



**Exploration of Indian Social Influence on Civic
Architecture in Post-Colonial Durban: Towards the
Design of an Exhibition Centre in Phoenix**

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ABSTRACT

This research process has explored the impact of colonialism and apartheid on Indian civic space from a global perspective and then from a local perspective within the City of Durban. The justification for exploring Indian social influence was that Durban contains the largest number of Indian people outside of India. This study has focussed on social influences of culture and identity and how it impacted civic spaces in the built form. The architectural theories of Phenomenology and Critical Regionalism has further helped the development of a brief for the design of an Exhibition Centre in Phoenix. This typology has sought to restore a sense of belonging, pride, recognition and celebration of the Indian people by creating meaningful architecture in the civic realm.

Colonialism has impacted India and South Africa, resulting in the loss of culture and identity of Indian communities. Therefore, by analysing India and South Africa's historical context, it was possible to compare their social and physical landscapes. Traditional Indian cities were very organic and sporadic; however colonial British influences had a Eurocentric grid iron structure; therefore, a fusion of these developments has guided the proposed civic development. The proposed Exhibition Centre incorporates aspects of Indian culture and identity as well as modern-day contemporary design concepts.

The outlined precedent and case studies has helped to demonstrate the relationship between culture, identity and architecture, and has strengthened the overall design development process.

DECLARATION

I hereby declare that this dissertation is my own unaided work and carried out exclusively by me, except where otherwise acknowledged. It is being submitted to the School of Architecture, Housing and Planning at the University of KwaZulu-Natal, in partial fulfilment of the requirements towards the degree of Master in Architecture. This dissertation has not been previously submitted for any examination or degree at any University.

Sivandran Govender

Signed 30th November 2020

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As stated by the world-renown leader Mr Nelson Mandela, “It always seems impossible until it’s done.”

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DEDICATION

I dedicate this dissertation to my Dear Family:

Sarah Noelene Govender, Brielle Allidae Govender and Zaileigh Azrielle Govender.

Thank you.

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**PART ONE: BACKGROUND
RESEARCH ON ISSUES**

CHAPTER 1: INTRODUCTION

1.1 INTRODUCTION

1.1.1 Background

The research intention is to explore South African Indian culture and identity represented through the built form, in post-colonial and apartheid Durban, KwaZulu-Natal. The research initiative stems from the agenda to identify and recognise the factors related to colonisation and its adverse impact on resident Indian communities within the Durban City metropolitan region. Therefore, the aim would be to address issues of inequalities experienced by these previously disadvantaged communities, with a core focus on understanding and addressing issues of colonisation and post-colonisation of Indian culture and identity (Noble, 2011).

The rich heritage, culture and identity of Indian South African communities within Durban, KwaZulu-Natal were limited and restricted in terms of Colonial and apartheid laws, decisions and governance. The arrival of indentured Indian labourers on South African shores were between the year 1860 to present, is approximately one hundred and sixty years.

The apartheid regime is well known among South African citizens and the world over. The ruling political party of the day was the National Party, their aim was to oppress and segregate non-white social groups and allow white supremacy over the country. Numerous laws were passed in Durban, KwaZulu-Natal during colonial rule and apartheid that kept Indian and African people under subjection. They were not allowed to trade or buy land in white owned areas and the education system was very basic.

Prior to the group areas act of 1952 the Durban inner-city was occupied by non-white groups, however the forced removals saw a segregation and deprivation of a rich cultural mix of these communities.

The government used city planning as a tool to zone areas closest to the CBD for easy access of the white communities but moved the non-white social groups to the least developed areas. This relocation required high travelling costs and travel time from the outskirts to the CBD. This motivated a system of economic and industrial culture rather than the vibrant culture of the people.

A typical example of forced removals was the Block AK precinct within the Durban inner city. Leading up to the 1950's Block AK was a thriving community of various race groups and cultures, they acted in unison as a single-family unit that faced many challenges together. Approximately 6000 Indian families were relocated to areas such as Chatsworth, Phoenix, Merebank, Verulam and Stanger.

The physical separation and relocation of the various race groups within Durban at the time changed the urban form and framework of the country in favour of the colonial settlers. Racial segregation and the quest for power and wealth led these disadvantaged communities down an unpleasant path of social inequality and injustices that left them displaced from urban participation, accommodation, and society's economic well-being. The period of oppression and slavery created a huge psychological imbalance together with social and mental stresses that affected the way they lived and interacted with each other at a social level (Noble, 2011). Therefore, cohesion and interaction through tangible civic spaces and architecture would be able to rekindle a new unity of various subcultures that creates strong communities.

Colonisation has played a major part in the shaping the landscape of the Union of South Africa since its inception in 1902 (Molatelwa, 2015). The colonial influences of the Dutch and the British over a period of approximately three centuries have impacted almost every facet of life in South Africa, from religion and politics to tradition, culture and the physical built form and spatial planning of the country's urban framework. Segregationist legislation laws instituted by Colonialism against the Indian people brought about extreme inequality in the country (Molatelwa, 2015).

Non-white individuals were not allowed to trade or own land in designated white areas, the education systems were extremely biased and offered a very rudimentary learning foundation. The apartheid regime in South Africa was initiated in 1948 and continued for a period of 44 years, up until 1992 when Nelson Mandela was released from political imprisonment. The implementation of the Group Areas Act of 1952 brought about forced removals and segregation of white and non-white communities, the non-whites were relocated into areas that had very limited development and infrastructure (Noble, 2011). The aim was to create a physical barrier between the racial groups and to seclude each race group into different regions.

The City of Durban consists mainly of British Colonial civic designed spaces that work well within the city context but precluded other social groups' cultural identities living and working within the same shared spaces. The city spaces are shared between a diverse range of people with various sub-cultures and belief systems however there is no sense of belonging. Indian architecture was based on ancient principles of the Vastu Shastra that relied mainly on astrology and proportion. The built form of any city development should reflect all its occupants' culture and identity regardless of political issues and constraints. (Singh 2015).

1.2 MOTIVATION/JUSTIFICATION OF STUDY

This research initiative deals with the social foothold of the Indian South African community and their identities defined through the design of a civic building in Durban. The apartheid era's planning principles did not include valuable social aspects such as the opportunities for recreational, functional, and cultural activities that encourage public engagement and social interaction (Gehl 1971).

The Group Areas Act of 1952 saw the physical separation and relocation of the various race groups within Durban and it changed the urban form and framework of the country in favour of the colonial rulers.

This research aims to inform a socially appropriate civic space such as an Exhibition Centre that fosters Indian culture and identity. This design will be symbolic towards the realization of a landmark development for Indian South Africans and their culture within an African context such as Durban. The exhibition space within an Indo-African community represents all its people through contemporary architecture of the present time. The proposed design purposefully responds to present building technology and style, appreciated by the observer. However, this type of Civic Architecture will therefore reinforce, and bolster Durban's unique culture of Indo-Africanism represented by the local community. Such architecture concretises the new Indo-African identity and culture that is exclusive to the region.

The result of mass housing projects became architecture without the architect, there was no consideration of analysis, orientation, topography and cultural impetus which lends itself to identity. The resultant suburbs were Chatsworth, Phoenix, Merebank, Verulam, Stanger, Kwamashu, Clairmont, Inanda and Ntuzuma.

Therefore, the opportunity to create a sense of place and cultural identity within Durban is a driving factor in the process of development and growth for previously disadvantaged race groups fostering a sense of community and placemaking.

The justification for the research within the city of Durban and Kwa-Zulu Natal would be based on the fact that Kwa-Zulu Natal is home to the largest Indian population outside of India. India was also colonised by the British, which eventually led to an agreement of shipping Indentured Indian labourers to South African soil in the year eighteen sixty (Moletelwa, 2015).

1.3 DEFINITION OF THE PROBLEM, AIMS, AND OBJECTIVES

1.3.1 Definition of the Problem

Many countries and nations throughout the world face various social challenges and difficulties with regards to culture, heritage and psychological well-being, in some instances these negative circumstances hinder the progress of such societies to a point of social decay and the creation physical barriers. South Africa had numerous political issues that gave rise to social ills and inequalities throughout the history of the nation. The social well-being of a society is extremely important in creating identity through the built form. Colonial funded architecture often tended to exclude other local and settler groups of people's identities.

The problem is the lack of well-planned civic spaces of apartheid planning principles resulting in the loss of culture, identity and integration of non-white communities, i.e. the integration of Indian communities within the Durban City built form. Colonisation by European settlers created a system of inequalities and injustices that caused a huge social divide among white and South Africa's non-white race groups. The group areas act of the apartheid era further enforced these principles by creating spatial planning divides that reorganized the urban framework and built form of the Durban city landscape.

The apartheid government of the day used town-planning and urban design principles to secure ownership of land closest to the Durban CBD and access to the beach which was regarded as prime property. The non-white race groups were moved inland away from the CBD.

The aim of the colonialists was to create a physical spatial buffer of distance and location that would in turn create high commuting costs for job opportunities to and from the central business district for the non-white communities. The well thought out processes of racial segregation implemented by the colonial settlers during the colonial and apartheid eras created a huge divide between the white and non-white race groups in South Africa and would therefore require a long-term resolution. (Molatelwa, 2015).

This resulted in pockets and enclaves of social resistance to social and cultural identities. Hence the lack of tangible-built spaces infusing cultures.

The social and political platforms laid by colonial and apartheid planning laws greatly impacted non-white community interactions and integration.

The development of a suitable public facility will benefit the community at large by bridging the gap of manifest gathering spaces within the Indian and African communities, the intention would be to explore existing civic spaces through precedence and literature and identify how they can be reinterpreted for purpose within the local context.

The design of an Exhibition Centre would create an opportunity for communities to come together in unison with a single purpose that exudes interaction and social cohesion of local cultures and identities shared through civic architecture.

1.3.2 Aims

The aim is to explore Indian South African social influences on civic architecture in Post-Colonial Durban.

1.2.3 Objectives

The aim above will be accomplished by the following:

1. Investigate the significance of Indian South African Culture and their social influences on a place, in the context of Durban.
2. Understanding how culture and identity are represented through civic built form globally.
3. Investigate how multi-sensory architecture can contribute to meaningful place.
4. Exploring how Indian South African identity and cultural responses can contribute to a new kind of architectural style in a contemporary context.

1.4 SETTING OUT THE SCOPE

1.4.1 Delimitation of the Research Problem

The research will be limited to exploring the impact of colonisation and apartheid from a local perspective. The key focus area will be on the local context within the City of Durban and its surrounding suburbs. The research process will consider important areas affected by the impact of apartheid and the movement patterns of Indian communities during the colonial and post-colonial eras within the South African built environment.

1.4.2 Definition of Terms

- **Exhibition Centre:** A civic facility that consists of a cultural exhibition space that caters for the various social groups within the local context and is designed for sustainable community engagement.
- **Colonisation:** The action or process of setting among and establishing control over indigenous people of an area.
- **Post-colonial:** Is the occurrence of a new political interest after the demise of colonial rule.
- **Cultural Expression:** Those expressions that result from the creativity of individuals, groups and societies, and that have cultural content.
- **Eurocentric:** Focusing on European culture and history to the exclusion of a wider view of the world; implicitly regarding European culture as pre-eminent
- **Segregationist legislation:** Is the physical separation of categories of individuals, usually on the basis of gender, race, religion, or class.
- **Psychological:** Related to a mental and emotional state of a person, -affecting or arising in the mind.
- **Apartheid:** A policy or system of segregation or discrimination on grounds of race. (in South Africa)
- **Civic:** Relating to the duties or activities of people in relation to their town, city, or local area.
- **Civic Space:** Is created by a set of universally accepted rules, which allow people to organise, participate and communicate with each other freely and without hindrance, and in doing so, influence the political and social structures around them.

- **Civic Architecture:** Relates to Civic buildings that bring people together around shared interests and community purpose. The success of the architecture is defined by how people experience institutional values and collective aspirations, as manifested through its physical presence within the public realm.

1.4.3 Stating the Assumptions

All human beings have rights to natural spaces including built environments which are created specifically for their purpose. In the past Indians and Africans were excluded from the City of Durban by the colonisers, in post-apartheid South Africa they now have freedom of the city. Social cohesion can bolster harmony within civic spaces of a city that are reflective and representative of people's cultures, identity and symbolic elements, creating an existential foothold to a region.

1.4.4 Key Questions

Primary Question:

How can Indian South African social influences, impact civic architecture that resonate Indianness in Post-Colonial Durban?

Secondary Questions:

1. What is the significance of Indian South African culture and social influences on a place, within the context of Durban?
2. How is culture and identity represented through civic built form globally?
3. In what way, can multi-sensory architecture contribute to meaningful place?
4. How can Indian South African identity and cultural responses, contribute to a new kind of architectural style in a contemporary context?

1.4.5 Hypothesis

If a place of cultural access and community integration is established in Durban that promulgates the idea of conceptualising communities, then a true sense of regional architectural identity and culture would be restored within the City of Durban. The design of a Cultural Hub that incorporates Indo-African culture and heritage will give rise to a new kind of civic architecture that is specifically local.

1.5 CONCEPTS AND THEORY

1.5.1 Culture and Identity

Culture and Identity is important since South Africa has a very rich and diverse cultural history and background; however, social injustices and inequalities have created huge physical and social barriers that limit and restrict all its citizens' integration. (Halloran MJ & Kashima ES 2006).

The culture and identity of Indian communities need to be understood in order to design places and spaces that can help to better understand their cultures. It is important to understand cultural backgrounds for example Ancient Indian Architecture was based on principles of the Vastu Shastra that relied mainly on astrology and proportion. The built form of any city development should reflect all its occupants' culture and identity regardless of political issues and constraints.

Balkrishna Doshi's works, well-known architect and author will assist in understanding Indian culture and identity with regards to architectural design. Philip Riley a Professor of Ethnolinguistics asks, how do we learn who we are and how are our social identities negotiated, his writing will give insight on language, culture, identity, and ethos from a global perspective.

1.5.2 Phenomenology

Norwegian architect, author and architectural theorist, Christian Norberg-Schulz, specializes in architectural Phenomenology, he emphasises that architectural design solutions need to meet the physical and psychological desires of human beings. Architecture cannot be realised by scientific means only, there has to be an understanding of artistic perception and symbolization (Norberg-Schulz 1976).

In his book *Eyes of the Skin*, Juhani Pallasmaa, deals with multi-sensory aspects of perception, memory, imagination, feeling, emotion, and moods that may inspire the design process so that it includes these vital human sensory elements. This theory is important in trying to address the lack of well-defined civic spaces that relate to us as people. The historical references made to apartheid and colonialism have left a gap in the design of sustainable public environments, so these elements will help address issues that deal with the philosophy of the mind and how individuals should perceive their surroundings, specifically civic spaces. (Pallasmaa 2012).

1.5.3 Critical Regionalism

According to Kenneth Frampton, Critical regionalism aims to provide tradition-based architecture linked to geographical and cultural contexts (Frampton 1985). Traditional architecture should therefore embrace international standards, modern concepts, materials, technologies, and ideas to create contemporary architectural designs rooted in local customs and knowledge. Critical regionalism, which is connected to the philosophy of Phenomenology, evokes not only the visual but all senses. Frampton notes that architecture's tectonics or poetics are lost if all the senses are not present (Frampton 1983). This research process will also look at Alexander Tzonis a Greek architect, author and researcher, he is known for his work on Critical regionalism, his study looks into the past, dating back to the origins of Vitruvius to try and address contemporary issues, he notes that architects should think critically when trying to explore opportunities and resolve design problems.

1.6 RESEARCH METHODS AND MATERIALS

1.6.1 Introduction

The proposed study topic has addressed several social aspects related to social inequalities and injustices forced upon the Indian community during the colonial and apartheid eras in South Africa. This section of the document will discuss the methodology and approach in addressing the research problem. The use of secondary and primary data sources will account for a major portion of the research analysis process.

1.6.2 Research Philosophy and Strategy

The research approach has considered a qualitative approach since there has been an exploration of the culture and identity of certain communities. The interpretivist paradigm method has facilitated the process of achieving the desired outcomes due to the topic being of a subjective nature rather than a factual one. Culture and identity within the Indian community has been explored using a social science and architectural lens. In the research process, secondary and primary data materials were used, however secondary data collection of written material, books and online data constituted a greater percentage of the text.

The purposive sampling technique was used to capture the primary data sets and the instruments used in this data collection were questionnaires and interview schedules.

1.6.3 Precedent Study

The selected precedent studies were based on the theories chosen for this research process, they have been studied in order to strengthen the development of ideas and design principles. The aim of the chosen precedent studies was to help understand how social influence on civic architecture could include culture and identity in the built form.

1.6.4 Secondary Data Collection

Secondary data has formed the basis of the literature review since it responded to the research question in a factual manner through well-known authors' writings. The literature review of secondary data was analysed critically in order to find appropriate solutions and recommendations towards the research problem. The instruments used were books, published journals, research reports, photographs, sketches and diagrams.

1.6.5 Primary Data Collection

The primary data collection has involved observations, interviews and case studies which offered a hands-on approach to understanding the research process. Personal data, video, works of art, historical records was also used for the study.

1.6.6 Observation

The method of physical observations has helped to understand how various cultures interacted and engaged with civic spaces and what important factors influenced a cohesive social environment.

1.6.7 Interviews

The interviews were based on a semi-structured approach, this allowed for the opportunity to engage with the respondents on a less formal basis in order to obtain valuable empirical data that addressed issues such as culture, identity and social influences. This data collection method has added a new level of understanding to research process. Due to the COVID-19 pandemic, the interview process required an online platform to keep in line with the National Government regulations regarding compulsory social distancing procedures.

1.6.8 Case Studies

The interaction with various case studies has allowed for the opportunity to identify and analyse the relevance of the research process's selected conceptual and theoretical framework. Generally, physical site visits to these facilities help understand how these environments are designed and whether they meet the end-users' needs. Due to the COVID-19 pandemic alternative methods such as observations and desktop studies were used for the research process.

CHAPTER 2: SOCIAL INFLUENCES OF CULTURE AND IDENTITY

2.1 INTRODUCTION

This chapter focuses on the social aspects of the culture and identity of Indian South Africans and how these cultural expressions influenced the built environment. The research will explore the significance of Indian social influences on civic architecture from a global perspective and then focus on the local context within the City of Durban, South Africa. The process will investigate the social and architectural history of Colonial influences with a core focus on the arrival of Indian Indentured Labourers from 1860 to present day. The role of Colonial and local influences on Indian culture will be explored in an attempt to understand their interrelation and social impacts on each other's culture. The use of local and international precedence and typologies will help compare the merging of cultures and ultimately define the creation of a new type of architecture going forward.

The research will seek to explore the need and importance of well-planned civic spaces and its impact on communities. It will also explore the effect and influence that culture and identity has on civic space design, bearing in mind that Durban has a combination of various cultures and subcultures within the Colonial, African, Coloured and Indian communities.

It is important to note that the 1860 Indentured Indian Labourers tried to find ways of expressing their culture and identity under an oppressive blanket of Colonial and apartheid laws. There are four key aspects of Indian culture and identity such as market/ trading, education and sports and spirituality, that stand out as significant among many other forms of cultural expressions in Durban. (Rosenberg 2013).

The research will seek to identify the significance of the above mentioned key social aspects of Indian culture and identity and its role regarding their social upliftment and economic empowerment during extreme racial oppression in Durban. The goal would therefore be to revive these cultural forms into a modern-day setting in Durban, but instead of being exclusive to Indian South Africans, it would be inclusive of all cultures and subcultures.

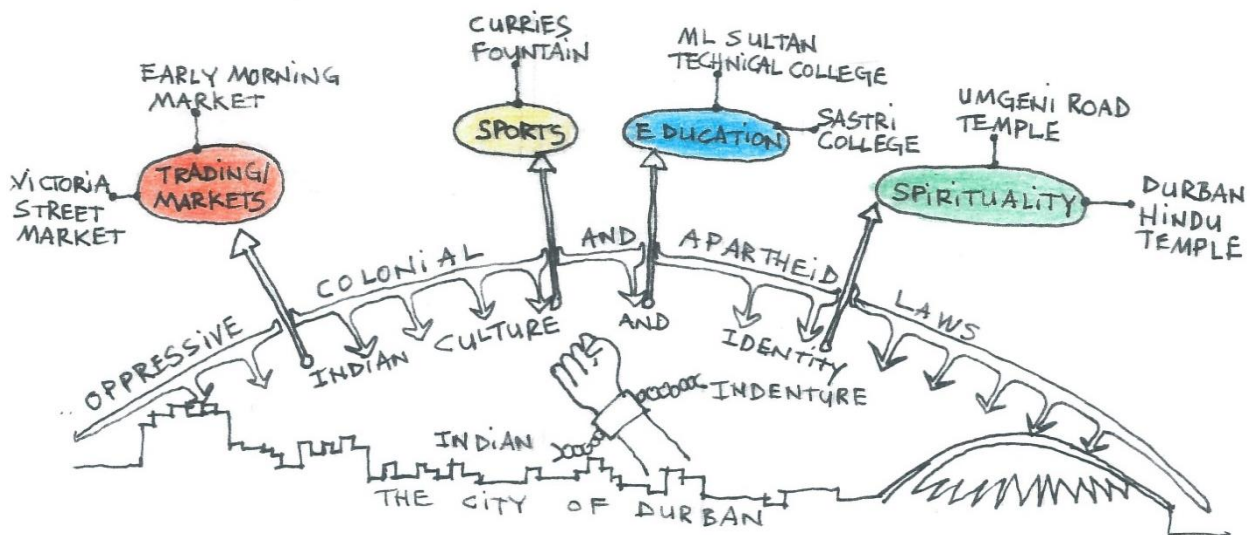


Figure 1: The above sketch symbolizes the extreme oppression of Indian culture and identity through Colonial and apartheid laws within the City of Durban. The key civic social aspects such as market gardening/ trading, sporting activities, education, and spirituality helped find a way of overcoming their oppressive lifestyles and create economic sustainability. (Source: Authors own, 2020)

2.1.1 Market/ Trading Space:

By 1885, approximately 2000 Indian market gardeners grew fruit and vegetables on rented land from absent colonial landlords; they consisted mostly of the free Indians that remained in Durban after their contracts had ended. The White traders petitioned for trade protection laws and as soon as Natal received their self-governance in 1893, they passed laws to limit the Indian trade industry (Rosenberg 2013). Some of the well-known marketplace facilities included The Early Morning Market in the Warwick Junction Precinct and the Victoria Street Market in the Grey Street Precinct.

2.1.2 Education:

The British Colonial government did not include provisions for education of the Indian Indentured children, however the roots of Indian education systems in the Durban Warwick Junction Precinct dated back to 1867, the Christian missionaries thankfully set up some small schools. There were approximately 20 educational facilities within this small area, but the basic education systems were very limited due to financial constraints. The first higher education facility for Indian people was the ML Sultan Technical College; this facility's negotiations started in 1928 but was eventually built and opened on the 7th August 1956 (Rosenberg 2013)

2.1.3 Sports:

The Curries Fountain precinct contained a reliable source of underground freshwater supply dating back to very beginning of the Durban urban complex. The plot was situated on the Western Vlei's marshy grounds and in 1925 it formally became the sporting precinct for the surrounding Indian community. Indians participated in many sporting activities from the earliest days, sports served an important socializing tool among the Indian community. The Curries Fountain sports precinct was also regarded as a struggle site, hosting many politically charged mass-meetings against racial discrimination and segregation. (Rosenberg 2013).

2.1.4 Spirituality:

Indian culture and identity were carried from memories of their homeland, India, and expressed through their spiritual beliefs in Durban. They began to erect informal wood and iron temples and shrines in the sugar cane plantations to observe the various rituals, deaths, births, and marriages that formed part of everyday life. The Umgeni Road Temple, built in 1883, is one of South Africa's oldest and largest temples and resembles shrines commonly found in South India (Rosenberg 2013). Several mosques and churches were also established in the city of Durban, catering for the various subcultures.

2.2 THE MEANING OF CULTURE, IDENTITY, SUBCULTURES AND MULTICULTURISM

The basic understanding of culture is related to daily life practices, how you live, how you talk, what you eat, the fashion, and clothes you wear. When we say we want to understand a community and how they live, we actually want to understand their culture. Culture is influenced by factors such as language, gender, race, age, religion and location (Gopidayal 2011).

Culture is 'the lens through which life is perceived', Diller 2004. Different cultures create their own experience of reality and may interpret the same situations in a unique manner. Culture is evolutionary in that it changes and conforms to human life challenges and situations. Diller 2004. This evolutionary process of culture may be affected by various factors; a typical example is advancements in technology that start to create a new type of culture, especially when dealing with the younger generation (Gopidayal 2011).

Culture is made up of symbols that render existence manifest. Culture means translating the forces provided into meanings that can be shifted to another place. Therefore, culture depends on abstraction in concretization. Through culture man gets rooted in reality and simultaneously free from complete dependence on a particular situation. Man, not only creates nature, but also constructs himself, society and culture, and he can perceive a given environment in various ways in the process (Norberg-Schultz 1980).

Architecture relates to the beliefs of people; therefore, we have a social responsibility to include issues of cultural diversity in the design of the built environment, especially in the South African context, to unite and reinforce the cultural relations of different groups in society (Gopidayal 2011).

Identity is an expression of culture, and it manifests itself in symbols, signs and artworks, it helps us identify different cultures. Culture and identity go hand in hand, they are intertwined and need to relate to each other. Identity in the built environment consists of different elements that contribute to a specific place's character, for example, the Genius Loci or spirit of a place as described by Norberg-Schultz (Gopidayal 2011).

Rappoport observes that among human beings there are two forms of identity, the first is private identity and the second is a public identity. Private identity is the declaration of identity to oneself and to one's intimate community, and public identity is the assertion to others in the public domain of one's private identity. Factors such as rituals, clothing, language influence our sense of identity, these are commonly referred to as cultural expressions (Gopidayal 2011). The designer of a place or space must first recognize the behaviour and values that reflect the identity of a specific group of people, this can prove to be a very complex and complicated task especially when it involves a multi-cultural society (Meiss 1990).

A typical example of a multi-cultural development is the Superkilen Park, Denmark, 2012.

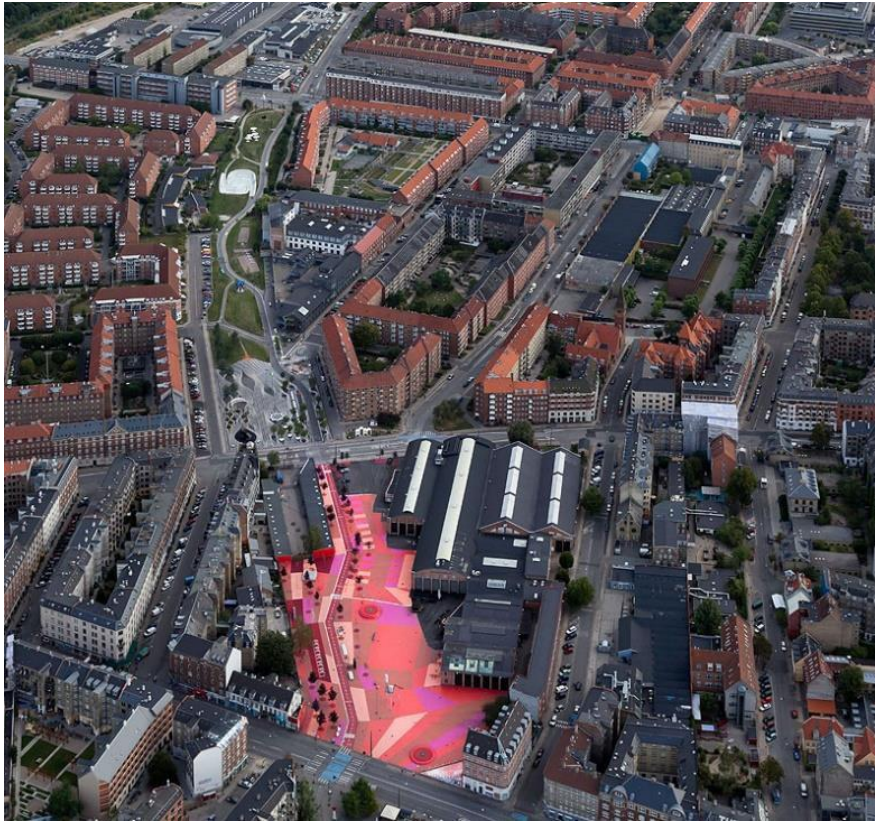


Figure 2: An Aerial view of Supekilen, it has longitudinal alignment (Source: Archdaily)

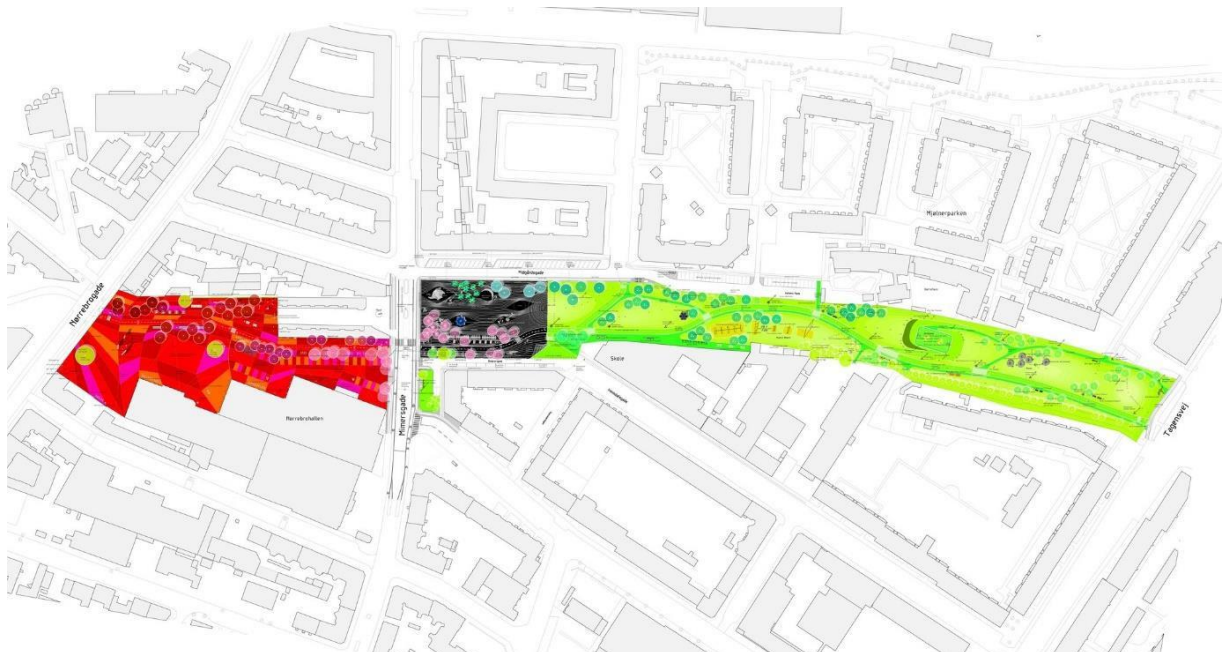


Figure 3: The plan of Superkilen Park showing the 3 zones; Green, Black and Red. (Source: Archdaily)

The Superkilen is located in Copenhagen, Denmark in a town called Norrebro, this is an excellent example of a socially and culturally diverse neighbourhood. The park's design

addresses some important issues. One of the main challenges was a high crime rate, and the other was an influx of over 20 nationalities from various countries like Sweden, Germany, Norway, Morocco, Pakistan, Iraq, Lebanon, Iran and Palestine. The public park design had to be innovative to accommodate for different ages, gender, religions, and cultures, thereby transforming it into a multi-functional space. The final design incorporated three zones, The Black Market, an outdoor urban living room and the Green Park for sport and play events, the Red Square for market, culture and sporting activities, the design process included public engagements with the residents with regards to design elements related to their culture. The open exhibition park includes details such as trashcans from the United Kingdom, a replica of an octopus shaped playground from Japan, benches from Brazil, a big sign from Russia. These elements create a sense of pride and ownership within the park and the residents are able to identify with elements from their culture (Alshehri 2013).

2.2.1 Understanding Subcultures and Multiculturalism

Subcultures play a vital role in our society; they help to strengthen our social structures, especially in a multi-cultural place such as Durban. Durban consists of various subcultures, for example, at a very high level, the white population are either of Afrikaner or British descent, the black people are either of Zulu or Xhosa descent, Indian people are either of North Indian or South Indian descent, in each culture the different languages form a barrier although their physical appearances may be similar. The Indian subcultures are further divided into religious components made up of Hindi, Islamic and Christian. It is important to note that 60 percent of Indian indentured labourers are from South India and the rest from North India. The predominant Indian culture in Durban is South Indian, either Tamil or Telugu Speaking. The North Indian communities are either Hindi speaking or Islamic.

Christopher Alexander notes that '*subcultures must be readily accessible to one another so that a person can move easily from one to another, and settle in the one which suits him best*' (Alexander 1977: 44).

Alexander goes on to say that '*a variety of subcultures in a city is not a racist pattern which forms ghettos, but a pattern of opportunity which allows a city to contain a multitude of different ways of life with the greatest possible intensity*' (Alexander 1977: 48).

The Superkilen Park incorporates elements that relate to human scale and creates a sense of safety. That encourages people to use the facility and ultimately interact with other users either

passively or actively. These various behaviours allow for diverse and stronger social connections between people and space. In creating a multi-cultural space the various cultures interact with each other, so for instance a person from Pakistan may sit on a bench from Brazil and in doing so begins to take in, understand and accept the culture of a different group. Superkilen incorporates Jan Gehl's ideas that focus on three important types of outdoor activities that are necessary for humanistic and quality outdoor spaces. 1. Necessary Activities, 2. Optional Activities, Social Activities (Gehl 1971). Two of the most used urban design elements at the Superkilen Park are the Baghdad, Iraq swing bench and the Tokyo, Japan Octopus. These objects bring Muslims and non-Muslims in close proximity creating an opportunity for social interaction (Alshehri 2013).

2.3 EXPLORING THE SIGNIFICANCE OF SOCIAL INFLUENCES ON CIVIC SPACE

2.3.1 The meaning of Civic Space

Public or civic open spaces are defined as state-owned, with equal access in all democratic countries to all the inhabitants of the city without distinction for caste, religion, sex, economic, social and cultural differences (Gangwar 2018). Although Indian South African identity is important to the community of Phoenix so too is the African identity important to the local community of the region. This then translates into a civic space appropriate to the local Indo-African community of Durban, represented through a contemporary civic design outcome.

In the midst of the built environment, civic open spaces are combined with the building forms to provide the so-called breathing space or 'green lung'; these are the physical voids that create social possibilities on a city scale. These spaces are symbolic and therefore establish a city focus or spotlight. For various events, civic spaces are used and represent the social or cultural nodes of the city. Civic spaces can be considered components of the urban fabric that connect other elements of the city that reinforce the urban fabric together (Gangwar 2018).

As Zukin noted in 1995, the civic spaces reflect "the window into a city's soul" a window to look beyond the surface, and the civic space is seen as "stood or fell with the principle of universal access" as suggested by Habermas 1998. Civic spaces have the potential to alter the "civic face of a city " which is a representation of the image of the city (Gangwar 2018).

2.3.2 Civic Space a Global Perspective

Civic spaces play a major role in providing their local people a good quality of life, as well as the sense of belonging to the city, this quality of life depends on the social and economic situation. For example, parks for leisure and physical well-being, trade spaces for commercial activities, social engagement, religious spaces for social peace, exhibition spaces for different kinds of knowledge sharing, and so on, various types of public spaces may meet multiple community needs (Gangwar 2018). Typical Indian civic open spaces were able to meet its inhabitants' needs by providing various types of spaces, for example, parks, male ground, bazaars (marketplace), temple courtyards, these spaces were created to suit the local climate, the socio-cultural needs and economic demands. It is essential to note that civic spaces in traditional Indian urban context were planned mainly for bullock cart, bicycle, person on foot, and so forth, these designs proved to be very economical during that period. The urban areas have undergone a major change from a socio-cultural perspective within the economy since the emancipation of the economy in 1990. India has since embraced the Colonial living style dependent on globalization, therefore modern civic open spaces have been completely restructured to focus on indoor spaces and vehicular access. These spaces are a network of gated communities for rich people and are unable to be reached by poor or working-class people. These spaces have led to the lack of civic interaction and the loss of group identity. Therefore, it is important to seek a common ground that produces a convergence between the traditional and contemporary design requirements of modern public spaces in order to address the needs of individuals, such as sufficient access to automobiles, technical advancements and living conditions, as well as their traditional needs. For example, by conventional concepts of design, providing access to all and establishing identity. The various kinds of public/civic spaces and the comparison between Indian and Colonial civic open spaces are discussed in this research process. The chosen case study focuses on design strategies, problems, and the fusion between traditional and modern civic open space design (Gangwar 2018).

2.3.3 Identity within the Civic Realm

In designing open spaces, the term identity can be a very important parameter and should also be able to produce a sense of belonging to the city for all its local people. This can be done by integrating in public open spaces the importance of socio-cultural elements, conventional

architectural features, and the diverse views of individuals. By embracing a Colonial model of open spaces in recent decades, Indian culture seems to have lost its identity and most open spaces are slowly evolving into a similar look and feel regardless of the geographic location. As mentioned earlier, the traditional Indian civic spaces were unique in character. This identity may again be reinterpreted in present-day open spaces by integrating and fusing the socio-cultural elements and design character with local building materials (Gangwar 2018).

2.3.4 Manek Chowk, Ahmedabad, Typical Example of a Market Space

Manek Chowk is a town square in old Ahmedabad, which is around 2500 square meters in area. In the center of two important heritage buildings known as the Tomb of the King and Queen, the chowk is placed. A vegetable market in the first part of the day, a bullion market in the early afternoon and a street food market at night after 9.30 pm are used for multipurpose purposes. Although the market area is relatively small in size, it is being used to its maximum potential (Amrita, Desai 2017).

It can be understood that the chowk is an excellent example of a multi-purpose civic open space venue, and in developing new sustainable urban areas, India will need a more generous quantity of such open spaces. While the civic space may not adhere to typical urban design principles, the adaptability to social interaction and integration may be utilized to design civic spaces in the future (see Figures 4,5,6,7,8,) (Amrita, Desai 2017).

