wood for the trees

A temporary theatre for the performance of ‘Circles in a Forest’
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Barbara for remaining calm and believing that I could
do this. It was great getting to know you

Elana for being available for inspiring chats

Arthur for giving me method & direction in my
madness

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Spiro for advice & being the reality & brawn to my
brain

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Carien, Anneke, Suné & Rossen for sanity, patience,
motivation, food, all your help & so much love

Pa for perseverance

Ma All the above and more - Ma is my rots

I am what I am by the grace of God
In the world of architecture a field of tension exist between permanence and temporality. The aim of this study was to explore the possibilities residing within this duality. During the urban investigation conducted in the Pretoria CBD, scars of vacant space were found that exposed the possibility of temporarily utilizing these empty spaces. In general vacant spaces tend to become unsafe, degraded and illegally occupied. If these vacant spaces could be temporarily reused it would benefit the owners, users and community at large.

The binding workshop of The Government Printing Works on Vermeulen Street just west of Church Square is in the process of being relocated and no planned future use is evident. The investigation proposes that the workshop be adapted to accommodate a temporary performance space. Through the process of matching a vacant permanent space with a temporary program their interdependence became evident resulting in an approach towards a mutuality beneficial symbiosis between the temporary and the permanent. The permanent host will benefit the temporary guest by providing shelter, safety and physical support. The temporary guest will benefit the permanent host by giving it life, activity and the opportunity to contribute to its local context. The temporary program will preserve the existing host and protect it from deterioration.

Production design as an inherently, temporary form of space creation was selected as the medium for this investigation. Performance space positions architecture within the realm of temporary experience and lasting memory. Circles in a Forest are the inspiration behind the design of the temporary performance space. This novel by author Dalene Matthee speaks of a segment in the history of South Africa, but also tells a universal story; that serves as a warning against the exploitation of people and natural resources.

The design focused on creating layers of permanence and temporality dependant on each other. As these layers are peeled away the space can be reinterpreted and adapted for other performances and programmes.
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“The city of Sophronia is made up of two half-cities. In one there is the great roller coaster with its steep humps, the carousel with its chain spokes, the Ferris wheel of spinning cages, the death-ride with crouching motorcyclists, the big top with the clump of trapezes hanging in the middle. The other half-city is of stone and marble and cement, with the bank, the factories, the palaces, the slaughterhouse, the school, and all the rest. One of the half-cities is permanent, the other is temporary, and when the period of its sojourn is over, they uproot it, dismantle it, and take it off, transplanting it to the vacant lots of another half-city.”

“And so every year the day comes when the workmen remove the marble pediments, lower the stone walls, the cement pylons, take down the Ministry, the monument, the docks, the petroleum refinery, the hospital, load them on trailers, to follow from stand to stand their annual itinerary. Here remains the half-Sophronia of the shooting-galleries and the carousels, the shout suspended from the cart of the headlong roller coaster, and it begins to count the months, the days it must wait before the caravan returns and a complete life can begin again.”

From ‘Invisible Cities’ by Italo Calvino in (Groak, 1992, 59)
Figure 02. Digital collage depicting architectural issue (Ficker, 2009).
01. INTRODUCTION
I.1 OUTLINE
The dissertation suggests a mutually beneficial relationship between what is considered as temporary and permanent architecture. To illustrate this mutualism the study focuses on the temporary use of vacant, permanent space and the inter-dependence of layers that vary between permanent and temporary. The role of small scale temporary architecture and the temporary use of vacant space in an urban context are explored (Figure 1).

Temporary design practices exist on the fringe of architecture and are therefore ideally positioned to offer an “outsider’s perspective” and explore current practices and theory. It contests the preoccupation of architecture as being permanent in order to reaffirm architecture as not just form and function but as experience.

The vacated, binding workshop of The Government Printing Works in the Pretoria CBD, is temporarily adapted into a theatre for the estimated time of three to five years. The temporary theatre is designed to host the performance of ‘Circles in a Forest’ by Dalene Matthee. The theatre itself becomes the set and experience of the text. The design allows the theatre to be reinterpreted and altered to the needs of other production via lighting, projections, props, and detail elements.

I.2 ARCHITECTURAL ISSUE
In a time where the socio-cultural, economic and ethical impact of thoughtless large scale permanent developments are frequently under question while existing structures stand empty, could small scale temporary architecture contribute towards change and meaningful experiences?

Delight
- Architecture neglects delight, experience, imagination, fantasy, tension, temporality and experimentation
- The inner city of Pretoria lacks recreational facilities and activities

Tension
- In the urban context of Pretoria there is tension between permanence and impermanence not being addressed by design practices (Figure 02)

Use
- Vacant, abandoned and forgotten inner city space becomes dangerous, derelict and is eventually lost to the public due to disuse or illegal use

Research questions
- What is permanent and temporary architecture?
- What is the relationship between temporary and permanent design?
- What is the role and importance of temporary design?
- What is the importance of spatial experience, memory and recreational spaces?
- Can vacant space be used and programmed temporarily?

I.3 DESIGN INTENTION
The architectural intention is to investigate temporary design as a catalyst in an urban context to activate under utilized or vacant space and to experiment with programming, spatial experience, and technology.

The Temporary Theatre endeavours to explore the possibilities of programming and occupying a vacant space temporarily. For the purpose of this thesis scenographic design was chosen as medium, as set construction is generally accepted as a temporary form of space creation and has the design of an emotively communicating space at its core.

The Temporary Theatre addresses the inaccessibility and separation of art from the public realm, as well as the tension between opposites. Ultimately a recreational attraction will be created, providing opportunity for social and cultural interaction in the city of Pretoria.

- **Symbiosis** (mutualism): Interdependent layers of temporary and permanent architecture
- **Catalyst**: temporary insertion towards positive change
- Temporary architecture facilitating experiment and experience

“Architecture is about space and about the events that take place in that space” (Tschumi, 2000, 12).
1.4 INTERIOR ARCHITECTURE 1.5 METHODOLOGY

Interior design encompasses more temporary forms of architecture. It is the author’s belief that interior architecture can play a vital role in rediscovering the opportunities of temporary construction and permanent infrastructure. These forms of design generally have a shorter life-span, are more mutable and have greater potential for change; therefore it is ideally positioned to explore the unpredictable, experimental and experiential opportunities of temporary construction.

“By their nature, temporary constructions dispute the dominant role of Architecture as lasting and providing permanent solutions” says Lévesque (2007,1). Temporary architecture allows for the testing of new possibilities in construction and spatial experience because of its smaller scale, shorter time frame and freedom to exist on sites inaccessible to permanent architecture. The interior architect could play the role of the “practitioner researcher” (Groak, 1992, 180-183).

We are surrounded by three skins that vary in terms of permanence - our own, the clothes we layer ourselves with, and the skin of the building (Ferreira, 2004, 46). This thesis suggests that interior architecture should boldly claim an intermediate, softer place between our bodies and the skin of a building and celebrate its function as a user-interface, creating the experience between individual and environment.

Grounded theory

The research approach for this dissertation borrows aspects of “grounded theory”. This method recognises and combines the use of various sources for generating research material and data and, as explained by Knight and Ruddock (2008, 87), it relates to the design process. Grounded theory includes the following:

Case studies

Case studies provide different perspectives and link closely with reality. A cross-sectional case study approach was used. This approach captures a situation at a moment in time and supports the use of multiple case studies. This method is less time consuming than a longitudinal case study, which follows a specific case over a period of time (Knight & Ruddock, 2008, 93).

Formal theory

According to Knight & Ruddock (2008, 87) it is unlikely for a new theory to be built from first base and that new theory should be built on an existing theory in order to make improvements. Theory is generated from a combination of literature, observations, common sense and experience. The use of literature is important as it allows researchers to build their case through supporting evidence.
Figure 03. Illustration of the symbiotic relationship between the temporary and the permanent (Banks, 2008).
02. THEORETICAL APPROACH
2.1 TENSION: PERMANENT VERSUS TEMPORARY

“All art is perishable” (Harbison, 1991, 13)

Within the discipline of architecture there exists paradox, duality and tension. The area of investigation lies between permanence and temporality. This tension cannot be easily resolved, if ever. It’s doubtful that there exists an ultimate, or extreme form of temporality or permanence. There is, however a spectrum that exists in-between and is evident in architecture.

The relationship between temporary and permanent structures is a relationship of complementary influence. The tipping of the scale between the two depends largely on one’s perception, interpretation and experience.

Agreeing that this tension is relative and intuitive, there are certain practices and forms of architecture that are generally considered to be of a more permanent or temporary nature and this will be the focal point of the study (Figure 03).

2.1.1 Permanent

A) adjective [adaptation of Latin permanent-em, present participle of permanere; to stay to the end, that B) remains fixed, motionless (Touw, 2006, 24).

‘Permanent’ is defined in the Oxford English Dictionary as “continuing or designed to continue indefinitely without change” (Touw, 2006, 23).

2.1.2 Permanence & Perception

By definition, architecture is meant to be permanent, to serve a practical and aesthetic purpose over an indefinite period of time (Chabrowe, 1974, 38). Formally, the concept is introduced into architectural discourse in Vitruvius’ Ten Books of Architecture as ‘firmitas’ and refers to the “ability of a building to endure, based on its own material strength and soundness of construction; often defying both nature’s and time’s deteriorating effects” (Touw, 2006, 28).

Embedded in the word ‘permanence’, is an understanding of both “time” and “matter”. This understanding is dependent on, and affected by cultural and scientific insights. “And it is, therefore, inevitable that changes in our definitions of “time” and “matter” will also compel us to rethink the concept of permanence” Shadi Nazarian (Touw, 2006, 7).

2.1.3 Defining temporary architecture

Temporary construction is something that is already present, and plays an important role in the socio-cultural and economical context of Pretoria; beginning from the time when farmers set up camp in Pretoria to buy supplies and have communion until today when street vendors commute to the city to put up their various stalls to sell cigarettes, sweets and fruit. Temporary construction also plays an important role in architecture and design, for example: the form, work and scaffolding used during construction and maintenance of permanent buildings as well as the temporary structures used for events and exhibitions.
2.1.4 Types of temporary uses and structures already present in the Pretoria CBD

- Fairs and festivals
- Sporting events
- Art installations
- Exhibitions
- Live performances
- Performance stages and sets
- Film sets
- Shop fittings
- Food vendors
- Events (demonstrations, promotions & marketing)
- Micro-enterprise developments
- Markets
- Mobile public outreach centres

The SANS 0400-1990 (18) defines a ‘temporary building’ as any building that is so declared by the owner and is being used or is to be used for a specified purpose for a specified limited period of time, but does not include a builders shed.

“Temporary architecture can range from a one-time educational event to a month-long art installation to mobile architecture that is designed to be portable but may stay on one site for several years.” (Dann et al. 2009, 3)

“Temporary architecture, to me, is simply the space created and removed over a short period of time, like for an event.” (Baunach, 2009)

2.1.5 Temporary design through history

Temporary architecture serves a different purpose from permanent architecture and has been flourishing for over 100 years. Throughout history its essential function has been to stand as an advertisement, conveying a political, social or commercial message. Once the occasion for the message had passed, so did the architectural messenger. The history of temporary architecture goes back to antiquity (Chabrowe, 1974, 385).

Hellenic times
The first main visual records of temporary structures were coins

Middle Ages
Scarcely any records

Early Renaissance
As coherent history emerged, temporary structures became a distinct genre

Baroque
This genre reached a peak

Early Renaissance & Baroque
- Public celebrations and mourning
- Decorative edifices, wooden scaffold faced by stucco and canvas
- Incorporated into elaborate ceremonial events
- Commemorated in pamphlets that contained engravings and descriptions of the structures along with accounts of the events and their participants

Mid-nineteenth century
Declined to the point of dying out but gave way to an industrial equivalent (Chabrowe, 1974, 386)

The Industrial Revolution accompanied by urbanization and the mechanization of labour, freed individuals from toil and resulted in the need for new and different forms of architecture and experiences.

Today the industrial era is giving way to a technologically inspired and knowledge-based society in which definitions of concepts like ‘temporality’ and ‘permanence’ are again being redefined (Edginton & Chen, 2008, 1-6). Architects are again fascinated by the idea of temporality, to a degree not seen since the nineteen-sixties and -seventies, when experimental design teams explored what Peter Cook, a member of London’s Archigram, called “expendability” and “throw-away architecture” (Hawthorne, 2008)

2.1.6 Intention

A clue towards defining temporary and permanent architecture can be found in the intention. Compare a structure, built with the knowledge that it will be erased soon after planning and expecting its demise; to a structure built with the intention that it should last indefinitely. Sometimes, when structures outlast their expectations, continue to be used or become socially or culturally important. That which was intended to be temporary, cross over to permanence. Examples are; the Eiffel Tower built in 1889 which was intended only as a temporary demonstration piece as the entrance arch to The World Fair and the outdoor Delacorte Theatre in Central Park, New York which was originally built as a temporary structure in 1962 (Groak, 1992, 70).
2.2 FORMS OF TEMPORALITY

Temporary & Changeable Use

These are: permanent structures of which the use or program change over time. Certain permanent structures are not used continually or the use changes. In the realm of architecture a permanent structure does not guarantee that it will be permanently occupied. Examples are: theatres, holiday homes, expo-, event- and exhibition centres, as well as vacant or abandoned spaces.

Temporary & Different Location

These are: nomadic or mobile structures that can be dismantled relocated and re-assembled; movable, foldable and collapsible architecture or furniture. Examples are: tents, caravans, travelling carnivals and shows, installations, exhibitions, form work, scaffolding and camping chairs.

Temporary & Once-off Existence

These are: once-off disposable structures that will be thrown away or cease to exist. Structures that are constructed with the intention of being de-constructed never to be assembled again. Examples are: once-off events, pavilions, promotions, launches, exhibitions, insertions, sets, decor and installations.
Temporary Materiality

These are: structures with a transient material quality: structures composed of materials that can easily break or degrade; disposable & recyclable materials; non-durable, light, translucent or thin materials; materials culturally associated with temporality.

Examples are: paper, cardboard, reeds, thatch, fabrics, canvas, tensile structures, glass, ice, wood, water, light and corrugated cardboard.

Events

These are: structures that last as long as the experience they facilitate and space that is temporarily appropriated to accommodate an event or happening. In this case the focus is on the experience that only lasts temporarily but creates a lasting memory.

Examples are: promotions, festivals, performances, digital media such as film projections and virtual space.

Temporary phase or position

These are: structures that grow, age, change form, composition, state or position. Structures that are intended to decay, change or evolve over time.

Examples are: adjustable architecture, flexible space, open building systems, ice structures, plants, corroding metals.
2.3 EXAMPLES OF TEMPORARY ARCHITECTURE

**Urban Switch**

This was a two-storey, 12 m high, temporary information pavilion by Modulorbeat, for the sculpture projects Münster 2007 exhibition. It had a gold-coloured exterior shell of perforated copper sheets in response to the Silberne Frequenz (i.e. Silvery Frequency), a light installation by Otto Piene, on the facade of the adjacent building. Illuminated from the inside at night, the interplay with the Silberne Frequenz installation created a particularly unique atmosphere. Acting as an “urban switch”, a moving part of the pavilion was able to re-route pedestrian and bicycle traffic on the square, thus also transforming the use and perception of this public space (Schwiontek, 2008).

**Kubik**

Temporary buildings are often minimalistic, stripped to their bare essentials (Modulorbeat, 2006). For three months, an empty plot of land in Berlin was transformed by constructing a temporary night club out of 144 plastic water tanks, normally used in industry. They were joined together by a simple system of metal bars and Euro Pallets, a 150 watt bulb was placed in each canister and wrapped in heat-resistant coloured film. Kubik has since been on tour in other cities like Barcelona and Lisbon (Schwiontek, 2008).

**Kunsthülle LPL**

This provided a temporary venue for the Liverpool Biennial 2006 by OSA architects. The quality of temporary architecture is also determined by the aesthetic impact of the realized concepts. On the flat roof of a disused factory, a simple steel construction was covered with PVC strips that stretched down to the ground. On the roof itself, a second inner shell, made of red PVC strips formed the actual venue. The PVC curtain of this two-layer facade allowed light and visitors to pass through (Schwiontek, 2008).
2.4 DELIGHT

2.4.1 The importance of recreational spaces and activities in an urban environment

As previously discussed, for several centuries, temporary construction has been, and still is associated with festivals and other forms of public, urban recreational and cultural activities.

Recreation is an expression of individual interest, often reflecting broader social and cultural values, and can serve as a wellspring for the generation of new creative perspectives for cities. As such, recreation is an optimal medium for transformation (Edginton & Chen, 2008, 1-6).

In the development of modern society, we can observe a few changes. One of these changes is the increase of mobility of mankind, the increase of speed in general and the progress in telecommunications. We can observe an increase of free-lance specialists, who work as teams and project-oriented for a specific and relatively short time, often on different locations; “The Nomads of the 21st Century”. Isolation, a decreasing social life and alienation, is already manifesting itself for the pioneers (Horsmans, 1996).

“Rapid changes in society have resulted in a very dynamic, fluid environment that demands from individuals and societies the ability to engage in the process of transformation”, says Edginton & Chen (2008, 1-6). To transform or change, one must be free or unencumbered from the constraints that are imposed in seeking a new way of being. Leisure provides an optimal opportunity for such transformation or change. Changes in society also create needs for new and different forms of leisure amenities and experiences. Recreation has the potential for improving, nourishing and sustaining individuals as well as cities because it:

- Enhances the livability of communities which has become a central theme in the promotion of cities in order to attract businesses. A livability approach focuses on creating leisure-oriented social and physical environments.
- Provides an optimal environment for individuals to seek new experiences, to experiment and to learn and grow anew.
- Creates opportunities for professionals to gain new knowledge, skills, attitudes and values.
- When applied to the workplace, environments can be designed in such a way as to promote a more creative, playful, and open social and physical environment (Edginton & Chen, 2008, 1-6).

In the chapter ‘The Carnivalization of the World’ Parker (2003, 140) discusses the Rio Carnival in Brazil and points out that the carnival has changed and grown over time in response to the specific circumstances of Brazilian life. “The carnival itself has been “Brazilianized” and has itself become a kind of metaphor with its own highly complicated set of meanings” (Parker, 2003, 140).

Hawthorne (2008) uses the example of Los Angeles as a city that has a long history of what he calls vernacular temporality; rows of taco trucks and party tents during Oscar week and thousands of people drive into the desert to take in the pop-up urbanism of the annual Coachella and Burning Man festivals.
2.5 THE IMPORTANCE OF TEMPORARY ARCHITECTURE

“...temporary structures are valuable not despite but because of their fleeting, popular character.” (Chabrowe, 1974, p.391)

“We are in need of a new approach where variability in space, time and shape, flexibility and portability are the main characteristics. Where conventional urbanism is based on two dimensional planning of functions and building architecture, that lasts forever, we now need an urbanism that introduces time as a parameter.” (Horsmans, 1996)

2.5.1 Economical climate

Currently the economic impacts of large-scale developments are being questioned. Lévesque (2007) is of opinion that small-scale temporary architecture has the liberty to explore and test larger themes through direct engagement with their site and their audience “Indeterminability emerges in the meeting of experience, time and context; the outcome of this conflation is impossible to predict” Lévesque (2007). Temporary architecture is an intervention which unveils unpredictable, experimental and educational opportunities. She also explains that impermanence superimposes an alternative reality by changing the time of experience (Lévesque 2007). As Perez-Gomez noted “festival time was obviously different from normal time. It dislocated and relocated human temporality, without resorting to banal linear time or a simple return of the same” (Lévesque, 2007). Once again, according to Lévesque (2007) ‘As such, public festivities were intimately linked to improvisation: the magic created in the imperfect was what carried the essence of the event, for in the unfinished, one can imagine new realities; they allowed to test and develop construction hypothesis and new forms’.

