6.1 INTRODUCTION

This chapter focuses on detailing of systems, materials and structural and component connections that manifest in the design. Of importance is how the new intervention integrates into the host building, creating an interface within which the AGC can be comfortably interacted.

The three interventions to be detailed relate to the tripartite oppression that the AGC experiences, namely; race, gender and power, which deal with aesthetics, representation and empowerment. How each addresses the respective oppression will be discussed in detail in the rest of the chapter.
6.2 APPROACH

The technical resolution and detailing must be contextually appropriate, taking into consideration material, colour and connection choices. The approach is a result of analysing the spatial qualities of informally designed spaces (figure 6.1). These findings are to be applied in the design investigation.

6.3 MATERIAL AND COLOUR STRATEGY

The material and colour strategy is influenced by elements found in the context.

6.3.1 Colour strategy

The colour strategy for the centre draws inspiration from hair salon signage that is commonly found in an African hair salon setting. The colours are rich with earthy undertones.

6.3.2 Material strategy

The chosen materials are decided upon by a criteria that is listed as follows:

6.3.2.1 Functionality

A material needs to first be functional before it can be aesthetically pleasing; this is noted in the imagery of informal housing whereby foo packaging is used as wallpaper to keep the cold and wind out. The end result is a visually striking place but functionality is key.

6.3.2.2 Sustainability

This is to be done by incorporating modularity is the design so that materials are easily replaceable without having to demolish a whole structure to fix a part.

6.3.2.3 Lighting

The demolition of walls within the African girl child centre will encourage a greater dispersion of daylight and artificial lighting this is to further be heightened by the application of materials with colour rendering that will permit the reflection and distribution of light.

6.4 Bonang colour pallete (Author 2015)
The façade is symmetrical in its design and the intervention adds a break in the symmetry, announcing the new use proudly. The deviation from the existing symmetry relates to what occurs on the floor plan level. The façade intervention underwent a re-iterative process discussed in Chapter 5 (5.7.1). The final form of the foyer being resolved led to the next iterations which required refining the design and detailing the form as shown in figure 6.1.

The intervention was originally intended to be an extension of the reception area downstairs and contain a multifunctional space upstairs. The multifunctional space remains upstairs (figure 6.3) but the programme has changed to a foyer space downstairs (figure 6.2), a transitional space that connects the exterior to the interior, orientates the user with orientation information boards, and allows for conversations to take place.

6.4.1 Thermal comfort
Thermal comfort is concerned with the comfort zone range within which the human body can adjust to the environment; this range is considered to be between 16 and 32°C in terms of temperature. The ideal temperature is 21-22°C.

The design of buildings that consider the comfort of the user results in an environment that encourages “…productivity, health and mental and physical energy” (Holm 1996: 6). The thermal comfort of the foyer building is of concern as it is a North-East facing building. This orientation may cause thermal comfort concerns in the warmer months. Solar control devices should be considered to reduce solar gain. Holm (1996: 11) states that it is recommended that summer sun be screened between solstices and winter sun be allowed to penetrate. This is a factor that is considered in the design.

6.4.2 Visual comfort
The majority of lighting in the foyer and multifunctional mezzanine will be natural daylight so as to refrain from increasing the energy consumption of the building. Daylighting is implemented in a diffused manner by means of translucent materials and shading screens. Artificial lighting will complement the daylighting method and will be an advantage on overcast days. Reflective indoor colours will be used as a means of further enhancing the daylight penetrating the foyer.

6.4.3 Ventilation
Passive ventilation is considered a means of achieving thermal comfort in the new structure. The Pretoria climate zone experiences both dry and rainy seasons, strong solar radiation and moderate humidity levels. Wind direction in summer is east-north-eastly to east-south-easterly while in winter it is south-westerly, minimum north-east. The summer wind is ideal for the north easterly and south easterly facing façade intervention.

6.4.4 Designing for comfort and climatic consideration
EcoTect was used to assess the amount of daylighting coming into the foyer and to ascertain how visual comfort could be reached by the application of a shading device.

A model was built with no shading device and tested (shown in figure 6.4 number 1) and a second model was built with a shading device and tested under the same climatic conditions (shown in figure 6.4 number 2). The screen which acts as a shading device reduces the lighting levels from 1700lux - 4100lux to between 500lux -2100 lux. This reduction in lux levels results in better visual comfort within the foyer.

Following visual comfort, the issue of thermal comfort and ventilation needed to be addressed. The building was originally intended to have solid glass glazing but this, as a design decision, would raise the temperature of the foyer and permit minimal ventilation into the space. Louvre windows were proposed as a solution, allowing for passive ventilation to occur in the space, therefore, a better suited thermal comfort for the space.

Of importance in the foyer design is the shading device that will permit ample daylight but also allow for cross ventilation to occur. The Biomedical Research Centre in Pamplona, Spain was investigated as a case study on how such a shading device could be designed.

The shading device is constructed from 3mm-thick perforated aluminium panels that shield the façade of the building from the sun. The screens are fixed at a distance from the glazing allowing maintenance of the screen and the glass façade.

The perforations in the aluminium panels permit filtered daylight into the building whilst also allowing for the user to have a visual connection with the exterior, thereby inhibiting a complete block of the view.

