means you are in need of new competencies." (vestergaard, 2018:online)

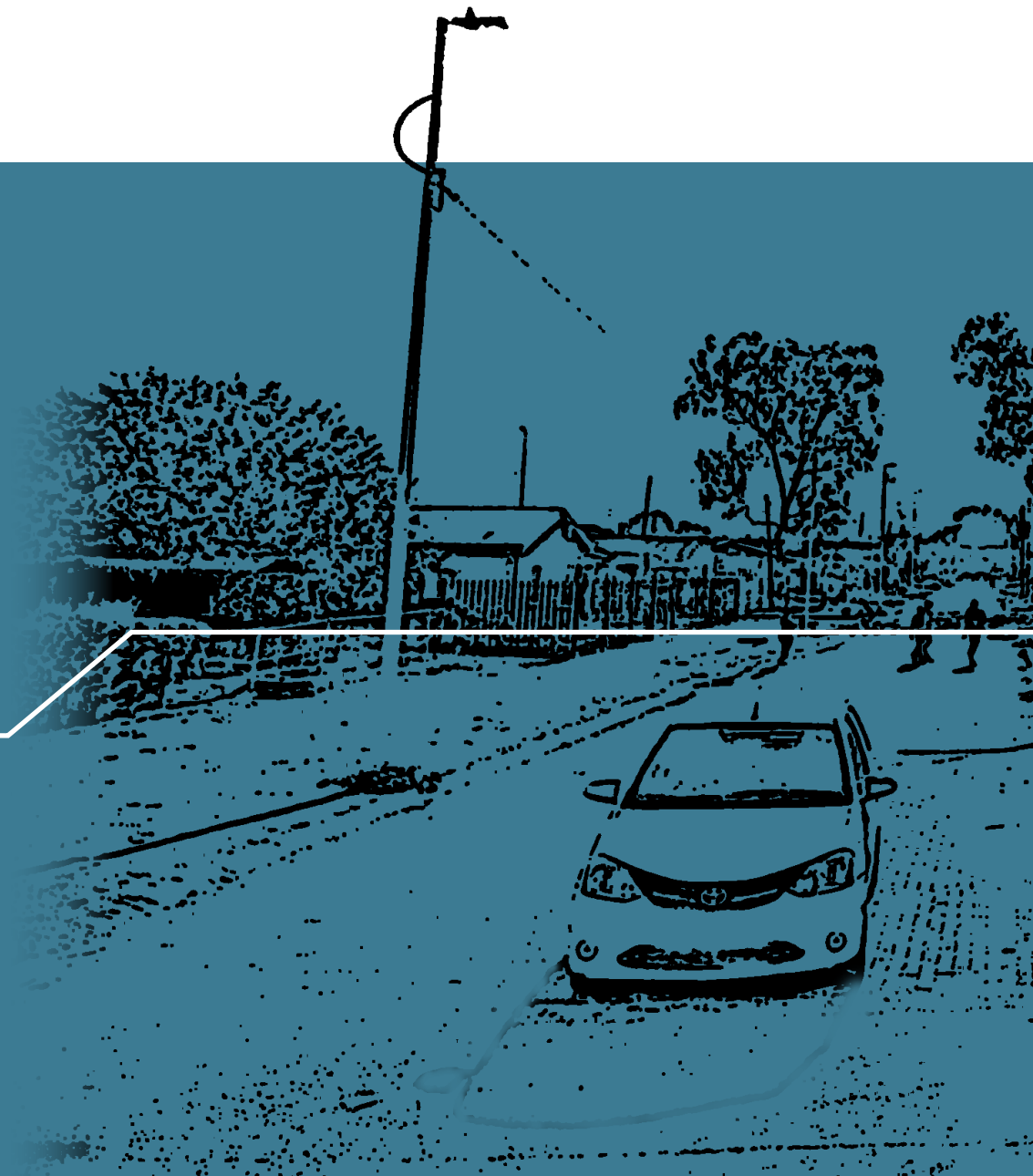
### Conclusion

The ideologies around transforming libraries so they become relational spaces is clearly an evident need in society. Therefore, the design and implementation of spaces for the Batho Library & Learning Centre will be formed around the social needs of the people of Batho. This will become meeting spaces, study areas and conversation pockets for any students or families that find this rest spot between their trips from Batho residential to the Bloemfontein CBD.

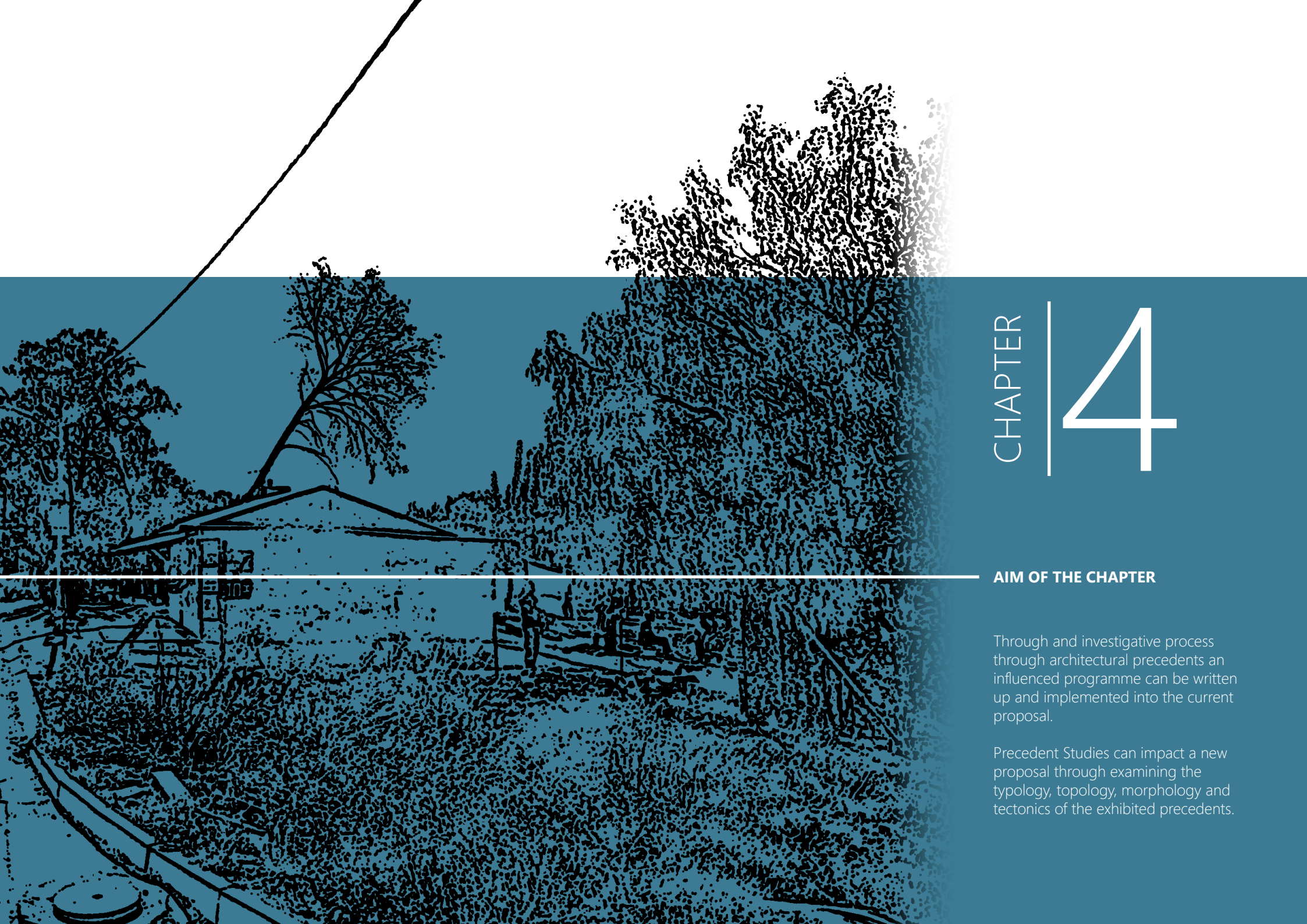


**Fig 82.** BW photo of class (online, 2019)

# BRIEF & PROGRAMME



*Fig 83.* Batho sketch (author, 2019)



CHAPTER

# 4

## AIM OF THE CHAPTER

Through an investigative process through architectural precedents an influenced programme can be written up and implemented into the current proposal.

Precedent Studies can impact a new proposal through examining the typology, topology, morphology and tectonics of the exhibited precedents.

# PRECEDENT STUDIES

## Topology Precedents

- Mendi Multi Purpose Centre  
- The Matrix Urban Designers and Architects
- Inkwenkwezi Secondary School - Wolff Architects

## Typology Precedents

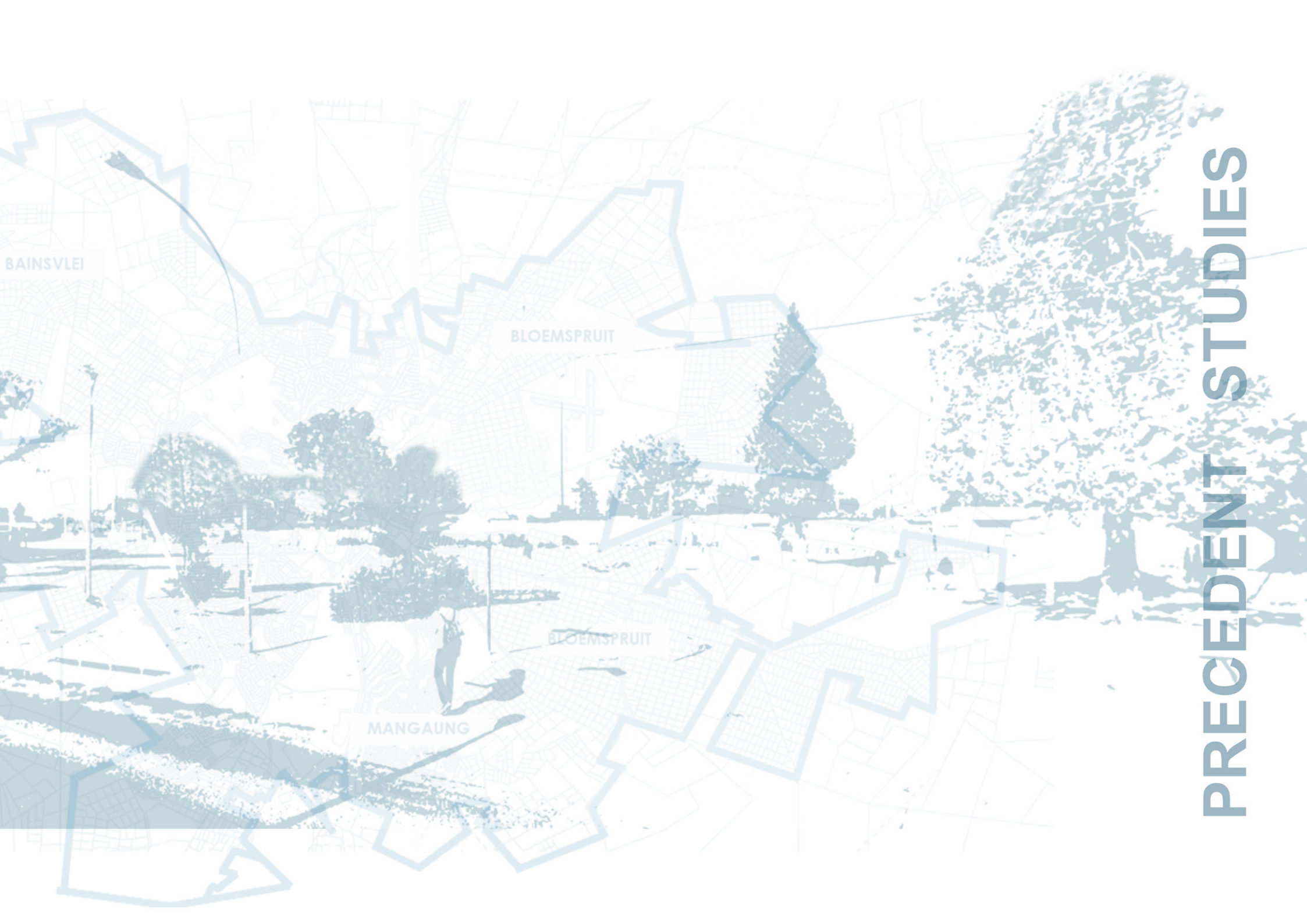
- Helsinki Central Library - COBE [Competition Submission]
- Sol Plaatje University Library & Student Resource Centre  
- DesignWorkshopSA

## Morphology Precedents

- Khayelitsha Community Centre - Makeka Design Lab
- Alexandra Interpretative Centre - Peter Rich  
↳ technical report chapter [Construction Morphology]

# 4.1





# PRECEDENT STUDIES



# Topology Precedent Analysis

## Mendi Multi Purpose Centre

**PLACE:** Ibhayi, Port Elizabeth, South Africa

**ARCHITECT:** The Matrix Urban Designers and Architects

**YEAR COMPLETED:** 2017

Located in the township of New Brighton, Port Elizabeth, South Africa what once used to be a 'blacks-only' Beer Hall during the Apartheid era was earmarked for redevelopment as a community building in the early 2000s.

Although initially designed as a place for alcohol consumption the original structure had over the years formed part of the local community fabric and also now offered a unique spatial character which could be integrated into the new building instead of demolishing completely.

The following components were identified to form part of the new Centre:

- > Multi-purpose Performance Hall
- > Visual Arts studio
- > Entrance foyer
- > Restaurant area
- > Office and administration component
- > Ablution facilities and general storage areas

The new Multi-Purpose community centre seeks to create a place of architectural dignity and a sense of place in the local community while at the same time establish a building which is contextually and socially relevant and one which offers local artists a platform for their work and future development.

### Important Influential aspects extracted:

- **Topological Approach**
- **Functions**
- **Spatial influence / threshold**
- **Forming a node in a township for the upliftment of the people**

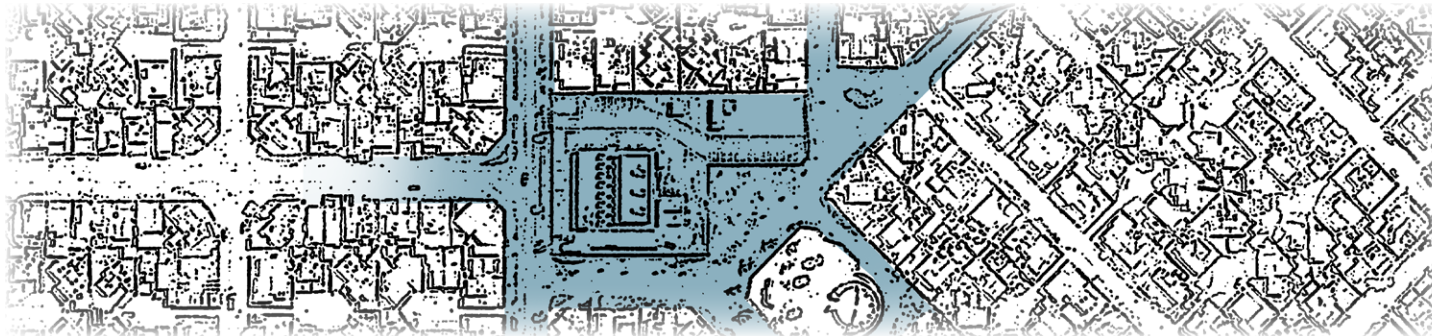
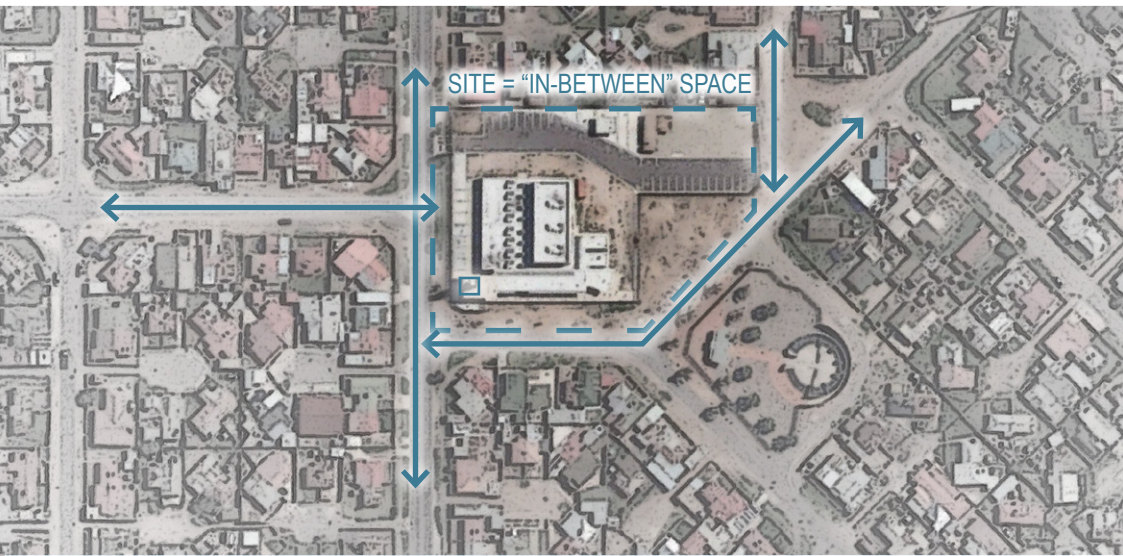


Fig 84. Mendi multipurpose centre site sketch (author, 2019)



Fig 85. Mendi multipurpose centre photos (online, 2019)



SITE = "IN-BETWEEN" SPACE



TOWER NODE BECOMES A BEACON OF HOPE FOR THE PEOPLE

CELEBRATED ENTRANCE

Fig 86-88. Mendi multipurpose centre sketches (author, 2019)



NODE / VOICE FOR THE PEOPLE

PUNCTURED THRESHOLD

# Inkwenkwezi Secondary School

**PLACE:** Dunoon, Cape Town, South Africa

**ARCHITECT:** Wolff Architects

**YEAR COMPLETED:** 2007

The Inkwenkwezi Secondary School was commissioned by the Western Cape. The school is on the periphery of the settlement next to a very big sport fields and on a dead end street. Access is from the quiet dead end road which allows children to linger safely. The school protects itself from theft and vandalism by creating an outer "wall" with all play spaces and access points beyond the safety of the entrance gates. The outer "wall" of classrooms encloses an undulating court with an open end facing Table Mountain.

The location of the building on a sloping site, on the edge of the settlement, was exploited to develop a civic architecture that distinguishes itself from the residential fabric around it by its scale and sculptural form. The hall rises to a tall corner which is exaggerated by vertical fluting and has a characteristic window. The same motive is repeated in the library.

Since the school brief is largely made up of repetitive classroom modules, the wall architecture is a device to bind these modules together and set the stage for the large scale undulations in plan which breaks the monotony of the block forms and the corridors. The windows on the long horizontal facades were bound together by a decorative device that draws inspiration from the way people paint on public buildings, be it lines or signage, which over time re-articulates or de-articulates the architecture. The decorative pattern which also draws on African weave work has its constructional logic in the need for expansion joints between concrete beams and block work and between various panels of block work.

## Important Influential aspects extracted:

- **Topological Approach within a township > Functions formed around central courtyard**
- **Spatial influence / threshold from street > building > courtyard > field**
- **Forming a node in a township for the upliftment of the people**



Fig 89-92. Inkwenkwezi Secondary School photos (online, 2019)

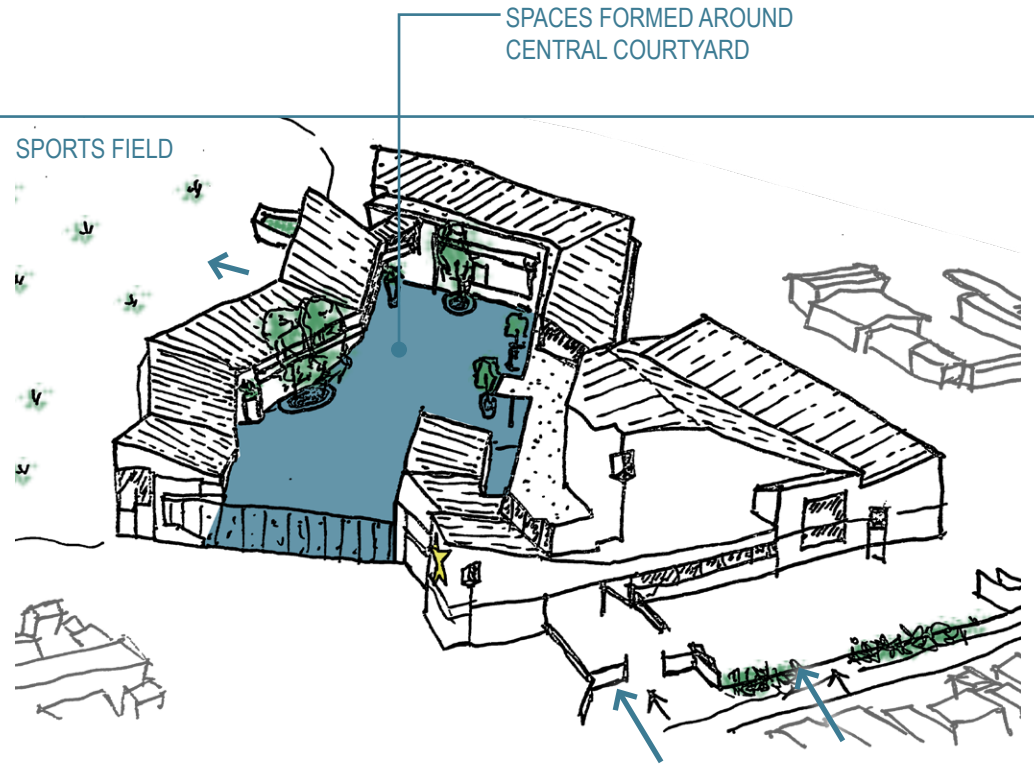
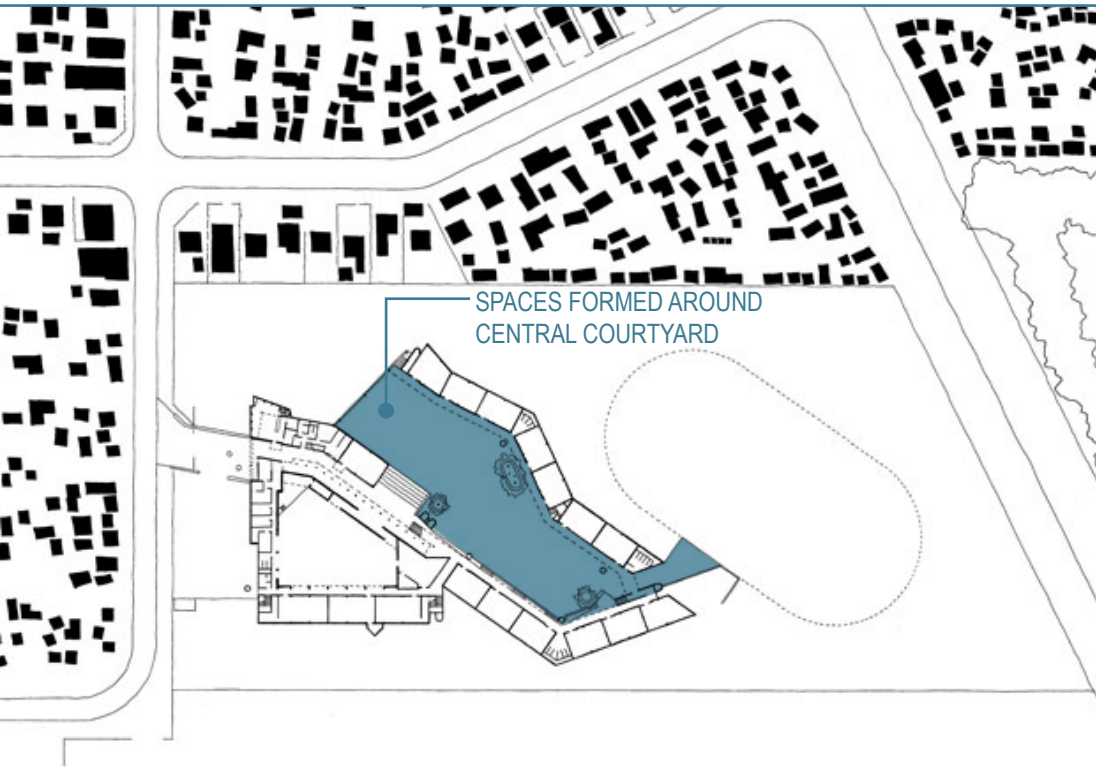
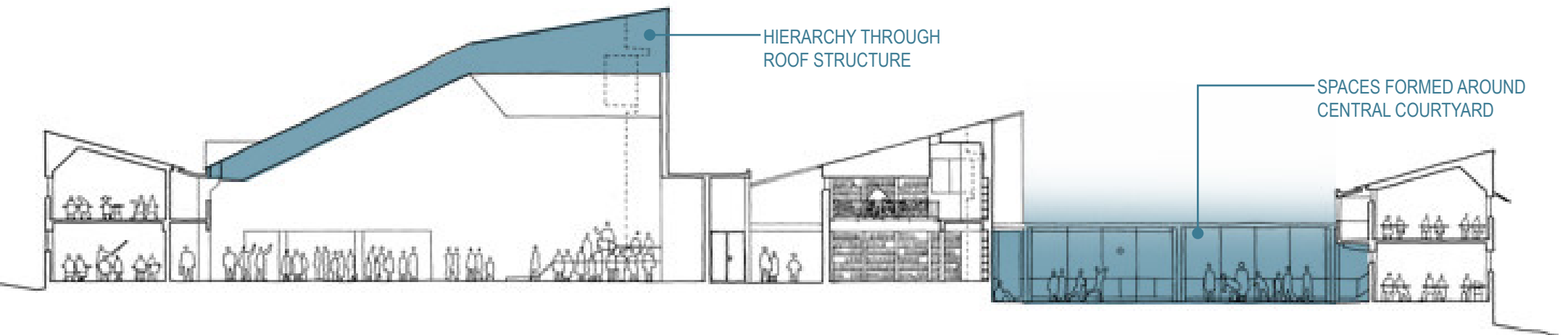


Fig 93-95. Inkwenkwezi Secondary School drawings (author, 2019)





# Typology Precedent Analysis

## Competition Submission - Helsinki Central Library

**PLACE:** Helsinki, Finland

**ARCHITECT:** COBE

**YEAR COMPLETED:** Competition 2012

The new city library in Helsinki establishes a new type of library, which is explicitly dedicated to the public. We propose an entire "Library City" (Kirjastokaupunki). It is a public space of informal social encounters and gatherings, in which people from all backgrounds feel welcome as if it was an extension of their own living room.

A city thrives on its rich intermingling of spaces – places to work, dwell, learn and play – all within close reach. The library city that we envision is inspired by that urban convenience and diversity as it incorporates venues of different thematic characters and qualities within a single building. Therefore, it turns the 'city library' building into an actual 'library city'.

By deconstructing a single building into smaller entities, each of them obtains a human scale and the library becomes a continuation of the city space of Helsinki. The building is organized according to a city structure, with its defined boxes as buildings and its interstitial spaces as public space. The Library City stands out clearly in the urban context – as part of the "pearl necklace" of cultural hubs surrounding Finlandia Park.

With its several entrances, the library acts as a porous filter that addresses and connects the flow of people coming from all corners of Helsinki, creating an active city edge towards the park. The new Library City becomes more than just a building. It becomes a contemporary indoor urban public space expanding the city fabric and the intertwined public spaces of diverse functions, characters, and uses are all organized and united by the library collection itself.

### Important Influential aspects extracted:

- Threshold ["in-between"] within the Library Typology
- The subtleness of public vs. private spaces - Break out spaces and in-between spaces = rest areas

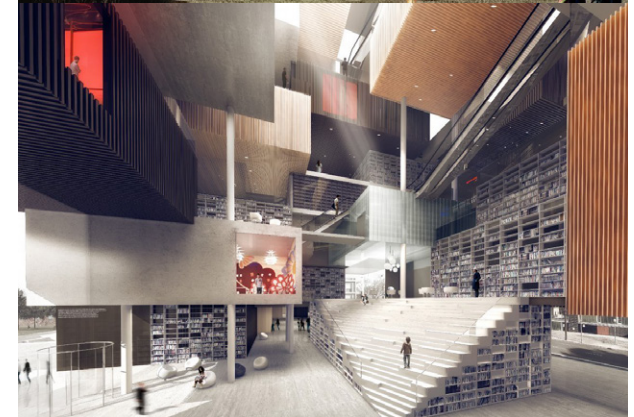
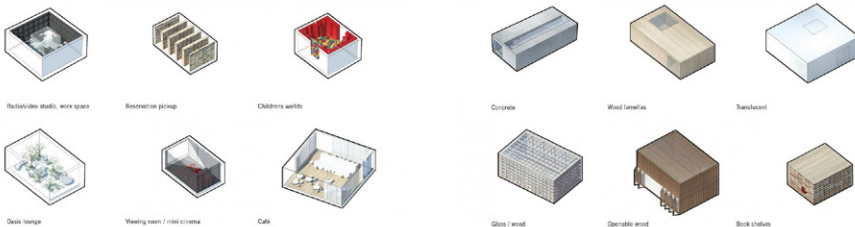
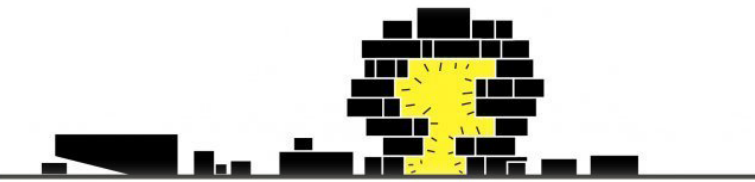


Fig 96. Helsinki Central Library (online, 2019)



**FUNCTIONS**

**MATERIALITY**

Fig 97. Helsinki Central Library (online, 2019)

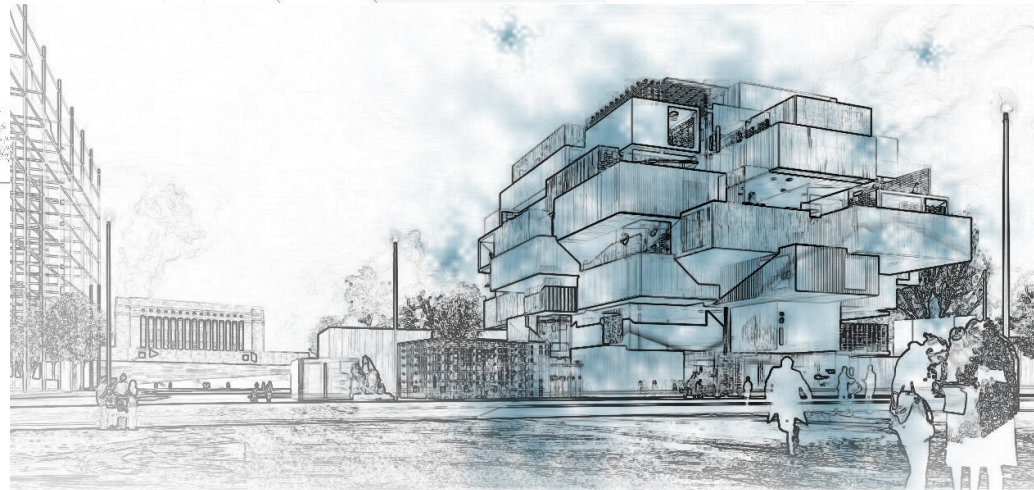
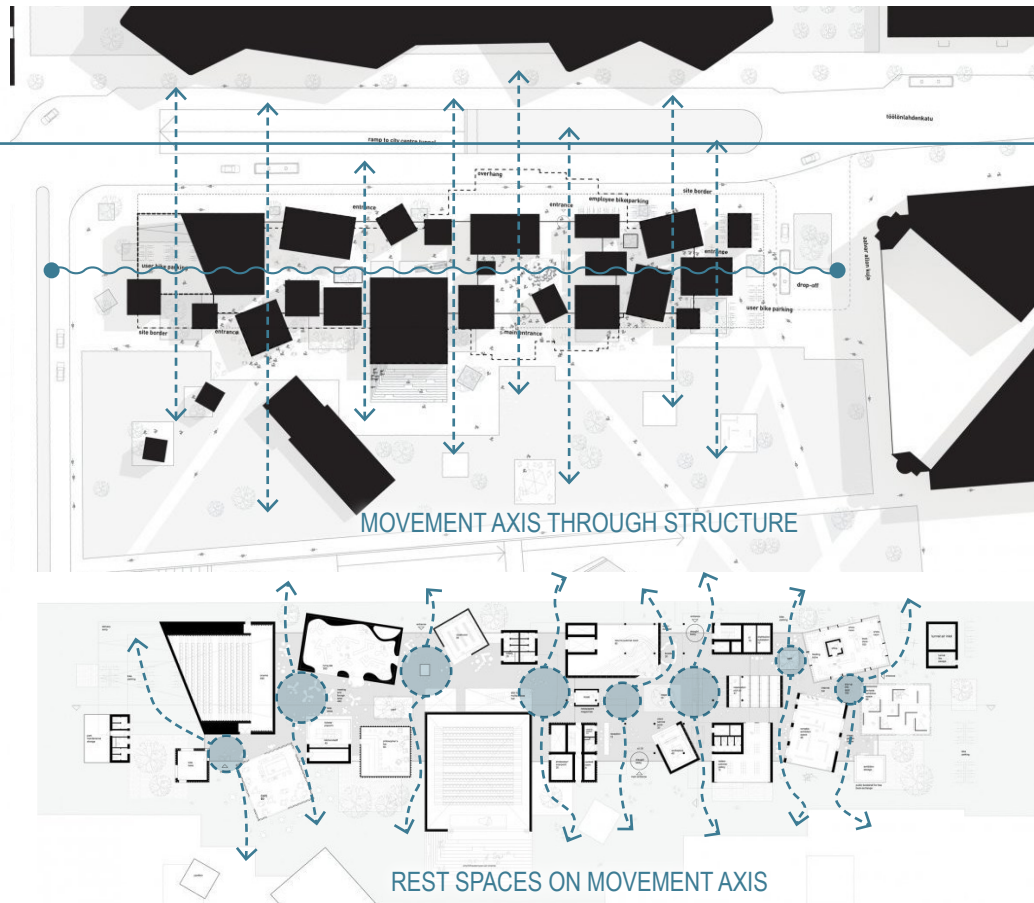


Fig 97. Helsinki Central Library sketches (author, 2019)

## Sol Plaatje University Library & Student Resource Centre

**PLACE:** Bishops Avenue, Kimberley Northern Cape, South Africa

**ARCHITECT:** DesignWorkshopSA

**YEAR COMPLETED:** 2018

In 2014, Sol Plaatje University [SPU] opened its doors as the first new University in South Africa's democratic era. Strategically close to the Square Kilometer Array Telescope [SKA], its initial intake of 135 students is expected to grow to 7 500 within its first 10 years. Located in Kimberley's Inner City, a progressive Urban Design Framework seamlessly incorporates existing civic, public and education stock with new purpose-built University buildings, positioning tertiary education as an integrated part of Inner City life. Perhaps it's heart.

Designworkshop was successful towards conceptualizing and delivering a Student Resource Centre as the functional and physical centerpiece of University life, including library, teaching, study, and social space. The SPU Library and Resource Center becomes a social place where people make themselves available to wide-ranging incidental and planned interchange in the course of daily life, both in physical space and online, with and without books, collectively and in solitude, directed and enabled by mentors or among themselves.

Ascending from public to private, each additional floor is another 'public square' accessed from its perimeter to enable 3-dimensional exploration of a continuous knowledge-scape. In everyday university life, the building is a refuge, a 24 hour winter lounge and summer veranda. In the City, it's a landmark of democratic learning, social and cultural exchange, and a generator of economic potential which always comes from empowered knowledge and ideas.

### Important Influential aspects extracted:

- Change from Public [GF] to Private [Above] within the Library Typology
- An In-Between space utilized by this interactive civic building
- Clever use of an informal amphitheater as internal stairs / meeting space



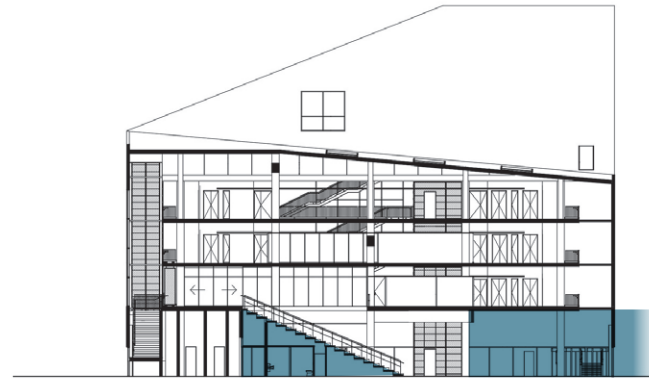
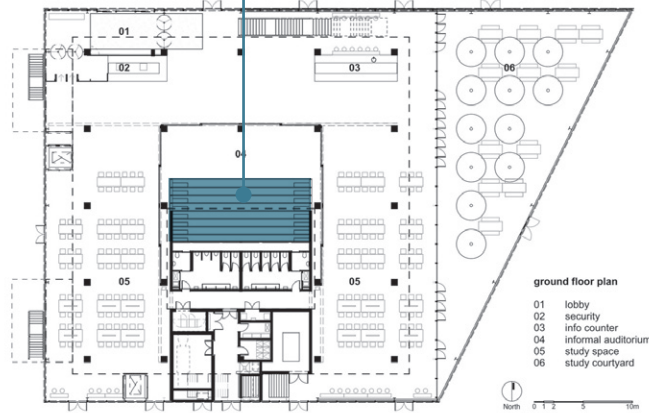
Fig 98. Sol Plaatje University (online, 2019)

Fig 102.

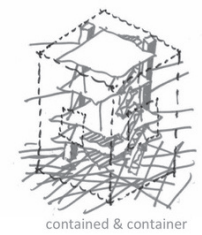
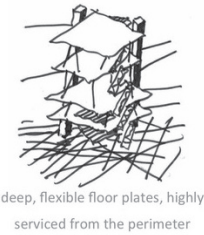
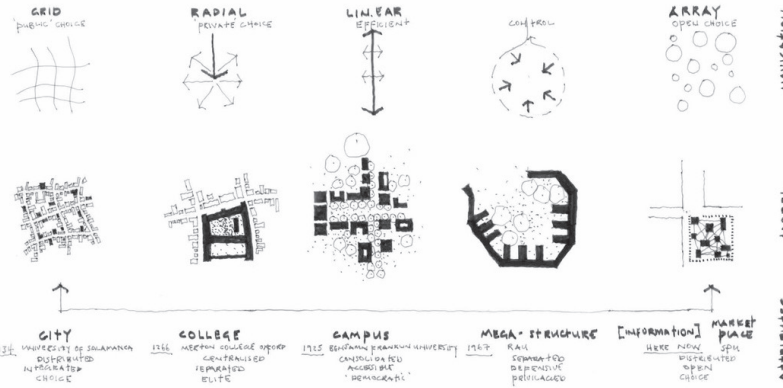
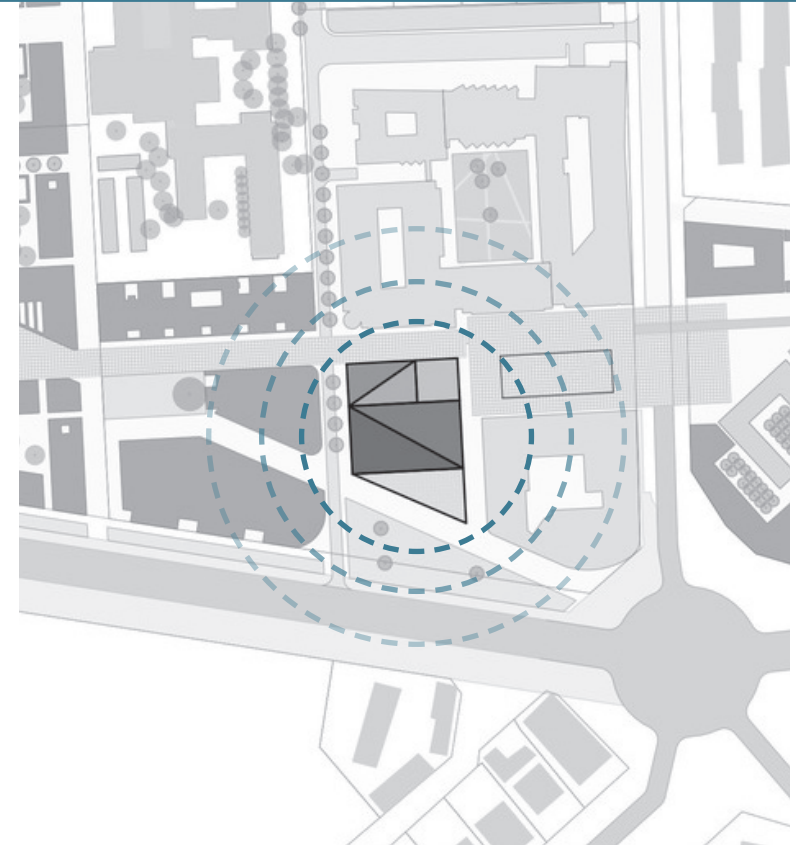


Fig 99-107. Sol Plaatje University (online edited, 2019)

INFORMAL AMPHITHEATER



PUBLIC GROUND FLOOR





# Morphology Precedent Analysis

## Khayelitsha Community Centre

**PLACE:** Khayelitsha, Western Cape, South Africa

**ARCHITECT:** Makeka Design Lab

**YEAR COMPLETED:** 2008

Khayelitsha is the largest and last township to be formally established in the Western Cape. Located at the heart of the Cape Flats and abutting Mitchel's Plain, its narrative of dislocation, hope, and unequal access to resources, amenity and infrastructure positions the area as an exemplar of Apartheid informed informality. The central business district was conceived to create a new urban room, an inspirational public realm for a devastated and desolate community lacking any resilient hierarchy of formalised 'publicness.'

Within this landscape, multipurpose centers were identified as key urban markers for urban development, and encompass four components, a sports and recreation aspect, municipal offices and service point, health and service clinic, and a library/ arts and culture aspect. These later evolved into Thusong Service Centres, one being the Khayelitsha Community Centre exhibited here.

The creation of a civic catalytic architecture in a context where the civic imperative is not a normative priority of the state presented challenges for officialdom, and the project seeks to relocate the discourse of architecture in informal conditions as part of a transformative act shaping township into town through bold design architectural and urban.

