



**ART AS A TOOL FOR THE CREATION OF BUILT FORM  
TOWARDS A DESIGN OF A MUSIC CENTRE IN DURBAN**

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# ABSTRACT

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*“...Our deepest fear is not that we are inadequate.*

*Our deepest fear is that we are powerful beyond measure.*

*It is our light, not our darkness that most frightens us.*

*We ask ourselves, who am I to be brilliant, gorgeous, talented and fabulous?*

*Actually, who are you not to be?*

*You are a child of God.*

*Your playing small doesn't serve the world.*

*There is nothing enlightened about shrinking so that other people won't feel insecure around you.*

*We were born to make manifest the glory of God that is within us.*

*It is not in some of us: it's in everyone.*

*And when we let our own light shine, we unconsciously give other people permission to do the same. As we are liberated from our own fear, our presence automatically liberates others.”*

- **Marianne Williamson**, *“A Return to Love: Reflections on the Principles of a course in Miracles”*, 1992.

Every individual has been gifted with potential that is often never realised or appreciated by society because of numerous socio-economic reasons.

Within the South African context, we see so much potential. South Africa has rhythm, it has soul. The sound of the African drums, the colour and flair of Indian dance, ballet, musical theatre and art to name a few, are all intricately woven into the South African culture.

Imagine.....

A place, a single building, proposed for Durban that would house music and the arts, from tutoring to performances aiming to bridge the divide between its diverse cultures and promote and develop skill in the most powerful, multi-functional tool...Music.

This study serves as a means of investigating the interconnected relationships between music, art and architecture respectively and aims to provide valuable information regarding music and its role in celebrating a progressive society.

# DECLARATION

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I declare that this dissertation is my own, unaided work and carried out exclusively by me under the supervision of Dr. Philippe Yavo. It is being submitted for the degree of Master in Architecture in the University of KwaZulu-Natal. It has not been submitted before for any degree or examination in any other University.

.....

Bradley Mason Naidoo

23<sup>rd</sup> July 2014

# DEDICATION

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To my Family

# **ACKNOWLEDGEMENTS**

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First and foremost, I thank my Lord and Saviour Jesus Christ for His grace, favour and hand of guidance throughout this degree for without Him and His love, none of this would be possible.

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# **CHAPTER ONE: INTRODUCTION**

## **1.1) Background Statement:**

Art is creative, free, bold, encapsulating and takes on many different forms such as architecture, painting, sculpture, dance, music etc. Brancusi (n.d.)<sup>1</sup>, a Romanian born sculptor suggests, “*Architecture is inhabited sculpture*” and calls for the realization of architecture as an art form. What makes architecture a unique art form is the fact that it can be inhabited. It is a three dimensional painting, a sculpture, which people experience tangibly. Today’s architecture seems to be diluted and simplified in order to please tight guidelines set by budgets, functions, but most often, convenience. By emphasizing the art in architecture, one captures moments in time, something that ultimately leaves a footprint in history for all to experience and appreciate.

As stated above, music as an art form is a tool for individual expression, is unique, and is socially acceptable as a form of entertainment as well as an informant to the nature of communities. Despite the different backgrounds, religions, and cultures of communities within South Africa, music has the potential to unite. Given South Africa’s past, the role music has played in the freedom struggle as well as the similarities between music and architecture, an expressed union of these two art forms will hold great potential in expressing South Africa for what it really is and become a tool for showcasing the rich cultural diversities contained within its borders to celebrating a bright future without forgetting the past.

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<sup>1</sup> “*Architecture is inhabited sculpture*”, [www.brainyquote.com/quotes/c/constantin316090.html](http://www.brainyquote.com/quotes/c/constantin316090.html)

## 1.2) Motivation/Justification for the study:

In every facet of Architecture, from buildings, to bridges, to skywalks and gardens, the creativity of the architect should be expressed as a built form in which core compositional principles were adopted and applied. Music is the same. Great composers such as Mozart relied on specific compositional principles to create a piece, but it is how they had assembled notes, breaks and peaks, that made their pieces stand out. “.....*Mozart manipulates musical contrast in the technical sense (harmony, theme, melody, dynamics etc.) such that it becomes a defining stylistic feature of these works and distinguishes them....*” (Keefe 2007:107). For many years Architects have adopted principles from music to aid in the composition of flowing, rhythmic, ordered buildings and it is clear that a very strong bond exists between the two.

This study looks at art as the spine of the research with the various forms of art (architecture, sculpture, painting, music, dance etc.), being the ribs which inform the design of the proposed Centre for Music. The fields of architecture and music are broad but provide an intriguing look at how these two creative fields could become one, and the benefits that follow as a result of this synergy. “*Music is geometry translated into sound, and that in music the very same harmonies are audible which inform the geometry of the building*” (Muecke 2007:254). Material and observations from published authors in fields outside architecture provide a much broader approach to the study as well as allow for a more concise outcome. The primary objective of this study is the celebration of diversity within society today.

Architecture and Music are two art forms that stimulate people psychologically and enable an expression of identity as well as creativity. Depending on how specific elements are put together in a piece, determines the overall outcome of the piece. Society is much the same, with a variety of people from different backgrounds just needing an opportunity to tell their story.

The combination of these two art forms would therefore hold great potential in celebrating the diversity of cultures within South Africa in both built form and social enlightenment. This proposal calls for a space that celebrates people, music, and

culture. By using the psychology of art composition, and music and how its intricately composed, creation of built forms which share the same sensitivity and importance as musical pieces created by composers can be achieved, both physically, like sculptures or paintings and emotionally through its attention to its effect on people. A Centre for Music will be able to capture these unique, informative expressions into a single place, opening one's eyes to the Past, Present, and Future.

### **1.3) Problem statement, aims and objectives:**

#### **1.3.1) Research Question:**

How can built form manifest itself as an art form?

#### **1.3.2) Statement of Research Problem:**

Two main problems are notably evident within the confines of Durban's borders. Firstly, an architectural problem, which talks of the lack of creativity within buildings due to various restrictions placed on, architects today. Secondly, a social problem, which describes the lack of celebrating a free and integrated society. South Africa has a very interesting past and one worth remembering, for not only the hardships but also the good that had come out through them, which many people fail to recognize. South Africa is a young democracy of only 19 years, and has prioritized the ideology of a *Rainbow Nation* to further build, integrate and celebrate the rich diversity within its borders. As Ngcongco (2011:2) states, "*it is this very diversity of cultural identities that require re-imagery*". Focus on the past is very clear to see around us today in monuments, apartheid museums and sculptures, but rarely is the celebration of what we have become as a unified people and country seen. The journey as well as the destination (freedom) should be celebrated, shared, expressed and space should be provided for that purpose, something that is sadly lacking today.

### **1.3.3) Overall Aims and Objectives of the study:**

#### **1.3.3.1) Aim:**

The creation of a visual and socially intriguing space for the expression (celebrating the future) and teaching (celebrating the present) of music as well as a place which remembers the importance of music in South African history (celebrating the past)

#### **1.3.3.2) Objectives:**

The objectives of this study are set:

- To investigate and explore various forms of art, how art affects people and the focus on music as a primary art form, significantly linked with architecture.
- To identify how music is composed, how music affects people and converting and adapting musical composition principles into an architecturally, artistic, composed built form.

#### **1.3.3.3) Design Objectives:**

- To create a multi-cultural built-form which includes people from diverse cultures.
- To create a complex dedicated to emulate cultural expressions from music.

#### **1.4) Scope of the study:**

##### **1.4.1) Delimitation of Research Problem:**

The outlined problem and aim encourages an investigation into both the fields of music and architecture to adequately present a working solution from both sides of the spectrum. However, both fields are broad, so focus on the principles of composition, social effects of both fields, and the historical background will be targeted. I am not going to discuss how the acoustics associated with music affect architecture.

##### **1.4.2) Stating the assumptions:**

It is assumed that both architecture and music need background knowledge to adequately achieve their aims. In order to make good music, one would need to understand music composition and chord arrangements, likewise with architecture; one would need to know the fundamentals of architectural composition principles in order to create effective built forms for public use. To understand these fields better, primary sources such as musicians and architects should be sourced out and contacted.

##### **1.4.3) Hypothesis:**

Music and architecture are commonly linked and are governed by their own individual composition principles that are based on theories of creativity and expression that encourage social gatherings and affects people psychologically. Both music and architecture work together seamlessly well unrestricted, and provide for an extremely beneficial union.

#### 1.4.4) Definition of key terms:

- **Composition:** refers to the arrangement of both musical (notes, rests, scales and keys) and architectural (textures, forms, spatial arrangements) elements.
- **Tool:** refers to music being the instrument used to assist in the creation of a built form. Characteristics of music, (rhythm, fluidity, contrast, harmony, balance) adapted to architectural design (facades, colours, textures, etc.).
- **Characteristics:** refers to both the qualities of music and of architecture. The core principles that define and characterize them.
- **Expression:** refers to the emotion intended to be evoked by the musical composer through a composition, the nature of the built form composed by an architect, and/or the emotion of the listener/viewer after being exposed to either composition.
- **Cultural identity:** refers to the uniqueness of people/communities credited to past experiences, age, location or population group. All of these variables creating a vast array of possibilities/identities.
- **Principles:** refers to the rules and qualities that define and govern both architecture and music art forms. These rules characterize and influence the outcomes of compositions.
- **Ideology:** refers to a belief or aim that the South African government currently employs or implemented from the inception of democracy.
- **Diversity:** refers to a variety of racial communities within South Africa
- **Creativity:** refers to the overall *artistic / imaginative* quality of the design

## 1.5) Thesis structure:

- **Chapter One: Introduction** presents the background and justification of the study, the primary research question, statement of the research problem, the scope of the study, its limitations, aims and objectives, as well as a working hypothesis. This chapter further defines key terms discussed within the study and outlines the thesis structure.
- **Chapter Two: Methodology** describes the methods used for the collecting of both primary and secondary data within this study, introduces the case studies that were investigated, as well as identifies and highlights the research limitations.
- **Chapter Three: Literature Review** presents an appraisal of published literature focused on explaining three main theories, namely, De-structuring, Phenomenology, and Place Theory as well as providing a substantial foundation for the proposed argument. Three focal points are addressed in this chapter, Music and its role in South African history, Architecture as an art form, and the psychology of visual perception in art and its role in creating meaningful Architecture.
- **Chapter Four: Case Studies and Precedents** provides a documented investigation and review of existing buildings (international) that add valuable insight and practical substantiation to the study as well as review of two local case studies visited within the Durban region.
- **Chapter Five: Key Responses, Analysis, and Findings** present the data and responses obtained from the general public and selected individuals regarding music, art and architecture. (Questionnaire and interviews analysis)
- **Chapter Six: Conclusions and Recommendations** provide a summary of the study and link the outcomes of the investigation to the primary outlined research question. The chapter also further introduces the Music Centre typology.

## **CHAPTER TWO: METHODOLOGY**

### **2.1) Research methods**

Both qualitative and quantitative methods are used in this study in the form of primary observation, the use of structured interviews and questionnaires. All documentation and information gathered by these two types of research methods will give a good insight into the dynamics of music (art) composition and its psychological effect on people. Structured interviews will provide a primary source of information and a first-hand view of personal experiences within the various sectors in which music to aid the study, it allows for views of life within different communities as well as a look into the effect of music's role in the history of South Africa.

*Conclusions will be made from the synergy of all compiled data. All recorded data will be documented and then incinerated to protect the people being interviewed.*

### **2.2) Research materials**

Specific research materials will be looked at during the duration of this study and will provide sufficient theoretical substance with regard to the research being carried out. These research materials are as follows:

#### **Primary Data:**

- **Information obtained via Interviews**

Give first-hand information that will be used to tell community stories.

Three individuals have been approached and provide insight on music's role and benefit in their everyday lives within specific areas of society:

- **T-Bone** – A performer (participates in plays, corporate events, etc.), music/art tutor and publicity manager at the BAT Centre. His background and occupation provide first-hand information on the basic and preferred requirements from the intended end-user. His input has been very beneficial to the study.
  
- **Mr. Warren Luke Naidoo** – a Christian minister currently completing his M.Th in praise and worship at Yale University. He is a gifted guitarist, pianist, violinist and worship leader who uses music to aid congregational gatherings. His input further describes the diverse roles of music in religious environments which is extremely beneficial to this study.
  
- **Mr. Mbongeni Mthembu** - A local music producer from the BAT Centre. He provides information regarding the importance of music on a much broader scale, locally. His occupation and background amplify the need for music within society today and provide for a first-hand view from within South Africa's musical industry.
  
- **Information obtained via Questionnaires**  
Analyzed completed questionnaires will provide a glimpse into the impressions of both music and architecture within the general public. The synergy of collected data will be used in determining useful conclusions which aid the proposed argument.
  
- **Information obtained via Observation**  
Constitutes the study via case studies.

### Secondary Data:

Information and further understanding of the relevant theories and topics within the fields of this study are obtained via published articles, books, and theses. Internet pages have also been looked at to gather as much information on the specific fields of music and art respectively. The gathering of information through literature has become the most significant in providing a solid foundation of the study which can be further developed through primary research.

The data collected at this stage is merely synthesized with the intention of informing the design process.

### **2.3) Introduction to Case studies:**

The study looks at two buildings which are seen to be vital aids in answering the outlined research question. These two buildings being, the BAT Centre and the Moses Mabida Soccer Stadium, both of which are located within the Durban CBD. The choice of these specific case studies lies primarily in their ability to address pertinent issues regarding art as well as a strong contextual and sociological link. Freedom of expression through various art forms (music and dance) are addressed within the BAT Centre and are seen in the composition and image of the built form along with a careful consideration on public involvement, teaching and upliftment. On the other hand, the sculptural value of buildings can be seen in none other than the most iconic building Durban houses of late, the Moses Mabida Stadium. This building not only provides a facility for sporting events to take place, but rather has provided a means of unity, upliftment, and pride within social circles. It is strongly believed that an investigation into how and why these built forms exist, the functions and facilities they provide, as well as how they are appreciated and perceived, provides a wealth of valuable knowledge and insight to the study.

## 2.4) Research limitations

The design of this study is to gather as much first-hand information on the role of music, the perception of existing architecture, and the potential existence of a relationship between art (music) and architecture within South Africa, from the community. As mentioned, each community within the vast regions of South Africa has a different story, and view of South Africa's past. These structured interviews and questionnaires will aid in understanding these stories, and allow for this study to have a well-rounded unbiased outcome. Interviews with individuals who use music within specific social environments and their personal stories will be documented, along with questionnaires answered by community members within specific age groups.

Age groups being targeted are as follows:

- **The Elderly** (+60/years)  
This age group will provide for a good view of South Africa's past struggle and add character to the research.
- **Adults** (26-50/years)  
For variety
- **Young people** (16-25/years)  
A youthful view on music and art that can be understood by the young people of today

In using these specific age groups, one is able to obtain a varied gathering of information, which constitutes an unbiased conclusion to the study. This would also help in making this research attempt intriguing to people of all ages.

This data collection process would involve primary fieldwork as well as a theoretical approach through the use of published literature and information obtained via the internet.

## 2. 5) Methods employed in the data analysis

As stated, all obtained data will be analyzed and synthesized.

### Questionnaires:

This process will be achieved through the comparative analysis of completed questionnaires. The results and findings of this analytical approach shall be reflected in concise paragraphs that fall under specific question headings and differentiate between the outlined age groups and genders. Conclusions will be drawn by careful consideration of the majority's consensus regarding issues pertaining to the focus of the study.

### Interviews:

Each person that has been interviewed has been selected according to his specific field of specialty as illustrated above. Drawing conclusions from the interviews is a twofold process involving firstly, analyzing obtained information from persons according to their specific field of expertise and secondly, a comparison between each individual and the group. This approach will be implemented to primarily provide a concise and holistic conclusion regarding music's importance and role in diverse social environments.

## **CHAPTER THREE: LITERATURE REVIEW**

### **3.1) Introduction:**

The study looks at three main theories, namely, De-structuring, the differentiation between a buildings ornamental value and its structure, Phenomenology, which talks of the importance of a space's context and of evoking emotion through various surroundings, and finally Place Theory. This speaks of a building's physical context and cultures that surround it and the importance of linking it back to a building. This chapter makes use of information obtained from a variety of sources and will aim to provide valuable insight on these theories. The main investigation, however, is on art and particularly music, its influence on South African history and its role in creating meaningful architecture.

### **3.2) Theoretical and conceptual framework:**

#### **3.2.1) De-structuring- Ornament vs. Structure:**

Also known as the “weakening” of architecture, is the relationship between structure and ornament which has been a long standing debate since the Renaissance. With the help of Architectural theory, however, distinguishing between the two has become a little easier. *“Ornament has the character of something attached or additional. Ornament is meant to be additive; it must not challenge or weaken the structure” (Tschumi, 1996).*

According to Tschumi (1996), both co-exist but an architect should not restrict design to a rigid neutralized grid, but rather, the image (ornamentation) should influence the structure.

Chang (1981) motivates this view and describes art as an artifact that grows and suggests a possible solution in creating art out of function. He provides a different approach on the cliché, “Form follows function”, and suggests that unlike science, art provides a means to create form out of the formless and releases what is artificially captured. It is not dependent on rigid formulae and rules but is free and creative. Chang (1981) further highlights that in order to move away from rigid functional formalism and release better aesthetics and expressions of character, architects need to stop limiting human physical adaptability. There is no definite limit to human adaptability and as Chang (1981) suggests, function may just as well follow form. The art in architecture hinges on what he calls the compromise of rationality and irrationality.

Tschumi (1996) suggests that Architecture and movies can be looked at similarly; as the structure of a projector is not questioned when watching a movie, so too, social critics critique the image of a building rather than the structure. Both are important in viewing the final product, but, the hierarchy must be acknowledged. This highlights the need for creativity in architecture; it is not merely planning but art work.

Further emphasis by Derrida’s (1979) *The Parergon* turns questioning between frame and image into a theme. Although the scales of both a building and a painting largely differ, a close link between the structure of a building and the frame of a painting can be seen. The frame of a painting is as important as the painting itself, even though the painting is of a higher importance. Without the frame, the painting wouldn’t be able to be shown off adequately and would be incomplete. Similarly, a buildings structure without the image (ornamentation) is useless, as the image is what people admire. (Tschumi, 1996)

In creating meaningful architecture, the compromise between rationality and irrationality by Chang (1981) must be prioritized. Creative architecture promotes thinking outside the box, and like art, is bold and encapsulating. Understanding the hierarchy between the image and the structure is therefore the first step in the creation process.

### 3.2.2) Phenomenology:

Norberg- Schultz (1980:5) the forerunner in the phenomenology of architecture explains it as *“the theory which defines architecture in definite terms”*. He suggests that the everyday life of human beings consists of physically tangible phenomenon such as people, trees, buildings, paths, green spaces etc. but like art, not only are the tangible phenomenon important, but also the intangible phenomenon such as feelings and emotions, which are often overlooked as insignificant (Norberg-Schultz, 1980:6). Norberg-Schultz (1980:5) states that, *“A man dwells where he can orientate himself within an environment as meaningful”*.

By addressing the intangible phenomenon through the use of various colours, scale, form, etc. which have been practiced in a variety of art forms through the ages, an architect has the ability to create an environment which is both visually pleasing, connects with people’s physical level and addresses the spiritual connection. This adds meaning to a space through the development of character.

Architecture and music are both based on character, which Norberg-Schultz (1980) considers as independent of space. Character represents the atmosphere of a space; the ways things are represented and portrayed to the observer, whilst space is merely an arrangement of three-dimensional elements, which make up place. To tie both music and architecture together, *“the character of a place may be emphasized by the character of music”* (Ngcongco, 2011: 10).

Sight is not the only sense that an architect should be encouraging. The synergy of many or all of the senses is what can be considered as the key to the creation of meaningful architecture as each sense has their own shortcomings, but together, compensate for each other. Today, most big events have music as a major part of the event e.g. the Olympics always has a musical theme. Sight and hearing is one example of this and is further described by Pallasmaa (2005).

Pallasmaa (2005) describes the distinctive differences between sight and sound. Sight isolates, is directional and restrictive to the exterior while sound incorporates, is multi-directional, and allows one to introspect, and connect on a deeper, more spiritual level. Pallasmaa (2005) further describes this introspection by illustrating the way in which one interacts with a physical environment. As he states, one *looks at* an object but sound *approaches* them; the eye *looks outwardly* but the ear acknowledges and *receives*. Similarly, built forms do not only react to the eyes gaze but return a sound that resonates within the ear.

In some cases sound maybe disregarded with people being unaware of its significance, this then solidifies the point stated above in which the character of places can be emphasized by the character of music. This enables the observer the ability to move through a space and still evoke emotion though unaware. An example stated by Pallasmaa (2005:50) is the cathedral. It may be observed as a dark lonesome space initially, but with the addition of the sound of an organ, can create a positive experience for the same space.

Pallasmaa (2005:44) says that “*architectural work is not experienced as a collection of isolated visual pictures, but in its fully embodied material and spiritual presence*”. When broken down, significant, meaningful architecture makes people completely experience themselves physically and spiritually (mentally). It is not just a visual experience, but an emotional one as well which involves a person’s entire being. (Ngcongco, 2011: 12)

### **3.2.3) Place Theory:**

According to Lynch (1981), Genius loci can be simply described as the “*genius of place*”. It is used to describe a space which can be easily remembered for both its physical (architectural) and spiritual experiences. Lynch (1981:132) further describes these spaces as “*good-spaces*” which make use of all the human senses. Trancik (1986) states that when one understands the contextual and cultural characteristics of a space, well designed spaces are achieved as well as emphasis on the character of the space, which promotes a unique spirit of place. According to Trancik (1986), Space can

only become meaningful place when linked to culture or regional context, else it remains a void. It is this “linking” that creates a stable platform, which enables people to develop their social life and culture (Ngcongco, 2011: 13).

The use of this theory will help create spaces that can be totally experienced by people. An exploration into the various roles architecture and music play in people’s lives as well as the psychological effects of the two will enable the creation of a built form which not only is pleasing to the eye, but evokes an emotional response from users and help relay the “story”.

### **3.3) Music and its role in South African history:**

*“.....there comes a time when we are tempted to wonder what we in our turn are producing in the way of architecture for the delight and edification of posterity”  
(Rutter, 1923:170)*

#### **3.3.1) The composition of music and its social relevance**

Beranek (1962: 31) states that *“Music is sound or a combination of sounds that varies continuously or discontinuously with time, usually rhythmically, changing pitch, timbre, and loudness in such a way as to communicate something to listeners in its own terms. The composition and performance of music is arts”*. As the quote states, music is the combination of sounds. A good composition consists of many smaller elements strategically positioned in time and space. Symbolically this represents the many individuals that make up a community and in essence, a nation. As was mentioned earlier, each community has their own song, their own tune, their own story, but each community is made up by individuals. In totality, the many stories, and experiences gathered from individuals, and communities edify, enlighten and showcase the country’s progress.

Beranek (1962: 13) further explains that “... *sound is created by materials that vibrate.*” Each vibrating string or membrane sets in motion the molecules in the air which surround them. The interesting fact is that these molecules are not satisfied in moving alone, they set in motion other molecules, and before you know it an outward bound sound wave is created which can be heard from quite a distance. In the same light, expression of experiences, stories, and culture have the ability to impact and change society as a whole one person at a time. Potential for big change is there from conception but it takes time and needs to be given an opportunity to be heard. Beranek (1962) explains that all vibrations are not the same. Depending on the length of the vibrating member or string, the pitch of the sound changes. The longer the member the slower the vibrations, lower the frequency, the lower-pitched the sound and vice versa. Symbolically this fact adequately describes and acknowledges uniqueness and individualism of people within a community.

- Length of the string: age of an individual

Similarly, each person depending on age and exposure to the elements (life) has a different pitch or sound. In a musical composition, low sounds (bass instruments) as well as high sounds (violins, acoustic guitars) are needed. Like it has been shown music is created by a combination of sounds; so it can then be said that a much sweeter sounding music is composed when there is a unifying of many different sounds rather than one created out of a mono-tone. Dever (2003) explains that a society with an imposed culture is like a building built on weak foundations. It would neither become successful, peaceful, nor reach its true potential. Expression should therefore not be stifled. Dever (2003) further explains that the greatest privilege individuals have in the South African democracy today is the right to freedom of expression, creativity, and to receive and impart information and/or ideas; an indicative means of which we can see our progress as a nation.

Ngcongco (2011) explains that music has more than one use other than just for entertainment. Music for some people is therapeutic; it is a tool for expression for a composer and has the ability to tell a story about a specific event. Dever (2003) further emphasizes that music is a cultural expression and an emotional representation which

paints pictures in the minds of the listeners. He explains music and culture are one and the same and that you cannot separate culture from music. Focus on South African music therefore promotes cultural identity.

*“Music is also therefore an artistic representation of a way of life that the people of any society are a part of” (Dever, 2003:04).*

Music has been with man for as long as he has lived on this earth. Man’s first language involved movement, rhythm and dance. Dever (2003) explains that the same is true with mammals and also those hunter-gathers who signaled each other using sticks, hitting them together stick on stick and in some cases using stones. As we go through each day we make music without even taking notice. The beating of our hearts, sound of our breathing, our feet touching the floor when walking, blinking of our eyes, swallowing of saliva, all these involuntary movements create music.

### **3.3.2) A brief background into music’s role in the Apartheid struggle prior to 1994**

From the outset it is important to note that in order to fully understand the transition from Apartheid to democracy, one needs to analyze not just the many negotiations that took place around tables by politicians but also understand and acknowledge the popular initiatives and responses to political change as Schumann (2008) suggests. Music, as outlined by Schumann (2008), played an important part in the Apartheid struggle as a means by which truths about a corrupted nation were revealed to the world and seamlessly adjusted and responded to the varying degrees of oppression throughout the 1940’s towards 1994, as the political situation changed, so did the music.

Schumann (2008: 17) eloquently describes music in a statement by German Playwright Berthold Brecht, which simply states *“art is not a mirror held up to reality, but a hammer with which to shape it”*. In understanding this view on the power of art, she likened this statement to the political use of music in South Africa,

*“...music in South Africa changed from being a ‘mirror’ in the 1940s and 50s to becoming a ‘hammer’ with which to shape reality by the 1980s. In South Africa, music went from reflecting common experiences and concerns in the early years of Apartheid, to eventually function as a force to confront the state and as a means to actively construct an alternative political and social reality.” (Schumann, 2008:17)*

The apartheid government restricted cultural expressions of many societies under their rule, but especially targeted music. It was seen as the greatest threat, and was primarily implemented to control the information the masses had access to, explains Dever (2003). *Radio Bantu* was an example of the application of the Apartheid regime’s philosophy of “separate development” and use of music to aid political policies. This philosophy allowed for the fusion of art and political issues, but in saying this, however, the regime did have full censorship through the Publications Act of 1974. The established Directorate of Publications responded to police complaints and public unrest and inevitably decided to ban or allow material submitted to it. Radio was a very powerful tool which was state controlled and very strictly monitored (Schumann, 2008).

As Schumann (2008) explains, oral communication was used to reach the majority. Due to the many restrictions placed on non-whites by the Apartheid regime, many of the oppressed were illiterate and financially restricted, so printed press was rarely used. Music and song therefore became a vehicle by which cultural resistance and expression was voiced by the majority anonymously. Schumann (2008:17) emphasizes the power of song further by a quote by Plato, *“Any musical innovation is full of danger to the whole State, and ought to be prohibited; when modes of music change, the fundamental laws of the State change with them.”* This quote recognizes music’s ability to go further than just use within entertainment circles but through embedded meanings, can bring political change. Exposure to this “threat” is what the apartheid regime wanted to avoid as it put a lot of pressure on them and their rule.

### **3.3.3) Defining the two musical approaches used**

Two types of music were made use of by the majority, namely “resistance music” and “protest songs” as Schumann (2008) describes. A clear understanding of the two however, allows one to differentiate between the passive, more suggestive, subversive method and a more direct, forceful one. As mentioned earlier, music was not static but changed as the political situation changed. Schumann (2008) explains resistance music as music which made use of purely musical means, making use of hidden meanings within seemingly inoffensive songs which were suggestive and could be interpreted by the majority. Protest songs however, were directed to specific situations, occasions and people. They addressed pressing issues and were the catalyst for unity amongst the majority. Schumann (2008) notes that during the 1950’s, the state controlled media was rather tolerant of musicians voicing their concerns about issues pertaining to the musicians themselves as well as the general population as a whole. As oppression increased through the 1980’s however, musicians were forced to take a more subtle approach and implemented hidden meanings within songs which from the “outside” seemed harmless. The ability of music and song to adjust is what eventually broke down the Apartheid regime’s power as unity was maintained irrespective of the reality of the oppression. The idea that strength was maintained in numbers and not as individuals was the key; it was this unity that was the “power” of people.

*“During the trial in court, as well as during the trials of facing police at protests, songs promoted a sense of **unity** and endurance” (Schumann, 2008:23).*

### **3.3.4) The evolution of music within the struggle**

#### 1920's – 1930's:

As Schumann (2008) points out, South African music was initially very influenced by the American style of doing things. They adopted the styles and techniques seen within the American choirs and religious gatherings, and as Schumann (2008) states, the public and performers alike really appreciated and relished in music that was as close to the American way. During the mid-1930 however, a strong musical political consciousness emerged through the integration of “African” elements. As Schumann (2008) explains, it was this very consciousness that brought about a political philosophy known as “New Africanism” and became the foundation to a militant protest from the 1940's onwards. During this time, she acknowledges, music started off as a purely musically based protest to a vibrant, energetic textual one. This approach was welcomed by many performers (Black Consciousness Movement) who through hidden meanings in song, conveyed deep issues regarding a political stand point which continued well into the 1980's.

#### 1940's:

Molefe Pheto an African musician describes the musical approach used during this time by saying that “*songs were not confrontational*” (Schumann 2008:21). Music of this time merely described and painted the “image” of reality. It addressed the irritations and hardships faced by composers and became the “mirror” to an oppressed society. Struggles such as police harassment and public unrest due to the many Apartheid laws was voiced and moved from being a purely political campaign to being an indication of the circumstances faced under the current rule (Schumann 2008). Another musician Miriam Makeba, when questioned about her music stated, “*people say I sing politics, but what I sing is not politics, it is the truth*” (Schumann 2008:22). This statement further emphasizes the stand point by musicians but sadly as Schumann (2008) clarifies, their music was still regarded as having a political influence. The awareness of the oppressive reality through music brought about a unity and political consciousness

amongst the vast majority and thus increased the interest in politically based music from the 1950's onwards.

### Early 1950's:

*“Our songs all had meaning. They reflected what was happening right now. [...] Cuthbert used to listen to the news, you see. Then he would come there and say, ‘Did you hear about in the news they say this and that and that?’ It ended up we are going to record that.” – Mary Thobai recording artist with Trutone*  
(Schumann 2008: 22)

The 1950's can be regarded as the “resistance turning point for South African music”. It was during this time, as Schumann (2008) describes, that there was a definite general public political awakening. The ANC (African National Congress) choir was formed and became the backbone to a focused political retaliation. Protest songs became evermore evident and popular with a very blurred line existing between protest songs and recorded music. They were pretty much one in the same and was an obvious, direct opposition to Apartheid. They now, did not merely voice concern and inform the masses of their reality but rather demanded and instructed a means of action. Two of the best known examples are highlighted by Schumann (2008:23) and are listed below:

- **The bus boycott in August 1943**

The song “*Azikhwelwa*” which translated means “*we refuse to ride*” echoed through the Alexandra township and for nine days, 15 000 people protested the fare hike on foot.

- **The “pass” campaign from August 1956**

Here the woman protested the use of passes by singing, “*Hey Strydom, Wathint’a bafazi, way ithint’imbodoko uzaKufa*”. Translated this means “*Strydom, now that you have touched the women, you have struck a rock, you have dislodged a boulder, and you will be crushed*”.

Songs quickly became very direct in their approach and started to address specific individuals. These songs, as Schumann (2008) explains, promoted unity and were sung at the top of the peoples voices. It was through these very songs and protests that the “mirror” slowly became the “hammer”. Schumann (2008) further explains that the lyrics and musical value of the songs were not the only important elements in the stance against injustice but so too were their various functions and use. Songs did not only serve a political function but was often used to convey messages of warning through camouflage and hidden meanings.

Schumann (2008) provides two such examples, firstly, the song “*Udumo Lwamaphoyisa*” by Mafuya, which simply means “*A strong police force*”, was sung by the lookout boys to warn shabbeen owners and drinkers of a strong police presence and a potential police raid. Secondly, was the attack by the Apartheid regime on *Sophiatown* which was a racially mixed area and the heart of the jazz and *marabi* music in South Africa. Through the *Group Areas Act of the 1950’s* and the *Prevention of Illegal Squatting Act of 1951* people were forcefully removed by government to Meadowlands in Soweto. It was during this time that many songs emerged by influential artists such as the Sun Valley Sisters, Miriam Makeba and Strike Vilakazi who addressed the heated disapproval of the moves. The most popular song belonging to Strike Vilakazi called “*Meadowlands*” and became the anthem of Sophiatown, which translated means “*We’re moving night and day to go to Meadowlands. We love Meadowlands*” (Schumann 2008:24). It was this very song that was indirectly interpreted by the government as support for the removals but actually carried the exact opposite meaning. It can be seen through these examples that the main objective of the songs sung were to protect the

masses and furthermore, to protect the unity of the masses. This unity was seen as the political opposition, despite the indirectness thereof.

### Late 1950's:

The late 1950's marked the peak protests of the masses through song as Schumann (2008) explains. It was distinctly distinguished by the Sharpeville Massacre which took place on the 21<sup>st</sup> of March 1960 in which sixty-nine unarmed protesters were shot and injured during a protest against the use of passes. As Schumann (2008: 25) quotes, the incident *“represented the beginning of the era of repression which stunted all political development among black South Africans in the 60's”*. During this time the ANC and PAC were banned with 169 political activists and leaders imprisoned and put on trial for treason. With the removal from Sophiatown, the previous “musical headquarters”, the exile of many jazz musicians, and the stricter SABC policies that were then implemented, the vast population was left stunned and the musical protest halted and silenced. This time became a dark and lonely time in South Africa's history. New residential locations allocated by the government lacked recreational spaces for performances as well as new laws that were implemented which prohibited gatherings of more than three people (Schumann, 2008).

*“Music became an even more important weapon in the struggle as any possibility of open legitimate protest had come to an end after the Sharpeville massacre”*

*– Hugh Masekela (Schumann, 2008: 25)*

As mentioned earlier, the functions and use of music became very important and was dynamic; it related to feelings of that time. Songs of this time were used now to express sorrow and mourning. One such song was *“Senzeni Na?”* which translated means *“what have we done?”* Sibongile Khumalo, a musician concurs that it was through the very

repetition (lyrics) of this statement that encouraged the masses to stand up and fight (Schumann, 2008).

### 1970's:

The direction and encouragement through song indeed affected the masses, and evidence of this new mindset was no better highlighted than in the Student uprising on June 16, 1976 in protest of instruction in school through an Afrikaans medium. Few musicians chose to continue in their stand through the incorporation of hidden meanings in song which, once again, set the platform for a definite political retaliation lyrically (Schumann, 2008).

### 1980's - 1994:

A definite increase in word play and hidden meanings was seen during this time in song as Schumann (2008) indicates. Songs titles were changed to create ambiguity but during live performances, the “real” meaning was directly understood by the masses. It was a way to counter the censorship of recorded music. Schumann (2008) highlights two examples by Yvonne Chaka Chaka and Lucky Dube respectively.

*“We recorded a song which at the time was called ‘Winnie Mandela’. The SABC refused to play the song; we changed it to ‘winning my dear love’. But what was nice during those days, [was that] the public knew all the songs. When you did live shows you’d go*

*‘Winnie Mandela’, people knew what was the song all about”*

*– Yvonne Chaka Chaka (Schumann, 2008:27)*

*“I spoke there about someone who was a liquor slave. When we did live shows, people were singing the song as ‘legal slave’. [...] People always had an ear for these subtle messages”.*

*– Lucky Dube explaining his song “Slave” (Schumann, 2008:27)*

Songs became even more provoking as time went on and were directed particularly at responses by the Apartheid regime. Many musicians were targeted, lots of blood was shed, but the fight continued. As Schumann (2008:35) states, *“Musical fusion by ethnically diverse bands (and audiences) negated decades of apartheid ideology and practice”*. Music moved from being thought provoking and indicative, to becoming a force to be reckoned with. It started to directly target state beliefs and ideals and eventually celebrated subtle breakthroughs. From the early 1930’s to 1994 musical approaches bounced back and forth but the overall ideals and aims were maintained; freedom and unity. It was the determination and consistency of the oppressed that eventually broke the chains of “oppression”. A statement by Nelson Mandela in *The Hidden years, 3<sup>rd</sup> Ear Music* as quoted by Schumann (2008:35) highlights music’s importance and power,

*“The curious beauty of African music is that it uplifts as it tells a sad tale. [...] African music is often about aspirations of African people, and it can ignite the political resolve of those who might otherwise be indifferent to politics. [...] Politics can strengthen music but music has a potency that defies politics.”*

– Nelson Mandela

### **3.3.5) Conclusion**

#### Diversity and Unity:

In understanding the role that music has played in South African history, one develops a deeper appreciation for music and song. No other example adequately demonstrates the power of music and the unity it can achieve than the struggle for democracy in South Africa, but what does it have to do with architecture? From the definition of music, we see that music can only be achieved through the incorporation and arrangement of a variety of individual elements (notes, high and low, pauses, breaks etc.). South Africa’s success was constituted to the diversity of people (different backgrounds), their views and opinions, which in turn made the songs that were sung meaningful and through diversity, prevented a “monotone” approach to the fight. As Mandela’s quote describes,

music uplifted and told a sad tale, and implies that a story was conveyed. A “story” is what needs to be reflected in architecture today. It is not just a building but also the “mirror” which reflects the current social environment. In architecture, built form is made up using a variety of elements, which together, create meaning and depth. It is very important to note however, how these elements work together in creating a uniform and complete art piece that can be easily identified and read by the layperson. The outstanding quality of music in the struggle was the unity it promoted. Music had the intense ability to draw people together and create “one” body. Similarly, an architectural piece needs to be complete in itself and remain united. Unity can be achieved through the focus on balance and harmony within the composition, and careful consideration on the varying potentials of individual elements. Each component has their own shortcomings but in working together, complement each other.

#### The dynamic nature of music:

As illustrated in the evolution of music, music was not statically used, but on the contrary, was used dynamically. The musical approach, style and intensity changed as the social environment and atmosphere of the time changed. An architectural theory which speaks of this approach is Place Theory (which has been discussed already). This theory bases its approach on a buildings link to its context. It’s important to address the architectural composition value of a built form within a particular context. It should not merely be a “copy and paste” routine, but a carefully orchestrated meaningful composition which inevitably should change with location.

#### The two musical approaches used and its architectural relevance:

The two approaches that were used, as described, were *resistance music* and *protest songs*. Resistance music remained a passive approach whilst protest songs became a forceful and direct approach. This parallels the two methods that architects use in design. The proceeding design could become a stand out, iconic development or a built form, which from the outside, blends into its surroundings. Through the investigation on music however, it is important to note that the approach used was dependent on the social context. Like music, architectural approaches should be purely based on the

context in which the built form lies. Both approaches are valid, but careful consideration on how they are perceived and received is important. Music provides the medium for cohesion within an architectural composition, something which every art piece requires.

### **3.4) Architecture as an art form:**

Architecture in itself is an art form, and as stated earlier, it hinges on specific principles for a successful composition (rhythm, axis, hierarchy, datum, symmetry and transformation). Ngcongco (2011) explains that architecture's primary function is to provide shelter and protection, so in order for architecture or a built form to be a work of art, one must think out of the "functionality" box. Ngcongco (2011) explains further that architecture as a work of art elevates human spirits and richly stimulates the senses. It's more than just a pretty building, but a building which has meaning, depth, and feeling. They are forms and structures which intrigue you, which consist of contrasting textures and feels; all of these elements working together to tell *one story*. Pallasmaa (2005) brings attention back to a very important exchange which takes place when viewing art. The lending of emotions and associations to the space is exchanged for an atmosphere of intrigue and encapsulation which stimulates one's thoughts and alters perception. He further states that architecture is much the same in that it is not just a series of still images but rather a physical representation of a spiritual existence. Physically, architecture stimulates the senses through interesting shapes, colours and forms but also contains a strong mental structure which creates a reality of significance and meaning.

*"If a building awakes nothing more than admiration for the skill displayed in its construction and ornamentation, then it is more properly to be regarded as an example of craftsmanship than as a monument of art." (Rutter, 1923:17)*

Music can be silenced and forgotten. Architecture on the other hand, leaves an indentation on history, whether for good or bad reasons. The combination of cultural expressions through music, stories of the use and importance of music through history, with the freedom of expression that architecture provides, cements history and memories. Characteristics of musical compositions can be adopted into the building typology, colours, textures, uses, but the underlying story must be told. This synergy of meaning, depth, creativity, activity makes all the difference and helps create a built art form inspired by music...a true work of art. Many forms of art exist such as, music, sculpture; painting, dance etc. but each has their own shortcomings. Sculpture may have a form but no acoustic properties, music may have acoustic properties but no visual stimulation. When combined, however, they enhance each other out and aid in conveying messages and emotions.

### **3.5) The psychology of visual perception in art and its role in creating meaningful Architecture:**

Art is not merely a pretty picture, but a physical piece of creativity which evokes an emotion through carefully orchestrated elements and is a window into the culture of that day. This statement is motivated by Arnheim (1966) when he points out that art has always been and used as a means of interpreting the nature and life to human eyes and ears. Sadly as Arnheim (1966) points out, art to the average person has become incomprehensible and confusing. Emphasis therefore, on how art is perceived and received is important.

*“.....we begin to understand that the human organism and its nervous system actually seek a contrasting sensory stimulation which is rarely provided for by mainstream architecture.” (Porter, 1997)*

Porter (1997:26-27) explains that our experience of interior and exterior spaces is primarily a sensual event. It involves the movement through places and spaces of varying intensity. He further added that each space affects the functioning of our senses and the way we are challenged to use them, creates this variety of intensity within space through exaggerated levels of sound, smell, taste, form and colour. Architects are therefore challenged to create space which not only stimulates visually, but also stimulate the ears, nose and skin of observers.

Porter (1997) further states that despite the primary focus being vision, one should never negate the importance and involvement of the other senses in experiencing space. Hearing, in identifying and acknowledging the acoustic properties of a space, smell, in aiding orientation through space and identification of space, and finally touch, the immediate receptors; the skin, or hands, allowing for a space to be physically experienced. As Pallasmaa (2005) highlights, architecture which hinges its experiential value on sight alone, suppresses and eliminates the roles of other senses within the experiential process, thus limiting the overall experiential potential of the architectural piece. Sight cannot fully encapsulate everything that touch, hearing, sight and taste can do working together. The experience of space can be described as a reflection of one's inner being. How we interact with a space internally, through the engagement of our multiple senses, sets the foundation into the reality of space.