Architects: Vaiño & Irigaray & Galar
Location: Pamplona, Spain
Architects: Vaiño & Irigaray & Galar - Antonio Vaiño i Daniel, Juan L. Irigaray Huarte
Client: Navarre Health Service
Cost: 18,000,000 €
Area: 12150.0 sqm
Project Year: 2011

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6.4.5 Bonang foyer screen design

The screen takes inspiration from that of the Biomedical Research Centre in Pamplona, Spain in that it has slits within the pattern that permit light and air to pass through for better visual and thermal comfort. The slits in the screen draw inspiration from black hair braiding patterns whilst also being staggered to allow for maintenance. The screen is attached to a CorTen weathering steel tube that is in turn fixed to the foyer building framework. The 250mm long fixing tube allows for the screen to be fixed at a distance permitting for the louvre windows to be opened and for maintenance work to be carried out.

CorTen steel is a material that is treated to weather over time and have an oxidised look to it. As the girls change and grow so does the façade structure. The material is a reference to the rusted zinc sheeting that is commonly found in the construction of informal structures. The structure that the foyer space is comprised of is lightweight steel, beams and columns which are glazed with openable louvre windows.

The exploded axonometric drawing (figure 6.9) of the foyer expounds on the various components that make up the foyer.

The connection between the new foyer building and the existing building is by means of a steel plate that is bolted into the new steel columns and the existing brick wall. The foyer structure is self-supported by its foundations yet the connection between the two results in a better integration of the two. This speaks of the manner in which African feminism is not about emasculating the male gender but about working, occasionally, with the male gender to dismantle patriarchy, and with the white race to undo destruction done by white supremacy.

The flooring, walls and ceiling materials within the foyer space are chosen to better enhance the amount of daylight entering the space. The vinyl flooring is prevalent in informal housing interiors; this material has been introduced into the foyer and extends into circulation routes within Bonang. The vinyl flooring, within an informal housing interior, is generally worn out from the wear and tear of daily use as it may not be of the best quality but is the most affordable. Bonang takes this commonly used material and applies it in the space in a better quality; therefore, the girls are able to identify this aesthetic, connect with the space and not feel alienated at or within Bonang.
The 3 entrances that puncture into and connect to the building are a representation of the tripartite oppression of race, gender and power that the AGC experiences, and of how these three issues become a bridge between the traditional white supremacist, and patriarchal society (the present) and African feminism (the future).

Figure 6.10: Facade intervention (Author 2015)
The auditorium is a speaking venue for the AGC and for the community. The space is inspired by the Feminist Stokvel, discussed in Chapter 2 (2.3). Talks that engage and empower the African girl child are to take place in this space.

The auditorium is constructed with a lightweight steel framework that is cladded in recycled timber (assembly drawing A2) which will be retained from the demolishing that will happen in the building. The main concern for the space was how to keep the surrounding sound out and the sound generated inside in. Depicted in the exploded axonometric of the auditorium (figure 6.11) is AlphaPerf metal acoustic panels that will aid in the absorption of sound generated in the auditorium. The perforations in the panels allow for minimal dust to settle on the panels. Sound absorption is further enhanced by designing for a slit (assembly drawing A3) in the auditorium seating that will permit generated sound into the void under the seating. The void in the seating contains Foamrite acoustic foam that will absorb the sound.

In terms of simultaneously keeping the generated sound in and surrounding noise out, two methods were employed. Firstly, the acoustic glazing was used to permit a visual connection with its surrounding, and secondly, the steel columns that support the glazing are cladded in Soniksfoam sound reduction panels with an aluminium sub-frame onto which CorTen weathering steel is cladded.

Figure 6.11 Auditorium exploded axonometric (Author 2015)
Figure 6.12: Pictures taken at Feminist Stokvel events in 2015 (Author 2015)
Figure 6.13: Auditorium intervention detailing (Author 2015)
The new vertical circulation, staircase and elevator, are centrally placed and a celebration of the empowerment of the AGC. The layout of the floor plans is designed for grouping of spaces thus situating public spaces together whilst the more private and quieter spaces are both located on one floor granting fluid movement throughout the centre. Instead, spaces such as the administration offices and crafting spaces are both situated on one floor granting her fluid movement throughout the AGC.

The staircase which wraps around and is supported structurally by the elevator is made up of a steel hollow core framework as annotated in Figure 6.12. The balustrading is designed to be CorTen steel with the black hair braiding patterns as inspiration for the cut-out pattern. A 50mm stainless steel handrail is placed at a 900mm height. The riser is constructed from repurposed timber that will be retained during the demolishing stage.

The elevator consists of a steel hollow core framework onto which the staircase structure is fixed, the framework is clad in 12mm laminated, and strengthened glass. The staircase is designed according to the requirements of SANS 10400-M depicted in Figure 6.12.
6.7 FLOOR DETAILING

A detail of concern is retaining and integrating the memory of the old with the new. In the case of demolished walls in the interior, the memory will be remembered by inserting a CorTen steel plate in the void of the wall demolition as indicated in figure 6.13. This detailing is to be applied to any surface in the building where a wall is removed, signifying respect to the old, and that it is possible to retain the history of the building in a manner that allows the new use of the building to function better within the space.