2.5.2 Reusing and recycling

We live in times where dwindling resources, pressing environmental problems and sustainability play an important role in the future of architecture. “Though it may sound paradoxical at first, this is precisely where we see great potential for temporary buildings and installations”, says Oliver Langbein from OSA (Office for Subversive Architecture) a network of eight architects and town planners who studied together in Darmstadt and now work in eight cities in five European countries.

Langbein explains that “Experience shows that plans for the future are often very unreliable and that some buildings become obsolete much more quickly than originally expected”. The key to sustainable planning, he believes, is to develop a solution which is appropriate to the particular space: “It may prove more sustainable to first use a temporary installation to identify a location's potential rather than designing a particularly eco-friendly building.” (Cave, 2008)

2.5.3 Collaboration

An integral part of temporary construction is, in many cases, a dialogue with local players. Oliver Langbein explains: “By incorporating their background knowledge into the work process, alternative concepts can emerge and planning errors can be avoided.” (Cave, 2008)

The boundaries between architecture, art, design and social intervention become blurred. “The open links to other disciplines are simply more diverse with temporary concepts than is the case in classical building projects”, says Oliver Langbein, while Jan Kampshoff from Modulorbeat stresses: “All these categories are relevant to us, and it makes little difference whether
our work is then dubbed art, architecture, design or whatever.” (Cave, 2008)

2.5.4 The temporary as catalyst

ground for experiment, facilitating change in the permanent

The temporary intervention could make suggestions towards ways in which the building could be permanently altered or re-used.

“Temporary projects are a bit like an urban laboratory”, says Jan Kampshoff from Modulorbeat (a firm of urbanists and planners in Münster): “What is fascinating about this type of work is that we can use the projects to transform, improve, disrupt, ignore or reinterpret spaces for a short period of time. The projects may disappear, but the spaces are never the same again.” Temporary buildings also have the advantage that they can often be erected more quickly than conventional buildings based on light and inexpensive materials and inventive and logical assembly”. (Cave, 2008).

An interdisciplinary workshop was ran by Oliver Langbein and Britta Eiermann during the Darmstadt Summer of Architecture 2008. Inspired by the question “Who does public space belong to?”, the workshop examined the scope for young people to make active use of urban spaces. Together with university and school students, the architects devised temporary transformations. They transformed lonely park benches into lounges and played urban mini golf in empty water basins and through old drainpipes and gutters (Figure 19). For their Landgewinnung (i.e. land reclamation) event they used large yellow towels to occupy public spaces and bus stops like only the Germans can (Figure 20). One thing that does become clear is that the experimental character of temporary works allows provocative architectural statements and a new perception of squares, public spaces and parks.
2.6 THE TEMPORARY USE OF VACANT SPACE

In the CBD of Pretoria, vacant spaces are seen as dangerous and to be avoided. These spaces are then illegally occupied. Eviction usually causes great distress to the owners, occupants and the surrounding community. Property also gets damaged when lying vacant for too long. Vacant spaces also have an adverse effect on the property value in an area (Figure 21). For these reasons the temporary use of vacant space is worth exploring.

During 2009 the Central Eastside Industrial Council of Portland Oregon in collaboration with Portland State University did research on this subject and identified benefits that temporary projects offer to property owners, space users and the community.

2.6.1 For property owners temporary projects can:

- Maintain the commercial viability for a property or area
- Demonstrate a viable, active use of a space to potential permanent tenants and attract people to the site, increasing exposure and interest
- Improve the space if users do painting or other finishing work—increasing its value
- Generate revenue
- Prove the viability for permanent use
- Put the property “on the map” and boost the image of the property and the owner
- Help maintain and develop good relationships with neighbouring owners and the community
- Enable owners to be involved in uplifting their community by fostering creative activity and start-up businesses

2.6.2 For property users temporary projects can:

- Test out a neighbourhood before making permanent commitments
- Offer a low-budget way to demonstrate property viability
- Allow existing businesses and community groups to expand their workshops, stores, or office space for special events, seasonal activities, or short-term projects
- House temporary events in unconventional locations
- Give artists and businesses exposure to new customers and spaces
- Provide venues for displays of art in storefronts (Figure 22)
- Provide locations for entrepreneurs to try out ideas and experiment with a low budget

2.6.3 For communities temporary projects can:

- Keep a business district active and attractive
- Prevent property from becoming an eyesore and reveal new possibilities for vacant spaces
- Activate and enliven dead or awkward spaces, such as publicly-owned pieces of land near highways and rail lines, walls and rooftops, or unused portions of occupied buildings
- Demonstrating possible uses for a space that is currently empty
- Spark more ideas and build a vision of could be
“Sometimes the spaces act as laboratories for the future city. Sometimes the uses act as catalysts for (re)development. Sometimes they make money. Sometimes they are just fun.”

(Dann et al. 2009, 2)
2.7 ARCHITECTURE AS EVENT & EXPERIENCE

Spatial, social and cultural experience

Event = people + activity + space = architecture

According to Tschumi (1977) the difference between architecture and art lies in “the experience of the moving body in space.” He sees the exclusion of the body and its experience from discourse as resulting in a reductive and formalist interpretation of architecture. According to him architecture should be seen as “…an interaction of space and events” instead of an object, as a “human activity or open-ended text” (Tschumi, 1981). Tschumi’s writing focuses on themes of transgression, limits and excess. He also places emphasis on the event and the experience of pleasure as being orchestrated by architectural space (Nesbitt, 1996).

He concentrates on the senses and the exhilarating differences and dialectics in the experience of space. He sees architecture as a pleasure of the mind rather than a thing of the mind. Architecture depends on imagination, sensual experience as well as rational concepts. In his explanation of fragments he refers to ‘desire’ as the movement between opposing fragments; the real and the virtual, memory and fantasy, presence and absence.

“Architecture is architecture because it sets in motion the operations of seduction and the unconscious.” (Nesbitt, 1996, pp.530-540).

Events are temporary by nature. In order to accommodate events, space is often created and removed over a short period of time. During an event a space can make you feel special in the moment when, normally, you would not consider that space as being special (Baunach, 2009).

2.7.1 Palio dinner

An example of this is a Palio dinner. The Palio is an annual horse race in Siena that pits neighbourhoods against each other. Before the race, a big dinner is held in each street and neighbours come out to eat. At the head of the table is the horse, the guest of honour. This event transforms a city street into a dining room for thousands. Although Siena has a natural and man-made beauty, Baunach (2009) would argue that the temporal experience of the dinner is the basis for falling in love with the city of Siena. The event is fleeting but it is this intense memory of civic transformation that truly creates the lasting impression of the city rather than its day to day stasis (Figure 23).

Temporary architecture also helps resolve what is really important for inhabitation, says Baunach (2009). The importance of space lies in the architectural experience augmented by its static form and aesthetics which is based more on a memory of a space at that moment.
2.7.2 Theatre & Temporality

Temporary structures have customarily been associated with the theatre. But while they shared the transient nature of the stage sets, they were always three-dimensional. A temporary structure constituted a volume of mass and usually enclosed space. The stage set was primarily two-dimensional and only simulated mass (Chabrowe, 1974, p.386).

In commenting on his set design for Richard Wagner's 'Tristan and Isolde', Daniel Libeskind says that: “the difference between architecture and theatre is that in theater everything is built to disappear...made with paper glue and light materials.”

He continues to explain how powerful the impermanence can be, because it creates memory and emotions which remain in the hearts and minds of the audience and that this is what architecture and theatre have in common (Libeskind, 2009). Places where collective and public cultural activity occur have an important and lasting influence (aesthetic, social, economical and symbolic) on the form and function of cities (Groak, 1992).

2.7.3 Environmental Theatre

“In 1916, poet Guillaume Apollinaire imagined a theatrical performance like a festival or market day in a public plaza. Apollinaire's vision of a multifaceted performance on a stage surrounding the audience was developed by modern directors in the 1920s and 30s as “environmental theatre.” Apollinaire argued that art, theatre and architecture should neither mirror nature, nor construct an ideal, but draw back the veil of the ordinary by juxtaposing images that open viewers' imaginations” (Read, 2006, 8).

Walter Gropius and El Lissitzky were respectively approached to design environmental theatres that would engulf the audience spatially, erasing theatric distance. Bringing audience and actors into the same space challenged the boundary between fiction, reality and constructed plays, not as fantasy, but as meaningful stories that have a real effect in the world (Read, 2006, 8).

During the same time Erwin Piscator in Germany and Vsevelod Meyerhold in Russia led a movement to do away with the box stage, to cross the proscenium arch and to bring performances into the hall with the audience (Read, 2006, 8).

2.7.4 Theatre as Experiment

"Theatre is perhaps architecture's most powerful ally in exploring the social impact of design: how space shapes actions and relationships. Theatre offers a manipulable realm of make-believe that can reflect on real situations, characters and places. In this protected field of play an architect and director may set up situations that actors explore emotionally in movement and gesture. In this sense, theatre demonstrates architecture, playing on exactly the issues of interpersonal relationships in space that architects engage with most pointedly in designing buildings, public space and urban life." (Read, 2006, 2).

"Through theatre, a designer may explore physical and social space in real time, at a real scale and with real people." (Read, 2006, 2).

Performances were to absorb spectators in a complete experience of action in space. Autant and Lara saw architecture neither as an art of composition nor as engineering, but as a performing art. In the experimental realm of theatre, actors and spectators could test the space poetically in performance (Read, 2006, 3).
In 1937, Autant built the Théâtre de l’Espace (Theatre of Space) performance hall within a larger structure designed by Paul Tournon for the Paris International Exposition, which stood for one year (Figure 24) (Read, 2006, 3). The theatre comprised a 50m long rectangular hall. The audience was accommodated in a smaller rectangular pit at the centre, surrounded on three sides by a fixed, raised stage. Small stage spaces were also placed in between the audience. This created two levels of performance space; one close-up and one seen from further away. On the upper surrounding stage, three scenes appeared: one beyond the facing audience, a second scene to the side requiring spectators to turn and a third going on behind them. (Read, 2006, 6). The exterior walls of the hall were pierced with glazed doors and windows that reached from the floor of the stage to a high ceiling to create a ‘transparent atmospheric band, continuous with the outside’ (Read, 2006, 5). Panels of scenery were hung in front of the windows yet they never entirely obscured a view to the outside. Actors on the panoramic stage would perform with scenery above them as well as a view through the windows to trees and sky beyond. This juxtaposition read simultaneously as flat paint and as illusory space (Read, 2006, 8). Most of the roof was a skylight that could be opened completely in good weather, releasing the hall to the sky (Figure 26) (Read, 2006, 4).

The slope of the stage floor on the upper levels created traditional up-stage and down-stage positions but because it followed the line of sight the audience could not see the floor and, as a result, it would be difficult to read depth (Figure 27). Together with the bright light from the windows behind, actors would seem two-dimensional and as if they were floating in weightless silhouette, their faces invisible (Read, 2006, 7).

The skylight lit the actors from above and made them appear close up when surrounded by the audience. This proximity and consistent shadow emphasized their physical presence and allowed the audience to see their movements in three-dimensional detail. The seating configuration placed both actors and members of the audience opposite each other with pieces of performance in-between. This meant that they were integrated into the performance and could see each others’ reactions (Read, 2006, 6).

Théâtre de l’Espace played on the boundary between the theatre and the city, constructing a fictional scene within a real place. While the narrative of the script invoked a fictional elsewhere, a view of the Parisian landscape was maintained juxtaposed with scenery. This recalled ancient epic dramas staged outside in natural landscapes or city squares.

Autant included a large screen on the building façade so that performances which were in progress inside, could be projected into the city (Read, 2006, 10). “… rubbing the story against reality, placing spectators both there and here, inviting them to speculate in between” (Read, 2006, 7)

The architecture of the Théâtre de l’Espace identified two experiences familiar in the structure of public, urban life and performances that are representative of public life (Read, 2006, 13). Distant scenes on the upper level surrounding the audience evoked one’s view of the lives of others, which often appear scenographic and well-ordered (Read, 2006, 9). The scenes on the lower stages unfolded unpredictably and like spontaneous events in one’s own life and modelled the casual, more private interactions of the city (Read, 2006, 11). The two areas remained linked and could affect each other. The boundaries between were “permeable enough for drama in motion” to cross from one to the other, defining moments of particular intensity when characters step from one into the other (Figure 28) (Read, 2006, 10).

Through theatre, Autant and Lara investigated architecture not as form but as action, a practice particularly relevant to design in cities (Read, 2006, 1).
Figure 24. Building containing the Théâtre de l’Espace designed by Paul Tournon for the Exposition International des Arts et Métiers, Paris, 1937 (Read, 2006).

Figure 25. Left: Plan, Section and Elevation drawn by Edouard Autant (Read, 2006),

A - Transparent Atmospheric Band (open to fresh air)
C – Counterweights for moveable ceiling
D – Scenery (Improvised)
E – Closed-circuit television screen showing performances in progress
F – Seating for Audience
L – Moveable Ceiling (Fresh air and weather protection)
O – Orchestra funnel
P – Panoramic Stage
R – Mirrors
V – Entry Hall
T – Advertising Posters

Figure 26. View from stage showing scenery panels overlapping windows above the heads of actors. Retractable ceiling and skylights flood theatre with sunlight during the day and frame view of heavens at night. Layered scenes, views and light proposed spatial experience of a modern public plaza (Read, 2006).

Figure 27. Cross-section based on Autant’s sketches and photos of the built hall. Actors perform at the lowest level between sections of spectators and on the upper surrounding stage (Read, 2006).

Figure 28. Interior based on Edouard Autant’s plan and section. Actors play improvised scenes in lower area between audience bleachers and choreographed drama on upper surrounding stage. Tilted mirrors reflect action behind spectators (Read, 2006).
A whole

existing fabric and
aesthetic environment

Figure 29. Digital collage for framework (Pretoria PlugIn City group, 2010).
03. FRAMEWORK
3.1 GROUP FRAMEWORK PRETORIA PLUGIN CITY

[COLLECTING FRACTIONS OF THE WHOLE]

3.1.1 Vision

- **Celebrate** the unique and multiple layers and characteristics of Pretoria’s inner city
- **Build** on and promote the existing urban fabric
- **Promote** Pretoria’s inner city as a stimulating energetic environment.

3.1.2 Identity

- Create local and regional identity in the inner city through creating a distinct brand identity for specific **nodes** and **strips**.
- Employ furniture, finishes, tectonics and existing fabric to reinforce and maintain strip (street) **identity**.
- Use markers to increase **legibility** of programmes, features and districts

3.1.3 Connect

- Promote **connections** between the CBD and bordering regions
- Promote inter connectivity within the CBD by **linking** open spaces and defining and developing social and cultural **nodes**
- Introduce people to the area identity by using **thresholds** as introductory points at specific entrances where people can “read” the city

‘It is better to think of an aggregation of small and even contradictory set pieces (almost like the products of different regimes) than to entertain fantasies about total and faultless solutions which the conditions of politics can only abort.’

(Rowe & Koetter, 1996, 279)

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Figure 30. Boundaries of the framework investigation (Pretoria Plugin City group, 2010).
3.1.4 Collage city [Colin Rowe and Fred Koetter]

‘Collage city’ is a theoretical approach that recognises the city as a composition of individual fragments and allow contradictions to coexist. Collage is used to identify the problem of composite presence in the city. This theory criticises utopian and totalitarian reasoning and promotes an urbanism that allows for change.

The intention and application of this method is to use the existing, as a point of departure, and then initiate focussed, site specific (fragments) interventions with a common vision.

Each intervention functions as a catalyst on its own, creating points of rejuvenation throughout the city that circles out and in turn sparks future initiatives. When the interventions are viewed on a larger scale, a collage is created, revealing the diverse and pluralistic character of Pretoria’s inner city.

‘A method of paying attention to the leftovers...of preserving their integrity and equipping them with dignity, of compounding matter of factness and cerebrality, a convention and a breach of convention.’

(Rowe & Koetter, 1996, 288)

Figure 31. Diagram explaining the theoretical approach of the framework (Pretoria PlugIn City group, 2010).
3.1.5 Phasing

Phase 1: Public nodes, recreation & links
Create public recreational programmes and events and provide links to unite the layers of activity.

Phase 2: Strip Strategy
Reinforcing and maintaining strip (street) identity with street furniture, finishes and building tectonics and create a brand identity for specific nodes and strips.

Phase 3: Thresholds
Create well defined thresholds at specific entrance points where people can “read” the city.

Figure 32. Diagrammatic maps showing framework intensions & phasing (Pretoria PlugIn City group, 2010).
3.2 PHASE 4 PRETORIA PLUGIN FESTIVAL

3.2.1 Proposal

The aim of phase four of the framework is to celebrate the city. For this purpose the framework proposes a cultural festival in the inner city. According to research an annual festival called the Jacaranda Festival was held on Church Square during the nineties. Building on this heritage the framework proposes a new cultural festival called the Pretoria Plugin Festival with Church Square at its centre.

3.2.2 Existing Jacaranda festival

During 2010, the Jacaranda Festival was held again for the first time in years.

The 2010 festival took place on a 50 000 square metre terrain next to the Zambezi Mall in Derdepoort, a northern suburb of Pretoria. Events included live music, acting performances and art exhibitions.

Criticism

- Isolated location: removed from the city centre
- Inaccessible: not in close proximity to major existing taxis and bus stops. Removed from the main public transport network of the inner city.
- Exclusive target market in terms of entertainment
- The programme doesn’t promote up-and-coming artists – almost exclusively well-known artists

3.2.3 Perceptions about Festivals in South Africa

Judging from personal experience and asking peoples’ opinions the following are some observations and assumptions:

- The major, well-known arts festivals in South Africa are held in smaller cities or towns
- The target market of these festivals is limited and generally feature more commercial performances. These festivals tend to exclude experimental, amateur performances and up-and-coming artists
- Other festivals are centred around a specific consumer or fresh product or a specific art form (wine, comedy, jazz, dance).
- Each year more people flock to festivals as they grow in popularity
- Festivals create economic opportunities
- People see festivals as a form of cultural expression
- People attend festivals specifically for its social aspects

‘As embassy capital we want to expose citizens of Pretoria and people from across South Africa to the rich diversity of cultures in Pretoria. We want to improve awareness among all people, of the important role the arts play in a multicultural South African society.’

(Jacaranda National Arts Festival, 2010)
3.2.4 Intention

The intention of the festival is not to entirely replace the Jacaranda Festival but rather to incorporate or supplement it. The PlugIn Festival agrees with the Jacaranda Festival's mission statement but suggests some changes and adaptations to the way it is executed.

