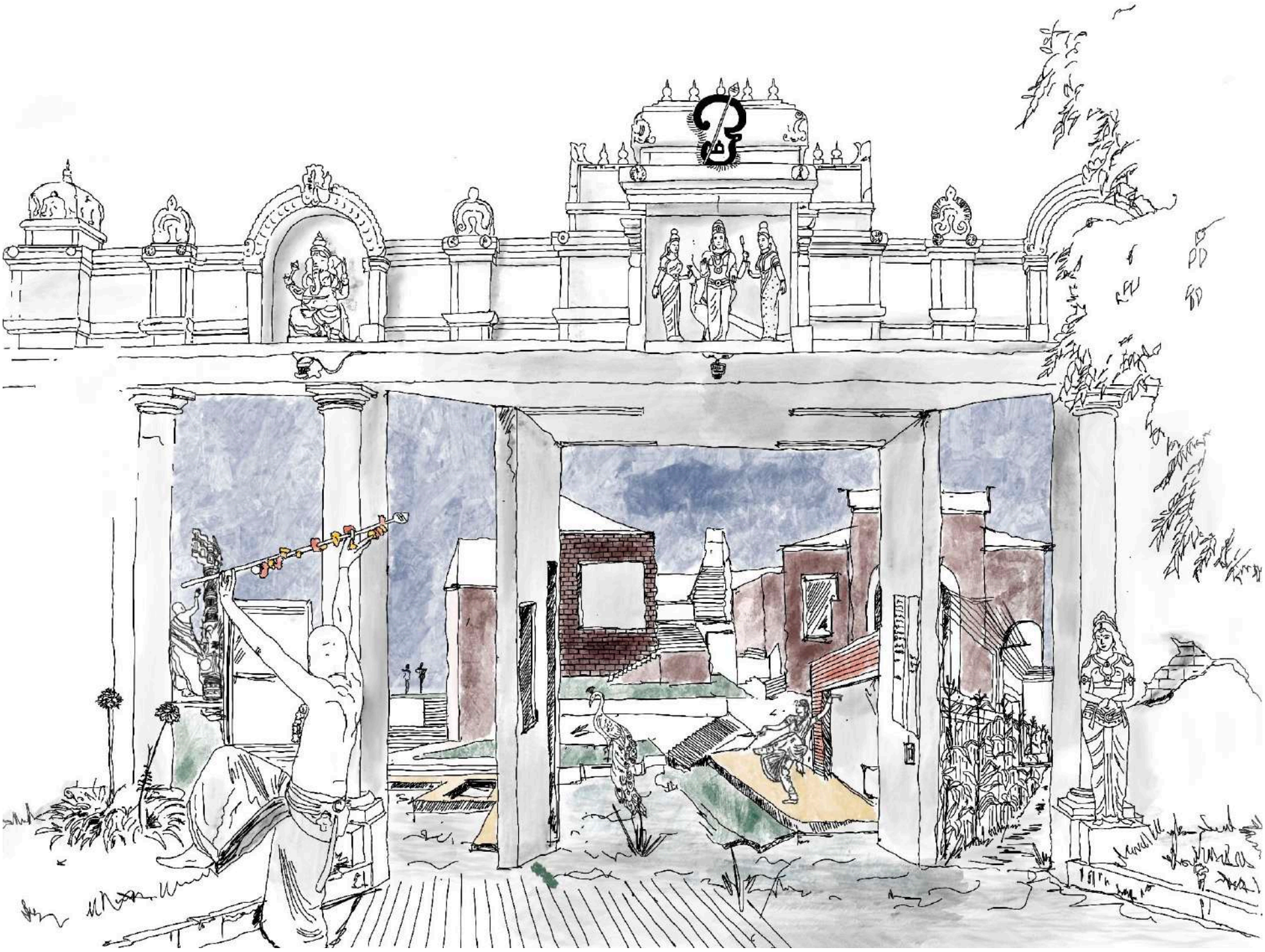


EAT, PRAY, LIVE

Re-imagining The Melrose Hindu Temple as a space for socio-cultural integration

Charvana Diar
1058629

February 2022

ACKNOWLEDGEMENTS

The extent of my gratitude goes way beyond the confines of this single page, still I owe my thanks to:

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My supervisors,
Brendan Hart, whose guidance throughout this challenging year, encouraged me and provided the platform to achieve greater heights. Reon and Sundeep, for the added support and for making time for me in your busy schedule.

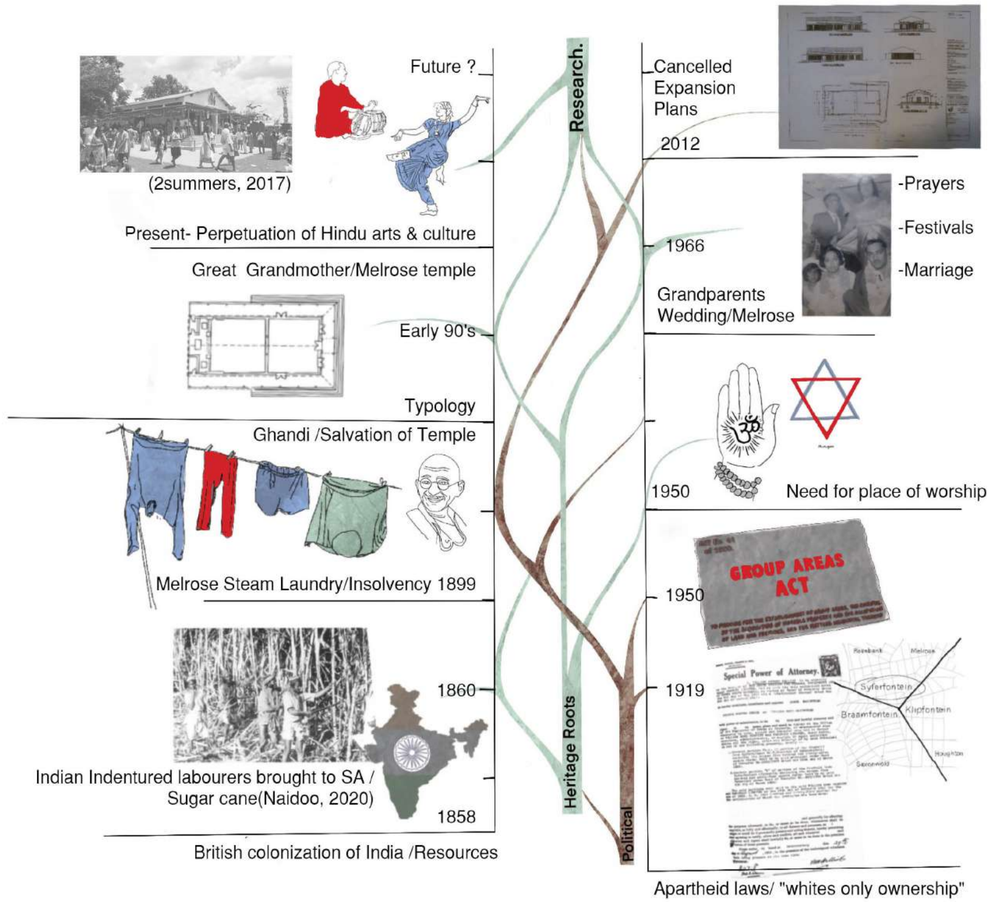
My peers,
A great deal of thanks to 'The Sub-Group', Bilqis and Mahdiyah in our mutual struggle; Michelle, Tumi and Philisani who helped in many different ways throughout the year.

And finally, everyone whose knowledge, time and resources contributed to the conception of this thesis and my academic development as a whole- Thank you!

"IT ALWAYS SEEMS IMPOSSIBLE UNTIL IT'S DONE."

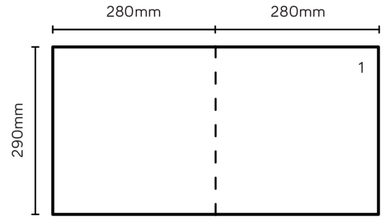
- Nelson Mandela

For my ever-loving BRILLIANT father, Dinesh Diar



FORMAT OF THIS REPORT

This document was initially prepared for printing, but has been adjusted to be legible and clear on screen, which is the new standard for submission of postgraduate reports at the university. Each spread is comprised of two 280x290mm pages (approximately A3 square).



I, Charvana Diar 1058629 am a student registered for the course Master of Architecture (Professional) in the year 2021. I hereby declare the following: I am aware that plagiarism [the use of someone else's work without permission and/or without acknowledging the original sources] is wrong. I confirm that the work submitted for assessment for the above course is my own unaided work except where I have stated explicitly otherwise. I have followed the required conventions in referencing thoughts, ideas, and visual materials of others. For this purpose, I have referred to the Graduate School of Engineering and the Built Environment style guide. I understand that the University of the Witwatersrand may take disciplinary action against me if there is a belief that this is not my unaided work or that I have failed to acknowledge the source of the ideas or words in my own work.

Signed _____ on 2022/02/22

SCHOOL OF ARCHITECTURE & PLANNING

UNIVERSITY OF THE WITWATERSRAND JOHANNESBURG

EAT, PRAY, LIVE

Re-imagining The Melrose Hindu Temple as a space for socio-cultural integration



This document is submitted in partial fulfilment for the degree: Master of Architecture (Professional) at the University of the Witwatersrand, Johannesburg, South Africa, 2021.

CONTENTS

01 ABSTRACT 11

02 LEXICON 12

03 INTRODUCTION 15
1 Evolution of Research 16

04 THE INDIAN COMMUNITY 21
1 Indian Arrival 22
2 Post-Apartheid/ Post Colonialism 30
3 Hybridity 33
4 Identity 35
5 A Sacred Space 37
5 Conclusion: What does it mean to be hybrid in a Post-Apartheid city ? 46

05 WATER AND SHARED URBAN SPACE 49
1 Water as a resource 52
2 Constructed Wetlands 54
3 Spaces around water in the city 56
4 Water and spirituality 60
5 Conclusion 64

06 THE PROJECT 67
1 Ritual 68
2 Kavady Festival 74
3 Activity 76
4 Abbotsford the Site 78
5 Site Evolution 80
6 Site Mapping 84
7 The Temple Compound 96
8 The Boundary 98

07 GENERATION OF DESIGN PRINCIPLES 109
1 Charrette 110
2 Experiment 1- Cloth 112
3 Experiment 2-The Elements 116
4 Analysis of Charrette 118
5 Experiment 3- Space 120

08 CASE STUDIES 123
1 Jetavan Spiritual Development Centre 124
2 Jawahar Kendra Arts Centre 126
3 Urban Intervention 128
4 !Khwa Ttu Cultural Centre 130
5 Freedom Park 132
6 Freedom Park- Phase 2 134
7 Babylonstoren Hotel 136

09 DESIGN DEVELOPMENT 139
1 Programme 140
2 Technical Sysrems 144
3 Sketch Design 146
4 Concepts 151
5 Orientation 154
6 Tectonic expression 156
7 Light Study 161
8 Process Sketches 162

10 FINAL DESIGN PROPOSAL 169

11 CONCLUSION 197

12 VIABILITY REPORT 198

13 LIST OF FIGURES 208

14 REFERENCES 218
1 Literature
2 Online

15 ADDITIONAL DOCUMENTS 225
1 Approval of Research
2 Ethics Clearance Certificate



THE SITE AT MELROSE...



01
ABSTRACT

This research report explores the possibility of creating a spiritual precinct within the northern suburbs of Johannesburg and is inextricably linked to the culture and heritage of the Hindu population. It seeks to challenge the historical typology of religious spaces and its interpreted apprehension towards becoming more socially and culturally inclusive.

There can be little dispute about the damaging legacy of urban planning under Apartheid. Continued tensions between colonial structures of power, identity, and cultural knowledge also persist. As a result, the Melrose Temple in Abbotsford remains isolated in its contextual setting while exclusively serving the religio-cultural needs of the Hindu population. In this instance, increased cultural transformation and co-existing hybrid identifications are essential in creating conditions conducive to an integrative city.

The overall proposal seeks to initiate conversation between its users by offering diverse programmes and activities that enhance self-transformation. These activities include the shared ritual practices of eating, cooking and growing food within an oasis of serenity and natural beauty. In line with ritual practice and religion, the significance of water on the site becomes an interesting aspect to explore further. Contemporary South Africa requires the vicinity of the Melrose Temple to reimagine how it positions itself within the city and ensure relevance for a generation that is seeking a new identity and what it means to be South African, underscored by the notion that "Our diversity is our strength".

Key themes such as cultural hybridity, identity, and spirituality form the conceptual framework of this report to develop an expression of this project through the built environment.

Figure 1.1
Historic photograph taken of the Melrose Hindu Temple in Abbotsford, Johannesburg (The Star Newspaper, n.d)

02
LEXICON

The following terms defined below are used throughout this research report, and may be interpreted differently from their standard definitions.

Spruit	Translates from Afrikaans to "stream". Typically refers to the naturally-occurring, north-flowing streams of Johannesburg, and often specifically to the Sandspruit.
Post-Apartheid	Occurring in the time after the end of Apartheid.
Coolie	A derogatory term used for people of Indian decent. In the Tamil language the word "KULI" means payment for menial work done.
Third-Space	A space whereby individuals can experience a transformative sense of self, identity and relation to others.
Hybrid	Of mixed character and composed of different elements
Indentured	An indenture is a legal contract that reflects or covers a debt or purchase obligation
Shloka	a Sanskrit word referring to a verse, proverb, hymn or poem
Kavady	A wooden arch on a wooden base, decorated with flowers and peacock feathers.
Ritual	A religious ceremony performed following a prescribed order and consisting of a series of actions.
Devotee	A strong believer in a specific God or religion.
Deity	A 'God" or divine supernatural being.
Dhobi	Indians who had emigrated from India and who continued to perform the service allocated to their cast.
Shiva Linga	An abstract or aniconic representation of the Hindu god Shiva
Navagraha	Nine heavenly bodies and deities that influence human life on Earth in Hinduism and Hindu astrology
Dharma	Religious duty

03
INTRODUCTION

This research report is linked to various disciplines of a historical, cultural as well as social nature. It was sparked by a need to create a narrative that represents my heritage and further the trajectory initiated by my forefathers. The Shree Siva Subramaniar Temple is well known as 'The Melrose Temple' in Johannesburg and is the product of great sacrifice by the Indian Indentured labourers. They often celebrated their relationship with God through festivals (Desai, 2010). These festivities played an essential role in fostering social solidarity and allowed the Indian community to survive the harshness of their unjust reality. The Melrose Temple is one such example that reflects this early history of Hinduism in South Africa and remains a popular shrine of worship to this day.

There are multiple interpretations of unacknowledged histories dating back to the early 1870s; therefore, my starting point was to gain a better understanding of the Temple's history, especially in relation to the rules and regulations of Apartheid. The association between the Indian community and Johannesburg's northern suburbs is quite disparate; therefore, the history of Indians in South Africa is further explored. Key themes become apparent in this research and include concepts and narratives of identity, cultural hybridity, religion as well as memory. These themes provide a framework to approach the theoretical analysis of the site at Melrose.

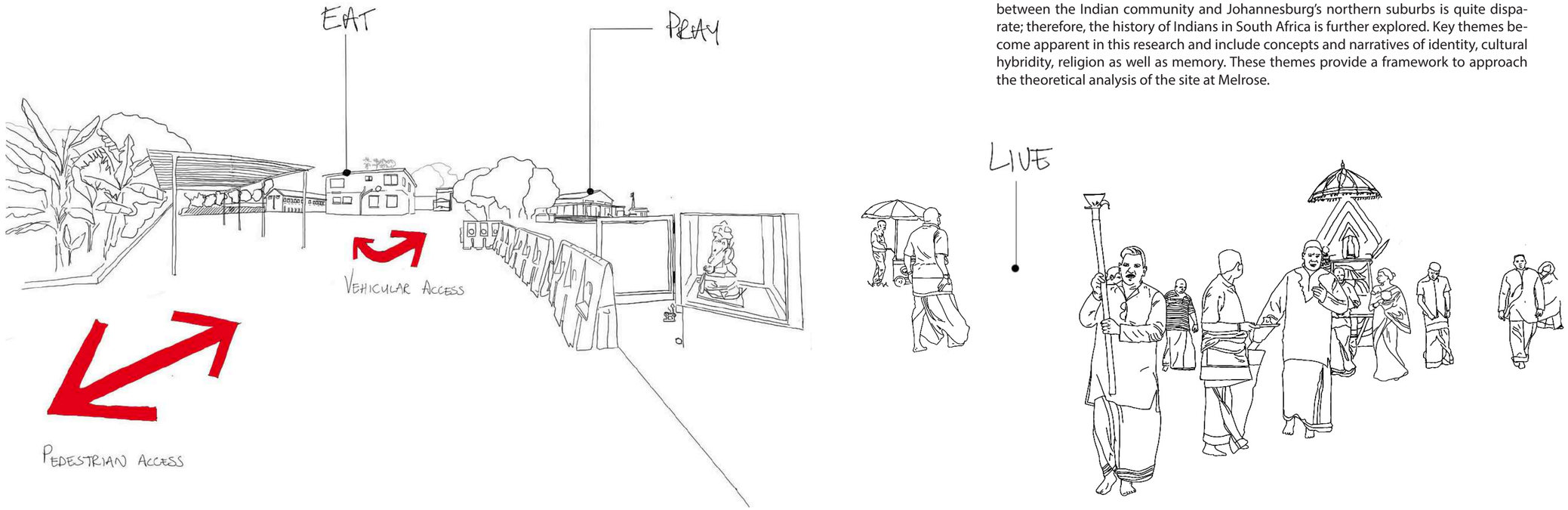


Figure 3.1
Illustration of the Melrose Temple- A perspective view (Author,2021)

1. Evolution of Research

This research finds its origins in the northern suburbs of Johannesburg, a landscape embedded with layers of displacement, oppression, and marginalization. Previously barred by law from living and using the area, people of colour are the focus. Having Grandparents and Great Grandparents who formed part of this tumultuous history al-lowed me the opportunity to think about how once-exclusive spaces within the city could transform to integrate various social groups, especially in contemporary South Africa.

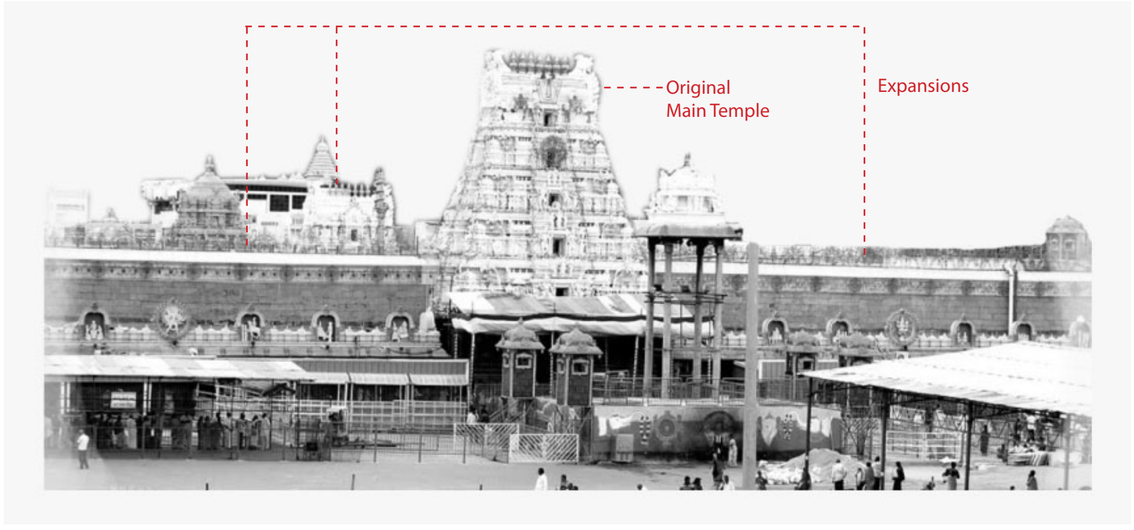
The northern suburbs are primarily residential in terms of scale, land use, and densi-ties but have also become home to various commercial developments. The significant increase of new barriers erected, such as high fences and tight security, emphasizes that the area is far from integrating the fragmented city of apartheid. Boundaries and barriers, also found within open public spaces, prevent the city from integrating due to the constant crime and safety issues, without any spatial consid-eration. How can areas within the elite northern suburbs of Johannesburg become more open, natural, and socially integrative? And how can the existing built fabric complement these changes?



Johannesburg has a rich cultural identity, as seen in the various churches, synagogues, mosques and temples. These religious typologies are clear indicators of the timeless principles and traditional methods used to create unique building structures. My strategy is to use the existing typology of the historic Melrose Hindu Temple and overlay it with the extension of a 'sub-building'. According to a study on the extension and construction surrounding existing Hindu temples in Varanasi, India, sub-buildings are used mainly as residences and sometimes contain rooms for offices or shops (Yanagisawa, et al, 2000). This integration of the old with the new has the potential to create a "third space" whereby contemporary physical form is joined with the principles that govern the old built fabric and, in turn, a new typology will form. By preserving and promoting natural spaces such as rivers, fauna, and flora, you expose people to enhanced opportunities for exploration and bring together vastly different cultures that have one shared interest: spiritual well-being and connection to nature.

Fig 3.2 (Right)
Residential developments in the northern suburbs of Johannesburg with high raised walls and barriers to seek refuge from crime (Jenkin, 2019).

According to the religious texts found in a series of manuals called the Mansara and the Silpa Sastra, a temple along with its deities may not be demolished as this action is considered sinful. These treatises, which date from 500 AD, are seldom consulted in the present day, especially in South Africa; nevertheless, they have remained a vague guide to later temple builders (GTA, 2003). A temple may not be moved as "the sacredness of a temple is inseparably linked with a specific place" (Ohara et al., 2020). However, a temple can be remodeled or extended due to various functional changes that occur over time. Huge temple complexes found in the south of India are prime examples of this "repeated extension" of the temple precincts. This allows opportunities for more functional programs to occur. The temple has exercised an enormous influence on our social life throughout history, apart from keeping the torch of dharma turning aloft (Harshananda. n.d.).



In the book titled 'Rediscovering the Hindu Temple: The Sacred Architecture and Urbanism of India,' Bharne and Krusche (2012) explain how a tiny sanctum born under a roadside tree developed into a large, canonized temple through constant expansion. To an extent, this process is reflected in the Melrose temple, as shown in the figures below, whereby the tiny tin structure which housed a mere fifty people slowly expanded over time and transformed, now seating up to four hundred people at a time.

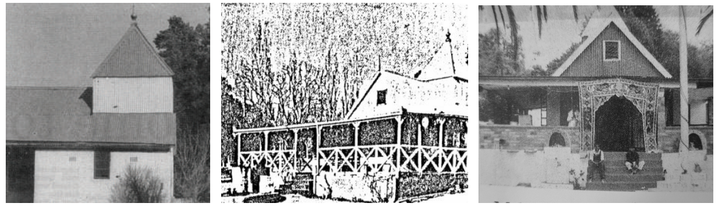


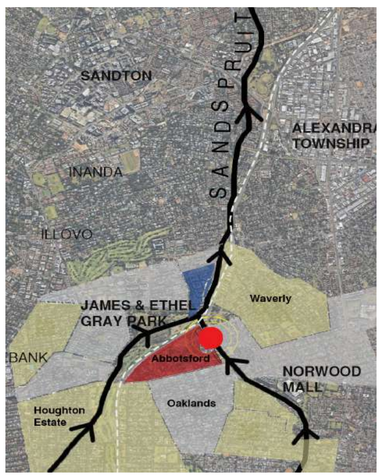
Fig 3.3 (Above)
Tirumala Venkateswara Temple, located in Tirupati, India
(Pngitem, 2019)

Figure 3.4 (Left)
Evolution of the historic Melrose Temple representing time and process in urban space.
-Original Temple (Newspaper article unknown,1983)
-Patio Installed
(The Star Newspaper,1984)
-Face brick piers and walling with expansion (Unknown,n.d)

It was from here that the project evolved into its theoretical context and established the initial research question: How can a historical typology such as the Melrose Hindu Temple regain contemporary relevance by servicing the needs of a widespread community in post-Apartheid South Africa? The history of the Melrose Temple is unpacked in the following chapter and sets the basis for the design intention, which is to provide accessibility to the previously disadvantaged groups within an affluent suburban environment.



There can be little dispute about the damaging legacy of urban planning under Apartheid. The imposition of racial segregation dislocated communities and entrenched inequality in the built environment. (Turok,1994). The northern suburbs of Johannesburg "are as much a product of Apartheid as the townships" (Mabin, 2014). In present-day South Africa, continued tensions seem to exist between the imperial or colonial structures of power, identity, and cultural knowledge. In everyday life, the norms of postcolonial power relations are subverted by everyday political, aesthetic, or daily practices. The inclusion of hybrid identifications that co-exists, and cultural transformations are an essential factor, especially in terms of the location of my proposed design: An exclusive use Hindu temple found in predominantly Jewish society. In today's globalized world, cultures are increasingly merging. The question is then, what are the challenges of hybrid cultures in terms of what my design can achieve?



Key:

- Melrose Arch Precinct
- Temple Location
- M1 Motorway
- Sandspruit north flowing River

Abbotsford is a lesser-known suburb just south of the Melrose Arch Precinct. Along with its neighbours Melrose, Oaklands, Waverly, Dunkeld, and Bramley, it captures the lush, distinctive features of the northern suburbs with its popular parks formed around several small lakes.

Running concurrently to this research component was my interest in the Sandspruit River, which originates from three small streams. The Orange Grove stream, the buried stream which runs near the edge of the Houghton Golf Course, and lastly from another little stream at the south end of a narrow park strip in Abbotsford.

It is a significant natural water system running in a northerly direction and plays a similar role to the River Ganga in India. All people of all religions revere the Ganges' as not only a part of their heritage and culture but also as an unending source of nourishment. This presented itself as one of the major drivers for selecting the project's context, being situated in Abbotsford. The fact that Abbotsford and its surroundings form, in some way, part of the narrative of water in the city, further introduced the conversation centred on water and the shared urban spaces that form around it.
The Melrose Temple was built in Abbotsford mainly due to the presence of the Sandspruit River, which, over the past 160 years, allowed Hindus the opportunity to carry out their daily devotional needs. This too further introduced the conversation centred on ritual practices and the spaces that can form around them. With reference to the traditional rituals on the Ganges riverbanks in Mumbai, I was attracted to the idea that the Sandspruit river stream that runs past the Melrose Temple could facilitate social and cultural integration instead of being hidden away on a piece of poorly tended property. This allowed me to see an opportunity to develop this underutilized space within the city by simultaneously paying 'homage' to my forebears. Natural, green spaces within urban environments should be of utmost importance and shared amongst all. Therefore, the project proposes the development of a new cultural precinct mainly for unity through spiritual enrichment. How can a new development in the integrative city of Johannesburg facilitate transformation in the area?

Type A

How can a historical typology such as the Melrose Hindu Temple, regain contemporary relavance by servicing the needs of a widespread community in Post-Apartheid South Africa ?

Type B

Integrated City
(Hybrid)

"THIRD SPACE"



Figure 3.5 (Opposite Top Left)
Highlighted site in context
(Author, 2021, After Google Earth, 2020).

Figure 3.6 (Opposite Bottom Left)
The Sandspruit runs northwards from three small streams through its northernmost suburbs. (Author ,2021, After Google Earth, 2020).

Figure 3.7 (Left)
The Ganges River is an integral part of Indian spirituality and provides space for various traditional rituals and cleansing ceremonies. (Unknown, n.d.)



04
THE INDIAN COMMUNITY

According to an article written by Maria Thomas entitled, 'The story of Indians in South Africa is about so much more than Gandhi,' she mentions that, around the world, the South African Indian community and Mahatma Gandhi are always associated. Gandhi's 21 years in South Africa were formative in his mission to lead India's freedom struggle (Thomas, 2018). This chapter expands that narrative by looking at what it was really like to be of Indian origin in South Africa -arriving as mere indentured labourers at the port of Natal to now being the largest population of Indian descent on the continent. This will be looked at in conjunction with the birth of the Melrose Temple, as these two events are inextricably linked.

The South African Indian diaspora has changed with history. One of the first things we grew as part of was colonialism. When indenture was abolished, Apartheid came about. So, the Indian community grew with Apartheid and lived under its regime as part of the black population. I was born post '94, as an early product of the 'born-free' generation, on the "threshold" of an uncertain present and between a socially unjust past and a hopeful future. I often remember navigating the city during my younger days as a young Indian South African. I recall Fordsburg being the only known place where one could buy any sort of Indian delicacies, spices, jewellery, or fabrics. In the past decade, however, Fordsburg repurposed itself and has evolved to become virtually unrecognizable to the Fordsburg of my childhood. Today, it is a rich "cultural melting pot" of various other immigrant communities. The influence of these different cultures on each other has had a significant impact on creating spaces that are more inclusive and accommodating to other cultures and societies.

Figure 4.1 (Opposite)
Photograph of my grandparents getting married in a predominantly "white neighborhood" at Melrose Temple, despite the rules of the Group Areas Act (Unknown, 1966)

1. Indian Arrival

Indian Indentured labourers arrived in Natal during the 1860s during British colonial rule. They were brought from India to work for the sugar cane farmers, who required them as an alternative source of labour. This was due to the shortfall of labourers since the African population were practising subsistence farming at the time. Most of these indentured labourers were Hindus and had signed a five-year contract that bound them in a manner similar to that of slavery. These labourer's experienced great hardship during their contracts and were incentivized to stay for a further five years in exchange for a free return trip to India or a piece of crown land.

From the 1870s onwards, a second wave of so-called "passenger Indians" followed the indentured immigrants at their own expense and established themselves as small shop owners and merchants (Valley,2001). Well-known as Gujarati traders from western India, they took advantage of the "opportunities provided by the growth in the number of indentured and ex-indentured Indians in Natal" (Desai,2007).

After the specified term of Indenture was completed, a third category of Indians emerged as "free Indians" in which many became hawkers, traders, and some even embarked upon market gardening. According to Tholsi Mudly in her article A Brief History of Indian Indenture in South Africa, the labourer's "...had to make many adaptations regarding religion, language, caste, dress, and food to survive in this land" (Mudly,2020). Following the discovery of gold and the establishment of Johannesburg in 1886, Indians started appearing in significant numbers. This movement prompted the Transvaal Government to impose restrictive laws, making the lives of Indian immigrants even more difficult. Law No.3 of 1885 "relating to Coolies, Arabs, and other Asiatics" further restricted their rights to own land and thus forced the Indian community into various segregated areas such as Fordsburg and Lenasia (Hart,2013). Not long after this, "Newtown's Coolie Location" (Johannesburg's first Indian settlement) was evacuated. This happened because the British Government had plans to redevelop the area, and the Coolie Location was declared unsanitary (Mayat, 2013).

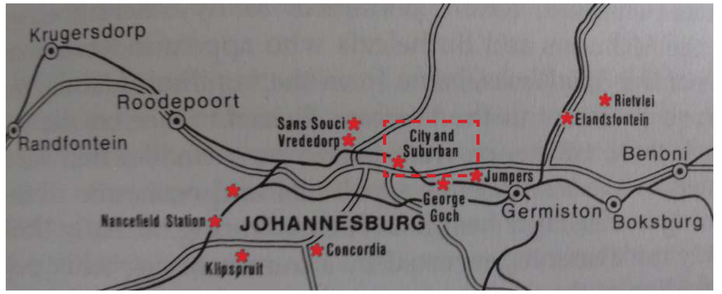
Figure 4.2 (Below)
Early Indian immigrants to Natal holding up tin tickets, similar to that of slavery (Unknown, n.d)



Figure 4.3 (Below)
Indentured Indians working on a sugar cane field in Natal, under British colonial rule (SAHO, 2020)



Figure 4.4 (Opposite Top Right)
Principal Washing Sites on the Witwatersrand 1890-1906 (Davie,2017 After New Babylon, New Nineveh: Everyday Life on the Witwatersrand, 1886-1914)



During this time, Johannesburg was still a rough mining town and only had a few services with no proper extensive drainage systems in place. It was forbidden to do the laundry at home, which caused laundry businesses to grow significantly in and around the city, as shown in figure 4.4 above. The opening of the Melrose Steam Laundry on the banks of the Sandspruit river mainly employed "dhobis" arriving on the Rand from Natal (Van Onselen, 2007). According to Doctor Sarresvathi Padayachee (2011), this employment opportunity came with the inclusion of accommodation at the Melrose Steam Laundry site, rations and a small cash wage. After a short while, the need for a place of worship became apparent amongst the Indian labourer's as "most would have been practising some sort of Hinduism in India" (Desai,2010). Therefore, it was only natural for them to try and introduce aspects of their beliefs and practices in the foreign land of South Africa. Since the laundry business only occupied a meagre portion of the land at Abbotsford, it became the ideal site to build a temple. The wide-open fertile farmland, along with the Sandspruit river, offered a space perfect for quiet meditation and prayer as it was "situated amongst placid settings, away from the city" (Padayachee, 2011).

A Hindu temple is not to be regarded as just an imposing building, however beautiful its architecture and sculptures might be. Nor is it a mere place of worship. The temple is an "expression of the whole community". It represents a link between man, God, and nature (GTA, 2003). There is a popular saying among the Tamil speaking Hindus which runs as follows:

"Koil illa ooril kudi irukke vemdaam"

Meaning, "Do not reside in a district where there is no temple". This emphasizes the importance of a temple in Hindu culture. The Hindus look upon God as a great King. Ko-il (Temple) thus becomes the King's house (GTA, 2003). Notably, the construction of this wood and iron temple structure was built purely out of love, labour, and the financial contribution made by my forefathers, despite having limited resources. From its humble beginnings, the temple served as a place of worship and as a safe space for the Hindu community residing in Johannesburg and specifically in areas such as Fordsburg and Mayfair. An interview that took place earlier this year revealed that the former president, Nelson Mandela, once hid within this Temple compound while evading the police during the Apartheid era. In his publication entitled The Temple at Melrose, Thillayvel Naidoo mentions that "no matter how far the Indian community may for any reason be removed from it in future, there will always be a regular pilgrimage to its hallowed precincts" (Naidoo,1984).

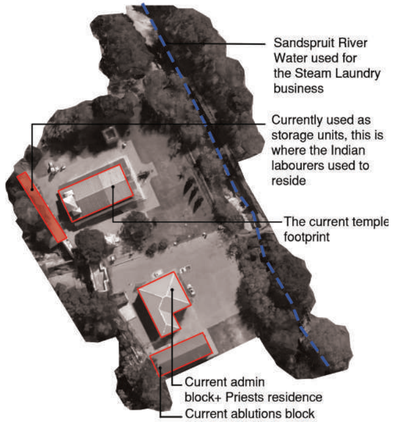




Figure 4.5 (Above)
Map highlighting the space where the Indian labourers used to reside against the current conditions in the temples compound (Author, 2021, After Google Earth, 2015).

Figure 4.6 (Above)
My Great Grandmother at the Melrose Temple (Unknown, n.d).

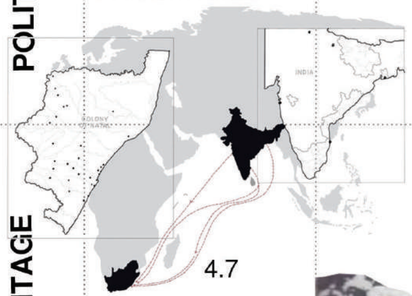
CULTURE

POLITICS

HERITAGE

1860

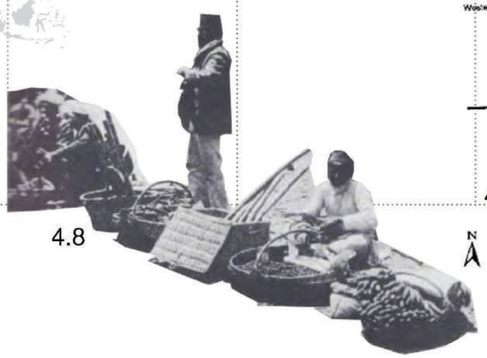
Arrival of Indians in South Africa as Indentured labourers and later as 'free' or passenger Indians.This was the start of a long and painful period in the history of Indian diaspora in Southern Africa



4.7

1885

The Asiatic Bazaar Law passed in the Transvaal, prohibited Indians from owning property except in the specific locations set aside for them.



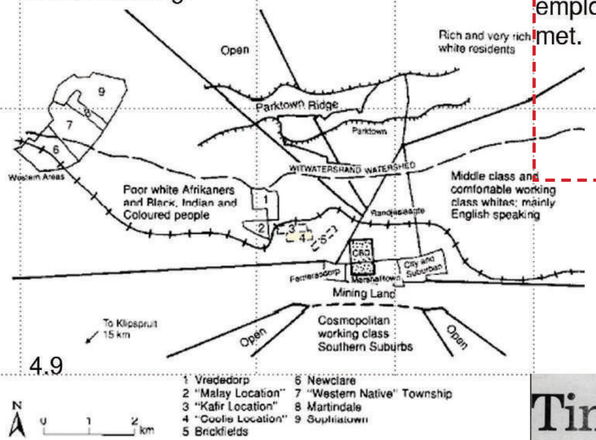
4.8

1886

Discovery of Gold in Johannesburg sees an influx of people into the city, with many new Indian immigrants coming to work as traders and hawkers. This can be seen in figure 4.2

1887

The 'Coolie Location, first known Indian settlement in Johannesburg. Located in Pageview/Fietas at the time- it was essentially the only area where Indians could legally buy and own property in Johannesburg.



4.9

1888

The Prohibition of Movement law passed that restricted Indians from walking about the streets after 9pm.

1897

Melrose Steam Laundry opened for business at the farm Syferfontein, owned by Mr Reginald Linakar, a compassionate individual who ensured that the religio-cultural needs of his Indian employees were met.

1899

The Melrose Temple is established due to the 'need for a place of worship' amoungst the labourers in the steam laundry. Its placid setting away from the city as well as the flowing river nearby made it the perfect location to carry out 'daily devotion'




RDM 13/1/83

Tiny temple's bitter history

IN OLD JOHANNESBURG, DOING THE LAUNDRY WAS THE PROVINCE OF MEN

DOING the laundry, according to television advertisements these days, is simply a matter of pressing a few buttons on a gleaming box. If you don't own a washing machine, there are two alternatives — the laundromats or a washerwoman.

Things were somewhat different in the early days when Johannesburg was still a rough mining town.

It was forbidden to do the laundry at home as there was no proper extensive drainage system.

Washing was done by black men, mainly Zulus from Natal, and dhobis, Indians who had emigrated from India and who continued to perform the service allocated to their caste.

The washing was done at the Braamfontein Spruit as well as other sites, and the washermen did good business until competition in the form of steam laundries arrived on the scene.

slowly but surely, the job of doing Johannesburg's laundry was taken over by the steam laundries.

The first steam laundry came in in existence on the banks of the Fordsburg Spruit. One of these new laundries was the Melrose Steam Laundry which was situated on the banks of the

4.10

1907-1913

After the Anglo Boer War Indian migration to South Africa came to a halt due to the **Immigration Act of Transvaal**, which favoured European immigrants.
The small existing Indian communities both in Natal and the Transvaal started to establish their own schools and temples. This is because they were at the time economically independant. (Hart,2013)

1930

Fiestas /Pageview became a proclaimed Indian area, although it was mixed. (Mayat,2013). Below is a photograph of my Grandmother standing just outside her current home at the time, in Fietas.



4.11

Figure 4.7 Indentured recruitment districts (Author,2021)
Figure 4.8 Indian hawkers in Johannesburg (Kallaway, 1986)
Figure 4.9 The Coolie Location (Morris.1980)
Figure 4.10 The Melrose Temple History (Johannesburg Heritage Foundation,1983)
Figure 4.11 My Grandmother Soobamah Pillay in Fietas (Unknown, 1950)

Rituals and Ceremonies

Expansion of Temple

CULTURE

POLITICS

HERITAGE

1948

Nationalist Party comes into power, stricter policies regarding racial segregation is enforced. This was the start of the Apartheid regime.

1950

Group Areas Act
This greatly restricted the residential rights of Indians during the Apartheid era. This law defined areas for each racial group to live and trade in. This law triggered mass removals of individuals who were considered to be residing in the incorrect areas. (Mayat, 2013)

1955

Kavady Festival takes place at Melrose Temple, a time when the Tamil community get together to say their thanks, receive blessings and rid themselves of their burdens.

1966

Displacement
Other events such as weddings also took place at the Melrose Temple despite the laws of Group Areas Act. Figure 4.8 below is a prime example of this showing a mixture of racial groups coming together for the ceremony. The temple was a beacon of hope for the future.

1991

Abolition of Racially Banned Land Measures Act revokes all Apartheid legislation that is related to the dispossession of land and racial segregation. The racial divide was already far too enrenched at this point.

1994

First Democratic Election took place and this marked the end of white minority rule in South Africa. This meant that freedom had finally been achieved, however, the conditions for too many South Africans have not been addressed. (SAHO, undated)

1996

Extensive Rennovation
The simple Melrose temple structure which accomodated roughly 50 people, served the Indian community for almost 100 years until 1996. Due to extreme decay, the structure needed to be replaced. This decision was resisted by heritage practitioners who wanted the building declared as a national monument. (Museum Africa,2012)

2011

The Temple Consecration Ceremony also known as the "Kumbh-Abhishekam" took place over a period of several days. It was the most important ritual in the life of a newly rennovated Melrose temple. The temple was now bigger ,accomodating approximately 400 people.

2021

Present Day
The exclusive temple sits as a "white elephant" amoungst its suburban context , reflective of the past racial divide.

4.12



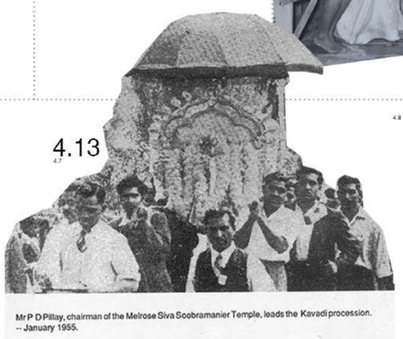


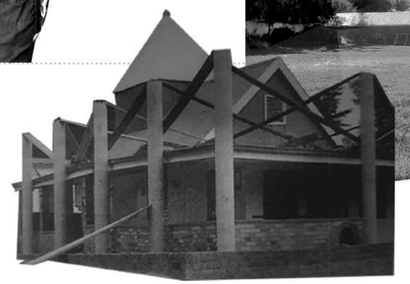
4.14



4.15

4.13





4.16



4.17

Figure 4.12 Racial Segregation in South Africa (50minutes.com, 2021)
Figure 4.13 Kavady Procession at Melrose (Gems,1955)
Figure 4.14 My Grandparents getting married at the Melrose Temple (Unknown, 1994)
Figure 4.15 Election day, 1994. (Berry, 1994)
Figure 4.16 Melrose Temple Renovation (Padayachee,1996)

Figure 4.17 The Melrose Temple site -Present day (Author,2021)

History of Melrose Temple Overview

CULTURE

POLITICS

HERITAGE

1982



Tiny temple may become a national monument

By BOETI ESHAK

ONE of Johannesburg's little known curiosities is about to become a national monument. It is the Melrose Siva Subramaniar Temple (MSST), a 76-year-old brick and corrugated iron structure.

This little-known relic of the early members of the South Indian community who practised their religion and worshipped in the then goldfields of Johannesburg, is situated in a dead-end street in the white area of Abbotsford, on the banks of the Lit-tle Jukskei River.

Mr Dougie Pavadai, chairman of the Melrose Siva Subramaniar Temple said his committee was originally opposed to the idea of having their place of worship becoming a monument.

"Among the reasons advanced were that it is a living temple in that prayers are held on a regular basis," he said.

"Then, the fact that tourists, mainly Americans, visit the temple. If it becomes a tourist attraction we will not be able to keep them from, say, taking photographs inside.

"The other important aspect is that we will not be able to make any improvements. This will be restricted."

But since the original decision, a sub-committee has been appointed to investigate the feasibility of having the temple declared a national monument.

This committee is in favour of the temple becoming a monument. It will report back to the council in October.

Mr Chris Zietsman, the national regional representative of the National Monuments Council, is confident the temple will become a monument.

Mr Zietsman said the National Monuments Act gives the Minister authority over any object, site and declare a particular building or structure a monument.

He also played the NMC's

4.18

The Shrine of the brick and iron temple



Guru A R Pathy photographed outside the 76-year-old temple

1994

Miraculously saved from demolition during the Apartheid era

4.20

Demolition awaits ancient Hindu shrine

By BOETI ESHAK

AN ANCIENT Hindu shrine in one of Johannesburg's northern suburbs is to be demolished and another erected in its place.

The temple to Lord Muruga, made of wood and iron, was erected more than 102 years ago by Indian labourers who were brought to South Africa to work in the Melrose Steam Laundry.

The building, on the banks of Sandspruit close to the Melrose Bird Sanctuary, was renamed the Johannesburg Melrose Shree Siva Subramaniar Temple in 1921.

Despite being renovated, the original structure is showing signs of decay.

Temple secretary Sassie Pather said plans had already been made to build a replica of a temple in South India on the site.

The temple will incorporate the seven Gopurams — gates representing the different abodes of Lord Muruga — so that complete prayers can be performed.

"We have applied to the Johannesburg City Council to rezone the land next to the temple so that a comprehensive community centre can be built here," Mr Pather added.

"The original dome will be retained so that the proud heritage of the early Indian settlers in South Africa can be protected."

Mr Pather said while professional consultants would oversee the construction, community participation would be encouraged and local contractors would be employed.

However, artisans from India will build deities according to temples in India. The temple council hopes that the three-phase development would be completed by the end of 1995.

The first phase will comprise accommodation for the priest and caretaker. The second entails building a kitchen, a community hall and an ablution block. The final phase is the rebuilding of the temple.

"We discussed our plans with residents in the area and the National Monuments Council. The NMC has to give permission to demolish any building older than 80 years," chairman Gopal Padayichie said.

"It is estimated that the complete construction would cost just over R1,5-million," he added.

Over the years, the Indian community nearly lost their holy place of worship, as subsequent owners of the property went insolvent. Each time the land was put on auction white nominees were found to act as trustees for the council.

"Now that the Group Areas Act and other racial laws are history, we are the rightful owners of the land," Mr Padayichie said.

● The temple council said a bogus collector, posing as a member of their organisation, is taking funds from people for a feeding scheme but their officials have identification badges.

4.19

ARCHITECTURE

JOHANNESBURG 100 1986

Number six in the series

Hindu haven

Surrounded by houses in a northern suburb of Johannesburg stands a stronghold of the Hindu faith — the Johannesburg Melrose Siva Subramaniar Temple in Joffe Park.

It has been chosen by Johannesburg 100 — the committee which is compiling a list of 100 local

1996

4.21



4.22

Consecration ceremony of temple, attended by Sri Pithukuli Murugadas





Special festival at Johannesburg's oldest temple

By Rodney Victor

Johannesburg's Melrose Temple, the oldest Hindu temple in Gauteng, is celebrating its annual Thaipoosam Kavady festival, culminating with Navagraha Prathishda Abishegam on March 10.

The ceremony features the installation and consecration of the nine planets in a temple within the temple.

The festivals are the largest celebrated by the South Indian community, says Sassie Pather, secretary of the temple's Shree Siva Subramaniar committee.

People from as far afield as Lenasia, Mafikeng and Natal are attending the ceremonies because of the historical importance of the temple.

The origin of the temple is unknown, but is said to be at least 110-years old.

4.23

2. Post-Colonialism, Post-Apartheid

Figure 4.24 (Below)
A sign during Apartheid showing the severely poor conditions under which non-European's in South African were subjected to. (Kampjef, 2014 Courtesy: Radio Freethinker)

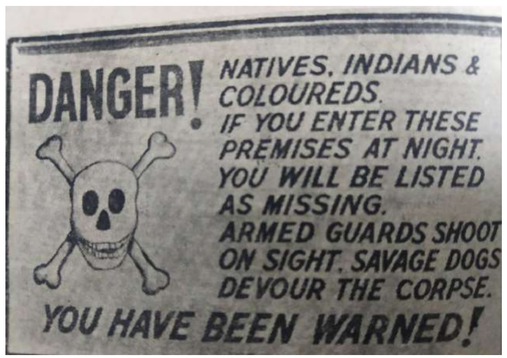
Figure 4.25 (Below)
Model Apartheid City
(du Plessis and Landman, 2002)

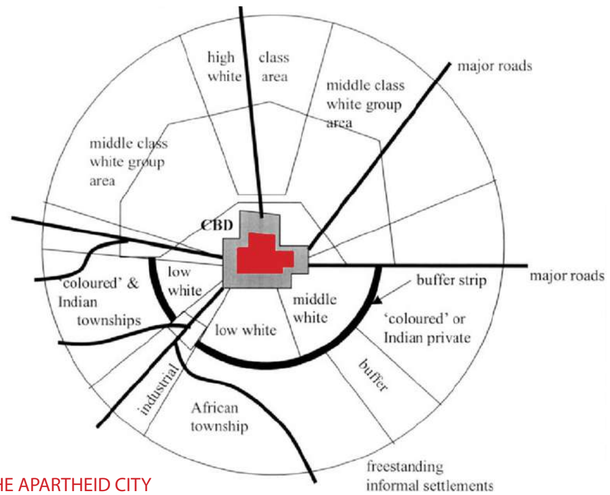
Figure 4.26 (Opposite)
Racial distribution in Gauteng in 2014 illustrates the legacy of the Group areas act
(Author, 2021 after Harrison et al, 2014)

Figure 4.27 (Opposite)
New perceptions of the "northern suburbs" of Johannesburg
(Author, 2021, After Stokes, 2018)

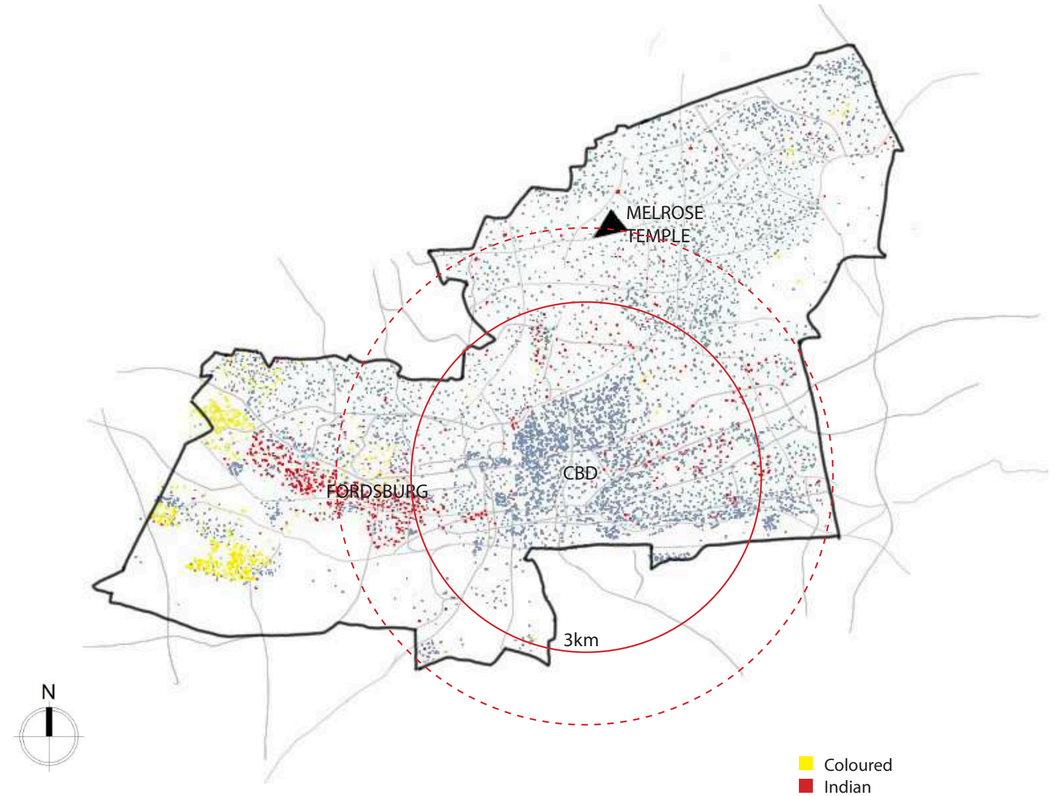
The tensions which continue to exist amongst the formerly colonized people are expressed through post-colonial theory. It deals with the effects of colonization on cultures and societies and those societies' responses (Ashcroft, 2017). In the South African context, the term "post-colonial" is better understood as "post-Apartheid", marking the end of British colonial rule in the twentieth century (Hart, 2013). Apartheid (literally 'state of being apart' in Afrikaans) was a policy of systematic oppression and essentially sought to shape the country's spatial, political, and economic life to enable a "separate development" of the four racial groups categorized as Indian, White, Coloured and Black. Although this law has been abolished, many South Africans still view themselves based on these categories or labels. Therefore, Post-Colonial theory is often recognized as the power relations that exist within the issues of "cultural diversity, ethnic, racial and cultural difference" (Ashcroft 2006).