*“It is evident that “life-enhancing architecture” has to address all the senses simultaneously and fuse our image of self with our experience of the world. The essential mental task of architecture is accommodation and integration. Architecture articulates the experiences of being-in-the world and strengthens our sense of reality and self; it does not make us inhabit worlds of mere fabrication and fantasy.”*

*(Pallasmaa, 2005:11)*

Pallasmaa (2005) states that this sense of self (inner being) is largely strengthened by the unison of art and architecture which enables fully engaged mental processes such as dreaming, pleasure, desire and imagination. Pallasmaa (2005:41) describes architecture as the “man-made” representation of nature. As he illustrates, architecture provides the foundation for perceiving and experiencing the world. It is not to be looked at in isolation, but is merely a signboard to direct our attention and experiencing of the world through wider dimensions.

*“Instead of creating mere objects of visual seduction, architecture relates, mediates and projects meanings. The ultimate meaning of any building is beyond architecture; it directs our consciousness back to the world and towards our own sense of self and being. Significant architecture makes us experience ourselves as complete embodied and spiritual beings. In fact, this is the great function of all meaningful art.”*

*(Pallasmaa, 2005:11)*

The combination of these senses and their input may even, as Porter (1997) suggests, alter ones visual perception of the environment and provide an image which may have been over looked by the observer in the beginning. With art, many techniques are used which take advantage of people’s ability to observe. Factors such as, balance, line and rhythm, texture, shape and form; colour and many more play an important part in the psychology of art which will be discussed further.

### **3.5.1) Balance**

Balance forms the umbrella under which all other elements of artistic composition falls. It is the final judgment of a piece of art and helps the observer identify with the piece. Arnheim (1956: 26) defines art as *“the striving for and achievement of balance, harmony order and unity”*. How each of the elements works together and is arranged, brings about a unity and identity of a piece of art. Balance as Arnheim (1956) suggests conveys meaning and it is this meaning that should be aimed to be portrayed. He

further states that an art piece becomes the statement of a seen reality and it is important to identify how this reality is perceived. Arnheim (1956) states that balance makes use of cognition and describes an object's position in relation to a particular environment. Arnheim (1956: 2) consolidates this view and suggests that *"no object is perceived as unique or isolated"*. An art piece is judged from the outset visually but as he points out this judgment is not made intellectually after the act of seeing is done, but rather through the seeing process. Similarly in architecture, the image of the entire building is judged by an observer with each element judged in relation to the entire built form, not in isolation and not by prior intellectual knowledge.

Within the creation of art pieces and the creation of balance within art pieces two main forces exist, namely psychological and physical forces. As Arnheim (1956) describes, it is these forces that manipulate how people relate to art works. Psychologically, how people perceive art is dependent on the individual as vision occurs in the mind. Colour, texture, sound etc. all play an important part in psychological experience within a piece of art. Literally, balance can be defined as *"the state of a body in which the forces that act upon it compensate each other"* (Arnheim, 1956: 9). From this definition, it brings to the fore front the idea of physical visual balance. Visual balance as Arnheim (1956) suggests, is solely dependent on a centre of gravity, size (scale), colour, and direction. The addressing of these two forces makes a piece of art, or in this case, building compositions seem balanced.

Two key elements add to the visual balance of a piece, namely weight and direction.

Weight is determined and depends on:

- **Location**

Where an object is placed in relation to the overall piece's centre of gravity determines its visual weight.

- **Size**

If an object's scale is larger than its context, it gives the perception of being heavier irrespective of its material composition. Colour can also be indicative of weight; lighter colours indicate a lighter weight than darker colours.

- **Isolation**

To highlight elements, isolation can be used and gives a visual weight to an element which is not dependent on scale. An example is a depiction of a sun or moon in an empty sky.

- **Shape and Direction**

Irregular shapes hold less visual weight than regular shapes and are dependent on its compactness around its own centre of gravity. Direction like weight is dependent on location. Where an object is placed within a particular context gives an idea to the “forces” acting on the object and thus the direction can be determined.

- **Knowledge**

In architecture, each material used has a pre-conceived strength. For example, wood and concrete, irrespective of its relative scale in relation to each other, has their own assigned weight due to previous knowledge or memory.

Why is balance so important?

Arnheim (1956: 12) provides a simple answer. *“Balance is the state in which every element has come to a standstill”*. A balanced composition gives no possible room for change. It is definite, not accidental and is valid in itself. It eliminates ambiguity and disunity and enables a piece to be totally comprehensible to a lay person. Arnheim (1956: 24) answers the question of why balance is desirable by saying it is *“because it is pleasing and desirable”*. The underlying thread behind this response hinges on the ideal that when an observer looks at an unbalanced composition he is said to experience a feeling of unbalance within his own body. It is the constant searching for meaning and identity, which causes a lack of equilibrium within one’s self. In essence, the striving for balance can be described as the striving for simplicity (Arnheim, 1956:52).

### 3.5.2) Line and Rhythm

Porter (1997) suggests that architecture is not experienced in lines but rather through the use of lines, one can express a philosophical ideal. It can be seen as significant of rhythm, direction of intensity or energy that embodies the emotional roller coaster journey the architect or artist would like take the observer on. Rigdon (2007:1) describes a line as *“An extension of a point or an elongated mark”*. A line, as he further describes, provides a means to connect two points together and demarcates the boundaries of objects. Within both art and architecture lines serve multiple functions. These functions are briefly illustrated by Rigdon (2007) and are as follows:

- Lines denote an end or boundary and aid in creating shapes and contours. This is useful in architecture as a building comprises of many forms which need definition.
- Variety is achieved through the use of different line types. Variety creates character, and character denotes meaning. Angular, curved, and regular lines all aid in creating a variety of different shapes and forms. These forms and shapes are what make architecture interesting.
- Lines are used to create rhythm through curved and straight lines which vary in length. This rhythm being the intended journey of discovery which the architect or artist wants to take the observer on. Rhythm is important in how a built form is perceived from the outside. It indicates unity, flow, direction and movement.
- Lines stimulate texture. Texture adds to the character of a building. Through touch, a person is able to tangibly experience a space or art piece. Lines help convey meaning to different surfaces, which in turn, allow for the exposure to a variety of experiences within both art and architecture.
- Finally, lines aid obtaining focus through direction. Emphasis (hierarchy) and importance can be achieved in art using bold, thick lines, or in architecture through the creation of forms and shapes which are unique and direct focus to it.

The psychology of lines is dependent on the differentiation between 3 different line types as described by Rigdone (2007). Vertical lines represent alertness and illustrate a strong firm and stable opposition to gravity. Horizontal lines represent restfulness, tranquility and calmness. They are quiet, serene and representative of passivity through its yielding to gravity. Combining both vertical and horizontal lines, however, are indicative of equilibrium and stillness. This emphasizes the importance of grounding a built form. By grounding and interplaying of horizontality and verticality an architect can achieve balance, which as described, creates balance within the observer.

The third type of lines are diagonal lines. They are unstable and represent a state of restlessness being neither vertical nor horizontal. These lines give the impression of movement and activity.

Porter (1997) adds that curves also play an importance in conveying emotion within architecture. He suggests that upward curves are indicative of cheerfulness while the opposite is quite true with regard to an emotional slump, whilst a lack in stability can be expressed through straight lines breaking up into curves. In architecture each line type can be used to help in adding to the mood of spaces. These lines could be expressed in either floor and wall finishes (tiles, wallpaper), cladding or through a variety of forms defined using lines.

As mentioned, mood can be manipulated through the use of lines (Rigdone, 2007). An assertive mood can be created by using solid, straight, sharp or bold lines. These lines are indicative of definite meaning, direction and thus create a sense of confidence. A passive more delicate mood is created by the implementation of curved, thin or continuous lines. Zig-zag, soft or broken lines, however, promotes a sense of casualness which is largely due to the in-between nature of the line type.

### **3.5.3) Shape and Form**

As Arnheim (1956) states, form and shape to the lay person may be improperly regarded as one in the same, however, further investigation into what their differences are, hold the key in understanding how people perceive them. McGraw-Hill (2004) describes shape as an element of art which is a 2 dimensional area defined by a given boundary and has no volume. Rigdone (2007) further highlights a difference between space and shape. He states that shape is the demarcated, enclosed space whilst space is undefined and open. Form on the other hand, as mentioned by McGraw-Hill (2004), is the 3 dimensional representation of a shape. McGraw-Hill (2004) further states that the way in which people perceive to them is largely related to and dependent on memory, space and context.

*“I see an object. I see the world around me.” (Arnheim, 1956:32)*

First and foremost, identification of shapes has to involve the process of seeing through one's own eyes, the reality of its presence within a certain place (Arnheim, 1956). As Arnheim (1956) further describes, shape is one of the main characteristics of an object which is obtained by the eyes. Determining the shape of an object in space is not only dependent on the image obtained by the eyes but as he suggests, is its synergy with memory. The experience of seeing in the present time is never done in isolation but rather can be described as the most recent of an infinite number of sensory experiences experienced by an observer in a life time (Arnheim, 1956). It can then be concluded that a person creates a systematic organization of images which, through memory, are linked together. When the process of seeing is engaged, these links are stimulated and bring about understanding and aid identification of objects in space. Simplicity makes for easier identification and aids balance. When a shape is geometric it is easily identified by observers, whilst organic shapes require time to comprehend.

The psychological effects regarding shape and form are not primarily determined by memory alone but by space as well. In art, as McGraw-Hill (2004) clarifies, space can be defined as both positive and negative space. It is the area of emptiness around, between, above, below or within objects. Shape and form are therefore dependent on space for their existence. As mentioned, two types of space exist within art, positive and negative. Positive space represents the object of concern, whilst negative space represents empty space between the objects.

Why is unenclosed “negative” space so vital in visual design?

The quantity of negative space is what determines an observer’s psychological stimulation. As McGraw-Hill (2004) suggests, large amounts of negative space expresses loneliness or freedom, whilst very minimal quantities of negative space express tension or togetherness. Rigdone (2007) elaborates further by suggesting that unenclosed space aids in creating importance for an object, it promotes isolation, creates stability and further defines or distinguishes an object within a particular contextual environment. He suggests that this “unenclosed” space can be likened to a rest in a musical composition or a pause in speech and is as important as the object in question.

Similar to colour and scale, shape too has an influence on a person’s mood according to Rigdone (2007). Various shapes are evident and exist around us today and help in conveying deeper meaning to what is captured by the eyes alone. Rigdone (2007) explains that more regular geometric shapes such as rectangles and squares portray a sense of confidence and stability whilst dynamic shapes such as triangles, hexagons, etc. are perceived as being less stable. He further suggests that shapes of unequal proportions convey and promote a visual intrigue and interest whilst more geometric shapes (common shapes) are viewed as less interesting.

In architecture this space can be looked at in two ways. Firstly, we can look at the organization and unity of elements within the built form itself. A built forms’ arrangement consists of a variety of shapes and forms, consideration in how these shapes and forms affect people within the entire composition is important in their overall experience. How

each element relates to the next, its scale, colour, shape, closeness etc. determine the overall identification of the built form. Secondly, how this built form is perceived within its environmental context. Isolation, as McGraw (2004) explains, could express freedom or loneliness, how a built form then relates to its immediate context is important in the meaning and image it portrays to onlookers.

Gestalt theory is one such theory used to define the way in which people perceive their environment. It was developed by German psychologists Johann Wolfgang von Goethe, Ernst Mach, and Christian von Ehrenfels with research work done by Max Wertheimer, Wolfgang Kohler, Kurt Koffka, and Kurt Lewin in the 1920's. The term "*Gestalt*" in German means "*unified whole*" and describes how people organize visual elements into specific groups. The theory sets out principles known as the *Gestalt Principles* and are described below:

- **Similarity**

Similarity occurs when objects appear similar and therefore perceived as a group or pattern. The mind is able to form these links irrespective of whether or not it was the intention of the artist or architect. Emphasis is attained through dissimilarity.

- **Continuation**

Continuation occurs when the eye is enticed to move from one object to another through a form or pattern which is indicative of direction.

- **Closure**

Closure occurs when an object or shape is incomplete or when a space is not completely closed. The mind has the innate ability to complete these shortcomings to aid the identification of what is being observed.

- **Proximity**

Proximity occurs when elements are placed close together. This gives the perception of a group. If placed further from each other, they will be judged as

separate entities. Therefore the “space” between objects is important if unity is to be expressed. A Report on *Psychology & Architecture* by W.Bro.Victor.G.Popow in December 2000, V1 suggests that repetitive gestalt demonstrates equalities where none may exist. The example of the Parthenon in Greece is sufficient. The outer columns are thicker and are spaced closer to surrounding columns but to the observer, are the same size and spacing throughout the façade due to their close proximity to each other.

- **Figure Ground**

This involves the eyes differentiation of a figure (object) and its surrounding area (background, ground). Balancing the figure and ground enables the observer to see the image clearer. It has to do with what is being focused on with regard to its context.

These principles identify and illustrate the power of the mind. The ability of one to understand and see without complete dependence on what they see is remarkable. Perception, however, is unique, primarily because people are unique. As a designer, identifying the importance of how the mind works enables one to manipulate this perception through an avenue which is rarely considered, enabling an observer to experience a built form in the way it was intended to be.

#### **3.5.4) Colour**

The psychology of colour is complex and differs from person to person. As Porter (1997) highlights, an investigation by Kurt Goldstein, a researcher in the field, states that it may not be completely wrong in saying that specific colours hold the key in stimulating a specific response pattern within organisms, as physical proof is available. Elevated heart rates, muscular tension, stimulated brain waves, and a definite arousal in emotional and aesthetic responses has been seen through various tests. In saying this

however, Porter (1997) suggests that it is the meanings and myths surrounding these colours that can be confusing.

- **Yellow** is thought to stimulate intellect and is advised to be used in classrooms, but also, is used primarily by suicidally inclined patients in art.
- **Red** is uniformly known as a strong, dominant and powerful colour
- **Green** symbolizes calm, peace and tranquility, and has been adopted as a default colour used in prisons and hospitals.
- **Blue** is seen as being cool, lightweight and passive.

From various tests, Porter (1997) points out, a conclusive result was noted. Dark colours were seen as more masculine, heavier, more unusual and seen to reduce space whilst defining it less than lighter colours. Lighter colours, on the other hand, were seen to be friendlier, pleasant, cultured and more beautiful than darker colours. It can be concluded then, that the *actual colour* is not as important as the colour's blackness and dimensions of hue. A dark blue and a light blue will evoke different feelings and emotions whilst still being "blue".

Porter (1997) suggests, the ultimate colour experience is not in the eye but in the mind and tends to collect and assign feeling and emotion of colour through memories associated with it. The "minds-eye" is what he suggests manufactures what a person sees. The physical eye however, merely absorbs different energies and wavelengths of light radiation within our visual spectrum. It is the synergy of both the physical eye and "minds-eye" that makes colour usage in both art and architecture so significant in understanding space and art.

In architecture, colour has been used for ages, from the early Neolithic caves as a means for expression, to the early Greek temples and medieval cathedrals for decoration as well as to relate stories through sculpture and painting. As Porter (1997) points out, colour use in architecture makes use of two main traditions. Firstly, for symbolism; as mentioned earlier, colour is experienced by both the mind and eye and

has to do with the synergy of viewing art or space literally and the memories associated with it.

A quote from *The Architect's Eye* sums up this view,

*“John Outram has described his use of colour and pattern as a medium to dematerialize a solid and orderly architecture; to use colour as an **aide memoire** to link the extreme past to a view of the future.” Porter (1997:61)*

Secondly, colour is used to aid the seamless integration of built forms into the context in which they are found. As Porter (1997) describes, this can be accomplished by specific material selection and colour choice. The first approach is bold whilst the second is much more of a passive approach. Both approaches however, are used effectively in built forms around us today.

Architecture can be bold and iconic but still requires a connection back to the context in which it lies in order for people to engage with it and follows on from the earlier introduction of Place Theory. Using both approaches allows the architect the freedom of expression and creativity whilst still maintaining its social relevance.

### **3.5.5) Texture**

Texture in both Art and architecture plays an important part in distinguishing limits and boundaries. In art this can be seen in paintings and sculptures which define areas of importance by varying texture, to a buildings landscaping, restricted areas, public areas wall and floor finishes which create a sense of place within a built form. Pallasmaa (2005) describes the hands as the sculptor's eyes. The hands he further adds are living and complicated organisms. They provide a source of information through histories of touch and have an embedded culture and beauty. Architects are much the same, a vision within their minds can only become a reality through the use of their hands. The skin reads texture, weight, density and temperature and as Porter (1997:66) illustrates, three main collective facets of touch exist. They are as follows:

- **The physical contact**

This is the first initial moment as one runs their hand over a surface. This gives a person the ability to distinguish between different textures and one that is required to understand an object or space.

- **Dimension**

By looking at, touching or picking up an object a person is able assign weight to the object. It is a tangible experience which makes use of a person's muscles and mind. We are also able to assign weight by memory, for example, a concrete wall, granite sculpture, etc.

- **Haptic perception of form**

This is the process by which a person can explore an object's form without the need for sight, but through touch. It is the strongest and most reliable of the senses and allows a person to acquire knowledge easily. As Porter (1997:67) states, "...*feeling is believing*"

Porter (1997) further states, it is often the case for people to reaffirm a visual disbelief through touch. It's an engrossing thrill which relates one into the realness of the experience within a space. This realness is described further by Pallasmaa (2005) who illustrates the realness of built realms to oral sensations. Through touch the hunger of the eyes are satisfied. The "taste" of space.

*"[The skin] is the oldest and the most sensitive of our organs, our first medium of communication, and our most efficient protector... Even the transparent cornea of the eye is overlain by a layer of modified skin... Touch is the parent of our eyes, ears, nose, and mouth. It is the sense which became differentiated into the others, a fact that seems to be recognized in the age-old evaluation of touch as "the mother of the senses"*

*(Pallasmaa, 2005:11)*

### **3.5.6) Scale and Smell**

Scale of an object or space, as Porter (1997) suggests, allows us to judge our own size. The larger the difference, the less comfortable a person would feel. He mentions that to alter the human scale relationship with the introduction of oversized, or over emphasized elements, one not only disturbs the scale within the arrangement or built form, but also unsettles the user or observer. An overwhelming sense is created by using dominating façades or extremely large, open volumes. On the other hand, very small, intimate spaces or facades create a sense of unease for users. Careful scale considerations are therefore suggested to be used to evoke a sense of tranquility and calm when using or experiencing art or built forms. This approach should not only be addressing the form or structural elements of a built form, but also the finishes, such as carpet patterns, roof tiles, floor paving etc.

Smell as Pallasmaa (2005) describes, is one of the primary means by which a space is remembered. Visual retrospection may be limited but smell is definite and is etched within one's memory. This smell then becomes a means of reference. In architecture emphasis on how spaces intrigue the sense of smell is an avenue which can aid and trigger a link back to a memorable experience, and therefore a built environment as a whole. Careful spatial organization along with function and material choices are of utmost importance in creating more memorable experiences.

Understanding the various components involved in creating pieces of art and how they affect people are just the stepping stones to fully grasp the significance of an art piece. To fully understand the piece one has to further look at how these components are systematically arranged with definite purposes. As Porter (1997) suggests, architects and musicians are similar in that they are able to manipulate sound, being in scale and rhythms, volume and the exposure to a variety of sensory experiences respectively. If a musical piece consisted of just a single monotonous note, the experience of the piece would be monotonous. Similarly, in architecture, a variety of experiences is needed to engage and intrigue users and not only emphasize a single component mentioned above.

*“The human cannot long endure a homogenous situation no matter how good and desirable it is.....the brain needs constantly varying forms of stimulation in order to operate.” (Porter, 1997:75)*

In understanding how musical pieces are composed, one can understand the significance in expressing a journey in a piece through the use of variety.

### **3.5.7) Conclusion**

Architecture and Music are two art forms that stimulate people psychologically and enable an expression of identity as well as creativity. Depending on how specific elements are put together in a piece, determines the overall outcome of the piece. Society is much the same, with many different people just needing an opportunity to tell their story. The combination of these two art forms would therefore hold great potential in celebrating and appreciating the diversity of cultures within South Africa both in built form and social enlightenment. This proposal calls for a space that celebrates people, music, and culture. A Centre for Music will be able to capture these unique, informative characteristics/expressions into a single place, opening one’s eyes to the Past, Present, and Future. It’s an area for *remembrance, learning and showcasing* South Africa’s rich cultural identities.

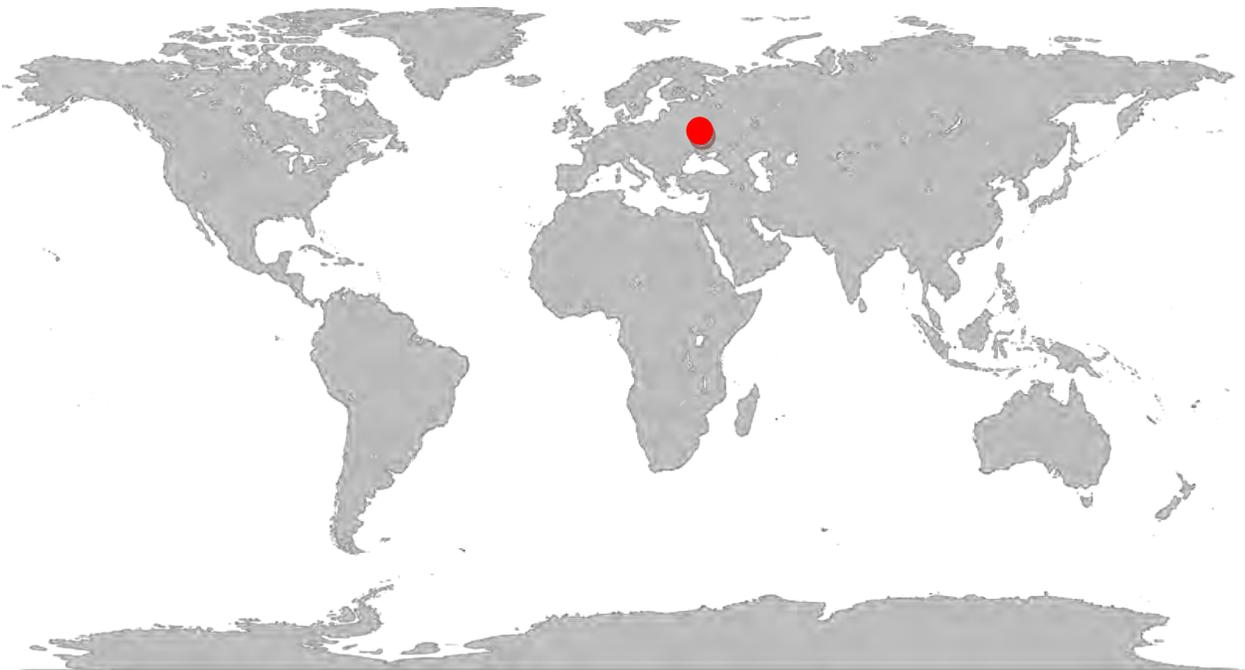
## **CHAPTER FOUR: PRECEDENTS AND CASE STUDIES:**

### **4.1 The Helsinki Music Centre – Helsinki, Finland**



**Fig1.0** View from the South-East of the Helsinki Music Centre

(<http://copperconcept.org/references/helsinki-music-centre-finland> - accessed 05/2014)



**Fig 1.1** Finland's location on the globe

([http://commons.wikimedia.org/wiki/File:World\\_map](http://commons.wikimedia.org/wiki/File:World_map) – accessed 05/2014)



**Fig 1.2** Helsinki's location within Finland

([https://suabroad.iastate.edu/index.cfm?FuseAction=Programs.ViewProgram&Program\\_ID=23](https://suabroad.iastate.edu/index.cfm?FuseAction=Programs.ViewProgram&Program_ID=23) – accessed 05/2014)

#### **4.1.1 Introduction**

The Helsinki Music Centre, *Helsingin Musiikkitalo* in Finnish, was formally completed in April 2011 and has become the musical centre or “musical living room” within the heart of the Helsinki city. Well accepted by the public, this centre aids in celebrating all genres of music. Finland, as a nation, prides and defines itself by its strong musical roots, and acknowledges classical music as one of the foundation pillars of its international image; the implementation of this world-class venue for performances, education and teaching was an ideal concept and was accepted with open arms. The project was initially commissioned by the *Sibelius Academy (The Finnish Music School)* in 1992. They had expressed a need for a better performance venue as the previously designed *Finlandia Hall* by Alvar Aalto, which had been conceived as a mixed use conference centre with poor acoustics, was just not good enough for music performances.

Formal implementation and formalization of the idea, however, only started in 1994 as two main orchestras joined in on the appeal, namely, the Finnish Radio Symphony Orchestra and the Helsinki Philharmonic Orchestra. In 1999 and 2000 respectively, a two-fold architectural competition commenced and applicants were instructed to create an architectural masterpiece on a site in the Toolonlahti area, known as the “pit”

opposite the Parliament House. The site previously housed the VR Warehouses which were a group of railway warehouses owned by *Finnish State Railways* within the city centre during 1899 – the 1980s. The winning entry and designers of the Helsinki Music Centre was locally based LPR Architects with the chief Architect Marko Kivistö at the reigns. Their design proposal “*a mezza voce*”<sup>2</sup> served to be a subtle addition to the Toolonlahti area and was seen to be the harmonizing catalyst within it (*Wikipedia*<sup>3</sup>; *Helsinki News* 2/2007 pg.3).

#### 4.1.2 Location and response to the urban surroundings



**Fig 1.3** Finlandia Park from the North. Finlandia Hall (bottom right), the Helsinki Music Centre (middle right), The Museum of Contemporary Art Kiasma (top right), and Sanoma House (top left).

([http://www.building.ca/issues/image.aspx?src=/daily\\_images/BD-20080401-023-imagecourtesyof-20190\\_MG0001.jpg&size=170](http://www.building.ca/issues/image.aspx?src=/daily_images/BD-20080401-023-imagecourtesyof-20190_MG0001.jpg&size=170) – accessed 06/2014)

<sup>2</sup> in a low voice – (Italian) – [www.Google.com](http://www.Google.com)

<sup>3</sup> [http://en.wikipedia.org/wiki/Helsinki\\_Music\\_Centre](http://en.wikipedia.org/wiki/Helsinki_Music_Centre)

The Helsinki Music Centre, as mentioned earlier, lies within the Töölönlahti area in the centre of Finlandia Park. This particular area has been the focus for many architects and urban designers, respectively, with proposals put forward to implement an urban design intervention aimed at creating a unified and easily identifiable concentration of cultural buildings linked by softer green, landscaped parks for public gatherings and events (Helsinki News 2/2011).

The buildings that make up this cultural concentration in the Töölönlahti area are the Museum of Contemporary Art Kiasma, the Helsinki Music Centre, Finlandia Hall, the Finnish National Opera, and the Sanoma House. They all depicted below:



**Fig 1.4** A view from the public gathering area (north), Sanoma House (left), The Museum of Contemporary Art Kiasma (right). (<http://www.panoramio.com/photo/60971137> - accessed 05/2014)



**Fig 1.5** The Helsinki Music Centre main entrance

(<http://thethingsienjoy.blogspot.com/2013/09/helsinki-city-surrounded-by-sea.html> - accessed 05/2014)



**Fig 1.6** The Finlandia Hall designed by Alvar Aalto

(<http://www.galinsky.com/buildings/finlandia/> - accessed 05/2014)



**Fig 1.7** The Finnish National House, Helsinki

(<http://www.pbase.com/image/83494194> - accessed 05/2014)

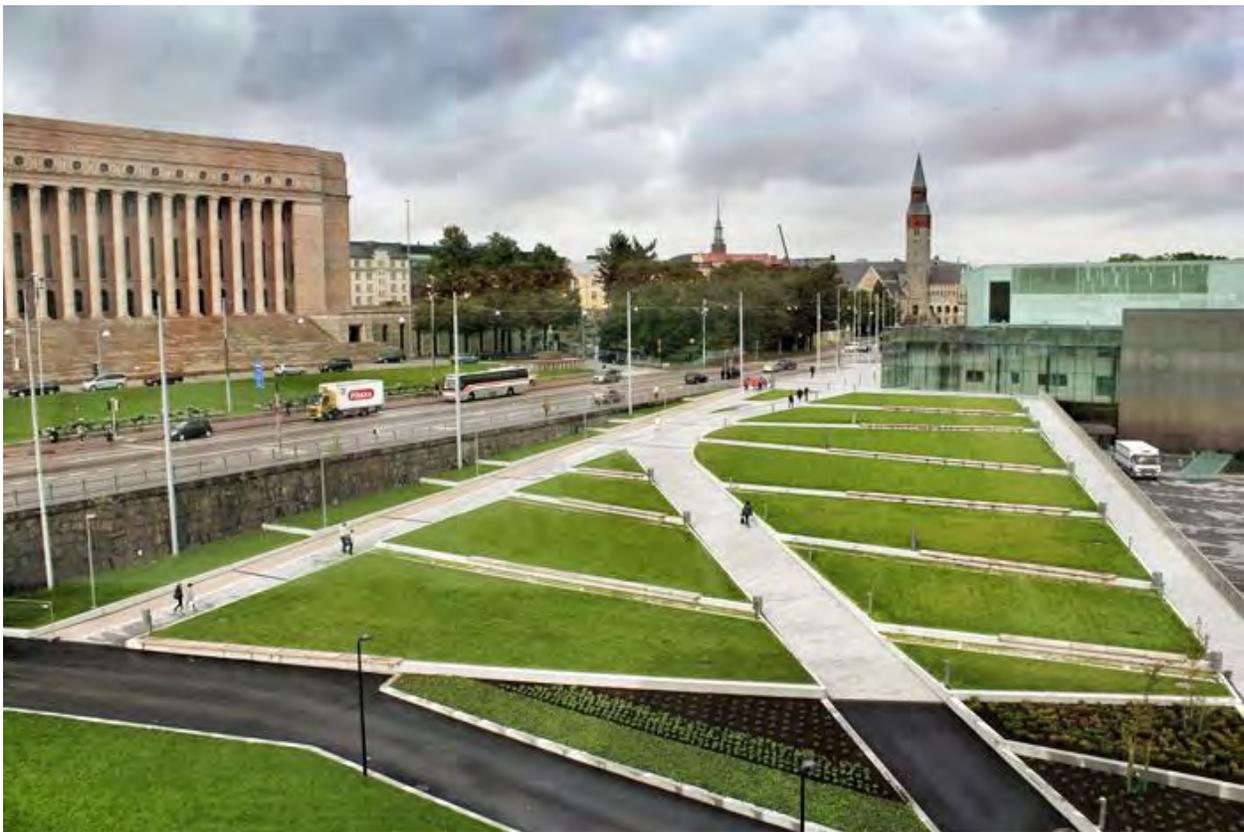
All the above mentioned buildings are located on the outskirts of the *Toolo Bay* and stretch further south towards the CBD with the Finnish National Museum and the Parliament House overlooking the area from the East. Other proposed interventions, such as, exhibition areas, restaurants, and spaces designed for cultural expressions and activities are going to be implemented underground. This has been primarily looked at as being a viable solution in order to achieve an “open”, less dominating space for visitors and the general public. The “void” created by the lack of built masses creates prime public gathering spaces, ideal for softening the harshness of the built up CBD. The Sanoma House, another important node, lies on the southern edge of Finlandia Park and serves as a prominent termination point for the development. The Sanoma House is further linked and connected to Finlandia Park physically, through pedestrian pathways and visually, through the “isolation” and openness that the public gathering spaces create (Helsinki News 2/2011).



**Fig 1.8** Site plan of Finlandia Park (<http://www.ckarlson.com/blog/2011/11/22/rotch-case-study-finlandia-park-finlandia-hall-helsinki-musi.html> - accessed 05/2014)

Lead architect for the *Helsinki Music Centre*, Marko Kivistö, explains that the architectural concept for the proposal stemmed from its immediate urban context. He further describes the centre as the “[...] *last, unifying piece of the puzzle*” within a very demanding and architecturally busy site (Helsinki News 2/2011). The Centre comprises **three main elements** that link and relate to important focal points around its urban context, they are as follows:

- The sloping green roof –creates an open public gathering space and links to the Museum of Contemporary Art *Kiasma*.



**Fig 1.9** The Helsinki Music Centre's green sloping roof as seen from the Sanoma House. The picture indicates the paths that create physical links through the gathering space towards the Parliament House and active street edges.

(<http://www.ckarlson.com/blog/2011/11/22/rotch-case-study-finlandia-park-finlandia-hall-helsinki-musi.html> - accessed 05/2014)

- The Glass foyer – creates a visual link and opens out towards the *Sanoma House* and *Finlandia Park*.



**Fig 1.10** An interior view from within the Helsinki Music Centre and the Cafe. The glass facades add to the open and airy feel of the building which creates a very inviting atmosphere for passersby.

(<http://www.ckarlson.com/blog/2011/11/22/rotch-case-study-finlandia-park-finlandia-hall-helsinki-musi.html> - accessed 05/2014)

- The green patinated copper sections – connects and acknowledges the parks green landscaping and gathering areas on its northern façade design.



**Fig 1.11** Copper cladding close up



**Fig 1.12** An example of the cladding use on the facades

(<http://www.aurubis.com/finland/architectural/references/helsinki-music-centre/> - accessed 05/2014)

The Helsinki Music Centre acknowledges its surroundings and that is what makes this building so successful at being the unifying puzzle piece to this particular urban environment. As the architect states, “*The building is an extension of different forces*” (Helsinki News 2/2011).

#### **4.1.3 Architectural Expression**

##### **Architectural style:**

The overall success of the Helsinki Music Centre lies in its subtleness. The proposed design by LPR Architects paid respect to Functionalist design through the incorporation of a fundamentally Finnish appearance. The careful choice of materials as well as intricate composition of forms helps this building blend into its landscape and urban surroundings without forgetting to acknowledge their importance. In a seemingly difficult site to use (architecturally), LPR Architects have achieved a design which seamlessly integrates the various cultural nodes within Finlandia Park, which in turn, makes it a success (Karlson, 2011)<sup>4</sup>. As the architects explain, the drive behind the design of the Helsinki Music Centre was to emphasize openness, approachability, and the overall enhancement of the integrity and sense of calm within the area. Openness allowed for both an airy, free and visual link between spaces as well as people. It created opportunities for interaction between music professionals, students, visitors and passersby (Musiikkitalo, 2014)<sup>5</sup>. The height restrictions on the site affected the design approach as well as a large part of the building lies underground to keep the roof of the building in line with that of its surrounding context.

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<sup>4</sup> Roth Case Study: Finlandia Park (Finlandia Hall & Helsinki Music Centre),

<http://www.ckarlson.com/blog/2011/11/22/rotch-case-study-finlandia-park-finlandia-hall-helsinki-musi.html>

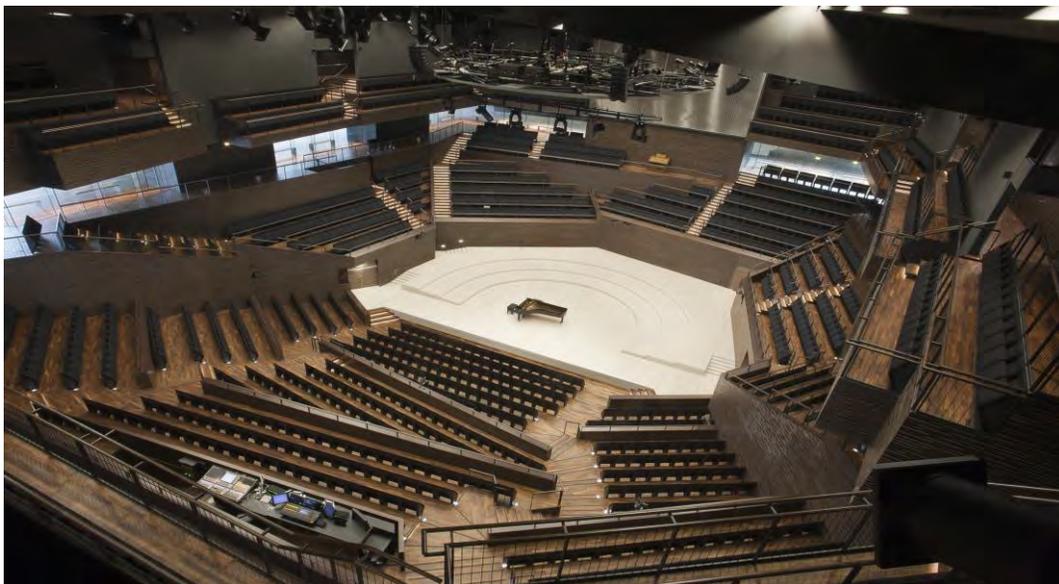
<sup>5</sup> “a mezza voce” – architectural design of the Helsinki Music Centre, 2011

[www.musiikkitalo.fi](http://www.musiikkitalo.fi)

*“Our goal has also been to create a living cultural centre for everybody, a meeting place in the middle of the city. We’re right on a convenient path between the railway station and the main thoroughfare Mannerheimintie.” – Director Helena Hiilvirta of the Helsinki Music Centre (Korpela, Weaver, 2011)<sup>6</sup>*

### **Space design:**

As stated earlier, the main intention of designing the Helsinki Music Centre was to provide a space for musical performances with excellent acoustics; it then is no surprise that the entire building centres around its main concert hall, “the heart”, which seats 1700 people (Helsinki News 2/2007, pg. 3). The main concert hall is vineyard shaped and according to the lead architect, Marko Kivistö, the design was inspired by the Finnish log floating tradition. When looking from above the concert hall, an image of floating river logs has been achieved in the organization and design of the seating which encapsulates a circular stage (Embassy of Finland, Nairobi, 2012)<sup>7</sup>.



**Fig 1.13** The “heart” of the building, the Main Concert Hall.

(<http://www.ark-lpr.fi/type-referenssi/helsingin-musiikkitalo/> - accessed 05/2014)

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<sup>6</sup> *Helsinki’s new Music Centre garners rave reviews,*

<http://finland.fi/public/default.aspx?contentid=189905&contentlan=2&culture=en-US>

<sup>7</sup> *Helsinki Music Centre – design, acoustics and free concerts, News 4/19/2012,*

<http://finland.or.ke/Public/default.aspx?contentid=247048&nodied=32134&culture=en-US>.

With acoustics being the driving force behind the overall design, the architects in collaboration with Japanese acoustician Yasuhisa Toyota have provided unique venues for particular musical expressions, these are as follows:

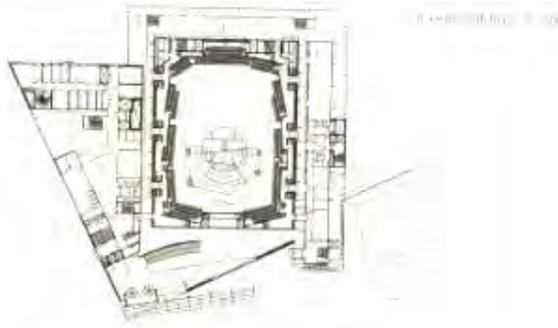
- The Main Concert Hall – seats 1700 people (acoustic music)
- The Black Box theatre – seats 200-400 people (amplified music)
- The Sonore theatre – seats 278 people (vocal music and musical theatre)
- The Camerata theatre – seats 240 people (small ensembles)
- The Organo theatre – seats 140 people (is fitted with 3 organs)
- The Paavo Rehearsal theatre – seats 240 people
- Auditorium – seats 80 people
- The Klubi Restaurant – a venue for live jazz, rock and small shows

The building consists of 8 floors with more than half of them being underground to adhere to the strict guidelines regarding the height of the building, however, the architects still managed to relay the concepts of *interaction*, *contact*, and *presence* through careful and precise spatial planning (Helsinki News 2/2011). Around the “heart” (main concert hall), a well-lit, open circumferential foyer becomes a hub of activity through the in house exhibition spaces and cafés that exist. Contrary to the regular approach in designing concert auditoriums, the architects have implemented glass facades, a “glass belt”, which enclose the hall and provide natural light through light wells within the foyer spaces. This enables one to still feel a part of the “musical experience”, visually. This foyer interacts with the outdoors and gives the public a view of the activities housed within this centre as its facades are made of glass and adds to the transparent, open nature of the design approach. The foyer provides a link to the Museum of Contemporary Art, Parliament House, the Central Library and public gathering spaces. These gathering spaces around the building further become an extension of the building during summer months, with indoor activities such as cafés, and restaurants, extending its reach outdoors (LPR Architects, 2014)<sup>8</sup>.

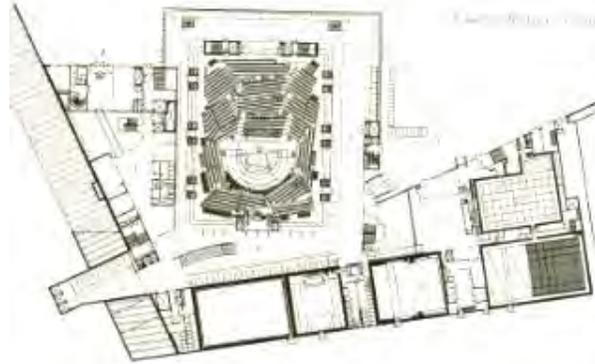
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<sup>8</sup> <http://www.ark-lpr.fi/type-referenssi/helsingin-musiikkitalo/>

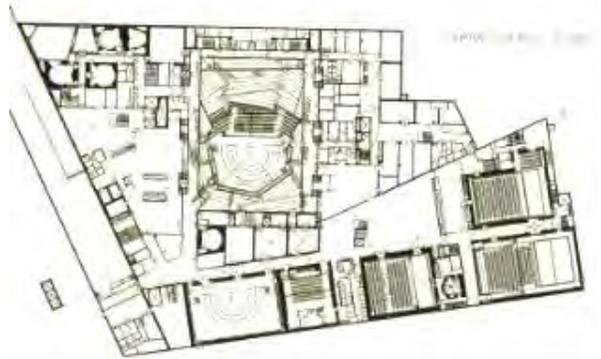
5<sup>th</sup> floor



4<sup>th</sup> floor

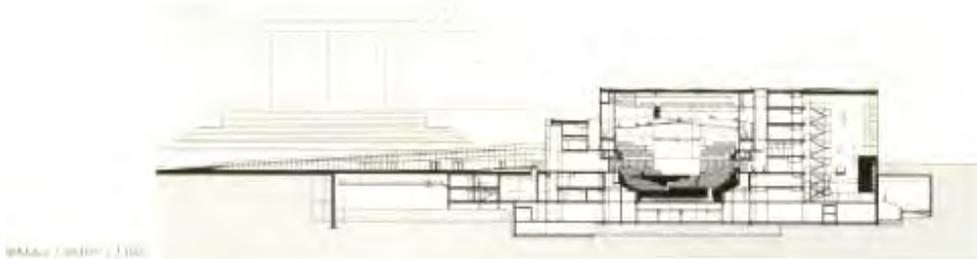


2<sup>nd</sup> floor



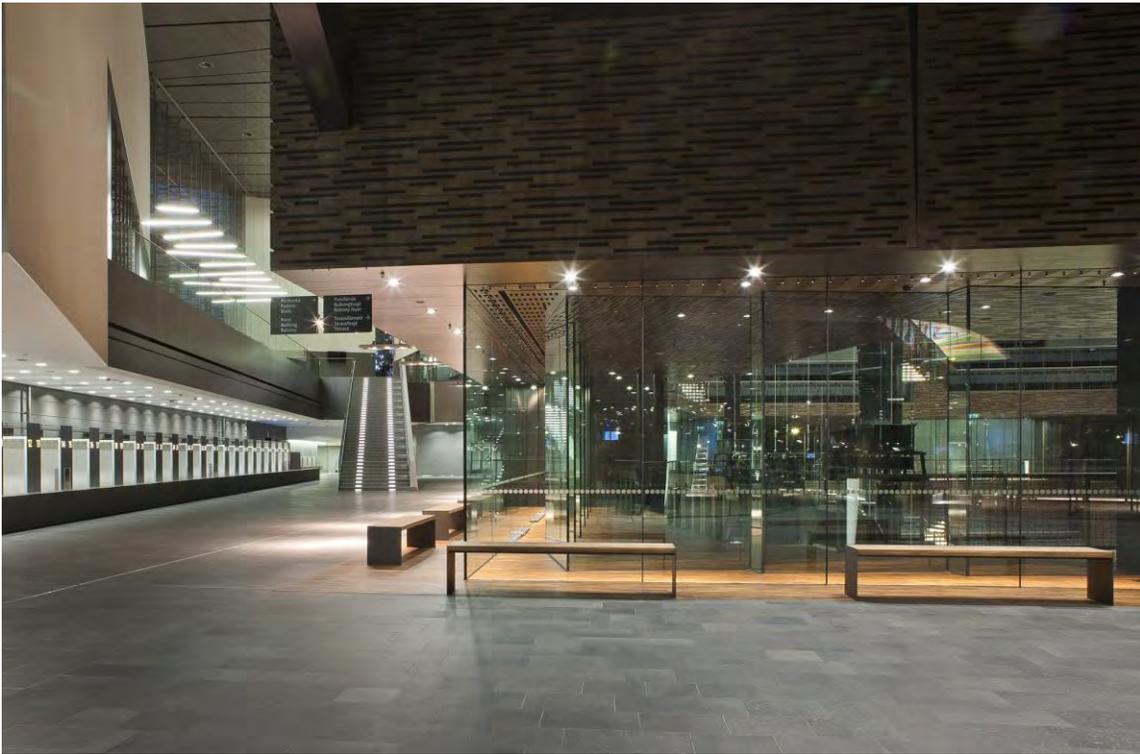
**Fig 1.14** An example of the intricate planning used within the Centre - 2<sup>nd</sup>, 4<sup>th</sup> and 5<sup>th</sup> Floors.