3.2.5 Location

The intention is to change the location of the entire festival or, at least a fringe component, to the Pretoria CBD. This location has historic importance, since Church Square used to be the centre of this festival. This will give people the opportunity to experience the inner city of Pretoria, rich in cultural and historic value. While providing public spaces and venues, the inner city will benefit from the rejuvenating social and economic boosts of a festival.

3.2.6 Accessibility

Church Square is close to BRT stops, taxi ranks and parkades that can accommodate a hop-off and walk network. The boundaries of the festival were determined by measuring walking distances from Church Square and the existing points of interest surrounding the square.

3.2.7 Target market

The location implies a different collection of people. The festival should, therefore, appeal to art lovers of different ages, races & genders, as well as renew interest in culture and the city. The intention is that the festival will attract a local, as well as an international market. The city of Pretoria, with its many embassies, is the perfect location for contributing an international element to the festival. The event historically featured international performances. The festival will allow room for a larger alternative, experimental and amateur segment.

3.2.8 Vision

- To promote the urban context; giving a new angle to South African festivals as we know them
- To create an urban event, annual ritual and tourist attraction in Pretoria
- Make it a more accessible and inclusive event
- To create a local and regional identity in the city, thus promoting Pretoria
- To connect people with the city - giving them a reason to visit the city
- Community focus, giving a platform to local artists & performers
- To generate an income for the inner city
- To create a framework for collaboration & skills transfer, sparking future incentives and creating a community legacy

3.2.9 Attractions

Culture and education

- Theme walks
- Artist & community craft workshops
- Schools & educational institutions; competitions & involvement of surrounding schools, TUks and TUT’s music, drama and arts departments

Additional categories & activities

- Digital art
- Animation
- Film
- Experimental & recycled media
- Photography
- Performance art
- Architectural & industrial design
- Fashion & textile design
- Location-specific art
- Museum/cultural walks
- Public - artist workshops
- Installation art

3.2.10 Time

The PlugIn Festival will be held for a week during the April school holidays. At this time of year the chances of rain are less and the weather in Pretoria is still pleasant. Events will also be scheduled for the evenings in order to attract people to the city, thus promoting it as a 24-hour zone, which will improve safety.
3.3 HOW DOES THE TEMPORARY THEATRE FIT INTO THE FESTIVAL FRAMEWORK?

3.3.1 Location
The site is located within easy walking distance of Church Square and falls within the festival boundaries.

3.3.2 Program
The building will function as a performance venue for the festival. The festival will be an annual city event and thus the building could be used on a yearly basis for this purpose. During and after the festival, The Temporary Theatre will act as a fringe venue to the State Theatre, located nearby. The Temporary Theatre will focus on more alternative and experimental theatre pieces, specifically supporting youth, community and other amateur stage productions.

3.3.3 Experience
As identified by the framework, the inner city lacks leisure and public recreation activities. Recreational events, such as festivals, are an economic, cultural and social boost for cities and can play a positive role in establishing a city's identity and regenerating the cities, as can be seen from examples of local and international cities such as Grahamstown, Potchefstroom, Rio de Janeiro and Edinburgh.

The temporary programme within the framework of a festival allows for repetition. The temporary structure should aim to leave small, permanent and positive traces. These small improvements, in turn, will spark greater change and renewal.

3.3.4 Location
The site is located within easy walking distance of Church Square and falls within the festival boundaries.

3.3.5 Use
As the framework proposes an existing building was utilized to accommodate The Temporary Theatre.

Figure 33. Diagram showing the proposed site in relation to Church Square and other points of interest (Author, 2010).
Existing point of interest, museums & theatre buildings

Figure 34. Map showing existing point of interest, museums & theatre buildings (Pretoria PlugIn City group, 2010).
Figure 35. Map showing festival routes, group sites and proposed uses of existing buildings and spaces during the festival (Pretoria PlugIn City group, 2010).
04. PHYSICAL CONTEXT

Figure 36. View of the site from across the street on the corner of Vermeulen- & Bosman Street (Author, 2010).
Founded in 1855 Pretoria has mostly developed along an east west axis in response to the restrictions posed by the topography of the terrain. This part of the city has a logical grid-based layout with Church Square still at its centre.

The capital city of Pretoria is regarded as the core city of the multi-nodal municipal ward of Tshwane. The Central Business District of Pretoria lies between the borders of D.F. Malan Drive to the west, Nelson Mandela Drive to the east, the Pretoria Railway Station to the south and Boom Street to the north.
4.1 SITE

The bookbinding workshop of the Government Printing Works
Bosmanstraat 148, erf 1/218-222

Figure 39. Pretoria within the context of Gauteng (Author, 2010).

Figure 40. Perspective of the Government Printing Works (Author, 2010).

Figure 41. Location of the Government Printing Works within the Pretoria CBD (Author, 2010).

Figure 42. Location of the binding workshop in the contexts of The Government Printing Works (Geography department, UP 2010).

Figure 43. Perspective showing the binding workshop & The Government Printing Works (Author, 2010).
4.1.1 BRT route, parking, pedestrian activity & schools

Mapping Conclusion:

The site is centrally located in a pedestrian-active area, within walking distance of Church Square and the BRT route. Pedestrians, locals and people who are dependent on public transport will be able to visit the theatre. There are quite a few schools surrounding the site. The schools could make use of the theatre and participate in projects. There is existing parking available for visitors from outside the inner city making use of private transport.

Figure 44. Map showing parking, schools, pedestrian activity and BRT route (Author, 2010).
4.1.2 Pretoria PlugIn Festival routes & points of interest

Mapping Conclusion:

The site is located within the boundaries of the proposed festival and in close proximity to new and existing points of interest.

The theatre will contribute to, and benefit from, the festival activities.
4.1.3 Current land usage of property around the site

Figure 46. Map showing land usage of property surrounding the site (Author, 2010).
Figure 47. Digital collage showing impressions of the site and its surroundings (Author, 2010).
Seventy in isolation, the building that houses the book-binding workshop could be considered unimportant. The building's historical importance lies in the fact that it is part of a larger whole; the Government Printing Works, and therefore related to its development and associations.

Over the years the Printing Works printed, among other things, the SA Railway timetables, voters’ lists, ballot papers, maps, cigarette excise duty labels, Union Government Gazettes, Matric exam papers, ID and passport documents.

The original printing works occupied a site in Church Street which were subsequently occupied by the State Library and later became the first home of the South African Reserve Bank.

Similarities found in comparing the Old Printing Press (Staatsdrukkerij, 1895) with the current binding workshop (1955) led the author to believe that the original printing press influenced the design of the binding workshop. In the light of available literature the following aspects could have been influential:

- Little detail, limited to the street facing facades (Minnaar, 2000, 68-75)
- Corner entrances unlike the central entrances of other government buildings of the time
- Other entrances are placed at the most useful positions for public access and workers entering from the street

**Architect:** Sytse Worpes Wierda (Government Engineer and Architect of the ZAR 1877 – 1899)

**4.2.1 Wierda’s point of approach:**

Functional, utility and industrial architecture can still make a positive contribution to the image of the city through following the same city building principles of, for example, edgebuilding (randbebouing) and through using the same building materials (Minnaar, 2000, 68-75).

Commonalities between these types of buildings are also evident in the binding workshop:

- A basic system of links and integration
- Materials chosen according to local availability – red brick, sandstone, painted corrugated iron roof sheeting and wooden doors
- Ventilators and volumetric interpretations of facades.
- Placement of buildings to face the street or square.
- Autonomous buildings, proud and steadfast with a clear outline

**4.2.2 Basic heritage evaluation adapted from Le Roux (1993,57)**

| A | Architectonic or style importance |
| C | Contextual importance in relation to the street or as part of a group |
| D | Designer of importance |
| E | Economic and reuse potential |
| H | Historical importance due to association with a person, group or event or by age (Older than 50 years) |
| L | Landmark, visually or within community sentiment |
| P | Physical condition |
| T | Typological importance |

**Elements with historical importance**

**Industrial heritage**

- Ventilators
- Red face brick
- Jagged roof profile
- Clerestory windows
- Corrugated iron roof sheeting
1887
The Transvaal government purchased the printing plant and gave
Jan Cilliers the
order to establish a

Government
Printing Works.

1892
Nationalized and established as a state printing press by
old president Paul Kruger

1875
President appointed the stamp commission

1877
British occupation – stamps displayed the British queen’s
head

1895
Department of Public Works were placed in charge and
moved the Printing Works to a new red-brick building
on the corner of Vermeulen and Kock Street
(now Bosman)

1899 – 1902
During the Anglo-Boer War the Printing Works closed.
Government printing was made possible by establishing a
mobile plant on a train that ran between Pretoria and
Delagoa Bay.
Towards the end of the war the Printing Works re-opened
with an entirely new staff, engaged by Lord Milner, the High
Commissioner in Durban

1901
The bust of the President appeared on stamps.
Up to 1901 only hand composition and ordinary letterpress machine minding and bookbinding were in operation.

1926
The red-brick building got too small and the staff and equipment
moved to a new and commodious building on an adjoining site valued at £350 000 and occupied more than 700000
square feet in 1955

1955
The quartermaster of the South African Police occupies the red brick building.
Greatly modernized by the installation of new machinery.
Original value of equipment – £500 000
350000 copies of the Transvaal telephone directory consumes
more than 450 tons of paper
4.3 RELATIONSHIP WITH OTHER EXISTING STRUCTURES

Activating under-utilized space
Reclaiming lost space
Learning through experimenting:
- facilitate temporality & recycling
- programming, construction & materials
Learning through repetition
Testing of theory

Cultural education
Sparking interest in culture
Exposure to cultural activities
Promoting art & culture in the public realm

Workshops & training
Skills transfer
Job creation
Income generation
Cyclical - lasting benefits

People getting together to work & play
Promotes community identity
Community events during the festival
- common design language/character
- create a local brand
Establishing a community facility

ARCHITECTURAL
CULTURAL
ECONOMICAL
SOCIAL

Figure 48. Aerial photograph showing the site in relation to other existing structures (Geography department, UP 2010).

1. Engen Garage & sports bar
2. Batho Pele house
3. Eendraght Primary School
4. Primary School
5. Telkom Tower
6. Telkom Tower South
7. Press: workshops, offices & cafeteria
8. Old government publishing house & press
9. Paper recycling
10. Workshops, storage & offices
11. Lithography & bindery
12. Parking
13. House Davidtz Old Age Home
14. City Forum - offices
15. Pennies Primary School
16. Vergesig - apartment block
17. Schubart Park
18. Nursery school
19. Van Zyl's Fitment Centre
20. Social housing
21. Social housing
22. Retail on street level
23. Social housing
24. Groote Kerk
25. Old Department of Public Works
4.3.1 Natural elements
The most prominent natural element on the site are the large Jacaranda trees lining Vermeulen Street parallel to the south facade of the building. There are six big trees at regular intervals towering up to the top of the roof and shading the building.

4.3.2 Street edge
The south facade is the only street edge of the building. The column, slab and infill composition are visible on this facade. Large steel frame windows are elevated from the street restricting any view into the building from outside. The incline of the sidewalk decreases towards the west. Although the edge of the building is completely closed off from the street, the trees provide a pleasantly shaded walkway along it. Pedestrians frequent this street judging by the palimpsest of posters and flyers against the edge of the building.

4.3.3 Existing community facilities that could contribute to, or benefit from the re-use of the site as a temporary theatre

**Schools:**
*Festival:* community participation, fund-raising & showcasing talents
*After:* upgrading facilities + new venue = fund-raising, recitals, exhibitions, skills training, workshops, functions & performances

**Groote kerk (church):**
*Festival:* Music & Choir performances, guest speakers
*After:* Youth facility,
Venue for Christmas play in collaboration with Huis Davidtz

**Residential component:**
*Festival:* community building, workshops & on-the-job skills training needed for festival
*After:* community venue, continued workshops & training, job creation - residents become the staff/workforce

**Huis Davidtz Old Age Home:**
*Festival:* Tea garden, venue, craft workshops & market
Creating awareness
*After:* continued workshops, training, new venue for events, community involvement, job creation - admin & maintenance
4.4 HOST BUILDING - ANALYSIS & APPROACH

4.4.1 Temporary use of found space

While this study was conducted (2010) the Government Printing Works in central Pretoria occupied the largest part of the block between Proes, Vermeulen, Shubart, and Bosman Street. At the time the relocation of this state facility, to the corner of Proes and Paul Kruger Street, two blocks to the east, was already underway and intended for completion by 2013 Reynhard.

Since 1970 a series of productions by Peter Brook experimented with performing in a variety of found spaces. In the context of this study ‘found space’ refers to existing spaces that had not been designed for theatrical performances but can, nevertheless, be converted into theatres with surprising success. Usually these performances also have the support of a community, relieved that a use has been found for an empty or precious old building. Little, or nothing, would otherwise be done to these spaces (Mackintosh, 1993, 83).

Examples

- Roundhouse – A circular 19th century steam engine shed in London
- Joseph Papp public theatre – Library in New York
- Schechner’s performing arts garage – Garage in New York
- Mnouchkine’s Cartoucherie de Vincenne – an old ammunition factory outside Paris

(Mackintosh, 1993, 86)

Traditionally theatre stages are neutral, black boxes suspended in space. Designed specifically to host different productions, the black box theatre relies on function and performance rather than on spatial experience. This type of theatre is referred to as a ‘black box’ because it is typically a dark rectangular volume with no reference to the external environment. Although the size and the technical capability of a black box theatre impose some constraints on the director and designers, in effect they work on a blank canvas.

In 1989 Ariane Mnouchkine made the case for ‘found space’. The development of this concept emphasised the fact that existing buildings and spaces have existing character, experiential qualities and dramatic potential. The found space (permanent) functions as a sacrificial backdrop to the performance (temporary) and becomes a theatre building in its own right. In turn the design and experience of the performance are directed and influenced by the existing space. This means that existing spaces other than traditional theatres has the potential to become a theatre.

“Theatre is the place where fiction and reality come together to promote each other. Real and unreal exist in tension; two opposites manifested at the same time and never fully one or the other. The potentials of space for performance are necessarily spaces where the reality and illusion are both a simulation of the material world but also real” (Oddey & White, 2006: 15)

Found space is the opposite of the black box theatre, the famous multi-purpose technical box which in fact bristles with limitations (Mackintosh, 1993, 86)

The architecture of theatre space has both a physical and metaphysical function.

Years ago directors were saying: “Give us a neutral space and we’ll handle the rest. I’m not sure if they would still say the same thing today. I say an empty space but an inspiring empty space that can be filled with images.” Existing space will also have its own ghosts from the past; memories, associations and meaning. (Mackintosh, 1993, 86)

According to Mackintosh (1993, 86) this unconventional preference for space that is not purpose-made might seem incomprehensible to architects. Actors, designers and directors however have the opportunity to comprehend immediately the practical and poetic dimension of an existing space; becoming aware of its character and dramatic potential.

A performance in a found space clearly advertises that the theatre played here is going to be a different experience from theatre played in a traditional theatre building. The audience will have a heightened sense of expectation and as a result take greater notice of the architectural quality of the space.

“The audience gets a buzz from the feeling that the players have come to town and taken over this particular structure.” (Mackintosh, 1993, 86)

Figure 51. Interior view of the host building (Author, 2010).
“For us La Cartoucherie is almost the ideal place. Of course the ceiling is rather low and the truss rods sometimes get in our way, but it is a house, a theatre, a large gracefully shaped umbrella made out of solid material that can be sculpted, painted, arranged and veneered.”

Ariane Mnouchkine (Cited in Mackintosh, 1993, p.86)
4.4.2 Reasons for choosing this site

- It falls within the Pretoria PlugIn Festival boundaries
- The site is within walking distance of Church Square
- Currently, The Government Printing Works is in the process of being relocated and is expected to remain empty for three to five years
- There is active pedestrian traffic along Vermeulen Street as suggested by the palimpsest of posters and flyers against the southern facade
- Vermeulen is a pleasant tree-lined street that can be incorporated into the design
- Natural southern light from clerestory windows can be employed
- The site is accessible for pedestrians and vehicles
- The existing hoist, and a large opening, allow for equipment and scenery to be lifted into the space.
- The industrial-capacity concrete floor slab and beams can carry an audience as confirmed by engineer
- The building contains a large double-volume space with minimal obstructions
- This building is part of a larger building complex that can contribute to, and benefit from, this intervention.
Figure 53. Exterior views of the host-building (Author, 2010).
Figure 54. Cardboard model of the host building showing exterior dimensions (Author, 2010).
4.5 STRUCTURE

The structure of the existing building is composed of a concrete column and beam-system with a 340mm thick concrete floor-slab and brickwork infill. The roof is supported by 40x40x5mm angle iron trusses bolted together and spaced at 4945mm centres. The trusses are supported by the 345x460mm columns also spaced at 4945mm.

“Interior architecture is the spatial manipulation of an existing building whilst engaging with its structural DNA, history, context, orientation and proposed program.” (Gigli, 2007, 34)
4.6 ACCESS, VERTICAL CIRCULATION & ABLUTION FACILITIES

Ground floor-lithography workshop

Figure 60. Ground floor plan of existing building showing access & ablution facilities (Author, 2010).

Figure 61. View of the entrance (Author, 2010).

Figure 62. View of service access in the western facade (Author, 2010).

Figure 63. View of the female ablution facilities; 9 wc’s, 6 showers & 5 basins (Author, 2010).

Existing vertical circulation

Existing ablution facilities

Main existing entrances & exits
First floor-binding workshop

Figure 69. Ground floor plan of existing building showing access & ablution facilities (Author, 2010).

- Existing vertical circulation
- Existing ablution facilities

- Main existing entrances & exits

Figure 64. View of the staircase leading to the first floor (Author, 2010).

Figure 65. Exterior view of the hoist going up to the first floor (Author, 2010).

Figure 66. View of the access door from the staircase to the first floor (Author, 2010).

Figure 67. Interior view of the hoist from the first floor (Author, entrance to the first floor from adjacent buildings (Author, 2010).
4.7 FOCUS AREA

Figure 70. First floor plan indicating the focus area of the study (Author, 2010).

Figure 71. View of the south facade indicating the focus area of the study (Author, 2010).

Figure 72. Typical section indicating the focus area of the study (Author, 2010).

Figure 73. Cardboard model indicating the focus area of the study (Author, 2010).
Factories often make great theatres because they have been built to house creations, productions, works, inventions and explosions.”

Ariane Mnouchkine (Cited in Mackintosh, 1993, 86)
Figure 76. Steel frame windows in South Facade (Author, 2010).

Figure 77. Wall thickness seen through the opening for hoist (Author, 2010).

Figure 78. Plan showing view A, 1-3 (Author, 2010).

Figure 79. Steel truss supported by column. Note the water pipe, electrical cables and sprinkler system supported by the truss structure (Author, 2010).
Figure 80. Interior view B (Author, 2010).
Figure 81. Stacks of paper on wooden pallets (Author, 2010).

Figure 82. Old printing equipment (Author, 2010).

Figure 83. Plan showing view B, 1-3 (Author, 2010).

Figure 84. Existing electrical fans (Author, 2010).
Figure 85. Interior view C (Author, 2010).
VIEW C

Figure 86. Existing ventilation system (Author, 2010).

Figure 87. Hoist and opening through western facade (Author, 2010).

Figure 88. Plan showing view C, 1-3 (Author, 2010).