Evidently, in South Africa, Colonialism had quite an insidious and corrosive impact on people and their landscapes, resulting in extreme spatial injustices and urban segregation. It started from the 1950's Group Areas Act, whereby thousands of Blacks, Coloureds and Indians were forcefully removed from areas that were classified for white occupation. This law made it impossible for the dhobis to continue living and working at the Melrose Steam Laundry, as it was situated in a "whites-only" suburb. It still intrigues me how the Temple survived demolition throughout this period, although it probably was just a miracle. The development of the plan for the model Apartheid city is shown in figure 4.24 below. In the Johannesburg context, the Apartheid spatial plan sought to designate lower-class white groups to the south of the central business district (CBD) and higher, middle-class white groups to the north while "Coloured and Indian groups occurred in the spaces between" (Stokes, 2018). The white minority groups were given preference in terms of access into the city and land area, whereas other groups' zones were "highly restricted and peripheral." (Christopher, 1995).



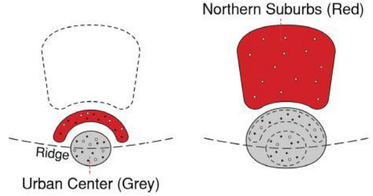


THE APARTHEID CITY



According to Christopher (1999), the structures of the Apartheid city have demonstrated to be "remarkably resilient" with minor changes as seen in the segregated residential patterns. Newly formed suburbs are primarily "mono-African" in character, and although "pockets of integration" have been noticeable, they are still subject to transformation within central cities. He further mentions that the "vast majority of South African urban dwellers will continue to live within the framework established under Apartheid for the foreseeable future" (Christopher,1999). As seen in figure 4.25 above, areas such as Fordsburg and Mayfair, historically home to the minority Indian immigrant community, are still densely populated by Indians. In the book titled 'Spaces of the Modern City: Imaginaries, Politics, and Everyday Life', the Authors Prakash and Kevin Kruse mention that "the struggles of these subordinate groups to cope with environments that were so hostile and segregated, defined the identities of the communities and their spaces" (Prakash and Kruse, 2008). This is what makes it so hard for them to move away, I believe, as these areas are now perceived as rich cultural or "ethnic" enclaves (Mohamed, 2006). The cycle now continues as "new immigrants are starting to settle within these established enclaves where the environment has a sense of familiarity" (Mayat,2013).

Coloured
Indian
African
White
Outline of Johannesburg immediate Context
Abbotsford- location of temple

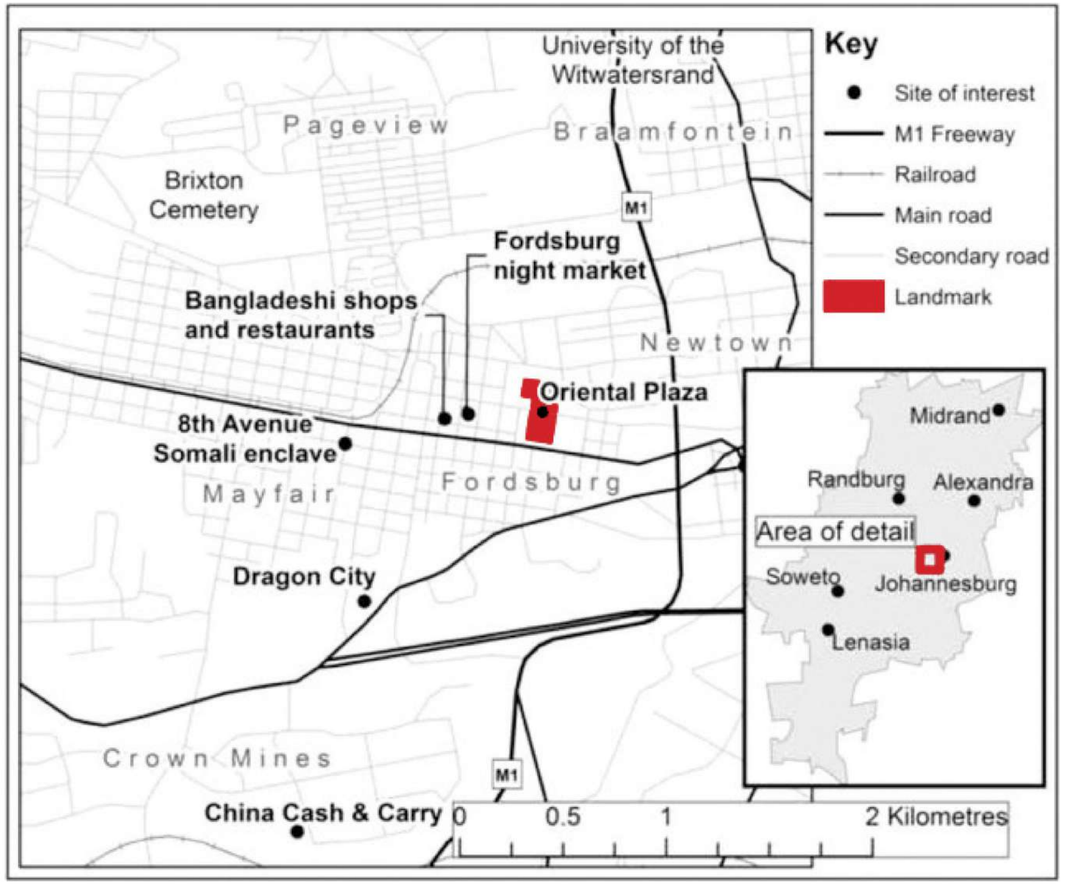


APARTHEID ERA

POST APARTHEID

Figure 4.28
Mayfair, Fordsburg, and surrounds
(Thompson, 2015)

Norwood is also home to a large Jewish community, as well as Middle Eastern and African ex-pats. This unique mix of cultures has suddenly birthed a multitude of cuisines from shawarmas to butter chicken and everything in between. Mahomed (2006) describes places such as Fordsburg (and similarly Norwood) as "zones of transition" because it is an area of not only commerce, residence, and tourism but also a centre for the cultural community (Mahomed, 2006). Along with the popularity of Mint Road, Fordsburg Square, and the establishment of the Oriental Plaza, "the suburb has been reaffirmed as an enclave where new interactions are constantly being created" (Mayat, 2013). It appears that some suburbs are more multi-cultural than others, typically depending on their proximity to the CBD or their business-oriented potential. These 'place-sharing' areas serve as an 'entry point neighbourhood' for many immigrants who all share a common interest and need to belong.



3. Hybridity

What does hybridity or being hybrid mean?

The word "hybridity" can have different meanings in terms of biology, culture, and ethnicity. According to Hart (2013), hybridization results from the tensions caused by colonization. In The Dictionary of Sociology, written by Authors Scott and Marshall (2015), the term hybridity is used to describe the condition in which boundaries of identity are crossed "resulting in illegitimate racial mixing" with reference to derogatory names such as "mongrel" or "half-breed". Alsayyad, the prolific author who writes about issues concerning the built environment, defines the term "hybridity" through the works of Homi Bhabha in his book Hybrid Urbanism. According to him, Bhabha invented the term in the post-colonial context during the early 1980s and is one of the most important advocates of the concept. He argues that hybridity is not a term that resolves tensions between cultures. Still, it is the creation of an 'in-between' or 'third space' whereby "elements encounter and transform each other"(AlSayyad,2007).

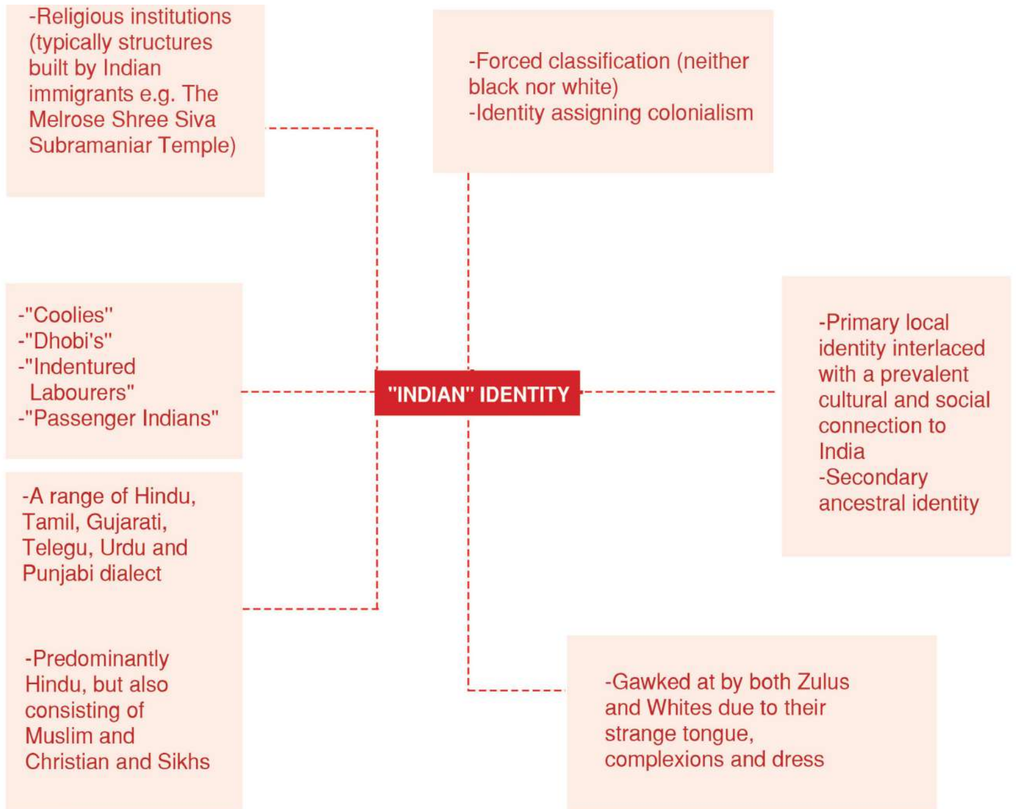
Bhabha's entire concept of the "third space" is spatialized to an extent as it comes from the emergence of hybridity (Hart, 2013). While he may have been speaking of a metaphorical space rather than physical between cultures, the "third space" can be defined in everyday life as a "transition space", where everyday political, aesthetic, or daily practices subvert the norms of post-colonial power relations (Antener, 2019). In the post-Apartheid city, areas of new contact between previously separated "different" cultures become the necessary boundary and space from which hybridity can emerge (Hart, 2013). The suburbs of Fordsburg, Mayfair West, and Norwood, for example, are newly mixed post-apartheid communities that perfectly reflect Bhabha's 'third space.' Therefore, the resulting spaces that emerge from this environment are considered 'hybrid spaces.'

Philipp Wolfgang Stockhammer (2012) explains that "hybridity is but one in a sea of metaphors attempting to come to terms with processes of cultural transformation". He identifies three metaphorical fields of hybridity: borrowing, mixing, and translating. Borrowing, in this case, refers to the idea of a subordinate culture adopting traits from a dominant culture to create a kind of "assimilation" between the two. Cultural borrowing is often associated with negative connotations as it indicates that the borrower's culture is not sufficiently original. According to Edward Said and French historian Fernand Braudel, "the history of all cultures is the history of cultural borrowing" (Stockhammer, 2012). Mixing has been viewed as a "fusion" of cultures and has become a widespread concept used in contexts that range from cuisine right through to music. Lastly, the notion of translating refers to the work that needs to be done to domesticate the alien and the strategies and tactics employed (Stockhammer, 2012).

The Melrose Temple is one such example of a minority Hindu culture that exists within a dominant Jewish culture, thus making it a site that encourages cultural abrasion while keeping its own identity intact. According to an article titled 'Hinduism, Christianity, and Liberal Religious Toleration,' the author Spinner-Halev (2005) further mentions that Hinduism has historically been relatively tolerant of other religions, making the Melrose Temple a perfect location for the construction of a new hybrid typology.

"Hinduism is not a codified religion"
- Mahatma Gandhi

The temple and its immediate surroundings have the potential to become a cultural hybrid space within the city whereby the "blurring of boundaries" would exist so that post-apartheid communities can search for new meanings alongside the old (Sandercock, 1995). According to Hart (2013), the complex interplay of identities, memories, and histories within a space is exactly what results in the emergence of hybridity. South Africans will always be hybrids themselves, and with this in mind, both urban designers and architects should expand this concept throughout the built environment. The new hybrid identity of the Melrose Temple would allow for a sense of continuity by becoming an ideal representation of a new socially just and culturally integrative South Africa.



4. Identity

AlSayyad, a cultural studies professor, defines identity in his book Hybrid Urbanism as "...typically referring to social labels given to individuals as members of a group, which may either be assigned by the individuals themselves or by others"(AlSayyad,2001). In South Africa, Indian culture grew to become "relatively isolated and insular" due to the legislated restrictions of Apartheid which, as mentioned earlier, employed to segregate people into specified areas or zones based on their ethnicity. Accordingly, "the removal of imposed identity in Post-Apartheid South Africa has resulted in the emergence of a new national one" (Mayat, 2013). This, however, has created an 'internalized conflict of identity whereby citizens who were once confined by national law now need to redefine their identity within a new South African context (Mayat, 2013). The process seems rather complex since 'Indian identity has constantly been constructed, deconstructed, and re-made over time: this underscores anxiety and tensions amongst Indians on how best to assert their belonging in Africa. In the article titled 'Identity and Belonging in Post-Apartheid South Africa: The Case of Indian South Africans,' authors Desai and Vahed (2017) explain that if access to resources continues to be defined by race exclusively, then one can anticipate increased frustration on the part of the poor's who will most likely be susceptible to racial and ethnic overtures. On the other hand, the middle classes, living in the same gated communities and enjoying the same sports, like cricket and golf, may witness bonding across racial lines (Desai and Vahed, 2017).

Memory and the resultant identity of the post-colonial diaspora are both multifaceted and complex. In the essay titled, 'Diasporas in Modem Societies: Myths of Homeland and Return' (1991), William Safran defines diasporas as "expatriate minority communities" that sustain a "memory, vision, or myth about their original homeland" with the belief that they will never be fully accepted by their host country (Safran,1991). This fits in line with the Indian-British novelist Salman Rushdie (2006), who argues that "identity is both plural and partial" being of two countries but not belonging to either. The Indian diaspora in South Africa is unique due to its identity traits referencing British colonial rule and Apartheid. With this in mind, and in the context of the Melrose Temple, the formation of identity is in much the same way, established by the shared histories, memories, and cultures that "permeate" within the Indian community (Mayat, 2013).

Since memory is generally the basis on which identity is formed, it should be consciously maintained. Hart (2013) mentions that as memory adapts and changes, so will the sense of identity. Therefore, the existence of such sites which carry such rich cultural and traditional memories are important for the preservation of identity, but only because the memories that these sites represent are now being "threatened" in our current society as time goes (Nora 1989). In the book 'Inner World: A Psychoanalytical Study of Childhood and Society in India,' Sudhir Kakar describes "Indianness" as a result of "historical, cultural and psychological influences" in which the network of social roles, religious values, and myth play an important part. Essentially, identity is not defined by ethnic similarity or racial cohesiveness but rather by similar cultural experiences. In my experience as a former Bharatanatyam dancer, I have discovered that both the dance and the dancer are the most thorough representatives of the Indian culture, originating from the state Tamil Nadu in India. Similarly, In the US, the dragon dance of the Chinese New Year also powerfully expresses cultural identity, serving as a "multivocal forum for the discussion of ethnicity"(Li, 2017).

Figure 4.29 (Left)
Diagram on Indian Identity from initial research (Author, 2021)

I believe that spiritual engagement through dance and music has helped the propagation of identity, especially in the South African context, as it has provided a pure and elevating type of entertainment and, at the same time, it has connected the community to the culture and practices of ancestral India. Kapila Vatsyayan (1974) describes this dance as "the highest order of spiritual discipline" in her book titled Indian Classical dance. Singh (2021) mentions that as time goes by, traditional Indian dance has started to reach much greater multi-racial audiences and is no longer exclusive to the Indian community. My former dance guru, Jayesperi Moopen, from the Thribangi Dance Company, mentions that" as a South African choreographer, dance has always been to transcend cultural barriers" (Moopen, 2018). She uses English, African and Indian music to juxtapose and highlight both traditional and contemporary movements. After twenty-seven years into democracy, terms like "Fusion, Multiculturalism, Interculturalism, and Cross-culturalism, are still being debated, especially where innovative and experimental work like this is concerned" (Singh, 2021).

A fixed singular national identity is not possible in the 21st century. "Huyssen (1995) argues that post-colonial national identities need to be heterogeneous to remain viable with the often 'multicultural communities' they represent" (Hart, 2013). Therefore, in the essay 'The Politics of Identity in South Africa: Diversity and Inclusion,' Paulin Manwelo (2011) explains her new way of thinking about "identity" as "citizenship". She seems to believe that this would redefine the term identity concerning our common bonds as South Africans rather than by our ethnic differences. Through increased interactions within exclusive religious spaces (such as the Melrose Temple), people would get the chance to exchange knowledge and share values that may not have previously been accepted or allowed.



Figure 4.30 (Above)
The Tabla, a membranophone percussion instrument (Thopate, 2016).



Figure 4.31 (Top Right)
Dancer and family member, Shivanie Naidoo, having her photograph taken on the banks of the Sandspruit river at Melrose Temple (Unknown, 2016)

5. A Scared Space

I believe that religion is also a central part of one's identity, which the sacred Melrose Temple stands to represent. "Religion" comes from the Latin word Religare, meaning 'to tie or bind together. The article titled 'Religion and Identity, states that religion is typically defined in modern dictionaries as "an organized system of beliefs and rituals centering on a supernatural being or beings". (Facing History and Ourselves, 2019) The article further mentions that to belong to a religion often means more than just sharing beliefs and participating in rituals; it also means being part of an identity (Facing History and Ourselves, 2019).



Figure 4.32 (Left)
My family, coming together in prayer on the banks of the Sandspruit river at Melrose Temple, during the Apartheid era. They are photographed wearing traditional saris while taking part in a religious ceremony
(Unknown, n.d)

For many years following their arrival in South Africa, religion was the only thing the Indian community could hold onto since colonial language and documentation had solely produced their identity. "Temples were a source of comfort for many, as it was here that communal worship was experienced, birth, marriage and death ceremonies observed, and festivals carried out" (Desai and Vahed, 2010). However, unlike in South Africa, the temples in India served a more multi-purpose function, being central to both economic and social interaction. Historically, temples were known as "convention centers for spiritual and intellectual conversation"(Vishnuvajhala, n.d.). It was not just a place of worship, and therefore, its design aimed at serving the broader community by housing hospitals, schools, and even courtrooms. Due to colonial rule and the earlier governing laws, temples in South Africa remained small without any major additions.

While cultural heritage spaces such as the Melrose Temple perform religious functions and "accommodate rituals", it has the potential to offer much more than that in the 21st century. Sacred spaces within the city should provide refuge and a sense of calm to counteract the storm of modern life. The space should "invite people to reflect on architecture and art, spirituality and the divine"(Dallas, 2016), drawing them away from the distractions of social media and smartphone notifications. Mann (1933) writes that the definition of "sacred architecture" only considers the earthly aspects of such and not the other dimension, that of the spiritual. (A. T. Mann, 1993). In the book 'Cultural and Urban Heritage,' Authors Igor and Gojnik (2019) express that every architectural experience is multisensory. The aspect of sacred architecture influences the visitor's experience of cultural heritage because "architecture relates, mediates and projects meanings anchored in a complex experience of space" (Igor and Gojnik, 2019).

The various phenomena such as light, smell, sound, and touch directly affect the entire experience of the sacred. They create distinct atmospheres of transcendence, eternity, belonging, and an out-of-the-ordinary character of space (Igor and Gojnik, 2019).

Finnish Architect and professor Juhani Pallasmaa makes a compelling argument for many architects to further explore their ideas and processes of design by integrating more 'sensory experiences' in their architecture. Pallasmaa claims that buildings are not only objects that we occupy, but we also respond to them in an equal measure. A good example of this is the Freedom Park Heritage site in Pretoria, informed by indigenous knowledge systems. Vital elements such as water, fire, stone, and indigenous trees and plants are utilized as a part of the spiritual ambiance of the site. Ultimately, people perceive places through their senses, recollection, and imagination to experience the spirit of the place or rather 'Genius Loci' more holistically (Norberg-Schulz, 1980).

Despite some characteristics of Freedom Park being "fraught with political issues" as to its objective and overt focus on African values, a study carried out by the department of architecture at the University of Pretoria clearly shows that, by integrating sacred African stories into an open public space, there has been a rather positive impact on most of the peoples' reaction and perception to the place. The site's features create a powerful 'sense of place' and essentially serve its intended spiritual, communal, and emotional functions. Although a specific "African cultural perspective or set of values" is reflected, it can also be understood in universal terms (Young and Vosloo, 2020). Freedom Park or 'Isivivane' in this case, is an important post-apartheid commemorative space that also functions as a place of mourning; a place of memory; a place for healing and reflection; a place for the ceremony; a place that engenders collective identity; and lastly a safe and comfortable place that is aesthetically beautiful.

This is achieved through inventive multi-functioning building elements such as light wells in the museum's interior spaces and openings in walls. These "all speak to the qualitative process of tying in an indigenous sensibility to a universal condition" (Young and Vosloo, 2020) by giving form to an experience that is spiritually, aesthetically, and emotionally engaging. In doing this, the set of designers hoped that the place would become more of a 'cross-cultural catalyst' which enables visitors to discover the true meaning behind the sacred place (Young and Vosloo, 2020).



Figure 4.33 (Right)
Isikhumbuto, The Garden of Remembrance at Freedom Park (MMA Design Studio, 2018)

Figure 4.34 (Opposite)
Multi-functional spaces with openings in walls for light to enter (A. Young, 2006)

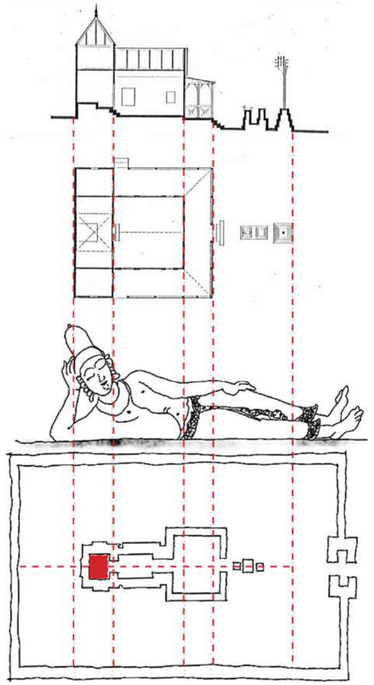
In his book entitled 'The Eyes of the Skin,' Pallasmaa (1996) argues that vision should be placed above all the other senses due to how we perceive the built environment. He uses the term 'Ocularcentrism' to describe this bias by examining architecture that appeals to the eye but does very little to engage with the other senses. According to architect and interior designer Ami Mody (2021), this raises many fascinating points for introspection. Do we only remember the cities that we have been to purely because of the sights that we have seen? Or are our experiences of spaces enriched by a particular feeling, smell, or taste that becomes so firmly etched in memory that they have the power to transport us back (Mody, 2021)?

Essentially, architecture should be an object for visual engagement and an extension of nature in the manufactured realm (Pallasmaa, 1996). Pallasmaa writes that life-enhancing architecture, like a forest, should simultaneously engage and heighten all the senses. Since every touching experience of architecture is multi-sensory, both scale and quality of space matter as they are equally measured by the skin, tongue, eyes, and ears. "Architecture strengthens the existential experience, one's sense of being in the world and this is essentially a strengthened experience of self "(Pallasmaa, 1996).

"Architecture is the art of reconciliation between ourselves and the world, and this mediation takes place through the senses" - Juhani Pallasmaa

The Melrose temple site hosts various religious ceremonies throughout the year and also includes "a plethora of sense impressions" (Drahos 2011). From the sound of the bubbling brook and chiming of the temple bell to the smell of incense and flower petals, all the senses relating to the body are stimulated to make the human experience more significant and memorable. Ultimately, the body's five senses get activated when you are inside the temple, according to an article written by the Hans News Service (2019). In every tradition, sacred places focus on the spiritual dimension, where the tangible world may transcend and a glimpse of the intangible experienced. They focus on those who seek to understand and experience this realm by acting as gateways for the community between this tangible world and the intangible spiritual realm (Croker, 2008).





Reference Temple

Figure 4.35 (Above)
Sketch diagrams of the earlier Melrose temple structure after slight alterations from original wood and iron to facebrick. The sketch below the Melrose temple plan and elevation is shown in comparison (Author, 2021)

Figure 4.36 (Top Right)
A breakdown of the spaces governing an earlier structure of the Melrose Hindu Temple (Author,2021 After The Star Newspaper,1984

Figure 4.37 (Opposite)
The Architecture and Sculpture of the Hindu Temple (Author, 2021 After GTA-Lecture 8: Religions and Churches in Gauteng, 2003)

As shown in the diagrams alongside, the Melrose temple was constructed in such a way that resembles the shape of the human body. This application is reflected in most Hindu temples worldwide to remind individuals that the body itself is the temple of God (Padayachee,1996). The temple reflects God in a cosmic form as various parts of the temple denote parts of the human body.

1. For example, the "head" is depicted as the garbhagriha (a square chamber where the main deity is stationed). This space is dark, much like a cave, with light coming in only through the front opening.

2. In many cases, the garbhagriha is topped by a medium-height tower-like roof called a "Vimana". According to Abhilash Rajendran (2019), the symbolic meaning behind the vimana comes from the "yearning movement of ascension towards akasha (heaven)", much like the mystical Mount Meru.

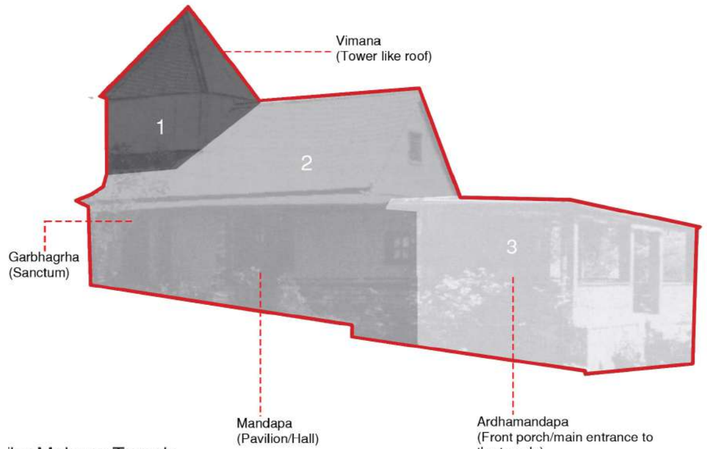
3. The "body" is represented as the mandapa, forms the entrance to the temple, and incorporates the characteristics of a hall or pavilion. This designated space is used for various congregational religious acts such as dancing, chanting, and the recitation of mythological, sacred texts. (Harshananda, n.d.) Depending on specific functional needs, some temples have multiple mandapas of various sizes.

4. Leading up to the mandapa and marking the entrance is the Ardhamandapa, which takes the form of a verandah. Before entering the Ardhamandapa, the devotees pass the Kodi and Balipitham mounted on a common platform.

5. The dhvajastambha is positioned in front of the entrance to the temple and is another common feature of Hindu temple architecture. This represents the flag post of the "King of kings" and proclaims the presence of the deity. It acts as the human axis, around which the cosmic energy and senses "sublimate into the absolute". (Kamakshi, 2021). Additionally, the three lines across the pole represent the three elements, fire, wind, water, and the three worlds or stages of evolution: man, the Devas, and the Gods.

6. A circumambulatory passage called a pradaksinapatha is usually provided around the temple, enabling devotees to circle the deity and pay their due respects.

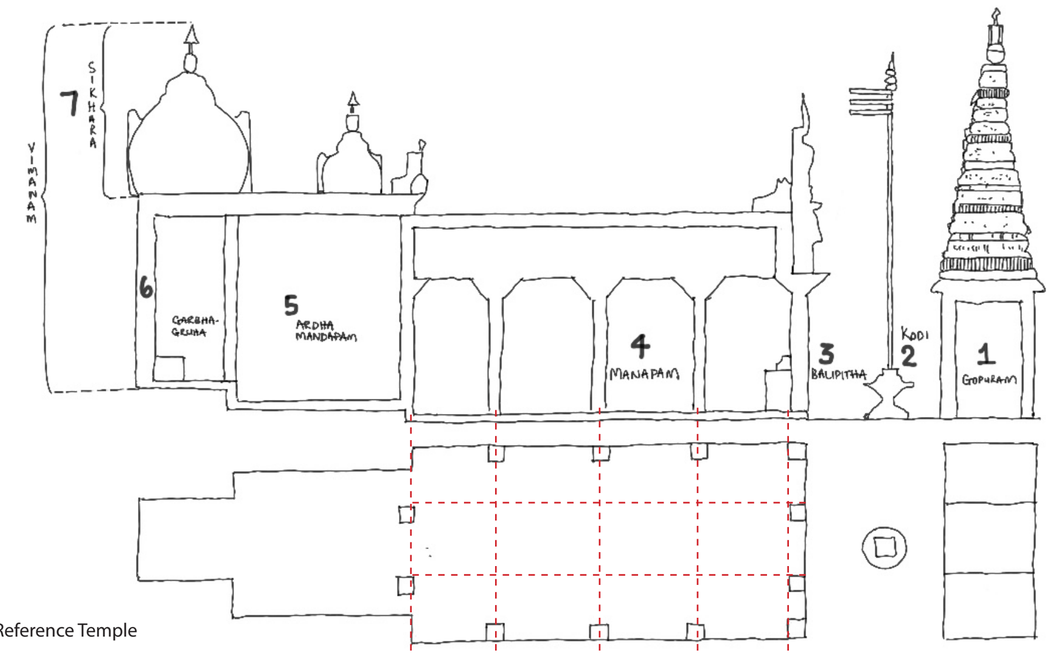
Essentially, the interior spaces of temples are arranged to promote the movement of the devotee from the outside towards the sanctuary through a series of enclosures, as mentioned above. These become increasingly sacred as the sanctuary is approached. A further expression of the sanctuary's energy radiating outwards is in the movement upwards. However, the worshipper cannot physically participate in this ascent; the symbolism attached to the parts of the temple permits him ritually to undertake such movement. (Michell, 1977) The Hindu temple serves as a "reminder of impermanence", a notion that implies a turning away from the "present illusionary world to surmount and transcend it "(Michell, 1977).
In Hindu philosophy, the form of the human body was created to suit the abstract idea of the square. This became the very first basis of a system of proportion which was later displayed in the works of Leonardo da Vinci and Le Corbusier through their "modular system of measurement". (Groover,1980) This square grid called the Vastupurushamandala, has all the geometrical, human, and astronomical properties that essentially form the basis of all Hindu Temples' ground floor plans.



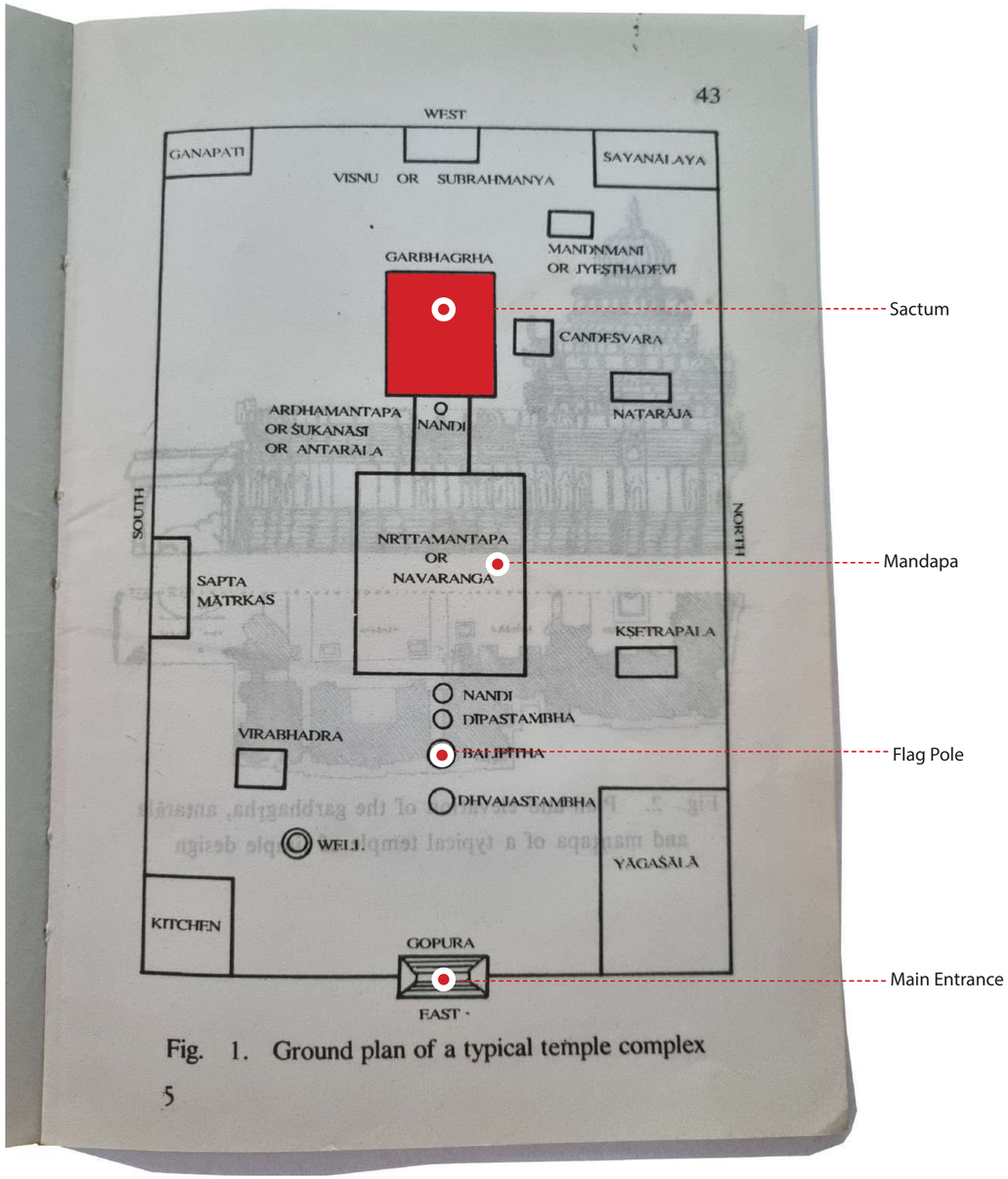
'he Melrose Temple

Key (Below)

1. Gopuram -Entrance Gate
2. Dhwajastambha-Flagpole (Kodi)
3. Balipitha Pedestal
4. Mandapam-Hall
5. Ardha Mandapam- Ancillary Shrine
6. Garbhagrha- Sanctum Sanctorum
7. Vimanam or Shikara- Tower



Reference Temple

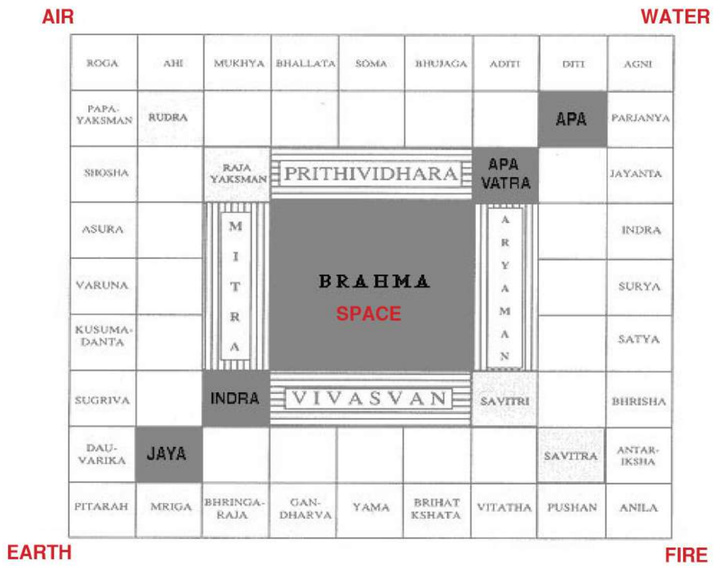


The Vaastu Shastra (technical Construction treatise) was published in the 10th century; it provides insight into the exceptional codified language of temple design and construction. This manual explains that a temple's overall design is typically based on a mandala, an astrological diagram including the "positions of stars, planets, deities, and the sun with regards to a particular site" (D.K. Ching et al., 2011).

The mandala is a concentric figuration; usually a square divided into several smaller squares by an intersecting grid of lines. This arrangement of central squares with others surrounding it is a "microscopic image of the universe with its concentrically organized structure" (Michell, 1977).

In the book entitled, 'The Hindu Temple", George Michell (1977) explains that by constructing this diagram to regulate the form of the temple, a symbolic connection is created, "binding together the world of the Gods- the universe, and its miniature reconstruction through the work of man- the temple"(Michell, 1977).

The assumption permitting such an identification of the universe with its model is that of spatial and physical correspondence between the worlds of God and man. The mandala of the temple plan is also considered a symbolic pantheon of the Gods, as the smaller squares of the diagram are each "the seat" of a particular deity. The central and largest square is usually occupied by Brahma, the deity concerned with creation. Arranged around this square are the planetary divinities, the guardians of the directions of space, and other astronomical deities. The mandala's centre is the most sacred part of the diagram. As mentioned previously, it is materialized in Hindu temple architecture by the symbol of the divinity placed in the sanctuary (Michell, 1977).



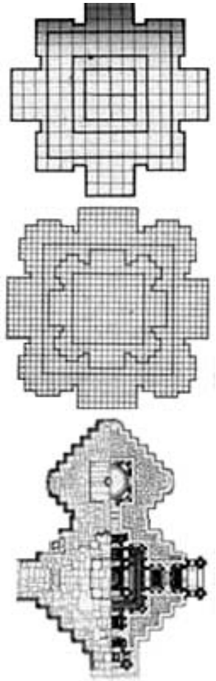


Figure 4.38 (Opposite)
Typical Temple Complex
(Harshananda, n.d)

Figure 4.39 (Left)
Complex temple forms with their basic unit remaining the square (Nangia,2001)

Figure 4.40 (Above)
A "Vastupurushamandala" one of many types formed from the fundamental shape of a square (Hindupedia, n.d)



Figure 4.41
Recent photograph of the Melrose Temple
(Author, 2021)

6. Conclusion

What does it mean it be hybrid in the Post-Apartheid city of Johannesburg ?



Through planning and designing interventions as well as theorizing and writing, post-colonial theory has redirected conversations of modernity to "marginalized locales" and, by doing so, highlighted the interchange of culture and power in producing, experiencing, and IMAGINING the built environment (Hosagrahar, 2012).

Post-colonial perspectives show the ways in which unique histories and forms are situated in global interconnections. According to Jyoti Hosagrahar, deputy director of the World Heritage Centre at UNESCO (2012), built form and space have been instrumental in reinforcing and negotiating hierarchies and relationships within sites of marginalization and oppression. Above all, it has given rise to various design solutions that are more culturally and socially integrative.

The shared opulence of Johannesburg's northern suburbs will profoundly impact previously disadvantaged individuals. South Africa is still far from the ideal of a multi-cultural society; due to the deep trench that has been left behind, various ethnic groups lead largely separate lives with barely any points of contact. Nevertheless, democratization within the society is steadily progressing (Jyu. fi. 2021). The future of our country largely depends upon access to equal opportunities for all, especially since South Africa's national identity is at a turning point. This historical change provides great opportunities that "seeks to authorize cultural hybridity's that emerge in moments of historical transformation" (Bhabha, 1994).

Heritage values are impacted depending on the identity or sense of self within a social community. "Interactions between communities similarly create hybrid urban contexts where cultures, identities, and spaces continually mutate" (Maharaj, 2016). As architect Vedant Maharaj explains, using architecture and built infrastructure, new hybrid spaces become extremely important in creating new uses and meanings. This transformation is necessary for the post-colonial context of South Africa to mediate change in ways that are both responsive to the systematic requirements and to the built environment.



Figure 4.42 (Opposite)
Image representing the emerging post-apartheid society in which both Indian woman and Zulu men dance together, pooling together arts and cultures (Wilson, 2003)

Figure 4.43 (Left)
My Grandparents wedding at the Melrose Temple (Unknown, 1966)



05
WATER AND SHARED URBAN SPACE

'The Witwatersrand' was the name given to the ridges where "streams sparkled as they tumbled down rocky hillsides" (Bodman, 1987). Following George Harrisons' discovery of gold in 1886, one of the largest mining camps in the world grew up and is known today as the city of Johannesburg. A conglomeration of several million people has since emerged in various new towns around the city, causing urbanization and over-population (Bodman,1987).

As the city grew, watercourses were modified, and little wetlands were drained. Ridges too, were covered with infrastructure due to the increase in 'urban drift', which resulted in a loss of their natural outlines (Bodman 1987). The ardent water-quality activist Wendy Bodman (1987) states that Johannesburg's highveld summer storms led to the use of watercourses as drains to carry 'away' stormwater, thus leading to the degradation of urban water streams. Contaminated stormwater is discharged into river systems and, combined with canalization, produces flash floods during the rainy season (CoCT, 2002). In many other countries where there is a consistent spread of annual rainfall, "stormwater is first piped via sewers to sewage purification plants" after which it is then "de-littered and purified" before eventually returning into the river system. (Bodman,1987)

During the early 1900s, the Sandspruit River acted as a water resource for agricultural production nearby the Highlands North Boys rugby fields. Portuguese market gardens emerged producing tomatoes, potatoes, beetroot, radish, celery, etc. (Jones, n.d.). Much value was given to the rich fertile landscape through its productive potential, and the sprawling urban developments that came afterward are a direct result of this agricultural heritage.

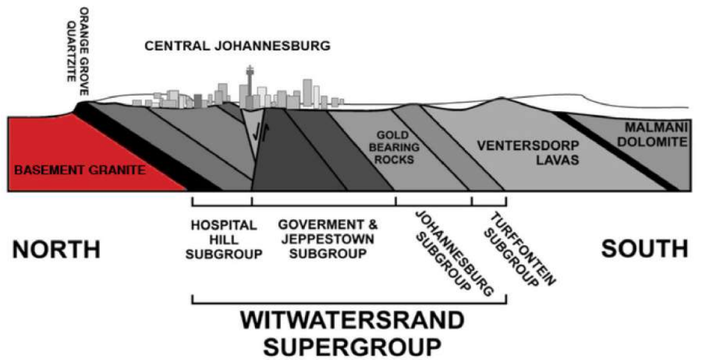
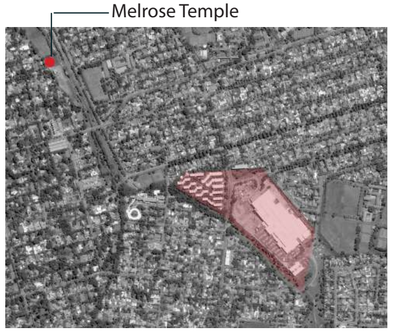


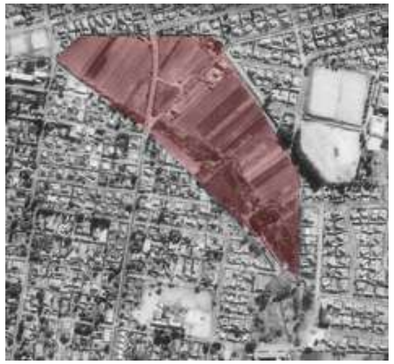
Figure 5.1 (Opposite)
Water fountain at the Zoolake in Johannesburg attracting city folk (Author, 2021)

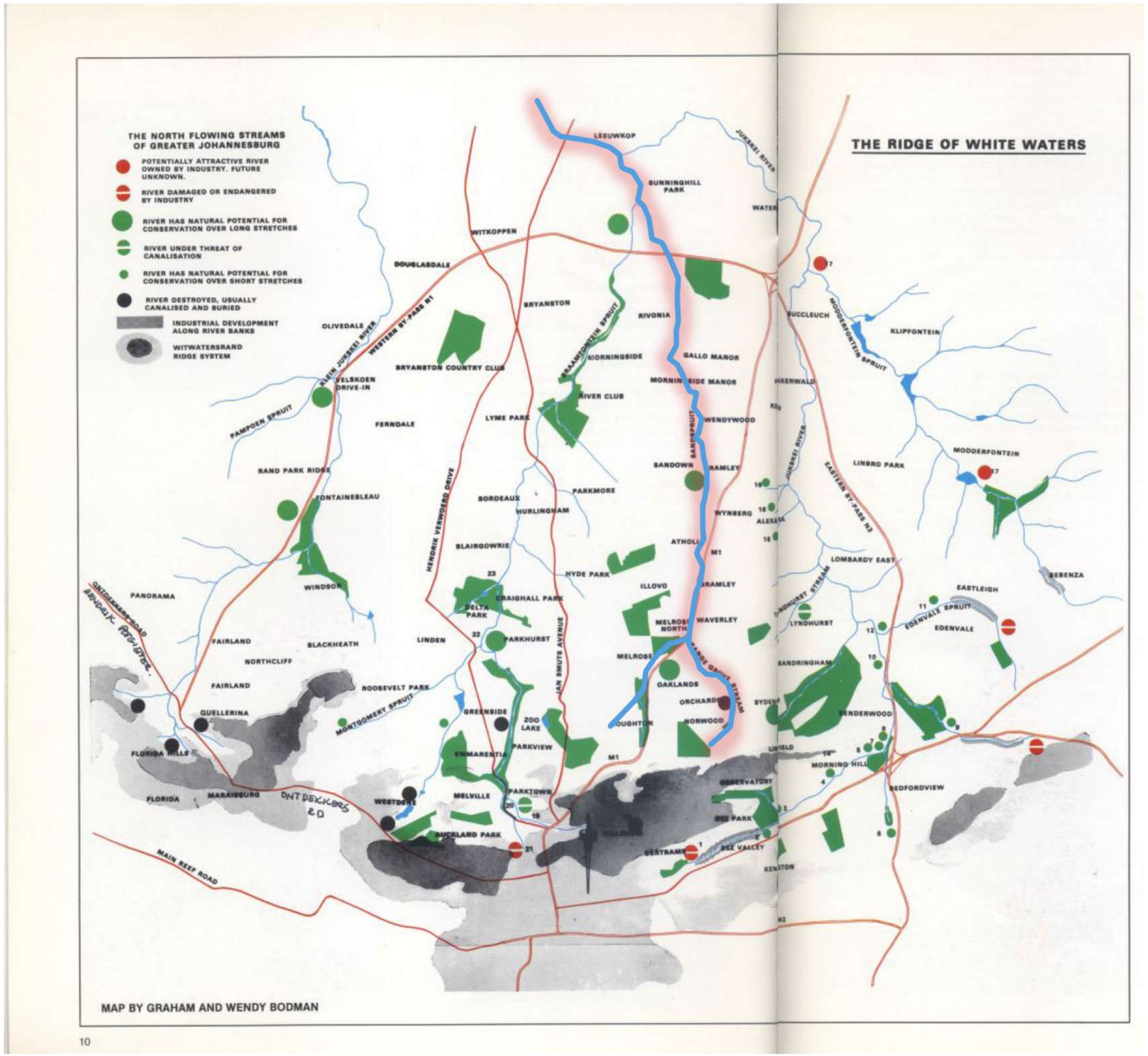
Figure 5.2 (Bottome Left)
Geological profile of Johannesburg highlighting the northern suburbs (Oggmus, undated)

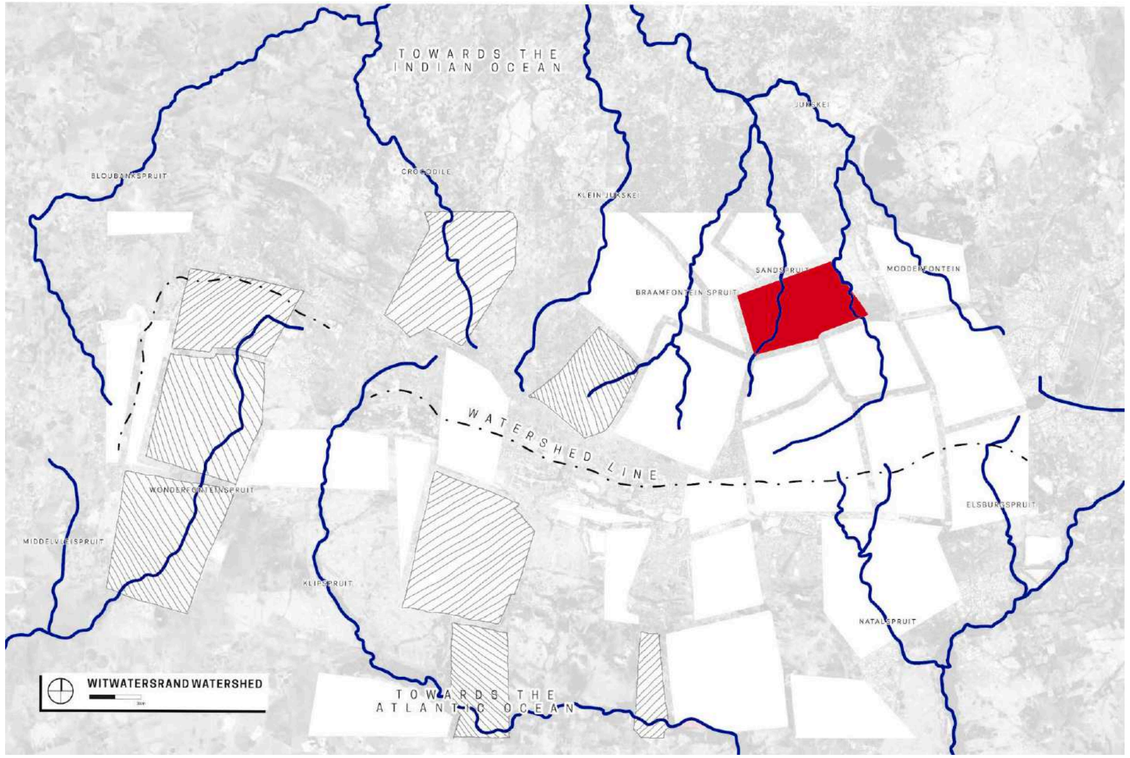
Figure 5.3 (Below)
A more recent map showing the proximity of the Melrose Temple to what used to be the Portuguese Market Gardens (Author, 2021 After Google Earth, 2007)

Figure 5.4 (Below)
Ariel map of the Portuguese Market Gardens from the 1950s showing the contour lines of cultivated land (Jones, n.d.)