(Manttari, R. (2007), *Out of the pit*. Helsinki Music Centre, *Arkkittehti* No.6, 2007, pg. 32-36)



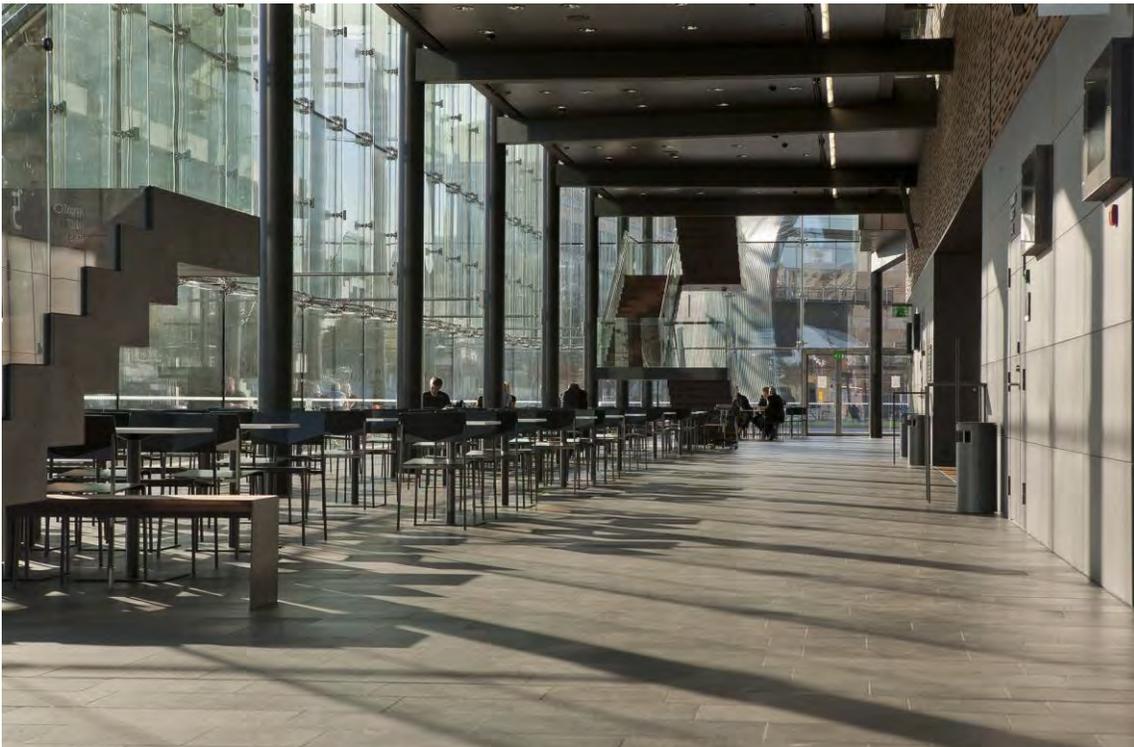
**Fig 1.15** A cross section through the Music Centre showing the underground floors

(Manttari, R. (2007), *Out of the pit*. Helsinki Music Centre, *Arkkittehti* No.6, 2007, pg. 32-36)



**Fig 1.16** A view of “Glass belt” that encloses the main concert hall.

(<http://www.ark-lpr.fi/type-referenssi/helsingin-musiikkitalo/> - accessed 05/2014)



**Fig 1.17** A view from the inside of the main foyer which is clad in glass.

(<http://www.ark-lpr.fi/type-referenssi/helsingin-musiikkitalo/> - accessed 05/2014)



**Fig 1.18** The Café located outside the Music Centre's main entrance

Stenger, W. (2012), *Finally a Concert Hall Worthy of Finnish Music*.  
([http://www.amscan.org/pdf/SR.Fall12\\_HelsinkiArticle.pdf](http://www.amscan.org/pdf/SR.Fall12_HelsinkiArticle.pdf) - accessed 2/05/2014)



**Fig 1.19** An example of exhibition areas and lounges within foyer spaces

(<http://www.ark-lpr.fi/type-referenssi/helsingin-musiikkitalo/> - accessed 05/2014)

The *Music Centre*, as mentioned, not only caters for performances but also houses facilities that relate to music education. The *Sibelius Academy* along with their teaching venues, offices, studio facilities, and library are housed on the Northern side of the Music Centre within 7 floors. The auditoriums and rehearsal studios are housed below ground with the administration block, which is located higher up, allowing for pleasant views of the entire Finlandia Park and neighbouring nodes (LPR Architects, 2014)<sup>9</sup>. Also housed below ground and neatly nestled around the main concert hall are the Helsinki Philharmonic Orchestra and Finnish Radio Symphony Orchestra headquarters consisting of office space, rehearsal halls, studios, and easy access to the performance area. In investigating the spatial planning of the Helsinki Music Centre it is clear to see that the building is very ordered. Public spaces are easily accessible and celebrated above ground, with the more private, “working space”, located below ground. As one moves up through the building however, you move from a very public to semi-public environment. The spatial planning is very clear and makes the building function as a musical composition in built form with many different elements or components coming together in an ordered system to promote a common cause, or “song” (Manttari, 2007).

**Facilities provided:**

- Sibelius Academy and related facilities (*studios, teaching areas, etc.*)
- Helsinki Philharmonic Orchestra Headquarters (*studios, offices etc.*)
- Finnish Radio Symphony Orchestra Headquarters (*studios, offices etc.*)
- Main Concert Hall
- 6 Music theatres
- Library
- Klubi restaurant and Jazz lounge
- Cafés
- Exhibition Facilities

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<sup>9</sup> <http://www.ark-lpr.fi/type-referenssi/helsingin-musiikkitalo/>

#### 4.1.4 Architectural composition

##### Form:

As stated by Marko Kivistö, the lead architect, the external form of the Music Centre was deliberately designed “simple”. According to him, this approach was implemented to prevent overpowering the dramatic and very diverse interior and to create a frame for the newly built Museum of Contemporary Art Kiasma due to its very intriguing and unusual form (*Wikipedia*)<sup>10</sup>.

The building has been designed and shaped to respect its surroundings. Two sides of main mass become parallel to the Finlandia Hall and the Parliament House respectively, while the tallest parts are placed closer to the green gathering spaces to give the appearance of buildings in a park. The Music Centre comprises of 3 main elements, which are differentiable by their hierarchy and material choice (Narjus, 2011<sup>11</sup>; Helsinki Music Centre)<sup>12</sup>.

- **Taller sections** (on the north) of the building are clad using patinated copper which relates and links back to the green landscaped gathering spaces.
- **The glass foyer** (on the south and east) allows for a visual connection between the public and the internal activities in a very aesthetic manner while maintaining a link to its neighbouring developments; the scale of the south has also been reduced so as to relate to the pedestrian.
- The third element is the **sloping green roof** which covers the 5 smaller underground concert halls. It, by design, becomes an extension of the square outside of the Parliament House and celebrates the architecture of Kiasma.

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<sup>10</sup> [http://en.wikipedia.org/wiki/Helsinki\\_Music\\_Centre](http://en.wikipedia.org/wiki/Helsinki_Music_Centre)

<sup>11</sup> *Helsinki Music Centre, Finland*,  
<http://copperconcept.org/references/helsinki-music-centre-finland>

<sup>12</sup> *Helsinki Music Centre*  
<http://www.archello.com/en/project/helsinki-music-centre#>

The building form, in essence, is geometric but distinguishable. The three elements are easily read and well integrated within the landscape. It is clear that it has been designed with all the external factors taken into consideration and therefore as an outcome, the Helsinki Music Centre responds to and respects its urban setting.

### **Materials:**

Four main materials have been used in the external façade design, namely glass, steel, natural stone and patinated copper cladding. As noted, the material choice was largely influenced by the design concept and the external urban context.

- The “soft bluish green” cladding was used to link the building back to its green context and help it blend seamlessly. Rhythm has also been expressed on the cladding through perforated holes in linear patterns which when viewed from different angles; express a rhythm and life to the coloured surfaces (Narjus, 2011)<sup>13</sup>.
- The glass facades were implemented to enable transparency and the concept of easy approachability and openness.
- Steel was used as a modern, hi-tech, aesthetic structural support for the glass facades which appreciate the contemporary architecture used in the Music Centre’s neighbouring developments.
- Natural stone was used to link the building back to the natural environment.

### **Colour:**

Externally and internally the colour pallet of the Music Centre remains very natural. Warm, neutral colours have been chosen to give a homely yet sophisticated feel, with floor and wall finishes changing according to the functions and use of specific spaces. Internally, colours like greys, creams, variations of browns, dark grey exposed steel,

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<sup>13</sup> *Helsinki Music Centre*

<http://www.archello.com/en/project/helsinki-music-centre#>

varnished light coloured timber floors and tan masonry can be seen with a touch of contemporary design, in the form of glass walls, subtle lighting and light grey clad walls. Performance areas however, reflect a specific atmosphere or setting with colours and finishes chosen to add to the character to the space according to the musical genre of that performance space. It is important to note that, finishes in these areas were chosen according to their acoustic properties (LPR Architects, 2014).<sup>14</sup>



**Fig 1.20** The colour scheme and finishes of the Organo Theatre with organs dating back from the 18<sup>th</sup> century

Stenger, W. (2012), *Finally a Concert Hall Worthy of Finnish Music*.

([http://www.amscan.org/pdf/SR.Fall12\\_HelsinkiArticle.pdf](http://www.amscan.org/pdf/SR.Fall12_HelsinkiArticle.pdf) - accessed 2/05/2014)

Externally the building design approach was that of subtleness, “a mezza voce”, and approachability. The colour choice was primarily responsible for its transparent characteristic and blending ability within its context. Transparency was achieved through the use of glass facades and the soft bluish green copper and natural stone cladding enabling it to blend into its landscape (Narjus, 2011)<sup>15</sup>.

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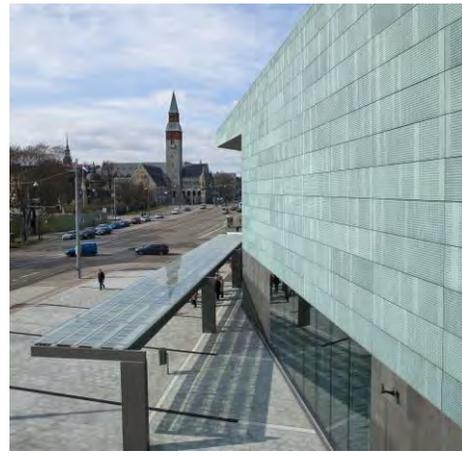
<sup>14</sup> <http://www.ark-lpr.fi/type-referenssi/helsingin-musiikkitalo/>

<sup>15</sup> *Helsinki Music Centre*

<http://www.archello.com/en/project/helsinki-music-centre#>



**Fig 1.21** The exterior façade colour scheme



**Fig 1.22** A close up of the copper cladding

(<http://www.ark-lpr.fi/type-referenssi/helsingin-musiikkitalo/> - accessed 05/2014)

**Scale:**

The scale of the building, as mentioned, was largely reduced because of strict height restrictions placed on the site. The building has only four floors exposed above ground level and has taken into consideration the human scale factor. Glass facades help in reducing the heaviness of the walls that almost look as if they weren't there from a distance; it is through this transparency that pedestrians feel free and unrestricted psychologically. Overhead walkway covers have been designed along solid facades and reduce the vast size of the blank façades along with a "glass-belt" which wraps around the perimeter of the building on ground floor (see pictures above). Internally, double volumes exist but are less dominating because of the light and airy feel the building promotes by the use of much glass as well as cleverly designed recessed seating areas which have lower ceilings around points of interest.

**Balance:**

Through this investigation, it can be clearly seen that this Music Centre is visually very well balanced. One of the first aspects is its grounding. It has a very central centre of gravity with a weight (mass) that is projected outwards rather than upwards. It's much more of a horizontal than vertical building and creates a sense of "standing-still"; or being at equilibrium. Secondly, is its size. It does not overpower its context but rather highlights its neighbouring developments through its colour (natural, subtle, blending in qualities) and material choice (glass, patinated copper cladding). Thirdly, is its form. The Music Centre has been very simply designed on the outside with all the intricacies left

for the internal planning and finishing. This helps in the understanding of the building externally and removes all ambiguity. As mentioned, the striving for balance can be described as the striving for simplicity (Arnheim, 1956:52). Finally, the Music Centre's material choices. Cognition plays an important part in the visual weight of a building regarding the knowledge of materials that are used in its construction. The choice of using glass and "soft" coloured facades therefore help in conveying a message of physical lightness.

#### **4.1.4 Buildings relevance to the study**

- De-structuring:

The ornamentation value of the Helsinki Music Centre may seem under designed and too simple to be classed as a sculpture, but it is through this simplicity, clean lines and abstraction of forms, that it resembles a contemporary artistic masterpiece. The architect's choice of materials, clear attention to detail and subtle design approach makes this building truly unique. Despite the outward appearance, structurally the building is sound, but a clear hierarchy can be seen by the outcome of this design. It's a very functional building yet possesses the image and characteristics of an art piece. Time and effort has gone into designing it to feel and look like an art piece; from internal wall and floor finishes, lighting and visual stimulation to texture, sound, and a gratifying user experience; you can't leave feeling the same as when you went in. The Helsinki Music Centre demonstrates that buildings can be both functional and sculptural at the same time despite heavy restrictions that may be placed on their locations.

- Phenomenology:

Deriving meaning from spaces, through spaces, and to spaces is exactly what this Music Centre promotes. From the investigation it can be seen that the design of spaces within the Music Centre was done individually depending on the function, use and activity of that space. Spaces were not merely mass designed but purposefully created and expressed. Spatial design is key in this building and centres around visual links and an openness that promotes a psychological ease for users. The journey as well as the

destination is emphasized within this building and can be seen in the design of the foyers (restaurants, cafes etc.), exhibition areas, and the smaller halls; which have all been individually designed and furnished to respond to the genre of music being showcased. Music and sound really do have an impact on the character of spaces within the Music Centre. This Centre has demonstrated how, with some thought and the acknowledgement of functions, spaces become better linked and appreciated both physically and psychologically.

- Place Theory:

As discussed, the concept and design approach of the Music Centre stemmed from its immediate urban context; its needs, restrictions, and location, but what has made this building so successful and readily accepted by the public was its ability to address and respond to the social and physical needs of the people. By its typology alone, it satisfies a social need as music is one of the pillars of this nation, but contextually, the way in which it has been designed, adds character to its solution. It is well knitted within its urban fabric and has been designed with the Finnish culture in mind. From aesthetic value, to functions, spatial design, material choice, everything links back to the Finnish culture, thus validating the national pride in this building.

#### **4.1.5 Conclusion**

The Helsinki Music Centre is truly a modern piece of art. This investigation adequately demonstrates how good design can be achieved simply, and has provided meaningful input to the study's argument. By looking at the Helsinki Music Centre one is reminded that the image of a building is very important but it should not negate the functionality of it. It must answer a social need. Furthermore, the way individual spaces were designed really stands out in this building and illustrates how meaningful space can be achieved through the acknowledgement and respect of function and activity, movement and visual links. The way in which this Centre has adapted to its context is very clear, and demonstrates an approach that can be carried through in prospective designs today. The Helsinki Music Centre is one example of a building that has really used the

characteristics of an artistic composition in its conception, from façade design, emotive stimulation, and space design.

#### 4.2 The Sydney Opera House – Sydney, Australia



**Fig 2.0** The Sydney Opera House with “graffiti lighting” on its roof

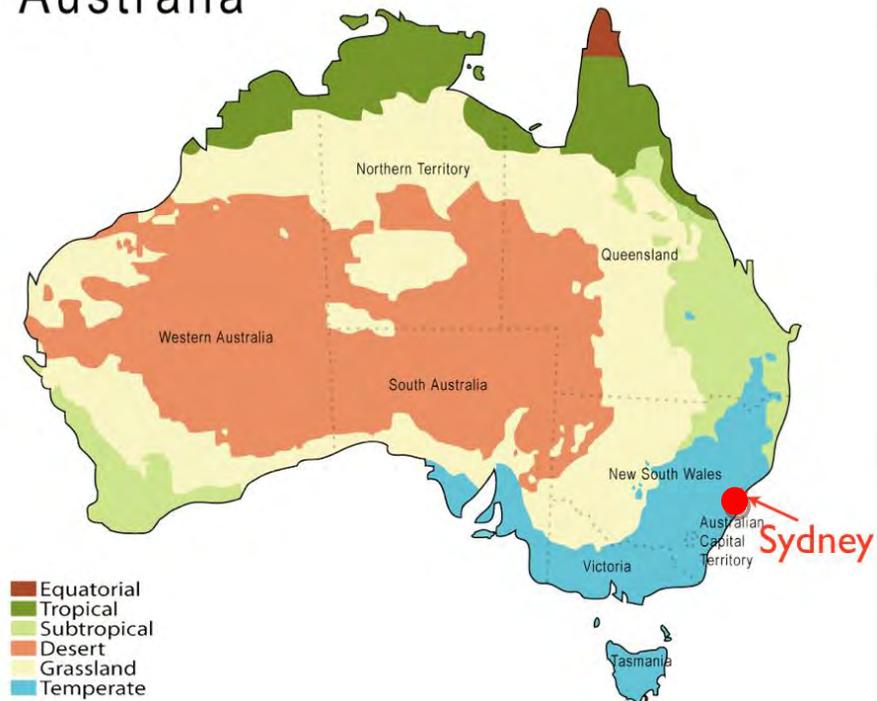
([http://en.wikipedia.org/wiki/File:Sydney\\_Opera\\_House\\_vivid\\_Sydney.JPG](http://en.wikipedia.org/wiki/File:Sydney_Opera_House_vivid_Sydney.JPG) – accessed 05/2014)



**Fig 2.1** Australia's location on the globe

([http://commons.wikimedia.org/wiki/File:World\\_map](http://commons.wikimedia.org/wiki/File:World_map) – accessed 05/2014)

## Australia



**Fig 2.2** Sydney's location within Australia

(<http://www.geocurrents.info/place/australia-and-pacific/australias-climatic-anomalies> - accessed 05/2014)

### 4.2.1 Introduction

When searching for spectacular buildings which have defined the turn of the millennium, The Sydney Opera House truly stands out from the rest. It may not have very strong historical background, but has become a defining icon for Australia, which illustrates the advancement of human engineering and design through its very expressive sculptural exterior. The Sydney Opera House rivals other monuments such as the Eiffel Tower in Paris, the Pyramids in Egypt, and the Taj Mahal in India. It is a very popular building across the world which contradicts its very rocky and critical acceptance by government and the Australian people due to its excessive cost and infringement of the site boundaries. The project was fundamentally initiated by a request for a larger venue for theatrical performances by Eugene Goossens, Director of the New South Wales State Conservatorium of Music, in the late 1940's. In 1954, he succeeded in his requests and designs for a dedicated Opera House were called for. On the 13<sup>th</sup> September 1955 a design competition commenced with designers instructed to design:

- **One large concert** hall for mass meetings, ballets, and operas seating 3000-3500 people
- **A small concert hall** and theatre seating 1200 people

The Sydney Opera House was designed by Danish architect Jorn Utzon who had won the design competition for the project in 1957. He was one of 233 entrants who applied but was selected because of the massive design potential of the proposal. He was the only applicant who had placed the two halls side by side which rose from a heavy, solid concrete base similar to that of the ancient Greek theatres. He also created a promenade from the car park and taxi drop-off area onto a level platform which guided people to the foyers and auditoriums and then terminating at a spectacular view of the Sydney Harbour. His design was not merely a concert hall, but a magnificent, artistic masterpiece that investigated and considered how people would interact with the building. Construction commenced in 1958 with Utzon overseeing construction, and the Opera House was officially opened on the 20<sup>th</sup> October 1973 by Queen Elizabeth II.

Jorn Utzon eventually won the Pritzker Prize, architecture's highest honour, for his efforts on the Sydney Opera House in 2003 (Wikipedia<sup>16</sup>; Weston, 1999; Arup, 1965).

#### 4.2.2 Location and response to the urban surroundings



**Fig 2.3** An Aerial view of the Sydney Opera House within its urban context. (Top-left) The Royal Botanic Gardens with the Government House sandwiched internally, (top-right) The Sydney CBD, (middle) the Opera Houses designed promenade that links to the parking and taxi drop off (CBD).

(<http://www.sydneyenziesshotel.com.au/maps-directions.html> - accessed 05/2014)



**Fig 2.4** A diagrammatic view of the Sydney Opera House location

([http://www.sydney-australia.biz/maps/opera\\_house\\_map.php](http://www.sydney-australia.biz/maps/opera_house_map.php) - accessed 05/2014)

<sup>16</sup> Wikipedia – Sydney Opera House  
[http://en.wikipedia.org/Sydney Opera House](http://en.wikipedia.org/Sydney%20Opera%20House)

The Sydney Opera House lies on one of the most focal points within Sydney. The site is located at the end of Bennelong Point, a very historic area since 1788 with the first European settlements occurring not far from it, and aids in expressing the character of Sydney Harbour. Its scale has been designed to relate to the Sydney Harbour Bridge, the sandstone cliff face, the Circular Quay and Macquarie Street respectively, with its main objective; being to demand an artistic representation and presence from every angle, from the air, water, or when moving by foot (Wells, 2013)<sup>17</sup>.

The site can be prematurely classified as being quite isolated as it sits on the water and only connects to the land via a designed promenade but, on the contrary, is very integrated within its context. It is flanked by the Sydney harbour on its North, the Royal Botanic Gardens and Government House on its South, and the Circular Quay and CBD on its West (Refer to fig... above).

The Opera House connects to its urban surroundings in diverse means, firstly through a physical link and connection (the promenade), secondly, through its natural approach in its colour choice (both internally and externally), thirdly, its form (organic), as well as its vision (a sculpture) (Wells, 2013).

#### **4.2.3 Architectural Expression**

##### **Architectural style:**

The primary influencer of the Sydney Opera House with regards its design was its integration, acknowledgement and relationship to the Sydney harbour, its topography and surrounding landmarks. Jorn Utzon accomplished this with a deep investigation and study into naval charts, photographs, and area site plans. According to him, his intention was to create a building that was sculptural, and blended seamlessly (naturally) into its surroundings, much like the sails of the yachts which enter the harbour. His approach, primarily due to the exposed nature of the site, was to create a building which stood tall and confident; exploiting the opportunity to be experienced and viewed as a sculpture from all angles. Another factor which inspired Utzon were the *sandstone heads* which

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<sup>17</sup> *Sydney Opera House,*

<http://australia.gov.au/about-australia/australian-story/sydney-opera-house>

mark the entrance into Sydney harbour, the building ought to express the same visual appeal and scale which engages and appeals to passersby, and take advantage of the beautiful views the site offered. The scale of the building, according to Utzon, should also impact how people would view the building and thus presented an approach which terminated in the creation of what we now see as the magnificent roof structure. He created a large base platform (promenade) which not only connected the site to the main pedestrian and vehicular thoroughfare, but created a base which was used to express the form of the Opera House, suggesting an upward visual direction. Two main precedent influences which he used were the Mayan temple platforms in Mexico and the Chinese “floating” roofs, both of which can be seen in the Sydney Opera House design. The use of a large platform (base) accessed by stairs creates a plateau on the entrance level, which gives the sense of being liberated from the “hustle and bustle” of everyday life, somewhat of an escape from reality, which parallels the platforms seen in the Mayan temples. Islamic architecture had also been seen to be a very strong influence, in particular the low mud-brick fabric of the Islamic City, in which tiled domed structures emerged like budding flowers where white petals were scattered over a fertile and red earth platform (Wells, 2013<sup>18</sup>; Weston, 1999).



**Fig 2.5** Chinese “floating” roof design. The Forbidden City, China.

(<http://www.chinaodysseytours.com/special-topic-about-china/mystery-of-chinese-royal-achitecture.html> - accessed 05/2014)

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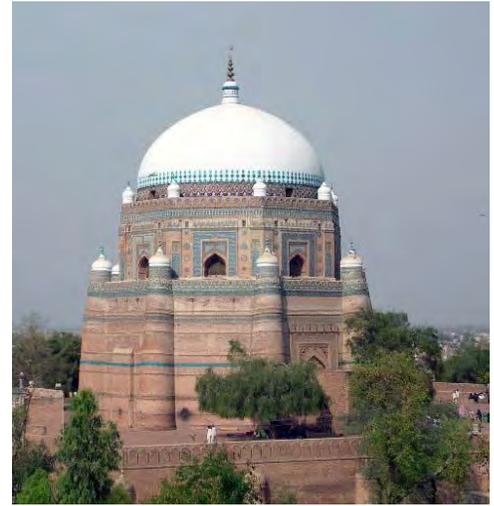
<sup>18</sup> *Sydney Opera House*,

<http://australia.gov.au/about-australia/australian-story/sydney-opera-house>



**Fig 2.6** Templo de los Guerreros, Tinum, Mexico. The plateaus in Mayan temples served as inspiration for Utzon's Sydney Opera House design.

([http://en.wikipedia.org/wiki/File:Templo\\_de\\_los\\_Guerreros.jpg](http://en.wikipedia.org/wiki/File:Templo_de_los_Guerreros.jpg) – accessed 05/2014)



**Fig 2.7** Shah Rukn-e-Alam Mausoleum, Multan. One of the Islamic marvels of South Asia gives an idea of the “white” petals which are scattered over a red earth plateau.

(<http://www.afghaninteriors.com.au/blog/> - accessed 05/2014)



**Fig 2.8** South Head, Watson's Bay. An example of the sandstone heads Utzon used as inspiration.

(<http://en.wikipedia.org/wiki/File:WatsonsBay0131.JPG> – accessed 05/2014)

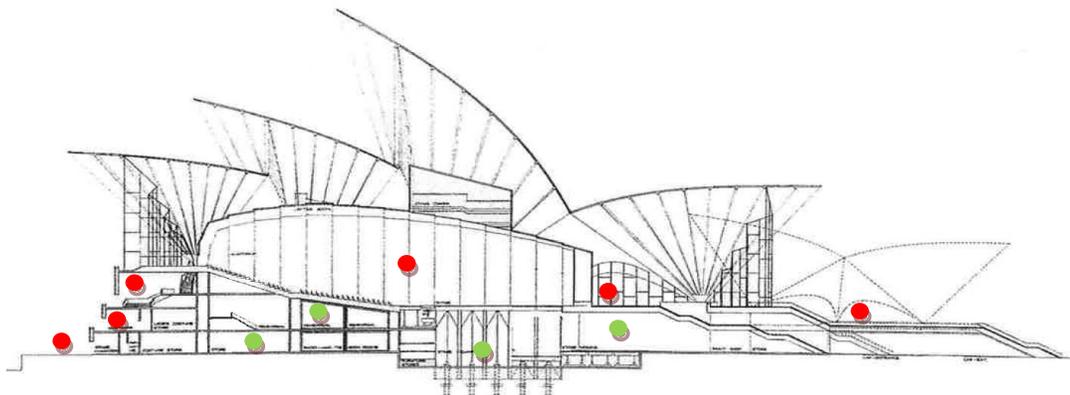
## Space design:

The building comprises of 4 main elements:

- a concrete platform (plateau),
- two organic concert halls placed side by side,
- an entrance hall
- “shell-like” roof structures,

All 3 elements clearly aid in differentiating between the public and private zones respectively. The solid base platform (which defines the private zone) is seen to emerge from the sea below like a rock and houses the workshops, offices, a recording studio, rehearsal rooms, dressing rooms and an experimental theatre which seats 400 people, all of which are accessed via stairs from the public promenade above. Above the platform (public zone) three organic forms stand tall and independently house the main concert hall which seats 3000-3500 people and a smaller hall which caters for 1200 people, the entrance hall, the *Guillaume* restaurant, bars, and retail outlets respectively. The ornate roof structure consists of many large white “sail-like” pieces which cover the main concert halls and smaller roof shells used to cover the entrance hall, stage towers, and bar area (Arup, 1965; Weston, 1999). The building, due to the raked auditoriums, create 5 floors from its sea facing end, and gently tapers towards the main entrance promenade, and is illustrated below:

- *Public*
- *Private*



**Fig 2.9** The longitudinal section taken through a concert hall

(<http://facadesconfidential.blogspot.com/2012/05/sydney-opera-house-decoding-glass-walls.html> - accessed 05/2014)



**Fig 2.10** An aerial view of the Sydney Opera House clearly showing the public promenade which terminates to magnificent views of the Sydney Harbour.

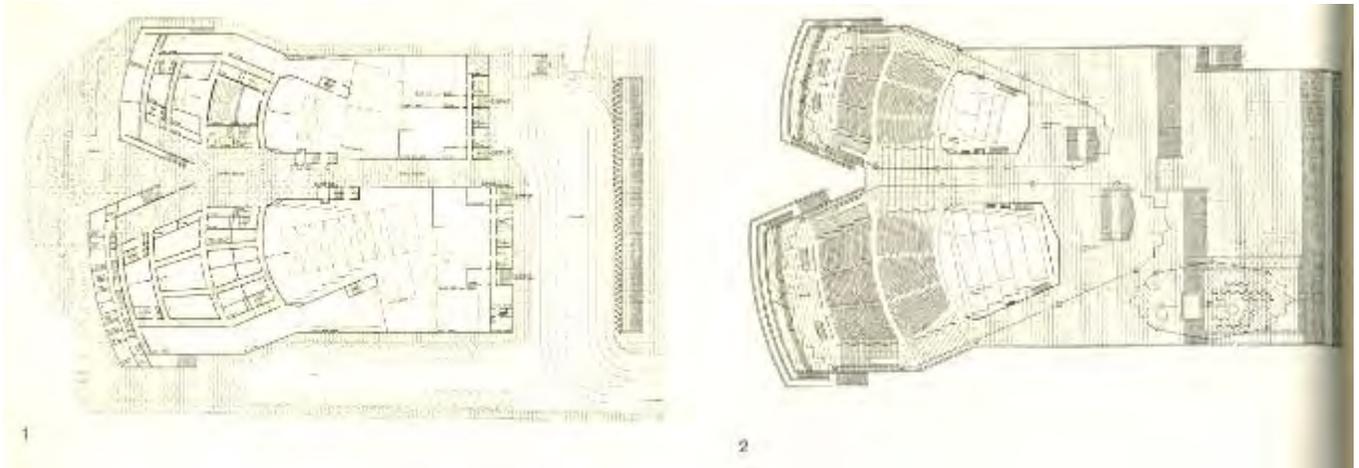
(<http://callumedwards.tumblr.com/page/2> - accessed 05/2014)

The main promenade and plateau, as mentioned, not only serves as just a link to the main land but serves as a base for this sculptural building. It terminates to unhindered views of the harbour and encourages people to experience and explore this masterpiece from all angles. Bar areas are strategically placed on the north and south facades of the Opera house and a restaurant on the harbour facing façade, all take advantage of an unparalleled visual experience. As with the Mayan temples, the Sydney Opera House too incorporates many split levels which “reach – down” to the street level below.

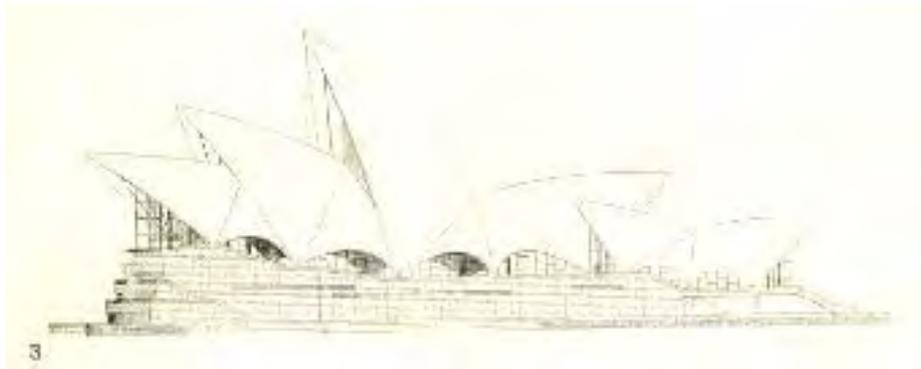


**Fig 2.11** The front view of the Opera House. The glass wall facing the harbour and the public promenade are very clearly seen.

(<http://www.news.com.au/finance/how-sydneys-iconic-opera-house-is-at-risk-of-financial-tragedy/story-e6frfm1i-1225873234562> - accessed 05/2014)



**Fig 2.12** The ground and first floor plans. Ground floor (left), First floor (right)  
 (Architectural Design Journal, March 1965, page 134)



**Fig 2.13** A sketched elevation as seen from the Sydney Harbour Bridge  
 (Architectural Design Journal, March 1965, page 134)

Unlike the Helsinki Music Centre, the Sydney Opera House is primarily a performance venue with smaller secondary facilities that have been incorporated to exploit the pedestrian movement in and around the site. The performance venues that have been provided are as follows:

- The main Concert Hall – seats +-3000people  
*(Sydney Symphony Orchestra)*
- The Joan Sutherland theatre – seats +-1500 people  
*(Opera Australia, Australian Ballet)*
- The Drama Theatre – seats +-550 people  
*(Sydney Theatre Company and other theatrical performers)*

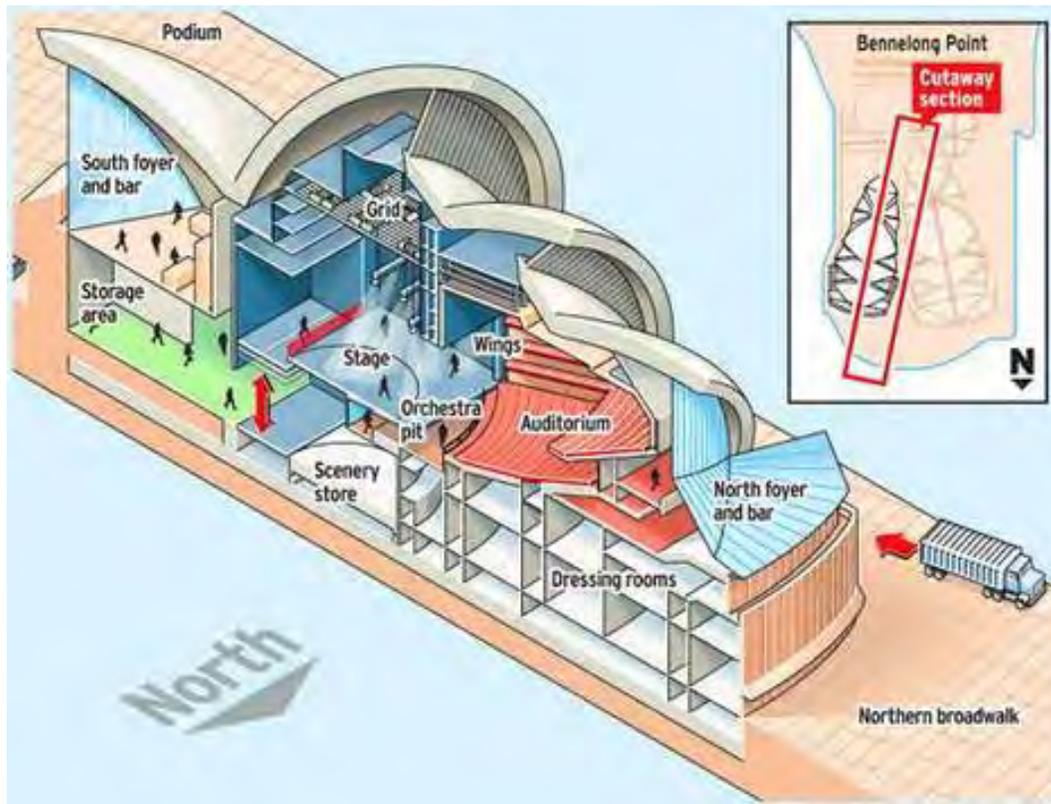
- The Playhouse – seats +-400 people
- The Studio – flexible venue seating 400 people
- The Utzon Room – multipurpose venue seating 210 people
- The Forecourt – open air venue, makes use of the monumental steps for performances
- Other outdoor venues on the promenade (northern and western facades) for occasional performances.

The building in totality is a very simple, clear, and clean design centered on the achievement of sculptural quality. Thus from its analysis, it can be concluded that function has followed form. Quality of space has also been prioritized within the design, one such example was Utzon's decision to face the auditoria away from the main entrance; which emphasized the sculpture, and forced the public to celebrate the form as they passed the stage area. The buildings current tenants are the Sydney Symphony Orchestra, the Australian Ballet, Sydney Theatre Company, and Opera Australia and it has provided the necessary facilities for their housing (Wikipedia<sup>19</sup>; Arup, 1965).

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<sup>19</sup> *Wikipedia – Sydney Opera House*

[http://en.wikipedia.org/Sydney Opera House](http://en.wikipedia.org/Sydney_Opera_House)



**Fig 2.14** A cut away section through the small concert hall  
 (<http://ashui.com/forum/index.php?topic=1453.0> – accessed 05/2014)

**Facilities provided:**

- 8 performance venues (incl. 2 main concert halls)
- Sydney Symphony Orchestra headquarters (rehearsal venues, offices, etc.)
- Australian Ballet (rehearsal venues, offices, etc.)
- Sydney Theatre Company (rehearsal venues, offices, etc.)
- Opera Australia (rehearsal venues, offices, etc.)
- Workshops
- Dressing rooms
- Experimental theatre
- Recording studio
- Cafés in-house and along the promenade
- The *Guillaume* Restaurant and *Bennelong* Restaurant
- In-house bars
- Retail outlets

#### **4.2.4 Architectural composition**

##### **Form:**

As mentioned earlier, the Sydney Opera House architect, Jorn Utzon's primary vision for the design of the Opera House was to emphasize and celebrate the sites context. He aimed to create a visual relationship and link to its topography and surrounding landmarks, keeping in mind that the building ought to stand out (be iconic) and be sculptural. A few of the landmarks and points of interest around the site are as follows and created a backdrop to which Utzon adapted his design.

- The Royal Botanic Gardens
- Sydney Harbour Bridge
- The Sydney Harbour – the ocean
- The Circular Quay

Regarding the form, the modern, expressive approach Utzon implemented was organic and natural to relate specifically to the natural setting in which the site fell. The water, the Royal Botanic Gardens and the yachts present, allowed for an organic form to birth and directly spoke to nature. One of the most identifiable elements within the design is its roof. The roof structure has been defined as “sail-like” (inspired by the yachts in the harbour), “clouds”, “sea-monsters”, but of late to flowers (inspired by the buildings natural setting, water, vegetation (the Gardens on the south), and man-made surrounds). Ancient Islamic architecture, as mentioned earlier, also played a significant influence in the design of the roof structure. In both the mosques and the Opera House, the “white-petal-like” roof elements contrast a red, uniform base (ground). All of the mentioned similarities follow a common thread; nature.

The roof design was not the only element which emphasized an organic, natural form, as the two main concert halls and the entrance hall did too. The envisioned sculptural piece sat on top of a regular, rectangular, terraced concrete plateau and was emphasized by the contrast of the two. The halls take on a curved, elongated form which is not over designed as to prevent overpowering the roof structure, and

expresses the breaking away from a rigid CBD design to a natural one towards the harbour (north) end. It's almost as if the building was carved from a single piece of clay and is intriguing from every angle (Weston, 1999; Wells, 2013<sup>20</sup>).



**Fig 2.15** An aerial view of Sydney Harbour shows the Sydney Opera House's immediate context.  
([http://commons.wikimedia.org/wiki/File:Sydney\\_Opera\\_house\\_3.jpg](http://commons.wikimedia.org/wiki/File:Sydney_Opera_house_3.jpg) – accessed 05/2014)



**Fig 2.16** The Sydney Opera House's organic and iconic roof structure.  
(<http://australia.gov.au/about-australia/australian-story/sydney-opera-house> - accessed 05/2014)

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<sup>20</sup> *Sydney Opera House*,  
<http://australia.gov.au/about-australia/australian-story/sydney-opera-house>

## **Materials:**

Five main materials have been used in the external façade design, namely glass, pre-cast concrete, plywood (interiors), aggregate panel cladding and ceramic tiles for the roof structure. The material choice was largely influenced by the design concept, a natural sculpture and the external urban context (focal landmarks). These materials uses are further explained below (Wikipedia<sup>21</sup>; Wells, 2013; Weston, 1999).

- Glass curtain walls are used to enclose foyer spaces (public). Glass provides a transparency which is needed to enjoy the buildings beautiful surrounds as well as provide much wanted natural light. The public relaxation spaces (the restaurants and bars) are located on the building's exterior on every floor and take advantage of unhindered views out towards the harbour, public promenade and the Royal Botanic Gardens (south). Glass was also used to express the floating nature of the roof structure. Although the roof is supported by pre-cast concrete ribs, the use of glass makes it seem as if it is floating from a distance. The glass facades were constructed using light weight steel framework which was supported off the concrete ribs in the roof. The conceptual idea behind its construction was derived from nature, the glass ribs specifically designed to represent a birds wings.
- Precast concrete was used primarily because of its strength and versatility; much needed to create the large scale organic forms and roof shells.
- Quarried pink granite aggregate panel cladding was used to clad the entire building and promenade to give a "reddish" appearance which aids in expressing Utzon's idea of a uniform "rock-like" base emerging from the sea. It supports and contrasts the white shell-like roof structures as well as, through contrast, highlights the roof structure. Rhythm has also been expressed in the cladding through the implementation of vertical ribbing. This gives the darker, simpler base, character.