6.8 COURTYARD TOWER INTERVENTION

The training tower that can be found in the inner courtyard is a part of the heritage of the site and therefore the treatment and redesign of it is to take this into consideration.

The design considerations for the tower are depicted diagrammatically in figure 6.16. The first consideration for complete demolition proved to be contradictory to the heritage strategy outlined in Chapter 2 (2.2.2) therefore partial demolition was considered to reduce the phallic nature of the tower and so lowering the height of the structure to that of the surrounding courtyard buildings. Diagram number three depicts the chosen approach to the tower intervention, this being more inline with the heritage strategy. The tower will incorporate a performance stage on the ground floor which will require demolition work. The rest of the tower will be designed to be a folly. Drawing inspiration from Rapunzel re-imagined as an African character (see figures 6.17 and 6.18. The folly will consist of staircases that lead to the top floor and back down. The girls are given freedom to make use of the different spaces, on each level, as they wish. The staircase is to be see through as in figure 6.20 whilst allowing for patterned cladding to be applied to it as shown in conceptual rendering figure 6.19 and figure 6.21.

Figure 6.15 Floor joint detailing, not to scale (Author 2015)

Figure 6.16 Training tower design consideration (Author 2015)

Figure 6.17: Afro Rapunzel comic strip (Author 2015)
Figure 6.18: Dreadlocked Rapunzel book cover (Author 2015)

Figure 6.19: Conceptual rendering of Training tower design (Author 2015)

Figure 6.20: Steel staircase (Author 2015)
Figure 6.21: Conceptual rendering of Training tower design (Author 2015)
6.9 CONCLUSION
The technical development chapter sought to find ways of adding value and meaning to the design by the application of the conceptual approach to the technical resolution of the interventions and connecting the old and the new to create an integrated interface. The chosen interventions which act as transitionary spaces and products were addressed in their connection details, material choices and design problem resolution.
7. Conclusion

7.1 Findings
The African girl child full of potential but surrounded with few opportunities to see her potential come to fruition. Bonang is such a space in which a young black girl can have an interface that connects her with relevant assistive organisations, her community and her culture. The existing host building stands impermeable and inaccessible by the public and especially the African girl child. The degenerate state of the building with its outdated, cellular layout required an intervention that would go in contrast to this.

The proposed interventions, public in nature, allowed for the building to be rendered usable by the community in a manner that works to the building’s and contextual setting’s advantage. The friction between the new and old, what is Afro-centric and what is western was dealt with by finding common ground between the two that could aid in the development of a design that. Informal design qualities, and interventionist approaches that are inspired by African culture aid in adding a contextually appropriate layer to the technical resolution of the building. The building therefore becomes a place in which the AGC can feel comfortable to engage in her own empowerment. She no longer needs to feel alienated in a traditionally patriarchal society.

7.2 Contribution
The study is relevant in the Interior design field as it has delved into how alteration could be designed to be contextually appropriate and empowering within an African feminist setting. The African feminist finds herself with a society that expects her to fulfill traditional and cultural roles, of which some may hinder her empowerment. The investigation looks into a program that breaks the barrier of inaccessibility to the African Girl Child within the city and designing interventions that translate the pivotal issues into a spatial setting.

The design investigated what is currently occurring contextually and then sought to incorporate and strengthen these activities. This manner of investigation is of importance especially with regards to an African Aesthetic of which no formal guideline exists within the Interior Design field. The design of the center was one based on intuition and conscious design, incorporating elements, informants and cultural findings with which the African girl child could identify.

7.3 Recommendations
The following recommendations are listed for further investigation:

7.3.1 Phased approach
The initial intervention in the design of the Centre for the African girl child is part of a phased approach which consists of an Arts and Culture program which could then be phased on to include programs that incorporate Technology, Engineering and Mathematics. Each program will have specific spatial requirements that will need to be designed.

7.3.2 African Aesthetic from an African feminist stance
The investigation of the African Aesthetic is in its initial stage and requires further development in identifying guidelines and informants that can be used in the designing of spaces that speak to the African context that the intervention is found.

7.3.3 Precedent studies
The precedent studies that were reviewed are a satisfactory start but requires for a deeper and more thorough investigation into precedents that relate to the African aesthetic.


9. APPENDIX- A: PRESENTATION DRAWINGS
Bonang

A Centre for the African Girl Child
by Esther Shadi

Full observation into Bonang: A centre for the African Girl Child in The Old Pretoria Fire Station: an investigation into the role of interior design as an agent in the empowerment of the African Girl Child.

Research Field: Heritage and Culture Landscapes
Study Advisor: Catherine Kutenwendi, MEd
Studio Member: Raymond Khenge, MEd
INTRODUCTION

“WE ARE THE ONES WE HAVE BEEN WAITING FOR”

(Makor, 2003)

BACKGROUND
The African girl child (G)
- represented by male dominance
- controlled: traditional perceptions of a woman
- abused by the time-honoured norms of her community
- the African girl child referred to in this study refers to a girl between the ages of
  12-17
- has inferior status

REAL WORLD PROBLEM
A result of the discrimination:
- Lack of access to girl-friendly, safe and supportive spaces at home in her self
  empowerment and self-actualisation
- School and home environments are not necessarily affirming, therefore a third
  space is needed whereby she can be acknowledged and empowered.