Figure 89. Existing sink, provided with hot and cold running water (Author, 2010).
SYNOPSIS
Set in the late nineteenth century, Knysna Forest is home to wild elephants and the fiercely independent families of woodcutters, who have coexisted warily but, for the most part peacefully, for generations. Now their future, and the destiny of the forest itself, is threatened by the exploitative greed of the timber merchants and ivory hunters, and the rumours of gold in the far reaches of the Forest’s rivers.

Saul Barnard, son of woodcutter Joram Barnard, stands on the deck of the ship called the ‘Pictor’. There is urgency in him. Once they have set sail he would be free of everything he had once cared for; the forest, Kate, Old Foot. Behind him, 29 years would die. While still in the harbour the wrinkled Outiniqua – Maska-brought him the news that his brother’s son had been gored by an elephant – Old Foot- and that Fred Terblans was going to shoot him. A special relationship existed between Saul and Old foot. He felt that he owed it to Old Foot to save him – the king of elephants – from the humiliation of falling to Terblanche’s gun. If someone had to do it, it would have to be him. So with four days left before the ship would sail, Saul left the ship, borrowed a gun from Maska and headed back into the forest to look for his animal brother.

As Saul walked into the forest, it felt as if he was walking backwards into himself. He relives his past. He again remembers being fourteen; butchering the Gallhead, the cutting of the Kalander, his experiences with Old Foot, Kate, the woodcutters and the wood buyer, Mac Donald, the discovery of Millwood and his years as a gold-digger. At the end, he has to face his fears, the forest, Kate, Old Foot... and come to terms with his past.
05. TEXT ANALYSIS OF ‘CIRCLES IN A FOREST’
5.1 UNIVERSAL STORY

‘Circles in a forest’ were chosen as text for this study as it is both a South African and a universal story. In South Africa it is generally wellknown and prescribed for high school language subjects. It presents a segment from the country’s industrial development and gives insight into the history of South Africa.

It tackles the ever relevant issue of man’s careless and greed-driven destruction of natural resources without considering future generations. Jooste, (1986, 3) describes ‘Circles in a Forest’ as a timeless story, so human that anyone can relate to it. It is a story about Man’s search for worth and dignity. It tells about the division between classes and the struggle towards social and economic justice and equality. ‘Circles in a Forest’ is also a story of hope and the triumph of an individual in the face of adversity.

‘Kringe in ‘n Bos’ has been translated into English, Portuguese, Dutch, French, Icelandic, Spanish, Hebrew, German, Swedish, Italian, Finnish and Norwegian. It is also available in Braille and on cassette for the visually impaired. Philo Pieterse Productions produced ‘Circles in a Forest’ as a feature film and the stage adaptation of ‘Kringe in ‘n Bos’ was done by Peet van Rensburg.

5.1.1 Relevant Issues

• Relationship between Man and his environment
• Natural resource dependency, exploitation, destruction & protection
• Discrimination, class struggle for social & economic equality
• Eco-fable relevant to architecture

5.2 THE MAIN THEME

5.2.1 The obliteration of nature

The destruction of the Knysna Forest and its elephants is one of the main themes of ‘Circles in a Forest’. Tracing history it is true that the demand for wood during the discovery of gold and diamonds in the 19th century contributed to the demise of parts of the Knysna Forest.

“Where Harrison or his men stopped them today, they felled tomorrow because the Government were putting pressure from the west for more and more wood for railway lines, wood for jetties, wood for harbours, wood for the mines, wood for making wagons that had to take man and his possessions north! Wood for tables, wood for chairs and cupboards and beds! Wood! Wood! Wood!” (Matthee, 1984, 109).

To the woodcutters, the forest was home. They believed it belonged to them and that they could fell trees and shoot elephants as they wished. Any attempt at nature conservation was met with severe resistance.

“Everybody was shooting, everybody was felling. Harrison’s control was not strict enough; where he warned them off today, they cut open the roof of the forest that should have protected the seedlings tomorrow. Or they shot the cows that should have calved in the spring. Harrison says, the way they’re felling now, there will be little more than fifty years left for the forest…How long for the elephants.” (Matthee, 1984, 109).

5.3 OTHER THEMES

5.3.1 Liberation & boundaries

“At the age of 29 Saul Barnard had just one overwhelming need – to be free! He wanted to be free of everything he had once cared for: the forest, the people of the forest, the things of the forest, Kate, Old Foot” (Matthee, 1984, 13).

5.3.2 The truth versus the lie

“To believe a lie is to betray yourself. To walk past the truth because the path of the untruth is well trodden is just the same. Let him then be guilty of everything, but not that!” (Matthee, 1984, 63).

5.3.3 The bond between human and nature (animal)

“…every time something happens, I find him somewhere in my way. The first time was when my mother died. In between, every time I’ve been in trouble.”

“Then it is so”, he whispered in awe.

“Old Foot is watching you…”

“You are the brother of the noblest Bigfoot that ever walked this Forest” (Matthee, 1984, 242).

5.3.4 Circles (circle of life)

Life is a crooked circle: “the woodcutter killed the forest; the wood-buyer killed the woodcutter. Round and round you walked the crooked circle year in year out. The wood-buyer got richer and richer while the hands that held the axes had
no defence and neither had the forest” (Matthee, 1984, 108-109).

“Elephants have this primeval self-defence tactic to find out whether someone was following him or not. They walked in circles “round and round and round. At some time the elephant must catch up from behind” (Matthee, 1984, 183).

“Saul walks a circle back into his past. “Saul Barnard walks into the forest and it feels like walking backwards into himself”” (Matthee, 1984, 1)

5.3.5 Superstitions & myths
Uttering the word ‘elephant’ was forbidden. “You never say their name in the forest! They will hear you and think you are calling them. You called them ‘bigfeet’ or ‘thicklegs’ or Old people but never by their name” (Matthee, 1984, 20)

“…the grown-ups taught you another thing about the blue buck: they were different from all the other buck in the forest because their gall was in their heads”” (Matthee, 1984, 27)

This belief left Saul feeling uneasy. He looked for the gall in its head but found it in its usual place. “Either the grown-ups had deliberately lied to him or they believed the lie themselves” (Matthee, 1984, 40)

5.4 MILIEU (ENVIRONMENT)

5.4.1 The forest
Muffled, subdued, still, peaceful, dark

The forest is a unifying element that has a life-presence and becomes an antagonist in the story. The experience of the forest makes a strong onslaught on the senses and its impenetrable terrain is often made worse by natural elements such as rain and mist. Jooste, (1986, 3) describes the forest as having a unique, secretive and mystic beauty.

“Maska, you used to tell us that the spirits live in the trees” (1986, 240)

At the beginning of the 1800’s the Knysna Forest was tremendous and dense. The Great Lourie, the Blue buck and the Kalander (Outeniqua yellowwood tree) are icons of the forest.

“…lay like a thick black wall around big island” (Matthee, 1984, 27)

“He would hide in the forest so that nobody would ever find him. Surely God could not have seen down into the forest from up in the sky, even the sun has to struggle to shine to the ground. Only specks of sunlight got through that roof of the tree tops” (Matthee, 1984, 47)

The forest was home to the woodcutters and their families

“The forest became thinned out around them, they just moved to another clearing in the forest. Their houses like most had only two rooms. Old Anro had made himself a lean-to against the cold.” (Matthee, 1984, 61)

“The gold diggers were afraid of the forest

Patterson: “I’m suffocating! This place is too close round me” (Matthee, 1984, 147)

“It’s this forest that’s got us confused. It’s killing us. It’s different for you…you don’t hate the forest as we do.” (Matthee, 1984, 233)

5.4.2 The woodcutters’ houses

“In some places there were natural openings in the forest like Big Island and there you could find 3-4 families living in makeshift homes of wood and corrugated iron sheets… The grey timber walls are parched like deadwood, the roof sagging to the one side” (Matthee, 1984, 63)

“Woodcutters never made wonderful houses; when the forest became thinned out around them, they just moved to another clearing in the forest. Their houses like most had only two rooms. Old Anro had made himself a lean-to against the outside wall” (Matthee, 1984, 26). While cutting they lived in an almost nomadic fashion – moving from tree to tree. They built a shelter and a workplace
where they were cutting. Here they stayed until the wood was ready to be taken to town.

**5.4.3 Cripple Bush**

“…where diggers’ axes had hacked out everything to make space for the tents and houses, and to provide firewood.” (Matthee, 1984, 109)

**5.4.4 Old Foot**

“The great terror that walked the forest: the elephant” (Matthee, 1984, 20)

“Where the huge thick tusks bulged from their sockets at the side of his head, they were smooth like butter and yellow. The lower part right down to the rounded tip was stained greenish black at least a hundred pounds of ivory on each side of his head. Under the eye a wet patch stained the rough wrinkled skin dark.” (Matthee, 1984, 29 & 30)

“Something indescribably majestic about him…” (Matthee, 1984, 30)

**5.4.5 Kalander**

“…enormous”

“Standing with his feet almost in the water of the Homtini… The most beautiful… Towering above all other trees. Giant roots anchored it to the ground like giant arms. Grey bark hung like dry strips of skin.”

“The old man’s beard, moss in its branches hung like thin green hair, waving eerily in the wind.” (Matthee, 1984, 74)

**5.4.6 Going to the village**

Saul was 14 years old when he first saw Knysna village.

“And nobody ever told him that the village was not in the forest.” (Matthee, 1984, 53)

“They came out of the forest on the eastern side of the town. One moment the forest was still around and above them, the next moment it started thinning out, getting lighter… more sun and then suddenly the world was lying open. Naked. Like someone without a hat. Without a roof. He wanted to turn round and run back to the shady shelter of the forest. The sun was hurting his eyes.” (Matthee, 1984, 54)

**5.4.7 Knysna Town**

“He stayed behind the wagon when they came to the first houses. Far apart to start with. Then closer together. Square and white, their roofs neatly made of thatch; on top of some houses, another house, with windows and all, was built. The gardens were lush and came right up to the street; there were flowers growing in them that he did not know existed. And the fear that was in him was not the same fear as for bigfeat, it was different, he was surrounded by it, he was in it.” (Matthee, 1984, 55)

**5.4.8 Mac Donald’s wood yard and shed**

“…enormous. Wood was stacked up everywhere, wood wherever you looked! Mountains of wood. Next to a large shed men were loading some of the wood on other wagons…” (Matthee, 1984, 56)

**5.4.9 The Pictor**

“450 ton, three masted barque, sails furled, was lying on the starboard side of the wooden jetty” (Matthee, 1984, 11)
5.5 CHARACTERS

**FOREST**
- Woodcutters:
  - Joram (father)
  - Joseph (brother)
  - Anro (uncle)
  - Simple minded, ignorant, superstitious, helpful and generous

**<MASKA>**
- Friend
- Link - forest & Saul
- Spiritual/mystical
- Native Outiniqua
- Bridge/medium between Saul and the forest

**SAUL**
- Deviant
- Rebel against society & rules, headstrong, loyal, leader
- Protector of the forest
- Bridge between two worlds

**<KATE>**
- Challenger
- Exuberant, presumptuous, obstinate, curious
- Challenge society & rules
- Link between Saul and the village

**VILLAGE**
- Wood buyers:
  - Mr. Mac Donald (Kate’s father)
- Gold diggers:
  - Patterson
  - Crampton
  - Exploiters
  - Power & control

5.6 NARRATION & STORY TELLING

The story is told by a narrator in the third person but through the eyes of Saul. This allows the audience to associate and sympathize with Saul. The non-chronological order of the events and the story-line that weaves between the past and the present gives the audience the opportunity to discover the story.

“Wherever there are people, the world over, there are tales...” (Savory, 1982, 171)

The stories of a ‘People’ is very much part of its life. Fables are told for the purpose of enforcing, or supporting, some point of family discipline, tribal custom or life-lesson. These rely on make-belief and elements of fantasy for their popularity – called magic realism (Gordon, 1995, 9). They uphold conduct that benefits society, individual character and the welfare of the community. They gain a great deal of their power from their skilful exploitation of language (Savory, 1982, 9).

This powerful tradition of the spoken word is called the oral tradition, and Africa is world famous for its rich storehouse of literature composed and handed down in this way (Gordon, 1995, 5).
1. & 8. Saul borrows the gun from Maska, to shoot Old Foot before Terblanche does. Saul walks back into the forest and into his past to find Old Foot. 
   Prologue

2. Saul's 14th birthday
   Saul starts questioning the superstitions of the woodcutters.
   Act 1, Sc 1
   The first time Saul leaves the forest & visits Knysna village. He meets Kate & Mac Donald.
   Act 1, Sc 2
   Felling of the huge yellowwood (against his will) Act 1, Sc 3

7. Saul boards the Pictor setting sail in 4 days. Maska tells Saul that his brother's son has been gored and they say it was Old Foot. Terblanche is going to shoot Old Foot. Saul decides he'll rather do it himself & he gets of the ship. Act 2, Sc 6

9. Saul follows Old Foot's tracks in circles through the forest. After 4 days Old Foot leads him back to Millwood to show him the destruction of the forest. Old Foot gets shot. Act 2, Sc 7

10. Saul realises his responsibility towards the forest & his people. Saul decides to stay in the forest. Epilogue

5.7 STORYLINE_NOT CHRONOLOGICAL_BETWEEN PAST & PRESENT, FOREST & VILLAGE
3. Saul confronts his father about the crooked circle of their way of life
   Saul leaves his father to work for Mac Donald in Knysna
   **Act1, Sc5**

4. Maska comes to tell Saul his father died
   Major encounter between Saul & Old Foot
   **Act2, Sc2**

5. Kate shows up in Millwood (gold town)
   Figure 191. Kate & Saul spend two days together in the forest
   **Act2, Sc4**

6. Mac Donald doesn’t approve & gets revenge by refusing to buy his brother’s wood
   Saul confronts Mac Donald but agrees to leave the forest
   **Act2, Sc5**
5.8 STORYBOARD

5.7.1 PROLOGUE

**Key events**
Saul borrows the gun from Maska, to shoot Old Foot before Terblanche does. Saul walks back into the forest and into his past to find Old Foot.

**Setting**
Maska’s scantly wooden house in a clearing in the forest. Maska is sitting by a small fire on one side of the stage. Saul walks up to him.

**Mood**
Mystic and spiritual, then panic and urgency.

**Lighting**
Cool, soft and dappled with fine bright rays of violet & white light. Gets more dappled & darker as Saul walks deeper into the forest. Spotlight on Saul.

**Sound Effects**
Birds and other forest sounds. Footsteps - walking on stones. Sound gets softer as Saul walks deeper into the forest. Smoke effect at Maska’s house.

---

Figure 90. Maska’s house (Author, 2010).

Figure 91. Saul walking into the forest (Author, 2010).
5.7.2 ACT I SCENE 1

**Key events**
Saul’s 14th birthday. Saul starts questioning the superstitions of the woodcutters.

**Setting**
Cutting shelter. Joram & Anro on stage. Saul comes in with food in his hands.

**Mood**
Celebratory, playful, confusion, defiance, unease.

**Lighting**
Warm, dappled, scattered white, sharp rays.

**Sound & Effects**
Bird sounds, fire, chopping of tree.

---

5.7.3 ACT I SCENE 2

**Key events**
The first time Saul leaves the forest to go to Knysna.

**Setting**
Traveling through the forest with the wagon.

**Mood**
Curiosity, excitement.

**Lighting**
Gets whiter & brighter as they walk out of the forest.

**Sound & Effects**
Forest sounds fade as they go further out of the forest.
5.7.3 ACT 1 SCENE 2

Key events
Saul meets Kate & Mac Donald for the first time

Setting
Knysna town
Mac Donald’s wood yard & shed

Mood
Exploitation, intimidation & fear

Lighting
Harsh, bright, white & blue

Sound & Effects
Foghorn, distant waves, yard sounds, school bell & children

Lighting
Light: softer, violet spot on Saul & Kate.
Figure 96. Knysna Village (Author, 2010).
Key events
Felling of the huge yellowwood against Saul’s will
Saul raises his concern – that the tree feels
Joram forces Saul to help cut down the tree
The tree falls.
They see signs of Old Foot’s presence

Setting
Forest, walking through the under bush, big Kalander
tree, cutting shelter
Night & daybreak

Mood
Anticipation, amazement, frustration, helplessness,
anger & despair

Lighting
Warm amber & green, scattered white rays, dappled
effect
Fades and gets bluer and darker to show the day pass-
ing and turning into night
Spot on tree

Sound Effects
Forest sounds, footsteps walking on forest floor, chop-
ing of the tree, tree crashing to the ground.
5.7.5 ACT I SCENE 5

**Key events**
Saul confronts his father about the crooked circle of their way of life and the destruction of the forest.
Saul leaves his father to work for Mac Donald in Knysna.
Anro walks into Old Foot.

**Setting**
Another cutting shelter.

**Mood**
Conflict, tension & anger.

**Lighting**
Dim, somber blue, grey and green with scattered white rays creating a dappled effect.

**Sound Effects**
The far off sound of trees being felled and falling to the ground.

**Lighting**
Harsh, bright, white & blue.

**Sound & Effects**
Foghorn, distant waves & yard sounds.

Figure 98. Saul leaving his father (Author, 2010).
Figure 99. Saul at the wood yard to work for Mac Donald (Author, 2010).
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<tbody>
<tr>
<td><strong>5.7.6 ACT 1 SCENE 6</strong></td>
<td>Saul is sent to the forest as a guide for gold prospectors. They find gold in the river.</td>
<td>Knysna town, Mac Donald’s wood yard and a stream in the forest.</td>
<td>Curiosity &amp; suspense</td>
<td>Village - harsh, bright, blue &amp; white; Forest - dappled blue, amber and white</td>
<td>Village - Foghorn, waves, yard sounds; Forest - Birds &amp; other forest sounds; Flowing water</td>
</tr>
<tr>
<td><strong>5.7.7 ACT 1 SCENE 7</strong></td>
<td>Saul leaves Mac Donald’s wood yard in search of gold.</td>
<td>Knysna town, Mac Donald’s wood yard and a stream in the forest.</td>
<td>Defiance, adventure, and excitement</td>
<td>Village - harsh, bright, blue &amp; white; Forest - dappled blue, amber and white</td>
<td>Village - Foghorn, waves, yard sounds; Forest - Birds &amp; other forest sounds; Flowing water</td>
</tr>
<tr>
<td><strong>5.7.8 ACT 2 SCENE 2</strong></td>
<td>Maska comes to tell Saul his father has died. Saul comes across Oldfoot in the forest.</td>
<td>A stream in the forest.</td>
<td>Sorrowful &amp; solemn, owe &amp; wonder</td>
<td>Village - harsh, bright, blue &amp; white; Forest - dappled blue, amber and white</td>
<td>Gradually becomes darker &amp; down lighting creates somber shadows; Broad ray of light on Oldfoot</td>
</tr>
</tbody>
</table>

**Figure 100.** Saul panning gold with the prospectors (Author, 2010).

**Figure 101.** Saul panning independently (Author, 2010).

**Figure 102.** Maska telling Saul his father died (Author, 2010).
5.7.9 ACT 2 SCENE 3

**Key events**
Saul and Kate walk into each other in Millwood (gold town). She confronts him about being swept up in the gold rush and so contributing to the destruction of the forest.