### Important Influential aspects extracted:

- **Morphological Approach**
- **Material Use to divide spaces**
- **A community hub within the growing township**

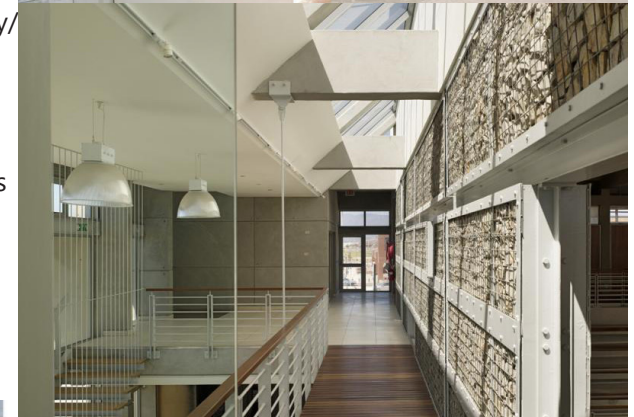


Fig 108. Khayelitsha Community Centre (online, 2019)

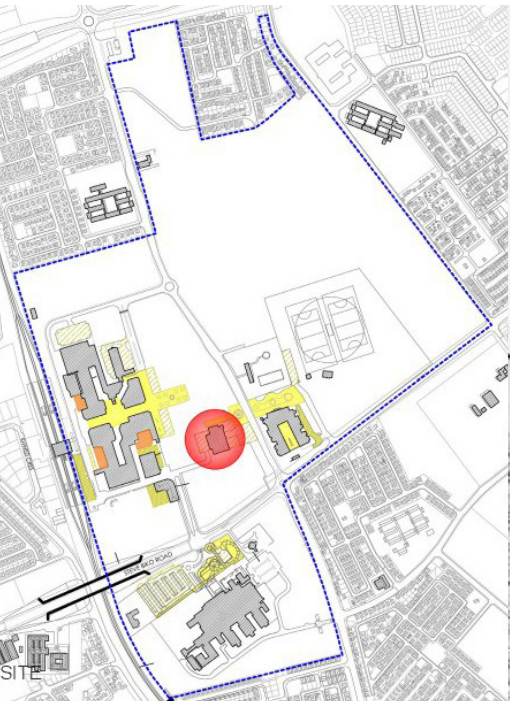
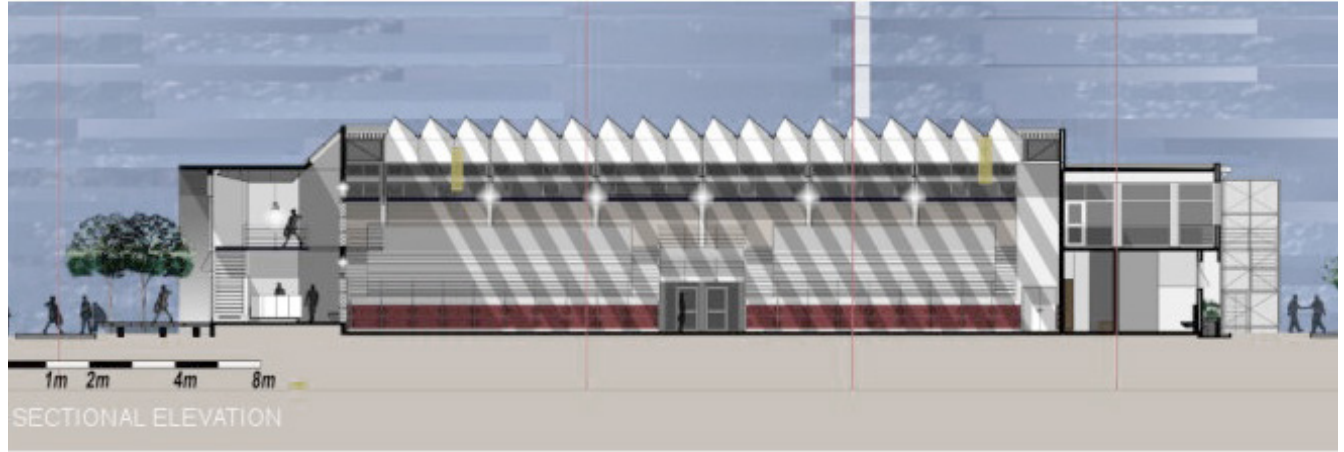
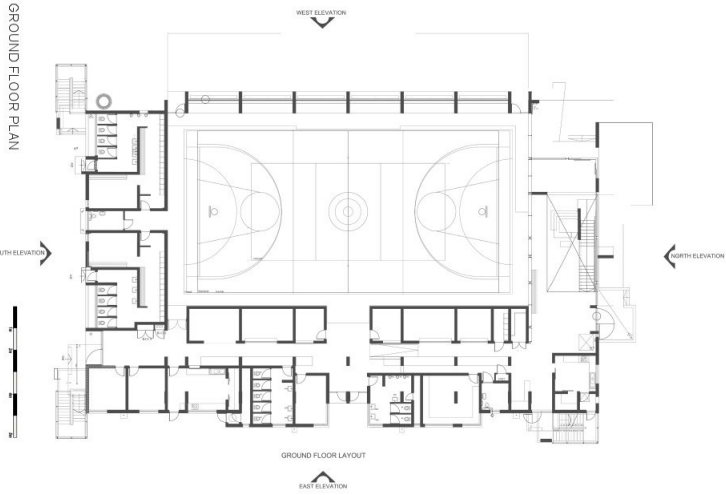


Fig 109-111. Khayelitsha Community Centre (online, 2019)

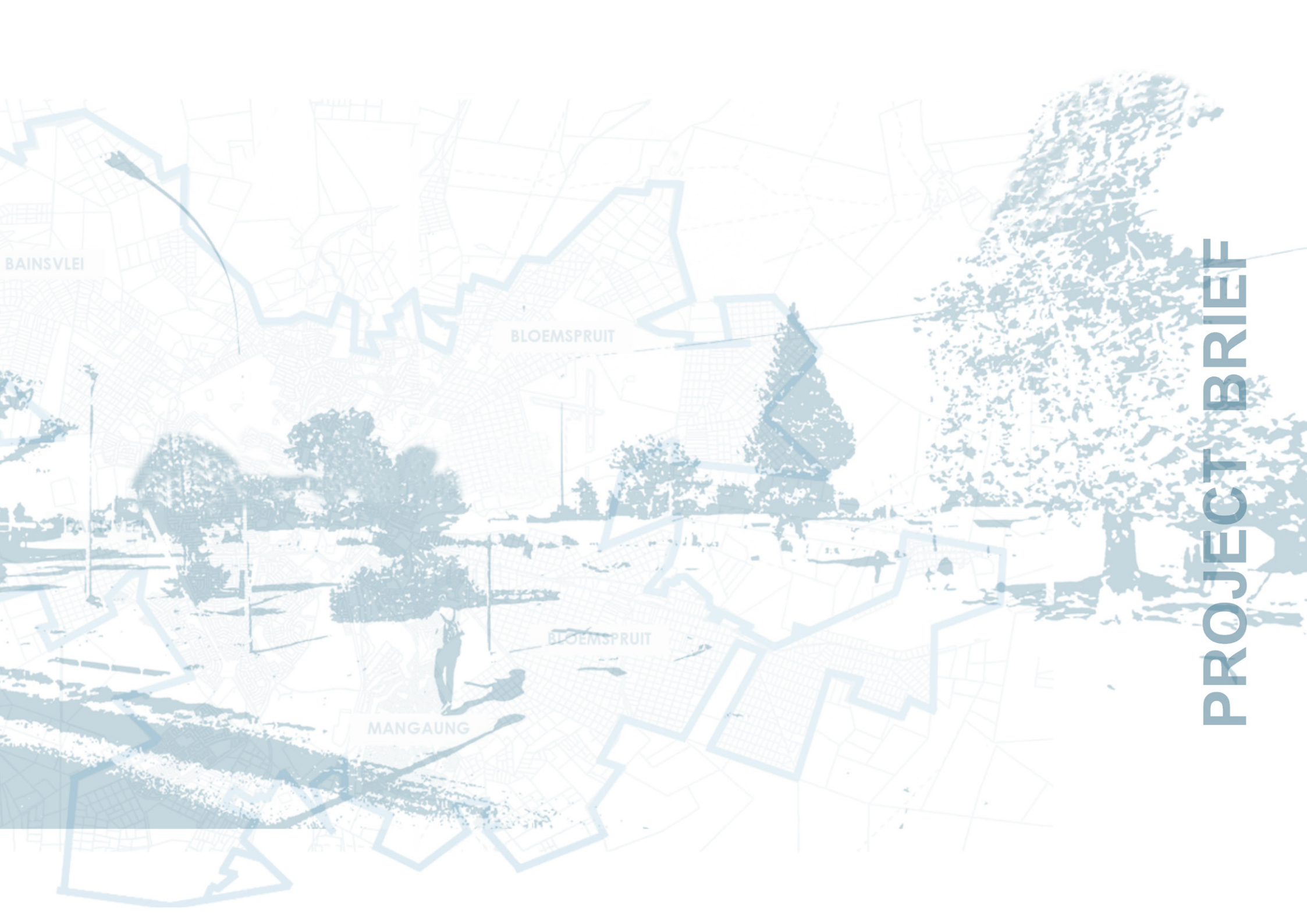
Fig 112. Khayelitsha Community Centre sketch (author, 2019)

# PROJECT BRIEF

Programme Functions

## 4.2





# PROJECT BRIEF



# Programme Functions

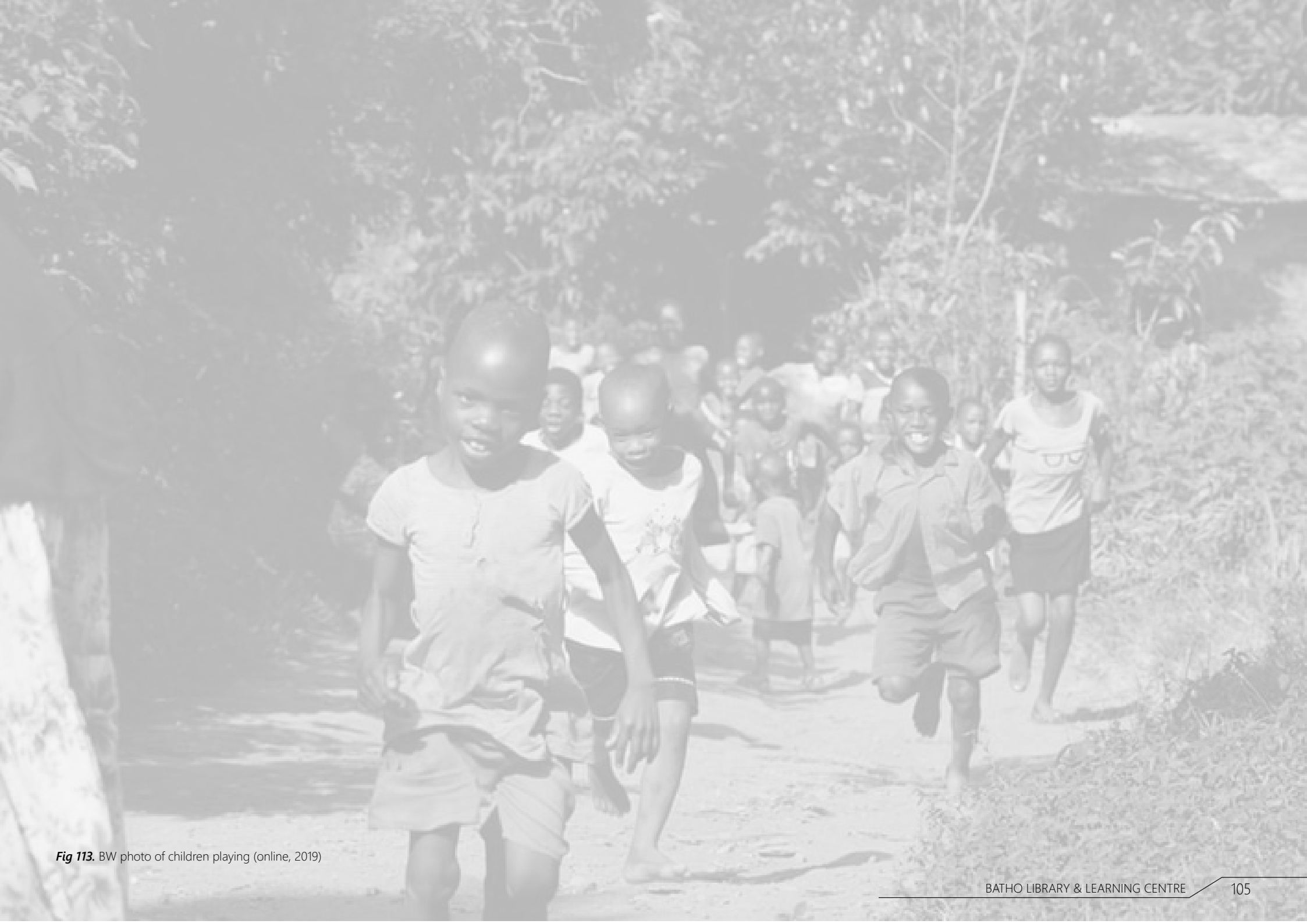
## PLINTH FLOOR LEVEL

Name	Area	Level
OPEN FLOOR PLATE	Not Placed	Not Placed
LANDSCAPED DECK	Not Enclosed	00 Plinth Level
TEMP REFUSE	4 m <sup>2</sup>	00 Plinth Level
ACCESSIBLE TOILET	5 m <sup>2</sup>	00 Plinth Level
STORAGE	5 m <sup>2</sup>	00 Plinth Level
HEAD OFFICE	6 m <sup>2</sup>	00 Plinth Level
STORAGE	7 m <sup>2</sup>	00 Plinth Level
WASH ROOM	8 m <sup>2</sup>	00 Plinth Level
STORAGE	10 m <sup>2</sup>	00 Plinth Level
STAFF ROOM	11 m <sup>2</sup>	00 Plinth Level
TUCKSHOP	12 m <sup>2</sup>	00 Plinth Level
MALE TOILETS	15 m <sup>2</sup>	00 Plinth Level
FEMALE TOILETS	15 m <sup>2</sup>	00 Plinth Level
SECURITY	15 m <sup>2</sup>	00 Plinth Level
MALE TOILETS	15 m <sup>2</sup>	00 Plinth Level
FEMALE TOILETS	15 m <sup>2</sup>	00 Plinth Level
CLEANERS ROOM	17 m <sup>2</sup>	00 Plinth Level
KITCHEN	28 m <sup>2</sup>	00 Plinth Level
ARCHIVES	34 m <sup>2</sup>	00 Plinth Level
ADMIN OFFICE	35 m <sup>2</sup>	00 Plinth Level
RECEPTION	63 m <sup>2</sup>	00 Plinth Level
SPORTS GYM	145 m <sup>2</sup>	00 Plinth Level
BOOK SHOP	209 m <sup>2</sup>	00 Plinth Level
ATRIUM COFFEE SHOP	244 m <sup>2</sup>	00 Plinth Level
RECEPTION & CAFETERIA	302 m <sup>2</sup>	00 Plinth Level

## FIRST FLOOR LEVEL

Name	Area	Level
VIEWING BRIDGE	Not Enclosed	01 First Storey
STORAGE	4 m <sup>2</sup>	01 First Storey
ACCESSIBLE TOILET	5 m <sup>2</sup>	01 First Storey
ACCESSIBLE TOILET	5 m <sup>2</sup>	01 First Storey
MALE TOILETS	15 m <sup>2</sup>	01 First Storey
FEMALE TOILETS	15 m <sup>2</sup>	01 First Storey
MALE TOILETS	15 m <sup>2</sup>	01 First Storey
FEMALE TOILETS	15 m <sup>2</sup>	01 First Storey
BALCONY	19 m <sup>2</sup>	01 First Storey
PC LAB	25 m <sup>2</sup>	01 First Storey
BALCONY	25 m <sup>2</sup>	01 First Storey
CLASSROOM 1	35 m <sup>2</sup>	01 First Storey
CLASSROOM 2	35 m <sup>2</sup>	01 First Storey
CLASSROOM 3	35 m <sup>2</sup>	01 First Storey
BALCONY	37 m <sup>2</sup>	01 First Storey
ARCHIVES	59 m <sup>2</sup>	01 First Storey
VERTICAL CIRCULATION	63 m <sup>2</sup>	01 First Storey
QUIET ROOM	70 m <sup>2</sup>	01 First Storey
STUDY AREA	73 m <sup>2</sup>	01 First Storey
WALKWAY BRIDGE	74 m <sup>2</sup>	01 First Storey
REST AREA	82 m <sup>2</sup>	01 First Storey
AUDITORIUM	107 m <sup>2</sup>	01 First Storey
TOY LIBRARY	184 m <sup>2</sup>	01 First Storey
EXHIBITION BRIDGE	217 m <sup>2</sup>	01 First Storey
OPEN FLOOR PLATE	311 m <sup>2</sup>	01 First Storey
READING NESTS	352 m <sup>2</sup>	01 First Storey
OPEN LIBRARY SPACE	427 m <sup>2</sup>	01 First Storey

Grand total: 52



**Fig 113.** BW photo of children playing (online, 2019)

## DESIGN METHODOLOGY

Fig 114. Batho sketch (author, 2019)





# CHAPTER | 5

## AIM OF THE CHAPTER

A design methodology is an overarching approach to design that may include a set of philosophies, principles, processes and techniques.

In this chapter an exploration into the process of the design will be exhibited.

# DESIGN METHODOLOGY

Phase 1 | Initial Design Exploration

Phase 2 | 3D exploration

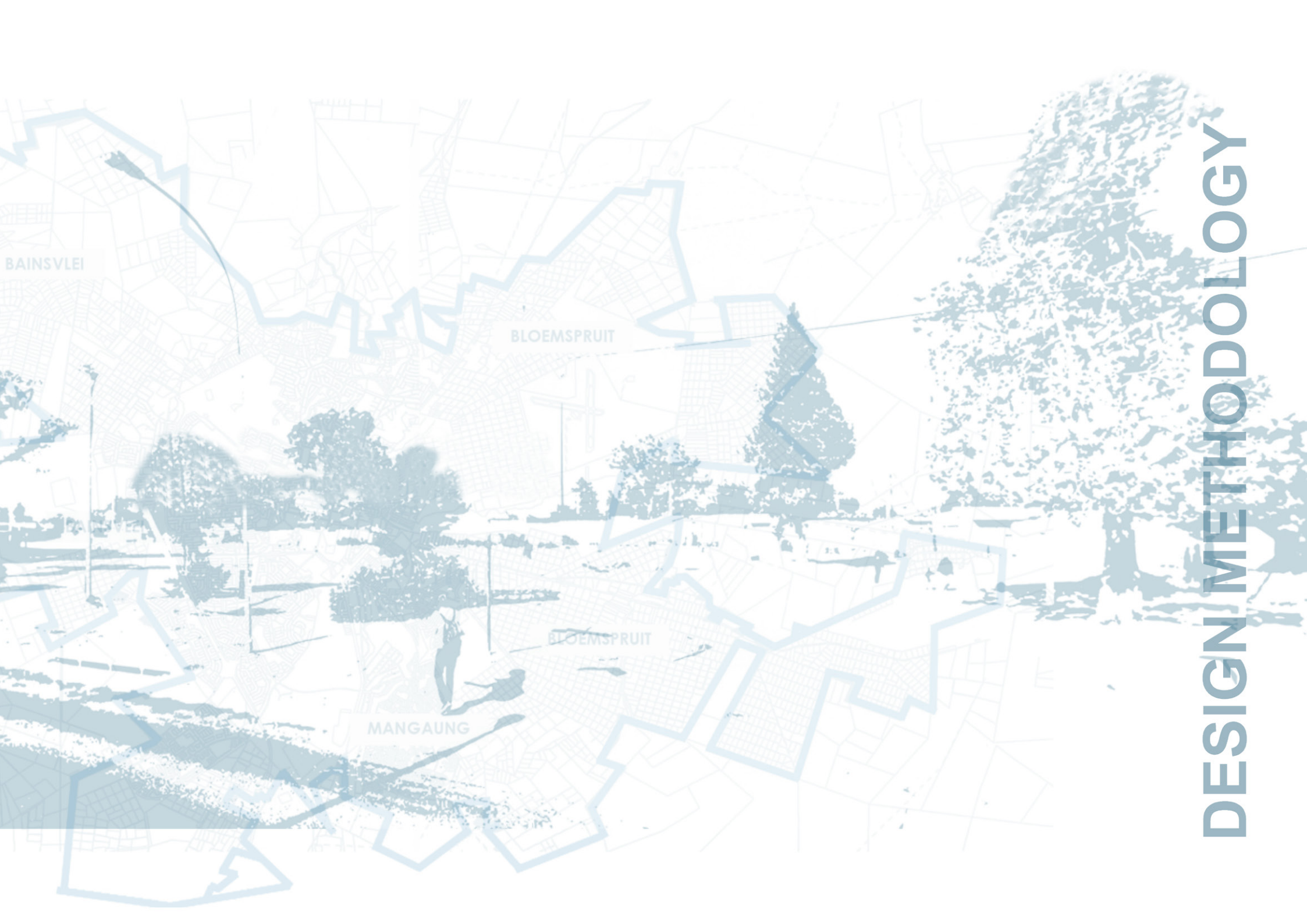
Phase 3 | Transforming basic massing into basic plans

Phase 4 | Plan and Section Development

Phase 5 | Sketch Plan phase with structural development

# 5.1





# DESIGN METHODOLOGY

# Phase 1 | Initial Design Exploration

The initial phase of designing started out with parti-like diagrams over the site. This helped morphology in terms of massing and placing the basic grouped functions on site. The main focus started off as an attempt to have the structure reach out toward the city and toward Batho as a way of connecting the two sides again.

Problem statement: Reaching out with the structure creates too much floor area without focusing on drawing people into the building.

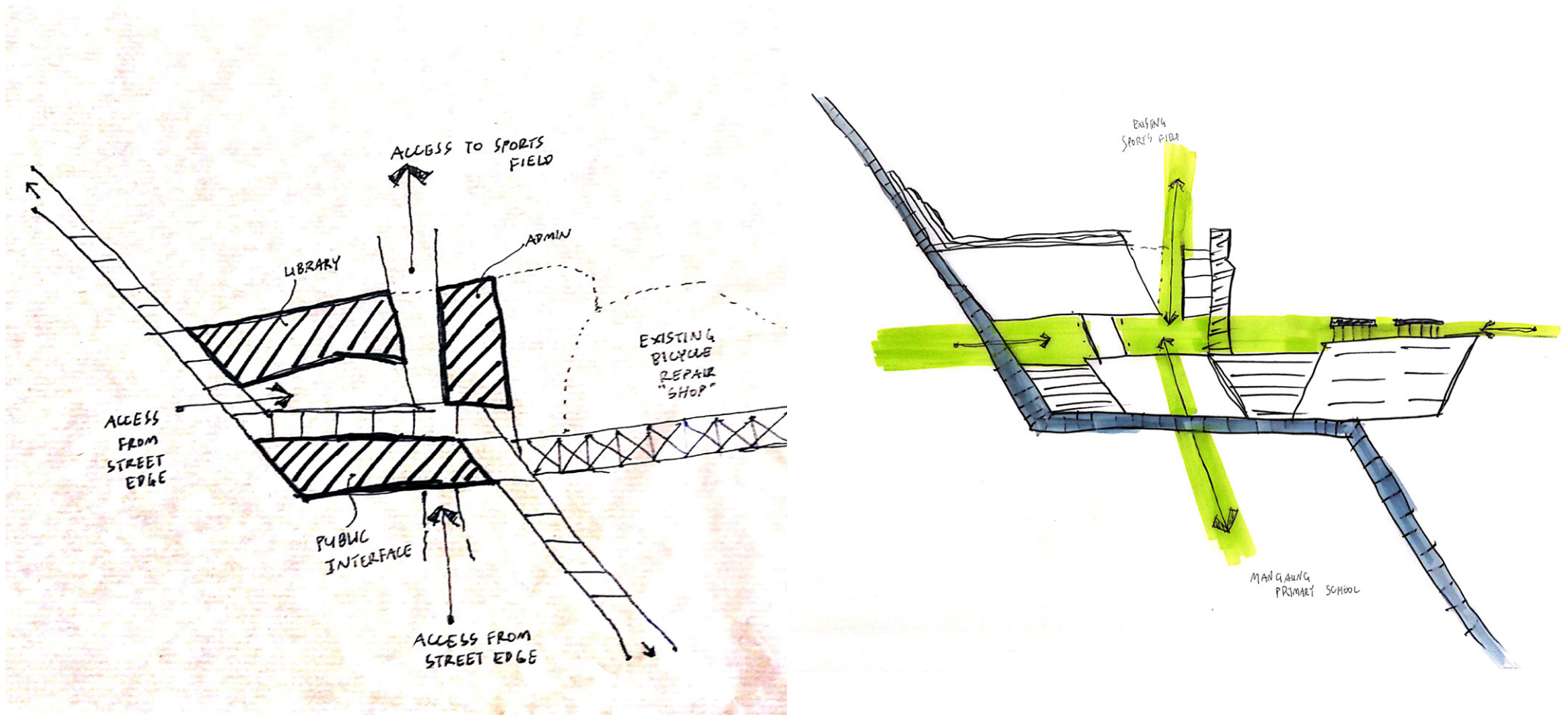


Fig 115-116. Proposal Diagrams (author, 2019)

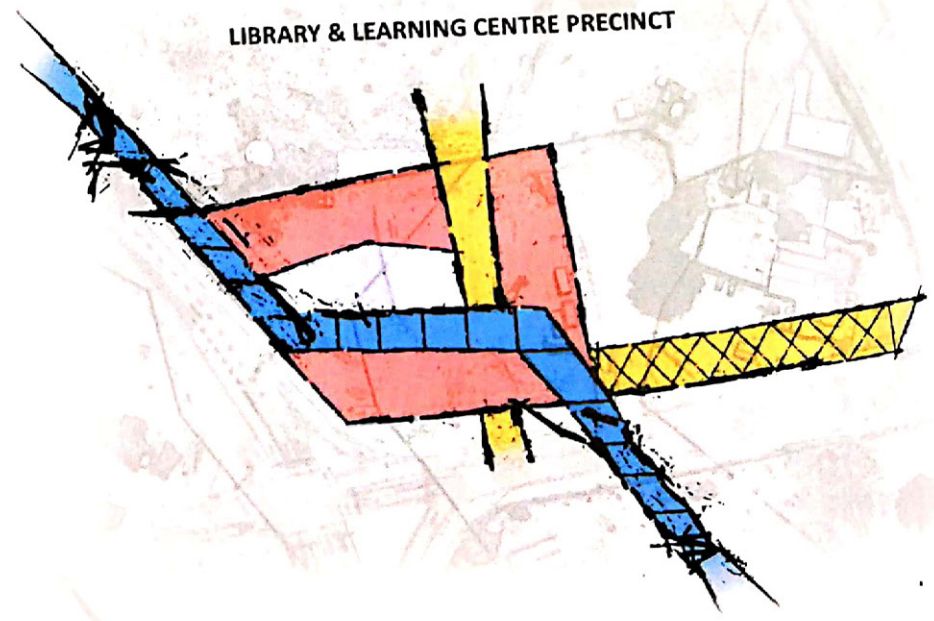
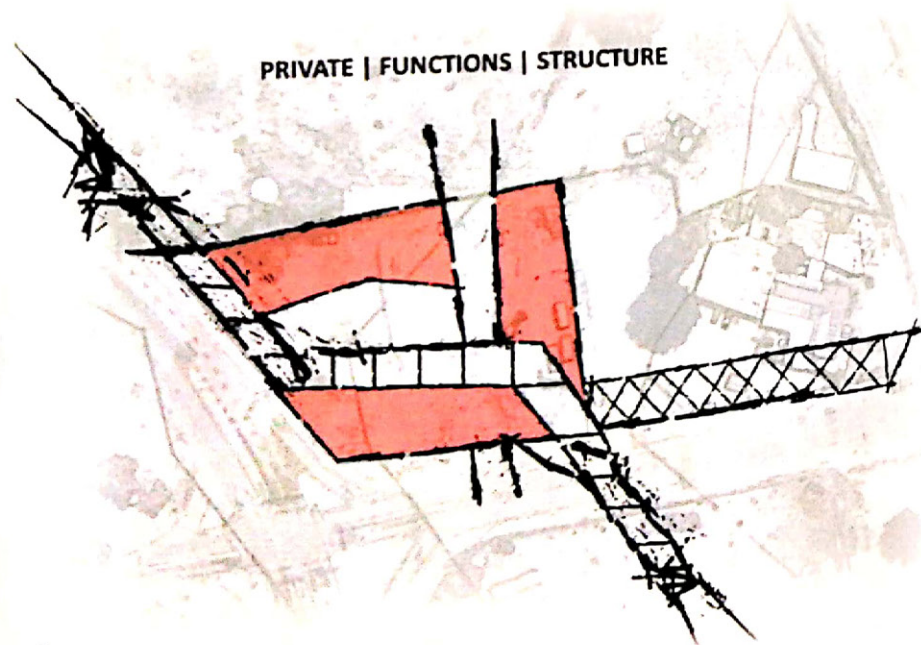
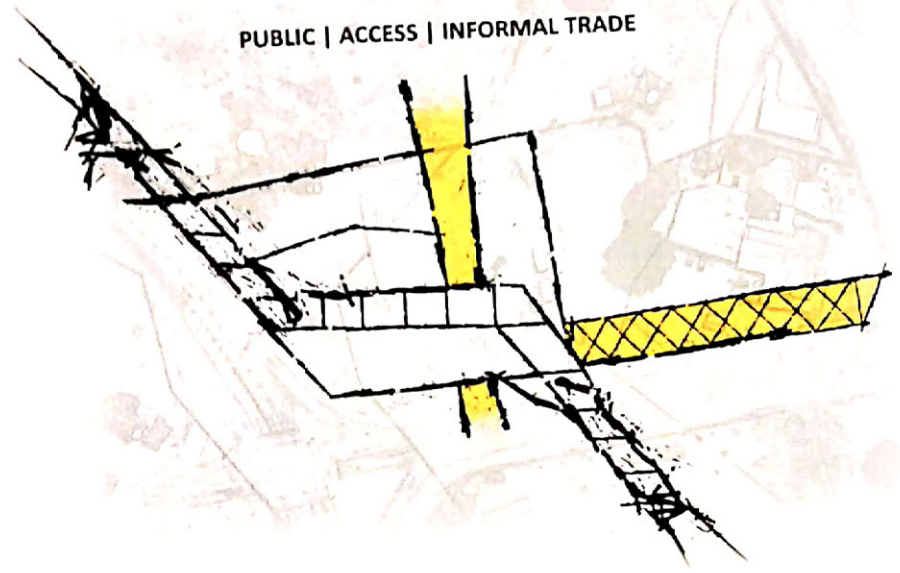
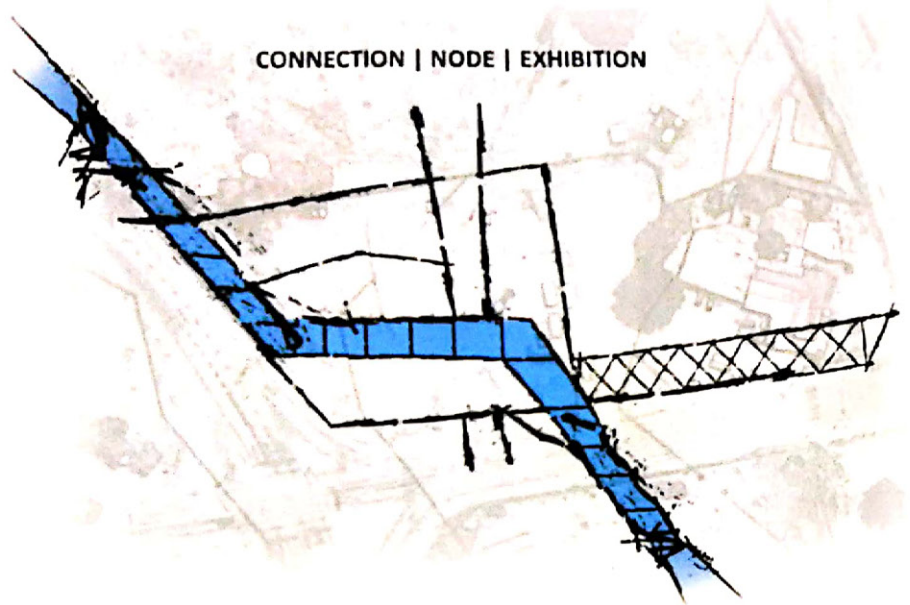
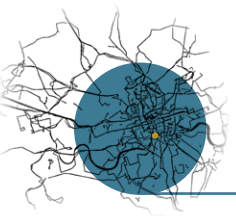


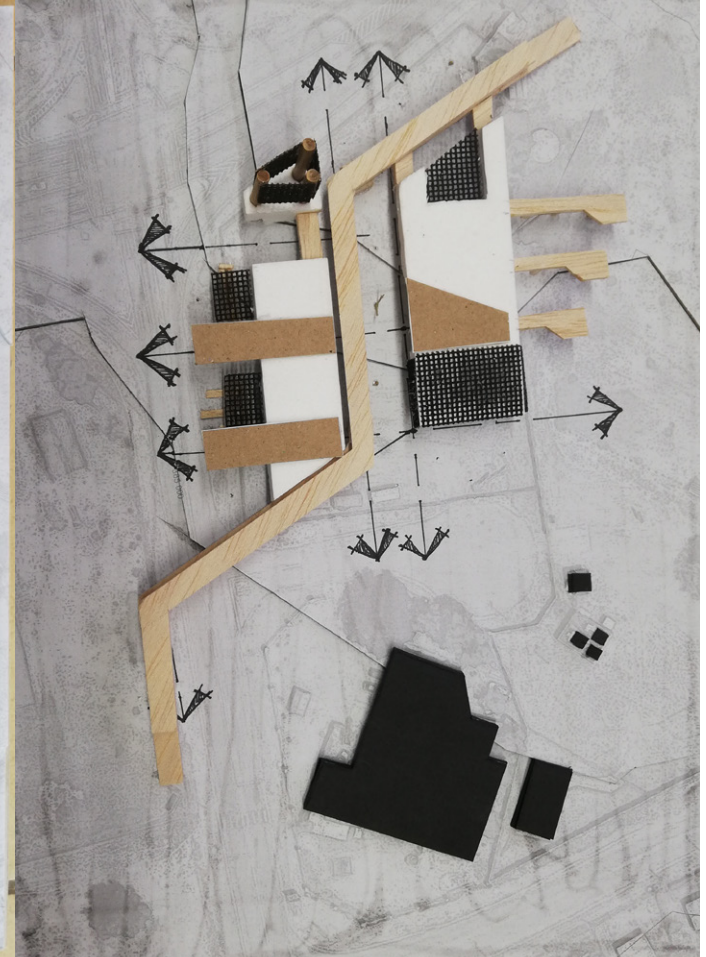
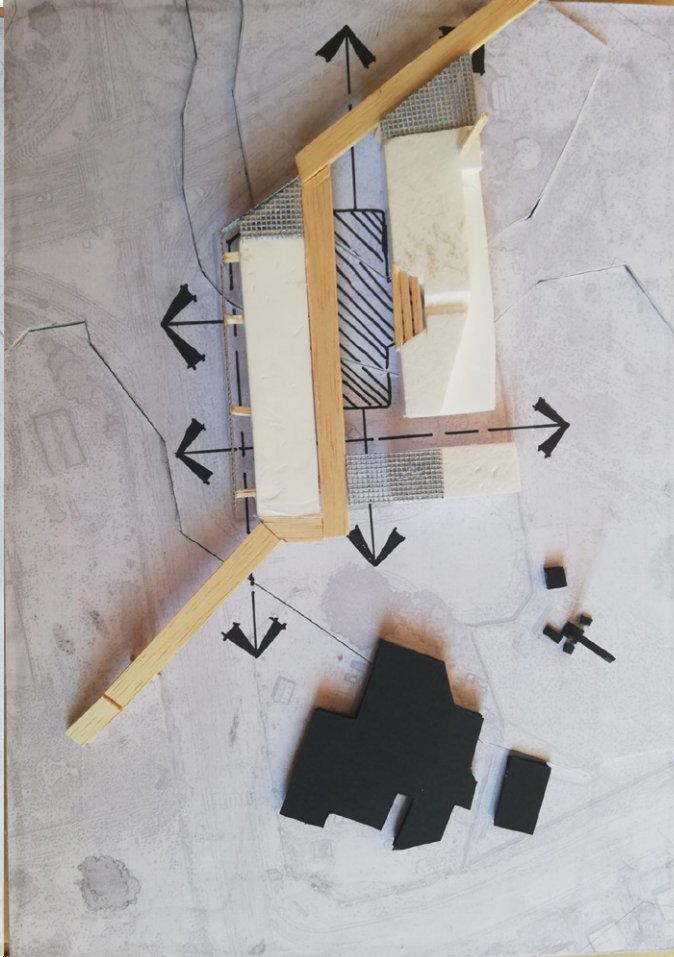
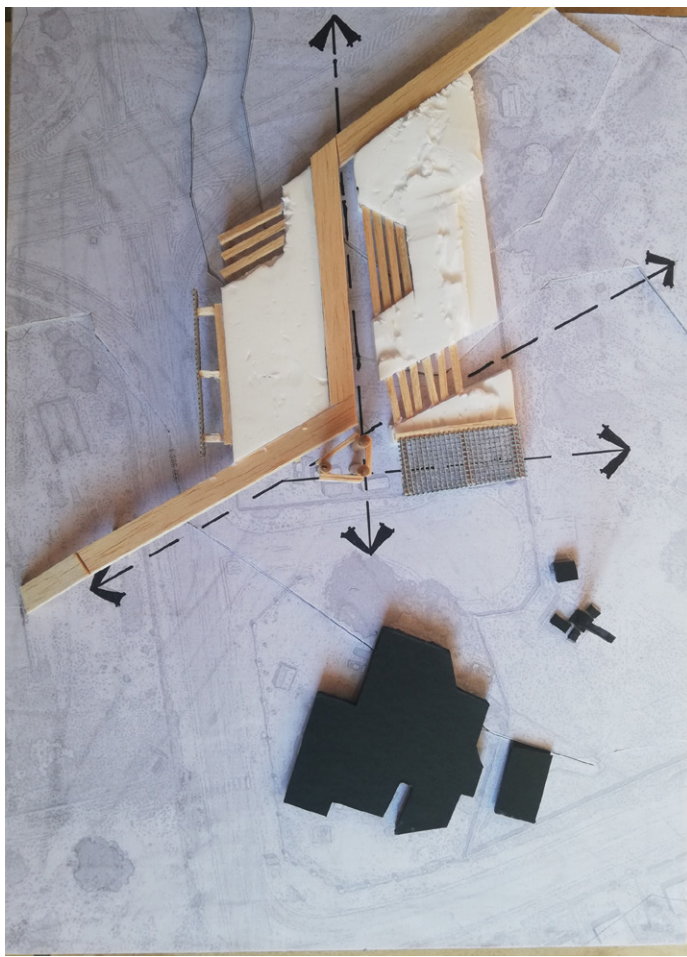
Fig 117. Proposal Diagrams (author, 2019)



## Phase 2 | 3D exploration

The second phase of designing entailed 3D representations of the progressing masses on site. This is an exercise to help one start to develop scale within the contextual fabric of the surroundings.

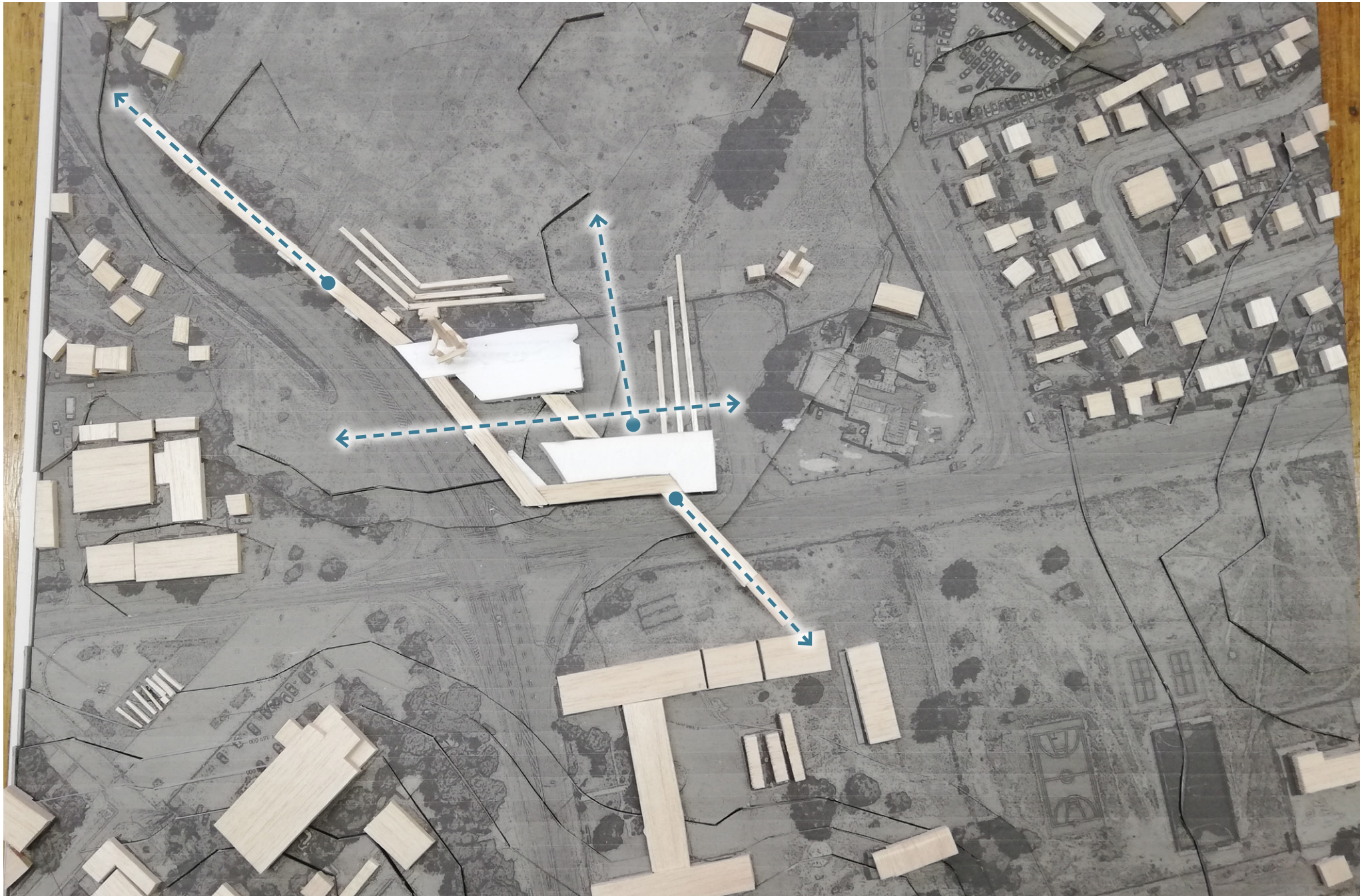
Problem statement: One would start to see the existing pedestrian routes on site fade away by creating all these new routes. One should rather incorporate the existing pedestrian movement.



**MODEL 1**  
*Fig 118-120.* Proposal Models (author, 2019)

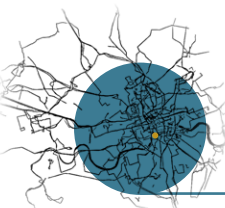
**MODEL 2**

**MODEL 3**



**First Site Model**

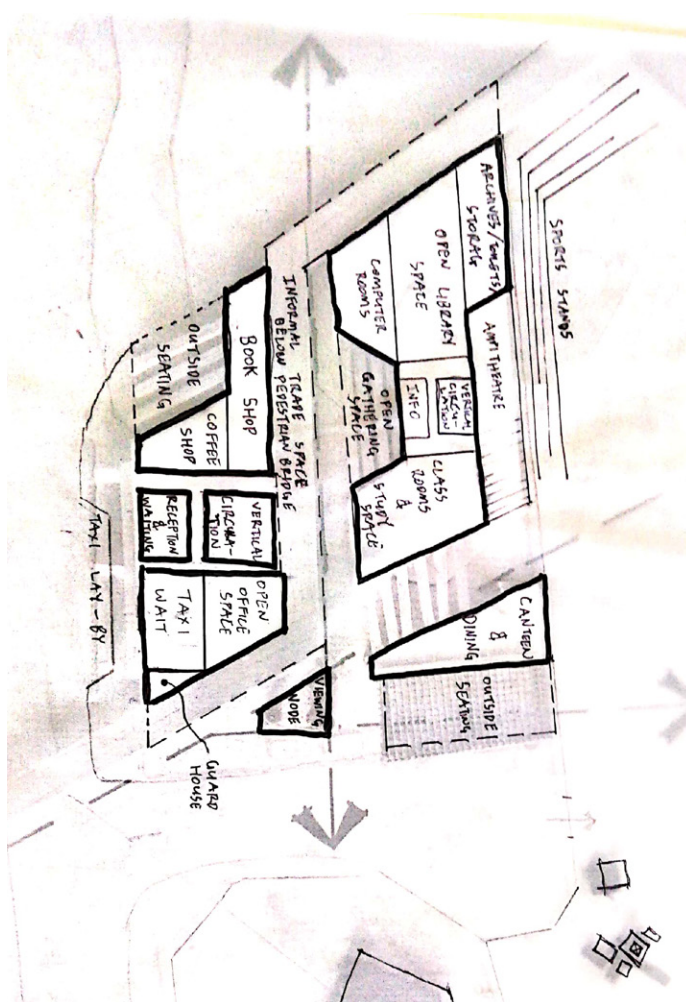
*Fig 121.* Proposal Site Model(author, 2019)



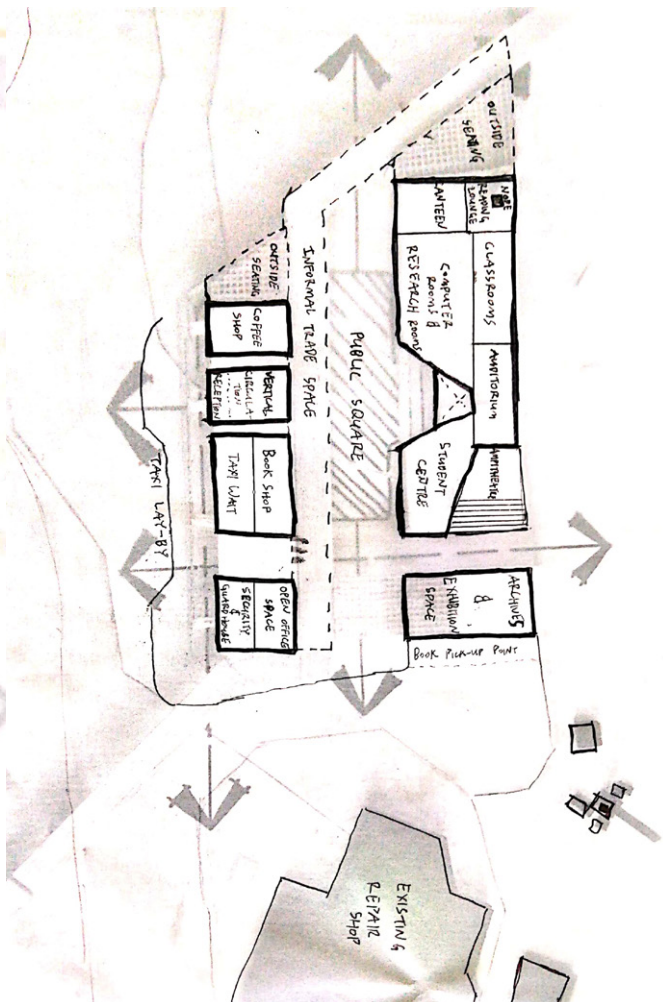
# Phase 3 | Transforming basic massing into basic plans

The third phase of designing entailed transforming the 3D exploration into basic shape plans. This is in an attempt to kick-start the layout design and start organizing functions around specific ideas

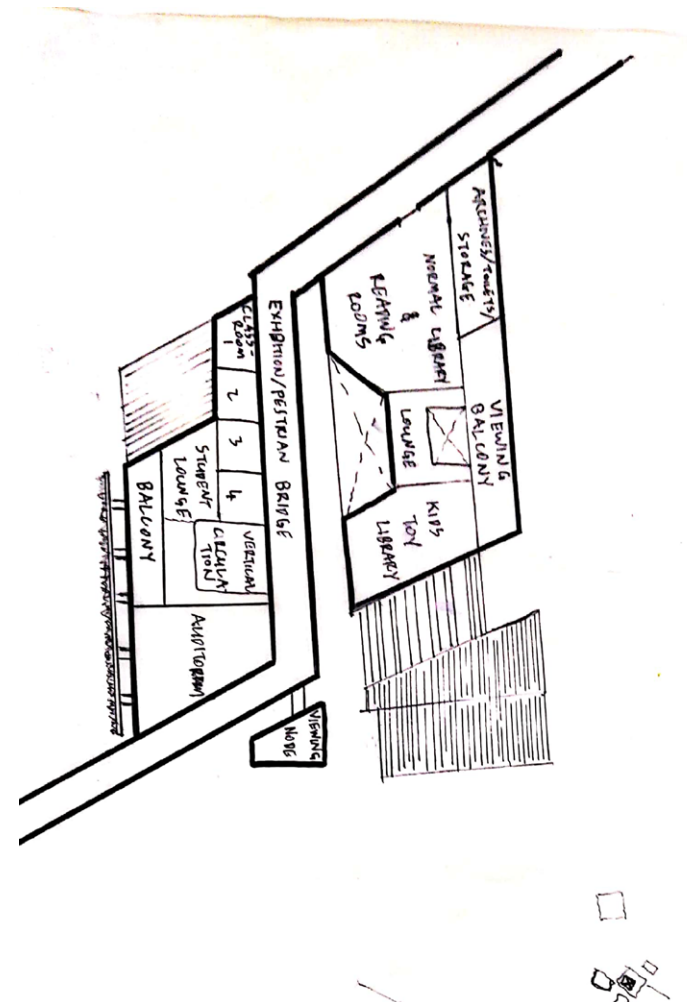
Problem statement: Too many of the same focal points entailed that some plans turn out similar to others.



PLAN 1  
Fig 121-123. Proposal Models (author, 2019)



PLAN 2

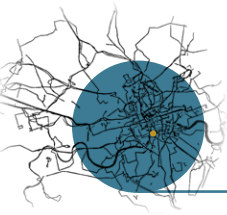


PLAN 3



**Site Sketch from memory**

*Fig 124.* Proposal Sketch (author, 2019)



## Phase 4 | Plan and Section Development

The fourth phase of design development in this case was to try translate a progress plan into basic sketch sections to help form some sort of language.