PROBLEM STATEMENT
The African woman and African girl child experience a dichotomy of oppression,
firstly within a previously white supremacist society and secondly within their own
family with regards to traditional gender roles and patriarchy.

To summarise: three main issues have been identified:
- The lack of opportunities for the African girl child in Pretoria’s CBD due to a
  patriarchal society and its limitations;
- The absence of physical spaces that cater to the African girl child in the
  CBD;
- The repercussions of a previously white supremacist society that lacks an
  aesthetic with which the African girl child can identify.

PREVIOUSLY WHITE SUPREMACIST TRADITIONAL ROLES AND GENDER PATRIARCHY

RESEARCH QUESTIONS

1. What theory exists that supports the African girl child and her three
   areas of oppression namely: race, gender and power? AFRICAN
   FEMINISM

2. Is there any identifiable historical significance in the house building
   and its context that may be used to empower the African girl child?
   HISTORICAL SIGNIFICANCE

3. What precedents can be investigated to aid the intervention in the house
   building? PRECEDENTS

4. Can a design aesthetic be generated that speaks to the African girl child
   and allows to empower her? DESIGN AESTHETIC
Name: Old Pretoria Fire Station
Location: 445 Boschmar Street and corner of Millwater Street, Pretoria CBD, Even 953 + 954
Build: 1912 ; Subject to Section 34 of the NHHA No 9 of 1996 because the building is older than 60 years
Previous use: Fire Brigade, Ambulance Centre
Current use: Tourism Information, Offices, Housing
Current owner: City Of Tshwane
Current occupant: Museum Park, Tshwane Leadership Foundation
MACRO CONTEXT

The chosen site is located within the context of the City of Tshwane Inner City Development and Regeneration Strategy. This strategy seeks to "...celebrate the national capital and reposition the inner city as a vibrant cultural and government centre" (Tshwane, 2009: 8).

The strategy identified a number of interventions:
- Announcing the destination: Design of gateways into the Inner City, e.g. at Paul Kruger Street Station;
- Cultural Circle: Town Hall Station near Museum Park;
- Capital Precinct;
- Mandela Development Corridor and Apartheid Museum Precinct;
- Tshwane Crossing;
- Zone of Urban Regeneration Mandated;
- Movement: BRT and other modes and;
- Exceptional Public Environment: Improvement of public spaces.

The selected site is situated within the Cultural Circle Intervention which is concerned with the "...identification of all existing cultural landmarks and facilities and the enhancement thereof, as well as the development of new, contemporary cultural landmarks" (City of Tshwane, 2009). The proposed design drives towards the implementation of the African Girl Child and African feminism as it forms part of cultural issues within both the South African and African context. This strategy will aid in identifying cultural activities within the micro and macro context.

The strategy entails less formal cultural zones such as markets, street performances and small businesses (City of Tshwane, 2009).

MACRO SITE ANALYSIS

The macro site analysis seems to investigate what is happening within the greater context that applies to the design investigation.

HISTORICAL CONTEXT

Pretoria was founded in 1855 and named after General Andries Pretorius, and in 1860, Spion Kop was incorporated as a part of Pretoria and subsequently what is now known as Pretoria West (South African History Online, 2013). In 1858 the first church was established on what is presently Church Square. Formerly named Market square, the area is the central point from which Pretoria grew the city’s social and commercial core. Notable buildings that were established before the Old Pretoria Fire Station include aloe Court (1876) and Union National Museum of Natural History (1932). In 1912, the Old Pretoria Fire Station was built, after which African Window / National Museum of Cultural History (1932) and City Hall with Pretorius Square (1935) were built.

A second layer of historical context, shown in Figure 3.10, has been investigated from the point of view of African feminism focusing on specific moments in relation to women in South Africa.
TRANSPORT

The old Pretoria Tin Stations found on the corner of Bronkhorst and Minnaar Streets (Figure 3.2) located along major transport nodes/locations in figure 3.3. There are a number of Gastrim bus stops found on Bronkhorst street which run parallel to Paul Kruger Street, while Minnaar Street was upgraded by closing off the west end resulting in less vehicle movement on the streets. Vaughan and Minnaar act as access routes to the formal historical and cultural areas located between them.

Pedestrian movement along Paul Kruger Street depicts it as a primary route due to its connection with the Pretoria Station, while Bronkhorst Street acts as a secondary route, feeding out into the primary route. The accessibility and ample provision of public transport will aid in the movement of the African girl child to and from the area.

EDUCATIONAL FACILITIES

Educational facilities within the greater Pretoria reveal that the current target age group for the African girl child Centre are educationally catered for within the city centre and are therefore lacking for study or recreational facilities.

The facilities indicated in figure 3.3 are in close proximity and cater for the formal education of students in the city centre while the African Girl Child Centre will provide informal education and empowerment of the African girl child.

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USE ZONES

The use zone mapping reveals that the proposed building is surrounded by a variety of uses to those of the building hence industrial and governmental uses, to fourth floor use facilities educational facilities and offices. To the north there are commercial zone building and transport completion of the site has a mix of residential uses from where the centre's African girls child w comes.

