CHAPTER SEVEN
CONCEPT, DESIGN AND TECHNICAL RESOLUTION
7.1 A STRATEGY FOR THE DESIGN

The design contribution takes the form of a temporary opera performance running for three to five weeks, which acts as an initial event to draw the public to the site. The William Kentridge re-imagined performance of the well-known opera Magic Flute will awaken the beauty of the site and encourage the audience and public to revisit the site once the performance is over. Figures 7.1 and 7.2 explore the initial conceptual development of the design intention, and shows a creative combination of site, scenography, atmosphere, and performance.

The main concept was developed around exposing both the existing beauty of the site and the thematic developments and emotions of the opera. Through this, the design was brought to life. A temporary intervention will contribute to the current preservation of the site. A designated walkway will facilitate the human circulation on the site, firstly to take them on a constructed journey of site and opera, and secondly to minimise the physical contact with the heritage fabric. This will ensure the preservation of the site whilst adding value to the site in the form of a possibly semi-permanent layer. The non-invasive, temporary intervention will act as an initial catalyst to the awareness and preservation of the site, encouraging the public to revisit the site once the performance has passed.
The design approach for this dissertation, visually explored in the final concept board Figure 7.3, uses a combination of the theoretical data-studies (explained in Chapter 4). This includes heritage, Site-specific Theatre, cultural diversity of theatre, elements of interior architecture and Scenography design - precendent studies (see Chapter 5) and Williams Kerridge’s adaptation of the Magic Flute Operas (invoked in Chapter 6). The mentioned data has been collected and organised throughout this document to inform the design decisions of the project. The design informants act as a means of consideration and inform an important part of the design development. The following selected informants have been considered in the design approach for each scene, as seen in chapters: – 7.2.1 Site-specific theatre, 7.2.2 Cultural diversity and 7.2.3 Heritage.

### 7.2.1 Site-specific theatre
Site-specific theatre is theatrical form from which there is no found location and character of the given site, as the backdrop and set for a production - refer to Chapter 4.2 for an in-depth explanation. The exploration of the site-specific location and the benefits for effective audience experiences of the existing site is the main informant of this design. Site-specific theatre serves to enhance the natural potential of the existing site, bringing to life its unique qualities, character and heritage. In the site-specific theatre, the site acts as the stage on which the performance will take place. Therefore, the selection of the Fort Daspoortrand ruin is a vital consideration for the further design of the site.

The use of the existing site offers a valuable layer of information which in conventional theatre would have to be fabricated. The site-specific location and its natural scenery, texture and volumetric spatial qualities can be enhanced and further developed in each scene. The selection of the location for each scene is carefully identified in order to relate to the thematic development of the Magic Flute. The site’s qualities and their locations need to be carefully considered to enhance both the production and the qualities of the site. These selections are further discussed under the unpacking of each scene in the following section, Chapter 7.5. They have also been identified in Chapter 3.1.5, the Analysis. The unpacking of the site is achieved by laying information, projection, set and Opera onto the site. The combination of opera and site opens the opportunity to add both relevance in the 21st century.

### 7.2.2 Cultural diversity
The intention at the onset of studying the cultural diversity of various theatres was to broaden an understanding of the forms and technologies used in theatres around the world. Throughout the research into these variations, the broad western approach to theatre design is challenged, and the richness of cultural diversity is further explored. The approach of the site was not to act in exact method or replica of the cultural traditional forms, but to relate to the theatre of different cultures and sociocultural ideas and take inspiration from these. The Asian and South African theatres are rich in indigenous cultures, therefore, taking inspiration from these forms will enrich the site in an unexpected way. The use of back projections and shadow puppets, inspired by the Asian theatre, see Chapter 1.2.5, is used in Act 1 Scene 3 and Act 2 Scene 10. This layering approach adds information and richness to the existing site and heritages. The African inspiration of wind and energetic performances, as well as strong and powerful voices, is exemplified in the opera performance at the site. The cultural relevance of indigenous South African theatres with the cultural relevance of the opens and site. The Western Theatre is explored through the use of lighting, projection and construction methods in the site. This combination of cultural richness gives the performance a unique visual approach, reflecting the diversity of South African society.

### 7.2.3 Heritage
Since the selected site is older than 60 years, it is classified under the National Heritage Act as a site at which the heritage must be considered. The site also represents a significant aspect of South African history during the Anglo-Boer War period, further adding cultural and historical significance to the site. The site’s heritage design approaches discussed in Chapter 4.6, the selected heritage design approach is preservation of the existing site. The preservation aims to create an awareness of the site and its unique character, revealing the history and drama of its heritage fabric. The idea of preservation is to fabricate a design to enhance the existing site and reinforce the performance, by creating a connection to the site’s unique character and its historical significance.

Temporary installations are used to enhance the quality of the site and reinforce the performance, by creating a connection between the two. The structures aim to grow from what the site naturally offers. For example, in Act 2 Scene 3, the abstracted tree form follows the natural contours of the site. Through this design intervention, an emphasis is placed on the skilful quality that the site has to offer. These trees also take inspiration from the natural forest, aiming to bring to light its unique qualities, character and structural nuances. In the site-specific theatre, the site acts as the backdrop and set for a production – refer to Chapter 4.2 for an in-depth explanation. The exploration of the site-specific location and character of the given site, as the backdrop and set for a production - refer to Chapter 4.2 for an in-depth explanation. The exploration of the site-specific location and the benefits for effective audience experiences of the existing site is the main informant of this design. Site-specific theatre serves to enhance the natural potential of the existing site, bringing to life its unique qualities, character and heritage. In the site-specific theatre, the site acts as the stage on which the performance will take place. Therefore, the selection of the Fort Daspoortrand ruin is a vital consideration for the further design of the site.

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Since the regulations of conventional theatre do not strictly apply to the open-air performances, the regulations for a construction site and occupational site have been studied. These regulations address issues such as unobstructed land, barrier-free drop-offs, and safety at non-structured locations. The safety of the audience and actors poses a unique opportunity to incorporate the safety measures with the design of the temporary interventions. These practical elements have been translated into design solutions which can enhance the performance, becoming one with the scene and transitional spaces between performances. The safety precautions and design approach is later explained and graphically represented on a plan – Chapter 7.4.6. The areas of danger were first identified and then a general design approach was considered for the safety and security of the audience members. The first approach is to restrict the audience movements around the dangerous zones using a marked pathway. The audience will be requested to stay beyond this path to avoid danger areas. Lighting will also be used to expose structural areas of danger, showing the beauty in their damage, whilst also warning the audience to be cautious.

The identification of interior architectural elements, as explored in Chapter 4.3.3, ensures that the design adheres to principles of interior architecture, since the site has an open-air nature. This aspect is vital in the project to ensure that the focus is kept within the field of interior architecture, and therefore validate such a project under the research of the degree Professional Masters in Interior Architecture.

A design focus on each scene will be placed on the created spatial qualities, lighting to enhance the space, and the way in which the audience members interact with the site. It is essential to focus on the aspect of wayfinding and site navigation which the audience members interact with the site. A typical design focus at each scene will be placed on the created spatial qualities, lighting to enhance the space, and the way in which the audience members interact with the site. A typical design focus at each scene will be placed on the created spatial qualities, lighting to enhance the space, and the way in which the audience members interact with the site. A typical design focus at each scene will be placed on the created spatial qualities, lighting to enhance the space, and the way in which the audience members interact with the site.
7.4 DESIGN EXPLORATIONS

The design approach for this project is twofold. The first aspect of the design focuses on the circulation at the site and the general functioning of the productions. This design focuses on audience safety, navigation, services, ablutions, refreshments and general movements at the site. The second aspect of the design approach focuses on the individual scenes - unpacking and exploring the way in which scenography and The Magic Flute Opera will be viewed by the audience. The design will consider the details of the layering of the design, as well as the methods of construction used in each scene to achieve the experiential outcome.

7.4.1 GENERAL PROGRAMME

A general idea of the site programming gives an overview of the location of services about the architectural structure of the site. Within the general programming graphics, seen in Figure 7.6, ablutions, services, stairs, site approach and designated bar areas have been identified. These design interventions should be temporary. However, they do not form the focus of this project; the design of the scenes is the main development for the design. The stairs form an important part of the audience circulation and therefore in the technical consideration, the design and implementation of the three staircases will be explored in detail.
7.4.2 Concept Model of Site Circulation

For a better understanding of the relationship between the audience, actors and site, concept models have been used to explain the thought process connecting all three visually. These initial concept sketches Figure 7.7 to Figure 7.15, graphically represent the audience’s expected movement at the site.

For clarity of the three-dimensional collage the following information is needed: brown card represents the contour at the site, cork represents the other smaller contours around the site, newsprint is a means to communicate the rest of the landscape, light brown paper represents the fort, white pins represent the audience movement, tracing paper shows the path along which the audience movement will take place.

Figure 7.7 to Figure 7.9 represent a macro view of the fort, with a focus on the road access to the site. Figure 7.10 to Figure 7.12 represent the movement of the audience from the parking bay to the Fort. Figure 7.13 to Figure 7.14 shows the expected and conceptual movement of the audience through the fort, taking them on a journey around the site.
7.4.3 Concept models of audience movement

After the conceptual models – which give an initial idea of audience movement – the same principles were used to give a more site-related impression of the audience and actor movement. The following models give a structural overview of the site, including the built-up areas and different levels of the site.

These models, like the previous ones, are best understood while considering the following information: the white built structure represents the existing fort; newsprint represents the walkable areas around the site; grey built-up areas seen in Figure 7.22 represents the newly-built work for the development of the scenes.

The intentions of the scenes are to move the audience around the site, exposing them to all aspects that the site has to offer. Figure 7.22 to Figure 7.24 show the initial attempt at adding information and structure to the site once the scenes and audience movement has been identified.