**Setting**
Millwood (gold town)

**Mood**
Unease, confrontation & frustration

**Lighting**
Village - harsh, bright, white & blue
Forest - dappled green, amber and white rays

**Sound Effects**
none
5.7.10 ACT 2 SCENE 4

**Key events**
Kate asks Saul to show her the forest as he sees it.
They spend two days in the forest.

**Setting**
Forest

**Mood**
Surreal & dreamlike

**Lighting**
Soft, dappled violet, amber & green – spot on Saul & Kate

**Sound Effects**
Birds & other forest sounds

---

5.7.11 ACT 2 SCENE 5

**Key events**
Mac Donald doesn’t approve of their friendship. He gets revenge by refusing to buy Joseph's, Saul's brother's, wood. Saul confronts Mac Donald but eventually he agrees to leave the forest.

**Setting**
Mac Donald's wood yard

**Mood**
Tension, confrontation & anger

**Lighting**
harsh & bright, white & blue, red spot on Mac Donald

**Sound & Effects**
Foghorn, distant waves & yard sounds

---

5.7.11 ACT 2 SCENE 6

**Key events**
Saul boards the 'Pictor', about to set sail in 4 days. Maska comes to tell him that his brother’s son has been gored. They blame Old Foot and Terblanche is going to shoot the elephant. Saul decides he’ll rather do it himself and gets off the ship.

**Setting**
The deck of the Pictor

**Mood**
Serious, unsure & urgent

**Lighting**
Harsh & bright, white & blue

**Sound & Effects**
Foghorn, waves & seagulls
5.7.12 ACT 2 SCENE 7

Saul follows Old Foot’s tracks in circles through the forest. After 4 days Old Foot leads him back to Millwood and shows him the destruction of the forest.
Figure 109. Old foot gets shot (Author, 2010).

5.7.13 ACT 2 SCENE 7

Old Foot gets shot by one of the gold diggers.
EPILOGUE

Saul realises his responsibility towards the forest & his people.
Saul decide to stay in the forest.

Figure 110. Saul & Kate desires to stay in the forest. (Author, 2010).
Figure 11. Stage door of the Pretoria State Theatre’s Opera stage (Author, 2010).
06. PRECEDENT STUDIES
6.1 TEMPORARY THEATRES

6.1.1 Pop-Up Theatre

Hessisches Staatstheater
Darmstadt, Germany
Convertible City
2005

While the original theatre designed in 1972 by Rudolf Prange was being reconstructed, the parking lot beneath it was used as a temporary performing space. The new structure was inserted where the driveway divides into multiple lanes in front of the entrance of the parking lot. The space accommodates all of the functions needed to run a studio theatre and includes a canteen, storage rooms and access to the new two-storey high foyer of the main building above. “Very interesting is the renewed atmosphere that is created by the temporary transformation. Both friendly and inspiring.” (De Boer, 2009).

6.1.2 Puppet Theatre

Carpenter Centre for the Visual Arts
Harvard University, Massachusetts
Pierre Huyghe & Michael Meredith
2004

The only major Le Corbusier-designed building in North America is The Carpenter Centre for the Visual Arts at Harvard University in Cambridge, Massachusetts. A temporary puppet theatre was constructed within its sunken courtyard in celebration of its 40th anniversary.

With the help of computer technology and students, conceptual artist Pierre Huyghe and Harvard assistant professor of architecture, Michael Meredith, collaborated on the structure. 2,000 bolts were used to form a rigid frame that held together 500 white polycarbonate panels covered in real moss. “Metaphorical identities included an egg, a seed, a tumour, an alien spacecraft, and Le Corbusier’s brain.” (Bellostes, 2008).

This precedent illustrates how a temporary insertion can be used to celebrate a permanent building.

Figure 112. Exterior view of the Pop-Up Theatre (De Boer, 2009).

Figure 113. Interior view of the Puppet Theatre (Bellostes, 2008).

This Precedent illustrates that a temporary insertion can enable a building to stay in use while it is being renovated.
6.1.3 Almeida at Gainsborough Studios
The Almeida Theatre
Shoreditch, London
Haworth Tompkins 2000

Materials:
- Turf
- Painted steel
- Reclaimed timber
- Painted scaffold tube
- Recycled theatre seats

Value: £750,000

During renovations The Almeida employed a series of temporary venues and staged once-off shows to maintain its presence. The coal-fired power station, a huge 19th century industrial structure that was used to support the Metropolitan railway, was converted into film studios in 1919. By 1999 partial demolition and conversion to apartments were scheduled for the now derelict building.

At the time, The Almeida Theatre was looking for a temporary venue for the staging of Richard II and Coriolanus; two large-scale productions. The theatre negotiated a one-year-lease from the developer and Haworth Tompkins did the conversions for as low-cost as possible.

The original volume, of over 25m high, was restored by demolishing an intermediate floor (Figure 114). The remainder of the building was treated as ‘found’ material and contained the foyers and bars. Original openings were retained for scenic effect. Scaffold staircases, ramps and simple cut openings were inserted to comply with the complex fire escape and circulation requirements for an audience of 900.

A simple scaffold seating system created a large courtyard auditorium on three levels (Figure 116) and basic soundproofing was installed. After playing to full houses throughout the summer of 2000, the venue closed at the end of the season and has now been demolished, as planned (Tompkins, 2010).

This precedent demonstrates how an old building can be temporarily adapted into a theatre that complies with safety requirements.
6.1.4 Ten-day Theatre

Institute for Contemporary Arts (PICA)
TBA (time based art) festival, Portland, Oregon
BOORA Architects
2004

Materials:
- Pegboard
- Scaffold structure
- Visqueen
- Plastic buckets
- MDF board
- Recycled carpet tiles

Value: $10,000

Eight volunteer architects turned a vacant warehouse into a ten-day temporary theatre for the TBA (Time Based Art) festival (Figure 123), Portland Institute of Contemporary Art's annual 10-day international arts festival (Figure 119). The budget was small and materials had to be undamaged and re-usable afterwards.

“It’s always fun when a team of architects gets the opportunity to roll up their sleeves and engage in making something directly, not having products be confined to paper and scale models.” (Architecture Week, 2005)

The structural grid of the building informed the diagram of the theatre (Figure 117). One of the structural bays provided sufficient clear space for the stage.

Around this stage, seating was positioned in the bays of the grid (Figure 124). Existing offices lining one wall were used as back-of-house support spaces. The positioning of the theatre in the warehouse reserved a large area of remaining space for the cabaret, bar and café (Figure 121).

A scaffold “media wall” differentiates the theatre volume from the surrounding volume of the warehouse. It partially bisects the warehouse, creating the envelope that encloses the theatre. The media wall’s interior and exterior are clad in pegboard and visqueen and illuminated from within, creating a glowing volume of light contained within a gritty industrial shell (Figure 118).

Pegboard, suspended from a swinging crane, creates a hanging entry marquee. A portal in the media wall with a projecting canopy forms the entrance. Technical equipment, transformers and cabling are concealed within the media wall. An elevated control room serves both the theatre and the cabaret stage. Benches, on a raked scaffold substructure was assembled from five gallon plastic buckets, MDF board and recycled carpet tiles (Figure 120 & 122) (Arquitectura de Interiores, 2008).

This precedent illustrates how a vacant space can be temporarily activated to create a performance venue during a festival and then be returned completely to its former state leaving only the memory behind.
Figure 120. Four steel columns of the industrial warehouse framed the temporary stage (Arquitectura de Interiores, 2008).

Figure 121. The visqueen cladding of the “media wall” reveals the skeletal scaffold structure (Arquitectura de Interiores, 2008).

Figure 122. Layout of the theatre and the media wall construction (Arquitectura de Interiores, 2008).

Figure 123. TBA (Time Based Art) festival poster

Figure 124. Plastic buckets, medium-density fiberboard and borrowed carpet tiles create bench seating with a raked backrest (Arquitectura de Interiores, 2008).
6.2 TYPICAL THEATRES

6.2.1 Lier Theatre - UP Campus

Description
Simple orange face-brick building, corrugated steel roof and exposed wooden trusses 3.5m above the finished floor level. Medium sized, black box theatre for intimate productions.

Exterior & entrance
Trees, planters and concrete benches along pathways separate the building from the parking area and create an outdoor waiting area.

Foyer
Service counter, sink, bar fringe, freezer, kettle and cupboards. Ablution facilities; one male and one female wc. A black pin-up board. Recessed, ceiling down lighters.

Seating capacity 80
Audience
Entrance from the side. One door between the stage and the raked seating. Stackable upholstered chairs staggered on 6 levels of rostra.

Stage
Proscenium stage on ground level, 8.4m wide and 7m deep play area. The stage is on ground level.

Backstage
A long narrow rehearsal space called ‘The Bok’; perpendicularly attached to the main theatre building with backstage access to the dressing room. One dressing room with lit mirrors and worktops divided into two areas by a curtain. Separate male and female ablution facilities with one wc, wash hand-basin and shower each. Backstage access to the stage via a passage, lit with blue lights that won’t spill onto the stage.

Technical aspects
A 3x1.5m control box on the highest rostra behind the audience is used to operate the sound system, lighting and special effects. The control desk houses the necessary electronic equipment: a computer to programme lighting sequences, a CD player and communication devices. Luminaries for effect and functional lighting are hung from the exposed wooden roof trusses.

Figure 125. Exterior gathering space & entrance of the Lier (Author, 2010).
Figure 126. Foyer of the Lier (Author, 2010).
Figure 127. Views of the audience, control box & stage (Author, 2010).
Figure 128. Views of the rehearsal space & change room (Author, 2010).
Figure 129. Views of the change room & backstage passage to stage (Author, 2010).
Figure 130. Luminaires fixed to existing trusses & lighting equipment in the control box (Author, 2010).
6.2.2 Masker Theatre - UP Campus

Description
Converted from an old school hall, the Masker dates back to the 1970’s. The building consists of a concrete frame with orange-brick infill and a corrugated steel, pitched roof with a three-storey high apex. Steel-framed windows were painted black to create the necessary level of darkness inside.

Exterior & entrance
Brick paving, walkways, some trees, planters and concrete seating, separate the entrance from the parking and create a gathering space. Although notice boards are placed along the walkways, posters are stuck onto the theatre door and front facade (Figure 133).

Foyer
Separated from the theatre auditorium by a purple velvet curtain which also functions as an acoustic absorber behind the audience. A simple service counter is located close to the entrance door. Ablution facilities can be accessed from the foyer (Figure 131).

Seating capacity: 117

Audience
Loose chairs are placed on a series of raked rostra that can be altered to allow different seating arrangements. Additional seating is provided on a mezzanine level above the foyer.

Stage
A typical 9m x 7m wooden school hall proscenium stage raised 800mm above the ground floor level. Dark fabric curtain wings.

Backstage
Four change rooms with lit dressing tables; wc’s, basins and showers located behind the stage with backstage access to the stage.

Technical aspects
6m above the ground level are six parallel rigs onto which luminaries are fixed. The control desk is situated towards the front on the mezzanine level.
6.3 ADAPTIVE RE USE THEATRE

6.3.1 Market Theatre - Johannesburg

Description
In 1976 Johannesburg's Indian Fruit Market was converted into the Market Theatre; internationally renowned as South Africa's "Theatre of the Struggle". In a post-apartheid South Africa the theatre aims to encourage new dramatic writing. The complex spans 36 meters and the roof of this vast Edwardian market hall is 200m in length. Metal trusses and other components were manufactured in Glasgow in 1922, shipped to South Africa and assembled here.

Exterior & entrance
The main entrance to the Market Theatre complex is the grand Edwardian facade in Wolhuter Street, which has three arched windows, flanked by twin domed towers (Figure 135).

Rental
The theatre and other spaces are available for rent and can be used for exhibitions, conferences and launches.

Stage
The Market Theatre consists of three theatres; the Main Theatre, the Barney Simon Theatre and the Laager Theatre. All three are open stages with seating on three sides. The stage floor of the Laager Theatre is on the ground level; the stage of the Barney Simon Theatre is raised one step and the circular stage of the Main Theatre is raised about 900mm from the ground level (see next page).

Technical aspects
Control desks and technical equipment were handled in a makeshift fashion and traditional theatre conventions adapted to overcome the limitations presented by the existing spaces. For example, the placement of the control desk to the side in the Laager Theatre (see next page).

Foyer
The entrance hallway is defined by a series of arches and concrete columns, a row of pendant luminaries and banners (Figure 136 & 137). The ticket office is situated to the right of the entrance. Niche-like rooms branch out of the hallway creating seating and gathering spaces. A flight of stairs leads up to a second foyer with a small bar.

Audience
The temporary, ad-hoc character, usually restricted to the stage, is brought into the auditorium space through the nature of the conversion. Existing services are exposed; brick walls are left bare and some of the vendors’ signs still hang from the gallery. Loose rows of upholstered auditorium chairs or benches are packed onto raked rostra.

Figure 135. Exterior gathering space & entrance of the Market Theatre (Author, 2010).

Figure 136. Foyer of the Market Theatre (Author, 2010).

Figure 137. Banners in the foyer, advertising the shows (Author, 2010).
Laager Theatre

Seating capacity: 100-120
Rental: R8 500 (+ 5% of door income)

Barney Simon Theatre

Seating capacity: 100-120
Rental: R8 500 (+ 5% of door income)
• Laager Theatre:

Main Theatre

Seating capacity: 387
Rental per week: R25 000 (+ 5% of door income)
Figure 144. Cardboard sign (Camp Photoshop, 2009).
07. CONCEPT DEVELOPMENT
7.1 CONCEPT

7.1.1 Symbiosis between temporary and permanent architecture

In 1879 German botanist Heinrich Anton de Bary coined the term symbiosis as “the living together of unlike organisms.” (Hartnett, 2010).

**Mutualism**
Beneficial to both interacting species.

**Endo-symbiosis**
One partner lives inside the other

**Ecto-symbiosis**
One organism lives on another

**Symbiosis**

–Dynamic, organic, growth, change, temporality
–Coexistence & tension– man/nature, permanent/temporary
–Arbour motif (text, prominent natural feature on the site, paper, books - stories, & press)

The theatre (temporary guest) moves into the existing building (permanent host) and together they accommodate an event. In the process, both the permanent host and the temporary insertion benefits (Figure 145).

While occupied by the temporary, the existing space will be activated, gain social and cultural importance and learn from the experimental symbiotic relationship.

After the performance moves out, the permanent host will be free to accommodate other temporary (guest) programmes using this one as an example. In this way the existing space that would have stood empty will be able to continually contribute to and interact with, its urban environment in an ever-changing way and provide meaningful spatial experiences.

In return the host will sheltered and protect the temporary insertion. The existing structure will provide physical support while the existing services like water and electricity will sustain the needs and requirements of the temporary insertion.

“*They came to know the shrubs of the underbrush: which were medicine and which were not; which berries you could eat and which not.*”
(Matthee, 1984, 18)
7.1.2 Layers of temporality

Within the spectrum between the temporary and the permanent there are layers varying from more permanent to more temporary. The same can be applied to nature in the case of symbiotic relationships and in the world of theatre.

The study applied the following layers of temporality to the design of the Temporary Theatre within the Permanent host building. Where the most permanent layer will remain the longest and the most temporary will fluctuate the most.

Figure 146. Diagrams illustrating layers of temporality (Moring, 2010).
7.1.3 Recycling the permanent building by temporary insertion

In dealing with existing buildings Gigli et al (2007, 35) identified three types of strategies according to the intimacy of the relationship between the existing and the new.

**Intervention**
When the existing is so transformed that it can no longer viably exist independently, and the nature of the re-modelling is such that the old and new are completely intertwined. *Most permanent*

**Installation**
The existing, and the new, exist independently. The new elements are placed within the boundaries of the building. The design or the grouping, of these elements may be influenced by the existing, but the fit is not exact and, should the elements be removed, then the building would revert to its original state. *Most temporary*

**Insertion**
If a new autonomous element, the dimensions of which are largely dictated by those of the existing, that is, it is built to fit, is placed in the confines of the existing. *Between temporary and permanent*

Figure 147. Diagrams illustrating strategies of reuse (Author, 2010).
7.2 TRADITIONAL STAGE FORMS

Proscenium stages

In this conventional arrangement the audience sits facing the stage on one side and views actors on stage through an opening framed by a decorative arch separating the stage from the auditorium. (Pecktal, 1975, 13)

Open stages

This arrangement allows half- or three-quarter round seating. The stage may be circular, semicircular, square, rectangular or otherwise angular. An intimate relationship is created between the audience and the actors (Pecktal, 1975, 13).

Theatre in the round (arena stage)

The audience, seated all round the acting area are closer to the action than in a proscenium theatre. Large scenic structures and flown scenery are limited and emphasis is placed on level differences, the floor and furniture. People must be able to see over or through the largest object and not be separated from the action behind it. The entrance gangways can also be used as part of the stage.

Thrust stages

This is a proscenium stage with an extended apron. A stage, attached to a rear acting area extends into the audience. It functions effectively as theatre in the round but is more theatrical, allows for more exaggerated design and has a scenic background. The design challenge is to disguise any division through use of colour, shape and, or texture. Actors should be given immediate forward access to the thrust as directly as possible.

Traverse stages

These stages although rarer than the others allow imaginative scenic images at either end of the acting area. Very similar to theatre in the round with the focus on the floor. The audience is placed in two blocks facing each other. The design must create a shared environment that becomes the theatrical bond between the audience and the actors.

Flexible theatres

Designed to be adaptable to several different shapes. Allow the production team to decide which is most appropriate according to the play and other practicalities.

Figure 148. Diagrams illustrating traditional stage forms (Author, 2010).
7.3 FICTIONAL SPACE IN REAL SPACE

7.3.1 Spatial programming informed by the text

Figure 149, Figure 267, Figure 15 & 16 Diagrams illustrating spatial programming (Author, 2010).
As discussed in the analysis of ‘Circles in a Forest’ circles in a prominent theme in the text. The story line also jumps back and forth between the past and the present.

The audience is still in the foyer. The sounds of the foghorn and seagulls draw their attention. The light changes to that of Maska’s shelter and a voice recording of important lines starts playing in Afrikaans:

Die lewe is ’n skewe kring. Saul, die lewe is ’n skewe kring!

Die blaubokkie se gal sit nie in sy kop nie.

The actors come onto the Threshold stage and the play begins. At the end of the prologue scene the narrator says: “Saul Barnard walks into the forest and it feels like walking backwards into himself” (Matthee, 1984, 1). With this the actors turn open the screens and walk into the forest. As the actors walk in the audience follow them and take their seats. The spotlight indicates the passages and the seating. Scene 1 begins...

As the play progresses the actors move along the passages, through the audience to the different stages for certain scenes. The audience will naturally follow their movement visually. Rotating chairs allow to the audience to also follow their movements physically. The audience becomes aware of the fact that man like the characters are caught between these two world; that of the forest (nature) and that of the village (man-made).

“Round and round you walked the crooked circle year in year out.” (Matthee, 1984, 108-109)

“In some places there were natural openings in the forest like Big Island and there you could find 3-4 families living in makeshift homes...” (Matthee, 1984, 26)

“They walked in circles “round and round and round. At some time the elephant must catch up from behind” (Matthee, 1984, 183)
Figure 151. Diagrams illustrating permanent host and temporary insertion (Author, 2010).