KEY

- Syferfontein Farm (Location of Site)
- Farms with "fontein" (fountain) in name
- Farms with water-related translations from Afrikaans, such as "spruit" meaning "spring"
- Streams
- General line of Witwatersrand ridge

Figure 5.5 (Opposite)
Wendy Bodman's map of greater northern Johannesburg's water systems
(Bodman, 1981).

Figure 5.6 (Above)
Plan of the Witwatersrand showing the layout of farms in 1886. overlaid on an aerial photograph of the greater city area
(Author, 2021 After Stokes, 2018)

Figure 5.7 (below)
The Sandspruit River between Athol Gardens and Strathavon (Bodman,1981)

Figure 5.8
Children playing on the Braamfontein Spruit (Bodman,1989)





Green spaces are typically created along the course of natural rivers. Often, these 'spruits' or rivers double as municipal servitudes, and some even "host a network of pylons that distribute electricity across the city" (Stokes, 2018). Bodman focused her work on saving these natural water bodies from destruction and industry to ensure that public spaces in the context of Johannesburg remain accessible to all.

Streams such as the Sandspruit, which flows past the Melrose Temple, fulfils many civic roles within the city today. This includes the provision of space for various religious ceremonies regarding the Hindu, Jewish and Zionist communities (elaborated on further in the document) , accessibility for pedestrians who use the spruit as transport routes, and water for those who don't have sufficient access to it. "People use some of the spruits' vast vegetation as cover during bathing and clothes washing" (Stokes, 2018).

As discussed in chapter 4, the Hindu temple is seen as a representation of the human body. Similarly, urban planners often depict a city as a human body by comparing various transportation, communication, rivers, and sewer systems to 'arteries and veins,' which 'pulse through the city.' Public open spaces and parks are important as they become the 'urban lungs,' detoxifying the often-polluted air. In the article titled 'Benefiting from Integrating Water into Public Spaces,' Chrysa Triantafyllidou (2015) mentions that water above all is "vital for all of these things beyond anthropomorphic attributions" (Triantafyllidou, 2015).

According to the International Water Association (2015), people of all ages generally prefer public spaces where water is present. Perhaps this is part of our attachment to nature as human beings, or maybe because water has many different functions in a public space. Not only is it used as a beautifying element, but the benefits of water also go way beyond the mere social aspects.

The Zoo Lake in Johannesburg is a prime example of a space constantly filled with people gathering. This is because the design of the park around an artificial lake, to which a central fountain was added in 1937, makes it particularly attractive to the general public who are constantly seeking refuge and an ideal relaxation point in the busy urban fabric (SatRenovationFrontend, 2021). Chrysa Triantafyllidou states that "sustainable solutions for urban design must include water elements at different scales" (Triantafyllidou, 2015). It has been proven that a wetland or a stream can lessen the heat island effect, enhance local biodiversity and improve air quality.

Johannesburg Water said that it lacks the funding for a backlog of infrastructure renewal projects; therefore, "strategic interventions need to be put in place to clean up pollution on riverbanks," according to Dunsmore (2021), a water consultant. This idea is effectively seen mounted towards the east of Johannesburg under the Ekurhuleni authority, whereby a constructed wetland system was created in the lower reaches of the Kaalspruit, another polluted and degraded stream (Walsh, 2021). The constructed wetland will not entirely clean the river; however, it will make the water more suitable for 'aquatic habitation' and even 'low-contact recreation' (Walsh, 2021). In this way, an engineered sequence of water bodies with vegetation will be used to remove harmful pollutants and bacteria, as a natural wetland would.

In her invaluable book titled 'The North Flowing Rivers of the Central Witwatersrand,' Wendy Bodman further describes the importance of these natural water systems and why they need to be preserved. They are contributors to Johannesburg's greater ecology and the social lives of those in the suburban areas through which they run their course (Bodman, 1987).

During the pleasantly warm summers, afternoon thunderstorms often occur. This influx of water dramatically transforms the spruits' 'trickle' into a torrent of high velocity, which "bursts out of its concrete bonds at the end of the channel, like the jet from great hose" (Bodman, 1987). This jet breaks away the earthen banks of the watercourse 'in great scours,' frightening city folk and their children. In fact, Bodman notes that municipalities have faced claims for property damage caused by major flooding of these rivers and streams in the past.

Pointed out in her book are various suggestions for handling small streams. She brings our attention to the importance of engineering techniques to attenuate the velocity of water in urban areas. Secondly, the purification of stormwater, particularly after a drought or a long dry winter, is equally important due to the pollutants that the rainwater picks up from the streets and other surfaces. This includes chemicals precipitated from air pollution, lead, fertilizer from gardens, silt from roadworks, and even animal droppings (Bodman, 1987).

Figure 5.9 (Above)
Flooding of the Sandspruit River (Renaud, 2016)



2. Constructed Wetlands

Due to the burying and canalization of small rivers, flooding and soil erosion are transferred downstream, causing destructive ecological problems. Damaged ecosystems cannot cope with heavy rainfall, and thus seasonal flooding occurs. Due to the ability to retain water in permeable soils, wetlands act as sponges and essentially prevent flooding (Bhikha, 2013). In doing so, pollutants get trapped in wetland vegetation, allowing suspended solids to settle out (US EPA, 2004). The pollutants are then converted into less soluble forms and are taken up by plants and micro-organisms, which remove the polluting material from the water (US EPA, 2004). In the Handbook of Constructed Wetlands, Luise Davis describes the various functions of a wetland under appropriate circumstances. She mentions that constructed wetlands can provide water quality improvement, cycling of nutrients, a habitat for fish- and wildlife, passive recreation such as bird watching, landscape enhancement, flood storage, and stormwater desynchronization (Davis, n.d.).

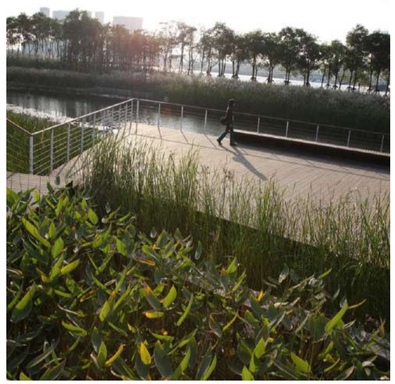
Other vital components of wetlands, such as the communities of aquatic invertebrates and microbes, develop naturally, according to Preetya Bhikha. There are different techniques or systems used to create these environments. The sub-flow system (SFS) involves the horizontal flow of water through gravel or sand, essentially acting as a filter. This allows for the filtration of fine pollutant particles and water retention for settlement and biological intake (Bhikha, 2013). On the other hand, a Bio-retention system accommodates micro-organisms that significantly reduce the polluting matter in areas planted with wetland plants on beds of nutrient-poor substrates (Bhikha, 2013).

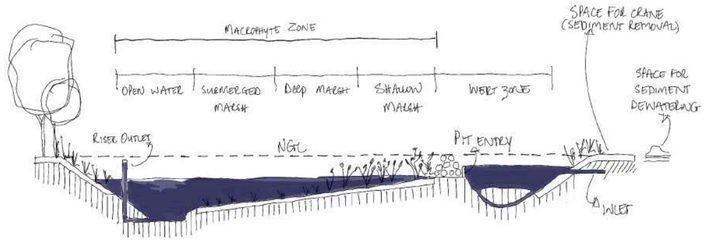
Finally, aquatic plant systems are composed of ponds containing both submerged and floating plants. This aids the adsorption and filtration of excess nutrients. However, the pathogens carried within the water are subjected to predation by micro-organisms and a clean (unfavorable) environment. These vegetated areas are shallow and contain an "inert zone (a sedimentation basin); a macrophyte zone (heavily vegetated but shallow area) and high flow bypass channels" (PUB, 2009) to accommodate sudden surges in water volume.

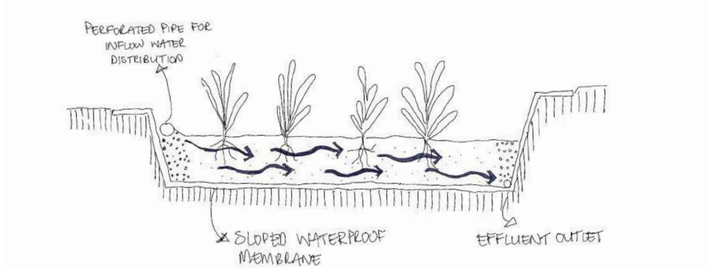
Figure 5.10 (Below)
Shanghai Huton Park, (Turenscape Architects, 2009)

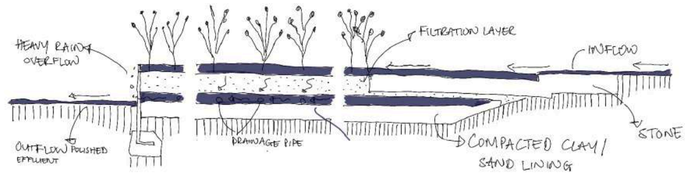
Figure 5.11 (Below)
Shanghai Huton Park, (Turenscape Architects, 2009)











A good example of a constructed wetland system is the Shanghai Huton Park, by Turenscape Architects, shown in the opposite figures. Located in a former industrial site along the Huangpu River, this ecologically conscious design includes urban agriculture, reclaimed industrial structures, and flood control. The walkways along the river seen meandering through riparian vegetation stand out the most in terms of its flexible edge that can accommodate flooding. (Singhal, 2011) A linear constructed wetland, 1.7 kilometers long and 5-30 meters wide runs through the park's center and was designed to create a "reinvigorated waterfront as a living machine to treat contaminated water in the Huangpu River" (Turenscape, 2011). Terraces and cascades are used to oxygenate the nutrient-rich water, reduce suspended sediments, remove and retain nutrients while creating beautiful water features (Turenscape, 2011).

Essentially, the evaluation of constructed wetlands should not be limited to their direct benefits; instead, it should account for the effective habitats they produce and its role in enhancing biodiversity. Landscape and waterscape architecture projects have great potential, particularly in suburban areas such as Abbotsford, to bring substantial welfare gains to communities with limited access to natural ecosystems (Ghermandi et al., 2009).

Figure 5.12 (Above)
Layout of a constructed wetland
(Author, 2021 After PUB, 2009)

Figure 5.13 (Above)
A sub-surface flow system
(Author, 2021 After PUB, 2009)

Figure 5.14 (Above)
The bio- retention system.
(Author, 2021 After PUB, 2009)

3. Spaces Around Water in the city

Figure 5.15 (below)
Map showing location of famous monuments and bridges (Author, 2021)

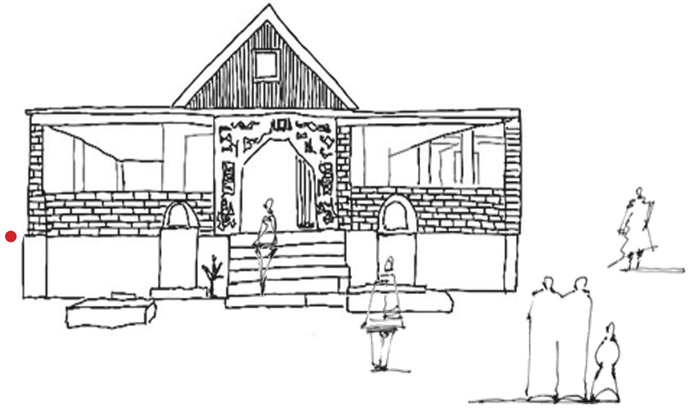
Figure 5.16 (Below)
The Cynda Bridge (NORA, n.d.)

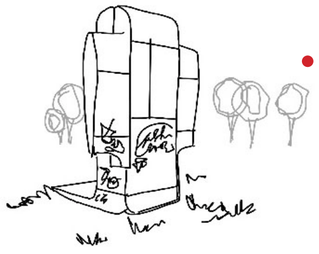
Figure 5.17 (Right)
The Katyn Memorial (NORA, n.d.)

Figure 5.18 (Right)
Veranda Architecture (NORA, n.d.)

Figure 5.19 (Right)
The Gardens (NORA, n.d.)

The tributaries of the Sandspruit river that flowed through the farms (Klipfontein and Syferfontein) created a rich fertile soil. These farms no longer exist; however, many monuments and historical structures are left behind on the landscape as a result of this significant body of water. These structures were built by the city's engineering department using locally sourced granite, thus creating an unusual architectural symphony (NORA, n.d.). During the early period, the Sandspruit river helped in agricultural production and was also helpful in doing the laundry, as mentioned in chapter 4. The Melrose Temple (opposite) is seen as a monumental structure today and is notably one of the earliest laundries founded on the banks of the Sandspruit (NORA, n.d.).





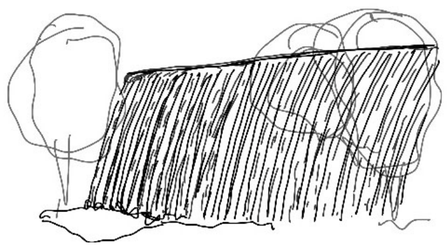


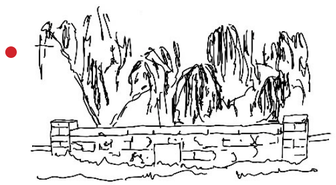
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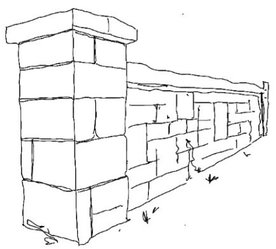


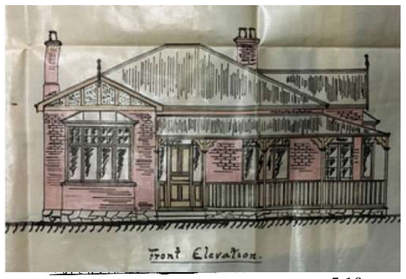
5.17











5.18



5.19

Figures 5.20 to 5.24 (Below)
Sketches showing existing monuments and bridges that exist surrounding the Sandspruit River tributary (Author, 2021).

1. Hilson Bridge
Dating back to 1926, the Hilson bridge is one of the earliest suburban bridges built in Johannesburg. The design of the bridge is unusual due to it being quite low and inconspicuous (NORA, Undated).

2. High Road
At 21 Nursery road, the Rochman's sheltered Nelson Mandela during the early 60's.

3. Pretoria Bridge
Constructed in 1938, the Pretoria Street Bridge asserts its dominance with bulky, dark granite and striking pediments. The rapid suburban growth in Abbotsford, Highlands, and Oaklands, necessitated the bridge's construction in 1930 (NORA, Undated). This bridge is a direct contrast to the Hilson Bridge.

4.The Melrose Temple
The Temple was founded in 1897 by indentured Tamil labourers who worked at the Melrose Steam Laundry on the Sandspruit riverbank. The Hindu community was granted rights to build a temple here, although restricted Group Areas and ownership laws meant that a white proxy always owned the land. (NORA, Undated) Sadly, the original buildings were demolished in 1996 and again in 2011.

5. Royal Airforce Memorial
Erected in 1976, this strange structure is the only remains of a memorial that commemorated the Royal Airforce aircrews who died during training in South Africa (NORA, Undated).

6. Waterborn Sewage
In 1927 it was decided to extend waterborne sewerage to the suburbs using the small natural drainage basins of Joburg's streams (NORA, Undated).

7. The Cynda Bridge
Unfortunately, this area has been tainted by association with Brett Kebble's arranged murder-suicide (NORA, Undated). It was constructed in 1931.

8. The Katyn Memorial
Commemorating the Katyn Forest Massacre, this memorial was erected in 1981. Fourteen thousand five hundred police officers and citizens were executed by the Stalin regime of the Soviet Union in 1940 (NORA, Undated).

14,15,16
Though gentrification from the 70s has almost obliterated its historic housing stock, Nellie Road contains the oldest remaining house (1911) at no 2, and a beautifully restored example of late 20s veranda architecture at no 52 (NORA, Undated).

19 and 20 The Gardens
Established in 1902, Its late Victorian design is largely unaltered. It was here that the thriving Portuguese Market Gardens were developed. Sadly, increasing land prices resulted in a very attractive sale of the land to Sanlam and Pick n Pay in the 1970s, resulting in the disappearance of the irrigation dams and destruction of much of the wetland (NORA, Undated).

These historically rich spaces within the city need to be preserved and maintained so that members of the public will be able to respect and appreciate what they stand for. In an article titled 'Braamfontein Spruit Habitat to be Restored' (2016), the writer mentions that the City of Johannesburg regards the environmental degradation of the Spruits and its surrounding green spaces; as a 'priority project.' It notes that the Johannesburg Roads Agency (JRA) has commissioned a study on the state of the city's rivers to improve the natural habitat and surrounding infrastructure. According to the acting managing director, Mpho Kau, the study will no doubt lead to far-reaching actions by the JRA to combat future degradation. As discussed earlier, "rapid urbanization close to the banks of the spruit has had a choking effect on the rivers', reduced its capacity and deprived it of its natural flow path" (Business live staff writer, 2016).

Unfortunately, our public spaces are often taken for granted or neglected despite their heritage value and importance. During the last few decades of the 20th century, the amount of money invested in their upkeep and provision failed to reflect the vital role they play in society. According to the Government's Urban Task Force, the general perception of our public environment is that it is 'run down and unkempt, a fact that contributes to the widespread dissatisfaction with urban life. According to Bodman (1989), urban anti-social behavior has many manifestations and many roots, and perhaps the destruction of nature is one of them..

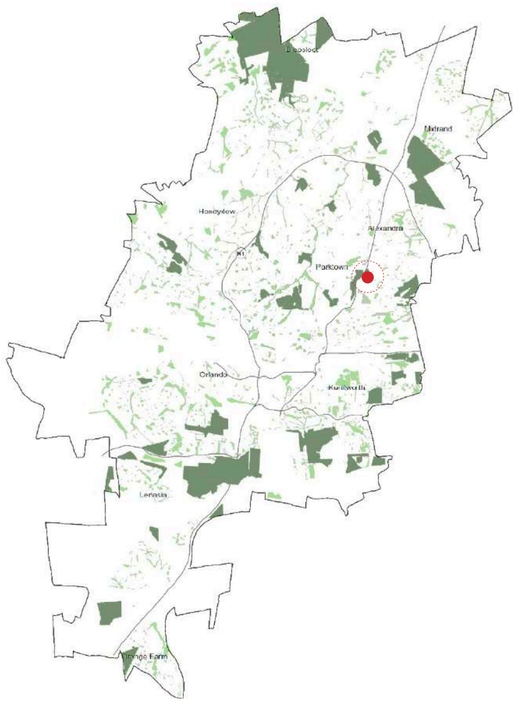


Fig 5.25 (Bottom Left)
Green assets in Johannesburg which are currently managed by the city
(Author, 2021 After JCP, unknown)

Fig 5.26 (Below)
Scott-Atholl Bridge at the Melrose Temple site showing Sandspruit river pollution
(Author,2021)

Fig 5.27 (Below)
Waste Pickers polluting the banks of the spruits (BusinessLive, 2016)





4. Water and Spirituality

The historical and sacred conception of rivers traces back to when the world consisted only of the five natural elements of earth, air, fire, water, and ether. Water is a natural element that has been religiously and universally accepted as a symbol of purity, abiding by the "universal law of circulation that governs all forms of vitality" (Schama,1995). Being a central element in the human body, water constitutes seventy percent of its mass and represents our main life force.

P. B. Singh (1994) mentions that running water, in general, is described as "bestowers of sanctity and miracles" and in this way, a regular chain of interrelationship between water bodies and human society is maintained by the "varieties of rituals and performances". Water has cultural and symbolic value, but over the last few decades, it has become quite evident that this precious resource is not only an essential medium for survival and, of course, life on earth, but also for human psychological, spiritual, and social wellbeing. Religious practices include any ritual, sermon, commemoration, or worship (of a deity), sacrifices, festivals, or other aspects of the cultures along the riverbanks. According to a survey done by the Department of Nature Conservation at the Tshwane University of Technology, most of the respondents (54%) associate the river with the religious practice of prayer, followed by baptism (49%) with the added benefit of being healed of diseases or ill-health (J. Mboweni, 2016).

Water has had many roots in spiritual symbolism and ritual throughout human history. Unfortunately, "too many members of the world's religions neglect to respect water as a finite natural resource"(HealingEarth, 2021).

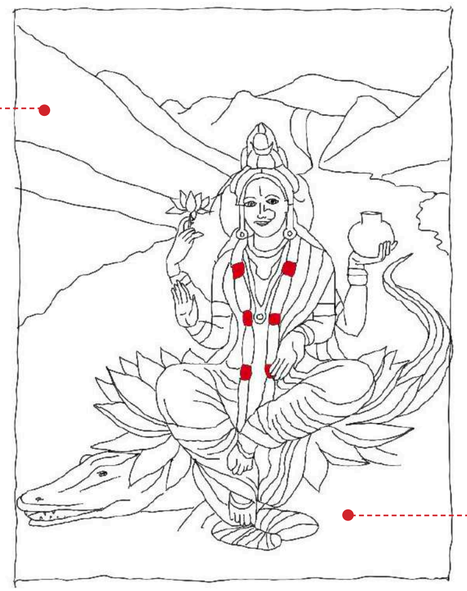


Fig 5.28 (Right)
Ganga is also personified as a goddess and worshipped as Goddess Ganga (Author,2021)



In a recent study, German researchers concluded that even being near human-made water features, such as city-center fountains, ponds, and canals, "induces [restorative] experiences [and] creates meaning." Many members of religious communities and likewise many people who profess no religion need an inner, spiritual conversion to appreciate the value of water.

Ancient Jewish tradition calls people on special occasions to cleanse their bodies spiritually by immersion in a 'mikveh' bath. For Muslims, ablution with water, or 'wudu', is obligatory for daily prayer. The prophet Mohammed states in the Qur'an: "O you who believe! When you rise up to prayer, wash your faces and your hands as far as the elbows, and wipe your heads and your feet to the ankles"(5:6). In Christianity, baptism through holy water symbolizes purity (Shazi, 2021). These are only a few examples of rituals that using water for spiritual purification in the world's religions. As with fluidity, human beings have found in water solvency a cleansing power that reaches beyond the physical body (HealingEarth, 2021).

Hindu mythology emphasizes the interconnectedness of water and its collective value (Shah, 2020). Therefore, it is crucial to approach all bodies of water with the same level of concern and respect. In the context of the Melrose temple, the Hindu community associates the Sandspruit with the Ganges River in India, seeing it as a symbolic reflection of the sacred. In India, Hindus consider the river Ganges an embodiment of the goddess 'Ganga.' This makes the Ganges River a "symbol of life and a place where one can wash away spiritual impurities", thereby "drawing closer to the sacred source of life" (HealingEarth,2021). The Ganga is one of the greatest symbols in Hindu cosmology as it is believed to withhold "great universal power that allows believers to attain enlightenment" (Maharaj, 2016). Apparently, ritual worship to the great river Ganga, in the form of bathing, meditation, sacrifice, and eventually death, will allow a believer to attain Moksha (liberation).

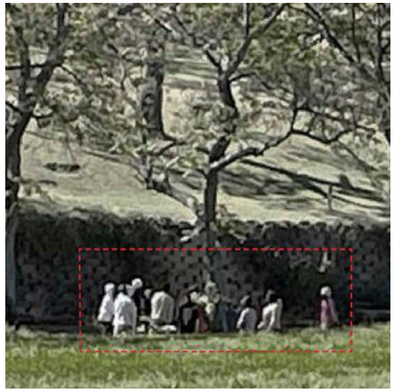


Figure 5.29 (Top Left)
Remnants such as candle wax are often left on the shallow rocks in the Sandspruit stream as traces of the ritual practices that have been carried out by religious groups such as the ZCC, as shown in the image above
(Author,2021).

Fig 5.30 (Top Right)
The ZCC Performing their rituals on the banks of the Sandspruit river tributary, next to the Melrose Temple (D.Diar, 2021).

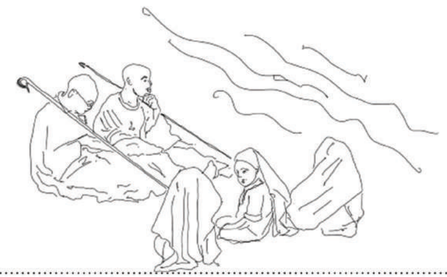
	Use	Belief	Ritual	
ॐ	Hindus use river water to cleanse ritual objects, symbolically purify themselves before rituals and prayers, and even drink the water to help with illnesses.	The Holy River Ganges is mythologically linked to Lord Shiva as the fountain that flows through the Himalayan terrain. As manifestations of gods and goddesses, rivers have a divine origin. The River Ganga descends from the heaven itself. Symbolically, it represents liberating the divine consciousness.(Jayaram, 2021)	According to Hindu funeral rites and rituals, the scattering of cremated ashes takes place. The family chooses a sacred body of flowing water . Ritual Immersion and the drinking of river water only takes place in India, however, it is done symbolically in South Africa.	
✝	Water from a flowing river 'metsi a noka e e elelang' is mainly used for external purposes. This includes cleansing the body or environment and individuals of ailments they may be suffering from. It is also used for casting out evil spirits. (Lebeloane and Madise, 2005)	A flowing river is believed to carry curative properties as it flows from one point to another through different environments such as valleys, villages and water falls. It is at this point or confluence that ZCC members prefer to draw water. (Lebeloane and Madise, 2005)	It is understood to have life-invigorating power if it has been blessed by either a minister of religion or a traditional healer (called inyanga or ngaka). African Indigenous Christian theologies give people this isi-washo (holy water in Zulu) to either bath in, drink and/or cleanse their environments (Lebeloane and Madise, 2005).	
✡	River water is used to cleanse the spirit and iliminate impurities. Infusing the soul with spirituality.	In Jewish Law, water is symbolic of life. Certain rabbinic sources interpret the ritual as guarantee of protection against the evil eye, while others interpret the custom as a reminder to God of the holiness of Isaac and his father Abraham, founder of the Jewish people (Britannica, 2021).	Tashlik, also spelt Tashlikh or Tashlich, (Hebrew: 'you will cast'). The ritual at one time called for bread crumbs to be fed to fish, symbolizing the wiping out of humanity's past iniquities. Mikveh or Mikvah is the ritual of immersion, resulting in "spiritual purification" (Britannica, 2021).	

Fig 5.31 to 5.33
Diagrams illustrating the various rituals that take place on the banks of the Sandspruit river, on the chosen site (Author,2021).

5. Conclusion

Water within urban spaces makes a city more livable and more resilient. Artificial wetlands, parks, and the corridors on both sides of a stream for stormwater harvesting can improve land-use practices significantly (Triantafyllidou, 2015). Within Johannesburg's northern suburbs, boosting the presence of these things can shape blue-green corridors, substantially revitalizing the area. On the other hand, traditional rituals, religious practices, and beliefs associated with river water also form an integral part of people's lives around the area. Therefore, the infringement of the cultural significance that local communities have attached to waterscapes should have stringent legal consequences since development directly impacts the people who depend on the environment for their physical and spiritual well-being (Mboweni and P. de Crom, 2016).

So, beyond the well-being that water provides in public spaces, it can also connect people and champion cross-sectoral, trans-disciplinary urban planning to achieve resilient cities (Triantafyllidou, 2015).



Fig 5.34 (Right)
The Sandspruit river now clogged with rubbish used to supply the water for the flourishing Melrose Steam laundry (Sunday Times,1983)

Fig 5.35 (Opposite)
A Mantra extracted from the Rig-veda. (TemplePurohit - Your Spiritual Destination | Bhakti, Shraddha Aur Ashirwad, n.d.)

O Water, because of your presence, the Atmosphere is so
refreshing, and imparts us with vigour and strength.
We revere you who gladdens us by your Pure essence.

O Water, this auspicious Sap of yours, please share
with us, Like a Mother desiring
(to share her best possession with her children).

O Water, when your invigorating essence goes to one
affected by weakness, it enlivens him,
O Water, you are the source of our lives.

O Water, may the auspicious divinity which is wished for be
present in you when we drink (water).
May the auspiciousness which supports you, flow to us.

O Water, may the divinity in Water dwell in the Farm lands,
O Water, I implore you to give nutrition (to the crops).

O Water, Soma told me that in Water is present all
Medicinal Herbs of the World,
and also Agni (Fire) who brings auspiciousness to the World.

O Water, you are abundantly filled with Medicinal Herbs;
Please protect my body,
so that I can see the Sun for long (i.e. I live long).

O Water, please wash away whatever wicked tendencies are in me,
and also wash away the treacheries burning me from within, and any falsehood
present in my Mind.

O Water, today, to you who is pervaded by fine Rasa
(Invigorating Sap) I came,
I deeply enter (i.e. bathe) in you who is pervaded by
Agni (Fire Principle); May that Agni produce lustre in me.



06
THE PROJECT

Rituals and ritual practices were used as an informer for the spatialization of program on the site. By looking at the processes followed, it was clear that the proposed building needs to fit a series of prescribed actions. The choreography of the everyday, annual, and festival rituals are explained to explore further how or if they could inform the design.

It is common practice amongst temple goers to observe certain etiquette, norms, and decorum before visiting "the Lord of the universe". This includes simple things like taking a bath and wearing freshly washed clothes. After entering the temple precincts, silence should be observed by withdrawing the mind into the thoughts of God. After getting individual worship, if any, performed, the main shrine should be circumambulated three, five, or seven times. Then one should bow down to the deity from a place outside the dhvajastambha (Flagpost), taking care to see that your feet do not point in the direction of any of the minor deities. Visiting the shrines of the minor deities is the next duty. Before leaving the temple's precincts, one should sit quietly in some corner and meditate. Lastly, since the distribution of alms to deserving beggars in the temple vicinity is considered meritorious, devotees are advised to do so. This entire process takes less than one hour to complete as part of the daily devotional act.

To further understand these processes, I took part in a 1-hour ritual ceremony.
This experience opened up my mind and gave me clarity to reflect on the beauty and peacefulness on the site.

"Offerings of perfumed substances, flowers, incense, lamps and fresh fruit - these are the five elements of the traditional puja which culminates with offering of the lamps." -Kamika Agan

Fig 6.1 (Left)
Photograph of my Dad and I on site
(V. Diar, 2021)


Circle Temple


Wash Hands


Break off Flower Petals

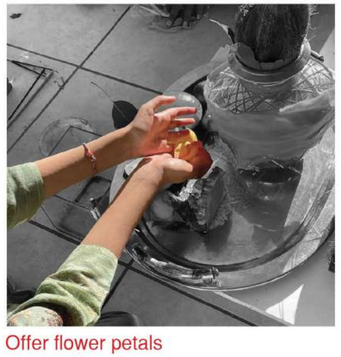

Set-up


Light Ghee Lamp


Offer Fruit


Ash Forehead


Prayer


Offer flower petals

Upon arrival, I took off my shoes as a means of paying respect. I then circumambulated the temple three times in a clockwise direction. This is usually done with palms pressed together while simultaneously chanting various ''shlokas''. After completing this auspicious gesture, I made my way to the south end of the temple, whereby all prayer items for the ritual were neatly set out. The Guru proceeded to sprinkle water on my hands using a Tulsi leave before the start of the ritual, which was is done as a 'symbolic purification.'
I then started to break off fresh flower petals into a tray before lighting the clay lamp. The Indian culture emphasizes natural things such as earth, water, fire, sky, and air; therefore, special significance is also given to flowers which are popularly used as an offering to statues of gods or even to photographs of ancestors.

The burning clay lamp, on the other hand, represents the element of fire. Fire is one of the five principal elements of this material creation, and it represents purity. For example, whatever comes in contact with fire is immediately purified, the way impure gold is converted into pure gold. ''Fire also represents luminance and brilliance. It acts as a dispeller of darkness. As soon as the fire is lit, darkness flees away. Similarly, the lamp being offered to the lord dispels the darkness inside the heart of the devotee'' (Vardhan, 2018).

I proceeded to light an agarbatti (incense stick) which possesses certain properties that purify the air and induce positive vibrations in the brain. This typically helps to concentrate more easily during meditations or rituals. Other fragrant substances burnt include camphor, loban and sandalwood. For the next step of the ritual, I applied holy ash to my forehead. Most of the time, some traditions are blindly followed without knowing their actual significance. This is one such custom that I have been following my whole life, without completely understanding the meaning behind it. Apparently, this action is done to keep us humble and remind us that at the end of our lives, we will end up as nothing but a handful of ash. ''From ashes to ashes''.

I then offered the flower petals to the statue of the Lord Ganesha, which was positioned on a silver tray, next to a coconut placed on top of a kalash (Copper or brass pot with betel vine leaves). Ganeshji (Ganpatiji) is the deity of auspiciousness. He is invoked for the success of all ventures and projects. He is the remover of all obstacles and is invoked by chanting:

''Vakratund mahakaya surya koti samaprabhaha
nirvighnam kuru mey deva sarva karyeshu sarvada''

Translated as -''O One with a curved trunk, large body, brightness equal to crores of suns, always remove obstacles from all my endeavors''.

Figure 6.2 (Left)
Photo series of the ritual -Stage 1
(Dinesh Diar, 2021)



Next, I recited a few prayers with the guru's guidance. At that moment, I remember feeling incredibly calm and untroubled. The early morning sun shining down provided a warmth that was so comforting and healing. While I was praying, all I could think about was how beautiful this space was and how lucky I was to be there, right in that moment, and privileged to have both my parents by my side.

After this, I was told to offer flower petals to the Kalash where the coconut sat atop before starting the next stage of the ritual- Yagna. As a rite, it is defined as "offering oblations in the name of the gods"(Aksharpith,2004), while specific mantras are being chanted. The pit into which the oblations are offered is known as the havan kund, and the wood that is used as "faggots" is obtained from specified trees only. I then poured ghee into the fire, which amplified the flames. Samagree (fragrant medicinal herbs)

Fire is symbolic of the divine light of the gods and tapas, or heat, which is acquired through penance. In the Rig Veda, it is suggested that the world was created from a primaeval fire ignited by Agni, the Fire God, whereby the fire is symbolic of internal power (Hays, 2018).

Figure 6.3 (Right)
The Peepal Tree- Hindus also pray to the water bodies, trees animals and nature at large (Dinesh Diar, 2021)

Figure 6.4 (Opposite)
Photo series of the ritual- Stage 2
(Dinesh Diar, 2021)


Turn Camphor


Pray


Offer Flower Petals


Seek Blessing


Add Ghee to the Havan Kund


Start Fire


Offer Samagree


Recite verses from religious text


Continue with offering s



Sprinkle water on Kalash (Brass pot)



Prayer



Break coconut



Ensure coconut is fresh



Ending prayer



Fruit offering



Put fire out



Aftermath



Ring Temple bell

For the next part of the ritual, I sprinkled water (symbolizing water from the Ganges) over the coconut as a purifying agent. I then took the coconut from the top of the brass pot and broke it on an old brick outside the sanctum. The cracking of the coconut symbolizes the breaking of one's ego. "The hard shell of ego and ignorance is broken to give way to knowledge and purity" (Srivastava, 2017). That is why breaking a coconut before any auspicious event is considered sacred, emphasizing that Hinduism's richness is immeasurable and profound.

I then entered the temple and offered some of the blessed fruit from the ritual to the main deities. Before taking leave, I rang the bell, usually hung in the area or porch preceding the inner sanctum. It is believed that deities remain manifest in temples where bells are rung; therefore, devotees ring them as an invocation to the deity to listen to their prayers and be blessed. As a young child, I would jump up and ring the bell as many times as I could. This is a memory that will live with me for a long time.



Figure 6.5 (Opposite)
Photo series of the ritual - Stage 3
(Dinesh Diar, 2021)

Figure 6.6 (Left)
The Guru helping me perform the ritual
(Dinesh Diar, 2021)

2. Festival





Figure 6.7 (Above)
Some devotees experience a "state of trance" and pierce their backs without bleeding, which is an expression of their utmost devotion and faith. (Wilson, 2018)

Figure 6.8 (Above)
Painting of Lord Muruga by artist Vijayann Rajasabai. (Rajasabai, 2020)

Figure 6.9 (Opoosite)
Photo series documenting the popular Kavady procession at Melrose Temple read from left to right (two summers.net, Wilson,

In contrast to the smaller, more intimate ritual documented earlier, the Melrose Temple has also hosted numerous religious festivals and observances since the very early days, with the most popular being the Kavady Festival. This occasion is observed twice annually, during the months of Thai (January/February) and Chithirai (April), and is dedicated to Lord Muruga, "who, devotees believe, has the power to cure illness and get rid of misfortune"(Desai,2010). Between 7,000 and 10,000 devotees gather at the temple during this time, bringing together the Tamil community from across the highveld and even further afield. Some devotees go into a trance, "channelling the spirit of Murugan or other gods, whereas many others choose to pierce their bodies with pins" (2Summers, 2017). Desai (2010) mentions that festivals were (and still are) essential "vantage points" for developing a presence and "collective consciousness" of Hinduism.

The Melrose temple hardly faced any sort of opposition towards the Hindu festivals over the past 150 years. It was probably due to the sympathetic nature of the surrounding Jewish residents. This is in contrast to the Temple at Umgeni Road in Natal whereby the DP Carnegie at the time wanted to "abate the Coolie noise" asking the question "By what right can they occupy the public roadway without any consideration for others, sick or dying" (Desai, 2010).

The Kavady is a wooden arch made from bamboo and is decorated with flowers and peacock feathers, as shown in the opposite photographs. This structure is carried on the shoulders of devotees, and it "represents the carrying of one's burdens and placing it at the Lord's feet."(Singh,2014) Two Soomboos (Small brass containers filled with milk) are then attached to the Kavady on each end, with which devotees wash the statuette of the Murugan deity. Usually, flowers from the Kavady are then placed into a nearby river as an offering to Ganga, the "Hindu River goddess".

Usually, the day of the Kavady Festival is blazing hot from the time it starts in the early morning at 7:00 a.m. Volunteers watch over the "dozens of massive pots, bubbling over hot flames" (2Summers,2017). Strangely, the last Kavady Festival that I attended was in the year 2020, before the start of Covid-19. It was an unusual day because it rained the entire duration of the festival, making the ground slippery and much harder to tread. I was inspired to see fellow devotees persevere regardless of the extreme weather conditions. Being there myself was quite a testament to my own faith and devotion. However, on this day, I kept thinking that more infrastructure could facilitate devotees during such adverse weather conditions, be it sunshine or rain.

In the book titled Ephemeral urbanism, Rahul Mehrotra (2017) discusses Ideas about the non-permanent configurations of a city landscape and the argument that the notion of "impermanence" is a legitimate addition to the urban discourse of the current day. Temporary settlements similar to those set up during the Kumbh Mela Festival in India are configurations that only exist for a limited period. Since the Hindu calendar marks the activation on site in different ways, the aim is to understand how my site can function at both extremes in terms of catering for religious events during certain times of the year as well as functioning outside of those major events.



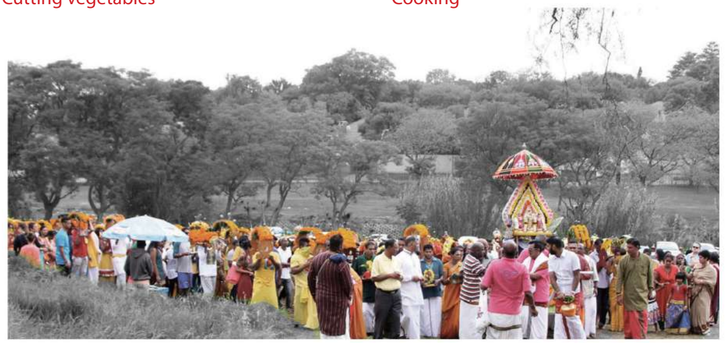
Cutting vegetables



Cooking



Smoking of the Soomboos



Kavady procession leaving the Chinese Park



Kavady procession circling the temple



Carrying a Paal koddum



Decorated Kavadies Aftermath



Taking down flag from the Koli

3. Activity

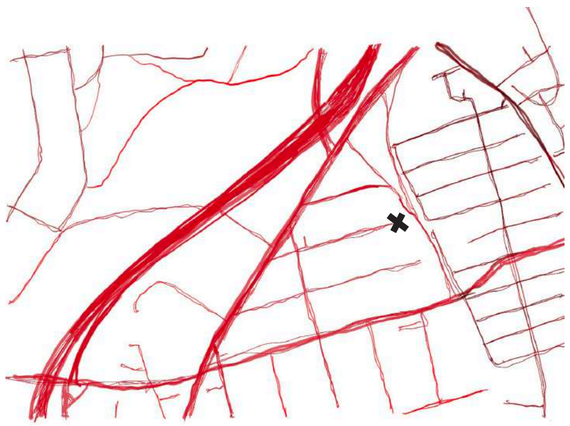
Earlier in the year, I interviewed a resident maintenance worker at the Melrose Temple grounds to understand when the temple is the busiest. This was made possible by first understanding what his daily chores are.

He started by explaining that a typical weekday starts at 5 am for him, setting up prayers for the Abhishegam (a ritual of pouring water or other sacred substances on a statue of a deity while also chanting some mantras). The Guru comes at 6 am, and together they perform the abhishegam ending at 9 am. After this, he washes everything clean, followed by a quick tea break at 10 am.

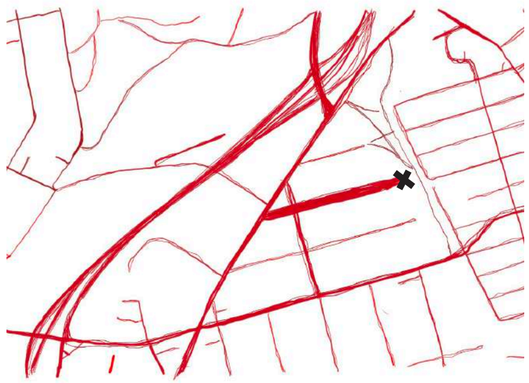
According to him, only a few people come for morning prayers with the Guru during the week. He carries out various duties during this time, such as cleaning inside the temple, washing, taking out bins, etc. He also cleans the stoep outside and around the temple premises to ensure that everything is kept neat at all times. He says the rest of the week is typically the same, except for Thursdays, which is left for "brass work". This includes a time-consuming process of polishing and shining.

He starts setting up for the Navagraha (nine planets) prayers on Fridays, which only takes place on a Saturday. He then cleans inside the temple in preparation for the weekend. Saturday is "prayer day" as it is very busy throughout the day, with the most popular time being noon. Sunday is not as busy, and he uses this time to rest and set up for Monday once again. Many people used to come around 10 am for the scheduled Sunday service; unfortunately, it cannot take place anymore due to the Covid restrictions that have been put in place by the government.

How can my design create a space that ensures the temple is always full of life and busy? As seen in the diagrams below, the busiest time of the year at Melrose Temple is, in fact, during the Kavady festival, with thousands of people coming in from far and wide. However, since this event only takes place twice a year, the temple is left considerably empty at all other times.



Monday to Friday

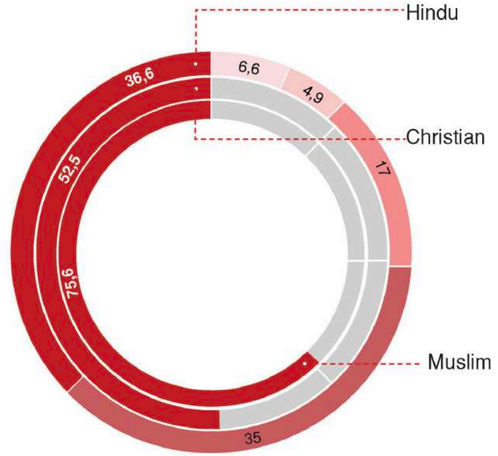


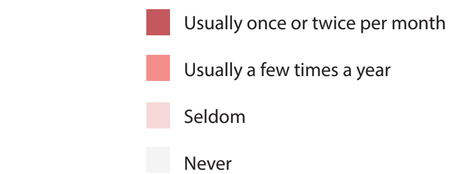
Saturday

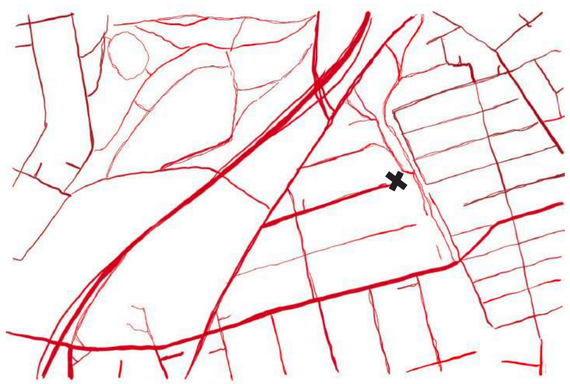
According to the Businesstech statistics, only 36,6% of Hindus in South Africa go to the temple every week. This proves that most of the time, the temple is left vacant. Only 6,6% of the population doesn't go to the temple at all. 35% of people only go to the temple, usually once or twice per month. Whereas 17% only go a few times a year. This is the percentage that I fit into. To increase the weekly attendance at the temple, various other services need to be provided to meet the needs of the widespread community and ensure a greater sense of belonging and safety.

Figure 6.10 (Top Left)
Graph comparing the distribution of Hindu observance in South Africa (Author, 2021)

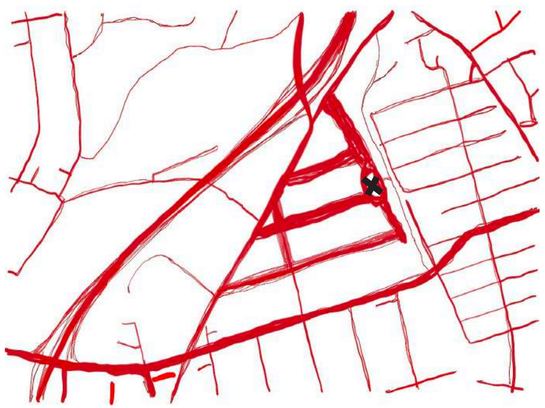
Figure 6.11 (Below)
Movement of cars and people in and around the Melrose Temple throughout the year (Author, 2021)







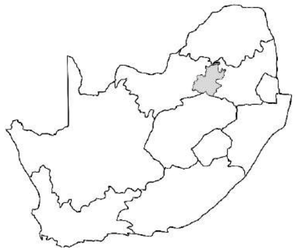
Sunday



Kavaday Festival

4. Abbotsford- The Site

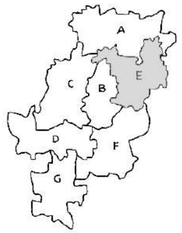
GAUTENG



JOHANNESBURG



REGION E



1. Melrose
2. Melrose North
3. Birdhaven
4. Abbotsford
5. Melrose Estate
6. Houghton Estate
7. Oaklands
8. Orchards
9. The Gardens
10. Highlands North
11. Waverly
12. Birnam

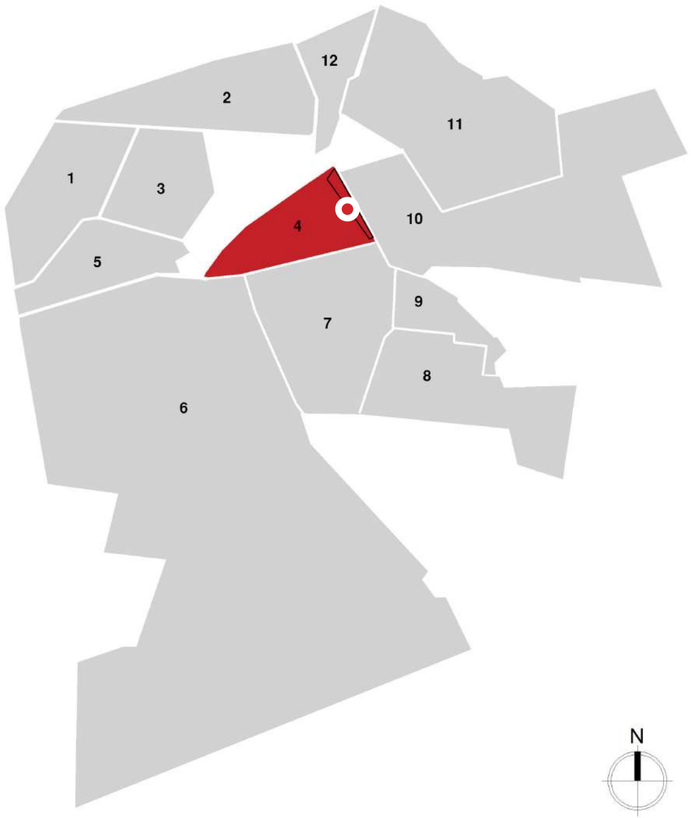


Figure 6.12 (Above)
Larger Context Location of Site
(Author, 2021)

Figure 6.13 (Right)
Locality plan to illustrate Abbotsford's location in relation to other Johannesburg suburbs (Author, 2021)

Figure 6.14 (Opposite)
Aerial photograph of Abbotsford in surrounding context. The distance landmarks are included (Author, 2021, After City of Johannesburg, 2021)



Figure 6.15 to 6.18 (Below)
Historic aerial photographs showing the development of Abbotsford and surrounds from 1937 to the 2000's
(NGI Geospatial Portal, 2021)

1930's



Abbotsford was located on the farm Syferfontein, which was one of rural nature with vast open spaces. As highlighted above, the Melrose temple is located on a narrow strip of fertile farmland close to famous Portuguese Market Gardens and St Mary's School for girls. Having been established as early as 1888, it is the oldest school in Johannesburg.