Figure 7.16 to Figure 7.18 show the movements from scene to scene. The scenes are scattered around the site, making use of the different levels and areas of unique character. The models shown in Figure 7.19 to Figure 7.21 depict both scene movement and the audience movement to reach each scene.
7.4.4 Scene location initial concept

Figure 7.25 and Figure 7.26 explore the initial scene location. The site selection for each scene is linked to the thematic developments of the Magic Flute narrative. The intentions for the scene location is to take the audience on a journey through and around the site, revealing its characters and drama.
Although not all the scenes of The Magic Flute have been fully designed in this project, their location around the site and the movement of the actors is important. Figure 7.27 shows a graphic representation of the site and the location of the 13 scenes in the entire performance. The four selected scenes have been depicted in red, while the other remaining scenes are shown in yellow.
7.4.8 Audience Movement

Figure 7.26 shows the audience movement—green—around the site. The intention is to take the audience on a journey of the site, allowing them to explore the various levels of the structure. The concept behind the journey is to combine the narrative of The Magic Flute with the narrative of the site, exposing the drama of the production and historical fabric simultaneously. Figure 7.29 shows the level relationships between the audience and the scenes.

**Key**
- Selected Scenes
- Other Scenes
- Audience pathway
- Scene visual link
- Audience 50-60 members
- Actors

**Audience Movement Layout**

**Figure 7.28 Audience Movement Layout**

**Scene 3 - A Garden**
- "Nur stille, stille, stille" (Hush now, absolute quiet)

**Scene 10 - The Temple of the Sun**
- "Der Holle Rache kocht in meinem Herzen" (The revenge of hell rages in my heart)

**Scene 5 - The Pyramids**
- "O zittre nicht, mein lieber Sohn" (Oh, tremble not, my dear son)

**Scene 1 - A Rough, Rocky Landscape**
- "O Isis und Osiris" (Oh Isis and Osiris)

**Scene 3 - A Grove of Palms**
- "O Isis und Osiris" (Oh Isis and Osiris)
7.4.7 SITE SAFETY HAZARDS

Since the site is a ruin, there are structurally compromised areas, steep un-barricaded high levels, and unstable ground. To ensure the safety of the audience, it is part of the design proposal to incorporate safety measures into the scenes and transitional spaces between scenes. Highlighted in Figure 7.30, are the areas of concern identified within the site. This graphic shows the dangerously high levels in the existing architectural fabric, unstable ground, boundaries of safe, walkable areas, as well as places deemed safe for the movement of the audience.

As a means to restrict the movement of the audience into unsafe areas, reflective illuminated pathways will show the audience which areas are safe. The ushers and guides will also assist the audience in their movement around the site. The audience will be requested not to deviate from the cleared pathways, for their own safety.

**SAFETY HAZARDS LAYOUT**

Figure 7.30 Safely mandated areas

**KEY**

- Safe walkable area
- Unstable ground
- High, dangerous levels
- New circulation additions

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7.5  General Technical Considerations

This section focuses on the general technical development of the project, through a look at circulation, functional services, navigation, disability, energy, lighting, temporary structures, materiality, theatre equipment, set construction, colour in theatre, theatre lighting, theatre equipment, sound, and acoustics.

Figure 7.31 Initial proposed plan 2m 4m
7.5.1 Circulation

Audience circulation is an important aspect of this design. Since the site is in a state of physical deterioration, a strategy must be put in place to ensure the future preservation of the site. As mentioned in the Heritage Chapter 7.2.3, the erosion over the last year at the site has been significant - this erosion was documented on multiple site visits. Through the photographic evidence recorded, it was found that the cause of the erosion is from grass loss, human foot traffic, and heavy rains. The strategy proposed for the circulation is therefore, to remove the foot traffic over these areas allowing the site to rehabilitate naturally over time. After consideration, it was decided that a permanent intervention for circulation be placed on the site. It was decided that if a temporary intervention is used and then removed after the performance, the returning movement will continue to damage the site further. Three staircases and one ramp are therefore placed on the existing site, as seen in Figure 7.32. The structures touch the site minimally to ensure that the overall design keeps with the concept of heritage fabric preservation. The materiality of the steel stairs and ramp responds to the existing site, ensuring that the structure will weather and change in the same way that the site does. Figure 7.33 shows the materiality of Corten steel, a structurally intact corroded steel, which will give the new structures a dynamic nature, changing with the progression of time. Ideally, the structure will be built one and a half months before the production so that some corrosion and color change is visible.

Figure 7.32: Circulation site

Figure 7.33: Corten steel weathering examples
7.5.1.1 Initial stair and ramp exploration

The stairs and ramp circulation were selected as design details, as illustrated in Figure 7.34 and Figure 7.55, as they are needed for the functionality of the site and production. The stairs and ramp will also add value to the site after the production. The technical exploration for the stairs and ramp, found in Figure 7.36 to Figure 7.43 on the following pages, shows the structure and specifications of the circulation.
Permenant Design Features, ramp and stairs

New Steel

5 Years

2 Years

0.5 Months

© University of Pretoria

02/06

© University of Pretoria

02/07
Permenant Design Features, ramp and stairs

New steel ramp section
7.5.2 Functional Services

Services and functional requirements for the project have been addressed with temporary interventions - these details are highlighted in Figure 7.44. Portable ablution blocks will be provided for males and females, including disabled persons. These ablations will be fixed on a temporary basis for the duration of site construction and performance. Figure 7.45 and Figure 7.46 show the types of ablations that will be used.

The temporary bar will be constructed from found materials, such as crates, pallets, and oil drums. These objects will be repurposed after the performance has commenced. Oil drums will be used as cocktail tables, and plastic slink crates and repurposed timber pallets will be used in the construction of the bar. Figure 7.47 to Figure 7.50 suggest the aesthetic look of the bar. The layout of the bar is defined for this project, however no further design detail will be developed. The bar area will act as a meeting point for the audience members after the performance, giving them a view of the city lights from the top of the fort. The bar will be open during the performance and is available for audience members; guides will assist with their navigation. Portable refreshments will be served at an interval-like event during the performance. The location of the bar also allows for storage under the trees to be used. This will keep the mess to a minimum and hidden from the audience’s view.

The main storage at the site will be incorporated into the space created under the ramp. Beneath the large landing in the centre of the ramp there is a void, which can be temporarily closed up to create a secure storage area. Prop storage and backstage areas have been included into the design of each scene, ensuring that the actors do not have to travel far to retrieve props needed for the scenes. As the actors do not have dressing rooms, they will not require a dressing room during the performance. However, an allocated area will be provided for the inactive actors. This area will, however, be a temporary structure and is retrieved from the storage space.
7.3 Disability considerations

The inclusive design for this immersive experience has been taken into careful consideration. A viewing platform and disabled solutions have been allocated for audience members who utilise a wheelchair. The disabled audience members who need to use a wheelchair will be requested to meet at the site earlier than the other audience members. The reason for this is that they will have an opportunity to visually explore the scenes of the performance before it begins, and after which take their place on the viewing platform. The location of the ramp in the interior of the fort will allow the disabled audience members to take the same journey that the other audience members will take during the performance. A guide will be allocated to each disabled audience member and assist them in any way needed during the production. Figure 7.61 shows the path which the disabled audience members will take. Audience members with significant visual impairment will be requested to arrive at the site before the production starts, and they will give a verbal guided tour of the scenes. The visually impaired will be assigned a guide who will assist them throughout the production, reminding them of the scenes that were explored earlier in the evening. This ensures that all members of the audience will have a similar experience. Auditory impaired audience members will be welcomed to partake in the visual experience of the performance. They will be requested to bring an interpreter or assist in verbal communications, or they can request that an interpreter guide is supplied. The production of The Magic Flute is presented in a three-dimensional exploratory form. The lighting effects and projections enhance the narrative, making this performance easier for the auditory impaired audience members to enjoy.

Figure 7.61: Disabled access
**7B.3.1 DETAIL DESIGN**

This viewing platform makes up a portion of the focus design details. A scaffolding structure has been used to construct the viewing platform, selected for its temporary nature as the structure can be removed and repositioned once the performance has concluded. Figure 7.52 depicts the initial exploration of the scaffolding and the structures which are resist commonly used. A standard KWK scaffolding was identified as the preferred structure, with the intention to hire the necessary components for the duration of the performance after which the structure is removed. The second-hand scaffolding with paint, damage and corrosion will form part of the varying heights of the existing soil. The platform will perch adjustable jacks allow for the scaffolding to be adjusted for compressed and secured before the structure is erected. The ground under the KWK jack and base plate will need to be recess between the two as an added heritage consideration. The platform, Figure 7.56 and Figure 7.57, is made up of standard parts. It stands within and over the existing room. A 100mm gap between the existing and the new work ensures that the structures do not touch and get damaged in the process. Lighting from below the structure will illuminate the viewing platform, selected for its temporary nature as for its aesthetic appeal, Figure 7.53 to Figure 7.55. The design performance has concluded. Figure 7.52 depicts the initial scaffolding with paint, damage and corrosion will form part of the viewing platform, Figure 7.56 and Figure 7.57, is made up of standard parts. It stands within and over the existing room. A 100mm gap between the existing and the new work ensures that the structures do not touch and get damaged in the process. Lighting from below the structure will illuminate the recess between the two as an added heritage consideration. The ground under the KWK jack and base plate will need to be compressed and secured before the structures are erected. The adjustable jacks allow for the scaffolding to be adjusted for the varying heights of the existing soil. The platform will perch over the existing wall, and joint at the ground level to create a seamless transition, easy for wheelchair use. KWK hook-on-board will be used to create the standing platform, ensuring the easy disassembly of the structure at a later stage.
7.5.4 Navigation of Site

The audience movement and navigation at the site is vital to the success of the production. The site-specific production aims to take the audience on a journey of the site, as they follow the narrative from scene to scene, shown in Figure 7.58. Due to the deterioration and dangers at the site – as identified in Chapter 7.4.6 - the audience's movements around the site needs to be designed and controlled. The addition of a navigation system aims to control the movement of the audience, directing them to the site and keeping them away from the danger areas. Initially, the idea was to use solar jars to provide light over the pathway. However, the cost of the jars and the risk of theft defined that all the jars would have to be removed every night and put out every day. It was decided that this would be an uneconomical choice.