EXISTING INFORMAL CULTURAL ACTIVITIES

The informal activities found within the centre figure 3.1 are a means for the community within the CBD to express and consume what is of cultural importance to the community.

Functions such as cafes and restaurants, hair salons, barbers, pottery and herbalists can be found. There are activities that provide guidance in the choice of programmes that are relevant to the centre, thus tying in with the Cultural Circle strategy that the City of Tshwane seeks to implement. These existing informal cultural activities will act as inspiration for the programme of the centre.
SITE ANALYSIS

The Old Pretoria Fire Station is located on the south end of Boom Street, one way, four lane, high traffic road, and on the west end of Minaar Street, a quieter in comparison with its two six, two way roads as shown in figures 3.12 and 3.13 respectively. Both streets offer a reason for greater public interface below the building and the street levels.

The building was designed by Cawen & Powers Architects, built in 1904 and thought to be of employ South African design, was to be utilized as a fire station, which later relocated to the building opposite it.

The proposed building defines the corner of Minaar and Boom Street 60MM-shaped building, depicted in figures 3.14, has an inner courtyard which is completely isolated from view when one stands looking in from the street.

The chosen building for the first phase intervention is located on Boom Street in order to make the most of the high foot traffic that occurs on this street. The building is currently occupied by the Museum Park Administrators, Taunton Leadership Foundation and Housing. This phased intervention is to be a reminder of the original phase in which the buildings on the site were built. The initial building is in the western building on Boom Street, followed by the building on Minaar Street and, lastly, the northern building.

Figure 3.11: Site conditions around the OPFS (Google Earth 2017, edited by author)

Figure 3.14: Old Pretoria Fire station floor plan and elevation noted by author, not to scale

Figure 3.15: Original floor plans before the proposed building for intervention shown

Figure 3.16: Original site sections before the proposed building for intervention shown

SITE FINDINGS

- Mixed use shown in figure 3.13
- Brick training tower, six stories high
- Main entrance to the site defined by a tower on the roof was intended to be on the eastern side of the building, located on Boom Street
- White plaster finished building which was designed to be asymmetrical
- Original clay tile roof was replaced with corrugated iron sheeting
- While the wooden vehicle entrance doors were replaced with rolling steel doors
- Building consists of a ground and first floor
- Wooden framed windows and doors are still in place, original fire places intact
- Timber flooring and ceiling still in use
- Rectangular plan which consists of load bearing brick walls
- Concrete beams and columns can be found in the fire truck parking garage
- The interior spatial quality of the OPFS reveals that the fire truck garage does not receive natural light due to the roller steel doors located on both walls
- With the floor to ceiling height being 4150mm and the first floor is at 3770mm
- Assessment table noted in the office indicated in figure 3.17 as “A”

Figure 3.17: Original site sections within the proposed building for intervention shown

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BUILDING STRUCTURE ANALYSIS

Useability
The building in question currently is in use, utilisable, and structurally sound. This is not to say that the building is fulfilling its purpose in a manner that is enriching to the users.

The current programme in the number of buildings on site is varied and not unified. There is no common purpose or goal.

In projects such as this which require adaptive reuse the designer is to carry out what is called and look ahead and design for the future betterment of the building. The assessment of the building with regards to this theory is quantified, practicality of use and available spatial qualities reveals that the building would be able to accommodate the proposed use in a manner that create a resilient space for the African girl child.

Figure 3.10: Building analysis method 2020

SURFACE TEXTURE ANALYSIS

The existing surface materials within the building are of a durable nature. Existing finishes range from timber and timber based boards, stone such as slate, ceramic tiles to metal grates and glass glazing.

SPATIAL ANALYSIS

The current floor plan is not being utilised to its full potential. There are offices, function rooms, training rooms and accommodation within the PHASE 1 building.

The sectional elevations reveal that a multi use programme is a viable option in building. The ground floor, floor to ceiling height is 4450mm and the first floor 3711mm. KḞavall C0202/36 states that for uses D2 AND R1, of which the building would fall under that the slab height can be between 2300-2700mm and 2700-3600mm respectively. The building therefore meets this guidelines.

The interior spatial quality is lacking in adequate electrical and daylighting so if internal load-bearing walls do not permit ample light into the cellular office space and accommodation spaces, furthermore this results in passageways being dark and cold transition spaces.

The engine fire truck parking is currently being used as storage space, the steel roller doors do not permit daylight into the space, making it a dirty lit space ev with electrical lighting. The numerous columns and high ceiling display potential for a striking spatial intervention.

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STATEMENT OF SIGNIFICANCE

The Old Pretoria Fire Station as previously stated was built in 1912 by Cronin & Partners, making it older than 50 years old and therefore is subject to Section 54 of the NHBRA (Q13 of 1990) (De Reuck & Blom, 1993:114).

Not much remains as a reminder of the fire station except for the training tower that to this day still stands proud and sturdy in the inner courtyard. Another architectural element that is a reminder of its previous use is the fire engine truck entrance gates on Beatrix Street. The internal courtyard character of the building is to be retained.