Problem statement: A typical Archie-type language came about without considering the contextual aesthetics within Batho

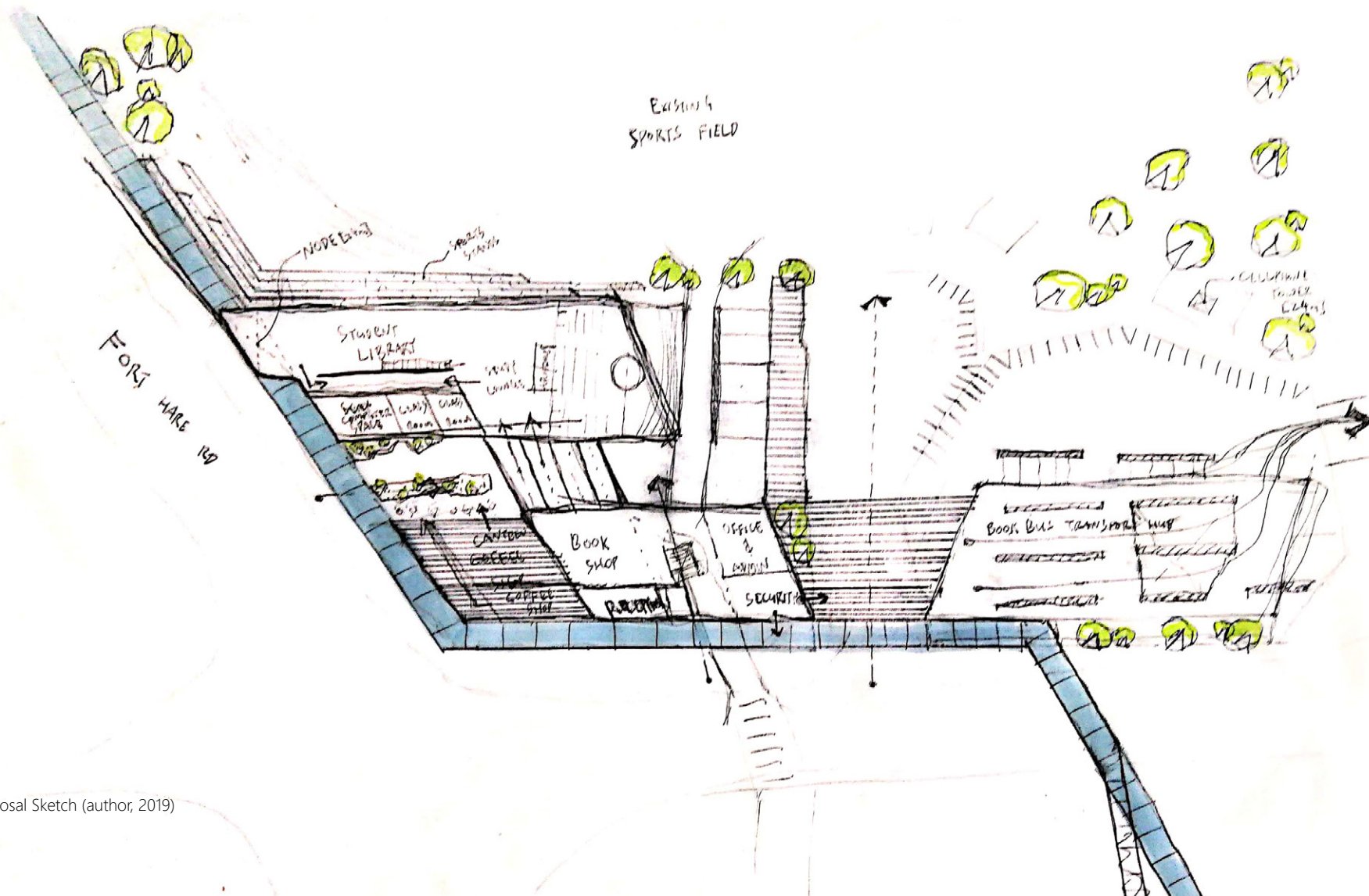


Fig 125. Proposal Sketch (author, 2019)

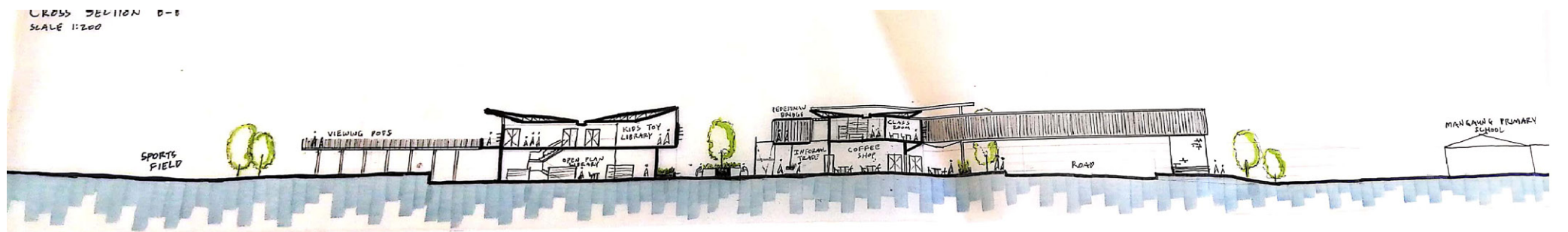
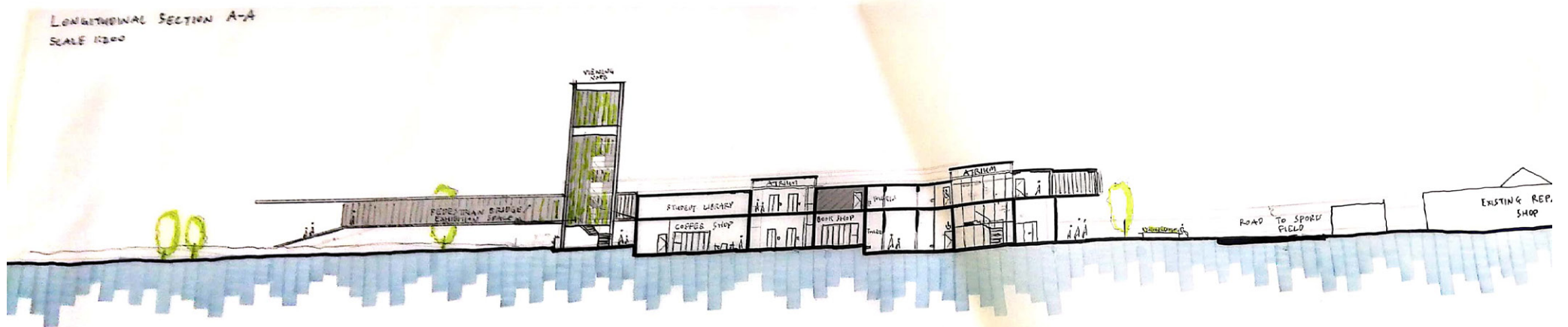


Fig 126. Proposal Sketch (author, 2019)

# Phase 5 | Sketch Plan phase with structural development

The fifth and final phase before attempting final design sketch plans is to develop the plans and sections in correlation to the now included structure. This will help guide one to starting final sketch plans and forming an all rounded design through structural ideas. A structural model is explored after plans and sections to witness in 3D the skeleton form of one's building.

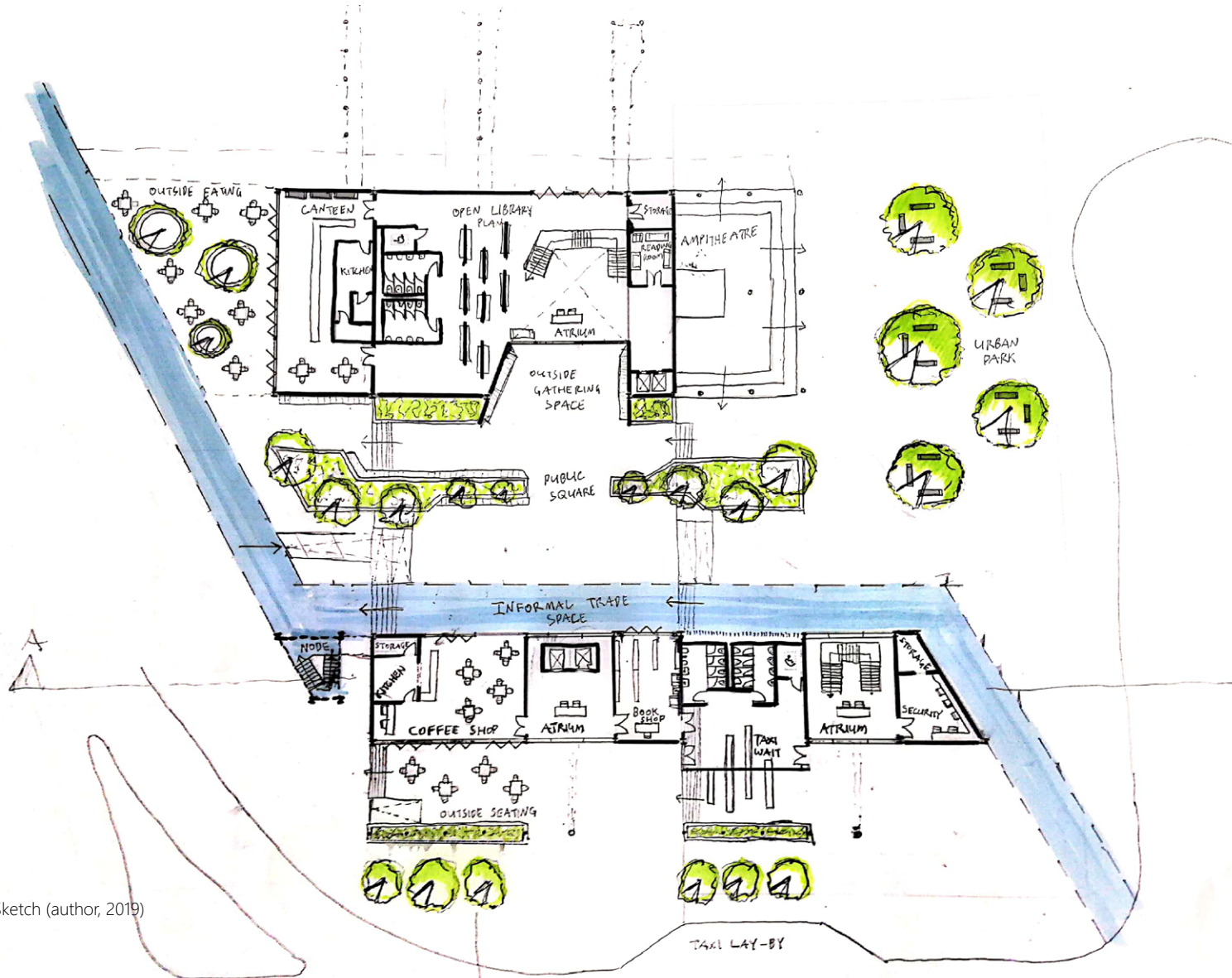


Fig 127. Proposal Sketch (author, 2019)

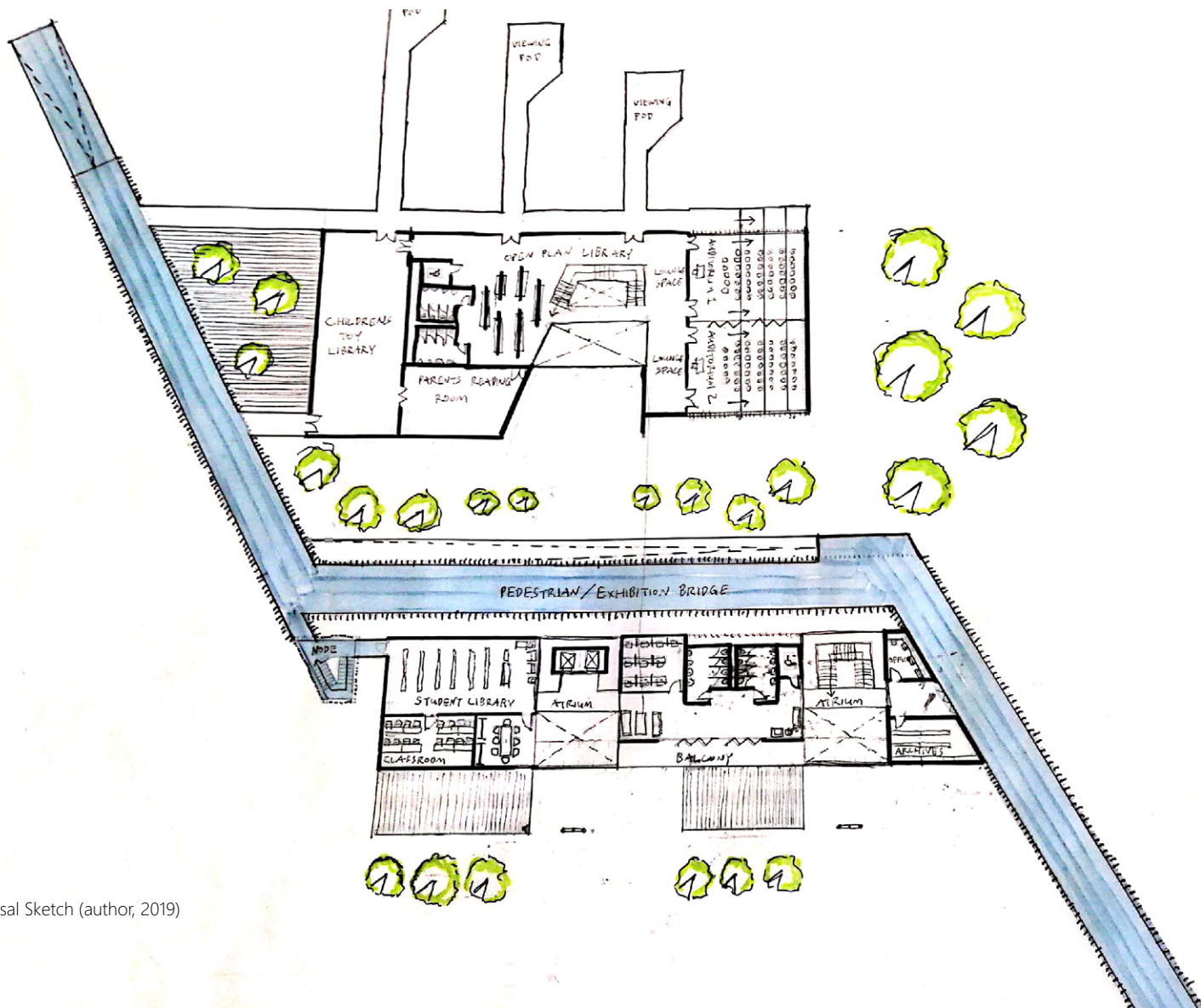


Fig 128. Proposal Sketch (author, 2019)

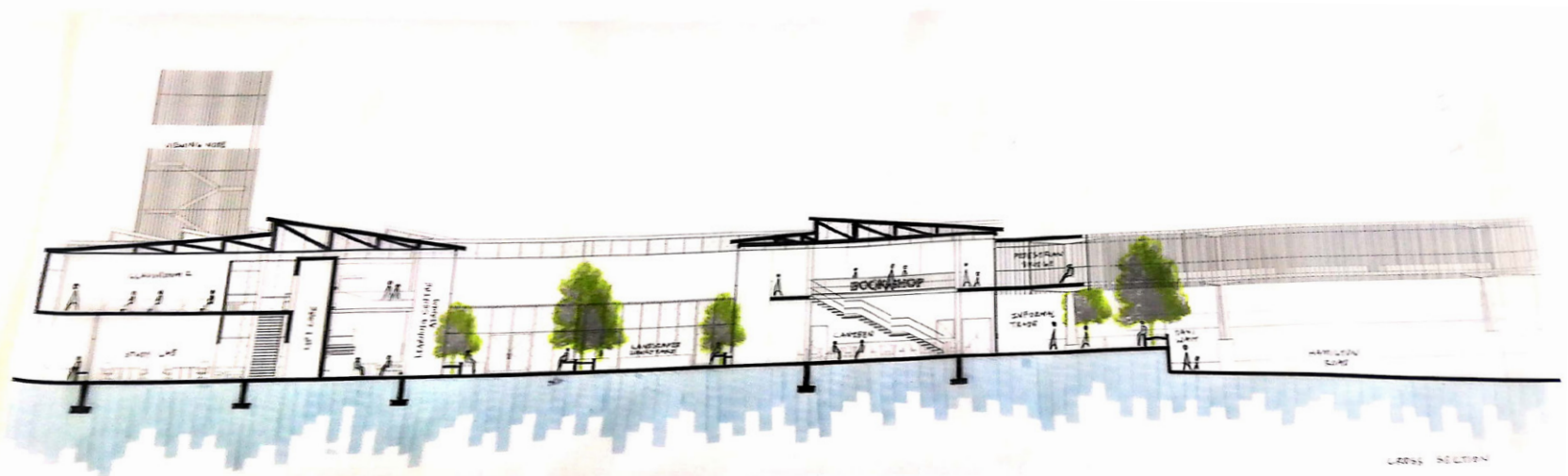
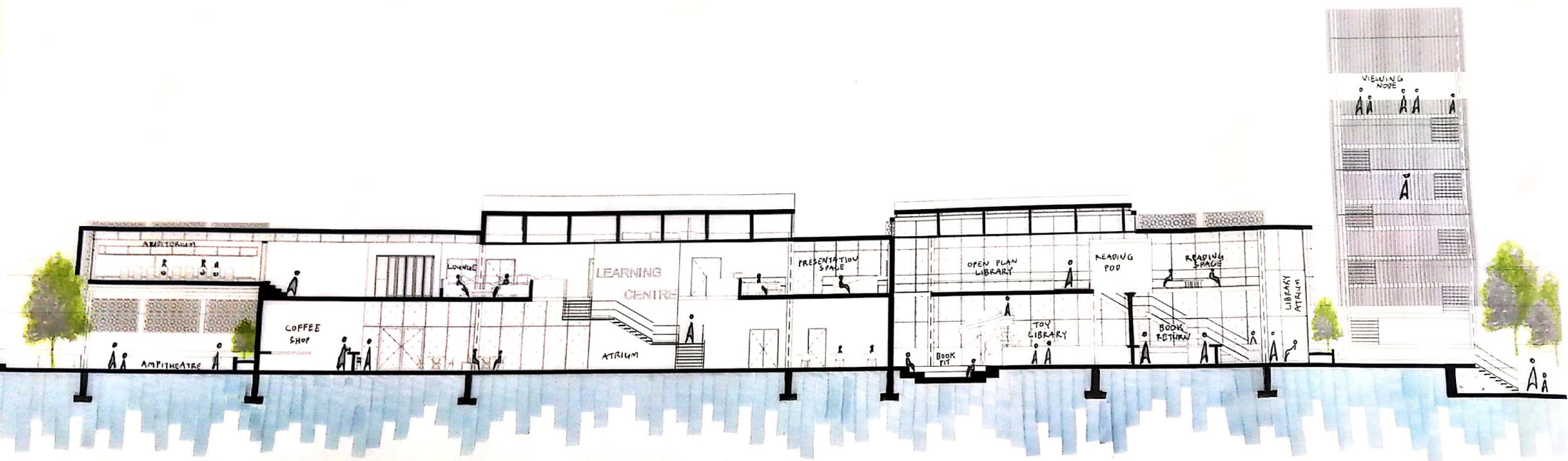


Fig 129-130. Proposal Sketch (author, 2019)

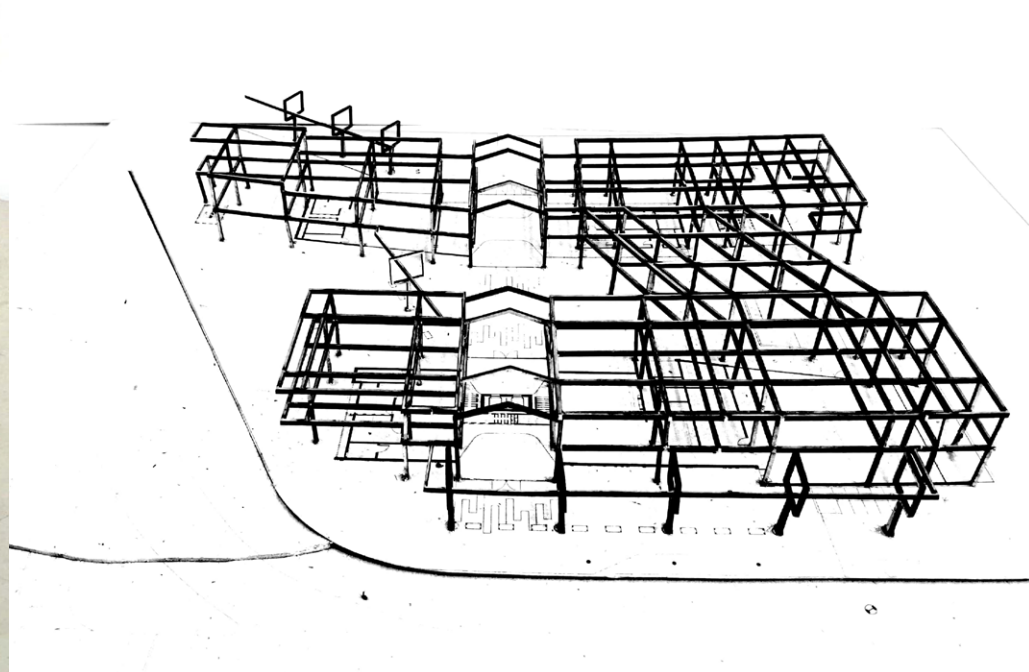
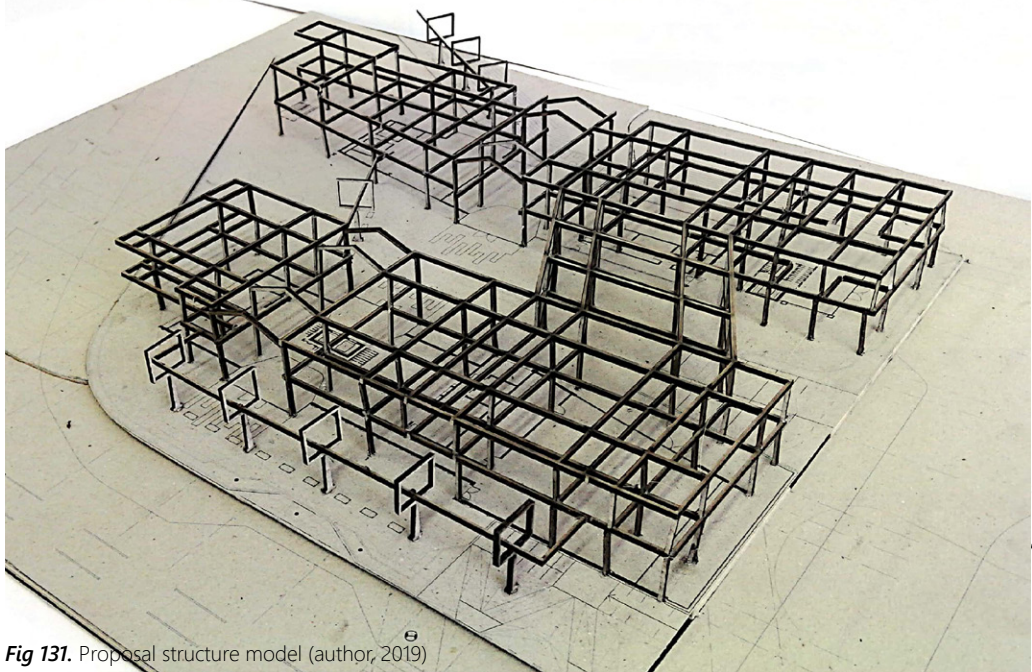
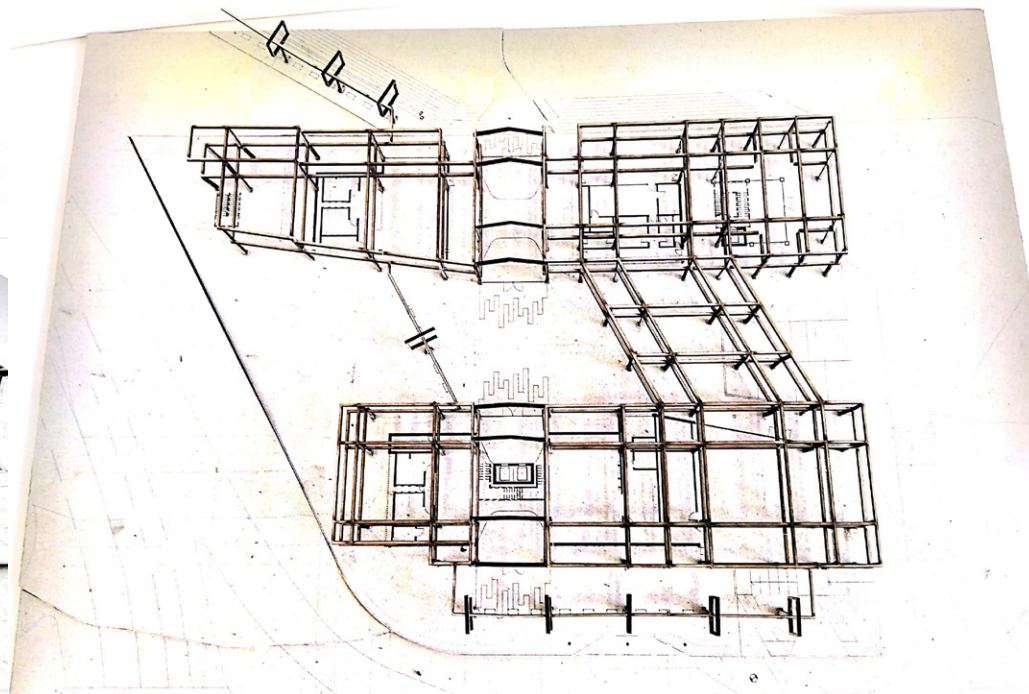


Fig 131. Proposal structure model (author, 2019)

## DESIGN SYNTHESIS



*Fig 132.* Batho sketch (author, 2019)



# CHAPTER | 6

## AIM OF THE CHAPTER

A look into the final design through plans, sections, elevations and rendered perspectives.

The design of a "Batho Library & Learning Centre" is exhibited in its context at a reply to compliment the residents and their cultural beliefs

# DESIGN METHODOLOGY

Site Plan

Ground Floor Plan

First Floor Plan

Typical Node Plans

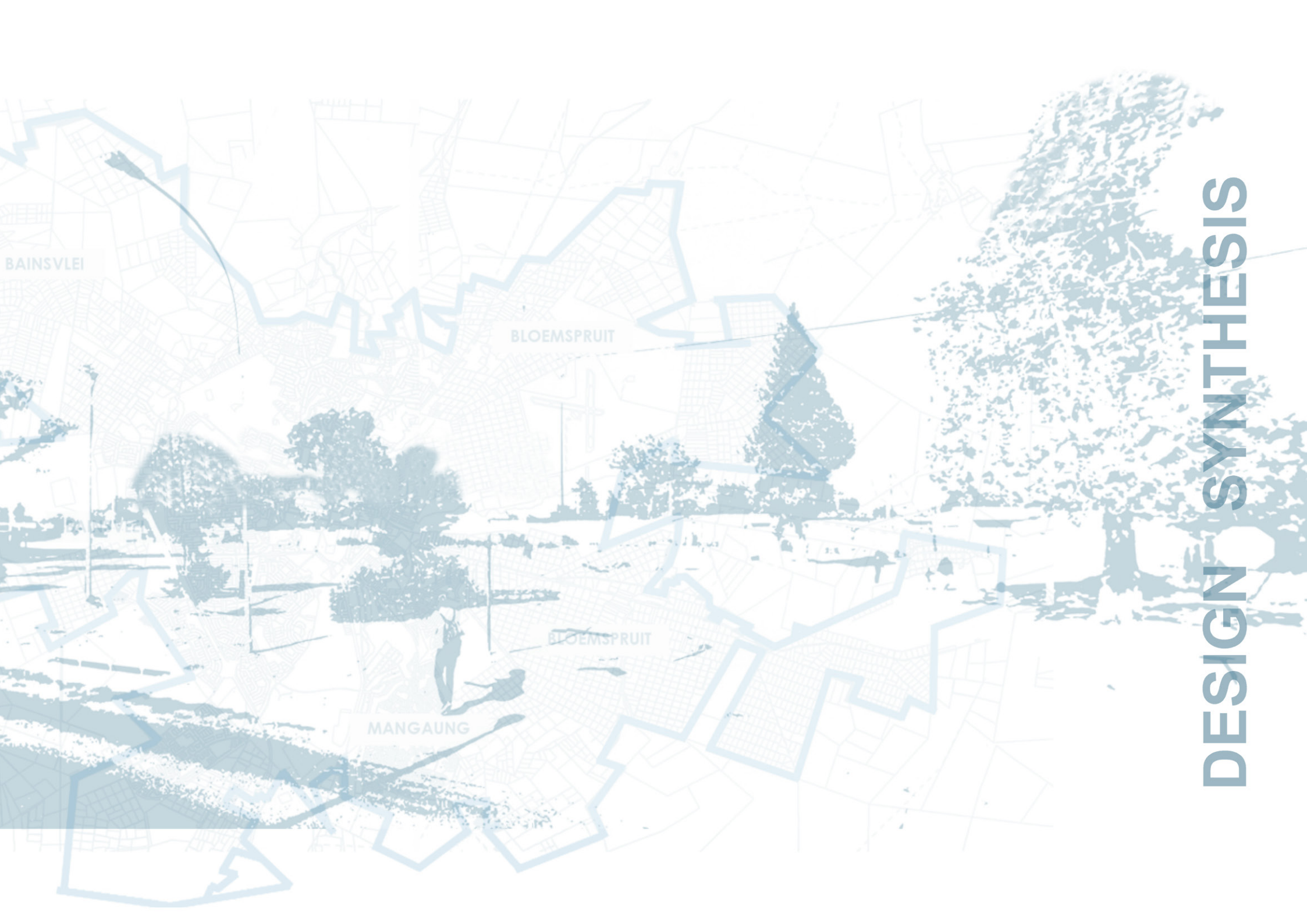
Sections

Elevations

Perspective Renders

# 6.1





# DESIGN SYNTHESIS

# SITE PLAN



*Fig 133.* Batho Library & Learning Centre proposal (author, 2019)





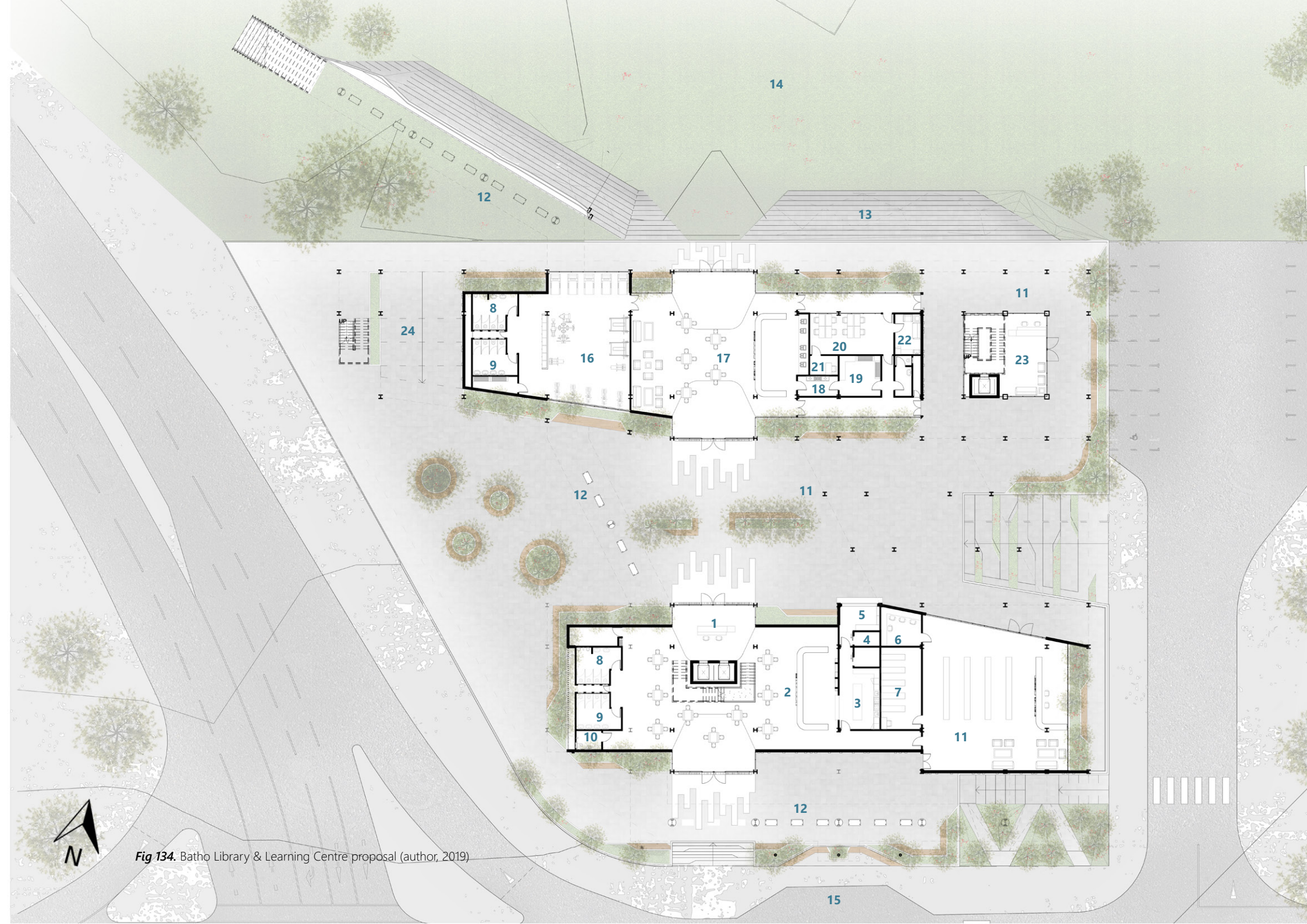


Fig 134. Batho Library & Learning Centre proposal (author, 2019)



## PLINTH LEVEL FLOOR PLAN

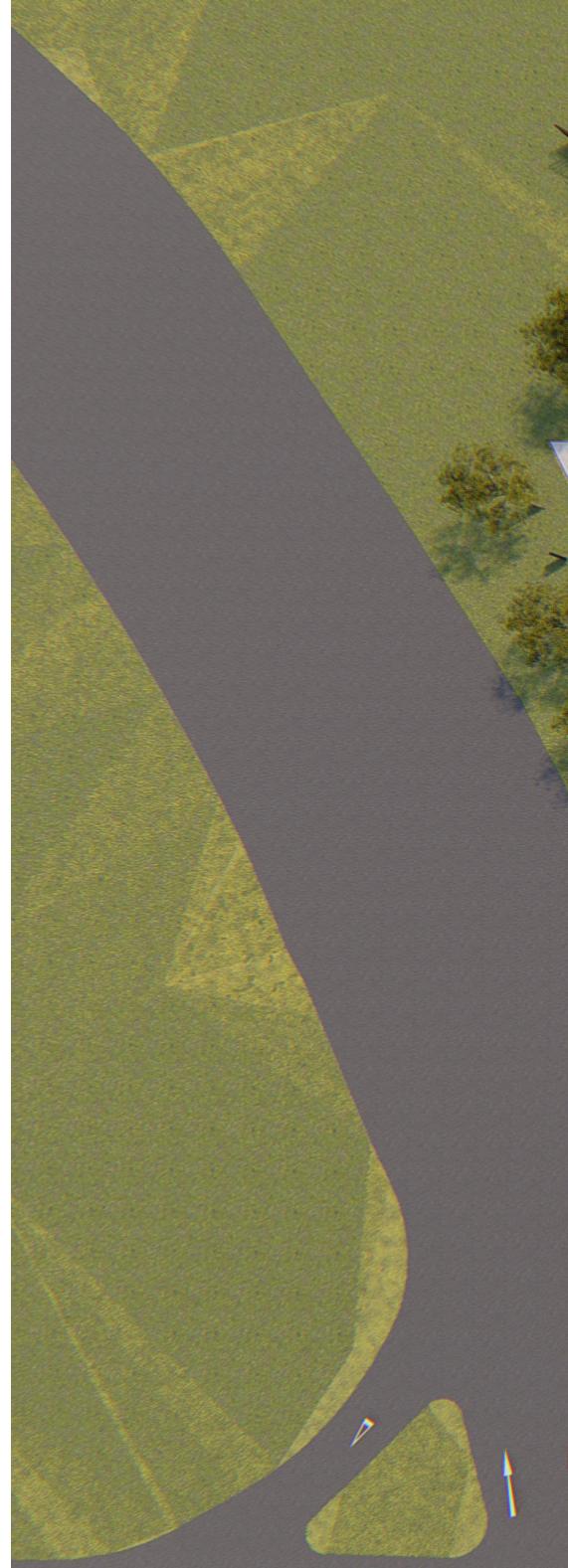
### LEGEND

- |    |                          |    |                        |
|----|--------------------------|----|------------------------|
| 1  | RECEPTION / INFORMATION  | 13 | LANDSCAPED GRANDSTAND  |
| 2  | CAFETERIA                | 14 | SPORTS FIELD           |
| 3  | KITCHEN                  | 15 | TAXI WAIT / DELIVERIES |
| 4  | TEMPORARY REFUSE         | 16 | GYM                    |
| 5  | TUCK SHOP                | 17 | COFFEE SHOP            |
| 6  | SECURITY                 | 18 | WET ROOM               |
| 7  | BOOKSHOP ARCHIVES        | 19 | CLEANERS QUARTERS      |
| 8  | MALE TOILETS             | 20 | ADMINISTRATION OFFICE  |
| 9  | FEMALE TOILETS           | 21 | HEAD OFFICE            |
| 10 | ACCESSIBLE TOILET        | 22 | STAFF ROOM             |
| 11 | LANDSCAPED DECK          | 23 | RECEPTION & WAITING    |
| 12 | INFORMAL TRADE STRUCTURE | 24 | AMPHITHEATER           |



# PLINTH LEVEL FLOOR PLAN

*Fig 135.* Batho Library & Learning Centre proposal (author, 2019)





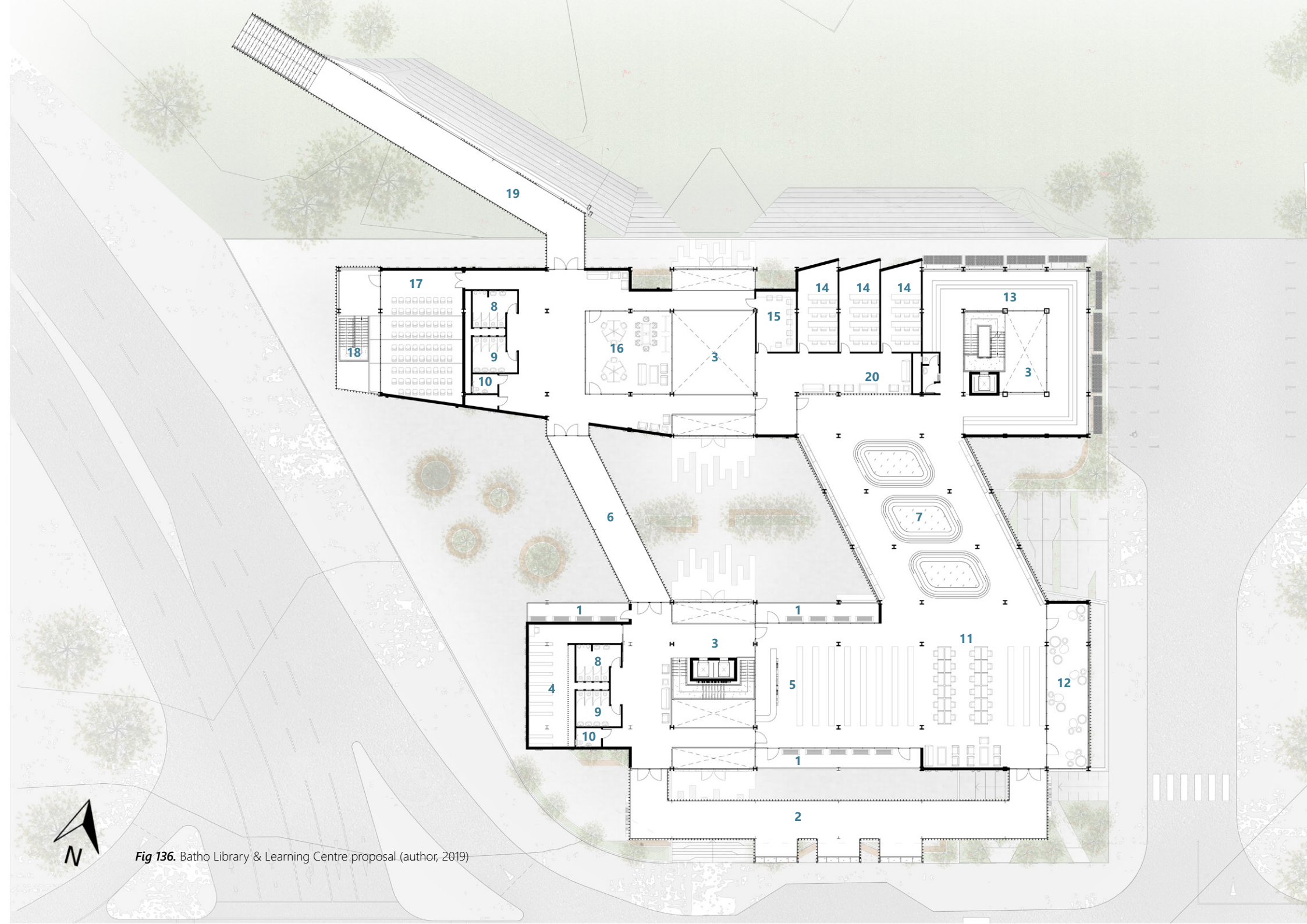


Fig 136. Batho Library & Learning Centre proposal (author, 2019)



## FIRST FLOOR PLAN

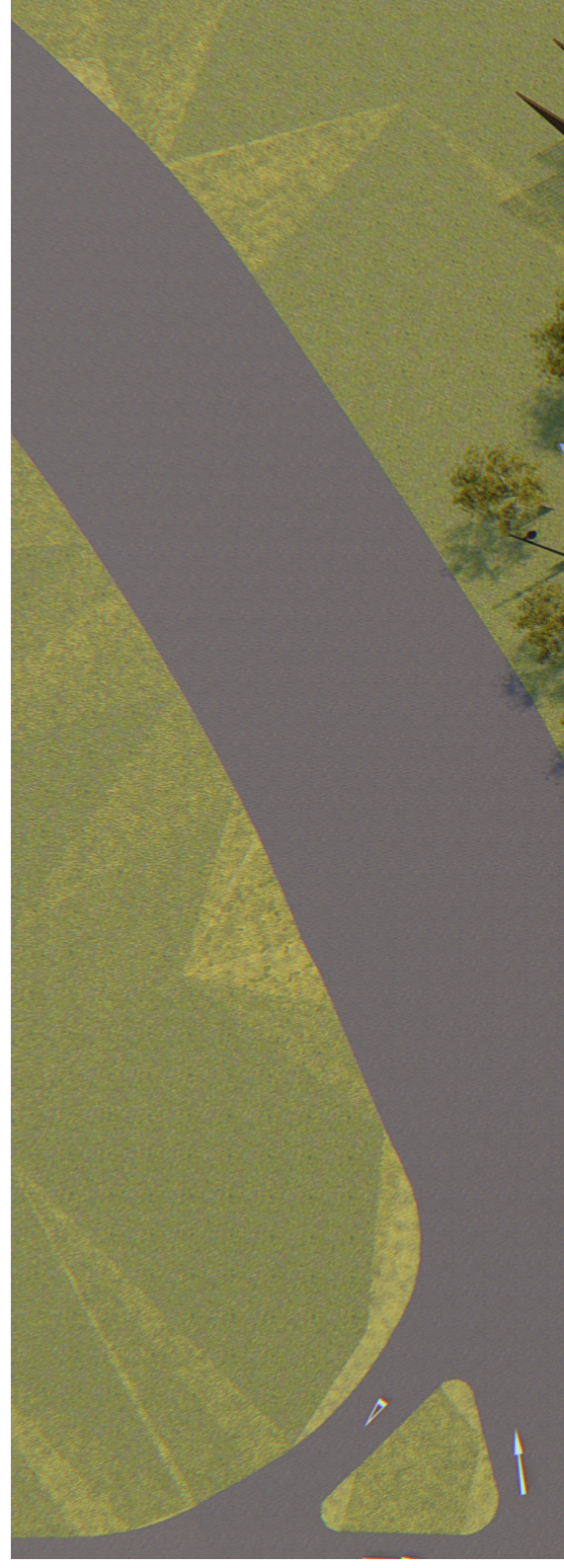
### LEGEND

- |    |                    |    |                       |
|----|--------------------|----|-----------------------|
| 1  | BALCONY            | 13 | KIDS TOY LIBRARY      |
| 2  | EXHIBITION BRIDGE  | 14 | CLASSROOM             |
| 3  | ATRIUM             | 15 | COMPUTER LAB          |
| 4  | LIBRARY ARCHIVES   | 16 | STUDY AREA            |
| 5  | OPEN LIBRARY       | 17 | AUDITORIUM            |
| 6  | PEDESTRIAN WALKWAY | 18 | FES                   |
| 7  | READING NESTS      | 19 | SPORTS VIEWING BRIDGE |
| 8  | MALE TOILETS       | 20 | REST AREA             |
| 9  | FEMALE TOILETS     |    |                       |
| 10 | ACCESSIBLE TOILET  |    |                       |
| 11 | RESEARCH COMPUTERS |    |                       |
| 12 | QUIET ROOM         |    |                       |



# FIRST FLOOR PLAN

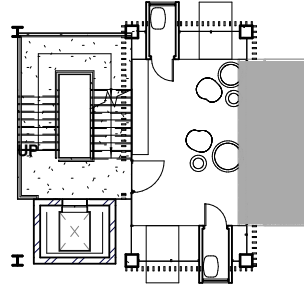
*Fig 137.* Batho Library & Learning Centre proposal (author, 2019)