Figure 152. Floor plan of Temporary Theatre 1:500 (Author, 2010).
Figure 153. Floor plan of Temporary Theatre not to scale (Author, 2010)
7.4 PROPOSED ACCESS RAMP

The host space of the Temporary Theatre have no direct access to the outside. The two points of access first lead through other parts of the building. There is also no accessible access to this space. The facade with most contact to the exterior is the southern facade. This is also the facade parallel to Vermeulen Street with the most pedestrian activity. As stated previously this facade is already used as an informal advertisement board as can be seen by the palimpsest of posters.

As part of the design a new, accessible point of entry along this facade is proposed. A ramp supported by a scaffold structure and with a shade net covering and leading directly into the theatre space was chosen for this purpose. The ramp function as a strong visual element drawing attention and advertising the Temporary Theatre to passers by. Like a giant root the ramp attach the Temporary Theatre to the ground and draw people from the sidewalk directly into the theatre space, giving it life. The experience will already begin as people ascend on the ramp exporting them from the real world of the city to the fantasy world of the.

Visitors will feel the rough texture of the oriented strand board under their feet and become aware of the shade net covering with scattered openings over their heads closing around them progressively as they ascend further up the ramp creating a luminous green glow.

The scaffold structure will become a canvas to be filled in with billboards, production posters and community art works. The sheltered space underneath the ramp will become a host for informal traders, a resting place for tired pedestrians or a meeting place for friends.
Scaffold structures are strongly associated with temporality. They are expected to be disassembled and relocated and designed for that purpose. The framework and infill construction of the ramp will support the concept of symbiosis. Compared to the light, translucent and fluid character of the shade netting, the hard, rectilinear metal scaffolding become the permanent layer and the shade netting the temporary layer dependant on the structural support of the scaffolding. The same apply to the board infill of the sides of the ramp.

The ramp itself can also be reinterpreted and repainted according to the current production being shown, adding another layer of temporality.
Figure 162. Exterior perspectives of the scaffold ramp (Author, 2010).
Figure 163. South facade showing scaffold ramp with trees, not to scale (Author, 2010)
7.5 THRESHOLD STAGE MOOD BOARD

Mystical
Spiritual
Free
Foggy
Smoky
Transient

“Maska, you used to tell us that the spirits live in the trees” (1986, 240)
7.6 FOREST STAGE MOOD BOARD

Enclosed
Covered
Dense
Dappled
Impenetrable

“He would hide in the forest so that nobody would ever find him. Surely God could not have seen down into the forest from up in the sky, even the sun has to struggle to shine to the ground. Only specks of sunlight got through that roof of the tree tops” (Matthee, 1984, 47)
7.7 MILLWOOD STAGE MOOD BOARD

Destruction
Greed
Exploitation
Death
Scarring

"...where diggers’ axes had hacked out everything to make space for the tents and houses, and to provide firewood."

(Szukalski, 2008)
(Lehr, 2008)
(Smithee, 2009)
(Willhelm, 2007)
(Ruzza, 1991)
(Whittaker, 2008)
(Nettler, 2010)
(Electrosonic, 2010)
(Turto, 2010)
They came out of the forest on the eastern side of the town. One moment the forest was still around and above them, the next moment it started thinning out, getting lighter… more sun and then suddenly the world was lying open. Naked. Like someone without a hat. Without a roof. He wanted to turn round and run back to the shady shelter of the forest. The sun was hurting his eyes.” (Matthee, 1984, 54)

“…enormous. Wood was stacked up everywhere, wood wherever you looked! Mountains of wood. Next to a large shed men were loading some of the wood on other wagons…” (Matthee, 1984, 56)
7.9 THRESHOLD STAGE CONCEPT SKETCH

Figure 168. Interior view of the Threshold stage (Author, 2010)
7.10 FOREST STAGE CONCEPT SKETCH

Figure 169. Interior view of the Temporary Theatre showing the Forest, Millwood & Village stage (Author, 2010)
Figure 170. Interior view of the Millwood stage (Author, 2010)
7.12 VILLAGE STAGE CONCEPT SKETCH

Figure 171. Interior view of the Village stage (Author, 2010)
08. DESIGN & TECHNICAL RESOLUTION

Figure 172. Follow spot effect 2 kW (McGill, 2007).
8.1 TYPICAL SET CONSTRUCTION

The list of materials used in the construction of scenery is endless. New innovations, materials and applications are constantly introduced to the theatre. There are however certain materials that are considered to be standard, widely used, traditional stage materials. Parker & Smith (1974, 164) classify these materials as follows.

8.1.1 Structural materials

Timber
Timber is the most common framing and structural material. Timber used for scenery must be lightweight, strong and cheap. In South Africa clear pine provides the best combination. Clear SA pine is preferred because it has few knots that cause weak spots in the wood that tend to split. Wood is combustible and must be protected with paint, varnish or fire and water resistant agents. Timber is recyclable and reusable.

Metal
Hollow, square and angle iron sections are used for the structural frames of platforms and panel scenery and to support standing scenery. Malleable iron pipes is used for battens to support hanging scenery, as a weight or bottom batten for a drop; for lighting booms and as structural elements (Parker & Smith, 1974, 168).

8.1.2 Cover stock

The material used to cover the structural frame of scenery is called cover stock. Depending on the use fabric or a hard surface material can be used.

Covering Fabrics (soft Scenery)
Structural frames are traditionally covered with canvas although any fabric can be used as covering. Fabrics like gauzes (scrimps), vision, square or sharks tooth mesh, Holt (1988, 33) and Hessian are often used to create textured or lighting effects. In South Africa unbleached Calico is most often used as a substitute because it is lighter, cheaper and more readily available. Fabric covering is fireproofed and sewn to size. A thin mixture of water and PVA paint is used to prepare the surface before it gets painted.

Hard surfaces
If the surface is such that it has to be walked on or withstand active handling, the frame is covered with a harder surface. Plywood is most commonly used because it is lightweight yet strong enough to supply a hard surface with a minimum of framing. Laminated wood is sometimes used as a substitute. Masonite, a very hard surface of compressed wood pulp, is also commonly used as a floor covering. Thin plywood is mainly used for platform tops. Double faced corrugated cardboard is an inexpensive hard surface covering (Parker & Smith, 1974, 170).

8.1.3 Hardware

Joining hardware
Joining hardware includes nails, screws, tacks, staples, and bolts used for joining wood or metal.

Stage hardware
Stage hardware refer to hardware made especially for the stage and designed to brace, stiffen, rig flying scenery and temporarily join units of scenery (Parker & Smith, 1974, 172).

8.1.4 Rope, cable, and chains

Cotton braid rope
This type of rope is used for lightweight rigging and as a trick line to trigger a mechanical effect from an offstage position.

Manila rope
Stranded manila rope is used for heave rigging.

Cable
Cable is used to hang scenery when the supporting wire will be in view. Cables are very strong for its small diameter and can support a heavy piece of scenery without being too prominent.

Chain:
in theatre chains are used for special rigging and as weights for draperies.
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Chain:
in theatre chains are used for special rigging and as weights for draperies.

8.1.6 Free forms

Depending on the form, irregular three-dimensional pieces of scenery are created by constructing a framework from a structural material such as timber or metal. Contour pieces are often cut across the shortest dimension, fixed to a base shape and stiffened with cross bracing. The frame is wrapped in chicken wire so that it adapts to the shape of the frame. The final surface is then applied to the chicken wire. Usually unbleached Calico is dyed with a base colour, dipped in a water-and-wood glue mixture, tacked to the frame and allowed to dry. Once dry effect painting and texturing (saw dust) are applied. Free forms are also frequently made from fibreglass, polystyrene or polyurethane which is undesirable unless reused, because they are environmentally unfriendly. These pieces are lightweight, inexpensive and sturdy (Parker & Smith, 1974, 204).
8.2 MATERIALS

8.2.1 Approach

“A seamless package is frustratingly daunting. However, a broken system is usually one that attracts the most attention... breaks enable one to understand better how something should or could work.” (Fuller & Haque, 2009)

When encouraging the reuse and re-purposing of buildings and materials Fuller & Haque, (2009) recommend the use of what they call “pre-broken” materials and buildings.

The fabric of the existing building could be considered as pre-broken. It is a utility industrial building that speaks of creating rather than an intimidating, pristine or precious building.

Pre-broken materials are materials that are discarded, unused, readily decomposed and are interrogate-able or hack-able. Because these materials aren’t expected to last they encourage reuse and re-purposing and enable people to experiment and participate. Building with these materials requires constant innovation, replenishment and reconstruction and emphasises the ephemerality of architectural constructs, says Fuller & Haque, (2009).

8.2.2 Temporality

Materials chosen for this design were chosen based on their temporality or ephemeral feel. The inserted space is of a temporary nature and therefore the materials should speak of the transient nature of the design. Materials perceived as temporary materials will be easily distinguishable from the permanent fabric of the existing building and reinforce the concept of symbiosis between the temporary and permanent elements.

Materials already used in a temporary fashion in the Pretoria CBD were observed during the framework investigation and informed material choices.

Greef (2005, 3-6) is of opinion that South Africans reject the notion of temporary and reused materials mainly because of the perceived stigma of inferiority. By using these kind of materials in an innovative and fun way could greatly improve the public’s perception and open them up to the idea. It also gives designers the opportunity to experiment with and test the use of these materials.

8.2.3 Availability & sustainability

Material was selected based on whether they could be sourced locally. Using available materials from the site and surrounding area are cheaper and faster. The embodied energy will also be less that if materials had to be transported over great distances. The local community could the also benefit and be involved in the collecting of materials.
8.2.4 Floor covering

Interlocking, recycled rubber floor tiles qualify as a green product.
# Rubber tiles usually come in square sizes from 300-500mm, it is a bit easier to install and can easily be mixed to create patterns. A tile can be replaced if needed.

# Sheets: Rubber sheets are better protected against moisture and water damage due to less seams than tiles.
  * Glued: The rubber tile or sheet gets glued to the sub-floor.
  * Interlock: The rubber tiles are manufactured with a locking system.

Pattern Options

* Plain: Available in both tiles or sheets this floor has a smooth surface.
Recycled rubber flooring is suitable for indoor and outdoor use. It has outstanding slip-resistance, low VOC emissions, provides cushioned resilience and is very durable, stain resistant and has constant colour. (ECOsurfaces, 2005).

Installation and maintenance are relatively easy. Rubber flooring is generally considered a low-impact, environmentally friendly building material. Flooring that contains recycled rubber is a cheaper and more durable choice than synthetic or virgin rubber says TVE (2002). The energy required to process the used tyres and chemicals is lower than that used to produce other resilient flooring says ECOsurfaces (2005).

Additional recycling benefits can be realized if rubber flooring is installed without adhesive. The environmental impact of manufacturing the adhesive is eliminated and the air quality of the area where the adhesive would have been used is improved. Rubber tiles are flammable but they are 100% recyclable.

Carpet

Styles Loop Pile: The loop pile carpet is an great all rounder both for residential and commercial use. This is due to the fairly low pile and tight weave which makes for easy cleaning and is also available in a wide range of colour combinations.

Dark colours: Deep colours create a cosier feeling in rooms, as well as disguising dirt and stains better than lighter shades. Dust and lint will show up more on darker colours, making a darker palette ideal for rooms that have high use.

This is a crucial part of the installation and serves a variety of purposes. Underlay or under felt drastically lengthens the life of your carpet and serves as a shock absorber, reducing the strain of impact on your carpet, this will also reduce pile crushing. Protecting your carpets backing from rubbing on the sub-floor is also an important function while allowing for airflow beneath your carpet. Sound and heat insulation are also added benefits.

Always use a good quality underlay, in South Africa the most common and cost effective underlay is the fibre underfelts which are classified in ranges by the gram per m2 of the underlay. The minimum recommended is the 800gsm but we recommend you ask your supplier for the 1000gms under felt which is most commonly used.

Carpet Pile Fibres

Blends: It is a popular practice to blend the above fibre types in order to use the best properties from each and also to reduce the cost of the more expensive fibre types like wool.

Polyester: Polyester is available in vibrant colours and has similar properties to Nylon, non-allergenic, moisture and wear resistant properties, high resistance to staining, does not fade easily and is also permanently anti-static, but lacks the same degree of durability.

Wool: Unique, Natural, Soft, Luxurious and more, guarantees an exceptional experience. Wool also naturally has excellent properties like, water repellant, flame resistant, resistant to crushing, extremely durable and naturally antistatic, which improves soil resistance and ease of maintenance. Wool also has good sound and thermal insulation properties and gives unsurpassed comfort underfoot. This premium fibre is in a class of its own, as its price will reflect.
8.2.5 Temporary local materials

- cardboard boxes
- wood pallets
- recycled wood
- plastic cold drink crates
- shopping centre trolleys
- printed vinyl billboards
- scaffolding & shade net

Figure 177. Local material inspiration (Author, 2010).
8.2.6 Temporary materials on site & application examples

- Cardboard tubes
- Cardboard drums
- Wood crates
- Cardboard boxes
- Paper
- Wood pallets
- Cardboard sheets

Figure 178. Wooden pallets used for raked seating (Michler, 2010).
Figure 179. Stacked cardboard tubes creating a wall (Heaney, 2005).
Figure 180. Stacked cardboard tubes creating a room (Chert, 2007).
Figure 181. Stacked cardboard boxes creating an entrance (Fairs, 2008).
Figure 182. Stacked cardboard sheets creating an enclosed sound box (The Cool Hunter, 2007).
8.3 FLOOR PLANS

Figure 183. Ground floor plan showing proposed access ramp (Author, 2010)
Figure 184: First floor plan showing Temporary Theatre insertion (Author, 2010)
8.4 ACCESS RAMP

8.4.1 SECTION THROUGH SCAFFOLD RAMP 1:50

Walking surface:
25mm (OSB/3, for load-bearing uses in humid conditions)
screwed onto 40x40x3 hollow square steel sections with self tapping countersunk screws. Hollow sections fixed to beam with U-bolts
KwikAz clips

KwikAz pierces through scaffold sheeting/screening/netting and locks into place over the scaffolding frame, giving a powerful, quick and reusable securing solution. A rubber strap enhancement to provide extra grip when attaching unsupported (no chain link) netting, shade cloth and screening.

Figure 186. Diagrams illustrating how KwikAz clips work (Scaffold Industry Association, 2010)

Figure 187. Example of new sliding door to be fitted in two existing window openings after windows have been removed (Marathondoors, 2010)

Figure 188. South facade (Author, 2010)

8.4.2 SOUTH FACADE SHOWING SCAFFOLD RAMP WITHOUT TREES 1:500
Figure 189. Perspective of space underneath the access ramp showing the secondary entrance, shade cloth wrapping & ticket sales counter (Author, 2010)
8.4.3 PERSPECTIVES OF STREET INTERFACE & RAMP

Figure 190. Perspective of access ramp showing the first pause point

Figure 191. Perspective showing seating underneath the ramp, advertisement boards & covered space to be appropriated by informal traders (Author, 2010)
8.5 FOYER, SCREEN & COUNTER

8.5.1 PERSPECTIVE VIEW AS SEEN BY VISITORS ENTERING THE FOYER SPACE FROM THE STAIRS OR THE RAMP

Recycled rubber interlocking floor tiles over the existing concrete floor.

Recycled plastic cold drink bottles stringed together with wire rope and hung from the existing trusses.

Recycled plastic cold drink bottles stringed together with wire rope and hung from the existing trusses.

Scaffold interior entrance ramp structure clad with 10mm oriented strand board, finished with clear varnish.

270x270x270 mm Building blocs constructed from nine pieces of 75ø cardboard tubes, cut to size and fixed together with clear silicon in 270x270x270 cubes. Cubes are fixed to each other with 4ø threaded rod through corresponding pre-drilled holes.

Lit lettering created by fixing a compact fluorescent lamp inside selected tubes. The open ends of the tube are covered with a disc of white translucent acrylic sheet cut to size. Different coloured lamps will provide additional possibilities.

10 mm Plywood Curved over X-board at seating and service areas.

16mm Thick layers of acrylic sheet inserted between layers of X-board to transmit light from mini fluorescent tubes fixed to the inside of the crates with cable ties.

Figure 192. Interior perspective of foyer space (Author, 2010)
8.5.2 PERSPECTIVES OF TREE SCREEN, TERRACED PALLET SEATING & SERVICE COUNTER
8.5.3 DETAILING OF TICKET & INFO COUNTER

16 mm Closed cell X-Board screens, 2440mm wide each (standard sheet sizes)

16 mm Closed cell X-Board tree cut-outs to form perpendicular supports

Holes are drilled into the X-Board tree shapes. The perforated shapes are then covered with 10mm grey felt to increase sound absorption

10 mm thick, curved plywood fixed to stack of X-board with 6Ø threaded rod stringed through corresponding pre-drilled holes in the plywood and layers of X-board. Rod secured with a 6Ø nut & washer at the top & the bottom.

Segment of service counter consists of three 990mm long units

16 mm Open cell X-Board off-cuts stacked with edges exposed in elevation.

90 Degree curved plywood to be primed and painted.
Lettering painted on with stencil

Figure 193. Details of ticket & information counter (Author, 2010)
10 mm Curved plywood to be primed and painted
6Ø threaded rod, nut & washer
Mini fluorescent tube light fixed to the sides of the crates with cable ties
330x345x350 Plastic milk crate
16 mm Open cell X-Board
6Ø threaded rod, nut & washer

Figure 194. Section through refreshment counter (Author, 2010)
The tube can be filled with fibre glass or any re-used material with good sound absorption qualities and the open ends covered with a disc made of metal mesh with a layer of felt glued to it.

4m Threaded rod connector stretching the 74mm diameter of the tube and held in place by the thickness of the cardboard wall of the tube through two corresponding holes.

The building blocks are modular, each with two rods, one to the top (bottom) and one to the side and two holes one to the top (bottom) and one to the side. This allows the blocks to be stacked and joined in various configurations.
Figure 199. Prototype showing light application of blocks & examples of felt & acrylic disc covers (Author, 2010).

Figure 200. Model illustrating lighting effect of layers of open cell X-board & acrylic sheet lit from behind with a CFL (Author, 2010).
8.6 LIGHTING

8.6.1 Existing lighting

The existing building is currently provided with 220 luminaires each with two fluorescent tube lamps. In total there are 440 lamps. Assuming that these lamps are basic T8, 58W lamps they add up to 25.5 KW

Fluorescent tube lights are discharge lamps that produce light through electric discharge when a current passes through an inert gas. These lamps use 5 times less electricity than a tungsten lamp, produce less heat and have a longer life. The light quality of these lamps is generally harsh and flat. Softer colours are available; Neon for example produces a warm red colour. Fluorescent light is diffuse and cannot be directed. These lamps can only be dimmed with an electronic dimmer. Fluorescent tube lights are mainly used for general lighting.

8.6.2 Replacement lamps

Luminous intensity of source = candela (cd)
Luminous flux = lumen (lm)
Illuminance (Lux) = lumen/m² = lux (lx) 1x = 1m/m²

On April 13, 2010 as part of the implementation measure for EU ordinance 245/2009, there will be an incremental phasing-out of products used mainly in street, industry and office lighting, namely inefficient fluorescent lamps as well as control gear and luminaires for fluorescent lamps and high-intensity discharge lamps.