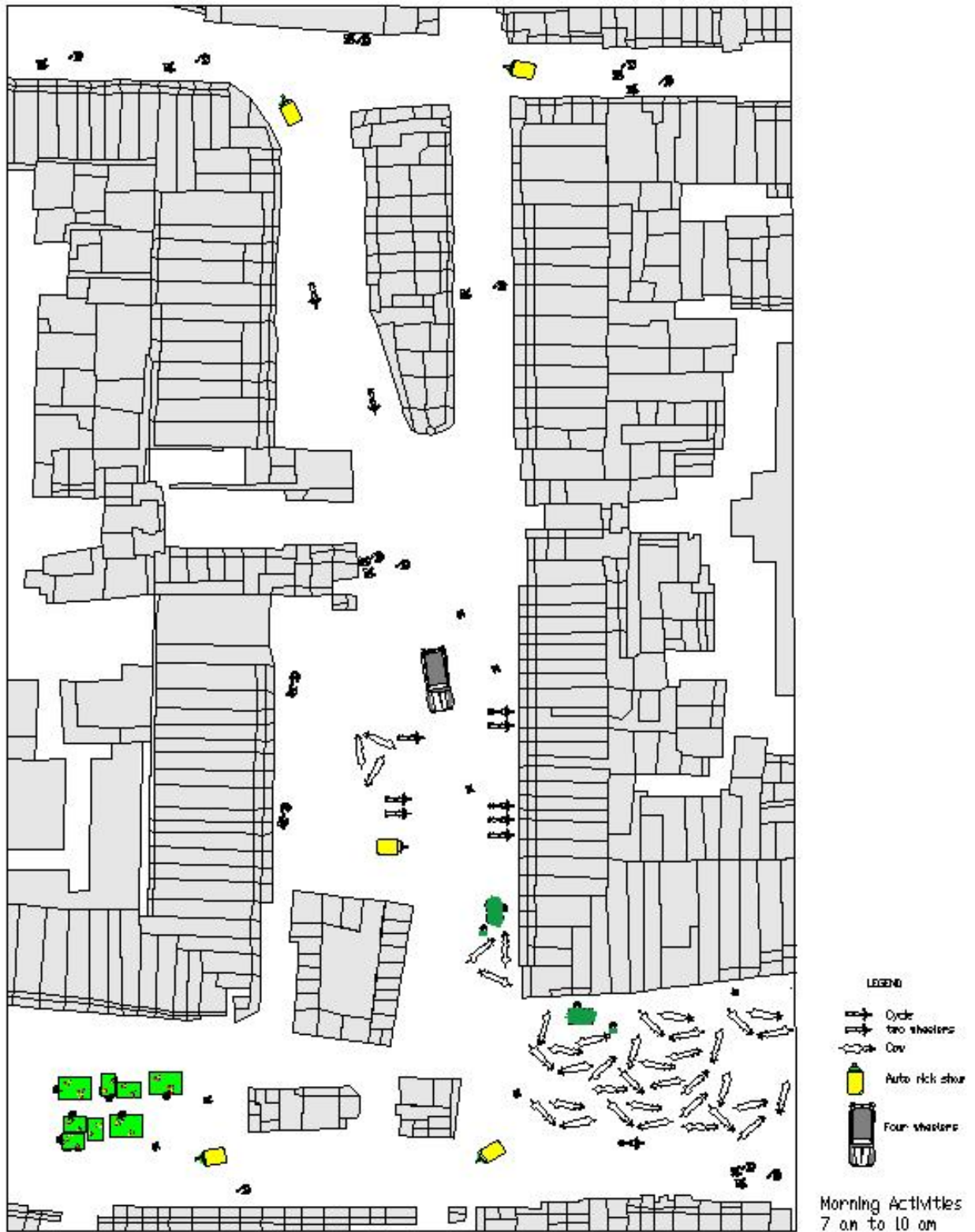


Figure 4: Manek Chowk, Early Morning Activity

(Source: <https://sideabatch2.files.wordpress.com/2017/01/morning-plan-a1-model.jpg>)

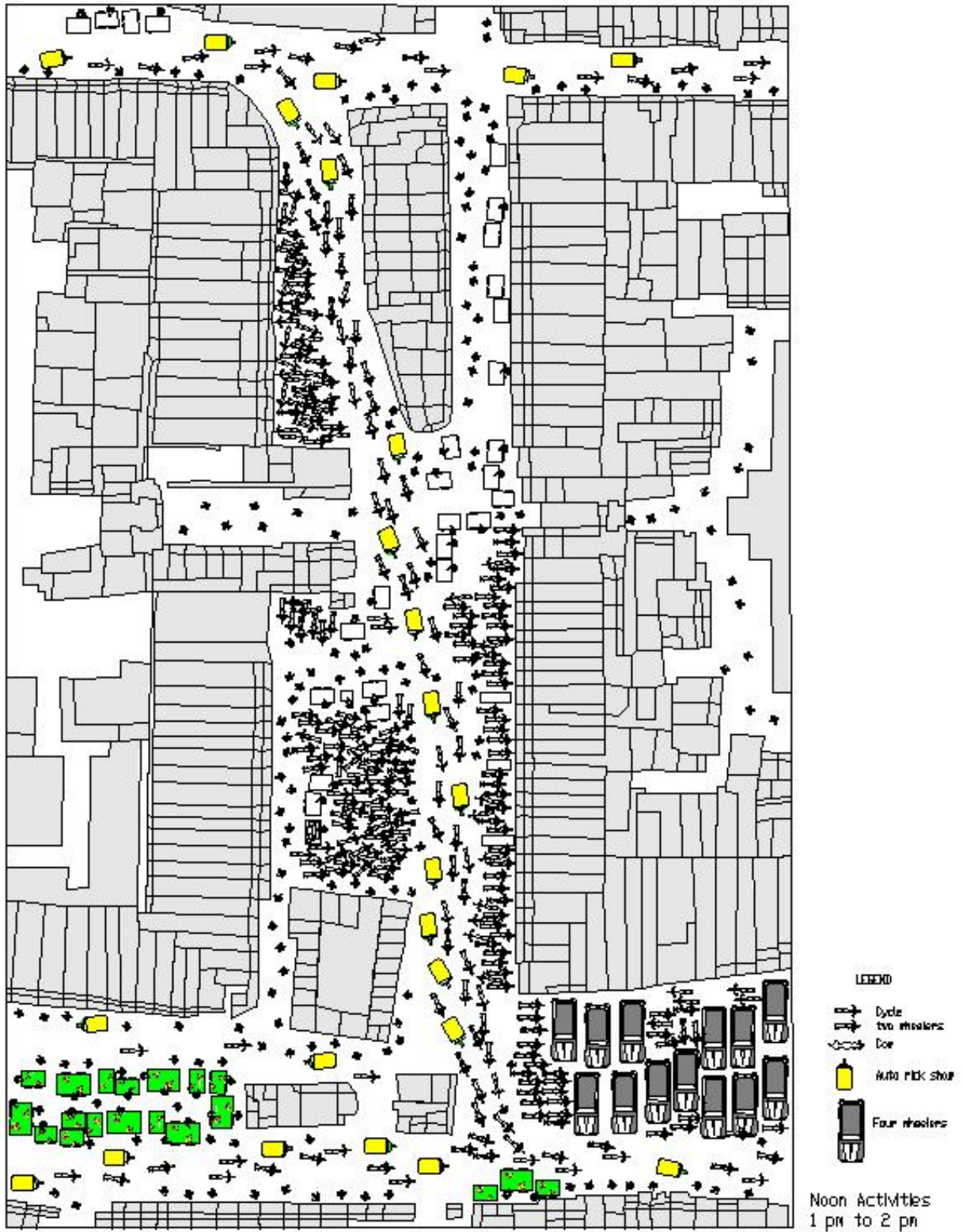


Figure 5:Manek Chowk, Lunch Time Activities

(Source: <https://sideabatch2.files.wordpress.com/2017/01/noon-plan-a1-model.jpg>)

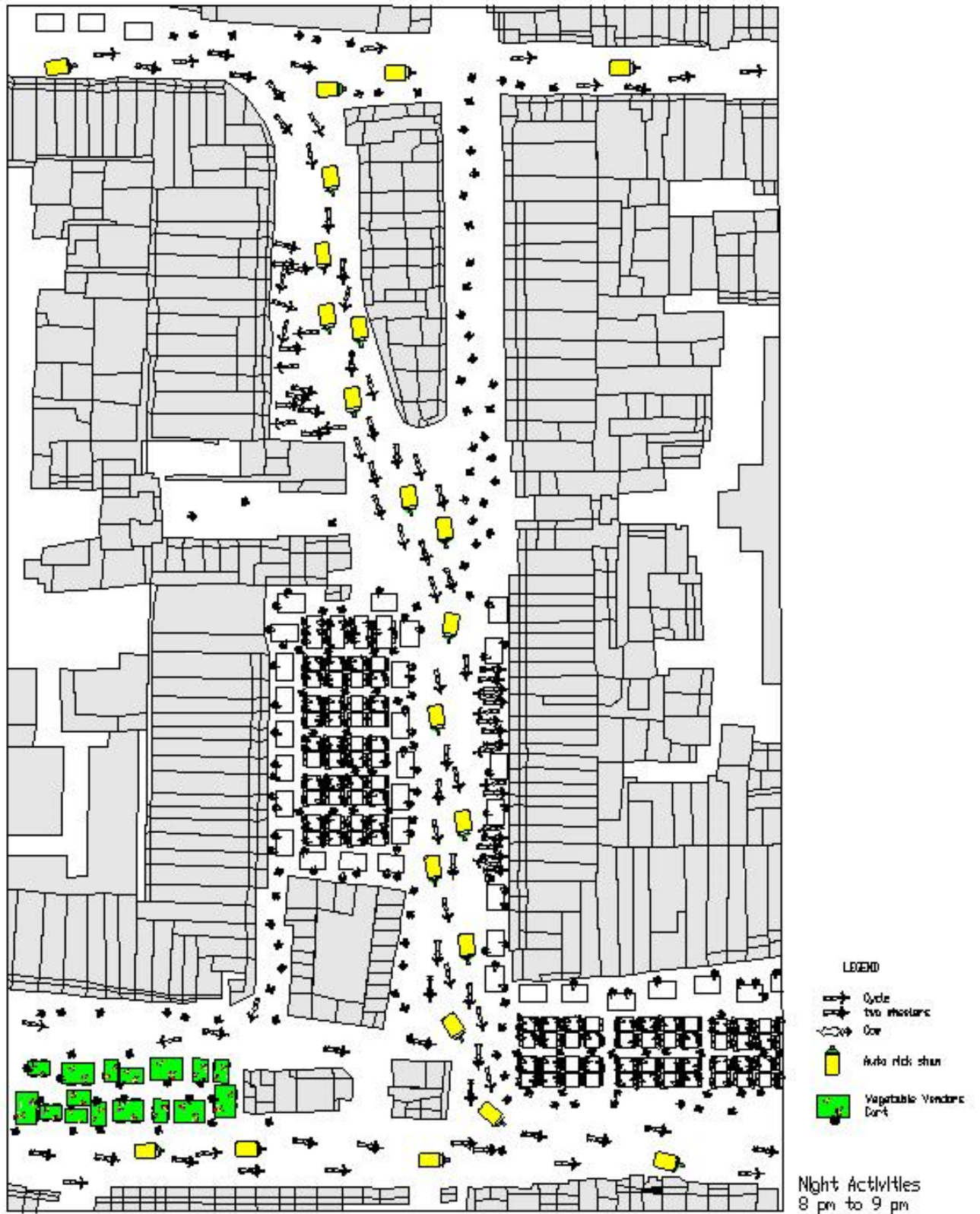


Figure 6: Manek Chowk, Night Activities

(Source: <https://sideabatch2.files.wordpress.com/2017/01/night-plan-a1-model1.jpg>)

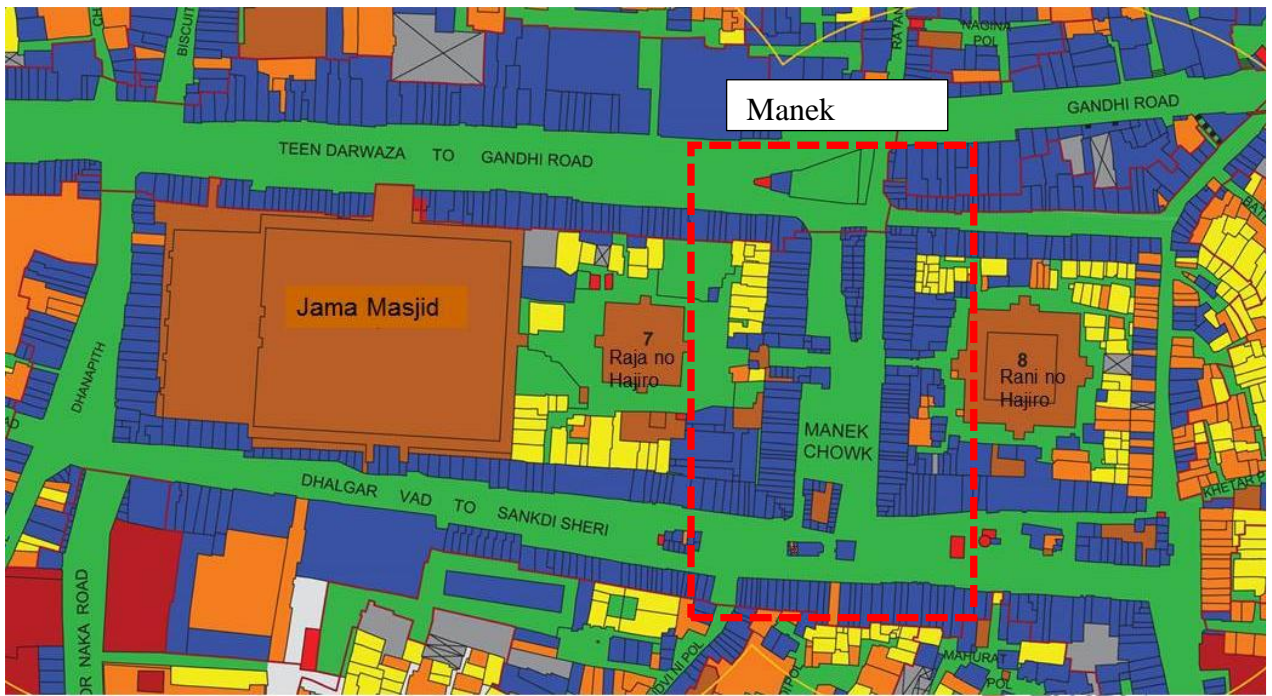


Figure 7: Manek Chowk, Landuse Map

Land Use Key

(Source: World Heritage Nomination Dossier-Historic City of Ahmadabad)

- | | |
|---|---|
| ■ Institutional | ■ Residential |
| ■ Public | ■ Religious |
| ■ Amenities | ■ Commercial |
| ■ Public Open | ■ Mixed |



Figure 8: Food market at night in open space of Chowk

(Source: <https://cmxpv89733.i.lithium.com/t5/imageserver/page/image/id600313iF02E76B5B8E70033v=1.0>)

2.3.5 Sub conclusion:

It may be noted that there is a need for policymakers and planners to understand the significance of civic spaces and these spaces ought to be user focused. The spaces should have the option to satisfy the entire community's needs and multipurpose activities may be essential to use the space to its maximum potential. The civic spaces should be well integrated with different modes of civic transport networks with a visibly safe and secure environment for all users. The civic open spaces should blend formal and informal trading zones, skills development, and religious facilities to encourage social activities and community integration. The next section will focus on typical civic spaces and the impact of social activities on a space

2.3.6 The Dravida or Southern Style Temple, Civic Space

The majority of Indentured Indian labourers in Durban, as mentioned earlier were from South India, notably, civic spaces in South India included numerous public temples. In these places it was common to see Tamil or Dravidian inspired designs with distinct entrances known as gopurams. These entrances often lead to enclosed fortified courtyards that offered refuge to the villagers in times of battles, these space included schools, temples and kitchens, see figure 10 (Singh 2015).



Figure 9: Gopuram at Meenakshi Amman Temple,

(Source: https://en.wikipedia.org/wiki/Meenakshi_Amman_Temple)

According to Harber, Kearney and Mikula, gopurams are extremely large concrete structures adorned with elaborate statues of demons and demigods. The Meenakshi Amman Temple is a typical example showing the rectangular shaped structure that steps upwards and tapers into a barrel vault see figure 9 (Singh 2015).

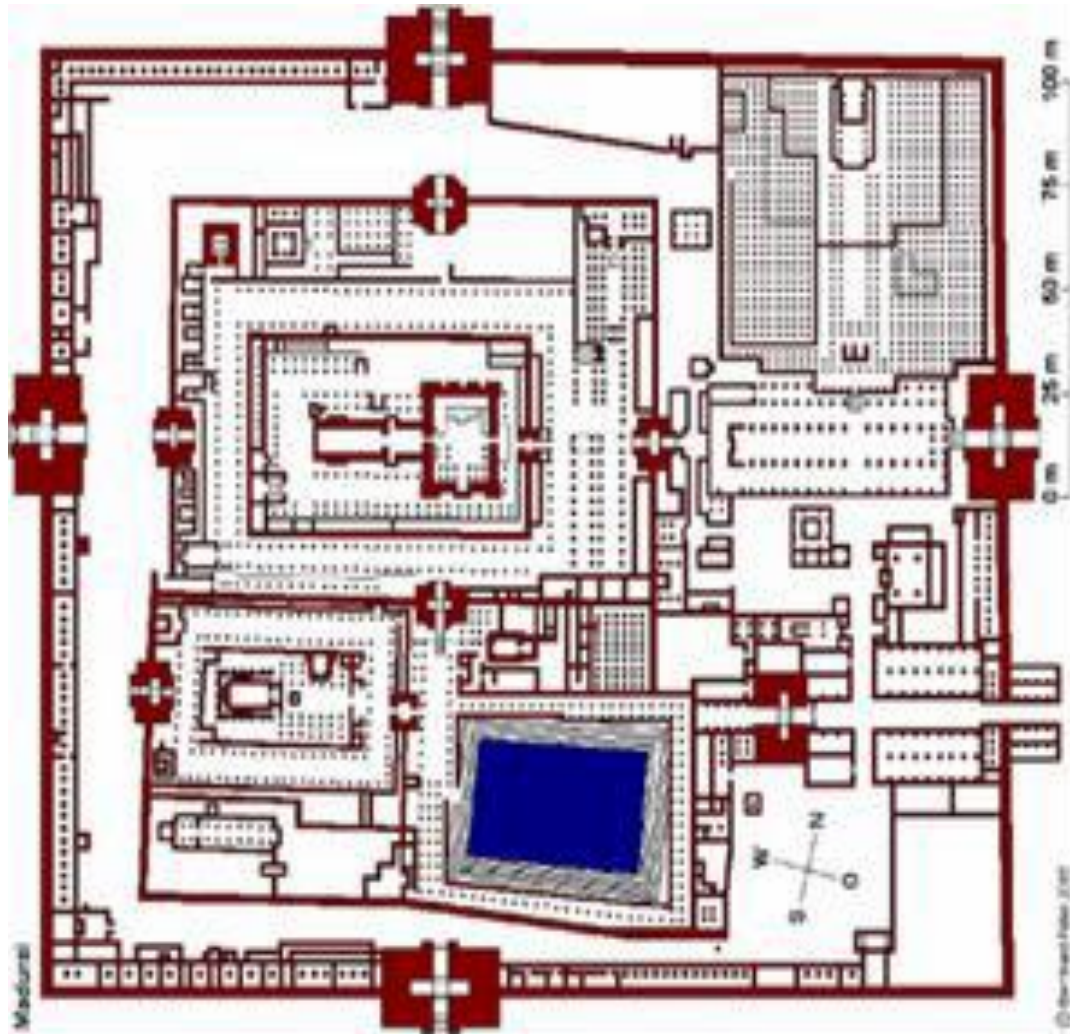


Figure 10: Plan of a typical Dravida style Temple as depicted by the plan of Meenakshi Temple
 (Source: <https://www.google.co.za/search?q=plan+of+meenakshi+temple&rlz>)

2.4 SYMBOLIC MANIFESTATIONS OF ARCHETYPES

Archetypes are an information base commonly derived from contact with a culture over time. There is therefore no human innovation imposed on this information base. Archetypes have behind them a history, as discussed by Jung, typically built up by conscious references to cultural traditions. Over time, a society may settle on certain principles that are fundamental to its activity and move them further into the future. Archetypes are characterized by thought patterns as emotional manifestations that are recognizably the same across the planet. The trends are repeated again and again and again. (Gopidayal 2011).

2.4.1 Natural Archetypes

In India, Hinduism is the most prominent faith and is closely connected with nature. Possible sacredness is all infused with the elements of the landscape: hills, trees, caves, mountain slopes, rivers, springs and lakes. As the Hindu texts describe, "the gods often play where the groves are, near rivers, mountains and springs and in towns with pleasure-gardens," nature is seen as sacred places (Michell 1977). Traditionally, the combination of shadow, water and seclusion achieves sacredness, which is an important part of Hindu culture.

The translation of its values into the built form transcends that of faith alone, since Hinduism is a holistic religion. There is a set of universal standards that can be extracted: (Luckan 2008):

- The sense of center and the declaration of limits: Center assumes a metaphysical meaning in
The ancient understanding of the core of life applies to Indian architectural archetypes. In Hinduism, the center is the source of all energy and is filled by Brahman. A conceptual center or a manifested center, which is not usually a geometric or physical center, may be this center.
- Attitude toward spatial organisations: the layering of spaces is very deeply rooted in Indian place-making. In Hindu culture-oriented architecture, this is particularly true, as the religion in itself is holistic. Reflective cultural architecture is thus a composition, both functionally and symbolically, of layered spaces, such as sacred spaces and living spaces in daily life.
- Attitude toward order: The Indian architectural response to order, instead of simplifying the spaces to create a forced unity, is to create an amalgamation of a variety of rooms that illustrate their attitude towards embracing diversity. This type of response embraces the contextual drivers, contradictions, and imperfections to construct a dynamic whole in a single concept of order.
- Attitude toward form: historically, arrangement of forms and composition are a mixture of additive and versatile.
- Attitude toward light: The division between the building and the sky in Indian

architecture is constantly blurred. This is encouraged by a play on light and shadow, which in turn constructs a metaphysical setting. This is significant in Hindu architecture, as the importance of light relates to the life of God.

Attitude to symbols and meanings: In architecture, symbols serve as metaphors for cultural values.

In Indian architecture, the symbols established in the landscape and spatial symbols define the archetypes that have existed for centuries. Such archetypes may accumulate layers over time of meanings and patterns.

Water

Owing to their healing and purifying abilities, rivers are known as sacred. This can be seen in the celebration of the Ganges River in particular. Water is necessary for the religion's ritual acts. The symbolism of the Lotus flower, representing rebirth and enlightenment, is attached to water symbolism (Michell 1977).

To provide easier access to the water's edge, a defining architectural feature was developed. Ghats are a series of steps in stone which lead to the edge of the water source. For daily activities such as bathing and water collection, this space-defining feature is used. For Hindu ritual practices and worship, however, this element is also used (Luckan 2008).

Trees

The sacred tree is a sign in any village and city that can be found. The tree is commonly the Banyan tree, which has been renowned for centuries for its ability to expand (Figure 11). Parallels are also drawn between the tree's wide canopy and the likeliness of the shelter given to its devotees by God. Therefore, the tree is synonymous with nourishment and treatment. Usually, the shade offered by the sacred tree is the place where meditation is possible and a space where contact with the divine can be achieved is usually embodied. Thus, worship, festivals and rituals are also associated with the Banyan tree (Michell 1977).

Hinduism argues that the act of ritual is the manner in which man catalyzes the universe's positive or negative energies. The acts of sacrifice of animals originally included ceremonies. These acts have, however, fallen away over time, and rituals are performed with offerings of fruit, flowers, and milk. (1999, Albanese).

Traditionally, architectural solutions have been reserved for utilizing religious buildings such

as temples.

One of the initial stages of construction was to erect a pole on a site deemed fit for a sacred building, in the center of the site to which a sacrificial animal would be secured. The pole symbolizes the center of the cosmological structure that our universe revolves around. Thus, the pole symbolizes the connection between heaven and earth (Albanese 1999).

The sacrificial stake is linked to the essential spiritual symbolism of the tree. A tree is the symbol of fertility and life. It is rooted in the earth symbolically and enters the heavens, thus representing the spiritual direction that must be followed by man. Since ancient times, divine encounters have been thought to occur under trees (Albanese 1999). Trees are believed to be the birthplace of spirits of guardianship.

The area under a tree becomes a new zone distinct from the surrounding space, as Luckan asserts. This is known as Luckan's 'outdoor room, which historically defines an outdoor public space (Gopidayal 2011).



Figure 11: Ritual acts around a tree

(Source: <httpsbharathgyanblog.files.wordpress.com201306women-celebrating-vata-purnima.jpg>)

Mountains

In Hinduism, mountains and hills are symbolic of the void in which, creating a sacred dimension, the two hemispheres of heaven and earth meet. The room in which the Gods reside and conduct sacred rituals is believed to be this dimension. Thus, Hinduism dictates that the summit of mountains and hills is a place of transition between the world of man and the world of gods (Albanese 1999).

2.4.2 Spatial Archetypes

Courtyards

One of the more important spatial archetypes in Indian architecture is the courtyard (Figure 12). This room is both culturally symbolic and climatically realistic. Courtyards in both public buildings and private homes are traditionally used as outdoor public spaces. Usually, a tree and a water source dominate space, producing a micro-climate. In Hinduism, layers of meanings and symbolism are assigned to this room (Luckan 2008).



Figure 12: Courtyard of Fatehpur Sikri, India

(Source: <https://media-cdn.tripadvisor.com/media/photo-s/05a8f8d6/fatehpur-sikri.jpg>)

Ghats

One of the most symbolic Ghats is considered to be the Ghats of Varanasi (Figure 13), which exist along the vital Ganges River. For many purposes, the various people who rely on the river use the ghats, ranging from the mundane tasks of practice to the act of meditation and the ritual process of cremation and worship. In a way, the architectural aspect becomes a trigger for an integral element of being a Hindu; the sense of community. The Ghats is a space that encourages social interactions (Gopidayal 2011).



Figure 13: Ghats of Varanasi, India

(Source: https3.ap-south-1.amazonaws.com/zo-mediablog_photooldvaranasi6.jpg)

Kund

Other sacred spaces that stimulate social interactions or meditation are Kunds. As mentioned by Luckan (Luckan 2008), Kunds are sacred spaces that are defined by terraces or steps. In general, space is a sunken area that, in the form of a plan, may be a square, a rectangle, a circle or even a polygonal. The kund is typically located in the middle of a complex of buildings. The center is often filled with water, or a flower, in many existing developments (Figure 14) (Gopidayal 2011).



Figure 14: Kund in the city of Ujjain, India (Source: <https://img.traveltriangle.com/blog/wp-content/uploads/2020/03/Gomti-K>)

2.4.3 Design Principles of Vastu Shastra

The primary aim of a structure is to foster an alignment with natural law according to Vastu Shastra. Architects aimed to replicate the seamless structural form of the Vastu design that exudes energy and life. According to Dr. Sthapati, “Vastu science views the world as a living entity rooted in space and a member of the universe’s cosmic, living body” (Singh 2015).

Borden states that the following basic parameters for the collection of large sites must be taken into account:

- Orientation of the building,
- The shape and orientation of the plot,
- The general slope of the plot and the neighbouring topography,
- The exceptional natural features on the site or close by,
- The condition and quality of the earth, the quality of the ground water and the soil’s ability to withstand the load of the Vastu structure applied upon it, and
- The existence of man-made elements on or nearby the Vastu site. Well landscaped gardens close by are preferred.

The Importance of Colours

Colours, according to Vastu Shastra, are correlated with feelings and powers. In the realization of vast structures, certain colours increase the observer 's mood and enhance their reaction to vast space. Gopidayal explains that the major colours are violet, white, blue, gray, orange, yellow and red. that each of these colours has a distinctive feeling attached to it and a natural element (Singh 2015).

The Brahmasthan, The Central Core

Borden quoted Sthapati as saying that "by constructing four walls and a roof in a constructing, we encompass universal space." The structure becomes a living organism at this point. "The living organism produced in Vastu architecture is a vibrant structure represented at its heart with a light-energy heart, known as the" Brahmasthan. Figure 15 (Singh 2015).

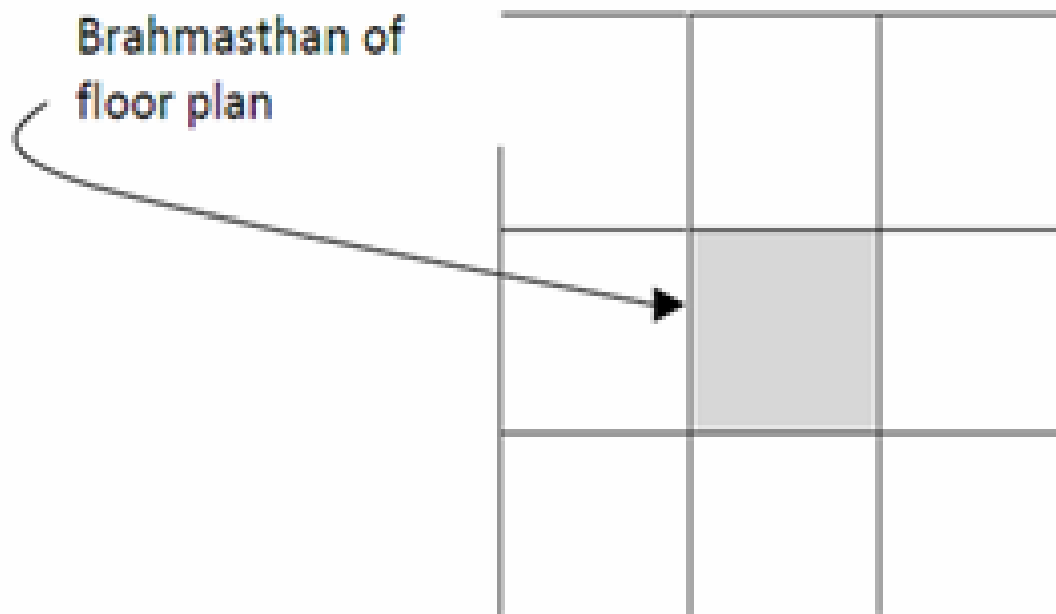


Figure 15: The Brahmasthan.

(Source: <https://www.google.co.za/search?q=vastu+purusha+images>)

The Five Primary Elements

According to Gopidayal, Hindu folklore suggests that there are fundamental life-giving forces in which everything exists, these elements consists of Earth, Water, Air, Fire and Space.

2.5 COLONIAL INFLUENCES ON INDIAN CIVIC SPACES

The perception of Indian civic spaces and Colonial civic spaces has been totally different for hundreds of years because of its residents' lifestyle. An individual's lifestyle relies upon the climatic conditions, socio-cultural, monetary and political circumstances of a specific location.

In the Indian setting, civic spaces were very significant and always accommodated for typical socio-cultural activities such as, political, business, relaxation, recreational and spiritual. In city planning, the civic spaces in Harappa and Mohenjo-Daro were well planned and given priority. The open square was erected on a platform with various types of buildings, such as the Great Bath and Assembly Hall. These open spaces were accessible to all inhabitants of a community, providing vital spaces for urban populations.

Later on, various kinds of open spaces were given to different groups of citizens due to the onset of aristocracy. The idea of availability of all open spaces for civic engagement seemed to have shifted. The Royal Patronage and Brahmins were able to access and enjoy spaces inside the royal residences; these open spaces were formal gathering spaces, for dance performances and recreational parks. The basic masses were simply bound to open areas in the temple courtyard. The temple courtyard comprised of different areas, for example, civic gardens ("Thottam, Nandavanam"), sacred groves ("Kaavu"), bathing ghats ("Kadavu"), step wells, ("Kunds and Vavs") and temple tanks ("Theppa kulams"). The temple yard spaces were used to show different expressions of painting, dance, music, and writing as exhibition areas. Other open spaces generally called "bazaar", were used as marketplaces, these spaces were utilized for the most part by the general civic and these spaces were adorned during the celebrations. The design of these spaces was complex and organic and the integration of formal and informal spaces was a very well thought out method of planning (Gangwar 2018).

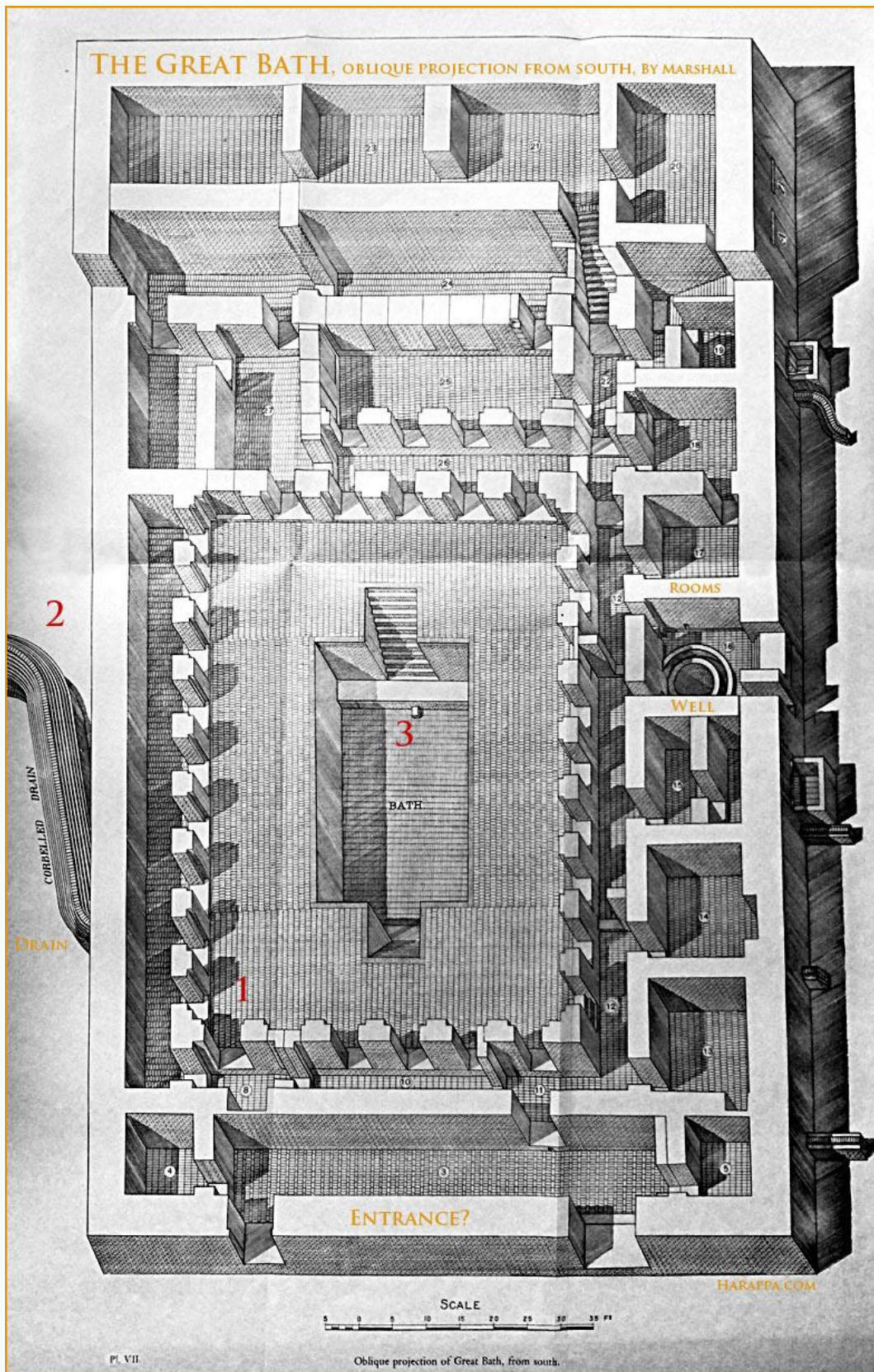


Figure 16: Great Bath at Mohenjodaro

(Source: <httpswww.harappa.com/sites/default/files/great-bath-diagram-done-4.jpg>)

British rulers generally had alternate thoughts of civic spaces due to socio-cultural and climatic conditions within their own country, so they completely disregarded Indian civic Spaces' principles. This issue led to loss of identity to Indian civic Spaces. The sizes of spaces were enormous, and several redundant elements of colonial influence were included. The scale was not suitable to the local context. Political protesters generally utilized the civic open spaces for India's freedom; therefore, the British rulers never allowed the common natives to use these spaces.



Figure 17: New Market, India, Kolkata (Source: Gangwar, 2018)

The above is an example of British influence on Indian civic architecture with a distinct character. However, this specific design accommodates modern-day vehicular traffic and also caters for an intimate pedestrian street scale, with covered walkways for trading and social interaction.

2.5.1 The British Bungalow

An Anglicized version of a Bengal word, *bānglā*, is the word 'bungalow.' *Bānglā*, originating in India, refers to a local vernacular style of construction that, due to its easy adaptation to the British way of life, gained popularity with the British occupation. The first English use of a *bānglā* derivative appeared in a letter sent by Edmund Foster, an agent of the East India Trading

Company (Cody 2009). "Foster noted in his 1659 letter that an attacking native army rapidly set up camp," making bunguloues and houses. The size or shape of the bunguloues is small in detail, but the meaning of the letter indicated that they were temporary forms of housing, quickly and easily mounted (Cody 2009).

Records of this unique type of indigenous housing were not listed until 1676. "Another East India Company agent noted the development of" Bungaloes or Hovells for housing in the service of the Company for all such English in his journal Streynsham Master. As mentioned by Foster the form of building suggested that it was a primitive building (Cody 2009).

They commented on the temporary nature building and its lack of refinement, but there was no description of the form of building. Comte du Modave was one of the first European visitors to explicitly describe what he thought was a Bānglā. In his terms, "A bānglā is a bamboo pavilion covered with thatch or leaves from trees that one builds for a particular occasion" (Cody 2009).



Figure 18: A Traditional Bānglā (Source: Cody, 2009)

Although in India, the Europeans saw bānglā as a temporary form of housing, it was used as a more permanent type of housing by native Indians. Banggolo was the term used by natives, instead of referring to their own homes as bānglā. On two sides, its sloping roof and its two gable ends were defined by as Banggolo. The same general house plan and layout were used by both the wealthy and the poor, increasing or decreasing the primary structure's scale (Cody 2009).

The thatched roof that extended on all sides, creating a veranda, was the most prevalent feature of a banggolo. This scheme appeared in the earliest accounts of Indian bungalows (Figure 18).

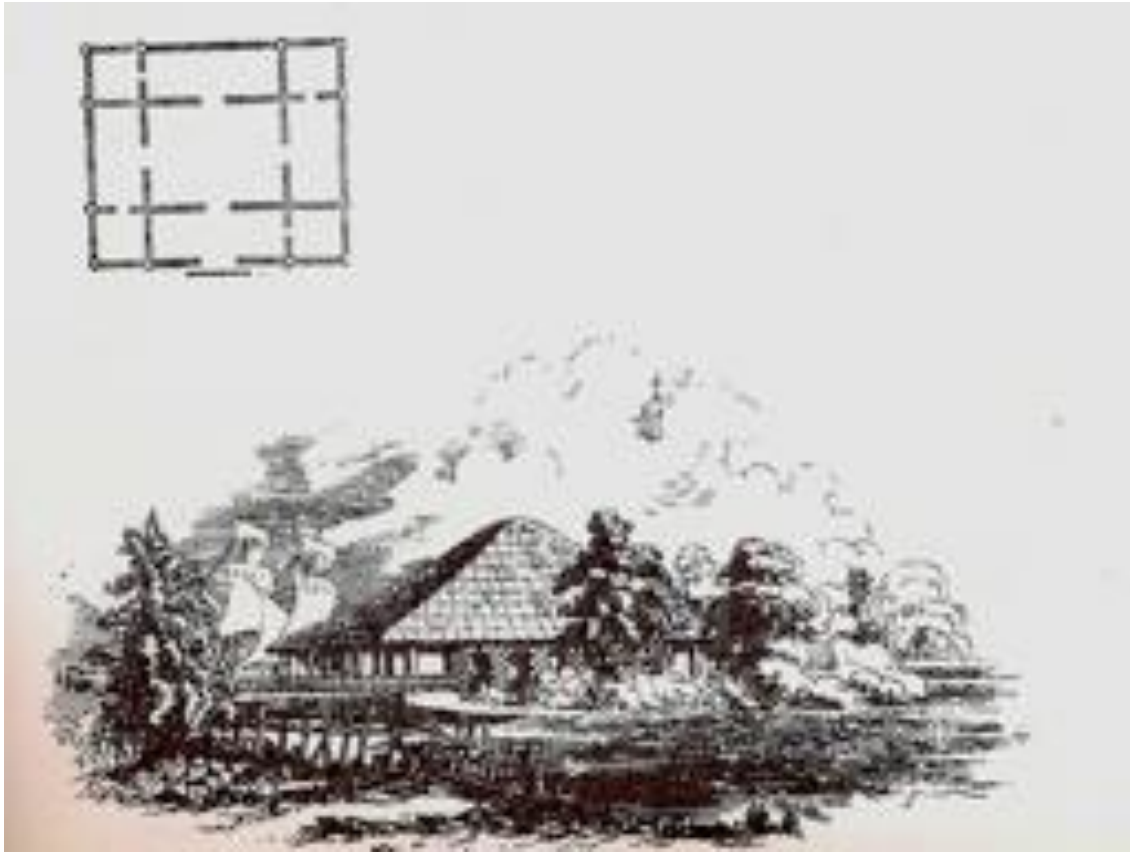


Figure 19: Anglo-Indian Bānglā (Source: Cody, 2009)

It was noted in a letter written in 1783 that the British would turn the large verandahs as required into extra rooms for themselves and visitors (Cody 2009).

A more extensive summary states:

Bungalows are buildings in India that are usually elevated one, two or three feet from the ground on a brick base and consist of only one level; Their plan is typically a large room with a dining and sleeping room in the middle and sleeping rooms at each corner; the entire building is covered with one general thatch, which is low on each side; verandahs or porticos are the spaces between the corner rooms. With windows and a wide door in the center, the middle hall is lit from the sides. The central verandahs at either end are often converted into rooms (Cody 2009).

This version of a bungalow, bānglā, or banggolo was the prototype for the housing style adopted by the British military and industries in India.

As more British and European citizens began to conduct business in India, the traditional *bānglā* or *banggolo* was adopted as the main kind of residential architecture. In most British records and texts, the housing style was not referred to like a *banggolo* as the natives did, but instead, a *bānglā* by the more formal term. The term was used to refer to the houses built for the Bengal district officers using local practices, and reflected a specific style of construction. The term was used to refer to different types of construction, ranging from a single-family house to larger compounds, although *Bānglā* has some similar features. The Anglo-Indian *bānglā* is distinguished by its low profile and exterior porches that extend around most of the building (Cody 2009).

The *bānglā* roofline has numerous accounts; some records show that a low sloping roof extended over the porches, providing heat cover, while others suggest that the *bānglā* roofline was of a higher pitch, made of thatch, with extensive overhanging eaves.

This form of vague characteristic significance has become part of the bungalow's unique history and development. The overhanging eaves, one of the most readily recognizable characteristics of a bungalow, were noted in both descriptions, despite the roofline difference. The interior was spacious with rooms opening onto the porches and a central living area to facilitate airflow. For cross-ventilation, numerous windows, doors and clear-story windows were used (Cody 2009).

The British perceived the *bānglā* as primitive and unfit structures for long-term occupation. The term "hovel" was often used interchangeably with the word *bānglā*, giving a hint of how the British felt about the native style of architecture. While *bānglā* may have originally been seen as a temporary form of accommodation, it eventually became part of British architecture's vocabulary (Cody 2009).

The simple single-story design, complete with a strong roofline covering the porches, became a popular type of military architecture in the British Empire. The low cost and rapid rate of construction made the *bānglā* a common type in many British territories, such as India, South Africa, the British Virgin Islands and Australia. Moreover, adapting the *bānglā* to the unique needs of the different geographical areas was simple.

The low roofline and well-ventilated plan made the structure much more fitting for tropical areas than traditional British architecture styles. To British merchants and their kin, the familiar shape and forms became a retreat. A safe refuge away from the uncertain and foreign world helped to establish the addition of traditional European elements (Cody 2009).



Figure 20: English Adaptation of the Anglo-Indian Bānglā (Source: Cody, 2009)

As it was introduced to each new territory, the bānglā took on vernacular architectural characteristics from each area, allowing the architecture to blend in with the environment so as not to attract too much attention to itself, but also to maintain a sense of separateness (Figure 19). Unlike traditional indigenous architecture in the Empire, the bungalow was never intended to be used as agricultural architecture (Cody 2009).

The objective was simple, to provide shelter and to supervise a workplace. They have never been intended or used as sites of processing or manufacturing. As an indigenous, local, vernacular form, its origins have influenced how the British acquired the bānglā and, by extension, the bungalow. The style of construction was seen as a means of communicating with nature and the climate in unfamiliar territories, but from a safe distance.

The bungalow came to be regarded as a refuge upon its arrival in England, a place to reconnect with nature. As a result of its origins in the most remote areas of the Empire, the bungalow was embraced as a suburban and rural type of architecture rather than an urban form of architecture (Cody 2009).

2.5.2 Subconclusion

It can be assumed that, in view of the fact that their socio-cultural and climatic conditions were very different, the Colonial open spaces and Indian open spaces were planned. It can be noted

that the Colonial open spaces were based on a much larger scale with geometrical forms, and urban design principles, while Indian civic spaces were based on a much smaller scale with an organic and natural growth as well as a mixed land use conceptual approach. One of the key differences was that Indian civic spaces were used as a large part of local citizens' everyday life, while Colonial civic spaces were used for a specific time of the day for such leisure activities (Gangwar 2018).

It can be concluded that Indian cities' spontaneous urbanization can depreciate the quality of life of their local people. Civic open spaces, such as health care, leisure, entertainment and socio-cultural identity, are used as vital instruments to offer critical services to local people at no cost. The Colonial idea of civic space, for instance, shopping malls, gated parks within communities and so on, has limited these spaces to rich people because of globalization and denied access to the poor (Gangwar 2018). The exploration of traditional Indian civic spaces place a strong emphasis on religious and market bazaar type facilities accessible to all members of society regardless of social or financial status. These spaces were also designed to suit the climate and comply with environmental sustainability issues. The contemporary civic spaces may be ready to satisfy the advanced technological needs of its end-users, for example, access to Wi-Fi, modernised buildings, sufficient parking etc, and simultaneously address issues pertaining to identity, culture and values (Gangwar 2018).

2.6 COLONIAL INFLUENCE ON CIVIC ARCHITECTURE IN DURBAN

The bay of Durban was first discovered in 1497 by Vasco de Gama and was named after Sir Benjamin Alfred D'Urban. However it only began to develop in the 19th century after it was annexed to the United Kingdom. The bay was in a strategic position for international trade and therefore attracted many job seekers from various provinces, communities, rural areas and cultural backgrounds. The rural community dwellings maintained the Dutch heritage and traditions of the early colonial settlers, however the British influences brought about a more formal and monumental style of buildings that showed off their domination and stature (Benincampi 2018). British influence on city planning and civic space design, can be noted in their implementation of the Eurocentric grid iron street layout shown in figure 21. In comparison to a typical tradition city in India as seen in figure 22, the layout is very organic, sporadic and therefore creates an urban sprawl. Many of these traditional city's were not design for the motor vehicle, however the streets in Durban were wide enough to accommodate the

movement of horse and carts as well as pedestrian sidewalks. The grid iron system allowed for a logical and cost effective method of expanding the city centre with necessary infrastructural services.

The British colonial era sustained a long period of growth and prosperity. It brought a large number of migrants, mostly from India and local provinces, giving rise to a cultural and social infusion which affected above all architecture, to the point that it is possible to state that “Southern Africa architecture is a rich combination including indigenous domestic architecture (Zulu, Tswana, Khoi), Afrikaner (Dutch) and English settlements, Cape Dutch architecture, Malay architecture (Hindu and Islamic), Republican, Victorian and Edwardian architecture” (Benincampi 2018).