### THIRD FLOOR PLAN



### FOURTH FLOOR PLAN

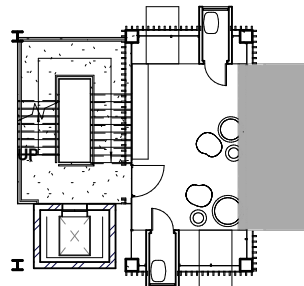
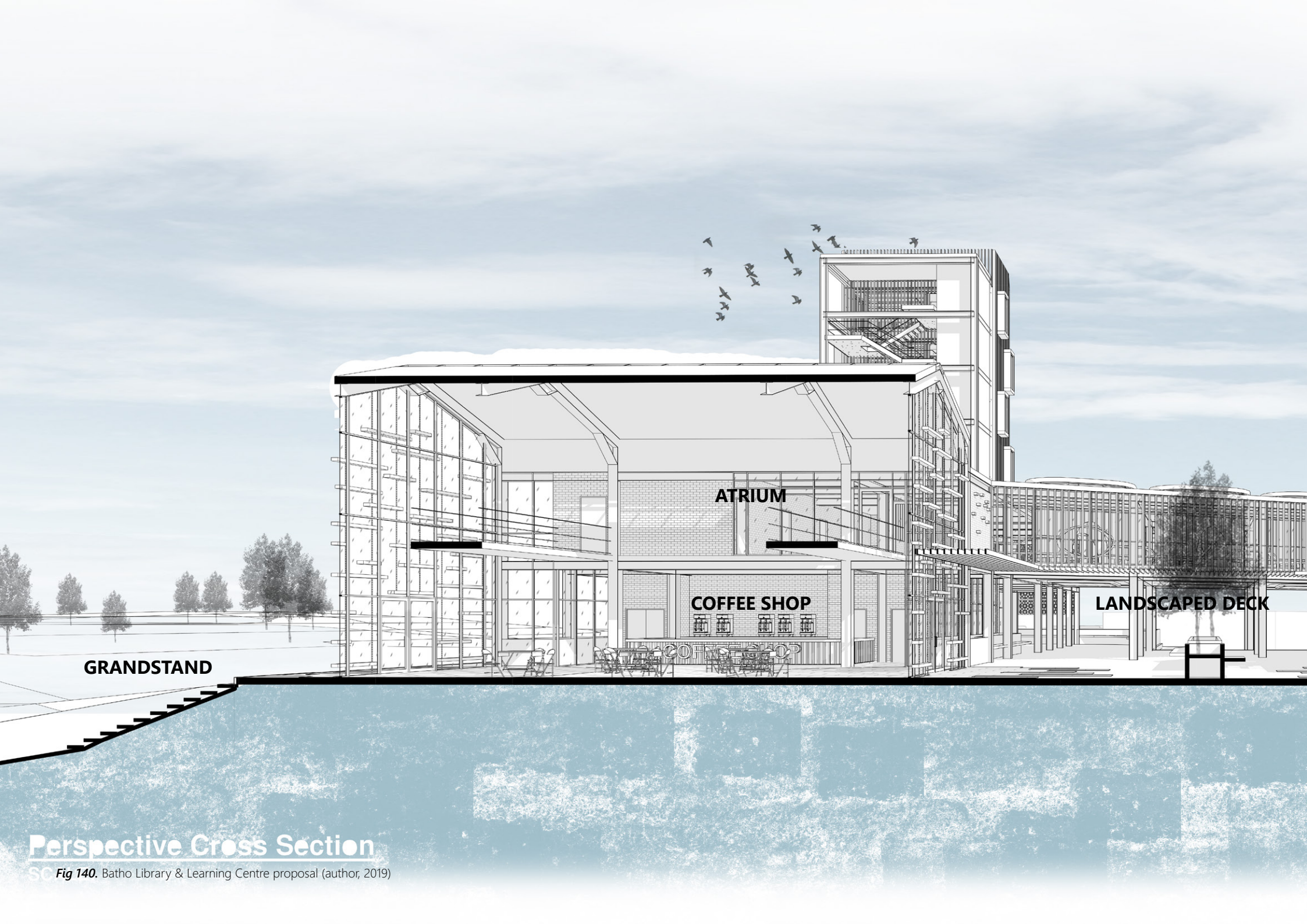


Fig 138. Batho Library & Learning Centre proposal (author, 2019)



SECTION PERSPECTIVE OF READING NODE

Fig 139. Batho Library & Learning Centre proposal (author, 2019)



**GRANDSTAND**

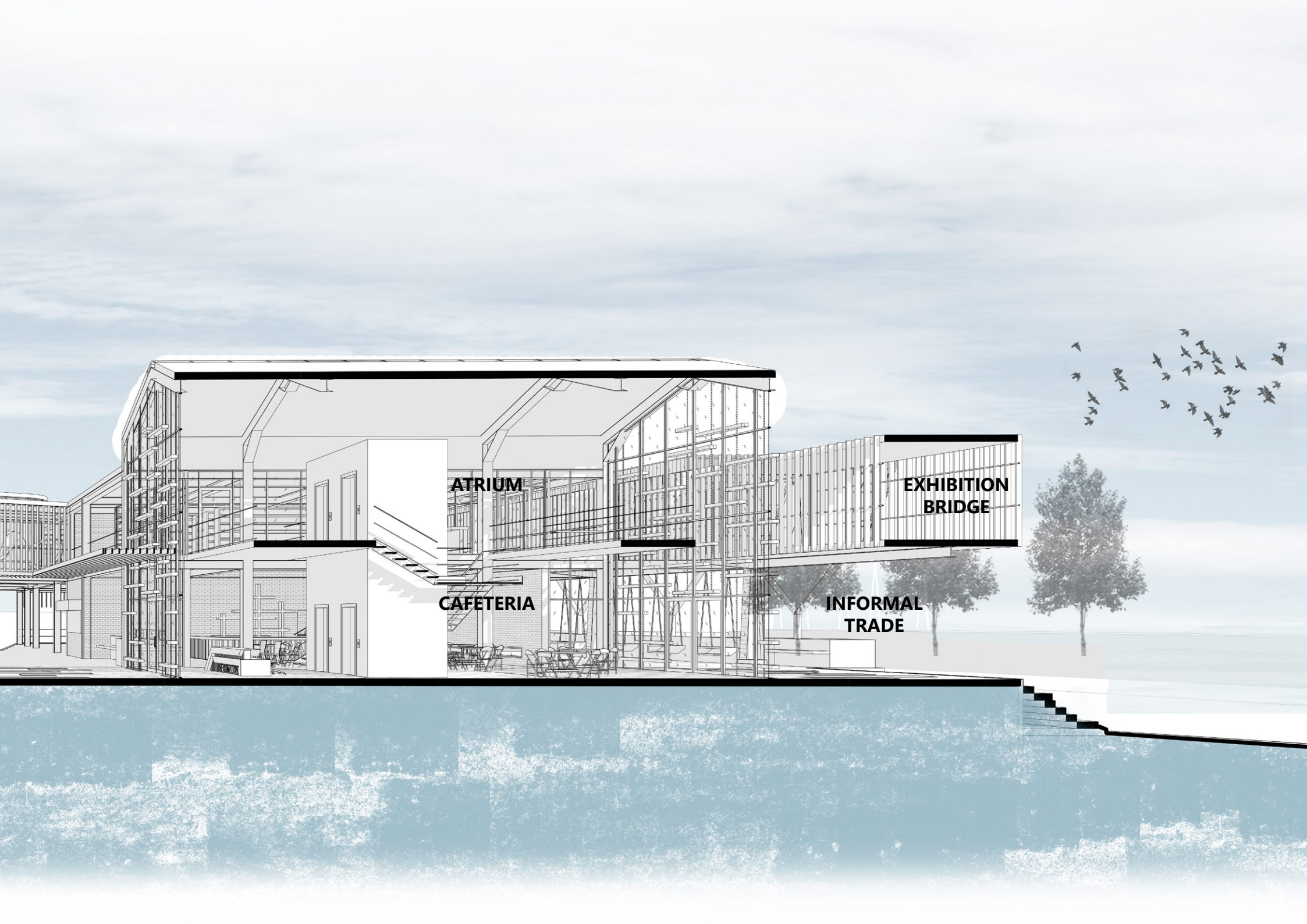
**ATRIUM**

**COFFEE SHOP**

**LANDSCAPED DECK**

## Perspective Cross Section

SC Fig 140. Batho Library & Learning Centre proposal (author, 2019)



**ATRIUM**

**EXHIBITION  
BRIDGE**

**CAFETERIA**

**INFORMAL  
TRADE**



**AUDITORIUM**

**TOILETS**

**STUDY AREA**

**AMPHITHEATER**

**TOILETS**

**GYM**

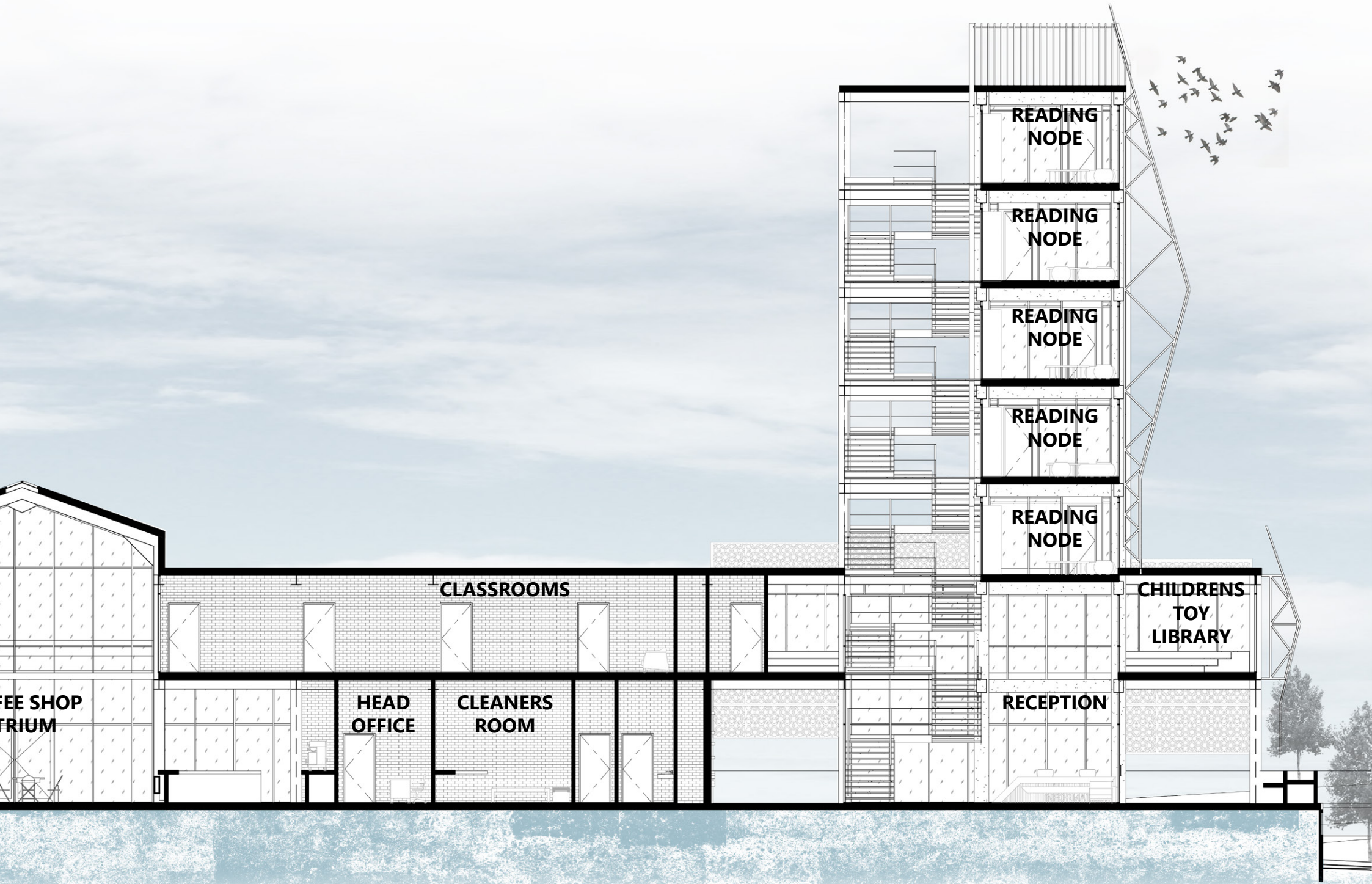
**COFFEE**

**AT**

*Fig 141.* Batho Library & Learning Centre proposal (author, 2019)

**Longitudinal Section**

SCALE: 1 : 100



FREE SHOP  
TRIUM

CLASSROOMS

HEAD  
OFFICE

CLEANERS  
ROOM

READING  
NODE

READING  
NODE

READING  
NODE

READING  
NODE

READING  
NODE

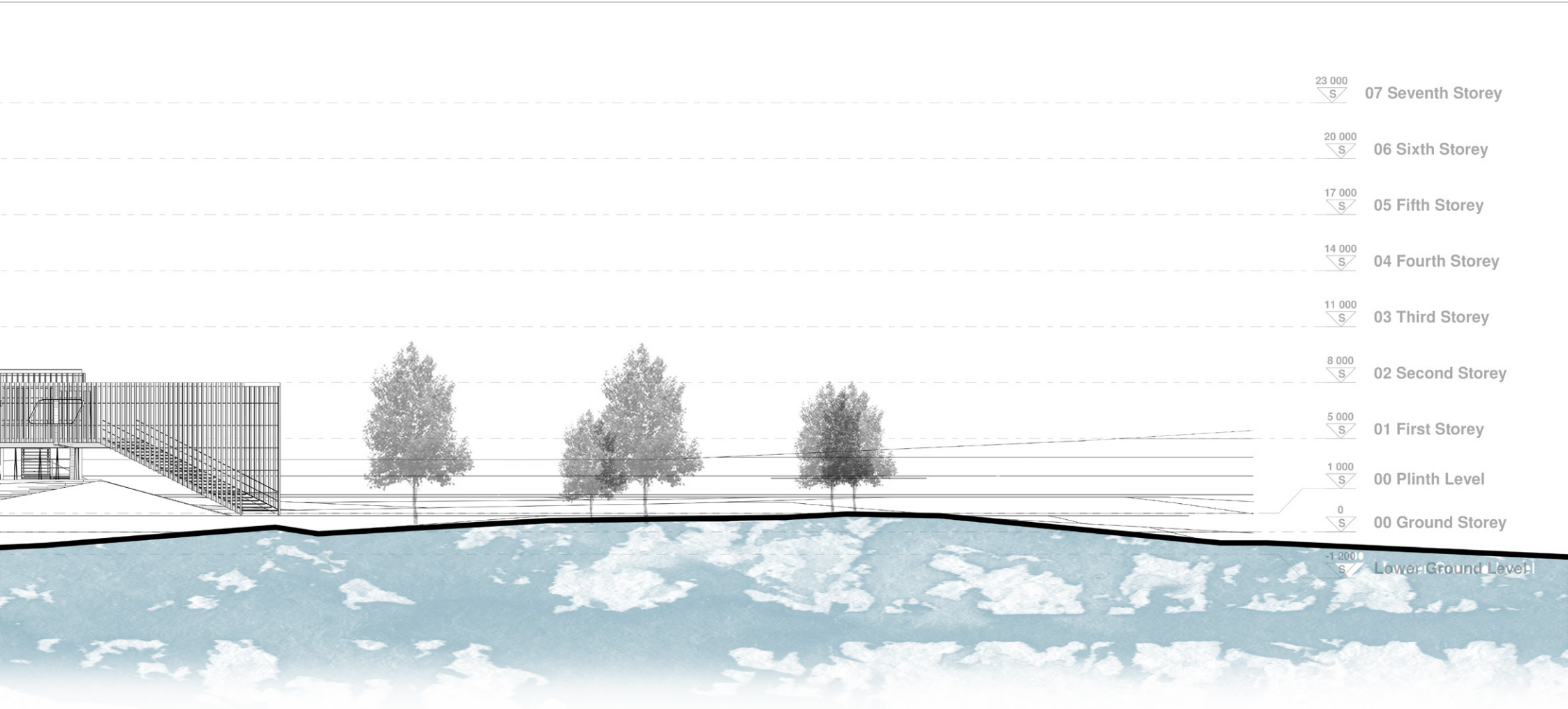
RECEPTION

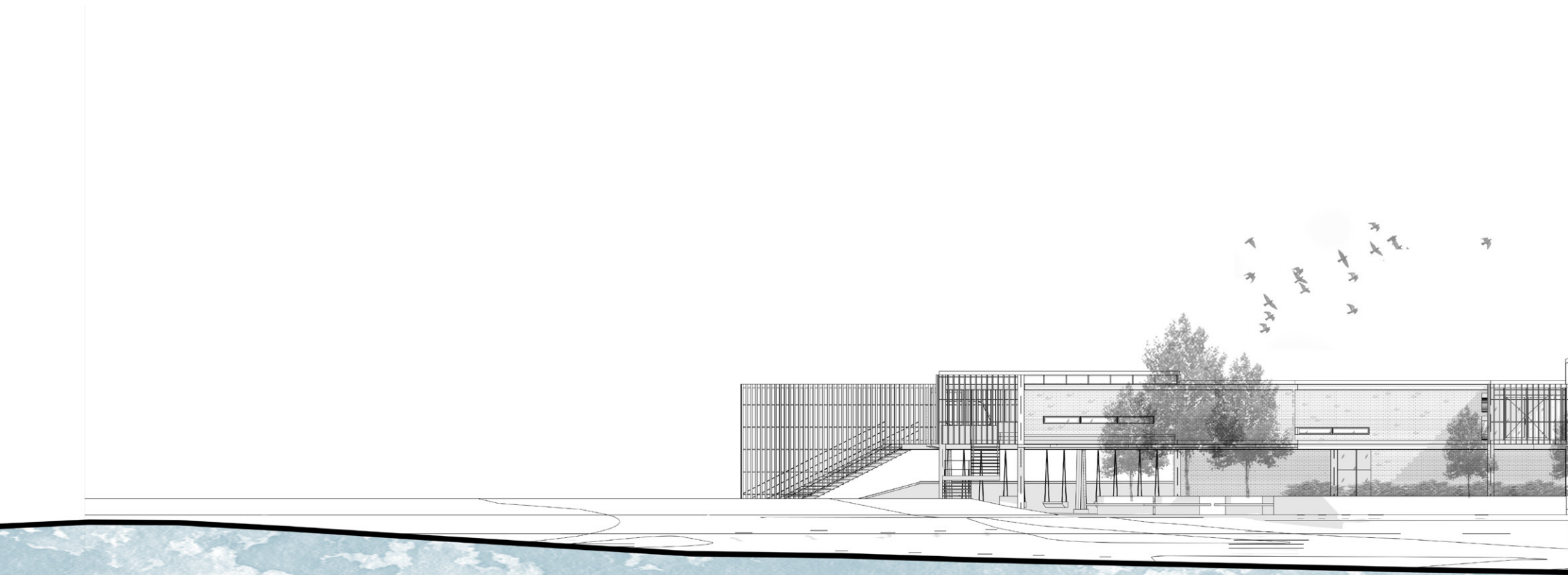
CHILDRENS  
TOY  
LIBRARY



North Elevation

**Fig 142.** Batho Library & Learning Centre proposal (author, 2019)





South Elev South Elevation

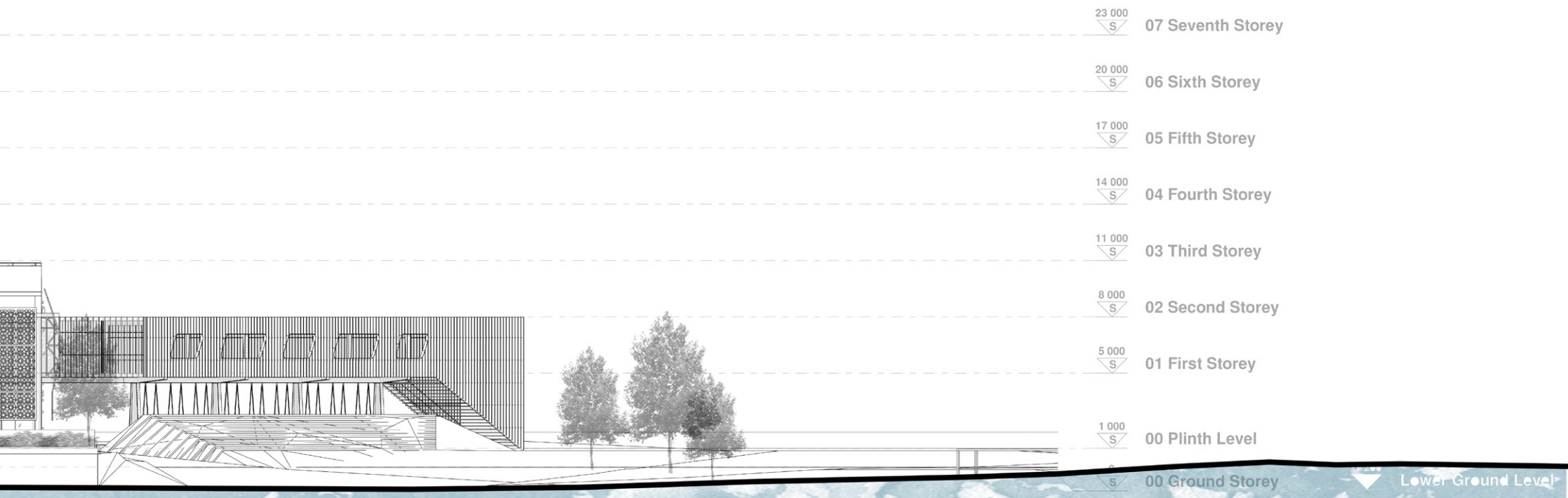
**Fig 143.** Batho Library & Learning Centre proposal (author, 2019)



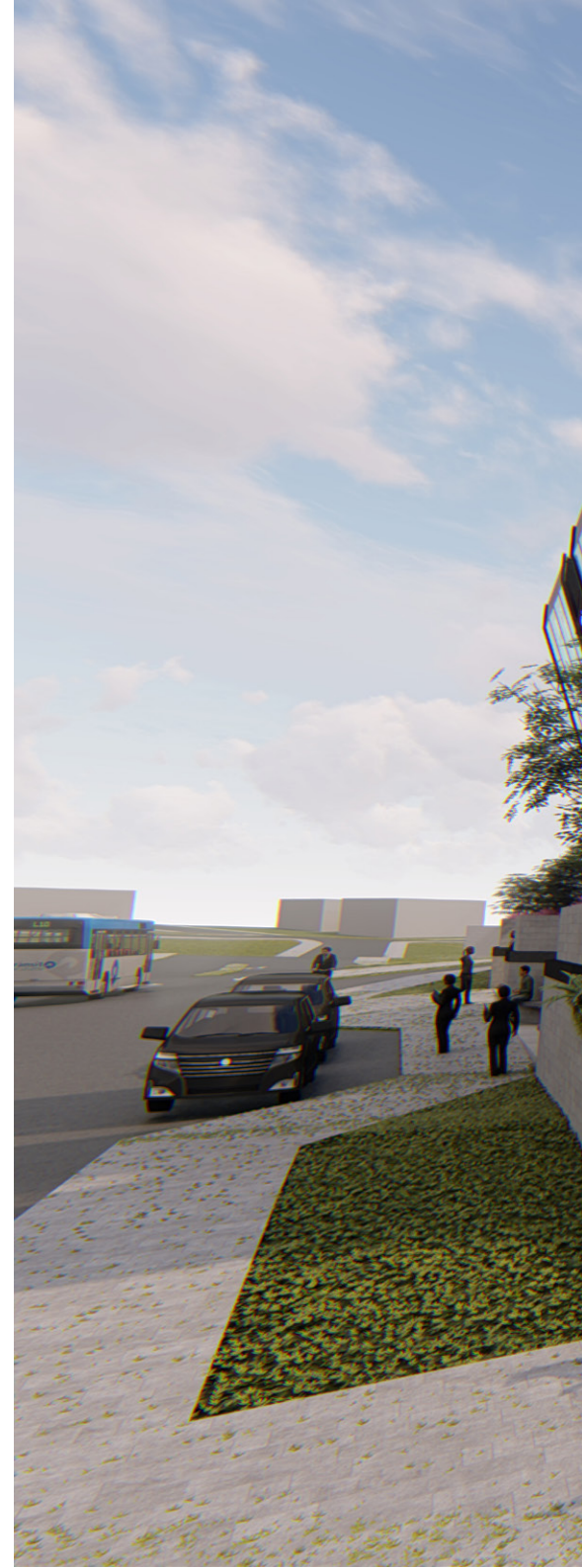


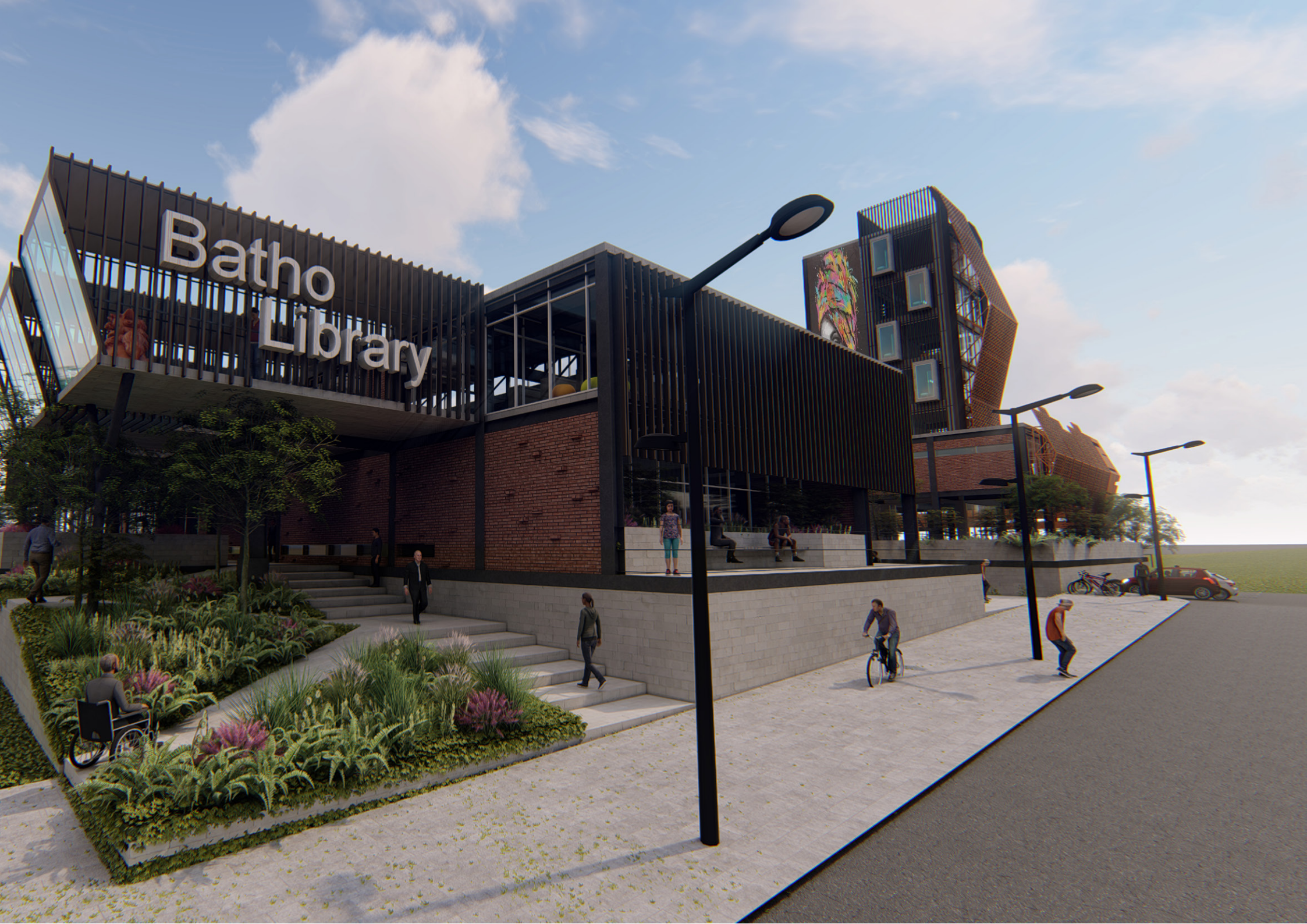
East Elevat **East Elevation**

**Fig 145.** Batho Library & Learning Centre proposal (author, 2019)



*Fig 146.* Batho Library & Learning Centre proposal (author, 2019)

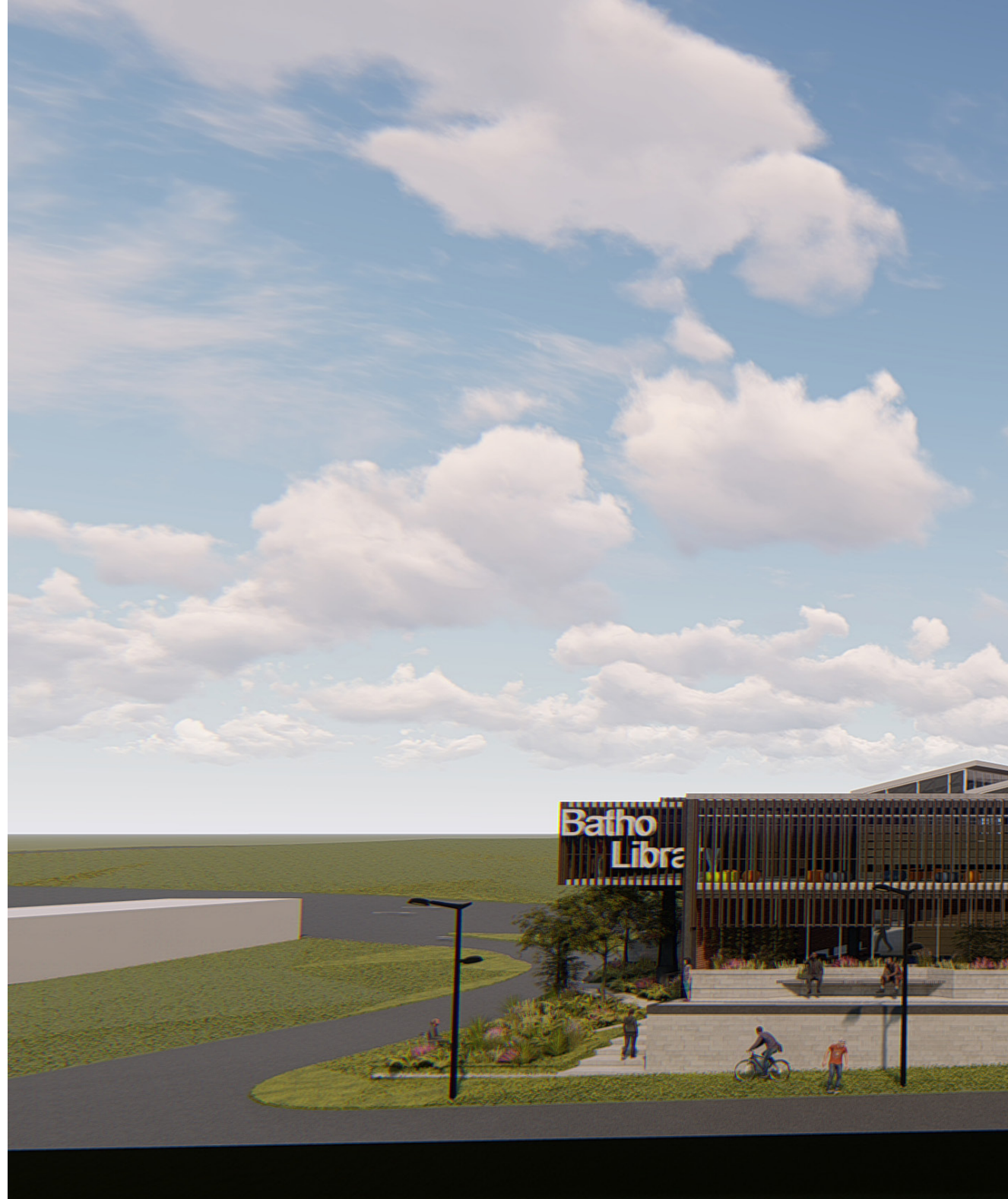




Batho  
Library

EAST ELEVATION PERSPECTIVE

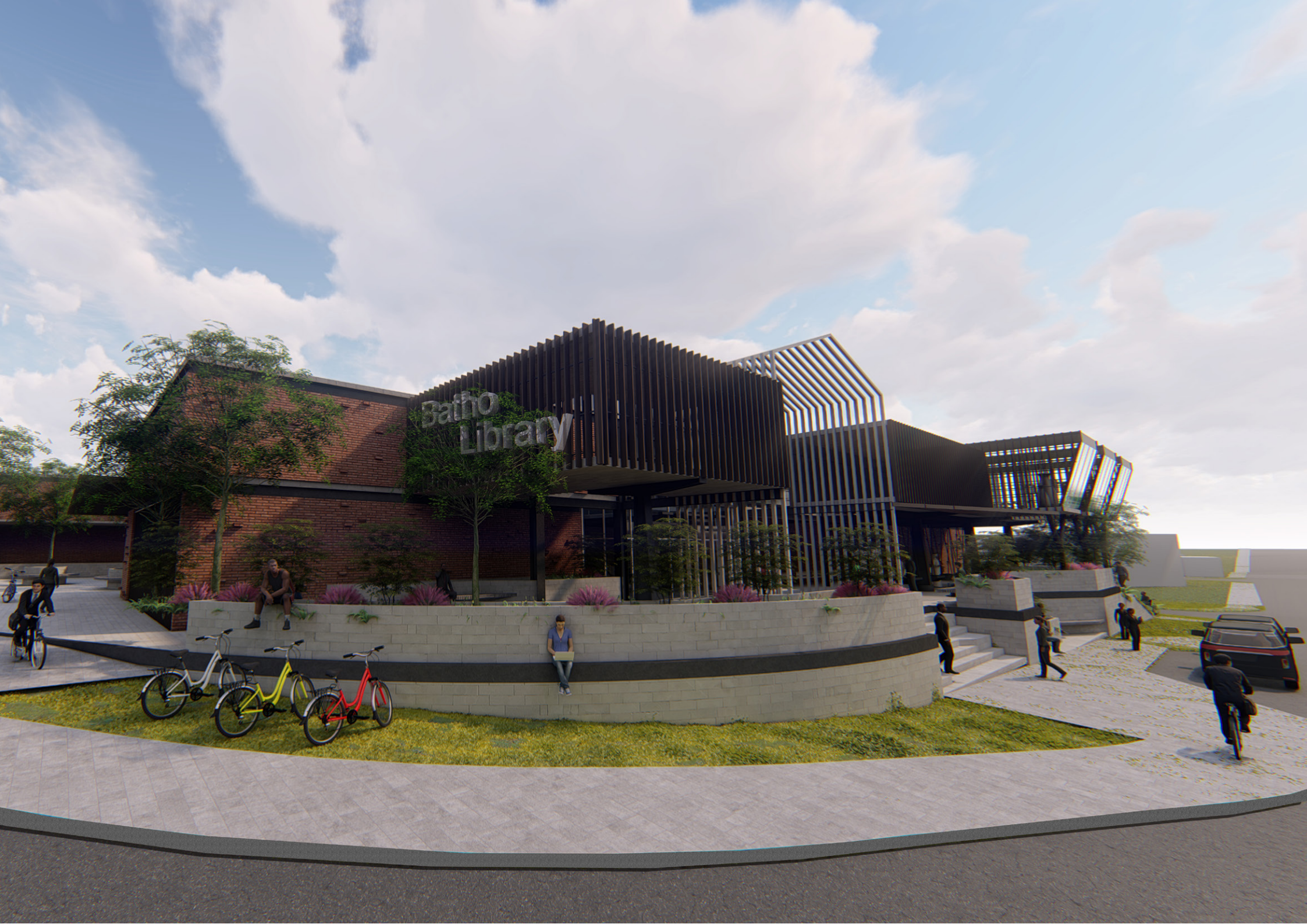
Fig 147. Batho Library & Learning Centre proposal (author, 2019)





*Fig 148.* Batho Library & Learning Centre proposal (author, 2019)

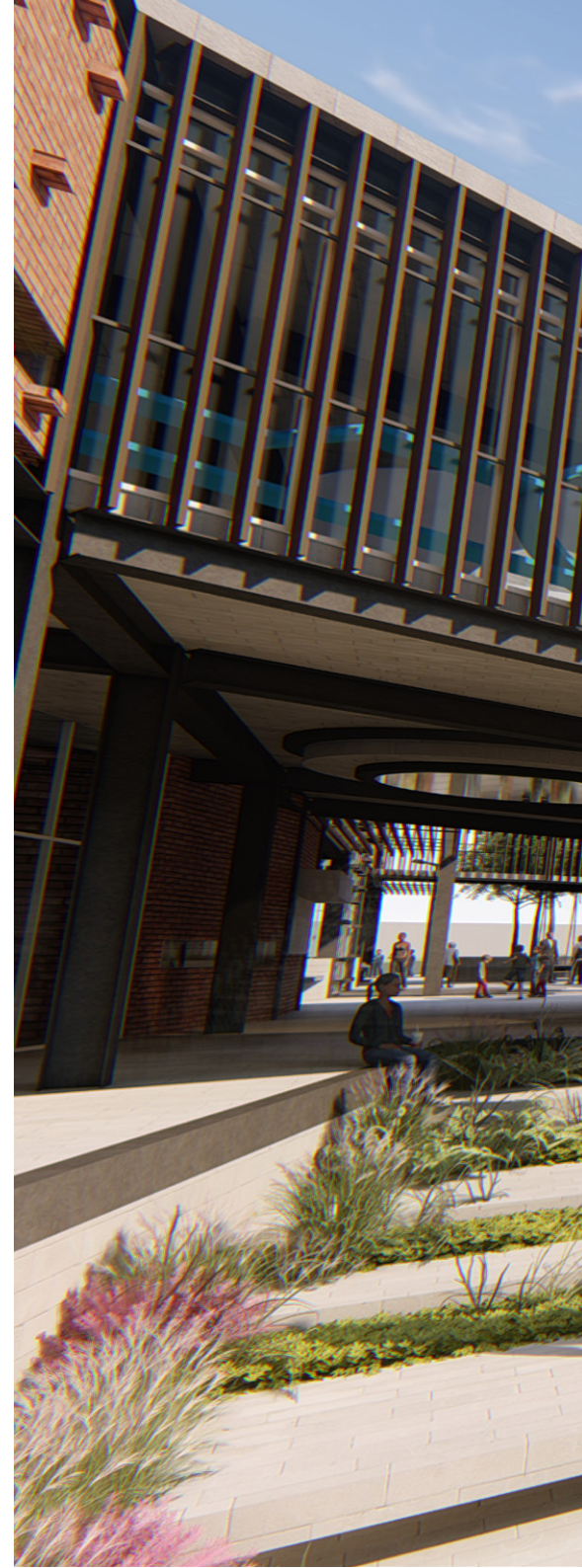




Batho  
Library

## EAST ENTRANCE PERSPECTIVE

*Fig 149.* Batho Library & Learning Centre proposal (author, 2019)





*Fig 150.* Batho Library & Learning Centre proposal (author, 2019)

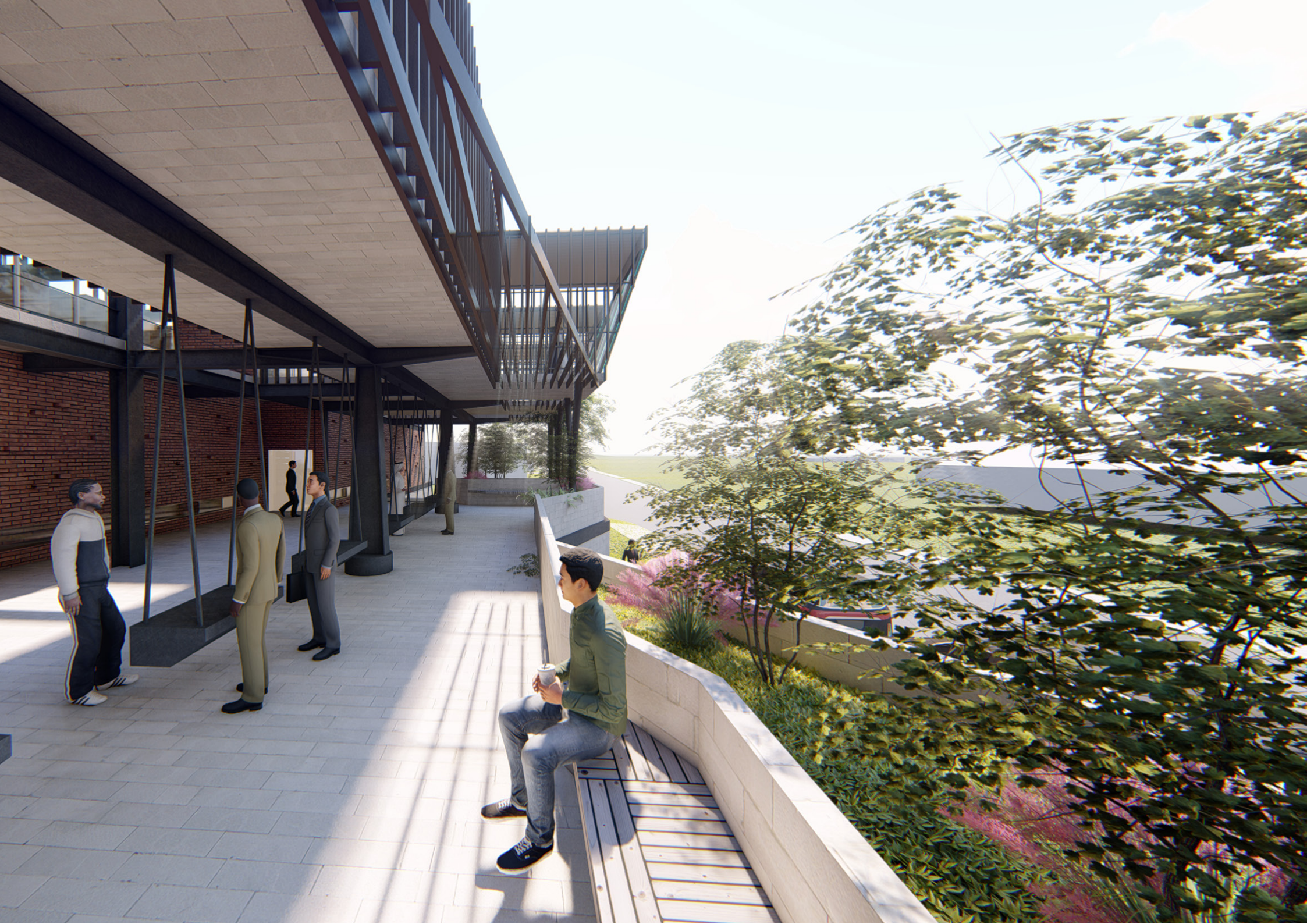




## SOUTH FACADE INFORMAL TRADE PERSPECTIVE

*Fig 151.* Batho Library & Learning Centre proposal (author, 2019)





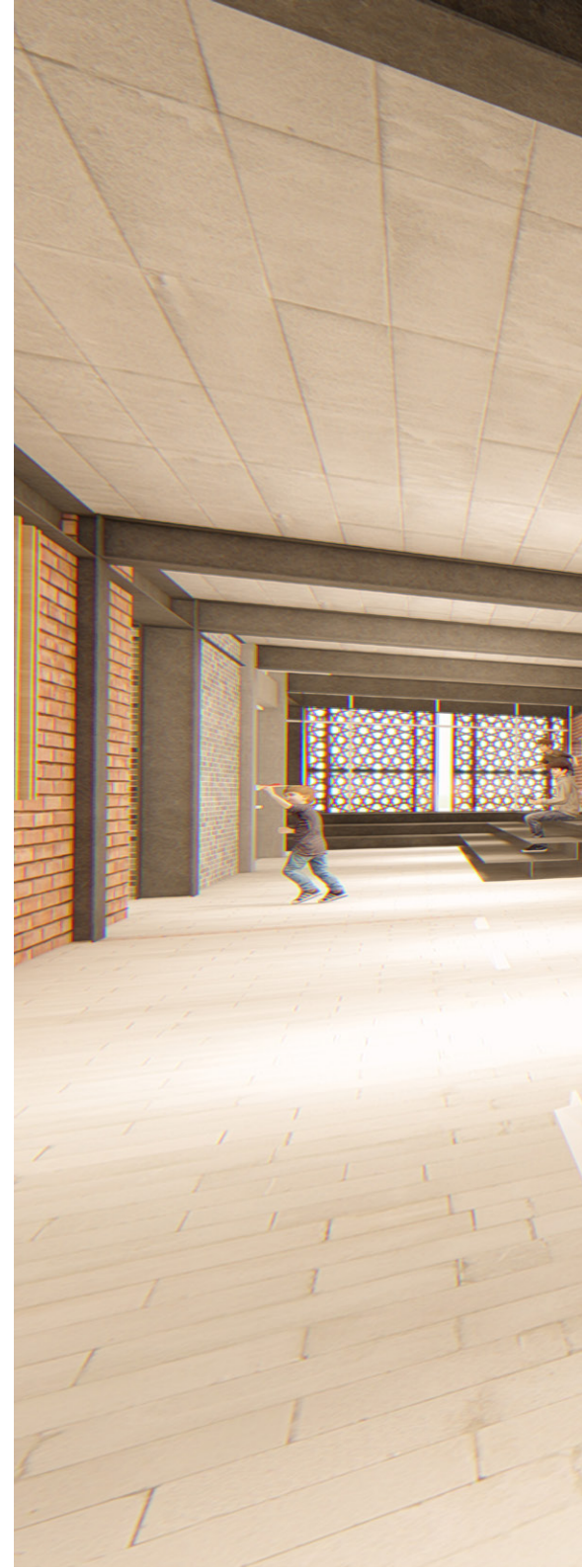
# NORTH ATRIUM PERSPECTIVE

*Fig 152.* Batho Library & Learning Centre proposal (author, 2019)



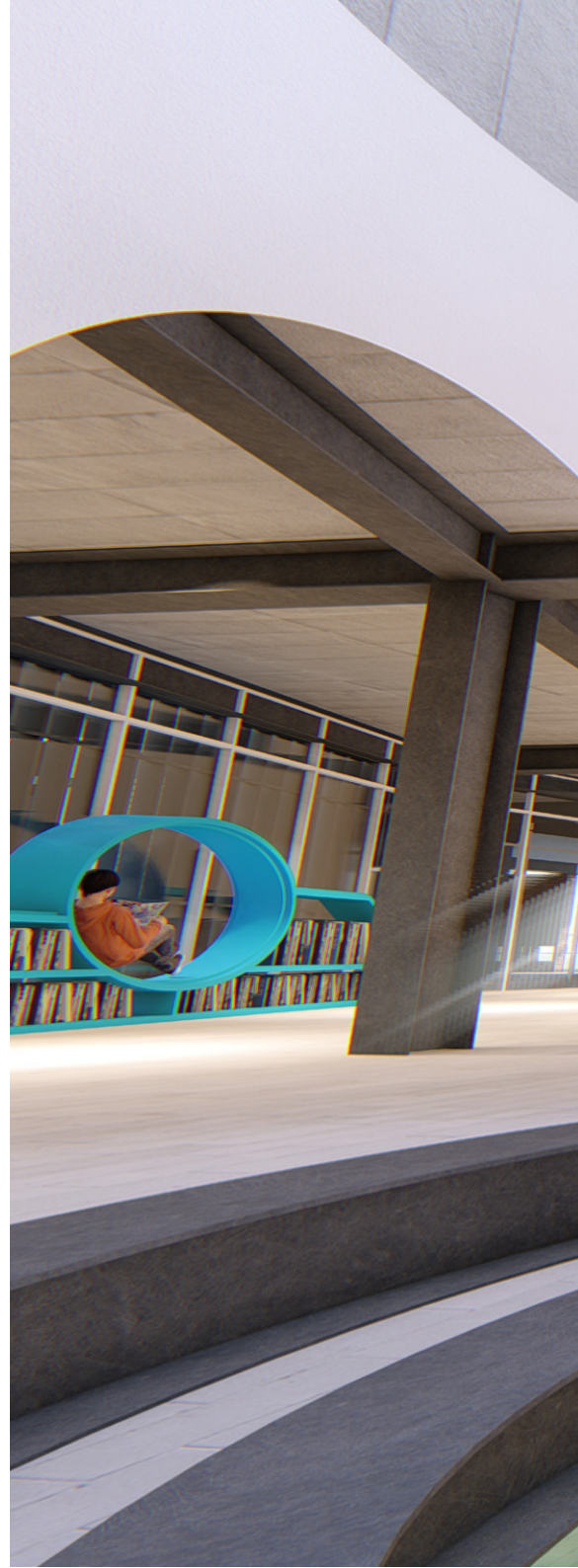


*Fig 152.* Batho Library & Learning Centre proposal (author, 2019)