The second challenge was that if the path were lit up constantly during the performance, it would detract from the lighting effects of each scene. The solution to this problem was to use timber stakes, Figure 7.59, 38mm x 38mm x 600mm knocked into the ground and covered with different coloured reflective tape. This extra layer of information means that different colours can be used for different directions of navigation. All reflective stakes moving away from the scene will illuminate in red, showing caution that the audience is moving in the wrong direction. The stakes leading towards the scene along the path will be covered in a reflective colour which reflects the thematic development and transition between the scenes. Since the reflective tape responds to light, two suggestions for their use are proposed. Firstly, the use of ushers or guides who will assist the audience by illuminating the pathway with a torch, and secondly to request that the audience download a phone light management application. The application will automatically turn on and off the audience's phone lights as they are needed between scenes and during the scene. The control of the light is important, as ambient and uncontrolled light will detract from the lighting effects in the scenes. The application will allow for all lighting to be controlled and manipulated.

The timber stakes are placed along safe, cleared and walkable areas of the site at 2000mm intervals, the pathway also measures 2000mm wide. The colour changes are identified on the plan, Figure 7.58. The audience will be requested not to move beyond the pathway, as these designated areas will be the only ones deemed safe for their movement. The guides will ensure the audience co-operates with this request and assist any persons who would like to use the ablution facilities during the performance.
The isolation of the site means that there is no municipal connection to electricity. Various means of power were considered and evaluated to ensure the best choice of electricity supply. Stage lighting, projections, general lighting, and speakers are elements which require an energy source. Initially, the use of batteries was proposed as the means of power. The batteries would be placed at each scene – carefully disguised – and the lights, sound, and projectors would be connected to them. After looking at the logistical side of the batteries, it was discovered that they would need to be removed every evening after the production, taken off-site for charging and then replaced the following afternoon before the start of the production. The movement and management of the batteries would create unnecessary work and effort. The basic calculation of five batteries per scene was proposed, making this exercise very costly. Alternatively, the batteries could be charged on-site, using a generator, this would mean that the generator would also need to be provided at the site. The second idea was to bypass the batteries and supply energy using only the generator. Typically, generators produce a large amount of noise, ranging between 72 and 75 dBA at 7m. The ambient noise of the generator against the natural silence at the site would then interfere with the performance. A study into silent generators was then done. Although these generators are more expensive to purchase, they would be more suited to the performance. A silent generator produces between 62 and 66 dBA (Figure 7.61) according to the Occupational Safety and Health Administration (D.P Driscoll, 2016), a comparison of typical noises produced. It was also proposed that the generator be hired by the theatre company; for the duration of the production this would cost the same as buying the needed equipment. The generator would be located away from the primary areas of the site, ensuring that the reflected sounds travel away from the performance areas. See Figure 7.61. Cabling from the generator to each scene will be further explored in the scene unpacking. Exterior cabling and outdoor plugs will be required for the performance.

The option of solar was considered, however, the cost required for portable solar trailers would be too high. On the following page (Figure 7.62) a comparative table shows the different energy options for the project. In conclusion, the option of a silent generator is best suited for the performance. The most eco-friendly option is an 8kVA LPG natural gas generator. The option of solar was considered, however, the cost required for portable solar trailers would be too high. On the following page (Figure 7.62) a comparative table shows the different energy options for the project. In conclusion, the option of a silent generator is best suited for the performance. The most eco-friendly option is an 8kVA LPG natural gas generator.
7.5.6 LIGHTING TYPES

There are two main types of lighting used in this project. The first is general lighting for the site, this will be used in the case of an emergency and at the end of the production. The other lighting types are theatre lighting as discussed in 7.5.9.3

7.5.6.1 GENERAL LIGHTING

General lighting, Figure 7.63 is needed at the bar, ablations, entrance and pathways to the parking. The strategy for this lighting will be the use of temporary floodlights, shown in Figure 7.64, to provide enough light for general functionality. Since the spaces between each scene do not have a main source of light, a solution for emergencies must be considered. In the event of an emergency, flood lighting placed around the site will be turned on, illuminating the entire fort and allowing the audience to evacuate the space. Towards the end of the performance, these floodlights will be turned on briefly in the final scene. This will be the first time at the audience see the entire site. The brief appearance intends to create intrigue, and attract the audience to the site once the production time has passed. The following energy calculations show the required amount of energy needed for the production. The 8kva generator will produce more than enough energy for the requirements.

According to Architective (2013:376), the typical theatre requires 100 Lux of light on stairs, corridors, and audience movement areas. Lux refers to the amount of lumen per square meter. The total area of audience movement is approximately 250m², therefore approximately, 25000 lumens are needed in the general area of the site. The floodlight performance requires darkness, these lights will act as a backup for emergencies and the brief illumination at the end of the performance. Six floodlights have been placed in the interior of the fort, and three at the path from the fort to the parking. This provides substantial light for the audience's movement.

Energy Calculations

\[
\text{Lux} = \frac{\text{Lumens}}{\text{Area of the site}}
\]

Therefore,

\[
\text{Lumens (required)} = \text{Lux x Area}
\]

\[
\text{Lumens} = 100 \text{Lux} \times 250m^2
\]

\[
\text{Lumens} = 25000
\]

Lighting for emergency at site = 25000 lumens = 4800 (floodlight)

\[
= 0.52 \text{ floodlights are needed} \approx 6 \text{ floodlights}
\]

According to Architective (2013:376), the typical theatre requires 100 Lux of light on stairs, corridors, and audience movement areas. Lux refers to the amount of lumen per square meter. The total area of audience movement is approximately 250m², therefore approximately, 25000 lumens are needed.
7.5.7 Temporary Structures Precedents

Temporary structure inspiration was taken from a collection of various precedent imagery which helped inform the material choices for the project. Since the focus of the project is on temporary design, lightweight materials, local resources, and available and regenerative materials were considered. Chapter 7.5.8 takes a further look at the materials and how the choice of materials to use were made. Figure 7.65 to Figure 7.68 looks at a bridge design by Shigeru Ban. The bridge is constructed from cardboard tubes and a modular steel joint system. The boundary of the material’s tensile strength is challenged, and the structure defies the expected. Figure 7.69 to Figure 7.75 explores the use of simplistic timber structures, in an attempt to create temporary designs. Figure 7.73 depicts the use of lightweight fabric as a medium of construction. All the above materials and structures are used and built with the intention of being temporary. The set design of the scenes has taken inspiration from these structures and utilises their aesthetic qualities to enhance the production.
7.5. MATERIALITY

The materiality choices reflect the temporary design focus of this project. The intention is to use materials that can either be reused, repurposed, or recycled after the production initially, a list of domestic, construction, organic material and waste were evaluated. Appendix B, page 259 shows a material audit which highlights the quality of the materials. After all the materials were identified, a further in-depth look was placed on the limits of the domestic and organic materials. Figure 7.76, a collage shows domestic materials which can be recycled, re-used and repurposed. The organic materials, Figure 7.77, most of which are found at the site, would be used in conjunction with the domestic arena. A further exploration of material selection can be found under each scheme development, where the materials were critically selected to enhance the themes of the narrative.

This project does not strictly align itself with the GBCSA GreenStar rating, ISAT or LEED, however, efforts have been taken to ensure that the design and solutions to the site are respectful of the environment and the heritage significance of the site. For the brief requirements, a Greenstar report has been produced to evaluate the project. The criteria focus on the materiality of the design, energy use, and design for disassembly. As mentioned above the materials selected have been chosen for their reusability and theirPaused after 49 words. Therefore just as the intention of the project is focused on preservation, the choice of materials consider the ecological preservation impact it will have. The chosen energy generator uses natural gas, a more sustainable and eco-friendly alternative to petrol and diesel. Design for disassembly links closely with the choice of materials, to ensure that the materials can be fully reused. The design considers how every element will be constructed and deconstructed for reuse purposes. Figure 7.78 shows the report generated from the Greenstar assessment.
7.5.9 THEATRE EQUIPMENT

It is proposed that the performance be produced by a theatre company, which has access to the equipment needed for a theatre production. The existing theatre equipment such as lighting, projectors, cables, scaffolding platforms, basic set design, antiques and cloth from the theatre. Additional equipment will be rented.

7.5.9.1 THEATRE SET CONSTRUCTION

Scenery are set design for the narrative. These decorative and functional objects need to be constructed with care and consideration. First, it must be possible and lightweight in structure so as not to move readily on the stage and from theatre to theatre; second, scenery has to be able to assume large-scale proportion for maximum of portability; last, because scenery is here today and gone tomorrow, it must be economical. (W. Oren Parker and Harvey K. Smith 1979:191). The intention of this project is the theatre production through the reflection of the narrative's themes, acting the scene does not need to be constructed, but rather enhanced through the set design.

Figure 7.79

In traditional theatre, soft scenery includes drapery materials, drops, and cyclotrons - these typically provide large areas of scenery. In the Site-specific Theatre, the chosen location replaces the soft scenery, as the existing environment provides the background and setting for the performance.

Frame scenery describes the type of scenery which is planned and supports itself. This scenery would comprise loose objects and details which stand out from the soft scenery, giving a three-dimensional effect. The three-dimensionality of the first, assumes that minimum framed scenery is needed.

The specific location scene is selected to create the light environment for the narrative, meaning the scenery does not need to be constructed, but rather enhanced through the set design.

Weight-bearing structures typically give the actor a standing platform. They are forms of stairs, ramps, and scaffolding. In this form, it is important to ensure these structures are sound and safe. The use of sound platforms and suspended stages in the project is an example of weight-bearing structures.

Follow spot is a spotlight which can be manipulated and changed, but also used to follow a moving actor. Figure 7.79 The spotlight is typically used to direct light to a specific area, such as an actor's face. The lighting directions can be measured and controlled to follow the actor's movements. Various methods are used, including manipulation of light intensity, distribution of light path, and colour.

7.5.9.2 COLOUR IN THEATRE

Colour and the physiological effects of colour are used to play a role in the experience of the audience. However, the physiological effect of colour on a theatre audience is difficult to measure as a group. The design depends on measurable individual responses, depending on the audience.

IN 7.8 IN W. Oren Parker and Harvey K. Smith (1979:248) it is stated that “within the framework of traditional training and conventions, the six basic spectrum hues can be described in terms of their emotional response, as follows:”

- Yellow—radiant, light, golden, sunny, in light values, pastel, golden, neutral.
- Orange—exciting, fiery, joyful, bright, cheerful, exciting, healthful, appealing.
- Red—active, passionate, full of inner warmth, strong, firesome.
- Purple—shy, gentle, deeper shades, shadow, horror, charm, a delicious colour.
- Blue—passive, majestic, cool, purity, tender, tenderness.
- Green—down at all times, calm, relaxing, restful, restful, serene.