The political situation in South Africa had a huge influence on its architecture, the various phases can be noted as the Union of SA in 1910, the impact of the World Wars, the apartheid era 1948, the Republic of South Africa in 1961, and the democracy in 1994 (Oliver 2017).

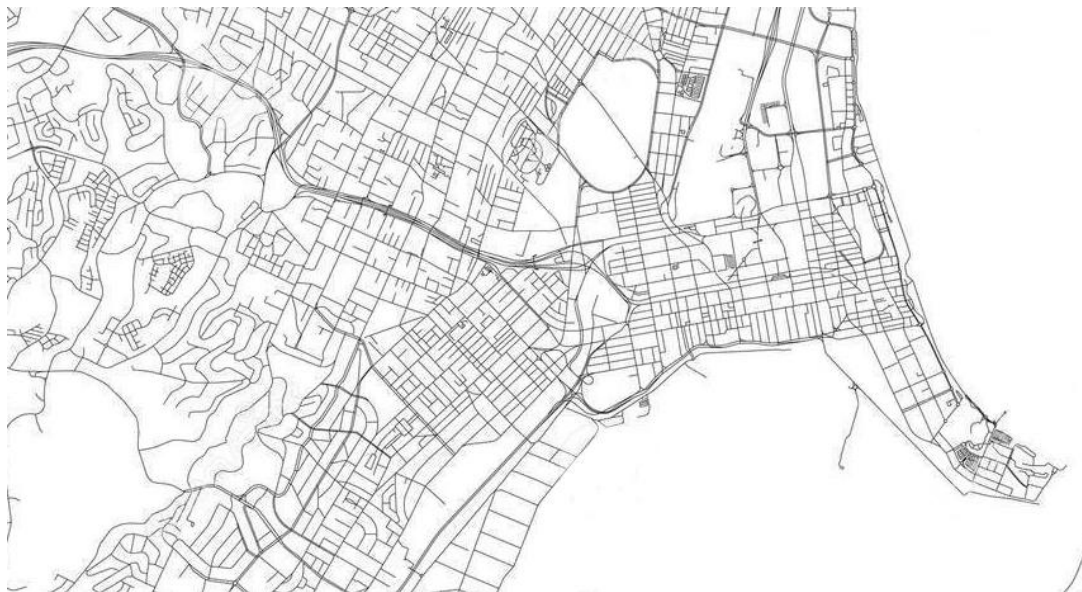


Figure 21: Historical Map of the Durban CBD (Source:<httpsthumbs.dreamstime.comzstreets-durban-city-map-south-africa-africa-streets-durban-city-map-south-a.jpg>)

This map shows typical grid iron influence of British Colonial Rule within the City of Durban.

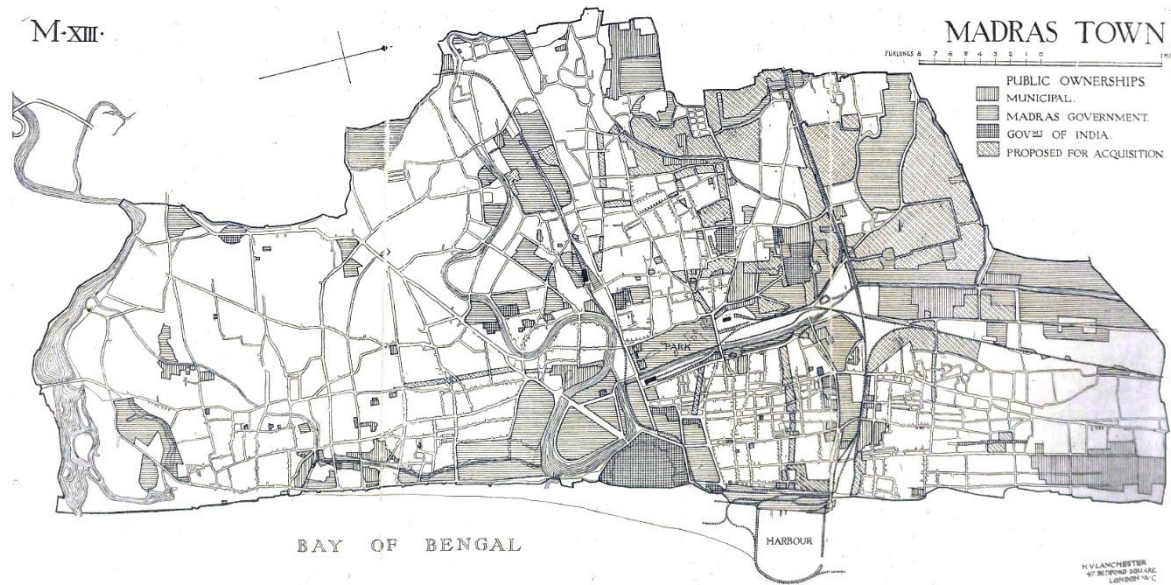


Figure 22: Historical Map of Madras Town in South India

(Source: https://upload.wikimedia.org/wikipedia/commons/3/33/Madras_ownership_plan.jpg)

This map shows a very organic layout plan of the Madras Town, the land uses are intermingled and the road network has a very sporadic design, the city grew very naturally as the need arose.



Figure 23: A photograph of KwaMashu township taken in 1958, north of the Durban CBD. A Typical Box House Type Housing Developments for the Black Communities, during apartheid.

(Source: Rosenberg & Vahed, 2014)

2.6.1 Creating Meaningful Place in Post-apartheid Durban

“From birth we try to orientate ourselves in the environment and establish a certain order. A common order is called culture. The development of culture is based upon information and education and therefore depends on the existence of common symbol-systems. Participation in a culture means that one knows how to use its common symbols. The culture integrates the

single personality in an ordered world based upon meaningful interactions.” (Norberg-Schulz 1979: 69)

In times of rapid social change, an awareness of history and present circumstances must be generated in order to grasp man's perspective. Man sees his world in two ways; the first is to use the senses to understand conscious information, the second is to interpret unconscious knowledge (Jung 1964).

In the Durban City context, the Moses Mabhida Stadium and the coastal rejuvenation of the Blue Lagoon or Umngeni river estuary area are good examples of civic developments that encompasses a wholist approach to inclusive design. As mentioned earlier the Superkilen Park development successfully addressed issues faced by a diverse and multi-cultural society, using simple urban design elements within the public realm.

The Moses Mabhida Stadium Precinct can be seen as a people centred public space that aligns itself with the social change and landscape of a democratic South Africa.

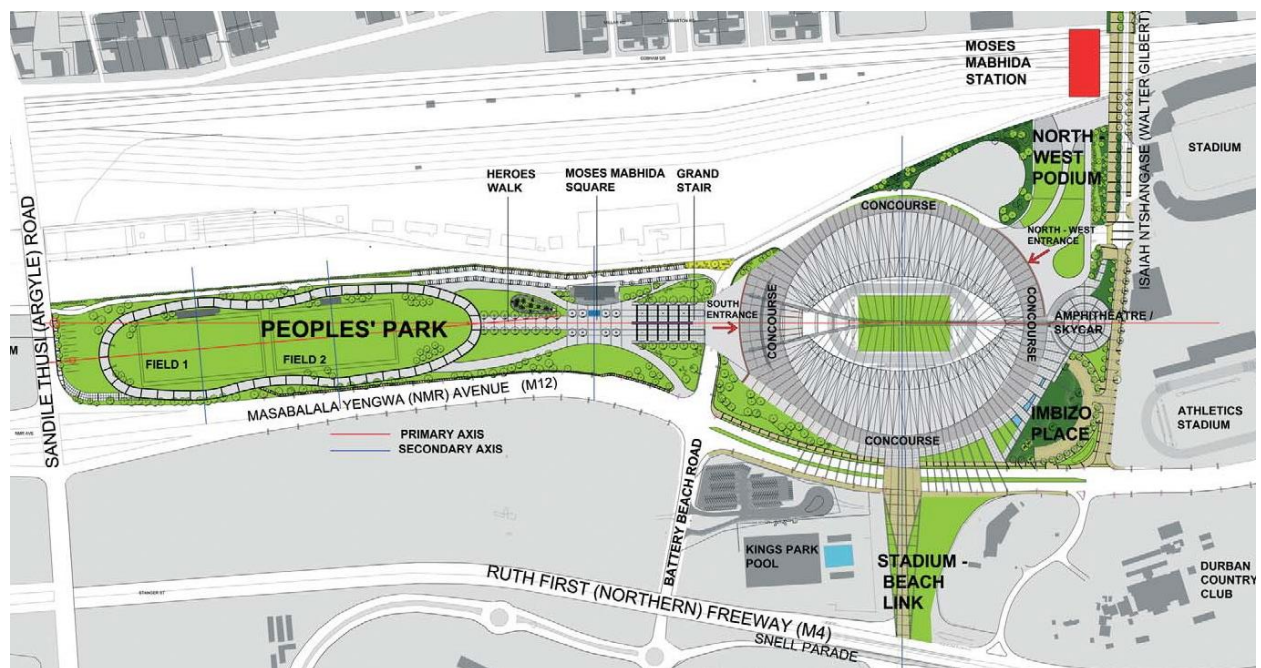


Figure 24: An urban contextual map of the iconic Moses Mabhida Stadium, showing the well-integrated public realm that responds to its surrounding urban setting. This stadium was designed and built Post-apartheid and therefore creates an environment that is inclusive of all cultures within the City of Durban. (Source: KZNTA Journal issue 1/ 2010)

The municipality realised that the actual stadium would only be used on match days and special events to prevent the building from becoming a white elephant in the city. They agreed that the surrounding public realm would become a vital component of sustainability within the precinct.

This also created the opportunity to recognise and celebrate the struggles and victories the country has been through historically. The design team's approach to the civic space was very social-cultural, the theme was simply 'place, Spirit, memory'. This led to the conceptualisation of various precincts around the stadium namely: 'Peoples Park', 'Heroes Walk', 'Moses Mabhida Square', 'Imbizo Place' and the 'Stadium Beach link'.

There are four main entrances to the stadium, the first one is the South Entrance from People's Park onto the concourse, the second is from the North-West Entrance close to the existing railway, the third is from the East Entrance, the Stadium Beach Link off Masabalala Yengwa Avenue and the fourth is off Battery Beach Road for VIP, media and players.

People's Park to the south of the stadium was initially meant to include only multi-purpose playing and training fields, however the urban design team changed the approach to creating a 'place for recreation' and also included practice fields and a running track. They conceptualised the 'Heroes Walk', 'Moses Mabhida Square' and the 'Grand Stair' and ramps leading up the main concourse. Heroes Walk is a processional avenue connecting the southern playing fields to Moses Mabhida Square. The avenue is characterized by trees, lighting, and public seating and articulated with sporting accomplishments etched with the general polished concrete surface on granite bands set flush. The width of the Grand Stair was excessively broad. That led to the proposal for a central water course, cascading to mask the Masabalala Yengwa Avenue traffic noise. The staircase has five landings, each wide enough to accommodate for events such as art exhibits or stalls in the markets (Source: KZNIA Journal Issue 1/ 2010).

Imbizo Place enjoys best location and accessibility, this is the activity zone of the stadium precinct. The hardened surface from the lawn that extends to the parking crescent is characterized by three pools with fountains. People gravitate towards these centerpieces; they are raised and provide restaurant patrons with both an edge and seating arrangements (Source: KZNIA Journal Issue 1/ 2010).

Lawns and local natural plants, including trees and ground cover, have been intensively cultivated throughout the majority of the open spaces. Landscape planting follows the guidelines found in the Durban Inner City and KwaZulu-Natal Coastal Belt Guiding Principles for Landscaping document and the eThekweni Parks Department's List of Useful Indigenous Plants for the Durban Inner City Region. The task was to use greenery that would respond to the micro-climates of the site with consideration of proximity to the sea and cost effective maintenance (Source: KZNIA Journal Issue 1/ 2010).



Figure 25: People's Park, view of the Heroes Walk, Moses Mabhida Square and the Grand Stair
(Source: KZNIA Journal Issue 1/ 2010)

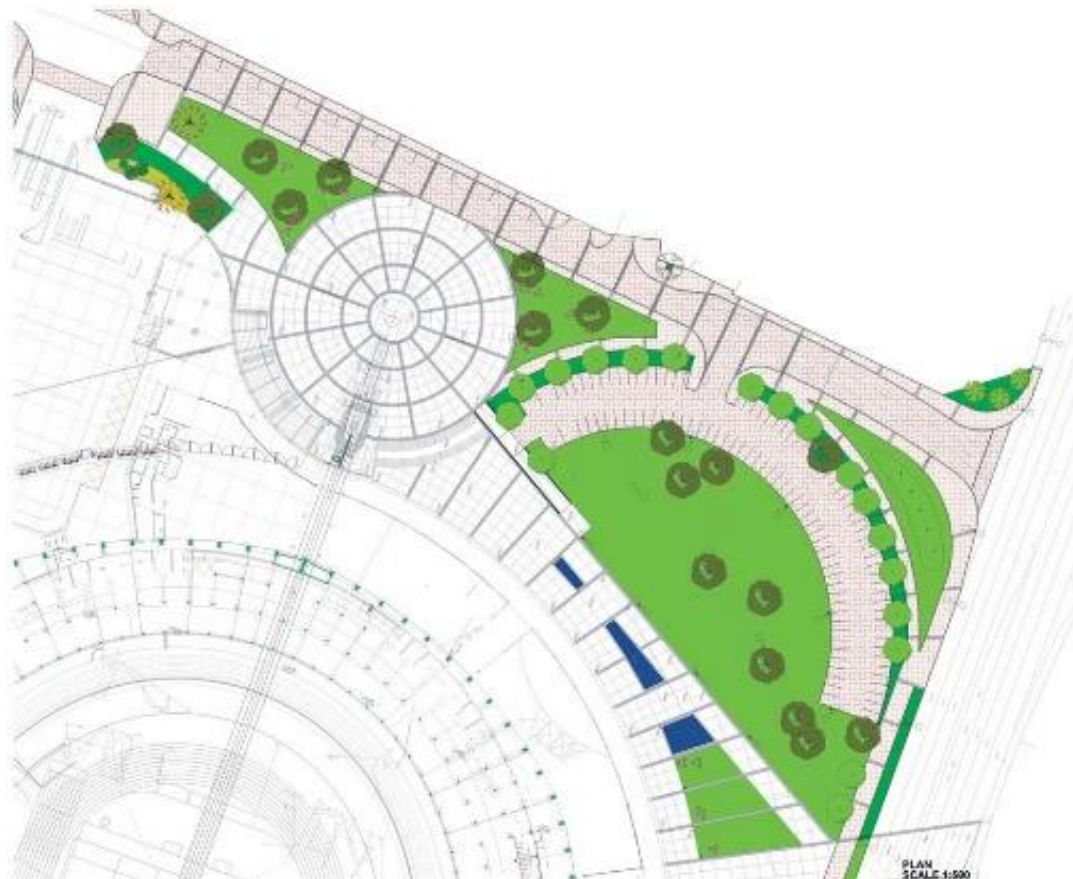


Figure 26: Plan of Imbizo Place, showing public parking area, landscaped area and water feature.

(Source: KZNIA Journal issue 1 /2010)



Figure 27: Raised water feature and colonnade that relates to human scale.

(Source: KZNIA Journal issue 1 / 2010)



Figure 28: The Blue Lagoon Precinct coastal rejuvenation project focuses on uninterrupted pedestrian circulation. The recreational water feature at the Umngeni River's edge allows for pedalling boat activities that adds to vibrant social atmosphere.

(Source: Aerial base map, Google Earth image accessed on 8/12/2020, Overlay by author)

The Blue Lagoon beach is located in the coastal area of Durban North, KwaZulu-Natal province. Blue Lagoon beach is used by the public for leisure and entertainment. It provides space for fishing, vendors, braai, and swimming. During apartheid it was designated to the Asian race group, and post-apartheid it is used by everyone.

Public spaces like beaches were also not shared between Whites and Non-whites. Beaches designated 'White only' (such as Boulders Beach) were strictly segregated offering more facilities, bathing, and interest. Africans were only allowed on Mnandi Beach, and although Coloured people were given more coastal areas, these were unappealing and lacking in facilities. In Durban South, beaches were allocated to the Black community, while Front beach and North beaches were allocated to the White community and North (Blue Lagoon beaches) to the Indian community.

The launch of the 2010 South Africa World Cup unveiled a new urban landscape in the metropolitan city of Durban, with public spaces being an important part of the creation and visual display. Durban under eThekweni municipality revamped its coastal beaches stretching from uShaka Marine World on South beach to Blue Lagoon on North beach. This development agenda is not very different from the developments that mostly occur in developing nations for example India and Brazil. Public spaces have proven to be an important part of the modern strategy needed for the promotion of cities to potential investors and the raising of foreign profiles.

It is evident that the Blue Lagoon beach development project was partly a way for the eThekweni municipality to try and correct the injustices of the past by transforming public spaces that were divisive during apartheid to make them more inclusive (Zulu 2016).

2.7 THE GREEN HUB

The Environmental Planning & Climate Protection Department (EPCPD) of the eThekweni Municipality needed a room for eco-tourism bookings, birding and nature tour guides, river rangers and their canoes in February 2010, dispensing brochures on local flora and fauna, environmental exhibits, children's theater, and four staff facilities. At the same time, the Department of Parks requested a new permanent public toilet block in the city. The design had to show environmentally sustainable construction and operations, as advocated by the EPCPD Green Guides, in line with the key purpose of the house. (Source: KZNIA Journal issue 1 /2011).



Figure 29: The Green Hub, Blue Lagoon Precinct.. (Source: KZNIA Journal issue 1 /2011)

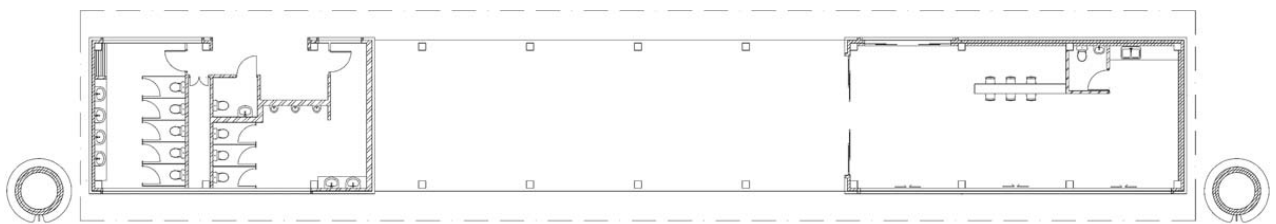


Figure 30: Floor Plan of the Green Hub Facility

(Source: KZNIA Journal issue 1 /2011)

The building remains unfenced, merging with the park and its users. The elongated north-facing plan with narrow room widths that enhanced cross-ventilation and daylighting was informed by passive architectural design. At both ends, the unifying roof harvests rainwater in tanks to water the surrounding landscaping. The Green Hub is currently operated by the Green Corridor project of the Municipality and is open during working hours to the public every day.

The famous Durban ‘Golden Mile’ terminates at the Blue Lagoon precinct and offers the public a vibrant leisure and entertainment social space as well as an educational Green Hub facility that is easily accessible to all.

2.8 CONCLUSION

This chapter focused on civic spaces from a multicultural perspective since we are dealing with diverse cultures in Durban. The ‘Superkilen Park’ helped better understand how to integrate various cultures together. Thereafter the chapter focused on civic spaces from a global perspective in India and down to a local context that allows us to understand how civic space has changed from traditional perspective to a contemporary setting in Durban. British colonial influence has also impacted the concept of civic spaces with a grid iron layout within the CBD. The township areas lacked proper planning in terms of civic space and did not

consider the community aspects of integration and cultural access.

The Indentured Indian communities were under extreme oppression by Colonial and apartheid laws of the country, however they began to use left-over spaces in the public realm to express their culture and identity and thereby improve the quality of living by creating economic empowerment. They used the memory of life in India as a tool to help them to survive in a foreign land that did not cater for their basic social needs. The Indian community became an important part of the landscape of Durban, they somehow managed to establish themselves and create a sense of meaningful place in a land that was meant to breakdown their spirit and keep them under oppressive laws. This chapter outlines key objectives of the research problem arising from South African Indian culture and identity, and from a global perspective of social influence on civic space adapted specifically through India; 'their land of origin', and how this identity lends itself to the local Durban context.

'Built environments are reflective of contemporary place of 'Genius Loci', whose identity is driven by contextual phenomena so as to create a sense of belonging amongst users' (Mthethewa 2019). In short, the built environment ought to reflect the identity of the people occupying space within a specific region. The next chapter will deal with ideas of what is considered a manifestation of a people's culture and historical forces that could be understood through a process of cross disciplinary analysis.

**CHAPTER 3: PHENOMENOLOGY OF
PLACE**

3.1 INTRODUCTION

A socially cohesive environment and human sensory aspects of phenomenology that translate into architectural space will be emphasised in this chapter. Understanding the relationship coupled with the concepts of perception and sense of place will enlighten the design process of a facility that will empower people from different walks of life socially and economically.

In attempting to understand multi-sensory, practical, aesthetic, environmental and socio-cultural dimensions, symbolic concepts will be identified, and different examples will be looked at. In terms of the natural forms that they bring to the world, the natural landscape will be discussed. The phenomenology of place refers to the degree of consciousness that one encounters internally and externally within an environment. In order to understand the qualities of existential spaces, the idea of *genius loci* or the spirit of place will be examined.

On the subject of phenomenology, Martin Heidegger and Maurice Merleau-Ponty were very influential writers. Their students, Christian Norberg Schultz and Juhani Pallasmaa, further elaborated on the relationship between phenomenology and architecture. They brought to light an analytical understanding of how culture and society interact with the landscape and the environment.

3.2 MULTI-SENSORY EXPERIENCE

3.2.1 Body and Space

(Body -Life -People -Social aspects / Space -Environment -Sense of Place -Architecture)

Pallasmaa states that sensory perceptions are constantly interconnected through the body and the environment and self-inform and redefine each other, referring to the Merleau-Ponty theory that made the human body the center of the world of perception and considered the body in the world as the core of the organism. We probably remember special places because our bodies have been affected or we have witnessed them through our bodies (Shirazi 2009).

In experiencing a building, Pallasmaa believes in an existential experience, so that "experiencing a space or a house is a dialogue, a kind of exchange: I place myself in space and the space resides in me"(Pallasmaa 2005). In the existential perception of space, the body and space unite and integrate with each other, so that we encounter a space-body. A building is experienced; it is approached, challenged, aligned with one's body, moved around, used as a condition for other objects. Architecture guides, scales, and frames behaviour, emotions, and perceptions (Shirazi 2009).

Merleau-Ponty argues that, partly because of our existence as embodied beings, place is a central ontological framework of being in the universe. We are "bound by the body to be in place," so our world is automatically governed in terms of here-there, near-far, up-down, above-below and right-left by the very physical form of the human body (Seamon 1984).

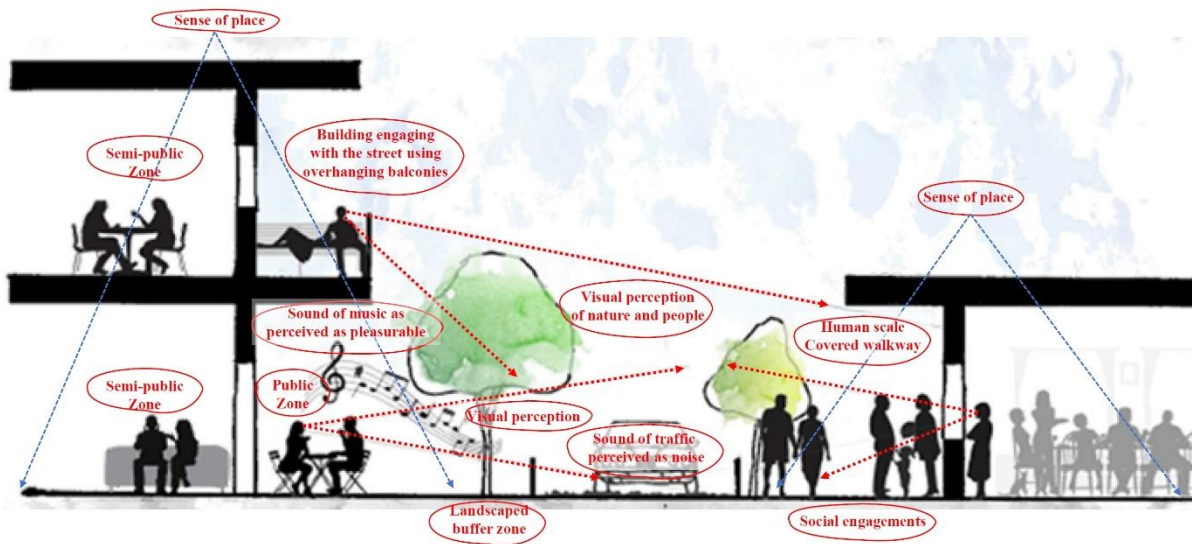


Figure 31: Sketch illustrating the multi-sensory engagement of the human body with the built environment.

(Source: Theory of Architecture and Urbanism project 2019, overlay by author)

"In the spatial experience, Pallasmaa explains the significance of the body as follows: "I confront the city with my body, my legs calculate the length of the arcade and the width of the square; my gaze unconsciously projects my body on the cathedral's façade, where it roams over the mouldings and contours feeling the scale of recesses and projections, my body weight matches the cathedral's mass". In the world, I encounter myself and through my bodily understanding. The city and my body complement and define each other. I live in the city and the city lives in me. The body, which is of considerable importance in the experience of space allows us to touch our environment, causing measurement and perception as a consequence. The sense of touch means that humans are integrated with their environment and can eradicate the distinction between the subject and the object.

In experiencing the world; our senses cooperate and constantly connect with our surroundings. The intangible dimensions of space are thus obtained. For example, the footsteps of the person walking in the space are grasped by the material walking on it; the sound reflected in space

helps us to measure space. In this way, the perception of space shows the real importance of measuring (Soltani & Kirci 2019).

The human body has been described by Merleau-Ponty as the beginning of human perception. According to this approach, all environmental meanings begin in the body. In architectural phenomenology, approaches focused on the body and body motion in architecture could find meaning in terms of space perception with the body (Soltani & Kirci 2019).

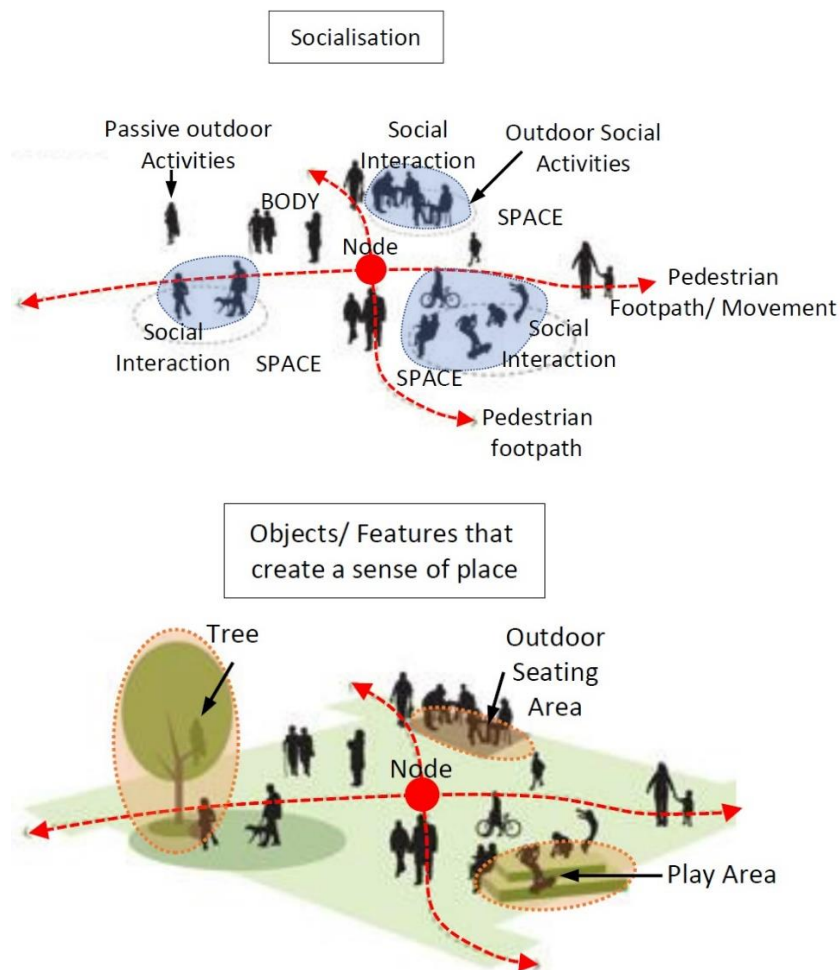
Pallasmaa stated; body, sensation, and meaning are related. Our bodies and movements are in constant contact with the universe; they are constantly educated and redefined by the world and itself. The body-related vision and the world-related picture transform into a single continual experience. There is no body in space apart from its domicile; similarly, there is no space unrelated to the presumed unconscious image of the subject. Evaluating architecture apart from these concepts will be inaccurate (Soltani & Kirci 2019).

In response to our atmosphere, everything about the human body has evolved from our capacity to breathe air in our environment to our capacity to see and hear the perceptual resonances of our world (Myers 2016).

3.2.2 Exploring the Relationship between Socialisation and the Built Form

As mentioned by Kasule, there is a need to consider the social domain and how people use and view space in its entirety in order to achieve social cohesion of different societies through architecture, and how space contributes to the creation of social activities. Place allows space to occur by connecting sociality with space in daily life (Kasule 2016). Furthermore, place is tangible and experienced through the senses, and our actions and experiences in relation to social facilitation and organization in space are moulded and guided by the framework of space around us. It has been argued that buildings consist of daily life's social domain, spaces that function as vectors of social interaction inside and around the house. These interactions are the development of a sophisticated synergy of interconnected environmental energy, process expertise and relationships, described by Jane Jacob (2012) as organized complexity. In essence, the idea of space being social and socially developed is in turn spatially constructed (Kasule 2016).

According to Kasule, the first step that people take when interacting with space is perception. It affects our experience with space. The built environment is thus seen by users as an integral part of social formation, personal development, personal experience, emotions, and memories. Perception in the built environment refers to spatial experience and contact with constructed form that includes the integration of one's body and mind with space through sensory perception that mediates between skin and the built environment (Kasule 2016). Reviewed research has shown that a person or group of people encounter a relationship with a place in which they find themselves through experience, conditions, perception and meaning. The way spaces and the senses affect individuals provide a new way of looking at architecture (Kasule 2016). A sense of place is a result of interaction between person and place, an increase in sense of place creates opportunities for social interaction as the concept encourages people to stay longer in a place and connect with each other (Kasule 2016).



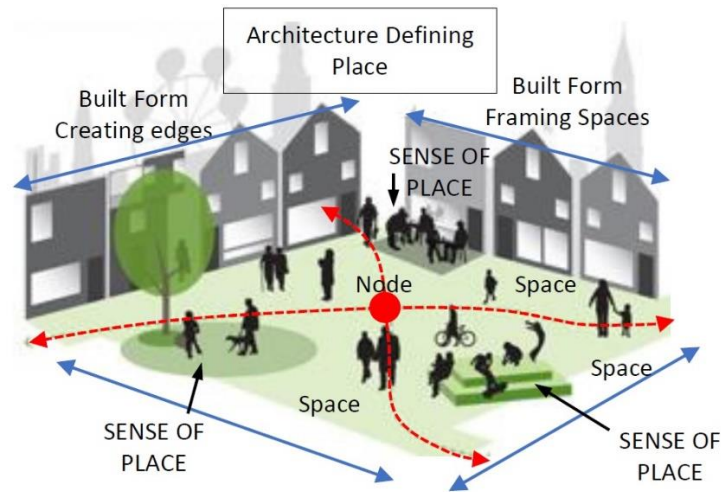


Figure 32: Jan Gehl Methodology of Life, Space, Buildings

(Source: https://64.media.tumblr.com/2f22fcc193e54864d11917d505b8593etumblr_neuicb0srV1qm4bu8, Overlay by Author)

3.2.3 Sensory Man

In his well-known work, *The Eyes of The Skin*, Juhani Pallasmaa transformed the emotional self into the sensory self. He not only sees, but sounds, feels, tastes, and touches the world. Only focused on vision, architecture is mesmerized without "focus and participation" in the flow of images (Tran 2018).

Pallasmaa believes in the supremacy of vision over other senses in Western culture. According to him, in classical Greek thought, certainty was based on vision and visibility and, according to Heraclitus, the eyes are more credible witnesses than the ears. Plato discovered vision as the greatest gift of mankind, and Aristotle believed that vision was the most noble of the senses. Thus, after the Greeks, knowledge became analogous to the obvious vision, and light became the metaphor for truth, as Pallasmaa noted (Shirazi 2009).

“Man looks at the creation of architecture with his eyes, which are 1,7 meters from the ground”, and “Architecture is a pliable thing. I mean by “plastic” what is perceived and measured by the eyes.” Le Corbusier’s philosophy that “Architecture is the masterly, correct and magnificent play of masses brought together in light” is another testament to his eye-centric architecture (Shirazi 2009).

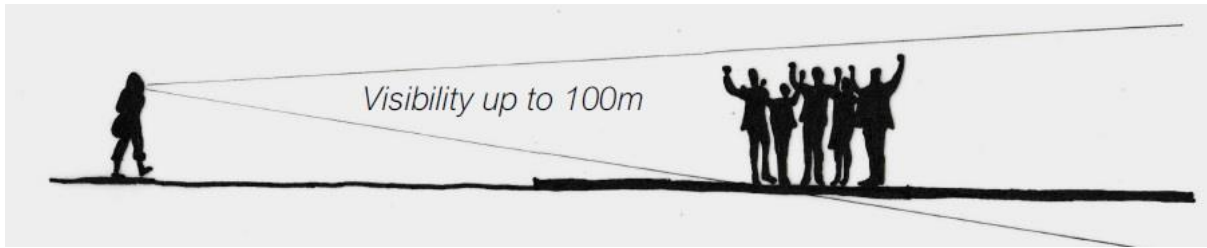


Figure 33: When walking the axis of vision is directed 10 degrees downward, so anything above ground floor may go unnoticed. Further than 100m a person may not be able to identify another person.

(Source: Theory of Architecture and Urbanism project, 2019)

Pallasmaa argues that the perception of architecture is multi-sensory and the qualities of matter, space, and scale are measured not only by the eye, but also by the ear, nose, skin, tongue, skeleton, and muscle. In effect, through all the senses, we experience architecture. In order to convey their way of presence in architecture and its interpretation, Pallasmaa reviews the nature and significance of the senses separately. The eye has to function with the other senses, and all the senses can be viewed as variations of the sense of touch. Pallasmaa says, referring to Merleau-Ponty, who says that through vision we touch the sun and the stars, "Even the eye touches; the gaze implies an unconscious touch, body mimesis and identification" (Shirazi 2009).

Although contact is a sense of closeness, intimacy, and love, the eye is the organ of detachment and distance. Distance is reached by the eye, but touch has a physical relation. The sharpness of the vision dims deep shadows and darkness, makes distance vague, and provokes imagination. Via shadows, imagination and daydreams inspire more than light. With its shifting darkness and light, we would have witnessed the magic of an old city's streets and considered it more fascinating than today's lit roads (Shirazi 2009).

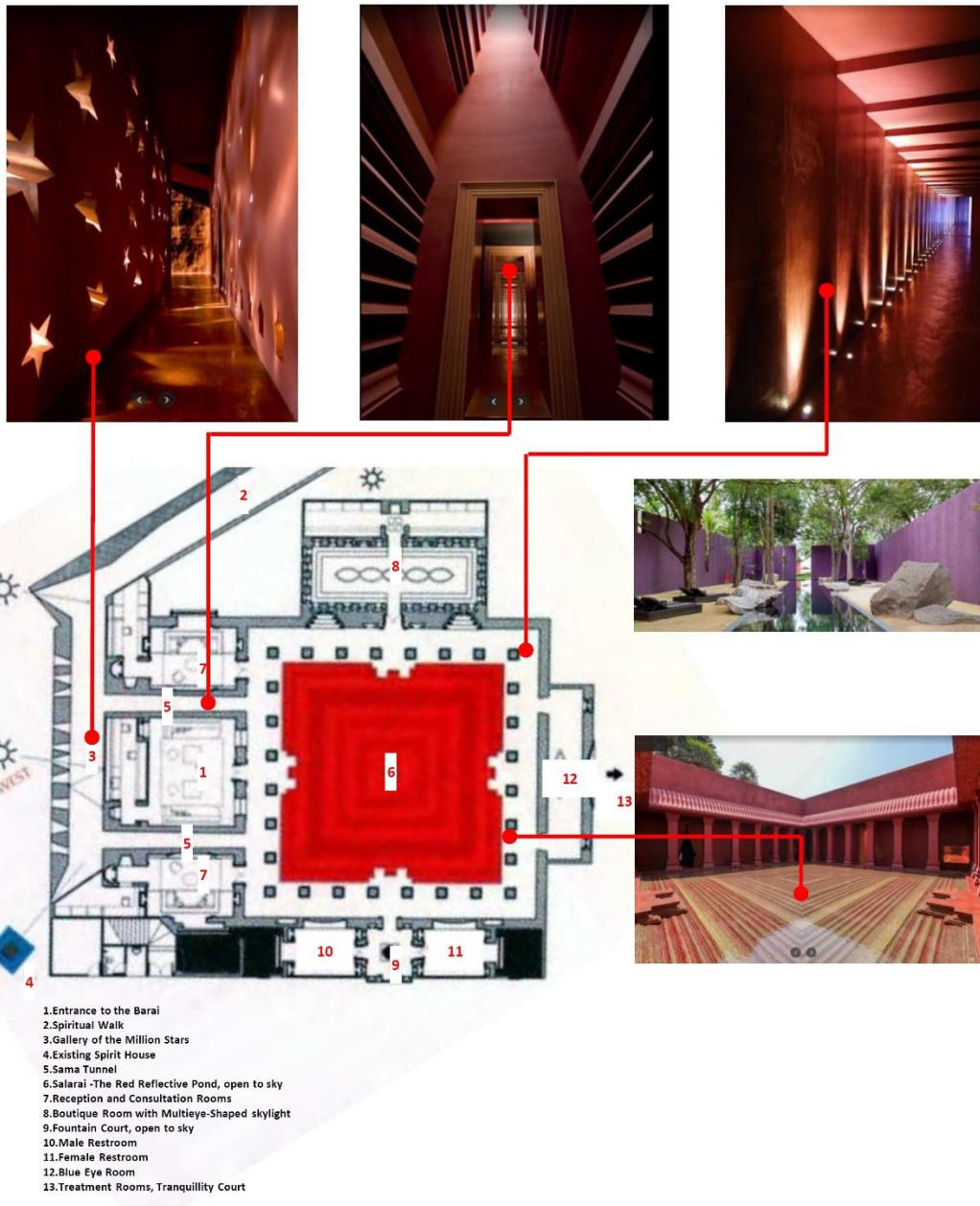


Figure 34: Floor plan of The Barai, Hyatt Regency, Thailand.

(Source:<https://www.google.co.zamaps/place/TH+BARAI+Spa+and+Residential+Suites/@12.5361001,99.9673413,3a,75y,90tdata=!3m8!1e2!3m6>)

Architect Lek Mathar Bunnag engages with the play of shadow and light in his building. He explains that the journey into the spaces is experiential. That the journey is long and quiet all along. He mentions that as one proceeds inwards there is less light, less noise and the silence becomes more prominent. The high, enclosed walls are plain with no detail to reduce the focus on them.

Pallasmaa points to the existential value of vision and hearing and to the discrepancies between them. He notes that not only the perception of its visual features, but also the perception of its acoustic features, is the understanding of a building or space. Each structure has its own visual and auditory character, which impacts our body while visiting it. Through our hearing, we perceive space. The sound of church bells in a town or the voice of Azan over a loudspeaker in a Muslim city causes a sense of spirituality.

Large, open, and vast streets of contemporary cities do not restore tone, and the interior spaces of the buildings absorb echoes. In shopping centers and malls, public space loses the possibility of consuming the auditory volume of space and we hear recorded music instead. Our ears, in fact, have been blinded (Shirazi 2009). Sometimes its fragrance is the most enduring memory of any room. "Each dwelling has its own smell of home." The presence of a space can be hidden from the retinal memory, but the nose helps the eyes to remember. The nose recalls better than the eyes.

The skin reads the texture, weight, density, and temperature of the matter as a means of touch, Pallasmaa says. The skin senses and comprehends. The warmth of a surface could be felt through the skin. To estimate their weight and texture, we touch the material. The sole of the foot tests gravity. When we walk barefoot onto the seashore, we sense the hardness of the sand, the warmth of the stone, and the steady breathing of the earth. We are told about the past by the pattern of the pavement we played on in our childhood. We touch the joy of intimacy as we sit around the home's fireplace and feel the warmth of the fire through our skin. The sense of taste seems to be the worst sense of architectural experience and its relation with architecture is less discussed (Shirazi 2009).

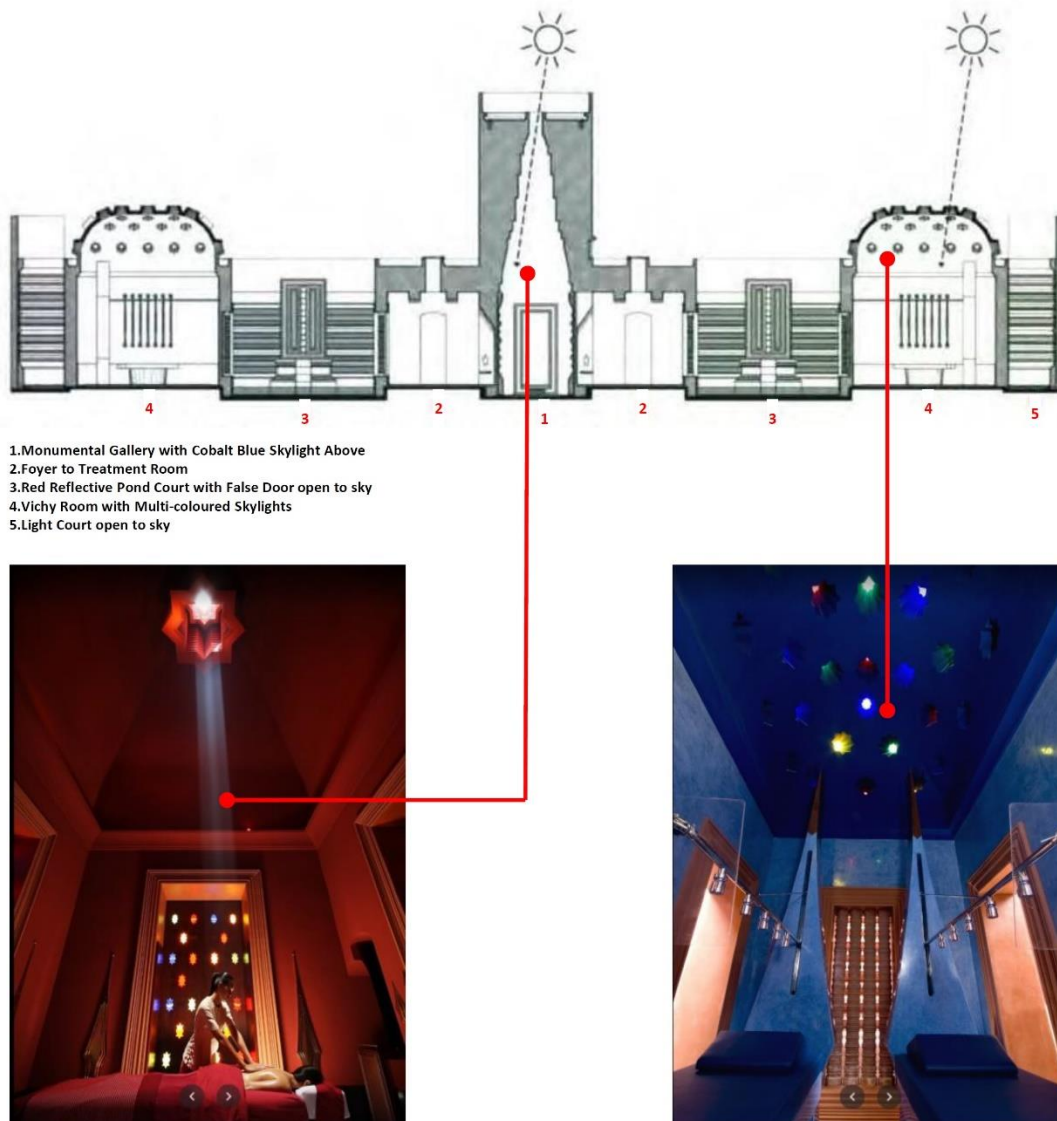


Figure 35: Cross Section of The Barai. translates into what would be considered the Bramhastan in Indian religious architecture.