Internally there three steel moulded fire places (Fig 3.18 inside offices that need to be considered as part of the original character of the building due to their craftsmanship as well as timber framed windows, timber flooring and ceiling. The original timber doors leading into the fire truck entrance and parking area have been replaced by steel roller doors. The original clay tile roof has been replaced with corrugated iron sheets. The existing facade is symmetrical in nature, with two niches in the facade that allow people into and out of the building. Elements such as the building corner keystones, Art Nouveau influences in fire places, bare floor boards indicate that the building is of an Early Edwardian style.

These identified elements are to be retained where needed or restored and reused elsewhere with the memory of them retained where necessary.

HERITAGE STRATEGY

The heritage strategy for the intervention in the Old Pretoria Fire Station, depicted in figure 3.12, is one of integration, retaining the memory of its past whilst incorporating the new use and future into the building and site. New work is to be incorporated in a manner that is complimentary, and where demolition has been carried out, the preservation of the footprint within the building and site is to be preserved with newly integrated elements.

The integration of the past, present and future aims to render the OFS its history, physical and metaphysical, accessible to African girl child. By exposing the building in this manner, the African girl child should be able to identify with and feel empowered by it.

A detail of concern is retaining and integrating the memory of the old with the new. In the case of demolished walls in the interior, the memory will be remembered by leaving a CorTen steel plate in the void of the wall. Demolition as indicated in figure 3.13.
LOCAL HERITAGE LEGISLATION: NATIONAL HERITAGE RESOURCES ACT

The National Heritage Resources Act (NHA) is a legislation utilised by the South African government as a means of managing national heritage resources. The NHA focuses on the need to protect and promote important historical, cultural, and scientific heritage. It provides a framework for the protection and management of heritage resources.

The NHAAct (South Africa, 1996) stipulates that all heritage sites and buildings have legal recognition and protection. This means that any alterations, alterations, or deprivations of such sites and buildings are regulated by the NHA. The NHA provides that all heritage sites and buildings are protected from alteration, deprivations, or deprivations of such sites and buildings.

THEORETICAL APPROACH

AFRICAN GENDER STUDIES

Why the African Girl Crush

The African girl child is perceived to be at a disadvantage in society because of her gender. She faces many challenges and is often discriminated against due to her gender.

The African woman is considered a patriarch of the family or community (Mackenzie 2011). She bears the burdens of society and is often asked to do more than men.

AFRICAN FEMINISM

African feminists are now disseminating these connotations as they are diverse in colour, in how they present themselves, and in what they fight for. They are not seeking equality as a means of growing stronger than their male counterparts but rather to highlight the strengths of individualism and a collective.

Lebohang Maseko and Chimamanda Ngozi Adichie are two examples of contemporary African feminists. Lebohang Maseko is a feminist writer and poet. She has written books such as "Black Bird Voice 2014.

Chimamanda Ngozi Adichie is an award-winning novelist whose novel "Americanah" is a commentary on colourism. She speaks about the need to break free from the shackles of colourism and fight for equality.

FEMINIST STUDIO

The Feminist Studio is a collective of women who have come together to talk and share openly about social issues facing the black South African woman. The collective comprises of Pontshe Phalane, Mlacakumdo Bongia, Daniele Studiu, Joe Mhlo, Phumzile Chigwede, Lebohang Maseko, Nkosazana Dlamini, and Nkosazana Nkosi. They are depicted in the image below.

THE HAIR SOIREE

Texture Discrimination: The Problem with Keffir Hare!

Observe with:
Skinhead
Longhair
Brazilian Twist
Tresse Eks
Loose hair goals

The Hair Soiree

Date: Saturday 27 June 2015
Venue: Constitution Hill
Time: 12.00 to 15.00
Cost: R150 excludes hair, drinks and a free case of Constitution Hill
Tickets available at Checkers
Riviera Re-ValidationINYX@Mail.com

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AFRICAN REPRESENTATION

The representation of the African girl child within the space she occupies is of importance. Weisner (1982) states that both the world out there and the world inside ourselves depend close and confirm to our socially learned perceptions and values. By representing the African girl child and the African aesthetic a sense of African pride is instilled in her.

The representation of the African girl child will be discussed under three themes, namely, race, gender and the concept of power, within the African family and where in this power struggle she currently fits.
PROGRAMME

USER GROUP
African girls between the ages of 13 to 17.

PROGRAMME FOR BOYANCHE CENTRE FOR THE AFRICAN GIRL CHILD
The programme for the African girl child is to be mixed race, relating to the contextual location whilst providing innovative means of posing empowerment through creative design. The African Girl Child is to be empowered in sectors such as Business, Science and Technology and the Creative arts. These sectors will be in the play, work, learn grouping of spaces.

Half a mind is a terrible thing to waste.

STEM encourages a well-rounded approach to education.

STEM is a STEM Centre that teaches STEM is based on skills generally using the left half of the brain and thus is logic driven. Math, reading and data driven skills. Arts, which uses the right side of the brain supports and fosters creativity, which is essential to innovation.

FISH AND THEATRE

PHASE I: Arts and Culture
The initiative is to achieve the building and build awareness to the general public, concerned organisations and specifically the African girl child about the centre. The chosen building for PHASE I was chosen due to its positioning on a main public road and a more prominent and distinct entrance to the building.