1950's



The typical land sub-division within Abbotsford and its surroundings mutated over time. As shown above, occupation of the land significantly increased with a proliferation of residential developments taking up considerably larger areas of the suburban block

1970's



This image was taken 'pre-highway' since construction only started on the highway in the late 1960s. By the late 1970s, Abbotsford sees its scales and densities increasing even further. Interestingly, the highway cut through the Johannesburg Park system and followed the river's route, very destructive to natural open spaces.

The sewage works which used to be in the James and Ethel Grey Park is visible here and is currently where the Melrose Bird Sanctuary is located.

2000's



In the 2000's Abbotsford existed similarly to how it does today. The development of the M1 Motorway allows the site to become more accessible. In 2007 The Melrose Arch Precinct came about, replacing and erasing a section of existing suburban development.

An increase in residential developments is also evident as a result of this. Trees have significantly decreased at the James and Ethel Gray Park purely due to safety concerns. Interestingly though, the narrow strip of land as highlighted above remained constant throughout the entire evolution of the suburb and its surroundings.

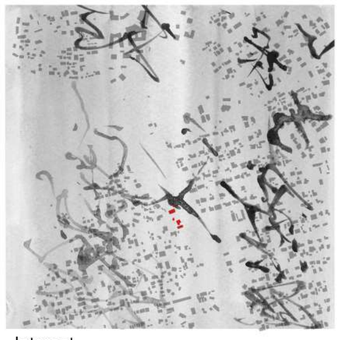
6. Site Mapping



Community



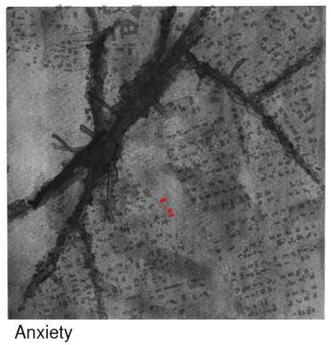
Fear and Frustration



Interest



Calm



Anxiety



Composite Image

In order to 'see' the site through a different lens, mapping using watercolour indicates an emotive and relatively intuitive response that further interrogates the placement of my intervention. The chosen medium of water was used as it is one of the five elements of nature, giving it the desired organic quality. Another reason I chose water is because of the dominant Sandspruit river tributary on-site, which stood out for me the most upon arrival. The process aimed to explore the site through sensing rather than analyzing and through feeling rather than thinking (Pincus, 2015). Five emotions were chosen and mapped out to capture how I experienced the space. A rough base map image of the existing site layout was used in the paintings so that all the layers could eventually merge to form a composite image of the site.

Figure 6.19 (Top)
Watercolor paintings of site
(Author, 2021)

Figure 6.20 (Opposite)
Basemap of site mapping various building typologies surrounding site (Author, 2021)

The emotions that were chosen indicate;
-Community as a sense of belonging and safety
-Fear and frustration due to the resident waste-pickers. Many pedestrians mentioned that they felt unsafe and often got "pickpocketed" while walking to work.
-Common Interest concerning the surrounding community
-Calm from the Snadspruit river tributary. The sound of the bubbling brook amplifies the spiritual quality of the space and the other natural surroundings.
-Anxiety brought about by the M1 North Motorway and adjacent main road

The final image with overlayed markings suggests that the upper portion of the site (B), as indicated below, is the ideal location for my building and its program since my senses were heightened in this space in contrast to the site (A). This location will inform more public accessibility and visual connections from the main road and further draw attention to the historic Melrose Temple.



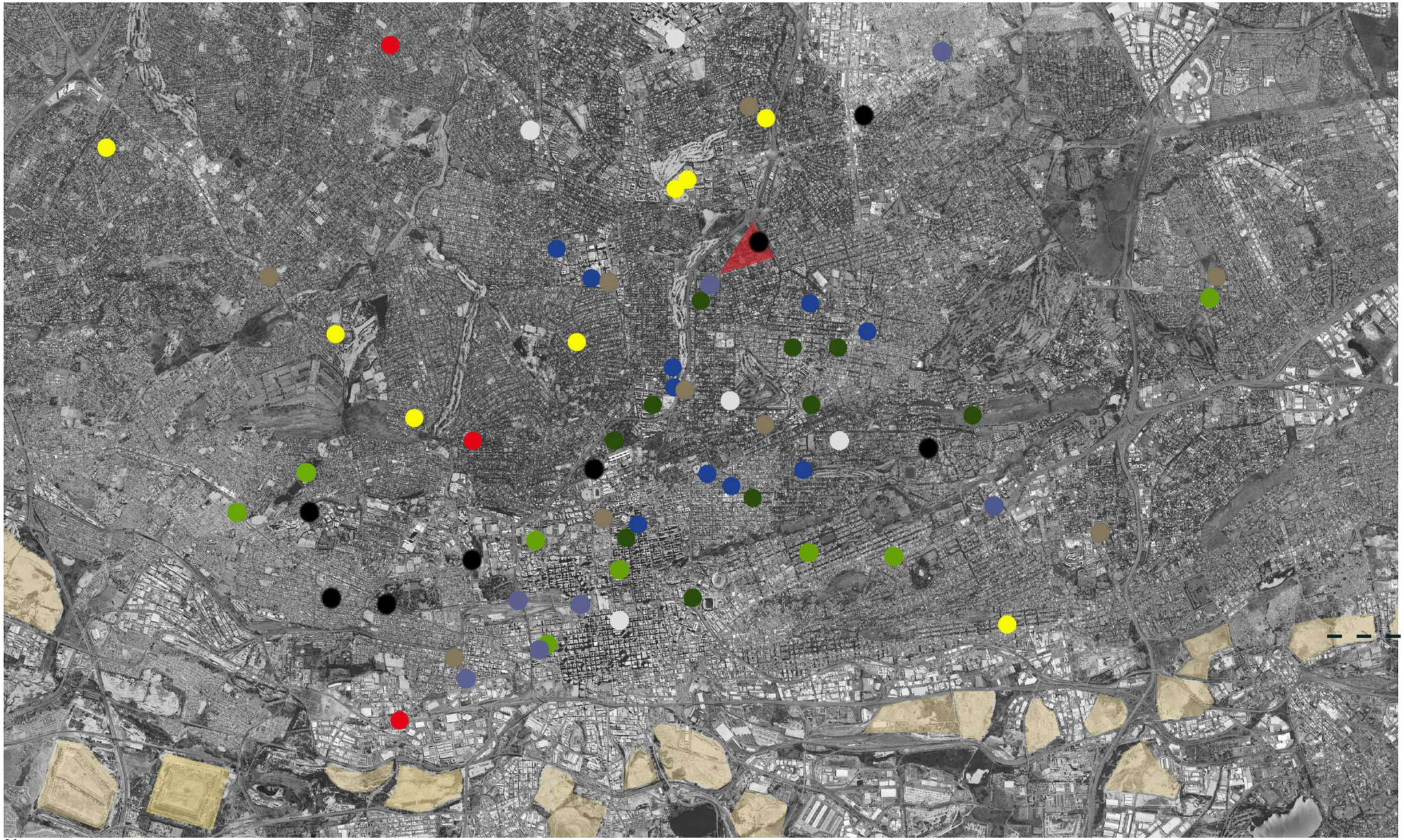
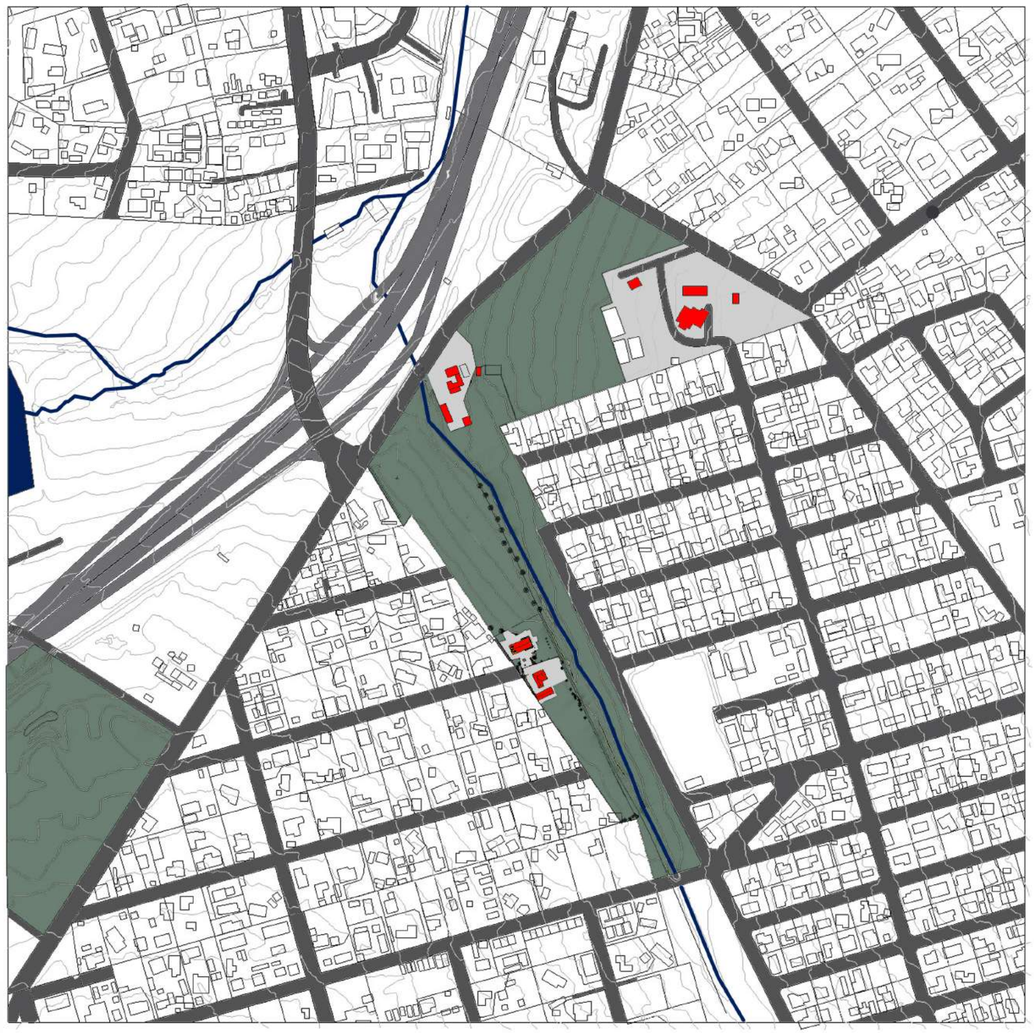
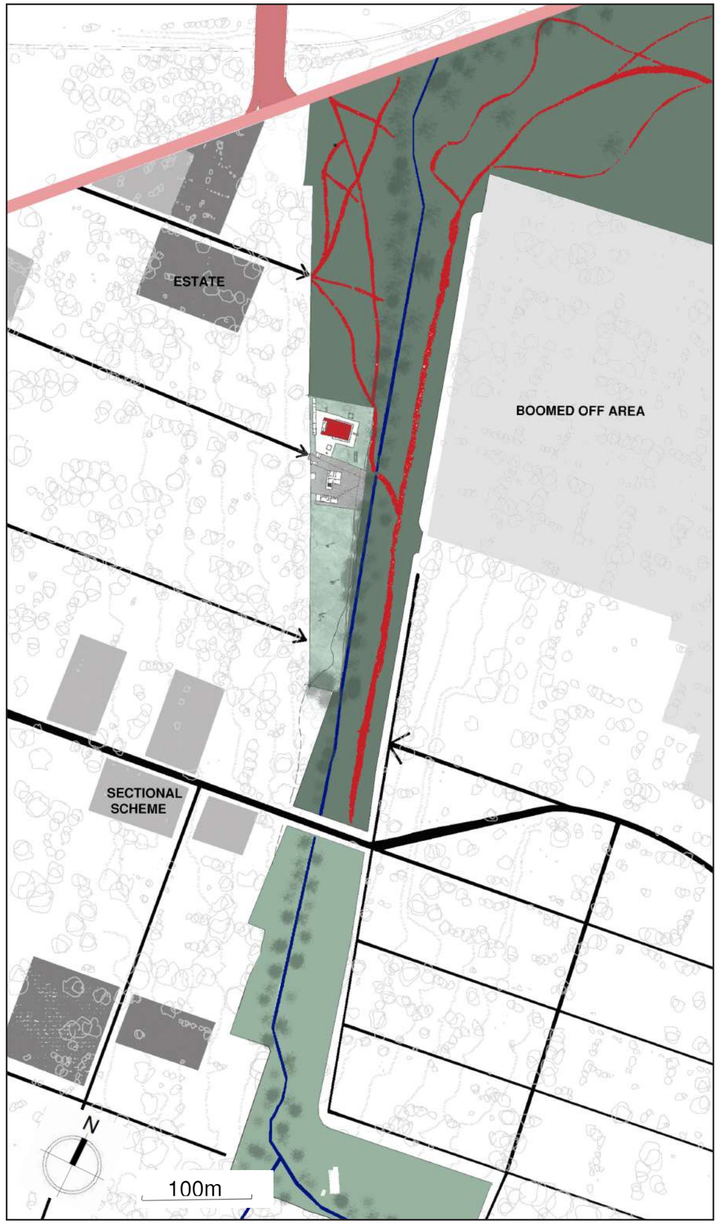


Figure 6.21 (Left)
Greater context map of Johannesburg, showing the location and proximity of various religious, cultural and community buildings (Author, 2021, After Google Earth, 2021).

Key aspects of the site needed to be taken into consideration for the design of the project as highlighted in the following maps. It was particularly important to understand the site and its edge conditions, which would be used for designing the fixed and permeable boundaries on site.





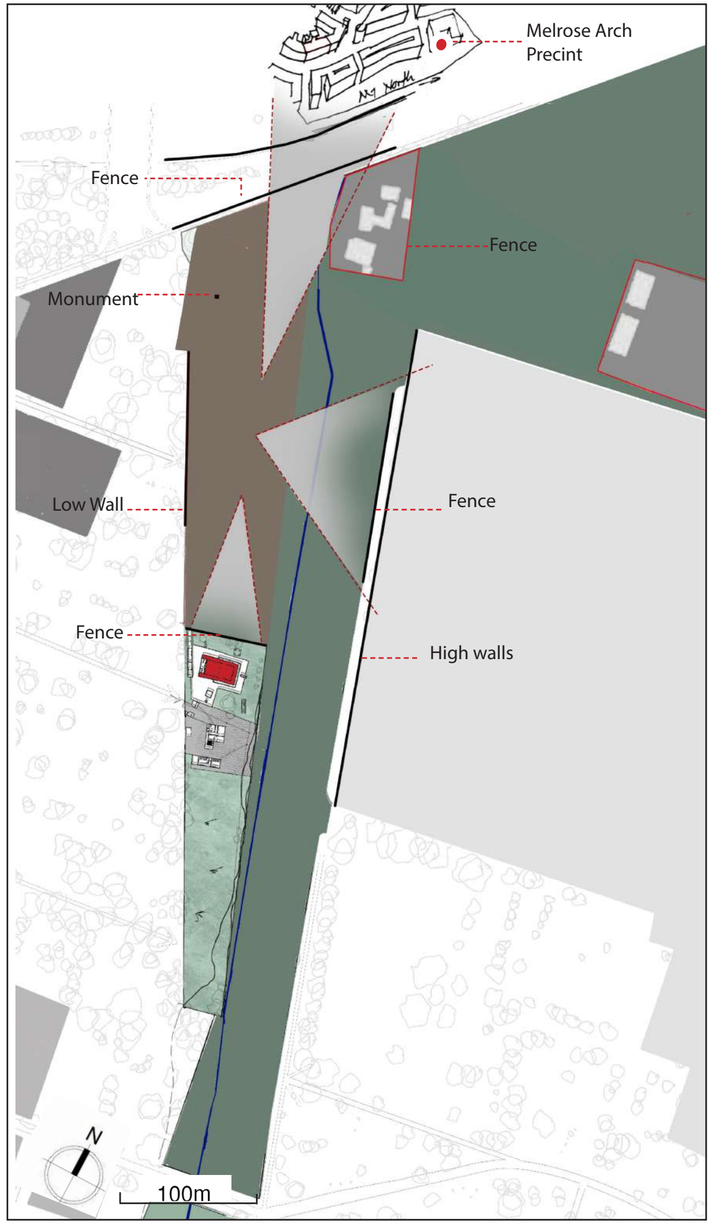
Current Movement routes on site:

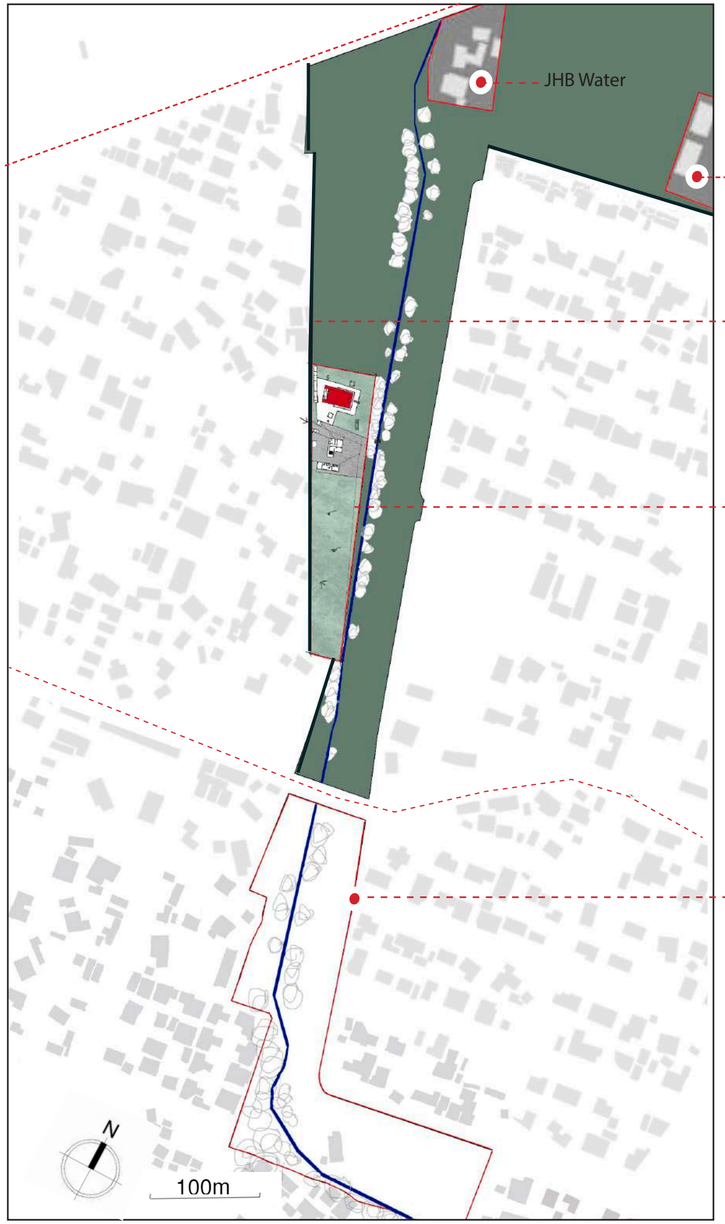
BLUE:	Water
RED:	Pedestrians
BLACK:	Cars
PINK:	Bus/Taxi/Car

Definite pathways have been etched into the land by pedestrians walking on site as shown in the colour red. Transport and accessibility routes are highlighted in black.

Sight lines

The site has distant visual links to the Melrose Arch Precinct and the M1 Motorway. Atmospheres on site leave the visitor feeling at peace within a quiet, detached landscape. The design aims to capture this feeling by creating a ritual pathway across the natural gradient on site, while celebrating the tranquil beauty of the land. These qualities present an ideal opportunity for a space of regeneration, activated through public use.



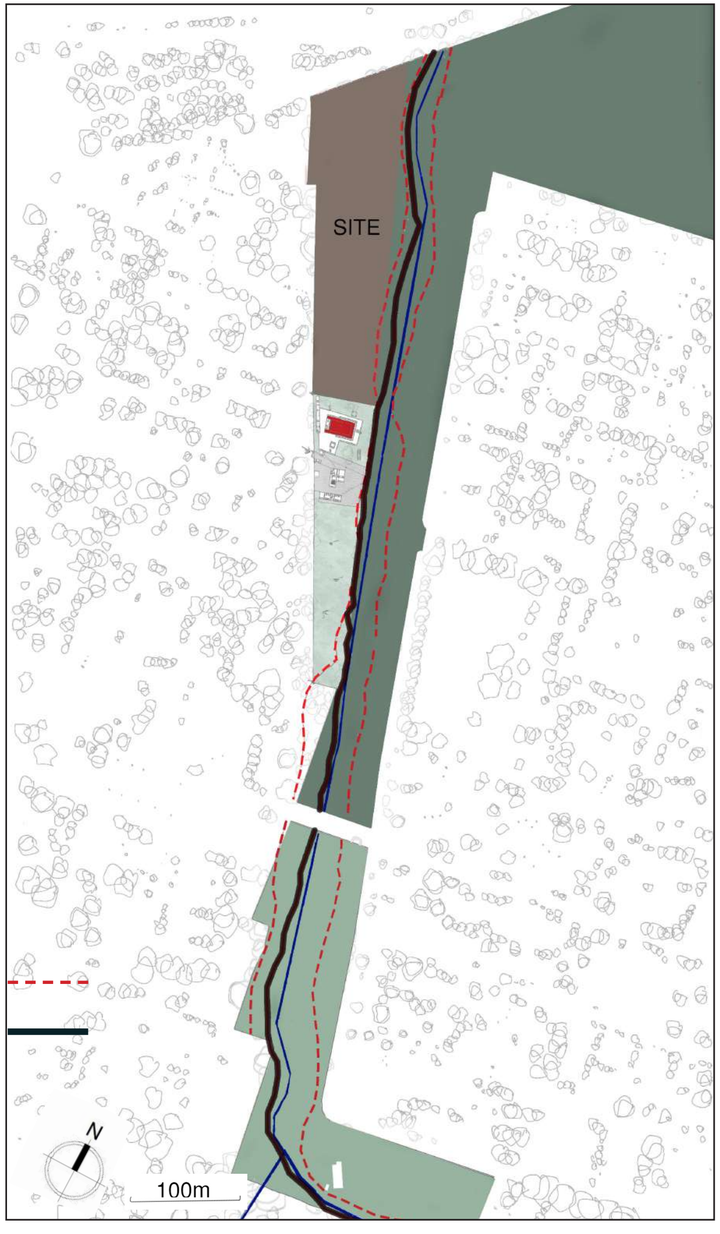


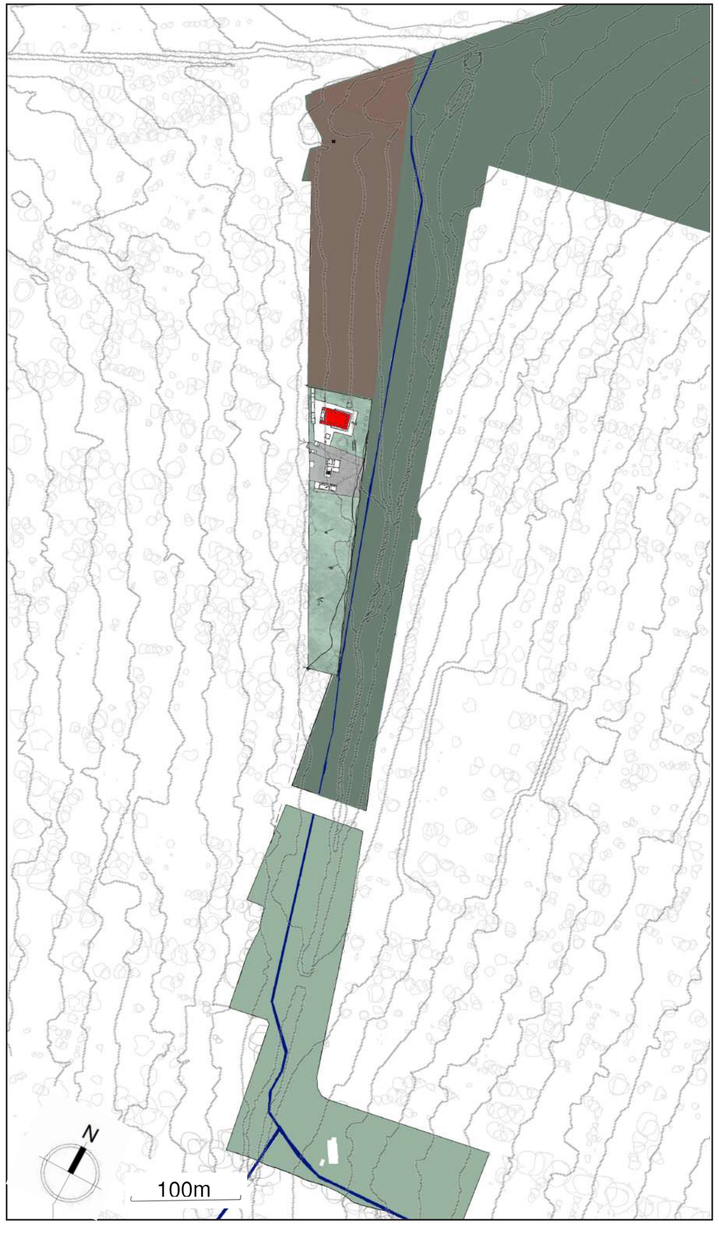
The Precinct

The site can provide green relief for workers, pedestrians, students, and residents in the surrounding areas.

Flood Lines

Highlighted on site are the flood lines, which Indicate the water levels likely to be reached having a specified recurrence interval. The 10m floodplain within this area is susceptible to inundation by floods up to the one hundred year recurrence interval.





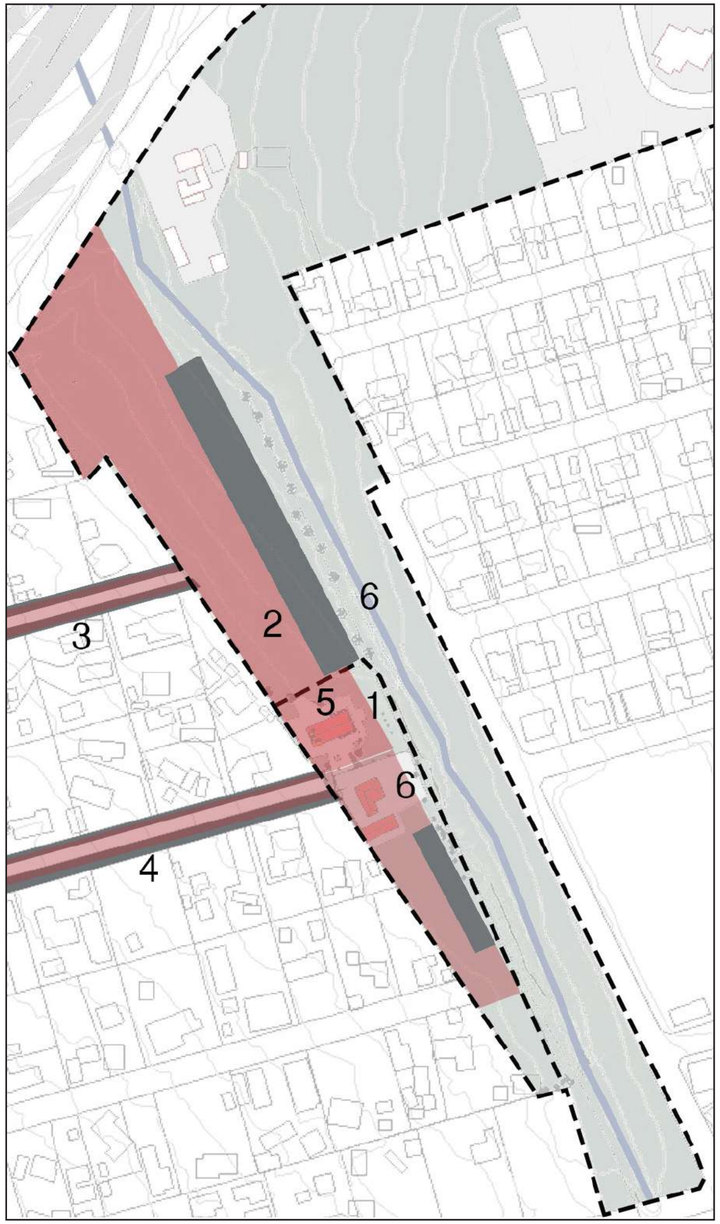
Recreation

The site is an ideal location for a recreational area with the catchment of Melrose, Oaklands, Highlands North, Waverly, and Birdhaven. This allows for a continuation of the network of recreation, containing the Killarney Country Club, James and Ethel Grey Park, and Waverly Sports.

KEY:

Occupation by people

Occupation by cars



Kavady Festival

1. Circle the temple three times upon arrival

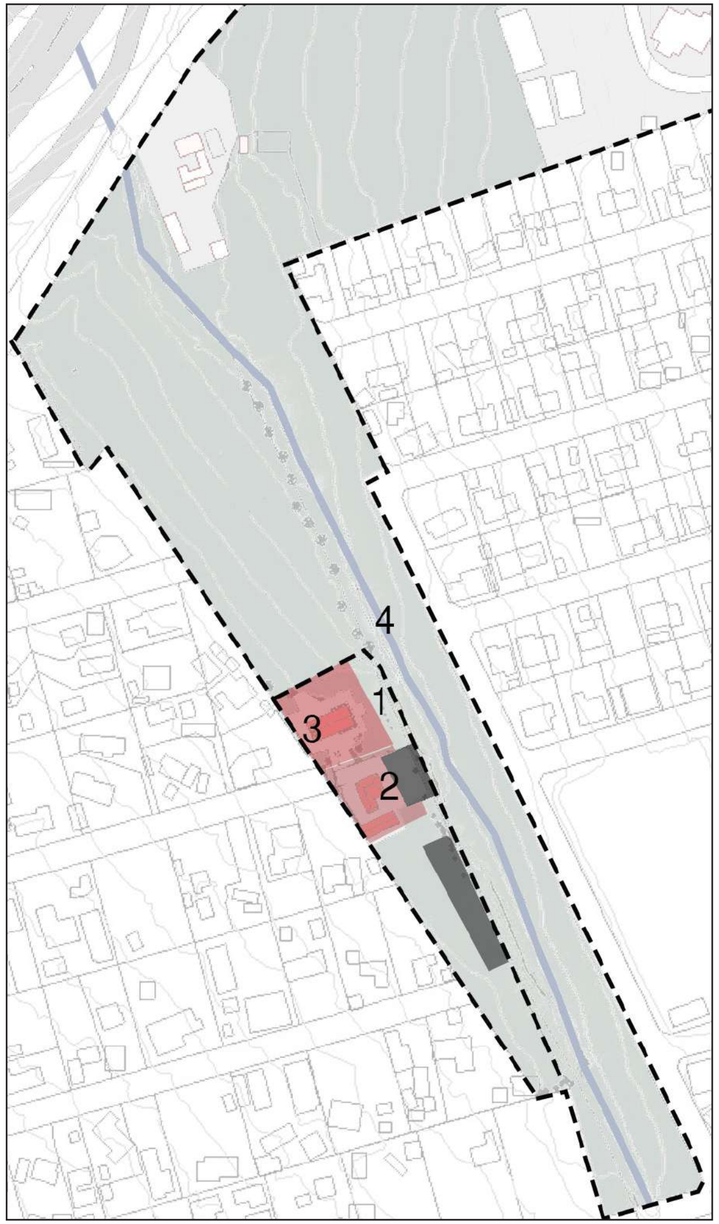
2. Walk towards the Chinese Park where the blessing of the Kavady takes place

3. Walk barefoot down 3rd street with Kavady

4. Enter the temple once again from 2nd street with Kavady

5. Circle the temple again three times before entering

6. Submerge flower petals used as decora tion on Kavady into the Sandspruit River



Various Daily/Weekly Rituals

1. Circle Temple three times before entering

2. Receive food offering/prasad after prayer

3. Designated area for various havans and prayers, by appointment with the priest

4. Pouring of ashes into the Sandspruit River after cremation ceremony



Fig 6. 22 Kitchen Courtyard



Fig 6. 23 Admin Block/ Priests residence



Fig 6. 24 Courtyard with view of temple





Fig 6.25 Historic Bridge



Fig 6.26 Ablutions



Fig 6.27 Open Field only used during Kavady

8. The Boundary

In this new precinct, private and public gatherings would occur, keeping the temple and its surroundings fully-functioning at all times and not just during annual festivities and prayers. An increase in accessibility to the river would, in turn, open up the space more by carefully breaking down the existing boundaries.

As shown in the illustration to the right, the boundaries are represented by the Sandspruit river tributary as well as the demarcated fencing and walling around the temple grounds. These boundaries are quite limiting, making the site more exclusive in nature and resembling conditions that are not conducive to an integrative city.

A small historic bridge that crosses the river still exists, making way for pedestrians who need access to transport facilities on the adjacent main road; however, safety is questionable, especially for the women who walk alone through the site on a daily basis. Traces of waste-pickers living amongst the trees is evident in figure 6.29 below; this is probably due to the presence of the Sandspruit river water, which they often use for bathing. This further emphasizes how the site is more often than not underutilized.

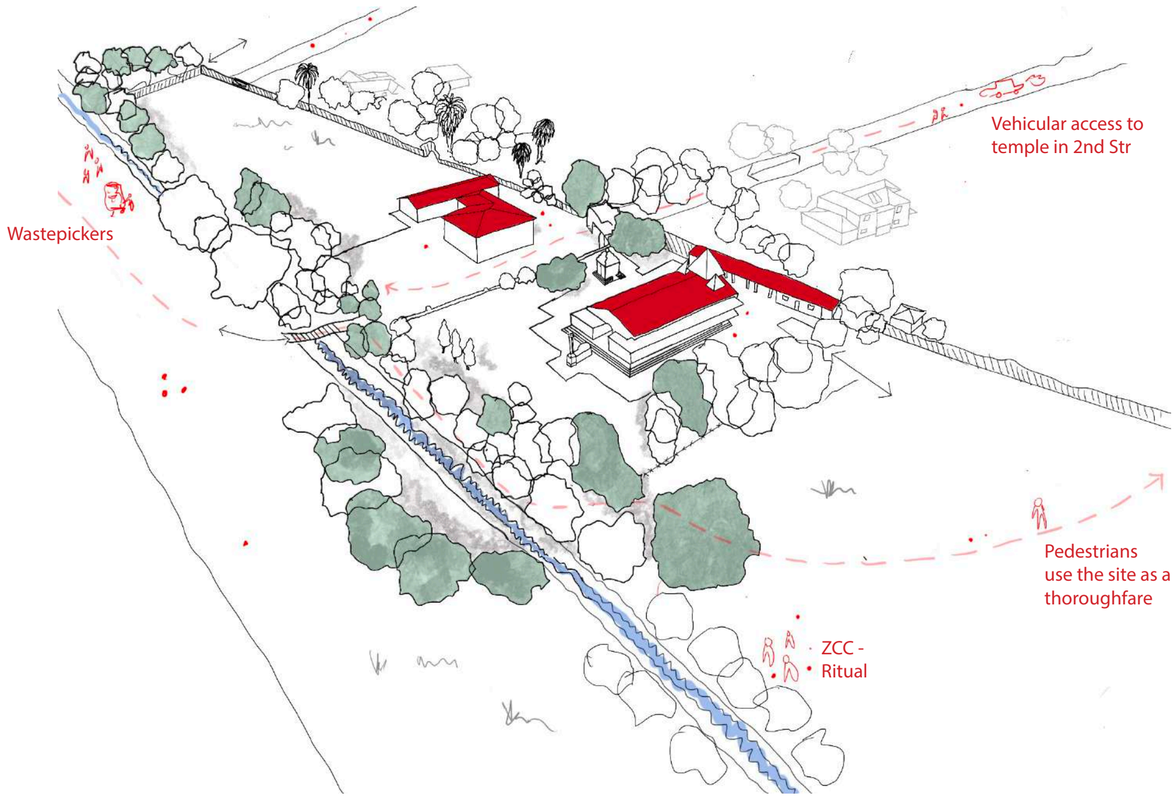
Figure 6.28 to 6.30 (Below)
Photographs of waste found in and around the riverbanks (Author,2021)

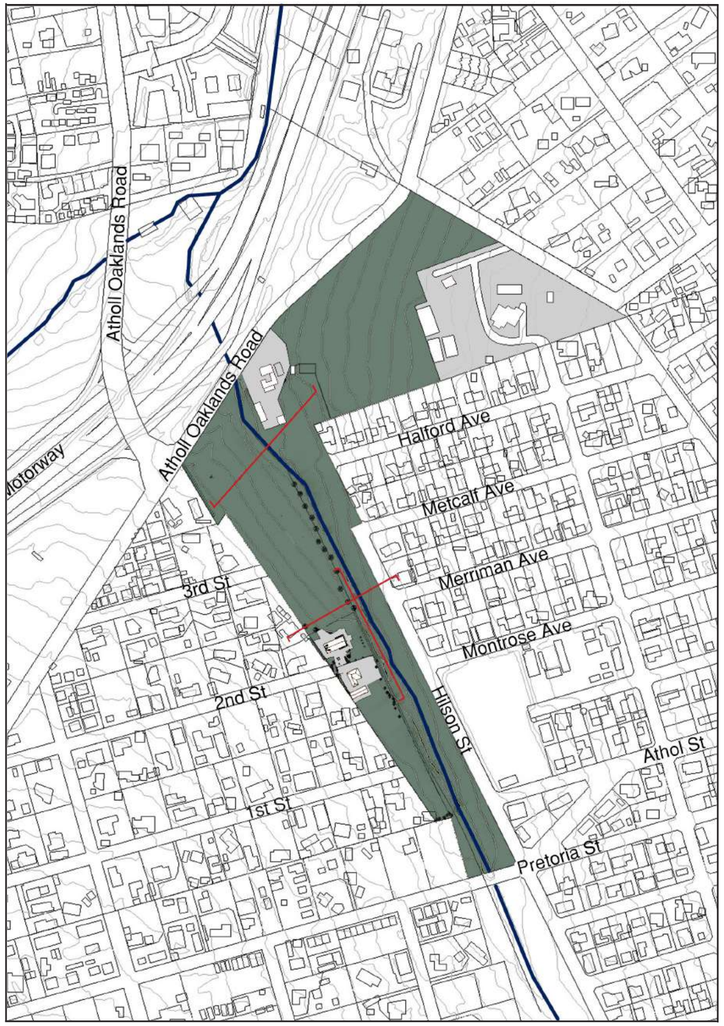
Figure 6.31 (Opposite)
Diagram illustrating the current boundaries and edges on site (Author, 2021)











Context Map



Figure 6.32
Sections indicating the harsh edges and boundaries on site (Author, 2021)



Figure 6.33
Image of site showing the river to the left and the Katlyn Monument to the right with the temple in-between (Author, 2021)



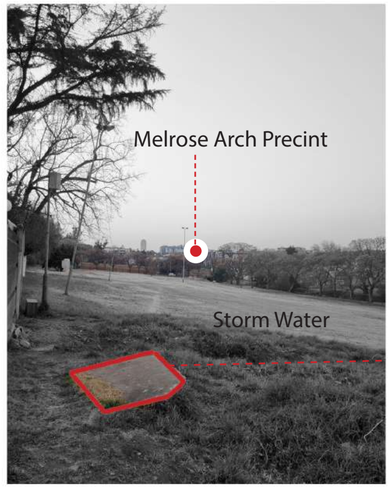


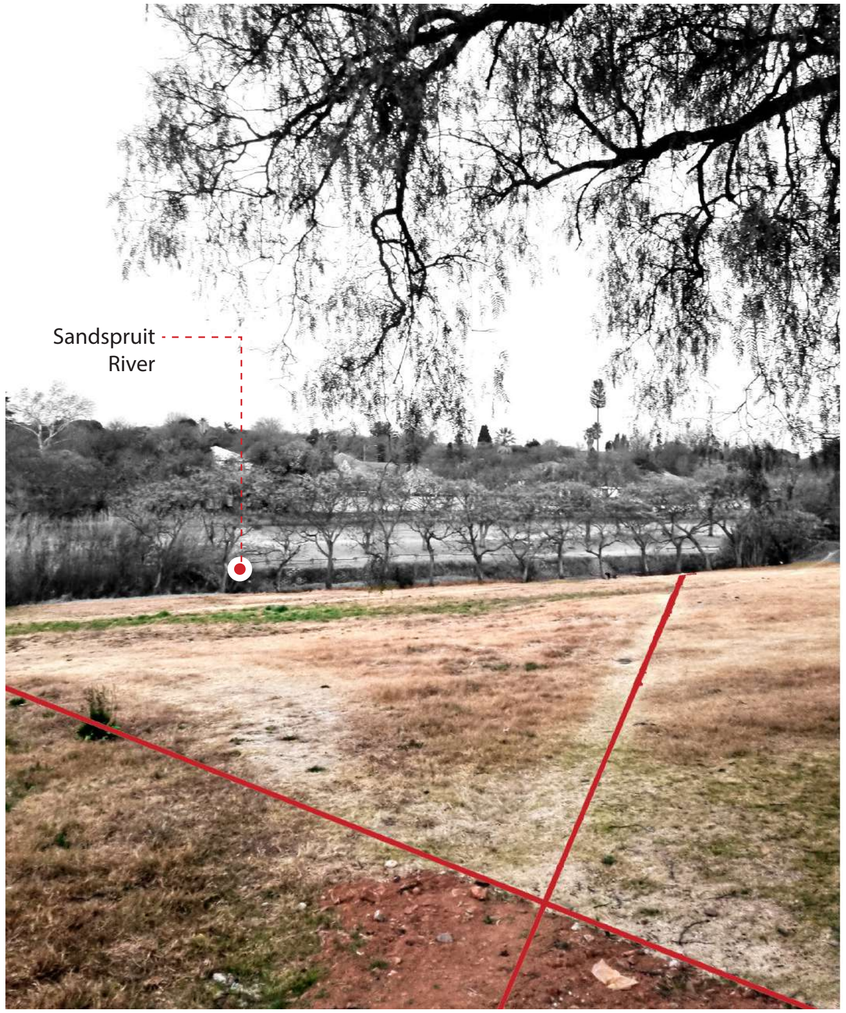








Figure 6.34
Site photo study
(Author, 2021)

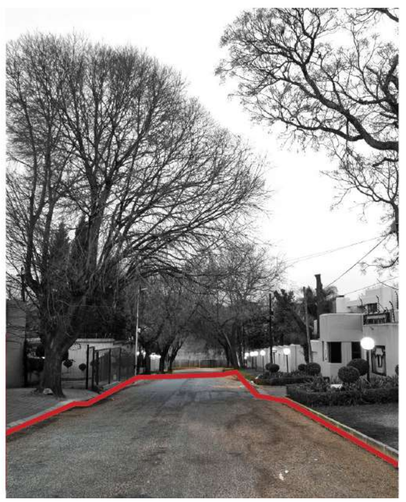


Desire Lines









Approach to site with residences on either side of road





Figure 6.35
Site photo study
(Author, 2021)



07
GENERATION OF DESIGN PRINCIPLES

This chapter gives an overview of the different design exploration processes. Ultimately, this stage of the project sought the generation of the main principles to govern the final design proposal.

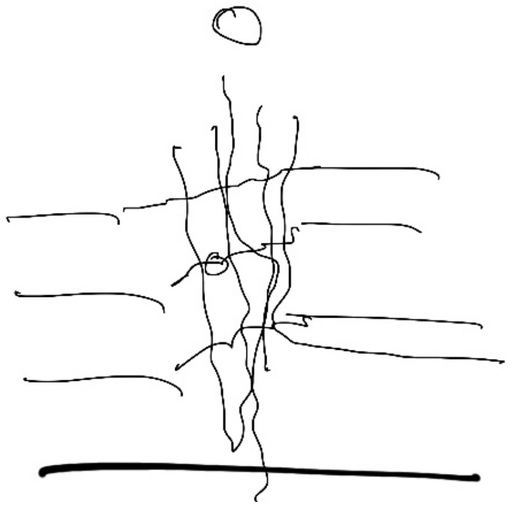


Figure 7.1(Opposite)
Cloth tied on a banana leaf- Traces of ritual
(Author, 2021)

Figure 7.2 (Left)
Quick sketch of site (Author, 2021)





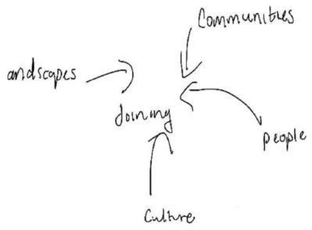
1. Charrette

I thought of cloth when deciding what material to use for my design charrette. The cloth material is sensuous and organic, similar to the characteristics of the natural environment. The fabric became a symbolic metaphor for the greater Hindu community who, throughout the years, developed a shared bond through the Melrose Hindu Temple. The material cloth was then exposed to the five natural elements, fire, water, earth, air, and space, to explore further and generate various form-finding principles on which to base the design.

Another reason for the choice of cloth stemmed from the history of the Melrose Temple, which originated on the basis of a steam laundry, as mentioned in chapter 4. In many instances, though, the material cloth is very auspicious, symbolising one's cultural identity, especially in the various ritual practices worldwide.