In the modern stage the spotlight is far and away the most important instrument of all. (W. Oren Parker and Harvey K. Smith, 1979:445). This high-intensity light beam can be shaped and directed into many forms. It is used to follow the actor's movements, direct attention to specific areas, or focal points. The lighting directions can be measured and manipulated to follow the actor's movements. Various forms of lighting are generally used to illuminate the scenery and actors.

The lighting of the actors' faces can portray and reveal specific characteristics. The lighting can either show the entire face, or only specific areas. Light intensity, distribution of light path, and colour contribute to the drama.

Theatre design relies heavily on the use of lighting, as it contributes to the drama. Lighting can be used to enhance the theatre, narrative and actor's character. Various forms of lighting are generally used to illuminate the scenario, actors and focal aspects. The quality of light can also affect the performance. Various methods are used to manipulate light intensity, light distribution, light path, and colour.

7.5.10 THEATRE LIGHTING

Theatre design relies heavily on the use of lighting. The lighting directions can either show the entire face, or only specific areas. The lighting directions can be measured and manipulated to follow the actor's movements. Various methods are used, including manipulation of light intensity, distribution of light path, and colour.

In W. Oren Parker and Harvey K. Smith (1979:248). Colour plays a role in the production through the reflection of the narrative's themes. In the Site-specific Theatre, the chosen location replaces the soft scenery, as the existing environment provides the background and setting for the performance.

Lighting contributes to the drama. Lighting can be used to enhance the theatre, narrative, and actor's character. Various forms of lighting are generally used to illuminate the scenery, actors and focal aspects. The quality of light can also affect the performance. Various methods are used to manipulate light intensity, light distribution, light path, and colour.

The lighting of the actors’ faces can portray and reveal specific characteristics. The lighting can either show the entire face, or only specific areas. The lighting directions can be measured and manipulated to follow the audience's experience. The audience's experience. The audience's experience. The audience's experience. The audience's experience. The audience's experience.

7.6 MUSICAL PROJECTIONS

An indoor theatre often spends time and money on achieving a natural sound quality. The theatre building is designed to enhance the natural sound quality produced in the site. The acoustic type of building is an example of the sound quality produced in the site. The acoustic type of building is an example of the sound quality produced in the site. The acoustic type of building is an example of the sound quality produced in the site. The acoustic type of building is an example of the sound quality produced in the site.

Theatre design relies heavily on the use of lighting, as it contributes to the drama. Lighting can be used to enhance the theatre, narrative, and actor's character. Various forms of lighting are generally used to illuminate the scenery, actors and focal aspects. The quality of light can also affect the performance. Various methods are used to manipulate light intensity, light distribution, light path, and colour.

The lighting of the actors’ faces can portray and reveal specific characteristics. The lighting can either show the entire face, or only specific areas. The lighting directions can be measured and manipulated to follow the audience's experience. The audience's experience.
Each scene has been developed according to a template. This ensures that every scene follows the same process, making it logical and simple to comprehend. The following Figure 7.80 gives a graphic representation of the template used in each scene.

A) The selected scene template starts with an exploration of the traditional plot of The Magic Flute. This gives an overview of the narrative of the scene. Themes are identified and isolated - these themes will be further explored in the three-dimensionality of the design.

B) The main theme of the scene is illustrated.

C) A comparison of the visual representation of the traditional version and the William Kentridge version of The Magic Flute is made to show the differences between depictions of the same scenes.

D) An overview plan shows the location of the scene on the site.

E) A closer view of the specific scene shows where the audience and actors are located, as well as the line of sight between the two.

F) The elevation represents the differences in the height of the site, showing the audience-actor relationship.

G) The audience-actor relationship is represented to show how this manipulation adds to the thematic development of the narrative.

H) Since the selection of the location of the specific scene is vital to the site-specificity of the project, the identification of the scene is visually represented. The main graphic focuses on the view of the site during the day from the audience perspective. The smaller graphics highlight important considerations for the scenes.

I) The interior architecture elements identify key focuses that each scene will take into consideration, ensuring that the design is aligned with the interior field, and that the spatial development of the scenes is thought out.

J) An initial conceptual collage explores the site, main themes, Kentridge imagery, and characters in a graphic representation of the intended mood.

K) The images show the intended atmosphere of the scenes, which includes graphic projection overlays, characters, and the site, giving visual representation of the expected design outcome. The graphics are represented from the audience’s perspective.

L) Smaller graphics show the progression of each scene and the focus on lighting, projection, and actor movement.

M) The sketches explore the initial technical considerations for the scene. Hand-drawn sketches show basic construction ideas and material considerations.

Figure 7.80 Shows a graphic representation of the design template used for each scene.
7.7 SCENE TECHNICAL CONSIDERATIONS AFTER DESIGN

Four scenes have been identified for an in-depth technical exploration, each chosen to explain the overall design of the project. Figure 7.81 gives an overview of the site, identifying the positioning of the selected scenes, general programming design, main circulation points, path navigation, and scene interventions.

7.8 ACT 1 SCENE 1 – A ROUGH AND ROCKY LANDSCAPE

The scene begins when the Queen of the Night appears, in a dramatic recitative and aria "O zittre nicht, mein Lieber Sohn" (Oh, tremble not, my dear son), telling Tamino that if he saves Pamina, he can have her as his wife. The plot is further discussed in Chapter 6.2. The Queen is portrayed as a weak and distraught character; however, she is very cunning and deceptive as she persuades Tamino to rescue her daughter Pamina. At the start of the aria, the Queen aims to come across as a fearful and lonely mother who is pining for her child. However, it is evident by the power in her voice and the greatness in her thematic music that she is much more than a worried lady. These strong themes of sadness and worry are portrayed through her facial expressions and the translation of her song. This scene was selected as it is one of the first arias of the opera and forms an important introduction to the characters in the narrative.
7.8.1 Scene Location

Act 1 Scene 1 is in a rough and rocky landscape outside of the city. As this scene forms part of the initial performance at the fort, the location for the scene is at the entrance to the fort as seen in Figure 7.82. Selected for its large dominating scale, the architecture becomes a representation of the queen and her underlying power and strength. On the plan, the actress is located at the white [1] and the audience at the black [1]. In the graphic, the symbol for the audience is a grey bird’s-eye view figure. The queen is placed above the audience, and her face is projected onto a large screen behind her, accentuating her power. Figure 7.83 depicts this scene of the section of the scene and the relationship between the audience and the actress. The illustration in Figure 4.5, as discussed in Chapter 4.8, shows the type of audience-actor relationship, emphasizing the actor’s power in this view.

7.8.2 Location Character

Selected for its dominating and striking architecture, the scale of the entrance structure strikes one’s eye. The decorative archway forms an interesting juxtaposition between the natural landscape and the man-made fort. The boldness and majesty of the entranceway is exemplified in Figure 7.84. The entrance to the fort forms an important part of the performance, as it is the first time that the audience will be exposed to the existing structure. Figure 7.84 shows the sunset at the entrance to the fort. This graphic is a realistic depiction of what the audience will see as they approach the site, as only the lighting for the scene will reveal the structure of the site. Figure 7.85 shows the approach to the site and pathways, which the audience will take to reach the fort. The gravel road poses a challenge to the audience circulation, however, this is dealt with in the technical development. The detail at the site forms an intricate part in the reveal of the depth of the narrative. The archway detailing, Figure 7.87, shows the intricacy of the architectural design. The strength of the architecture is used to accentuate the power of the queen, the imperfections in the structure a reflection of her weaknesses and downfall. The structure and the boldness of its built-up existing areas become a metaphor of power and authority of the queen.
7.8.3 A link to interior architecture

Act 1 Scene 1 has a focus on the proportion of the architecture and the scale of the actress against the structure. The interior architecture elements shown in Figure 7.88 and discussed in Chapter 4.8, which are focal points in the creation of the scene include proportion and scale, lighting, support, and enclosure as main elements, and environment, space, and the ground plane as the secondary elements. These design details will be later explored in the design development, Chapter 7.8.5 of this scene. The combination of the proportion of the architecture and the actress will help to manipulate the thematic development of the underlying power archetypal figures of weakness and loneliness. The lighting in this scene will focus on revealing the architecture to the audience, enticing them into space and exposing the character and drama of the existing ruin. The ground plane plays an important part in the success of the scene and the manipulation of the audience. Noise creation at the location will enhance the drama of the performance. This design consideration will be further developed in technical considerations in Part three of this Chapter.