(Source:<https://www.google.co.zamaps/place/THE+BARAI+Spa+and+Residential+Suites@12.5361001,+99.9673413,3a,75y,90t/data=!3m8!1e2!3m6>)

Light is the critical natural element in this project. Light and shadow are used to convey an introspective experience. Coloured glass is used to express this idea. Some colours are beautiful and visually sensitive when they are expressed in the dark. No windows are situated on the outside; the individuals are exposed to the skylights in place. Lek stressed that the natural elements have to be respected: sun, rain, moon, breeze, shadow and water. Architecture is made using these elements to create a sense of tranquility. Lek wanted to achieve seclusion and stillness while preserving a peaceful environment.

3.3 ORIENTATION IDENTIFICATION AND NATURE

3.3.1 Orientation and Identification

Evidently, every human being must have both orientation and identification schemata. In terms of the schemata created, an individual's identity is defined because it defines the environment that is accessible. The common linguistic use confirms this fact. In reality, it is popular to say when a person wants to say who he is I am a Roman, or I am a New Yorker. That's a lot more concrete than saying: I'm an optimist or an I'm an architect. We agree that, to a large extent, human identity is a function of places and objects. Heidegger states, therefore, 'Wir sind die Be-Dingen.' It is also important not only that our world has a special orientation-promoting structure, but that it consists of unique recognition objects (Norberg-Schultz 1980).

Orientation alludes to the spatial organization of the environment and our concern about it. The middle, direction, and domain are based on orientation. The core is the fundamental element of existential space. It is evident at various stages, an organization is a core of constructed cloth, and a house is a center of private life. In general, "In contrast to the unknown and perhaps frightening world around the center reflects what is known" (Norberg-Schultz 1980).

Complementing the middle is the direction or axis. This means both inside and outside, and the events of departure and arrival. A route reflects travel possibilities and alludes to the cardinal points as the referential scheme of orientation. Its consistency determines a direction and has a certain "rhythm" and "tension".

As possible locations for the behaviour and behaviours of man, centers and paths constitute "domains." Therefore, our environment consists of several areas, including fields, lakes, deserts, mountains, etc. In this way, 'Orientation implies structuring the world into domains across paths and centers' (Norberg-Schultz 1980: 59). As man dwells and is subjected to a specific environmental character, he is simultaneously put in space. The two psychological roles involved were likely called orientation and identification. He must be able to orient himself, he must know where he is, to obtain an existential foothold. But he also has to connect with the world, that is to say, he has to understand how he is in a certain location (Norberg-Schultz 1980).

3.3.2 Nature

In three fundamental ways, man-made places are connected to nature. Man aims to make nature's form more precise. That is, he wants to imagine his view of nature, representing the existential foothold he has acquired. He creates what he has learned in order to do this. He builds an enclosure where nature indicates limited space, where nature appears centralized, and erects a Mal (Mal is a concept of centre). When nature proposes a direction, he makes it a path. Second, by adding what it lacks, a man must complement the given scenario. Finally, his interpretation of nature must be symbolic. Symbolization means that the essence of the perception is converted into another form. The natural character, for instance, is transformed into a building whose characteristics somehow manifest the character. The purpose of symbolization is to liberate meaning from the immediate situation in which it becomes a cultural object that, in a more complicated situation, can be part of or transferred to another place. All three relationships imply that the experienced meanings of man are accumulated to establish a 'imago mundi' or micro-cosmos that concretizes for itself the universe. Gathering obviously relies on symbolization and implies moving meanings to another location, which becomes an existential center (Norberg-Schultz 1980).

Ando argues that modern logical and functional architecture is disconnected from nature and experiences; he criticizes modernity in the sense that it forgets the connection with nature, the real feelings of life, the wind's breeze and the rain's sound. He takes abstract geometric shapes, fills the interior with man's everyday activities, enriching the architecture (Soltani & Kirci 2019).

The primary natural objects such as rocks, plants and water construct a significant or sacred site, and the most primitive of the sacred places we knew of was a microcosm landscape of stones, water and trees. Moreover, men who are merely found by him, in other words, never choose those places; the sacred place reveals itself to him in some way or another. In the environment, the sacred places serve as cores, serve as objects of the orientation and identity of man and constitute a spatial framework. Thus, we consider the root of the idea of office space as a system of places with an overwhelming understanding of nature. Only a scheme of significant places makes it possible for real human life (Norberg-Schultz 1980).

The second mode of natural comprehension is to abstract a hierarchical cosmic order from the events of flux. Such an order is usually centred on the direction of the sun, as the most invariant and the Cardinal points come on in grandiose natural phenomenon.

The third mode of natural comprehension consists of describing natural places' essence and comparing them to basic human characteristics. The accomplishment of the Greeks was the abstraction of characters, and the very nature of the Greek landscape obviously made it possible. Greece has several different but varied sites topographically (Norberg-Schultz 1980). Nature also consists of a fourth group of less palpable phenomena. Light was, of course, still seen as an integral part of reality, but an ancient man concentrated his attention on the sun rather than the more general concept of light. His symbol of wisdom, both artistic and intellectual, was, however, associated in Greek culture with Apollo, who absorbed the old sun-god Helios. Lights have become an aspect of primary importance in Christianity, a sign of relation and harmony linked with the idea of love (Norberg-Schultz 1980).

3.4 STRUCTURE OF PLACE

Any enclosed space is defined by a border. Heidegger states that a boundary is not where something ends, but as the Greeks acknowledged, it is where something begins. The floor, wall, and ceiling are referred to as the boundaries of a constructed space. The landscape borders are identical in structure and consist of the earth, the horizon and the sky. The basic structural similarity is the fundamental significance of the relationship between natural places created by man (Norberg-Schultz 1980).

An enclosure is a good distinctive feature of any man-made environment, and how it is enclosed defines its character and special characteristics. Therefore, the enclosure may be more or less complete, there may be gaps and implied directions, and the place's capacity varies accordingly. Enclosure primarily means an indistinct region, separated by a constructed boundary from the surroundings. Both the degree of enclosure and space orientation, which are two aspects of the same phenomenon, are determined by the limits. In a centralized enclosure, when an opening is inserted, an axis is created that indicates longitudinal motion. We see such a combination of enclosure and lengthwise in Stonehenge, where the altar is moved away from the geometric base (Norberg-Schultz 1980).

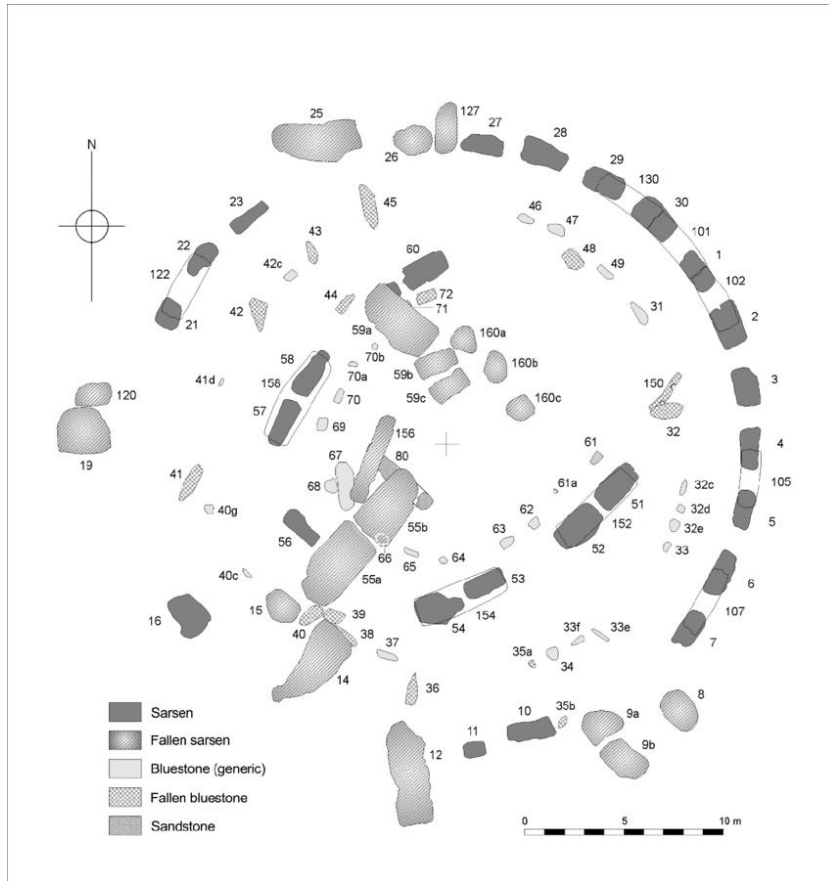


Figure 36: Stonehenge Floor Plan

(Source:https://www.researchgate.net/profile/Dimitrios_Dendrin/publication/317431912/figure/fig)



Figure 37: The Stonehenge Image

(Source:http://e3.365dm.com/2007/1600x900/skynews/stonehenge/wiltshire_5053437.jpg)

3)

For example, the upper boundary of the space, such as the hemispherical Dome or a barrel vault, frequently emphasizes centralization and longitudinally. The ceiling helped us to determine the internal spatial structure and to visualize it. The existence of a ceiling typically determines the unique form of enclosure known as interior space. The sky serves as the upper boundary because there is no ceiling, and space is part of outer space, despite lateral boundaries. Therefore, an enclosed space illuminated from above produces a surreal sense of being inside and outside simultaneously. Centers, roads and domains or urban districts are the core urban components (Norberg-Schultz 1980).

The character of a man-made place is characterized to a great extent by its degree of transparency. The strength or transparency of the boundaries makes the space appear to be isolated or part of a fuller whole. The outside-inside relationship, a primary characteristic of concrete space, implies that spaces have a varying degree of extension and enclosure. Settlements are enclosed bodies, while habitats are distinguished by varied but essentially continual expansion. Settlement and landscape, therefore, have a figure-ground relation. In general, in relation to the landscape's extended soil, every enclosure becomes manifest as a figure.

A settlement loses its identity if the relationship is compromised, just as the landscape loses its identity to a considerable degree. Any enclosure becomes a nucleus in a broader sense and can serve as a focus for its surroundings. With a variable degree of continuity (rhythm) in various directions, space extends from the middle. Like the directions of the earth and sky, the main directions are clearly horizontal and vertical. Other significant characteristics of concrete space are centralization, direction and rhythm. Finally, it is important to remember that natural features such as hills and villages may be categorized or grouped with a varying degree of proximity (Norberg-Schultz 1980). To enclose space, the wall is no longer there, but rather to direct it and achieve internal and external unification. Opening usually helps to concretize various internal and external relationships. The containment and interiority are highlighted by holes in a massive wall, where the filling of a skeletal wall buys large glass surfaces that dematerialize the building and create an interface between outside and within. Openings also acquire and express light and are therefore important determinants of architectural character (Norberg-Schultz 1980).

3.5 LANGUAGE OF ARCHITECTURE

3.5.1 Structural Components

Norberg-Schulz states that 'Architecture' may be divided into three essential structural components: topology, morphology and typology. 'Topology' is the spatial order of a work and in a single work of architecture is defined as 'spatial organization.' "Architectural space is derived from place (Greek: topos) rather than abstract mathematical space," the word 'topology' suggests. Its basic structural components are 'center', 'path', and 'domain'.

Morphology is related to the 'how' of architectural forms and is described in the single work of architecture as 'formal articulation.' Morphology is also concerned with the limits of space and asks 'how' buildings stand, rise, and open. The word 'stand' refers to the earth connection, 'rise' the sky connection, and 'open' refers to the spatial contact with the world, that is, the connection between 'outside and inside' (Norberg-Schultz 1980).

The basic structures of 'Being-with' are highlighted by typology. In other words, it concerns the meeting of human beings. 'Typology' deals with the dwelling forms of embodiments. The four categories of settlement, urban space, institution, and house can be considered as typological distinctions. Typology analyses the comprehensive spatial totalities, contrary to topology and morphology.

3.6 SPIRIT OF PLACE

The genius loci refers to a profound understanding and knowledge of the place, also referred to as the spirit of place. The idea originated from Roman folklore, where guardians give life or spirit to a place or people in the form of angels called genii. In the modern world, the word is now referred to as the distinct feature of a specific location. The notion of inspiration rules the soul. The genius of the place is its essence. The genius loci was referred to as the 'protective spirit of a position' in the classical Roman civilization. It is referred to in the modern era as the environment of a specific location. Norberg-Schulz describes this philosophy by saying that man can occupy a space; emotions and circumstances, and thus identify himself with the external world when he can regulate his inner self. He argues that a location is a place that has character. The genius loci is a state of truth that man takes part in his everyday efforts in life (Luckoo 2011).

Throughout Heidegger's work, a study of human experience, which Heidegger calls Dasein, articulates the issue of being that motivates 'Being and Time' (translated as being-there). In 'Being and Time', by our involvement with the things we experience, he explains Dasein's relationship to the universe. We create everyday things, such as jugs and chairs, sculptures and symphonies, and great works of art. We are building bridges, churches, and homes. Lands and children are being tended. We connect with things through our daily involvement with them, and this engagement often takes place in the world, in a place (Myers 2016).

Holistic, combining aspects of nature and physical environmental attributes of civilization and human culture must be a phenomenology of place. Place phenomenology indicates that elements of the natural world maintain the dimensions of the psychological, physical, cultural and spiritual worlds of people and reflect them. In terms of design, the goal is an architecture that is environmentally, humanly and spiritually suited to the place and people (Seamon 1984).

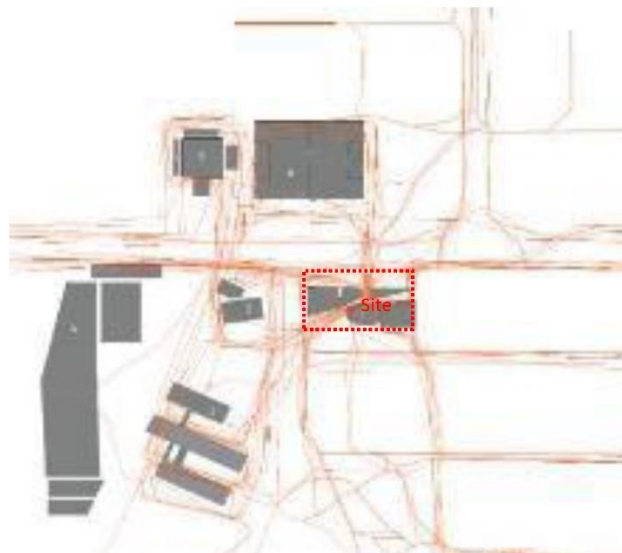


Figure 38: The Ubuntu Centre, Zwide Township, Port Elizabeth, Layout of Existing Footpath Analysis. (Source: Kasule, 2016)

According to Kasule the architectural response uses basic but deliberate methods of collecting space born from the existing footpaths, the overriding idea stems from the current paths that cut through the site. The site is situated in the dusty township of the Eastern Cape, which represents critical and embedded dynamics within the region. The concept of typology therefore blends from existing township networks, provoking debate and stimulating trade by projecting lasting dedication to the people's needs, celebrating the identity of the Xhosa tribe (Kasule 2016).

Clearly, location is an integral part of life. By Place we mean a range of concrete objects that have material quality, form, texture, colour. Together, these things create an environmental character that is the essence of the location (Norberg-Schultz 1980).

As such, a character or setting is given a place. Therefore, it produces an overall qualitative phenomenon that we cannot take away any of its features, such as spatial connections, without losing sight of its concrete essence. Furthermore, everyday experience tells us that to take place in a satisfactory manner, different acts require different environments. As a result, a multitude of unique places consist of towns and buildings. What is absent, however, is the world of everyday life, which should be of real interest to men in general, and to planners and architects in particular. There is a way out of the impasse, which is the discipline known as phenomenology. Phenomenology was formulated as a return to things as opposed to abstractions and mental constructions (Norberg-Schultz 1980).

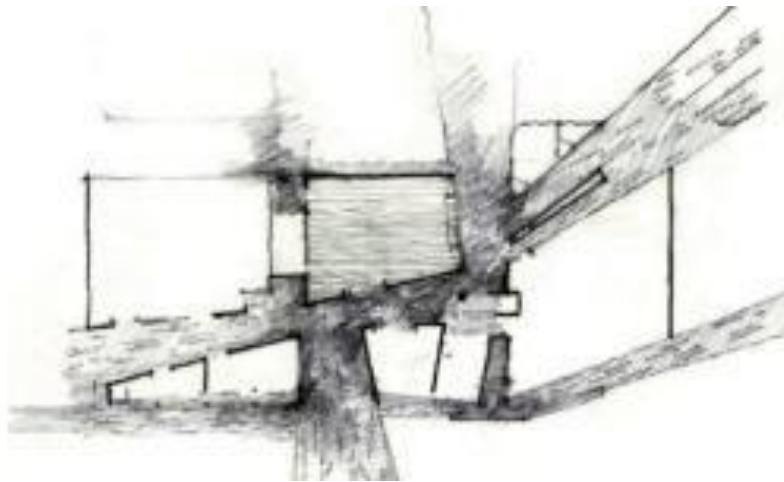


Figure 39: The Ubuntu Centre’s conceptual massing taking into account the existing footpaths.

(Source: Kasule, 2016)

Instead of punctured entrances, the massing of the building enables pedestrian walkways to proceed through the building. This helps the township path to continue. This improved perception of connectivity, community and ownership helps the community to integrate and accept the building. This process includes the community and fosters a true spirit of place (Kasule 2016).



Figure 40: Ubuntu Centre, 3D model of the building. (Source: Kasule, 2016)

The universe of our daily lives comprises of concrete phenomena. It is made up of humans, of animals, flowers, trees, woods, stones, soil, wood, water, cities, streets, houses, doors, windows, and furniture. It is also made up of the sun, the moon, and the stars, of floating clouds, of shifting seasons, of night and day. Although more intangible phenomena, such as emotions, are also included. This is what is given, this is the content of our existence (Norberg-Schultz 1980).



Figure 41: The Leaning forms of the building creates a spirit of place. The forms leaning on one another, speaks of the unity of the community of Zwide Township.

(Source: Kasule, 2016)

The poem 'A Winter Evening' by George Trakl illuminates some of our life-fundamental world's phenomena and specifically the basic characteristics of place. First of all it informs us that every circumstance is local as well as general. The winter evening described is obviously a local, Nordic phenomenon, but the implied notions of outside and inside are familiar, like other meanings associated with distinction. Hence the poem concretizes essential existential properties. Here, concrete means making the general recognizable as a particular local circumstance. The poem goes in the opposite direction of scientific thinking by doing this. Although science departs from the above, poetry takes us back to concrete things, exposing the meanings inherent in the world of life (Norberg-Schultz 1980).

“A Winter Evening
Window with falling snow is arrayed,
 long tolls the vesper bell,
 the house is provided well,
 the table is for many laid.
wandering ones, more than a few,
come to the door on darksome courses.
Golden blooms the tree of graces
drawing up the earth's cool dew.
 wanderer quietly steps within;
pain has turned the threshold to stone.
there lie, in limpid brightness shown,
 upon the table bread and wine”.

A winter evening's natural context is that it is a cold, dark, public space outside the dwelling. The inside of the dwelling is private, warm, luminous, safe, and provided for. Man has to create a path of life from the outside or unknown world to the place where he will dwell, and through his labour he brings bread and wine to the inside, this space then becomes meaningful and offers growth and blossom.

The sound of the vesper bell can be heard by everyone in the public and private realms, so it is a sensory element that can easily bring a public activity into the private space without any tangible, physical implications (Norberg-Schultz 1980: 8).

3.7 CONCLUSION

This chapter focused on the relationship between socialisation and the built form, how people interact with different spaces and how it makes them feel. People experience places through the senses and therefore it was important to understand how the human body works as well as the advantages and limitations of human sensory elements. Diverse cultures use the concepts of phenomenology to design spaces that they can identify with, this creates a sense of belonging.

As a catalyst that enables individuals to create relationships that create their social fabric, a vital insight into the role of perception and sense of place through spatial cohesion has been explored. Spaces tend to mould and construct one's actions. This suggests that when understanding and sense of location are included in the development of architectural spaces and physical elements, society prospers both socially, culturally, and economically (Kasule 2016).

Civic buildings are conceived by exploring and analysing visual perception, sense of place and spatial harmony, culminating in a space of cohesiveness. The main objective of this chapter was to explore how multi-sensory architecture can contribute to meaningful place, that the design needs to respect and respond to the uniqueness of the physical environment, expressed through critical regionalism theory, which will be expounded in the following chapter.

**CHAPTER 4: CRITICAL
REGIONALISM**

4.1 INTRODUCTION

Kenneth Frampton is the main author in this chapter. He is well known for his works in Critical Regionalism and Critical Tectonics. Frampton is important since his research explores social aspects such as the identity, the culture, the regional and climatic variables related to individuals that create the built form. (Pillay 2014). Frampton considers 6 important points towards Critical Regionalism, this theory also recognizes conventional approaches, but also seeks to incorporate this in a contemporary setting, listed as; 1. Culture And Civilisation, 2. The Rise And Fall Of The Avant-Garde, 3. Critical Regionalism And World Culture, 4. The Resistance Of The Place-Form, 5. Culture Verses Nature and 6. The Visual Versus The Tactile. A term critical regionalism was first brought about in the 1980's. Alexander Tzonis, Liane Lefaivre and Kenneth Frampton were the topic's three key authors. To characterize a contemporary architecture that was not labelled as the international style nor regionalism, critical regionalism was used. In modern tradition, the architecture of critical regionalism is ingrained, but specific to culture and location. Critical regionalism, according to Frampton, is "An architecture of resistance" (Pillay 2014). Critical regionalism can be noted; " is to mediate the impact of universal civilization with elements derived indirectly from the peculiarities of a particular place "(Pillay 2014). In this approach a resistance was established, "decided response to normative, universal standards, practices, forms, and technological and economic conditions". It has been said that critical regionalism is difficult to define and has been found to lack stylistic unity, because critical regionalism is a process rather than a product, depending on the situation in which it takes place, this process differs (Pillay 2014).

This chapter analyses critical regionalism in terms of the cultural, regional and climatic aspects that contribute to a sense of place and identity. It is closely connected to culture and nature through critical regionalism. The doctrine looks at how to follow an universal system where a new spirit of place can be induced by spatial expression. The doctrine still respects traditional methods but seeks to implant them in a contemporary setting. When context, climate, topography, and cultural issues are dealt with on a universal basis, cultural identity is formed. The natural environment plays an important role in shaping spaces according to human requirements. Local resources are often used to enhance a place much more than for economic reasons (Luckoo 2011).

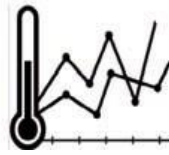
4.2 CULTURE VERSES NATURE



Topography



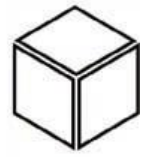
Site Context



Climate



Lighting



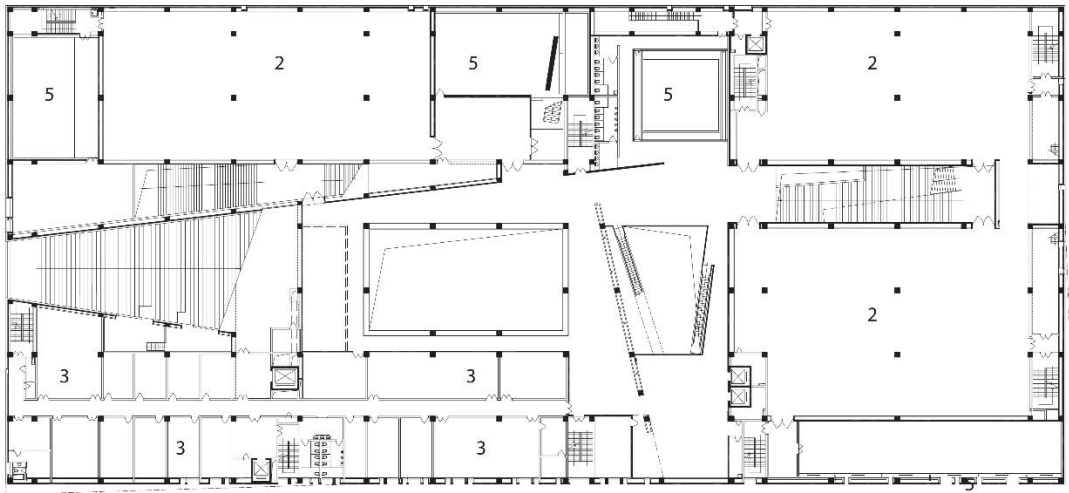
Tectonic

The key words of Kenneth Frampton. (Source: Kalvelage, 2016)

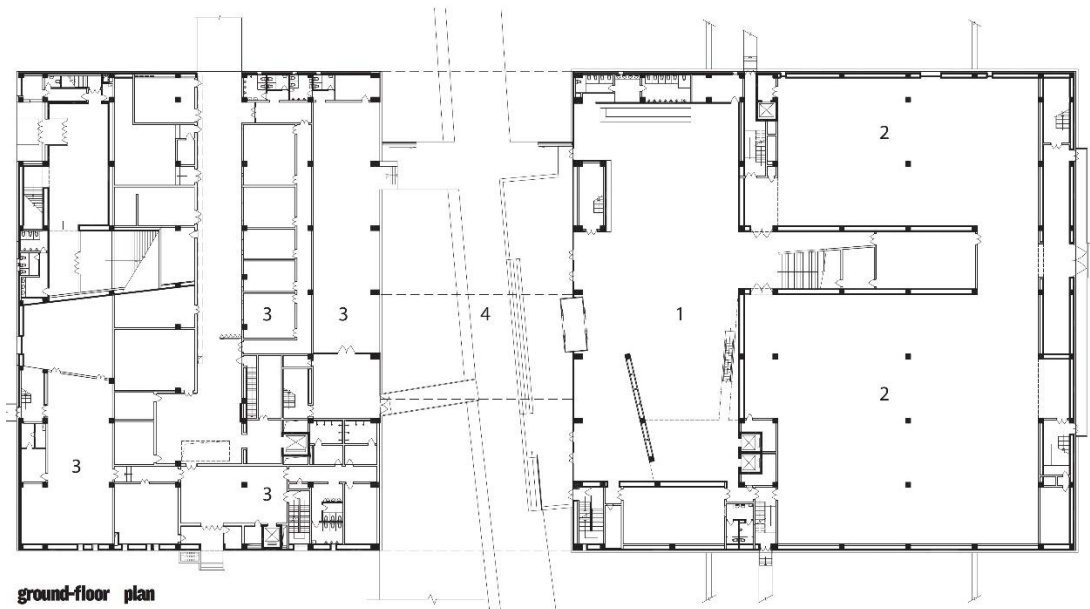
Critical regionalism has its origins deep in nature and culture, contrary to the more recent abstract avante-garde movement, it requires a more straightforward resolution of nature (Pillay 2014). A significant aspect of the urban structure may be the topography of a site that has not been harshly affected. It can be suited so that it does not disturb and operates harmoniously with whatever lies in its context. Critical regionalism considers the ‘Placelessness’ philosophy when developing a site with steep topography. The preferred option would be to terrace the site so that it relates to nature rather than flatten the site and completely change its appearance- (Pillay 2014). The cultural aspects of the site are the location, history and agricultural values. A site's regional problems may include climatic factors and communities. The layering of a site, taking into account cultural and regional factors, is therefore significant. The regulating concept of architecture should be ‘tectonic rather than scenographic’, according to Frampton (Pillay 2014). Frampton also emphasizes that “in a poetic form that incorporates craftwork, material and gravity, architecture can convey structure” (Pillay 2014). A suitable example is the Ningbo Historic Museum by award winning Chinese architect Wang Shu.

4.2.1 Ningbo Historic Museum, China, 2008

In terms of the surrounding climate, local history and traditions, the Ningbo Historic Museum evokes the memory of the past with salvaged materials from former farmers in modern form. It is a place for people to discover a culture that has been forgotten and concealed.



first-floor plan



ground-floor plan

Figure 42: Floor Plans showing a basic rectangular shaped structure with internal courtyards and pedestrian circulation. (Source: <https://www.architectural-review.com/buildings/ningbo-museum-by-pritzker-prize-winner-wang-shu.pdf>)



Figure 43: Street elevation showing the leaning form of the building that has a modern look and feel however the materials, colour and texture relate to the local culture. (Source: Kalvelage, 2016)

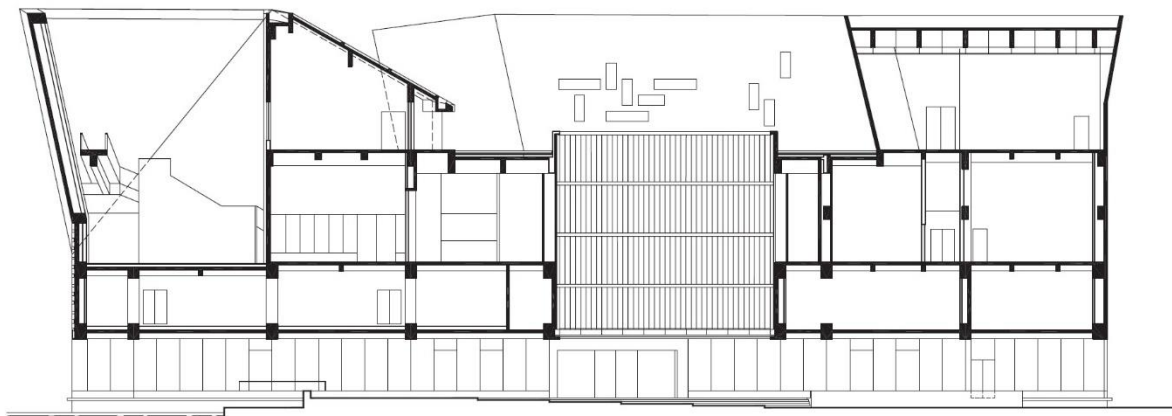


Figure 44: Cross Section of the Building. (Source: http://cdn.ca.emap.com/wp-content/uploads/sites/12201003/Section__380.pdf)

Topography:

Yinzhou is situated along China's east coast. Old villages were razed to ground under rapid urbanization to accommodate highrise residential and office buildings. Large, unpopulated flat land was thus developed.

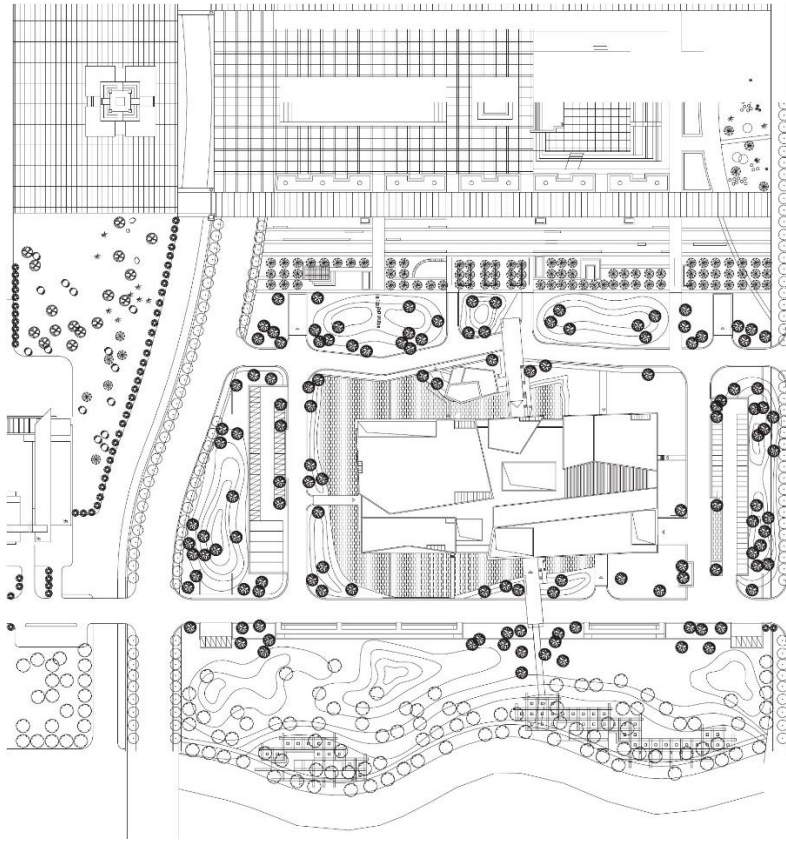


Figure 45: Site Plan showing urban context, relatively flat site surrounded by large open spaces.
 (Source: https://cdn.ca.emap.com/wp-content/uploads/sites/122/01003/Site_Pla_380.pdf)

Site Context:

The museum is located on a large unpopulated flat land, a site without context. It was shaped like a mountain to reflect the existing landform in Ningbo. As a square geometry, it rises up from the floor and starts to lean on the second floor. The type of design resembled a large ship on the north side going to land ashore. It relates to the importance of maritime trade in the history of Ningbo.

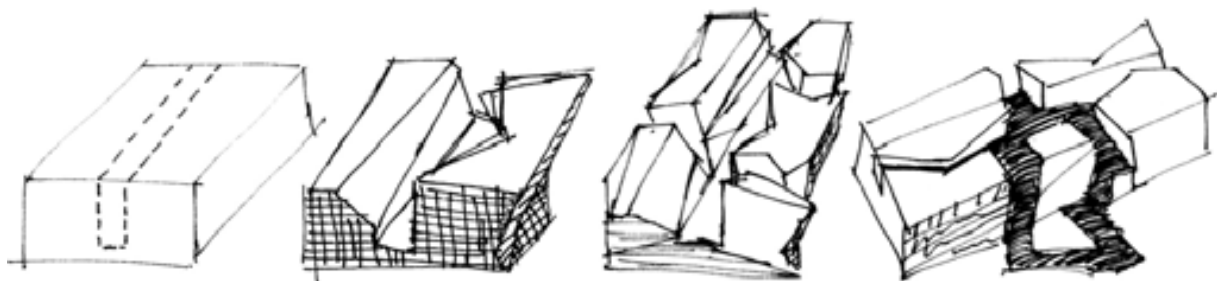


Figure 46: Form generation derived from site context. (Source: Kalvelage, 2016)



Figure 47: Site context, from left to right, Standalone structure, Form resembling Ningbo mountains, Form resembling a big boat coming ashore. (Source: Kalvelage, 2016)

Climate:

There is a subtropical monsoon climate with warm and moist air in the Ningbo Historic Museum region. Wang Shu used brick as a construction material for better insulation because of its solid density and due to its unique weather conditions. It minimizes summer and winter temperature variations. In order to increase natural ventilation and the penetration of sunlight into interior space, internal courtyards were incorporated.



Figure 48: The building encapsulates the concept of traditional verses modern and tectonic verses tactile. (Source: Kalvelage, 2016)

Lighting:

The inner courtyard, the skylight of the roof, and the facade's scattered windows bring daylight into the interior space. For a better introduction of light, Wang Shu often used glass panels, reflective metal ceilings and carefully spaced scattered windows.

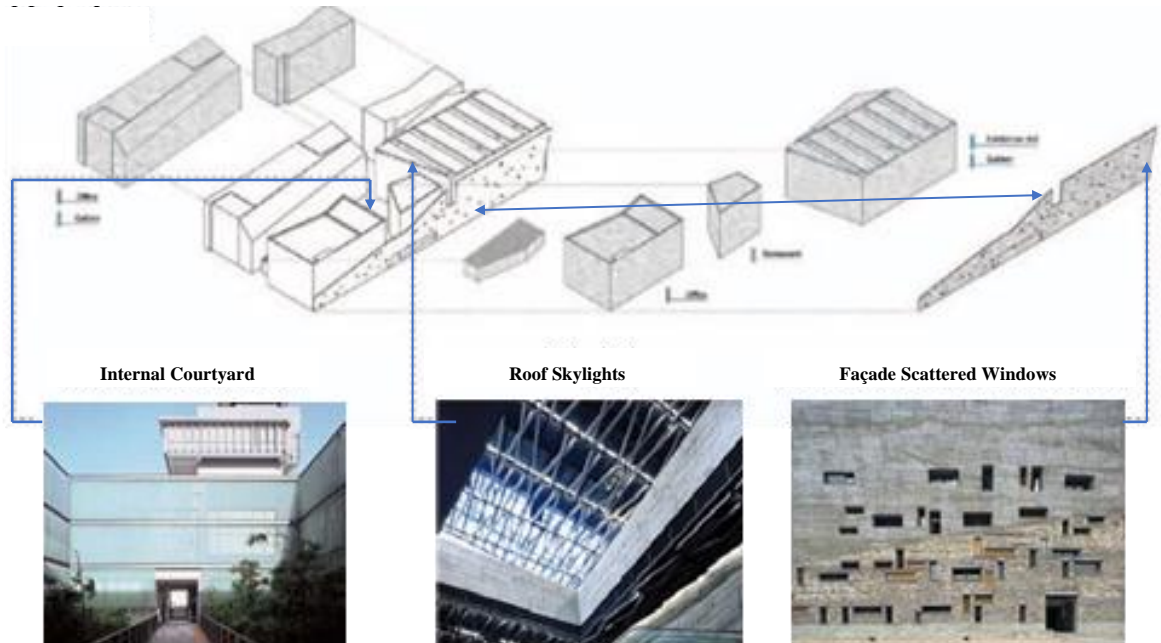


Figure 49: Combination of traditional and modern methods of building design, courtyards and glass. (Source: Kalvelage, 2016)

Tectonic Form:

After a typhoon in Ningbo City called WAPAN a local practice of using material fragments for fast construction is used for facade construction. The Chinese vernacular architecture uses 20 different kinds of grey and red recycled bricks and tiles from former farmer's house in a modern way.



Figure 50: Blend of natural colours and textures with modern form of structure. (Source: Kalvelage, 2016)

4.3 CRITICAL REGIONALISM AND WORLD CULTURE

To shift the emphasis away from the postmodern discussion, the word Critical regionalism was introduced. Critical regionalism considers the philosophy of 'Placelessness' when developing a site with steep topography. The preferred option would be to terrace the site so that it relates to nature rather than flatten the site and completely change its appearance.

Critical regionalism's primary concept is that it takes universal approaches into consideration but considers the local area and context (Pillay 2014).

The optimisation of advanced technology and the nostalgic, historical ways of decoration must also exclude critical architecture. Perhaps there is a cultural foundation to the architecture of critical regionalism. Frampton also stresses that local variables such as light, tectonic structure and topography need to be taken into account by critical regionalism (Pillay 2014). Because critical regionalism is a progressive discourse, it is also noted that it does not go back to the vernacular (Pillay 2014).

Kenneth Frampton explores the relationship between local culture and universal(modern) civilization. Over the course of centuries, local culture has been produced and is a part of world culture. Without new relationships between designer and user, no architecture can be created. critical regionalism can be seen ss a bearer of world culture and a vehicle of universal civilization. A good example is the Chalet in Mase, Switzerland. In the case of a traditional house the base was built from stone, while the first floor is made from wood. Chalet in Mase's concrete structure is enclosed with cladding on higher levels to resemble traditional barn.