Figure 7.3
Charrette experiment using the element of fire (Author, 2021)

2. Experiment 1-Cloth



1. Pleated using a hot iron

2. Pinched

3. Folded

4. Bunched by pulling on a single thread

5. Pulled by unravelling all threads

6. Cut with scissors

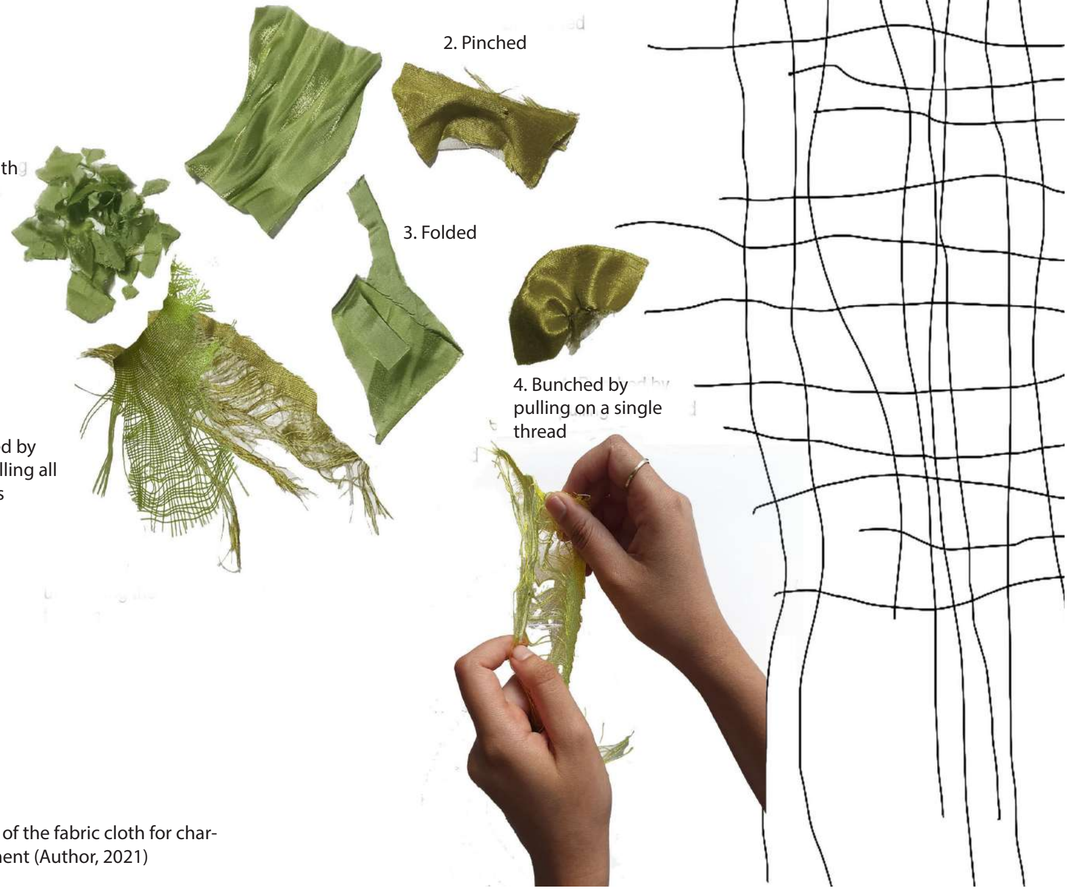


Figure 7.4
Photographs of the fabric cloth for charrette experiment (Author, 2021)



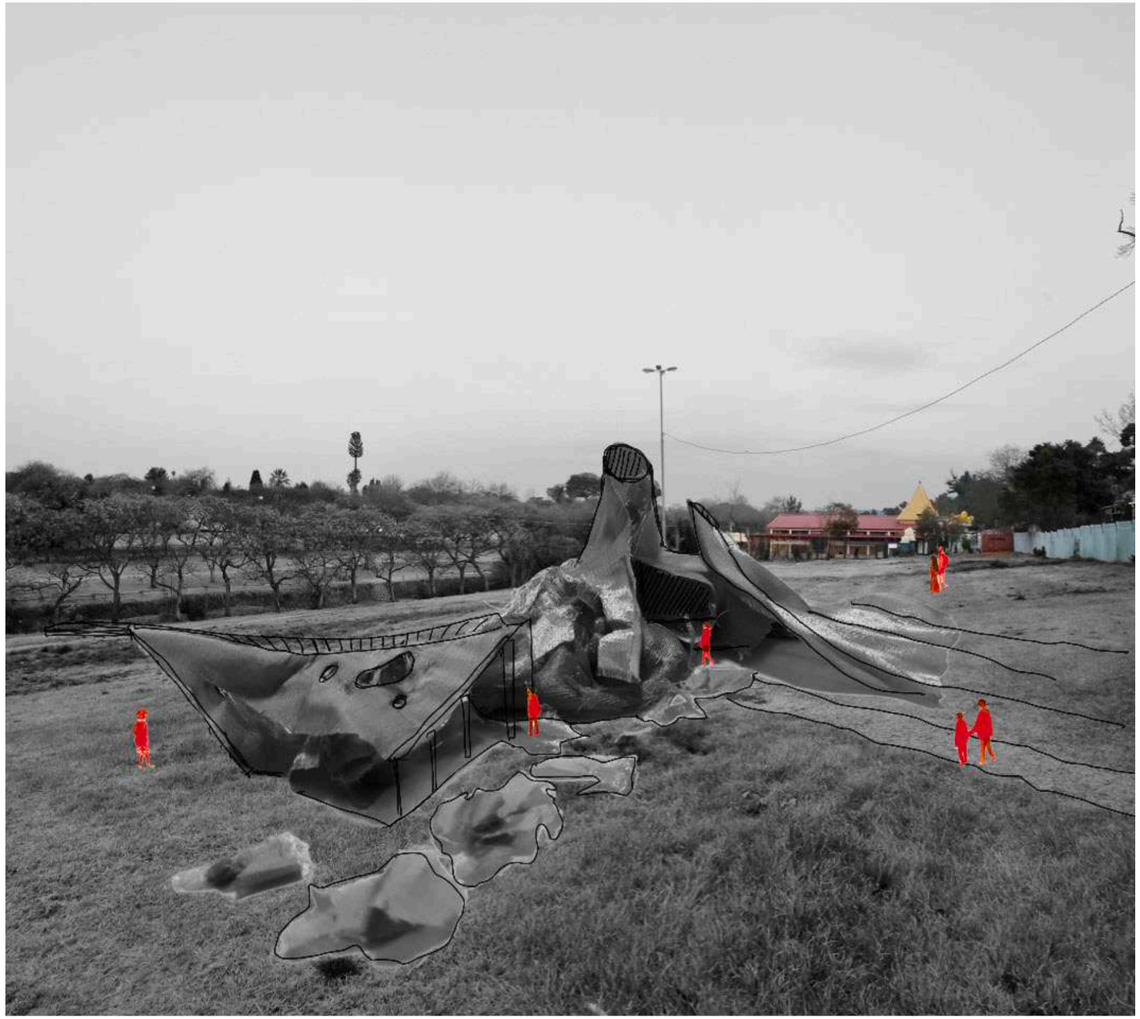


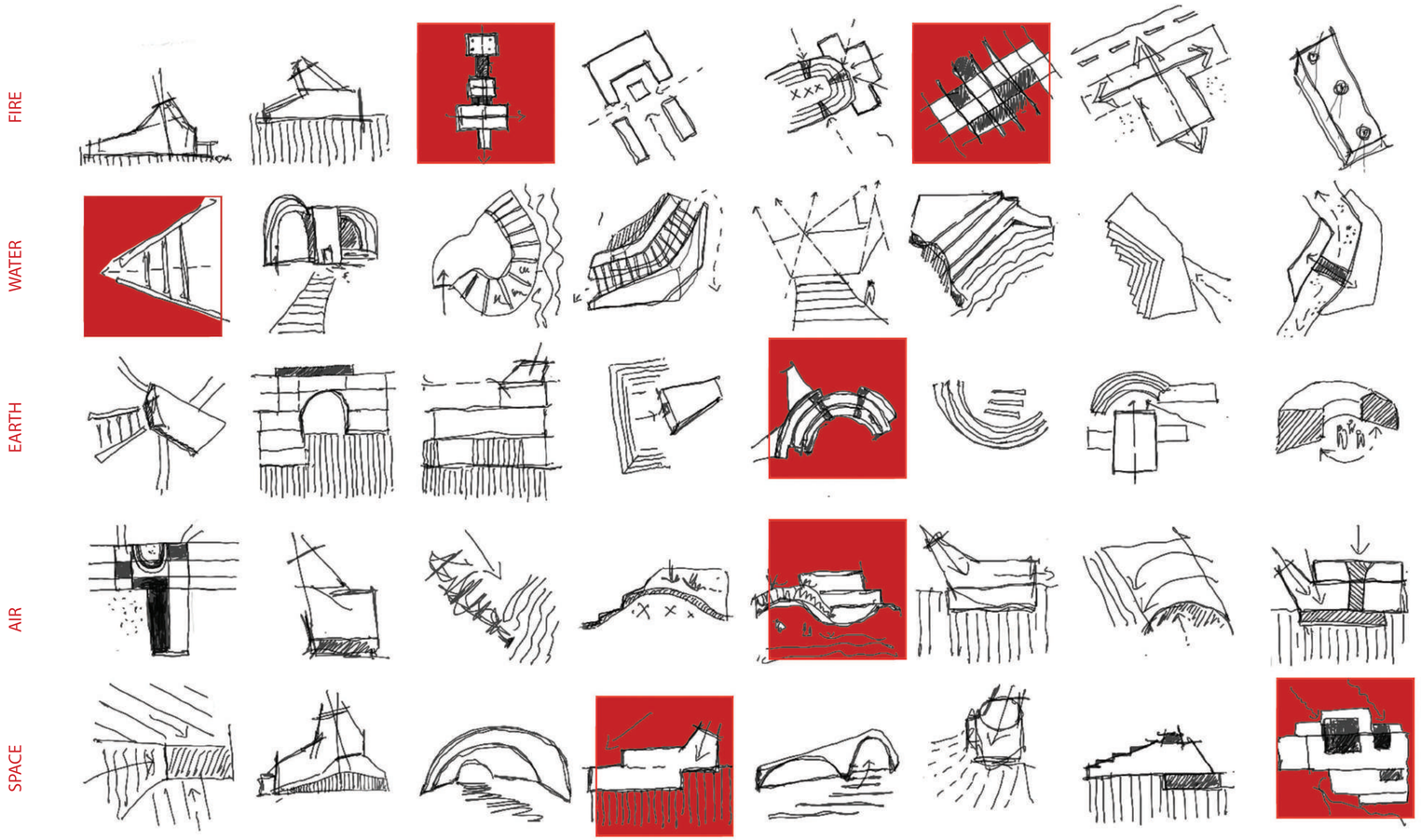


Figure 7.45 and 7.6
Conceptual collage of charrette model on site (Author, 2021)



Figure 7.7
The resultant charrette experiment exposed to the five elements of fire, water, earth, air and space(Author, 2021)

The resultant arrangements were photographed to allow them to be directly translated into architecture through drawing. The drawings distil the models to their essential ideas. The exercise further demonstrated how the five natural elements could translate into various principles defining architecture.



Interpretations of the models through drawing Read highlighted squares clockwise from top left:

1. "Open-to-sky" interpretation with light pouring in from above.

2. Our experience of an architectural space is strongly influenced by how we arrive at it. "A sacred space will feel more significant when placed at the end of a sequence of lesser spaces" (Frederick, 2007). The spine comprises a series of smaller spaces leading to the main space.

3. Square grid with disruptions, suggesting a more asymmetrical, dynamic composition.

4. Ascension, using a series of terraces to navigate slopes.

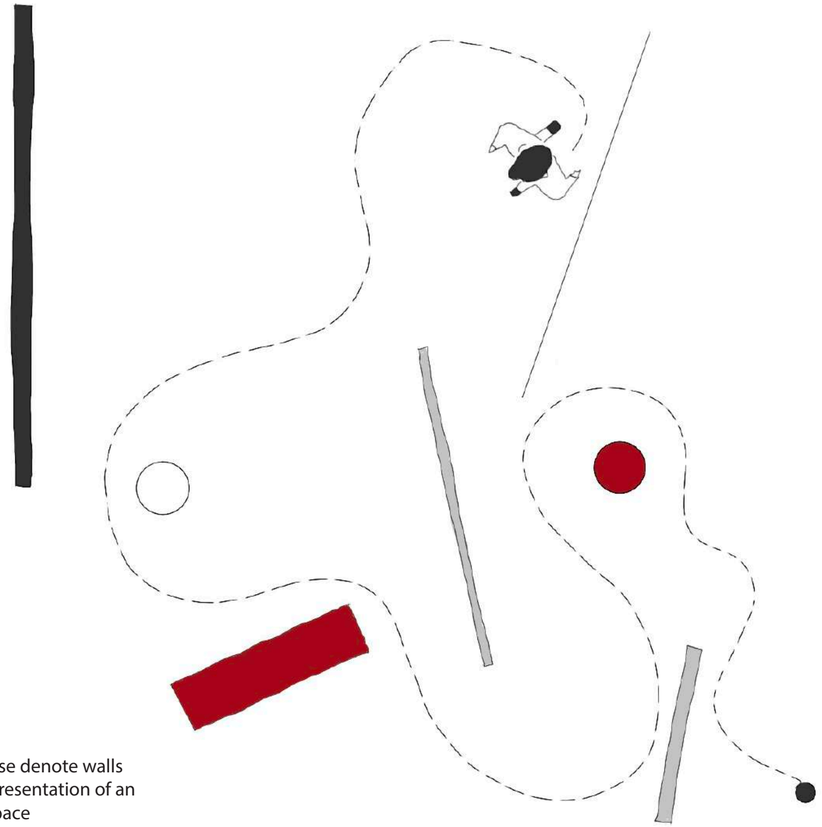
5. Amphitheatre with stairs across the layers to transverse the layers in travelling the stair.

6. Submersion into landscape bleeds into the urban fabric, and the building almost becomes "anchored".

7. Altering surface planes to create volume. We move through negative spaces and dwell in positive spaces (Courtyards).

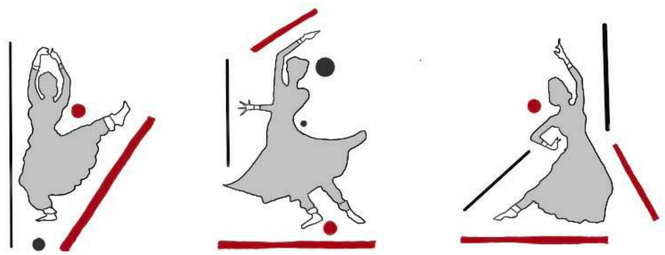
Figure 7.8
Interpretations of the charrette through drawing (Author, 2021)

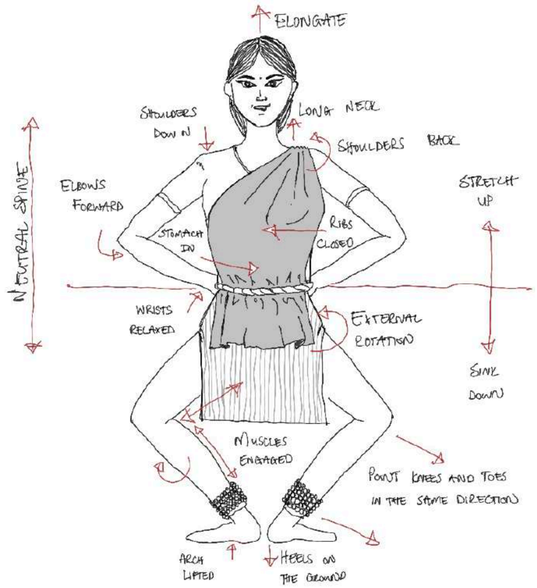
1.



Circles and lines in this case denote walls and columns, and is a representation of an abstract 3-dimensional space

2.





"The dancer, who dissolves her identity in rhythm and music, makes her body an instrument, at least for the duration of the dance, for the experience and the expression of the spirit" (Yodh, 1988).

In Bharatanatyam, the dancer weaves a series of triangles throughout the dance. The torso is used as a unit, the legs are in a semi-plie form, and the stance achieves the basic posture called Aramandi (Ubhayakar, 2019 rethinking the future).

Dance, like architecture, is an exploration of space, according to Vishnuvajhala. Dance outlines the possible structure of space through an infinite set of possibilities. On the other hand, time is defined by space in dance, and the dancer describes a 3-D space around herself through the various movements and postures (Vishnuvajhala, n.d.).

These experiments result from an exploration of relationships between a community and their identity as reflected through either the cloth and/or cultural embodiment. Cultural expression through various materials encourages form-finding that begins to embody cultural identity in a unique way. From this, a metanarrative that is embedded within these experiments can be extracted, providing a lens through which I could then interrogate the site, programme, and architectural form.

Figure 7.9 (Opposite)
Abstract Architectural elements defining space (Author, 2021 After Prajapati, n.d.)

Figure 7.10 (Opposite)
Bharatanatyam Dance Postures defining 3-D Space (Author, 2021 After Prajapati, n.d.)

Figure 7.11 (Above)
Aramandi Position (Author, 2021 After Wong, 2019)

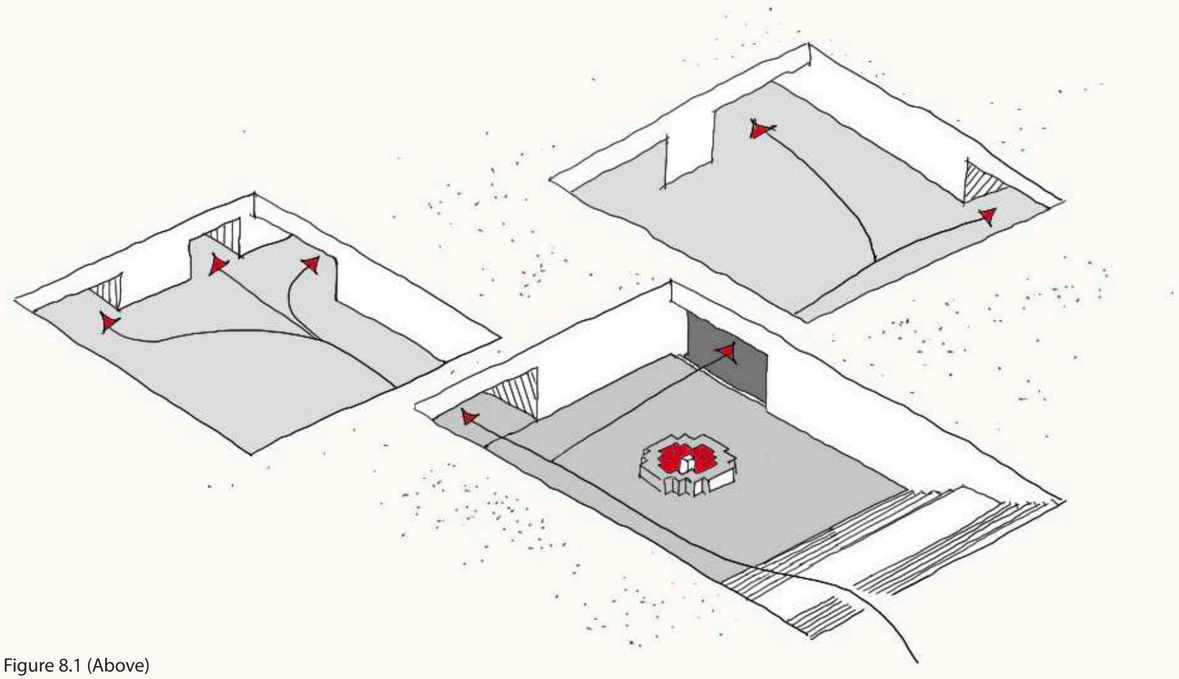


Figure 8.1 (Above)
Illustration of Charles Correa's Bharat Bhavan, successfully integrating both traditional and contemporary (Author, 2021 After)

Figure 8.2 (Opposite)
Collage showing an overlapping of modern and traditional buildings (Author, 2021 After, Rethinking the Future, 2019)

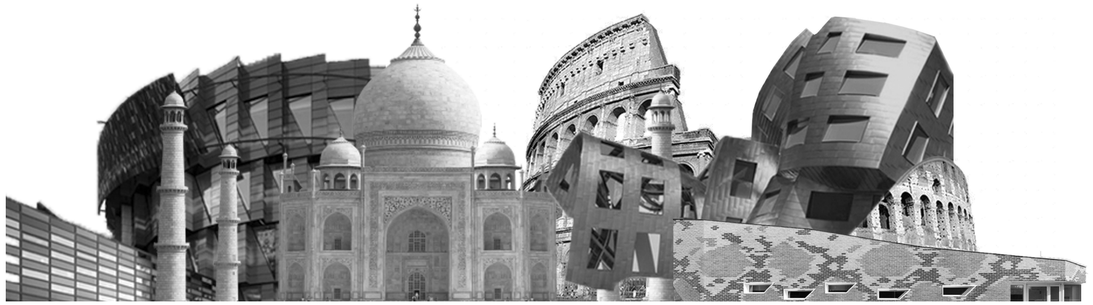
08
CASE STUDIES

The following case studies are fitting examples of how contemporary architecture can still honour and uphold tradition and values while defining an architectural form that works to better meet modern-day societal needs. Modern structures only started appearing after India gained independence; before this time (1947), Indian architecture was at a standstill in development and had no unique identity. After the world-famous architect Le Corbusier designed the city of Chandigarh, "an architectural breakthrough began".

According to Le Corbusier (1986), the architectural form is the external structure of the building plays a significant role in the overall evaluation of project success. Therefore, architects must keep this in mind while including current globalized trends without forgetting its impact on local architecture. This is particularly relevant in traditional building typologies such as temples needing revitalization to better meet the needs of the current aspirations.

Across India, architects are beginning to draw inspiration from the works of Le Corbusier, and thus, modern architecture is rapidly transforming cities. In the following examples, traditional characteristics are seen overlayed with contemporary style and form, creating more expression and identity in the buildings. The materials used are basic and cutting-edge because their response to ecology and climate are well incorporated within the designs.

"Architecture should speak of its time and place, but yearn for timelessness." -Frank Gehry



JETAVAN SPIRITUAL DEVELOPMENT CENTRE

Sameep Padora and Associates

Maharashtra,India

2020

PROGRAM /RITUAL /TECTONIC/ CULTURE



This spiritual skills development centre was designed for the native Buddhist community. It seeks to provide a 'spiritual anchor' by creating spaces for yoga and meditation while also imparting training and skill development for community members (Archeyes, 2020).

The program was split into six buildings; each carefully positioned to keep the surrounding planting and trees intact. Two courtyard spaces emerged and served as links through this process, threading these buildings into a 'common identity' (Archeyes, 2020). Common areas such as courtyards create a safe space for the community, allowing for knowledge sharing and social integration.

What makes this building unique is the inversion of the roof profile, whereby the central valley lies in the middle with the edges rising upward. This creates a visual connection with the outdoors, provides good cross-ventilation, and integrates a smart system to collect and reuse stormwater via a constructed roof channel.

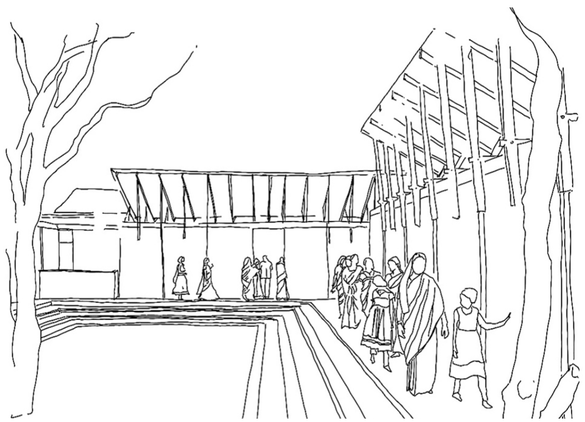
Fig 8.3 (Above)
Courtyard Space (Sumner,2020)

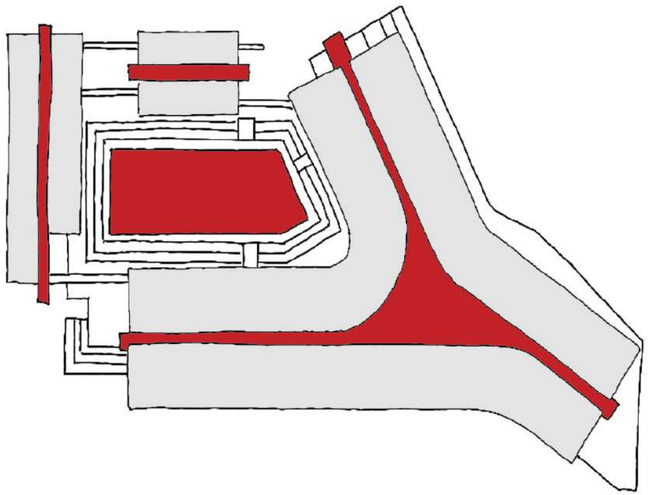
Fig 8.4 (Right)
Courtyard Spaces (Author,2021)

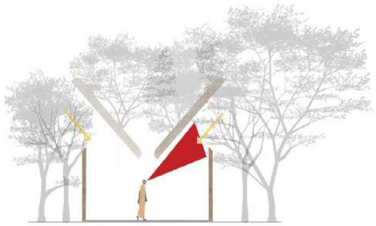
Fig 8.5 (Opposite, Top left)
Central courtyard linking six building masses (Author,2021)

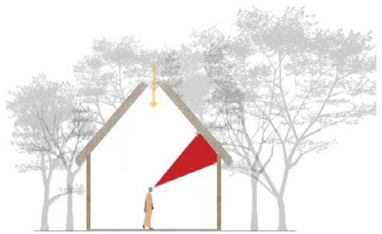
Fig 8.6 (Opposite, Top right)
Views out (Author,2021)

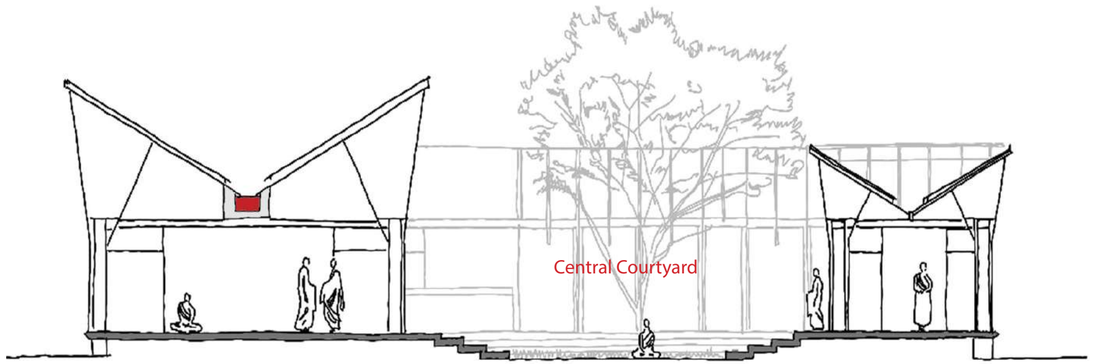
Fig 8.7 (Opposite)
Bringing the outside in (Author,2021)











JAWAHAR KALA KEND-
RA ARTS CENTRE
Charles Correa Associates
Jaipur, Rajasthan,India
1991

PROGRAM /RITUAL/ TECTONIC/ CULTURE



This arts centre invokes the navagraha (nine square yantra) and is a direct extension of the original plans for the city of Jaipur. Similarly, one of the squares in the new design is pivoted and used to create an entryway. Each square directly corresponds to the mythical qualities associated with each of the nine planets e.g. power, knowledge and so on.

The square grid that has been used references the design principles which the Vaastu Shastra govern. Once again, the courtyard remains an important element in the design, being central to all the activities that take place surrounding it.

The journey through the various celestial divisions within the building is marked by a diversity of spatial densities (Archeyes,2020). Therefore the experience of the building uniquely redefines the act of cultural display with strong associations to past recreated incidents and rituals of art and craft, echoing the teachings within the Hindu culture.

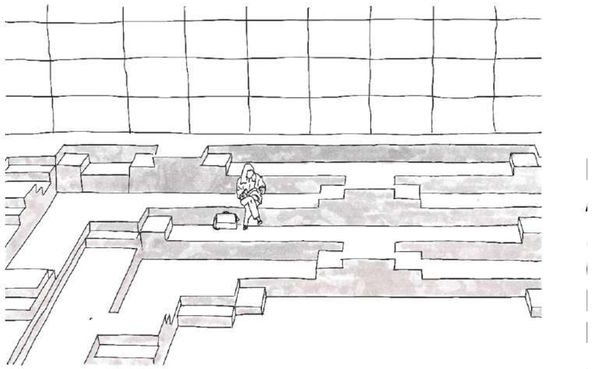
Fig 8.8 (Above)
Entrance (Godel,2020)

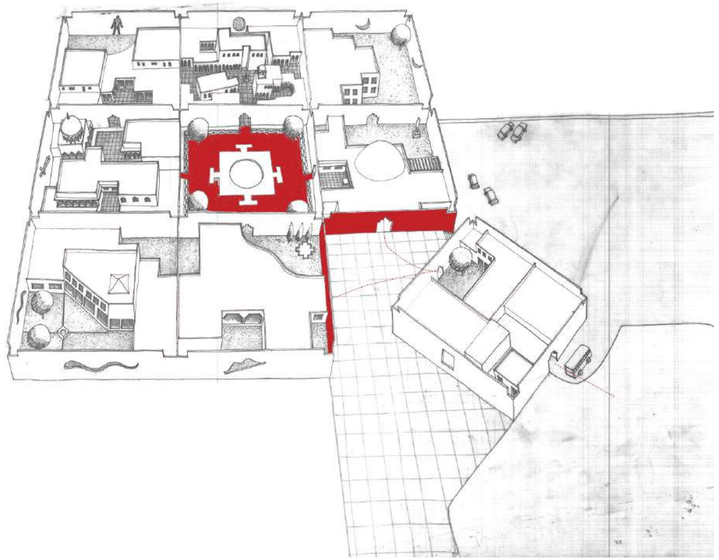
Fig 8.9 (Right)
Courtyard Space (Author,2021)

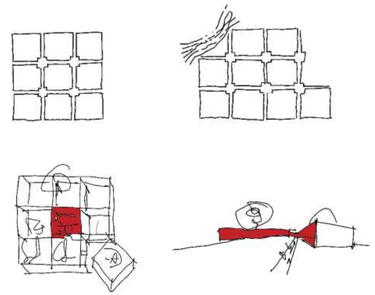
Fig 8.10 (Opposite, Top left)
Building Axonometric
(Charles Correa and Associates)

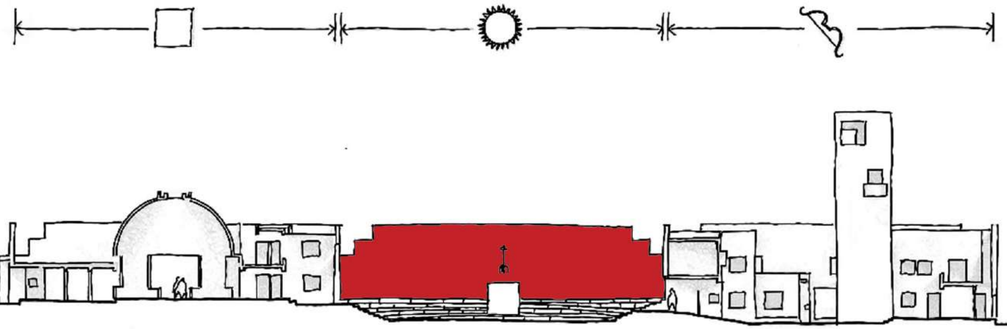
Fig 8.11 (Opposite, Top right)
City of Jaipur plans in contrast to the Kendra Centre (Author, 2021 After Charles Correa)

Fig 8.12 (Opposite)
Elevation showing links to each planet (Author,2021 After Charles Correa)









URBAN INTERVENTION
Morphogenesis
India
2017

PROGRAM /RITUAL /TECTONIC/ CULTURE

This urban intervention aims to reimagine the interface between the Ganges River and human habitation. By analysing this project, it is clear that civic spaces that are located along the Riverbank increase public engagement and gathering potential.

The project forms part of the larger National Mission to clean the Ganges River, with twin objectives: conserve and rejuvenate it and effectively reduce the river's pollution. (Langar, 2017).

Different cultures perform various rituals on the banks of the Sandspruit river. In India and similarly around the world, the tradition is that Hindu followers connect with the river during critical stages of their life to perform certain rituals. Therefore, it is important to understand the ritualistic cycle first to develop a cultural contextual solution. "Where people will gather, where they will wait, where they will be mourning, and where there will be celebration" (Langar, 2017).





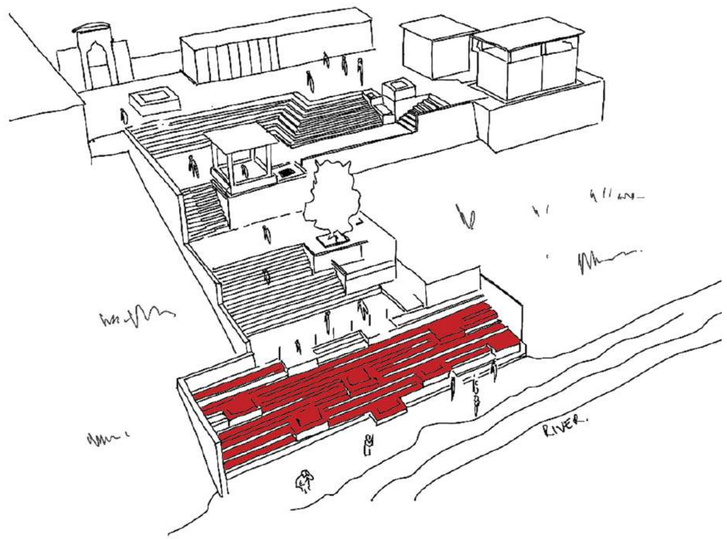
Fig 8.13 (Above)
River Edge (Morphogenesis, 2017)

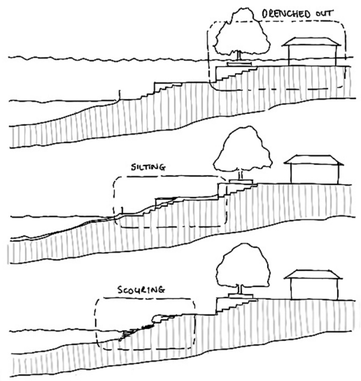
Fig 8.14 (Right)
Gathering spaces (Morphogenesis, 2017)

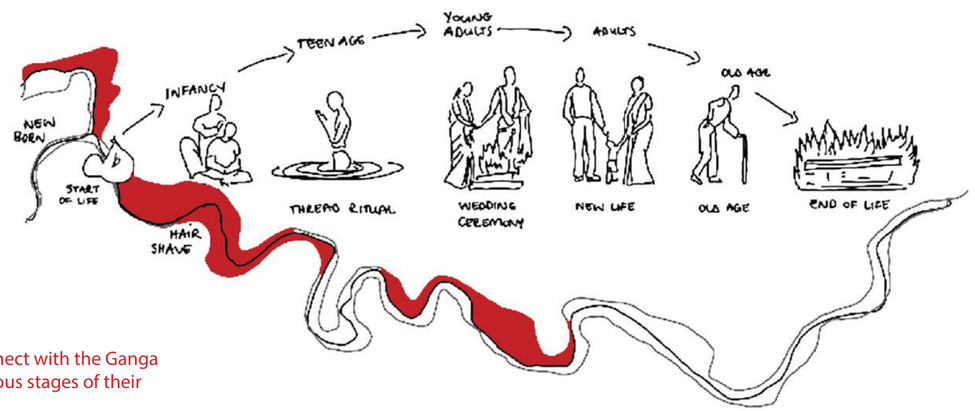
Fig 8.15 (Opposite, Top left)
Easy access to river water (Author,2021)

Fig 8.16 Opposite, Top right)
Exisitng unstable Ghat edge due to flooding (Author, 2021)

Fig 8.17 (Right)
Ritualistic cycle (Author, 2021)







People connect with the Ganga river at various stages of their life cycle.

!KHWA TTU CULTURAL CENTRE
KLG Architects
Yzerfontein, South Africa
2019

PROGRAM /RITUAL /TECTONIC/ CULTURE



The 'Sedhiou Cultural Center' is an environmentally sustainable design formed as an 'organic landscape'. It aims to keep the African Heritage alive by providing cultural, social, and educational experiences (Abdel,2019).

Despite the town having a rich heritage, it still lacked a space for cultural expression, similar to the Melrose Temple in Johannesburg. The aim is to bring people together through spiritual and cultural events and, at the same time, shed light on the past.

The structure consciously demonstrates a balance between materiality and context using a combination of environmentally conscious strategies and contemporary technologies, seeing that it is located along a granite ridge (Abdel, 2019). The design includes the use of local materials with an indigenous planted concrete roof. This harmoniously integrates the building into the setting, which is a unique strategy that the Melrose Temple site could borrow from.

Fig 8.18 (Top)
The Sedhiou Cultural Precinct in context (Letch ,2019)

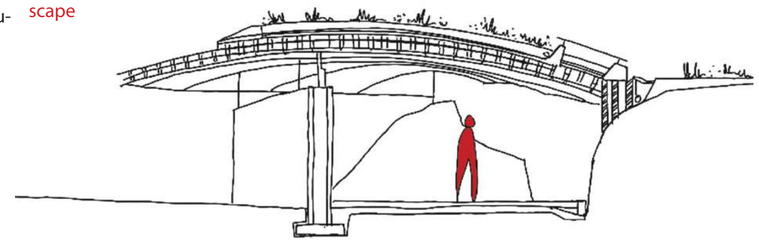
Fig 8.19 (Right)
Indigenous planted concrete roof (Author, 2021 After Abdel, 2019)

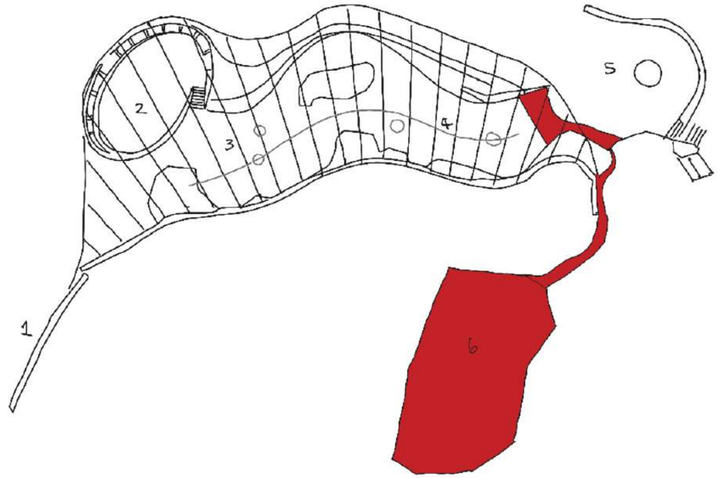
Fig 20 (Opposite, Top Right)
Site Plan (Author,2021 Derived from Abdel, 2019)

Fig 8.21 (Opposite,)
Elevation (Author,2021 After Abdel, 2019)

Fig 8.22 (Opposite)
Context (Author,2021 After Abdel, 2019)

Planted Roof acts as a continuation of the landscape

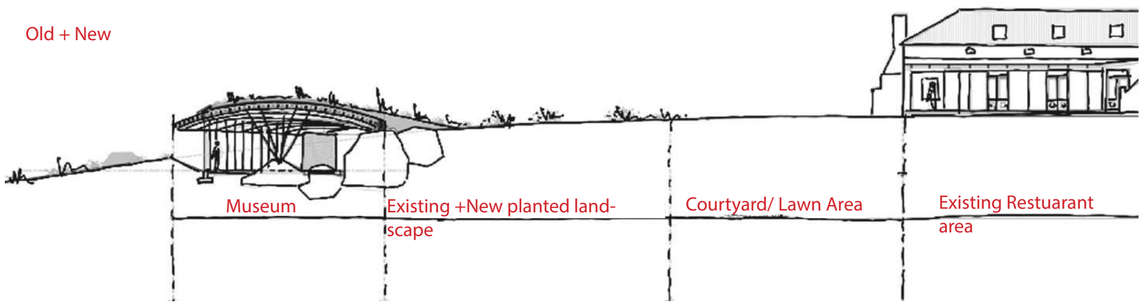




1. Entrance Pathway
2. Media Centre
3. Exhibition 1
4. Exhibition 2
5. Outdoor Area
6. Dam



Old + New



Freedom Park
GAPP + Mashabane
Rose Architects + MMA
Pretoria,South Africa
2008



PROGRAM /RITUAL /TECTONIC/ CULTURE

This project uses the idea of nation-building and reconciliation through history, culture, spirituality, and indigenous knowledge systems (IKS). These devices are used to guide both the intervention and landscape.

The vicinity of the Melrose temple includes various cultural and ritual practices that could also guide the design of the building intervention while strengthening the diversity of its users.

Different elements are connected through winding pathways that eventually creates an experience or 'journey' towards the main sacred sanctuary and central gathering space. A constructed pond is used in this public space so that people can reflect with views from the amphitheatre. At the Melrose Temple, where water is the main feature on site, the space needs to be designed to accommodate people who similarly need to sit, gather, and reflect.

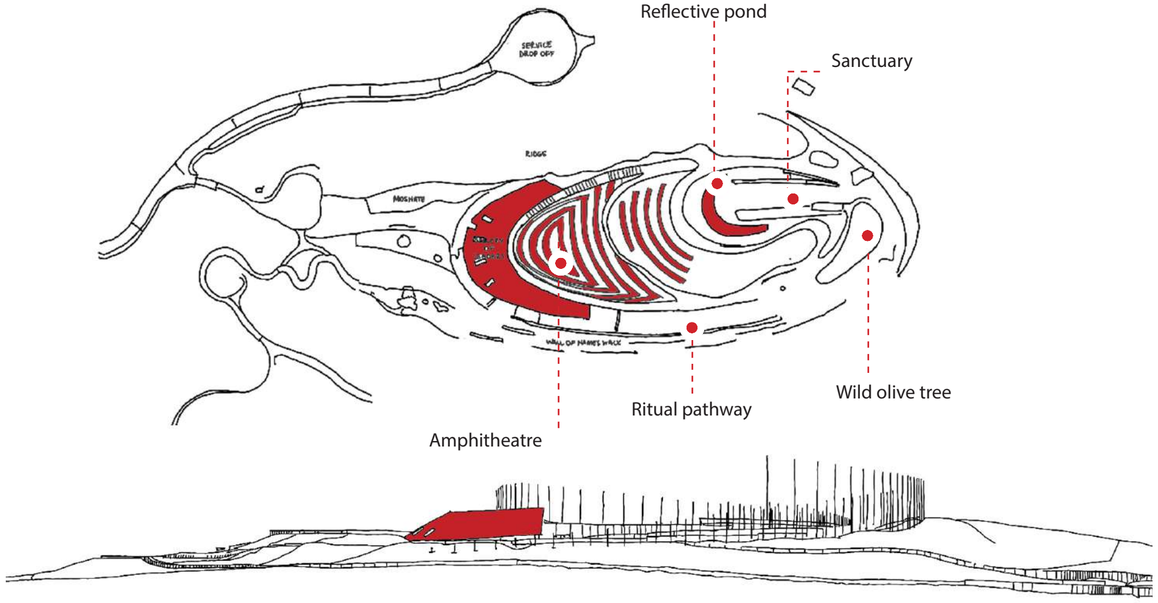


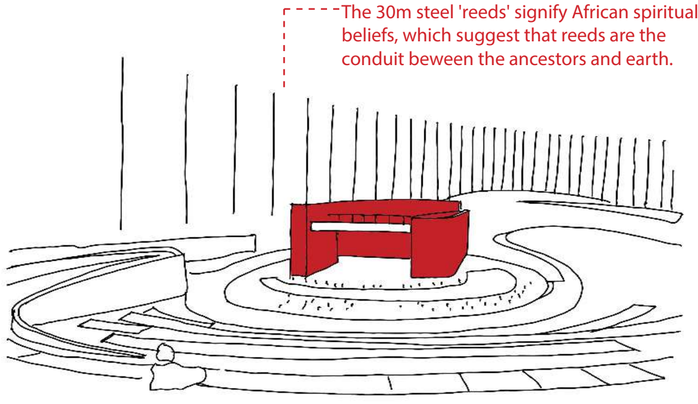
Fig 8.23 (Above)
Isikhumbuto, The Garden of Remembrance (Makhene, 2019)

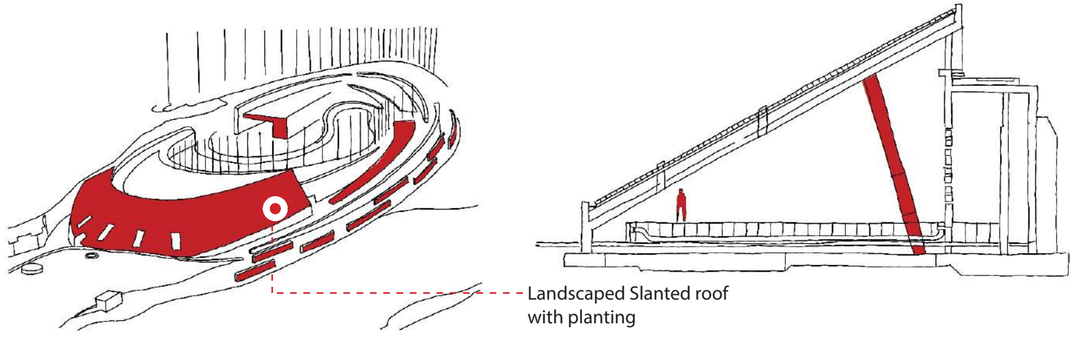
Fig 8.24 (Right)
Amphitheatre (Author, 2021)

Fig 3.25 (Opposite, Top)
Site Plan (Author, 2021)

Fig 8.26 (Opposite)
Elevation showing relationship with the landscape (Author, 2021)

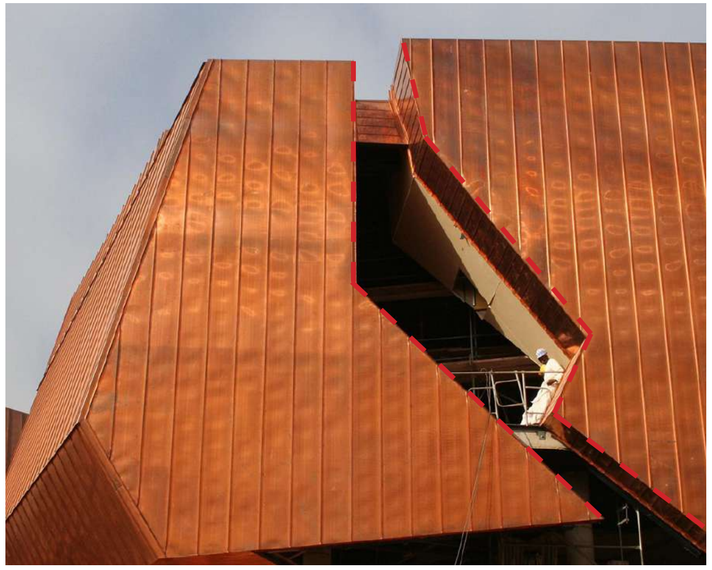
Fig 8.27 (Opposite)
Axonometric and Section of building (Author, 2021)





Freedom Park
GAPP + Mashabane
Rose Architects + MMA
Pretoria,South Africa
2008

PROGRAM/ RITUAL/ TECTONIC/ CULTURE



In the second phase of the Freedom Park construction, a museum and archival facilities are incorporated into the scheme. The concept for the museum came from the idea of a traditional healer's 'healing garden'. It evolved into the creation of large 'boulder-like volumes' that contain spaces within for storytelling and learning about rich cultural histories (Archdaily,2012).

The materiality of the building is particularly unique. The walls and roof are clad in copper sheeting. The purpose of this material choice was due to the fact that the copper would eventually rust and turn green. This would allow the building to blend into the surrounding natural environment seamlessly.

The series of buildings placed on the site looks like the start of a journey, guiding and directing people along a pathway carefully created by the positioning of the building masses.

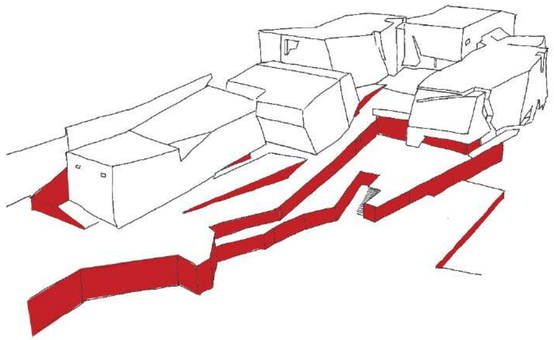
Fig 8.28 (Above)
Copper cladding (Bird, 2011)

Fig 8.29 (Right)
Axonometric diagram (Author, 2021 After Bird, 2011)

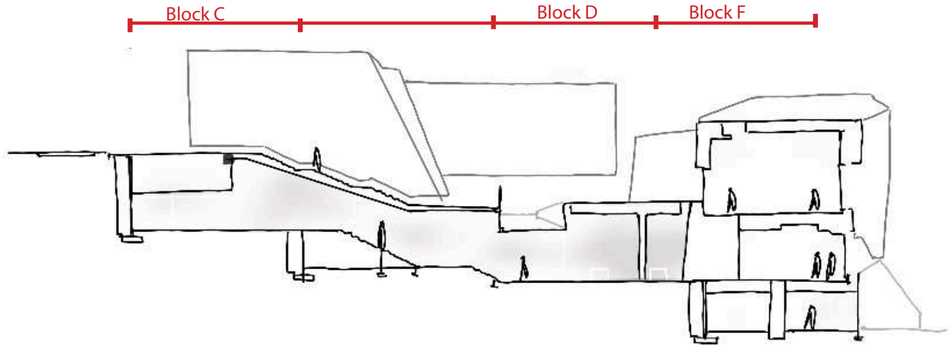
Fig 8.30 (Opposite, Top)
Site Plan (Author, 2021 After Bird, 2011)

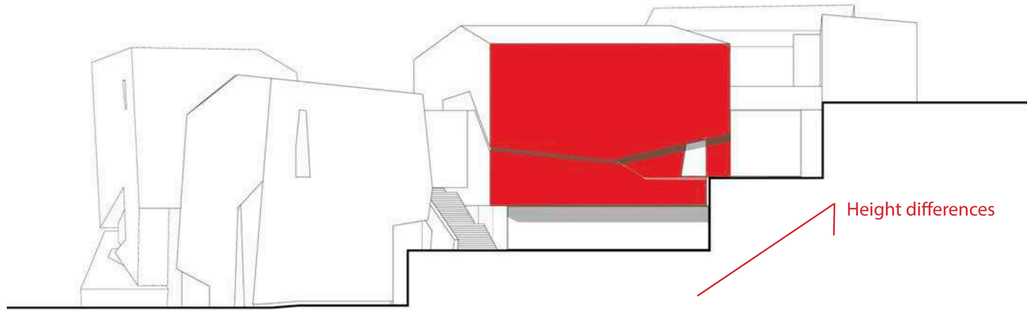
Fig 8.31 (Opposite)
Section (Author, 2021 After Bird, 2011)

Fig 8.32 (Opposite)
Elevation (Author, 2021 After Bird, 2011)



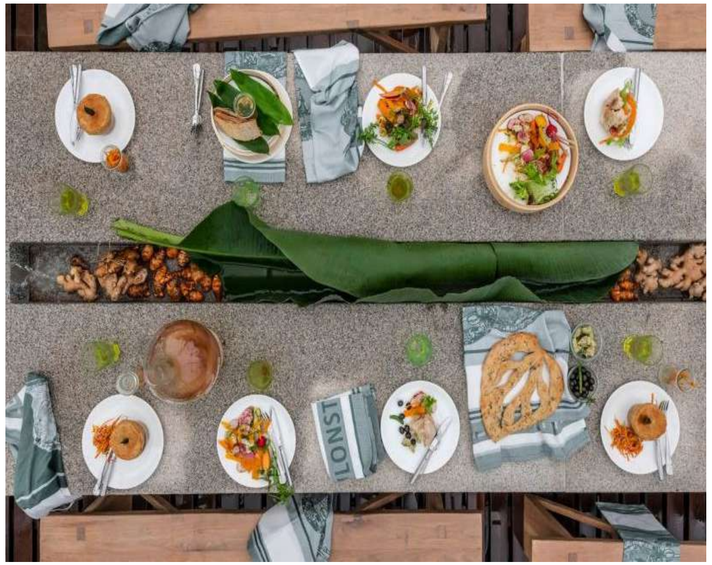






Babylonstoren Hotel /
Malherbe Rust Architects
Cape Winelands
- SOUTH AFRICA
2011

PROGRAM/ RITUAL /TECTONIC/ CULTURE



This plant-filled dining experience allows visitors to learn about the history of the spice trade by tasting various foods infused with different spices grown on-site. Not only do the surrounding plants provide a tranquil green space, but they also give off various aromas such as cinnamon, nutmeg, cloves, ginger, turmeric and galangal. These plants are either edible or of medicinal value and need carefully controlled mechanics for heating and cooling the space according to their needs.

Besides dining, the Babylonstoren hotel offers guests the opportunity to join in the pruning, planting and harvesting or picking of the various vegetables, fruits, nuts, herbs, and spices while simultaneously exploring the garden's riches. This gives them peace of mind about where the food is coming from and the satisfaction of picking it out themselves. The experience also includes great views of fynbos vegetation along with a guided tour of the garden estate.