Environment: Space
Light
Enclosure
Ground Plane
Support
Display
Decoration
Information
Proportion
Acoustics

7.8.4 Initial conceptual mood board

The initial concept board, Figure 7.89, brings together all the necessary elements for the scene. The black and white graphic of the fort entrance depicts the location of where the actress will stand during her performance, and the view suggests that the audience is below her. The location of the scene is shown in the white plan overlay. The images focus on the scene at the entrance to the fort. A character image of the queen, as developed in Chapter 6.3 – is used to represent the actress positioning in the scene. Careful consideration of her costume is needed, as the lighting for the scene is a challenge. This will be further developed in technical considerations. The imagery of William Kentridge’s version of The Magic Flute is then placed over the scene graphic, showing the design connection between the graphic development and the concept for the scene. The collage brings the necessary aspects of the scenes together to create an emotive and expressive mood board for the design initiation.
7.6.5 Design Development

The following page of conceptual drawings Figure 7.90 to Figure 7.94, represent the initial ideas for the development of the scene. The collage-like layering of information shows the progression of thoughts as the scene and initial design is unpacked. The journey starts with the original narrative of The Magic Flute Act 1 Scene 1, and the discovery of the thematic qualities of the performance. These qualities include the concealed power of the queen and her fear, worry, and loneliness. The site is then selected as a metaphor for the queen - the strength of the queen is mirrored by the scale of the architecture. Focal aspects of the scene location are identified and further considered. The castle-like silhouette of the entrance and relationship between the queen and her ‘castle’ - the minimal damage to this portion of the structure acts as a metaphor for the queen’s power. Along with the design considerations, include an understanding of the materiality needed to create the scene. The emphasis on recyclability and reusability as the main design challenge is identified. Together with the thematic development of the scene’s plot and the existing site character, a three-dimensional design of the site, narrative and audience experience can be created. The focus of Act 1 Scene 1, is to reveal the structure and use light as a drawing tool to enhance and expose the existing character of the site. The manipulation of the proportion of architecture and the actress also forms an important part of the way the audience perceives the performance.
**7.8.6 MODELS AS A TOOL FOR DESIGN EXPLORATION**

The following images of the models have been used as a means to explore the design of the scene. The final outcome of the design development has been informed by iterating the models, and assessing the feedback of the scene design. Figure 7.95 shows the initial model before intervention. Figure 7.96 to Figure 7.98 explore the use of light to enhance the scene. Figure 7.99 to Figure 7.104 depicts the audience view and positioning during the scene. Figure 7.105 shows the scene with lighting in the dark.
Design Outcome

As mentioned above, the focus of Act 1 Scene 1 is to introduce the audience to the site and to the performance, with an emphasis on bringing the two together. Figure 7.106 gives a graphic representation of what the audience will see at the start of the performance. As the audience approaches the site, the sun will be setting, casting deep and dark shadows over the fort. The audience will only visually explore the entrance to the site at this point, creating anticipation of what will be revealed in the rest of the site. The tunnel, which is more than 20m long, will draw the audience in towards the scene. Lighting at the end of the tunnel will create a scene of excitement as the light grows to reveal more of the site as the scene progresses. Figure 7.107 and Figure 7.108 show the growing light during the performance and the way in which more of the architecture is revealed on the queen’s character and motives are revealed. Figure 7.109 – the final representation of the scene – shows how the queen and the site have been fully revealed and the audience now wait in anticipation to move through the site and explore what the site has to offer. The metaphorical connection between the queen and the site takes the audience on a visual exploration of the reveal of their characters and the drama of their personas.
7.8.8 LIGHTING EXPLORATION

The lighting in this scene plays an important part in the reveal of the queen and the exposure of the character of the fort. The following photographs taken of the model with added lighting, show the possibility of lighting different sections throughout the tunnel entrance. Figure 7.110 - the initial graphic shows the light at the end of the tunnel, used to encourage the audience to move through the space. Figure 7.111 to Figure 7.113 show how more of the site can be revealed using light. Figure 7.114 gives an idea of the effect that different light colours can have on the creation of the atmosphere, and Figure 7.115 depicts the way in which the rest of the fort entrance can be revealed using light. The lighting for Act 1 Scene 1 is further developed in technical considerations.

7.8.9 INITIAL TECHNICAL EXPLORATION

The following figures - Figure 7.116 to Figure 7.118 - explore the initial attempt at technical development. The focus is placed on the lighting, projection, and audience views at the site. Figure 7.116 gives a sectional view as to where the audience and actress will stand during the performance. The angle of view range forms an important part of the success of the scene. Figure 7.117 gives a sketch perspective of the lighting consideration of the tunnel - the yellow representing the need for lighting to expose the existing character of the site. Projection in Act 1 Scene 1 is important to re-iterate the proportion of the architecture against the proportion of the queen. Back projection - represented in Figure 7.118 - onto a scrim gauze material will allow for the enlarging of the queen’s face and mouth onto the screen.
7.10. Technical considerations

The initial scene of the performance, "O zittre nicht, mein Lieber Sohn" (Oh, tremble not, my dear son) as discussed in Chapter 7.8, focuses on the portrayal of the Queen of the Night and her initial reveal to the audience. She is a powerful character and the scene should reflect that. In the initial technical exploration, Chapter 7.9, it is identified in the use of lighting, projection, and the audience’s view to enhance the actor’s character. The final technical exploration, Figure 7.119, explores the scene, as explained in Figure 7.119, shows at which points in the site the lighting is used. The experimental approach is for the lighting intensity to grow as the scene progresses, enticing the audience to explore beyond the tunnel entrance. Figure 7.120 shows the plan of Scene 1, showing the specific areas in which the lights are placed, as well as sections Figures 7.121, on page 175, showing the angle and illumination of the lights. The LED B16 RGB 7W a 54 LED PAR light, Figure 7.122, used as spotlights to illuminate the walls of the fort and reveal its character.

As one moves through the tunnel, the light grows and the fort’s character is exposed. The fort room is lit with LED rope lights along the base of the wall. This only reveals a small amount of detail of the fort’s form. The lighting sequence for the fort is used to reveal and enhance the beauty of the site. The initial scene of the performance, “O zittre nicht, mein Lieber Sohn” as discussed in Chapter 7.8.10 Technical considerations

As one moves through the tunnel, the light grows and the fort’s character. The final technical exploration, Figure 7.119, explores the scene, as explained in Figure 7.119, shows at which points in the site the lighting is used. The experimental approach is for the lighting intensity to grow as the scene progresses, enticing the audience to explore beyond the tunnel entrance. Figure 7.120 shows the plan of Scene 1, showing the specific areas in which the lights are placed, as well as sections Figures 7.121, on page 175, showing the angle and illumination of the lights. The LED B16 RGB 7W a 54 LED PAR light, Figure 7.122, used as spotlights to illuminate the walls of the fort and reveal its character.

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information of the state of the site. In the second room, the PAR light beam is positioned up the wall at a 45° angle, shown in Figure 7.22c. This reveals more of the structure for the audience. In the third room, a 53° angle PAR light exposes more of the structure. Finally, in room four, the PAR light is placed on the top of the wall, with the beam flooding the entire wall with light. In this room, all the character and detail of the fort’s structure is revealed.

The scaffolding structure is placed above the entrance tunnel, giving the audience a place to stand. It is placed on the raised platform so that the audience members below can see her clearly. The height of the platform is worked out by laying at the typical eyeline of an average human (approximately 1850mm) and projecting lines up towards the fort entrance. Before the actor is a Bricolux arc with a Gobelin projection screen, Figure 7.124, with pre-recorded images of her face back-projected onto it. The image of her face grows as the scene develops, until only her mouth is seen on the screen. The Operator, Figure 7.125, is positioned behind the scaffolding and screen to ensure that the actor’s dialogue is not lost onto the screen. Figure 7.126 shows technical development of the scaffolding, the front section of the scaffolding structure, similar to that used for the disabled viewing platform. The reinforced ledger ensures that the desired gap between the two existing walls can be achieved. The acoustic reflection structure is visible in the section. The 4-mm-mason-board is used to reflect the actors’ voice towards the audience below, ensuring no sound is lost during her performance.
In Act 1 Scene 3 – as discussed in Chapter 6.2.3 – Pamina and Tamino meet for the first time. Sarastro explains in “Nun stolzer Jungling, nur hierher” (Proud youth, come this way) that the two young and in-love children will need to prove their worth and go on a path of enlightenment if they wish to be together. The scene was selected as it is the final scene of Act 1 and is a key point in the development of the thematic notion of enlightenment and the path to greatness. A strong sense of light versus dark is evident in this scene, and the design development later explains the significance of this. The scene takes place outside the temple. The three entrances read, ‘Wisdom’, ‘Reason’ and ‘Nature’.

Figure 6.12 Act 1 Scene 3 – Traditional version 1991

Figure 6.13 Act 1 Scene 3 – William Kentridge version 2001

7.9 Act 1 Scene 3 – A grove in front of the temple

Trial, kindness and unity

Figure 6.20 “Nun stolzer Jungling, nur hierher” (Proud youth, come this way).
Act 1 Scene 3 takes place in front of the temple. In order to achieve the effect of the temple-like original environment, this scene takes place above and in front of the original ruin at the site. In Figure 7.128, the white box shows the actors positioning and the black box the audience location. The audience is required to stay within the prescribed walkable area so as to not encounter any danger from the damage of the ruin. The members of the audience are represented by the grey dot on the way near Figure. The actors are both on the same playing level as the actors, and viewing the main actor Sarastro from below, giving him a sense of authority. Figure 7.129 shows a section of the scene and the relationship between where the actors and audience are located As discussed in Chapter 4.8, Figure 4.5 shows the relationship between the audience and actor, where the actor is placed above the public, giving the actor a sense of power and authority. Figure 4.4 shows a combination of the actor and audience on the same playing level, denoting a sense of equality and reliability. In this scene the main father-like character – Sarastro – is placed above the audience and the two younger children – Taras and Parenz – at the same level of the audience showing their immaturity. Figure 7.130 shows the relationship between the three selected areas on the plan of the scene of the original Magic Flute, the site plays an important role in this scene. The height difference and structure allow the actors to be placed on both levels to reiterate their psychological character. As seen in Figure 7.131, the built-up nature of the surroundings becomes to the real structure of this scene. The three selected areas, as seen on the plan Figure 7.131, represent each of the three temples. Reason on the left, Taras on the Right and Warden in the middle. Figure 7.131 gives an overall view of the existing ruin at the site and the amount of natural erosion and degradation of the structure. Similarly, Figure 7.130 depicts the view from the upper level of the fort showing the open nature of the rooms. Inside the rooms, trees and plants have started to grow in this scene, these elements add to the creation and reliability of the thematic development of the narrative to the site. The trees will also be used to suspend acoustic boarding to ensure the sound is controlled. This will be further developed in Part Two. The photograph in Figure 7.131 shows the site that the audience will see when watching the progression of the scene.

7.9.1 Scene Location

Selected for its ornate petry and architectural structure to the temple scene of the original Magic Flute, the site plays an important role in this scene. The height difference and structure allow the actors to be placed on both levels to reiterate their psychological character. As seen in Figure 7.130, the built-up nature of the surroundings becomes to the real structure of this scene. The three selected areas, as seen on the plan Figure 7.131, represent each of the three temples. Reason on the left, Taras on the Right and Warden in the middle. Figure 7.131 gives an overall view of the existing ruin at the site and the amount of natural erosion and degradation of the structure. Similarly, Figure 7.130 depicts the view from the upper level of the fort showing the open nature of the rooms. Inside the rooms, trees and plants have started to grow in this scene, these elements add to the creation and reliability of the thematic development of the narrative to the site. The trees will also be used to suspend acoustic boarding to ensure the sound is controlled. This will be further developed in Part Two. The photograph in Figure 7.131 shows the site that the audience will see when watching the progression of the scene.