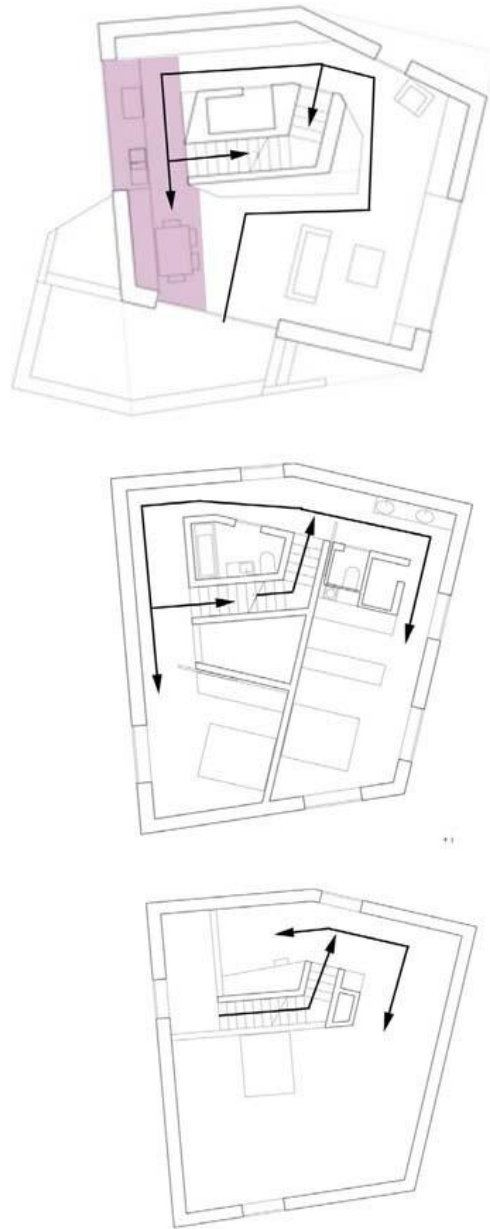


Figure 51: The floor plans of the building are completely modern with circular communication, the position of the kitchen (highlighted in pink) which forms part of the circulation illustrates how the way of life has changed, compared to traditional design where the kitchen is usually contained in one core. (Source: Kalvelage, 2016)

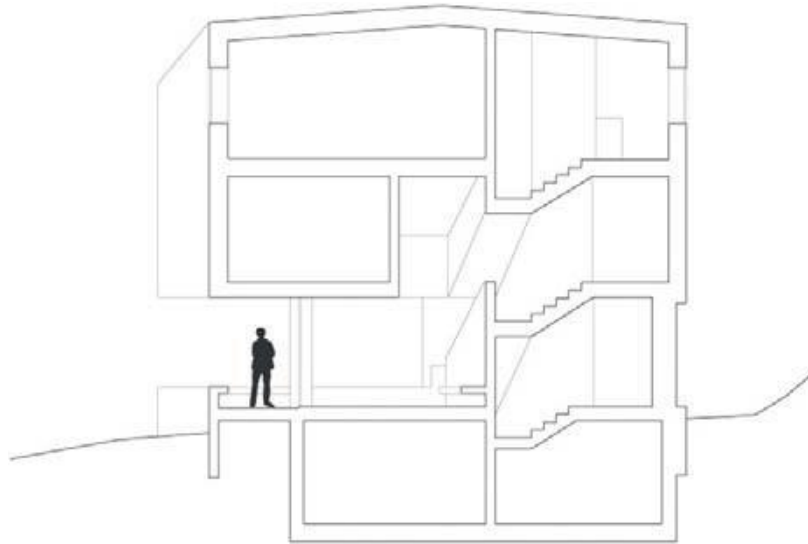


Figure 52: Modern Building Entrance, the idea, also evident in traditional buildings, to have the roof above the entrance, to enter the building from the covered area. (Source: Kalvelage, 2016)



Figure 53: Orientation of Openings, Chalet in Mase is single family house. Located beneath the village of Mase, the new building, facing due south and has an open view of the valley. (Source: Kalvelage, 2016)

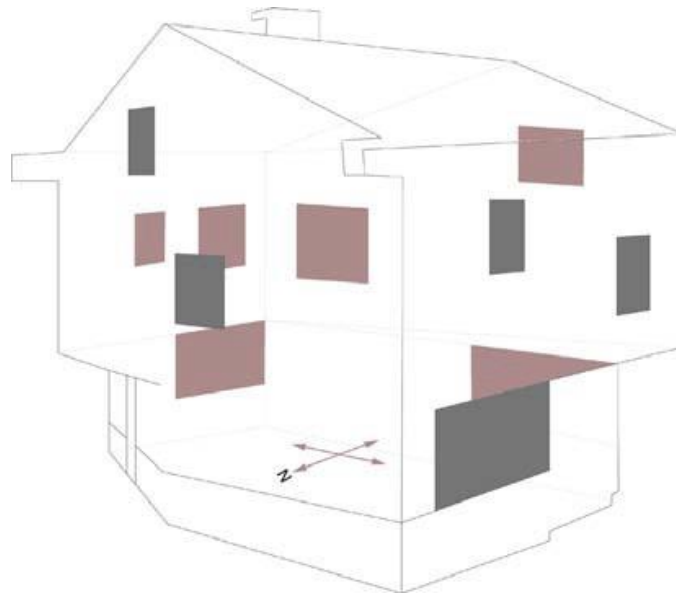


Figure 54: Most of the windows are facing South to get as much sunlight as possible, while there are less openings on the Northern side. South East facade turns towards the South to get more light. (Source: Kalvelage, 2016)



Figure 55: Interior - modern/traditional, Mix of concrete elements and wood on the walls and wood works. (Source: Kalvelage, 2016)

4.4 VISUAL VERSES TACTILE

Vision is considered to be one of the most important and essential human senses however, other senses such as smell, taste, sound, and feeling and touch are also present in the human body. It is important to remember that when the built environment is perceived, a person uses all these senses. According to Frampton : “The tactile resilience of the place-form and the capacity of the body to read the environment in terms other than those of sight alone suggest a potential strategy for resisting the domination of universal technology.” (Pillay 2014). Human experiences are often impacted by the culture in which they take place in the built environment. In the built form, apart from the overbearing visual, tactile perception is an important meaning. Frampton also notes that it is a visual experience and a tactile one to go through the built form (Pillay 2014). The tactile is in contrast to the scenographic in the attempt to experience this loss, through this event the true authenticity is hidden and cannot be identified (Pillay 2014). According to Frampton “When all the senses are not present, the poetics of architecture is lost”. For an expression other than vision, the tectonic form is abandoned and reverts to the architect. An excellent example of materiality and structure is the Saint Benedict Chapel designed by Swiss architect Peter Zumthor.

4.4.1 Saint Benedict Chapel, Switzerland, 1988

The Chapel, a cylinder that turns into an oval and then into a keel is situated in a small village in the mountains: the geometry of this church, while distinct, is also complex and mysterious to the eye. This is further intensified by the construction of the building on a sheer slope.

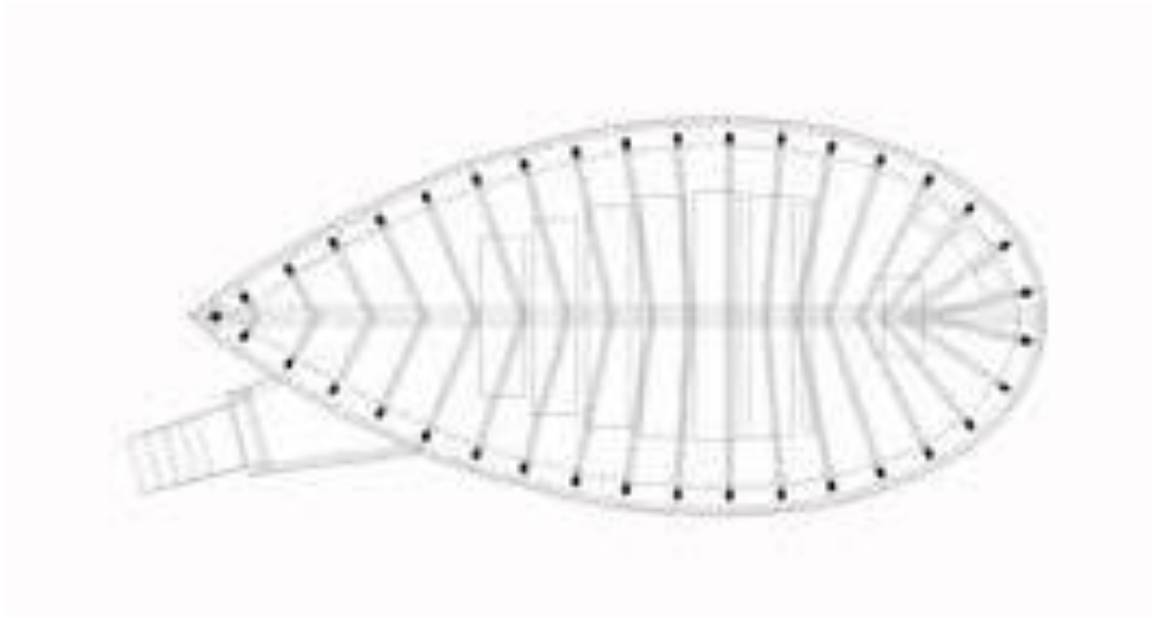


Figure 56: Floor Plan. (Source: Kalvelage, 2016)

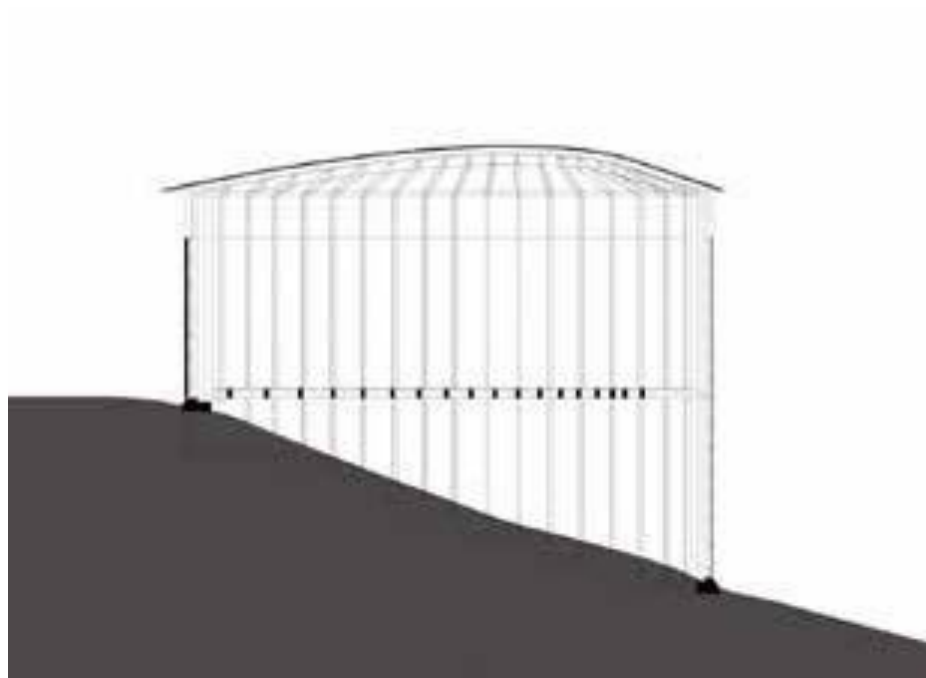


Figure 57: Cross Section. (Source: Kalvelage, 2016)



Figure 58: This Chapel is a modest wooden building situated on a mountain slope. (Source: Kalvelage, 2016)

The structural resolution is far from being a rational and prefabricated vision of woodworking. While maintaining a distinct symmetry, shape is fully customized, wherein each beam and each lock, have unique dimensions from each other, especially for adapting to the context rough terrain.



Figure 59: Built with modern techniques, but respects the essence of materials and traditional construction methods. The pure use of tile and wood in the body structure expresses the local culture. (Source: Kalvelage, 2016)



Figure 60: The architect defines where to direct light. (Source: Kalvelage, 2016)



Figure 61: The level of detail, the interior is worthy of admiration, floors, windows, accessories, nothing is related to aspects of a commercial character, its identity takes shelter in the soul and its intimate design features. (Source: Kalvelage, 2016)



Figure 62: The chapel, close to the local traditional houses, is erected with wooden shingles and snips. The roof of the chapel resembles a boat's hull. An elegant, minimal solution is to mediate between the expressive roof and the more conventional wooden base below: a ring of vertical wood columns and glass panels crowning the chapel that allow the interior space to be penetrated by natural light. (Source: Kalvelage, 2016)



Figure 63: The material is baked wood with brownish red colour. The timber on the south facade remains its original colour. The colour of its edge got changed under different sunlight exposure. The north facade turns into a grey colour since it's always covered with steam. The trace of time and nature is the exclusive decoration of the facade. The shadow of the entrance, the trace of the waterdrop, the sunlight, the rainfall, the snowfall, all of them are documented on the facade. (Source: Kalvelage, 2016)

4.5 CONCLUSION

This chapter focuses on Critical regionalism which is a philosophy that deals with the question of 'placelessness' and identity by considering the meaning of the building. It is influenced by culture and nature of the area. However, the introduction of this theory attempted to present a universal language. With techniques designed to establish a better living climate, the climatic conditions are strongly taken into account. The architectural style is based on a regionalist approach where architectural elements are used to establish a place's identity by appealing to the region's needs. Both cultural and technical approaches include critical regionalism. The aim is to follow a holistic concept where the position and time are in line with creative ways. When individuals participate in a position for continuity in the living process, an amalgam of the past and present, a cultural identity is created. The direct association with nature is discussed by this theory. In its meaning, a sacred connection is established between the user and the building form. The inner perception of the urban environment is improved by climate control.

Culture and location is significant through this research process, bearing in mind that Indian people were displaced from their homeland India to a foreign place, being Durban South Africa. Critical Regionalism therefore helps understand the fundamental aspects of the culture, identity and history of Indian people in order to better apply principles of architectural design that help to relate to space and place in a different region. The objective of this chapter helps understand how Indian identity and culture could contribute to a new architectural style within the African context, specifically Durban.

In the following chapter different architectural attributes are explored, with the view of soliciting design criteria through selected precedent and case studies that will contribute to the design outcome.

CHAPTER 5: PRECEDENT STUDY

5.1 THE CENTRE GEORGES POMPIDOU

5.1.1 Project Description

Architects: Richard Rogers and Renzo Piano

Location: Paris, France

Project area: 103,305 Square Meters

Project Year: 1971-1977

In 1969, then French President George Pompidou wanted to develop an iconic building that was dedicated to the contemporary arts including film, literature and theatre. The building and its public square are a vibrant and multi-cultural part of the Beaubourg neighborhood in Paris. This was a region that had been in decline before the project started (Samuel 2019). Announced as winners in 1970, Rogers and Piano's young partnership defined their projected plan as “a live centre of culture and information for all classes of society“. The flexibility of the building design in terms of structure, technology and the building program attracted practitioners, managers and the general public. (Samuel 2019).

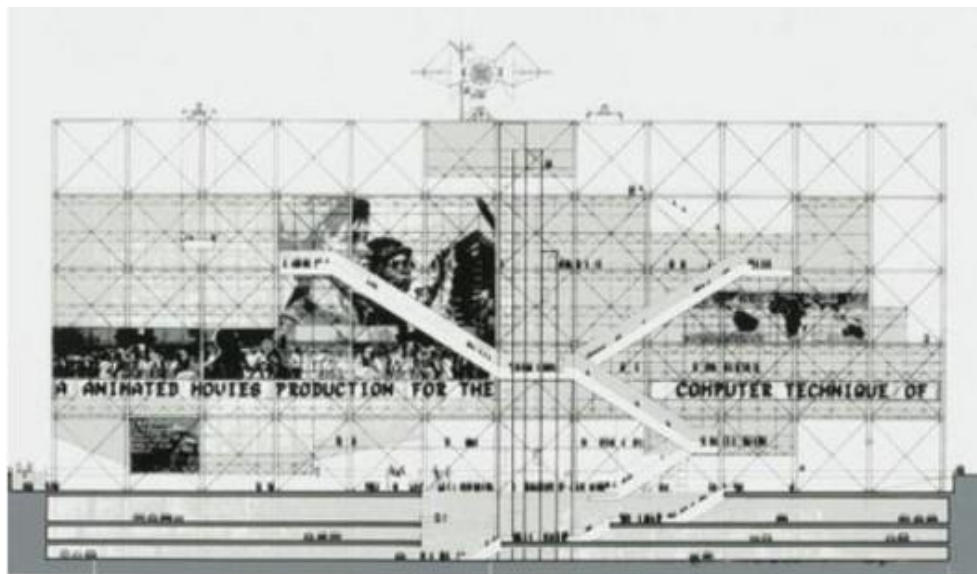


Figure 64: Early conceptual sketch of Pompidou elevation. (Source: Miller, 2014)

5.1.2 Background and Social Context

President Pompidou dedicated the Plateau Beaubourg area of Paris to the development of a modern and special multidisciplinary cultural centre including a large public library and a National Modern Art Museum. (Miller 2014). Due to the lack of funding the Les Halles region's intended rejuvenation never took off; however, the new image created by the Pompidou Centre, the district of Les Marais, created the much needed rehabilitation and rejuvenation for the wider area. (Miller 2014).

The architects used color-coding to highlight certain service elements of the building. However, the Centre was not easily accepted by the Parisians. The French people were not happy with a modern architectural style, believing that their traditional architectural style was under threat (Miller 2014). The centre's background is important in that it contributes to its success; there are many tourist attractions in the city centre. The Pompidou draws about 25,000 locals and tourists a day to the heart of Paris. With warm and friendly summers and relatively cold winters, the climate supports a pleasant public urban life. It is safe to say that the French, in the social context have a strong connection to the arts. Street Art, however, is still a stigma that still needs to gain acceptance, the public forum and space shown by the Pompidou is of immense significance in promoting the fight on a legitimate public platform to display Street Art (Miller 2014).



Figure 65: The Centre Pompidou, public piazza, social gathering space. The large Piazza in front of the building is used as an open to sky public gathering space whereby the centre can be viewed and appreciated as an exhibit itself. (Source: <http://www.richardrogers.co.uk>)

5.1.3 Justification of Precedent

The Centre Georges Pompidou, which received the 1975-1978 August Perret Prize of the International Union of Architects for most outstanding international work, is an art centre located in the highly urbanized and walkable city of Paris. In the Pompidou Centre, there are various activities and functions, including exhibition spaces and a library. A number of ever-changing internal and external displays of both graphic and fixed art are supported by the building.

The Pompidou Centre's well-designed pedestrian circulation and traffic diversions will help to inform my design process. The placement of the service core and the uninterrupted exhibition floor space is an important feature of the design. This creates flexibility within the building programme that allows for necessary changes over the course of time (Miller 2014). The Centre's structure and tectonics allow the building itself to be viewed as an outdoor exhibition by tourists and locals.

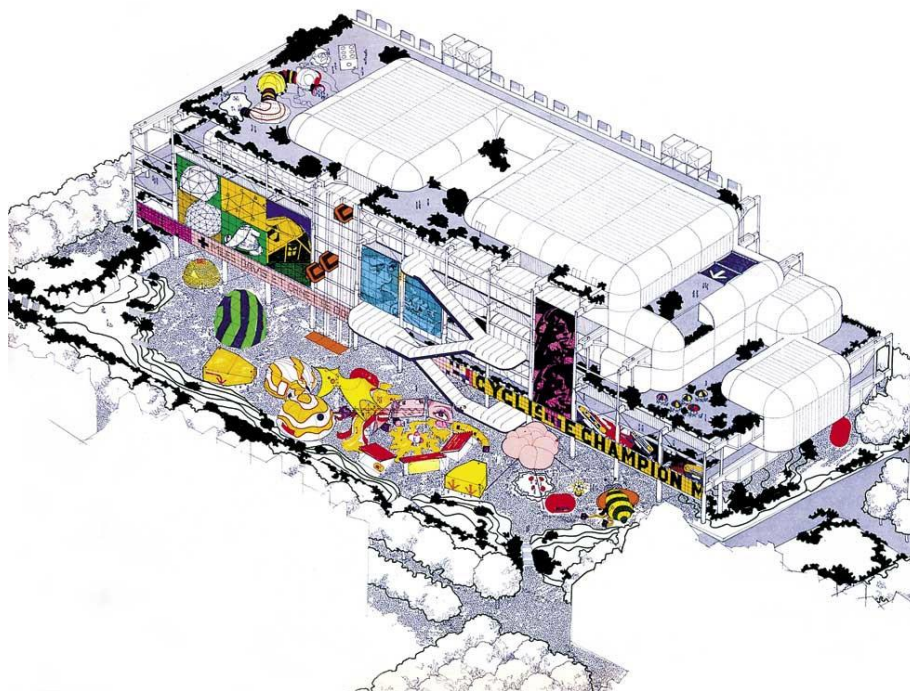


Figure 66: The original impression for the Centre with an emphasis on visual and playful engagement, 1977. (Source: <http://www.richardroddgers.co.uk>)

5.1.4 Urban Context and Locality

Pompidou is located in the center of the city of Paris. It is situated approximately one kilometre from the Cathedral of Notre Dame and the Louvre Museum, two of the most important cultural facilities in Paris. The Centre is located in the Les Halles neighbourhood, within the inner city, this was a market place also known as 'a densely populated medieval quarter.' In the renewal of the capital, the Pompidou was thus conceived as a vital part of the development. The core of Pompidou is surrounded by multi-storey mixed used developments, restaurants, galleries and surrounding neighbourhoods linked by narrow walkable streets (Samuel 2019).

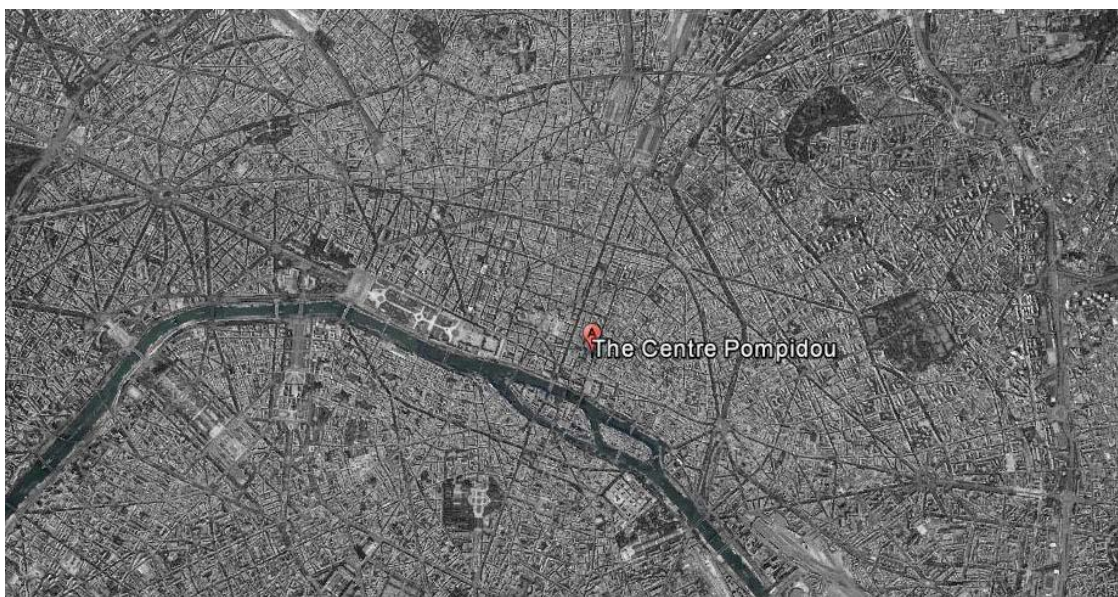


Figure 67: Macro Scale of the Centre Pompidou. (Source: Google Earth, 5/01/2021)

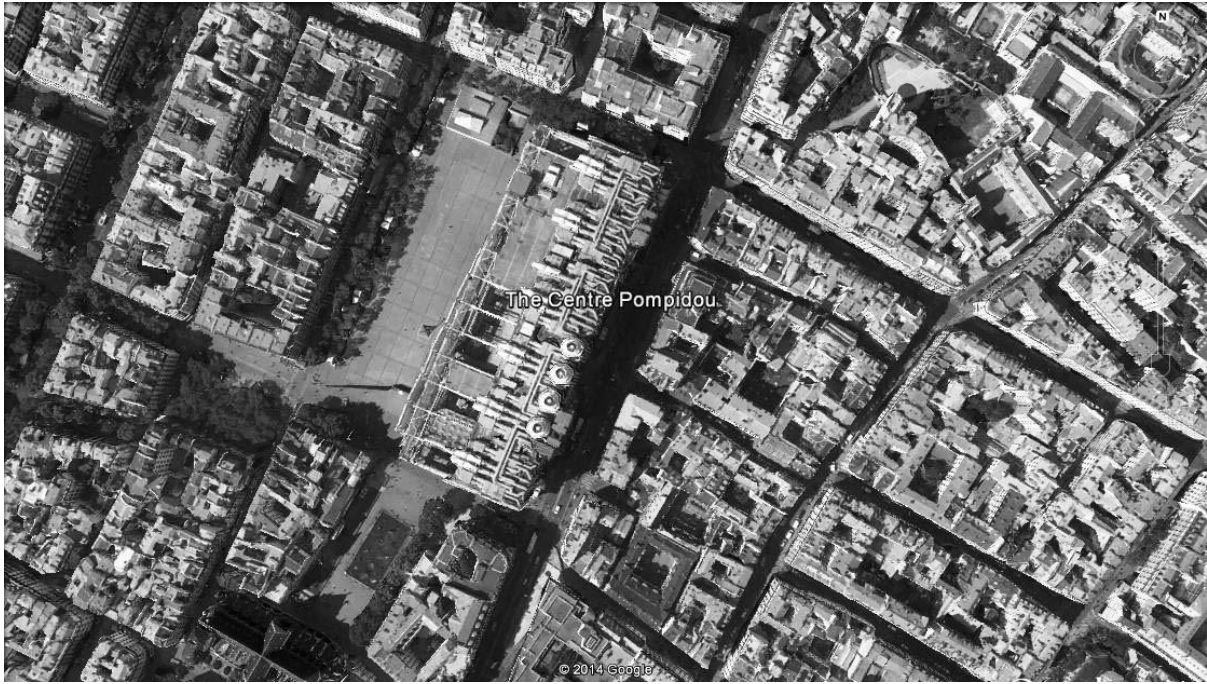


Figure 68: Micro View of the Centre Pompidou. (Source: Google Earth, 5/01/2021)

5.1.5 Planning and Programme

The architects conceptual plan was based on the fact that the building was in the middle of a bustling town and there were extreme space constraints. They used only half of the sites area as a building footprint with 7 levels of floor space, this allowed them to create an important pedestrian piazza at ground level that spilled out into nearby shops, restaurants and galleries. In the lower levels of the building, large public areas consist of theatres, restaurants, cafes and the entrance to the facilities that contribute to the social life of the piazza and the street (Samuel 2019).

Dedicated elevators, escalators and stairs facing the public square take advantage of the views of Paris and offer alternative public circulation routes fixed on the exterior façade. The Pompidou has a flexible building program consisting of temporary exhibits, administrative spaces, libraries, restaurants, galleries and terraces (Samuel 2019).



Figure 69: Uninterrupted, Flexible internal spaces that can be rearranged as required for various functions or programmes. (Source: Miller, 2014)

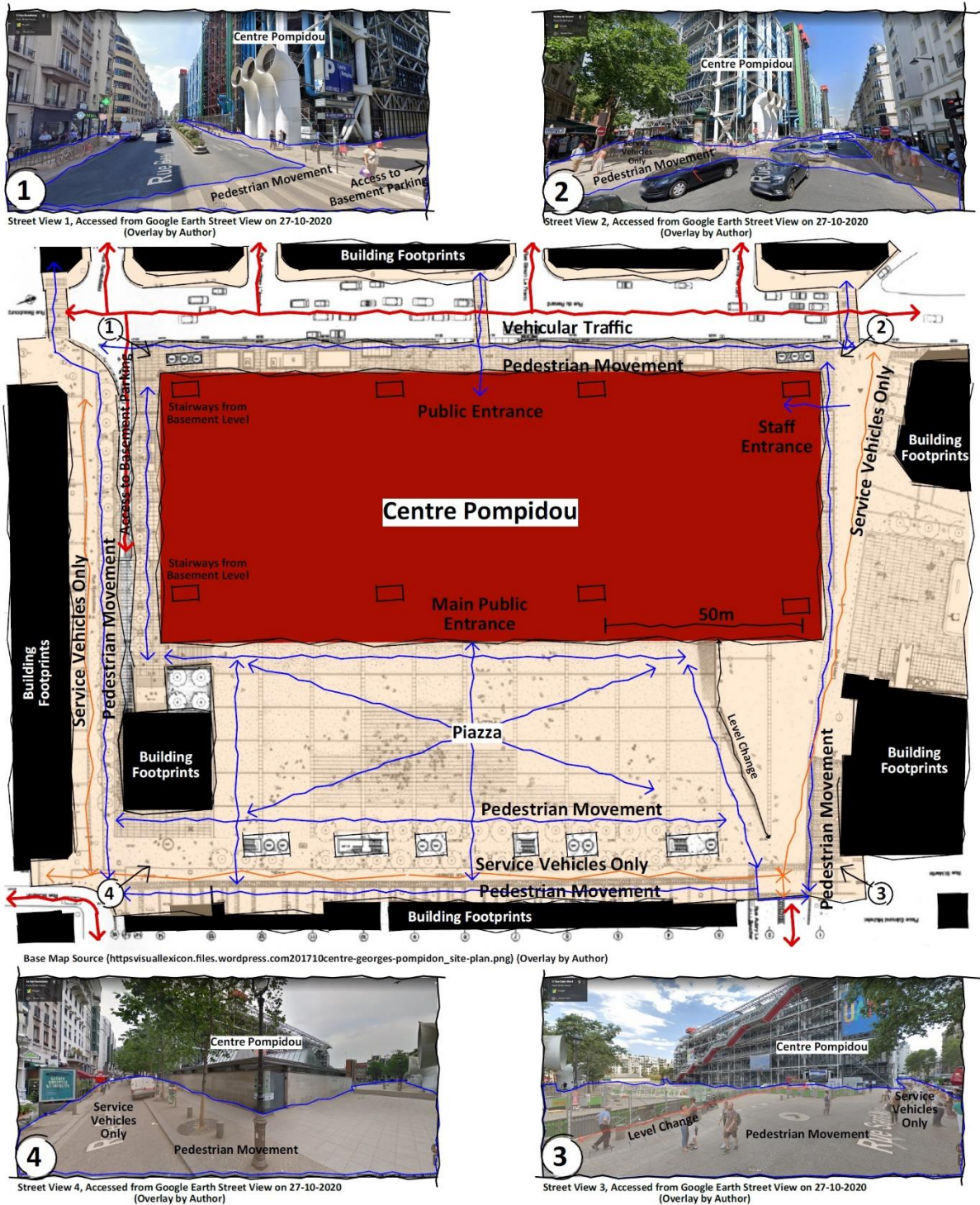


Figure 70: The Centre’s building footprint sits on half the total site area allowing for ample pedestrian movement and interaction with the building at ground level. The parking is at basement level with vehicular traffic kept to the edges this allows for uninterrupted pedestrian circulation around the building. There is controlled access for services vehicles only. (Source: Google Earth Street View, Adapted by author, 27/10/2020)

5.1.6 Design Rationale

The Parisian landmark is described by Richard Rogers as "a computerized, information-oriented Times Square and the British Museum". The rationalization of the design would begin with the urban context that was then degenerating, needing a catalyst that would help change the urban environment economically, ecologically and socially (Samuel 2019).

The need for internal flexibility was prompted by the decision to put facilities and services on the outside, creating large open floors. The connection to the British museum to which Rogers refers is provided by these wide spaces that allow museum curators to set up exhibitions that completely express the theme of the exhibition in the most effective way through art and culture (Samuel 2019).



Figure 71: External Elevation showing colour coded service core. (Source: Miller, 2014)

5.1.7 Evaluation and Analysis

The Centre Georges Pompidou is an art centre designed to function as more than a building hosting exhibits of art. Rodgers and Piano described the initial vision of the city's central node as a "live centre for information, entertainment and culture" (Miller 2014).

The Art Centre has seven superstructure floors, a concrete slab and structural steel framework forming the seven platforms that make up a floor area of 103,305 square meters. A 'flexible container' and 'dynamic communication machine' were planned for the house. A major civic library, Europe's biggest national art museum, an industrial centre for design, a children's library, a temporary exhibition space, an art centre, and IRCAM (Institute for Study and Coordination in Acoustics/Music), a centre for music and acoustic studies, as well as

restaurants and cafés, are housed within these seven levels. Due to the column-free interiors, the Centre Pompidou boasts vast uninterrupted interiors, as a result of constraining all services to the outside (Miller 2014).

An authentic and important aesthetic to the internal function and typology is the overall intense technical feel of the house. The building is an artistic sculptural feature that involves the senses of the users on many visual perception levels that include light, color, voice, and movement variations.

"The greater the involvement of the public, the greater the building's success." Operational development and the sensitivity and pleasantness of such a space determine the creation of a true sense of place. This links, as previously discussed, the user and architecture through purpose and interaction (Miller 2014).

Except for the library room, where more neutral and generally intimate space is needed, internal spaces are usually accessible and provide a public atmosphere. A more concrete connection to the consumer of the Pompidou Centre is provided by the operation and purpose on the periphery of this building within the overlapping flexible spaces.

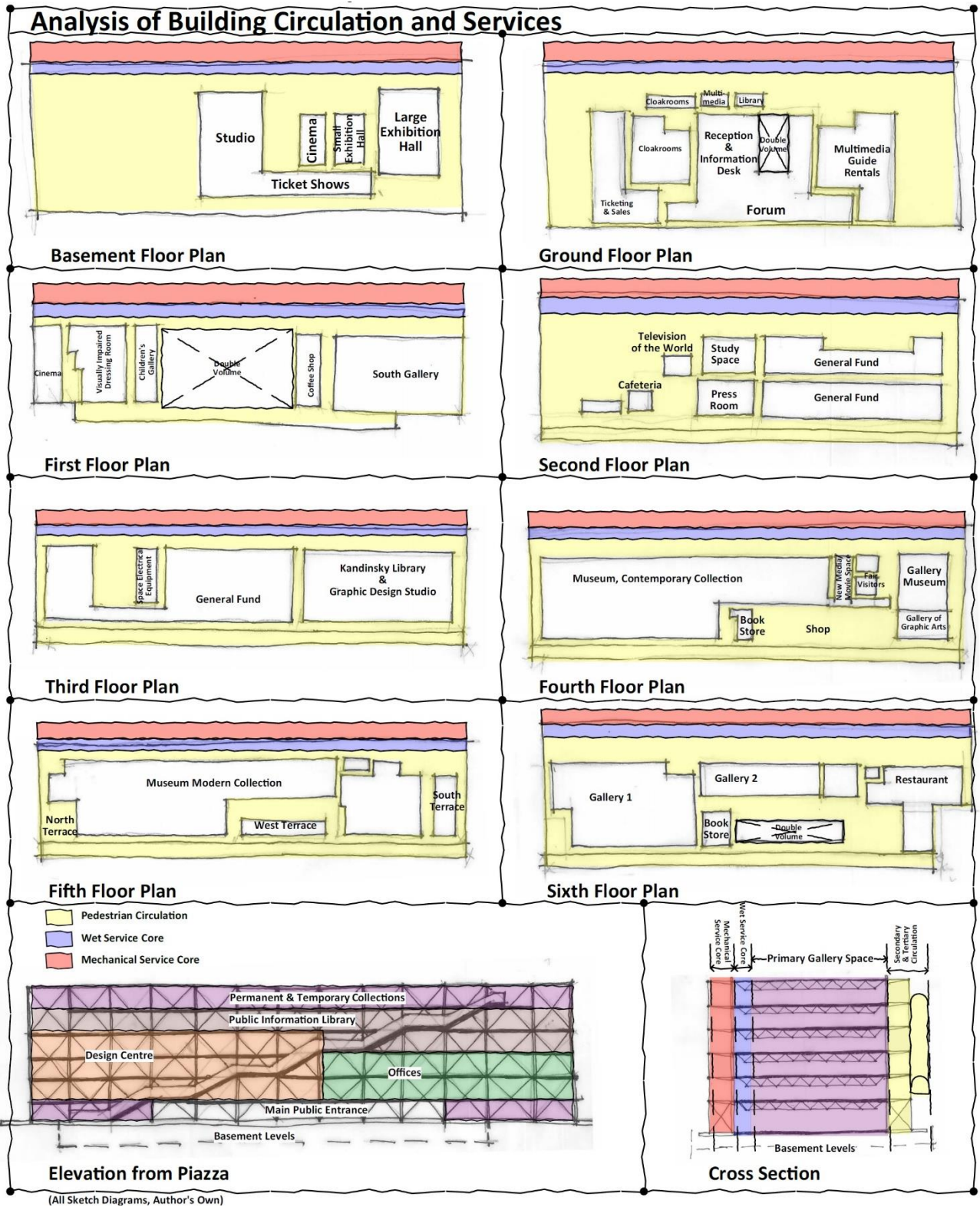


Figure 72: A Diagrammatic analysis of pedestrian circulation and services within the building. The Centre turns its back to the main road and exposes its service core. The primary focus is therefore on the main entrance facing the public Piazza, the transparent external escalators and the views of the cityscape. (Source: Authors own, 27/10/2020)

5.1.8 Summary

The building itself serves as an outdoor exhibition with its exposed external framework and colourful piping layout. The Pompidou Centre is fundamentally a powerful example of meaningful architecture relating to the quality and materials of the structure. Public space and the human interaction fit exceptionally well and serve as the achievement of creating a sense of place (Miller 2014). There are open and well-lit internal spaces in which it is possible to show art and change and adjust exhibits whenever necessary (Miller 2014).

The design features of the Pompidou Centre can be represented in the versatility of the building, the movement and the sense of public space activity, links it to the context (Samuel 2019). The creation of a flexible public realm at ground level encourages active and passive activities as well as incidental and scheduled visits to the Centre. This relates to the principle of place identity, whereby the community shares a bond within the facility by the use of public space. This defines logical architecture and illustrates the route by which gravity travels down the structure to produce a completely flexible box that transfers the structure, facilities and circulation of the building to the outside of the building (Samuel 2019).

The Pompidou Centre relates well to its context and the culture of the French people although at the time of conception it was met with a level of uncertainty. The lessons learned from the design of the centre will inform design principles related to the design of an exhibition centre within the local context of Durban. The circulation system, the flexibility of spaces, the structural aesthetic, the building as an outdoor exhibition space are significant design concepts that can be further explored and reinterpreted to appraise the proposed design.

5.2 WARWICK JUNCTION

5.2.1 Project Description

Architects: eThekweni Architecture Department, Warwick Junction Urban Renewal Project

Location: Durban CBD, KwaZulu Natal, South Africa

Project Year: 1995

The Warwick Junction's market hub is situated at the "Entrance to the City", between the CBD and the suburbs of Glenwood and Berea and is located underneath the flyovers that link the CBD through the national highways to other inland business centers. Warwick Junction's somewhat neglected and covered up location can be seen as a metaphor for the previously nonchalant approach towards the state and private investors' precinct.

Owing to the large number of people who travel through the precinct on a regular basis, street traders are drawn to Warwick Junction. This is primarily due to the various public transit services in and around Warwick Junction, as well as being within a 10-minute walking distance of the CBD.

The local authorities established an urban regeneration project for the Warwick Junction precinct in 1995. This project was planned to take a somewhat different approach to most other local authority schemes, both in South Africa and abroad, as the urban planning phase included the input of street vendors directly. The system developed for traders works similar to a standard property lease, the traders pay the local authorities a fee granting them a trade license, each license is associated with a "plot number" and each "plot" is marked with lines drawn on the ground. Most street traders are not equipped with any facilities on their plots, but as long as it sits inside their denoted trade space, they may carry their own table and chairs. A further drawback is that any equipment they use must be removed every night to allow for street cleaning purposes.

In Warwick Junction, spatial and social justice was achieved when street traders took legal action against the construction of a shopping mall on the site of some of Warwick's most famous markets. This would have caused the economy and many jobs and livelihoods to be lost within the district.







- | | | | |
|--|------------------------------------|------------------------------------|----------------------------|
|  Nodes | 1 Facility for Mielie Cooking | 5 Herb Traders Stalls | 9 English Market |
|  Main vehicular circulation | 2 Pavement Stalls | 6 Information Centre | 10 Pinefore Traders Stalls |
|  Pedestrian paths | 3 Traders Stalls on Leopold Street | 7 Hazrath Badsha Peer Shelter | 11 Early Morning Market |
|  Market Edges | 4 Market Road Bridge | 8 Facility for Bovine Head Cooking | 12 Victoria Street Market |
| | | | 13 Transport Facilities |

Figure 73: Warwick Junction contains an organic placement of paths, edges and nodes. The market place is positioned centrally and ties the rest of precinct together successfully. (Source: Leith, 2012, Adapted by author, 29/12/2020)



Figure 74: Street View of The Early Morning Market. The market space is centrally positioned with heavy pedestrian circulation that creates a vibrant public space. The symbolic artwork creates a sense of pride, ownership, identity and orientation within the precinct. (Source: Google Earth Street View, Adapted by author, 29/12/2020)

5.2.2 Background and Social Context

A multi-faceted and lively area within Durban CBD is Warwick Junction. It is the result of Durban's political and ethnic past and of racial segregation being imposed during the apartheid period. Due to its closeness to the Berea road and the railway, Warwick developed itself as a residential area. There, the present Indian community was well founded, making up one third of the population.

The Early Morning Market was constructed in 1934 for Indian gardeners to sell their produce. It has however changed greatly over the past forty years. In the early 1970's, the customer profile was dominated by Indians, with a substantial number of whites and a growing number of blacks. By the 1980's, there were slightly more blacks, fewer Indians and no whites. Currently, most stalls are owned by blacks with sales almost exclusively to blacks.

More recent history has seen the Warwick Junction scheme's development, launched in 1995 via the special branch of architectural projects in the area. This project looked at the "public space" reconceptualization to try to connect the isolated parts of Warwick Junction and provide formal and informal trading spaces. The implementation of the informal economic policy set up in 2000 to legitimize the use of public spaces has seen this happen.

In the late 1980s, traders were recognized for their economic contribution and allowed to stay on the streets at explicitly designated trading sites. With the abolition of apartheid, the growth, population and movement of Warwick Junction began to thrive. As so many more people moved into it, the entire dynamic of the region shifted and expanded, the area became illegible and confusing to individuals. Research carried out in 2001 showed some approximate numbers

that Warwick Junction catered for: 2000 taxis, 130 000 daily taxi departures, 140 000 daily departures on train and bus, 460 000 people passing through the area per day, concentrated pedestrian counts in excess of 50 000, 8000 market and kerb-side traders, 1200 bags of rubbish daily, and 23 000 weekly customers through a 70 square metre formal sector butchery.

However, this sudden and rapid growth contributed to the creation of an area that, if one is unfamiliar with it, is overcrowded, confusing and particularly difficult to navigate. One of the first moves was to refurbish one of the worst buildings in the city as a project center. The building became the project's execution, consultation and administration centre, and announced the start of a series of capital interventions.



Figure 75: From left to right, Porters, Meilie Cookers, Herb Seller. (Source: Leith, 2012)



Figure 76: From left to right, Pinafores, Traditional medicines, Fresh Produce. (Source: Leith, 2012)



Figure 77: Early Morning Market. (Source: Leith, 2012)

5.2.3 Justification of Precedence

In the city, pedestrian traffic is no more concentrated than it is here. The Early Morning Market (a fresh produce market), the formal City CBD, and the different modes of transport are constantly moving. The path through the Berea Station concourse, reached by a bridging walkway crossing above Leopold Lane, is the most direct and popular connection to the CBD. The region is an active and lively meeting point for informal trade and entrepreneurs. For optimum industry, trade takes place along the most-used pedestrian paths. The places for herbalists and informal traders are the areas of intersection and routes of travel. An Indian temple at the corner of the site of the Grey Street Cemetery and St. Emmanuel along Queen Street with Sangomas and herbalists in the same area also shows that Warwick Junction is a significant cultural and religious node.

The Warwick Junction Project, launched in 1995 through the Special Architectural Projects Branch of the City, has been developed more recently. This project aimed to reconceptualize 'public space' to attempt to connect the disconnected sections of the Warwick Junction area together and provide more established spaces for the area's informal trade and service providers. For entrepreneurs in the area, pavement trading has been the key economic foothold for them in the city. Durban created an Informal Economic Strategy in 2000 in order to legitimize the usage of such public spaces. Positioned in the middle of Warwick Junction, the Project Centre's locality allows active interaction with the community and promotes constructive communication between the government and local residents and traders. Some of the designed works in the area have also questioned traditional architectural typologies due to the unique character and problems in the Warwick Precinct and have resulted in an architecture that reacts singularly to the real challenges and opportunities in the area. The Market Road Bridge, constructed in 1998 by OMM Design Workshop, is one such project. In a series of

initiatives, The Bridge was the first to merge some of the systemic divisions produced by apartheid planning.

The Proposed Exhibition Centre for Phoenix will also seek to integrate previously disadvantaged and marginalised communities by creating a sustainable, accessible, and inclusive public facility for all South Africans. The proposed facility will add value to the existing industrial node and become a facility that is situated in an important overlapping area between two residential areas that is currently seen as an unsafe and left-over space. The presence and strategic positioning of the marketplace is critical for the success of the development.