Similarly, the chosen site at Melrose will attempt to use filtered river water in growing the crops on site. The image above sets a great example in terms of understanding how this system could work. However, since Babylonstoren is located on a Wineland farm, there is ample space for growing and planting many different foods. The space at Melrose is significantly smaller but could borrow from the ideas around growing, cooking and eating healthy fresh foods. This could happen while learning about the historical values of traditional Hindu foods inspired by the principles of Ayurveda. Another takeaway from the work done on this farm is how the architects strengthened the continuous line of development. In most instances of restoration, existing historic buildings are often fossilized. Architects should take a different approach with the understanding that the life of any building is, in reality, something that will have to develop over time. It is also the continuous process of cultural evolution that takes place, which seems to keep buildings pertinent while still taking the heritage value seriously. Not too seriously, though, as this will allow for the building to be reinterpreted and renewed (Hans, 2004).

Fig 8.33 (Opposite, Top Left)
Birds eye view of the 24 seater dining table set with the most fresh ingredients (Frearson ,2019).

Fig 8.34 (Left)
Ginger grown on site and used extensively in preparing food for guests (Frearson, 2019).

Fig 8.35 (Top)
Garden water from berg river in garden (Babylonstoren, 2011).

09
DESIGN DEVELOPMENT

This chapter serves as documentation of the processes that lead up to the final design proposal and occurs before the initial submission of the research and design report for submission.

In it, ideas around programme, form and tectonics are represented by sketches before the final design proposal drawings are seen.

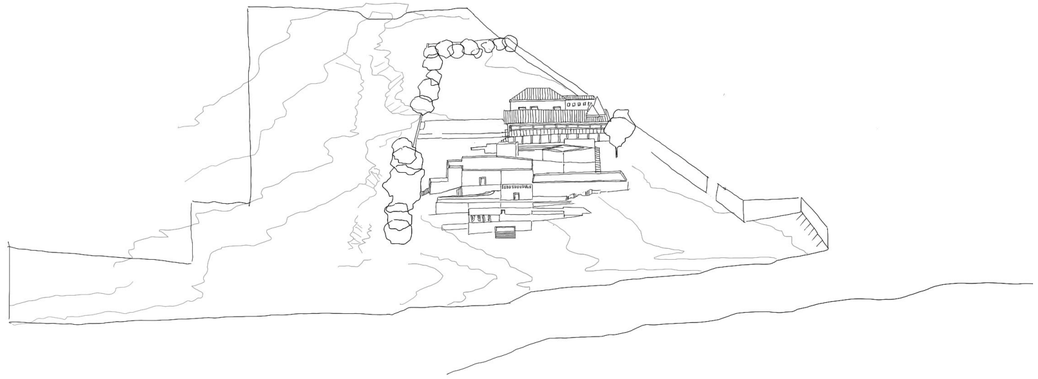
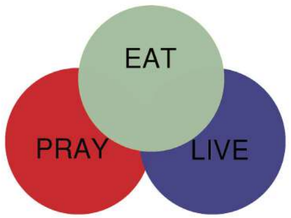


Figure 9.1 (Left)
Process Sketches (Author, 2021)

Figure 9.2 (Top)
Perspective view of proposed building
(Author, 2021)

Sacred spaces such as the Melrose Temple have consequently become disconnected and insular from its context due to various circumstances such as Apartheid and the Group Areas Act. I believe that the condition is worsened by the lack of research on how a religious influence can determine the use and design of public space. To mitigate the issues as mentioned above, the program will attempt to increase the value of an under-utilised site by establishing a new identity through public activation.

BREAKDOWN



EAT:

Within and around these categories will be provision for general building services such as electrical and water distribution. The users of the space: students, pedestrians, surrounding residences, the Hindu community as well as other members of the public will be encouraged to look after, care for and respect the site and its sacred location, being adjacent to the Hindu Temple.

The Kavady festival emphasises the importance of cooking, feeding and eating together, and these rituals often become a significant aspect of social integration worldwide. This aspect of the program comes from the idea that these interactions can now occur throughout the year and not just on special occasions.

This includes the provision of a dining Hall that will accommodate an intimate group of just under 100 people for events such as weddings, prayers, performances and gatherings etc., keeping in mind the strict Covid restrictions for indoor and outdoor gathering spaces. This designated area will also include an outdoor spill-out space to include extra participants.

A large community kitchen for sorting, storing, and cooking vegetables growing in the outdoor 'culinary garden' becomes one of the features on the site. This borrows from the famous saying, "...by the people for the people" as members of the public who volunteer, will be given the opportunity to learn how to harvest and cook healthy, fresh, hydroponically grown foods that provides a wholesome and flavourful cuisine. This idea draws a strong connection to nature and pays homage to the famous Portuguese Market Gardens. The kitchen will be financially supported by the adjoining non-profit restaurant to try and support local communities and other charitable organisations in need. This will be achieved with respect to a famous saying by the great Indian spiritual master, Sri Sathya Sai Baba, to "Love all, Serve all", by the offering of food or "Annadanam".

Figure 9.3 (Top)
Programme
(Author, 2021)

In support of the Temples teachings, Ayurveda becomes an important aspect of the program. According to the Oxford dictionary, Ayurveda is regarded as a natural Hindu system of medicine (incorporated in the Atharva Veda), stemming from India more than 3,000 years ago. This system of medicine was based on the idea of balance in bodily systems and uses in diet, herbal treatment, and yogic breathing.

Ayurvedic cooking workshops or seminars will be hosted to teach people how to maintain a healthy way of life. The world is becoming more diet-conscious; therefore, an Ayurvedic way of cooking food is very much required and should be recognized as a "boon to society" (Shende and Bhalekar, 2019). In this regard, I believe that more awareness should be created amongst the younger generation as this will slowly begin to initiate the acceptance of Ayurvedic cooking within larger communities, leading to a more healthy, prosperous society as a whole.

PRAY:

Easy access to the river water will be provided using the Ghat typology of ancient India. This will allow the various communities to carry out their ritual practices safely and with better ease. Walkways between the culinary garden and alongside the river bank will also be included in the scheme, allowing people to connect with nature and take in the beauty of the space as they move through the site. This will also provide a direct link with access from the precinct to the temple.

The incorporation of a Yoga studio works in hand with the practices of Ayurveda. Spiritual seekers of the public will get the opportunity to understand yoga as the foundation for studying Ayurveda. The classes will focus primarily on lifestyle practices that support self-transformation, health and balance with a direct focus on mind, body and spirit. The practice of Yoga often brings the mind to a peaceful , quiet space of wonderment where creative ideas are able to form. Similarly, spiritual practices such as meditation have a similar effect on the mind.

LIVE:

The inclusion of designated workshop spaces surrounding a central courtyard will further integrate the rich cultural histories of the past through lectures and story-telling. These wokshop spaces will be used for creative stimulation. As mentioned before, there is often a deep spiritual connection one feels when practicing the arts of dance and music. Surrounding schools within a 5km radius such as St Marys, Highlands North and H. A Jack will be able to utilise this creative platform, providing students the opportunity to expand their mental and creative horizons. With the inclusion of an auditorium, this part of the program encourages people to find joy in being able to teach, practice and perform the arts together.

The Hindu tradition includes an extensive repertoire of devotional vocal music in many different languages and regional styles. Singers pray to the deities by using the classical poetry from various religious texts. Ravi Shankar, the great sitar virtuouso, has popularised Indian classical music far beyond India, having collaborated with the late violinist ,Yehudi Menuhin and the Beatles, to name a few. Áccordingly, "God creates the world through sound, and dances creation into existence. Human beings need music and dance to connect with the divine" (The Handy Religion Answer Book, n.d.).

Figure 9.4
Programme Breakdown
(Author, 2021)

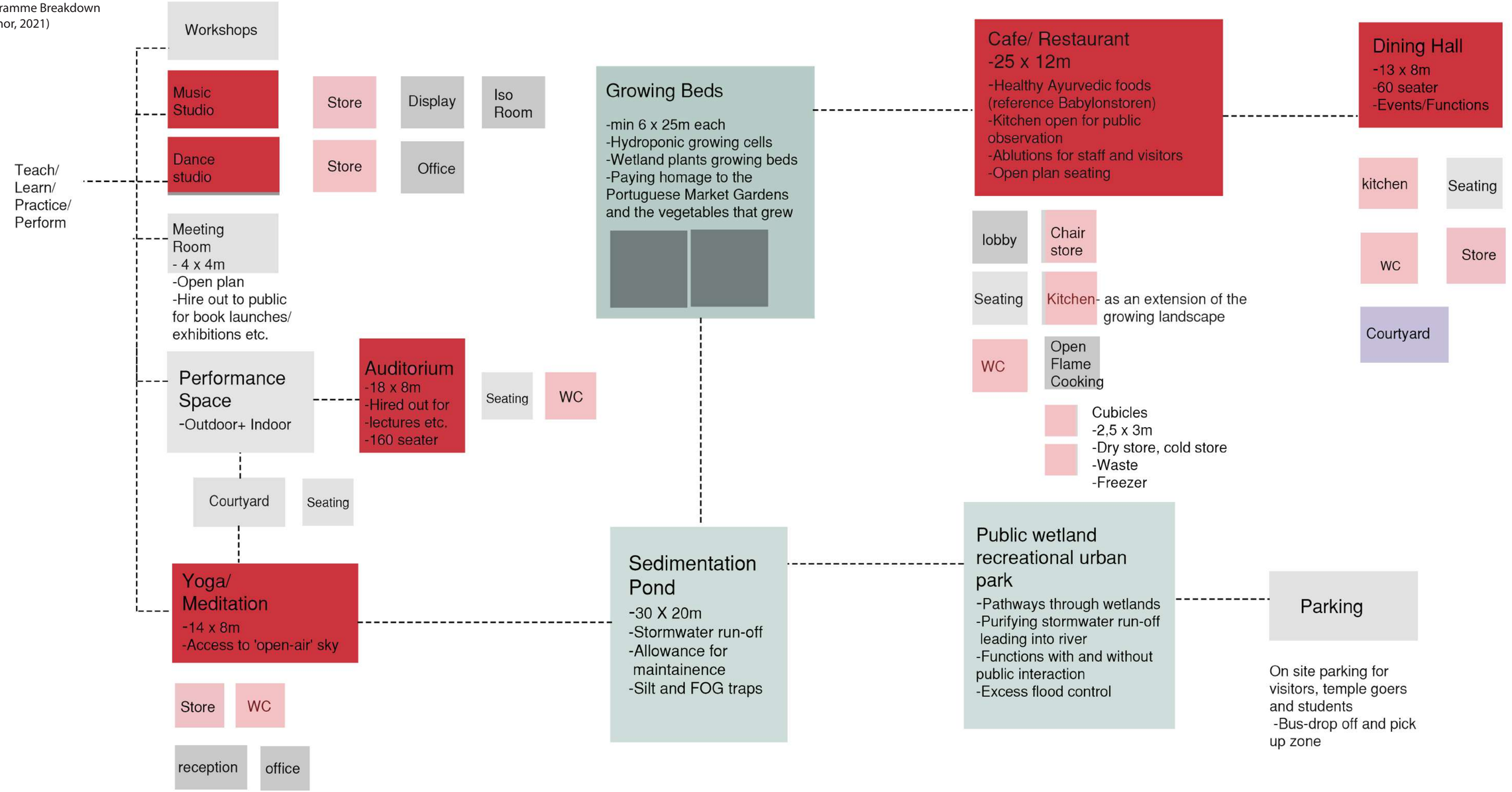
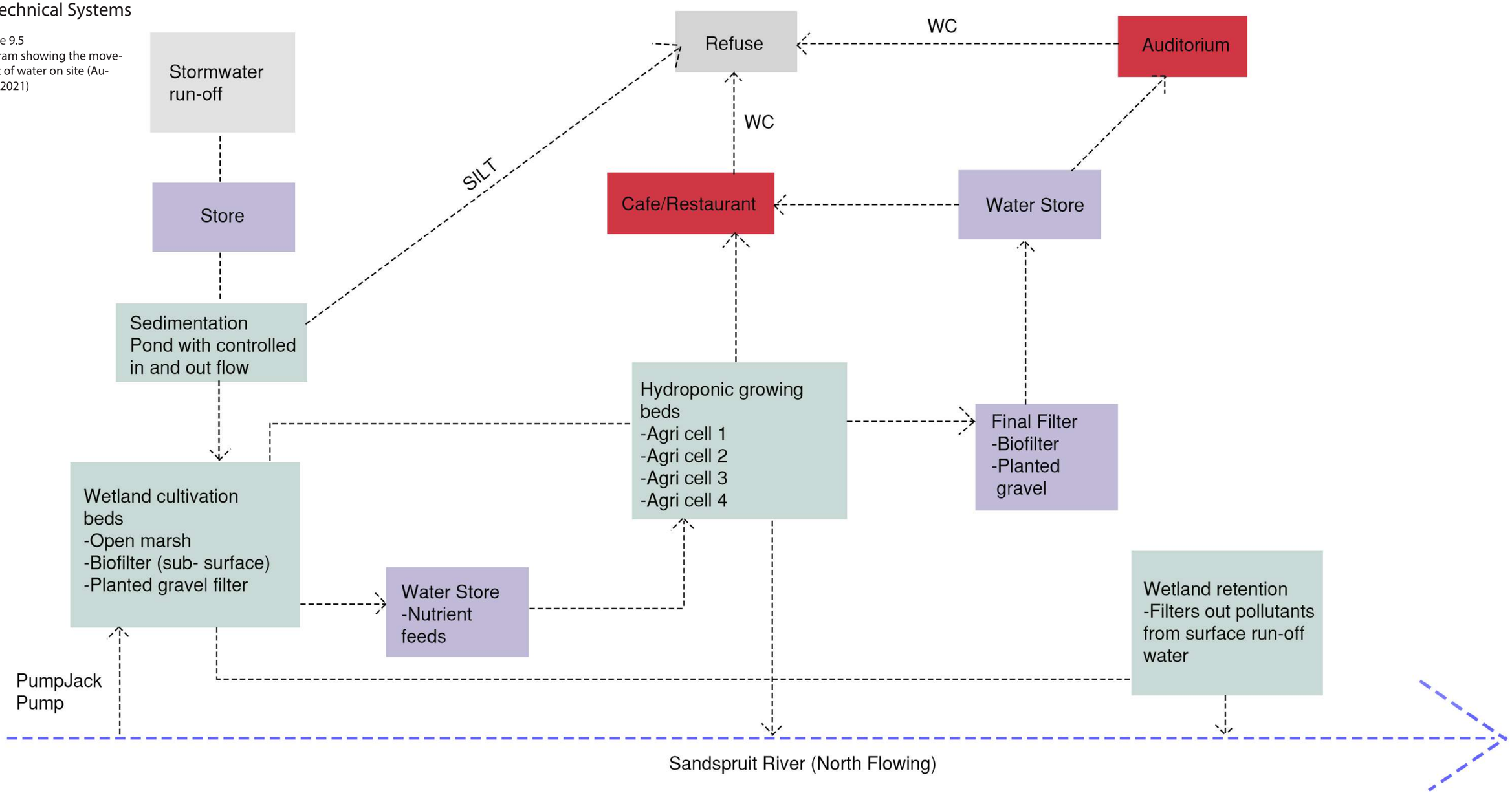
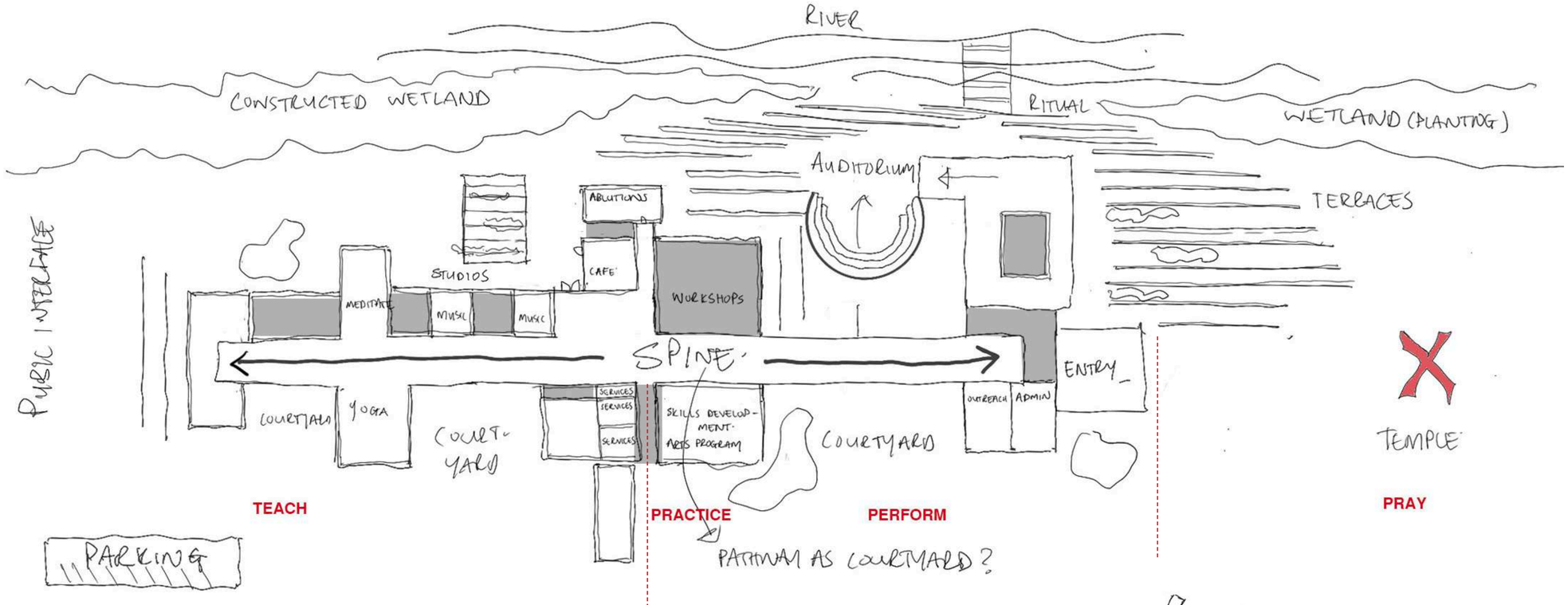
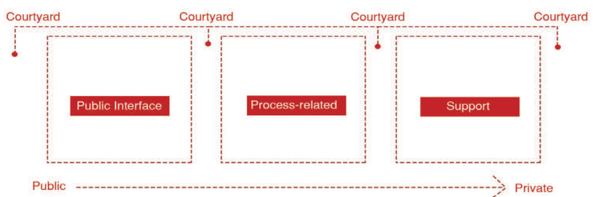


Figure 9.5
Diagram showing the movement of water on site (Author, 2021)







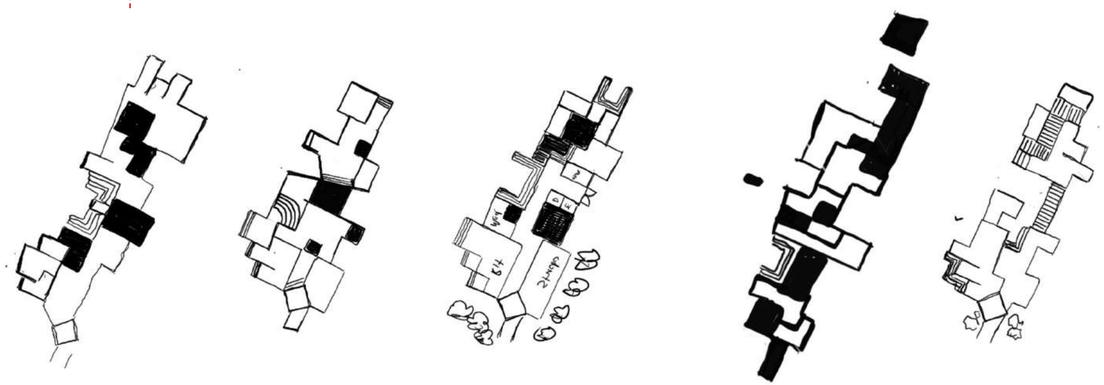


Figure 9.6
Explorative process sketches
(Author, 2021)

-Very early exploration of solid and void spaces. The idea was to merge open-air courtyard spaces with programmed spaces to create a building that bleeds into the existing natural landscape without being intrusive to the site and temple compound.

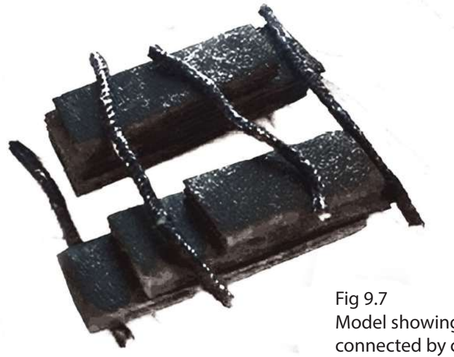
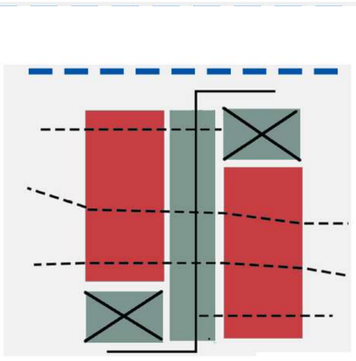
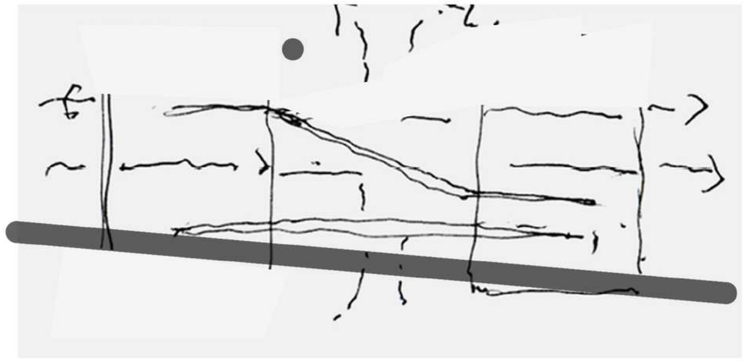


Fig 9.7
Model showing a fixed form that are connected by cross intersecting planes





NOTE : Although the following design explorations were explored, many of these ideas were abandoned during the design development process due to problems relating to the contextual viability of the scheme.

This building form utilises the prevailing north wind, with the inclusion of floating walkways above the courtyard space.

The circulation pathways connect the two offset forms and displays a unique building in terms of the existing context. The placement allows for adequate cross ventilation.

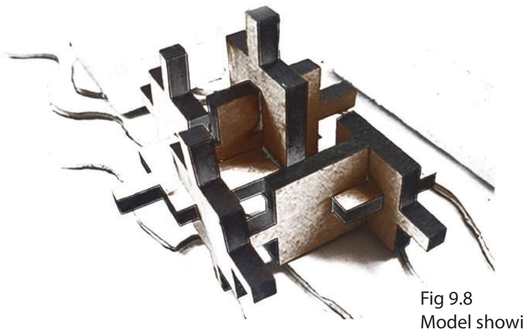
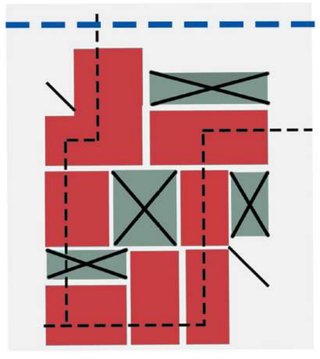
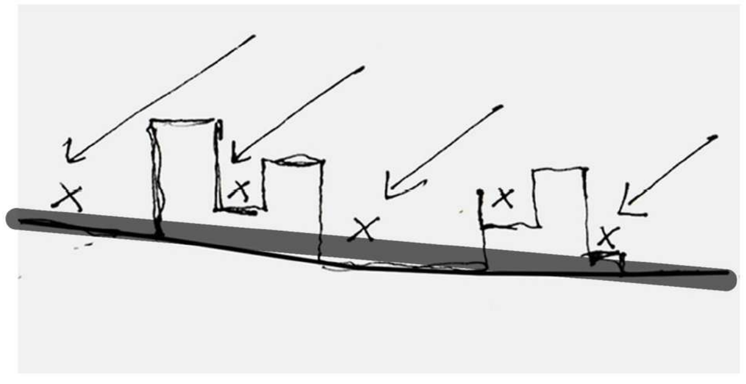


Fig 9.8
Model showing interlocking forms whic create a series of pause areas/courtyard

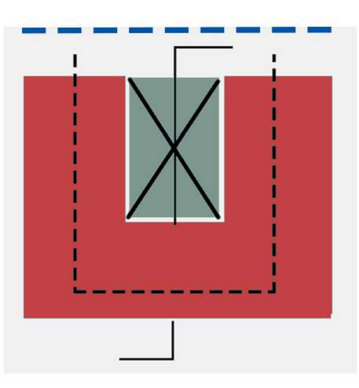


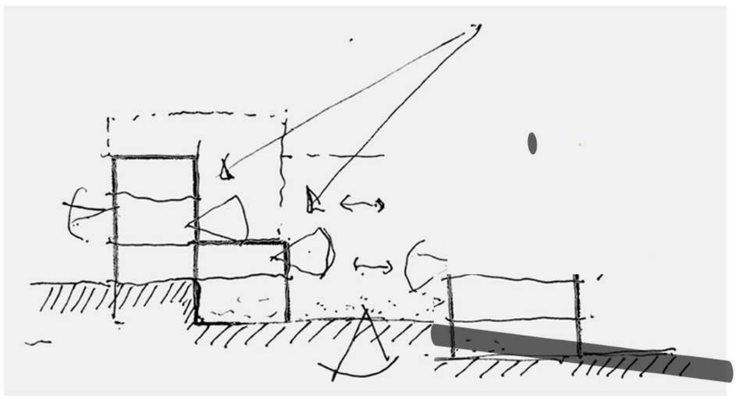


Fragmented form creates smaller courtyard spaces or places for interchange. This form is complex and encourages different lighting throughout the building.



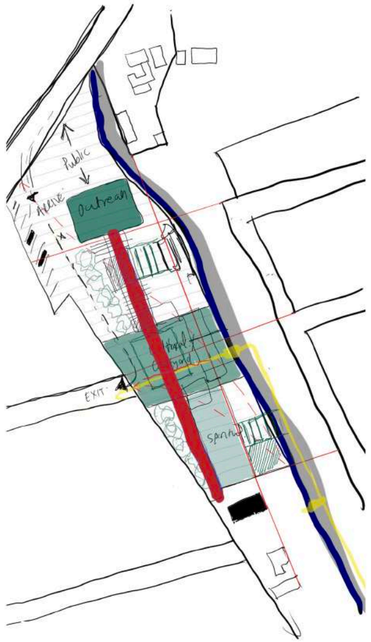
Fig 9.9
Model showing a simple 'U' shaped form which also creates a large central courtyard

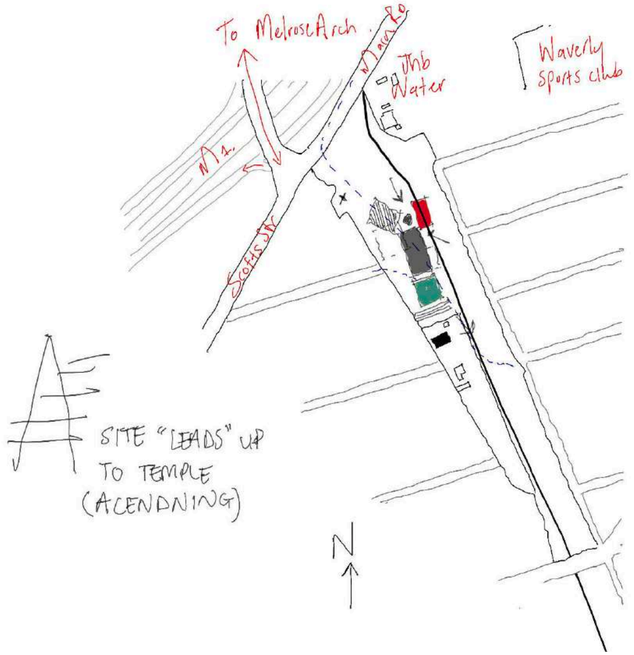


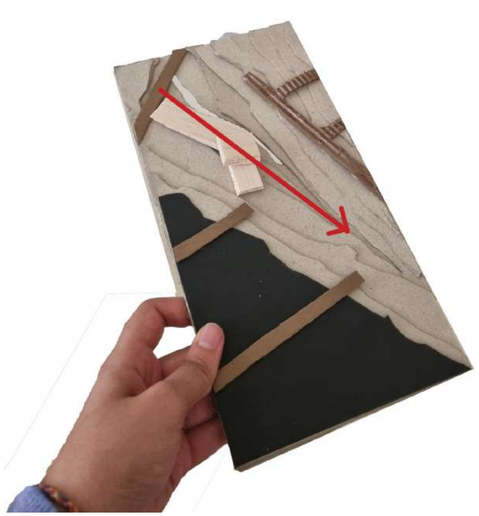


Due to certain site conditions, the building needs to re-orient itself to face east, similar to the existing Melrose Temple. The reason for this is to reach optimal energy efficiency.

The building should fit into its existing context and therefore, should be placed in a similar direction to the existing contours on the site. The building is terraced, creating a greater sense of openness







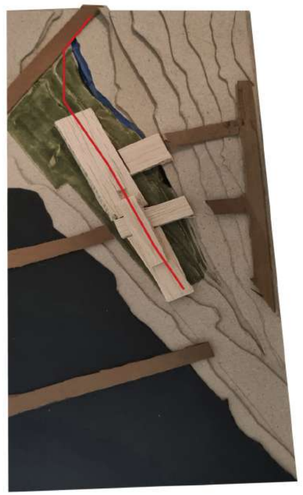


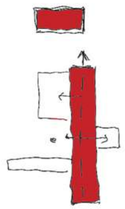
Fig 9.10 (Above)
Early sketch setting out program
(Author, 2021)

Fig 9.11 (Right)
Rough model of site with massing
(Author,2021)

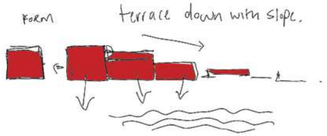
Fig 9.12 (Opposite)
Concepts (Author,2021)

4. Concepts

The design proposal should seek to accommodate the natural features that currently exist on site. This is not to say that the open public space cannot be developed, but the consideration for existing public green space and functionality is to be made.



1. Connection to Main Temple
A 'ritual pathway' or spine that leads people into the site. Currently, the site is utilised as a thoroughfare for pedestrians. Perhaps the circulation routes which facilitate movement could become a major design driver?



2. The site slopes in two directions with a 7 meter slope leading into the river bed. This poses as a danger for the elderly folk as well as children who could drown.



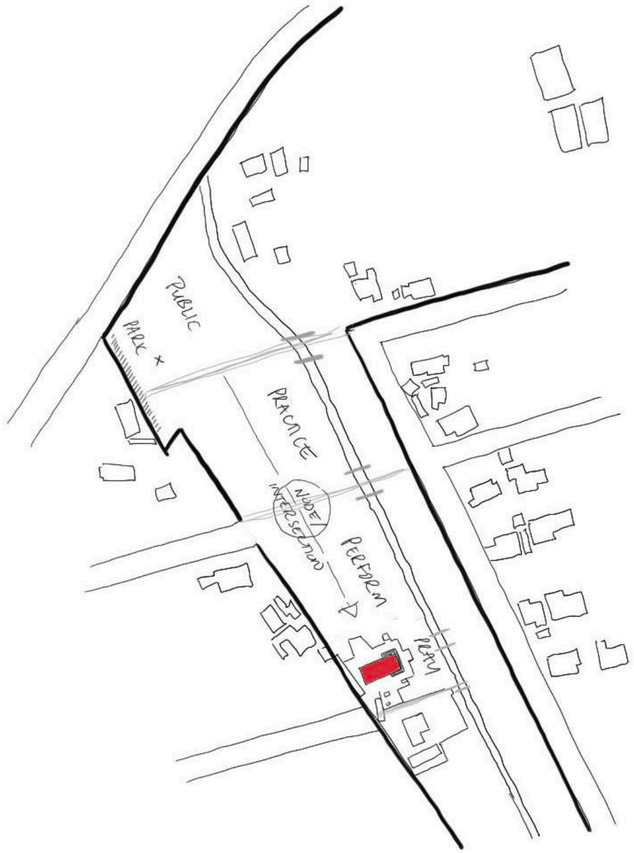
3. 'Open to sky' Courtyards allow maximum sunlight into the building and provide spaces for the interchange of knowledge.



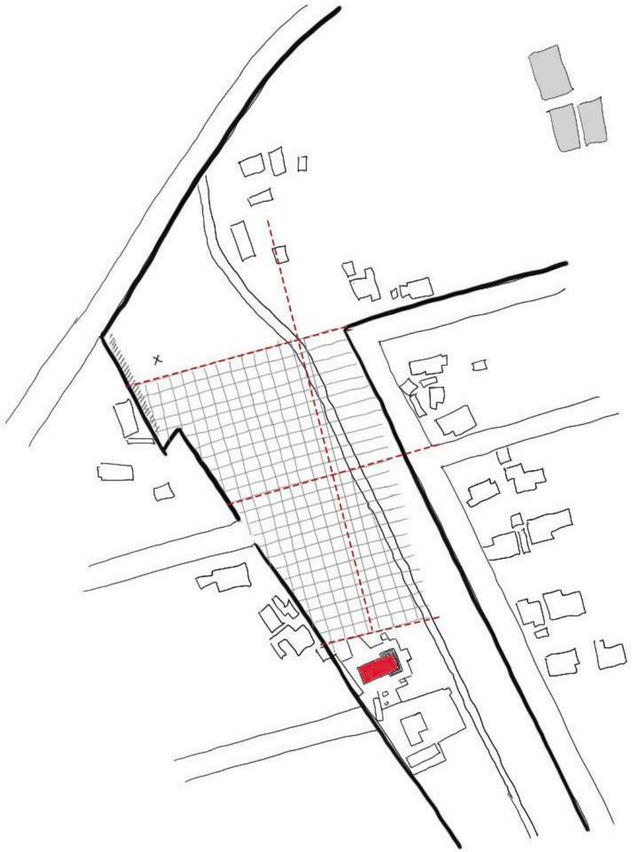
4. Terracing with a reference to the Ghat Typology, allowing for easier access and contact points to the river water.

Fig 9.13 (Below)
Quick explorations in plan (Author,2021)

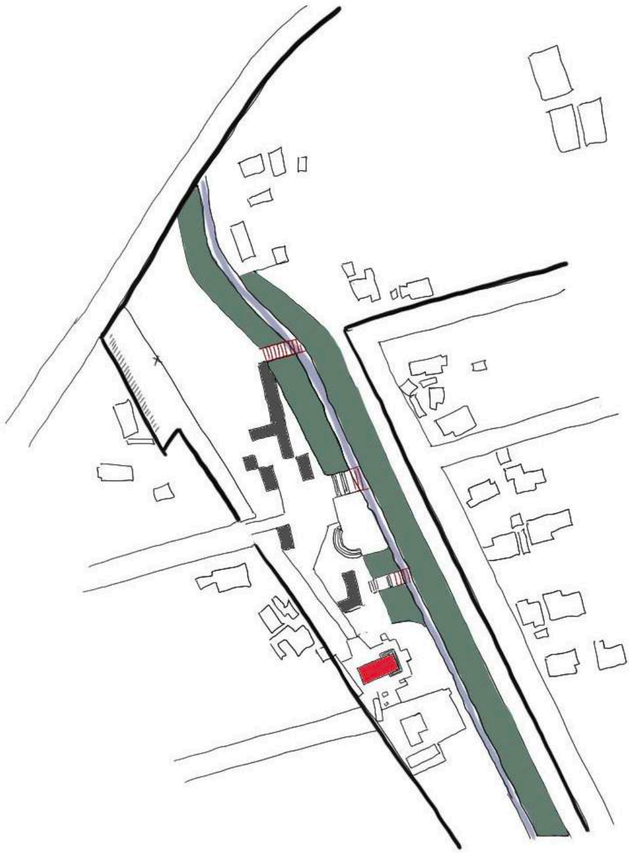
Quick explorations in plan view helped me arrive at a spatial organisation that accommodated the program. The structural grid is based on the standard 8,4 by 8,4m. It was decided to use a square grid in reference to the Vaastu Shastra Mandala. Massing was derived from this, and the program filtered into it. The explorations below primarily focus on the public ground floor plane.



Practice, Perform, Pray



8,4 x 8,4 Square grid

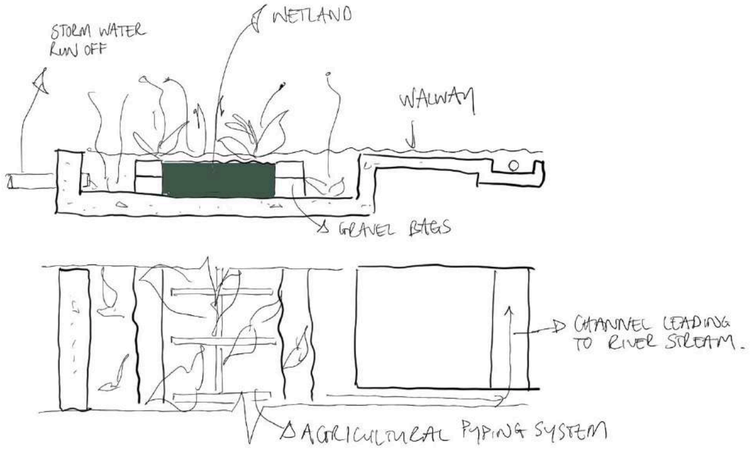


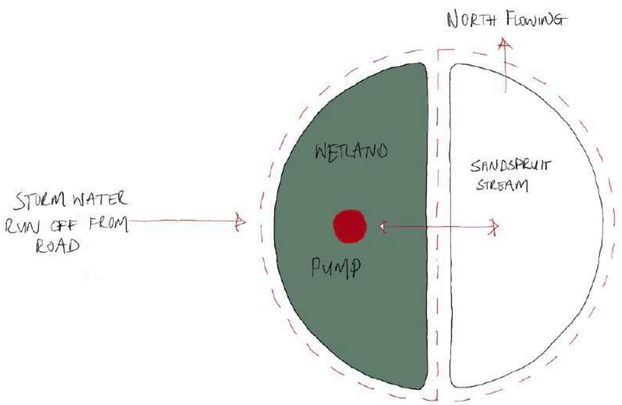
Constructed Wetland with views

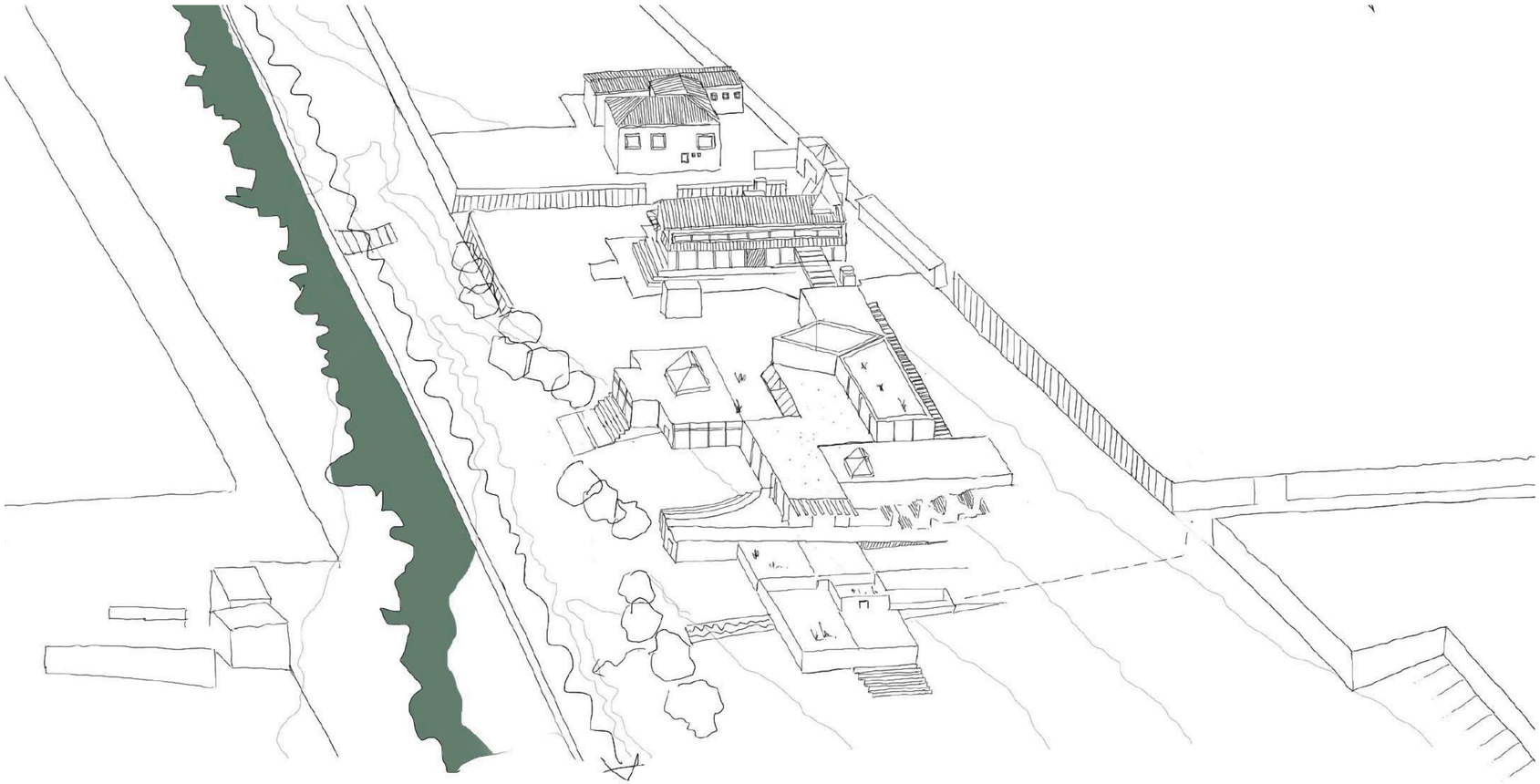
The design does not aim to rehabilitate polluted river water in any way; instead, the search is for the ways in which a wasted resource can be used to regenerate a site by passively helping to rehabilitate the river water over time. In doing so, the site makes allowances for constant changes in water levels and becomes part of a functioning ecological network.

Fig 9.14 (Opposite)
Diagram showing the flow of stormwater (Author, 2021 After Stokes, 2018

Fig 9.15 (Below))
Rough sketch illustrating the constructed wetland system (Author,2021 After Stokes, 2018)







Perspective View



Brick (Skin) Concrete (Skeleton) Glass (Eyes)

Figure 9.16 (Right)
Materiality of building structure
(Author, 2021)

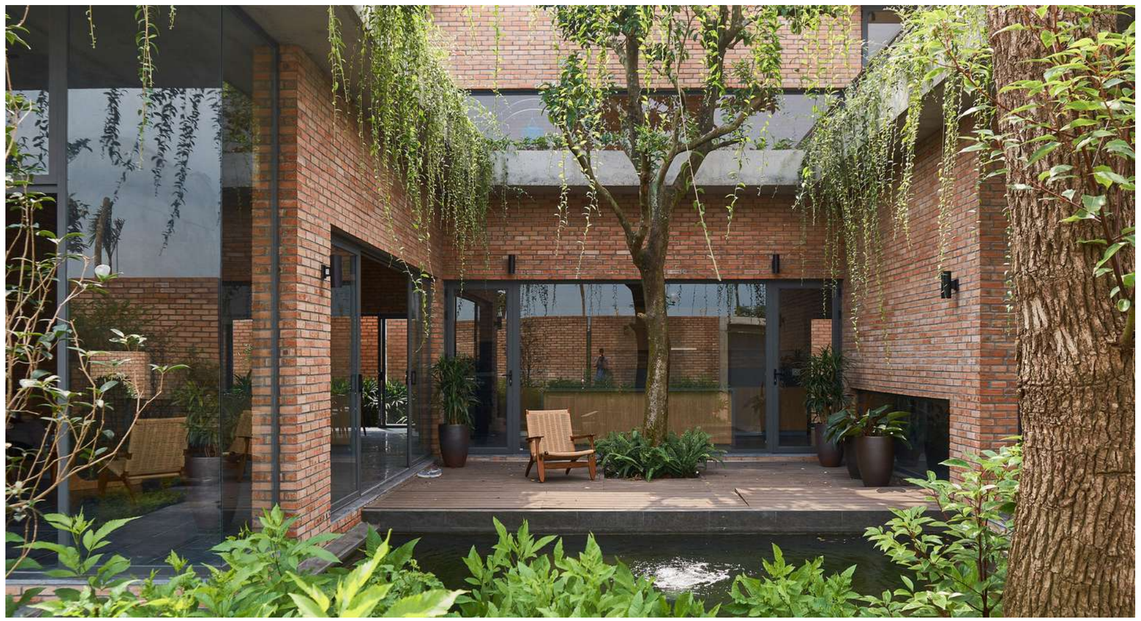
Figure 9.17 (Below)
Greenery Curtain House
(Nguyen, 2021)

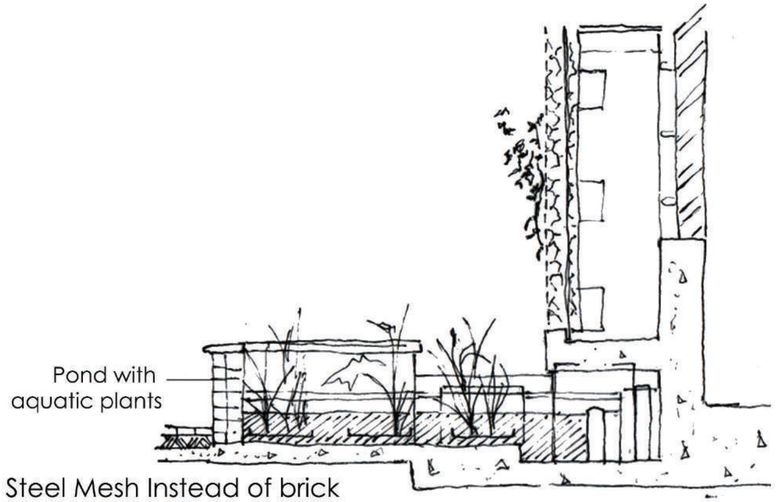
Figure 9.18 (Right)
Sketches exploring the different connections between various building compnents
(Author, 2021).

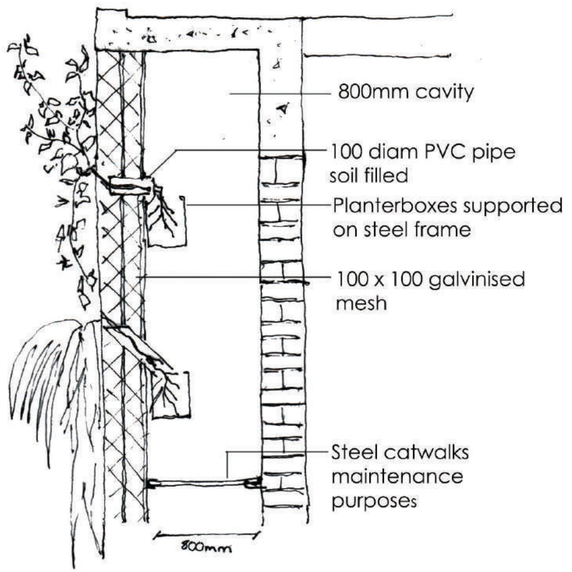
6. Tectonic expression

Material components consist of concrete as the main structure and face brick as the natural base material. The reason for this is that the building has a stronger relationship to its existing neighbours: Melrose Arch Precinct and the Temple complex, both comprised of brickwork.

A red brick finish with intricate patterning will create a subtle "complementary contrast" to the existing buildings on the site while maintaining respect for its context. This idea forges a symbiotic relation in which each of the buildings on site heightens the essential characteristics of the other, further emphasizing the contrast between the old and the new/ modern and traditional.