PHASE II: Science and Technology
This will build on to PHASE I and so broadening the range of interest for the African girl child. This phase will incorporate knowledge transfer spaces such as laboratories and access to skills for professionals to work from so the girl child can be exposed to the career and trained in a hands on manner.

PHASE III: Engineering and Mathematics
The third phase will be of a more educational nature, offering a “Flex” to students that perform in the Engineering and Mathematics field allowing the girls to be a step ahead.

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SPATIAL QUALITIES OF INFORMALLY DESIGNED SPACES

ARMAATURE
Reconstruction of broken elements by means of propping, this is to maintain spatial relationships that would be under gravitational threat (Scott 2008, 118).

EXPOSED FIXTURES
Fixing points and joints of elements are left exposed or unfinished mostly due to financial reasons.

DECORATION
Decoration is subjective and dependent on what is readily available and affordable.

COLLAGE OF MATERIALS
Available materials are used in the construction and decoration of spaces.

MULTI-FUNCTIONAL SPACES
The multi-functionality of space is due to space constraints.
**Conceptual Approach**

<table>
<thead>
<tr>
<th>Form of hair alteration</th>
<th>Level of alteration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Braiding</td>
<td>Integrated but separate</td>
</tr>
<tr>
<td>Relaxed hair</td>
<td>Changes hair texture</td>
</tr>
<tr>
<td>Weaving</td>
<td>Integrated but less integrated than braiding</td>
</tr>
<tr>
<td>Dreadlocks</td>
<td>Existing hair is twisted into its own braid</td>
</tr>
<tr>
<td>Natural hair</td>
<td>Hair is left to grow out as is, little hair manipulation needed</td>
</tr>
</tbody>
</table>

**Interventionist Approach**

1. Removal of existing hair style
2. Washing/treatment of hair
3. Blow-drying and conditioning
4. Installation of wig
SPATIAL LAYOUT AND HERITAGE INTERVENTION

The precedents discussed focus on how an intervention in a heritage building can be used to introduce new use in the existing building spatially and on the floor plan.

MUSEUM OF CONTEMPORARY ART OF ROMA MACRO:
Architects: Studio Odile Decq
Location: Via Ostiense, Rome, Italy
Area: 12,000 sqm
Year: 2007

The Museum of Contemporary Art of Rome (MACRO) designed by Studio Odile Decq sought to change the monotonous site into a more open one. The integration of contemporary art gallery in an ancient mixed industrial building proved to be challenging but resulted in an intervention that is striking.

FAÇADE: A prominent corner of the façade shown in figure 4.1, has been removed and replaced with contemporary materials that stand in contrast to the host building, permitting light into the building and connecting space users within the heritage building with the context.

CIRCULATION: The circulation path, depicted in figure 4.2, runs from the façade towards the existing building where it dilates but instead is dynamic, offering various viewpoints along the route.

SPATIAL ORGANIZATION: The spatial organization is not limited to the static orthogonal spaces detailed by the original building but rather adds on a formal, open space and section to form angled horizontal and vertical planes.

FORTRESS OF FORTERZA
Architect: Markus Scherer with Walter Reber
Location: Trattenbach, Gmunden, Austria
Area: Unknown
Year: 2009

This was a military fortress built in 1580, used as a granery during the 19th century, and in 1918. Trattenbach then came under Italian rule and was used by the army until 2015. This former fortress has become a place for meetings and cultural exchange.

FAÇADE: Elements such as the retained existing backpack (Figure 4.3) keep the memory of the past, in a matter that is bold while the new additions attempt to compete with the form of the building with missing parts.

CIRCULATION: Of particular interest is the existing tunnel (figure 4.5) which was extended to 32 meters, to connect the lower to the middle fortress. A lift and black concrete stairway was added with a golden handrail. The extension of the tunnel is of importance because it extends the memory of the history of the building. The architects used the opportunity to maximize the fortress’ spatial potential.

SPATIAL ORGANIZATION: The use of the horizontal organisation of space could have produced a psychologically design but the architects sought to move away from this and rather use the vertical geometry that exists to some degree. This shift from existing geometry provides an intriguing spatial product.

MONTBURG MUSEUM EXTENSION
Architect: Netz Solcheck Arquitectos, SP
Location: Halle, Saale, Germany
Year: 2008
Area: Unknown

The castle of Montburg in the city of Halle is an example of Gothic royal architecture from the end of the 13th Century in Germany.

FAÇADE: The facade intervention could announce a new entrance (Figure 4.7). The superposed new intervention peaks out of the with an embellished roof that stands as a memory of the host building. The new materials stand in contrast to the roof, highlighting that which is old and the new.

CIRCULATION: The existing buildings were kept as intact as possible whilst the intervention was inserted within the host, retaining its ruined state as far as possible.

SPATIAL ORGANIZATION: Due to the removal of the existing roof, the floor was completely rid of its walls, to allow for a more open plan as shown in figure 4.8.