5.2.4 Urban Context and Locality

Warwick Junction is situated at the entrance to the CBD. Movement to and from the CBD calls for movement around it or alongside it. It is also one of the city's busiest transport centres. The Warwick Precinct upgrade will help the city of Durban, as Warwick is a tourist attraction. Other important areas such as Durban Station, the Centrum Location, the Albert Park district and its walking distance to the Esplanade and the beachfront are also in close proximity to the city. A link between the railways would allow a closer connection to the CBD.

Warwick Junction is the main transport hub and the western gateway, linking Durban's city with all major transport routes, both vehicular and pedestrian. Johannes Nkhosi (Alice Street), which heads into the area, and David Webster (Leopold Street), which heads out of town, are the main roads that pass through Warwick. Julius Nyerere Road links these highways in a north-south direction (Warwick Avenue). These roads are very busy and people use them every day to get to and from work.



Figure 78: Macro Scale locality map of Warwick Junction. (Source: Mongezi, 2014)



Figure 79: Micro scale locality map of Warwick Junction. (Source: Google Earth, 30/12/2020)

5.2.5 Planning and Programme

There was no other space for Warwick Junction herb vendors to sell their herbs and traditional medicines along the pavements and roadside interchanges in the Warwick district. Today, as it is, pedestrian space is still scarce and there was a need to build overhead pedestrian paths linking the Victoria Street Bus Terminus and the city's different taxi ranks. The municipality never completed the Queen Street vehicle onramp over the current railway line and the Victoria Street off-ramps to the highway. All stakeholders agreed to transfer the herb traders to the ramps and provide them with the stalls of sheltered traders and use the unused spurs of the freeway as protected overhead passages to get between stations and markets for pedestrians. The abandoned freeway is inventively connected by a series of footbridges to the surrounding markets and stations. The Market Road Bridge, constructed by OMM Design Workshop, is one of the most recognized (See Figure 55 & 56). On either side of the ramp, the stalls are set up, with pedestrians' circulation in the middle. With the floor just slightly elevated to signify the floor area of the 'stalls' of the herb sellers and a lean-to roof to provide some protection from the sun and rain, the shelters' design is kept quite simple. Herb traders share larger areas demarcated by a half-height wall that provides shelters with structural support and demarcates various areas of the market for herb traders.

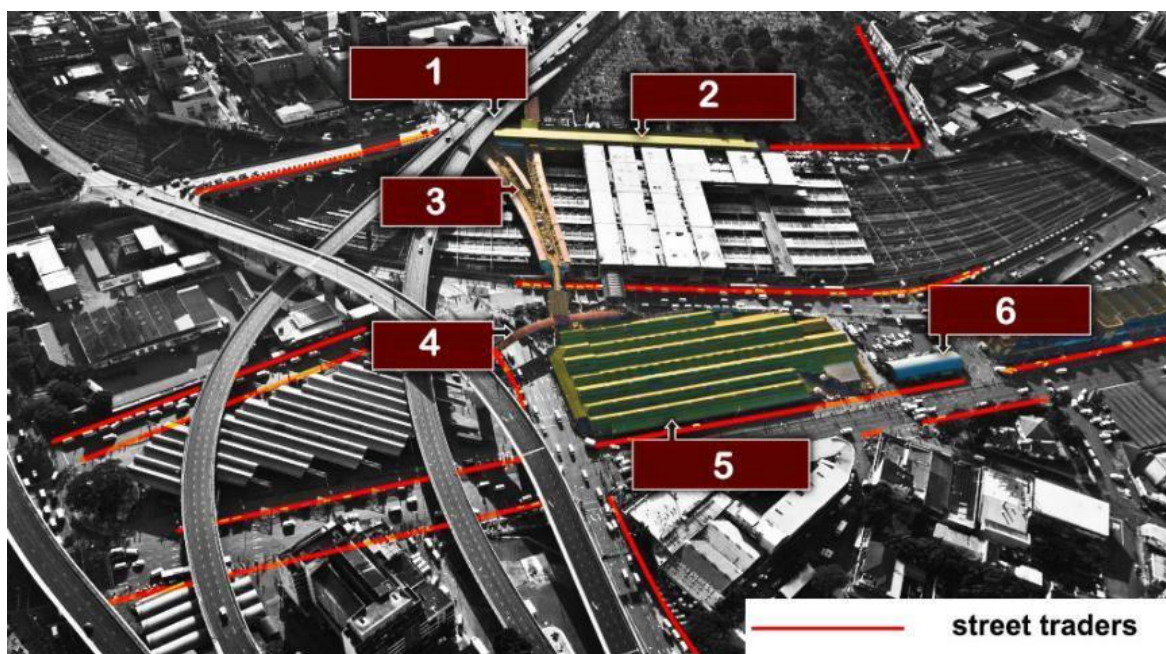


Figure 80: Section and layout of Muti Market bridge and ramp over Leopold Street. (Source: KZ-NIA Journal 2, 2001)

The area of Warwick Junction is divided by the N3 Western Freeway, limiting integrated growth. On the other hand, apart from making it one of the key gateways into Durban CBD, providing a form of shelter under the flyovers has helped the growth of the informal economy, leading to sheltered public for trade.

In addition to its variety and character, the area has different distinctive areas within the precinct, namely: the Transport Center, the Trade Hub, the Grey Street Area, the Educational Precinct.

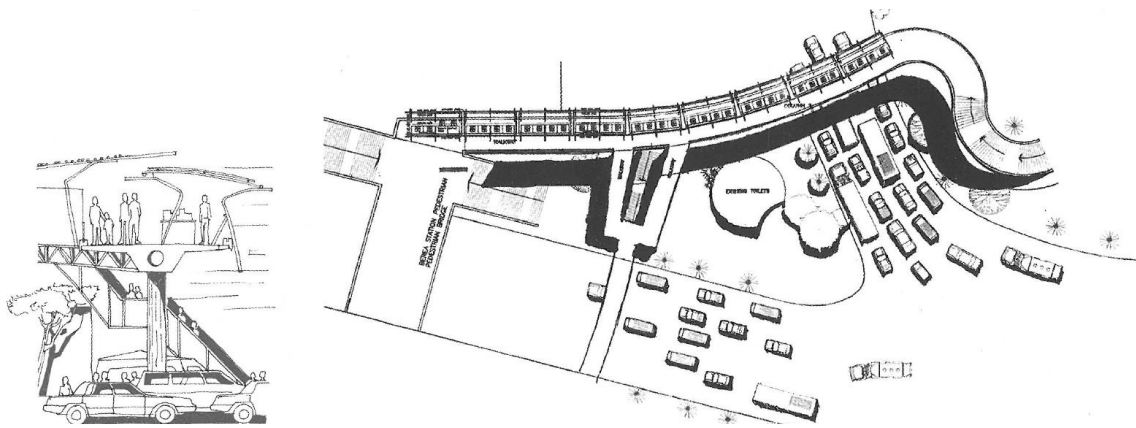


Figure 81: Warwick junction's different trading locations, 1. Imphepho & Lime Market (traditional medicine, beneath the fly overs), 2. Brook Street (clothing) Market, 3. Herbal Market, 4. Aerial Market, 5. Early Morning Market (fresh fruits and vegetables), 6. Bovine Head Market (meat). (Source: Mongezi, 2014)

5.2.6 Design Rationale

The materials used to make the shelters are available locally and are reminiscent of the materials on the outskirts of the city used in shantytowns. In order to hold up the corrugated iron lean-to roofs, gum poles are used, and the dividing walls are simply made of roughly plastered stone. The architecture thus fits well in the sense of the stalls of African traders that are typically made of "cheaper" materials that are easily available. The style is low-key and doesn't overpower. Rather, the focus is on the unhindered movement and accessibility of pedestrians to their particular destinations and the visibility of the herb sellers' goods.

The use of few materials and low dividing walls, reflects a sense of transparency and integrity. This conceptual design seemed ideal for an area that was isolated for so many decades from

the rest of the city. With as few walls between them as possible, many herb traders sit side-by-side under the same roof, enabling easy-flowing conversation and camaraderie among fellow entrepreneurs. A sense of community is created in a transitory area that is constantly being used by individuals passing through. Initially, the disused freeway was built for the flow of anonymous vehicular traffic, but now does so much more than this, a slower speed of pedestrian movement that encourages conversation and trade to build a sense of *communitas*. People will learn about their environment at a slower and more thorough speed than that of a motor vehicle. The threshold is also made apparent by the slightest modifications in height and overhead shelters, despite the absence of walling and conventional architectural thresholds such as doors and windows.

At all times, one is aware of what is going on in the immediate environment. A simple orientation and sense of security are generated by the visual connection establishing a destination. In both the pedestrian's healthy transition from one area to the next and the efficient sales of the herb sellers' products, visibility plays a key role.

The Market Road Bridge is one of the pedestrian bridges constructed to connect on and off-ramps that have been transformed into the Herb Sellers' Market to the disused freeway. It was conceived as a market gateway and, as it stretches high above the busy David Webster Street (formerly Leopold Street), it has become a landmark that marks the entrance to the Warwick area, whether on foot or by motor vehicle.

The bridge is intended to carry pedestrians safely up and over the busy streets below and on to the Herb Sellers' Market Bridge and the nearby transport stations. The bridge is about three meters wide, making it possible for large numbers of people to use it at once.

People are protected from falling over the sides by a metal grille railing that stands almost at head-height. There is a handrail on each side for the elderly or sickly to use to support themselves, and the floor is ramped so that trolleys and wheelchairs can be moved along it. The bridge also connects to another pedestrian bridge that already existed in the old Leopold Street district, which now connects the Early Morning Market to the Victoria Street Bus Terminus. Most of the foot traffic that was level with and alongside vehicular traffic, creating more chaos on the already busy roads, is pushed upward by linking these pedestrian bridges, and people can easily reach one of the different destinations in the Warwick area.

With some shady pergolas, the building is nothing more than a pedestrian bridge. However, Warwick Junction, renowned for its harsh and tough setting, is ideal for the use of durable

materials such as concrete for the floor and steel grilles for the sides of the walkway, and caters to masses of people every day moving over the pedestrian bridge. The wattle branches, or iziNtingu, that are used to provide shade on the pergolas are a traditional vernacular and thus provide a clear connection with the users' architecture.

The bridge appears lightweight and a swooping motion suggesting a sense of movement is produced by the irregularity of the wattle branches in the canopy. Not only does this transient quality reflect the role of the bridge; it lets people move from one place to another, but it also reflects the psychological and social condition of the individuals who use it. (See Figure 56). These individuals are in a "in-between" state, not in one position or another, and they enter an environment they may not be familiar with, they are in a state of liminality. The use of bridges and overhead walkways physically knits together the current urban fabric and allows people to understand and navigate the unfamiliar world, helping to mentally knit together their own map of the spaces as they discover them along the road (Bekker 2011).



Figure 82: Market Road Bridge, Side elevation. (Source: KZ-NIA Journal 3, 2001)

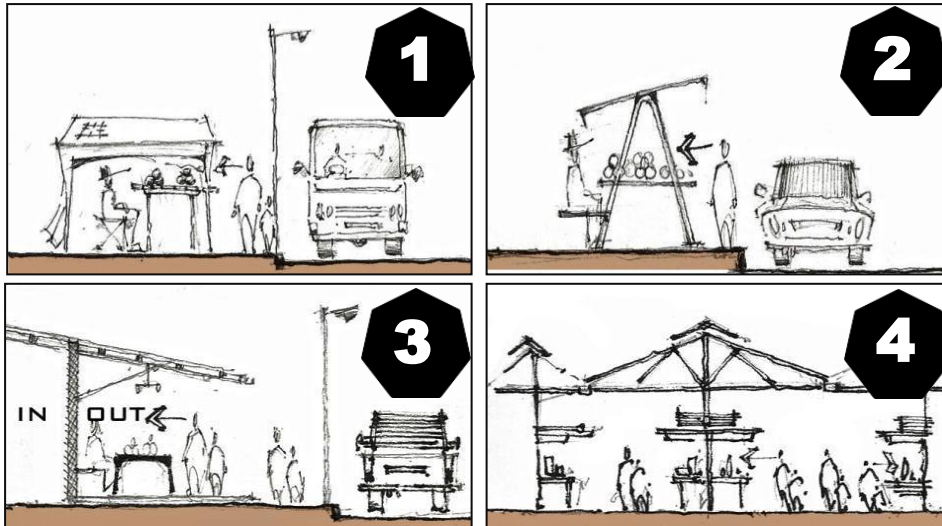


Figure 83: Various types of street trading, 1. Self built shelter, 2. Prefabricated formal shelter, 3. Under 'formal' infrastructure' 4. Located internally under formal shelter. These traders generally found themselves moving closer to the paths and edges where pedestrians passing by would purchase goods. Most of the pedestrians move through the precinct briefly in order to use the intermodal transport facilities. (Source: Mongezi, 2014)

5.2.7 Evaluations and Analysis

Until 1994, local healers were often harassed by the police, and a lack of storage and proper trading kiosks meant their goods were either damaged or stolen. The Muti market was established in 1997 to allow the healers to control the room in which they worked. On an unused flyover, a remnant of Durban's modernized city, the market site is situated. The Warwick Junction project leader, Richard Dobson, states that the construction and design process was smooth since the infrastructure was already in place and unused (Lott 2016).

Traders soon adapted to the new space they were provided, and it was now possible to connect early in the morning to the brook street market, allowing a large amount of foot traffic to pass through. This is an illustration of how Warwick's traditional healers could deconstruct and reinterpret a previous method built solely for moving vehicles from point to point. Apart from the spatial reorganization of the space, which 'long denounced and repressed' the traditional practices of healers in the heart of the region, we can also observe a metaphorical deconstruction of the former apartheid regime. These healers have now built a spiritual center

in the city of Durban. Perhaps, how one moves through space to get from one point to another is the most striking aspect of the Muti market. The market is a thoroughfare that takes you along a specific road, taking you to sights and smells that thrill and stimulate the senses (Lott 2016).



Figure 84: Before -The incomplete and unused vehicular flyovers. (Source: KZ-NIA Journal 3, 2001)



Figure 85: After -The Muti Market, using the existing flyovers with very basic roof sheet structures for shelter. (Source: Leith, 2012)

We also see the peculiar manner in which traders have modified the spaces they occupy in the market of clay wholesalers. The physical limitations of the above flyovers have been reinterpreted by these market traders, turning the space below into both a marketplace for their goods but also a safe, sheltered space within which they can reside. This market acts as a special route from the Brooke street market to the market for bead sellers and a waste recycling center which is very close to the Muti market (Lott 2016).

Every market in Warwick is reflected by the mixed trade strip, the cardboard collectors and the porters. The mixed merchants sell a wide range of items, according to Dobson, ranging from cigarettes to small snacks as well as 'hand lotions, music, crockery, small pieces of hardware and even rat poison' (Lott 2016). Depending on what kind of permits the local authority has given them, these traders fill any room available to them on the street edge and this becomes a lively and chaotic space similar to an informal town. As the day wears on and pedestrian requirements change, the things sold on the pavements move. In the morning, essential items such as a cigarette or a packet of chips are directed at people who may want to buy some on their way to work. The stalls tend to draw individuals searching for unique products such as music and hardware by mid-day. The focus has moved once again towards the end of the day to draw consumers who need something to purchase for the evening meal or other immediate household needs. This continuous shift shows the way the street edge is used as a trading area by Warwick's street traders. The primary function of the pavement is that of a walkway, but its function in this instance was reinterpreted to serve various needs, adapting to different times of the day (Lott 2016).

5.2.8 Summary

In Durban, there is a desperate need for architectural orientation for all individuals visiting the region. Despite its apparent uncertainty, Warwick Junction fulfils the gateway to Durban's best and manages to capture the feeling of movement, honesty, and openness needed from an orientation and mobility architecture. However, it lacks the iconic feature of landmarks, such as the immediate acknowledgement from a distance of architecture, views between spaces to help visitors find themselves in the sense of Durban. The design should integrate local culture and architectural elements that add warmth and context, so people feel a sense of belonging.

Through analysis, the Early Morning market is in a prime position and is very well supported by the various urban structuring elements, but when examining the relationship between inside and outside a link, it is somewhat ignored as there is now a preference for trading on the outside of the market rather than the inside. This is due to limited external connections once within, which could be enhanced with further structuring of entrances and exchanges along movement

paths. This, in turn, would mean that merchants would gain more trade and have a possible positive impact on the growth of livelihoods.

The fact that Warwick Junction is so well linked to an array of outlying areas across the city as well as to many city districts means that for many it is a familiar place and a place with which many may identify. It also provides a platform for the growth and pride of marginalized communities within the region, being truly symbolic of the democratic age in which South Africa now lives. For these reasons, in the opinion of the writers, Warwick Junction has a positive sense not only to its direct users but also to the entire city.

CHAPTER 6: CASE STUDY

6.1 BAT CENTRE

6.1.1 Project Description

Architects: Architects Collaborative

Location: Durban Harbour, KwaZulu Natal, South Africa

Project Year: 1995

Project cost: R2.3 million (fully equipped)

The 'BAT' Centre is an abbreviation for the 'Bartel Arts Trust' named after the late Hugo Bartel who was an Austrian engineer. He donated a large amount of wealth dedicated to the upliftment and promotion of arts and culture in Durban. Architect, Paul Mikula and lawyer, Dick Breytenbach were both tasked with the opportunity to conceptualise and facilitate the creation of an arts centre that would give the underprivileged community a chance to engage with skills training and economic empowerment (Naidoo 2014). For those seeking support and creative spaces to develop their artistic talent, the BAT Centre is a home. It is a non-profit organization devoted to promoting the music, visual arts, dance, crafts, and literature of KwaZulu Natal. The centre is therefore aimed at promoting a variety of art disciplines that encourage cultural engagement and interaction. The sense of Durban as a multi-cultural society also involves the idea of a diversity of cultural activities. Events at the centre range from weekly entertainment programs, to comedy evenings, music evenings, and drumming evenings. In the centre, there are also numerous art and design shops, a graphic art studio, youth development facilities and community art programs. It can also be concluded that the centre acts as a community centre that uses art as an instrument in the city to unite and foster cultural diversity. (Mseleku 2014).



Figure 86: Harbour facing elevation of the BAT Centre. (Source: Naidoo, 2014)

The BAT Centre uses a leased property currently owned by Transnet, the old naval training institution known as the 'good-ship' SAS Inkonkoni. The BAT Centre's primary goal was to inspire painting, ceramic, pottery, dance, music and also to promote cultural and sociological exploration. The BAT Centre was designed and officially opened on 17 August 1995 by Architects Collaborative (Naidoo 2014). It has been running since 2000 with the BAT trust fund's help and is primarily based on public donations and sponsorships. It acts as a (can be contracted out) entertainment venue for showcasing new talent and provides emerging artists and musicians with a means of employment. Since its inception, the BAT Centre has hosted numerous fashion shows, poetry evenings, seminars, and foreign artists (Naidoo 2014).

6.1.2 Background and Social Context

The Durban Harbour incorporates both import and export companies and the military naval base, making it an integral component and the main economic hub of the city. The location of the BAT Centre was based on developing social and cultural unity within the local community. A world torn apart by apartheid and ethnic division was justified by this highly significant and admirable theme.

The architectural vision for the BAT Centre was developed by Paul Mikula of Architects Collaborative (Miller 2014).



Figure 87: Social interaction between students, tourists and staff members. (Source: Sokhela, 2012)

6.1.3 Justification of Case Study

The Bartel Arts Trust Centre is regarded as one of the most important forums for the advancement of the arts and culture of Durban. The study of the BAT Centre is then essential to the analysis in understanding how the building has functioned over the years and its successes and shortcomings, so these key findings will begin to inform how to approach the production of a design. This building has been a landmark for the art scene in Durban over the years, hosting numerous festivals, exhibitions and displays. The Bartel Arts Centre has seen many renowned international and local artists and performers showcase and show their work at the centre. It has played a crucial role in the improvement of Durban's cultural life. Through the creative use of sculptures and mural artworks on the facades, the centre supports and communicates the arts (Figure 88). This building then becomes a forum inside and outside the building for artists to demonstrate their work. Over the years, the centre has taken advantage

of young people passionate about the arts, usually from deprived neighbourhoods (Mseleku 2014).

The BAT Centre creates a truly integrated social and spatial experience whereby everyone, including students, staff and tourists, are able to access and experience the entire facility. The proposed Exhibition Centre in Phoenix will seek to provide an interactive experience regarding cultural exhibitions, market space and training facilities. The way people use, feel and experience the various areas for art and heritage will help guide and inform the overall design process. The theory of phenomenology is evident in the design of the BAT Centre, it creates a sense of place by the use of bright colours, beautiful murals, sculptures, art works and textures.



Figure 88: Sculptures and Mural Art. (Source: Mseleku, 2014)

6.1.4 Urban Context and Locality

The BAT Centre is located on Maritime Place, on the northern edge of the port of Durban. The site is connected to harbour developments on its east and west sides, passing on the northern boundary a railway line, a public park and the busy Margret Mncadi Avenue (The old Victoria Embankment). They serve as a visual and physical barrier to the development and make it difficult to reach the site. The BAT Centre has almost completely neglected its façade facing the main road and rail on which services are situated and has concentrated all its resources on its main façade facing the harbour. The main entrance, cafe and open to sky entertainment terrace on the façade facing the harbour take advantage of the views on the first floor with the

main public-oriented services, shopping, radio station and resource centre linking the ground floor with pedestrian tourists. With a stunning and vibrant art mural, the entire facade is covered and celebrates its distinctive typology in a harsh and heavy background. The incorporation of the construction of the BAT Centre was intended as a catalyst for the rejuvenation of harbour development and is well-positioned within the Esplanade district to serve both harbour staff and the community at large (Naidoo 2014).

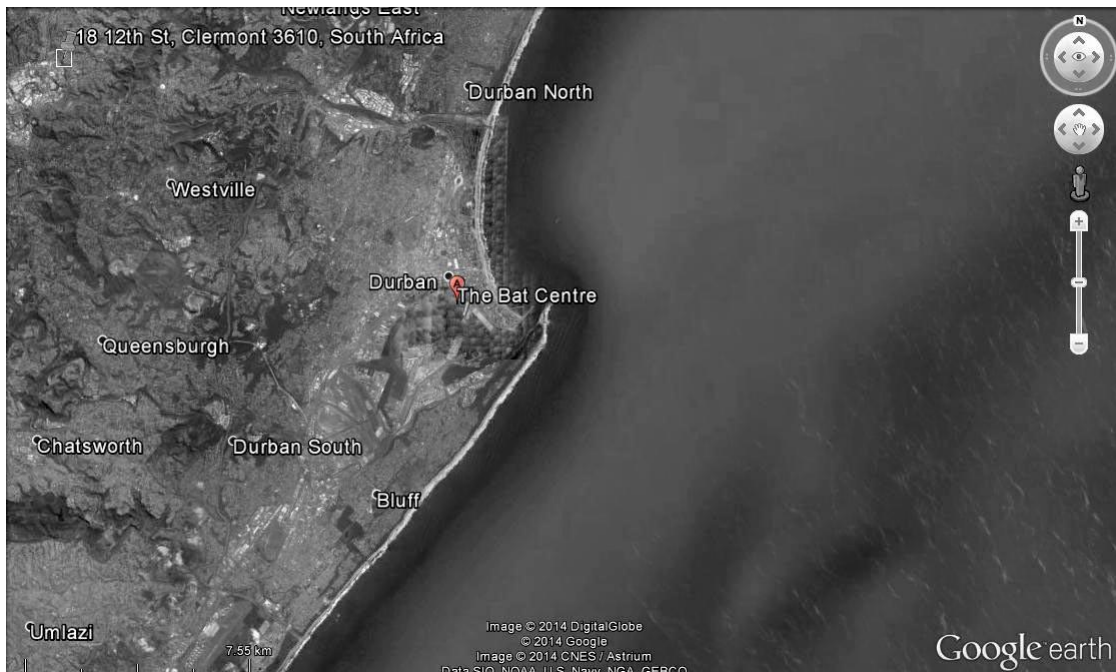


Figure 89: Macro Scale locality of the BAT Centre. (Source: Google Earth, 5/01/2021)



Figure 90: Micro Scale locality of The BAT Centre. (Source: Google Earth, 5/01/2021)

6.1.5 Planning and Programme

The BAT Centre uses SAS Inkonkoni's old navy base and consists of three main buildings that are linked via walkways and balconies. The rear face of the buildings spill out into a narrow courtyard that allows sufficient natural light into the internal spaces. The ground floor has a resource centre, coffee shop, a computer shop, a conference hall and a radio station. The ground floor facilities also include studios (ceramics, drawing and music studios (Naidoo 2014).

The BAT Hall, also referred to as the performance room, is the heart of the BAT Centre. The former Inkonkoni Hall is used by the BAT Hall and is a large volume of raked seats that can accommodate up to 500 seated people.

The BAT Centre is designed through paint, finishes, detailing, and interconnected planning to showcase and celebrate the arts, presenting visitors in and around the Centre with a variety of different environments and emotional triggers (Naidoo 2014).



Figure 91: Ground Floor Plan of The Bartel Arts Trust Centre with the varying functions
ORANGE – Main performance hall | **BLUE** – Retail and commercial | **RED** – Art facilities
(workshops, photo gallery, music practice rooms, resource centre | **GREEN** – Open courtyard |
YELLOW – caretaker room. (Source: Mseleku, 2014)

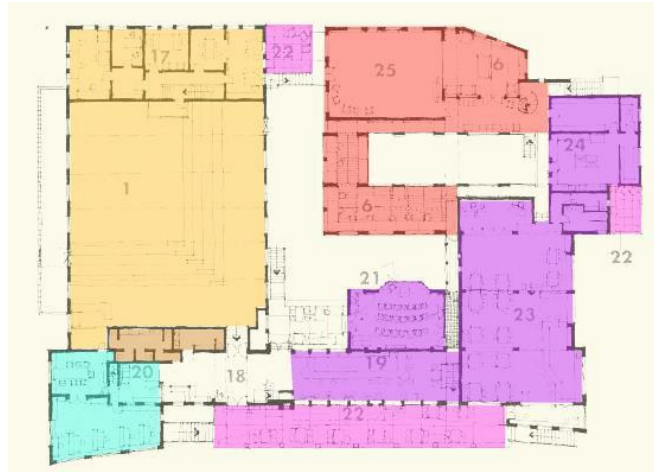


Figure 92: First Floor Plan of the Bartel Art Trust Centre **ORANGE** – Main hall and offices | **PURPLE** – Retail and commercial | **RED** – Art facilities (workshops, dance studio) | **PINK** – Outdoor terraces | **BLUE** – administration | **BROWN** - ablutions (Source: Mseleku, 2014)

6.1.6 Design Rationale

The building aims to foster the creation of arts and culture in Durban and is a creative center that accommodates a range of art disciplines seeking to work together in linked and overlapping spaces. This brings down the challenges between the creators and consumers of the arts that exist. This offers exhibition spaces for the presentation of artwork as well as studios where the artwork is created. The building also houses a small retail and manufacturing sector that helps the centre regularly raise revenue and brings numerous users to the facility (Mseleku 2014). By integrating the roles, this lets the building attract the public, aiming for the facility to be occupied at any given time, either for entertainment or education. As in most public buildings with street frontage, this section is used for retail purposes, sometimes connected to the function of the building, with installations such as small art curio shops. On the ground floor, retail rental shops spill out on the pavement, clients who frequent the bar and restaurant on a regular basis, or use the upper level terrace during the various music events held in the BAT centre. The centre improves its connection to the water's edge, allowing the area facing the view with ample seating to spill out onto the wide deck (Mseleku 2014).



Figure 93: Outdoor Terrace and performance balcony (Source: Naidoo, 2014)

The position of the BAT Centre is compact, with a large portion of the site covering the footprint. The building had to be optimal with an open courtyard used to give the building breathing space and light to penetrate the internal spaces. This serves as a foyer space on the ground floor for the visual art workshop, retail stores and the Bat Café. The high-rise towers of the city are caught in the background, linking us to the edge of the city that is ignored in most of the centre (Figure 68). Owing to the low size of the surrounding central buildings, the courtyard is penetrated with ample light (Mseleku 2014).



Figure 94: Internal courtyard view of the BAT Centre (Source: Mseleku, 2014)

Within the BAT Centre, platform spaces are built, which not only produce, but also show the work of the artist, both as part of the building fabric and in the exhibition galleries on site. As a focal part of the centre, the sense is transmitted, with the gallery space being one of the first spaces that one enters as they enter the facility. The Menzi Mchunu Gallery (figure 69) sits on a mezzanine floor above the entrance foyer and overlooks the bar area and has views of the harbor, confirming its relationship to the water's edge once again (Mseleku 2014).



Figure 95: The Menzi Mchunu & Democratic Gallery, mezzanine level (Source: Mseleku, 2014)

The Main Hall (figure 70) is one of the most notable of all the BAT Centre facilities. This is a wide open hall that is used for major art conferences and concerts, holding up to 500 seated people. The seating in the hall is tiered to maximize the view of the stage. This has a sufficient backstage facility and its own administration offices handling the reservation and service of the Main Hall (Mseleku 2014).

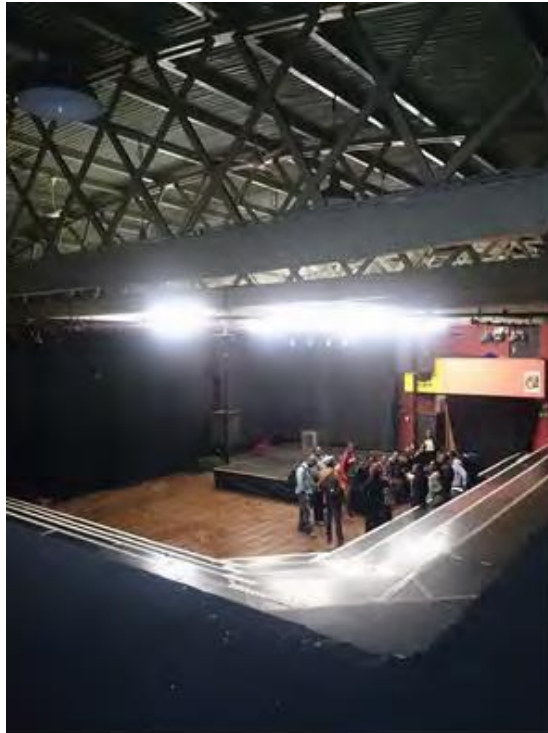


Figure 96: The BAT Hall. (Source: Naidoo, 2014)



Figure 97: Level of detailing of gum pole roof beams. (Source: Naidoo, 2014)

6.1.7 Evaluation and Analysis

The centre being redesigned in 1995, had to adapt and contain other elements that seemed to clash with the dignity of the new building, these new elements appeared as "after-thoughts." The most notable of these is the Menzi Mchunu Gallery, which overlooks the entrance foyer consisting of a lightweight mezzanine structure. The initial foyer area was built with high-level windows penetrating the room as a double volume space. This can be seen in the manner in which halfway between these wide openings lies the mezzanine frame, exposing the lateral structure of the seating area from the outside terrace (Mseleku 2014).

The simple forms and position of the BAT Centre together with the use of colour and sculptures simulates curiosity of passers-by. The BAT Centre's outer appearance is distinctive, bold and shows a visual response in its setting to help celebrate cultural diversity. (Naidoo 2014).

6.1.8 Summary

The BAT Centre promotes the ideology of a "Rainbow Nation" that South Africa tries to live up to. This building is tall and proud of its functional architecture, the services offered, and the innovative, articulate means implemented to demonstrate and combine cultural diversity (Naidoo 2014). In a bland urban setting, the manner in which art has influenced the building's architecture is impressive and highlights the need for more memorable and meaningful buildings today. As there is still a need for more centres and organisations that provide these types of services that teach, celebrate, incorporate and improve the different art forms, the centre was a successful intervention by the developers. In addition, the ability to transform society really lies in creative architecture (Naidoo 2014).

6.2 INTUKHUKO JUNCTION

6.2.1 Project Description

Architects: East Coast Architects

Location: Cato Manor, Durban, Kwazulu Natal, South Africa

Completion Date: April 2006

This case study will explore how the social problems of memory and recognition of people who once lived in this area have been resolved by this township (Pillay 2014).

Intuthuko Junction was a project that resulted from a design competition initiated in 1999 by the Cato Manor Development Association and won by a local architectural firm, East Coast Architects. In the complex, there is a 'Administrative Support Hub' for the CMDA and office space for other non-government organizations. (Padayachee 2014).

A case-oriented design that looked objectively at issues of growth was the competition winning entry. It aimed to provide an integrated approach to the contemporary functionality and cultural traditions of the informal settlement of Cato Manor. The site itself is actually not as busy as one would expect, the only true appreciators are individuals visiting the building for a business and educational cause. In the early years of its inception, the building held a common position, but some aspects of the functionality and process seem to make this culturally rich architectural intrusion less available than the architects originally expected (Phiri 2011).



Figure 98: Intuthuko Junction, Street View. (Source: Google Earth Street View, 29/12/2020)

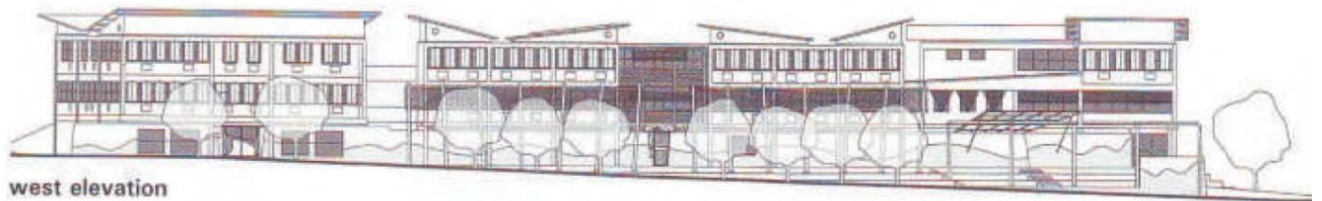


Figure 99: Street Elevation by East Coast Architects. (Source: Pillay, 2014)

6.2.2 Background and Social Context

In Durban, Kwa-Zulu Natal, the township of Cato Manor was founded in 1843. It was named after George Christopher Cato, the first Mayor of Durban. For his work and personal commitment to community service, the land was granted to George Cato as reward. However, from the 1650's the area was inhabited by the Nqondo clan and later on by the Ntuli Clan in 1730. (Pillay 2014).

In the early 1900's the land was sold off and leased to numerous Indian market gardeners who were former indentured labourers. Shortly after their contracts expired on the then Natal province's sugar cane plantations, Indian Indentured employees occupied Cato Manor. It is also remembered that the first inhabitants of the Cato manor were the Indentured laborers. The

Indian gardeners often considered it lucrative to lease land to Africans, and it was forbidden for African people to own land (Pillay 2014).

Cato Manor saw an influx of individuals after World War Two. Most citizens were African laborers. As illegal beer brewing occurred, tensions rose between the citizens and the council of Durban. The brewing of beer was a large part of African residents' income and was an integral part of the African culture.

By 1949, racial tensions were rising between African and Indian residents who lived next to each other. An incident whereby an African boy was punished by an Indian shop owner for theft, occurred on 13th January 1949. This culminated in violent destruction of Indian homes and businesses by African dwellers (Pillay 2014).



Figure 100: Rioting at Cato Manor due to forced removals. (Source: Pillay, 2014)

In 1952, the Durban Council bought Indian Landowners' land to set up an emergency camp for homeless African citizens, named after the local river, this site became known as UMkhumbane. The Community Area Board proposed in 1954 that the white area be claimed as Cato Manor. After the introduction of the Community Areas Act, the whole population of Cato Manor had to be relocated. The Indians were relocated to Chatsworth and Kwa-Mashu was passed to the Africans.

Cato Manor was completely empty by 1968, with only a few Hindu temples, a beer hall and a few residences left. For the Whites, a part of Cato Manor named Stella Hill was constructed. The University of Natal has purchased a greater portion of the property. In 1979, the Cato

Manor Residents Association set up the last remaining residences (CMRA). In the 1980s, it was published that Cato Manor again became eligible for Indian occupation. To implement the re-creation of Cato Manor, the Cato Manor Development Association (CMDA) was established in 1993 (Pillay 2014).

6.2.3 Justification of Case Study

The architectural approach is based on a deep devotion to responsible, sustainable architecture that creatively responds to a community's social needs. This contributes to a building's vibrant architectural character that shows sensitivity in its relation to the world and its residents.

Intuthuko Junction breaks away from the traditional urban framework that defines its typology and exists between formal and informal dimensions while attempting, through a multitude of passive design techniques and material choices, to sensitively filter the elements of nature. This belief in the management of nature stems from the creator's environmental character, claiming that man's social and environmental ills originate from the unbridled sense of industrial society confronted by contemporary culture (Padayachee 2014).

6.2.4 Urban Context and Locality

The Intuthuko building is located at the corner facing Mary Thilphe Street in Cato Manor, Durban, South Africa (Figure 76). Cato Manor is situated between the Umbilo, Brickfield and Sherwood areas on the outer borders of the Durban Metropolitan region.

Cato Manor is filthy and suffers from low connectivity, insufficient facilities and the availability of services. The place tends to be surrounded by Brickfield's business district, the campus of Howard University and the Albert Luthuli hospital. All zones that enjoy continuous growth and high-level capital (Phiri 2011).

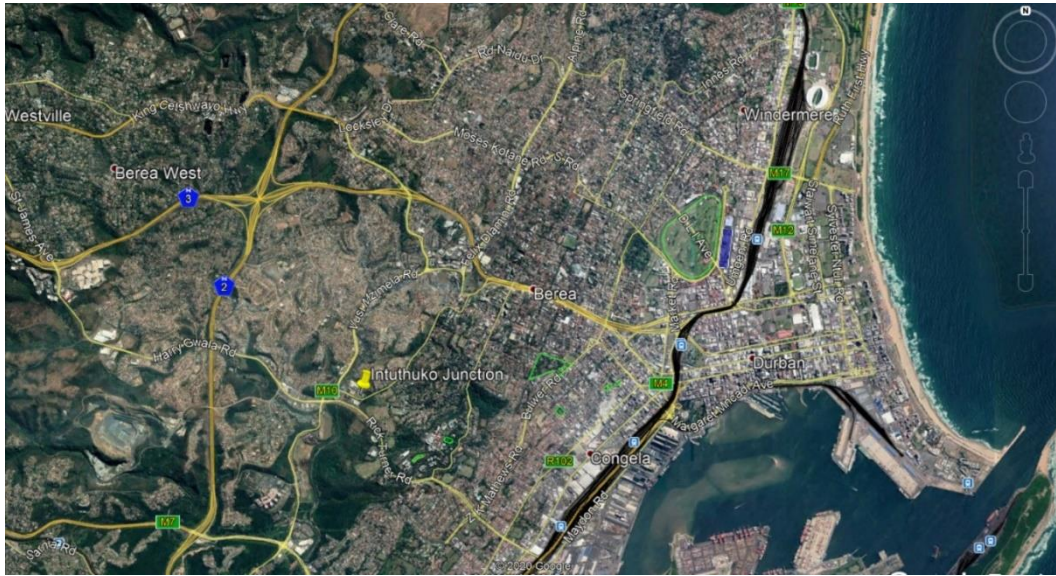


Figure 101: Macro Scale locality map of Intuthuko Junction. (Source: Google earth, 8/01/2021)

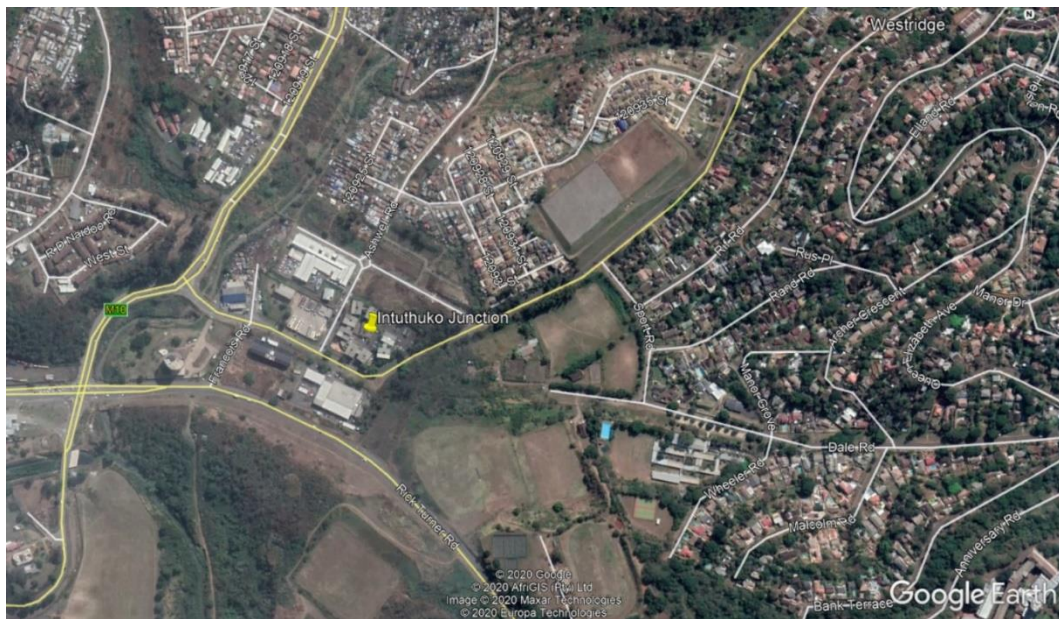


Figure 102: Micro Scale locality map of Intuthuko Junction. (Source: Google Earth, 8/01/2021)

6.2.5 Planning and Programme

Intuthuko Junction’s office space is located on the first level with an angled serpentine wall on the ground level. This provides a buffer between the public pavement and the development’s internal space. To allow for pedestrian and vehicular entry, this solid wall is punctured at various points. The project also discusses the development aspect very well, providing a public

gathering place for meetings and activities, including a pergola that can be enclosed. At the edge of the lane, the building reacts well to its surroundings, creating an icon (Pillay 2014). The facility consists of eight 'pods' inside the construction premises. The pods are matched to the road frontages irregularly, offering the authentic feeling of informality. In general, the office buildings have a central courtyard and are on 3 floors throughout the scheme. This courtyard functions as a light well and helps to ventilate the growth. However, since the building requires air-conditioning facilities, this technique is not being used to its maximum extent (Pillay 2014). Private holdings occupy Intuthuko Junction's upper floors, these office spaces run well and revolve around a central courtyard. It is easy to circulate inside these spaces and finding the way is not a challenge (Pillay 2014).