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<sup>21</sup> *Wikipedia – Sydney Opera House*

<http://en.wikipedia.org/Sydney Opera House>

- White ceramic tiles from Japan were used on the exterior of the roof shells. Following on from Utzon's inspiration, Islamic architecture, the tiles help to express the "petal-like" and "sail-like" appearance. Both matte and glossy tiles were used and create one of the most alive surfaces which were inspired by the contrast between fresh and frozen snow. As the light hits the roof, they glow and change colour depending on the angle and height of the sun. Bright white in full sun, pearlescent blue-grey when in shadow, or pink and cream in ambient light.
- Australian white birch plywood was used to bring the natural exterior expression of the built form to the interior. Utzon made use of Ralph Symonds, a genius in the use of plywood, who helped create the glass facades mullions, interior finishes, cladding and the furniture out of plywood.

### **Colour:**

Along with the material choice, colour choice was also used to reflect Utzon's natural approach to the design and helped the Opera House to fit and relate to its contexts topography. On the exterior, two main colours are used, the "pinkish-reddish" precast concrete base platform and the souring white roof structure. As mentioned, this was to illustrate the rock-like base emerging from the ocean, supporting a "light-weight" organic roof structure which resembled white falling flower petals (Weston, 1999).

Internally, Utzon aimed to convey the same natural feel synergized with a rich, expressive, colourful experience which promoted vibrancy and was purposed to help people escape from the reality of their daily lives. Brown plywood provided warmth and connection to the earth contrasted with vibrant colours expressing his interest in Chinese and Buddhist art, temple design and ancient caves. He proposed to amplify the contrast between the exterior colour experience and the internal, focusing on the character of internal spaces and their psychological effect on people without forgetting the social and traditional opera auditorium design links. Creative expression did not negate social relevance (Wells, 2013)<sup>22</sup>.

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<sup>22</sup> *Sydney Opera House,*

<http://australia.gov.au/about-australia/australian-story/sydney-opera-house>



**Fig 2.17** An internal view of the Main Concert Hall.  
 ([http://www.cestchristine.com/wp-content/uploads/2011/03/IMG\\_28901.jpg](http://www.cestchristine.com/wp-content/uploads/2011/03/IMG_28901.jpg) - accessed 05/2014)



**Fig 2.18** Internal foyer design. Indicates the play with colour as well as the use of glass.  
 ([http://www.cestchristine.com/wp-content/uploads/2011/03/IMG\\_28761.jpg](http://www.cestchristine.com/wp-content/uploads/2011/03/IMG_28761.jpg) - accessed 05/2014)



**Fig 2.19** A bar overlooking the Sydney Harbour.  
 ([http://www.cestchristine.com/wp-content/uploads/2011/03/IMG\\_28771.jpg](http://www.cestchristine.com/wp-content/uploads/2011/03/IMG_28771.jpg) - accessed 05/2014)



**Fig 2.20** The Utzon room. The simplicity of material choice with a splash of colour.  
 (<http://rovingadobe.wordpress.com/2013/04/04/swan-song-in-sydney/p1000992/> - accessed 05/2014)

**Scale:**

The site's location plays an important part in outlying the scale factor required for the Opera House. The site is located right at the end of Bennelong Point and is flanked by the sandstone heads (which mark the entrance into Sydney Harbour), the Sydney Harbour Bridge (west) and Circular Quay (south). The finished building adequately acknowledges the scale factor in this regard, and fits into the grandeur of its surroundings by expressing a dominant and an iconic stance. Its isolation (no immediate buildings surround it) calls for a large presence, which Utzon has captured by its sheer scale, material choice, and elaborate roof structure. The emotive responses

conveyed by passersby within and around the Sydney Opera House closely parallels those felt when around the outlying landmarks (Wells, 2013).

The scale of the roof shells further expressed the nature of the internal spaces and specific height requirements of them from the outside. Large shells were used to cover spaces which required larger internal volumes for seating and performances, like the two main concert halls. Smaller performance halls and restaurants used smaller roof shells and prevented a very large and open volume internally which added to the psychological comfort for users (Wikipedia)<sup>23</sup>.

Material choice, specifically glass, has positively influenced human scale within the building. Through its airy and open nature, glass has helped create a sense of freedom and openness that is nonrestrictive and inviting.

### **Balance:**

The Sydney Opera House has demonstrated a good visual balance which is primarily due to its three-fold, layered composition (base, form, and roof). It's a well-grounded building. The level plateau that has been designed serves as a base for the sculpture (building) above and adds to the perception of a stable and firm composition, one that is at rest. The plateau, due to the lack of openings and solid concrete make up, gives the impression of strength. It is large and visually balances out what it supports. The forms used are easily read and reduces the ambiguity for the observer; they are able to easily relate to it despite its organic nature. The forms have been simplified as to not disturb the emphasis on the roof structure. With regard to its concept, the aim of the building was to be iconic and sculptural and that is definitely achieved through its scale, isolation (location) and material choice. Despite being large, it relates to its context and its sheer size is indicative of its heaviness. The Opera House's location and setting further adds to this visual weight because of its isolation and the specific choice of materials used in its construction. The building is primarily concrete and gives the impression of being

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<sup>23</sup> *Wikipedia – Sydney Opera House*

[http://en.wikipedia.org/Sydney Opera House](http://en.wikipedia.org/Sydney_Opera_House)

dominant and heavy. All of the above aids in formalizing an iconic, dominant structure and appearance which possesses a very strong independent presence visually.

#### **4.2.5 Buildings relevance to the study**

- De-structuring

The design of the Sydney Opera House centered on its sculptural exterior. As stated, it's almost as if its function followed its form but both complement each other well and help create a unique experience both internally and externally. Through the location of specific functions within the building, Utzon really exploited its extravagant form and design, creating spaces which appeal to people both visually and psychologically. The Sydney Opera House depicts what sculptural buildings should possess; character, presence, an iconic nature, a strong image and balance, which are all achieved through careful material choice, scale, and form. Throughout the Opera House's design process, Utzon made use of specific elements which helped to emphasize the sculptural quality of the building. The solid concrete platform (base); it became a base for the building above and through its darker colour emphasized it. The organic form speaks of clay sculpture which has been finely tuned and crafted to create a fluid and playful elevation from all angles. The Opera House's scale plays a significant role in conveying the image of a sculpture; it oozes presence, and plays on the psyche of observers. Material choice helps one to focus on what Utzon intended to be the most dominant element, the roof. Its various shapes suggest an intricacy and purposeful arrangement cementing its image as an art piece.

As much as the sculptural image of the Opera house was important to Utzon, the structural component was prioritized as well. In depth investigations into how elements were going to stand and be supported has been successful and achieved through rigorous determination. What stands out is the fact that his sculptural idea was made to work; it was not silenced by the structural implications, rather the technology worked around the image it was to project. This finding outlines the hierarchy that exists between the Opera House's image and its structure; however, as it has been demonstrated, both are important. The Sydney Opera House illustrates how sculptural

buildings can be achieved and how they can be used to add character to a space. This building provides very beneficial information to this study in how art and architecture are linked, furthermore, how a built form can manifest itself as an art form.

- Phenomenology

A sensory experience is what Utzon aimed to achieve in and around the Sydney Opera House. To achieve this he made use of the organic form, the building's scale and colour. A contrast between the external colour scheme and material choice with the interior inevitably created a variety of different atmospheres within the Opera House, which in turn, emphasized vibrancy and a sense of escape through the use of brighter splashes of colour contrasted with a naturally simple space (materially). This approach synergized traditional functional spaces with modern expressiveness, the result being spaces which uplift, inspire and excite. As mentioned Utzon's inspiration were the Chinese and Buddhist temples, caves, and art. From his design, we see how the implementation of colour through their inspiration was essential in expressing the Australian natural and cultural life (vibrancy, energy, diversity). The emotive response upon entering the building was not what was initially expected. Each space has been purposefully designed and positioned as to evoke specific emotions. For example bar and restaurants have been located on the building's exterior as to create a sense of openness and comfort, both of which are achieved through the use of glass (airiness, openness, and transparency), soft colours, and controlled heights which relate to the human scale (Wells, 2013)<sup>24</sup>.

Along with colour and material choice, the form and scale of the Opera House evoke an overwhelming feeling of awe and appreciation. The building's fluid form helps in creating spaces both internally and externally that are inviting, soft, comfortable, and visually, directs an observer's attention back to nature.

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<sup>24</sup> *Sydney Opera House*,

<http://australia.gov.au/about-australia/australian-story/sydney-opera-house>

The Sydney Opera House demonstrates art's power in altering the psyche of people, one of its fundamental uses, through a sculptural form and vibrant (natural exterior) colour pallet. A strong link between art and architecture can be seen in the design of the Sydney Opera House and hence adds relevance to the study.

- Place Theory

The outlying design approach used by Utzon speaks of a definite and celebrated link to the buildings surrounding context, from nature (the sandstone heads, water, birds, flowers, and the presence of the Royal Botanic Gardens) to specific landmarks which outline the site (Sydney Harbour Bridge, CBD). All of the above mentioned factors largely influencing the form, scale, colour and aesthetic value (material choice) of the Sydney Opera House. The implementation of these relationships into the building design has aided the Opera House to fit into its context whilst still maintaining a sculptural quality and iconic nature. The primary lesson learnt through this investigation has been that a sculptural, iconic building can be formed despite blending and relating to its surrounding context; an architect does not have to negate one for the other. By applying this approach, social and contextual relevance is maintained and acknowledged.

#### **4.2.6 Conclusion**

The Sydney Opera House stands out as a modern artistic masterpiece today. Upon investigating this building a greater appreciation for the building's design has emerged and illustrates how through art, an architect can create more meaningful and memorable buildings and spaces. The Opera House expresses simplicity in a very beautiful way and emphasizes the importance of functional adaptability. Function does not always have to dictate form, but rather form can inform functionality. The recognition of urban context within the design of the Opera House is admirable and highlights the importance of a cultural and contextual link within design despite the seemingly isolated conceptual approach. The Sydney Opera House truly is a sculptural building which stands out as one of the most memorable iconic buildings of this age.

### 4.3 CASE STUDY 1: The BAT Centre, Durban, South Africa



**Fig 3.0** The main entrance, harbour facing façade of the BAT Centre.

(<http://www.ulwazi.org/index.php5?title=File:BatCentre.jpg> – accessed 05/2014)



**Fig 3.1** South Africa's location on the globe

([http://commons.wikimedia.org/wiki/File:World\\_map](http://commons.wikimedia.org/wiki/File:World_map) – accessed 05/2014)



**Fig 3.2** The location of the BAT Centre in Durban

(<http://www.google.co.za/maps/@-29.8656068,31.0319239,2684m/data=!3m1!1e3> – accessed 05/2014)

#### **4.3.1 Introduction**

The primary reason in including the BAT Centre into this study as an investigated case is that it serves as one of the very few buildings within Durban which promote cultural diversity and acknowledge the importance of music, art, and the performing arts within society today. It is a space that not only focuses on the outward image of a built form but through the organization and provision of specific facilities and tutors, teaches, inspires and helps people grow and perfect their talents (specifically youth). It is a stepping stone for prospective artists and musicians and serves as a one stop venue for everything concerning the arts; tutoring facilities, performance venues, workshops, and after-market support (studios and production). The determination and willingness of individuals at the centre is admirable and one can definitely see the positive effect the arts have on people and their mental growth (confidence, creativity, social relations). The primary focus of this investigation is to study the BAT Centre's internal intricacies and how through its facilities and design, it promotes social growth. The facility reflects a music composition through its provided facilities. Like music, which touches the soul of listeners (internally), this building too can only be fully experienced from the inside

out. Learning the arts teaches individuals how to outwardly perform and express an inward message and story.

The establishment of the BAT Centre was an initiative made possible by the late Austrian-born engineer Hugo Bartel who is acknowledged in the Centres name, BAT is an acronym for Bartel Arts Trust. The BAT Centre is a privately conceptualized and funded idea which coincidentally coincided with a governmental one, as it was the recommendation by the Arts and Culture Task Group to establish arts venues in Durban. As mentioned, it was made possible through Bartel who died in 1992 and donated a large sum of money to the arts. A trust fund was then established with the sole purpose of carrying out his wish. Both Paul Mikula and attorney Dick Breytenbach sat on the board at the time and it was decided that a physical mixed use art centre was required as an alternative to continuing the previous awarding of art bursaries to excelling students (Peters, 1996).

The BAT Centre makes use of a leased property currently owned by Transnet which was known as the “good-ship” *SAS Inkonkoni*<sup>25</sup>, the old naval training establishment. Due to the fact that the building is leased and the terms associated with its leasing agreement, the architectural value of the building has suffered but amazingly the BAT Centre has still achieved the intended results from a multi-purpose arts establishment, making use of existing space and manipulating it for their intended purposes. The primary aim of the BAT Centre has been, to use art (music, dance, painting, ceramics, and visual art) to unify people from all walks of life and to serve as a platform and stepping stone for “young talent”; the BAT Centre facilitates cultural and sociological experimentation (Peters, 1996). The BAT Centre designed by *Architects Collaborative cc* and was officially opened on the 17<sup>th</sup> of August 1995. It currently runs with the help of the BAT trust fund since 2000 and is largely dependent on donations and sponsorships by the public. It serves as a performance venue (can be hired out) for showcasing new talent and provides a means of employment for young artists and musicians. Since its

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<sup>25</sup> *SAS Inkonkoni* was the name of the citizen naval base in Durban. *Inkonkoni* is a Zulu word used to describe a Gnu, which was the symbol of old *Natal province*.

<http://isidingo.blogspot.com/2007/02/inkonkoni-meaning.html> - accessed 15/05/14 - 23:10pm

conception, the BAT Centre has hosted many fashion shows, poetry evenings, workshops, and international artists (Ngcongco, 2011; Peters, 1996).

#### 4.3.2 Location and response to the urban surroundings

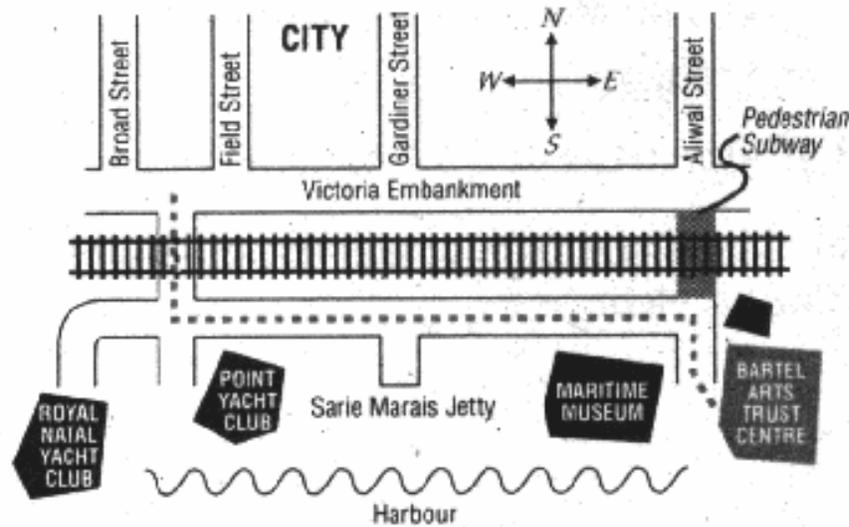


Fig 3.3 Diagrammatic site plan of the BAT Centre within its immediate context.

(<http://www.durbanet.co.za/bat/pics/batmap.gif> - accessed 05/2014)

The site lies within a North Eastern section of the Durban Port, nestled in a tough working environment right next to the busy tug basin. Concluding from a purely contextual point of view, the BAT Centre struggles. It's accessed via Margaret Mncadi Avenue (the old Victoria Embankment) in front of the Point Yacht Club as seen above and is hardly visible from the main road. It has only one vehicular access point and one pedestrian access from Samore Machel Street (the old Aliwal Street) through a provided subway under the main rail line. As mentioned, one of the primary marketing and publicity problems is the acknowledgement of its existence. The BAT Centre is not visible and has therefore relied on social networking and the internet for exposure. Despite the locality issues, the BAT Centre is seen to celebrate its location through its functional design.

The BAT Centre has almost totally ignored its road facing façade, on which services are located, and focused all its attention to its primary harbour facing façade. The main entrance, restaurant and outdoor performance balcony are located on the harbour

facing façade, taking advantage of the views, on the first floor with the main public orientated facilities (retail, radio station, resource centre etc.) interacting with pedestrian visitors on the ground floor. The entire façade is covered with a beautiful and colourful art mural and celebrates its unique typology amidst a harsh and heavy context. Upon visiting the BAT Centre I was immediately taken aback at the centres playful façade (it was very inviting and intriguing) and awesome views at its disposal. Huge ships, the water, smaller boats taking people for rides and the very sound of the water splashing up against the concrete platforms, create a unique and seemingly ironic sense of tranquility and calm (Peters, 1996). One of the reasons for selection of this site in particular was that it is well located in relation to other art venues within the city (the Maritime Museum is also located on its periphery). The inclusion of the BAT Centre development was envisioned as a catalyst in rejuvenating the harbour development and is well located to serve both the harbour workers and the community at large within the Esplanade district (Peters, 1996).



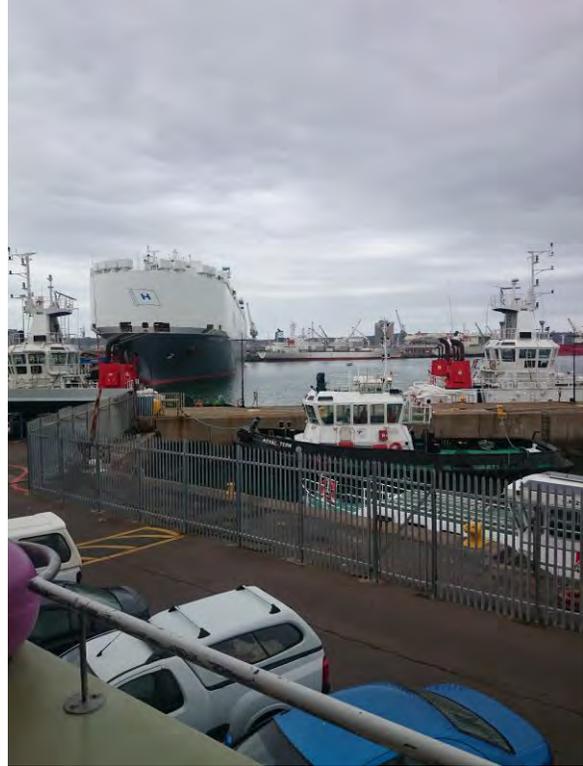
**Fig 3.4** The harbour facing façade (main entrance)

(By Author, 05/2014)



**Fig 3.5** Looking off the entrance porch towards the Point Yacht Club.

(By Author, 05/2014)



**Fig 3.6** Looking towards the busy tug basin and ship docking area (right)

(By Author, 05/2014)

One of the most prevalent annoyances and downfalls of its location is the noise factor. Being in close proximity to the main road (Margret Mncadi Avenue) as well as the main tug basin, noise disruption is inevitable; I must admit however, upon my visit, noise was not a pressing issue and was not even considered a hindrance for the observed activities internally.

Through the investigation of the BAT Centre's location, it has been concluded that the BAT Centre has acknowledged its context and has made attempts to appreciate specific elements within it, whilst providing alternative solutions that counter the negative effects resulting from its location.

### 4.3.3 Architectural Expression

#### Architectural style:

The vision of the BAT Centre centres on the acknowledgement and celebration of the role of culture (cultural diversity) within South Africa by the introduction and promotion of the arts (music, dance, literature, theatre etc.) found within KZN's borders. The Centre aims to provide a platform for the exposure of young talent. By focusing on this, the resulting successes envisioned are job creation opportunities for artists, an after-market support centre, as well as a contribution to the local economy by the exploitation of local and international tourism (the BAT Centre, 2013)<sup>26</sup>.

The Centre has outlined a mission statement which has undoubtedly influenced how the centre has been designed (the BAT Centre, 2013). This approach is further described below:

- The celebration of the arts and cultural diversity within Durban, KZN, and South Africa as a whole. The centre will promote and cultivate local talent and encourage “cultural mixing”
- The creation of job opportunities for artists as well as the sourcing of local talent. The housing of many different art forms largely encourages and allows for the impartation of skills which not only provides a physical benefit but also serves as inspiration to youngsters from all backgrounds within the centre.
- It will serve as a mixed use art and culture centre for the greater Durban region, which enlightens, encourages, exposes and celebrates cultural expression through the arts.
- It will become a resource centre (literature, painting, shows etc.) which acts as a “factory”, producing and enhancing the creativity of people and displaying their talents for all to see.

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<sup>26</sup> *The BAT Centre*

[http://www.batcentre.co.za/index.php?option=com\\_content&view=article&id=14&Itemid=3](http://www.batcentre.co.za/index.php?option=com_content&view=article&id=14&Itemid=3)

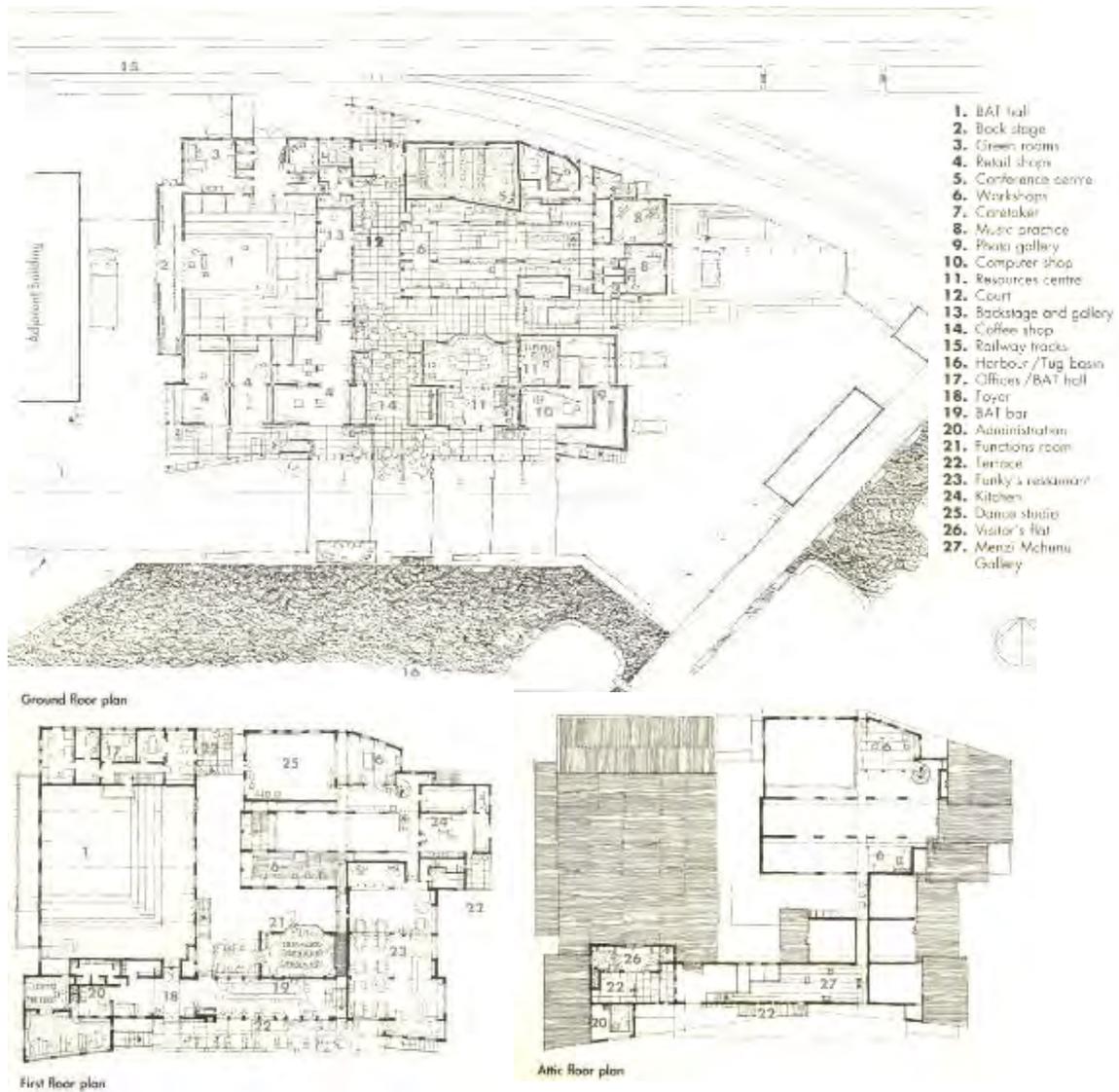
The fact that the property is leased has largely impacted the architecture of the BAT Centre. Spaces have been reworked and remodeled with functions being changed to suit the present requirements; all of which make use of the existing structure, which is broken into 3 individual forms surrounding an internal courtyard. One of the elements which have primarily influenced the Centre's architecture has been the large bowstring trusses from the previous *Inkonkoni* Hall. It has suggested a swooping curved roof structure of corrugated iron sheets which contrasts a rigid rectangular built form. The roof, by its form, can be seen to acknowledge and celebrate its location as it resembles the waves seen in the harbour.

The BAT Centre is a creative space which has incorporated many art forms under one roof that are linked together and overlap without any barriers or boundaries. It has been designed with the ideas of "no-division" and "no-segregation" in mind and in doing so, has become a prime example of cultural and professional diversity through art. As one enters the building as a visitor, you have free access into the work spaces as well as the retail spaces which create a deeper sense of appreciation of the final products. For students and artists alike, this leads to a form of inspiration and togetherness which both enlightens and encourages. The folk at the BAT Centre have become one big family who enjoy a common activity, which is art. Be it painting, ceramics, theatre, music, producing, dance, all are expressions of creativity and freedom which everyone enjoys. Through its colourful persona, the Centre has brought life to a dead and otherwise bland urban setting and stands proud and tall through its uniqueness. The BAT Centre's design aimed to showcase that meaningful and memorable buildings do not have to be expensive or contemporary (it makes use of recycled and cheaper materials), but through expressing what it stands for, possesses a character and spirit which people enjoy and relate to (Peters, 1996). From visiting the BAT Centre, I cannot deny feeling uplifted and inspired after I left; though simple in its design and construction the image of the BAT Centre is a true reflection of the South African rainbow nation.



**Fig 3.7** A section through the BAT Hall indicating the large bowstring trusses which influenced the curved roof form.  
 (Peters, W. (1996), *Venue for the Arts – The BAT Centre – Appraisal by Dennis Claude*, KZNIA Journal issue 4/1996)

**Space design:**



**Fig 3.8** The ground, first and attic floor plans of the BAT Centre  
 (Peters, W. (1996), *Venue for the Arts – The BAT Centre – Appraisal by Dennis Claude*, KZNIA Journal issue 4/1996)

The BAT Centre makes use of the previous *SAS Inkonkoni* navy base building; a building broken into 3 main components interlocked and connected via an internal courtyard. Strategically designed to exploit pedestrian movement, the BAT Centre houses all the public facilities on the ground floor (Fig.3.8) providing a good connection with the public on its exterior and exposes them to the artworks created by artists from the Centre. Some of the facilities housed on ground floor are, retail shops, a coffee shop, a resource centre, computer shop, photo gallery, Durban Youth Radio (BAT Radio) and a conference centre. Apart from just exposing talent, the design also caters for the convenience of the occupants. Other facilities included on ground floor are workshops (ceramics, sculpture, painting, sketching), back stage facilities for the BAT Hall, green rooms, and music practice venues. These facilities have been positioned to take full advantage of the communal courtyard and encourage interaction between the public and performers. Close proximity to the performance space and parking facilities has also been a primary influencer in their location and caters for the moving of instruments and props to and from practice venues.

Upstairs, on the first floor (which links all 3 individual building together), is the main entrance foyer which connects visitors to a host of other facilities on offer such as, access to the BAT Hall, the BAT Bar (can be hired out for functions), the outdoor terrace (with beautiful views), *Funky's* Restaurant and Jazz lounge (includes kitchen facilities), a small function room (fully equipped for presentations and meetings), the administration offices, a dance studio (can be hired out), workshops and the BAT Hall offices. From the planning of the Centre, it's evident that integration between the public and artists/musicians has been seen as a priority, but as the Centre demonstrates, it still maintains control and privacy within specific facilities.

The Attic floor houses the *Menzi Mchunu Gallery* which further provides access to artists onto the outdoor balcony on the harbour facing façade for live performances seen by passersby or those seated on the terrace below. A visitor's flat is also housed on this floor with administration offices, multiple terraces and workshop space which form an extension of the facilities below.

The heart of the BAT Centre, as with the Helsinki Music Centre, is its performance space also known as the BAT Hall. The BAT Hall makes use of the previous *Inkonkoni Hall* and is an expansive volume consisting of raked seating that can hold up to 500 people seated (750 people all together).

The planning of the BAT Centre cements and validates its aim to promote cross cultural mixing, and is further emphasized by the interior design and detailing of its spaces. A definite contrast between wall and floor finishes as you move from space to space creates a vibrant and energetic feeling which visually illustrates an inward message. Glazing has been used systematically to bring to life transitional spaces which terminate in workspaces defined only by its furniture. Further emphasis on wall textures, floor textures and colour, bring to life spaces which may, in other buildings, seem insignificant. Contrasts in spatial function, in surface materials and colour, in forms, in the enclosure of spaces and light creates an overwhelming yet positive unison. Every detail of this building has been looked at as an opportunity to express creativity. One such example is the reused telephone poles which have been used as purlins; they add to the informal character of the space and have been painted and carved; in its simplicity, represent creativity (Ngcongco, 2011; Peters, 1996).



**Fig 3.9** Illustrating the level of detailing seen in the BAT Centre

(Ngcongco, N. (2011). *Musical Expression in Architecture: A Proposed Music Complex for Durban*. University of Kwa-Zulu Natal, page 79, by author)



**Fig 3.10** Looking down at the workshops upon exiting the main entrance foyer  
(By Author, 05/2014)



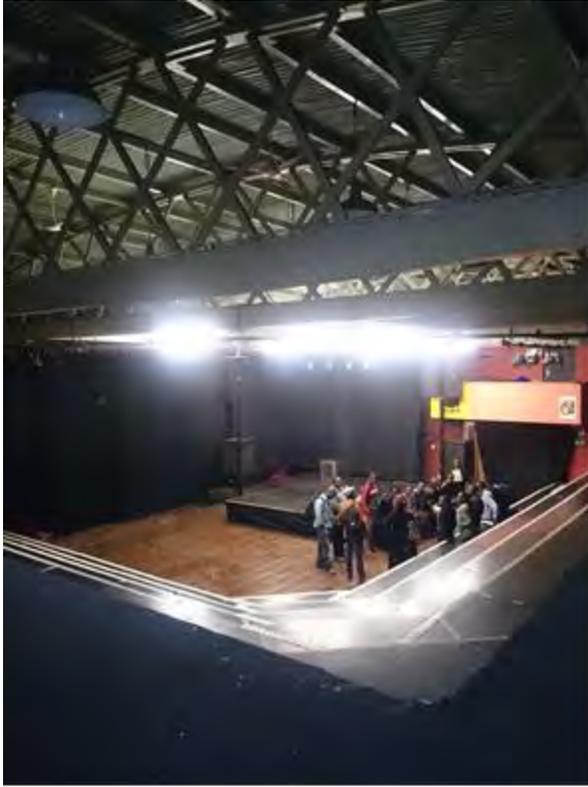
**Fig 3.11** The Entrance foyer  
(By Author, 05/2014)



**Fig 3.12** The outdoor terrace and performance balcony on the Centre's main façade  
(By Author, 05/2014)

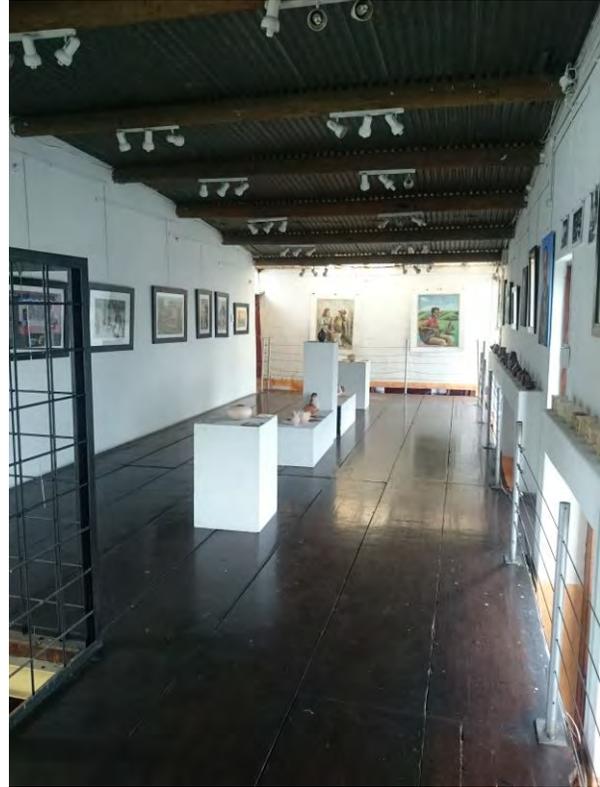


**Fig 3.13** The BAT Bar below the art gallery  
(By Author, 05/2014)



**Fig 3.14** The BAT Hall

(By Author, 05/2014)



**Fig 3.15** Menzi Mchunu Art Gallery

(By Author, 05/2014)

As outlined, space is merely an arrangement of three dimensional elements (Norberg-Shultz, 1980), and can only become a place when it has character; it is this character which influences the atmosphere within it. Norberg-Schultz (1980:5) states that, “*A man dwells where he can orientate himself within an environment as meaningful*”. This statement sums up the BAT Centre’s composition as it has literally created a meaningful place from an otherwise dead space. The BAT Centre has been designed to emphasize and celebrate the arts through colour, finishes, detailing and its inter-connected planning which creates a variety of different atmospheres and emotive stimuli for visitors in and around the Centre.

## **Facilities provided:**

- Clowns without Borders (theatre performers – offices)
- Association of Community Art Centres (offices)
- SAMRO offices (South African Music Rights Organization)
- *Mayonie Productions* (Recording studio)
- *Clive's Ceramic Art & Philani's portraits* (retail)
- *BAT Craft Shop* (retail)
- *Lungelo's Inspirational Gallery*
- BAT Café
- Durban Youth Radio (studio)
- Visual Art studios
- Resource Centre (library)
- Computer shop
- Workshop space (ceramics, sculpture, painting, sketching)
- The BAT Hall (750people)
- Green Room facilities
- Music practice Venues
- *Funky's Restaurant and Jazz Lounge*
- A function room
- Admin offices
- A Dance Studio
- *Menzi Mchunu Art Gallery*
- Multiple outdoor eating and social spaces
- Internal courtyard (also used as a sculpture gallery)
- Photography studios (incl. dark room)

#### **4.3.4 Architectural composition**

##### **Form:**

The form of the building has been dictated by the previous use of the building. It consists of rectangular forms that contrast the organic form of the roof structure that has been influenced by the large bowstring trusses in the main hall. Both forms respect the BAT Centre's location and fits into its context easily. The rigid forms of its habitable base connect visually with the Durban CBD and other buildings along the harbour region whilst the fluid roof structure resembles the water seen at the harbour. The BAT Centre as a whole can be easily read and negates all visual ambiguity for occupants and visitors.

##### **Materials:**

Material choice has played an important part in relaying one of the primary aims of the BAT Centre. In using cheap and recycled materials the Centre has been successful in demonstrating how meaningful and memorable buildings can be achieved without massive amounts of money. Reused industrial windows of irregular sizes, shutter board flooring and tiles, reused industrial steel gratings, reject table tops, steel joists, and the reuse of telephone poles as purlins, all contribute to the total diverse reuse of materials seen within the Centre. The BAT Centre can be looked at as a "collage", a concept which directly relates back to its typology and objective; a multi-purpose arts centre celebrating the arts. Because of the choice in materials, unique experiences and atmospheres have been created through and within spaces. There is no definite differentiation between spaces functions and finishes, visually, and adds to the idea of unity through a barrier-less environment. Structurally, the BAT Centre is constructed using concrete blocks and an economical alternative structural system which negates the use of trusses. Cross walls are used at 5m centres and make up the structural skeleton of the buildings which vary in height (Peters, 1996). These walls then support re-used telephone poles that are used as purlins onto which treated corrugated iron roof sheeting is applied. This construction method allows for a direct relationship to the BAT Halls existing roof structure as well as cuts costs.

## **Colour:**

The playful use of colour within the BAT Centre is one of the first things visitors are exposed to upon arrival, especially on the main harbour facing façade. Colour usage varies as much as the materials used in its construction but is seen as being one of the primary means of expressing its creativity and uniqueness. The colourful and playful graffiti façade, which faces the harbour, is changed every few years by the help of a large painting festival and adds to the character of the centre. Before even entering the building, the vibrant colours of its exterior create an interest and expectancy that lures in passersby. Internally, the colour pallet does not change and reflects the same vibrancy and creativity of the artists themselves who are housed within the performance areas and workshops respectively, focusing specifically on contrast. Within the Centre no monotonous spaces exist, rather each space is purposefully designed to express a cultural diversity and mixing through colour, materials and finishes. Some of the colours seen inside the Centre are, yellow, red, green, blue, white, and orange and are contrasted by murals which add to the variety. The colour usage within the BAT Centre is what makes it stand out and be memorable. It expresses an “aliveness” and playfulness that is vibrant and inspiring to both the visitors and artists alike.

## **Scale:**

The BAT Centre has successfully addressed human scale and provided spaces which reflect a comfort one would expect from being at home. Lower ceiling heights have been implemented in workshop, restaurant, café and administration spaces which limit an overwhelming presence in more private spaces and add to the cozy and relaxed nature of these spaces. Furthermore, the double volume space created in the main entrance foyer is broken up using a mezzanine floor (*Menzi Mchunu Gallery*) helping to divide up the volume visually. The BAT Hall has also significantly catered for human scale, but largely due to its curved roof. The roof form has allowed for shorter ceiling heights at the seating areas and larger ceiling heights at the performance area which inevitably keeps audiences comfortable. Externally, a retail colonnade allows the triple storey façade to relate to the pedestrian. Through its use, a pedestrian is able to relate himself to his surroundings without having to feel overwhelmed. The external façades of the BAT

Centre have also been subdivided by function (the inclusion of terraces and balconies). This further helps in visually reducing the overall heights of the exterior façades and relates them back to the pedestrian.

### **Balance:**

The BAT Centre, despite its very ornate and elaborate finishing, poses a very strong visual balance. The unity, order and legibility of the building can be seen within its planning, exterior finishing and functional layout which lends to an overall balanced design. Firstly, the building represents a very good grounding because of its horizontality (its weight is spread longitudinally rather than vertically) and implies a state of equilibrium. Secondly, is its colour. The BAT Centre due to its very playful exterior creates a very strong distinction between itself and its context, thus creating a state of isolation which further adds to the visual weight of the entire piece. Finally, the Centre's form. The form of the building is simple and reflects very little complexity from the outside as the complexity of this design is focused on its internal finishes and functionality which creates a greater sense of balance. As mentioned, the striving for balance can be described as the striving for simplicity (Arnheim, 1956). The BAT Centre as a built form is easily read by the lay person and reflects a solid and heavy presence through its visual representation, thus resulting in a simple yet creatively intriguing balanced building.

#### **4.3.5 Buildings relevance to the study**

- De-structuring

The BAT Centre's simple forms and location have led to the focusing of its design to its outward image to attract and lure in passersby. It is through its very colourful and playful exterior that stimulation of a person's curiosity is achieved. Society tends to judge what they can see outwardly and the same is true for architecture, a trait that the BAT Centre exploits very successfully. The diverse nature of its functions, people, and art forms it houses, has resulted in a simple yet sophisticated representation of creativity externally through the use of colour and artistic furnishings. Within its setting, the BAT Centre's

outward image is unique, bold and indicates a visual response to aid catalyzing the re-image of a social state by celebrating cultural diversity through art. Structurally, the building is sound but through its structural resolution, indicates an objective stand point; meaningful and memorable architecture does not need to be expensive. A simple structure has been designed and clearly highlights the hierarchy that exists between it and the building's image. Both play an important part in the design of the BAT Centre, however, focus has been placed on how people perceive the building within its context. The BAT Centre illustrates the importance of a building's outward image and how this image can be used in expressing a building's social relevance.

- Phenomenology

Meaningful space has been achieved through the synergy of colour and materials along with the celebration of the diverse art forms housed within the Centre. Through the careful selection and arrangement of materials, colours, and finishings within spaces (symbolic of an art piece), a definite character has been created. As with the Helsinki Music Centre, spaces within the BAT Centre have been purposefully designed, and aided by the way in which each space is linked to the next, creates an environment which stimulates the psyche of its inhabitants. As mentioned, the spatial design of the Centre suggests an unrestricted and barrier less environment for both the visitors and artists, and encourages social integration and therefore exposure. It is the uniformity in contrast (finishes, fittings and colours applied to all the interior spaces) that implies unity and togetherness despite functions of spaces changing. One such example is the movement from the resource centre to the café. Both consist of contrasting finishes but are identifiable by their individual functions and possess a specific atmosphere within them. Inspiration for artists and a vibrant atmosphere throughout the building can be felt tangibly as creativity is expressed through every possible avenue internally (walls, detailing, colours, etc.). The BAT Centre has created an atmosphere which inspires, enlightens, motivates, and encourages visitors and artists alike through the focus on contrast. The BAT Centre physically represents the inward message of unity and encourages individual creative expression and growth.

- Place Theory

Trancik (1986) states that space can only become meaningful place when linked to culture or regional context, else it remains a void. Ngcongco (2011: 13) further highlights that it is this “linking” that creates a stable platform which enables people to develop their social life and culture. The vision of the BAT Centre has been to promote cultural diversity within KZN and South Africa as a whole and to emphasize arts role in achieving it. The BAT Centre in this regard responds to the regional context through its social relevance and serves as a catalyst to address a pertinent issue. Within its urban context (harbour), the BAT Centre provides a foundation for growth both individually (artists and visitors) and socially (exposure and education). It has become a beacon of hope and change that celebrates the rich diversities present within the area.

Architecturally the Centre relates to and stands out within Durban’s harbour region. The BAT Centre’s form suggests a direct relation to its surrounding buildings, its roof relates to the ocean waves, but it is through its façade embellishment, playful colouring, and internal functionality, that its uniqueness is emphasized. The BAT Centre demonstrates that iconic, meaningful and memorable buildings can relate to a particular context but still stand out from it. It is however, important to note that they should always maintain a social relevance and link back to a regional context.

#### **4.3.6 Conclusion**

The BAT Centre is a true reflection of the “Rainbow Nation” ideology South Africa aims to promote. From its functional layout, facilities offered, as well as the creative expressive means implemented to demonstrate cultural diversity and mixing, this building stands tall and proud. The way in which art has impacted the design of the building (character) within a bland urban context is remarkable and emphasizes the need for more memorable and meaningful buildings today. Furthermore, another admirable characteristic of the BAT Centre is its simplicity. The BAT Centre illustrates how meaningful buildings do not have to be expensive, but rather through a simple and artistic approach one can achieve more than just the necessary functions that buildings house today. Artistic architecture truly has the power to change society.