7.9.2 Location Character

Overview of the rooms where the scene takes place for this scene. The three selected areas, as seen on the plan Figure 7.130, shows the site that the audience will see when watching the progression of the scene.
7.9.3 A LINK TO INTERIOR ARCHITECTURE

Act 1 Scene 3 focuses on the creation of the environment in which the performance takes place. The interior architecture elements, Figure 7.134, selected for the scene are environment, space, and lighting as the main elements, and support and proportion as the secondary elements. These design details will be explored later in the design development of this scene. The relationship between the existing site fabric and set design is an important aspect of this design. A metaphorical abstraction secures in the creation of the environment which in turn responds to the site and the set design for the scene. Lighting and projection are used to enhance the thematic development of the narrative and give and add to the visual information by laying existing, new and previous works onto the same playing area. The support structures for this scene address the acoustics and staging for the actor. These will be further developed in Part three, technical considerations. Proportion is manipulated in this scene through projections onto the acoustic panelling, which serves a dual purpose.

7.9.4 INITIAL CONCEPTUAL MOOD BOARD

The initial concept board, Figure 7.135, brings together all the selected elements of the scene. The black and white photographic image shows the physical location of the site, representing the audience view of the performance. The white plan gives a graphic representation of how the site is located in the fort. The bird illustration and yellow shining graphic are taken from William Kentridge version of the magic flute, ensuring that this scene utilises the imagery that he has already created. The dark figure represents Sarastro - his character development can be seen in Chapter 6.3. The collage of imagery brings together the site, actors and audience, aligning the scenes with the site-specific nature of this project. The existing structure will be illuminated to ensure focus is placed on its character as well as the additional scene design.
7.9.5 Design Development

The following two concept development sketches, Figure 7.136 and Figure 7.137, on the following page, show the initial design exploration of the scene. Both graphics focus on the use of the existing site as the starting point for the scene progression. The themes identified in The Magic Flute narrative are then layered onto the existing site, growing from the information already provided. An example of this is the choice of this location to host Act 1 Scene 3. The similarities in structural nature of the site and the temple in the narrative are prominent. This ties the performance to the existing site and gives it an opportunity to enhance the performance with its unique character. The scene focuses strongly on the path towards enlightenment and the fact that light will always win. These themes are then developed and enhanced using lighting and projection. Materiality play an important role in the scene - the materials used to highlight the paths towards the temple carry metaphorical meaning, giving the performance more depth. The cardboard tubes are used to represent ‘Reason’, the man-made structure enhancing the metaphor. Natural sticks are used to symbolise the ‘Nature’ temple, the organic form placing emphasis on nature. ‘Wisdom’ is represented by a combination of both cardboard – man-made – and sticks – nature-made. The refined timber columns represent both ‘Reason’, ‘Nature’, and together the two show the maturity and balance of ‘Wisdom’.
7.9.6 Models as a tool for design exploration

The following images, Figure 7.138 to Figure 7.148, show the use of the model as a means of design exploration. The images focus on the manipulation of the pathways and how the materials can be changed to create different effects. Various materials are explored: Figure 7.139 to Figure 7.141 show the use of paper and Figure 7.142 to Figure 7.147 use wooden sticks. Figure 7.148 shows a darkened view of the model after final additions. The model iterations form part of the design development for each scene.
7.67 Design outcome

As mentioned above the focus of this scene is on the creation of the environment, layering of visual detail, and the metaphorical meaning in the selection of materials. Lighting and projection allocate an important part in the design of the scene. Figure 7.149 shows the start of the scene, where the focus is on the actors performing. The lighting at the start of the scene focuses on Sarastro, who stands above the existing structure. He is the most powerful character and the light enhances his character’s enlightened state. Figure 7.150 shows the final moments of the scene. The playing area is flooded with light and the couple head toward the temple to begin their journey to enlightenment. Figures 7.151 to 7.153 show the various use of materials. These materials carry the metaphors of the theme through the scene. The acoustic and lighting design will be further discussed in technical consideration.

Figure 7.149: Start of Act 1 scene 3
Figure 7.150: Ending moments of Act 1 Scene 3
Figure 7.151: Cardboard tubes representing reason
Figure 7.152: Timber poles representing wisdom
Figure 7.153: Sticks representing nature

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7.9.8 LIGHTING EXPLORATION

The following images, Figure 7.154 to Figure 7.156 show the manipulation of lighting on the models of the scene. Lighting, as mentioned, is important in the metaphorical development of this scene. The light becomes a symbol of all things good and the power which comes with following the light.

7.9.9 INITIAL TECHNICAL EXPLORATION

The following figures, Figure 7.157 to Figure 7.162, explore the initial attempt at technical development. Focus is placed on the use of lighting and projection. Figure 7.158, as well as the choice of materials, Figure 7.159 to Figure 7.161. The technical design for this scene is further explained.
7.9.10 Technical considerations

In "Nun stolzer Jungling, nur hierher" (Proud youth, come this way), as discussed in 7.9, the theme of good versus evil is prominent. Lighting and projection are important aspects of achieving this drama of dark versus light. Acoustic considerations and enhancements as well as the exploration of materials and symbolic means are another focus in this scene’s technical development. Figures 7.162 to Figure 7.171.

As mentioned in the lighting exploration, Chapter 7.9.8, the illumination of the existing fort's rooms is used to create a glowing effect. The colour yellow is used for its psychological properties, mentioned in Chapter 7.5.9.2. Most of the light is focused on the interior of these spaces, to create the illusion of a temple (symbolizing good and light). At the start of the scene, the light on the interior is dim and it then grows, controlled by a dimmer controller, Figure 7.163. The LED spotlights, Figure 7.164, have a bright intensity making this effect possible. The cabling for this scene is concealed by the fort structure.

Acoustic panels, which are painted cardboard structures as seen in Figure 7.165, have been suspended between the two sets of trees on either side of the playing area. The use of cardboard allows for the flexibility of bending the material and recyclability in its afterlife. The cardboard sheets are suspended from a steel cable using a hook method. String keeps the cardboard curved and rocks are used as weights to keep it in place.

Acoustic panels, which are painted cardboard structures as seen in Figure 7.165, have been suspended between the two sets of trees on either side of the playing area. The use of cardboard allows for the flexibility of bending the material and recyclability in its afterlife. The cardboard sheets are suspended from a steel cable using a hook method. String keeps the cardboard curved and rocks are used as weights to keep it in place.
behind the audience, Figure 4.1, William Kentridge’s images are projected onto the existing site, and the audience is invited to imagine the action unfolding in the present. Figures 7.366 - 7.368: The plans, sections, and elevations reveal the planar dynamics of the narrative while the intensity of light grows throughout the scene.

Figure 7.366 - the plan of Act 1 Scene 3, depicts the symbolic intervention. These timber, cardboard, and natural stick walkways are symbolic of the ‘Winds’, ‘Reeves’ and ‘Nature’ temples in the open. Figure 7.367, Therefore, the selection of the materials and their symbolism is important. A range of materials were studied and identified, the table below. Figure 7.368, shows the comparison of the these materials and their qualities.

ACT 1 SCENE 3 STRUCTURE GRID SET-UP

Figure 7.366 Act 1 Scene 3 Plan

TIMBER STRUT DETAIL_051

WOD STICKS DETAIL_052

ACT 1 SCENE 3 PLAN DETAIL_052

Figure 7.367 timber details

Figure 7.367 timber details

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Figure 4.1: College of Skills’ Northridge Mega Home production.
The plot of Act 2 Scene 3 is discussed in Chapter 6.2.6 wherein the aria "Der Holle Rache kocht in meinem Herzen" (The revenge of hell rages in my heart) the queen gives Pamina a dagger and orders her to kill Sarastro or she will be disowned. Selected as one of the most well-known arias of the Magic Flute, this piece of music is dramatic, emotion-filled and exposes the power of the soprano's voice. Throughout the piece, the Queen of the Night tells Pamina - her daughter - of the betrayal and disappointment that she feels towards her. The Queen of the Night sings in anger at her dissatisfaction with Pamina. The strong themes of anger, disappointment and betrayal ring through this aria, creating a dramatic and powerful performance.
7.10.1 Scene Location

Act 2 Scene 3 takes place in the palace gardens. The location of this scene was chosen due to the proximity to the existing trees on the site. Figure 7.172 shows a plan of the scene; the red highlights where the performance will take place, the white [6] shows the actors' positioning, and the black [6] shows where the audience will be located. The arrangements of the audience will be in a semicircle around the scene. The audience is denoted by grey bird's-eye-view figures. The degradation at the location of the scene enhances the thematic emotion of disappointment that the queen feels; the damage to the trees represents her trust being destroyed. The actor's stage area is placed lower than the audience, giving the queen a sense of vulnerability, and showing how her daughter's betrayal has weakened her. The levels of audience-actor relationship are seen in the section, Figure 7.173, and in the illustration, Figure 4.8, which was previously discussed in Chapter 4.8.

7.10.2 Location Character

The site was selected for the trees which surround the playing area (stage) as well as the level change between where the audience would stand and where the actress will perform. Figure 7.174 showing the audience's view shows the lone tree which stands at the top of the stairs. As the trees form an important part of the scene, an emphasis in the scene design of the stage will be placed on this tree. The other trees around the scene location are seen in Figure 7.175, where the stage is viewed from the entrance of the courtyard, looking towards the playing area. Figure 7.176 also shows the stage from a different perspective, showing the size of the stage and the sloped incline towards where the audience stands. Since the degradation and natural damage at the site play an important part in the links to the thematic developments of The Magic Flute, Figure 7.177 shows the deterioration of the existing stairs which form part of the backdrop of the scene.
7.10.3 A LINK TO INTERIOR ARCHITECTURE

Act 2 Scene 3 focuses on the use of lighting, projection, and reflection from mirrors to create effects for the scene. The interior architecture elements, as seen in Figure 7.178, which have been focused on for the creation of the scene are: environment, space, and light as the main elements, and ground plane, support, display, and proportion as secondary elements. The creation of the garden-like environment and the fragmented visual space has been achieved through the use and focus on the lighting experience in the scene. These design details will be later explored in the design development, Chapter 7.8.5 of this scene. Lighting forms an important part of the scenography and design creation for this performance. Different lighting effects and methods have been used to create an illusion or environment within the design.