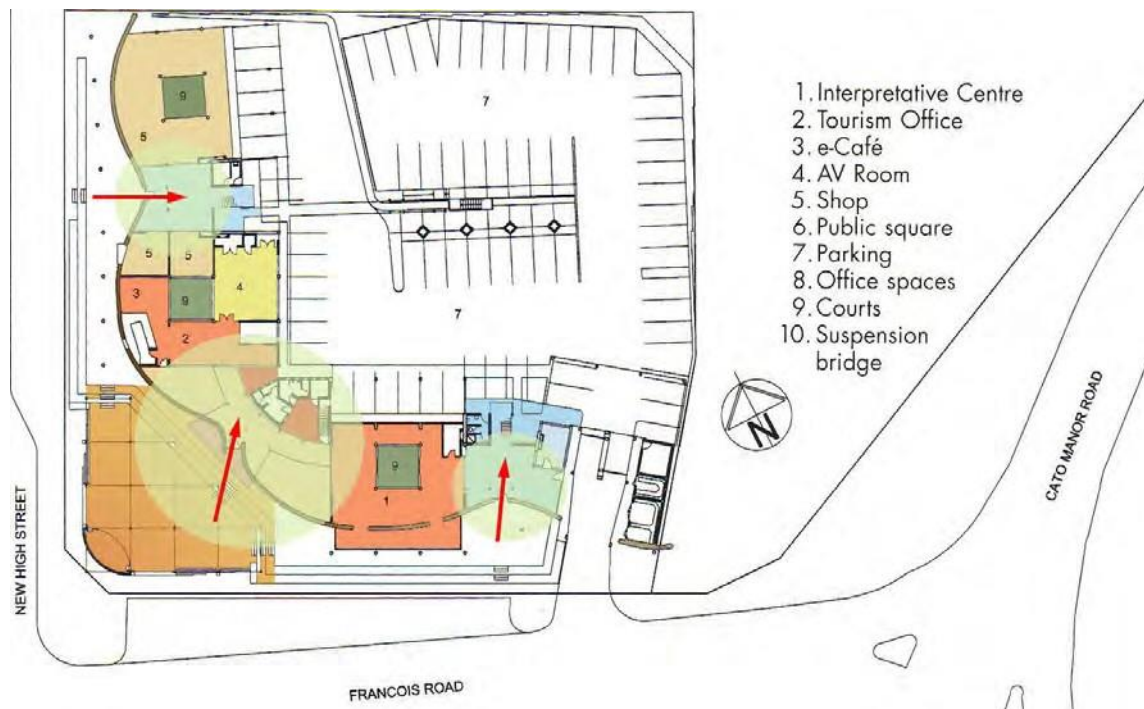


Figure 103: Ground Floor Plan of Intuthuko Junction. (Source: Phiri, 2014)



Figure 104: First Floor Plan of Intuthuko Junction. (Source: Phiri, 2014)

6.2.6 Design Rationale

As a fine example of well-thought-out, historically inspired architecture, Intuthuko Junction serves as a crucial part of the context in which it is located. In the urban context, the vast facility built from reinforced concrete and infill blockwork stands proud. The buildings are decorated in vibrant colours that make them prominent and capture the attention of the viewer (Pillay 2014).



Figure 105: Different types of sun screen devices used on the west elevation. (Source: Pillay, 2014)

The architects often take full advantage of the docks or factories' free plywood and use this to build stairs, bridges, devices for sun control. The architects still retain their enthusiasm for using materials that are unusual but appropriate. The building is highly detailed and uses many materials that are manufactured locally. One might argue that in this facility, the poetics of construction tell a tale of the bold character of Cato Manor's culture. Materials such as gum posts, concrete blocks, off-shutter concrete, textured plaster, vertical cladding of aluminium roof sheeting, paved floors, can create a tactile nature in the construction. On a more personal level, let the user feel and experience the house. Within the urban background, Intuthuko Junction was intended to stand out. When entering this building, an expression of trust is felt by its sponsors, the EU and the city council. The 8 pod buildings are all let out to represent various NGOs and government agencies (Pillay 2014).



Figure 106: The exposed concrete superstructure with infill block work, the different colours and various materials together with an interesting building form highlights important aspects of critical regionalism. (Source: Pillay, 2014)

6.2.7 Evaluation and Analysis

The initial plan envisaged by the architectural team created a central defensible open community area, but this space would later become a parking lot (Figure 103), a testament to the degree to which man's technology controls the use and form of space despite the best intentions of a planner (Padayachee 2014).

Intuthuko Junction's colourful architecture reflects a multiplicity of functions. The vivid colors also reflect the color schemes usually used inside Cato Manor itself. It creatively blends bright, near fluorescent reds, oranges and yellows (Phiri 2011).

The complex consists of eight separate but connected buildings, referred to as 'pods' by the architects. Such pods relate to each other in an un-orthogonal way, a reference to the local and conventional settlement patterns' informal alignment. Each consists of a reinforced concrete

frame, considered to be a 'essential Eurocentric evil' in the building aspect of the architects' design. The structural framework is enclosed by reinforced cement blockwork panels that are plastered and painted to resonate with the colours of the surrounding landscape and represent the diverse ethnicity of local inhabitants. (Padayachee 2014).

Despite the architect's best attempts and best intent, the reception of the expression of the building can not be managed. The centre proved popular during the early years of its existence, but the public section was limited to the Cato Manor Heritage Centre alone due to less public engagement by members. Access is also limited to a single point of entry, causing the center to internalize itself and to segregate itself from the public. This can be viewed as a reaction to the world that lacks unique growth since the core is situated on the edges of two underdeveloped regions. There is a feeling that, as the growth of the surrounding area expands, the centre will become more related to its surrounding landscape in time (Padayachee 2014).

6.2.8 Summary

The theory of critical regionalism is evident in the design of the Inthukuko Junction. The message is varied with a variety of units, informally aligned, referring both formal and informal to the tapestry of housing in the region (Pillay 2014). The mono pitched roofs serve to express that simple urban vernacular. Like thatching laths used as sunscreen for the windows, colours and finishes reflect the varied nature of local buildings. The area's 'Cardboard housing' is expressed in the thin sheeted metal roofs. To create a view of the central landscaped courtyards, each office floor is perforated. Such courtyards provide visual relief, serve as lightwells, and provide fresh air access. The production explores a dialogue between different poles of diverse and fragmented cultures in Durban and aims to make it explicit and legible.

CHAPTER 7: FINDINGS

Questionnaire:

The aim is to note and describe cultural influences, when dealing with civic spaces, specifically in Durban.

1. Which local area did you grow up in?

Respondent 1: Shallcross

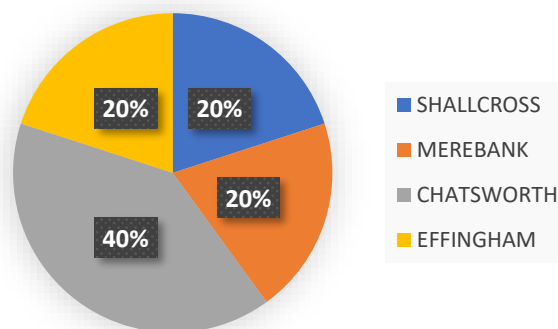
Respondent 2: Effingham Heights, Durban North

Respondent 3: Chatsworth

Respondent 4: Merebank

Respondent 5: Chatsworth

Most respondents are from Indian areas in Durban.



2. Are you familiar with your family background, roots and heritage?

Respondent 1: Just with what we have been told by our parents.

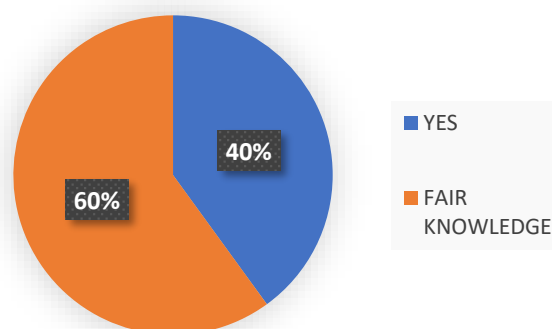
Respondent 2: Yes

Respondent 3: Yes

Respondent 4: Fair Knowledge

Respondent 5: Yes

All respondents have a fair knowledge of their roots and heritage.



3.Can you describe your experiences and challenges as you were growing up?

Respondent 1: I don't believe there were many challenges other than financial challenges, we learnt to live within our means and made the best of what we had.

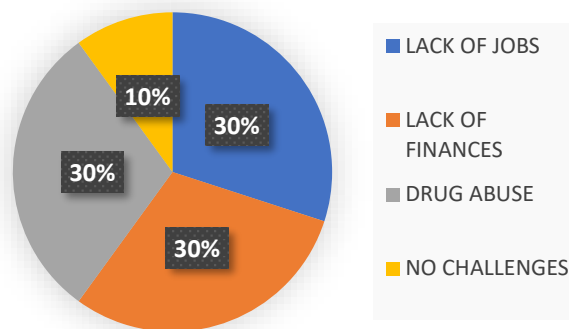
Respondent 2: I did not experience any cultural challenges whilst growing up.

Respondent 3: Most of the kids my age in my neighbourhood turned to drugs. Luckily, due to my upbringing, I did not participate in those activities.

Respondent 4: Living in a predominantly Indian community you become accustomed to Indian culture and way of living. Main challenges experienced is the lack of opportunity in the work environment.

Respondent 5: Born in 1994, therefore the after effects of apartheid.

The challenges are diverse, from lack of finance, drug abuse in the Indian community, lack of job opportunities and post-apartheid challenges.



4.What is your understanding of civic space?

Respondent 1: A space where the community comes together.

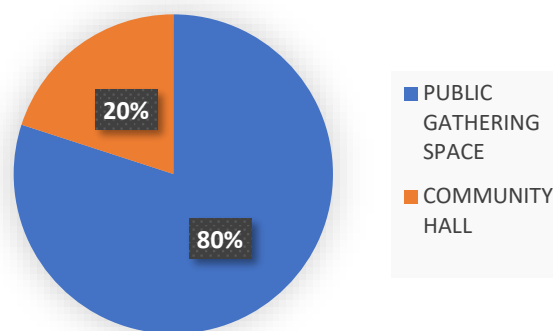
Respondent 2: An environment which facilitates the union of community members to freely interact and express their opinions and concerns regarding social and political issues without any government influence.

Respondent 3: A place where people can gather and also express themselves.

Respondent 4: A community Hall.

Respondent 5: An area that is governed by a set of familiar rules which people use to expose awareness.

The common understanding of civic: it is a gathering space for communities, for freedom of expression and a place of common identity.



5.What is your understanding of Indian culture?

Respondent 1: Diverse, rich in heritage and colourful.

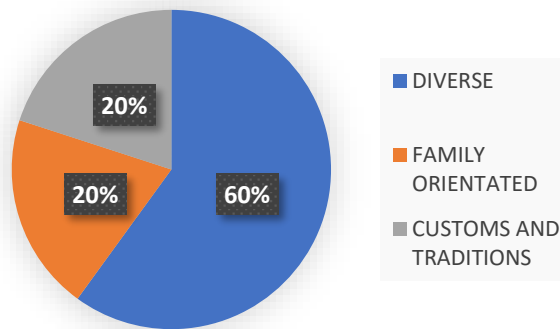
Respondent 2: In my opinion, the Indian culture is one which is united and diverse in the sense that there are numerous aspects which form part of it.

Respondent 3: Indian cultures are based around get togethers. Family is the most important factor for majority of the Indian society.

Respondent 4: Indian Customs and Traditions.

Respondent 5: Diverse, proud and exotic.

Respondents feel that Indian culture is diverse, family orientated, it helps to unite, and our culture creates a sense of pride.



6. What is your understanding of Indian identity?

Respondent 1: Indian identity is not forgetting your roots and where and why your forefather came here. It is also about recognising what they did, in order to give us what we have today.

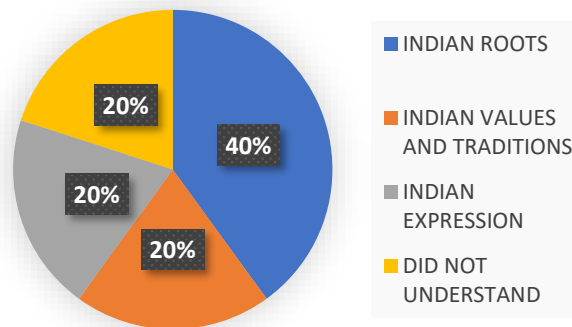
Respondent 2: An Indian identity is one in which Indian social norms, values and traditions play an active role in a person's life.

Respondent 3: N/A

Respondent 4: Your Lineage

Respondent 5: The way in which we choose to promote our cultural learnings to the public.

The ability to recognise the sacrifices our forefathers made, where you come from, how we express ourselves in public.



7.Do you think that Indian identities are been lost, and are they becoming too westernised?

Respondent 1: Yes, they are becoming westernized.

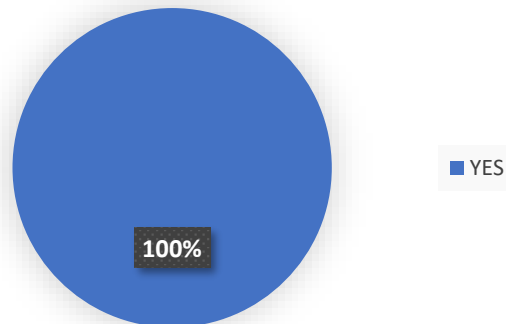
Respondent 2: Yes - this is a result of cultural imperialism from western countries such as USA.

Respondent 3: Yes, but the world is modern. People need to keep up, unless they will be left behind. There's nothing wrong with being westernised if you remember your background, roots and heritage.

Respondent 4: Yes.

Respondent 5: Yes.

All respondents said yes, strong western influences and the world we live in today is modern so we need to keep up to date, however we should always remember and acknowledge our background, roots and heritage.



8.Do you think it is important to have a blend of cultures in our society?

Respondent 1: Yes.

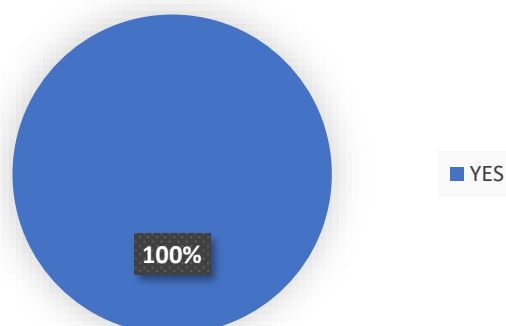
Respondent 2: Yes.

Respondent 3: Yes.

Respondent 4: Yes.

Respondent 5: Yes.

All respondents agree.



9.How do you think apartheid affected the various cultures in Durban?

Respondent 1: I think this was a major setback to the cultures, people had to re-establish themselves post group areas act.

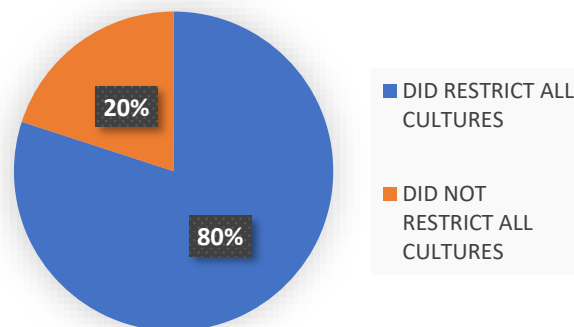
Respondent 2: At the time, individuals were unable to fully experience the reality of their culture due to governmental restrictions, therefore resulting in numerous alterations in those cultures. /

Respondent 3: No.

Respondent 4: Communities had to adapt to the restrictions imposed on communities at the time. In some instances, for the positive and some the negative.

Respondent 5: It did not allow for all cultures to promote their learnings evenly, those who were affected, did not have much choice in the matter.

Most of the respondents felt that apartheid restricted and setback the expression of various cultures in Durban. They felt that communities had no choice but to adapt to the rules and regulations of the day.



10.How do you think the group areas act of the 1950's affected the integration of various racial groups and had this separation not taken place what do you think the social landscape would have looked like now?

Respondent 1: The social landscape would have been totally different. Most area that are now predominantly white, where previously Indian areas. This has changed the landscape of those areas.

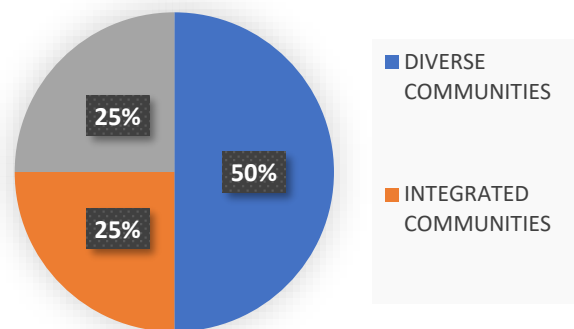
Respondent 2: One of the effects of the group areas on the integration of various racial groups is the creation of social barriers and racial stereotypes. With regards to the social landscape, if this act was not implemented then we would have not had the colonisation of races in certain areas which still exists at present.

Respondent 3: We wouldn't be exposed to other cultures and races. Indians in particular would not be so western.

Respondent 4: If this wasn't in place we would have a diverse community, people will be more accepting of the different race groups and further there shall be equal opportunity to all south Africans.

Respondent 5: Boring and incomplete.

It is important to note that we would have had a more diverse community and people would have been more accepting of each other's cultures. The separation created social and spatial barriers that seem impossible to rectify.



11. What public cultural festivals and ceremonies did you participate in and did they have an impact on the community?

Respondent 1: Eid, Diwali.

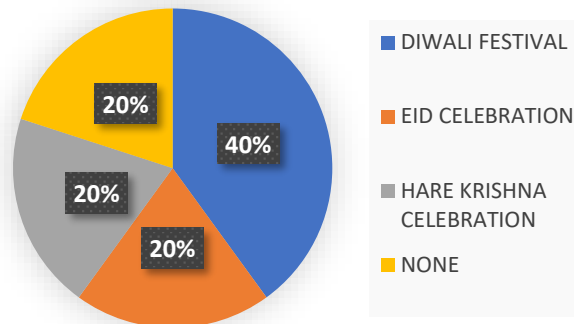
Respondent 2: I have participated in the Hare Krishna Festival. This festival has a positive impact on our community as it provides a platform which unites those individuals who share the same beliefs.

Respondent 3: Yes. For example, Diwali, many Indians celebrate and burst fireworks on this day whereas there are a lot of other people who do not like the idea of fireworks.

Respondent 4: None.

Respondent 5: Diwali, yes.

Most respondents celebrate Diwali, Eid or Hare Krishna Festival. The festivals create a sense of unity and identity within the community.



12.Do you think there is a need to develop a civic facility that will be able to celebrate Indian cultures and pay tribute to cultural festivals etc?

Respondent 1: No, I think there are various organisations within the Indian community that host various events in the different areas. This makes it easier for the locals of that area to participate without having to travel. The festivals held in different areas show the presence of Indian culture throughout the city.

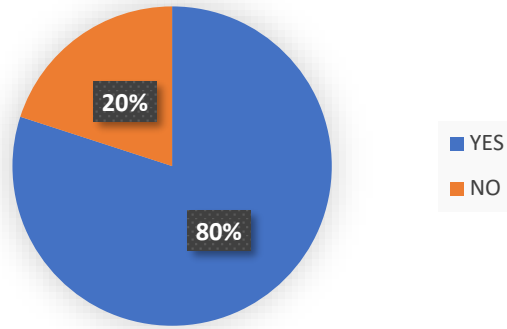
Respondent 2: Yes.

Respondent 3: Yes.

Respondent 4: Yes, at minimum there should be a community hall to facilitate all functions.

Respondent 5: Yes, most definitely.

Most respondents agree that there is a need for a civic facility.



13. Would you like to have access to a public facility that accommodates for multi-cultural activities that educates the communities and creates a sense of integration via continuous sustainable activities?

Respondent 1: Yes. A centre for education perhaps that could educate the youth and school learners about the history and culture of Indians in the country, and their contribution.

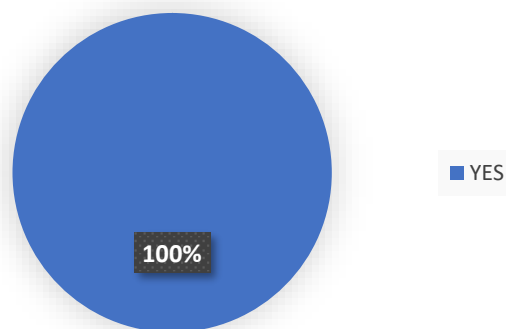
Respondent 2: Yes.

Respondent 3: Yes.

Respondent 4: Yes.

Respondent 5: Yes.

All respondents agree that there is a need for a multi-cultural public facility that educates the community and teaches the youth about Indian culture and identity.



CHAPTER 8: CONCLUSIONS & RECOMMENDATIONS

8.1 INTRODUCTION

The research findings provide detailed literature on the issues mentioned in this dissertation. The problem is the lack of well-design civic spaces that contribute to the loss of culture and identity. In this research, the key question raised was related to the restoration of a sense of culture and identity of Indian South Africans living in Durban. The goal was to examine the importance of social effects on public space by conducting extensive studies on theories related to architecture to establish a contextual and critical understanding of the issues. The human senses were explained in detail and the sensory essence of experiences was explored by describing how it contributes to a spirit of place. The researcher must ensure that as individual entities, cultures are still celebrated but provide a forum for cultural exchange and integration.

8.2 CONCEPTS AND THEORIES EXPLORED

The research process started by exploring the term culture and developing an interpretation of it. Culture can be described as the driving force behind the way daily lives are carried out. That which is intrinsic is an undeniable force between human beings. Thus, irrespective of globalization and industrialization's threatening effects, the impact of culture on the urban world and its inhabiting communities is indisputable.

Cultural expression is important because it makes it possible for a subculture to express itself in the public domain, thereby linking society together and enhancing its cultural identity. Strong subcultures are relevant within the urban environment as they contribute positively to the cultural character of the area. The importance of expressing identity in the built environment contributes to improving the sense of self, subculture, and the culture of the place as a whole of the person, and the use of symbols allows a group to affirm its identity. Symbols are layered with meanings that can only be interpreted by a certain culture. Symbols are generally archetypes composed in the constructed world, such as spatial layouts, shape, textures. These archetypes in the world provide a layer of meaning that is relevant as it connects the emotional significance of a space to the identity of a group.

The senses are responsive and are conscious of changes in the human body and the environment. Such a transformation is successful in creating experiential journeys as architectural elements in space manifest. In the theory of phenomenology, the notion of multi-

sensory experiences is mentioned. In terms of movement and action, the latter strongly promotes the engagement of the senses, enabling people to identify with the space in which they are. Architectural qualities put users closer to things and also drive them within.

In addition, by examining the approach posed by critical regionalism associated with an area's cultural value and climatic background, the social and cultural issues listed in the research questions were also studied. The building and its occupants are affected by the atmosphere and physical conditions of the area.

The devotion of culture and nature can be used in order to create a poetic essence of place in the form of light and art. The perception of the user requires a sense of touch as opposed to a visual sense. A sense of expression that includes the evolution of the being is created by adopting a universal approach. In order to respond to the transformation of human experience, ideas are thus produced.

To generate feelings and sensations, the sense of place can be experienced in terms of pictures, sounds, materials and light quality. Such a location has a holistic character with a specific user familiarity. On the other hand, by facilitating a living process where language and lifestyle offer meaning to space, culture binds society together. In spaces that determine the ways people meet, architecture provides an opportunity for social interaction to happen. In the use of architectural elements that inculcate a sense of harmony, spatial structures create distinct environments for different users.

Natural elements help establish a sacred atmosphere by ensuring that human beings and materials are balanced. Sacred architecture includes geometric representation of a complex nature in shapes, order and proportion. Geometrical forms have symbolic meanings and can produce a cultural sense of belonging.

With the application of scale, shape, material and aesthetics, symbolism has visual and physical attributes that evoke a sense of orientation. There are different perceptual sensory imprints of the tactile features, marked by the strength of light and darkness, temperature and substance aroma. In the doctrine of critical regionalism, tactile sensitivity is strongly seen where the main focus is on community, nature, climate, topography and meaning.

8.3 PROPOSED DESIGN GUIDELINE

The social aspects of Indian South African culture are strongly related to their cultural background and homeland. The research suggests that the presence of a marketplace in the public realm would create a sustainable and vibrant atmosphere that allows for social and economic upliftment of communities. A standalone civic building would become redundant over a period of time unless there is continuous public engagement and activities. Being in such close proximity to an industrial park the incorporation of a skills training centre within the design's building programme would spark the opportunity for industry to engage with the youth in terms of trade and sponsorship programmes. This would help alleviate the huge social issues of unemployed youth within the surrounding communities. An Exhibition Centre in the township of Phoenix would create a sense of belonging among the community. The facility will create an opportunity for the much needed expression of art in terms of cultural exhibitions, dance studios and a museum. These are the key functions of the proposed accommodation schedule; however, the detail design process will include various amenities and services that complement the building design.

8.4 CONCLUSION

To conclude, this current document covers studies that have been studied primarily to the researcher's optimal capabilities while taking into account some limitations that may have prevented the indicated broader studies. Various facets of architecture have been studied and analyzed in this dissertation. These elements are required to create an atmosphere for establishing an exhibition centre that will primarily address key social aspects. The spatial, functional, tactile, sensory and natural elements contribute in connecting man to his environment. These characteristics, complemented by the principles and hypotheses reviewed in the literature review, will be used in the design stage. The report would be used to create a concept brief leading to the design of the Exhibition Centre.

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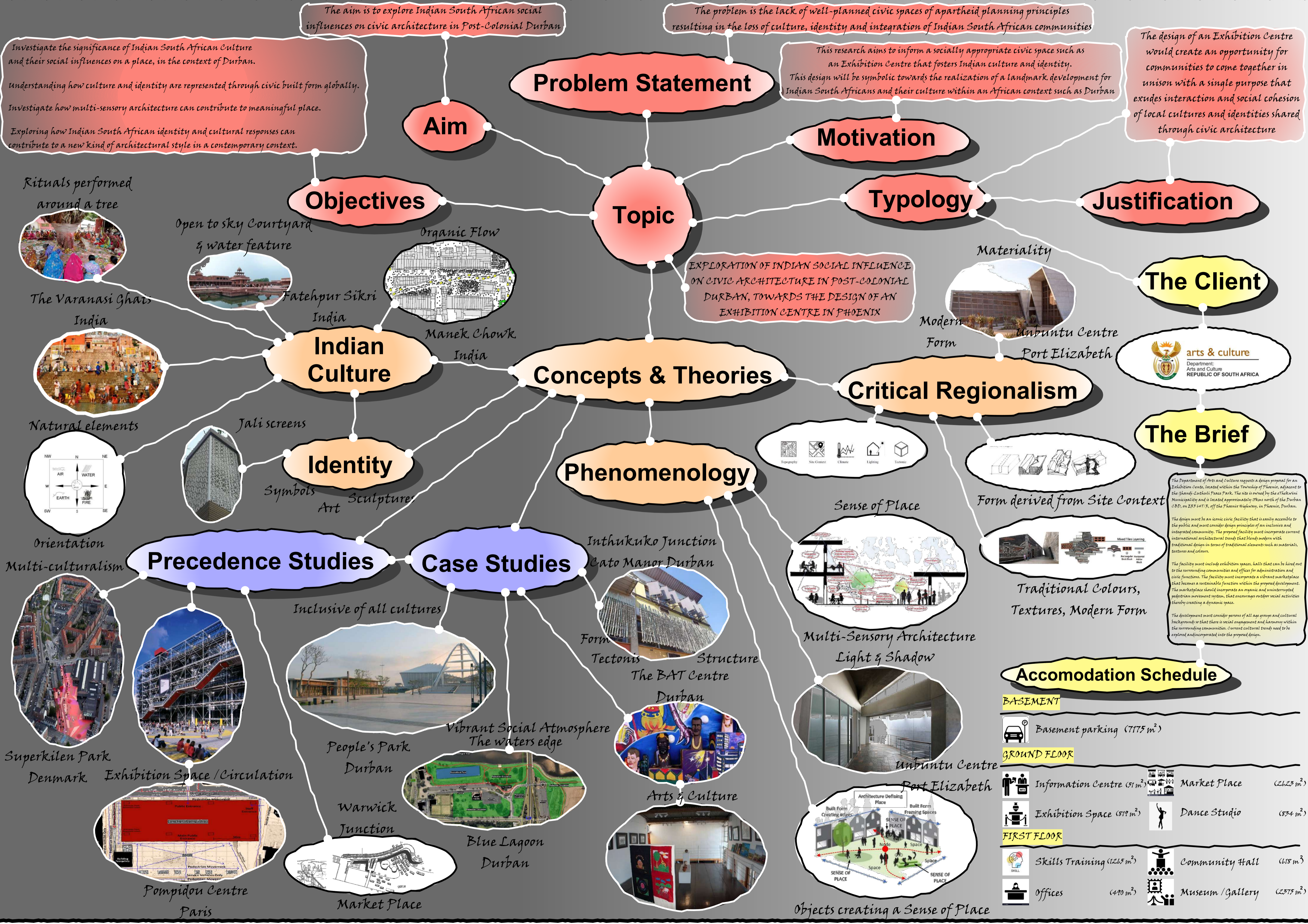
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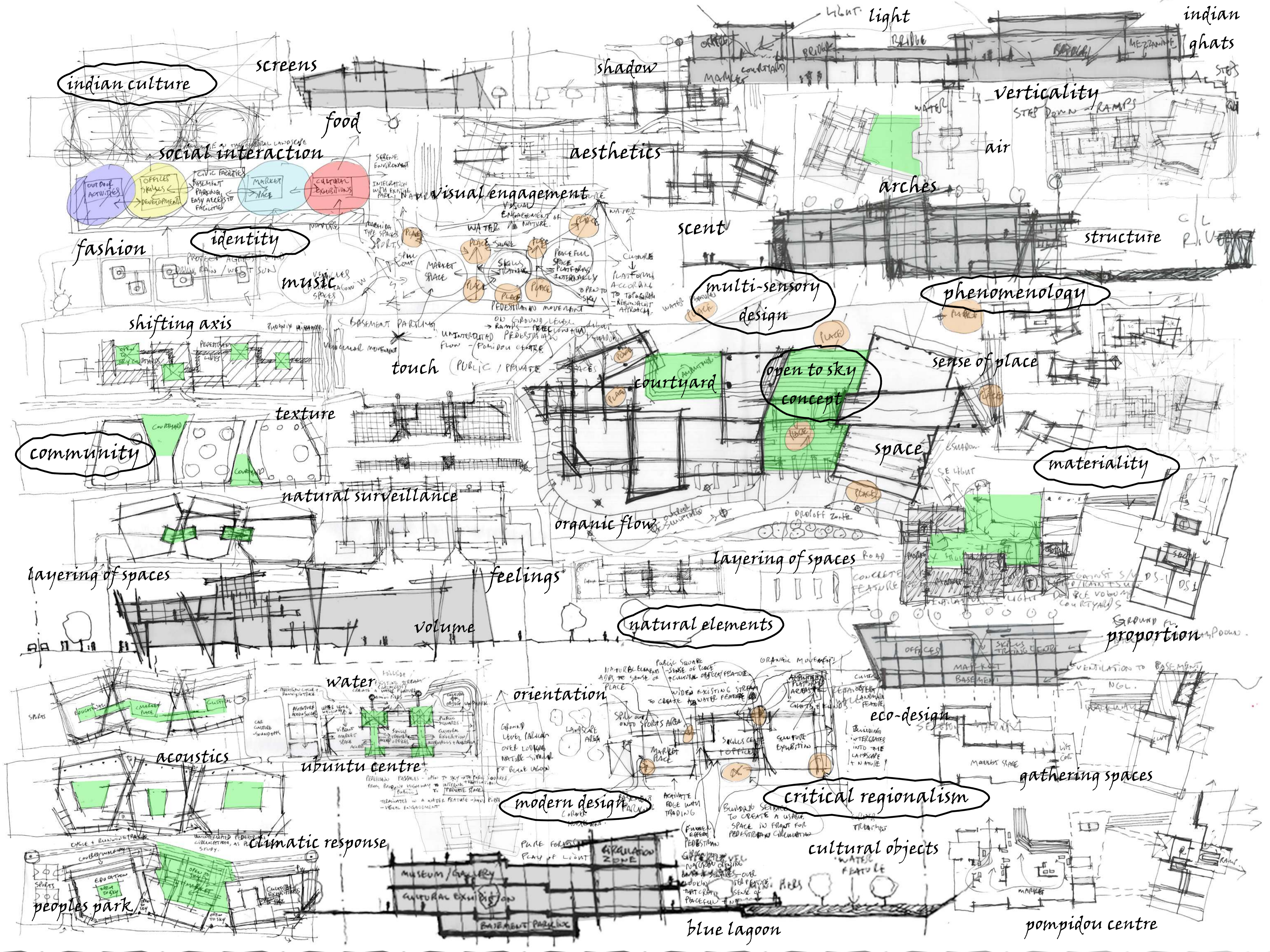
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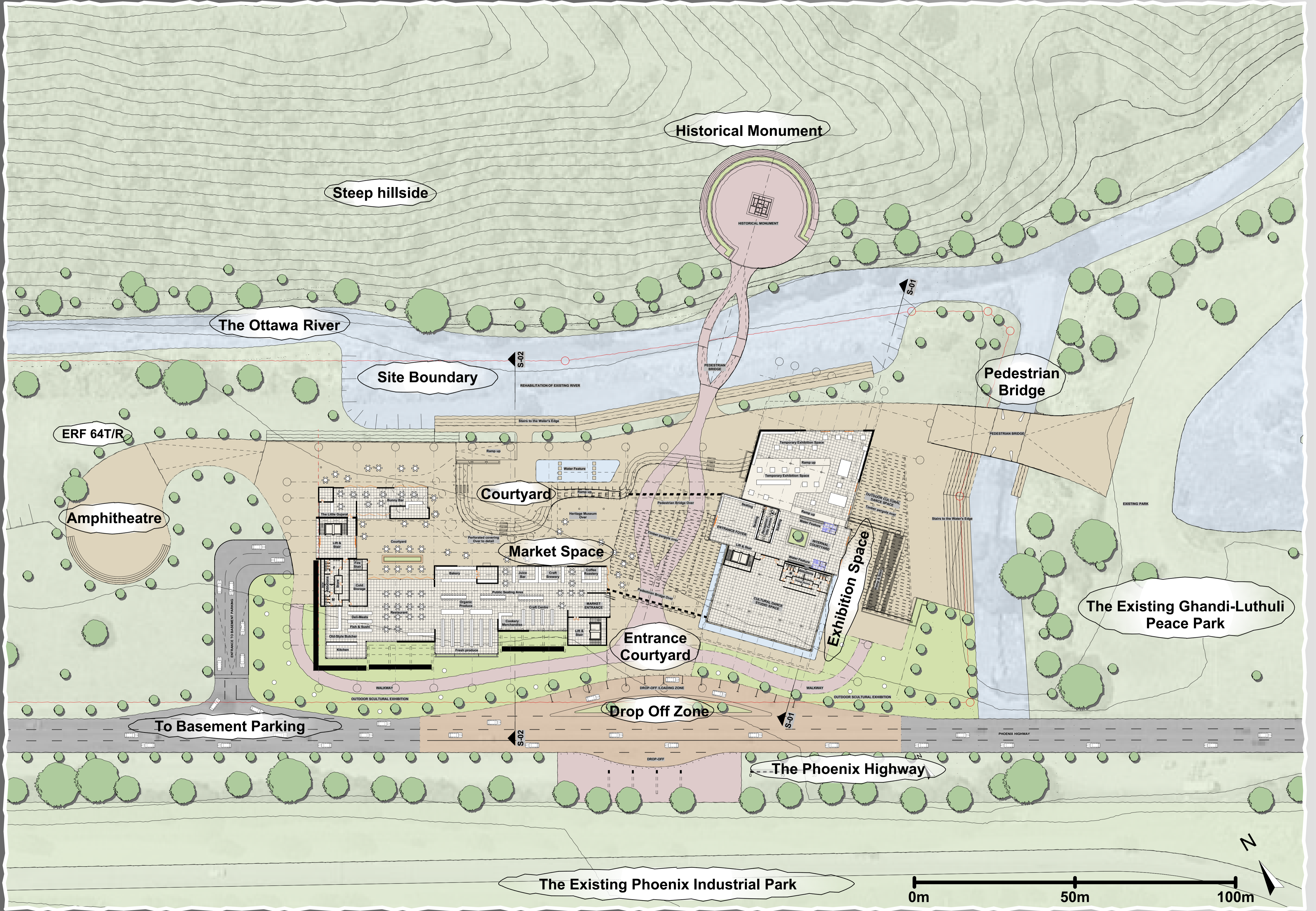
Exploration of Indian Social Influence on Civic Architecture in Post-Colonial Durban
Towards the Design of an Exhibition Centre in Phoenix