#### 4.4 CASE STUDY 2: Moses Mabhida Soccer Stadium, Durban, South Africa



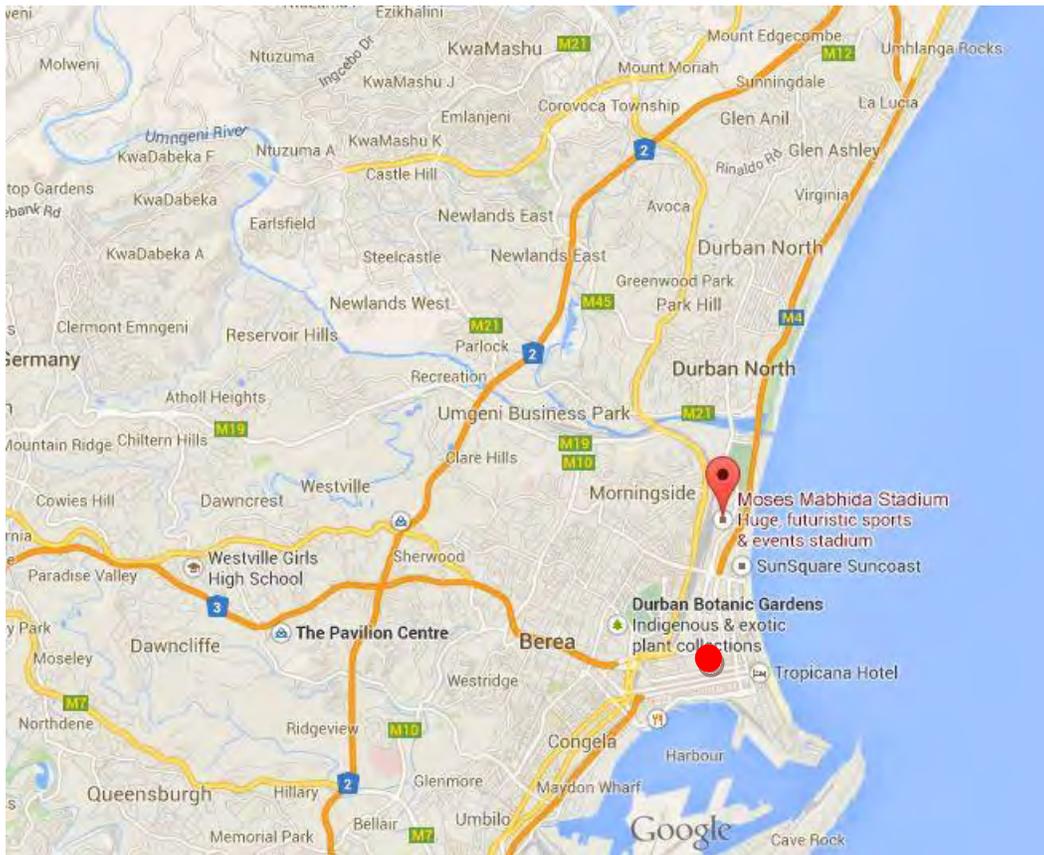
**Fig 4.0** View from one of the pedestrian pathways on the North West at night.

(<http://www.outdoorphoto.co.za/gallery/showphoto.php?photo=218778&title=moses-mabhida-at-night&cat=595> – accessed 06/2014)



**Fig 4.1** South Africa's location on the globe.

([http://commons.wikimedia.org/wiki/File:World\\_map](http://commons.wikimedia.org/wiki/File:World_map) – accessed 05/2014)



**Fig 4.2** Moses Mabhida Soccer Stadium location within Durban

(<https://www.google.co.za/maps/place/Moses+Mabhida+Stadium/@-29.7977687,31.0225803,12z/data=!4m2!3m1!1s0x1ef70778720ee299:0x3cb85e173f44b59a> – accessed 06/2014)

#### **4.4.1** Introduction

The Moses Mabhida Soccer Stadium, located on an elevated platform within the central sports district of Durban's northern coast, is undoubtedly the most iconic and recognizable piece of architecture housed within Durban today, since the 2010 FIFA Soccer World Cup. It has captured the hearts of the local and international community and has become a symbol of an advancing South African society. Well detailed and majestic in scale, Moses Mabhida stands tall within its urban context and conveys the deep seeded message of diversity and unity; it is truly a marvel to look at. Investigating this stadium adds value to the study because of its iconic image, scale and sculptural form. The typology (a stadium) is not fitting for this study, however, its architecture speaks of an artistic influence and expressive creativity which tells a story of a nation through a built form; the investigation therefore aligns itself to the essence of the argument and illustrates the multi-faceted nature of creative, artistic, architectural

design. The stadium was designed by a collaboration of architects to share in the appreciation of the final product, headed by the German lead architects, *Von Gerkan, Marg und Partner* further assisted by 32 South African architectural firms. Structurally the project was headed by *Schlaich Bergermann and Partner*, assisted by *Stuttgart* and *BKS*. The Moses Mabhida Stadium's final design is a result of a design competition that was held in 2006 which *Von Gerkan, Marg und Partner* won for their *Ibhola Lethu*<sup>27</sup> *Consortium* design; a stadium design which was not only unprecedented in scale and beauty, was iconic, but also captured the interests of the international community at large. The multi-use stadium which seats 62760 people was officially opened on the 29<sup>th</sup> of November 2009 (Wikipedia<sup>28</sup>; Warmann, 2010; Balz, 2009; Peters, 2010).



**Fig 4.3** An aerial view of Moses Mabhida Stadium illustrating its well knitted design within its urban context.

(<http://africaimagery.com/blog/2010/02/aerial-photography/attachment/460190/> - accessed 06/2014)

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<sup>27</sup> "Our football team" - English translation

[www.google.com](http://www.google.com) – accessed 26/05/2014 – 23:44pm

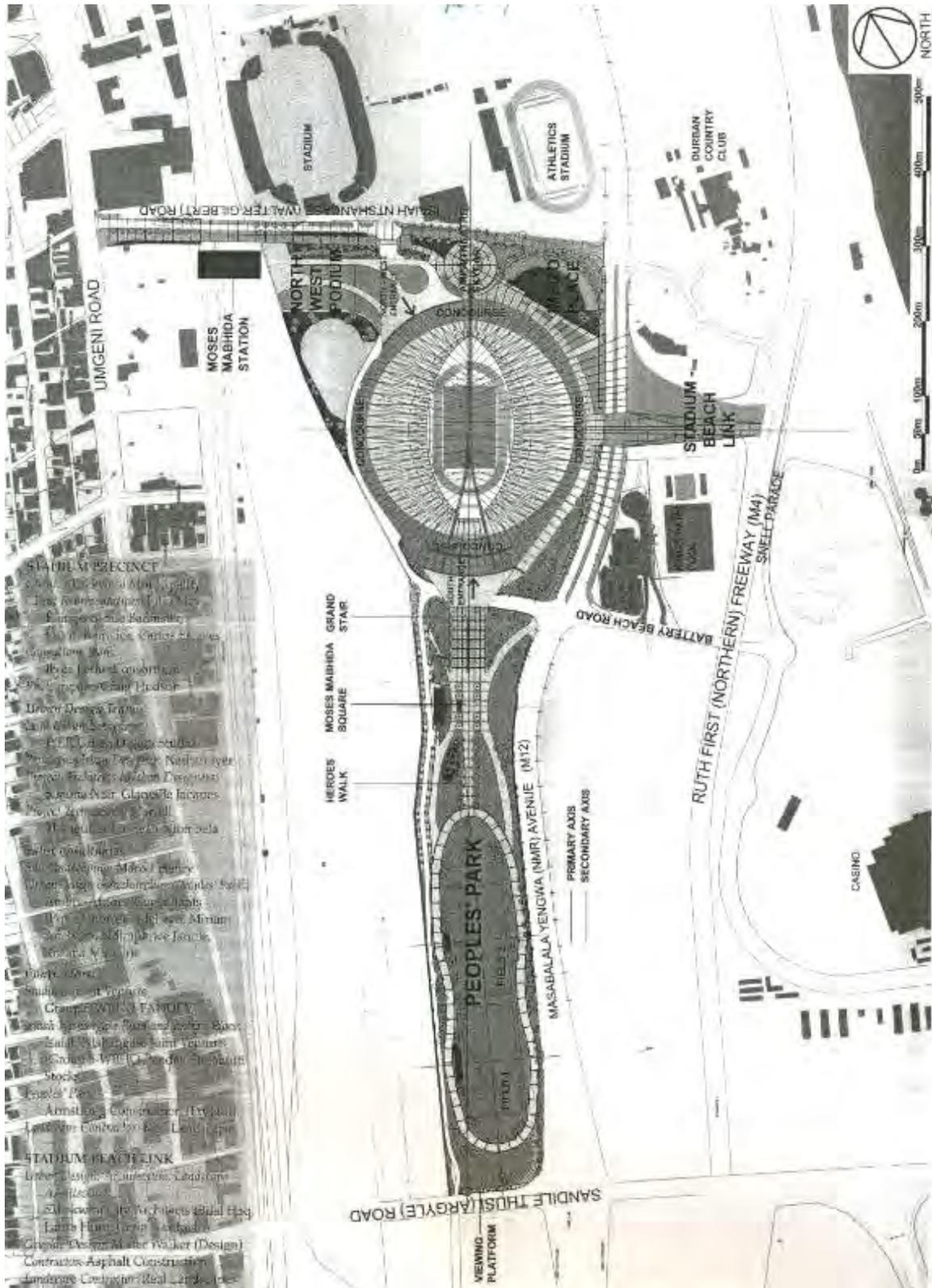
<sup>28</sup> *Wikipedia – Moses Mabhida Stadium*

[http://en.wikipedia.org/wiki/Moses\\_Mabhida\\_Stadium](http://en.wikipedia.org/wiki/Moses_Mabhida_Stadium) - accessed 26/05/2014 – 23:27pm

#### **4.4.2 Location and response to the urban surroundings**

The Moses Mabhida stadium is well nestled between the Ruth First (Northern) Freeway (M4), Isaiah Ntshangase (Walter Gilbert) Road and the ever busy Umgeni Road. The site, which the stadium now occupies, had previously housed the King's Park Soccer stadium. As per its design, the stadium illustrates and achieves a seamless integration between "building" and "space" which, in many design cases, is lacking. Its well knitted design within its urban context is achieved through the synergy of four secondary projects, namely (Peters, 2010):

- The entrances to the stadiums and its immediate context – these spaces were seen to be the "gateways" onto which a definite focus was placed. The design of these particular spaces enabled the stadium to pose a very approachable persona.
- People's Park – This multi-functional park stretches from the stadium's southern entrance and terminates at Sandile Thusi (Argyle) Road. Secondary pitches, a viewing deck as well as a memorial are all housed within this park and express a journey which is entirely centered on the appreciation of the iconic stadium, sport, and the memory of chief activist Moses Mabhida respectively.
- The redesign and upgrading of Isaiah Ntshangase (Walter Gilbert) Road - This was primarily looked at to soften the periphery of the stadium precinct and provide facilities which encourage public interaction. A new public gathering space (*Imbizo Place*) was created on the North East of the stadium along with an amphitheatre (skycar entrance) on its Northern facade. Furthermore, a public podium and landscaped garden were included on its North Western facade which highlights the stadium's North Western entrance.
- The pedestrian link to the beach – This link not only provided a physical pedestrian link between the stadium and the beach but also provided a stimulating visual experience which acknowledged the stadium's iconic structure.



**Fig 4.4** Moses Mabhida Precinct design

(Peters, W. (2010). *Durban's 2010 Soccer World Cup Venues, Moses Mabhida Stadium precinct*. KZ-NIA Journal, issue 1/2010, page 5)

### **4.4.3 Architectural Expression**

#### **Architectural style:**

The underlying urban design concepts and ideas that were investigated and influenced the final design of the stadium were broken down into five sub sections; all of which relate back to the stipulated design brief which called for an iconic structure which was to pose and evoke a sense of place, spirit and memory (Peters, 2010).

Firstly, the stadium's physical location and its connection to the broader urban context. The aim of the stadium's design was that it was to become an essential and meaningful addition to the city's urban fabric. This was primarily achieved through the careful consideration of the existing urban morphology and its visual (representations) and physical links to prominent nodal points around the site. The stadium demonstrates an appreciation of its surroundings and illustrates its importance in order to form part of an existing urban fabric. As mentioned, space can only become meaningful place when linked to culture or regional context; else it remains a void (Trancik, 1986).

Secondly, the design ought to respect and celebrate contextual influences. The stadium has acknowledged four key influences which have been addressed individually and uniquely at each coordinial interface. The northern façade interacts with other sporting infrastructure such as the ABSA Rugby stadium (Shark Tank) and athletics stadium, and has been softened and designed to cater for the pedestrian through the inclusion of public gathering spaces, performance spaces, and is well landscaped (vegetation and floor finishes). The inclusion of these spaces exploits the large volume of spectators present, forming intermediate "hang-out" spots suitable for all sporting infrastructure in the area. The southern façade of the stadium faces the Durban CBD which it responds to through the introduction of People's Park. This park indefinitely becomes a subsequent extension of the stadium itself and creates a journey experience which terminates at the southern entrance of the iconic stadium. Ideally positioned, the park captures passersby visually (from the outlying main roads) through the use of softer landscaping as well as providing adequate viewing of its primary activity; sport. The park is seen to have breathed life and colour into a dry and barren landscape.

On the Western and North Western edge of the stadium lies an important transportation infrastructure, the railway station. As mentioned, the upgrading of Isaiah Ntshangase (Walter Gilbert) Road has definitely impacted the accessibility and image of this mode of transportation. Larger, well lit, landscaped pavements give an almost pedestrianized feel to the road and encourage the use of rail as a primary means of transportation to the site and neighbouring infrastructure. This intervention encourages the pedestrian movement on the site and adds to the spirit and memory of a visit to the site. Lastly, the Eastern façade interacts with Durban’s beachfront and celebrates it in two very prominent ways. A physical link, the pedestrian walkway, is well landscaped and possesses a vibrant and “retreat-like” atmosphere. It is flanked by tall palms, is paved (like the beachfront promenade), and has become a busy thoroughfare to and from the beachfront for cyclists and joggers alike. The stadium’s form also highlights its coastal location. Its fluid structure can be seen as an extension of the ocean with its tensile roof structure symbolically representative of beach umbrellas as seen on the Durban shoreline.



**Fig 4.5** The pedestrian link to the Durban beachfront

(By Author, 05/2014)

Thirdly, the design ought to demonstrate a sense of publicness and encourage a mixed use environment. These qualities have been well demonstrated through the secondary activities located on the site and add to the versatility, approachability and sustainability of the stadium precinct. It has truly become a hub of activity, irrespective of whether a game is being played or not, and is accredited to the facilities that the stadium provides on ground level. Facilities such as coffee shops, a gym, restaurants, a club lounge, retail stores, as well as a tourist attraction (the sky car) all play an important part in maintaining a public presence and aid the sustainability of the precinct.

Fourthly, the design ought to possess a careful consideration on human scale. For a built form to be iconic, scale is thought to be a very important factor, which in some cases, tends to neglect its effect on the existing urban fabric and the end users. The challenge then was to create a building which possessed both an iconic image (scale) yet quite easily fitted into the urban fabric both in structure and form, as well as on a pedestrian level. The final design is successful and is largely accredited to its location and urban design. The location of the stadium is seen to be isolated from the neighbouring CBD which adds to the visual weight of the stadium and removes an overwhelming persona within its context. Furthermore, the massive scale of the stadium has been validated by the close proximity of other sporting infrastructure (large scale) and has helped in conveying a strong presence; an iconic nature. “Breathing space” around the perimeter of the stadium has also been an important inclusion in humanizing the stadium's scale. Public realms around the stadium limit the density of built forms in its immediate surrounds and allows for the stadium to be appreciated, celebrated and experienced without a feeling of claustrophobia. As mentioned earlier, further additions to link the stadium to its main contextual influences have ensured that the stadium plays an important part in the broader urban fabric, maintains a strong contextual link and prevents the stadium from becoming a “white-elephant”. The ground floor of the stadium has become a vibrant hub of activity in which many secondary activities are housed. As mentioned, restaurants, a gym, coffee shops etc. encourage public interaction and have maintained a comfort value for patrons through the respecting of human scale. Lowered ceiling heights (umbrellas, tensile roof structures, horizontal façade details) play an important part in achieving this comfort value.



**Fig 4.6** The food outlets located on the stadiums ground floor and landscaped exterior. The water features add to the tranquility of the space.

(By Author, 05/2014)



**Fig 4.7** The retail colonnade, illustrating the use of fenestration detailing to help humanize the large ceiling heights.

(By Author, 05/2014)



**Fig 4.8** A view towards the ABSA Rugby stadium from the Moses Mabhida amphitheatre

(By Author, 05/2014)



**Fig 4.9** A view towards the public gathering areas on the Eastern façade of the stadium

(By Author, 05/2014)

Finally, the design ought to represent a journey. As discussed, the design of People's Park captures the "journey" concept and commemorates the role of activists who have been involved in the struggle for democracy (Hero's walk), the importance of sport within the nation as well as the celebration of the advancement of a nation (technological advancement seen in the postmodern stadium design). It a visual journey (from the south) which terminates at a sculptural masterpiece and is further expressed in the prominent arch design. The arch symbolically describes the unity seen in South Africa today, through democracy, and is visually represented in the two elements becoming one.

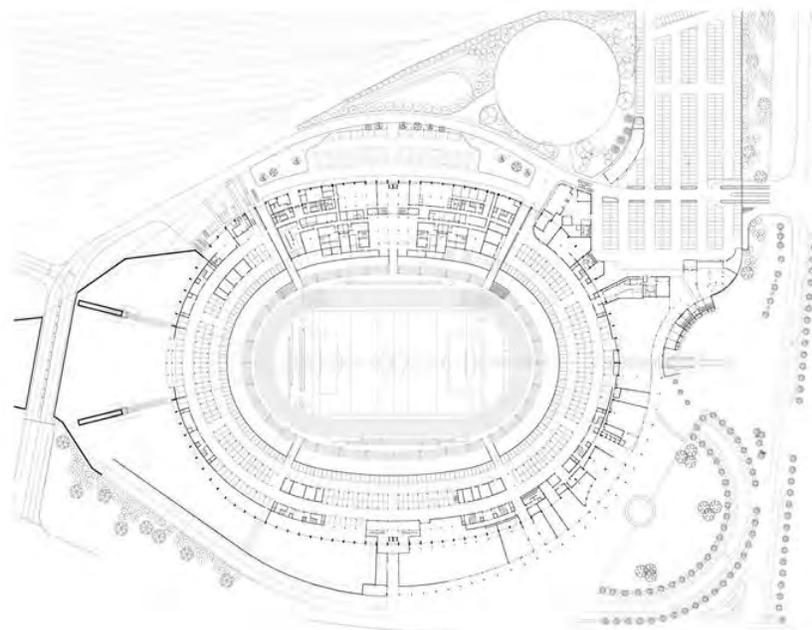


**Fig 4.10** An aerial view of the stadium from the south west highlights the “unifying” arch design as well as the public realms located on its perimeter.

(<http://thedurban.co.za/moses-mabhida-stadium/> - accessed 06/2014)

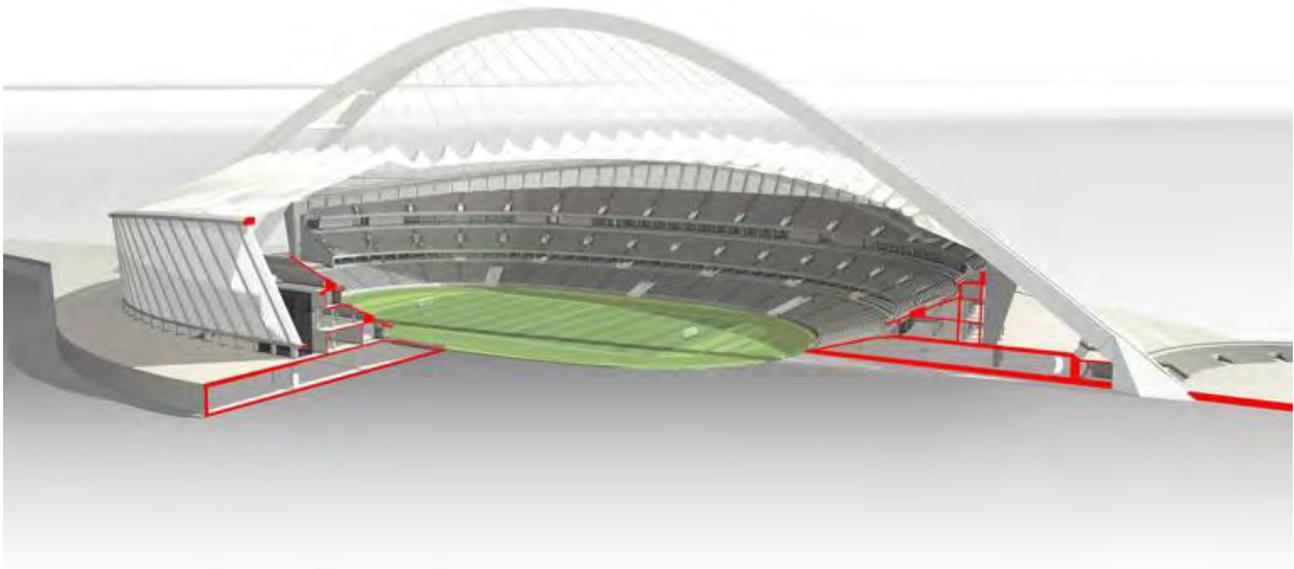
### **Space design:**

The stadium design aimed not only to provide the necessary facilities required by FIFA to host soccer fixtures, but also to acknowledge and focus on the buildings effect and relationship with spaces around it (Peters, 2010). As discussed, a lot of time was spent in designing the spaces around the stadium as they were seen as an extension of the stadium itself. The stadium, by typology alone, is public, but efforts to further functionalize public spaces were carried out to aid the sustainability of the stadium precinct after the 2010 FIFA World Cup. In implementing this idea, the ground floor of the stadium (the base) has been designed to interact with the public, distinctly on the Eastern and Northern interfaces, and expresses a very approachable nature. Both interfaces house multiple public gathering spots, landscaped gardens, an amphitheatre, an arch skycar, restaurants, coffee shops, a bar lounge, a gym, and sports retail stores, all of which help maintain a constant public presence and use of the stadium daily. The stadium's administration offices are housed on the western edge of the stadium, flanked by the main rail line, with the main parking for the stadium being below ground. Upstairs provides access to the private boxes and general stadium seating.



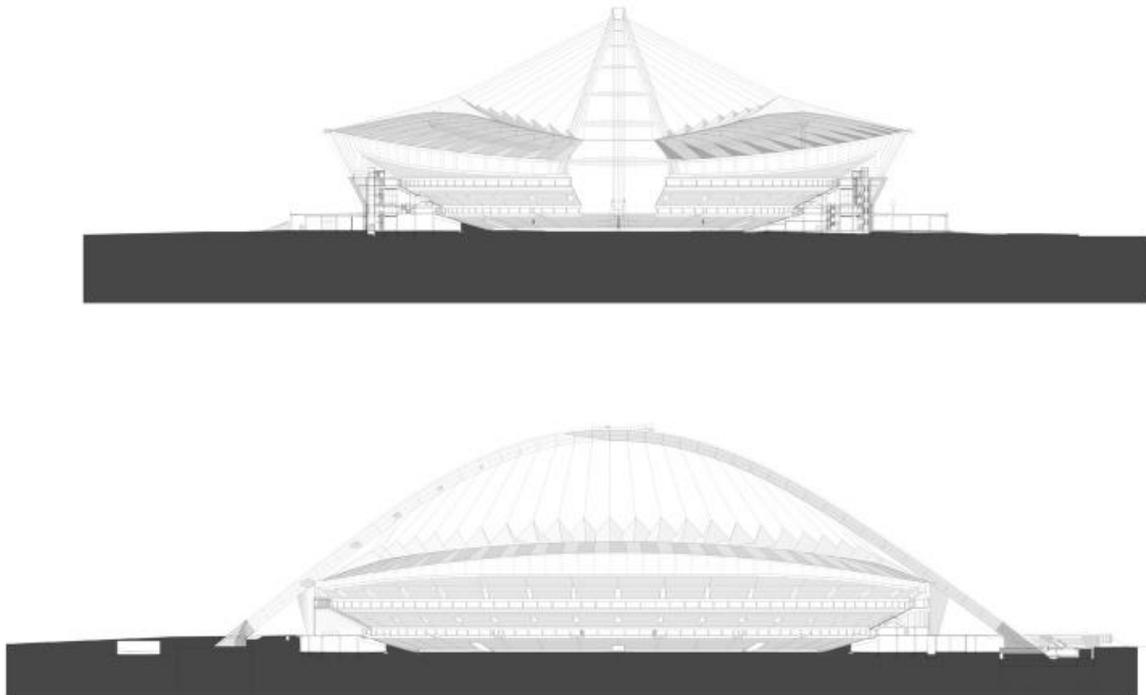
**Fig 4.11** The ground floor plan of the stadium (North is right)

(<http://ad009cdnb.archdaily.net/wp-content/uploads/2009/12/1261498226-1968-floorplan-level-01-a1-m500-72dpi.jpg>  
- accessed 06/2014)



**Fig 4.12** North East 3D Section

([http://plusmood.com/wp-content/uploads/2010/05/Durban-gmp-plusMOOD\\_north\\_east.jpg](http://plusmood.com/wp-content/uploads/2010/05/Durban-gmp-plusMOOD_north_east.jpg) - accessed 06/2014)



**Fig 4.13** A cross section from the North and a longitudinal section from the East

(<http://ad009cdnb.archdaily.net/wp-content/uploads/2009/12/1261498202-1968-sections-x-x-y-y-72dpi.jpg> - accessed 06/2014)

### **Facilities provided:**

- People's Park Café
- Cuba Lounge (Bar lounge and chill bar)
- Jacksonville Coffee
- Nino's Foods
- Prime Human Performance Institute (a specialist training facility)
- Sneakers (retail)
- STS Sports (retail)
- Subway Foods
- Virgin Active – Moses Mabhidia
- The Sky Car – (a glass lift which goes up along the arch from the North end to a viewing deck in the centre).
- The Adventure Walk – (550steps from the south end of the stadium along the arch).
- The Big Swing – (the largest big swing in the world, 220m high).

#### **4.4.4 Architectural composition**

##### **Form:**

One of the most striking and memorable features of the stadium is its form. It takes on a “bowl-like” circular form which broadens in diameter as it rises, over which a 106m high free standing arch holds up the tensile roof membrane via tensioned steel cables. The stadium expresses a very strong sculptural quality and through its organic form helps it to relate back to its natural context (the ocean). Amidst the relative “regular” architecture of its broader urban context, the stadium stands out and possesses a uniqueness which cements its iconic image. Furthermore, the fluidity of its form and lack of harsh edges adds to the inviting and welcoming nature of the stadium which also stimulates curiosity.

Contrasting this organic form is an array of vertical structural columns which differ in width and make up the entire frontal façade. The columns help to emphasize the racking nature of the “bowl form”, express verticality, as well as give the ironic impression of a light structure (looks transparent). The attention to detail within the entire composition makes this building so much more impressive and definitely adds to the unique character of it. Like an art piece which is intricately put together and detailed, so too is the Moses Mabhida stadium expressive of an artistic undertone. The arch is the highlight of this composition. It’s a free standing, organic form above the base of the stadium holding up the roof structure. It’s a symbolic element which has been taken from the South African flag and depicts unity and the coming together of a segregated nation (Wikipedia)<sup>29</sup>.



**Fig 4.14** A view of the stadium’s façade design from Imbizo Place. The mixing and contrast of structural materials (steel and concrete) adds to the creative and artistic make-up of the stadium.

(By Author, 05/2014)

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<sup>29</sup> *Wikipedia – Moses Mabhida Stadium*

[http://en.wikipedia.org/wiki/Moses\\_Mabhida\\_Stadium](http://en.wikipedia.org/wiki/Moses_Mabhida_Stadium) - accessed 26/05/2014 – 23:27pm

## **Materials:**

Three main structural materials have been used in the design of the stadium, namely steel, concrete and Teflon coated fibre glass membrane. The material choice was largely influenced by the design concept and the external urban context.

- Concrete was used because of its workability and versatility, characteristics which helped to construct the dynamic fluid forms of the stadium's super-structure. The arch, columns, flooring, etc. were all made using reinforced concrete. Concrete apart from its workability, was a natural product, and further linked the building back to its natural context.
- Steel was used as reinforcement within the concrete masses, and also as a lightweight secondary structural element which provided a contrast in the exterior façade design. Steel cables were also used as a structural support for the roof membrane. Tensioned steel cables attached to the arch support the roof and give an appearance of a floating roof from a distance.
- A Teflon coated fibre glass membrane was used as the roof structure. It's a very strong and durable material which is highly flexible.



**Fig 4.15** A view from Battery Beach Road, highlighting the tensile roof structure and varying structural material use.

(<http://forum.skyscraperpage.com/showthread.php?t=186623> – accessed 06/2014)

## **Colour:**

The exterior colour choice of the stadium is white with natural light grey power-floated concrete flooring forming a subtle contrast with it. A splash of colour is seen by the inclusion of green vegetation and the vibrant, multi-coloured seating internally. The neutral colour scheme adds to the uniqueness and iconic nature of the stadium within its urban context, whilst symbolically, representing purity, a new beginning, and a neutral canvas not identifiable by any race or colour. The white finish also adds to the visual quality of the stadium, as white helps to express the details on its façade design, unlike dark or multi-coloured façades which would have made the stadium seem heavy (because of its scale) also losing its focus on detail. The floor finishes in and around the stadium take on a natural and simple approach but, does so in a classy manner. The stadium sits on a polished, marble like, light grey concrete floor which emphasizes its sculptural quality. Like with any sculpture, space is needed to view it from all angles; similarly, the open space around the stadium allows one to truly appreciate this work of art whilst still feeling a part of it.

## **Scale:**

As mentioned scale was a very strong focal point within the design process. Efforts were made to humanize the scale of the building in many ways. Firstly, the colour choice. The colour pallet chosen helps to soften the harshness and heaviness of the structure thus impacting the psychological comfort of pedestrians. Secondly, the façade design. In creating an almost translucent façade by the use of supporting members which vary in thicknesses, the building evokes a feeling of lightness, airiness and freedom. Thirdly, the lowered ceiling height of the colonnade. The colonnade creates an extruded platform onto which the stadium sits. This platform reduces the overall height of the stadium from ground level whilst further lowering discomfort by the inclusion of membrane roofs which reduce the ceiling height further. The fenestration design also helps with scale by keeping the entrances to shops and restaurants at a recognizable, comfortable human scale. The fascinating aspect of the stadium design was the ability to achieve an iconic image whilst maintaining human scale and comfort.

## **Balance:**

The stadium is visually balanced. Firstly, its location. As mentioned, the stadium is somewhat isolated within its urban context. The design of the stadium has included many public realms around the built form which have in turn pushed it away from its immediate context, and created a strong individual presence (weight). Secondly its scale. The scale of the stadium is massive and gives the impression of being heavy, however it's initially perceived visual weight is countered by its careful façade composition and neutral colour scheme which balances itself out. Thirdly, its irregular shape. Within the greater urban context, the stadium possesses a contrasting, very irregular form which reduces the visual weight of the piece. Its material choice, however, and the lack of ambiguity within the composition as a whole, visually balances the stadium. The stadium stands out because of its uniqueness within its immediate urban context, but as has been demonstrated, still maintains strong visual balance and simplicity.

### **4.4.5 Buildings relevance to the study**

- De-structuring

The most attractive qualities of the stadium are its external image and sculptural form; the outer image is what makes this building unique. A definite hierarchy is seen within the design of the stadium regarding its image and structure. The primary emphasis has been placed on the iconic image and external spaces of the stadium and is further emphasized with an aesthetically pleasing structural resolution as seen in the façade and arch design as well as the tensile roof structure. The stadium most definitely achieves its functional requirements and maintains its structural integrity; achieved artistically. Simple, clean lines, a neutral pallet and a unique, sculptural form enable this stadium to stand out as a modern, artistic marvel for all of Durban and the world to appreciate.

- Phenomenology

As described, each link from the stadium to focal contextual influencers has been individually and uniquely designed. This has helped to create a unique experience and atmosphere at every turn. From the memorable, informative and tranquil journey from People's Park (Hero's walk), to the vibrancy of Imbizo Place (food outlets, bar lounge, skycar etc.), to the exciting and fun filled open air amphitheatre, to scenic pedestrian link to the beachfront, all evoke individual emotive responses from its users. Despite the visual similarities (colour, texture, materials, finishes), emotive responses are stimulated by the diverse variety of activities each area houses. The Moses Mabhida Stadium demonstrates how a built form's sensory experience is not limited to vision alone but rather through the choice of facilities and activities, a designer can express a journey and make use of an individual's multi-sensory potential. The scale of the stadium is also a very strong influencing factor regarding people's psyche. The enormous scale of the stadium creates a feeling of awe and amazement.

- Place Theory

The connection of the stadium to its context surpasses just a physical link, but rather has been seen to influence the overall design of the stadium. Its scale, form, colour scheme, material choice, and urban design have all been influenced by the urban context. The acknowledgement of its surroundings has enabled the Moses Mabhida Stadium to truly become a meaningful addition to the existing urban fabric.

#### **4.4.6 Conclusion**

The Moses Mabhida Stadium has provided meaningful insight into the role of iconic buildings within an urban fabric. They are not merely just large, stand out buildings, but should be a meaningful addition to the context in which they are located. The facilities they offer, the story they convey, and the image they portray are highly relevant. The stadium is a true celebration of South African unity through sport and the technological advancement of South Africa as a nation. Its creativity, uniqueness and sculptural quality cement its iconic image and capture the hearts of the community within Durban.

## **CHAPTER FIVE: KEY RESPONSES, ANALYSIS AND**

### **FINDINGS:**

#### **5.0 Introduction**

The study has been focused on answering the following research question, “*How can a built form manifest itself as an art form?*” Two problems have been presented in this study, one architectural, the other, social. Architecture of today, within Durban specifically, lacks creativity and centers predominantly on functionality. Being heavily restricted by cost implications and stringent design restrictions within towns and cities has greatly influenced architectural creativity and resulted in buildings which lack character and meaning. Socially, there is a lack of architecture reflecting South Africa’s current, integrated, inter-racial social reality is prevalent. Many built forms have been erected to commemorate the past yet very little speaks of the rich cultural diversity and “Rainbow Nation” South Africa claims to have. The study has aimed to address both pertinent issues, through art and specifically music. Music, as previously discussed, has played an important role by which democracy has been achieved in South Africa and should be celebrated for the unity it promotes. It served as a means to convey deep centered emotions and relayed stories pertinent to that era. It was the “glue” that kept the nation together. Like music which is arranged by the unison of many different elements (instruments and notes), so too individuals within the community, with their diverse backgrounds and experiences come together to tell one story; freedom. Music has the ability to unite people, it is a universal language which people from all nationalities and races can relate to, and through history, cements its social relevance.

## 5.1 Analysis

By further investigating the various art forms that exist today, two art forms stand out from the rest, namely architecture and music. Architecture is permanent and leaves an indentation on history (external) whilst music touches the soul (internal). Like all the art forms, both have their individual shortcomings and restrictions (music can be silenced and forgotten), but together complement each other.

The study acknowledges and highlights the need for the re-imagery of architectural design as described by Constantin Brancusi, “*Architecture is inhabited sculpture*” (Brancusi, n.d.)<sup>30</sup>. This statement sets a benchmark for architectural design and suggests a definite link between architecture and art through sculpture. It is this synergy of architecture and art (music, sculpture, dance, etc.) that is seen to aid in creating meaningful architecture that promotes more than just an outward image.

As seen through the study and the research presented, both architecture and art are similarly governed and composed according to specific design principles. Through further investigation into the psychology of artistic composition it was seen that art is not just a visual stimulus, but rather evokes emotions through the arrangement and organization of various components used in its composition. Components such as colour, balance, line types and rhythm, shapes and forms, texture, scale and even smell influence how art is perceived and felt, both physically and spiritually. Similarly, music is the result of a synergy of notes and instruments (like art); it encourages and highlights variety to avoid monotony. How these components are arranged, alters the output; the sound, the image, the feel.

How can architecture represent art? Through the investigation into the various components that influence how pieces art are perceived, the implementation of them into architectural design allows architecture to become physical, habitable, and meaningful representations of art which relate to people on both a physical and mental level. Sculpture speaks of the outward image; scale, balance, proportion, form, shape,

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<sup>30</sup> “*Architecture is inhabited sculpture*”, [www.brainyquote.com/quotes/c/constantin316090.html](http://www.brainyquote.com/quotes/c/constantin316090.html)

and colour. Dance speaks of rhythm, and flow, whilst painting describes texture, contrast, order and legibility, all of which are applicable to architecture. The composition characteristics of music provide the unity (glue) that aids in connecting all of these components together and through its nature amplifies a message and evokes meaning.

Through the re-imagery of architecture as an art form, South Africa's progress is given the opportunity to be meaningfully represented and permanently cemented within history, and through music influence social unity. Music has the ability to create positives out of negatives, one such example is a drum. Hitting a drum out of frustration or anger takes an otherwise negative emotional state and creates a positive sound which when grouped together with other such sounds, creates music. Similarly, within society, negative opinions and feelings towards the past will be channelled through music and help in promoting unity. The proposed typology, a Music Centre, is beneficial in celebrating and acknowledging music's' role in the struggle pre 1994, encouraging present participation in music, and provides an opportunity to celebrate the "new-voices" within society today.

## **5.2 Investigative approach**

The two methods which have been employed to obtain data within this investigation are questionnaires and structured interviews. The questionnaires were directed towards members of varies ages within society and provided for an unbiased outcome and glimpse into the broader social understanding of art, music and architecture. The primary objective of the questionnaires was to gather as many views as possible on architecture, art and music from the public, and in so doing, substantiate a social relevance for the need of the proposed Music Centre. Structured interviews were directed mainly towards people currently involved in the architectural, artistic, or musical professions. This approach helped in obtaining first-hand information on the nature and functional viability of the proposed Music Centre. The interviews also added insight into the social relevance of the proposal.

### 5.3 Key interview responses

From the responses of the interviews, it emerges that exposure to music is a common primary influencer to the start of musical careers. For most, the introduction has been through a church environment from as young as six years old and has positively influenced and changed individuals lives thereafter. Sadly as T-Bone, a performer, tutor and publicity manager at the BAT Centre suggests, music has not been recognized as a field of interest due to its inaccessibility and cost factor in townships around South Africa today. He elaborates; youngsters instead, focus on playing soccer for recreation. The dream of eventually becoming good enough to get paid for what they enjoy is a decision many take and explains the large football following seen in South Africa today.

Music is not merely a career, but a lifestyle for those who pursue it from an early age. This statement is amplified by Warren Naidoo, a classical guitarist, minister and final year masters student in theology. He concurs that music has become an “under-current” to all his emotions and feelings. He was introduced to the guitar at a tender age of ten at church and describes music as an avenue and output for his deepest convictions. Most importantly, however, music for him is yet another way to express his love for God. Mbongeni Mthembu, a music producer at the BAT Centre further describes music as his life and the very air that he breathes.

Music is a multi-functional tool. It becomes a means of relaxing or expressing oneself whether alone or for entertainment and is not merely employed to generate income. For Mbongeni Mthembu, music is his source of income but as he further suggests, is also his life. Warren Naidoo uses music as a form of expression in worship and suggests that he enjoys hearing and playing music recreationally. This sentiment is echoed by T-Bone who also holds tutorial classes in music and the performing arts for the youth at the BAT Centre.

Music is an outlet for expressing emotional views concerning current issues especially within the South African context during the struggle prior to 1994. Many times during this period South African music composers expressed pleas for peace and equality in their music. Mbongeni Mthembu mentions Lucky Dube and Hugh Masekela as examples. Warren Naidoo being much younger (23 years old) does not have much recollection of this as he was born in the early 1990's. T-Bone suggests music in this period conveyed messages of hope and consolation and was a means to soften news that was difficult to accept.

Sadly, the role of music lacks acknowledgement in South Africa. There is definite need for increased awareness in this regard as well as venues to promote tutoring, performances, and making relevant historic information readily available. In time the cultural divide, which exists at present, will be bridged as musicians from different cultures will have the opportunity to come together, composing music that has a unique South African sound. Both Warren Naidoo and T-Bone concur that the availability of information on South African music is inadequately unappreciated.

*"...our archives and records are inadequate, libraries and bookshops don't have enough material that celebrate and acknowledge S.A music." (T-Bone, 2014)*

*"...I find that most videos of solo musicians are from overseas." (Warren Naidoo, 2014)*

Music is a powerful language. It communicates feelings, thoughts, emotions, ideas and can affect the moods of hearers. It stimulates people psychologically and enables creativity and aids the expression of identity both personally and socially.

*"Music heals, music is a therapy, and anything can be said through music. Music can also kill and destroy." (Mbongeni Mthembu, 2014)*

*“...Music can make you cry, it can make you laugh...sad, happy...it can even make you feel like you’ve fallen in love. It can bring out your most sweetest and most bitter emotions. We should never underestimate its power.” (Warren Naidoo, 2014)*

Music, Art and Architecture are interconnected creative fields. The requirements of music and art are dependent on architecture for functional precision.