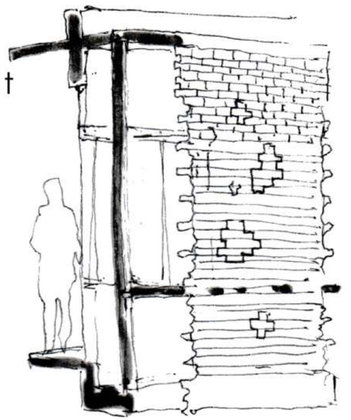
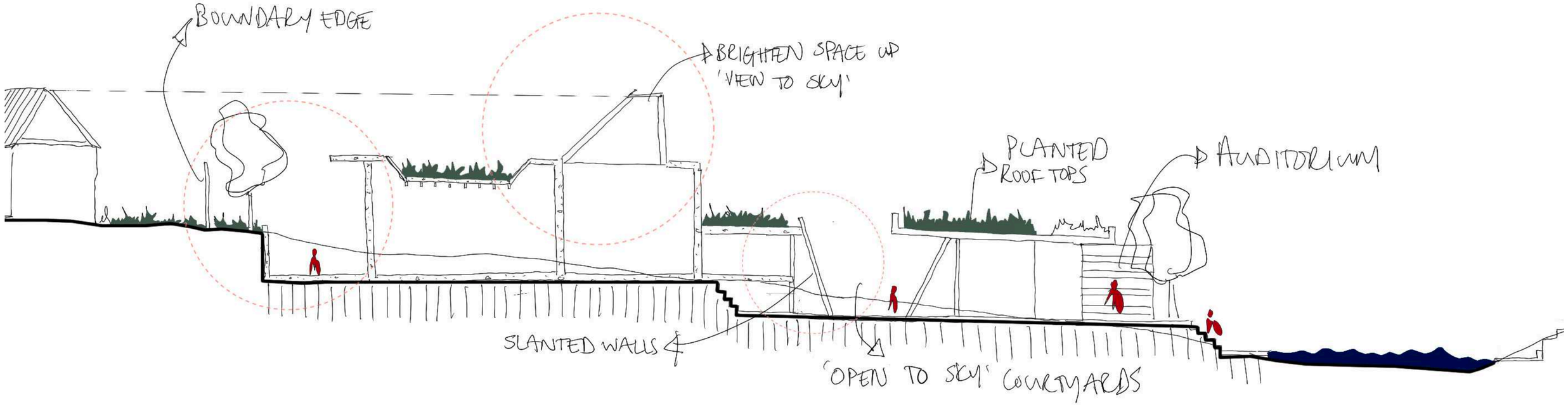
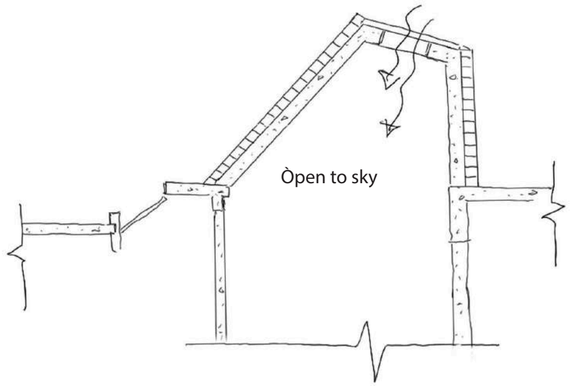
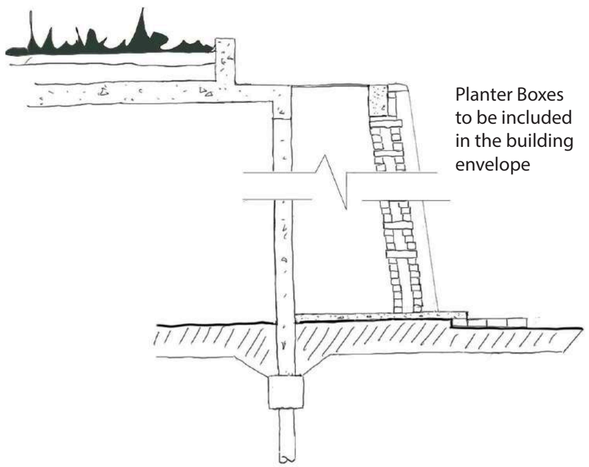


Figure 9.19 (Below)
Rough sketch showing a conceptual elevation of building - not to scale (Author, 2021)







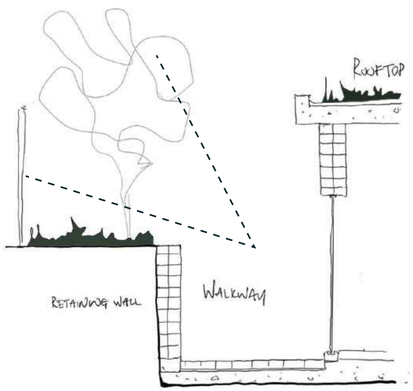


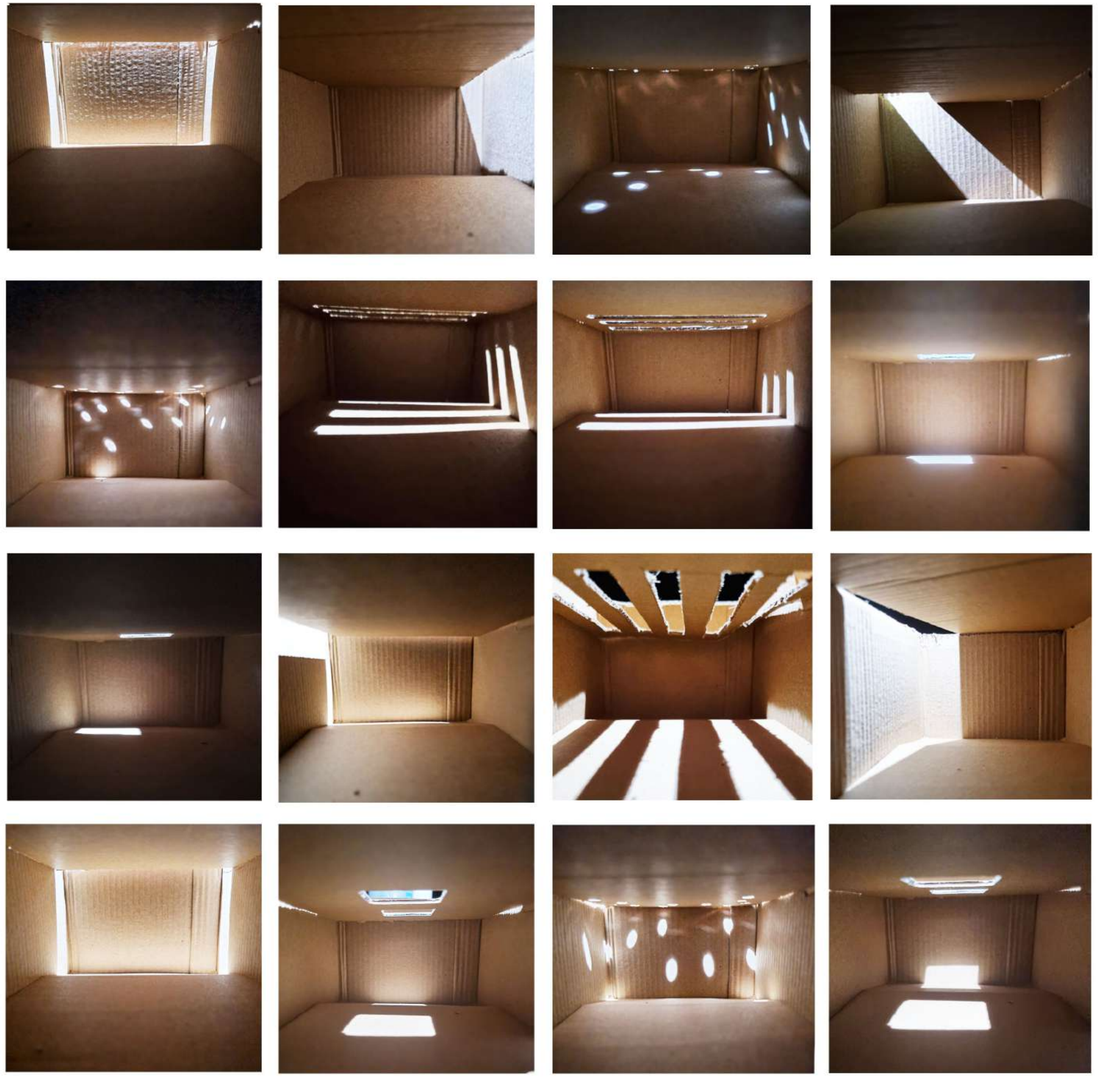
Figure 9.20 (Left))
Rough sketch of Large skylight- not to scale
(Author, 2021)

Figure 9.21 (Below)
Rough sketch of Slanted brick wall idea with planted rooftop- not to scale (Author, 2021)

Figure 9.22 (Below)
Rough sketch of newly proposed edge condition detail- not to scale
(Author, 2021)

Figure 9.23 (Right)
Light model experiments with projected shadows (Author, 2021)

7. Light Study

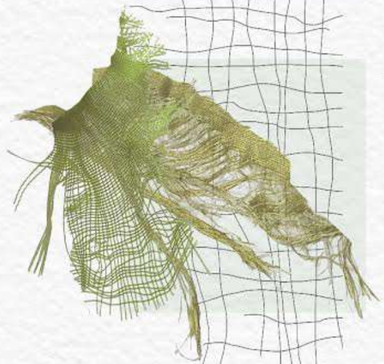


1



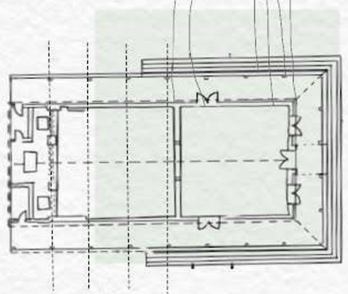
TEMPLE'S HISTORY INFORMED CHOICE OF MATERIAL FOR CHARRETTE

2



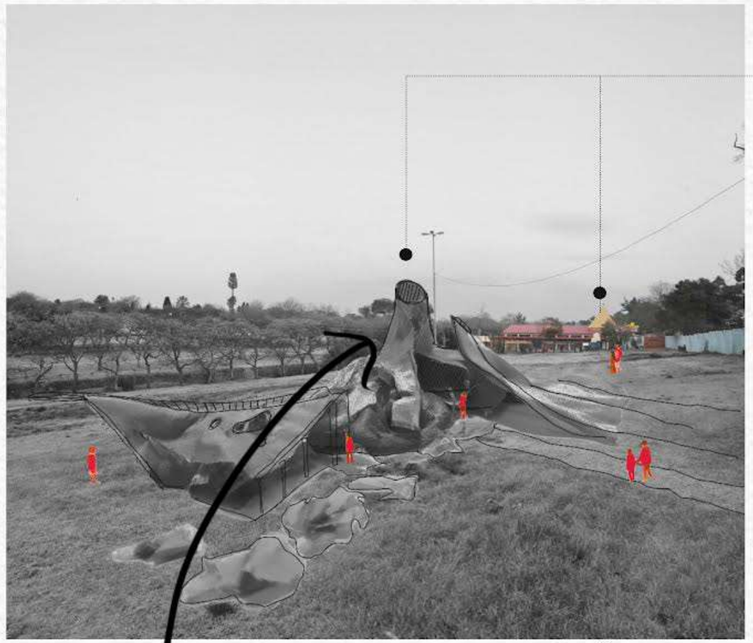
THE CLOTH - A SYMBOL OF IDENTITY + CULTURE, WAS EXPOSED TO THE VARIOUS ELEMENTS GENERATE FORM

3



THE SYMBOLISM + ICONOGRAPHY OF THE TEMPLE'S SIMPLE STRUCTURE ALSO HELPED FORM GENERATION

4



Charrette model on site

FIRE (Burn)



Sky Light

EARTH (Submerge)



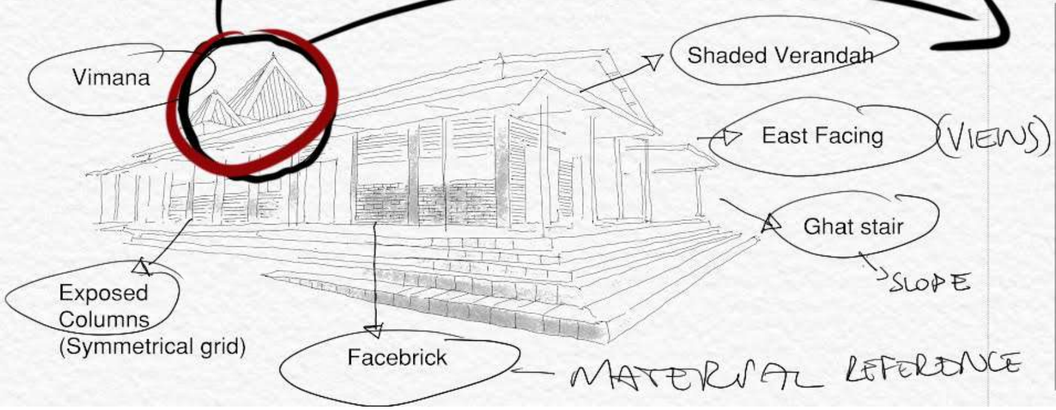
Embed Structure

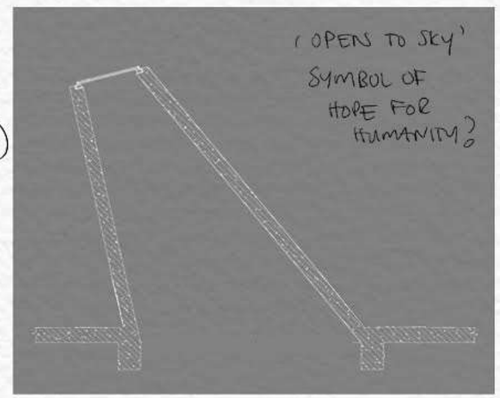
WATER (Dip)

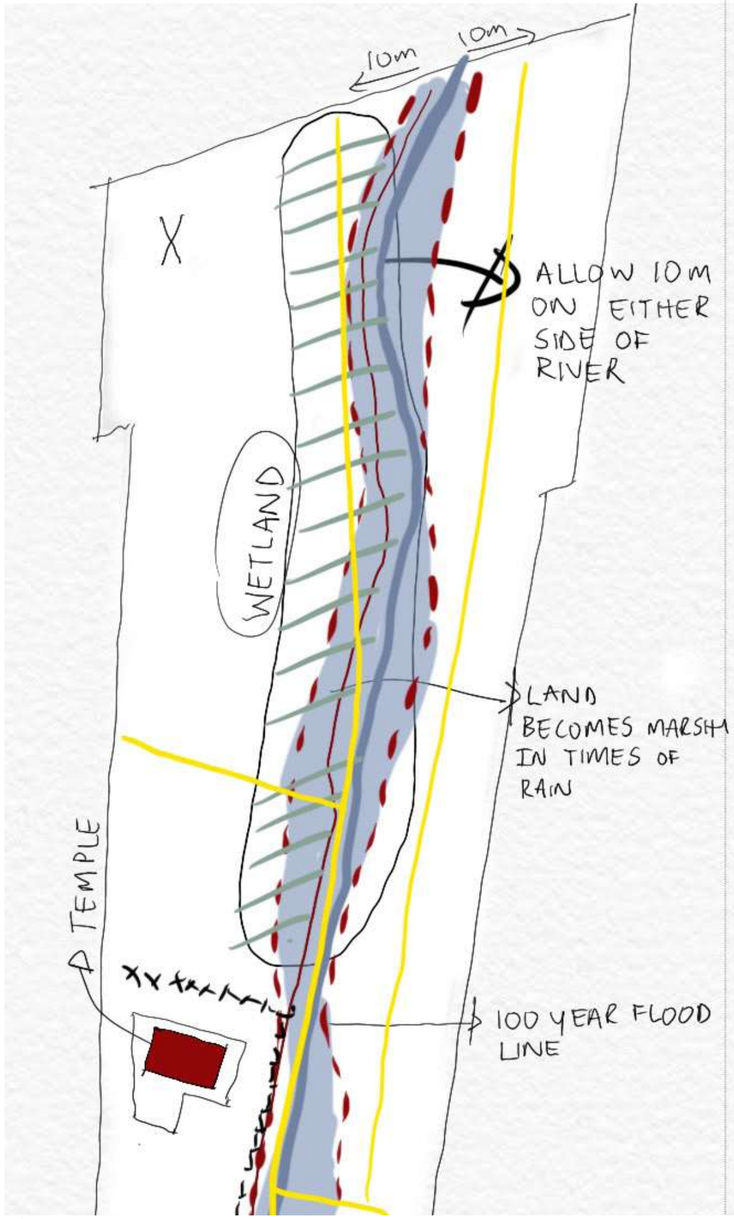


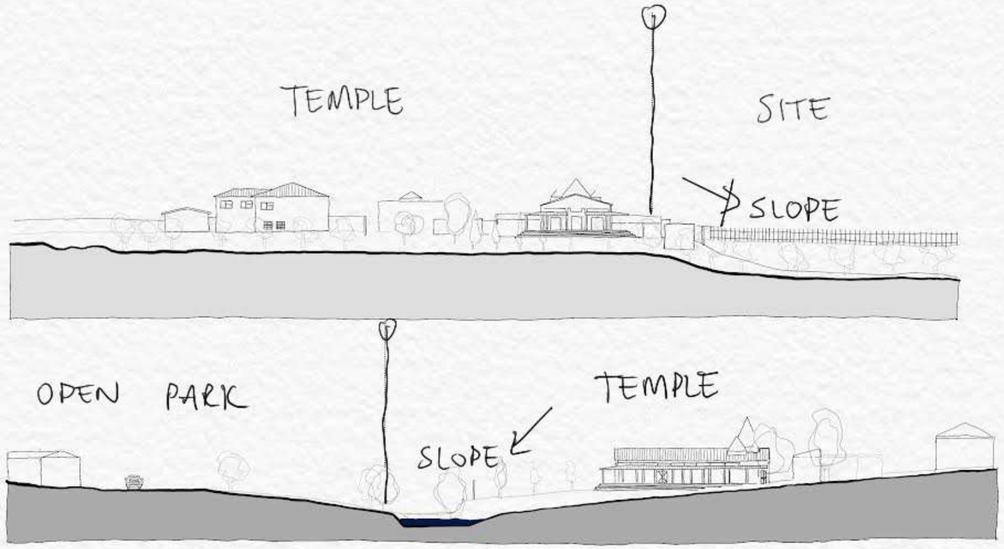
Provide Access to

TRANSLATED AS

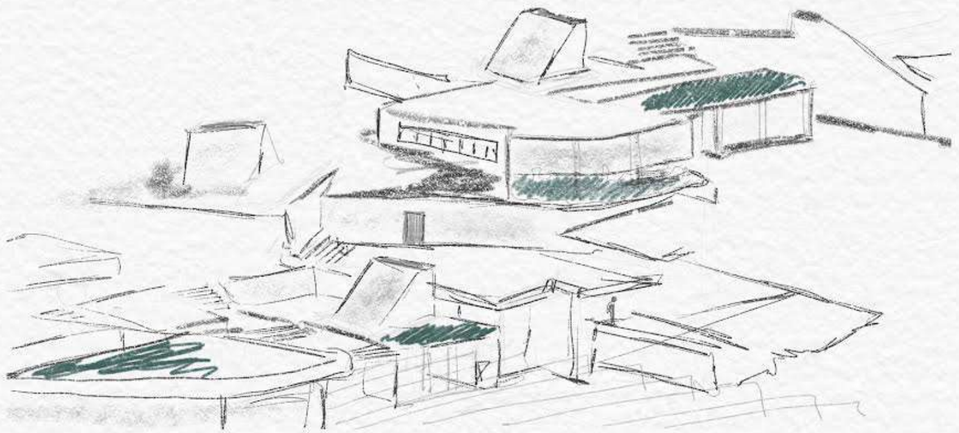


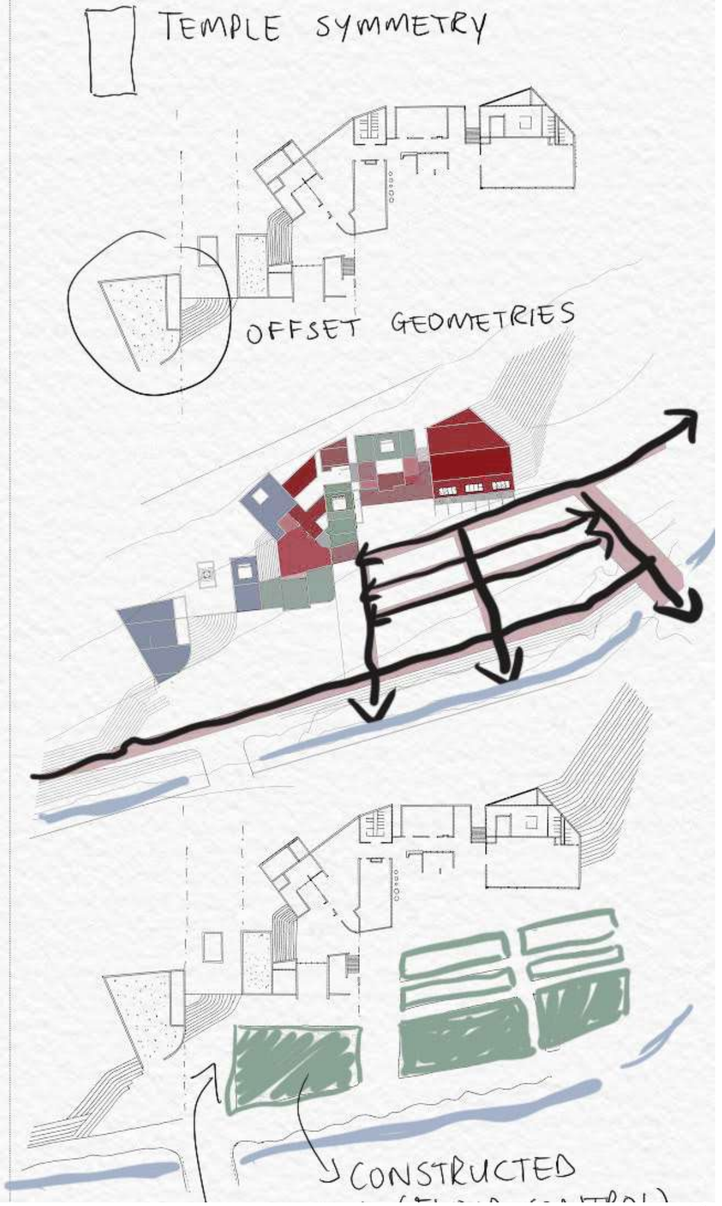


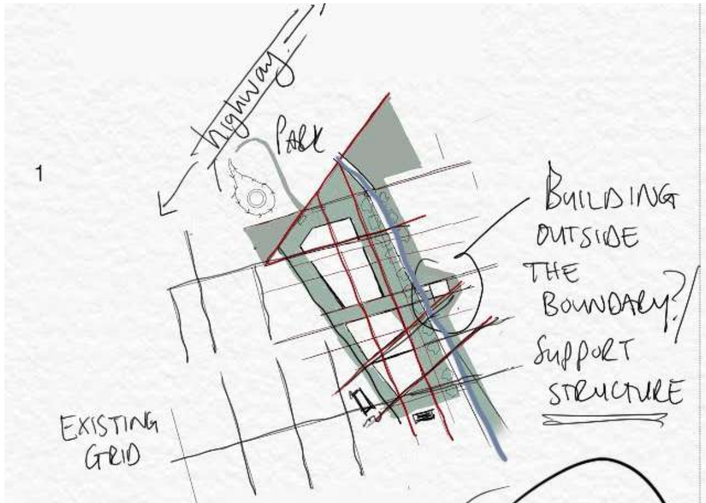

10m
10m
X
ALLOW 10M ON EITHER SIDE OF RIVER
WETLAND
LAND BECOMES MARSH IN TIMES OF RAIN
TEMPLE
100 YEAR FLOOD LINE

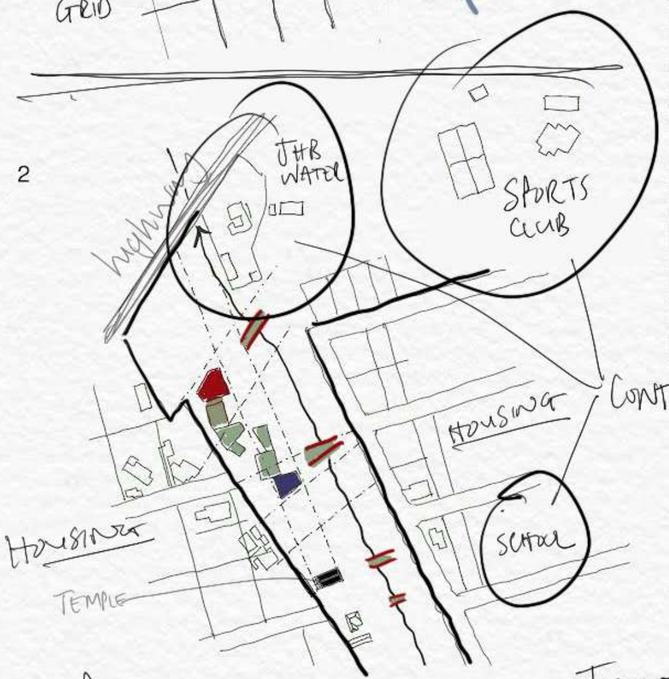

TEMPLE
SITE
SLOPE
OPEN PARK
TEMPLE
SLOPE

"GREENSCAPE"

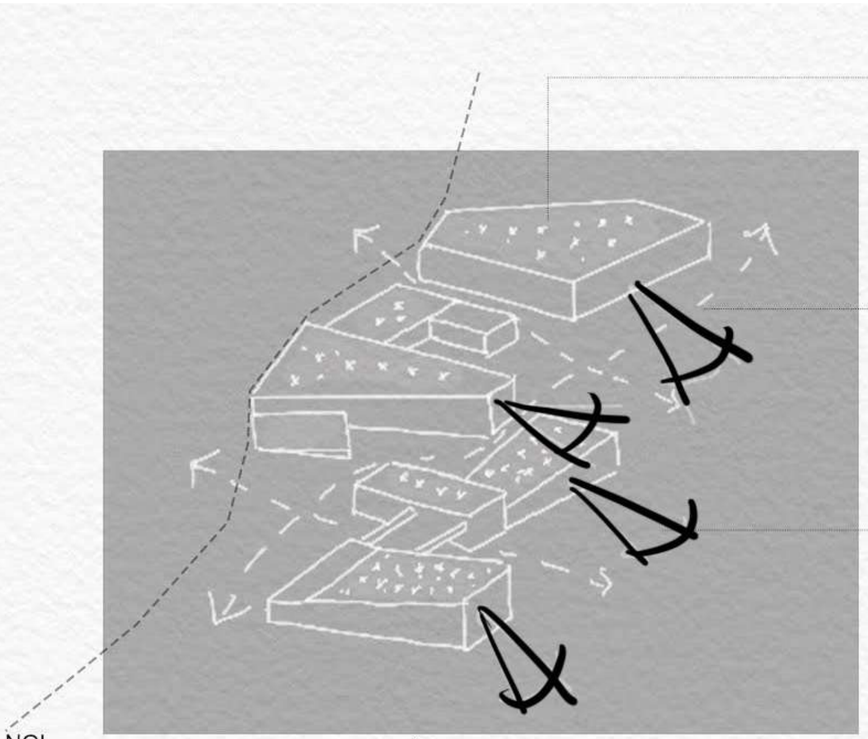



TEMPLE SYMMETRY
OFFSET GEOMETRIES
CONSTRUCTED

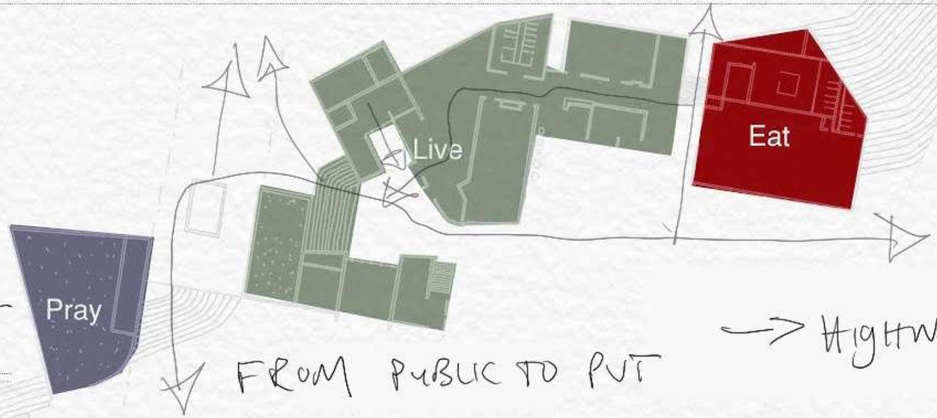




Pulling different axis on site

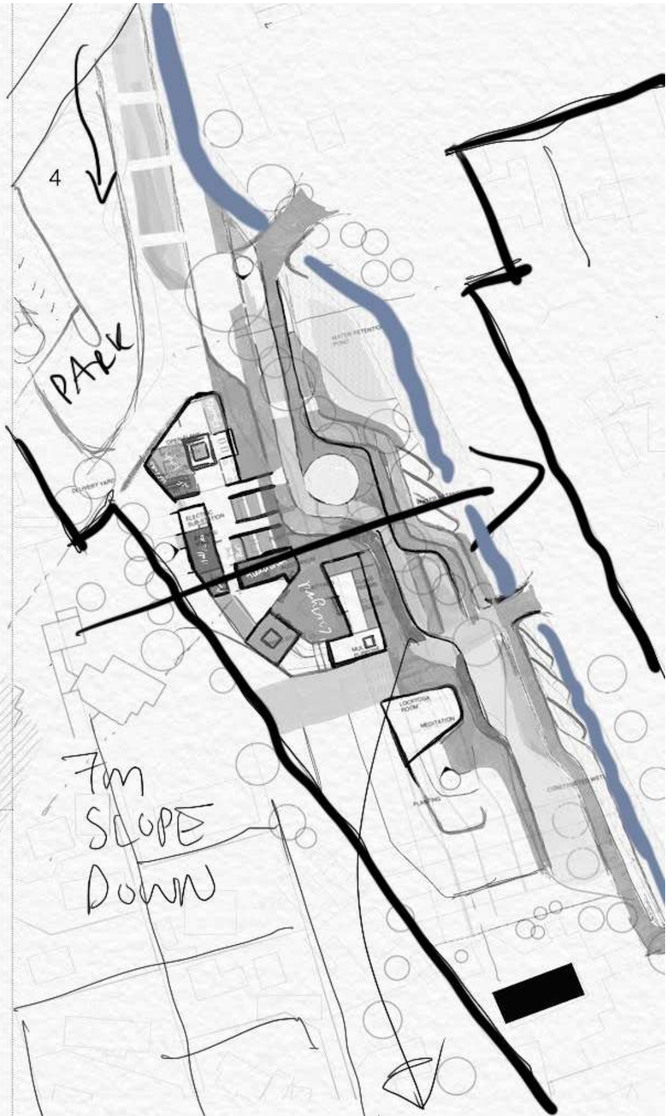


Massing



Temple ← → Highway

From public to pvt



Meandering walkways

10
FINAL DESIGN

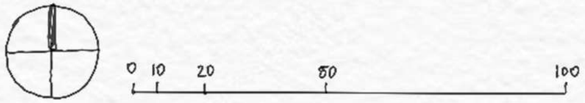


Figure 10.1 (Left)
Perspective view of proposed building
(Author, 2021)



On an urban scale, the site can be seen located at the end of a quiet suburban street. This liminal space aims to use the existing river as a connector rather than a divider by almost 'stitching' the site together, using three new foot bridges. This, in turn, would allow for increased accessibilty and interaction within this underutilized public space.

THE SITE



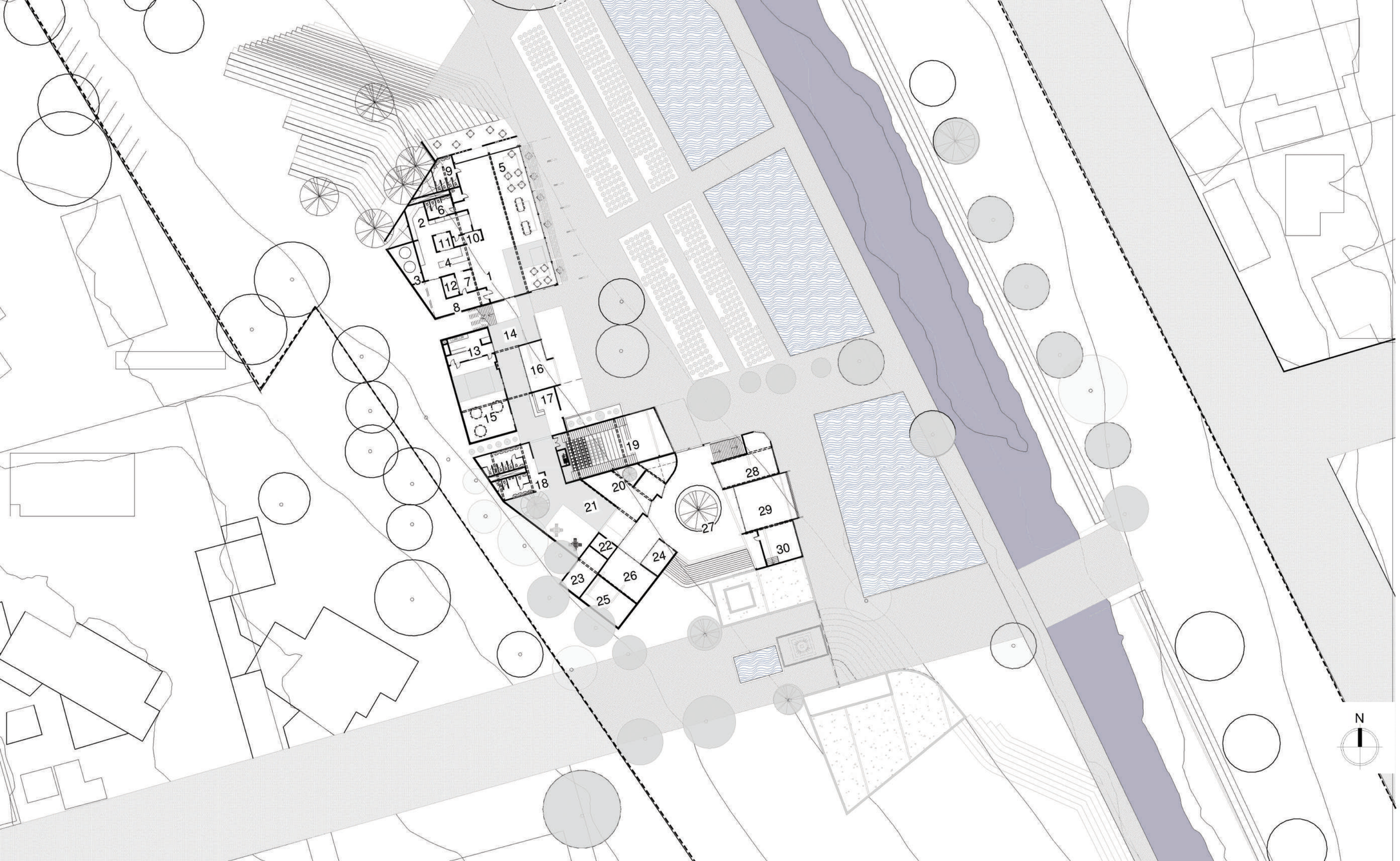


KEY

A Communal Kitchen
B Multi-Purpose Hall
C Ablution Block
D Auditorium/Discourse
E Music Studio
F Meeting rooms
G Dance Studio
H Yoga Studio

N

SITE PLAN



KEY

1 Communal Kitchen
2 Dish washing
3 Water Collection
4 Food Prep
5 Restuarant
6 Ablutions
7 Dry Store
8 Vegetable Prep
9 Ablutions
10 Freezer

11 Cold Store
12 Waste
13 Private Kitchen
14 Open Flame Cooking
15 Events Hall
16 Break-away space
17 Tea Bar
18 Ablutions
19 Auditorium
20 Worshop space

21 Courtyard Foyer
22 Iso Room
23 Music Studio1
24 Instruments display/Storage
25 Music Studio 2
26 Common Space
27 Courtyard
28 Meeting Room
29 Arts and craft Workshops
30 Admin/office

N

GROUND FLOOR PLAN

0 5m 10m 20m

Granite
Bedrock

31
UP
32
33
34
35
41
37
39
40
38

KEY

31 Auditorium
32 Offices/ Admin
33 Open Spce
34 Worshops
35 Office
36 Dance Studio
37 Gathering space
38 Locker Room
39 Counselling
40 Yoga Studio
41 Storage

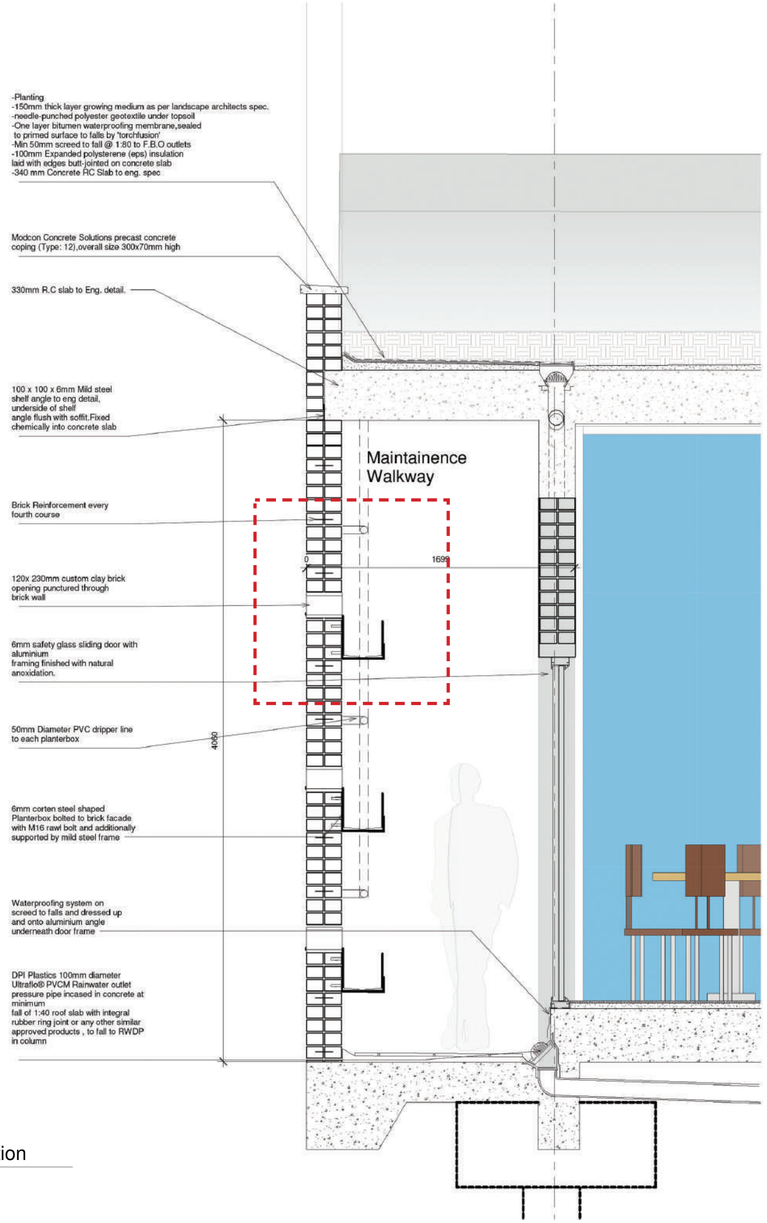


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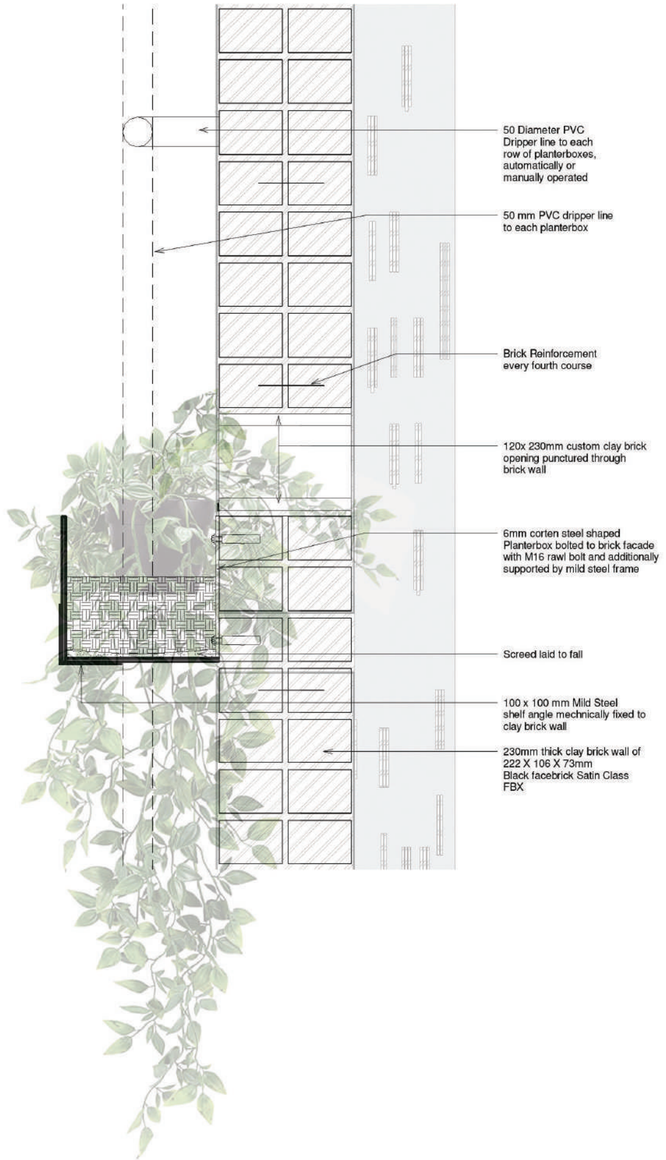
LEVEL -1 PLAN

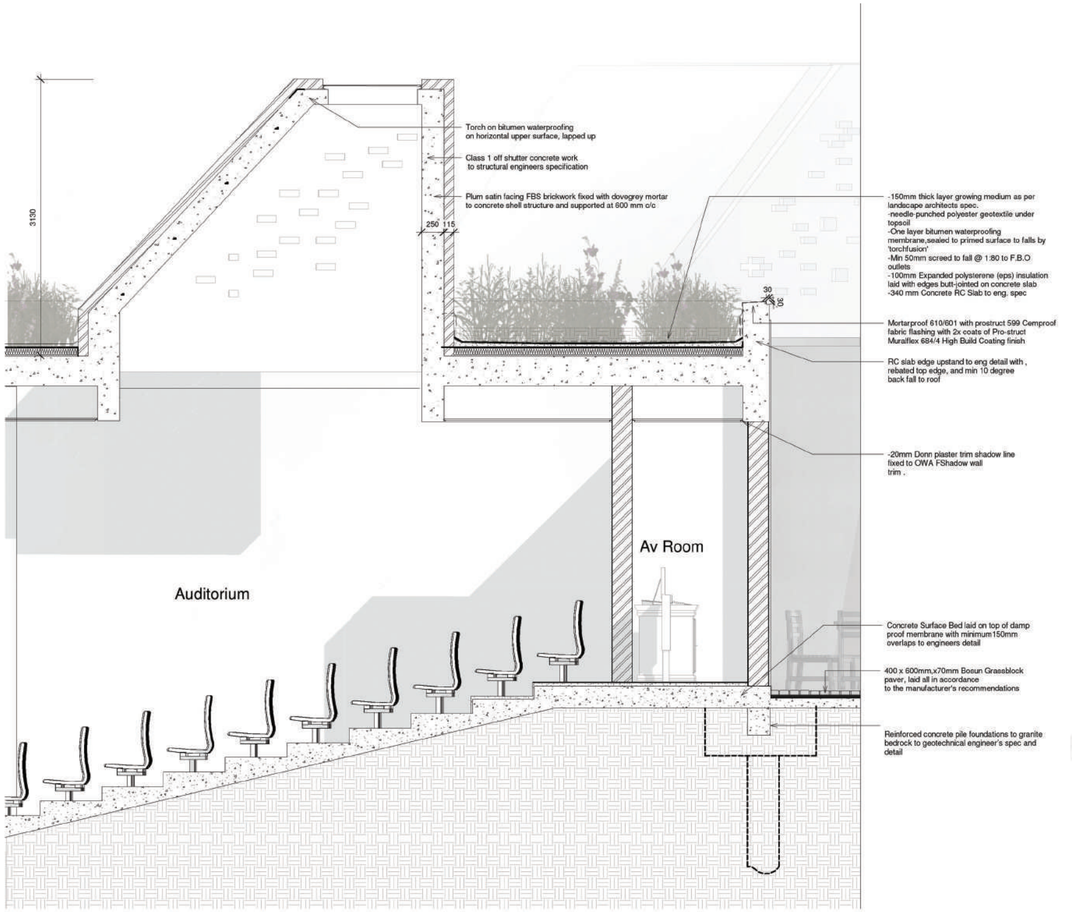
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DETAILS

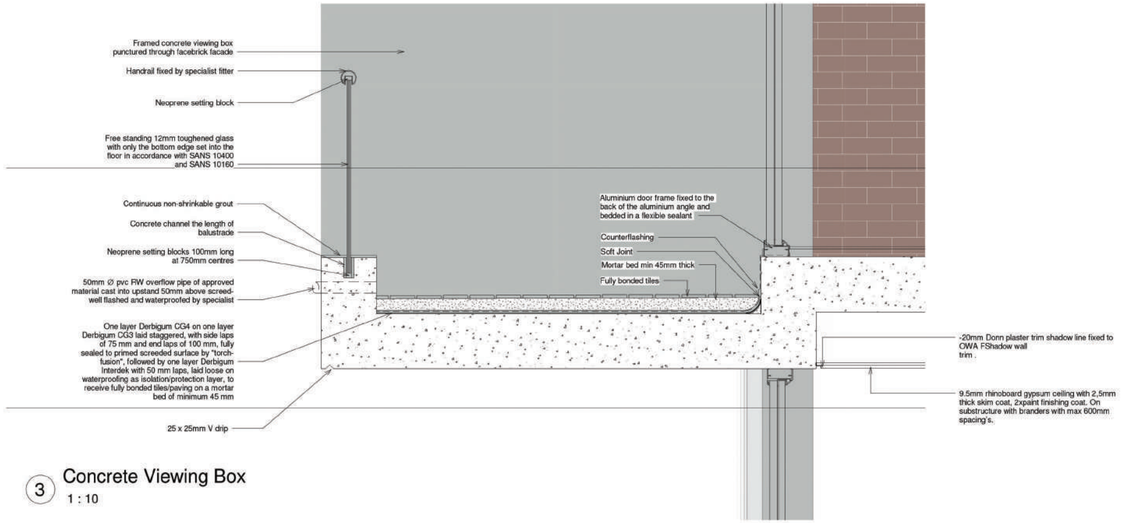


1 Perimeter -Section
1 : 15

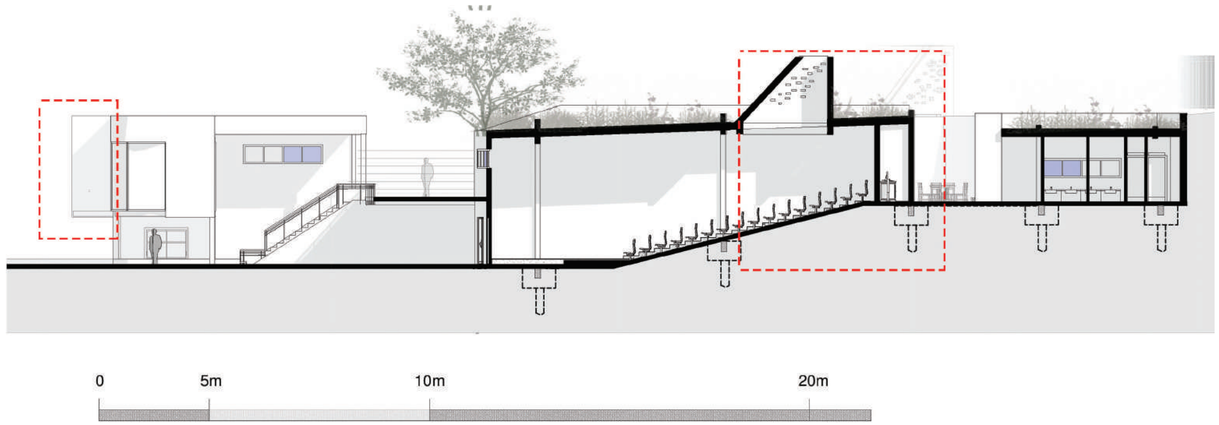




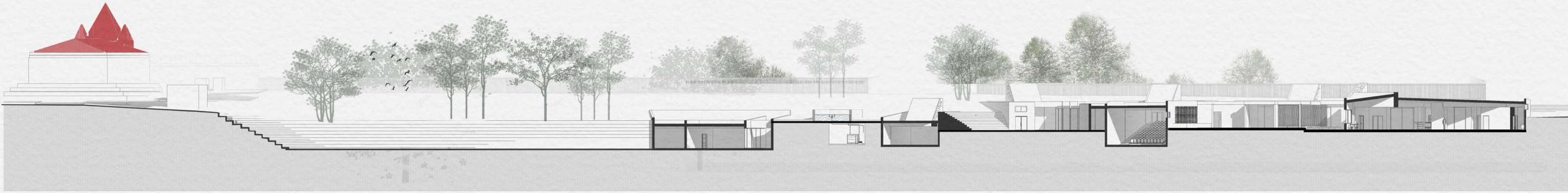
2 Detail of Roof Turret
1 : 25



3 Concrete Viewing Box
1 : 10



1 Section AA- Auditorium
1 : 100



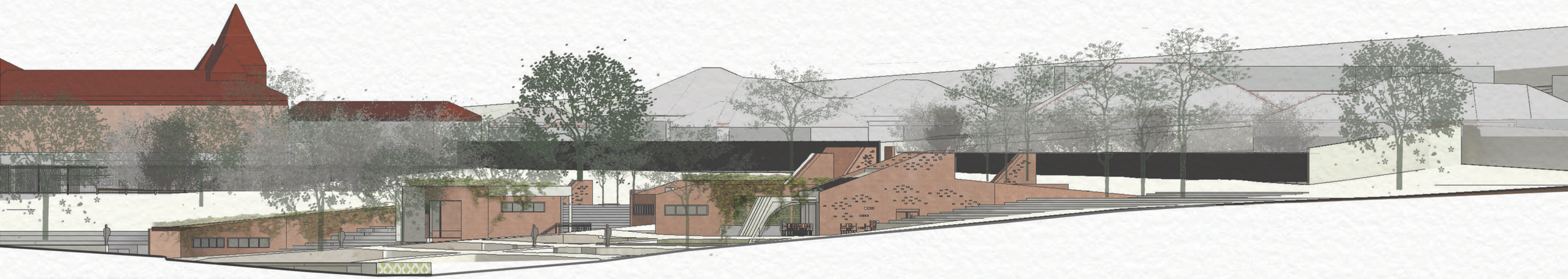
5 10 20

SITE SECTION



EAST ELEVATION

5 10 20



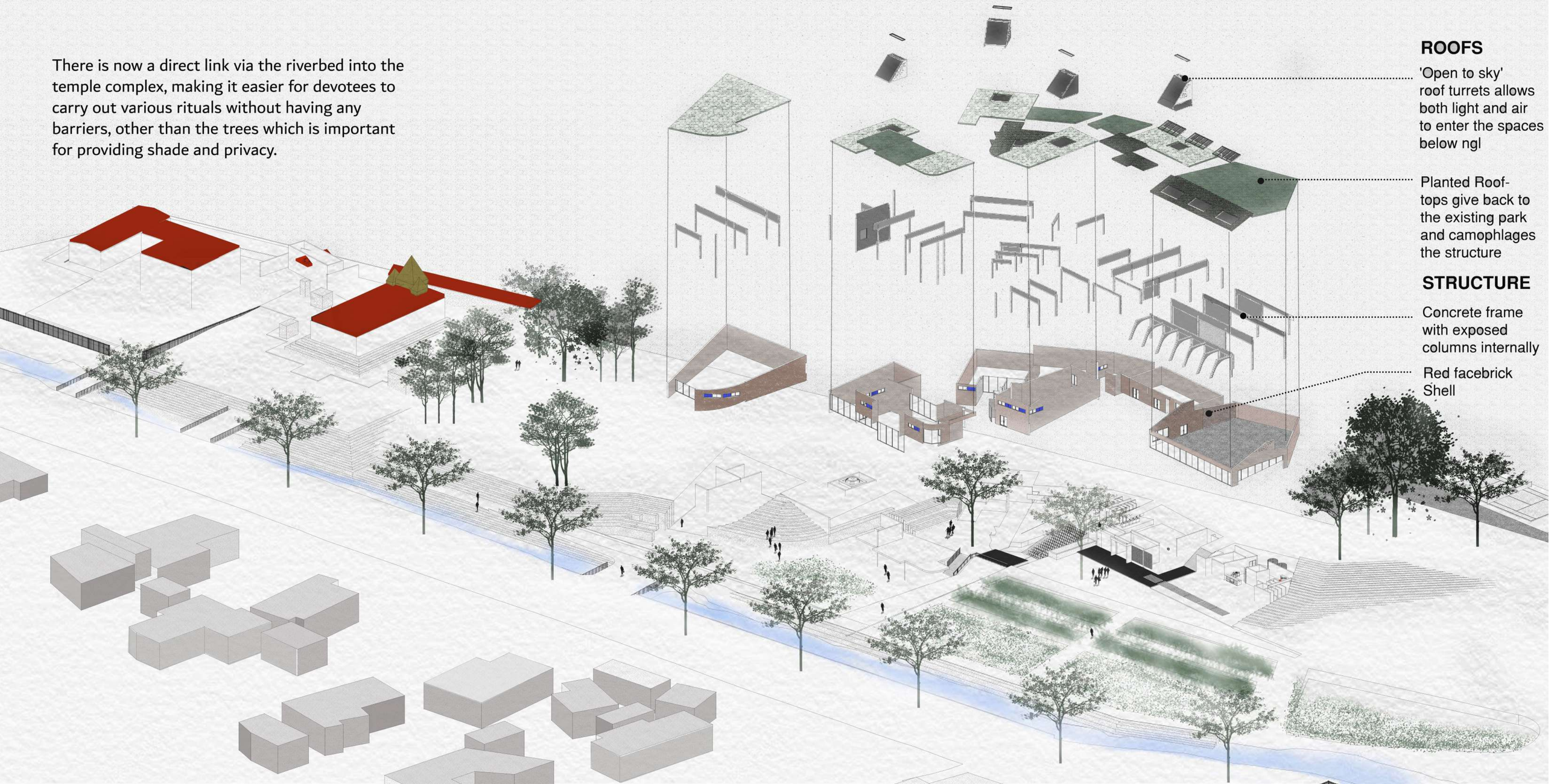
NORTH ELEVATION



WEST ELEVATION



There is now a direct link via the riverbed into the temple complex, making it easier for devotees to carry out various rituals without having any barriers, other than the trees which is important for providing shade and privacy.