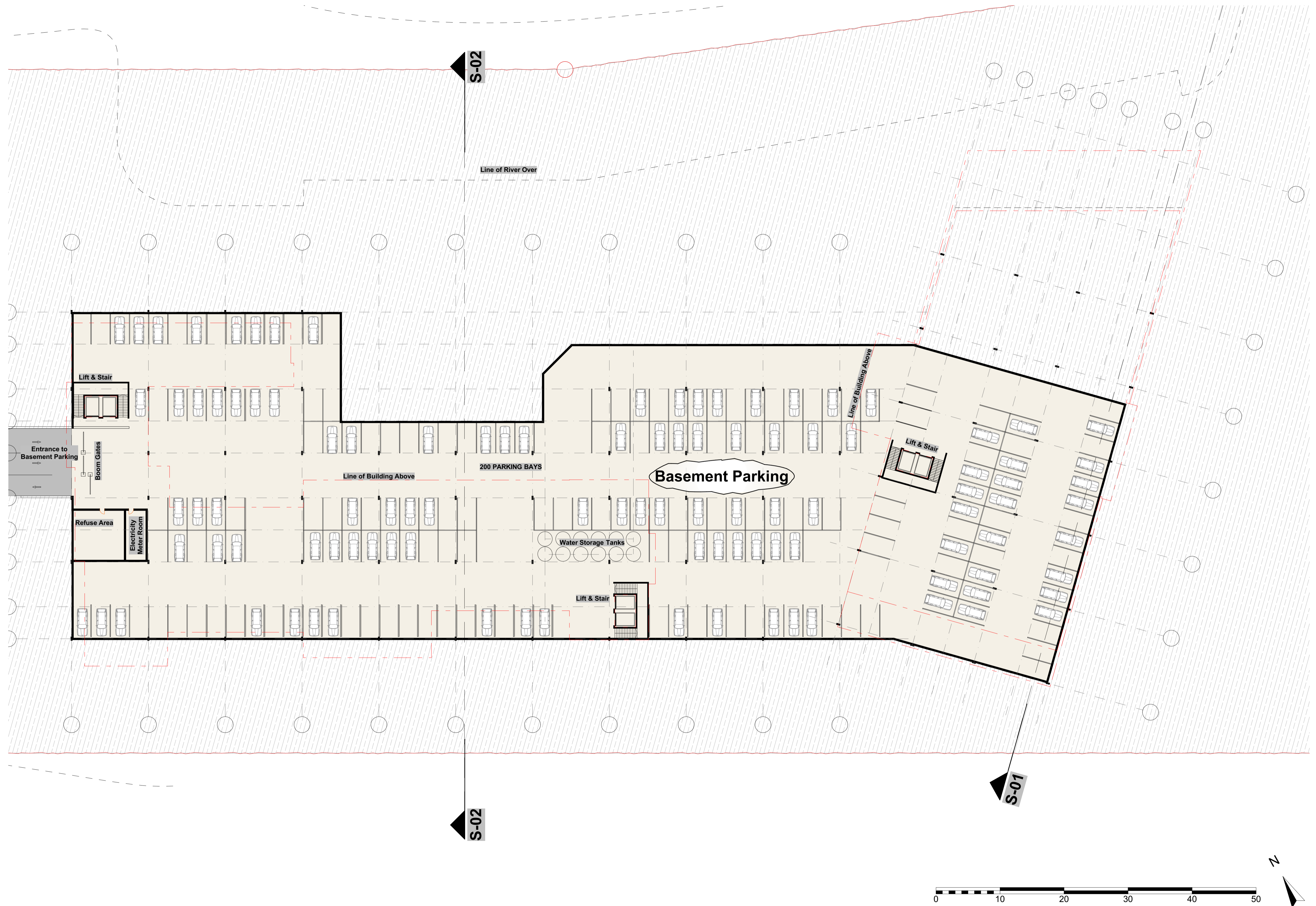
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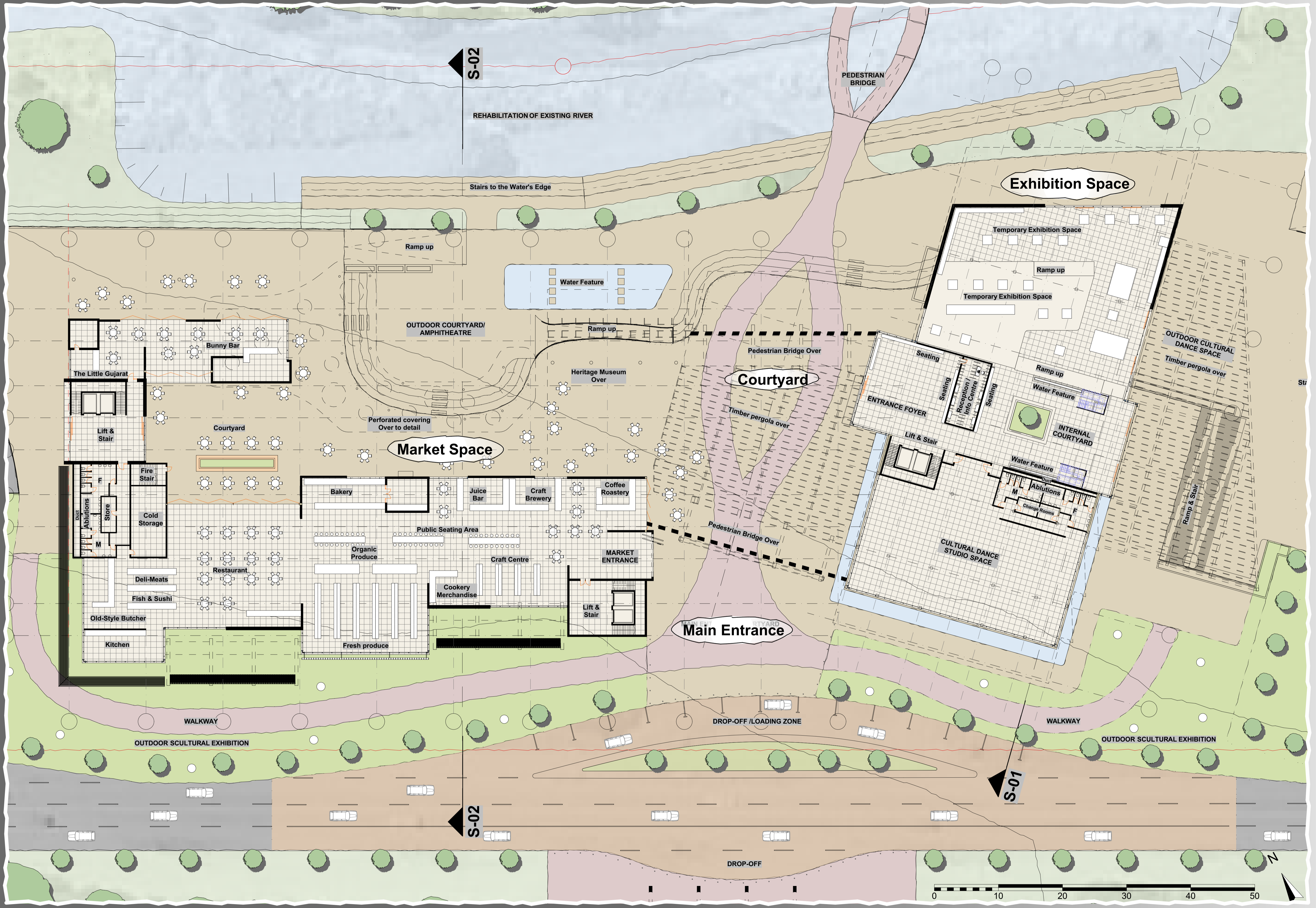
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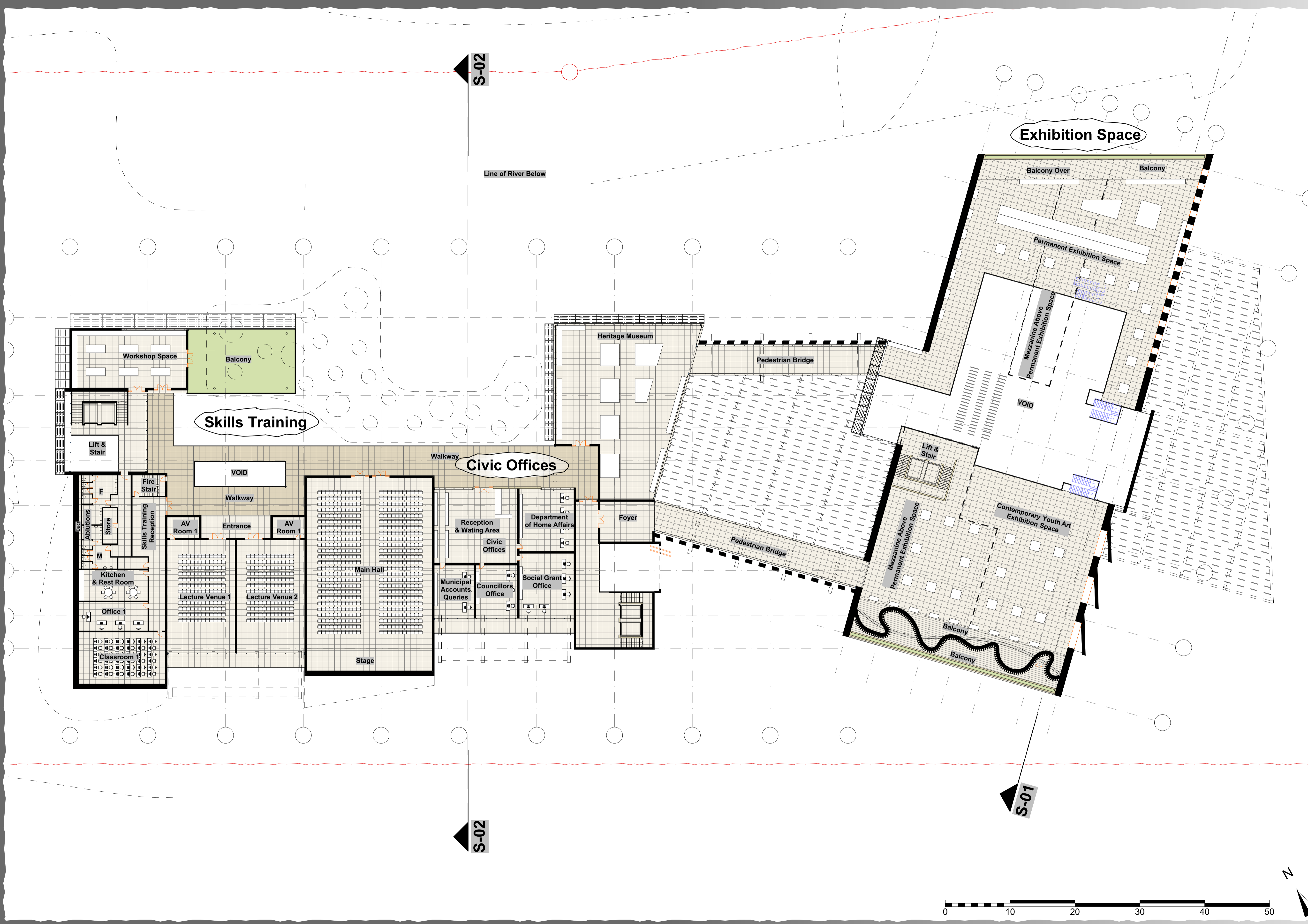
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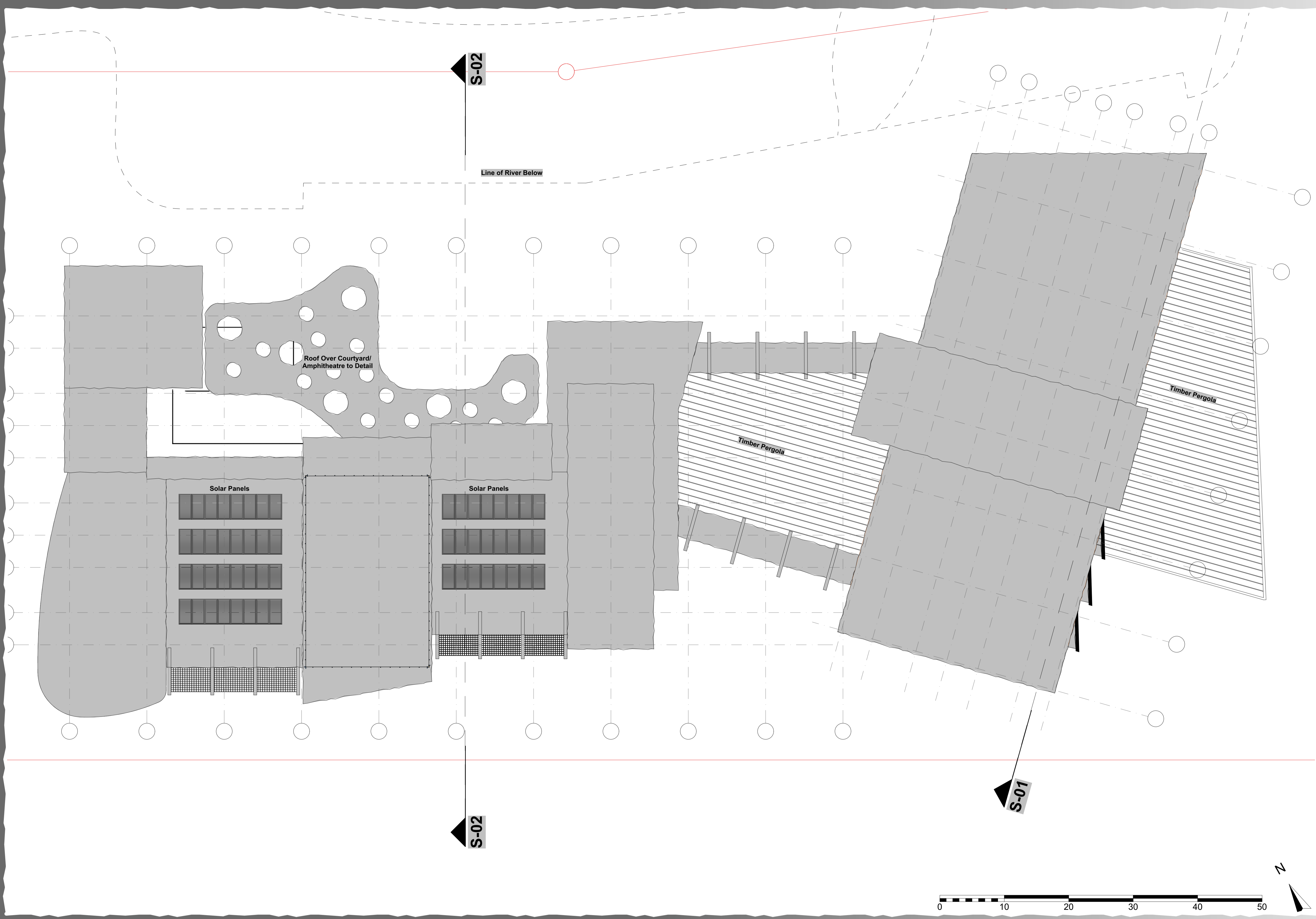
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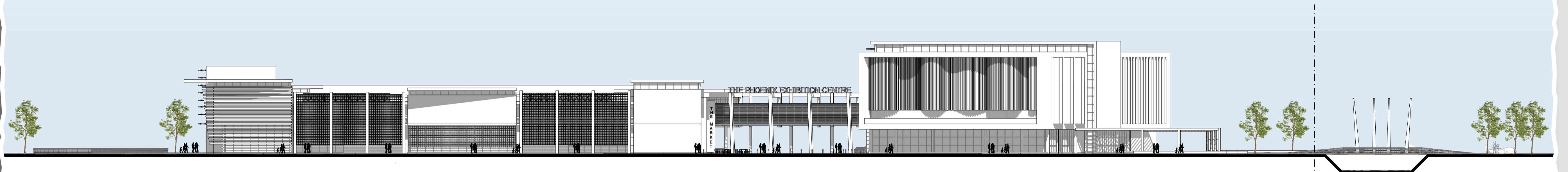
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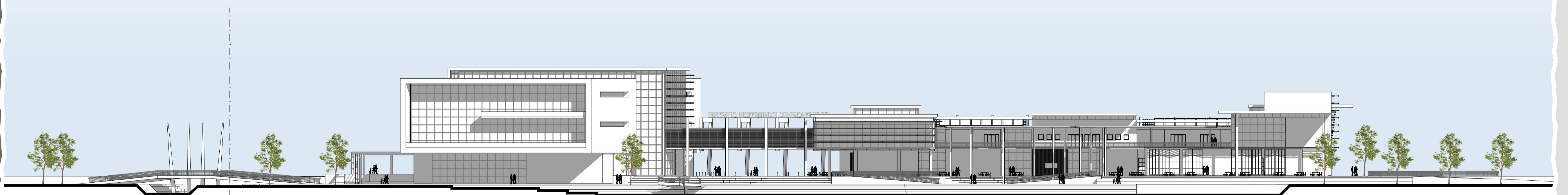
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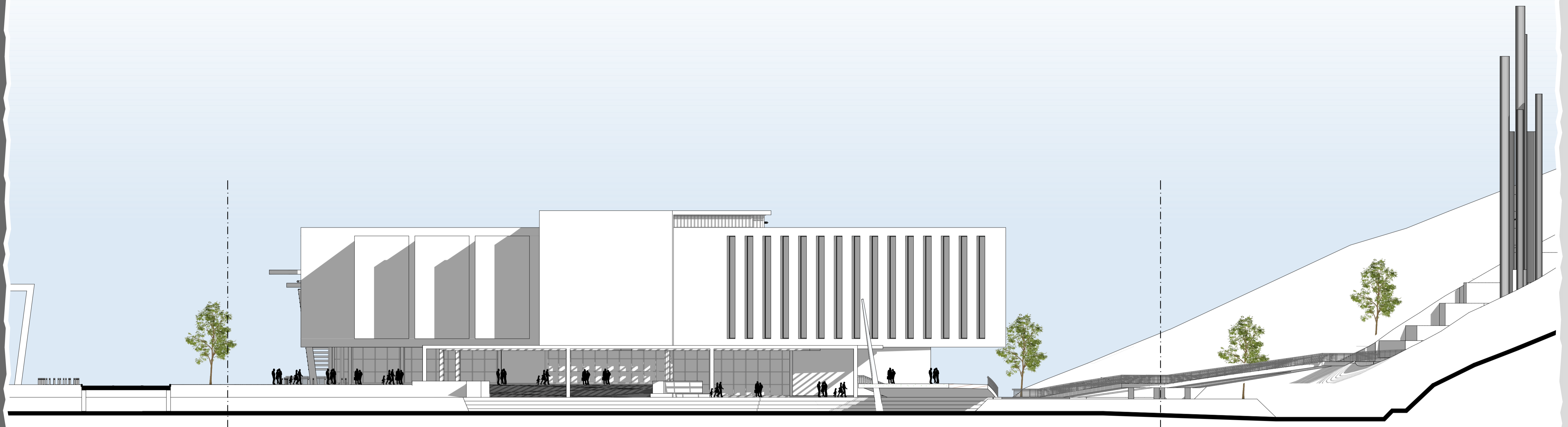


South West Elevation

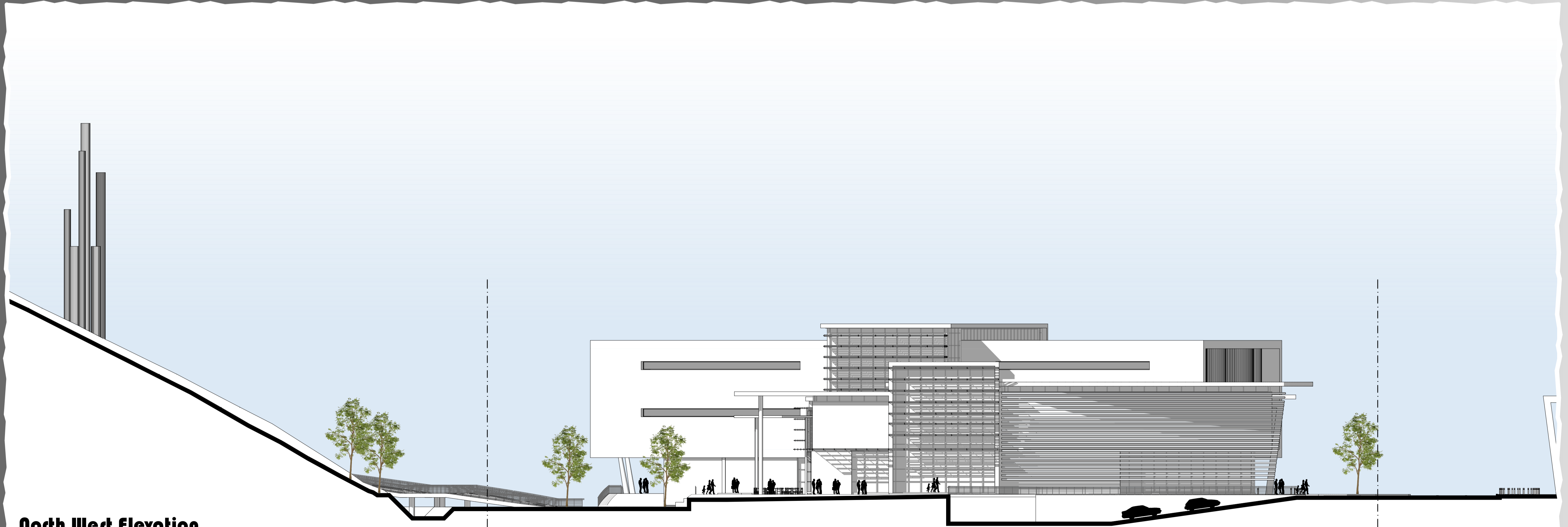


North East Elevation

**Exploration of Indian Social Influence on Civic Architecture in Post-Colonial Durban
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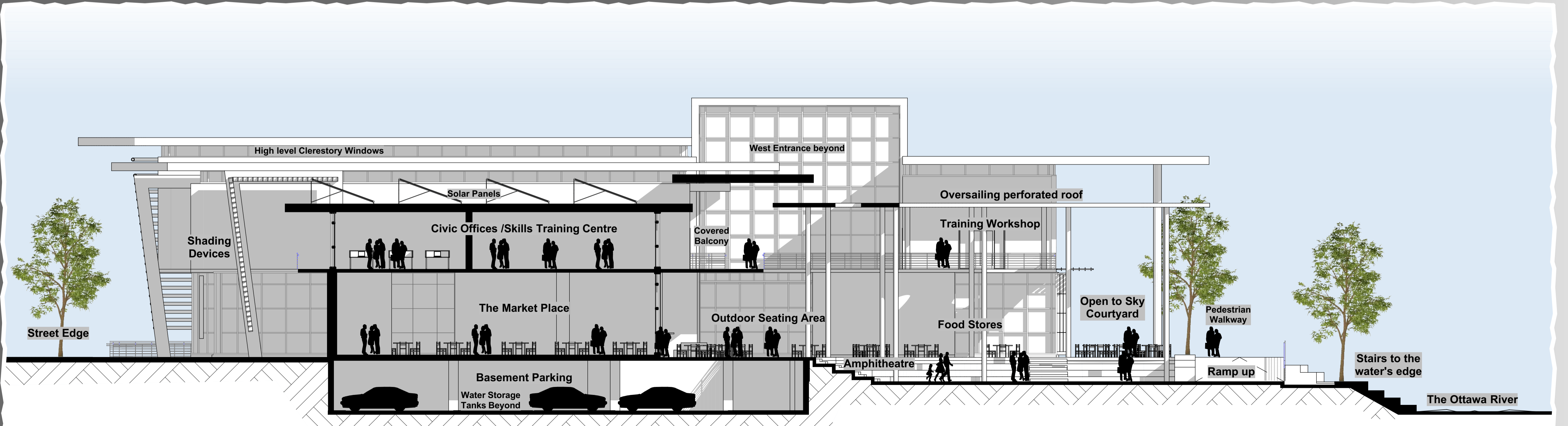
South East Elevation



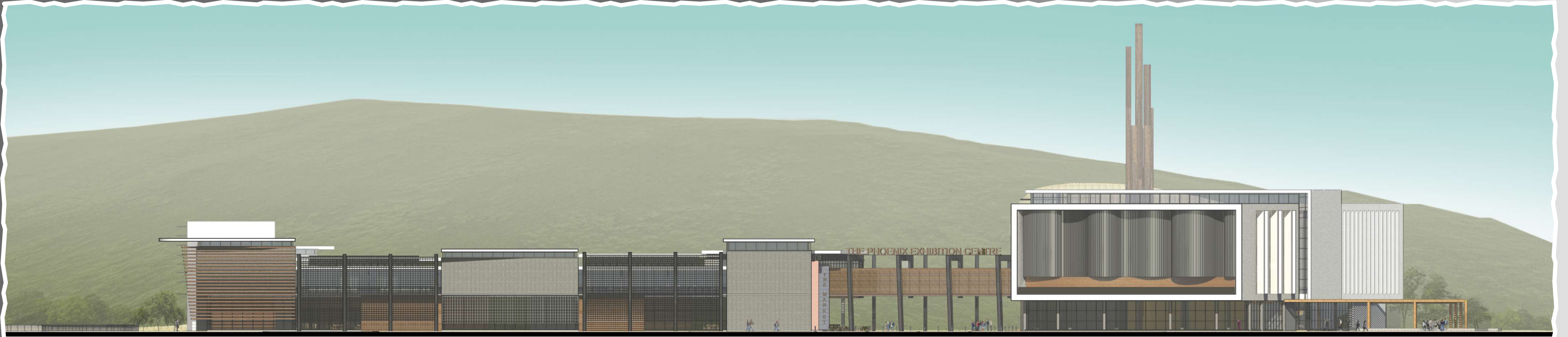
North West Elevation



Section S-01 3D Section Elevation



Section S-02

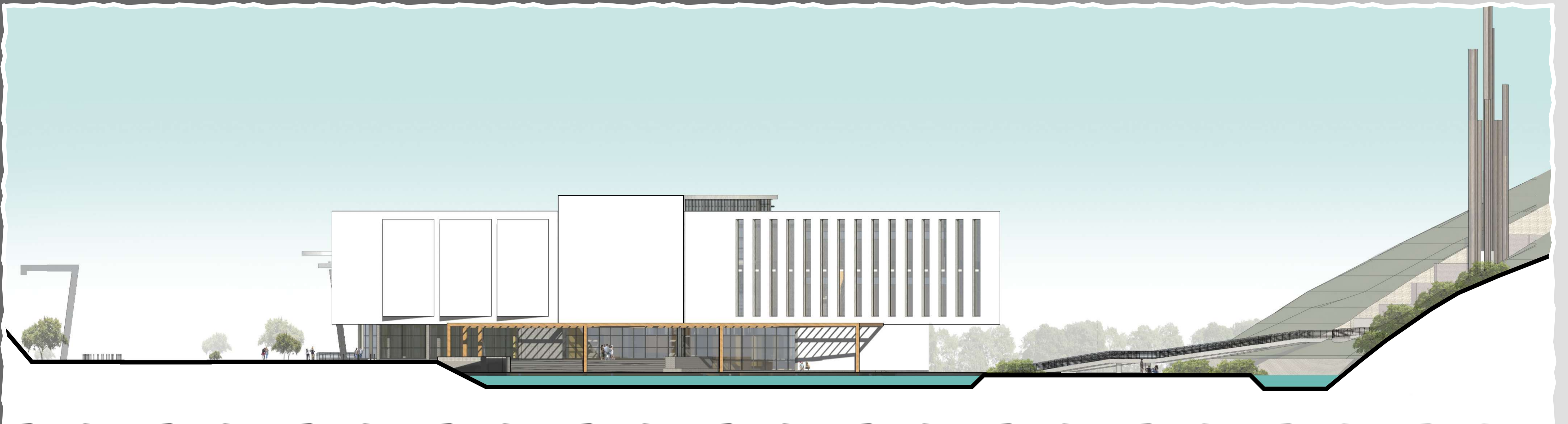


South West Elevation

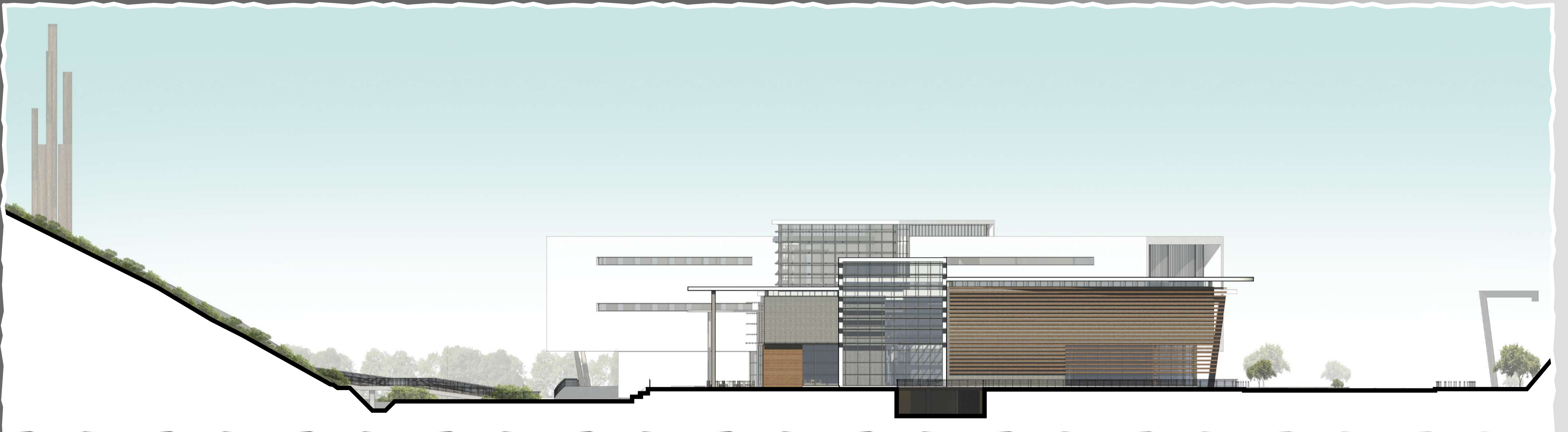


North East Elevation

**Exploration of Indian Social Influence on Civic Architecture in Post-Colonial Durban
Towards the Design of an Exhibition Centre in Phoenix**



South East Elevation



North West Elevation



Main Entrance Courtyard



The Exhibition Centre



Main Entrance Courtyard



The Historical Monument



The Amphitheatre and Courtyard Space

**Exploration of Indian Social Influence on Civic Architecture in Post-Colonial Durban
Towards the Design of an Exhibition Centre in Phoenix**



Walkway & Stairs leading to the Water's Edge



View off The Phoenix Highway

**Exploration of Indian Social Influence on Civic Architecture in Post-Colonial Durban
Towards the Design of an Exhibition Centre in Phoenix**



View from Phoenix Highway

**Exploration of Indian Social Influence on Civic Architecture in Post-Colonial Durban
Towards the Design of an Exhibition Centre in Phoenix**



View from the Hillside

**Exploration of Indian Social Influence on Civic Architecture in Post-Colonial Durban
Towards the Design of an Exhibition Centre in Phoenix**



Exhibition Space



Water's Edge



Entrance to Basement Parking



The Phoenix Highway

**Exploration of Indian Social Influence on Civic Architecture in Post-Colonial Durban
Towards the Design of an Exhibition Centre in Phoenix**



The Market Entrance



Pedestrian Bridge link to Existing Park



Outdoor Amphitheatre



Heritage Museum Above

**Exploration of Indian Social Influence on Civic Architecture in Post-Colonial Durban
Towards the Design of an Exhibition Centre in Phoenix**



Aerial View



- Off-shutter concrete walls
- Skills Training Centre and civic offices on the first floor
- Solar Panels on roof slab by specialist
- Market Space on the ground floor
- Timber screens with greenery
- Timber sun screens to detail

- Main Entrance Courtyard
- Historical Monument beyond to Detail
- Concrete Feature walls to architects Details
- Exhibition Space

South West Elevation



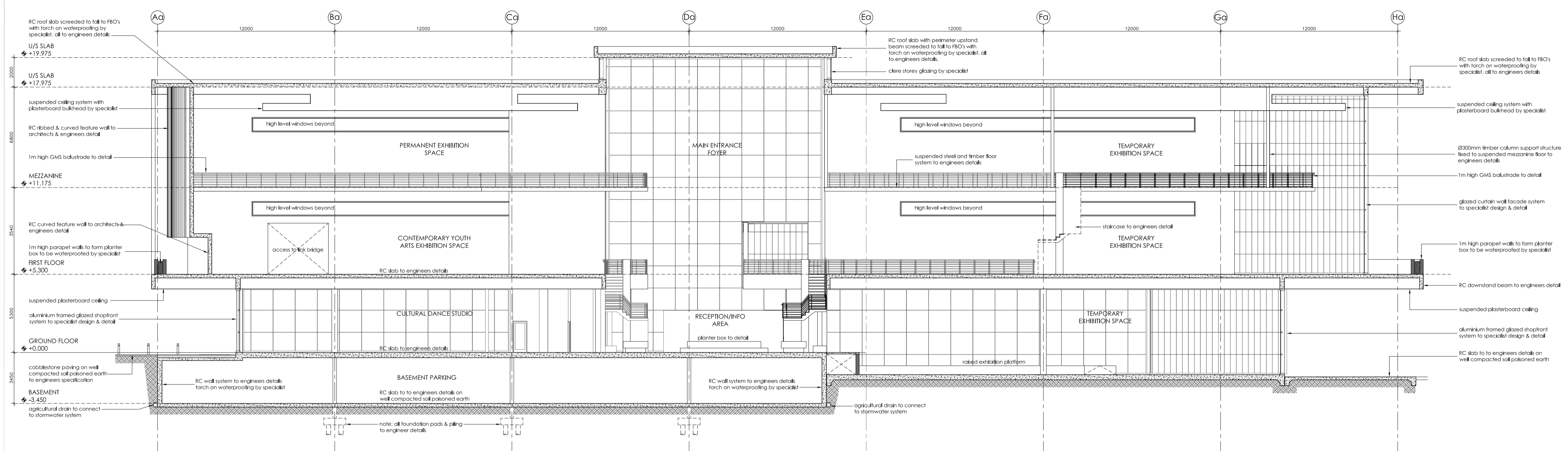
- Heritage Museum over
- Pedestrian link Bridge over entrance courtyard
- Pedestrian bridge over river to historical monument
- Feature wall to detail
- Floor to ceiling curtaining walling to detail
- Exhibition Space

- Solar Panels on roof slab by specialist
- Concrete steps to water's edge
- Perforated canopy & colonnade to detail

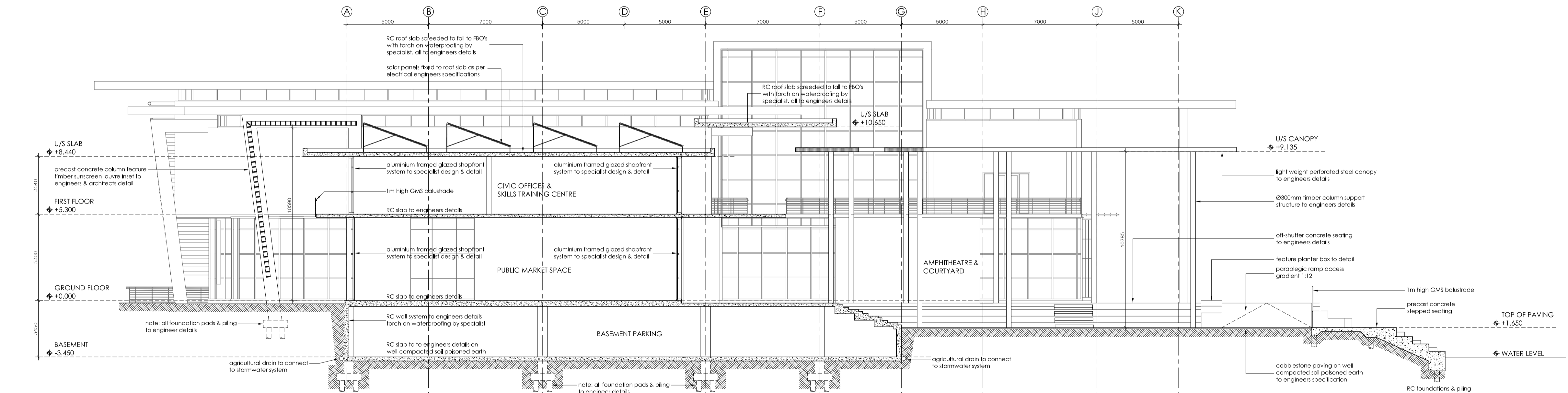
North East Elevation

SANS 10400 NATIONAL BUILDING REGULATIONS

PART A - GENERAL PRINCIPLES AND REQUIREMENTS
 ALL REQUIREMENTS TO COMPLY WITH PART A
PART B - STRUCTURAL DESIGN
 ALL STRUCTURAL DESIGN, IF NOT DESIGNED BY A COMPETENT PERSON, SHALL COMPLY WITH PART B
 ALL STRUCTURAL DESIGN AS PER RATIONAL DESIGN BY COMPETENT PERSON
PART C - DIMENSIONAL
 ALL DIMENSIONS OF ANY ROOM OR SPACE TO COMPLY WITH THE REQUIREMENTS OF PART C
PART D - PUBLIC SAFETY
 ALL BALUSTRADES TO COMPLY WITH D4.2 & D1 (ANNEX A)
 ALL STAIRWAYS TO COMPLY WITH D4.3 & D3 (ANNEX A)
 ALL RAMP & DRIVEWAYS TO COMPLY WITH D4.3 & D3 (ANNEX A)
PART E - SITE OPERATIONS
 ALL SITE OPERATIONS TO COMPLY WITH PART E
PART F - EXCAVATIONS
 ALL EXCAVATIONS RELATING TO A BUILDING TO COMPLY WITH F4.1 & F4.2
 ALL EXCAVATIONS AS PER RATIONAL DESIGN BY COMPETENT PERSON
PART G - FOUNDATIONS
 ALL FOUNDATIONS AS PER RATIONAL DESIGN BY COMPETENT PERSON
PART H - FLOORS
 ALL FLOORS TO COMPLY WITH ANNEX A J1
 ALL WATER RESISTANT FLOORS TO COMPLY WITH J4.2
 ALL SUSPENDED TIMBER FLOORS NOT EXPOSED TO THE ELEMENTS TO COMPLY WITH J4.3
 ALL CONCRETE FLOOR SLABS TO COMPLY WITH J4.4
 ALL FLOORS AS PER RATIONAL DESIGN BY COMPETENT PERSON
PART I - WALLS
 ALL MASONRY WALLS TO COMPLY WITH K4.2 & K1 - K2 (ANNEX A)
 ALL LINTELS TO COMPLY WITH B1 (ANNEX B) PART K WITH K4.8 & K3 (ANNEX A)
 ALL WATERPROOFING TO WALLS TO COMPLY WITH K4.5 & K1 (ANNEX C) OF PART I
 ALL FIRE PERFORMANCE & RESISTANCE OF WALLS TO COMPLY WITH L4.2 & L4 (ANNEX A)
 ALL STRUCTURAL WALLS AS PER RATIONAL DESIGN BY COMPETENT PERSON
PART L - ROOFS
 ALL ROOF ASSEMBLIES TO COMPLY WITH L4.1
 ALL WATERPROOFING & COVERINGS TO PITCHED ROOFS TO COMPLY WITH L4.2
 ALL FLAT ROOFS TO COMPLY WITH L4.3
 THE FIRE RESISTANCE & COMBUSTIBILITY OF THE ROOF ASSEMBLY TO COMPLY WITH L4.5
PART M - STAIRWAYS
 ALL STAIRWAYS TO COMPLY WITH M4.1
 DIMENSIONS OF STAIRWAYS TO BE IN COMPLIANCE WITH M4.2
PART N - STAIRWAYS
 ALL MASONRY STAIRWAYS TO COMPLY WITH M4.4
 ALL TIMBER STAIRWAYS TO COMPLY WITH M4.5
PART O - GLAZING
 ALL GLAZING TO COMPLY WITH PART N4.1 (ANNEX A)
 ALL ANTI-BLAST GLAZING TO COMPLY WITH PART N4.2 (ANNEX A)
 ALL GLAZING STRUCTURE AS PER RATIONAL DESIGN BY COMPETENT PERSON
PART P - SHOPFRONT GLAZING
 ALL SHOPFRONT GLAZING TO COMPLY WITH PART P4.1
 ALL SHOPFRONT GLAZING TO BE IN ACCORDANCE WITH SABS 0137 ED. 3.1 AS AMENDED
 ALL SHOPFRONTS TO BE IN ACCORDANCE WITH SABS 0137 ED. 3.1 AS AMENDED
 ALL SHOPFRONTS TO BE IN ACCORDANCE WITH SABS 0137 ED. 3.1 AS AMENDED
 ALL SHOPFRONTS TO BE IN ACCORDANCE WITH SABS 0137 ED. 3.1 AS AMENDED
PART Q - LIGHTING & VENTILATION
 ALL LIGHTING & VENTILATION TO COMPLY WITH Q4.1
 ALL AREAS TO BE ARTIFICIALLY AND NATURALLY LIT TO COMPLY WITH Q4.2
 ALL NATURAL AND MECHANICAL VENTILATION TO BE PROVIDED IN ACCORDANCE WITH Q4.3
 ALL LIGHTING & VENTILATION TO COMPLY WITH Q4.4
PART R - SANITARY FIXTURES
 ALL SANITARY FIXTURES TO COMPLY WITH R4.1
 ALL SANITARY FIXTURES TO BE IN ACCORDANCE WITH R4.3, R4.4 & R4.5
 ALL DISCHARGES FROM WASHING AREAS TO COMPLY WITH R4.9
 ALL SANITARY FIXTURES TO BE PROVIDED IN ACCORDANCE WITH R4.11
 ALL HYDRAULIC LOADING OF DRAINAGE INSTALLATIONS TO BE INSTALLED IN ACCORDANCE WITH R4.12
 ALL DRAINAGE SYSTEMS TO COMPLY WITH R4.13
 ALL SIZING OF DISCHARGE PIPES TO COMPLY WITH R4.14
 ALL DRAIN SIZES SHALL COMPLY WITH R4.15
 ALL SANITARY FIXTURES TO HAVE TRAPS IN ACCORDANCE WITH R4.16
 ALL SIZING OF VENTILATION PIPES TO COMPLY WITH R4.17
 ALL DISCHARGE & VENTILATING PIPES TO BE INSTALLED IN ACCORDANCE WITH R4.18
 DRAINS TO BE ACCESSIBLE IN ACCORDANCE WITH R4.19
 ALL TRAPS TO BE PROVIDED IN ACCORDANCE WITH REQUIREMENTS OF R4.20
 GULLY TO COMPLY WITH REQUIREMENTS OF R4.21
 ALL DRAINS TO BE LAID IN ACCORDANCE WITH R4.22 & R4.23
PART S - STORMWATER DISPOSAL
 ALL ROOF VALVES & GUTTERS TO COMPLY WITH R4.3
 ALL STORMWATER DISPOSAL TO COMPLY WITH PART R
PART T - FIRE PROTECTION
 ALL SAFETY DISTANCES TO COMPLY WITH T4.2
 ALL MATERIALS TO COMPLY WITH T4.5
 FIRE RESISTANCE OF DIVISION SEPARATING ELEMENTS TO COMPLY WITH T4.6
 ALL STRUCTURAL ELEMENTS AND COMPONENTS TO COMPLY WITH T4.7
 TENANT SEPARATING ELEMENTS TO COMPLY WITH T4.8
 INTERNAL PARTITIONS & WALLS TO COMPLY WITH T4.9
 ALL OPENINGS TO BE PROTECTED IN COMPLIANCE WITH T4.10
 ROOF ASSEMBLIES AND COVERINGS TO COMPLY WITH T4.11
 ALL CEILINGS TO COMPLY WITH T4.13
 ALL FLOOR COVERINGS TO COMPLY WITH T4.14
 ALL WALL FINISHES TO COMPLY WITH T4.15
 PUMPS & TANKS TO COMPLY WITH T4.29
 T4.32 & T4.34
SANS 10400
 FIRE HOSE REELS TO COMPLY WITH T4.34
 FIRE HYDRANTS TO BE PROVIDED IN ACCORDANCE WITH T4.35
 PORTABLE FIRE EXTINGUISHERS TO BE PROVIDED IN ACCORDANCE WITH T4.37 & THE SATISFACTION OF THE CHIEF FIRE OFFICER
 SERVICE PIPES, CONDUITS AND SLEEVES TO COMPLY WITH T4.4
 PROVISION TO BE MADE FOR SMOKE VENTILATION IN ACCORDANCE WITH T4.42
 AIR CONDITIONING SYSTEM TO BE DESIGNED BY PROFESSIONAL ENGINEER TO COMPLY WITH T4.43 & CERTIFICATE ISSUED ON COMPLETION
 ACCESS FOR FIRE FIGHTING AND RESCUE PURPOSES TO BE PROVIDED IN ACCORDANCE WITH T4.54
 BUILDING MATERIALS TO COMPLY WITH T4.55 & T4.56
PART U - REFUSE DISPOSAL
 REFUSE AREA TO BE CONSTRUCTED SO AS TO BE PROOF AND PROVIDED WITH HOSE, BIETAP & SUMP
 REFUSE AREA TO BE DESIGNED IN ACCORDANCE WITH PART U
PART V - TOBACCO LEGISLATION
 ALL TO COMPLY WITH TOBACCO LEGISLATION CONTROL PART V
 ALL TO COMPLY WITH COMPETENT PERSON'S REPORT



SECTION S01 1:100 @ A0



SECTION S02 1:100 @ A0

A. GENERAL	B. FIRE	C. STRUCTURE	D. DRAINAGE
1. ALL WORK TO COMPLY WITH NBR & STANDARDS ACT 5485:2000.	11. ALL WORKS TO COMPLY WITH THE IZNGA BUILDING DESIGN CODE.	22. SATELLITE DISH TO BE DISCREETLY POSITIONED - NOT VISIBLE FROM ROAD.	1. BUILDING TO COMPLY WITH SABS 0400 - 1990 PART 2 SECTION 3.
2. ALL DIMENSIONS & LEVELS TO BE CHECKED. ARCHITECT TO BE NOTIFIED OF ANY DISCREPANCIES. DRAWINGS NOT TO BE SCALED.	12. ALL WORKS TO COMPLY WITH THE IZNGA ENVIRONMENTAL MANAGEMENT PLAN.		2. BOUNDARY & RETAINING WALLS TO COMPLY WITH NBR PART 6 SCHEDULE 1 TO TABLE 5.
3. SAFETY GLASS TO BE USED WITHIN 2000mm OF FINISHED FLOOR LEVEL.	13. ALL EXTERIOR LIGHT FITTINGS TO BE BLACK SCALED.		3. ALL RETAINING WALLS & RC STRUCTURAL WORK TO ENG DETAILS.
4. STAIRWAYS TO BE SABS 0400 PART 11.	14. LOW ENERGY CFL LIGHT BULBS TO BE USED.		4. ALL SOIL EXCAVATION & FILLING CONDITIONS TO ENG REQUIREMENTS.
5. STAIRS MAX RISER 200mm MIN TREAD 250mm.	15. SOLAR THERMAL HOT WATER HEATING TO BE USED.		5. RC FLOOR SLABS TO ENG REQUIREMENTS.
6. ALL DIMENSIONS TO CHECKED AND VERIFIED ON SITE PRIOR TO COMMENCEMENT OF CONSTRUCTION.	16. THERMIST SWITCHES TO BE INSTALLED ON CONVENTIONAL GEYSERS.		6. EXTERNAL LIGHTING TO USE SOLAR POWER.
7. ALL GLAZING TO COMPLY WITH PART N OF THE NBR.	17. GEYSER BLANKETS TO BE INSTALLED ON CONSTRUCTION.		7. OFF SHUTTER CONCRETE TO BE CLEANED & RUBBED DOWN.
8. ALL ROOF TRUSSES AND ANCHORAGE TO BE FIXED WITH GALVANISED HOOP IRON TO ENG SPEC.	18. DUAL FLUSH TOILETS TO BE SPECIFIED.		8. ALL TRUSSES TO BE FIXED WITH GALVANISED HOOP IRON TO ENGINEERS DETAIL.
	19. ALL EXPOSED ROOF MEMBERS TO BE VARNISHED.		9. ALL FLASHINGS TO BE ALUMINIUM WITH MASTIC APPLIED OUTER FLASHING.
	20. TV AERIALS TO BE POSITIONED WITHIN ROOF SPACE.		10. ALL RC SURFACE BEDS ON POISONED AND COMPACTED FILL.
			11. ALL STRUCTURAL WORK TO PROFESSIONAL ENGINEERS DETAIL.

AREA SCHEDULE 1	REVISIONS	DATE
1. IES TO BE PROVIDED AT JUNCTIONS & BENDS TO ALL SOIL & WASTE PIPES.		
2. ALL PLUMBING TO BE CONCEALED.		
3. ACCESS PANELS TO BE PROVIDED TO ALL INTERNAL SERVICE DUCTS.		
4. ALL FITTINGS ON SEWER/VENT BRANCHES WITH SEPARATE ENTRIES TO SINGLE STACK DRAINAGE.		
5. ALL SOIL PIPES TO BE MIN 100mm DIA.		
6. ALL WASTE PIPES TO BE 50mm DIA.		
7. MIN DROP FROM FITTINGS 200mm.		
8. VENT VALVES TO BE FITTED TO ALL FITTINGS.		
9. URINALS TO BE FITTED WITH 50mm DEEP SEAL TRAPS AT FLOOR LEVEL.		
10. ALL SHOWERS TO HAVE HOT & COLD WATER.		

CLIENT: arts & culture
 Department: Arts and Culture
 REPUBLIC OF SOUTH AFRICA

COURSE: MASTER OF ARCHITECTURE
 UNIVERSITY OF KWAZULU-NATAL
 PROPOSED NEW CIVIC BUILDING FOR PHOENIX

The Phoenix Exhibition Centre

PHOENIX HIGHWAY, PHOENIX, DURBAN
 ERF 64T/R PHOENIX, DURBAN

TECHNICAL DRAWINGS

Plans

DRAWN BY: [Signature Box] DATE: 01.03.2021

CHECK 1 [] CHECK 2 [] DATE

CLIENT: [] SIGNATURES: [] ARCHITECT: []

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 PROJECT DRAWING REVISION