*Fig 153.* Batho Library & Learning Centre proposal (author, 2019)





*Fig 154.* Batho Library & Learning Centre proposal (author, 2019)





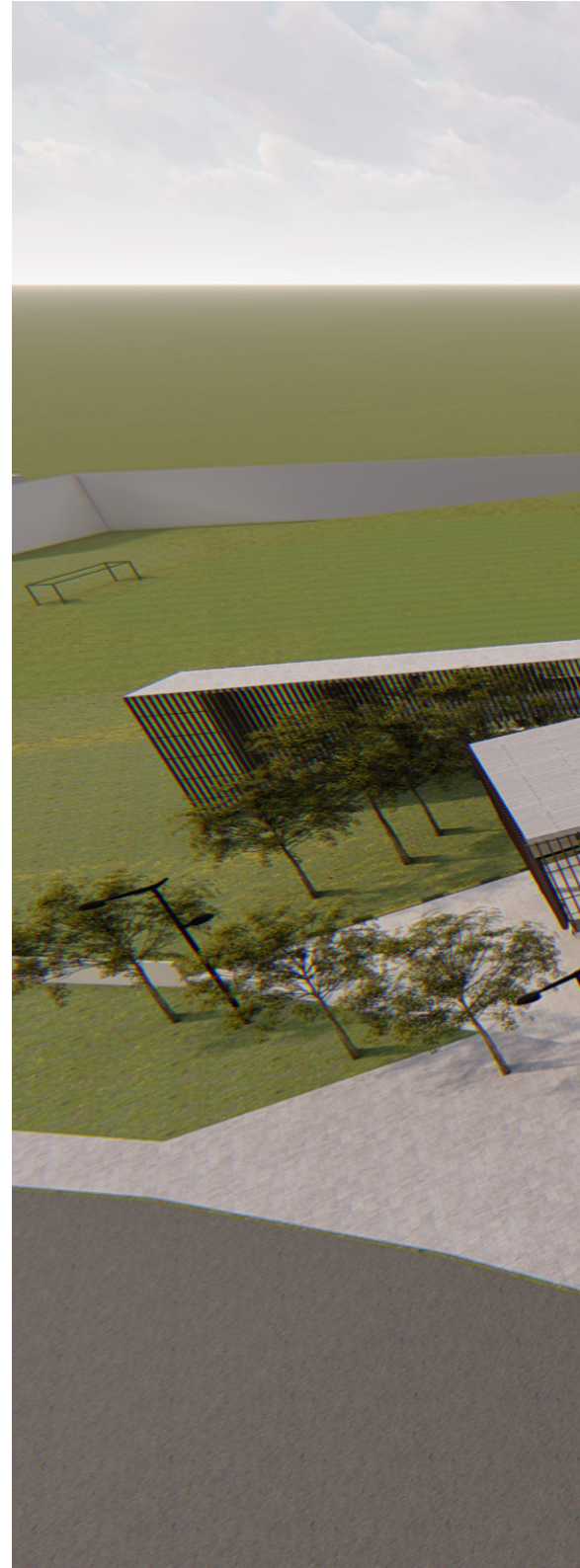
BATHO LIBRARY

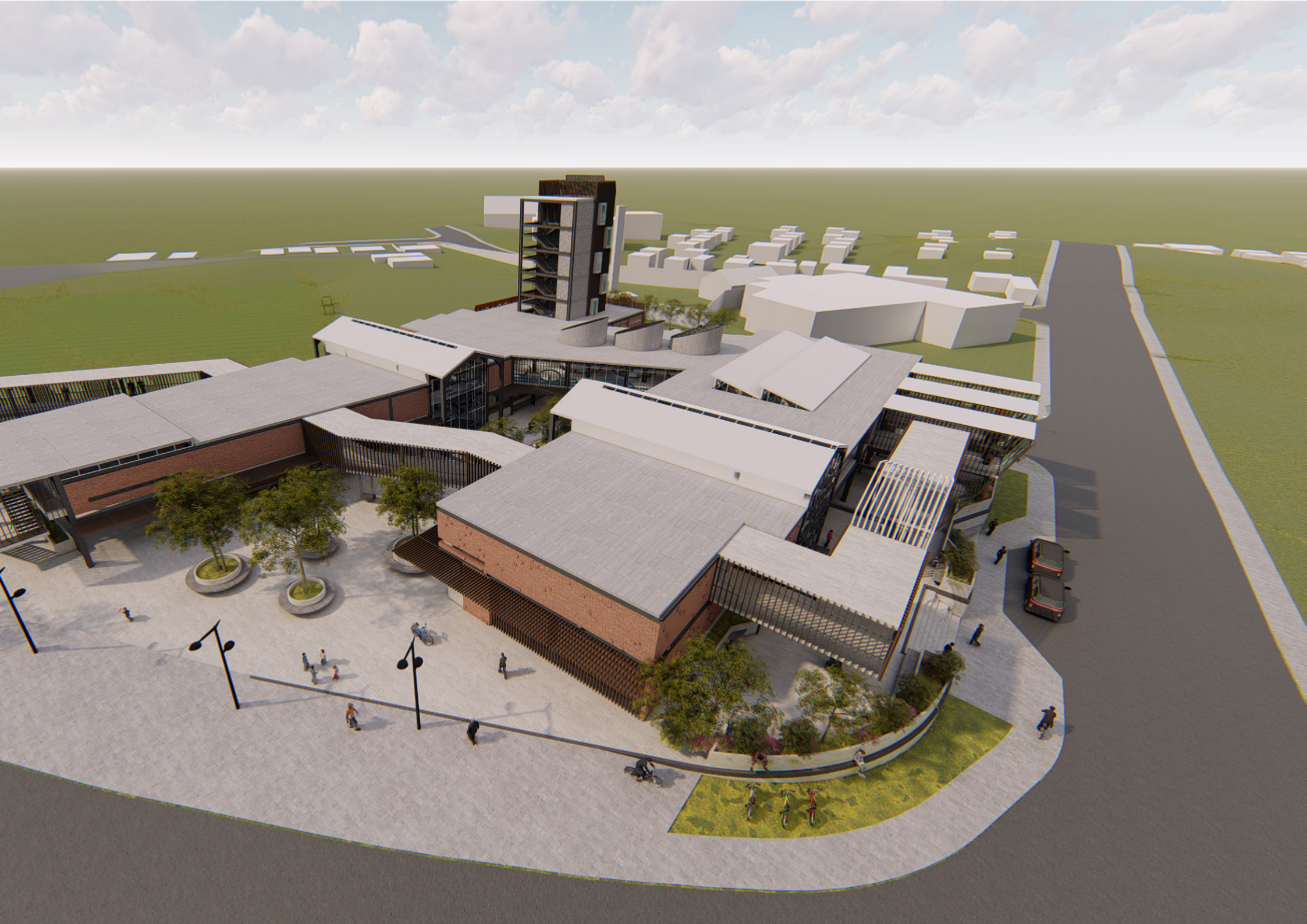
*Fig 155.* Batho Library & Learning Centre proposal (author, 2019)

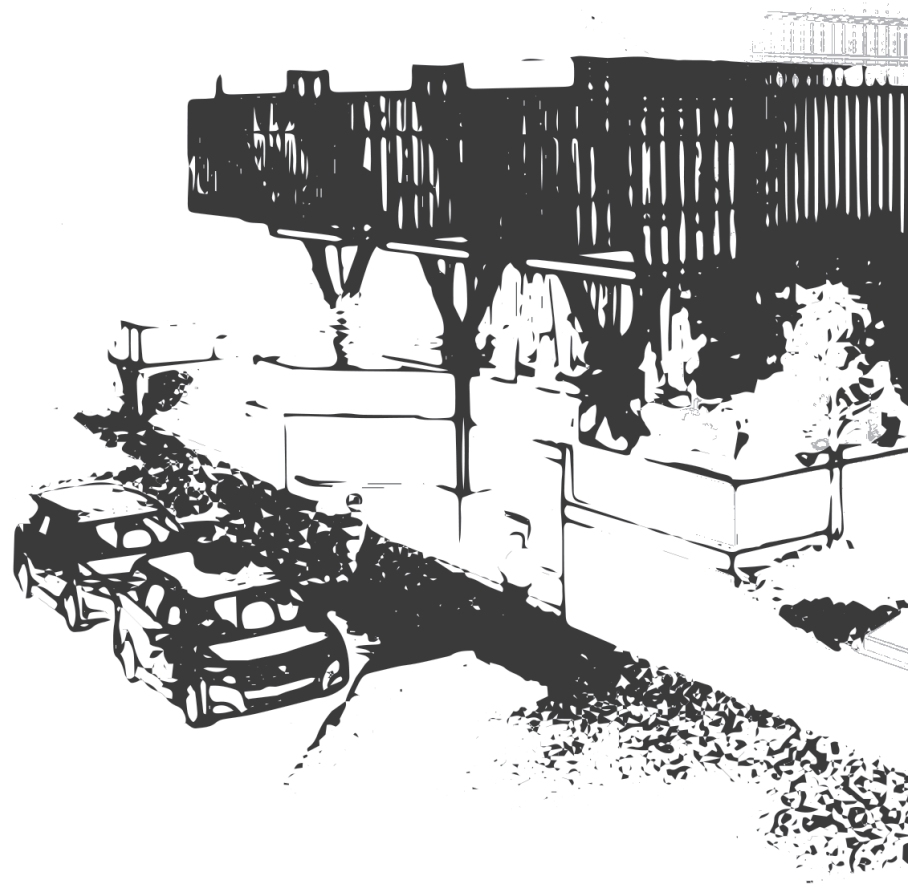




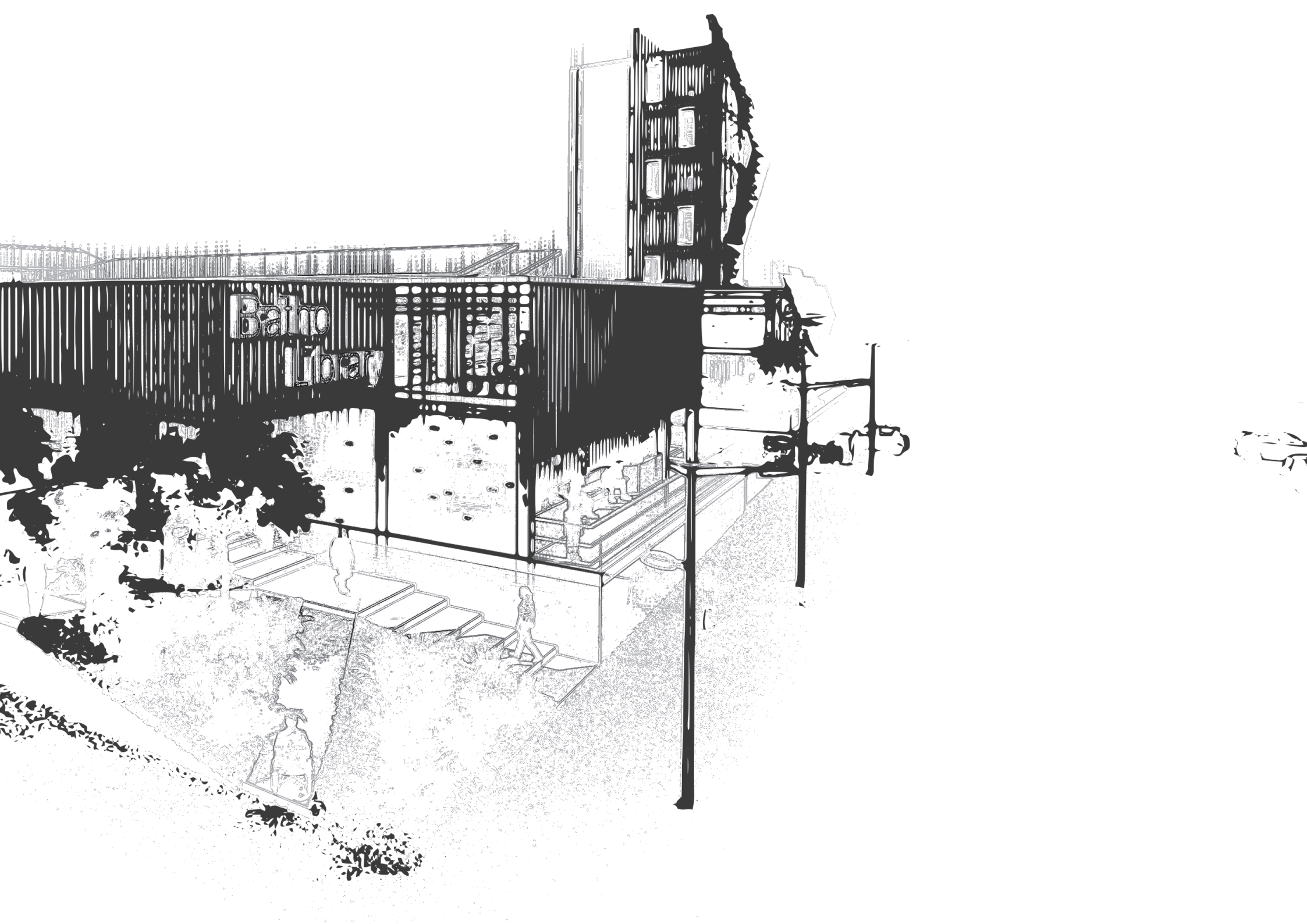
*Fig 156.* Batho Library & Learning Centre proposal (author, 2019)





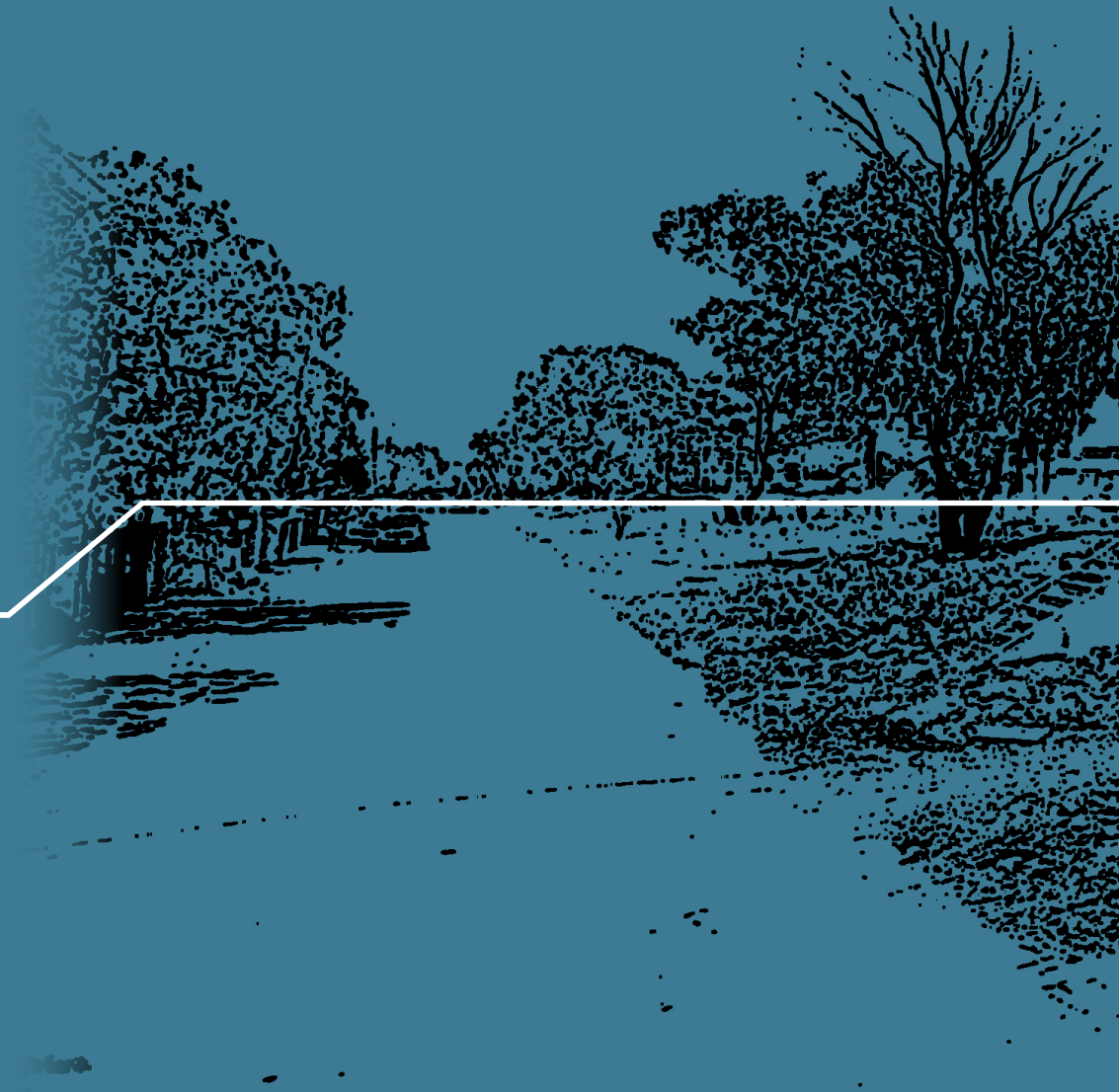


*Fig 157.* Batho Library & Learning Centre proposal (author, 2019)



# TECHNICAL EXPLORATION

*Fig 158.* Batho sketch (author, 2019)





## CHAPTER

# 7

### AIM OF THE CHAPTER

This chapter proposes the exploration of the thesis through its technical components and construction exploration.

The technical report unpacks important elements that help the design process become a realization and eventually a building.

The site specifics, structure, materiality, service co-ordination, and sustainability aspects of any project help contribute to effective architecture.

# TECHNICAL REPORT

Introduction - Tectonics

Site Information and geology | Topographic Analysis

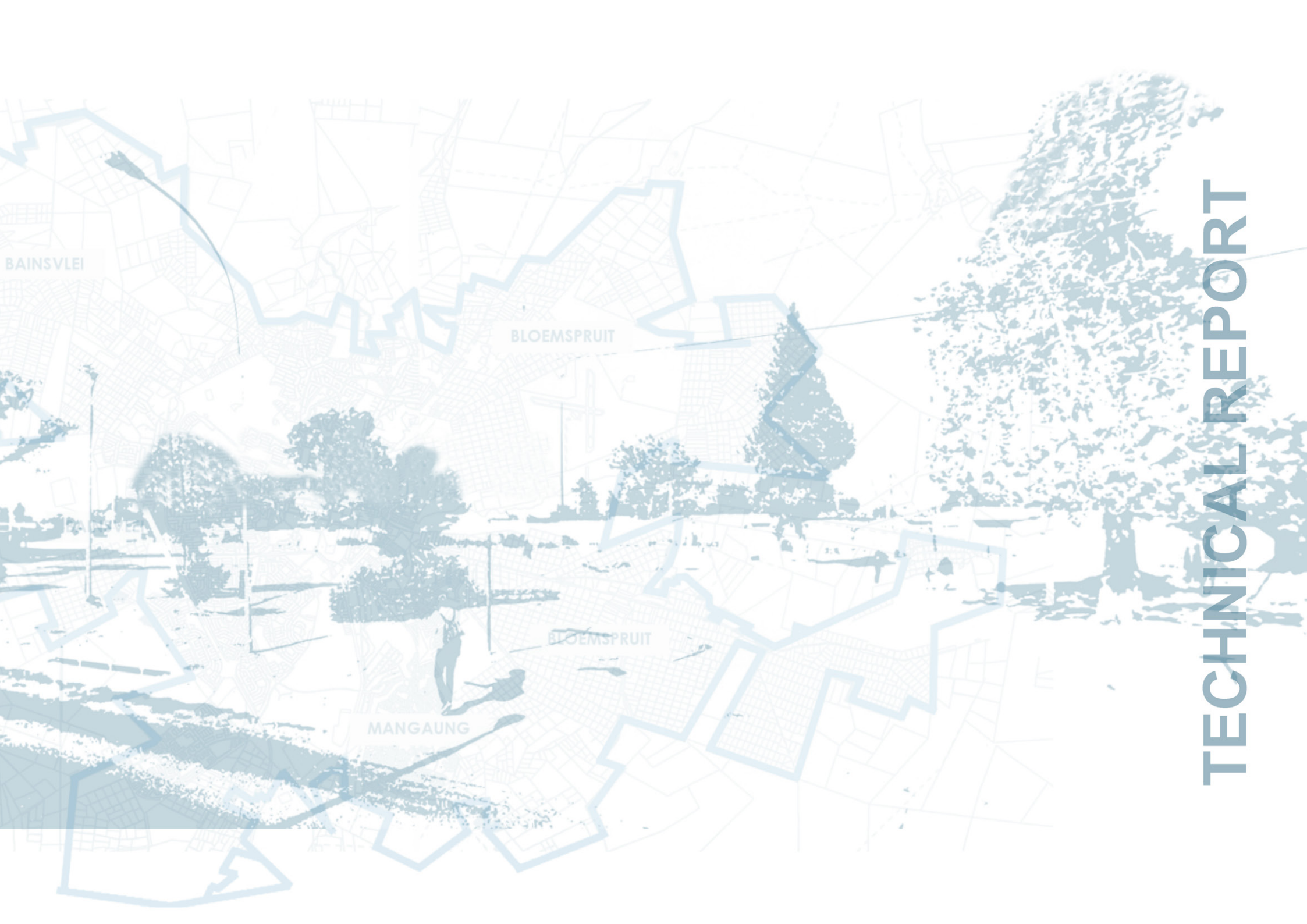
Sustainability aims and theory

Investigation into Structures and Materiality

Compliance with Health & Safety Requirements

## 7.1





# TECHNICAL REPORT

# INTRODUCTION - TECTONICS

Tectonics refer to the design methodological approach to structure. It is the 'art of construction'. It focuses on the physical detailing of the conceptual approach within the design.

An investigation of a technical design of building methods and materials for the proposed intervention. It plays an important role since it expresses the conceptual underpinning upon which the project is based. These terms are critically investigated to generate a proposed structural answer to the proposed design.

## The Technical Report

The technical report aims to briefly explain the basic structural system and its components used within the proposed design. The report will be divided into sections explaining the different aspects contributing to the structural systems used within the building.

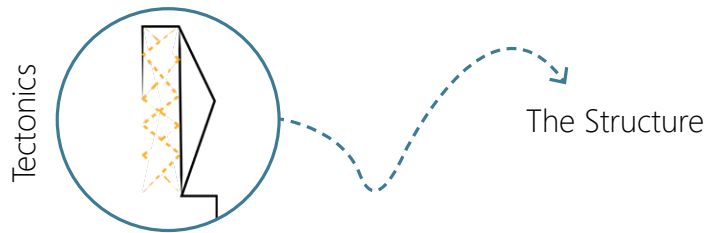
The report examines the site and how to approach the appropriate structural adaptation of the design's intentions.

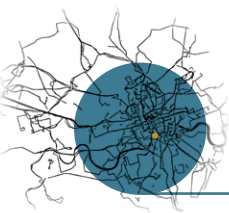
# PROJECT SUMMARY

WHERE [SITE] : Cnr. of Fort Hare Rd and Hamilton Rd ; Batho ; Bloemfontein

WHAT [PROPOSAL] : Batho Library & Learning Centre

WHO [CLIENT] : + N.Y.D.A - National Youth Development Agency  
+ National Museum Bloemfontein





# Locality

## Cadastral Information

The Proposed Site Location for the thesis is located at:

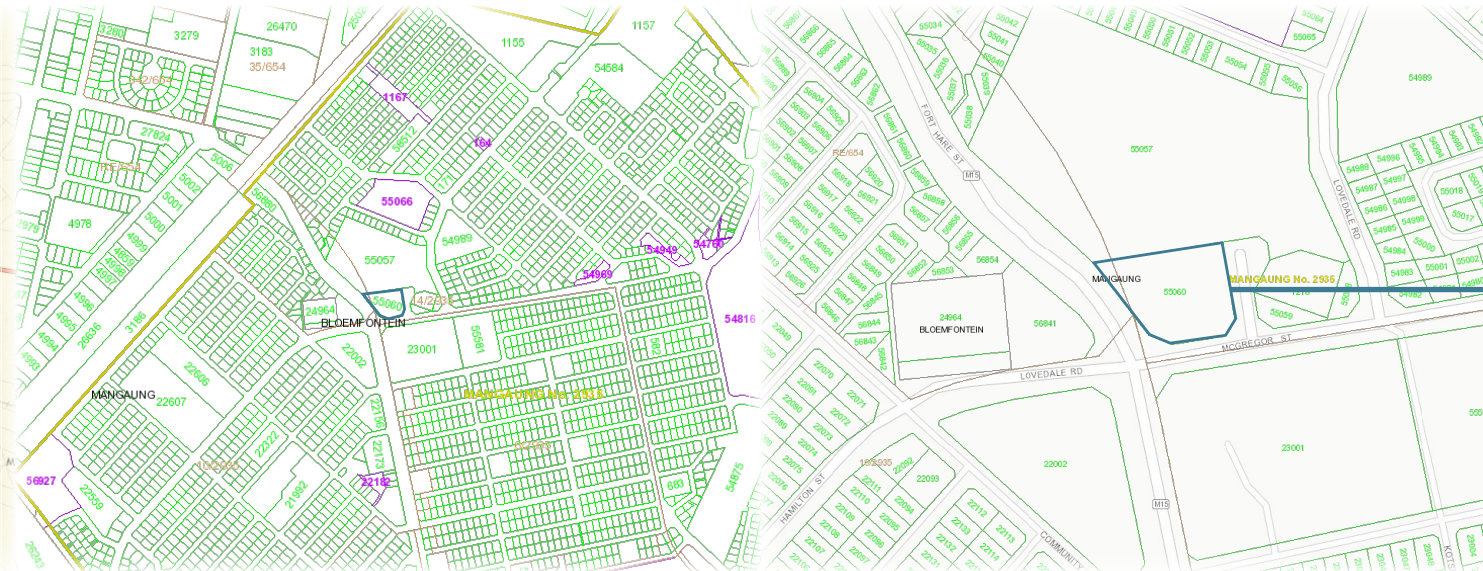
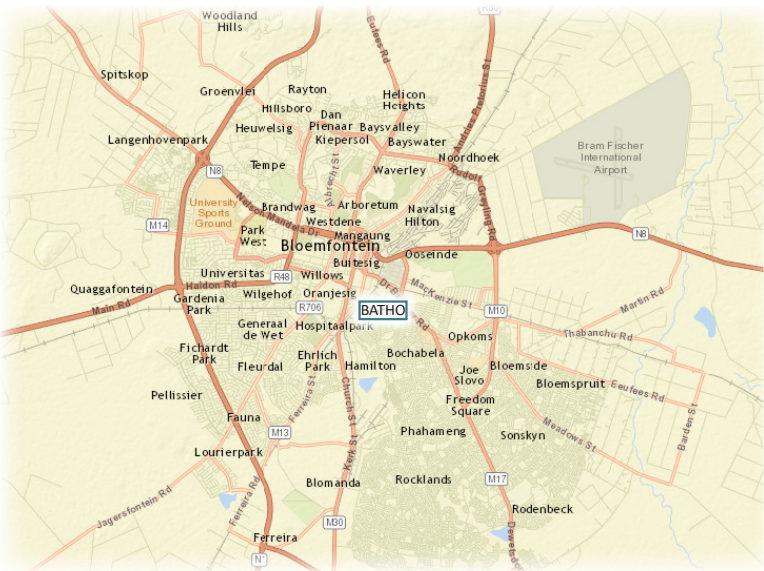
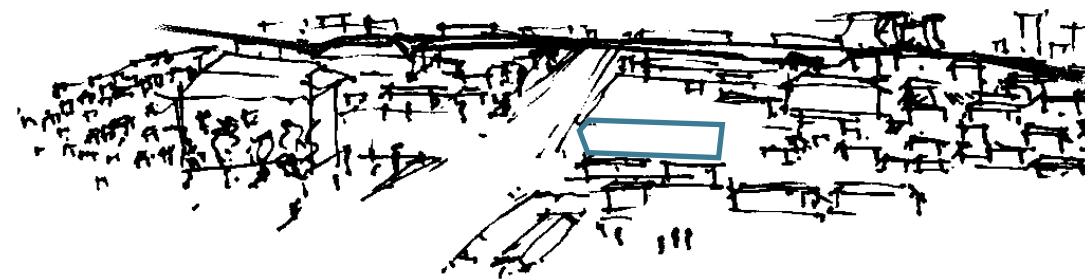
South Africa ; Bloemfontein ; Batho [Mangaung] ; Corner of Fort Hare Rd and McGregor St

Erf 55060 - Batho, Mangaung

### PLEASE SEE ATTACHED ANNEXURE A + B (SG DIAGRAMS OF PROPOSED SITE)

The Site is situated on a prominent corner on one of Batho's main roads into the township from the main Bloemfontein CBD.

As Batho is 80% Residential, one can see the need for a civic building to help uplift the community through education. Thus, a Library & Learning Centre would greatly benefit the people of Batho, whilst becoming an educational node on the prominent corner site.



## Site Location

The Proposed Site Location nestled in a busy and cultural batho allows for dominance of the street edge. Since the proposed Library & Learning Centre will be a day-visitor based centre, the position of the site should readily have access to private and public modes of transport. This is achieved by placing the community based facility in close proximity to the main artery road into Batho (Fort Hare Rd). As a result, the chosen site overflows with daily activities as it forms part of a very important pedestrian route. It is located in a busy and often vibrant section of Batho where traders sell a variety of goods along the street edge. All these contributing factors allow for the site to become a place for the people, by the people.



# Site Information and geology | Topographic Analysis

Zoning

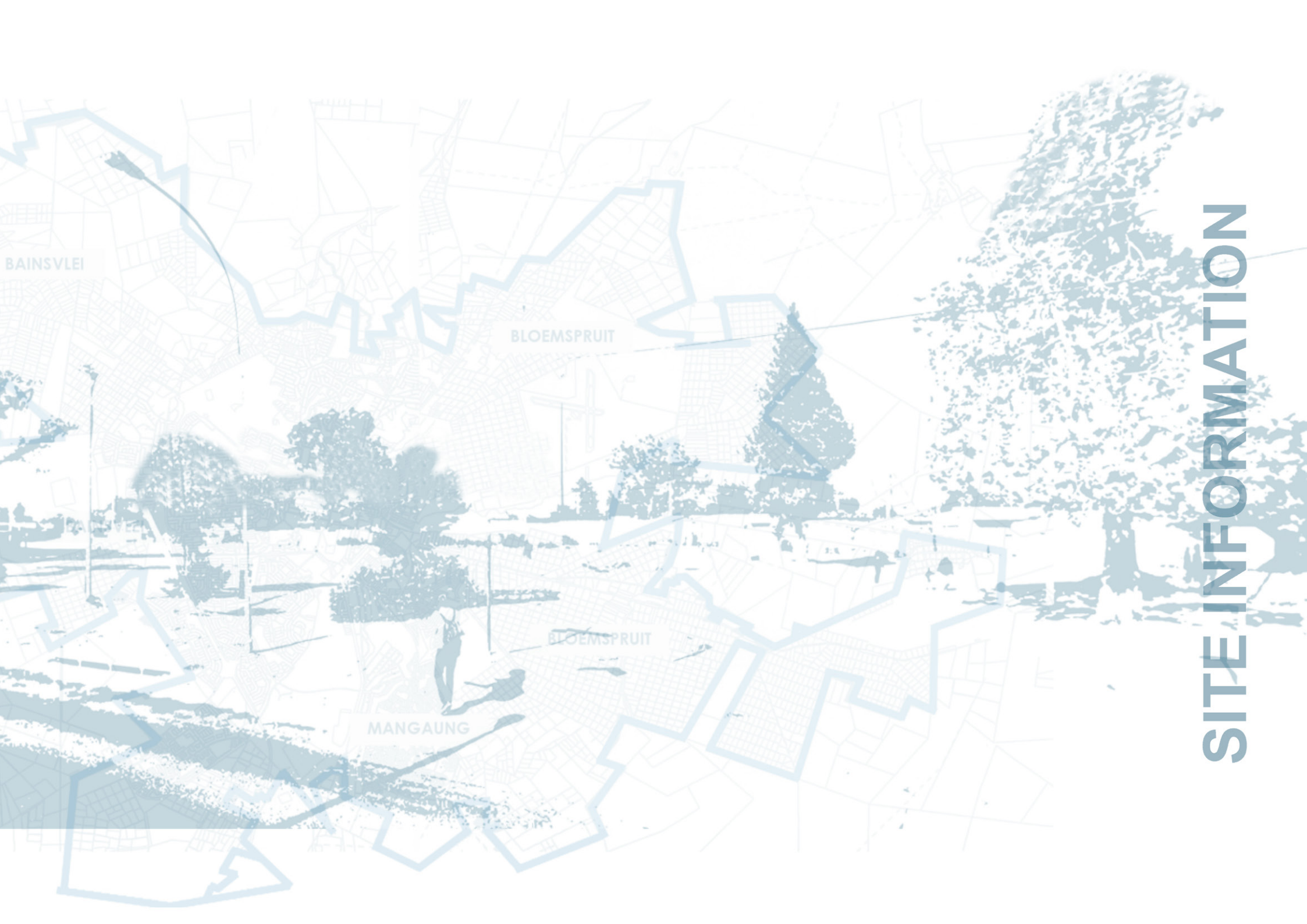
Climate

Existing Topography

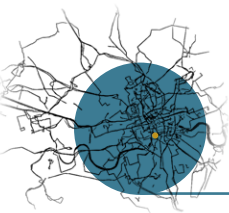
Man-made Topography

Site Geology





# SITE INFORMATION



# Zoning

The proposed site is zoned by the Mangaung Metropolitan Municipality as an Urban Renewal Zone, which permits the development of a Library & Learning Centre which could become a catalyst for further urban renewal. - Annexure C

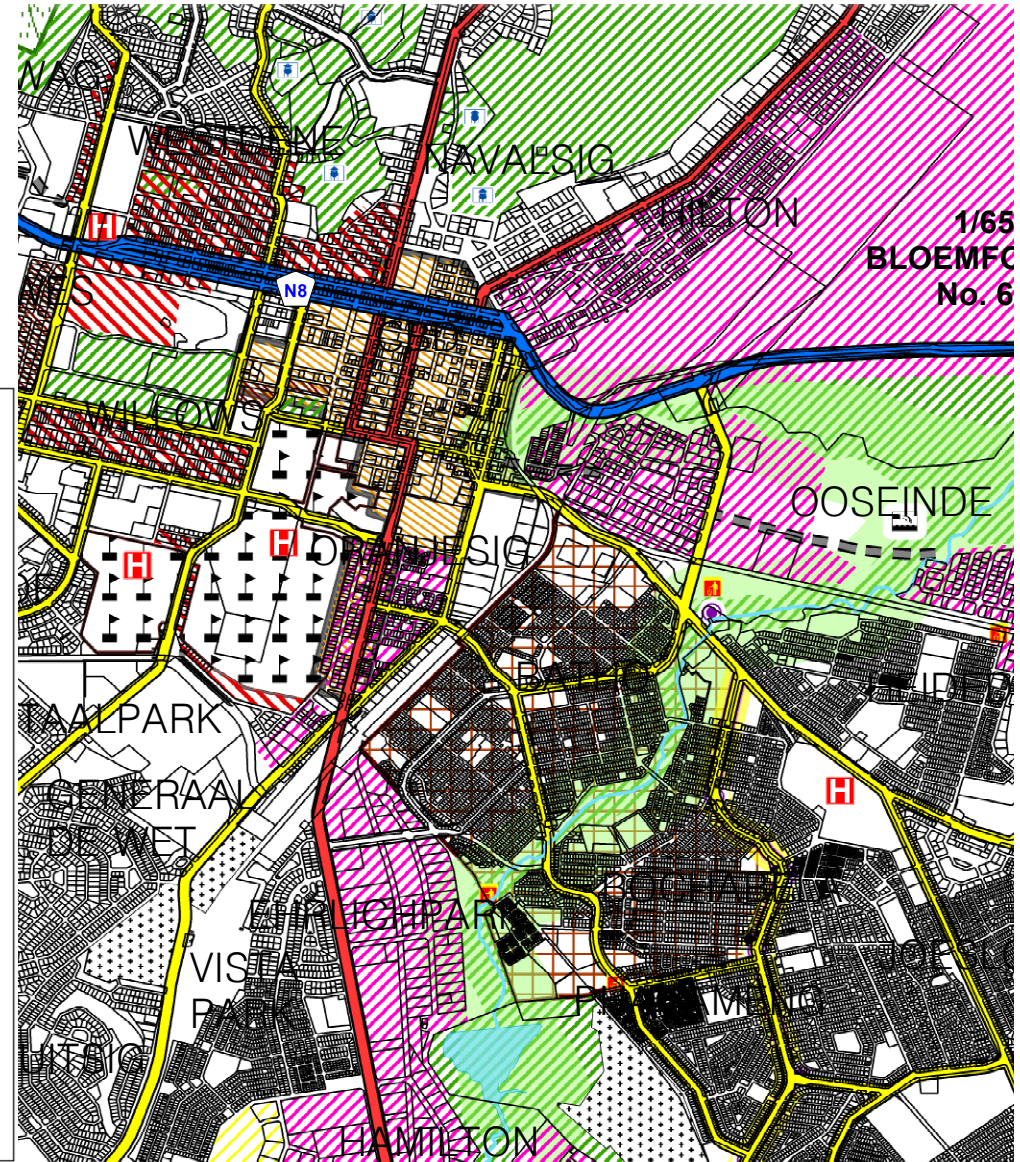
## Schedule of Rights

The Schedule of Rights will comply with the requirements of the Town Planning scheme and the classification of C2 (Museum - Occupancy comprising a museum, art gallery or library). - Annexure D

Please find developed Schedule of Rights on Drawing sheet 100\_01 - Site Plan (see example below of blank schedule)

SCHEDULE OF RIGHTS		
<b>PROPERTY</b>		
Erf / Township:	<b>Erf</b> <b>Township</b>	
Site	<b>Site Area (Ha)</b> (Site Area)	
Title Deed	<b>Title Deed</b>	
<b>ZONING</b>		
Town Planning Amendment	<b>Town Planning Scheme Amendment Scheme No.</b>	
Use Zone	<b>Zoning Type</b>	
Annexure	<b>Annexure No.</b>	
<b>DEVELOPMENT CONTROL</b>		
<b>Permissible</b>	<b>Control</b>	<b>Actual</b>
Height Restriction	Height of Covera	Actual Height
50% = 10000	Floor Area	50%= 10000m1
0.00	Floor	Actual FAR
0000m1	Density (Dwellins per No Of Dwelling Units Building	Actual Floor Area
<b>Permissible Density</b>		<b>Actual Density</b>
<b>No. of Dwelling Units-Permissible</b>		<b>No. of Dwelling Units-Actual</b>
Building Line 1		- Building Line Actual 2
Building Line 2		- Building Line Actual 3
Building Line 3		- Building Line Actual 4
Building Line 4		
<b>PARKI</b>		
Total Parking Bays	<b>ReqBays</b> parking	
Total Parking Bays	<b>ProvParking</b> parking	
Surplus / Deficit No of	<b>DeltaP</b> parking	<b>SURPLUS DEFICIT</b>
The information provided above is hereby certified to be		
NAME		SIGNATURE
DATE		NAME

LEGEND	
	MMM Boundary
	All Cadastral Data
	MMM Rivers_5000_Non_Boundary
	MMM Dams
	Urban_jctgs_2016
	Hospitals
	Airfields
	Airport
	Water Reservoirs
	Sewer Works
	Recycling Collection Point
	Rumetras
	National Roads
	Regional Roads
	MMM Main Roads
	Rural Roads
	Orlamps
	Future_roads_2016
	Future Rail
	MMM Feeder Roads
	MMM NB Development
	Development Corridor
	Patra Safety Area
	EFN_noise_contours_2011
	cemeteries_2016
	mixed_use_without_industry_2016
	mixed_use_with_industry_2016
	future_residential_2016
	Green Buffers
	Moss_2016
	Diverse Development
	Nature Reserves
	Urban Renewal
	Tourism Nodes
	Institutional_2016
	Defence Force
	agricultural_nodes_2016
	Tempo Safety Zone
	Activity Strip
	Intensive Agriculture
	Urban Development Zone
	Pen-Urban Areas



# Climate

## Climate Profile - Bloemfontein Climate Analysis

Situated near the semi-arid region of the Karoo and at the southern edge of the Highveld grasslands, Bloemfontein experiences a predominant semi-arid climate, with hot dry summer days frequently interrupted by afternoon thunderstorms and cold dry winters with occasionally frost and rare instances of snow.

The proposed site is especially void of any lush vegetation, presenting only a pale urban backdrop as context. With only open arid space on the site, a chance for vegetation and environmental well-being presents itself as an opportunity for intervention.

## Rainfall

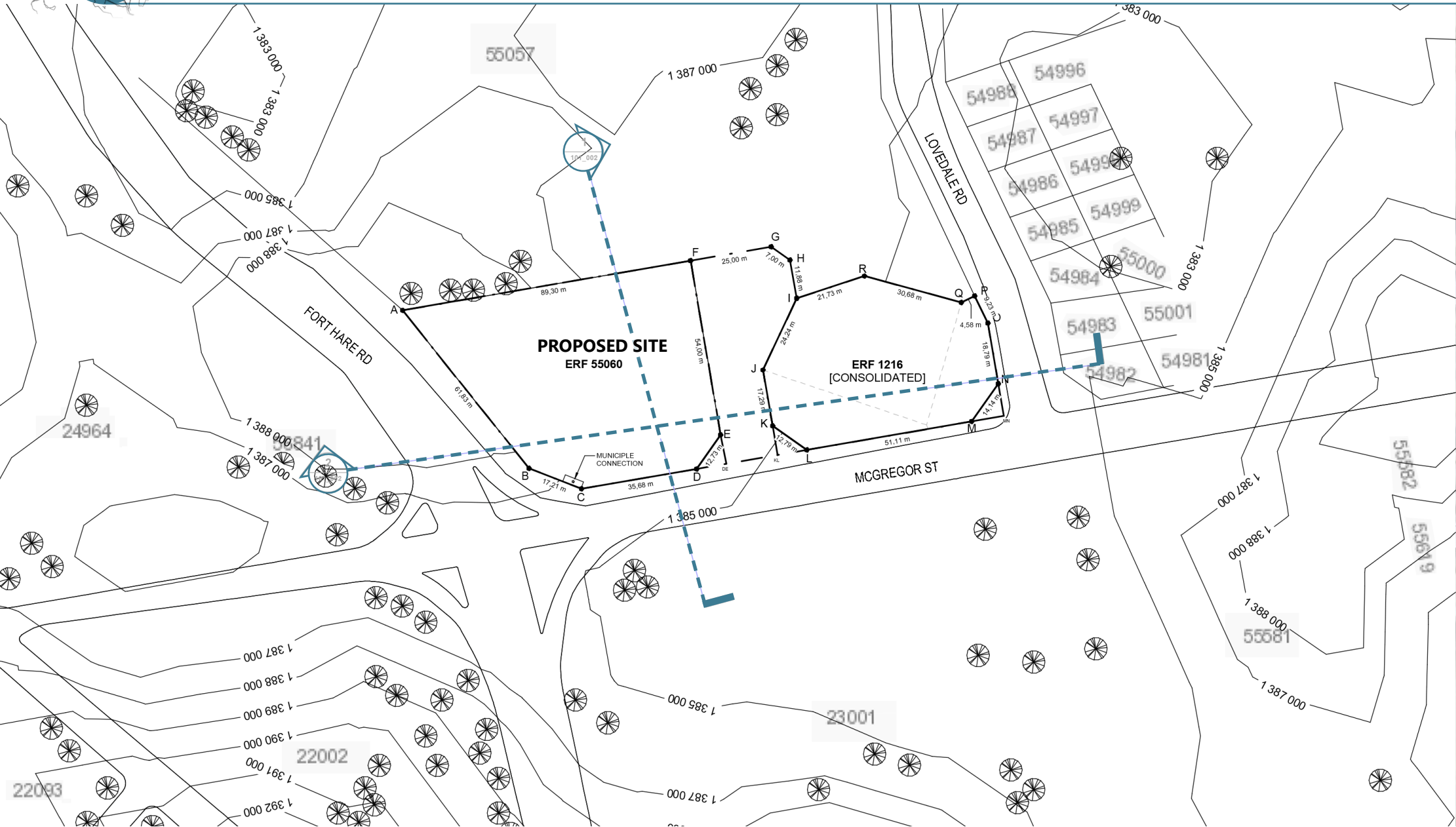
Bloemfontein normally receives about 407mm of rain per year, with most rainfall occurring mainly during summer. It receives the lowest rainfall (2mm) in June and the highest (68mm) in January. The monthly distribution of average daily maximum temperatures shows that the average midday temperatures for Bloemfontein range from 16°C in June to 29.2°C in January. The region is the coldest during July when the mercury drops to 0°C on average during the night (saexplorer.co.za, 2017).