*“...many buildings employ performers but don’t have the space for it. Dancers often change costumes in kitchens. Artists have no preparation / warm-up space.”  
(T-Bone, 2014)*

## QUESTIONNAIRE SUMMARY ANALYSIS

Interviewed	Gender	Ages	Age Grp	1	2a	2b	3a	3b	4a	4b	5	6a	6b	7	8	9	10
Gift Mvaba	Male	18	16-25	Moses Mabida	Playhouse	Function	Moses Mabida	Other	No	None	Yes	No	Nil	Free	Yes	No	Yes
Nkokoza Majola	Male	22	16-25	Playhouse	Playhouse	Function	Moses Mabida	Other	Yes	Library Art museum	Yes	Yes	Gospel	Comfort	Yes	Yes	Yes
Valentine Mfeka	Female	22	16-25	Playhouse	Playhouse	Other	Moses Mabida	Social	Yes	Stable Theatre	Yes	Yes	Opera	Comfort	Yes	Yes	Yes
Nonnie Mgvaba	Female	17	16-25	Playhouse	None	Other	Moses Mabida	Social	Yes	Bat centre	Yes	No	Nil	Confident	No	Yes	Yes
Msibi Syabonga	Male	20	16-25	Playhouse	Playhouse	Aesthetics	Moses Mabida	Function	Yes	Dn Art Gallery	Yes	Yes	Nil	Comfort	Yes	Yes	Yes
Ashley Naidoo	Male	53	26-50	Moses Mabida	Moses Mabida	Aesthetics	Moses Mabida	Aesthetics	No	None	Yes	Yes	Jazz	Relaxed	Yes	Yes	Yes
Claude	Male	37	26-50	Moses Mabida	Playhouse	Other	Moses Mabida	Social	No	None	Yes	Yes	Gospel	Peaceful	Yes	Yes	No
Mano Govender	Male	45	26-50	Moses Mabida	None	Other	None	None	No	None	Yes	Yes	Gospel	Relaxed Motivated	Yes	Yes	Yes
Dianne Mannie	Female	34	26-50	Playhouse	Playhouse	Function	Moses Mabida	Social	No	None	Yes	Yes	Gospel	Happy	Yes	Yes	Yes
Steven Mannie	Male	39	26-50	Moses Mabida	Moses Mabida	Other	None	None	Yes	Moses Mabida	Yes	Yes	Gospel	Elevated	Yes	Yes	Yes
Steven Mannie	Male	39	26-50	Moses Mabida	Moses Mabida	Other	None	None	Yes	Moses Mabida	Yes	Yes	Gospel	Elevated	Yes	Yes	Yes
Danielle Young	Female	17	16-25	Playhouse	Playhouse	Function	Moses Mabida	Aesthetics	Yes	Bat centre	Yes	Yes	Rock-Blues	Alive	Yes	Yes	Yes
Warren Naidoo	Male	23	16-25	Playhouse	Playhouse	Function	Moses Mabida	Aesthetics	Yes	Playhouse	Yes	Yes	General	Emotional	Yes	Yes	Yes
Susan Lucas	Female	59	26-50	ICC	Playhouse	Aesthetics	Moses Mabida	Social	No	none	Yes	Yes	Classical	Accepted	Yes	Yes	Yes
Kabalo Ndllovu	Male	31	26-50	Playhouse	Moses Mabida	Aesthetics	None	None	No	None	Yes	Yes	Hip Hop	Happy	Yes	Yes	Yes
Enoch Hlophe	Male	52	26-50	ICC	Moses Mabida	Function	Moses Mabida	Scale	Yes	Kinsmead Cricket	Yes	Yes	Gospel	Uplifted	Yes	Yes	Yes
Menze Maseero	Male	35	26-50	Playhouse	Playhouse	Aesthetics	None	None	Yes	Ushaka Marine	Yes	Yes	Jazz-reggae	Emotional	Yes	Yes	Yes
Melanie Naidoo	Female	50	26-50	Moses Mabida	Moses Mabida	Aesthetics	Moses Mabida	Social	No	None	Yes	Yes	general	Emotional	Yes	Yes	Yes

**Questions Legend**

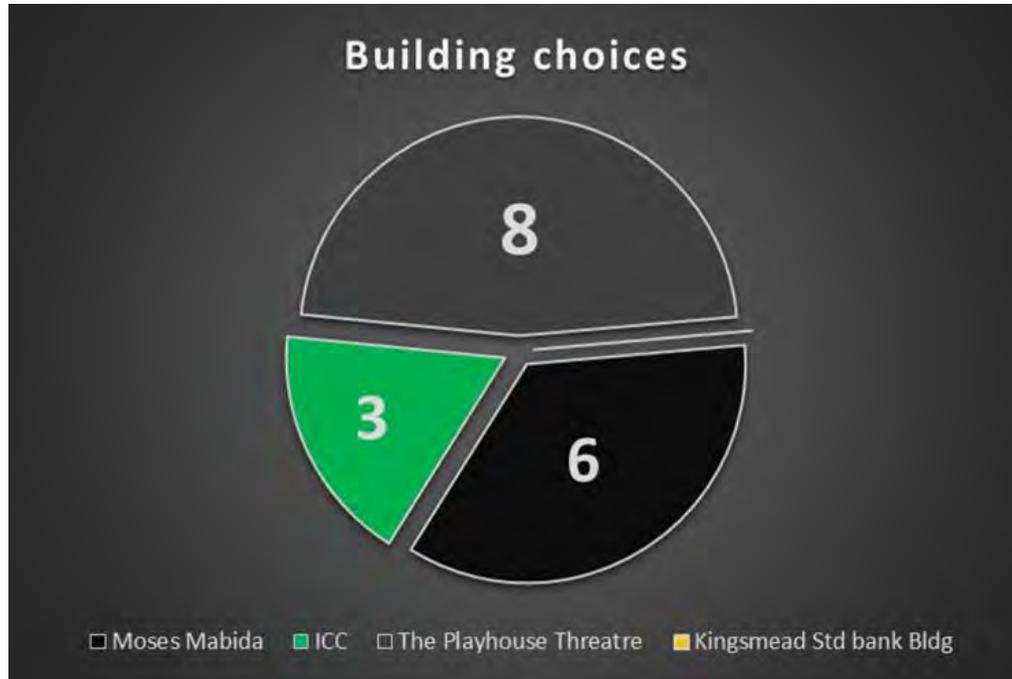
- Which of the following buildings do like and why?  
Moses Mabida    ICC    Playhouse    Standard Bank Kingsmead
- Which of the above mentioned buildings adequately represents the Durban culture and why?
- Which of the above mentioned buildings do you think is iconic and why?
- In your opinion, are there any buildings in Durban that represent the diversity of cultures in SA or is there segregation in this respect?
- Do you listen to and enjoy music?
- Is there a specific genre of music you listen to?
- How does your choices of music make you feel?
- In your opinion, can music be adequately used in creating or adding to the character of a place?
- In your opinion, are music art and architecture connected?
- In your opinion, are music art and architecture, tools for individual expression?

**Fig 5.0** Summary Table

(By Author, 06/2014)

## 5.4 Key questionnaire responses

### - Question 1

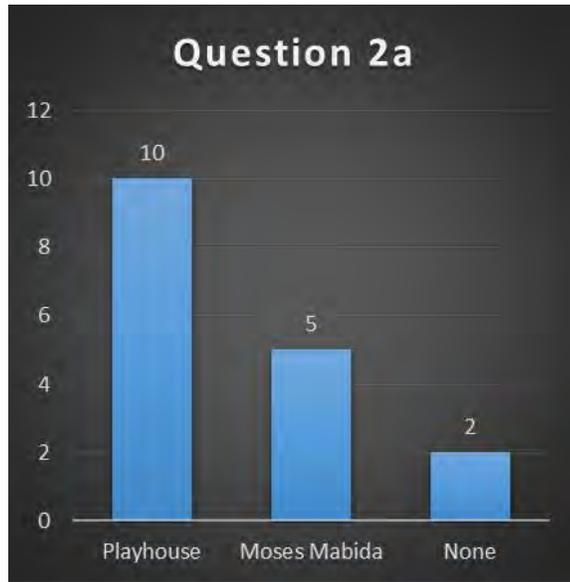


**Fig 5.1** Pie Chart indicating building preferences

(By Author, 06/2014)

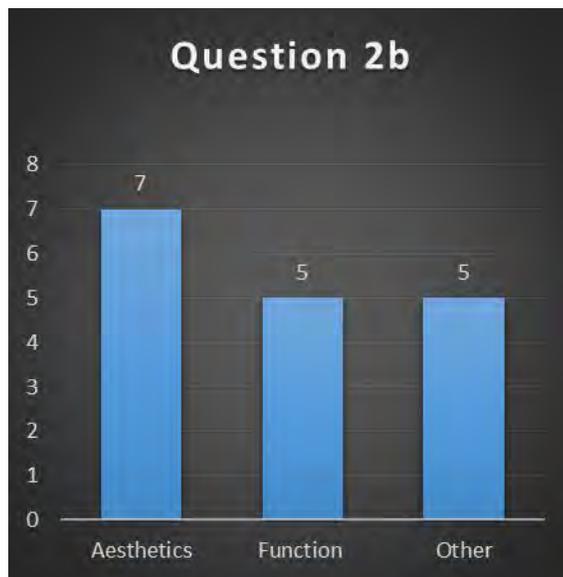
The data obtained reflects that The Playhouse Theatre was the building of choice for many, and was followed by the Moses Mabhida Stadium. The results were surprising but amplified a specific stand-point within society today regarding points of interests and their attractive qualities. The Playhouse Theatre strikingly stood out for its functionality and the activities it houses (exposure of talent), its “classic” image and the multi-cultural atmosphere it promoted. The stadium choice, Moses Mabhida, was a close second due to the emotional link people have back to the 2010 FIFA World Cup which was hosted in South Africa 4 years ago. Architecture, scale and aesthetic qualities are important, but to the layperson, it was seen that social relevance carried a lot more weight. The proposed typology should therefore maintain a strong social relevance and engage on a deeper level with the community than merely serve as a visual stimulant.

- **Question 2**



**Fig 5.2** A Graph indicating the building which is seen to promote the “Durban culture” best

(By Author, 06/2014)

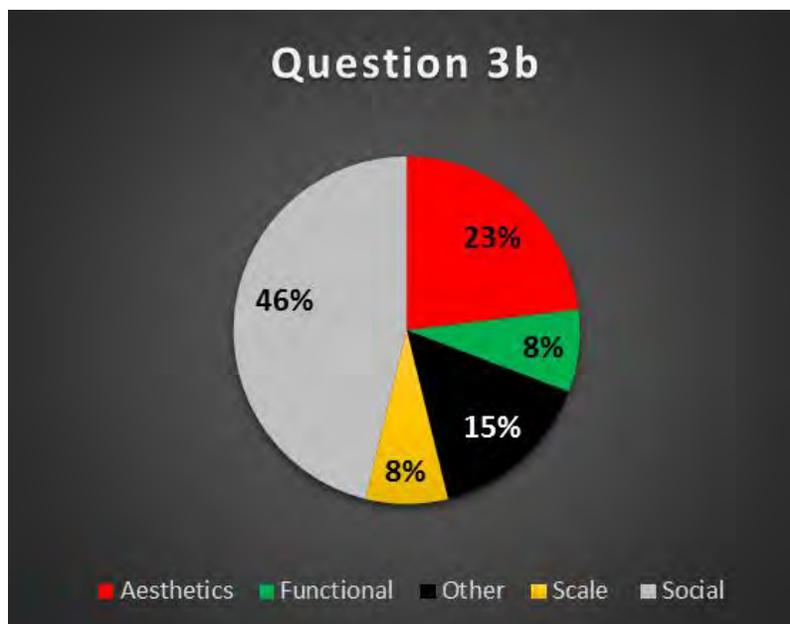


**Fig 5.3** A Graph indicating the primary factors which influence a building’s basic attraction

(By Author, 06/2014)

The Playhouse theatre was seen to be the most representative of the Durban culture. It was established decades ago and is a well-known venue for performances in music and the arts and has become a landmark venue for entertainment. Moses Mabhida Stadium, a venue that has united the South African people since the 2010 FIFA World Cup, still needs to establish itself as more than just a soccer and special events venue, making it more accessible to the general public. This proves that people look at buildings not only in terms of design (aesthetics), structure or form but also for its functionality and accessibility.

- **Question 3**



**Fig 5.4** A pie chart indicating the popular characteristics of an iconic structure as observed by the general public

(By Author, 06/2014)

**76%** of the total completed questionnaires indicated Moses Mabhida as the most iconic building with **24%** indicating otherwise. An iconic building by definition can be described as a building which stands out from the rest. The Moses Mabhida Stadium was built for a specific event, one that united the people of Durban and in some ways South Africa, in a way that nothing else did. From the feedback obtained, it was seen that the stadium's appeal centers on two primary factors, its social significance and aesthetic

quality (Fig 5.4). In designing iconic buildings today, scale is therefore not the only factor to consider.

- **Question 4**

According to Fig 5.0 (Summary Table), it can be concluded that the public is equally divided in terms of buildings representing the diversities of cultures in South Africa. This is confirmed by the various suggestions given by the public. Many people don't consider buildings as representing a "culture" which can validate the findings. A look at the suggestions indicates an attraction to buildings that incorporate diversity of social function. People remember buildings because of the activities that are held within them.

- **Question 5**

Everyone listens to and enjoys music which cements the social relevance of the proposed typology.

- **Question 6**

88% of the respondents listen to a specific genre of music which is largely dependent on cultural exposure and personal preference (Fig 5.0).

- **Question 7**

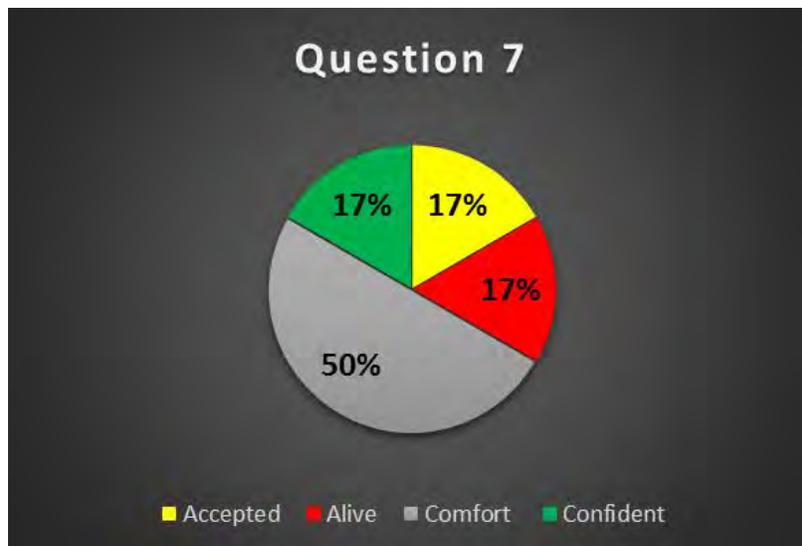


Fig 5.5 A pie chart indicating the popular psychological effects of music

(By Author, 06/2014)

The responses from this question validate music's ability to speak to the individual (Fig 5.0 and Fig 5.5). It is a powerful tool, a language, which is able to invoke emotional responses in its hearers.

- **Question 8**

**94%** of the respondents concur that music has the ability to create or add to the character of a place. This validates music's ability to alter atmospheres of places, moods of people as well as in the creation and triggering of cognitive memory.

- **Question 9 and 10**



**Fig 5.6** A pie chart indicating whether music, art and architecture are interconnected and form tools for individual expression

(By Author, 06/2014)

**94%** indicated that music, art and architecture are interconnected and form tools for individual expression. The responses indicate that almost 100% agree, music, art and architecture are connected but cannot fully validate their opinions. This could possibly be because people are aware of the effects of music, art and architecture on them but are naïve in fully understanding each component and the specifics of their interconnections. A generalized or superficial understanding resulted in these findings.

## **CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS:**

### **6.1 Concluding statements**

It has been established that music is a multi-functional tool and a powerful language that has the ability not only to serve as entertainment but also to further address and communicate ideals or emotional views. As with any tool, language or musical instrument, *practice makes perfect*, and requires a fair amount of exposure, commitment and determination in order to progress. As noted, the exposure to music at a young age influences the value placed on music and the arts which indefinitely determines its future impact on the individual. Music has the ability to not just become an addition to one's life, but as many musicians describe, music has become their life. It can become a lifestyle.

It has been noted that South Africa sadly lacks in acknowledging and providing resources regarding the role of music and musicians in South African history which amplifies the need for a relevant historical resource venue. Few venues currently exist which celebrate and physically represent a multi-cultural society. Also, existing venues sadly lack in providing functional space i.e. change rooms, rehearsal rooms, acoustic quality, etc.

It has emerged that function rather than only aesthetics, forms the basis by which people regard or value a built form in Durban. There are very few "iconic" buildings located within Durban which leads to the fact that importance is placed on the socially relevant functions or events rather than primarily on the architectural value. South African history has been a slow and painful road to freedom and has further played an important part in the way the community enjoys entertainment. This has resulted in the diversity of cultures enjoying their own form of entertainment rather than coming together as a unified people socially.

The power of music, its psychological impact as well as its ability to change lives, has been described, but art, music and architecture possess a final unique characteristic; all three are creative fields in which freedom of expression is encouraged.

The primary research question is “*How can a built form manifest itself as an art form?*”, and provides an avenue for exploring the outcome of a synergy of all three fields.

## 6.2 Recommendations

The proposed typology is a Music Centre, which aims to address the pressing need to celebrate South Africa’s progress in three primary ways.

Firstly, social relevance as seen through the investigative process is a focal point, which the community holds, in very high esteem. It surpasses just physical stimulation and is seen to focus on the activities and functionality of built forms. Music is an art form and an area of focus which has played and continues to play an important part in the lives of people within society today and serves as a means of unity; bringing people from diverse backgrounds together under a universal umbrella. It helps bridge the divide across cultural and age groups, gender and more especially, time. The focus on music helps celebrate the past influences (musical activists, the importance of song) whilst still maintaining a current awareness and celebration of the present. It has power, which can change society. All that is needed is a platform for exposure.

Secondly, through creativity (art). As mentioned, art is not merely composed to reach one’s eyes alone, but rather, aims to touch one’s soul and inner being (meaning and depth). Through its creative compositional exploration, the centre will aim to celebrate a multi-cultural social diversity in form, scale, colour, and functionality.

Thirdly, through architecture. Architecture provides a means to cement time in history. A celebration of South Africa’s progress could be no better celebrated than in a physical, habitable and sculptural built form.

The proposed Music Centre is a 3-fold typology consisting of:

- **A Music museum** (South African music) – “*remembering the past*”
- **A Tutoring Venue** (music rooms, etc.) – “*partaking in the present*”
- **A Performance Venue** (indoor, outdoor amphitheatre) – “*hearing the future*”

## **REFERENCES:**

### **Books:**

- Arnheim, R. (1956). *Art and Visual Perception: A psychology of the creative eye*. England: Faber and Faber Ltd.
- Arnheim, R. (1966). *Towards a Psychology of Art*. London: Faber and Faber Ltd.
- Beranek, L. (1962). *Music, Acoustics & Architecture*. U.S.A: John Wiley & Sons
- Chang, AIT. (1981). *The Tao of Architecture*. New Jersey: Princeton University Press
- Derrida, J. (1979). *The Parergon* trans. Craig Owens. USA: The MIT Press
- Keefe, SP. (2007). *Mozart's Viennese Instrumental Music: A Study of Stylistic Re-invention*. UK: Woodbridge, The Boydell Press.
- Lynch, K. (1981). *A Theory of a Good City Form*. London: MIT Press
- Lynch, K. (1960). *Image of the City*. London: MIT Press
- McGraw-Hill, G. (2004). *ArtTalk, Student Edition*. USA: McGraw-Hill Education
- Muecke, MW and Zach, MS. (2007). *Essays on the intersection of Music and Architecture Vol.1*. USA: Culicidae Architectural Press.
- Norberg-Shultz, C. (1971). *Existence, Space and Architecture*. Britain: Studio Vista Limited
- Norberg-Shultz, C. (1980). *Genius Loci: Towards a Phenomenology of Architecture*. London: Academy Editions
- Pallasmaa, J. (2005). *The Eyes of the Skin: Architecture and the Senses*. U.S.A: John Wiley & Sons
- Porter, T. (1997). *The Architects Eye: Visualization and depictions of Space on Architecture*. Hong Kong Dah hua Press. Co Ltd
- Rutter, F. (1923). *The Poetry of Architecture*. London: Hodder and Stoughton Ltd.
- Trancik, R. (1986). *Finding Lost Space: Theories of Urban Design*. New York: Van Nostrand Reinhold Company
- Tschumi, B. (1996). *Architecture and Disjunction*. U.S.A: The MIT Press

- Tschumi, B. (1990). *Questions of Space: Lectures on Architecture*. London: AA Publications
- Yeomans, J. (1968). *The other Taj Mahal: What happened to the Sydney Opera House*. London: Longmans, Green and Co. Ltd.

#### **Dissertations:**

- Dever, D. (2003). *Music Centre*, University of Kwazulu-Natal
- Ngcongco, N. (2011). *Musical Expression in Architecture: A proposed Music Complex for Durban*. University of Kwazulu-Natal
- Sabapathee, G.K. (2008). *Arts & Architecture in Design of a Graduate School of Fine Arts for UKZN, Durban*. University of Kwazulu-Natal
- Wygers, W.H.P. (1990). *A Music Centre for the City of Durban*. University of Natal

#### **Websites:**

- The BAT Centre (2013),  
[http://www.batcentre.co.za/index.php?option=com\\_content&view=article&id=14&Itemid=3](http://www.batcentre.co.za/index.php?option=com_content&view=article&id=14&Itemid=3) – accessed 16/05/2014 – 17:30pm
- Brancusi, C (n.d.), “*Architecture is inhabited sculpture*”,  
[www.brainyquote.com/quotes/c/constantin316090.html](http://www.brainyquote.com/quotes/c/constantin316090.html) - accessed 22/04/2014 - 01:46am
- Embassy of Finland, Nairobi. (2012), *Helsinki Music Centre – design, acoustics and free concerts*. News, 4/19/2012,  
<http://finland.or.ke/Public/default.aspx?contentid=247048&noded=32134&culture=en-US>. – accessed 07/05/2014 – 15:00pm
- *Helsinki Music Centre*  
<http://www.archello.com/en/project/helsinki-music-centre#> - accessed 07/05/2014 – 19:53pm
- Karlson, C. (2011), *Roth Case Study: Finlandia Park (Finlandia Hall & Helsinki Music Centre)*,

<http://www.ckarlson.com/blog/2011/11/22/rotch-case-study-finlandia-park-finlandia-hall-helsinki-musi.html> - accessed 07/05/2014 - 02:15am

- Korpela, S, Weaver, F. (2011), *Helsinki's new Music Centre garners rave reviews*,  
<http://finland.fi/public/default.aspx?contentid=189905&contentlan=2&culture=en-US> – accessed 07/05/14 – 02:13am
- LPR Architects (2014),  
<http://www.ark-lpr.fi/type-referenssi/helsingin-musiikkitalo/> - accessed 07/05/2014 – 15:30pm
- Musiikkitalo (2014), “*a mezza voce*” – *architectural design of the Helsinki Music Centre*,  
<http://www.musiikkitalo.fi> - accessed 07/05/2014 – 21:20pm
- Narjus, P. (2011). *Helsinki Music Centre, Finland*,  
<http://copperconcept.org/references/helsinki-music-centre-finland> - accessed 07/05/2014 - 20:45pm
- Warmann, C. (2010), *Moses Mabhida Stadium by GMP Architekten, Dezeen Magazine*  
<http://www.dezeen.com/2010/06/04/moses-mabhida-stadium-by-gmp-architekten/> - accessed 26/05/2014 – 23:23pm
- Wells, K. (2013), *Sydney Opera House*,  
<http://australia.gov.au/about-australia/australian-story/sydney-opera-house> - accessed 12/05/2014 - 00:50am
- *Wikipedia - The Helsinki Music Centre*,  
[http://en.wikipedia.org/wiki/Helsinki\\_Music\\_Centre](http://en.wikipedia.org/wiki/Helsinki_Music_Centre) - accessed 07/05/2014 - 21:35pm
- *Wikipedia – Sydney Opera House*  
[http://en.wikipedia.org/Sydney\\_Opera\\_House](http://en.wikipedia.org/Sydney_Opera_House) - accessed 10/05/2014 - 15:10pm
- *Wikipedia – Moses Mabhida Stadium*  
[http://en.wikipedia.org/wiki/Moses\\_Mabhida\\_Stadium](http://en.wikipedia.org/wiki/Moses_Mabhida_Stadium) - accessed 26/05/2014 – 23:27pm

## Website Articles (PDF):

- Balz, M. (2009), *Concept, design and realization of the Moses Mahbida Stadium, Durban, South Africa for the Football World Cup 2010*  
[http://riunet.upv.es/bitstream/handle/10251/7068/PAP\\_BALZ\\_1230.pdf](http://riunet.upv.es/bitstream/handle/10251/7068/PAP_BALZ_1230.pdf) -  
accessed 18/05/2014 - 19:45pm
- *Helsinki Music Centre*. Helsinki News 2/2011 international newsletter.  
<http://www.hel.fi/hel2/ajankohtaista/HelsinkiNews2.11.pdf> - accessed 2/05/2014 -  
21:36pm
- *New Music Centre to Become Musical Living Room*. Helsinki News 2/2007  
international newsletter, page 3  
[www.hel.fi/wps/wcm/connect/b81d11004a152ab7b334f7b546fc4d01/low\\_AUGU  
ST\\_HELSENKI.pdf?MOD=AJPERES&CACHEID=b81d11004a152ab7b334f7b54  
6fc4d01](http://www.hel.fi/wps/wcm/connect/b81d11004a152ab7b334f7b546fc4d01/low_AUGUST_HELSENKI.pdf?MOD=AJPERES&CACHEID=b81d11004a152ab7b334f7b546fc4d01) helsinki news 2007 new music centre.pdf - accessed 2/05/2014 –  
23:15pm
- Rigdone, K. (2007), *Elements and Principles of Design: Line, Space, Shape and Form*.  
[https://secure.class.uh.edu/theatre\\_facapp1/Data/Docs/KEVINRIGDONElements  
andPrincipalsofDesign.pdf](https://secure.class.uh.edu/theatre_facapp1/Data/Docs/KEVINRIGDONElementsandPrincipalsofDesign.pdf) line space shape and form - accessed 21/04/2014 –  
22:05pm

## Journals:

- Arup, O. (1965), *Sydney Opera House*. Architectural Design, March 1965, pages  
133-142
- Kaji-O'Grady, S. (2006), *Adding to the Opera House*. Architecture Australia  
Journal, May/June 2006, pages 53- 57
- Keiding, M. (2003), *Sydney, before and after*. Arkitektur DK Journal, N<sup>o</sup> 8,  
December 2003, pages 462- 487

- Peters, W. (2010). *Durban's 2010 Soccer World Cup Venues, Moses Mabhida Stadium precinct*. KZ-NIA Journal, issue 1/2010, pages 4- 12
- Peters, W. (1996). *The BAT Centre – Appraisal by Dennis Claude*. KZ-NIA Journal, issue 4/1996
- Schumann, A. (2008), *The beat that beat apartheid: the role of music in the resistance against apartheid in South Africa*. Stichproben – Vienna Journal of African studies Vol. 8 Issue 14, pages 17-39
- Weston, R. (1999), *Flower power*. RIBA Journal, December 1999, pages 12- 14



**APPENDIX 1:**

Name:

Occupation:

Age:

**Interview Guidelines**

**1. How did your musical (artistic) story start?**

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**2. How important is music (art) in your everyday life?**

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**3. What is the role of music (art) within your profession or extracurricular activities?  
How does it benefit you?**

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**4. In your opinion, how important was the role of music in South Africa during  
struggle prior 1994?**

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**5. Do you think that music's role in South Africa is adequately acknowledged?**

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**6. Do you feel there is a need for a venue for music tutoring, historic remembrance and performances in Durban? Would it benefit the community at large?**

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**7. In your opinion, can music be used to unify the diversity of cultures within South Africa?**

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**8. Is there more to music than the fame? Or is there a message you aim to portray?**

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**9. In your opinion, what is the “power” of music? What affect does it have on people?**

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**10. Do you think that an exposure and introduction to music can help shape society?**

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**11. In your opinion, does the music industry's image need re-imagery?**

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**12. In your opinion, are music, art and architecture connected?**

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**13. Do you think that music (art) could influence architecture?** (character of space, form, spatial organization)

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**14. What are the possible psychological benefits that result with an exposure to music and art? (in your opinion)**

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## Questionnaire

**1. Which of the following buildings do you like and why? Tick your choice**

- Moses Mabida,
- The ICC,
- The Playhouse Theatre or
- The Kingsmead Standard Bank Building?

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**2. Which of the above mentioned buildings do you think adequately represents the Durban culture and why? If none, please explain**

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**3. Which of the above mentioned buildings do you think is iconic and why? If none, please explain**

---

---

**4. In your opinion, are there any buildings in Durban (which you are aware of) that represent the diversity of cultures in South Africa? Or is there still segregation in this respect?**

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---

**5. Do you listen to and enjoy music?**

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**6. Is there a specific genre of music you listen to? If so why?**

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---

**7. How does your choice of music make you feel?**

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---

**8. In your opinion, can music be adequately used in creating or adding to the character of a place?** Please give an example of a particular experience

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**9. In your opinion, are music, art, and architecture connected?** Please validate your answer

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**10. In your opinion, are music, art, and architecture tools for individual expression?**  
Please validate your answer

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UNIVERSITY OF  
KWAZULU-NATAL  
INYUVESI  
YAKWAZULU-NATALI

**ART AS A TOOL FOR THE CREATION OF BUILT FORM  
TOWARDS A DESIGN OF A MUSIC CENTRE IN DURBAN**

**PART 2 – DESIGN REPORT**

**Bradley Mason Naidoo**

Dissertation submitted to the School of Built Environment and Development Studies,  
University of KwaZulu-Natal, in fulfilment of the requirements for the degree  
of Master in Architecture

Durban 2014

# PART TWO

## DESIGN REPORT

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# **CHAPTER ONE: INTRODUCTION**

## **1.1) Introduction:**

Art is creative, free, bold, encapsulating and takes on many different forms such as architecture, painting, sculpture, dance and music etc. Brancusi (n.d.)<sup>1</sup>, a Romanian born sculptor suggests that “*Architecture is inhabited sculpture*” and calls for the realization of architecture as an art form. What makes architecture a unique artform is the fact that it can be inhabited. It’s a 3 dimensional painting, a sculpture, which people experience tangibly. Today’s architecture seems to be diluted and simplified in order to please tight guidelines set by budgets, functions, but most often, convenience. In South Africa, few buildings express the creativity one would expect from sculptures and seamlessly blend into each other within a city skyline.

By emphasizing art in architecture, one captures moments in time, something which ultimately leaves a footprint in history for all to experience and appreciate.

As specified, music as an artform is a tool for individual expression, is unique, and is socially acceptable as a form of entertainment as well as an informant to the nature of communities. Despite the different backgrounds, religions, and cultures of communities within South Africa, music has the potential to unite. Given South Africa’s past, the role music has played in the freedom struggle as well as the common similarities between music and architecture, an expressed union of these two art forms will hold great potential in expressing South Africa for what it really is and become a tool for showcasing the rich cultural diversities contained within its borders to celebrating a bright future without forgetting the past.

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<sup>1</sup> “*Architecture is inhabited sculpture*”, [www.brainyquote.com/quotes/c/constantin316090.html](http://www.brainyquote.com/quotes/c/constantin316090.html)

## 1.2) Project description:

This design serves as a means of illustrating the interconnected relationships between music, art and architecture respectively and aims to provide valuable information regarding music and its role in celebrating a progressive society.

Every individual has been gifted with potential that is often never realised or appreciated by society because of numerous socio-economic reasons.

Within the South African context, we see so much of potential. South Africa has rhythm, it has soul. The sound of the African drums, the colour and flair of Indian dance, ballet, musical theatre and art to name a few, are all intricately woven into the South African culture.

Imagine.....

A place, a single building, proposed for Durban that would house music and the arts, from tutoring to performances aiming to bridge the divide between its diverse cultures and promote and develop skill in the most powerful, multi-functional tool....Music.

### **Urban design requirements:**

- The Music Centre should serve as a gateway (icon) to an already existing, well used activity hub. Contextual exposure is critical and therefore the chosen site should provide good visibility and a setting which promotes a relaxed atmosphere.
- The Music Centre's site should lie near the city's coastline in order to exploit the constant influx of both domestic and international tourists to Durban and create a "cultural activity node" which is sadly lacking today. As mentioned the objective the Music centre is to expose South Africa's rich, colourful and diverse present society through music and art.
- People movement through and around the site is imperative and therefore making use of existing transitional routes and destinations will largely benefit the proposed Music Centre.

- The building should tie into its immediate and surrounding context. The Music Centre's design should celebrate and acknowledge its setting and work together with it to maintain a strong contextual link within its urban fabric.
- The chosen site should be easily accessible for both pedestrians and motor vehicles.

### **Architectural requirements:**

- The architectural style and design of the Music Centre should respond and respect the existing architecture within the area as well as celebrate its environmental context.
- The design should encourage the mixing and movement of different cultures and people. Spaces should be designed to encourage diversity of functions and should not be restricted indoors; rather outdoor space design should be an extension of the internal spaces.
- Flexible, fluid, open plan spaces should be included within the design to cater for multiple functions.
- As mentioned, one of the objectives is to create an iconic building therefore, volume, mass and stature of the building should be a priority.
- Geometry restricts interaction. The design should allow for freedom of movement and not be restricted through the use of rigid linear forms rather the use of non-linear, organic forms should be encouraged within the design to promote social mixing.
- The architectural style of the Music Centre should not be described to by any population group, but rather, symbolically represent the paradigm shift in the way we now look at society; the beauty of our diverse present. It should stand out for its beauty and contrast.

### **1.3) The Notional Client:**

#### **1.3.1) The Client Organization**

The client for this project is The Kwa-Zulu Natal United Music Industry Association (KUMISA). They are a non-profit regional music industry organization whose primary vision is to promote, protect and invest in the growth of diversity of the KZN Music industry.

The organization further represents, controls and serves the interests of the music industry in KZN both nationally and internationally and provides a means to expose the world to the rich musical diversity available in KZN and South Africa as a whole.

KUMISA is a multifaceted organization who hinges their day to day operations on specific outlined aims and objectives. It's these very objectives and stand points which have made this organization the perfect client for the Music Centre project. Some of the important facets of KUMISA are as follows:

- They facilitate, promote and package KZN music to the global market. (market)
- They promote the need for additional platforms for the promotion and showcasing of the KZN Music industry's work. (exposure/performance)
- They recognise the importance and encourage the impartation of knowledge pertaining to the legal aspects of the music industry as well as the regulation of performance platforms through an industry accreditation system of basic standards. (education)
- They invest in the youth development. KUMISA aims to prioritise workshops and seminars as well as encourage the development of a music precinct within KZN through music festivals and live music venues. (education)

### 1.3.2) The Client's Requirements

The client has required a mixed use Music Centre housing performance spaces, a music school, and Music store, a multi-purpose function venue and retail facilities, food outlets as well as the South African Music Museum. It is a building which is to be seen as a retreat, an escape from the negatives of reality and focuses on social integration and unity. With music being a universal language it appeals to all people and is not race dependent, therefore through music, the Music Centre will aim to bridge the socio-economic boundaries found within society today.

The introduction of the Music Centre in Durban serves to initiate further developments along Durban's coastline and in time create a cultural tourist node which would change over time (progression). The following objectives have been set by the client:

- To create a space primarily focused on celebrating present society and encouraging unity through music and art. The proposed building should house a diverse array of functions and activities which target a larger variety of users' not just musicians and specific race groups.
- **Hearing – Performance venue**  
To create a visually intriguing, multi-cultural venue to expose and celebrate South African diversity through music. The proposed design should include scenic indoor and outdoor performance spaces which seamlessly blend into each other. The experience of moving through the building should be overlaid by a network of intricately positioned performance spaces (informal) which capture the attention of passersby, altering perceptions and experiences at every turn. The building's sound should change as time lapses.
- **Partaking – Music School**  
The creation of a venue for the nurturing and cultivating of fresh young talent. Music has the ability to change lives; it serves as an outlet for ones emotions and helps convey messages. Music education (Music School) should therefore be a vital component of the proposed design. People should not only be able to enjoy the "sound" of their synergy, but rather partake in the "music". Practice rooms,

lecture venues, a music library, social spaces as well as a fully functional state of the art recording studio should be included in the design.

- **Remembering - Museum**

A place to reflect. As much as the future is important, acknowledging the past influencers role in getting South Africa to where it is today is as important. The proposed design should therefore include an interactive South African Music Museum consisting of sound booths, animated displays, and projected movies.

### **1.3.3) Detailed Client's Brief – Schedule of Accommodation**

#### **Ground Floor: 5400sqm** (maximum public access)

- South African Music Museum
- Museum Store
- Outdoor Amphitheatre – scenic attraction
- Food court
- Music Store – instrument sales, repairs, cds, DVDs, etc.
- Retail Stores
- Ablutions

#### **First Floor: 2800sqm** (semi-private)

- Music Library
- Recording studio – to attract the commercial market
- Jazz Lounge / Club – night life for young and old
- Multiple informal live music performance / viewing decks – tourists /functions
- Observation Bar
- Main auditorium entrance – feature performance venue
- Multi-purpose Function Venue – to ensure consistent use of the venue year round. Matric dances, lunches, dinners, exhibitions, etc.
- Ablutions

**Second + Third Floor: 1300sqm + 1000sqm** (private)

- Music School
- Administration facilities
- Building management offices
- Lecture venues
- Music practice rooms
- Private social spaces
- Ablutions

**Total building area: 10 500sqm**

# **CHAPTER TWO: SITE SELECTION, SURVEY AND ANALYSIS**

## **2.1) Introduction:**

A fixation on the past injustices within South Africa’s history has undoubtedly stumped the social integration capacity and growth of the nation. Reflecting on the past isn’t harmful if the priority is the future. The Music Centre aims to address this reality and promote unity by providing a means to celebrate and harness the present through a very rewarding and socially acceptable way.....music.

## **2.2) Site selection and discussion:**

Durban city can be expressed by a rigid grid, as shown in **Figure 1**, and is created through the arrangement of a series of residential, retail, industrial and commercial blocks, housing the City’s main transport, sports and public facilities.



FIG. 1 Zoning Diagram of the City Of Durban

The required site conditions were easily set out and are as follows:

- The site should lie along **the water's edge** (coast). As discussed in the dissertation, people (domestics and internationals) flock to Durban mostly because it's the relaxed atmosphere, setting, and its beaches, yet Durban does not have a "waterfront", something like the V&A Waterfront in Cape Town to celebrate this. A venue for eating, shows, buying, relaxing and showcasing the Durban culture. The site location is vital as it sets the mood, and creates an unforgettable experience.
- **Site exposure** is of utmost importance. The proposed site should take into consideration and exploit the current movement of people in and around the city, in order to promote the social sustainability of the building and to ensure it does not become a monument but rather a well-used masterpiece.
- The proposed site should aim to form part of and create a new "cultural / activity node" within the city; Network and connect to spaces, creating a definite link to the greater CBD.....becoming a new destination point.
- The site should be easily accessible by motor vehicles and pedestrians.
- The site should have Iconic potential. As discussed earlier, the proposed Music Centre aims to become an icon of the present society and thus requires a setting which aids and coincides with that vision. Not only should the building leave a lasting impression but also the experience.....which the landscape and setting cannot be isolated from.

3 sites around Durban's CBD were looked at, each with their own pros and cons. Their locations can be seen below in Fig. 2. Each site is described below:

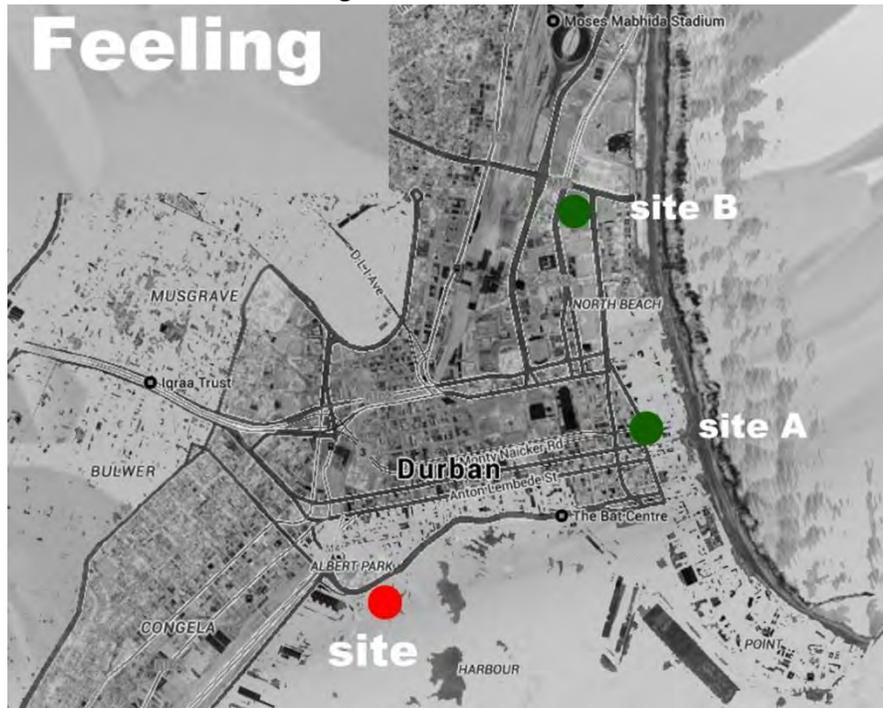


FIG. 2 Site locations in relation to each other

### **Site A – Beachfront** (6/10)

The site is located on the corner of Playfair Rd and K.E Masinga Rd. It is currently unused but does house a small parking lot and further becomes a “chill spot” for passersby.



FIG. 3 Site A – immediate surroundings

## Pros:

- Corner site
- Elevated ground level - creates a site importance
- Good visibility
- Located at the entrance of the beach front
- Unobstructed – due to the lack of built forms
- Good North light
- Dedicated parking facilities
- Large area to develop – flat
- The site is a potential node for the beach front
- The site acts as an extension of Snell parade's pedestrian activities
- Easily accessible
- Pedestrian friendly

## Cons:

- Strong harsh winds
- Climatic issues
- Security issues due to the openness of the site
- Not directly linked to the central CBD



FIG. 4 Site A – site pictures by Author

## **Site B – Drive –in** (5/10)

The site is located on the corner of Sylvester Ntuli Rd and Sandile Thusi Rd. It is currently used as an overflow parking for city held events (A1 GP and Top Gear).