In summary, the interventions discussed in this section highlight the need to sculpt heritage buildings in a manner that does not continue the original intention but rather introduce the new intervention in a manner that is contrary, complementary to the site, thereby reactivating the building not only in programme but form and space. The extension and reinterpretation of existing or past elements comes to enrich the design interventions.

Analysis

The orthogonal nature of the building was rejected and a diagonal line was used to form new spaces as depicted in the image above. Thus, a well-analysis Figure 4.9 reveals that the stable horizontal line is changed to an unstable line, resulting in the static nature of the space becoming dynamic.

Figure 4.1: Facade of Museum of Contemporary Art of Rome (MACRO) 2007

Figure 4.2: Circulation within the Museum (MACRO) 2007

Figure 4.3: Spatial organisation within the museum (MACRO) 2007

Figure 4.4: Analysis of floor plan arrangement and spatial organisation within the museum (MACRO) 2007

Figure 4.5: Section through the extended tunnel (Fortezza) 2012

Figure 4.6: Plan of intervention at the military fortress (Fortezza) 2012

Figure 4.7: Facade of the Montburg Castle 2008

Figure 4.8: Plan of the Montburg Castle 2008

Figure 4.9: Interior, open space view in the castle of Montburg 2012

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PROGRAMME
The following procedures have been investigated due to its successful nature as a community centre within the South African context.

UBUNTU CENTRE
Architect: Fathi Architecture
Location: 5 On Gar Street, Jinet, 0200, Port Elizabeth, South Africa
Area: 1951 m²
Year: 2011
Programme: Mixed use community centre and commercial spaces
The Ubuntu Centre is located in Jinet in Port Elizabeth and is an example of how architecture and education can be used to empower a community. The centre contains facilities for pupils' IT testing and training, counselling, education, and community empowerment.

The multiple functions that the building contains figure 4.39 address the needs found in the community. This was done by looking within the community to provide an answer or alternatives to social life, educational dilemma and the need for creative expression and enjoyment.

The variation in programmes for the centre to cater for young and old within the community at different times of the day. This ingenious use of programme to prompt different users at different times can aid in accommodating more functions with less but more flexible spaces. It also ensures a continual use of the centre. The multi-purpose hall, depicted in figure 4.17, is an example of this continuous use.

AESTHETIC AND CONCEPTUAL FRAMEWORK
The following procedures were chosen in an attempt to identify an aesthetic that the design intervention would need in order to successfully represent the African get child through interior design. These two procedures represent the formal and informal interiors that can be found within the South African context. The formal interior is primarily constructed by skilled labour applying sophisticated mass produced materials, while the informal interior is created by unskilled individuals applying found and/or recycled materials.

CONSTITUTIONAL COURT OF SOUTH AFRICA
The Constitutional Court (2015) (b) brief was "to create a building rooted in the South African landscape, physically and culturally, without over emphasising the symbols of any section of the South African population, or making a pastiche of them all."

The physical materials used in this case were glass, metal and black slate. Figure 4.33 shows the court with an African feel. The Constitutional Court (2015): "This materials are relevant within the South African context and as spaces users can identify with their everyday use."

THE FORMALISED AESTHETIC, THE MACHINERY, ARCHITECTURAL ELEMENTS
The Constitutional Court can be considered to be a space that has been formalised, meaning that the majority of the building was built commercially and using various machinery.

COLOUR
The colour is also incorporated by allowing the inherent colour of architectural elements and furniture material. The use of colour is not overwhelming rather, it complements the spaces, and results in a unified look of the Foyer space (figure 4.18).

TEXTURE
Textures used in the spaces, range from the very smooth and polished to rough and coarse as seen in figure 4.14. Texture on surfaces and in the incorporated art and crafts all work harmoniously together.

SHACK CRC
Shack CRC is a photographic documentation of the dignity to be found in the dusty corners of South Africa's shacks, and is described as "...an exhibition of cultural creativity in real life context" (Fraser 2002: 15).

THE INFORMAL, AESTHETIC, HAND-CRAFTED FOUND OR RECYCLED MATERIALS
Shack CRC serves to celebrate making the most of what is affordable and available. The interiors and built structures shown in Shack CRC, are made from hand-made elements more as a necessity rather than a luxury. The built structures are built according to what the creators could afford or find resulting in materials being recycled. For example, a method of wall papering the interior of a shack to keep the cold out, as depicted in figure 4.36 by boiling paper from household and food items, using a new idea, the results of which are in attractive pattern and colours within a glass space; a collage of mirrors.

COLOUR
Colour is used daringly to create a bold and colourful atmosphere is seen in figure 4.15. The colour usage is unconventional. It may not be predetermined, such as in formally design spaces, but a result of a collage of found materials and readily available elements.

TEXTURE
The texture that can be seen in Fakonde's collage is made up of different materials such as Lucky Star make-shift wallpaper, vinyl floor samples to painted interior wall tiles (figure 4.16).

In summary, the formalised African aesthetic is primarily deliberate in that there is a concept, a specific colour palette, and predefined materials. The spaces are realised through the use of machinery and commercialised elements. In contrast, informal spaces with an African aesthetic are unplanned in that what is available and affordable is used. There is no concept in the makeup of a space, rather there are layers of materials and textures which are organically layered and completed, which result in each space being unique in its aesthetic.