Sun Exploration from centre point of Batho



# Topography



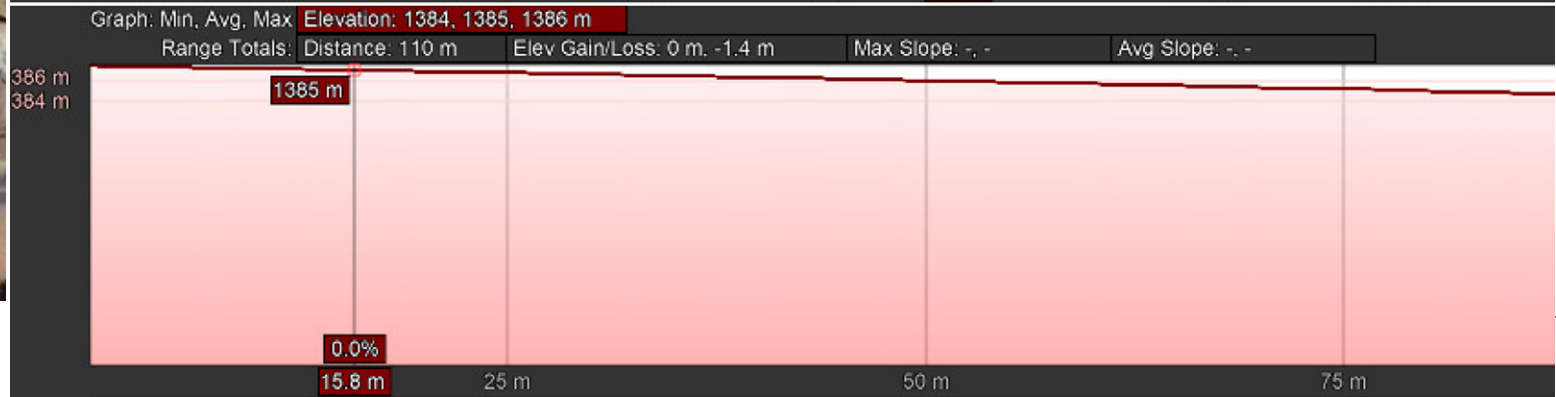
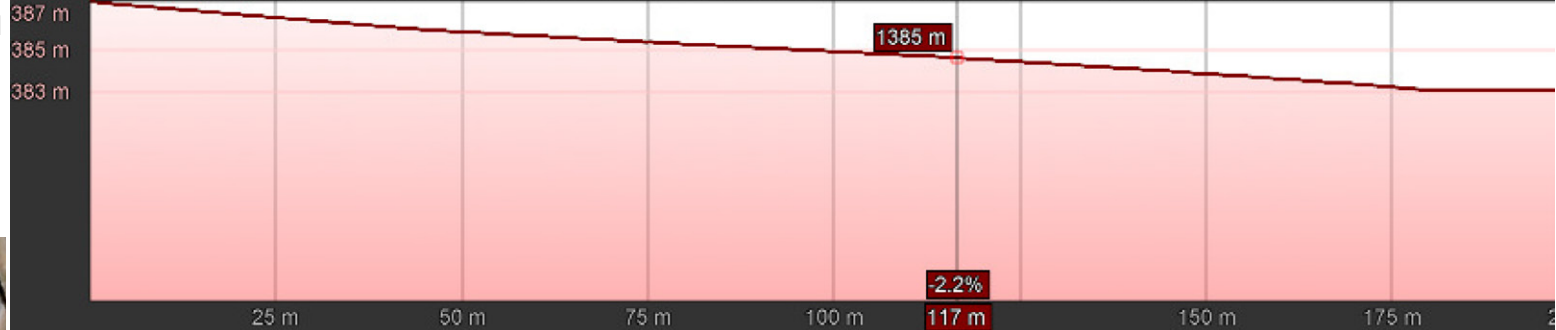
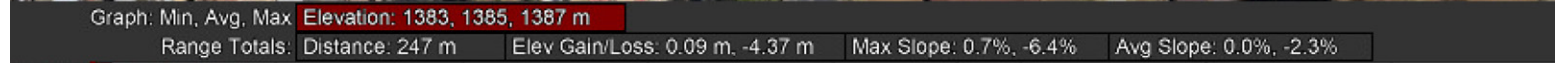
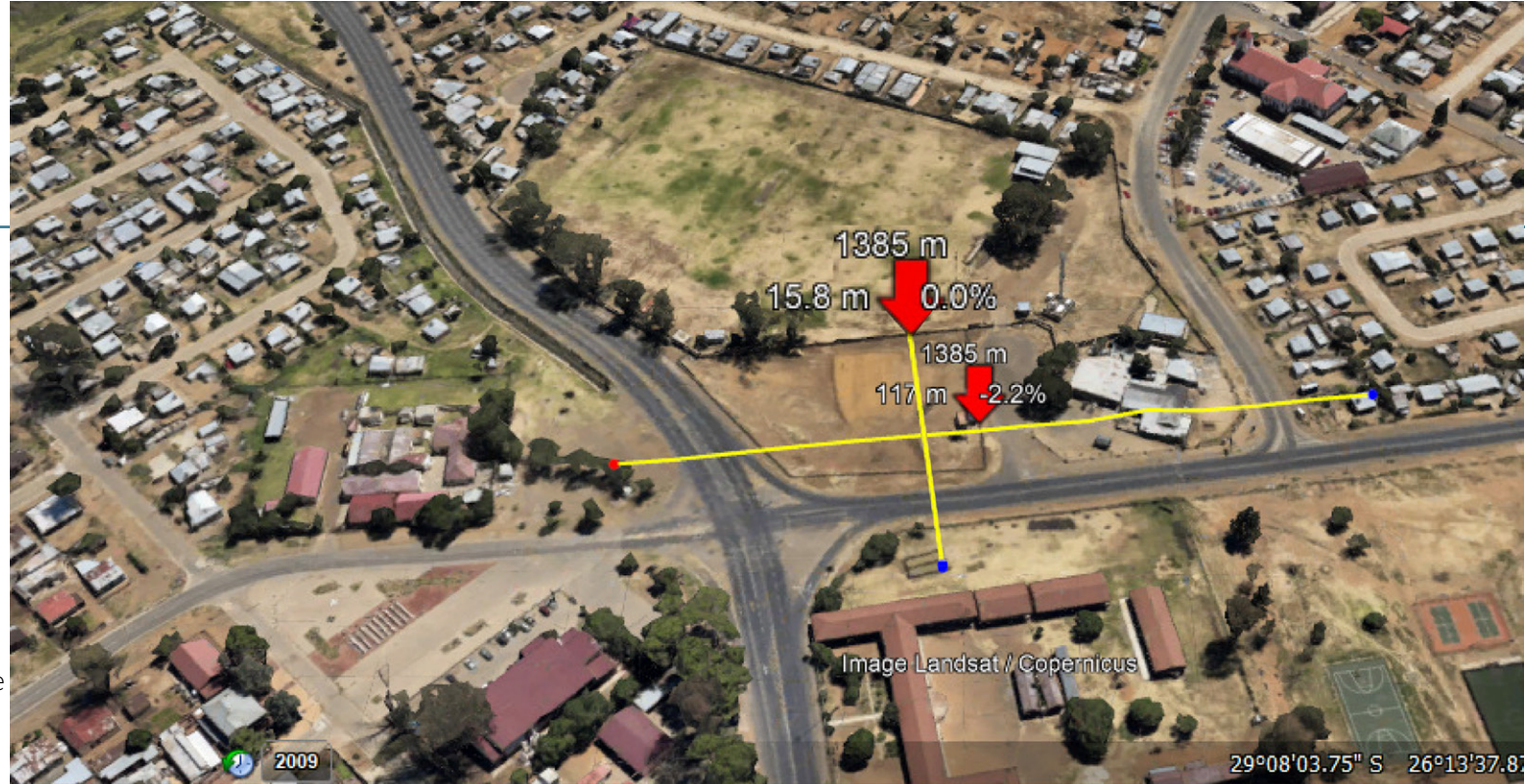
## Existing Natural Site Profile

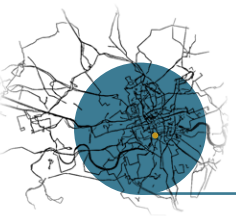
The existing site (Erf 55060 - Batho, Mangaung) exhibits a predominantly gradual change from north to south and west to east.

With the lowest point of the site being at the South/East point of the site it presents an opportunity for the design and utilization of a 1.8 meter high plinth for the proposed design.

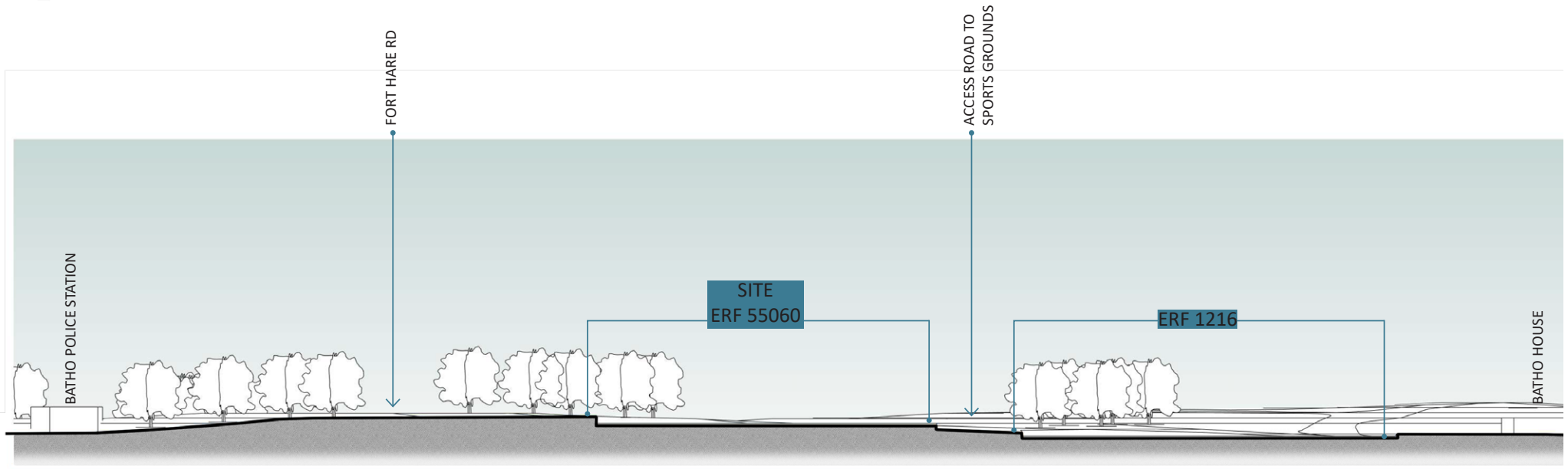
The design of a plinth will allow the proposal to be placed on a pedestal to grant it importance as a node within the community. This will also allow for the opportunity to design spaces to guide the user up into the main functions of the proposal.

The proposed site is a dominant underutilized corner site with high foot traffic across the site and high vehicular traffic around the site. This can be enhanced through the proposal and compliment the existing movement within the area.

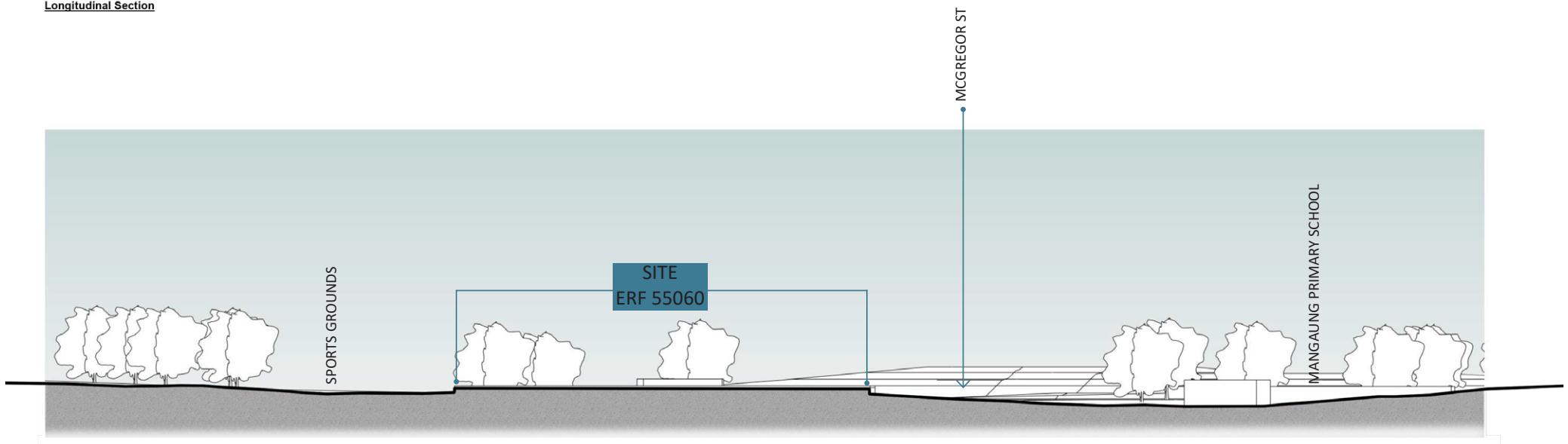




# Man-made Topography



Longitudinal Section



Cross Section

# Site Geology

The proposed site upon first inspection exhibits a soil type with layers that present itself as sand, clay and silt. i.e. a diverse soil presents itself. The sample can be tested and exhibit loam soil with a high percentage of clay contents on the upper layers.

"Loam soil is a mixture of soil that is the ideal construction. It is actually a combination soil, normally equal parts of clay, silt, and sand, which gives the benefits of each with few of the disadvantages." (homebulding, online: 2019)

There are existing one and two storey structures on neighboring sites of the proposal and this shows the soil is construction-friendly. Photos taken on site of the soil present an opportunity, together with the sample, to progress with design and technical construction proposal.

"As is the case with most of Bloemfontein's lower-lying areas, Batho was laid out on an area with a clay content of more than 30%. In some areas, the clay soil stretches down to a depth of up to 120 centimeters." (du bruyn, 2018: 495)



# Sustainability aims and theory

Sustainability aims and theory

Site Climate Conditions

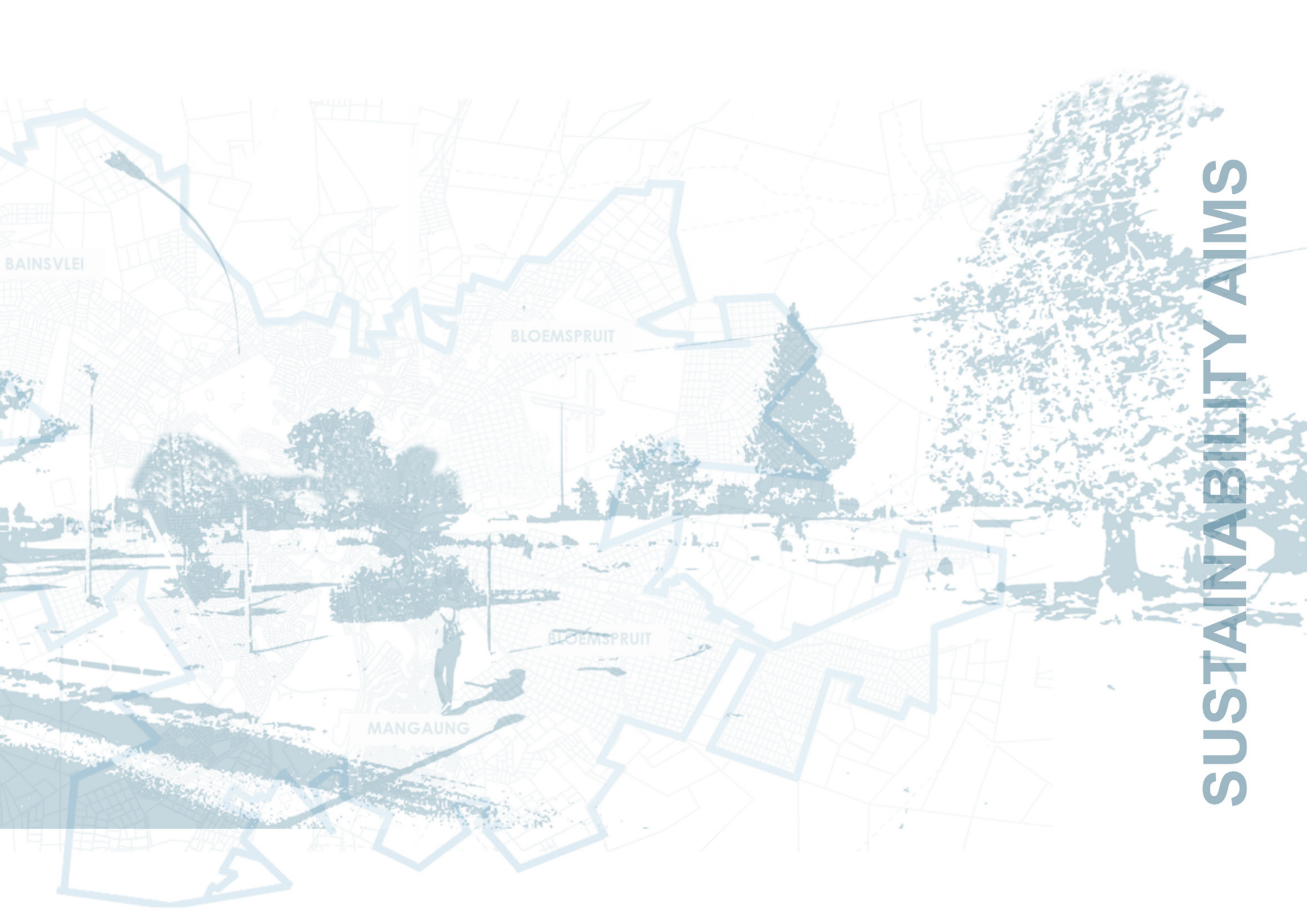
Sustainability Case Study

Primary sustainability aims within the proposal

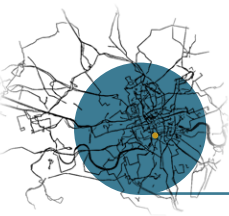
- Light
- Energy efficiency
- Materiality

Water Harvesting

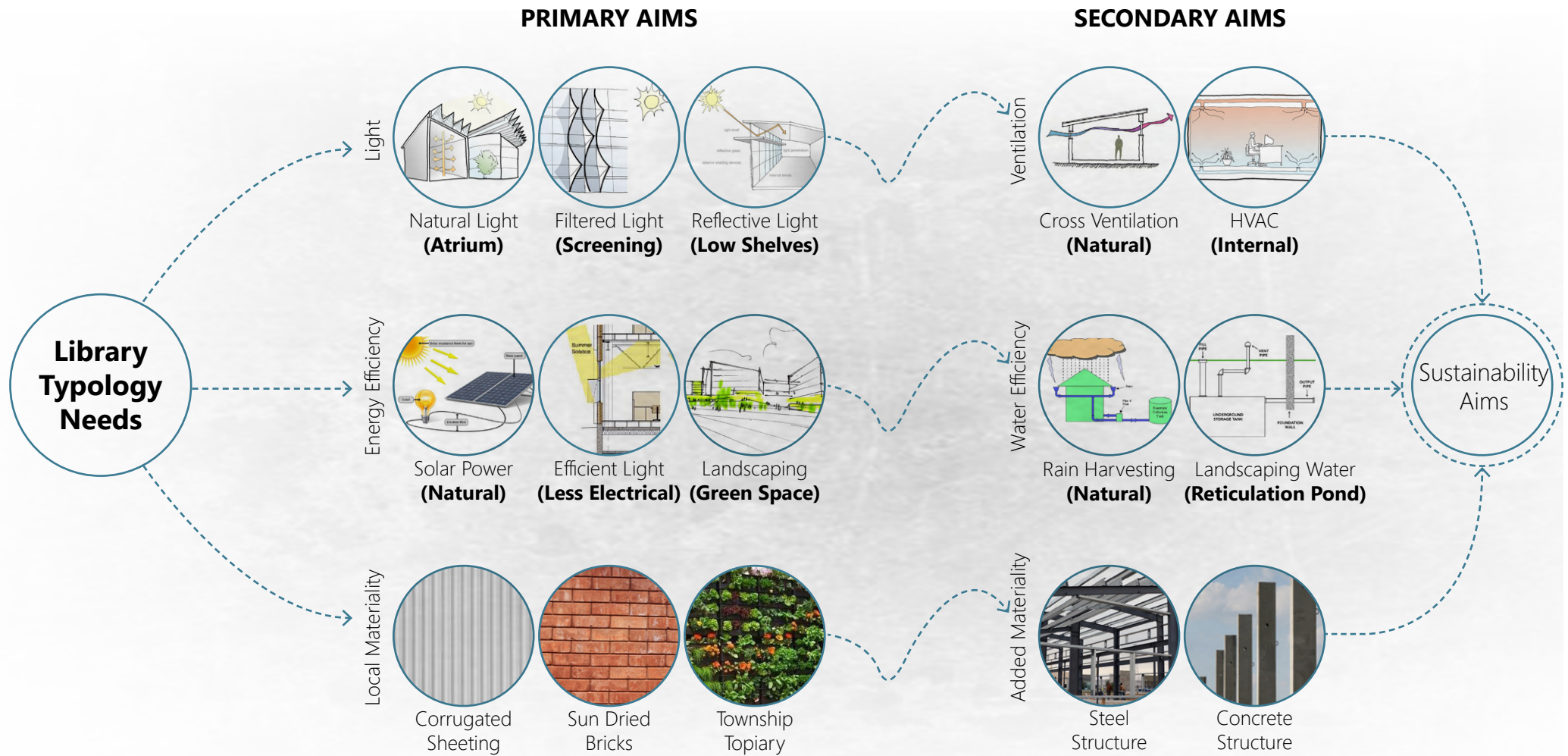




# SUSTAINABILITY AIMS



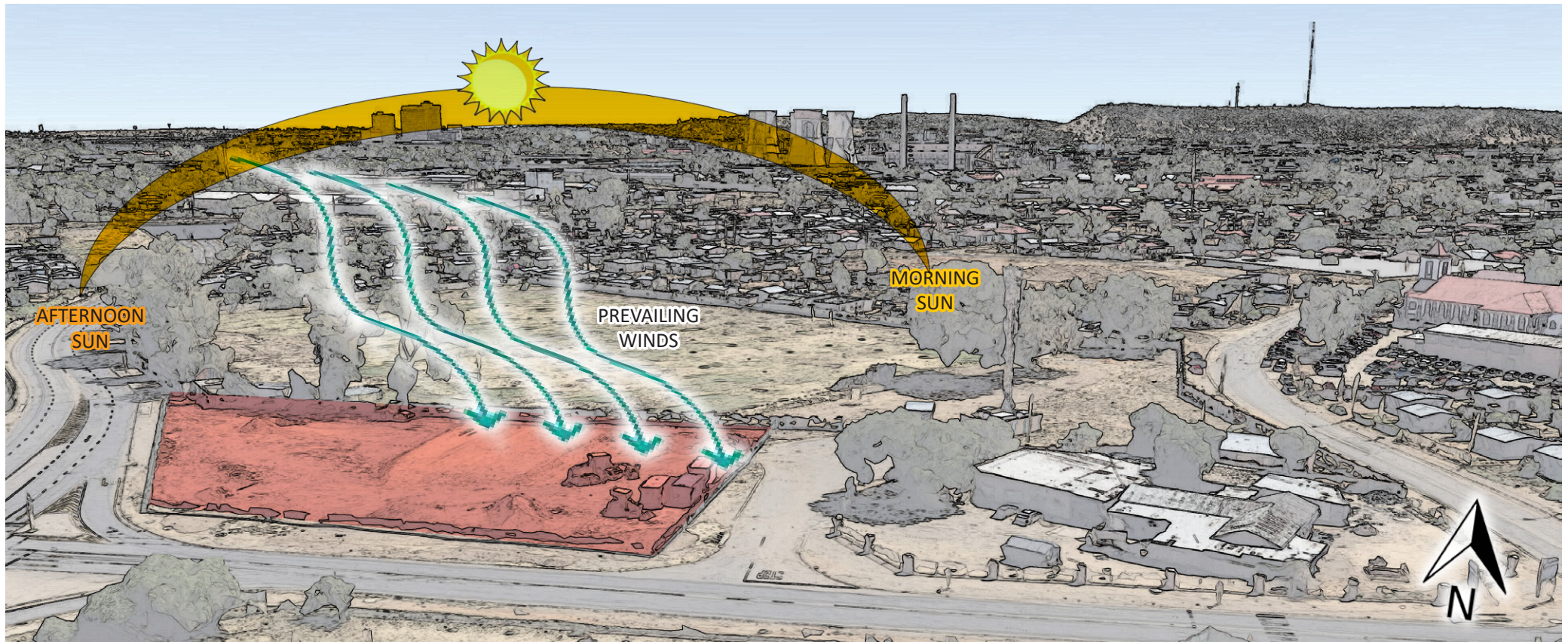
# Sustainability aims and theory

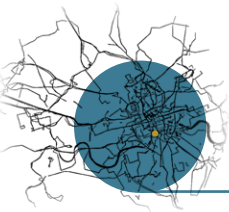


## Materiality within Sustainability

With regards to materiality, a sustainability theory comes across to implement a social sustainability and local language that contributes toward the existing context through the use of materials that are found in the existing local built environment and materials easily accessible to the community. Many of the Batho houses still standing today were built and adapted by the owners so local labour could be used when dealing with the local sun dried brick construction, corrugated roofs and beautified landscaping through existing topiary skills.

# Site Climate Conditions





# Sustainability Case Study

## University of California Merced – Kolligian Library

**PLACE:** California America

**ARCHITECT:** Skidmore Owings & Merrill

**YEAR COMPLETED:** 2005

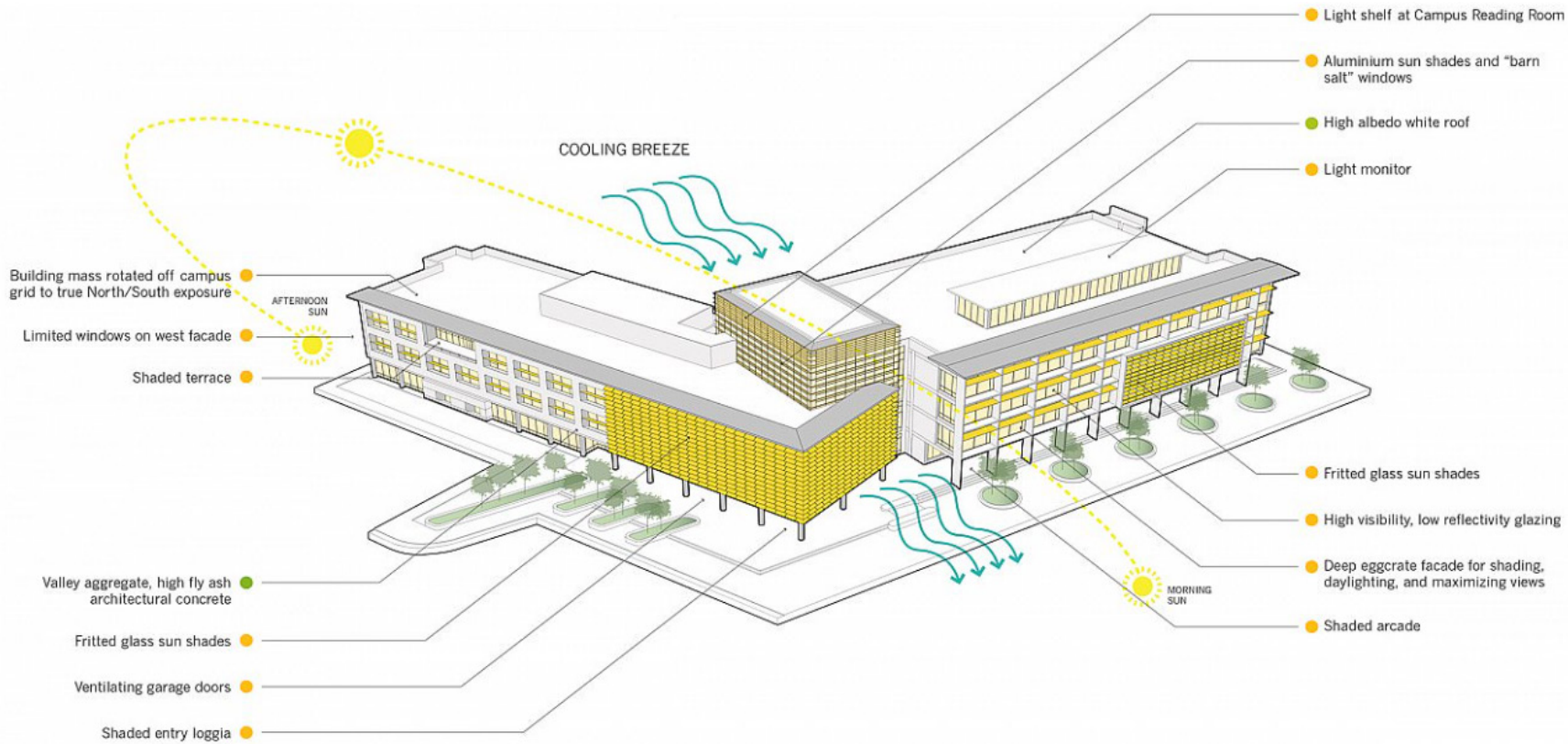
The Kolligian Library includes flexible open space and a highly adaptable infrastructure, allowing it to accommodate changes as the campus evolves. The building is composed of three primary elements: a sky-lit area well-suited for a traditional “stacks and carrels” library, a multi-use space, and a lantern-like volume that serves as the building’s organizational and social center.

The University of California Merced campus is located in the Central Valley, where summer temperatures can approach 100 degrees Fahrenheit (38 degrees Celcius). Several sun mitigation strategies were incorporated to maintain views to the campus and the landscape beyond. SOM oriented the building north-south and created deep-set facades to provide ample shade. Louvers, loggias, overhangs, and arcades invite students to congregate and work outside in an extended “campus living room.” These strategies form a significant part of the project’s overall sustainable ethos, which aligns with a larger sustainable mission set out by the university.

Important aspects to take from this case study to influence the proposed Library & Learning Centre:

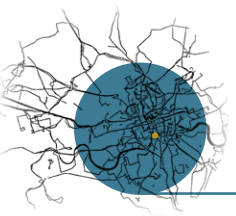
- Basic Sustainability Principles used in a simple way
- Light within a Library is the most important
- Orientation and Shape of building can easily be manipulated to enhance light and air flow



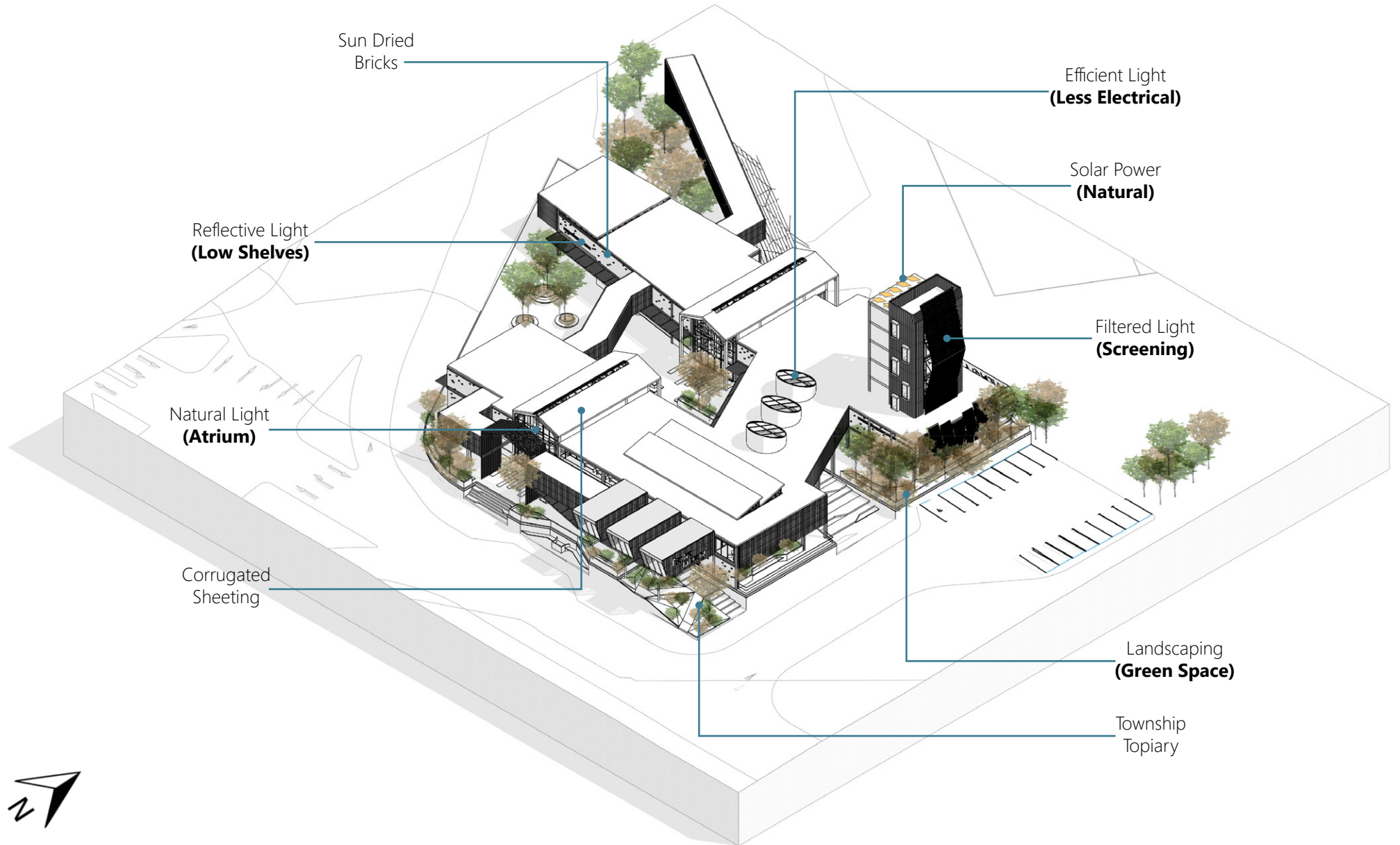


- SUSTAINABLE SITE
- WATER EFFICIENCY
- ENERGY AND ATMOSPHERE
- MATERIAL & RESOURCES
- INDOOR ENVIRONMENTAL QUALITY





# Primary sustainability aims within the proposal



# Light

Light in libraries and social meeting places within the proposed typology. This means ample natural light is needed, and is achieved through the atrium and roof designs. Filtered light for spaces of play and conversation is enhanced through perforated screens and materiality. Reflective light is needed in educational spaces so low light shelves are designed through 300mm sill height strip windows. All of these contribute toward the enhancement and utilization of natural light within the proposed programme.



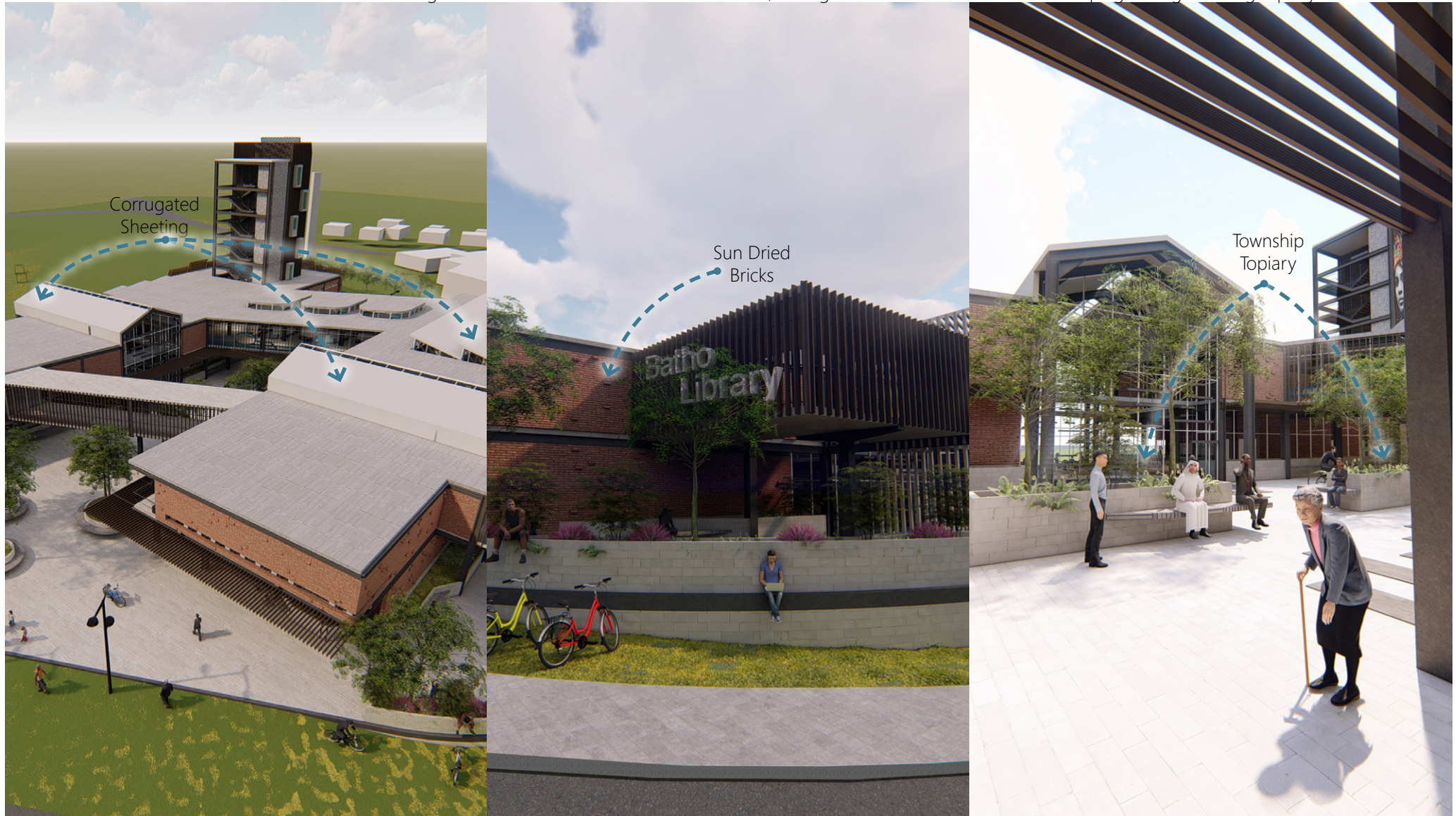
# Energy Efficiency

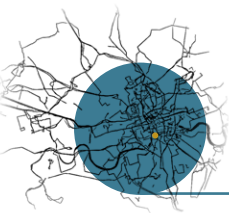
The energy efficiency within the proposed structure is focused around Solar Power, Efficient Light, and Landscaping. The Solar Power is absorbed and used throughout the building through photo-voltage panels placed on top of the tower facing north. The Efficient natural light is achieved through large windows and opening within the structure and helps save on electrical lights and bulbs. The mass landscaping scheme, which is a contextual influence of township topiary, reduces the carbon footprint whilst helping shade through green space.



# Local Materiality

With regards to materiality, a sustainability theory comes across to implement a social sustainability and local language that contributes toward the existing context through the use of materials that are found in the existing local built environment and materials easily accessible to the community. Many of the Batho houses still standing today were built and adapted by the owners so local labour could be used when dealing with the local sun dried brick construction, corrugated roofs and beautified landscaping through existing topiary skills.





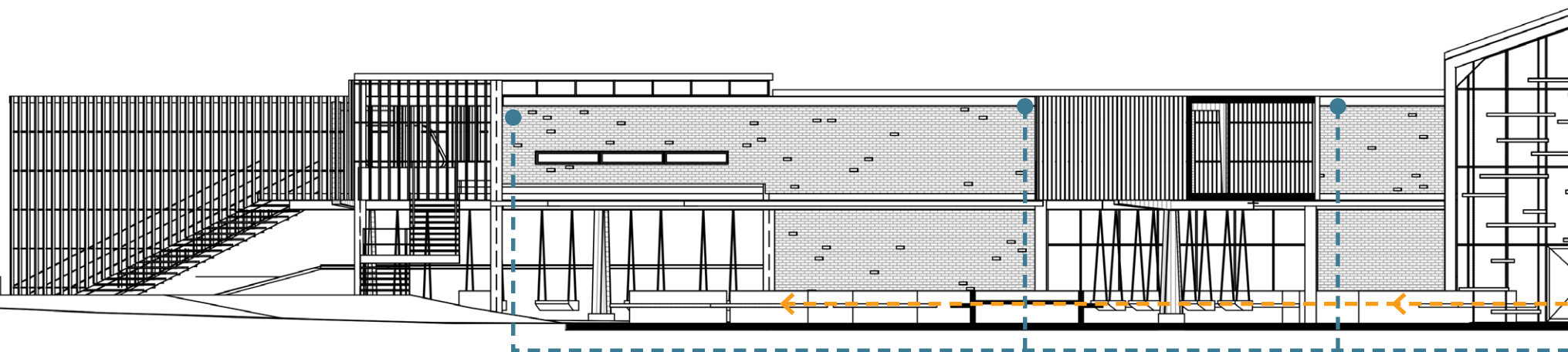
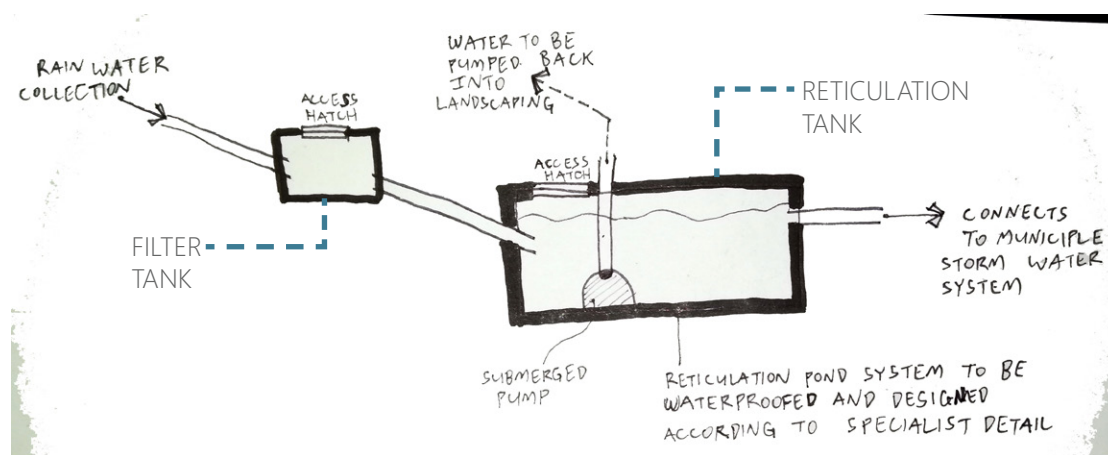
# Water Harvesting

## Water Reticulation Pond


The proposed water harvesting method includes the design and implementation of a water reticulation pond at the lowest point of the site. Rain water will be collected here and pumped back into the abundant landscaping proposed on the site. Excess water will be filtered and put back into the municipal storm water system.