FIG. 5 Site B – immediate surroundings

### **Pros:**

- Large flat area to develop
- Unobstructed
- Strong axis to the “Entertainment- Hub”
- Good North light
- Easy accessibility (cars)
- Corner site – good street frontage potential
- Strong link to the existing school – similar typology functions
- Strong existing links to prominent Nodes – Moses Mabhidha Stadium and the beach front

### **Cons:**

- No vegetation
- Isolated from the central CBD
- High noise factor
- Not pedestrian friendly

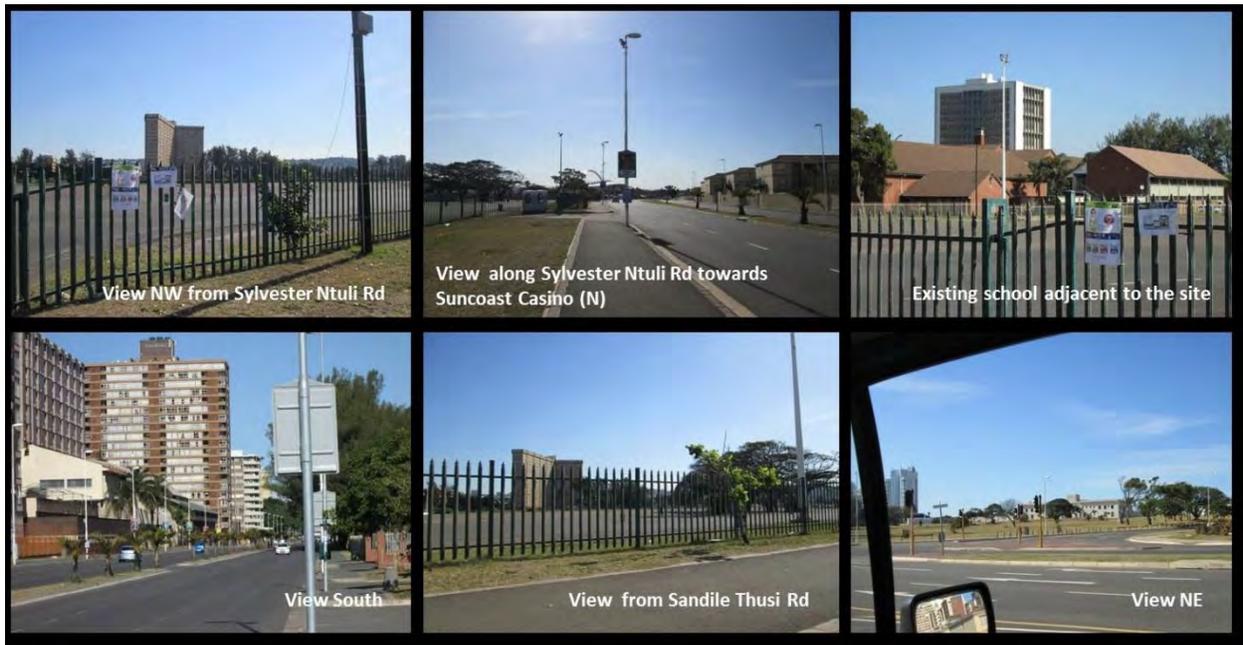


FIG. 6 Site B – site pictures by Author

### Site C – Wilson’s Wharf (chosen site) 9/10

- The site is located in Wilson’s Wharf next to the Point Yacht Club on Boatmans Rd. It is currently used for commercial trading – flea market and restaurants



FIG. 7 Site C – immediate surroundings

## Pros:

- Strong tourist node
- Strong link to the BAT Centre
- Existing parking facilities
- Is well connected within the urban fabric
- Site lies within a developed area
- Large area to develop which is currently, adequately zoned
- Good views
- Pedestrian friendly
- Easy accessibility (cars and pedestrians)

## Cons:

- Poor North light with preferred orientation
- Isolated from the main street edge
- Noisy surroundings – railway, yacht club
- Climatic issues

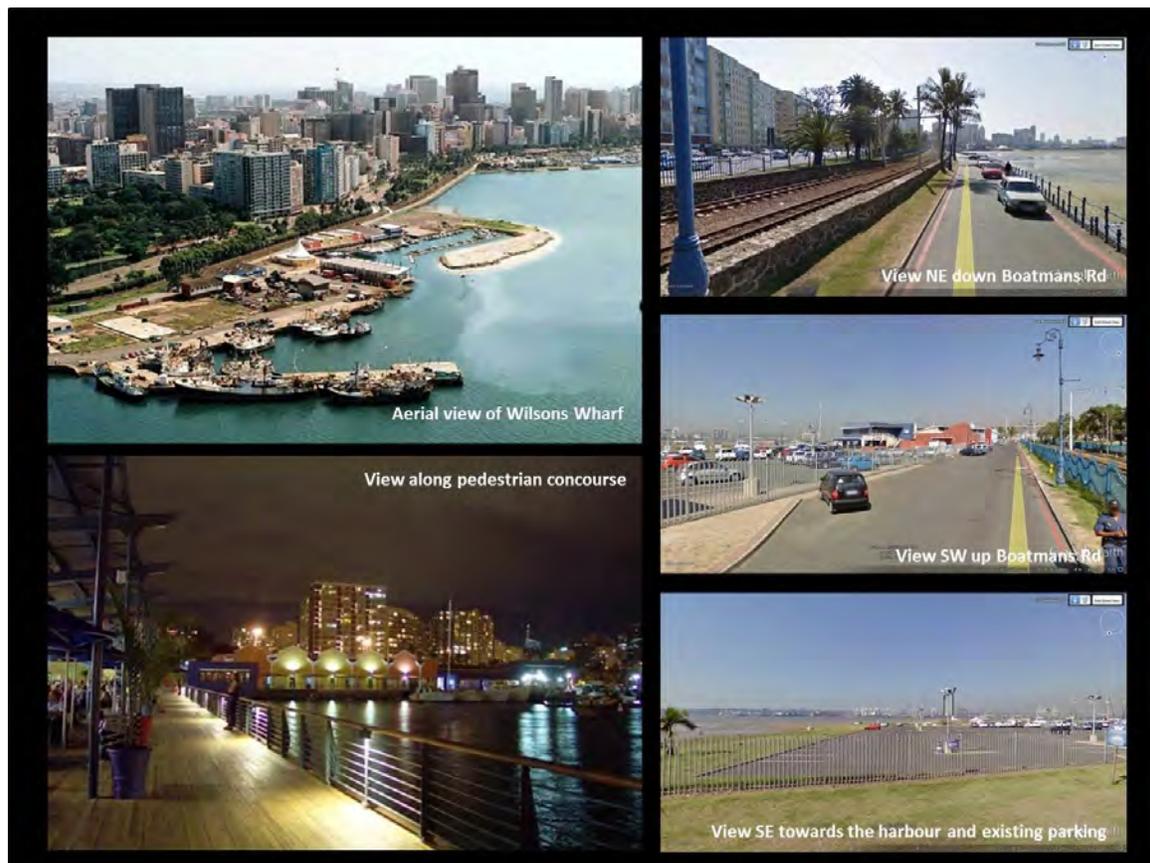


FIG. 8 Site C – site pictures by Author

The selected site was Site C – Wilson’s Wharf. The decision was based on the criteria mentioned above. Although the site lacked in the accessibility requirement, the site provided many more positives regarding landscaping, exposure value, iconic potential and it lies on the water’s edge of Durban’s Harbour, opposed to being near it.

### **2.3) Site Survey:**

Currently set in Durban’s southern coastal waters, Wilson’s Wharf is home to an array of tourist attractions. Firstly as an eatery, Wilson’s Wharf provides the perfect setting with meandering decks and seating areas surrounding a yacht mole and overlooking Durban’s ever busy harbour. Secondly, as a yacht mole, it further welcomes many commercial and private business opportunities such as deep sea fishing, boat rides, boat cruises etc. Thirdly, entertainment, Wilson’s Wharf is home to the Catalina Theatre. Lastly, it houses multiple retail outlets where one can get a little something to remember the experiential visit. These retail outlets are housed within an old industrial building which has been gutted out and converted into an indoor flea market. The site has enough parking facilities and is in close proximity to the many other developments for both pedestrians and motor vehicles.

The site lies along Boatmans Rd which runs parallel to the ever busy Margaret Mncadi Ave (the old Victoria Embankment). Boatman’s Rd also connects the site to two more points of interests, namely The Natal Maritime Museum and the BAT Centre respectively.

2 strong barriers currently exist, the port railway line, and a lush green belt which serves as a visual break from the harder landscaping of the CBD. The preferred orientation of the site is South (for the views) with North facing the CBD. This does pose a design problem as the proposed building will evidently turn its back to North because of the visual stimulus due to its location.

Currently the site is isolated and inverted with “dead” spaces being created between points of interest. As much as the site is very pedestrian friendly, the route to Wilson’s Wharf is not and so the proposed design aims to take this into account.



FIG. 9 Site C – site pictures by Author



FIG. 10 Site C – Zack's existing balcony by Author

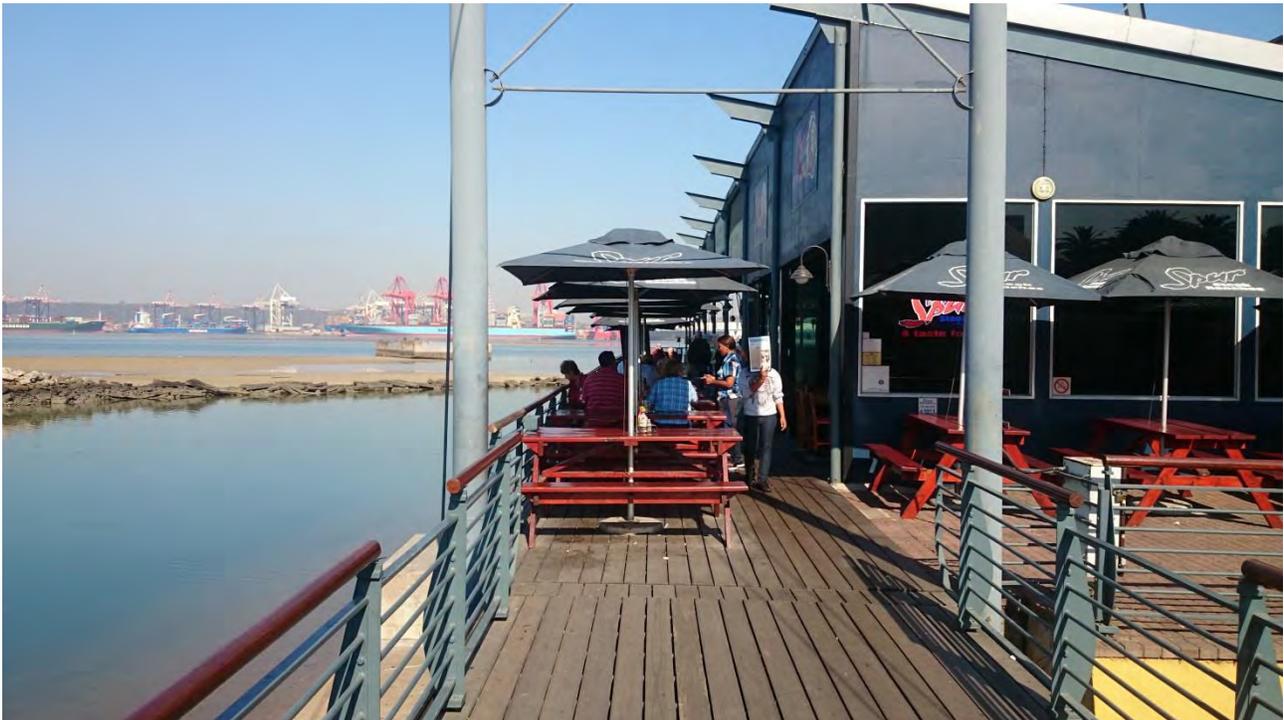


FIG. 11 Site C – Existing main pedestrian walkway by Author



FIG. 12 Site C – Existing food court by Author



FIG. 13 Site C – site panoramas by Author

## 2.4) Site Analysis:



FIG. 14 Site C – Prelim site analysis by Author

## **CHAPTER THREE: DESIGN DEVELOPMENT AND RESOLUTION**

### **3.1) Conceptual and Theoretical Issues:**

#### **3.1.1) Introduction:**

The primary question answered during this investigative and design process has been, “How can a built form manifest itself as an art form?” with art and music in particular, being seen as the answer to the bigger issue described below.

**[Past] vs [Present]** and the celebration of a proud “Rainbow Nation” through artistic architecture \_\_\_\_\_

2 main problems have been noted, one being a social issue whilst the other deals predominantly with present-day architecture:

**[Past]** \_ The past is an essential component in forming the foundation on which a nation is built, however, a constant focus on it can also become a hindrance in moving forward and developing further; one cannot move forward facing backwards. In South Africa particularly, this scenario is most prevalent. Focus on the past, specifically the negatives of Apartheid, have become a norm (monuments and structures), resulting in deep animosity towards the current governing methods. The proposed building, a Music Centre, proposes to tackle this issue by celebrating the present society, filled with its intricate diversities through a “common-ground”; Music.

**[Present]** \_ Music is a universal language each and every person can identify with and is seen to be the glue which can bring about unity. It is this unity and synergy of voices and stories that creates a unique South African song. The Music Centre will stand as a monument which highlights and celebrates the South African Rainbow Nation ideology; providing a platform for the exposure of young talent and growth of up and coming musicians.



- **[Phenomonology]**

Phenomonology speaks of an intimate sensory experience. It talks of creating spaces which evoke emotion much like an art piece. In using this theory, focus will be on creating a sensory journey as one moves through the building. Arts influence will play a large role in creating the perfect atmosphere through the varied use of colour, texture, form, sound, scale, etc. Like a musical composition which consists of many different notes (not monotone), so too, the Music Centre will promote diversity and playfulness.

- **[Place - Theory]**

Place Theory describes a buildings contextual relavence and appreciation. Focus on celebrating the Music Centre's urban framework has been prioritised as a buildings setting is the foudnation on which all design stems from.

### 3.1.2) Conceptual development:

The concept of the proposed design is **Harmonic Infusion – unifying progressive diversity through music.**

Architecture as an art form has a very important part to play in our lives even if we don't take it into consideration every day. It has the ability to tell stories and convey emotions as well as help us reflect on the past. Today's architecture is a permanent indentation on history which will provide future generations a sneak peak into how life is today. The main question is, what message and story are we going to convey to future generations to grow from?

A look at society today gives a guideline to the nature of our inaccuracy and injustice. We have become a society steeped in the past and failing to enjoy the present. In order to progress as a "Rainbow" nation we need to appreciate and celebrate our diversity..... our present. Music in South Africa has been and always will be important. From the days pre-1994 in the struggle to now, music's role in conveying deep seeded messages and stories is unsurpassed.

The South African story is a unique one with many positives coming from every injustice. A stronger nation.....a fighting spirit.....a unique character are but a few. Society can be regarded as having a song with each community group contributing a "note", and like a musical composition, the greater the diversity, the better the sound. Like the concept states, the building aims to unify a progressive diversity – as society grows so too does diversity, however music is the universal language which ties everyone together.

This Music Centre is the place for the celebration of today, it is a place for the exposure and celebration social of diversity and young talent as well as a space which commemorates a "glue" that kept a nation together.....music.

**The Design** hinges itself on 2 main ideals;

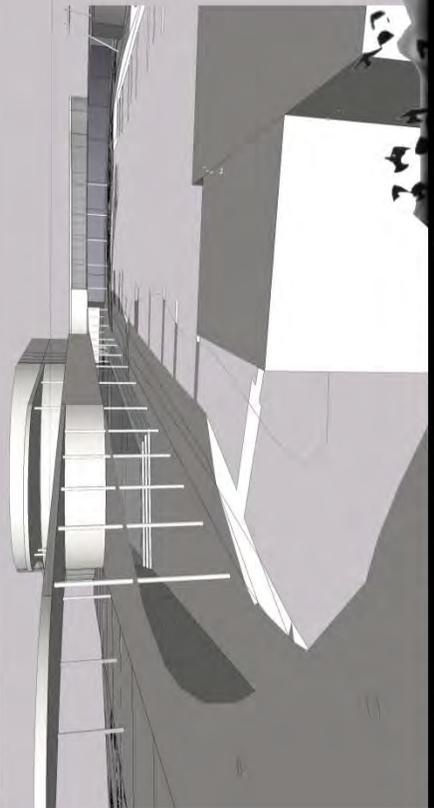
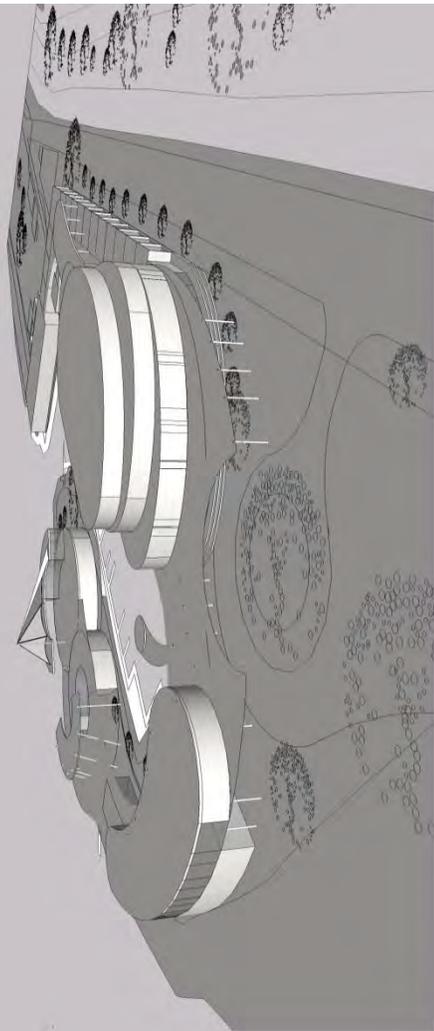
- **Harmony** – defined as progression. This can be seen in both the entrance "journey" and the movement through the development towards the terminating formal performance auditorium.
- **Infusion** – multiple entities working together as one. This can be translated into the 3 buildings working together as one as well as the "in between" spaces infused with activity – informal performance spaces – for the exposure and celebration of diversity. It also adds to the sensory experience of the visit.

# [ CONCEPTUAL\_MASSING ]

"How can a built form manifest itself as an art form?"

*"When we feel, a kind of lyric is sung in our hearts. When we think, a kind of music is played in our mind. In harmony, both create a beautiful symphony of life".*

- Tabo Beta



Art as a tool for the creation of built form towards the design of a **Music Centre in Durban**

Bradley Mason Naidoo 207510242

FIG. 15 Site C – Conceptual massing by Author

The priority whilst designing the Music Centre was the idea of progression and its emphasis within the building.

- Progression in society

Celebrating diversity through the design and incorporation of spaces which encourage social integration as well as multiple performance spaces to expose and promote the talent of the “present” generation. Taking advantage of the “In-between” spaces between points of interest to create in themselves a destination point, a memorable experience through sight and sound .....

- Progression through movement

Progression is a journey. From the moment you enter Boatman’s Rd, the journey starts with the grand walk through a “gateway” to something new, encouraging a paradigm shift in ones thinking. Primary functions have also been strategically positioned to draw people to all the extents of the development. 3 nodes exist on the site and are follows:

- Zacks (houses the Catalina theatre) as well as the many other eateries on the site (East)
- The South African Music Museum (North). To expose the least chosen typology to maximum foot traffic
- The feature Auditorium (South). The most iconic edge of the site nestled within the Harbour’s waters.

Each of these nodes remain connected an are accessible by everyone from either end of the site.

- Progression through education

The main building on the Northern side of the site consists of 4 floors in which the following functions are housed:

- South African Music Museum
- Music Library
- Recording studio – to attract the commercial market
- Jazz Lounge / Club – night life for young and old
- Multiple informal live music performance / viewing decks – tourists /functions

- Observation Bar
- Main auditorium entrance – feature performance venue
- Multi-purpose Function Venue – to ensure consistent use of the venue year round. Matric dances, lunches, dinners, exhibitions, etc.
- Music School
- Administration facilities
- Building management offices
- Lecture venues
- Music practice rooms
- Private social spaces
- Ablutions

The building is zoned vertically from public on Ground Floor, semi-public on First Floor, to private on Second to Fourth Floor respectively, housing the music school. The zoning symbolically represents the effort it takes to progress and develop as a musician. Similarly, horizontally, the building houses multiple “informal performance spaces” which effectively happen along the route to the feature indoor auditorium which again signifies a new tier in performances.

**The urban design** focuses on the revitalization of Boatman’s Road, which is the main vehicular access to the chosen site and is a direct link to two nodes of importance, namely The National Maritime Museum and the BAT Centre respectively. The design consists of a proposed widening of the road with the inclusion of green pockets to add to the aesthetic and atmosphere of the area. A meandering pedestrian deck over the water’s edge has also been added to the road to encourage an influx of pedestrian traffic to and from the proposed site, with the ability to hold an informal flea market (creates a vibrant thoroughfare) and rickshaw rides to and from the Music Centre.

(Adds to the “journey” experience).

No access roads have been proposed directly from the site to the main CBD as the concept speaks of progression, rather, an expectant, intriguing experience has been focused on upon entering the Music Centre.

The Music Centre’s “iconic” nature does not merely stem from the form or mass of the building; rather it is through infusing, experiential, and multi-sensory experiences that the iconic landmark is created.

**The form** of the building is organic in nature and is derived from the context in which the site lies as well as the typology of the proposed building. The site is located in Wilson's Wharf, houses a yacht dock and has an unobstructed view of the Durban harbour. There are 4 main reasons for the form:

- **Fluidity** – to respect and relate to the immense water frontage
- **The site** – is curved on plan and suggested an organic building to blend in seamlessly into its landscape
- **The typology** – Music is and art form. Art is never merely described by perfectly squared corners rather it provides a clean palette for expression.
- **Contrast and intrigue** – the form of the Music Centre contrasts its context and adds to the expectancy and intrigue of passersby, either on the main road or from a distance – Victoria Embankment.

### 3.2) Final Design Proposal:

# Abstract

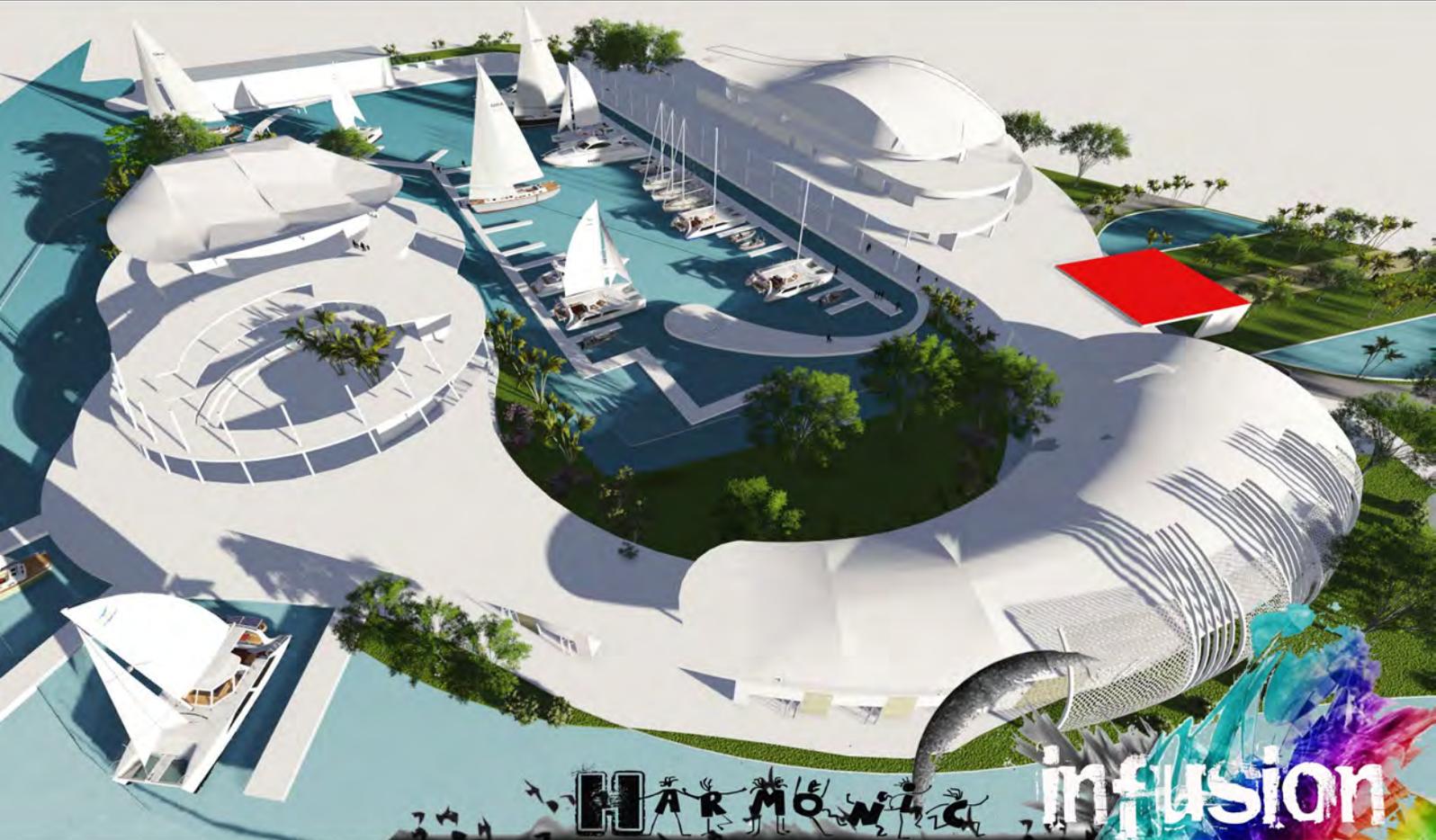
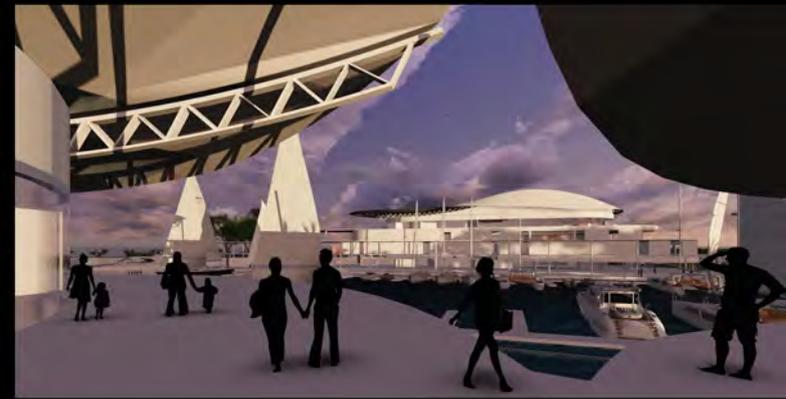


## Art as a tool for the creation of built form towards the design of a Music Centre in Durban

Every individual has been gifted with potential that is often never realised or appreciated by society because of numerous socio-economic reasons. Within the South African context, we see so much of potential. South Africa has rhythm, it has soul. The sound of the African drums, the colour and flair of Indian dance, ballet, musical theatre and art to name a few, are all intricately woven into the South African culture. Imagine.....

A place, a single building, proposed for Durban that would house music and the arts, from tutoring to performances aiming to bridge the divide between its diverse cultures and promote and develop skill in the most powerful, multi-functional tool....Music.

This study serves as a means of investigating the interconnected relationships between music, art and architecture respectively and aims to provide valuable information regarding music and its role in celebrating a progressive society.



# [ DESIGN\_PRIMER ]

"How can a built form manifest itself as an art form?"

**[Past]** vs **[Present]** and the celebration of a proud "Rainbow Nation" through artistic architecture

2 main problems have been noted, one being a social issue whilst the other deals predominantly with present-day architecture:

**[Past]** The past is an essential component in forming the foundation on which a nation is built, however, a constant focus on it can also become a hindrance in moving forward and developing further; one cannot move forward facing backwards. In South Africa particularly, this scenario is most prevalent. Focus on the past, specifically the negatives of Apartheid, have become a norm (monuments and structures), resulting in deep animosity towards the current governing methods. The proposed building, a Music Centre, proposes to tackle this issue by celebrating the **present society**, filled with its intricate diversities through a "common-ground"; Music.

**[Present]** Music is a universal language each and every person can identify with and is seen to be the **glue** which can bring about **unity**. It is this unity and synergy of voices and stories that creates a unique South African song. The Music Centre will stand as a monument which highlights and celebrates the South African Rainbow Nation ideology; providing a platform for the **exposure** of young talent and **growth** of up and coming musicians.

- **[Remembering]** the past - South African Music Museum
- **[Partaking]** in the present - Music School and tutoring venue
- **[Hearing]** the future - Performance venues (indoor + outdoor)

## [ Art - itecture ]

"Architecture is inhabited sculpture" - Constantin Brancusi

This quote directly contradicts much of the architecture seen around today. Very few buildings (if not any), in Durban, truly resemble sculptures. We live in a world dictated by functionality and tight budget constraints which largely effects architecture. The Music Centre therefore aims to celebrate **art**, under which both music and sculpture exist as art forms, to express **true** architectural creativity.

# [ THEORIES ]

## [ De - Structuring ] - ornament vs structure

The De-structuring theory brings attention to the hierarchy and relationship between a building's exterior (image) and it's structural make-up (internal). Like a movie which people watch and critique, a building is judged primarily on what can be seen (it's image), however, in saying this, the projector used to show the movie is also important, for without it, no movie will be seen. In a nutshell, a buildings structural component is very important but the focus should be on it's image not just functionality. A.I.T Chang points out that many designers under-estimate an individuals ability to adapt to their surroundings, thus impacting considerably on the final outcome of a buildings design. This theory amplifies the need for artistic creative buildings within an urban framework. Within the Music Centre's composition, art will be used to highlight this component.

## [ Phenomonology ]

Phenomonology speaks of an intimate sensory experience. It talks of creating spaces which evoke emotion much like an art piece. In using this theory, focus will be on creating a sensory journey as one moves through the building. Arts influence will play a large role in creating the perfect atmosphere through the varied use of colour, texture, form, sound, scale, etc. Like a musical composition which consists of many different notes (not monotone), so too, the Music Centre will promote diversity and playfulness.

## [ Place - Theory ]

Place Theory describes a buildings contextual relevance and appreciation. Focus on celebrating the Music Centre's urban framework has been prioritised as a buildings setting is the foundation on which all design stems from.

# [ AIM + OBJECTIVES ]

The creation of a visual and socially intriguing space for the expression (celebrating the future) and teaching (celebrating the present) of music as well as a place which remembers the importance of music in South African history (celebrating the past)

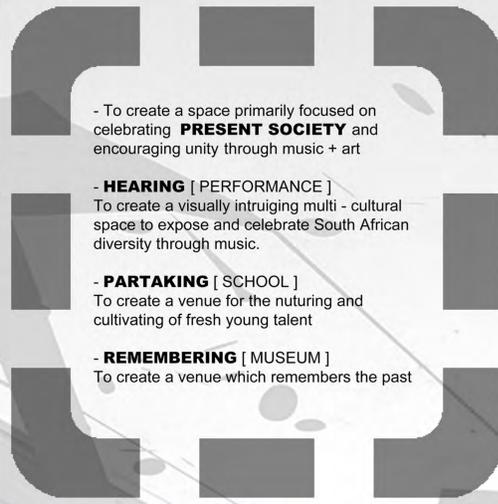
### Objectives:

- To create an iconic symbol for Durban.
- To create a multi-cultural built-form which includes people from diverse cultures.
- To create a complex dedicated to emulate cultural expressions from music.



[ CLIENT\_BRIEF ]

[ CLIENT\_ORGANIZATION ]



**KUMISA**  
The KwaZulu-Natal United Music Industry Association

**KUMISA's Vision**  
KUMISA's vision is to promote, protect and invest in the growth and diversity of the KZN music industry.

### KUMISA's Mission

- To support and accelerate the development of a financially viable and sustainable industry;
- To facilitate, promote and package KZN music for global market accessibility;
- To develop and facilitate access to digital and new media technologies;
- To improve skills levels, business capacity and support for SMMEs;
- To promote networking and communication between music industry professionals.
- To protect, promote and advocate for the rights of music industry practitioners;
- To prioritise research and development of the music industry;
- To prioritise the preservation and promotion of indigenous KZN music.

### What they do:

The KwaZulu-Natal United Music Industry Association (KUMISA), is a non-profit, regional music industry organisation that aims to serve and represent the interests of the music industry in KwaZulu-Natal (KZN), nationally and internationally.

### KUMISA's values:

- **Promote:** KUMISA believes that the services and products of the KZN music industry should be afforded more platforms to promote and showcase their work. KUMISA will adopt a multi-faceted approach to promoting the KZN music industry.
- **Protect:** KUMISA believes that rights of music practitioners can be best promoted through education about and promotion of best practise with regard to intellectual property law compliance and the regulation of performance platforms through an industry accreditation system of basic standards.

- **Invest:** KUMISA aims to prioritise workshops and seminars, encourage the development of a music precinct, music festivals and live music venues and lobby stakeholders to invest funds at the same.

### KUMISA's short-term goals are to:

- Recruit members from across KZN.
- Keep our members informed of current affairs and relevant opportunities within the music industry.
- Facilitate knowledge transfer between members.

### KUMISA's long-term goals are to:

- Engage in dialogue with government regarding policy and development of music;
- Represent the business interests of all musical endeavours;
- Map the music industry in KZN on an annual basis to estimate its economic value and establish a benchmark;
- Improve infrastructure;
- Regulate the industry with specific reference to live performance and air play on radio;
- Work with copyright protection societies to ensure consistent distribution of royalties

"When we feel, a kind of lyric is sung in our hearts. When we think, a kind of music is played in our mind. In harmony, both create a beautiful symphony of life".

- Tabo Beta

# Schedule Of Accommodation

<b>[GF - public]</b> - 5400sqm	<b>[FF - semi private]</b> - 2800sqm	<b>[SF + TF - private]</b> - 1300sqm + 1000sqm
- South African Music Museum - Museum store - Outdoor Amphitheatre - Food court - Music store - Retail stores	- Music Library - Recording Studio - Jazz lounge / club - Multiple informal live music performance / viewing decks - Observation Bar - Main Auditorium entrance - Multi-purpose Function Venue	- Music School - Administration facilities - Building Management offices - Lecture venues - Music practice rooms - Private social spaces

# Exposure

Entertainment Well-being

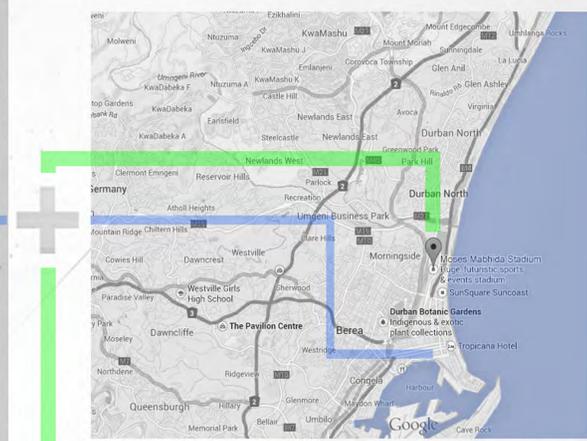
Growth Appreciation

Inspire Experience FREEDOM

Contrast

Enticement

# [ PRECEDENT + CASE STUDIES ]



The BAT Centre stands out within its deary urban setting. This building was particularly focused on due to its adaptability, creativity and functionality. The main goals of the centre are focused on youth development, growth, and exposure. Simple creativity.



Moses Mabhida Soccer Stadium located in Durban, South Africa stands as the most iconic building in the city, largely due to its uniqueness and large scale. Its play with organic elements was most noted as well as its light and airy construction methods.



The Sydney Opera House in Sydney, Australia is just spectacular. It can simply be described as a sculpture and possesses the presence one would associate with an art piece. Simple in design, massive in size and stance, the Opera House sits on the entrance to Sydney Harbour and has become an icon for Australia. It was designed by Jorn Utzon, a Danish architect and is grouped alongside the likes of the Pyramids, Taj Mahal, Eiffel Tower etc.



The Helsinki Music Centre, located in Helsinki, Finland is a new building of the same typology. Its high tech and contemporary approach is simply beautiful. It gives a good idea of the needed functions within a Music Centre as well as demonstrates the use of new construction materials. The Music Centre has definitely followed the outlined theories mentioned. It demonstrates creativity in adaptability.



.....Uniting Progressive Diversity through Music

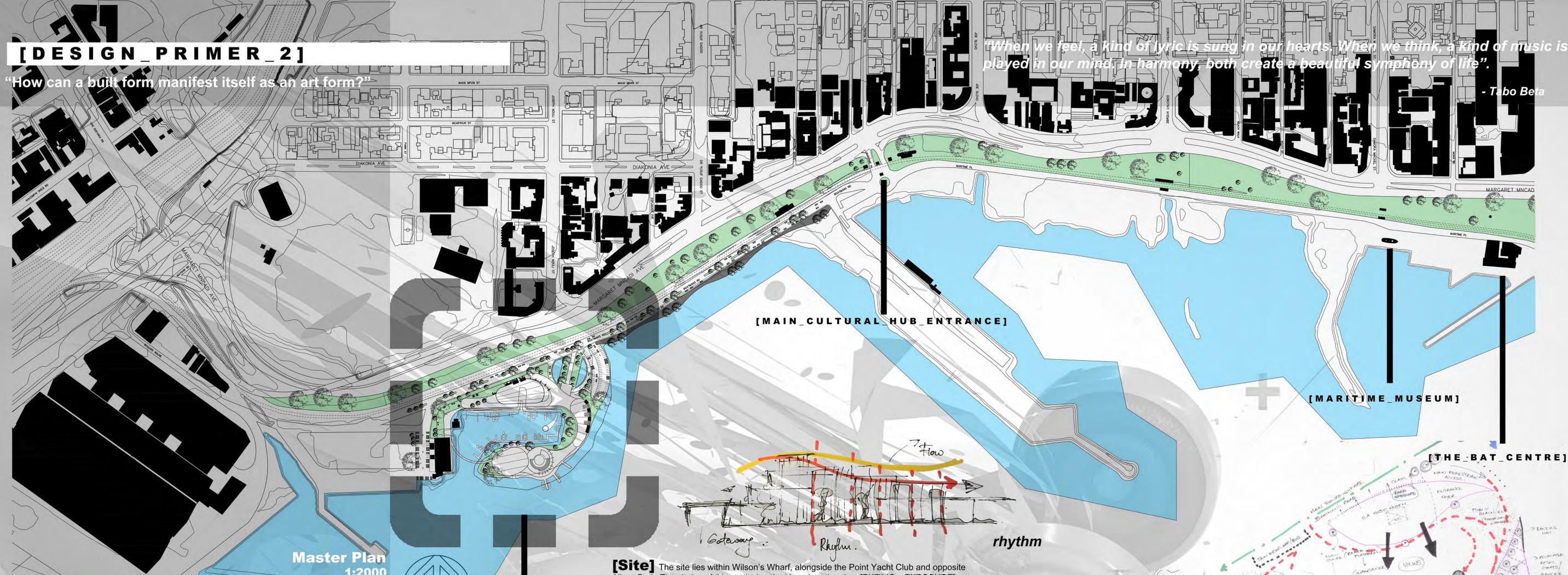
Bradley Mason Naidoo 207510242

[DESIGN PRIMER 2]

"How can a built form manifest itself as an art form?"

"When we feel, a kind of lyric is sung in our hearts. When we think, a kind of music is played in our mind. In harmony, both create a beautiful symphony of life".

- Tabo Beta

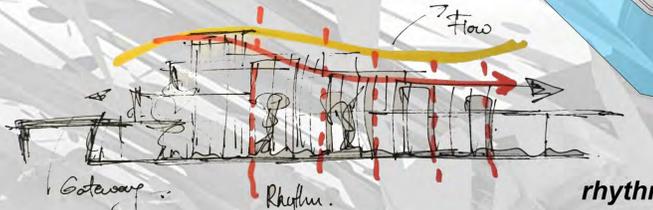


Master Plan  
1:2000

[HARMONIC INFUSION]

**[Harmony]** can be described as "Agreement in feeling or opinion", "one accord", "A pleasing combination of elements in a whole", or as "The study of structure, progression and relation of chords". From the definitions, harmony denotes willing togetherness. It's the seamless coming together of elements/notes/people to produce one sound. It speaks of co-operation, unity, and blending, something which the Music Centre intends to promote. In order to create harmony, diversity and contrast is needed. As mentioned, South Africa is known as the "Rainbow Nation", and like a rainbow which has multiple colours in its make up, so too does society, consisting of individuals from many different backgrounds; it is this contrast that creates the rainbows beauty. The Music Centre intends to promote youth development through music and art resulting in a progressing society, one that celebrates diversity, creativity, and togetherness.

**[Infusion]** can be described as "The process or result of joining two or more things together to form a single entity". Infusion describes the synergy within the proposed Music Centre. Apart from the coming together of individuals, infusion describes the joining together of multiple functions as well as architectural elements (forms, colours, textures, etc.) to create one single entity/composition. It further goes on to describe the envisioned "singular social entity" as a result of harmony. The chosen site, Wilson's Wharf, physically represents the synergy/infusion of the many diverse activities along the Durban coastline (North-South) and acts as the perfect termination to Durban's habitable coastline.



**[Site]** The site lies within Wilson's Wharf, alongside the Point Yacht Club and opposite Albert Park. The choice of this particular site hinged on the sites [PUBLIC EXPOSURE] value. Currently, Wilson's Wharf is a tourist hub, with many individuals flocking to the many provided eateries and shops. For the chosen typology, good exposure was a prerequisite. In being a Music Centre, the site had to be in an area which already drew people (the atmosphere of the site set the foundation for the design) to it as well as would provide a scenic venue for live performances. It is a relatively large site which is currently used as a commercial trading and restaurant venue and is very well used.

The site faces South (towards the Harbour view) with the greater CBD on it's Northern facade. It lies in close proximity to the Natal Maritime Museum as well as the ever popular BAT Centre and forms part of a rich performance, cultural and relaxation hub. The site is flanked by two main barriers, the Point Yacht Club and Margaret Mncadi Ave [NOISE]. Other physical barriers include the existing port railway line, Boatman's Rd (west) and Maritime Pl (east).