ROOFS

'Open to sky' roof turrets allows both light and air to enter the spaces below ngl

Planted Roof-tops give back to the existing park and camophlages the structure

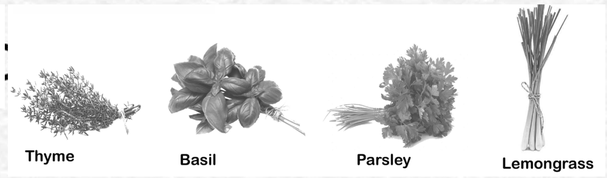
STRUCTURE

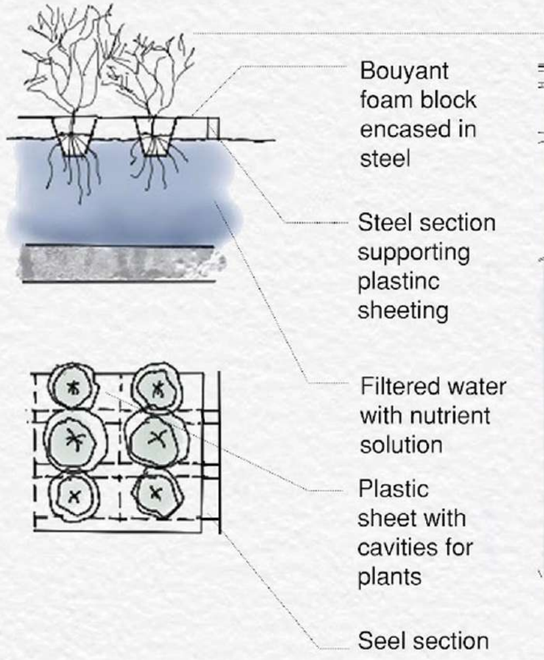
Concrete frame with exposed columns internally

Red facebrick Shell

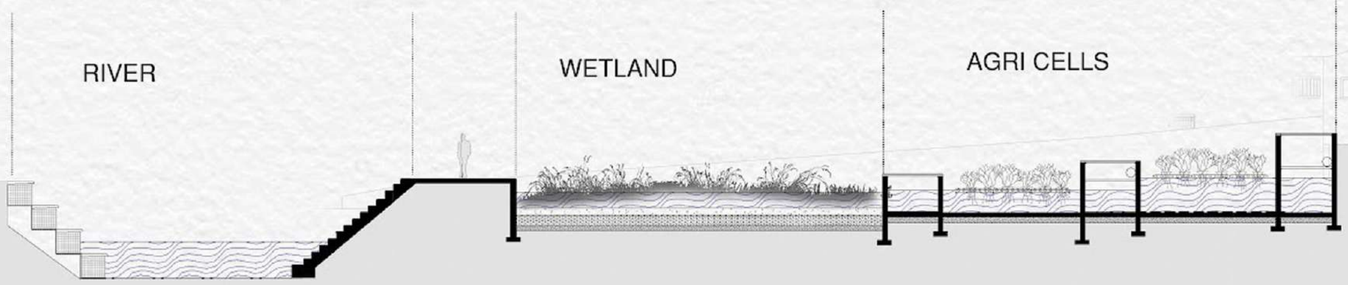
CULINARY GARDEN + WETLAND

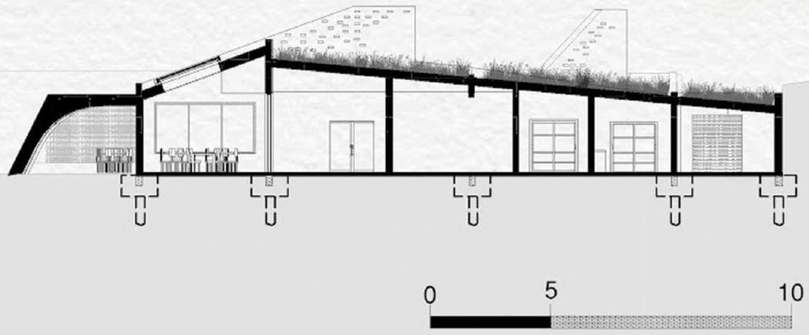
- 'Balance of bodily systems' (Ayurveda)
- Reference to the earlier Portugese Market Gardens









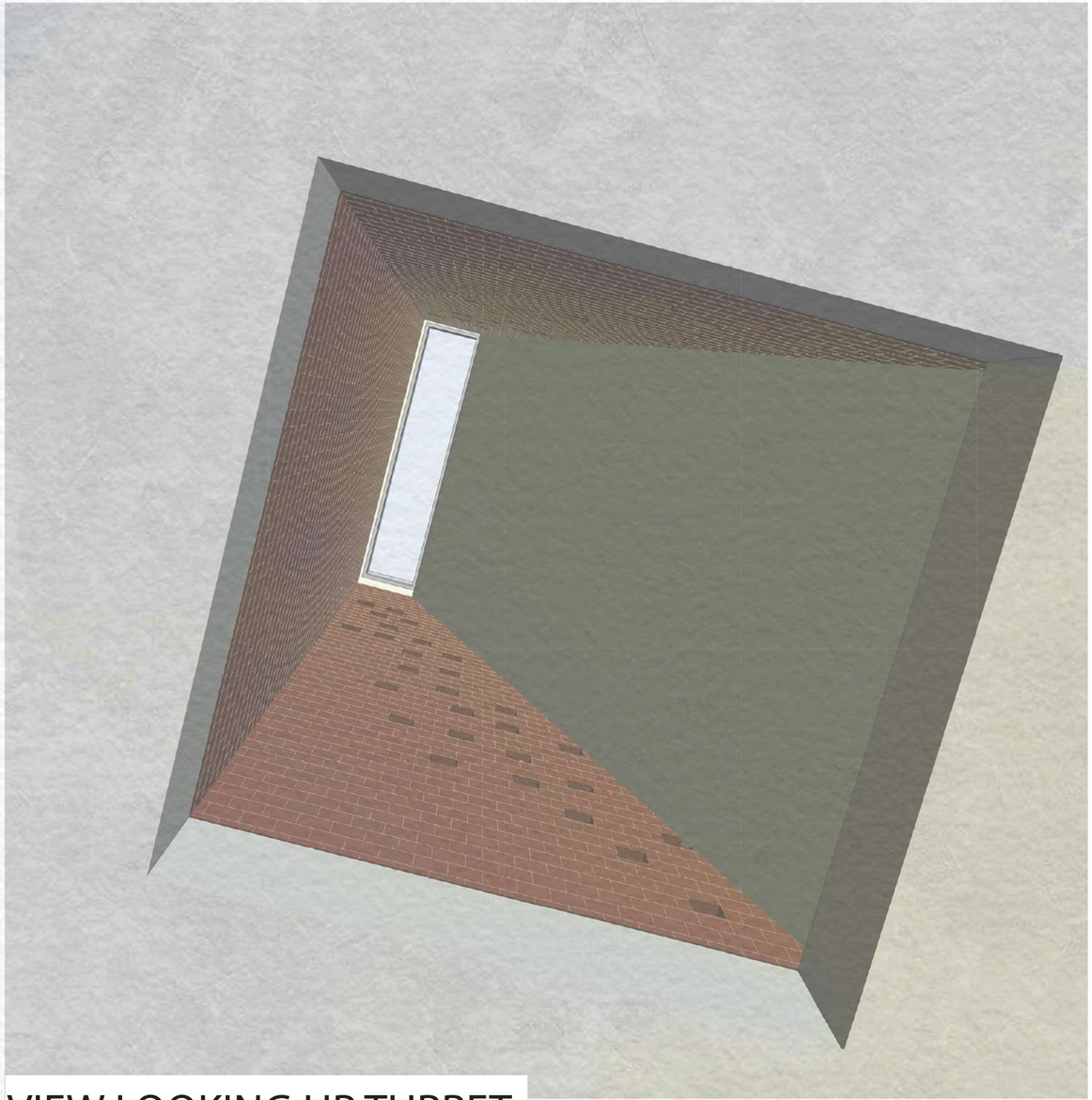




SOUTH ELEVATION



ENTRANCE TO RESTAURANT



VIEW LOOKING UP TURRET



VIEW INSIDE YOGA STUDIO



VIEW FROM PLANTED ROOF-TOP

11
CONCLUSION

In this chapter, a personal reflection is documented by highlighting various shortcomings and achievements, as translated by the author, following the final oral examination. The research that came before, captures the historic role that religion and beliefs have played as practices of defiance and resistance during South Africa's colonial and Apartheid history. The final design proposal is clearly understood as the conclusion of the research, opening up for further interpretation .

The loss of my father from Covid-19 in June really tore my world apart, and it made me realize that life as we know it is very unpredictable. As I look back and reflect on the year, I feel grateful and inspired more than ever. The constant deadlines that were set out saved me from sinking into a deep depression on numerous occasions. I decided to take my father's advice and "Carpe the Diem out of life", which translated into the idea that I should finish my thesis despite the hardships faced, as our time on earth is of the essence.

This research report started from a personal position, locating myself in terms of my geographic background. Undertaking this particular topic took me on an incredible journey, from learning about my forbears and their heritage to Johannesburg's racially abject spatial conditions. The final design proposal embodies the project's title, or rather, how post-apartheid spaces need further development to accommodate and include a multitude of demographics and user types.

I do believe that the project would have benefitted from additional time due to my tentative creative processes. However, the design leaves a lot open for interpretation, and I look forward to pursuing similar urban projects in future with the hopes of unveiling more layers of history and culture.

12
VIABILITY REPORT

1 Introduction

THE PROJECT

The City of Johannesburg requires the creation of a cultural precinct for public gathering, that incorporates into it a scheme for enhancing spirituality amongst the general public. Over the past decade, researchers across a wide range of disciplines have started to recognize the positive contribution that spirituality can have on one's mental health. Particularly during this time of global unrest due to the Covid-19 pandemic, mental health should be brought to the forefront.
The facility should be sited in Abbotsford, Johannesburg, but its proposal should form more of a strategy, directed at the development of new spiritual spaces within cities that are progressive in terms of its integration of members of the community in which it is placed. The conversations that the strategy should initiate are:
1.The successful sharing of spaces within the city in order to have a more integrated public realm which pertains to more progressive inner-city developments, and
2. A development that is sustainable in both social and environmental aspects. This can be measured in terms of its social impact (creation of "place", community gatherings and discussions) and its environmental impact (efficient use of resources, labour and materials).

CLIENT BRIEF

The Melrose Temple has a deep-rooted history in terms of the indentured labourers who originally built it, therefore, the promotion and preservation of its heritage along with the cultural and spiritual values should be of utmost importance. The precinct should serve as a "homage" to those Indentured labourers who laid the foundation for the perpetuation of the Tamil Religion and culture in South Africa. Accordingly, this development should "enrich both the lives of their occupants and of the city of which they are a part, thus ensuring that their cultural and architectural patrimony is preserved for generations to come"(Seco,2021).
The precinct's main architectural requirement is the construction of a series of buildings forming the main priority of services to be completed by the architect. These facilities include:

-Auditoriums 2x for teaching and presenting
-Ritual Spaces for practicing traditional methods
-Meditation rooms for teaching and practicing spirituality and mental stability

-Offices 2x Single Storey Buildings (Precinct Management)
-Performance Spaces for cultural and traditional events
-Soup Kitchen for outreach programs and events catering
-Dining Hall for events such as weddings and annual religious festivals
-Studio Space for learning and teaching both dance and music

The provision general building services should be made within these categories such as circulation and electrical. What follows is an analysis of the project through client, site, financial considerations,
and implementation.

2 Client

Since the project interest is sparked by the need to protect and preserve the historical narrative of the Melrose Temple site in the northern suburbs of Johannesburg, the client body for this project will consist of both governmental and non-governmental entities, which will include representatives from each of the following funders:

1.The major client for the project is the
Department of Arts and Culture (DAC)
This department forms an integral part of the City of Johannesburg (COJ). The DSAC aims to promote "a diverse and socially cohesive society with a common national identity" (South African Government,2021) specifically for those living in Johannesburg. The department has a mission to develop, preserve, protect and promote arts, culture and heritage. The DAC therefore has a particular interest in the development of this project that seeks to integrate a previously marginalised community both socially and culturally through the provision of music, dance and other facilities which would further promotes the cultural heritage of the site. As part of its key measurable objectives, the department also aims to implement heritage policies to ensure that the transformation of the heritage landscape increases nation-building and social cohesion.
In this regard, the department will continue to foreground national symbols that contribute to a sense of unity among South Africans. Promoting and preserving heritage infrastructure.

2. The South African Tamil Federation

Represents the Tamil community in all aspects such as culture, religion, education both Tamil and English. This body will have an interest in this development as it consists of concerned social workers and intellectuals with the same interest to protect the well-being of the Tamil people and their culture in South Africa in support of and in recognition with national goals.

3. South African Federation for Mental Health
(SAFMH)

The SA Federation for Mental Health is a registered, non-governmental NGO, with the main aim to promote good mental health and wellbeing amongst the South African public. Since it has been proven that spiritual activities have a great positive influence on one's mental and physical health, this organization becomes another interested party particularly because their main aim is 'to be a dynamic movement, which serves as an effective resource to empower people to attain optimal mental well-being and quality of life in a just society' (SAFMH,2021). The development of this spiritual respite is incredibly Important, especially during these times of social isolation.

3.The South African Hindu Maha Sabha (SAHMS)
The South African Hindu Maha Sabha promotes Hindu Dharma (behaviour and social order) through observing the best principles of Hindu religion, ethics, values, philosophy and culture. Since the project relies on the enhancement of Hindu cultural and religious values brought by the Indentured labourers over 150 years ago from India, this body will be interested in this development as their mission statement similarly involves working towards the development of all members of the Hindu faith, 'in a spirit of respect, unity and brotherhood'.
4.The National Arts council (NAC)

This body facilitates the ability for people to practice and appreciate the arts and will also form part of the projects additional funding, together with implementing agents such as State-Funded Institutions, Non-Governmental Organisations (NGOs), Community-Based Organisations (CBOs) and Faith-Based Organisations (FBOs). One of the organisations main objective is "to foster the expression of a national identity and consciousness by means of the arts", which will be further enhanced by this cultural development within the marginalised city of Johannesburg. Essentially, the development aims to bring people together.

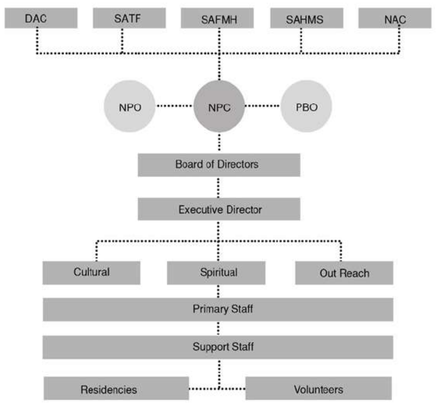


Figure 12.1 (Right)
Breakdown of interested parties
(Author, 2021)

3 Site

LOCATION

The project is located next to the existing Melrose Temple grounds and sits at the end of 3rd Avenue in Abbotsford, Johannesburg. The site acts as a buffer strip between two residential communities and has a direct link to the Melrose Arch Precint. It measures approximately 250m in length and 65m in width, with the Sandspruit river flowing through it.



SITE INFORMATION:

Locality: Abbotsford, Johannesburg
ERF: 24/25
Area: 16250 sq.m
Street: 3rd Street

Restrictions: 10m flood line along Sandspruit River course

Town Planning
Zoning: Public Open Space
FAR: 1.5
Coverage: From SG Diagram (50%)
Height Restriction: 2 Storeys
Parking Requirements: 5/100m2

Municipality: City of Johannesburg Metropolitan Municipality
The site was selected mainly due to socially sustainable objectives concerned with the formally marginalised Indian community. In terms of urban town planning, the socially engineered spaces of apartheid still exists throughout Johannesburg and needs to be urgently addressed in the built environment. Therefore, the river which currently splits the land in half will be used as a connecting spine and appropriated as a point of access onto the site.

Figure 12.2 (Above)
Site Context (Author, 2021 After Google Earth 2021)

The projects siting is the council-owned land adjacent to the Melrose Temple, incorporating the Johannesburg Property Company's mandate of managing and developing "the city's property assets for the purpose of maximising both social and commercial opportunities." (JPC, n.d.) Furthermore, the development of the surrounding land lends itself to the incentives of the project that form part of the sustainable and progressive development of the city.

RESTRICTIONS

Due to the site being located on the Sandspruit riverbank, this warrants the expertise of a competent person to mitigate all the future risks involved. The 10m flood line means that the building construction will have limitations especially in terms of the high clay content found in the underground soil. This restriction affects both environmental and financial aspects due to the intensive geotechnical and structural design needed for the building.

URBAN

The project should primarily be a consideration of the urban fabric of Melrose. Essentially, the precincts programmatic requirements should not limit its reach, in terms of shared spaces in the public realm. Therefore, it should rather present a sense of safety, security as well as accessibility particularly through the uniformity of spatial language and pedestrian movement both within and through the temple grounds.

ARCHITECTURE

The architecture of the proposal should essentially be derived from the processes that are fundamental to religious spaces in contemporary south Africa. It should contribute to the urban essence of the project as a revitalised landmark that functions as a spiritual skills development facility. Its materials should echo those of its context, while remaining appropriate to the building's functions.

4 Financial Consideration

COSTS

Construction Costs: an estimate of the building cost was produced based on the most recent Property and Construction Cost Guideline supplied by Aecom. Sub-Appendix A tabulates the results and predicts the construction cost to be R37 739 550,00 including VAT.
Professional Fees: Since the architect is appointed conventionally and for full services, the architect's fees were calculated as project based, as shown:
Fees = Primary + Secondary Fees
Fees = 1359237,34 + (37739550-13000001) x 9,09%
Fees = R 3 608 062,34

Other consultants fees were roughly estimated using a document from the Construction Industry Development oard, as shown in Sub-Appendix B.
Sub-Appendix C shows the total projected cost of the project.

FUNDING

Funding will happen in two parts. Part one will be the construction of the development and part 2 will be operation and maintenance.
Funding for the project depends on the municipal stakeholders involved such as the JCP as well as from external donors. A large section of the client body is not for profit and is made up of smaller community-based organisations. An allocation will be made to the Department of Arts and Culture in order to construct a new building that uplifts a previously disadvantaged community. The project will most likely be funded by:

1.Johannesburg City Parks (JCP)
One of the key objectives is that the JCP aims to develop and maintain all city parks and open spaces while reviewing initiatives to enhance safety. These form part of the scheme so that these vacant spaces within the city can become frequented as a shared public space.

2. National Lotteries Commission (NLC)
The NLC supplies funding to a maximum of R10 000 000,00 under The Arts, Culture and National Heritage Distributing Agency. The fund prioritises projects that engage with local communities and is intended to promote heritage preservation and sustainable development as well as nation building.

3. The Department of Arts and Culture has set up
The Arts and Culture trust focusing on areas of development including job creation, creative skills, cultural tourism marketing as well as cultural diversity.
It was recently announced that the DAC will consider proposals of new developments that need financial support, specifically for heritage and cultural projects. Through the National treasury budget, funding is greatly supported due to the importance of the arts and culture in society.

4. Corporate
The residue of the project will depend on corporate donations from several companies however, PBO registered client bodies are more likely to donate as the funds are tax deductible.

Income
The monthly and annual income of the scheme is broken down as shown in Sub-Appendix E. The precinct mostly generates income from renting out its studio spaces and venues. Similar to the cost of hiring out other venues nearby, a figure was estimated relative to the capacity of the venue.

Expenses
Monthly expenses for each constituent were generated, such as services, marketing, maintenance etc. as shown in Sub- Appendix F

Viability
Based on the comparison between income and expense, the projected project viability suggests that a positive balance remains to the approximate value of R3 554 400 per annum. This remaining amount could be used towards various outreach programmes that are offered by the precinct.

SUB APPENDIX A: Construction Costs

	Programme	Size (R/m2)	Cost (R/m2)	Net Total	VAT	Gross Total	Percentage
	Performance	500	R5 000	R2 500 000			
	Workshops	200	R8 000	R1 600 000			
	Administration	50	R8 000	R400 000			
	Meeting Space	60	R8 500	R510 000			
Cultural	**Total**	810		R5 010 000	R751 500	R5 761 500	15,26%
	Landscape	10000	R500	R5 000 000			
	Parking	6500	R600	R3 900 000			
Public Space	**Total**	16500		R8 900 000	R1 335 000	R10 235 000	27,12%
	Meditation	250	R7 300	R1 825 000			
	Ritual Spaces	650	R15 600	R10 140 000			
	Studios	400	R14 600	R5 840 000			
Spiritual	**Total**	1850		R17 805 000	R2 670 750	R20 475 750	54,25%
	Administration	100	R8 000	R800 000			
	Auditorium	400	R25 000	R10 000			
	Cold Storage	20	R14 600	R292 000			
Outreach	**Total**	520		R1 102 000	R165 300	R1 267 300	3,35%
Total						R37 739 550	100%

SUB APPENDIX B: Professional Fees

Consultant	Percentage	Amount
Architect	as calculated	R3 608 062,34
Quantity Surveryor	8%	R3 019 164
Engineers (All)	19%	R7 170 514,50
Net Total		R13 797 740,84
VAT	15%	R2 069 661,13
Gross Total		R15 867 401,97

SUB APPENDIX C: Total Development Cost

	Cost
Construction	R37 739 550
Professional Fees	R15 867 401,97
Total	R53 606 951,97

SUB APPENDIX D: Income

	Item	Price per Unit	Qty/month	Total
Cultural	Tickets	R100	800	R80 000
	Venue Hire	R8 000	3	R24 000
	Workshops	R5 000	8	R40 000
	Total			R144 000
Spiritual	Studios	R150	300	R45 000
	Classes	R350	120	R42 000
	Total			R87 000
Outreach	Venue Hire	R30 000	6	R180 000
	Total			R180 000
Total per month				R411 000
Total per annum				R4 932 000

SUB APPENDIX E: Expenses

	Expenses	Amount
Cultural	Services	R8 500
	Marketing	R3 000
	Supplies	R3 000
	Maintenance	R4 000
	Total	R18 500
Spiritual	Services	R15 000
	Maintenance	R6 000
	Supplies	R10 000
	Total	R31 000
Outreach	Services	R15 000
	Subscriptions	R20 000
	Marketing	R5 000
	Supplies	R5 000
	Maintenance	R3 500
	Total	R48 500
Public Space	Maintenance	R4 200
	Services	R7 600
	Salaries	R20 000
	Supplies	R3 000
	Total	R16 800
Total per month		R114 800
Total per annum		R1 377 600

5 Implementation

The project team consists of the client, design team and the construction team. The construction team consists of the main contractor and subcontractors to be appointed for the construction stage of the building.

PROFESSIONAL TEAM

The appointed project manager will govern the professional and construction teams. Should the design bleed into the adjacent council owned land, then rezoning and updating of surveyor general (SG) diagrams will be handled by the planning team. It is most likely that the 'Public Open Space' will need to be rezoned as 'Special', in this case. It is also crucial to appoint a geotechnical engineer during the early stages of this project so that a soils report can be conducted, and the team can then be advised regarding its implications on design.
The design team will be led by the architect, who will be appointed for partial services in this case (as professional architect and principal consultant). Due to the nature of this project and considering the short timeline until practical completion, a single architect will be involved across all stages of the project.

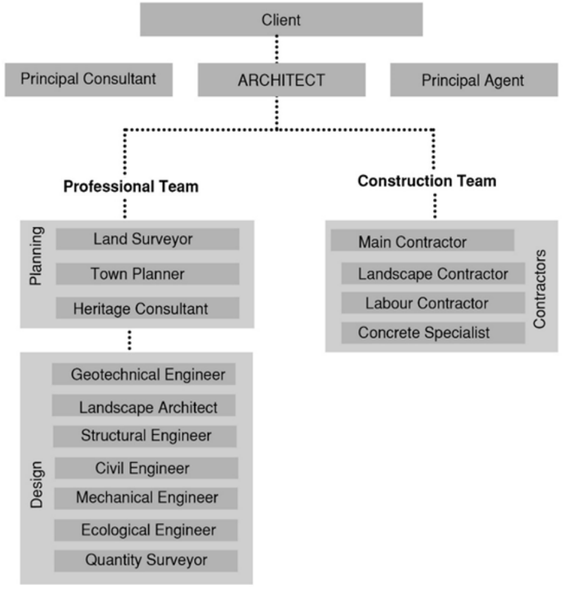


Figure 12.3 (Left)
Diagram showing the Project Team
(Author, 2021)

CONTRACTING TEAM

The contracting will be managed by the Johannesburg Property Company and will most probably take the form of an open tender, allowing members of the public to freely apply.

In terms of specialist input, the facility will require that of a concrete specialist from the initial design stages of the project throughout. This specialist will be contracted as a consultant and will be appointed by the client. Along with other consultants, the specialist will be managed as the Professional Team under the project manager of the Johannesburg Property Company, for and on behalf of the client.

6 Sustainability Considerations

TECHNOLOGY

The geology of the site largely requires the close integration with the landscape as there is a sudden drop in elevation of the land leading into the river. This involves extensive excavation into the natural ground level which means that retaining structures as well as extensive geotechnical and structural design will be needed. Due to the technologies needed to transform the site, a significant financial as well as environmental implication will occur.

SOCIAL IMPACT

Social sustainability is the most important factor in terms of the project's main objectives, considering the sites unfortunate history of marginalisation and oppression. The main goals would be to deliver powerful messages to the community through dance and music performances and to reduce the likelihood of crime or recidivism among youth through spiritual development.

ECONOMIC

The scheme aims to employ local labourers in order to support smaller businesses within the South African economy. Since the precinct is able to easily self-sustain without the need for monetary funding, it further facilities the local economies by providing infrastructure for dance productions etc. Therefore, this project seeks to become a starting point for upcoming talent and further encourages the development of arts, culture as well as spirituality within the surrounding communities. This is even more important in areas where people are met with serious mental health issues. Additionally, the scheme provides direct employment for teachers, trainers and artists, across a wide range of abilities and interests.

ENVIRONMENTAL

The project integrates a substantial landscaping component which reimagines an underdeveloped open space in the city into a better functioning green space with increased public accessibility. In relation to climate, the buildings will be designed and positioned using passive ventilation and solar theories. The materiality of the design includes concrete and masonry which are easy to maintain as well as recycle. Additionally, the provision for rainwater harvesting will also be part of the building design in order to suit the various future needs of the precinct.

Unfortunately, over the course of the construction period, river pollution may occur due to the scale of the project in relation to the site.

7 Conclusion

In conclusion, the project aims to be built over 2 phases so that monetary spending can be managed throughout the process. The end goal is to create a space that is spatially effective, ecologically beneficial and financially viable.

This business plan provides an overview of the processes involved in the implementation and funding of the project. The vision for this project is that it will become a model for all underutilised spaces within the city and provide both sustainable and inner-city development.

13
LIST OF FIGURES

Page three figure: Diagram representing research pathways (Author, 2021)

CHAPTER 1: ABSTRACT

1.1 Historic photograph taken of the Melrose Hindu Temple in Abbotsford, Johannesburg (The Star Newspaper, n.d)

CHAPTER 2

No Figures

CHAPTER 3: INTRODUCTION

3.1 Illustration of the Melrose Temple- A perspective view and development of thesis title (Author,2021)

3.2 Residential developments in the northern suburbs of Johannesburg with high raised walls and barriers to seek refuge from crime (Jenkin, 2019)

3.3 Tirumala Venkateswara Temple, located in Tirupati, India (Pngitem, 2019)

3.4 Evolution of the historic Melrose Temple representing time and process in urban space.
-Original Temple (Newspaper article unknown,1983)
-Patio Installed (The Star Newspaper,1984)
-Face brick piers and walling with expansion (Unknown,n.d)

3.5 Highlighted site in context
(Author, 2021, After Google Earth, 2020

3.6 The Sandspruit runs northwards from three small streams through its northernmost suburbs. (Author ,2021, After Google Earth, 2015)

3.7 The Ganges River is an integral part of Indian spirituality and provides space for various traditional rituals and cleansing ceremonies (Unknown, n.d.)

CHAPTER 4: THE INDIAN COMMUNITY

4.1 Photograph of my grandparents getting married in a predominantly "white neighborhood" at Melrose Temple, despite the rules of the Group Areas Act (Unknown, 1966)

4.2 Early Indian immigrants to Natal holding up tin tickets, similar to that of slavery (Unknown, n.d)

4.3 Indentured Indians working on a sugar cane field in Natal, under British colonial rule (SAHO, 2020)

4.4 Principal Washing Sites on the Witwatersrand 1890-1906 (Davie,2017 After New Babylon, New Nineveh: Everyday Life on the Witwatersrand, 1886-1914)

4.5 Map highlighting the space where the Indian labourers used to reside against the current conditions in the temples compound
(Author, 2021, After Google Earth, 2015).

4.6 My Great Grandmother at the Melrose Temple (Unknown, n.d).

4.7 Indentured recruitment districts (Author,2021)

4.8 Indian hawkers in Johannesburg (Kallaway, 1986)

4.9 The Coolie Location (Morris.1980)

4.10 The Melrose Temple History (Johannesburg Heritage Foundation,1983)

4.11 My Grandmother Soobamah Pillay in Fietas (Unknown, 1950)

4.12 Racial Segregation in South Africa (50minutes.com, 2021)

4.13 Kavady Procession at Melrose (Gems,1955)

4.14 My Grandparents wedding at the Melrose Temple (Unknown, 1966)

4.15 Election Day, 1994 (Berry, 1994)

4.16 Melrose Temple Renovation (Padayachee,1996)

4.17 Present Day (Author,2021)

4.18 Tiny temple may become National Monument (Sunday Times, 1982)

4.19 Hindu Haven (Newspaper article, 1986)

4.20 Demolition awaits Hindu shrine (Sunday Times, 1994)

4.21 Woman wearing colorful saris and listening to the dedication (Rykliff, 1996)

4.22 A sign during Apartheid showing the severely poor conditions under which non-Europeans in South African were subjected to (Kampjef, 2014 Courtesy: Radio Freethinker)

4.23 Model Apartheid City (du Plessis and Landman, 2002)

4.24 Racial distribution in Gauteng in 2014 illustrates the legacy of the Group areas act (Author, 2021 after Harrison et al, 2014)

4.25 New perceptions of the "northern suburbs" of Johannesburg (Author, 2021, After Stokes, 2018)

4.26 Mayfair, Fordsburg, and surrounds (Thompson, 2015)

4.27 Diagram on Indian Identity from initial research (Author, 2021)

4.28 Dancer and family member, Shivanie Naidoo, having her photograph taken on the banks of the Sandspruit river at Melrose Temple (Unknown, 2016)

4.29 The Tabla, a membranophone percussion instrument (Thopate, 2016)

4.30 My family, coming together in prayer on the banks of the Sandspruit river at Melrose Temple, during the Apartheid era. They are photographed wearing traditional saris while taking part in a religious ceremony (Unknown, n.d)

4.31 Isikhumbuto, The Garden of Remembrance at Freedom Park (MMA Design Studio, 2018)

4.32 Multi-functional spaces with openings in walls for light to enter (A. Young, 2006)

4.33 Sketch diagrams of the earlier Melrose temple structure after slight alter ations from original wood and iron to face brick. The sketch below the Melrose temple plan and elevation is shown in comparison (Author, 2021)

4.34 A breakdown of the spaces governing an earlier structure of the Melrose Hindu Temple (Author,2021 After The Star Newspaper,1984)

4.35 The Architecture and Sculpture of the Hindu Temple (Author, 2021 After GTA-Lecture 8: Religions and Churches in Gauteng, 2003)

4.36 A "Vastupurushamandala" one of many types formed from the fundamental shape of a square (Hindupedia, n.d)

4.37 Complex temple forms with their basic unit remaining the square (Nangia, 2001)

4.38 Typical Temple Complex (Harshananda, n.d)

4.39 Recent photograph of the Melrose Temple (Author,2021)

4.40 Image representing the emerging post-apartheid society in which both Indian woman and Zulu men dance together, pooling together arts and cultures (Wilson, 2003)

4.41 My Grandparents wedding at the Melrose Temple (Unknown, 1966)

CHAPTER 5: WATER AND SHARED URBAN SPACES

5.1 Water fountain at the Zoolake in Johannesburg attracting city folk (Author, 2021)

5.2 Geological profile of Johannesburg highlighting the northern suburbs Oggmus, undated)

5.3 A more recent map showing the proximity of the Melrose Temple to what used to be the Portuguese Market Gardens (Author, 2021 After Google Earth, 2007)

5.4 Ariel map from the 1950s showing the contour lines of cultivated land (Jones, n.d.)

5.5 Wendy Bodman's map of greater northern Johannesburg's water systems (Bodman, 1981).

5.6 Plan of the Witwatersrand showing the layout of farms in 1886. overlaid on an aerial photograph of the greater city area (Author, 2021 After Stokes, 2018)

5.7 The Sandspruit River between Athol Gardens and Strathavon (Bodman,1981)

5.8 Children playing on the Braamfontein Spruit (Bodman,1989)

5.9 Flooding of the Sandspruit River (Renaud, 2016)

5.8 Shanghai Huton Park, (Turenscape Architects, 2009)

5.9 Shanghai Huton Park, (Turenscape Architects, 2009)

5.10 Layout of a constructed wetland (Author, 2021 After PUB, 2009)

5.11 A sub-surface flow system (Author, 2021. After PUB, 2009)

5.12 The bio- retention system (Author, 2021. After PUB, 2009)

5.12 The bio- retention system (Author, 2021. After PUB, 2009)

5.13 Map showing location of famous monuments and bridges (Author, 2021)

5.14 The Cynda Bridge (NORA, n.d.)

5.15 The Katyn Memorial (NORA, n.d.)

5.23 Scott-Atholl Bridge at the Melrose Temple site showing Sandspruit river pollution (Author,2021)

5.24 Waste Pickers polluting the banks of the spruits (BusinessLive, 2016)

5.25 Green assets in Johannesburg which are currently managed by the city (Author, 2021 After JCP, unknown)

5.26 Ganga is also personified as a goddess and worshipped as Goddess Ganga (Author,2021)

5.27 The ZCC Performing their rituals on the banks of the Sandspruit river tributary, next to the Melrose Temple (D.Diar, 2021)

5.28 Remnants such as candle wax are often left on some rocks in the Sand spruit river leaving behind 'traces' of ritual ceremonies as shown in the image below (Author,2021)

5.29 to 5.31 Diagrams illustrating the various rituals that take place on riverbanks (Author,2021)

5.32 The Sandspruit river now clogged with rubbish used to supply the water for the flourishing Melrose Steam laundry (Sunday Times,1983)

CHAPTER 6: THE PROJECT

6.1 Photograph of my dad and I on site (V. Diar, 2021)

6.2 Photo series of Ritual stage 1 (Dinesh Diar, 2021)

6.3 The Peepal Tree- Hindus also pray to the water bodies, trees animals and nature at large (Dinesh Diar, 2021)

6.4 Photo series of the ritual stage 2 (Dinesh Diar, 2021)

6.5 Photo series of the ritual - Stage 3 (Dinesh Diar, 2021)

6.6 The Guru helping me perform the ritual (Dinesh Diar, 2021)

6.7 Some devotees experience a "state of trance" and pierce their backs with out bleeding, which is an expression of their utmost devotion and faith (Wilson, 2018)

6.8 Photo series documenting the popular Kavady procession at Melrose Temple -from left to right (two summers, 2017) (Wilson, 2019) (The Johan nesburg Melrose Shree Siva Subramaniar Temple, 2016)

6.9 Painting of Lord Muruga by artist Vijayann Rajasabai (Rajasabai, 2020)

6.10 Graph comparing the distribution of Hindu observance in South Africa (Author, 2021)

6.11 Movement of cars and people in and around the Melrose Temple through out the year (Author, 2021)

6.12 Larger Context Location of Site (Author, 2021)

6.13 Locality plan to illustrate Abbotsford's location in relation to other Johan nesburg suburbs (Author, 2021)

6.14 Aerial photograph of Abbotsford in surrounding context. The distance land marks are included (Author, 2021, After City of Johannesburg, 2021)

6.15 to 6.18 Historic aerial photographs showing the development of Abbotsford and surrounds from 1937 to the 2000's (NGI Geospatial Portal, 2021)

6.19 Watercolor paintings of site (Author, 2021)

6.20 Base map of site (Author, 2021)

6.21 Quick sketch of site (Author, 2021)

6.22 Kitchen Courtyard (Author, 2021)

6.23 Admin Block/ Priests residence (Author, 2021)

6.24 Courtyard with view of temple (Author, 2021)

6.25 Historic Bridge (Author, 2021)

6.27 Ablutions (Author, 2021)

6.28 Open Field only used during Kavady (Author, 2021)

6.28 to 6.30 Photographs of waste found in and around the riverbanks (Author, 2021)

6.31 Diagram illustrating the current boundaries and edges on site (Author, 2021)

6.32 Sections indicating the harsh edges and boundaries on site (Author, 2021)

6.33 Image of site showing the river to the left and the Katlyn Monument to the right with the temple in-between (Author, 2021)

6.34 Site photo study (Author, 2021)

6.35 Site photo study (Author, 2021)

CHAPTER 7: GENERATION OF DESIGN PRINCIPLES

7.1 Cloth tied on a banana leaf- Traces of ritual (Author, 2021)

7.2 Charrette experiment using element of fire (Author, 2021)

7.3 Photographs of the fabric cloth for charrette experiment (Author, 2021)

7.4 and 7.5 Conceptual collage of charrette model on site (Author, 2021)

7.6 The resultant charrette experiment exposed to the five elements of fire, water, earth, air and space (Author, 2021)

7.7 Interpretations of the charrette through drawing (Author, 2021)

7.8 Abstract Architectural elements defining space (Author, 2021 After Prajapati, n.d.)

7.9 Bharatanatyam Dance Postures defining 3-D Space (Author, 2021 After Prajapati, n.d.)

7.10 Aramandi Position (Author, 2021 After Wong, 2019)

CHAPTER 8: CASE STUDIES

8.1 Illustration of Charles Correa's Bharat Bhavan, successfully integrating both traditional and contemporary (Author, 2021 After Charles Correa)

8.2 Collage showing an overlapping of modern and traditional buildings (Author, 2021 After, Rethinking the Future, 2019)

8.3 Courtyard Space (Sumner,2020)

8.4 Courtyard Spaces (Author, 2021)

8.5 Central courtyard linking six building masses (Author,2021)

8.6 Views (Author,2021)

8.7 Bringing the outside in (Author,2021)

8.8 Entrance (Godel,2020)

8.9 Courtyard Space (Author,2021)

8.10 Building Axonometric (Charles Correa and Associates)

8.11 City of Jaipur plans in contrast to the Kendra Centre (Author, 2021 After Charles Correa)

8.12 Elevation showing links to each planet (Author,2021 After Charles Correa)

8.13 River Edge (Morphogenesis ,2017)

8.14 Gathering spaces (Morphogenesis ,2017)

8.15 Easy access to river water (Author,2021)

8.16 Existing unstable Ghat edge due to flooding (Author,2021)

8.17 Ritualistic cycle (Author,2021)

8.18 The Sedhiou Cultural Precinct in context (Letch ,2019)

8.19 Site Plan (Author,2021 Derived from Abdel, 2019)

8.20 Top Elevation (Author,2021 After Abdel, 2019)

8.21 Above Context (Author,2021 After Abdel, 2019)

8.22 Left Indigenous planted concrete roof (Author, 2021 After Abdel, 2019)

8.23 Isikhumbuto, The Garden of Remembrance (Makhene,2019)

8.24 Amphitheatre (Author,2021)

8.25 Site Plan (Author,2021)

8.26 Elevation showing relationship with the landscape (Author,2021)

8.27 Axonometric and Section of building (Author, 2021)

8.28 Copper cladding (Bird, 2011)

8.29 Axonometric diagram (Author, 2021 After Bird, 2011)

8.30 Site Plan (Author, 2021 After Bird, 2011)

8.31 Section (Author, 2021 After Bird, 2011)

8.32 Elevation (Author, 2021 After Bird, 2011)

8.33 Perspective view (Wang Weijen ,2011)

8.34 Interwoven Spaces in Plan (Author,2021 After Weijen, 2011)

8.35 Site Plan (Weijen, 2011)

8.36 Various framed views (Author, 2021 After Weijen, 2011)

CHAPTER 9: DESIGN DEVELOPMENT

9.1 Process Sketches (Author, 2021)

9.2 Explorative process sketches (Author, 2021)

9.3 Early sketch setting out program (Author, 2021)

9.4 Rough model of site with massing (Author,2021)

9.5 Concepts (Author,2021)

9.6 Quick explorations in plan (Author, 2021)

9.7 Rough sketch illustrating the constructed wetland system (Author,2021 After Stokes, 2018)

9.8 Diagram showing the flow of stormwater (Author, 2021 After Stokes, 2018)

9.9 Light model experiments with projected shadows (Author, 2021)

9.10 Greenery Curtain House (Nguyen, 2021)

9.11 Rough sketch showing a conceptual elevation of building - not to scale (Author, 2021)

9.12 Rough sketch of Large skylight- not to scale (Author, 2021)

9.12 Rough sketch of Slanted brick wall and planted rooftop- not to scale (Author, 2021)

9.12 Rough sketch of newly proposed edge condition detail- not to scale (Author, 2021)

9.13 Quick explorations in plan (Author,2021)

9.14 Diagram showing the flow of stormwater (Author, 2021 After Stokes, 2018

9.15 Rough sketch illustrating the constructed wetland system (Author,2021 After Stokes, 2018)

9.16 Materiality of building structure (Author, 2021)

9.17 Greenery Curtain House (Nguyen, 2021)

9.18 Sketches exploring the different connections between various building comp nents (Author, 2021).

9.19 Rough sketch showing a conceptual elevation of building - not to scale (Author, 2021)

9.20 Rough sketch of Large skylight- not to scale (Author, 2021)

9.21 Rough sketch of Slanted brick wall idea with planted rooftop- not to scale (Author, 2021)

9.22 Rough sketch of newly proposed edge condition detail- not to scale (Author, 2021)

9.23 Light model experiments with projected shadows (Author, 2021)

CHAPTER 10

10.1 Perspective view of proposed building (Author, 2021)

CHAPTER 11: CONCLUSION

No figures

CHAPTER 12: VIABILITY

12.1 Breakdown of interested parties (Author, 2021)

12.2 Site Context (Author, 2021 After Google Earth 2021)

12.3 Diagram showing the Project Team (Author, 2021)

14
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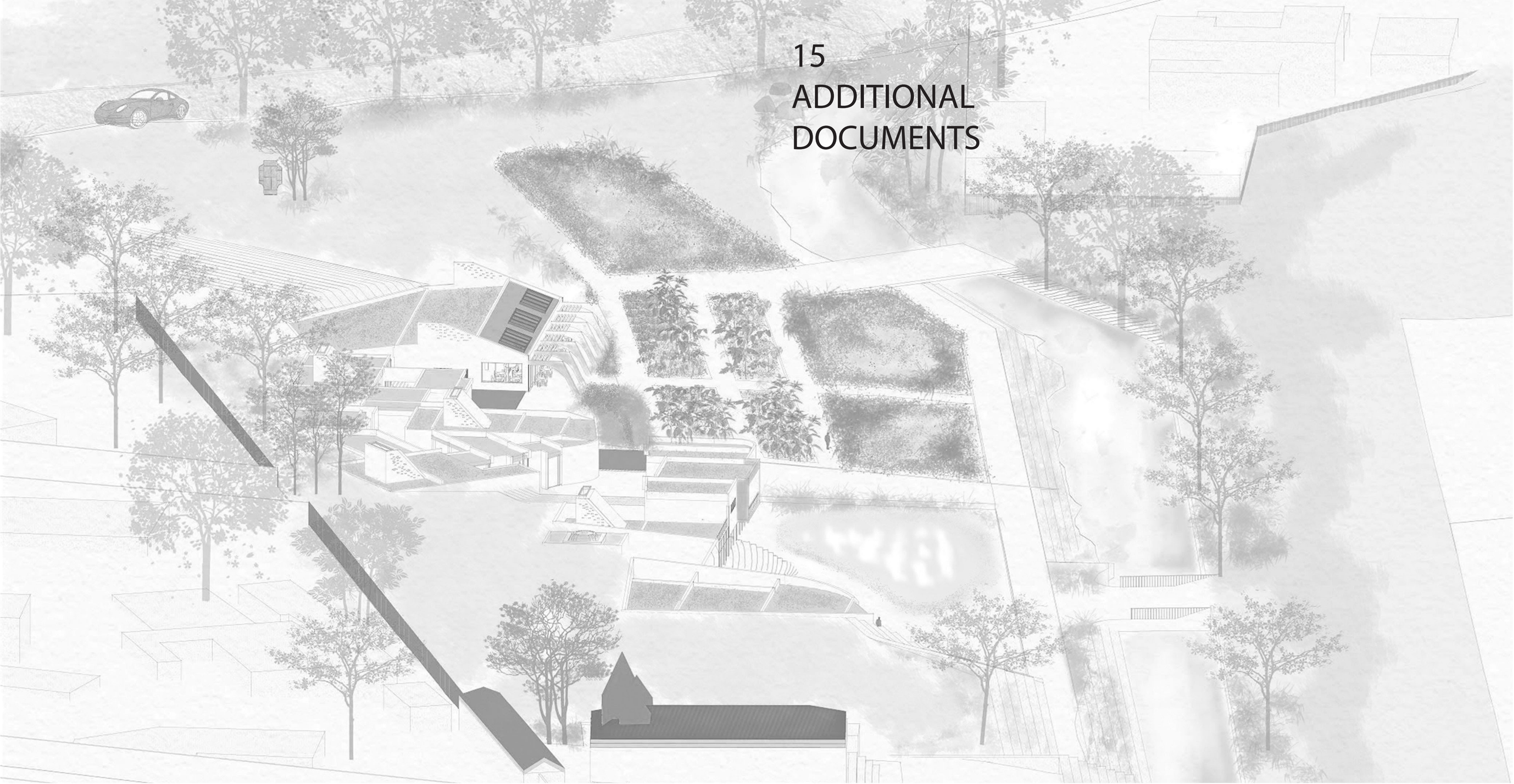
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15
ADDITIONAL DOCUMENTS



1. APPROVAL OF RESEARCH

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24 June 2021
Person No: 1058629
PAG

Miss C Diar
4 Mentone Court
Killarney
Riviera Road
2193
South Africa

Dear Miss Charvana Diar

Master of Architecture (Professional): Approval of Title

We have pleasure in advising that your proposal entitled *Eat, Pray, Live: Re-imagining The Melrose Hindu Temple as a space for socio-cultural integration.* has been approved. Please note that any amendments to this title have to be endorsed by the Faculty's higher degrees committee and formally approved.

Yours sincerely

Mr Yaseen Stoffberg
Faculty Registrar
Faculty of Engineering and the Built Environment

2. ETHICS CLEARANCE CERTIFICATE

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG | SCHOOL OF ARCHITECTURE PLANNING

21 September 2021

Faculty of Engineering and the Built Environment:

Ethics clearance letter:

Dear Charvana Diar (1058629), this letter confirms that your ethics application has been **cleared.** Your clearance/protocol number is SOAP09/2021

Yours sincerely

Lerato Nkosi

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