7.10.4 INITIAL CONCEPTUAL MOOD BOARD

The initial concept board, Figure 7.179, brings together all the selected elements of the scene. The site location is shown through the photograph in the background of the sketch, emphasising the trees which are vital to the performance of this scene. The monochromatic plan overlay displays the location of the scene at the fort. Character’s images developed in Chapter 6.3 are used to represent the actors in the scene: the large dominating figure represents the Queen of the Night as the main character, and the smaller figure represents her daughter, Pamina. The red imagery which is placed over the scene is William Kentridge’s graphics from his adaptation of The Magic Flute. Together this collage of imagery gives a basic conceptual idea of the focal aspect of the scene. These notions are then translated into the three-dimensional design.

Figure 7.178 Interior Architecture Principles
Figure 7.179 Initial mood board collages
7.10.5 DESIGN DEVELOPMENT

The following concept pages, Figure 7.180 to Figure 7.182, shows the initial design exploration of the scene. At first, the site was identified and explored, then a focus was placed on what the existing site has to offer, whether it be the built-up areas, structured walls, or in this case the location of the tree which forms a vital part of the design. The scene and its thematic developments were then broken down into core themes by looking at the character progression through the scene and identifying what needs to be visually conveyed to the audience. This scene focuses a lot on the queen and her emotions of betrayal towards her daughter Pamina. She is a powerful character, and the use of projection to enlarge the queen exposes her dominance. The scene is then graphically and emotively explored to convey the dramatic feel, and the layering of information shows the design considerations for the scene.
7.10.6 Models as a Tool for Design Exploration

The following images, Figure 7.183 to Figure 7.189 of the models have been used as a means to explore the design of the scene. Iterations of the models coupled with the feedback of the scene design has informed the outcome of the design development. The materials used are foil-covered straws to mimic the effect of mirror vinyl-covered cardboard tubes.
7.1.7 Design Outcome

The focus of Act 2 Scene 3 is to create the illusion of a forest in addition to the existing trees at the scene location. The use of angled mirrors behind the existing trees reflects multiple trees throughout the space. The mirror vinyl-covered cardboard tubes scattered through the playing area represent more trees. The intention of the mirror finish on the tubes is to reflect the existing trees, as well as the actresses and audience members to create a fractured narrative.

The cardboard tubes are all the same heights and are placed on different contours of the scene to accentuate the natural slope and flow of the site. Projections of William Kentridge’s graphics add to the creation of the scene and lighting that shines on the bases of the mirror columns accentuates the forest type environment. The use of mirrors allows the audience to view the performance, the site and themselves in one visual collage. Figure 7.190 shows the start of the scene when the Queen of the Night arrives. The queen is lit up by her costume which has integrated lighting, to be explored further. Figure 7.191 shows the scene towards the end of its duration. The queen has grown in proportion—created using perspective and projection. The smaller images, Figures 7.192 to Figure 7.194, show a progression of the lighting and reflections of the mirrors in the scene. As the mirrors need light to reflect effectively, the lighting of this scene is very important for the success of the visual experience.
7.10.8 Initial technical exploration

The following images, Figure 7.195 to Figure 7.201 explore the initial attempt at technical development. Focus is placed on how to develop the temporary structures for the set design in the scene.

7.10.9 Technical consideration

In the aria "Der Holle Rache kocht in meinem Herzen" (The revenge of hell rages in my heart), as discussed in Chapter 7.8, the power of the queen’s character is revealed in a dramatic and emotion-filled scene. Since the structures will all be removed once the performance has finished, all additional structures need to be simple to deassemble and recycle or reuse. The tree-like structures are created from mirror vinyl-covered cardboard tubes.
The materials used are lightweight, cost-effective, standard sizes and easy to manipulate. Figure 7.205 shows the intended tree-like structures designed. A simple basket with a steel stand is used to secure the structure in the ground, with minimal site interference. The basket will be knocked into the ground at the specified intervals or if the cardboard tube will be secured over it. Re-used AC Concrete cardboard tubes (made of fabric) or A2 Spiral cardboard tubes (made of paper) will be sourced and used for these structures. The use of standard 2000mm length tubes, shown in Figure 7.204, has been specified, however this will be determined by availability.

Figure 7.204: 2000mm cardboard tube

Figure 7.205: Cardboard tube detail
Figure 7.206 Mirror upright detail
7.11 ACT 2 SCENE 5 - THE PYRAMID

The plot of Act 2 Scene 5, as discussed in Chapter 6.2.8, is based on T amino's progress on his path to enlightenment. In this scene, the priesthood is pleased with his progress, and they pray that he will find success and be worthy of their order. In this chant-like song “O Isis und Osiris” (Oh Isis and Osiris), the chorus are singing to their gods, Isis and Osiris. This scene was selected as it makes use of a chorus, as well as strong freemason symbolism. Since the cast of this specific production is small, there is no availability for a chorus. Therefore, this is achieved using dynamic lighting and projection, further explored in Part three of this chapter. Strong themes of trial and worthiness are prominent in this scene, and the music mimics a prayer-like tone.

Figure 6.39 Act 2 Scene 5 - Traditional version 1991

Figure 6.40 Act 2 Scene 5 - William Kentridge version 2001

Figure 6.41 “O Isis und Osiris” (Oh Isis and Osiris)
7.11.1 Scene Location

Act 2 Scene 5 takes place in the pyramid of the ordeal. The use of the exit side of the tunnel provides the structural needs for this scene. The location of this scene is shown on the plan, Figure 7.210, where the white [8] represents the positioning of the actor and the black [8] the location of the audience. The audience is standing on a scaffolding structure which is perched above the existing fabric. On the plan, the audience is represented by the grey bird’s-eye view figures. To represent the levels at which the audience views the performance, a section, Figure 7.220, shows the height and audience views. Figure 7.221 shows the illustration, as discussed in Chapter 4.8, of the audience and actor on the same elevated level of interaction.

7.11.2 Location Character

As mentioned the location of the scene was selected for the composition of the existing structure. Over the distance from where the audience stands to the actor’s position, the natural perspective of the structure implies a triangular shape. This shape relates to the imagery and symbolism of the narrative, and can be used to enhance the performance. Figure 7.212 gives a view of the playing area from where the audience is located. The triangular shape is seen on the walls leading up to the arch. All scenes points during this scene, the audience perspective will be fractured. Figure 7.213 shows the restricted view of certain audience members. Figure 7.214 shows the view from the built platform, again accentuating the triangular form while including other views around the site. To keep the focus on the structure, lighting will be used to emphasise the existing fabric. Figure 7.215 shows a view of the actor playing area, the height at which the actor will stand is accentuated in this image.
7.11.3 A LINK TO INTERIOR ARCHITECTURE

Act 2 Scene 5 focuses on the layering of information to convey the themes of the scene. The interior architecture elements, Figure 7.216, of most importance is space, light, and information. Secondary to this, is environment and display. These elements have become the focus in the design development of the scene, ensuring that the site and performance come together in one realm. The physical use of the existing site is a point of interest for the scene. It will be enhanced with lighting and layering of information, later explored in the design development, Chapter 7.9.5 of this scene.

7.11.4 INITIAL CONCEPTUAL MOOD BOARD

The initial concept board, Figure 7.217, brings together the selected elements of the scene. The monochromatic image of the existing site, layered with a white plan to show its location, gives an indication of the environment for the performance. The layering of William Kentridge’s graphics provides the viewer with more information about what is to be expected in the scene. The black and grey figures represent the chorus and Sarastro; the repetition of the imagery emphasising the fraternal brotherhood. As a whole, this collage suggests the intended outcome for the scene.

Figure 7.216: Interior architecture principles.

Figure 7.217: Initial concept mood board.
The following pages of concept sketches show the initial design exploration of the scene. The imagery starts with an exploration of the existing site and how the scene can grow from it. Figure 7.218 shows the structure of the existing fabric used to enhance the triangular shape and extend the architecture beyond where it stands. The graphic in Figure 7.219 shows the initial idea of repetition of the triangular form. This is used to enhance the idea of the chorus and keep with the strong imagery of William Kentridge’s narrative. The thematic development of this scene has a focus of the fraternal order and the freemason society - the repeated imagery also represents this part of the narrative. Lighting and movement in the scene are important in order to mimic the idea of a larger chorus. The scene focuses on how to enhance the existing structure and create the needed symbolism from it. Figure 7.220 shows the unpacking of the scene, starting with the site, then narrative and then merging the two.
The following images, Figure 7.221 to Figure 7.228, show the models used to explore the design development of the scene. The iterations of the scene show the progression of the design and the intention of the added structures. Testing of the design on the model was an important part of the design process. Figure 7.221 is an example of the initial model. The triangular form is prominent; this is then further explored to ensure that the choice of design is correct. Figure 7.222 and Figure 7.223 show the use of a rounded structure to mimic the arches. However, these structures do not enhance the narrative imagery. Figure 7.224 and Figure 7.225 show a progression of a more angular curve, again not supporting the narrative imagery. Finally, Figure 7.226 and Figure 7.227 mimic the triangular structure found at the site and within the narrative. Figure 7.228 gives an overview of the scene in the darkness, using lighting to enhance the triangular structure.
7.11.7 Design outcome

The focus of Act 2 Scene 5 is to create imagery that relates to both the site and the narrative. The use of the freemason triangular shape is important in this scene of The Magic Flute. Therefore, it forms an important part of the scene development. In the scene, the chorus and Sarastro stand above the existing structure, surrounded by triangular forms. The use of lighting and projections enhance the symbolism and the form. Figure 7.229 shows the start of the scene. A focus is placed on the main actor and the triangle form. As the scene progresses so does the lighting, and the dynamic movement of the light. Figure 7.230 shows the end of the scene and how the light has grown; this is achieved using projection and filtered lighting. Figure 7.231 to Figure 1.233 explore the lighting at the scene, using light and shadows to emphasise specific aspects.
7.11.8 INITIAL TECHNICAL EXPLORATION

The following figures - Figure 7.234 to Figure 7.237 - explore the initial attempt at technical development. Focus is placed on the triangular symbolism and form, which is further explained later.