[SITE SELECTION]

Wilson's Wharf 9

- [Pros]**
- Strong tourist node
  - Strong link to the BAT Centre
  - Existing parking facilities
  - Well connected to the urban fabric
  - Site lies within a developed area
  - Large area to develop
  - Beautiful contextual setting and views
  - Pedestrian friendly
  - Easy accessibility

- [Cons]**
- Poor north light in preferred orientation (towards the views)
  - Isolated from the main street edge
  - Noisy surroundings (rail and yacht club)
  - Climatic issues
- [Opportunities]**
- Revitalisation of the waterfront
  - The creation of a "cultural / entertainment" hub
  - Become an extension of the BAT Centre (proximity)



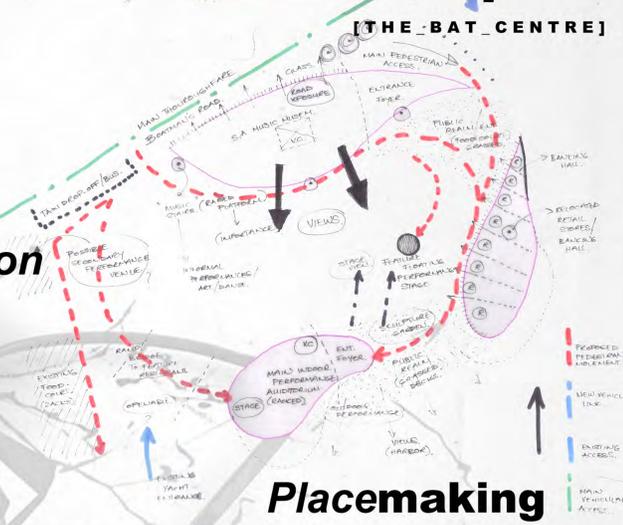
Feeling



- [Site A] - 6/10 Pros:**
- Cnr site
  - Elevated Ground level
  - Good visibility from street edge
  - Location
  - Unobstructed
  - Good North light
  - Parking
  - Accessibility
  - Pedestrian friendly
- Cons:**
- Climatic conditions
  - Security
  - Connection to the CBD
  - Minimal built context

- [Site B] - 5/10 Pros:**
- Unobstructed
  - Large site
  - Good Accessibility
  - Cnr site
  - Strong contextual links
- Cons:**
- Hard landscaping (min veg)
  - Isolated site
  - Not pedestrian friendly

Placemaking



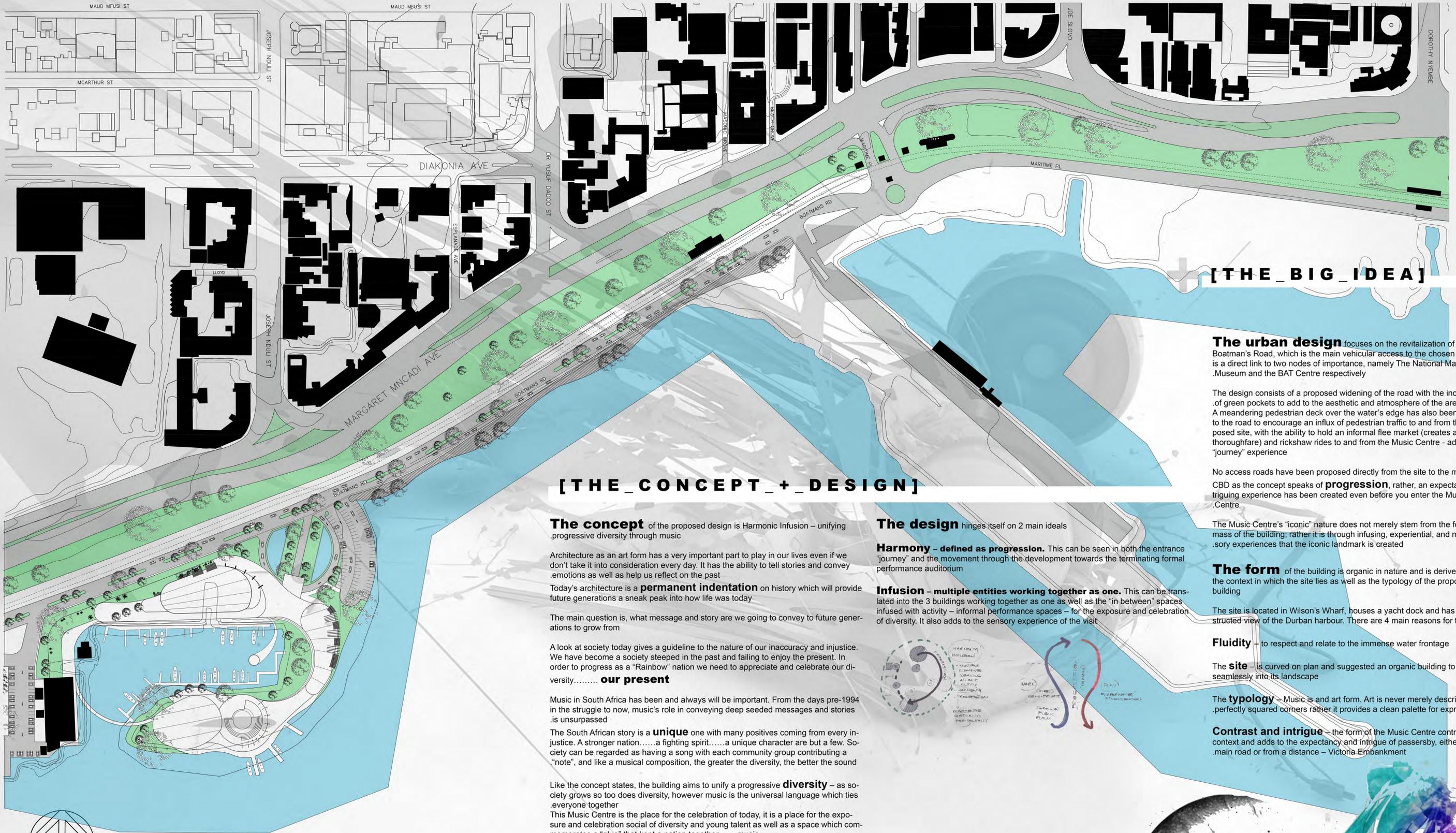
Fluidity



"When we feel, a kind of lyric is sung in our hearts. When we think, a kind of music is played in our mind. In harmony, both create a beautiful symphony of life".

- Tabo Beta

"How can a built form manifest itself as an art form?"



[THE\_BIG\_IDEA]

**The urban design** focuses on the revitalization of Boatman's Road, which is the main vehicular access to the chosen site and is a direct link to two nodes of importance, namely The National Maritime Museum and the BAT Centre respectively

The design consists of a proposed widening of the road with the inclusion of green pockets to add to the aesthetic and atmosphere of the area. A meandering pedestrian deck over the water's edge has also been added to the road to encourage an influx of pedestrian traffic to and from the proposed site, with the ability to hold an informal flea market (creates a vibrant thoroughfare) and rickshaw rides to and from the Music Centre - adds to the "journey" experience

No access roads have been proposed directly from the site to the main CBD as the concept speaks of **progression**, rather, an expectant, intriguing experience has been created even before you enter the Music Centre

The Music Centre's "iconic" nature does not merely stem from the form or mass of the building; rather it is through infusing, experiential, and multi-sensory experiences that the iconic landmark is created

**The form** of the building is organic in nature and is derived from the context in which the site lies as well as the typology of the proposed building

The site is located in Wilson's Wharf, houses a yacht dock and has an unobstructed view of the Durban harbour. There are 4 main reasons for the form

**Fluidity** - to respect and relate to the immense water frontage

The **site** - is curved on plan and suggested an organic building to blend in seamlessly into its landscape

The **typology** - Music is and art form. Art is never merely described by perfectly squared corners rather it provides a clean palette for expression

**Contrast and intrigue** - the form of the Music Centre contrasts its context and adds to the expectancy and intrigue of passersby, either on the main road or from a distance - Victoria Embankment

[THE\_CONCEPT + DESIGN]

**The concept** of the proposed design is Harmonic Infusion - unifying progressive diversity through music

Architecture as an art form has a very important part to play in our lives even if we don't take it into consideration every day. It has the ability to tell stories and convey emotions as well as help us reflect on the past

Today's architecture is a **permanent indentation** on history which will provide future generations a sneak peak into how life was today

The main question is, what message and story are we going to convey to future generations to grow from

A look at society today gives a guideline to the nature of our inaccuracy and injustice. We have become a society steeped in the past and failing to enjoy the present. In order to progress as a "Rainbow" nation we need to appreciate and celebrate our diversity..... **our present**

Music in South Africa has been and always will be important. From the days pre-1994 in the struggle to now, music's role in conveying deep seeded messages and stories is unsurpassed

The South African story is a **unique** one with many positives coming from every injustice. A stronger nation..... a fighting spirit..... a unique character are but a few. Society can be regarded as having a song with each community group contributing a "note", and like a musical composition, the greater the diversity, the better the sound

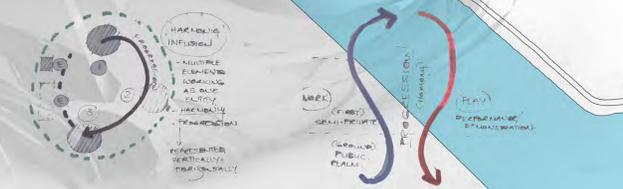
Like the concept states, the building aims to unify a progressive **diversity** - as society grows so too does diversity, however music is the universal language which ties everyone together

This Music Centre is the place for the celebration of today, it is a place for the exposure and celebration social of diversity and young talent as well as a space which commemorates a "glue" that kept a nation together.....music

**The design** hinges itself on 2 main ideals

**Harmony - defined as progression.** This can be seen in both the entrance "journey" and the movement through the development towards the terminating formal performance auditorium

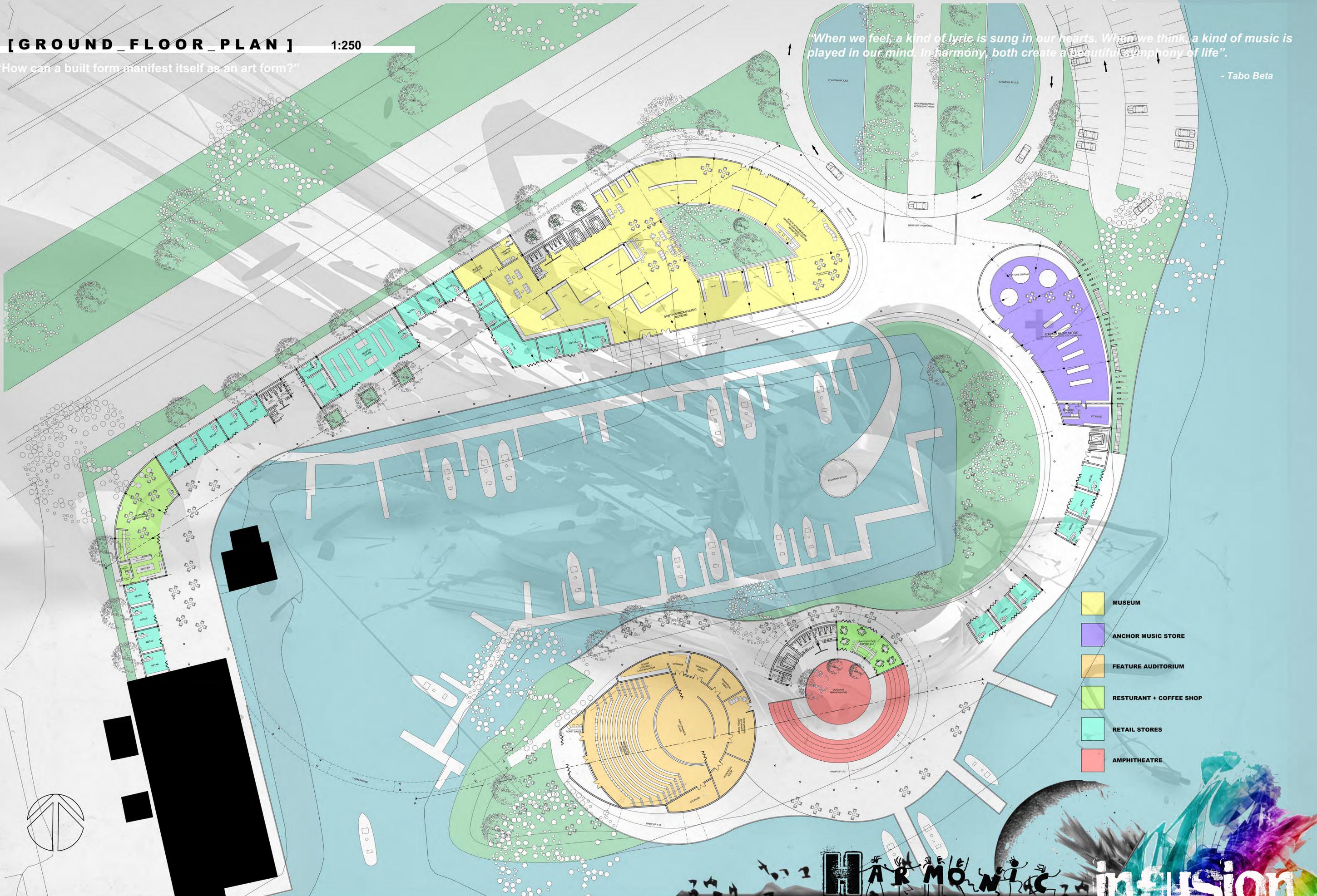
**Infusion - multiple entities working together as one.** This can be translated into the 3 buildings working together as one as well as the "in between" spaces infused with activity - informal performance spaces - for the exposure and celebration of diversity. It also adds to the sensory experience of the visit



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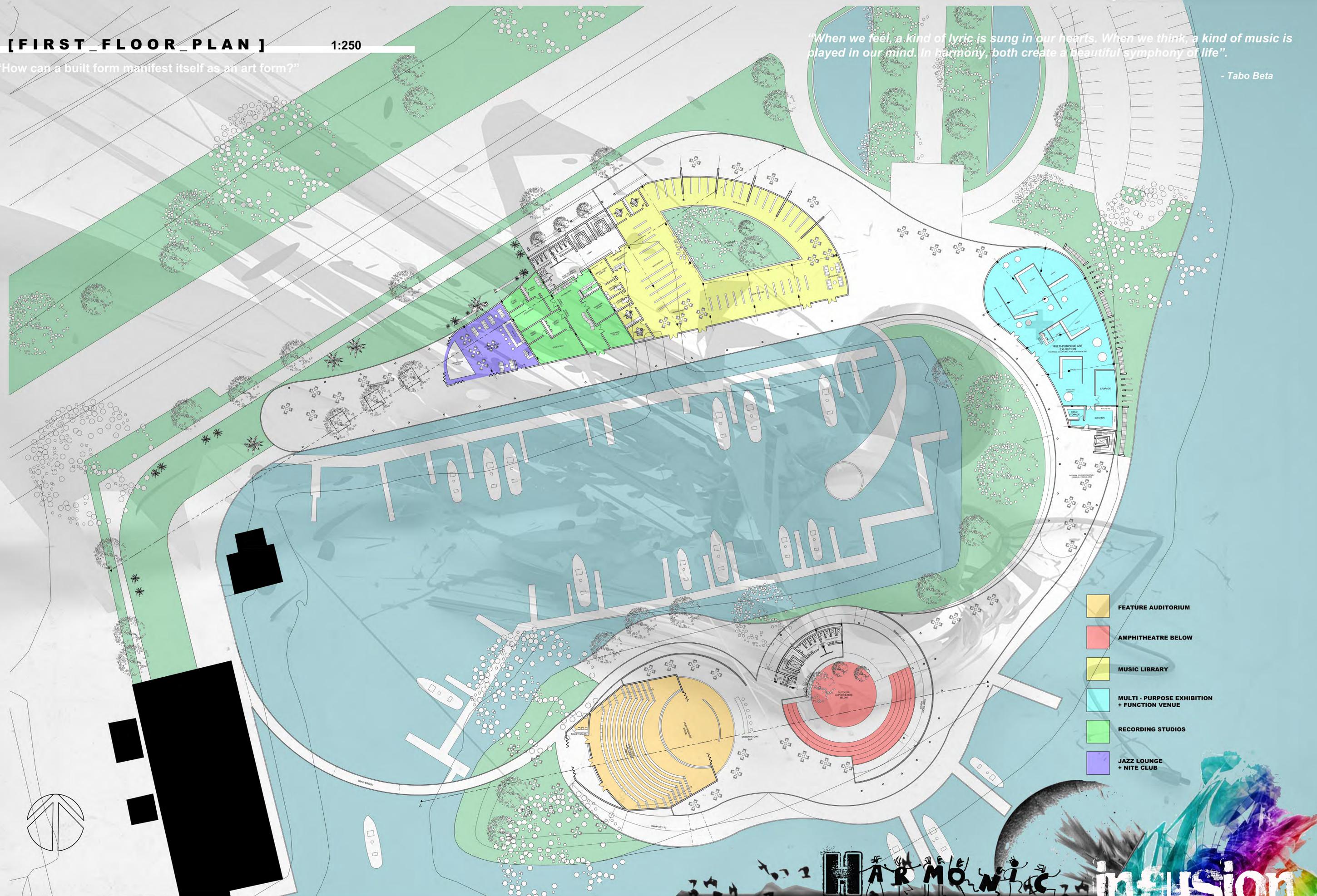
[FIRST\_FLOOR\_PLAN]

1:250

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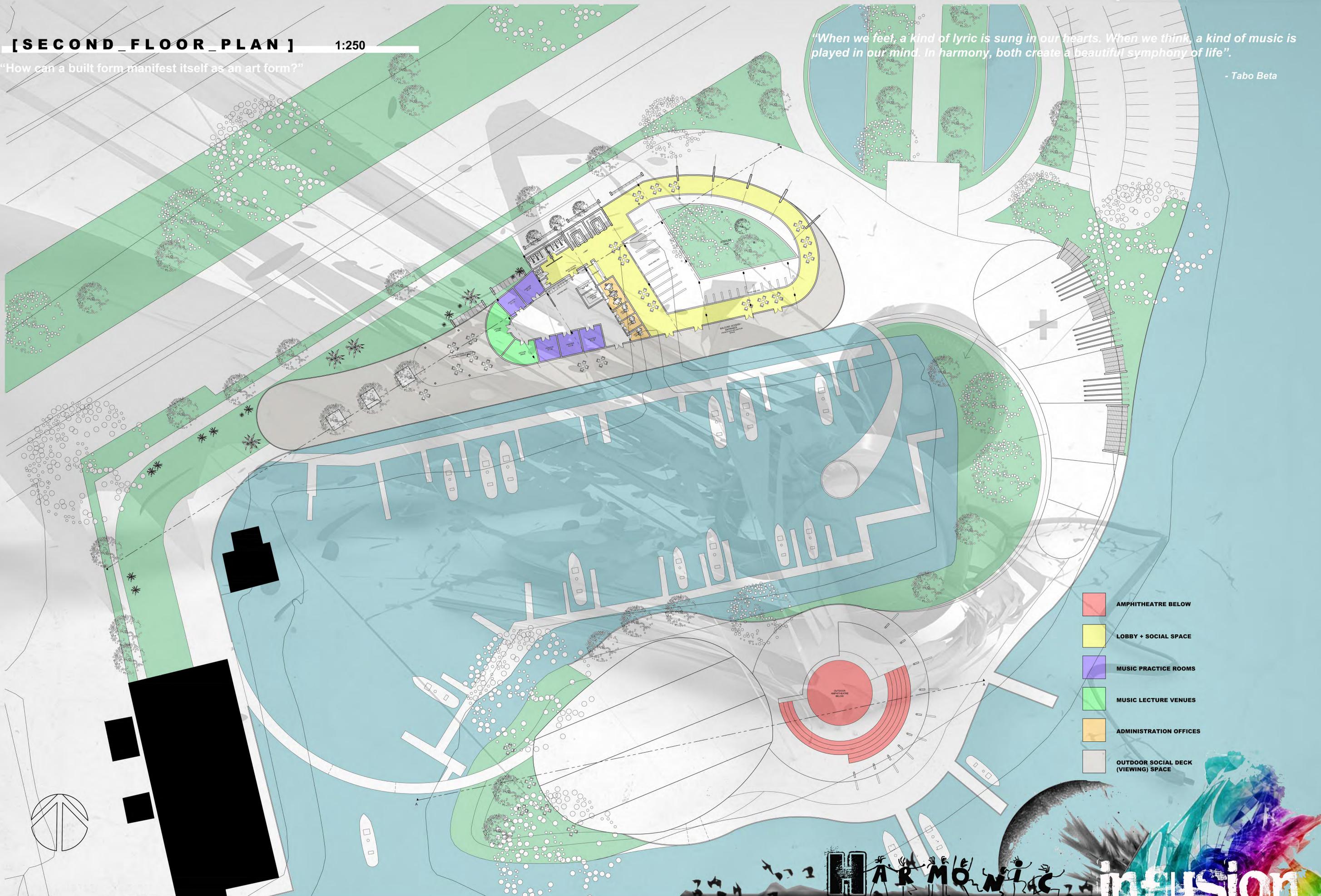
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- AMPHITHEATRE BELOW
- LOBBY + SOCIAL SPACE
- MUSIC PRACTICE ROOMS
- MUSIC LECTURE VENUES
- ADMINISTRATION OFFICES
- OUTDOOR SOCIAL DECK (VIEWING) SPACE

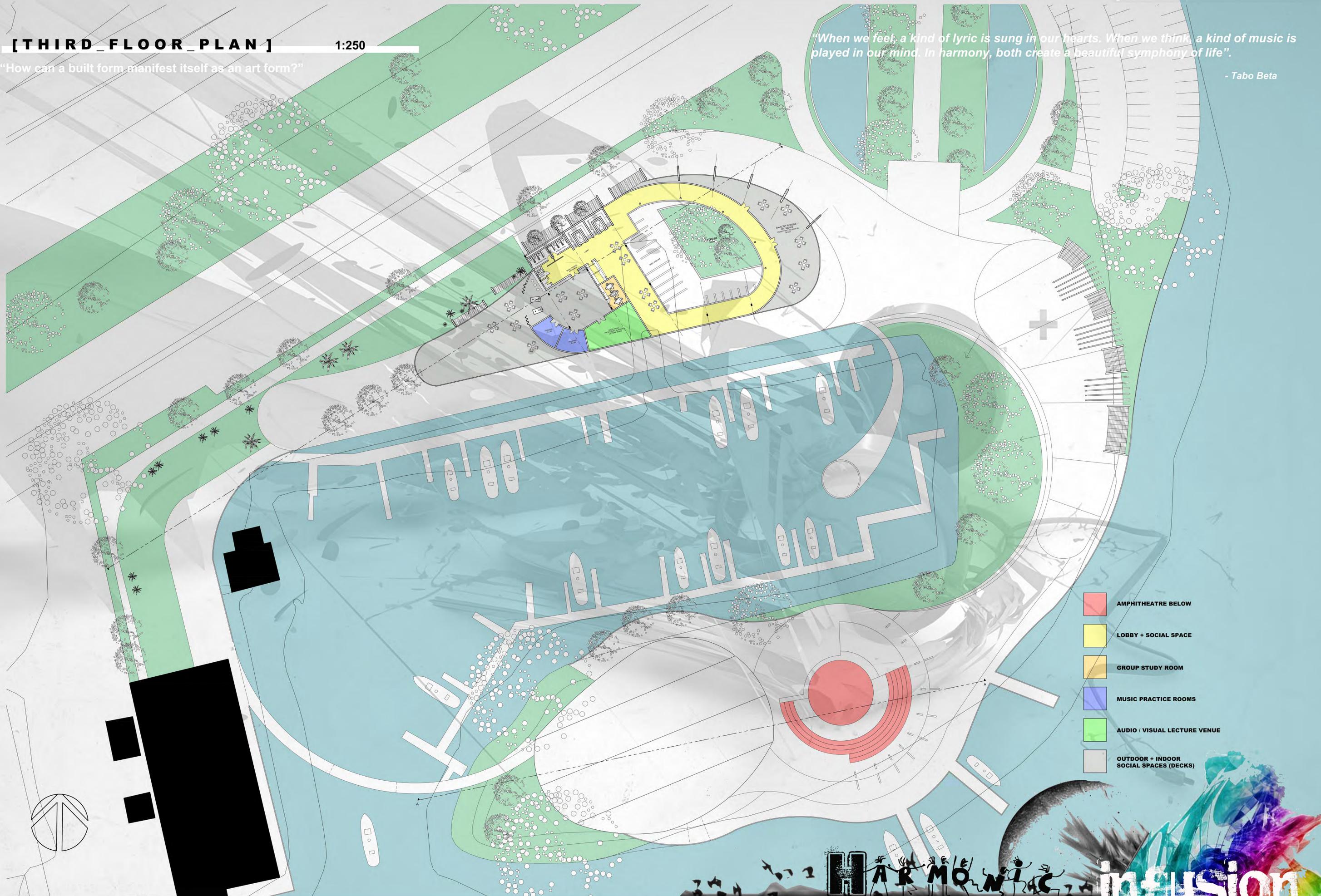
[THIRD\_FLOOR\_PLAN]

1:250

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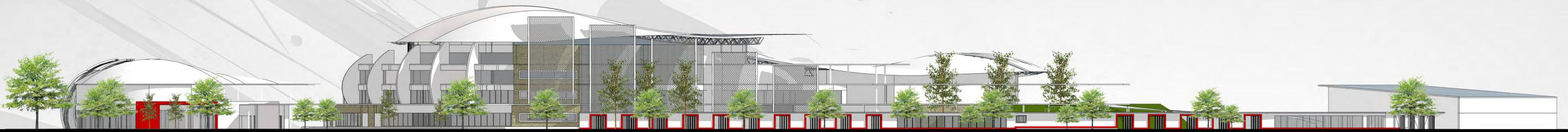
- AMPHITHEATRE BELOW
- LOBBY + SOCIAL SPACE
- GROUP STUDY ROOM
- MUSIC PRACTICE ROOMS
- AUDIO / VISUAL LECTURE VENUE
- OUTDOOR + INDOOR SOCIAL SPACES (DECKS)

[ SECTIONS + ELEVATIONS ] 1:250

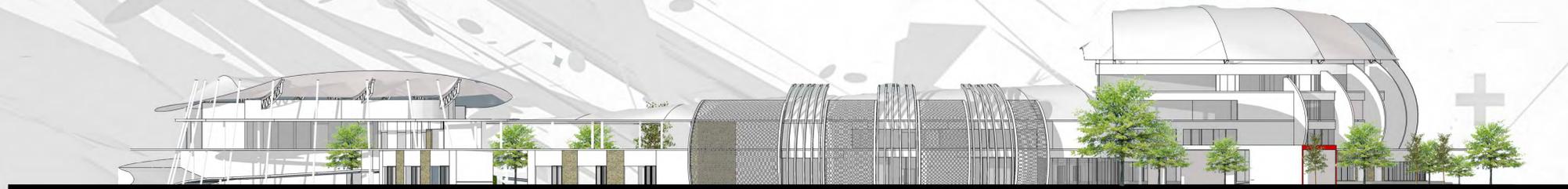
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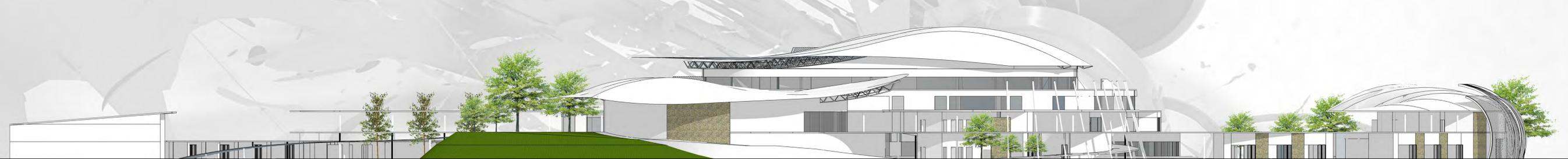
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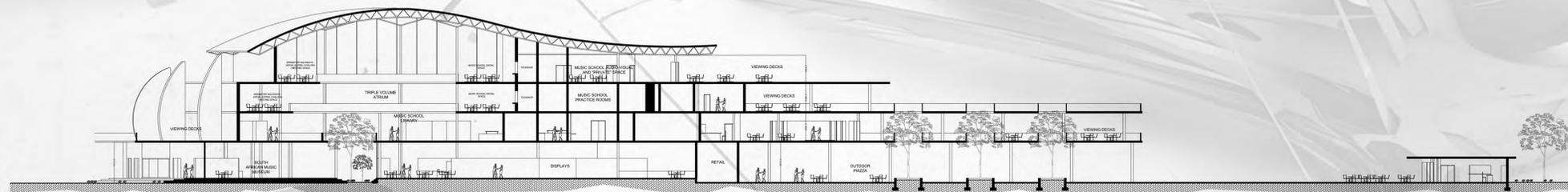
North \_ Elevation 1:250



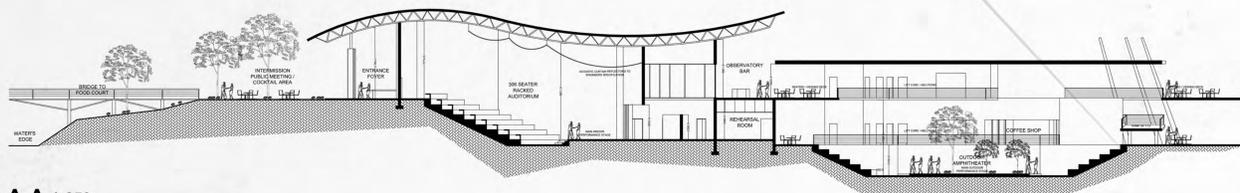
East \_ Elevation 1:250



South \_ Elevation 1:250



Section B-B 1:250



Section A-A 1:250



.....Uniting Progressive Diversity through Music

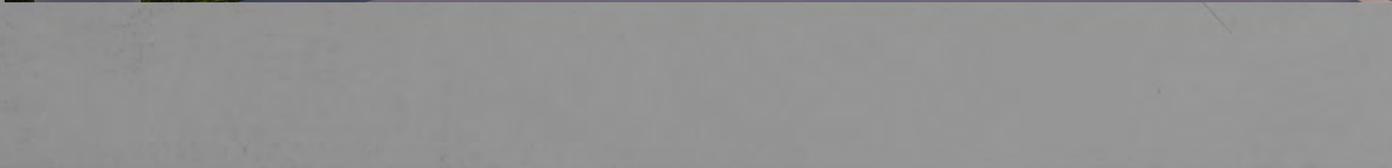
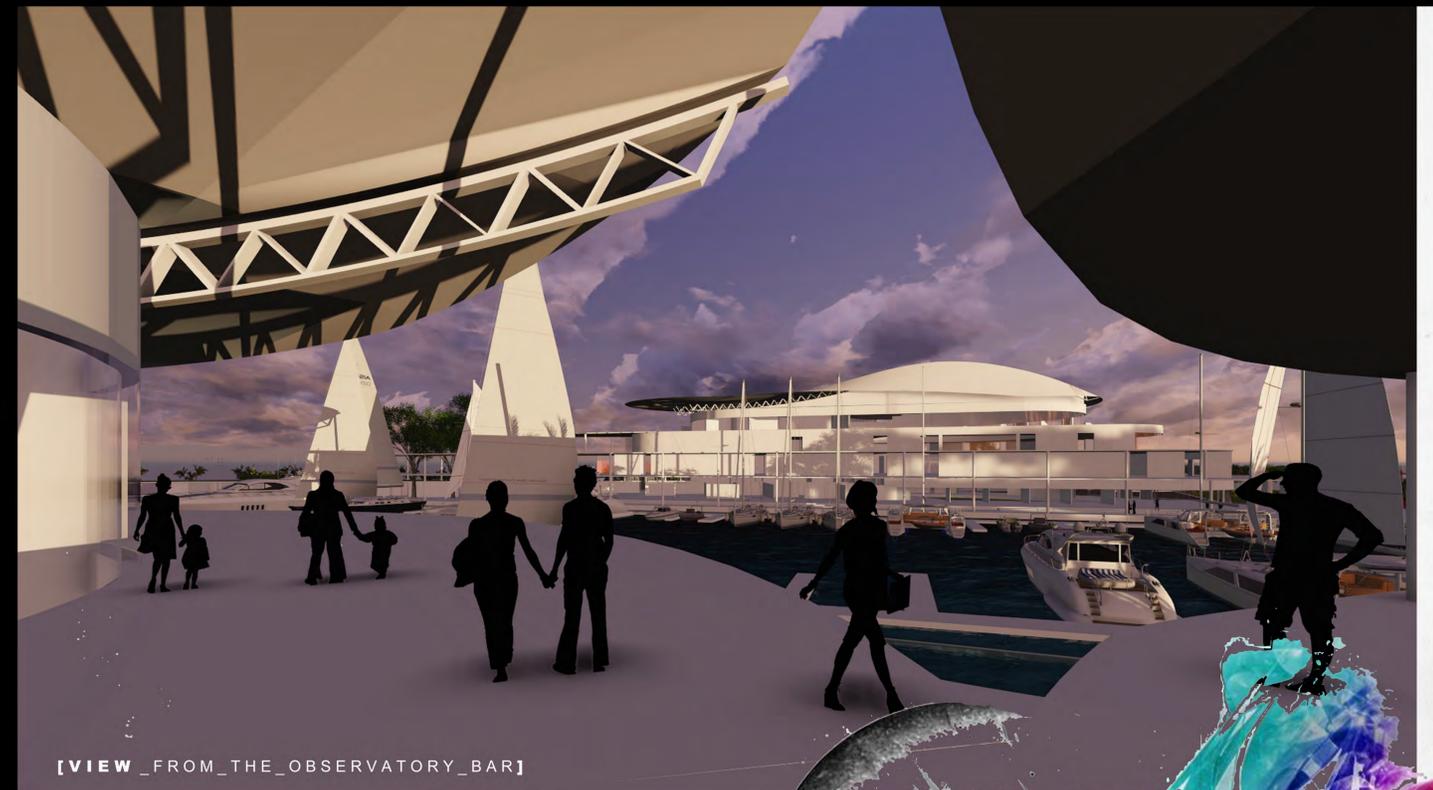
[ 3D\_RENDER\_1 ]

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[ 3D\_RENDER\_2 ]

"How can a built form manifest itself as an art form?"



[VIEW\_ONTO\_THE\_PEDESTRIAN\_BOULEVARD]



[VIEW\_FROM\_THE\_YACHT\_ENTRANCE]



[VIEW\_FROM\_THE\_MUSIC\_SCHOOL\_DECK]

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[THE\_MUSIC\_CENTRE]



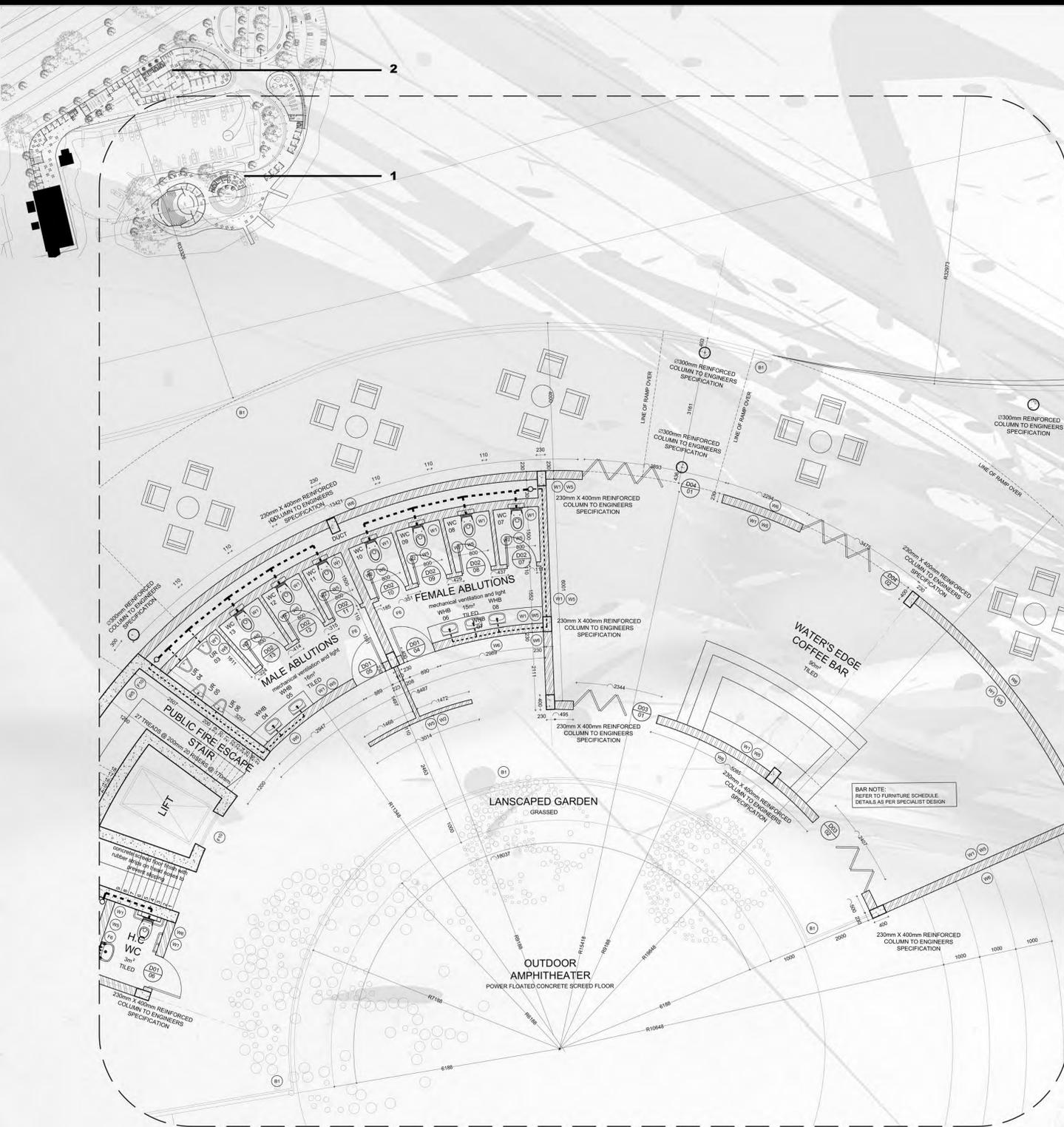
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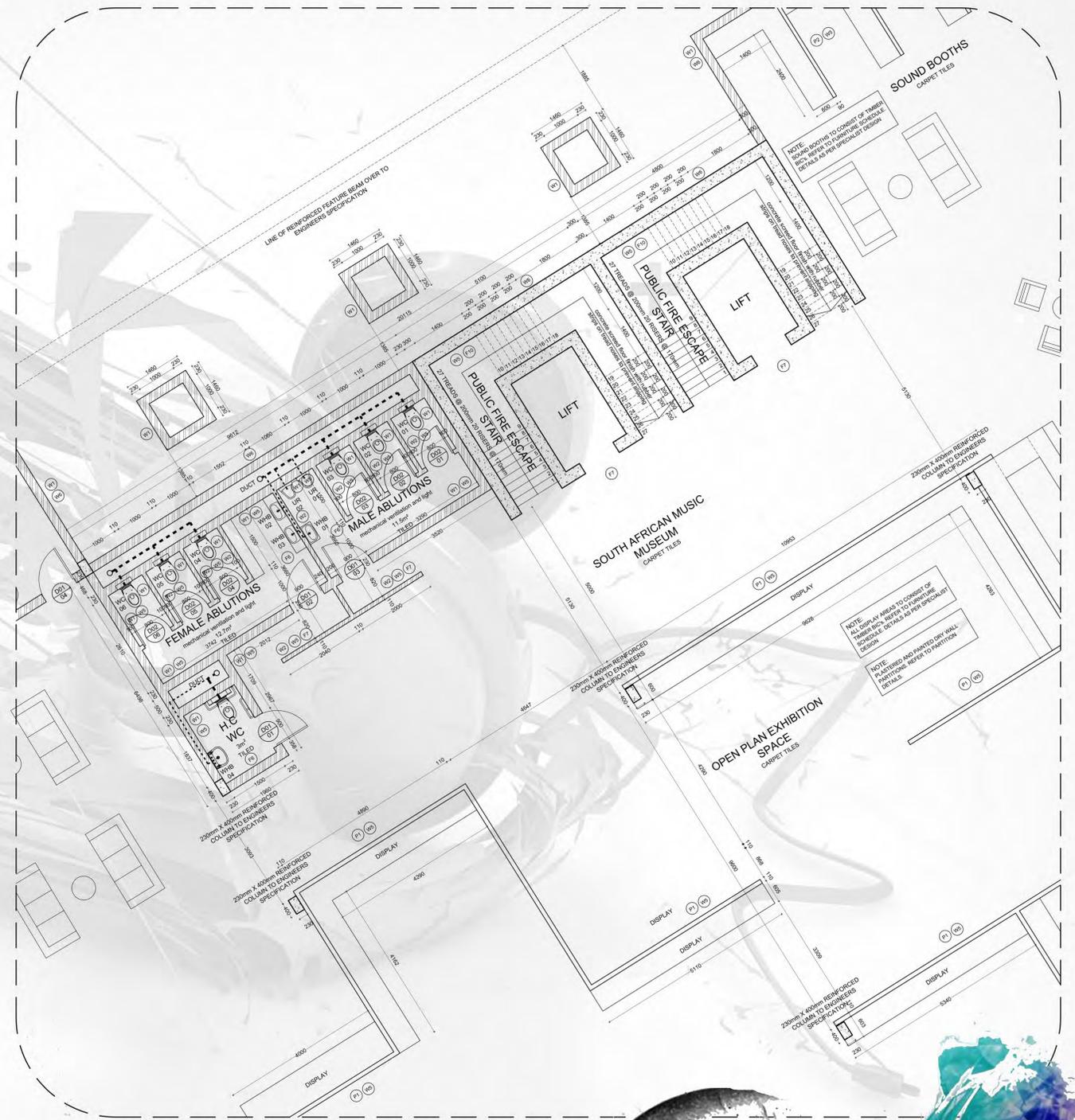
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1-[OUTDOOR AMPHITHEATER]



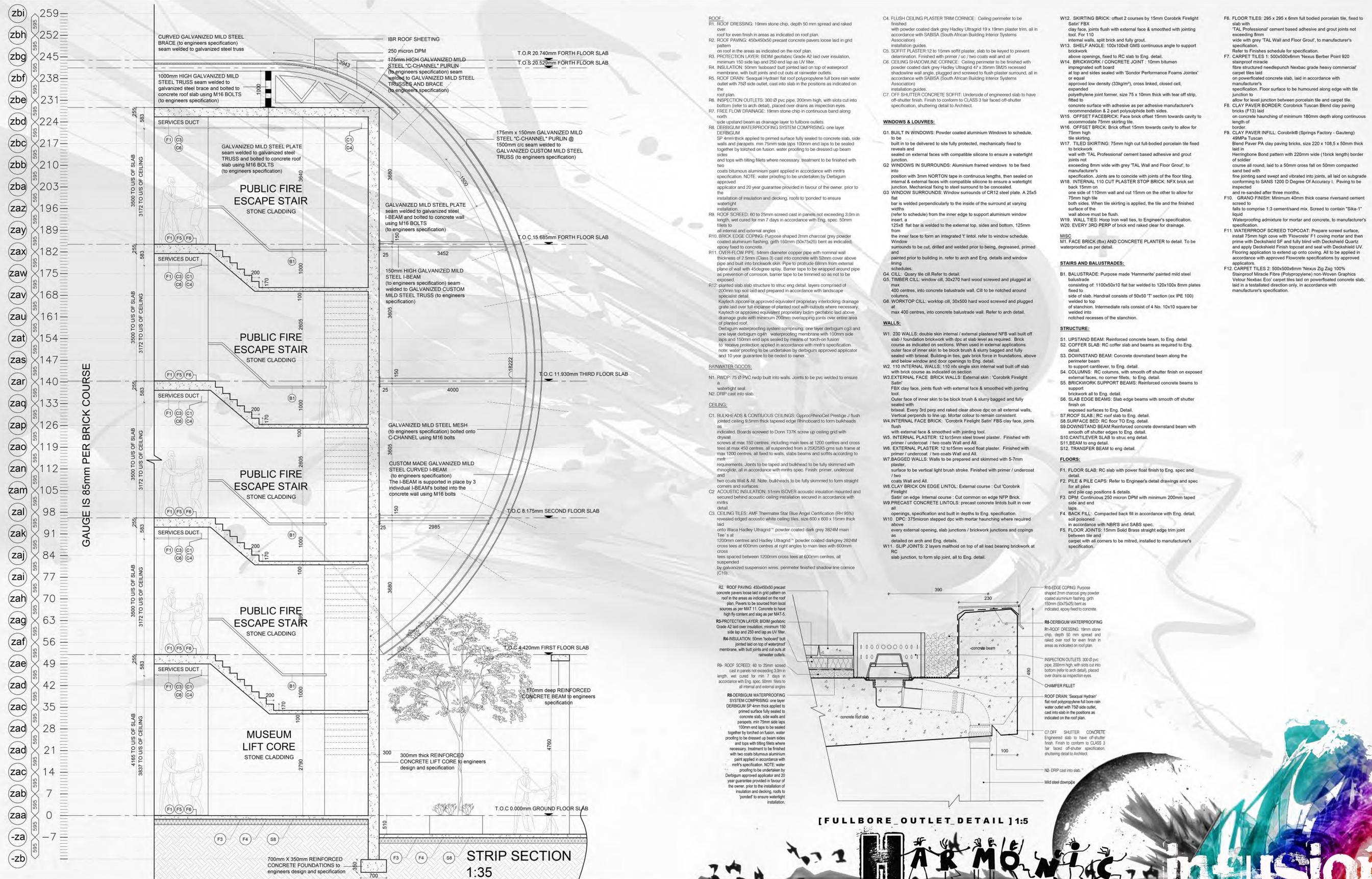
2-[MUSIC MUSEUM LIFT CORE]



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[ FULLBORE OUTLET DETAIL ] 1:5

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