The Temporary Theatre will replace these lamps with OSRAM LUMILUX® Cool Daylight fluorescent lamps that have a longer service life that allows longer replacement intervals and therefore lower maintenance costs. It is also more ecologically friendly as a result of greatly reduced mercury content and full recyclability (Osram, 2010, 3).

8.6.3 Calculations

The recommended value of 50 Lux for the new occupancy class (A2: Theatrical and indoor sport) is much less than the 700 Lux recommended for the current occupancy class (D1: High-risk industrial). This means that the replacement lamps can have a lower Watt value. Alternatively fewer lamps can be used to achieve the necessary Lux value. Using fewer lamps will be more cost effective and when the theatre is used for other purposes more lamps can be added to suit the specific lux requirements. As a result electricity will be saved (SANS 204-2:2008).

Existing D1 occupancy

Lux = lm/m²
700Lux = lm/2124m²
lm = 700x2124 = 1486800 lm

Basic T8, 58W = 5200lm

1486800/5200 = 285.9
286 lamps needed

New A2 occupancy

50Lux = lm/2124m²
Lm = 50x2124 = 106200 lm

OSRAM LUMILUX® T8 = 5200lm
106200lm/5200lm = 20.42
21 OSRAM LUMILUX® T8 lamps will be needed for the temporary theatre.

Other possible occupancies

A1: Entertainment and public assembly: 50 Lux
A3: Place of instruction: 100 Lux
A4: Worship: 100 Lux
B3: Low-risk commercial:
C1: Exhibition Halls: 300 Lux
C2: Museums: 300 Lux

300Lux = lm/2124m²
Lm = 300x2124 = 637200 lm
637200/5200lm = 122.54

A maximum of 123 OSRAM LUMILUX® T8 lamps will be needed for alternative occupancies which is still less than the 440 fluorescent lamps currently in use.
Figure 201. Existing fluorescent lighting (Author, 2010).

Figure 202. Fluorescent lamps (Osram, 2010, 3).

LUMILUX® T8
- Up to 10% lower power draw than T12 lamps
- Operated on conventional control gear with starters and on QUICKTRONIC® electronic control gear
8.6.4 Stage lighting Instruments

Dimmers

External dimmers are relied on to control the lighting level of lights that have no built-in electronics or dimming (Cadena, 2006, 49).

Floodlights

PAR lights (parabolic aluminized reflector) come in varying diameters and are used to light scenes, as top lights, and for special effects. The wide unfocused beam produces an intense oval pool of light with soft edges. An adjustable knob allows the lamp unit to be rotated within its casing, changing the orientation of the oval. The colour and intensity can be altered.

Profile Spot Fixtures

A profile spot luminaire is a hard-edge fixture that can project an image by using a gobo. The beam can be focused and controlled. It is used to light the faces of actors, to control light spill or to project scenery or graphic images (Cadena, 2006, 373).

Follow Spots

Follow spots are used to emphasize a moving actor by increasing the brightness of the light on him over the general intensity of the stage lights. The movement of the actor is followed by a single, freely mounted spotlight. In straight drama soft edge follow spots with reduced intensity are used so that the audience doesn't notice it and only feels the effect (Parker & Smith, 1974, 368).

Rigging Systems

A rigging system is used to provide a safe and convenient structure on which to hang production equipment such as lighting, sound, video, and scenic elements (Cadena, 2006, 36).
5m Z-Line truss

8.6.5 LIGHTING PLAN SHOWING CEILING PANELS & TRUSSES

Figure 209. Floodlight effect 2 kW (Berne, 2010).

Figure 210. Follow spot effect 2 kW (McGill, 2007).

Figure 211. Gobo effect 2 kW (WeddingWire, 2010).

Figure 212. Profile spot effect 2 kW (Mellor, 2008).

Figure 213. Lighting plan (Author, 2010).
8.6.6 Light & Colour

Coloured light and the actor

Startling colours will be avoided for the acting areas as it will adversely effect the faces and costumes of the actors. Often the acting area is lit with tints of pink and amber that is flattering to the faces of the actors but deadly to green materials. For the forest stage shades of green will be used in the scenery. These acting areas will be lit with clear light which appears warm when used in conjunction with cool colours on stage such as green.

Green light has limited use on the acting areas of the stage. Green adversely effects the human face; cheeks and lips appears muddy, blond and reddish hair look dead and any blemish becomes grotesque. Green light will only be used on the acting area of the destruction stage where a distorted effect is desired.

Green light will be used on the transitional scenery between the threshold and the forest and the forest and the destruction stage. On scenery green light is especially enriching (Parker & Smith,394).

Colour media

A gel or gelatin is the most typically used because the sheets are very thin, the colour range is extensive and it is the cheapest. The plastic like coloured sheet is bought and cut into the desired sizes and placed in the colour frame of a luminaire. They have to be replaced quite often but can last up to two years (Parker & Smith,395).

Colour experience

The expressive content of a colour can stimulate, relax or depress the feelings of the viewer. Reds quicken the heartbeat, greens are restful, and neutral hues can be depressing. The impression is registered in terms of colour and brightness. The experience of colour is a physiological, intellectual and emotional process. Tradition and personal frame of reference can also condition an emotional response (Parker & Smith,235).

The six basic spectrum hues can be described in terms of their emotional response:

- **Yellow**: Radiant, light giving, golden, saintly; in light values near white, virginal.
- **Orange**: Festive, earthly, peasant colours, warmth, neutral shades, nature in the fall.
- **Red**: Danger, active, passionate, full of inner warmth, fiery, strong, forceful, anger war.
- **Violet**: Royal, piety, deeper shades, shadows, terror, chaos, a reddening colour.
- **Blue**: Passive, receding, restraint, detached, deep, cold, purity, icy tints.
- **Green**: Tranquillity, compassion, restfulness, nature in the spring and summer.
- **Black**: Evil, dominance
8.6.7 Light as scenery

The most familiar form of light as scenery is projected imagery and live footage. However curtains and columns of light are also included in this definition.

At this point in time the use of projections have developed past a sensational novelty and extreme experimentation. Now designers can draw from previous crude and successful examples and apply projections more effectively, economical and subtly in order for it to be a supporting element rather than overwhelming and distracting.

For the purpose of this study projections will be employer as it embodies the concept of symbiosis between the temporary (ephemeral projected light image) and the permanent (tangible object, surface or plane projected on).

Projections will be used to reinforce the setting or milieu and to incorporate the original culturally idiosyncratic text into the space.

Because of the temporality of light and projections it is more flexible, multi-functional and sustainable. Although the equipment necessary are currently expensive and rely on electricity creating and projecting an image is quicker and less resource and labour intensive.

Projections are usually applied to the background; not as a substitute realistic background but as a medium of its own and best expressed in abstract or thematic terms becoming an additional actor.

Projection= light source + medium (slide/electronic) + image+surface (called the screen but can be anything)
Projection equipment can be placed in front of an opaque screen or behind a translucent screen normally used for shadow projection (Parker & Smith,440).

Tips for a clear image

- Use dark colours in your setting.
- Keep reflective surfaces on the floor to a minimum
- Baffle reflected light from the stage with a black gauze in front of the screen. This is especially useful in back projection.
- Light actors from the side reducing damaging front light.
- Give the screen a black border to sharpen the projected image by contrast.
8.6.8 New temporary diffusers

The thesis investigates the temporary reuse of an existing building by means of insertion. The intention is to avoid too much major permanent changes and to utilize as much of what is existing as possible. To support this intention the design decision was made to use the existing lighting fixtures. As mentioned fluorescent light is mainly used for functional lighting. To create a more intimate theatre atmosphere that is in keeping with the text new, designed temporary diffusers will be suspended from the horizontal members of the existing angle iron trusses so that it hangs underneath the fluorescent tubes at varying distances.

The design of the diffusers is inspired by the way gobos work. A gobo, also known as a break up pattern is a mask used to create patterns, shapes or dappled light effects on the stage. A shape is cut into a disc of aluminium, stainless steel, or glass that is inserted in the focal plane of a luminaire. Gobos come in many shapes, but often include leaves, waves, stars or similar patterns (Cadena, 2006, 254).

The diffusers will be made from cardboard drums cut across the width into two cylinders of varying length. A circular disc of translucent acrylic sheet, cut to size is then loosely placed inside the drum. The metal reinforced edges of the drum have a smaller diameter than the rest of the drum. After the drum is cut there will be two cylinder pieces with one metal edge each. The diffuser will be suspended with the metal edge to the bottom so that the acrylic sheet will be held by the smaller diameter of the drum. Before installation, twig and leave shapes are lazar cut out of the acrylic discs. Shades of green and yellow acrylic will be used for the discs.

Figure 214. Aluminium gobo (West Bay Opera, 2006).
Figure 215. Cardboard drum found on site and cut into discs (Author, 2010).
Figure 216. Acrylic disc with lazar cut pattern (Author, 2010).
Figure 217. Gobo inserted in the focal plane of a luminaire (GoboMan, 2010).
Figure 218. Gobo inserted in the focal plane of a luminaire (Merrell, 2009).
“Of the original phenomena, light is the most enthralling. Leonardo da Vinci” (Cadena, 2006, 213)

Green lights distorts the human face while warm yellow livens the face creating a visible duality and separation among the audience.

Figure 219. Insert acrylic disc into the drum (Author, 2010).
Figure 220. Elevation of hanging diffusers (Author, 2010).
Figure 221. Lighting effect of diffusers (Author, 2010).
8.6.9 Detailing of Ticket & Info Counter

- **5Ø Steel shackle connecting cables**
- **2Ø Steel cable**
- **520Ø Cardboard drum cut to a 350 mm height**
- **Aluminum edge reinforcement**

**Elevation of diffuser suspended from existing truss 1:10**

**Plan of acrylic sheet “gobo” insertion 1:10**

**Section through the edge of the diffuser 1:2**

**5mm Thick edge of cardboard drum**

**5mm Thick opaque white acrylic sheet**

**Aluminum edge reinforcement**

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**Figure 222. 1:1 Prototype of cardboard drum diffuser (Author, 2010)**

**Figure 223. Details of cardboard drum diffuser (Author, 2010)**
Three 4\(\text{ø}\) holes drilled 20mm away from the edge of the drum.

2\(\text{ø}\) Steel cable looped through.

Cables united and tied together with a 5\(\text{ø}\) steel shackle.

420\(\text{ø}\) round acrylic disk with twig pattern laser cut before assembly.

Figure 224. Interior perspective showing diffusers & drinks tables from cardboard drums (Author, 2010)

Figure 225. Photo’s showing diffuser assembly (Author, 2010)
8.7 SECTIONS
Figure 226. Section A-A showing Threshold stage & adjustable screens with forest projection (Author, 2010)
Figure 227. Section A-A showing Threshold stage with adjustable screens & changing projections to show destruction, 1:200 (Author, 2010)
Figure 228. Curtain screens with lighting (Author, 2010)
Figure 229. Section A-A projections depicting Maska's spiritual forest. 1:200 (Author, 2010)
Figure 230. Section B-B showing the ceiling panels & the audience caught between the Forest & the Village stage (Author, 2010)
8.8 INTERIOR PERSPECTIVES

“Maska, you used to tell us that the spirits live in the trees” (1986, 240)

“He would hide in the forest so that nobody would ever find him. Surely God could not have seen down into the forest from up in the sky, even the sun has to struggle to shine to the ground. Only specks of sunlight got through that roof of the tree tops” (Matthee, 1984, 47)

Figure 231. Forest stage with Kalander tree during the day (Author, 2010)
“By the time it was dark they were back in the forest. It was like a thick blanket closing around your body, warming you against the cold.” (Matthee, 1984, 61)

“They came to know the shrubs of the underbrush: which were medicine and which were not; which berries you could eat and which not.” (Matthee, 1984, 18)
Saul follows old foot in circles through the forest. Eventually Oldfoot leads him to Millwood to show him the destruction. This is also where Oldfoot gets shot by a gold prospector.

As the play progresses they gradually exit the stage leaving the red painted stumps exposed to depict the gradual destruction of the forest.

“Where Harrison or his men stopped them today, they felled tomorrow because the Government were putting pressure from the west for more and more wood for railway lines, wood for jetties, wood for harbours, wood for the mines, wood for making wagons that had to take man and his possessions north! Wood for tables, wood for chairs and cupboards and beds! Wood! Wood! Wood!” (Matthee, 1984, 109).

“…where diggers’ axes had hacked out everything to make space for the tents and houses, and to provide firewood.” (Matthee, 1984, 109).

Figure 233 Perspectives of the Threshold stage showing destruction (Author, 2010)

Figure 234 Concept model for ‘Living tree costume’ (Author, 2010)
And nobody ever told him that the village was not in the forest.” (Matthee, 1984, 53)

“They came out of the forest on the eastern side of the town. One moment the forest was still around and above them, the next moment it started thinning out, getting lighter...more sun and then suddenly the world was lying open. Naked. Like someone without a hat. Without a roof. He wanted to turn round and run back to the shady shelter of the forest. The sun was hurting his eyes.” (Matthee, 1984, 54)

Villagers “traveling” through the audience from the Forest stage to the Village stage to sell the “chopped wood”
“He stayed behind the wagon when they came to the first houses. Far apart to start with. Then closer together. Square and white, their roofs neatly made of thatch. And the fear that was in him was not the same fear as for bigfeat, it was different, he was surrounded by it, he was in it.” (Matthee, 1984, 55)

“…enormous. Wood was stacked up everywhere, wood wherever you looked! Mountains of wood. Next to a large shed men were loading some of the wood on other wagons…” (Matthee, 1984, 56)
8.8.5 WOOD BEING PROCESSED IN THE VILLAGE

Figure 236. Interior elevation of the Village stage (Author, 2010)
Kalander tree

Base of Kalander tree cut from 16mm X-board

Plan of Kalander tree 1:50

Vertical root profile shapes cut from 16mm X-board and fixed perpendicular to the base with wood screws from underneath the base, in a radial fashion 1:50

1100mm High, 590 ø, cardboard drums placed in the centre of the root construction 1:50

8.9 KALANDER TREE DETAIL
“Standing with his feet almost in the water of the Homtini… The most beautiful… Towering above all other trees. Giant roots anchored it to the ground like giant arms. Grey bark hung like dry strips of skin”

“The old man’s beard, moss in its branches hung like thin green hair, waving eerily in the wind.” (Matthee, 1984, 74)

“… something tells me that tree is alive! If he was dead he could not have grown and if you live, you can feel and if you feel you’ll be afraid to go dead”
160x100x3mm Clear acrylic connectors joining the 75ø cardboard tubes together 1:20

Figure 238. Joining of cardboard tubes to create branches (Author, 2010)

Figure 239. 1:1 Prototype to show assembly & disassembly of the Kalander tree (Author, 2010)
When the Kalander tree is felled and during the coarse of the play the Kalander tree is diassembled and transported to the Village stage where the “wood” is sold.

Figure 240. Felling of the Kalander tree (Author, 2010)
Figure 241. Live size model experimenting with the acoustic panel system (Author, 2010)
“By the time it was dark they were back in the forest. It was like a thick blanket closing around your body, warming you against the cold,” (Matthee, 1984, 61)
8.10 ACOUSTICS

Theatres used for drama depend on good speech intelligibility and acoustic intimacy around the audience. The affects of sound occur in two ways; the quality of generated sound that the audience wants to hear and annoyance with unwanted sound (noise).

8.10.1 Existing building

When using an existing building not designed as a theatre there will be shortcomings regarding acoustics. Sensitive spaces may be located adjacent to a noise source for example a busy road, or the building might have poor sound insulation. The Temporary Theatre is located parallel to Vermeulen Street which is quite busy during the day but much quieter during the night. Some of the noise disturbance is alleviated by positioning the theatre space on the first floor and the useful mass provided by the heavy traditional brick construction (Lord & Templeton, 1986, 41).

“Subjectively people will be more tolerant of prevailing acoustical conditions in an existing building than in a new one, and there may be more tendencies to have to compromise standards where existing fabric is dealt with. It may be more cost effective to employ corrective measures like sound reinforcement rather than drastically modifying a sound fabric” (Lord & Templeton, 1986, 41).

This statement supports the intention of the study to utilize the existing and avoid drastic permanent changes.

8.10.2 Reverberation time

For the audibility of speech clarity is a prime requirement. To achieve this, the audience must receive strong sound reflections immediately after the direct sound. For clear speech in a theatre, the desired reverberation time is between 1.0 s and 1.5s (Spring, 1999, 2).

“The reverberation time is defined as the time taken for an interrupted sound to fall in level by 60 dB. The reverberation time is probably the most significant measurable factor determining the acoustical character of a room”

8.10.3 Existing acoustic character

Reverberation time calculations

Reverberation time (RT60)

\[ RT60 = 0.161 \frac{V}{A} \]

\[ RT60 = 0.161 \left( \frac{19470 \text{ m}^3}{646.76 \text{ m}^2} \right) \]

\[ RT60 = 4.84 \text{ sec. with people} - 3.31 \text{ sec} \]

\[ 4.84 = 0.161 \left( \frac{19470 \text{ m}^3}{A} \right) \]

\[ A = \frac{3134.67}{0.057} \]

A must be 2089.78

Critical distance \( D_c \)

\[ D_c = 0.057 \sqrt{\frac{V}{RT60}} \]

\[ = 0.057 \sqrt{\frac{19470 \text{ m}^3}{3.31}} \]

\[ = 0.057 \sqrt{5882.2} \]

\[ = 0.057 \times 76.7 \]

\[ = 4.4 \text{ m} \]

Room dimensions: 59m x 36m x 9.17m = 19470 m³

Wall surface area:

\[ 631 + 111.656(2) = 854.312 \text{ m}^2 \] (bricks - plastered)

\[ 197 + 164.22 + 413 = 774.22 \text{ m}^2 \] (windows)

108m² (concrete – plastered)

Floor surface area:

2124m²

Ceiling surface area:

\[ 885+767+236 +413 = 2300 \text{ m}^2 \]

Total absorption for 125Hz

=646.76 m²

With people = 946.76 m²
<table>
<thead>
<tr>
<th>Material Type</th>
<th>125Hz</th>
<th>250Hz</th>
<th>500Hz</th>
<th>1000Hz</th>
<th>2000Hz</th>
<th>4000Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Floors</strong></td>
<td>0.01</td>
<td>0.01</td>
<td>0.015</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
</tr>
<tr>
<td><strong>Concrete</strong></td>
<td>21.24 m²</td>
<td>21.24 m²</td>
<td>31.86 m²</td>
<td>42.48 m²</td>
<td>42.48 m²</td>
<td>42.48 m²</td>
</tr>
<tr>
<td><strong>Walls</strong></td>
<td>0.01</td>
<td>0.02</td>
<td>0.02</td>
<td>0.03</td>
<td>0.04</td>
<td>0.05</td>
</tr>
<tr>
<td><strong>Plaster on masonry</strong></td>
<td>8.54 m²</td>
<td>17.1 m²</td>
<td>17.1 m²</td>
<td>25.62 m²</td>
<td>34.16 m²</td>
<td>42.7 m²</td>
</tr>
<tr>
<td><strong>Concrete (sealed or painted)</strong></td>
<td>0.01</td>
<td>0.01</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
</tr>
<tr>
<td><strong>Windows</strong></td>
<td>0.35</td>
<td>0.25</td>
<td>0.18</td>
<td>0.12</td>
<td>0.07</td>
<td>0.04</td>
</tr>
<tr>
<td><strong>Ordinary glass in steel frame</strong></td>
<td>270.9 m²</td>
<td>193.5 m²</td>
<td>139.32 m²</td>
<td>92.88 m²</td>
<td>54.18 m²</td>
<td>30.96 m²</td>
</tr>
<tr>
<td><strong>Ceilings</strong></td>
<td>0.15</td>
<td>0.11</td>
<td>0.04</td>
<td>0.04</td>
<td>0.07</td>
<td>0.08</td>
</tr>
<tr>
<td><strong>Plasterboard 12mm in suspended ceiling grid</strong></td>
<td>345 m²</td>
<td>253 m²</td>
<td>92 m²</td>
<td>92 m²</td>
<td>161 m²</td>
<td>184 m²</td>
</tr>
<tr>
<td><strong>People</strong></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td><strong>Highschool</strong></td>
<td>300 m³</td>
<td>450 m³</td>
<td>600 m³</td>
<td>750 m³</td>
<td>750 m³</td>
<td>600 m³</td>
</tr>
<tr>
<td><strong>150</strong></td>
<td>300 m³</td>
<td>450 m³</td>
<td>600 m³</td>
<td>750 m³</td>
<td>750 m³</td>
<td>600 m³</td>
</tr>
</tbody>
</table>

Figure 243. Table showing the sound absorption coefficient values of existing materials (Author, 2010)

Figure 242. Determining the reflection angles of the acoustic panels (Author, 2010)

Distributing sound; Angle of incidence = Angle of reflection
Problem: Noise

Possible cause
The most important kind of external noise affecting buildings is transport noise from road traffic, aircraft and railways (Appleton & Aveline, 1999, 4). The windows are usually the weakest part of the envelope where sound insulation is concerned. Larger rooms with large reflective surfaces can cause echoes and excessive reverberation (Lord & Templeton, 1986, 42).