7.11.9 TECHNICAL CONSIDERATION

In "O Isis und Osiris" (Oh Isis and Osiris), the site forms an important informer of the narrative - the triangular symbolism of the scene is created using lights and the existing site fabric. The movement and textured use of light is also relevant. William Kentridge uses the term to 'draw with light'. His imagery, as seen in Figure 7.248, gives a suggestion on how to achieve the textured light. The use of fibre and moving light is explored in this scene, see Figure 7.238 to Figure 7.245 depicting the type of equipment needed for the performance.

The other technical focus of the design is the way in which the temporary structures touch the site. These lightweight timber structures, gentle and securely touch the site to keep with the sensitivity of heritage presentation. Timber protection is used over the existing structure, and cables secured into the ground are used to fasten the triangular structure (details to be resolved).

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CHAPTER EIGHT

CONCLUSION
This dissertation intended to bring awareness to the cultural and historical value of the Fort Daspoortrand ruin, through the introduction of a temporary, site-specific opera. The opera as a catalyst aims to serve as an initial event to illuminate the beauty and drama of this old military ruin. The performance will encourage and enhance the appreciation of the fort, after which, if successful, another developer would be able to add a more permanent function to the site.

Opera in the 21st century has been identified as a culturally rich entity which can add value to society. However, opera around the world has seen an attendance decline over the last decade. This dissertation has provided a way in which the re-imagining of an opera can challenge and encourage a new range of audience members, ultimately making opera an all-inclusive cultural experience.

The site-specific performance of The Magic Flute can give new life back to the fort and opera, by taking the audience on a journey of the site, creating a homogenous experience of site heritage, theatre, and escapism.

The audience will have minimal contact with the heritage fabric; this is achieved through controlled walkways and circulation interventions. The initial intent was not to add any permanent structures to the fort, but rather to use temporary interventions and materials to develop the design. However, it was noted through the exploration of the site that the erosion from human movement poses a threat to the future preservation of the ruin. Therefore, permanent circulation was proposed, creating the possibility of the public revisiting the site once the opera has finished. The materiality choice for the new structures would ensure sensitivity, allowing the structure and site to weather and change together, slowly becoming one.

The temporary scene design poses a non-invasive method in the creation of the three-dimensional experience. Re-used, recycled and repurposed materials compose the additional fabric, ensuring that a sustainable and ecological approach is achieved. The design intervention highlights and exposes the unique character of the fort, using lighting, projection and minimalistic structures to simultaneously uncover the drama of the heritage fabric and reveal the narrative of The Magic Flute. The strategy of ‘touch gently and leave nothing’ is considered throughout the design, ensuring the preservation of the historical and cultural value of the site.

Since this dissertation project has a temporary and short-term life-span, the theories set out for scenography in interior architecture can be further explored in future projects. The Magic Flute at Fort Daspoortrand could become a benchmark and model to create awareness of uncelebrated historical landmarks of South Africa.
The village was turned into 'Pretoria Daspoort hospital opened with 8 apartments. A brief history of Westfort Village explains the original intention of the village, its use as a Leprosy colony and its current use as an illegal housing village.

Theatre theory

Temporary wooden playhouse '37 '65

'Representing the warrior. Colourful eading and face-paint emotive and expressive. Dancing and singing are the production.

which overtly uses the properties, qualities, and meanings of the public. This new life aims to be achieved through a three-dimensional spatial enhancement of the drama. Design informants

Main research question

How can the combination of the site, Fort Daspoortrand, and the opera, Magic Flute, add to the development of the cultural richness of both entities?

Theoretical Chapter 4.2 to follow). Preservation is the maintaining of the site in its current condition, as well as the minimisation of further decay. Due to the site will be kept in its present state, with the exception of the permanent intervention. The set design, which will form part of the temporary intervention,

Interior Architecture

In the research, the interaction of the spatial enclosure and the design informants

Displacement and intimidation: The French Opera House, America, New Orleans opened without the introduction of new material.

'Venti sale del Crepuscolo' (Die Weisheitslehre disee Knaben) (May the wise took a walk unawares)

Between 1904 and 1914, the site was constructed for the first time as a sugar plantation. Due to the site's history and the architectural elements, both a 'show' and 'emotions'

Restoration means returning a place to a known earlier state and is distinguished from restoration by the introduction of new material.

1700

Edgar Allan Poe, author of the short story "The Fall of the House of Usher". The author's purpose in writing this story was to evoke a sense of fear and suspense, which is achieved through the use of several elements of gothic fiction, such as the setting, the characters, and the plot.

"Die Weisheitslehre disee Knaben" (May the wise took a walk unawares)

"Schnelle Fube, rascher Mut" (Swift steps and courage)

Construction of the Fort was complete and the site was ready for use. The site was then used as a military fortification, and later as a prison. The site was finally abandoned and left to nature.

Local sand exposed through human erosion

Irregular shaped local stone used in the building structure

Site - Fort Daspoortrand Water Tower

Pretoria CBD 11.24km

Fort Schanskop - 11.5km

Main Roads

Ekangala

Vanderbijlpark

Average Rainfall

Summit Solstice, 21 December

Lunar study

Space refers to the physical attributes of the environment. It is classified as either primary or secondary. Primary space is typically the areas of the site where the public or people will come into contact and is developed as a result of elemental damage. The intention of developing primary space is to enhance and maximise its function or purpose. Secondary space is the space that surrounds primary space.

Light typically refers to the natural and artificial use of light and its particular properties. Light can be used to create different moods and atmospheres. For example, warm light can create a welcoming and inviting atmosphere, while cold light can create a more formal and serious atmosphere.

Site - Fort Daspoortrand Water Tower

Pretoria CBD 11.24km

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Light typically refers to the natural and artificial use of light and its particular properties. Light can be used to create different moods and atmospheres. For example, warm light can create a welcoming and inviting atmosphere, while cold light can create a more formal and serious atmosphere.

Design informants

William Kentridge

Jean Rosenthal

Performance at Fort Daspoortrand during the night. However, full consideration of the sun's movement and its effect on the audience is essential. The construction of the set will be addressed in each scene, ensuring the maximum output of sound quality is achieved in each section of the opera. Also, the design of the set will also refer to the way that that night's sky acts as a ceiling or the trees bring context to the site. The opera performance at Fort Daspoortrand will utilise lighting effects, projection and other scenography elements which create the atmosphere or set the mood for the space.

The production at Fort Daspoortrand will take place during the night. However, for this project display will take the form of a visual exhibition of the design. Design informants

Not only will the materials be reusable or recyclable, but the performance will take place during the night, so the audience will arrive as the sun is setting, giving shadows over the audience and reveals a new mystery to the site.
Heritage Design informants

66 Minutes in Damascus, participatory theatre

quality - based on the abstraction of the themes and narrative of interior architecture, and therefore the validity of such a significance that opera and the site have to offer in 21st

The value that the preservation of the site can add to the larger social event are becoming less defined

Rejecting attachment, it is necessary for a place to be preserved. Through the suspension of such decay, the importance and Rooted in a profound emotional connection to cultural heritage is the attachment of place. The value of these

Restoration - Mason 1992 -

between - Mason 1992 -

typically the areas of the site where the public or people will come into contact - Mason 1992 -

Scene 2 - The courtyard of the Temple of Ordeal

Tamino enters, being led by Monostatos. This is the first meeting between Pamina and Tamino - they celebrate in an embrace, causing outrage from Sarastro's followers.

Scene 1 - A grove of palms

"Wie stark ist nich dein Zauberton" (How strong must your combination of 'show' and 'emotions'

"Schnelle Fube, rascher Mut" (Swift steps and "be your magic sway)

"Bald prangt, den Morgen zu verkünden" (Soon to find love, but as the story progresses he meets a beautiful young

"Ach, ich fuhl's, es ist verschwunden." (Ah, I feel, it is missing)

"Nur stille, stille, stille" (Hush now, absolute quiet)

...
# Appendix A

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<td>Zu Hüt't Zu Hüt't Soirn bin ich, sorgen</td>
<td>Der Vogelfänger bin ich ja schon</td>
<td>Die Sonne ist aufgegangen</td>
<td>Ein Bildnis ist zurückgeblieben</td>
<td>Er ist, er sei, er sein</td>
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<td>Help! Help! There is no way I can lose</td>
<td>The bird catcher am I am</td>
<td>This is a portrait of a enchanting beauty</td>
<td>Do not tremble, my dear world!</td>
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<td>O Isol de Oris</td>
<td>Soll ich dich, Träumer, nicht mehr sein?</td>
<td>Bewahret euch vor Widerwulken</td>
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<td>O Isol and Oris</td>
<td>Shall I see you, dreamer, no more?</td>
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<td>In diesen heiligen Klären</td>
<td>Dialog: — Hier seid ihr so sehr beide allein überlassen. Acht, im Flur ist es still, verirren sich nicht. O bis und Obris</td>
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<td>Here you are left alone. Oh, I feel it's gone. O bis and Obris</td>
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**Themes:**
- Heartfelt
- Lightness
- Malevolent ideals
- Good and evil
- Light and dark
- Fantasy (oriental)

**Environment Comment:**
- Night, Exterior
- Night, Interior
- Interior Night, Artificial light
- Night Exterior

**Graphic Illustrations:**
- Heartfelt Pain From Lost Love Broken Heart: Melancholy
- Light-hearted atmosphere
- Majestic play
- Lonely
- Desire for love
- Want for love
- Depression
- Condition love
- Dramatic
- Supercilious
- Symptom of future

**Environment Comment:**
- Night, Exterior
- Night, Interior
- Interior Night, Artificial light
- Night Exterior

**Themes:**
- Mansions
- Passionate love
- Temporary love
- Desire for love
- Anghel from here
- Sorrows
- Tormented love
- Dramatic love
- Night, Interior

**Environment Comment:**
- Night, Exterior
- Day, Exterior
- Day, Exterior
- Exterior Night (Bright light)
## Appendix B

### Domestic Waste

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