## Submerged Water Pump


- Max.Head: 0-20m
- Max.Capacity: >400 L/min
- Driving Type: Motor
- Material: Stainless Steel
- Structure: Submersible Mix and Axial Flow Type



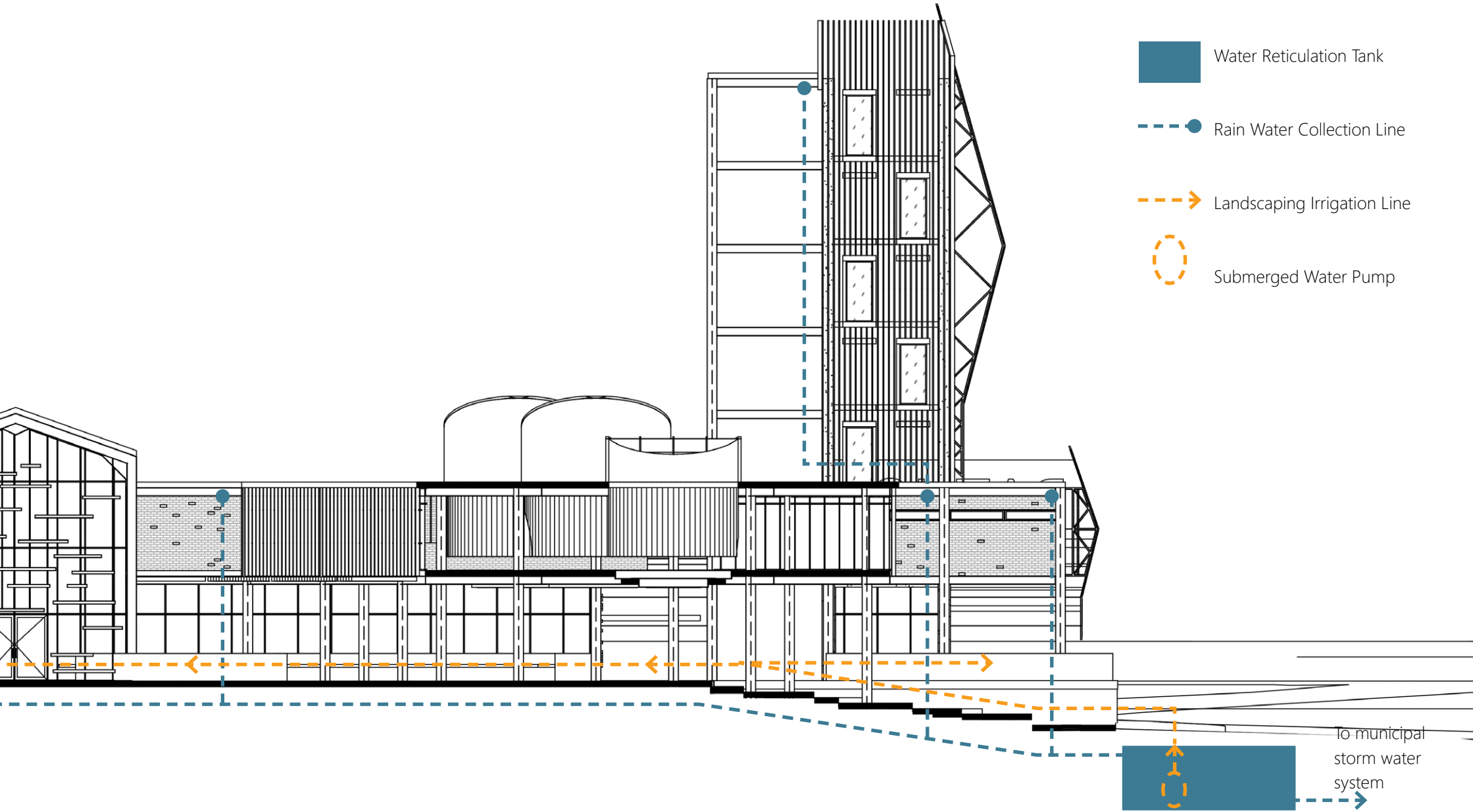
**KEY**

 Water Reticulation Tank

 Rain Water Collection Line

 Landscaping Irrigation Line

 Submerged Water Pump



# Investigation into Structures and Materiality

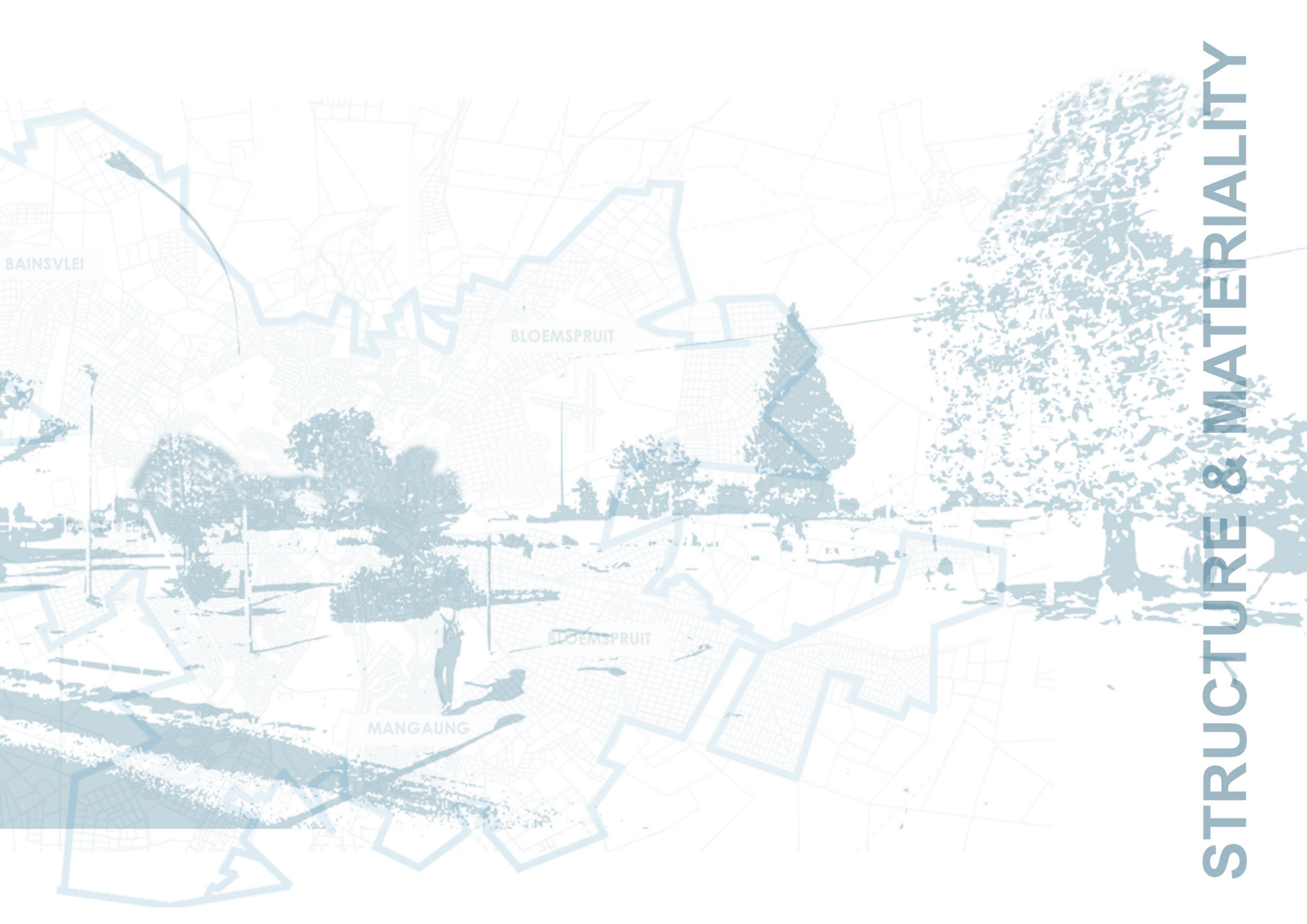
Structural / Material Investigation

Structural Morphology Case Study - International

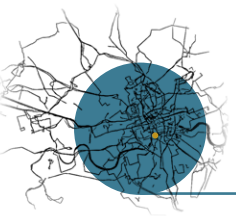
Structural Morphology Case Study -Local

Proposed Structure and Materiality

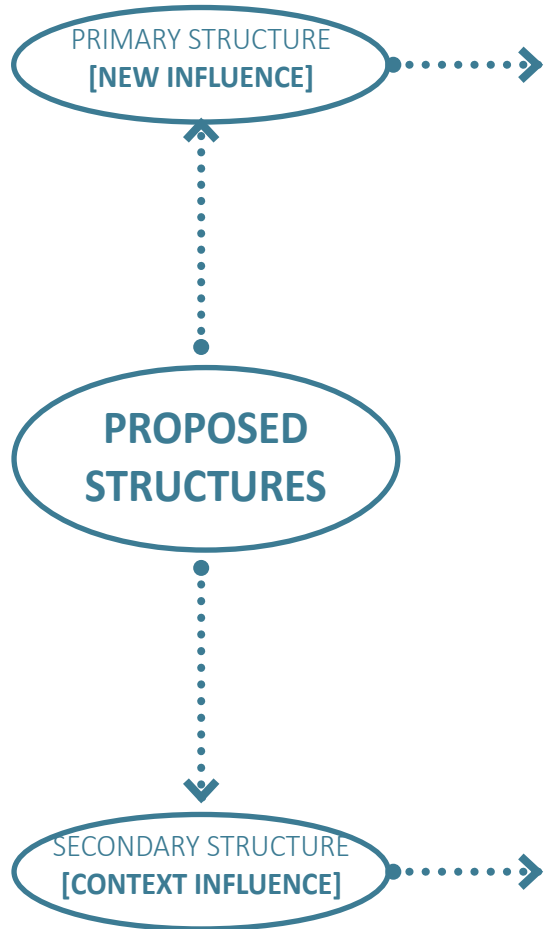




# STRUCTURE & MATERIALITY



# Structural / Material Investigation



STEEL FRAMING  
[PRIMARY STRUCTURE]



STEEL TRUSS & COR-TEN SHEETS  
[SCREEN STRUCTURE]



CONCRETE TOWER  
[NODE STRUCTURE]

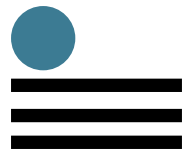
SUN DRIED BRICKS  
[SECONDARY STRUCTURE IN-FILL]



CORRUGATED SHEETING  
[ROOF FINISH]



TOWNSHIP TOPIARY  
[LANDSCAPING AND VEGETATION]

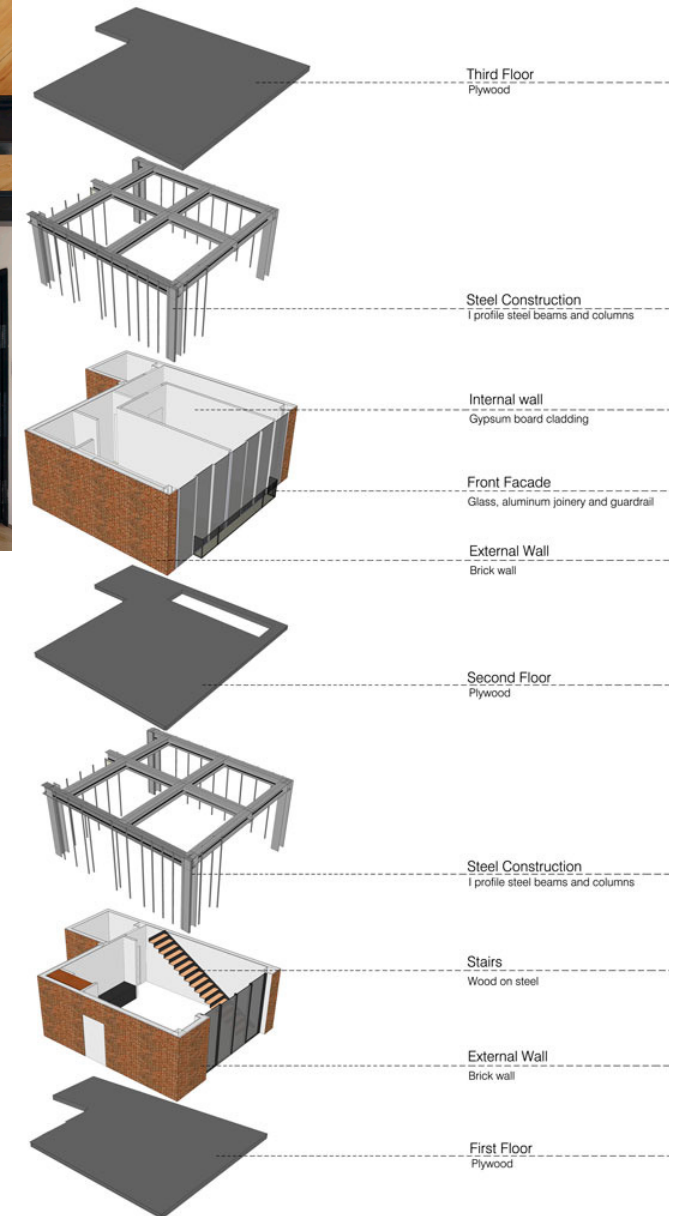
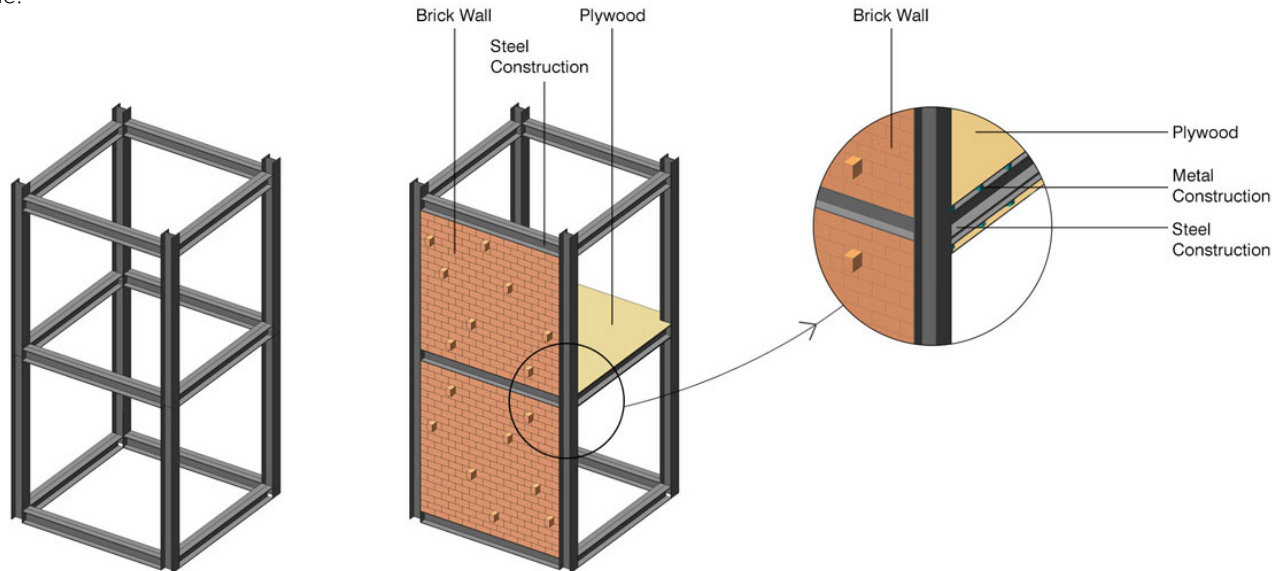


# Structural Morphology Case Study - International



## NoXX Apartments; Istanbul; Turkey - CM Architecture

The underground levels of the building are reinforced concrete while the upper levels are established as steel structure. Composite structure is left visible on purpose, without using plaster, paint or any cladding material in the inside and the outside.





# Structural Morphology Case Study -Local

## Alexandra Interpretive Centre

**PLACE:** Alexandra, Johannesburg, South Africa

**ARCHITECT:** Peter Rich

**YEAR COMPLETED:** 2003

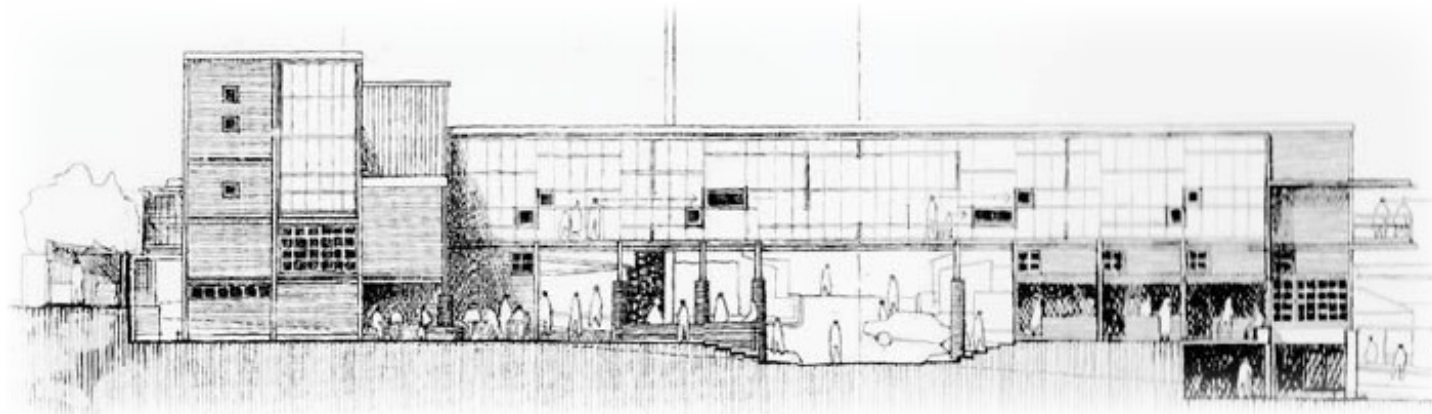
The Interpretation Center celebrates Nelson Mandela in the township as the area was his first home in Johannesburg. The structure is a mixed used three floor structure, conceived as bridge spanning over the animated and loud streets of Alexandra.

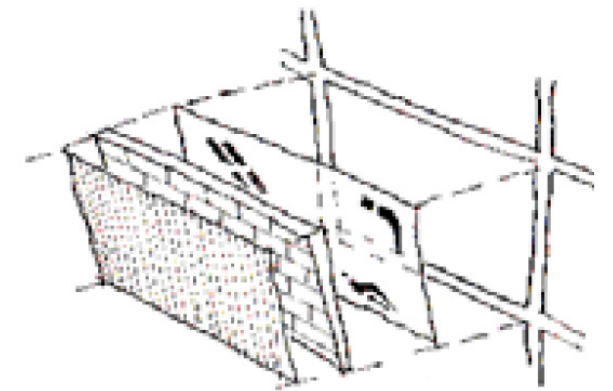
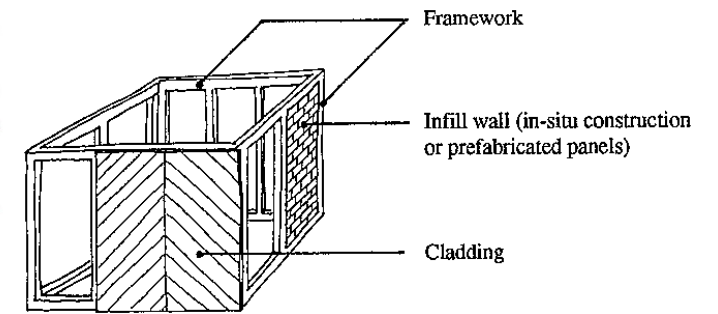
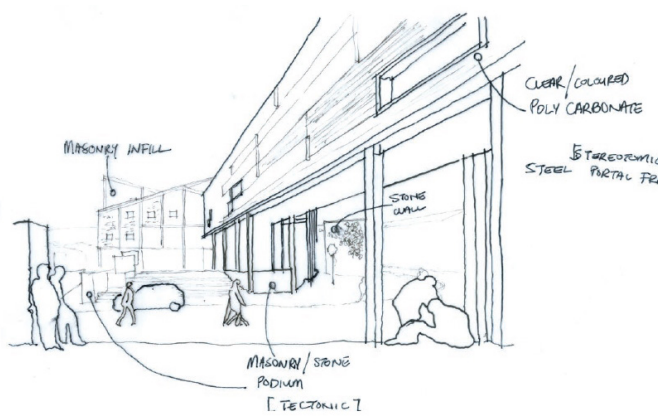
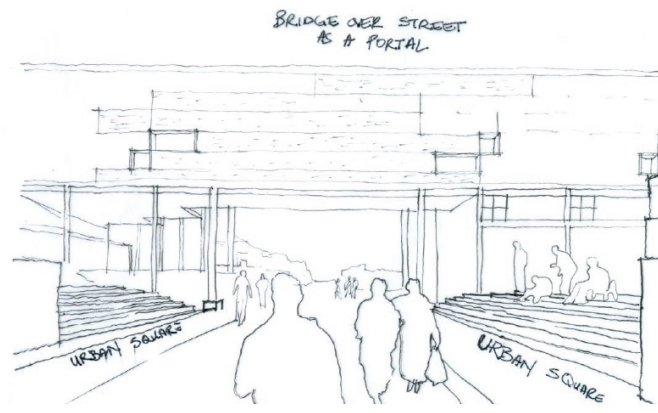
The program contains an exhibition space to tell the story of the place, a jazz archive for the rich musical history born here, a library, training facilities, shops and restaurants. Through the design the building also generates two urban squares, places to be taken over to the resident's liking, envisioned for both organized events like movie projections and the informality of street life.

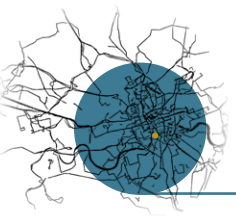
A major part in the construction of this project was played by the relationship based on respect with the immediate surrounding and people of Alexandra.

Important aspects to take from this case study to influence the proposed structure:

- Relates to FORM & STRUCTURE [the use of a bridge that becomes the functions]
- The use of steel frame structure and local brick and stone in-fill
- Simple Bridge Architecture for pedestrians
- Bridge has more than 1 function [Pedestrian walk-way/exhibition space]







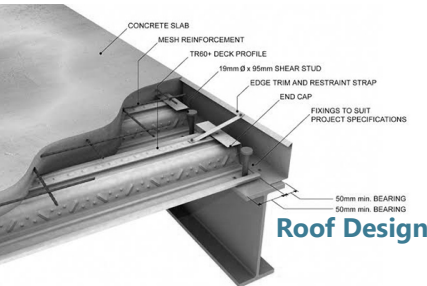
# Proposed Structure and Materiality

## Batho Library & Learning Centre Structure

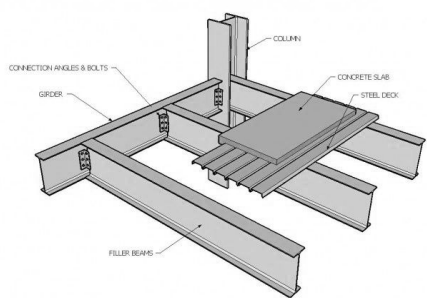
- Steel Column and Beam
- Brick and Glass shop front in-fill
- Composite Floor System
- Composite Roof System
- Concrete Column and Beam Tower
- Steel Trusses for Roof and Screens
- Portal Frame Atrium



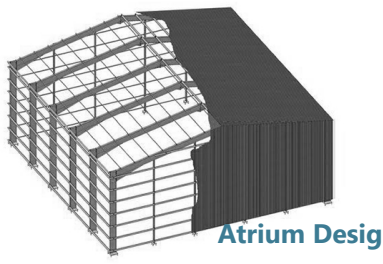
Pedestrian Bridge Design



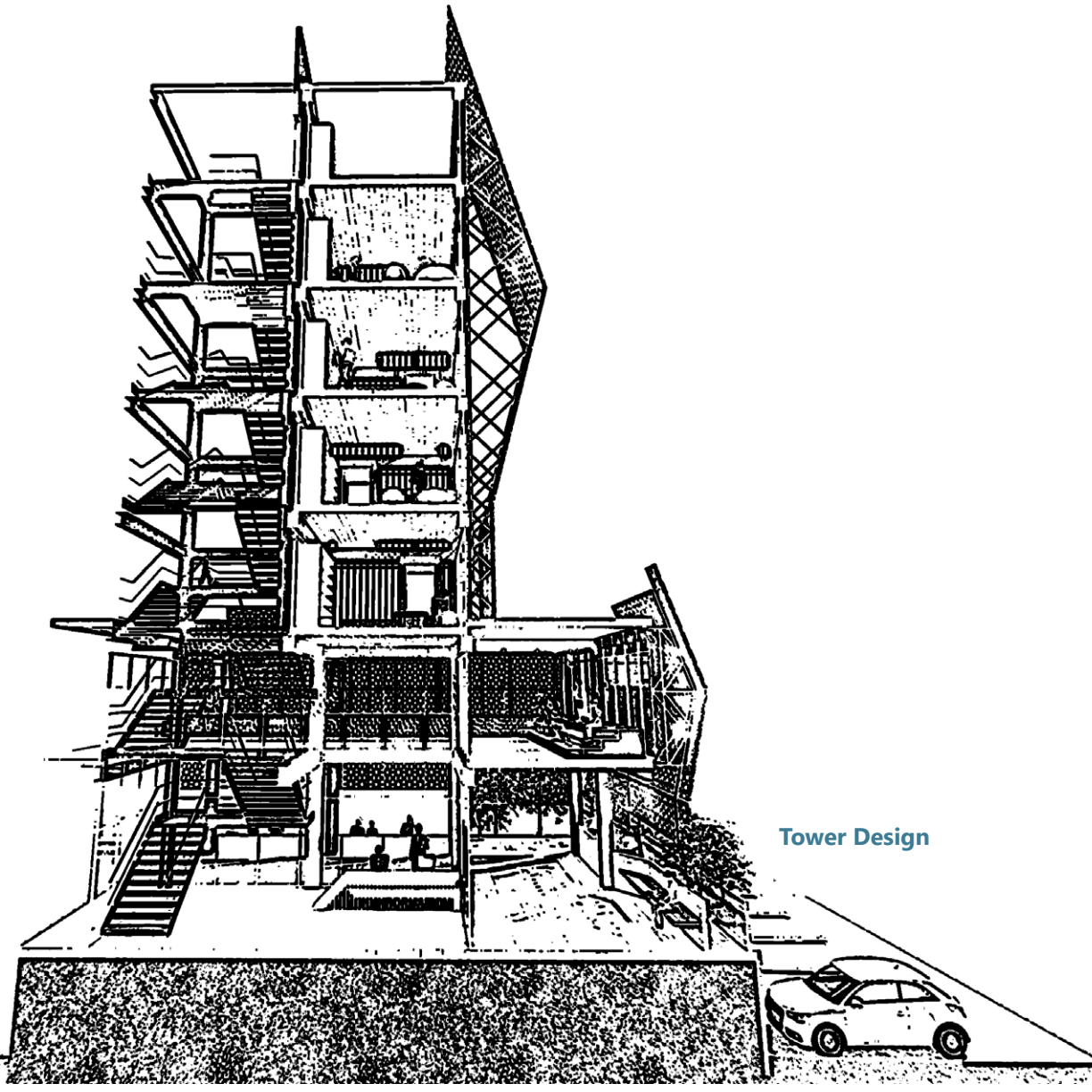
Roof Design



Floor Design

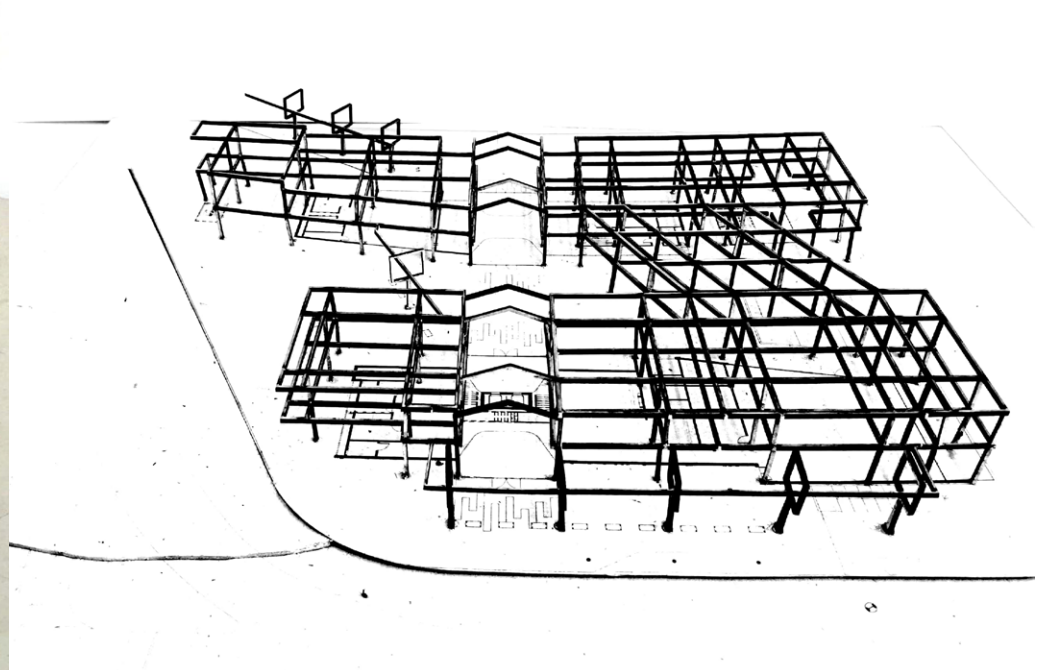
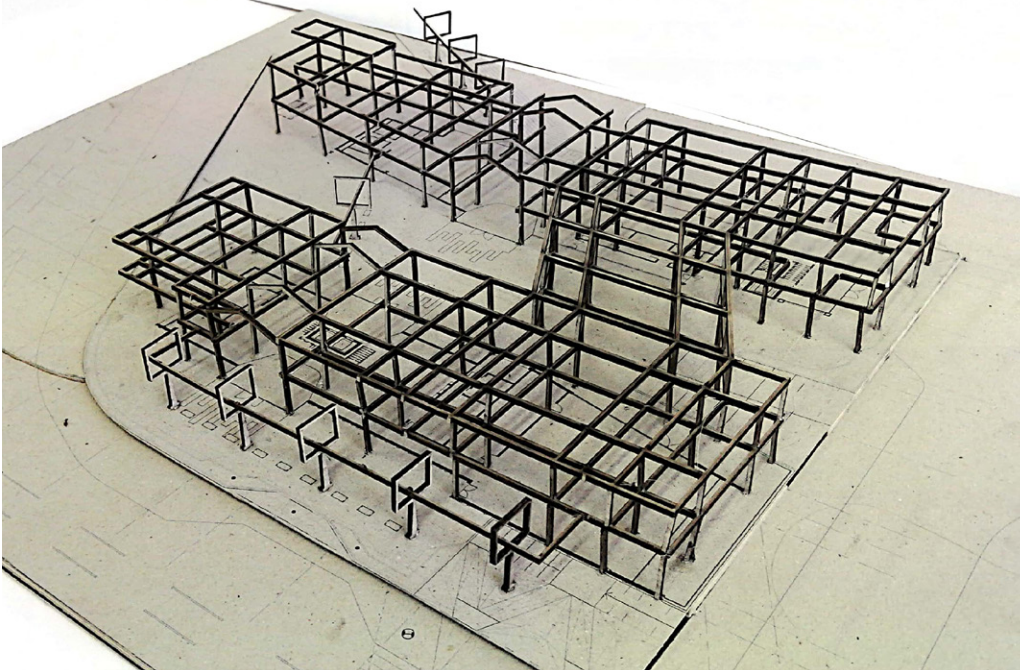
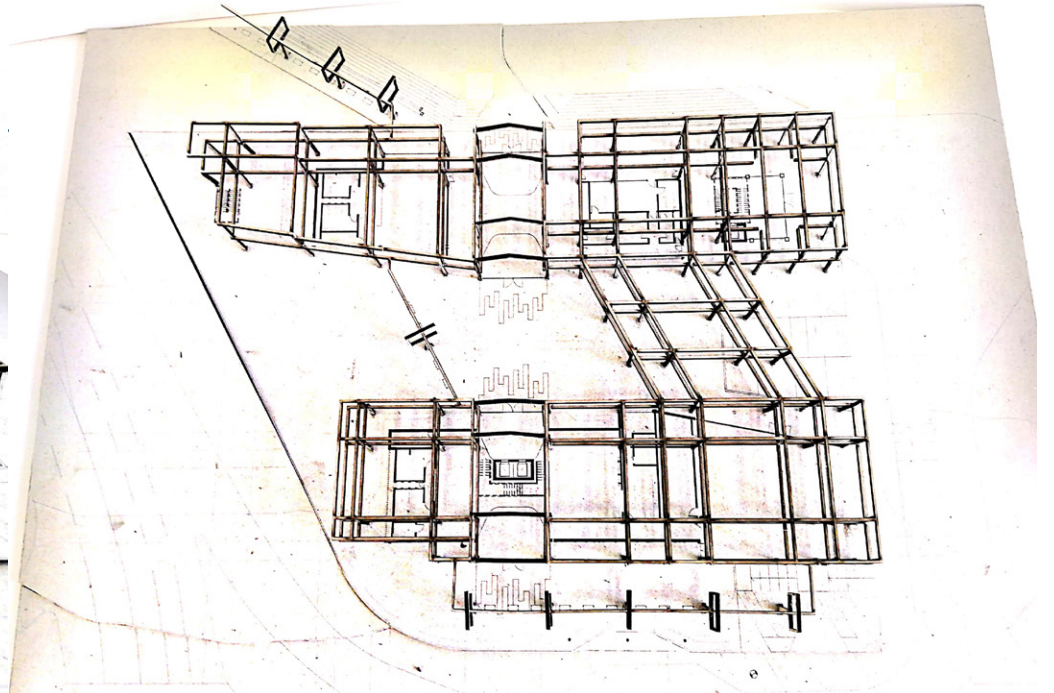