Possible solution
Screen or add absorption (Lord & Templeton, 1986, 43). Noise level can be reduced by lining the room surfaces with an efficient acoustical absorbent material (Spring, 1999, 3). For speech the wall behind the audience must be absorptive and the surfaces behind the actors should be reflective (Appleton & Aveline, 1999, 4). In the case of the Temporary Theatre the walls behind the audience is also the wall behind the actors. From the calculations it is clear that more absorptive material is necessary. Absorptive material will be applied to available surfaces in the form of carpets felts and fabric. The largest floor surface will be covered in rubber tiles. Rubber is a resilient material which will act as an absorber because the interlocking tiles are placed on the concrete floor and not fixed to it with a rigid connection.

Because the theatre has large standard steel frame windows with opening sections it will be a futile exercise to try and insulate the space. The design will aim to reduce the noise level by placing barriers that intercept the line-of-sight between a sound source (the street) and the audience. As a rough guide, screen-type barriers 1 to 4 m high and mass about 10 kg/m2 can give transmission losses of 5 to 20 dB (Spring, 1999, 6).

Problem: Poor reception at rear

Possible cause
Lack of useful reinforcement of sound source (Lord & Templeton, 1986, 43). Normal conversation is audible over a distance of up to 10m. Raised conversation is audible up to 24m (Lord & Templeton, 1986, 29). The volume and quality of the unamplified sound is dependent on the volume, shape, size and internal finishes of the auditorium, and on its resultant reverberation time (Appleton & Aveline, 1999, 4).

Possible solution
Add reflective surfaces. Flat surfaces is effective in distributing sound but easily cause a “flutter echo” or “standing wave”. Reflective Concave surfaces concentrate sound in some places causing deficiencies of the reflected sound in certain places called dead spots (Lord & Templeton, 1986, 42). Convex surfaces are the best surfaces for distributing sound. They provide a wide-spread of reflected sound. Reflections can be controlled by irregularities such as columns and trusses or through the use of absorptive materials (Acoustics.com, 2004).

8.10.4 New temporary, sound reflective ceiling panels

The ceiling suspended at calculated angles will reflect and disperse sound into the audience to reinforce the sound and make sure that desired sound is audible. The reflective ceiling panels will be suspended from the existing steel trusses with adjustable cables at the corners. The panels will be made of white, translucent acrylic sheets cut into irregular (forest) and regular shapes (village) and tied together with cable ties through pre-drilled holes. The ceiling will cover the audience and progress from irregular to regular. Assemble will be done on the floor surface below and then hoisted into place. The resilience of the suspended acrylic sheets together with gravity will cause the sheets to sag in the middle forming convex surfaces that will reflect and disperse the sound. The resilience of the sheet is inhibited by the convex shape it takes on and thus loses its absorptive qualities.
Figure 244. Live size model installation testing the acoustic panel system (Author, 2010)
Figure 248. The set for a dance called “California.” Polycarbonate panels are joined with plastic zip ties and suspended above the stage with cables (Cramer, 2004).

Figure 249. A focal point for Mash–Up!, an eight–week–long series of experimental events and performances (Ferrara, 2005).
8.10.5 Configuration & assembly

Marking the dimensions on the floor.

Filling the marked area with cardboard.
Tracing and cutting out the shapes.

Marking holes in the corners.
Tying pieces together with cable ties.
Attaching strings of fishing line from the cable ties to the outside.

Lifting and suspending the panel from existing hooks and ballustrades.

Figure 251. Assembly of the model testing the acoustic panel system (Author, 2010)
Figure 252. Plan view of acoustic panel model (Author, 2010)

- **Forest ceiling panel plan**
- **Village ceiling panel plan**

- Floor surface seen through openings
- Acrylic ceiling panels
Figure 253. Ceiling plan showing sound reflecting acoustic panels (Author, 2010)

Figure 254. Concept sketches of acoustic panels (Author, 2010)
Adjustable suspension of the ceiling panels from the existing angle section steel trusses 1:10

40x40x5 Existing angle section steel truss

Looping gripper
ADJUSTMENT: Remove load from cable, depress plunger & adjust cable height. Release plunger to lock cable position

2ø Staal cable

Cable stopper

5mm Acrylic, concave, sound dispersing ceiling piece

Figure 255. Detail showing the suspension of the acoustic panel system (Author, 2010)
Cable ties used to join the 12 individual pieces of each panel

STEP 1: Insert cable into looping gripper
STEP 2: Pass cable through or around anchor point
STEP 3: Insert cable back into

Figure 256. Cable ties (Author, 2010)
Figure 257. Diagram illustrating how a looping gripper works (Cable grippers, 2010)
Figure 258. View from above ceiling model showing shadows created on the floor surface underneath (Cable grippers, 2010)
8.11 SEATING _ CARDBOARD DRUM SWIVEL CHAIR

Figure 259. Plan of swivel chair (Author, 2010)

Figure 260. Elevation of swivel chair (Author, 2010)

Figure 261. Cardboard drum available on the site (Author, 2010)

Figure 262. Chair profile cut from tube resulting in two identical pieces that fit onto each other (Author, 2010)
Figure 263. Two 38x114mm pieces of timber are cut to 600mm lengths. The ends are rounded and a slot is cut in each end for a casters to fit through. The two pieces are fixed together with a shiplap joint and secured with wood-glue and wood-screws. A caster is placed in each slot and fixed to the wood with wood-screws. Matching holes are cut in the base of the drum to accommodate the casters. The assembly is placed in the bottom of the drum (Author, 2010).
The chair will be manufactured on site from the cardboard drums in which printer toner is packaged and delivered. The profile that is being cut out will allow two chairs to be made from one 1100mm high, 600dia. drum. The sharp edged angular profile will also resemble the stumps of cut down trees. The casters that cant swivel themselves are attached in such a way that the chair can only rotate and not move back and forth easily to help keep the chairs in place and avoid distraction.

Figure 264. The wood members are fixed to the base of the drum with wood screws and washers. Four pieces of timber are cut to size and a groove is made in each, to fit over the connections of the casters. These pieces are then fixed over the casters and screwed to the wood underneath. This is done to secure the casters in place (Author, 2010).
Figure 265. Sheets of cardboard was cut according to the chair profile and stacked next to each other inside the chair to create a seating surface. A 450 x 1000 mm rubber mat is woven from 40mm wide strips of the inner tube of a vehicle tyre. A 400 x 950 x 40 mm piece of foam is covered with a felt cover that can be removed and washed. The covered foam is attached to the rubber mat by pressed-it clips. The ‘pillow’ is then placed onto the seating surface of the chair to increase comfort & acoustic absorption. The pillow itself can also be used as temporary movable seating with the rubber mat as durable substrate providing a non-slip grip (Author, 2010).
Plan of cardboard swivel chair 1:10

Detail of caster connection 1:5

Caster screwed onto the 25mmx114mm plywood cross support into which a slot is cut for the caster to fit through

Elevation of cardboard swivel chair 1:10

Figure 266. Detailing of cardboard swivel chair (Author, 2010)
Longitudinal section through cardboard swivel chair 1:10

590ø Cardboard drum cut to specifications

1000mm x 400mm Upholstered covering made from recycled rubber, foam and felt

5mm Masonite coveringbase, screwed onto 25mm plywood over castor
Caster screwed onto a 25mmx114mm plywood cross support into which a slot is cut for the caster to fit through

Figure 267. 1:1 Prototype of cardboard swivel chair with upholstered covering (Author, 2010)
### 8.12 FIRE SAFETY

**General requirements according to SANS 0400 Part T**

**Compliance of the Temporary Theatre**

<table>
<thead>
<tr>
<th>Escape routes &amp; doors</th>
<th>Escape routes &amp; doors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>• 45 Maximum travel distances to nearest escape door</strong></td>
<td><strong>• The length of the building exceeds 45m and therefore a minimum of two escape routes have been provided in the initial design. The added ramp entrance will further ease evacuation.</strong></td>
</tr>
<tr>
<td><strong>• Exit door shall open in the direction of travel along the escape route</strong></td>
<td><strong>• All of the existing exit doors already open in the direction of travel. The new door that exit to the ramp is a sliding door.</strong></td>
</tr>
<tr>
<td><strong>• Walls of corridors forming part of an escape route must be constructed of non-combustible materials</strong></td>
<td><strong>• The existing walls of corridors forming part of an escape route are constructed of non-combustible materials</strong></td>
</tr>
<tr>
<td><strong>• The floor of any escape route must have a slip resistant surface.</strong></td>
<td><strong>• The existing concrete floor screed will be covered in rubber tiles that increase the slip resistance of the interior floor surface and varnished OSB board will be used for the surface of the interior and exterior ramp.</strong></td>
</tr>
</tbody>
</table>
| **• The maximum number of people per escape route is 190.**  
**• Escape routes for 190 people must have a minimum width of 1800mm.** | **• The existing escape routes are 2900mm (exit 6) and 2185m (exit 4). The planned occupancy for the Temporary Theatre is 150 patrons and shouldn’t exceed 200 including staff. The existing escape routes are thus sufficient. The new exit via a 2150mm wide scaffold ramp will provide an accessible fire escape.** |
| **• Rooms with a population of more than 25 must have at least 2 exit doors opening in the direction of travel along the escape route and with an aggregate width not less than the required width for the escape route.** | **• There are two existing exit doors. A third one will be provided for the ramp exit.** |
| **• Emergency routes shall discharge at ground level directly to a street or public place or to an approved open air space leading to a street or public place.** | **• The existing stairway forms part of an emergency route. It has handrails on each side throughout its length and discharge into a corridor that is part of the route and then into an open space. The ramp discharges into the street.** |

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*Figure 268: Existing fire escapes routes (Author, 2010).*
### General requirements according to SANS 0400 Part T

#### Compliance of the Temporary Theatre

<table>
<thead>
<tr>
<th>Markings, signposting &amp; Emergency lighting</th>
<th>Markings, signposting &amp; Emergency lighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Emergency routes shall be clearly marked and signposted to indicate the direction to be travelled in the case of emergency.</td>
<td>• The Temporary theatre will be entirely non-smoking and “No smoking” signs of approved size shall be prominently displayed.</td>
</tr>
<tr>
<td>• Emergency routes must be provided with artificial lighting and when the building is occupied there must be a minimum illuminance of 50 lux on a horizontal plane 100 mm above the floor.</td>
<td>• The existing exit routes already comply. The new exit route will be provided with such lighting.</td>
</tr>
</tbody>
</table>

Figure 269. Signposting for escape routes & equipment (Author, 2010).

Figure 270. Discharge spaces emergency routes (Author, 2010).
**Occupancy specific requirements**
requirements according to SANS 0400 Part T

<table>
<thead>
<tr>
<th>Escape routes</th>
<th>Escape routes</th>
<th>Fire-fighting equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Aisles must have a minimum clear width of 1100mm and allow unobstructed movement to the escape routes.</td>
<td>• The width of the aisles between the chairs is 1800mm to allow actors to move and perform along them.</td>
<td>• Fire hydrants One per 1000 m² or part thereof</td>
</tr>
<tr>
<td>• Distance from the front edge of any seat to the front edge of the seat immediately in front of, or behind must be a minimum of 675 mm.</td>
<td>• To allow the chairs to rotate 360 degrees and for people to have enough legroom the seats are spaced 841mm away from each other which is further than in a typical theatre. As a result there is ample space between the seats.</td>
<td>• Portable extinguishers Occupation A2: 1 per 200m² Occupation D2: 1 per 100m² (Previous occupation: D2 Moderate risk industrial)</td>
</tr>
<tr>
<td>• Fire hydrants</td>
<td>• For occupation A2 fire hydrants aren’t required. The fire hydrants required for the previous occupation will be an added benefit.</td>
<td>• In accordance with its previous occupation the space has more portable extinguishers with bigger capacities than needed for the new occupation.</td>
</tr>
</tbody>
</table>
| • Hose reels  
  Any building of two or more storeys in height or in any single storey building of more than 250 m² in floor area must have hose reels at a rate of 1 for every 500 m² | • There are already enough fire hydrants provided for the existing buildings floor area of 2972m² (3000m²/500m² =6) | • Sprinkler system  
  For occupation A2 without a fly tower a sprinkler system isn’t required. The existing building does have a sprinkler system that will provide extra safety in the case of fire. |

Figure 271. Fire-fighting equipment (Author, 2010).
### Occupancy specific requirements according to SANS 0400 Part T

<table>
<thead>
<tr>
<th>Escape routes &amp; doors</th>
<th>Markings, signposting &amp; Emergency lighting</th>
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<tbody>
<tr>
<td>• 45 Maximum travel distances to nearest escape door</td>
<td>• The Temporary theatre will be entirely non-smoking and “No smoking” signs of approved size shall be prominently displayed.</td>
</tr>
<tr>
<td>• Exit door shall open in the direction of travel along the escape route</td>
<td>• Such signage is not provided in the existing building and will be added in order to comply with the requirements. The possibility of battery powered devices will be investigated.</td>
</tr>
<tr>
<td>• Walls of corridors forming part of an escape route must be constructed of non-combustible materials</td>
<td></td>
</tr>
<tr>
<td>• The floor of any escape route must have a slip resistant surface.</td>
<td>• The existing building wasn’t intended for use during the night and therefore new emergency lighting independent of the normal mains supply will be installed.</td>
</tr>
<tr>
<td>• The maximum number of people per escape route is 190. • Escape routes for 190 people must have a minimum width of 1800mm.</td>
<td></td>
</tr>
</tbody>
</table>

### Compliance of the Temporary Theatre

- Rooms with a population of more than 25 must have at least 2 exit doors opening in the direction of travel along the escape route and with an aggregate width not less than the required width for the escape route.

- Emergency routes shall discharge at ground level directly to a street or public place or to an approved open air space leading to a street or public place.

### Rules that don’t apply

Sub rules TT49.2, TT49.4, TT49.5 and TT49.6 don’t apply in the case of places used solely for amateur productions or stages without a fly gallery. The Temporary theatre will mainly be used for amateur productions and won’t have a fly tower. This provides certain design advantages: the existing separation or lack thereof between the audience and the stage and the stage and the dressing rooms is allowed. Fire shutters aren’t required, the stage floor may be of timber, an automated roof ventilation system, communication and alarm systems aren’t needed and the dressing rooms don’t need direct access to an emergency route. Any Decorative material, wall, partition, horizontal slab and ceiling don’t have to be of a non-combustible material.
004. CONCLUSION

The initial aim of investigating the role of temporary architecture and the relationship between perceived temporary and permanent architecture became more clear and focused as the research and design process progressed through the course of the academic year.

The design investigation emphasized the experimental and role of temporary architecture. Temporary architecture are generally less intimidating, of a smaller scale, involve easily workable materials and can therefore be produced quicker. This quality proved important in building models and prototypes for the design.

The concept of a mutually beneficial, symbiotic relationship and the hierarchical layering of temporality and permanence that emerged together with the text requirements were the drivers that guided the design process.

This conceptual approach can be seen in the design in the following examples.

The insertion of the Temporary Theatre (guest) as a whole into the existing permanent structure (host) depend on and benefit each other. The existing space restrictions determined the space created by the insertion although to permanent attachments were made except for the two window panels that were removed and replaced with permanent sliding doors. This is the permanent sacrifice of the existing building for the Temporary Theatre but will benefit the existing building after the insertion has been removed.

The new temporary access ramp will attract attention to the building and will provide easy and visible access.

Drawing people directly of the street into the theatre like a root drawing water from the ground the ramp will give life to the theatre. The public interface and the shaded space created underneath the ramp will become a host to be appropriated for social interaction and informal trade.

The scaffolding structure of the ramp will be the most permanent layer supported by the ground of the sidewalk and in turn supporting the oriented strand board cladding and the shade cloth which is the more temporary layers. The most temporary layers will be the varnish finish of the OSB, advertisements and poster and finally the human activity.

The X-board screens in the foyer are constructed from two interdependent parts; the sloped screens obstructing the view to the back of house spaces and the tree cutouts providing perpendicular support. The screens are supported by the existing floor and intern supports the felt covering.

The cardboard drum light diffusers are dependant on the existing trusses (most permanent) from which they are suspended. The acrylic ‘gobo’ discs are supported by the cardboard drums and the coloured gels (more temporary) lie on the acrylic discs. The light that is diffused form the most temporary layer.

The cardboard swivel chair (supported by the floor) is constructed from a cardboard drum that houses the cardboard sheet cutouts that creates a seating surface onto which the pillow is placed. The pillow itself is made from a rubber weaved mat (two interdependent elements) and a piece of foam with a felt cover. The most temporary layers are the felt cover that can be removed and washed changed and the person sitting on the chair.

The examples illustrate how the design was driven by the concept and supports the argument that the temporary and the permanent are layered and inter-dependent, benefitting instead of opposing each other.

The ceiling panels are also temporarily suspended from the existing trusses. The white translucent acrylic panels are a neutral base for lighting effects and projections (most temporary) The panels can be removed, broken up into individual pieces, stacked and relocated.

The cardboard swivel chair (supported by the floor) is constructed from a cardboard drum that houses the cardboard sheet cutouts that creates a seating surface onto which the pillow is placed. The pillow itself is made from a rubber weaved mat (two interdependent elements) and a piece of foam with a felt cover. The most temporary layers are the felt cover that can be removed and washed changed and the person sitting on the chair.

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