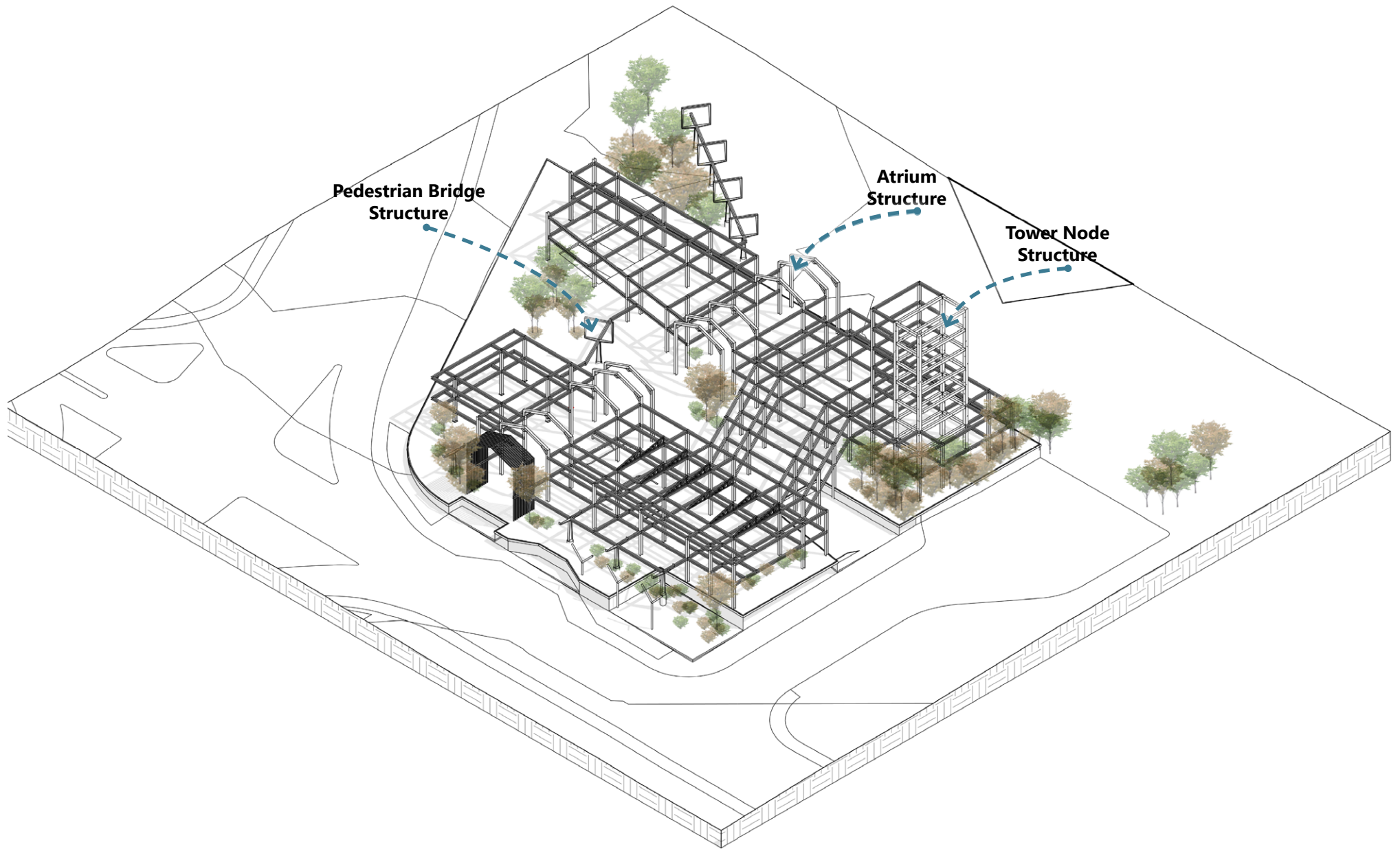
Atrium Design



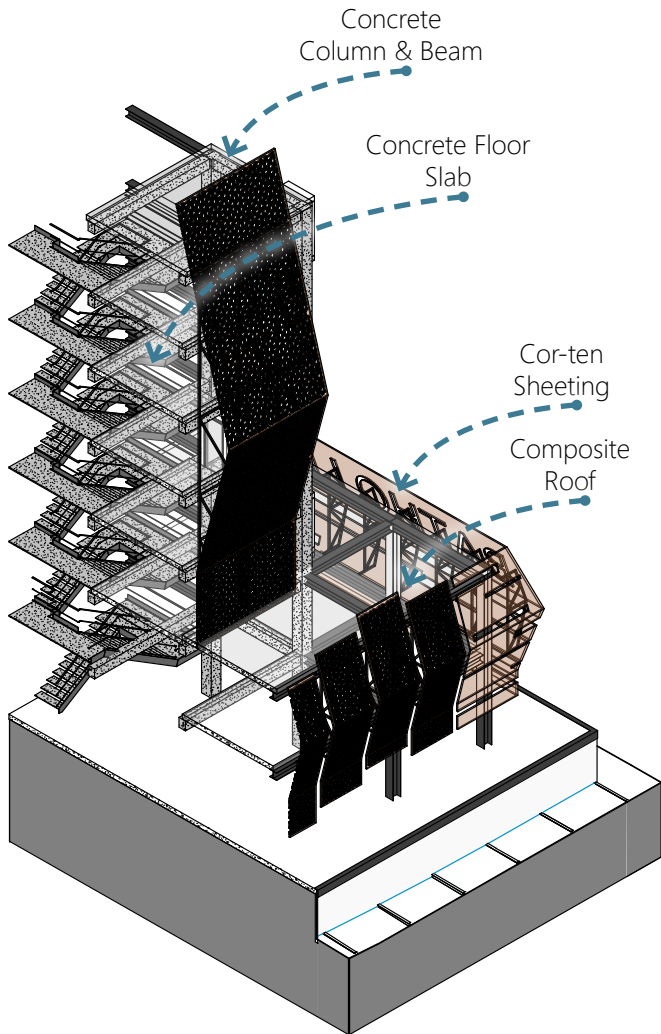
Tower Design

# Structural Model

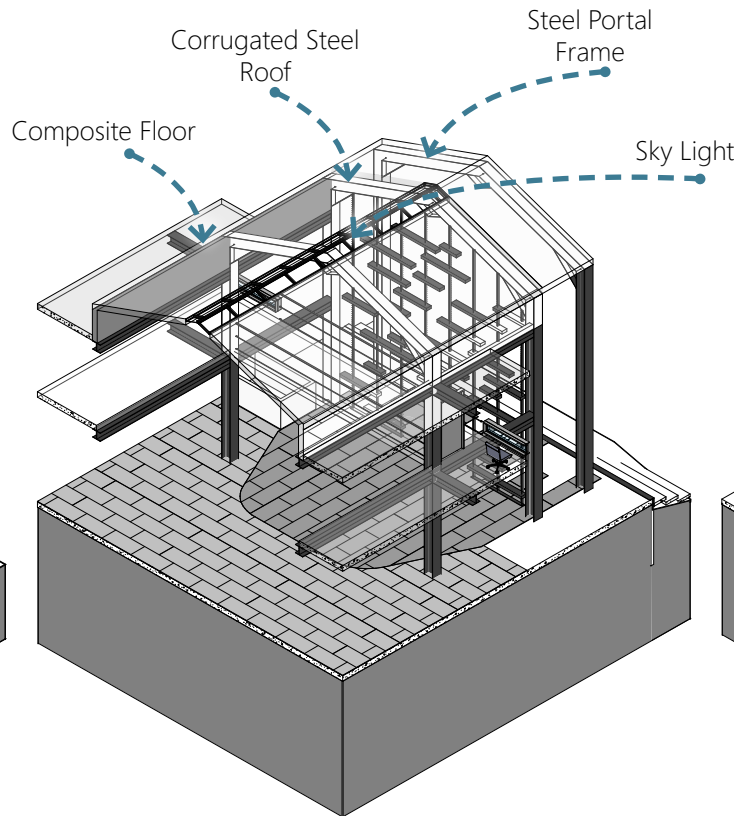




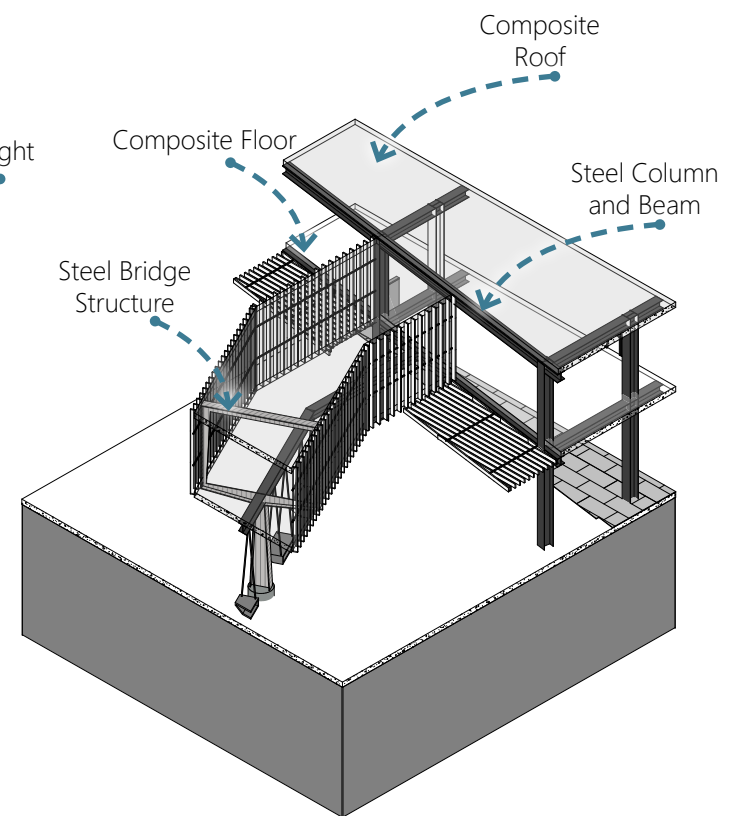
### Tower Node Structure



### Atrium Structure



### Pedestrian Bridge Structure

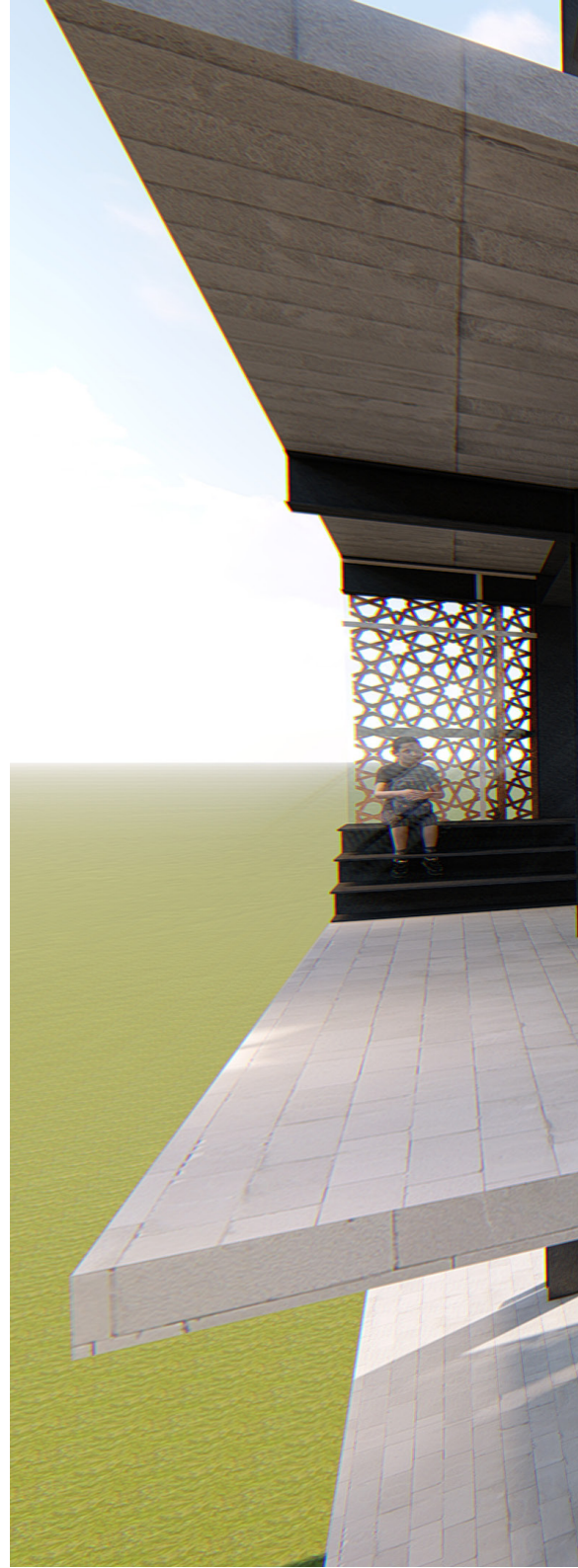


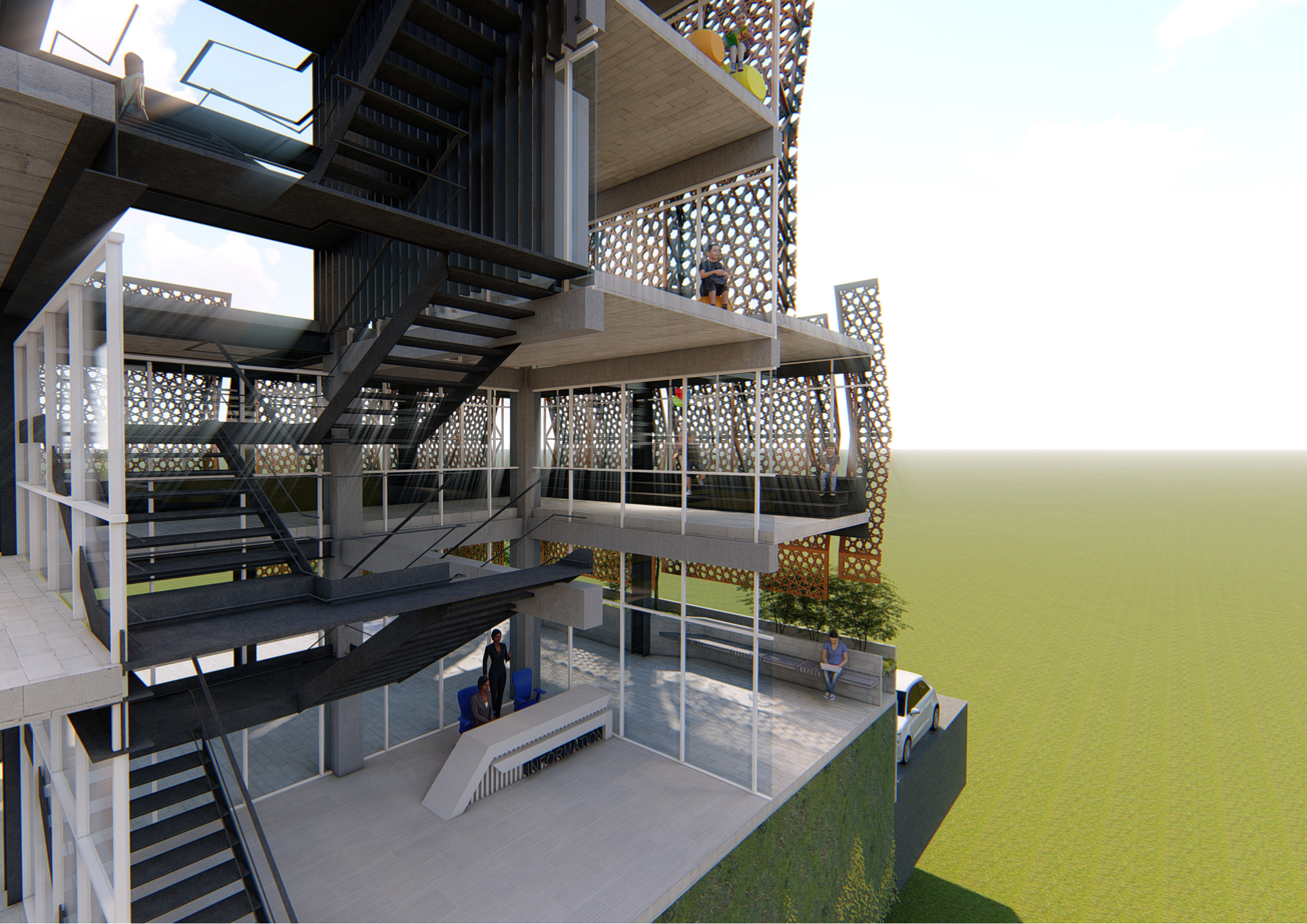
# NODE STRUCTURE PERSPECTIVE





# NODE STRUCTURE PERSPECTIVE



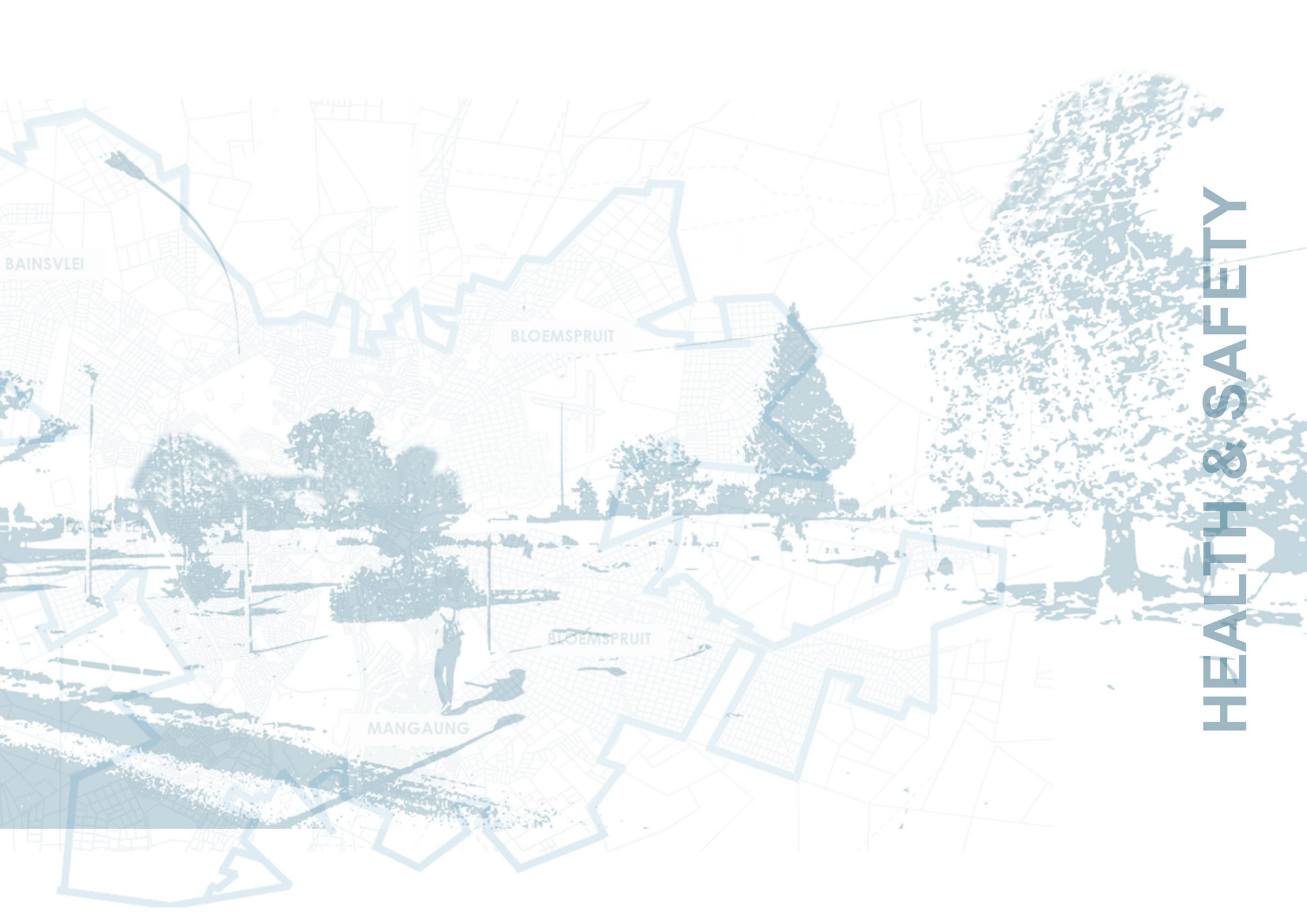


# Compliance with Health & Safety Requirements

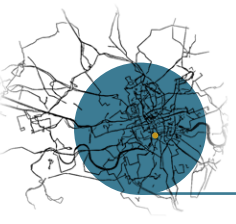
Horizontal Circulation

Vertical Circulation



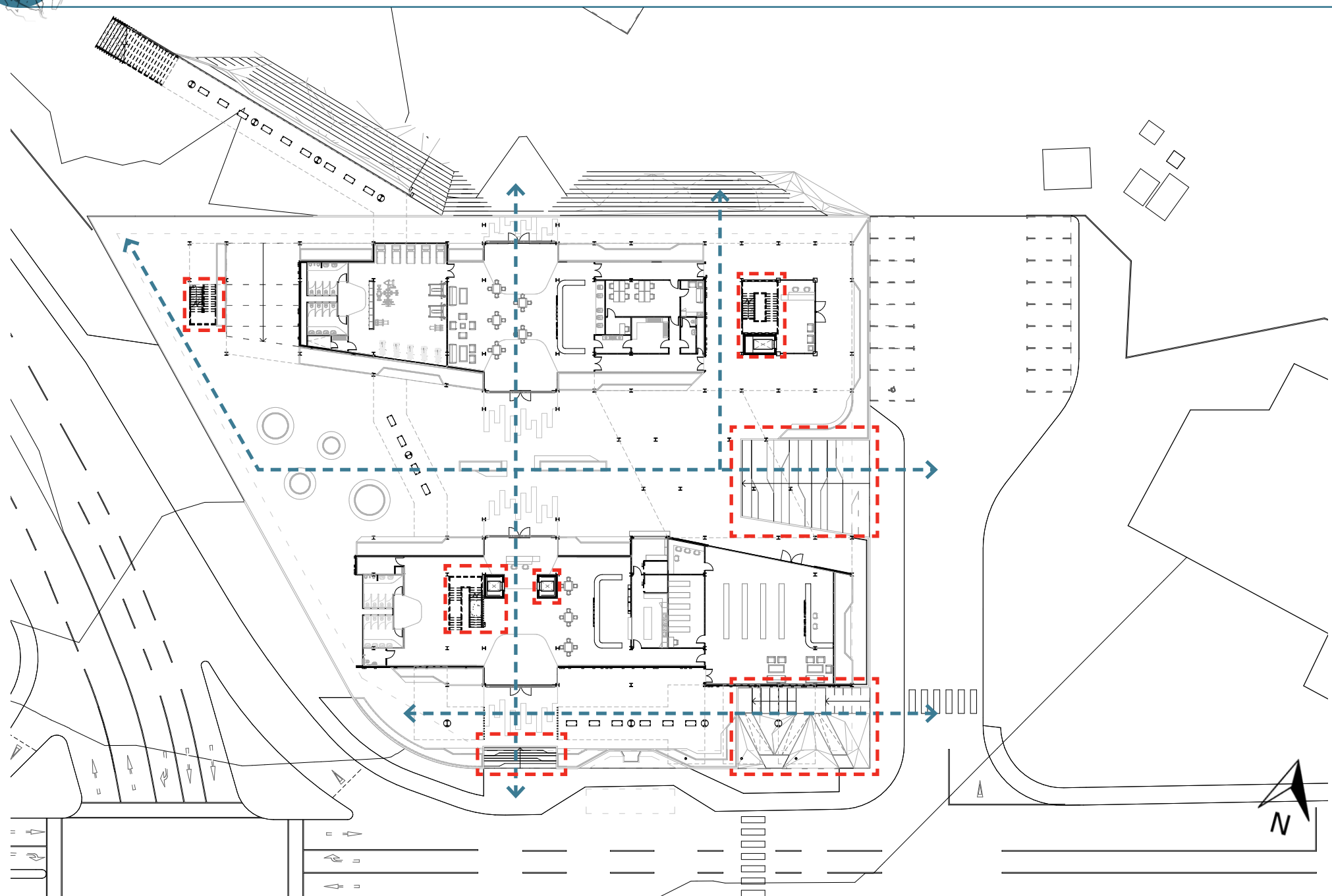


# HEALTH & SAFETY

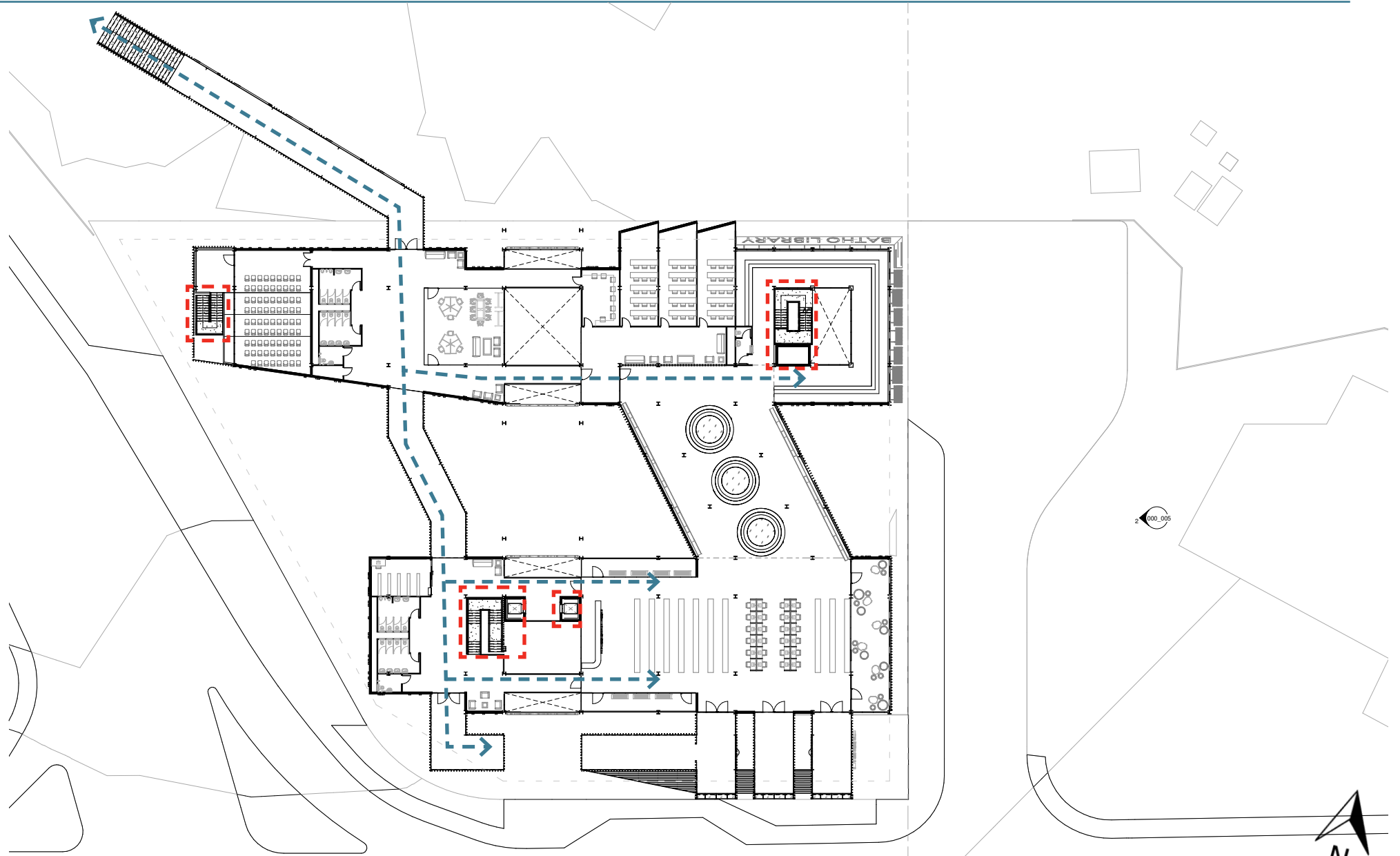


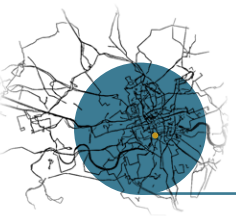
# Horizontal Circulation

GROUND FLOOR PLAN



# FIRST FLOOR PLAN



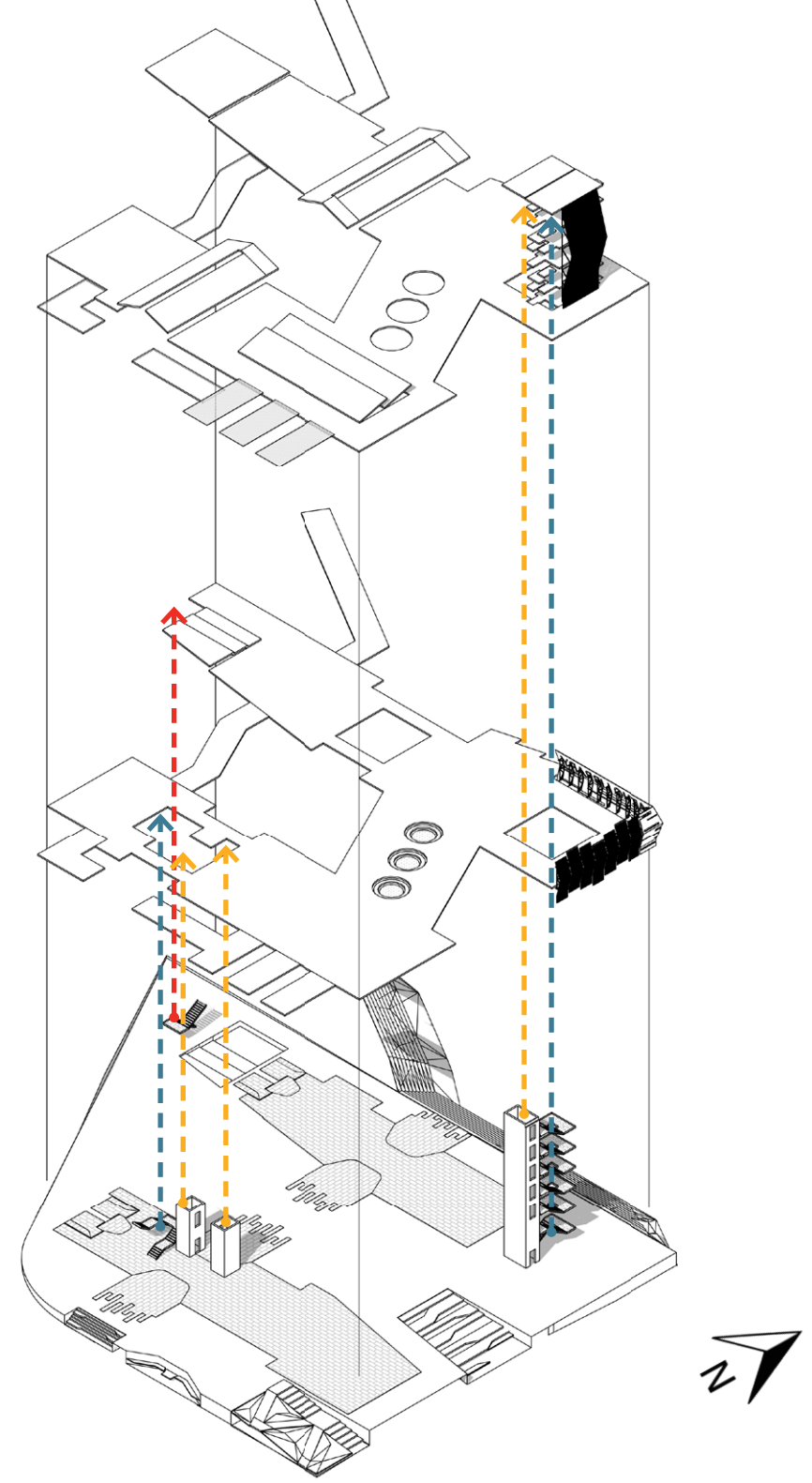


# Vertical Circulation

## Water Reticulation Pond

The Vertical circulation of the building is split over 3 cores that include 3 lifts and 3 stair cases.

- Elevator Shaft** 
- Circulation Stair / FES** 
- Fire Escape Stair** 



AXONOMETRIC VIEW



## CONCLUSION & REFLECTION

*Fig 159.* Batho sketch (author, 2019)





## CHAPTER

# 8

### AIM OF THE CHAPTER

Utilizing the gained knowledge during the investigation process to formulate a designed outcome.

Then reflecting on the proposal as a whole in an attempt to identify and further understand the challenges and conclusions within the proposed thesis.

# CONCLUSION & REFLECTION

Conclusion

Project Reflection

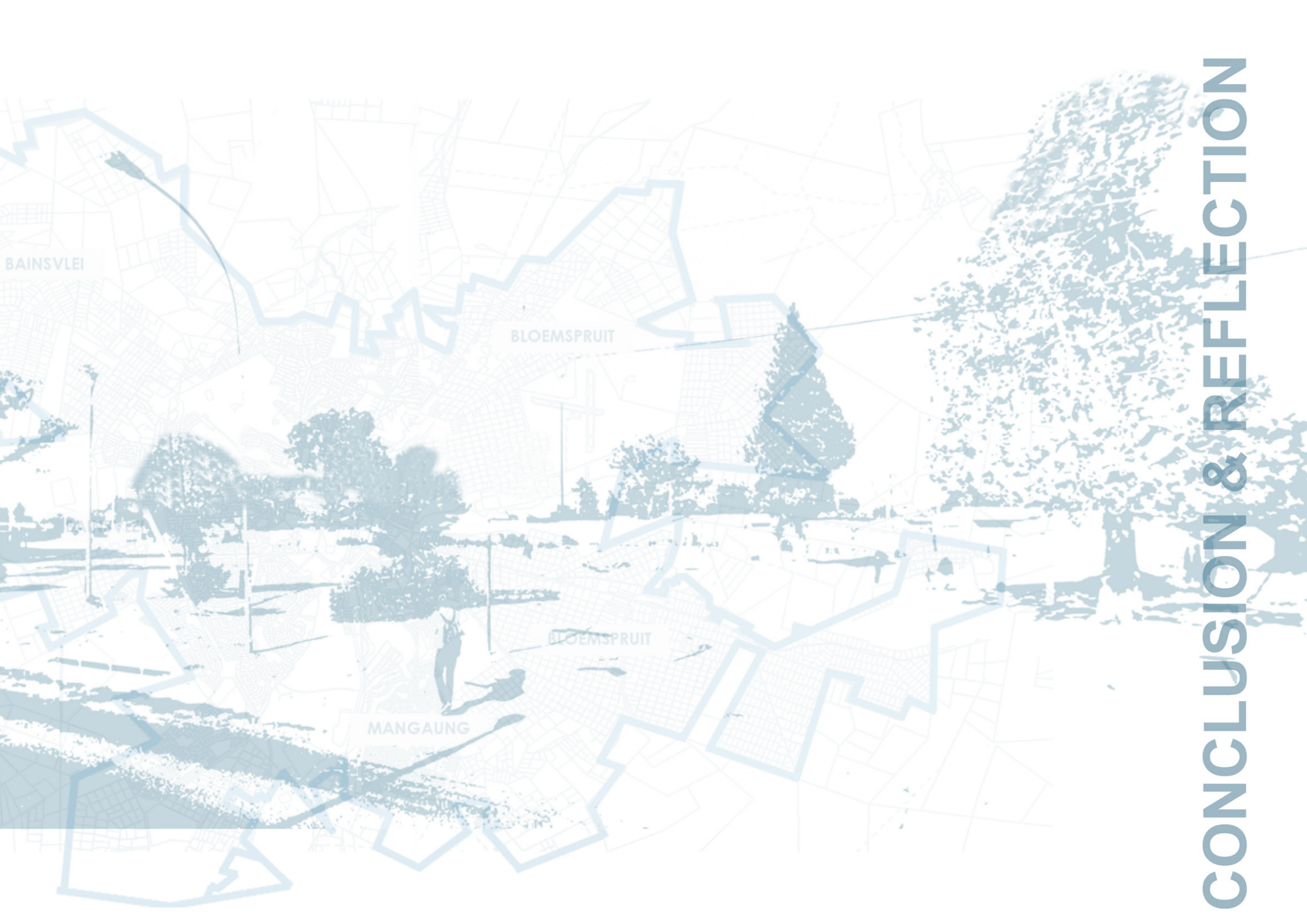
Reference List

Annexure Pages

Turn-it-in Report

# 8.0





# CONCLUSION & REFLECTION

# CONCLUSION

The proposed thesis sets out to incorporate many aspects surrounded around Batho, as a settlement/township, as well as theories about Threshold, the “in-between” and how these can be seen within the Batho context.

The theories and knowledge put forward about Batho formed an educational node that stitches itself into Batho's cultural fabric and becomes a space for the people of Batho and their identity.

With focus put on the existing, and interpreting “Threshold” as the main theoretical approach, the thesis created a “Batho Library & Learning Centre” that would become a rest and reflection space in close proximity to the Bloemfontein railway, and celebrate the movement of Batho people into the CBD and back every day.

With the Research Question proposed, the thesis forms an understanding of “In-between” spaces and existing identity to help generate the design for an educational node to tell stories of Batho and its people.

Ultimately, the design of a Batho Library & Learning Centre becomes a space to celebrate the people of Batho, through the upliftment of education, and a hierarchical node of identity and community.



**Fig 160.** BW photo of children playing (online, 2019)

## REFLECTION

When looking back at the dissertation as a whole, I can say that there were certain challenges that had to be overcome. Due to the fact that a problem/inquiry was chosen first, the following important aspect was site. To choose a site that would complement the Batho People and be on their main pedestrian route to the city. The proposed site is the perfect place for an opportunity to arise to benefit Batho and its people. By creating a Library & Learning Centre that starts to engage with the people and also tell stories of those people, a simple unity is created between man, city and architecture.

In conclusion, I thoroughly enjoyed investigating Batho and its vernacular elements. This helped influence the theory behind it and ultimately was one of the driving forces behind the design of the Batho Book House. This dissertation made it very evident to me that every aspect of architecture is important as they all come together to form a design for the people. Theory, History, Context, Construction and ultimately the Design of a building can be beautiful if one takes all these elements and uses them to design space that makes place.

This is why I believe the proposed "Batho Library & Learning Centre" would become a beautifully experiential node in the Batho landscape and ultimately become "A space to tell stories of the place and its people"

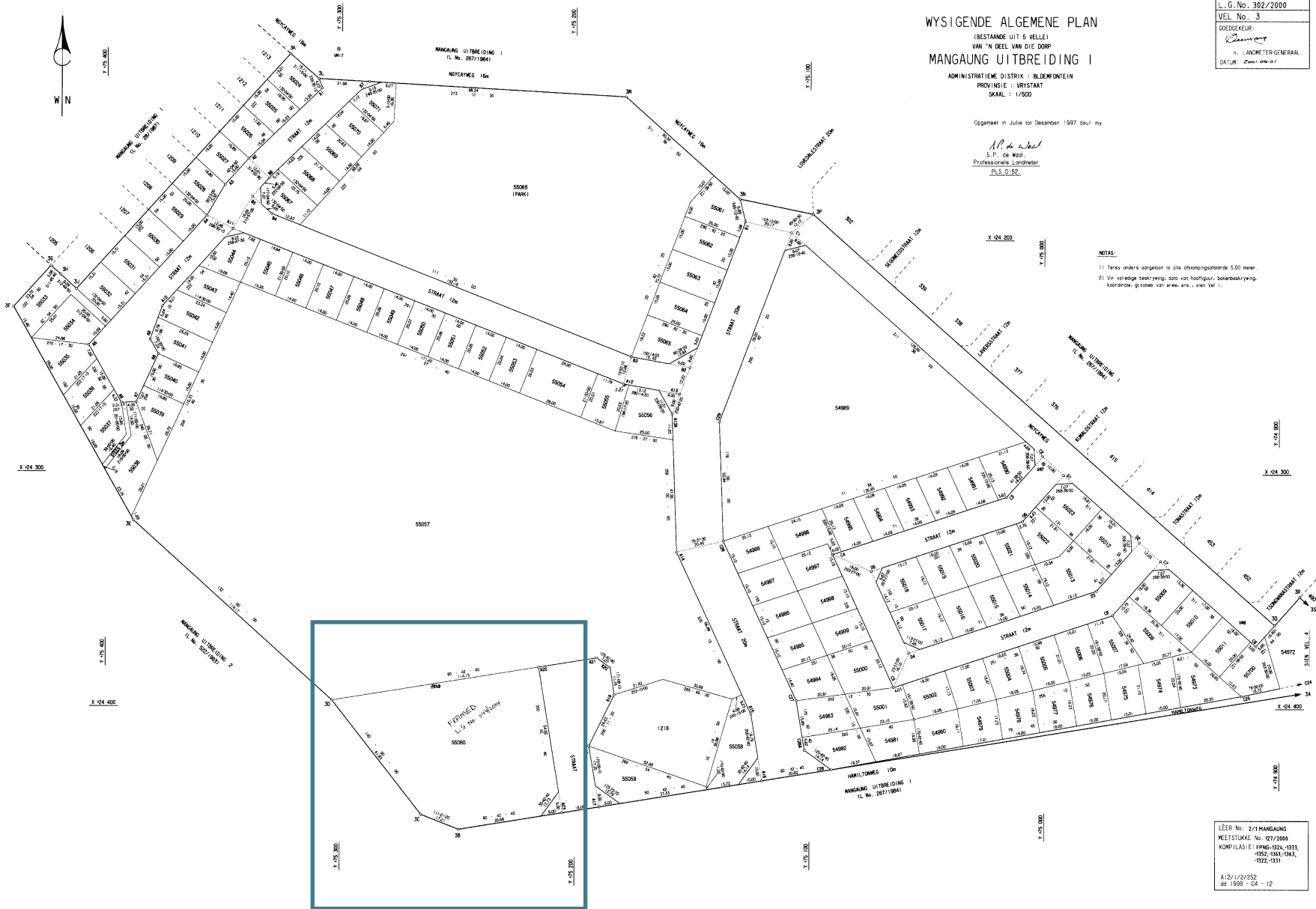


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WYSIGENDE ALGEMENE PLAN  
 (BESTAANDE UIT 5 WELLE)  
 VAN 'N DEEL VAN DIE DORP  
 MANGAUNG UITBREIDING I  
 ADMINISSTRATIEVE DISTRIK : BLOEMFONTEIN  
 PROVINSIE : VRYSTAAT  
 SKAAL : 1/500

L. G. No. 302/2000
VEL No. 3
DOEGEKEUR:
<i>[Signature]</i>
L. LANDMETER-GENERAL.
DATE: 2000/06/07

Opgemaak in Julie tot Desember 1997 deur my

*[Signature]*  
 S.P. de Wad.  
 Professionele Landmeter  
 P.L.S. O.L.S.

- NOTAS:
- 1) Tenye anders aangegeen is alle afmetingsgastande 5.00 meter
  - 2) Vir volledige beskrywing, stree van hooffuurg, bakelystreep, koordrooi, grootte van area ens., sien vel 1.

LEER No: 271 MANGAUNG
KEESSTRAKKE No: 027/2000
KOMPLIASIE: FPNG-024-033,
-192-1961-1963,
-032-031
A12/129/952
09 1998 - 04 - 12


SURVEYOR GENERAL DIAGRAM 1

ANNEXURE - A

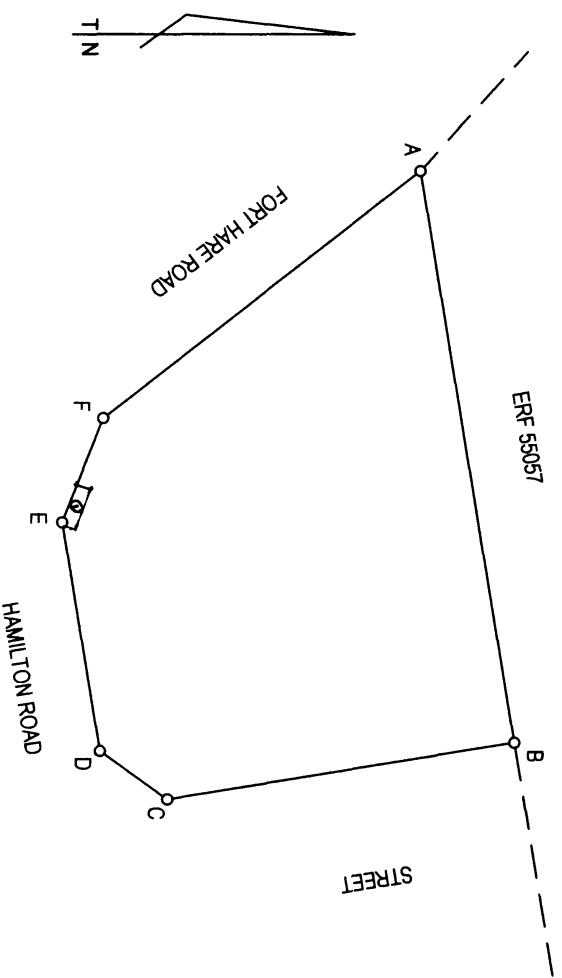
# ANNEXURE - B

## SURVEYOR GENERAL DIAGRAM 2 [ERF 55060]

SIDES Metres	ANGLES OF DIRECTION
AB 89,18	260 42 40
BC 54,00	350 42 40
CD 12,73	35 42 40
DE 35,68	80 42 40
EF 17,21	111 21 20
FA 61,83	142 00 00

S.G. No. 1144/2014
Approved 
for SURVEYOR- GENERAL 25/11/2014

Description of Beacons  
A, B, C, D, E, F : 12mm Iron peg



Scale 1:1000  
The figure represents 4448 square metres of land being

**ERF 55060**  
**MANGAUNG EXTENSION 1**

Administrative District: Bloemfontein  
Province: Free State

Framed in terms of Section 16 of Act 8 of 1997 in November 2014 by me **C.J. NORTJÉ PLS 1065**



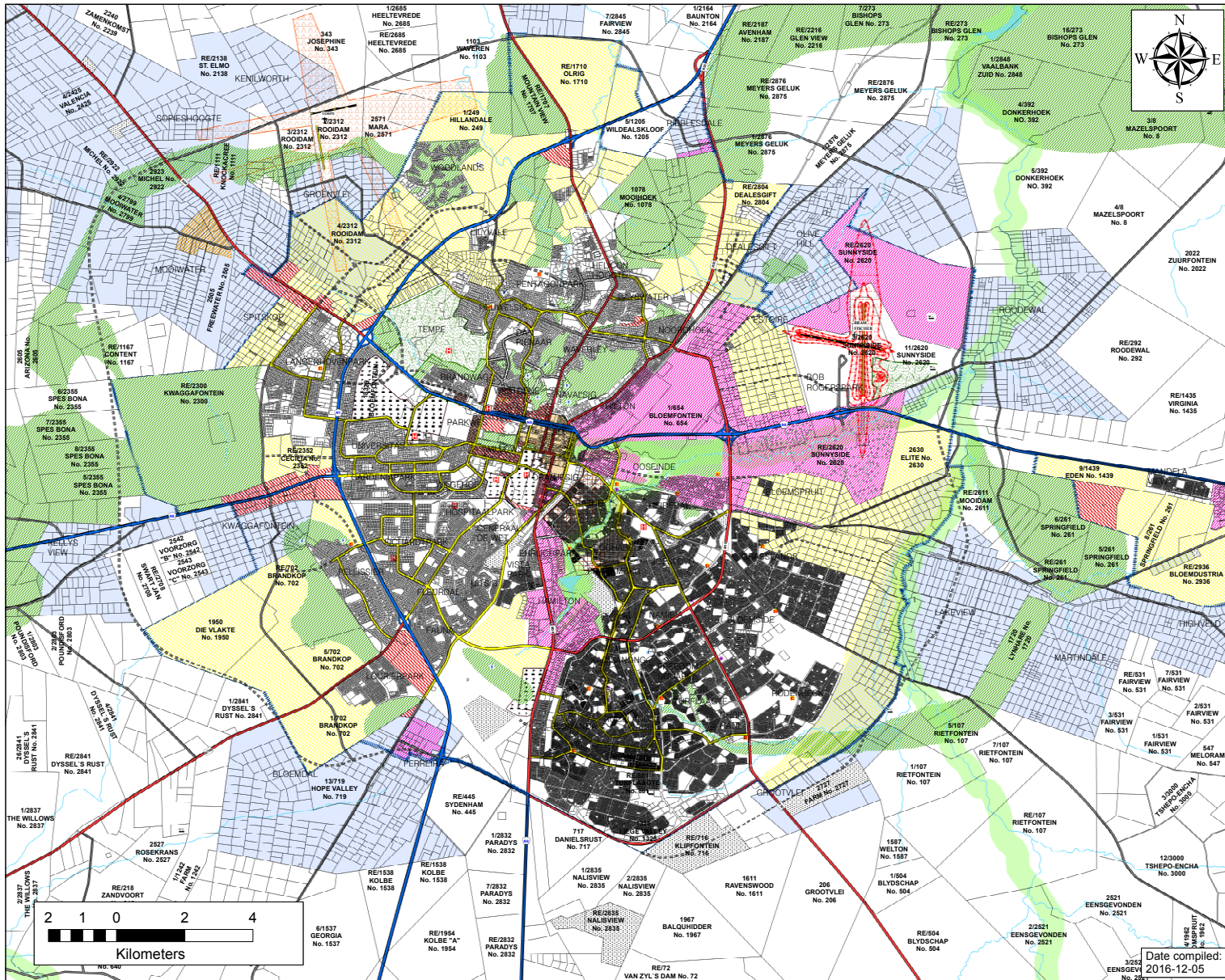
This diagram is annexed to No. T 622/2014 d.d. 16/2/2015 i.f.o. Registrar of Deeds Bloemfontein	The original General Plan is S.G. No. 302/2000 Transfer (Sheet 3)	File 55001-56000 MANGAUNG S.R. 538/2014 Comp. FPNG-1352 Gen. Plan S.G. No. 302/2000 Ext. 1, (Sheet 3)
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# MANGAUNG METROPOLITAN MUNICIPALITY

MANGAUNG METROPOLITAN MUNICIPALITY - ZONING

ANNEXURE - C



## LEGEND

- MMM Boundary
- All Cadastral Data
- MMM\_Rivers\_50000\_New\_Boundary
- MMM\_Dams
- Urban\_edge\_2016
- Hospitals
- Airfields
- Airport
- Water Reservoirs
- Sewer Works
- Recycling Collection Point
- Runways
- National Roads
- Regional Roads
- MMM Main Roads
- Rural Roads
- Offramps
- future\_roads\_2016
- Future Rail
- MMM Feeder Roads
- MMM NB Development
- Development Nodes
- Development Corridor
- Petra Safety Area
- BFN\_Noise\_contours\_2011
- cemetery\_2016
- mixed\_use\_without\_industry\_2016
- mixed\_use\_with\_industry\_2016
- future\_residential\_2016
- Green Buffers
- Moss\_2016
- Diverse Development
- Nature Reserves
- Urban Renewal
- Tourism Nodes
- Institutional\_2015
- Defence Force
- agricultural\_node\_2016
- Tempe Safety Zone
- Activity Strip
- Intensive Agriculture
- Urban Development Zone
- Peri-Urban Areas

## MANGAUNG METRO BLOEMFONTEIN

MICRO FRAMEWORK MAP 2016



Date compiled: 2016-12-05

Table 1 — Occupancy or Building Classification

1	2
Class of occupancy of building	Occupancy
A1	<b>Entertainment and public assembly</b> Occupancy where persons gather to eat, drink, dance or participate in other recreation.
A2	<b>Theatrical and indoor sport</b> Occupancy where persons gather for the viewing of theatrical, operatic, orchestral, choral, cinematographical or sport performances.
A3	<b>Places of instruction</b> Occupancy where school children, students or other persons assemble for the purpose of tuition or learning.
A4	<b>Worship</b> Occupancy where persons assemble for the purpose of worshipping.
A5	<b>Outdoor sport</b> Occupancy where persons view outdoor sports events.
B1	<b>High risk commercial service</b> Occupancy where a non-industrial process is carried out and where either the material handled or the process carried out is liable, in the event of fire, to cause combustion with extreme rapidity or give rise to poisonous fumes, or cause explosions.
B2	<b>Moderate risk commercial service</b> Occupancy where a non-industrial process is carried out and where either the material handled or the process carried out is liable, in the event of fire, to cause combustion with moderate rapidity but is not likely to give rise to poisonous fumes, or cause explosions.
B3	<b>Low risk commercial service</b> Occupancy where a non-industrial process is carried out and where neither the material handled nor the process carried out falls into the high or moderate risk category.
C1	<b>Exhibition hall</b> Occupancy where goods are displayed primarily for viewing by the public.
C2	<b>Museum</b> Occupancy comprising a museum, art gallery or library.
D1	<b>High risk industrial</b> Occupancy where an industrial process is carried out and where either the material handled or the process carried out is liable, in the event of fire, to cause combustion with extreme rapidity or give rise to poisonous fumes, or cause explosions.
D2	<b>Moderate risk industrial</b> Occupancy where an industrial process is carried out and where either the material handled or the process carried out is liable, in the event of fire, to cause combustion with moderate rapidity but is not likely to give rise to poisonous fumes, or cause explosions.
D3	<b>Low risk industrial</b> Occupancy where an industrial process is carried out and where neither the material handled nor the process carried out falls into the high or moderate risk category.
D4	<b>Plant room</b> Occupancy comprising usually unattended mechanical or electrical services necessary for the running of a building.
E1	<b>Place of detention</b> Occupancy where people are detained for punitive or corrective reasons or because of their mental condition.
E2	<b>Hospital</b> Occupancy where people are cared for or treated because of physical or mental disabilities and where they are generally bedridden.
E3	<b>Other institutional (residential)</b> Occupancy where groups of people who either are not fully fit, or who are restricted in their movements or their ability to make decisions, reside and are cared for.

Table 2 — Design Population

1	2
Class of occupancy of room or storey or portion thereof	Population
A1, A2, A4, A5	Number of fixed seats or 1 person per m <sup>2</sup> if there are no fixed seats
E1, E3, H1, H3, H4	2 persons per bedroom
E4	16 persons provided that the total number of persons per room is not more than 4
H5	16 persons per dwelling unit provided that the total number of persons per room is not more than 4
G1	1 person per 15 m <sup>2</sup>
J1, J2, J3, J4	1 person per 50 m <sup>2</sup>
C1, E2, F1, F2	1 person per 10 m <sup>2</sup>
B1, B2, B3, D1, D2, D3	1 person per 15 m <sup>2</sup>
C2, F3	1 person per 20 m <sup>2</sup>
A3, H2	1 person per 5 m <sup>2</sup>

Table 1 (concluded)

1	2
Class of occupancy of building	Occupancy
E4	<b>Health care</b> Occupancy which is a common place of long term or transient living for a number of unrelated persons consisting of a single unit on its own site who, due to varying degrees of incapacity, are provided with personal care services or are undergoing medical treatment.
F1	<b>Large shop</b> Occupancy where merchandise is displayed and offered for sale to the public and the floor area exceeds 250 m <sup>2</sup> .
F2	<b>Small shop</b> Occupancy where merchandise is displayed and offered for sale to the public and the floor area does not exceed 250 m <sup>2</sup> .
F3	<b>Wholesalers' store</b> Occupancy where goods are displayed and stored and where only a limited selected group of persons is present at any one time.
G1	<b>Offices</b> Occupancy comprising offices, banks, consulting rooms and other similar usage.
H1	<b>Hotel</b> Occupancy where persons rent furnished rooms, not being dwelling units.
H2	<b>Dormitory</b> Occupancy where groups of people are accommodated in one room.
H3	<b>Domestic residence</b> Occupancy consisting of two or more dwelling units on a single site.
H4	<b>Dwelling house</b> Occupancy consisting of a dwelling unit on its own site, including a garage and other domestic outbuildings, if any.
H5	<b>Hospitality</b> Occupancy where unrelated persons rent furnished rooms on a transient basis within a dwelling house or domestic residence with sleeping accommodation for not more than 16 persons within a dwelling unit.
J1	<b>High risk storage</b> Occupancy where material is stored and where the stored material is liable, in the event of fire, to cause combustion with extreme rapidity or give rise to poisonous fumes, or cause explosions.
J2	<b>Moderate risk storage</b> Occupancy where material is stored and where the stored material is liable, in the event of fire, to cause combustion with moderate rapidity but is not likely to give rise to poisonous fumes, or cause explosions.
J3	<b>Low risk storage</b> Occupancy where the material stored does not fall into the high or moderate risk category.
J4	<b>Parking garage</b> Occupancy used for storing or parking of more than 10 motor vehicles.



Assignment Inbox

preferences




**Welcome to your new class homepage!** From the class homepage you can see all your assignments for your class, view additional assignment information, submit your work, and access feedback for your papers. ✕

Hover on any item in the class homepage for more information.

### Class Homepage

This is your class homepage. To submit to an assignment click on the "Submit" button to the right of the assignment name. If the Submit button is grayed out, no submissions can be made to the assignment. If resubmissions are allowed the submit button will read "Resubmit" after you make your first submission to the assignment. To view the paper you have submitted, click the "View" button. Once the assignment's post date has passed, you will also be able to view the feedback left on your paper by clicking the "View" button.

#### Assignment Inbox: NAS PLAGIARISM CHECK \_123\_1

Assignment Title	Info	Dates	Similarity	Actions
Check for plagiarism here		Start 11-Jan-2019 2:29PM Due 31-Dec-2019 11:59PM Post 19-Jan-2019 12:00AM	6% 	<a href="#">Resubmit</a> <a href="#">View</a> 





TECHNICAL DOCUMENTATION



# CHAPTER 9

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## AIM OF THE CHAPTER

Final Technical Drawings for submission

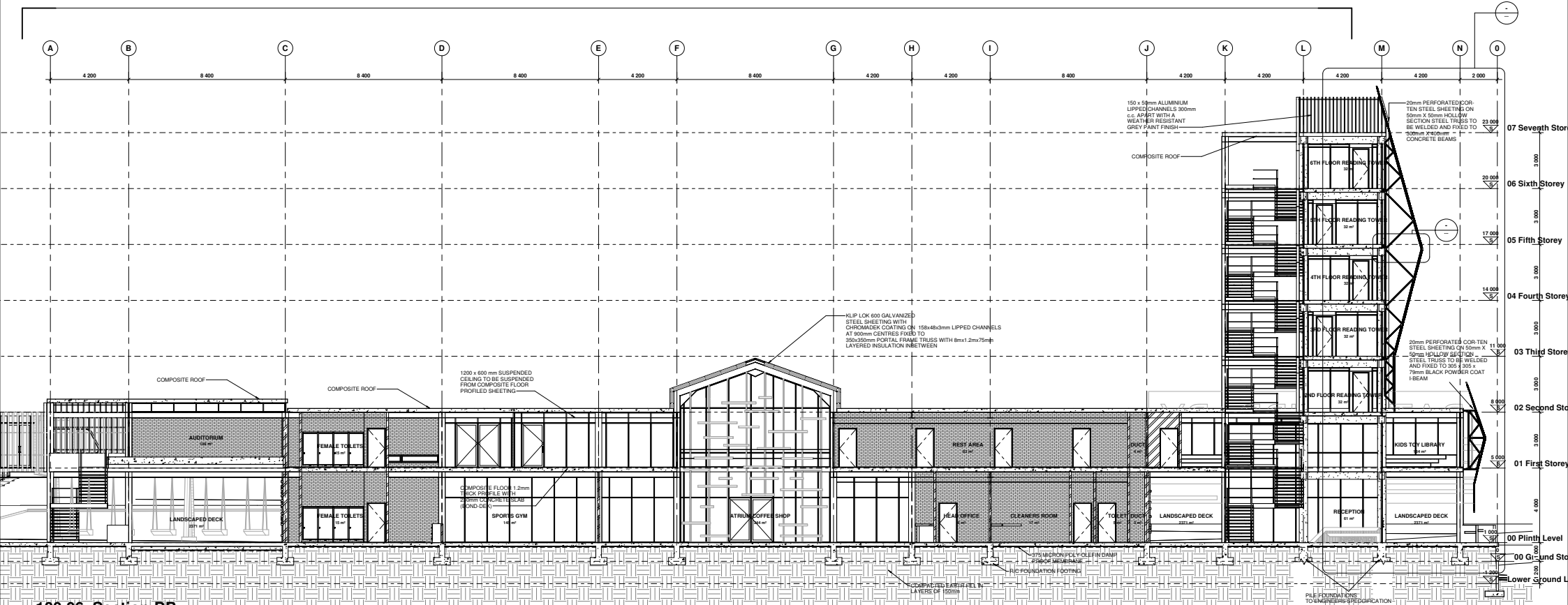




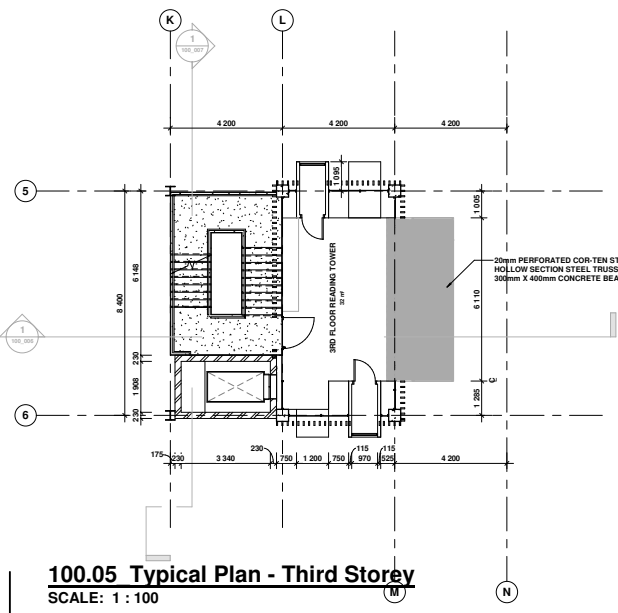




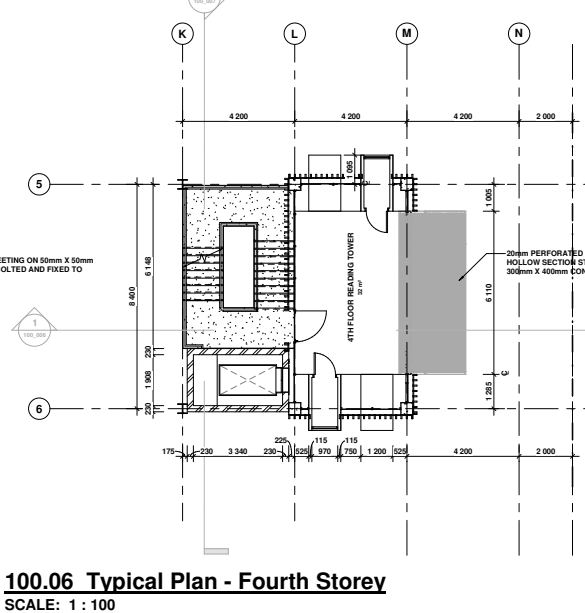




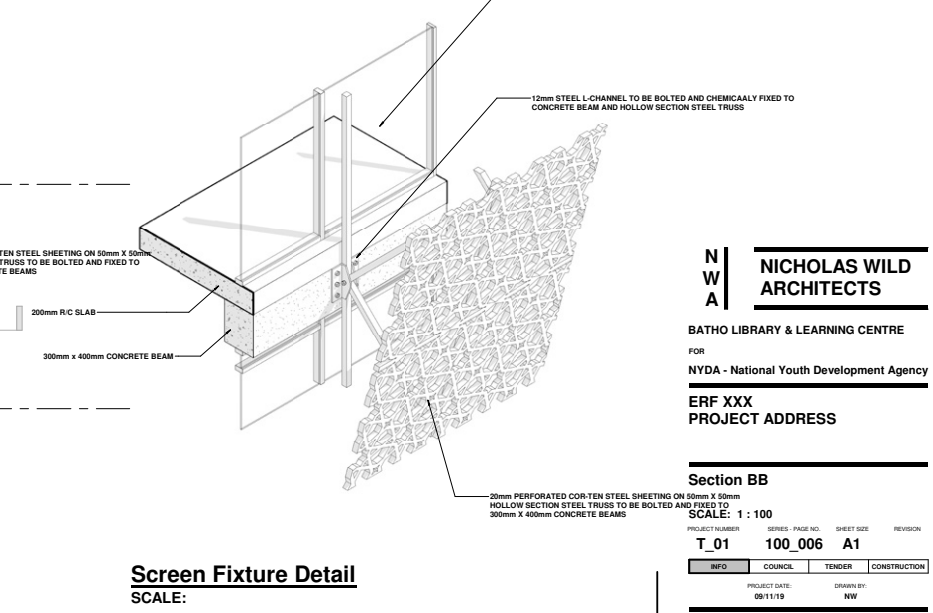
**100.06 Section BB**  
SCALE: 1 : 100



**100.05 Typical Plan - Third Storey**  
SCALE: 1 : 100



**100.06 Typical Plan - Fourth Storey**  
SCALE: 1 : 100



**Screen Fixture Detail**  
SCALE:

**N W A**

**NICHOLAS WILD ARCHITECTS**

BATHO LIBRARY & LEARNING CENTRE  
FOR  
NYDA - National Youth Development Agency

ERF XXX  
PROJECT ADDRESS

**Section BB**  
20mm PERFORATED COR-TEN STEEL SHEETING ON 50mm X 50mm HOLLOW SECTION STEEL TRUSS TO BE BOLTED AND FIXED TO 300mm X 400mm CONCRETE BEAMS  
SCALE: 1 : 100

PROJECT NUMBER	SERIES PAGE NO.	SHEET SIZE	REVISION
T_01	100_006	A1	

INFO	COUNCIL	TENDER	CONSTRUCTION

PROJECT DATE: 08/11/19  
DRAWN BY: NW















