



# 6

## PRECEDENT STUDIES

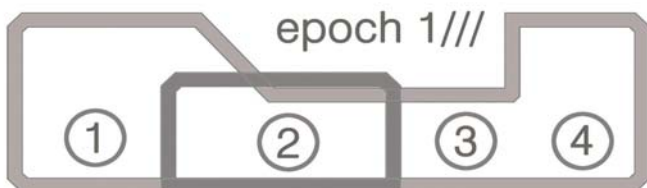


### 6.1 Origins Centre – University of the Witwatersrand

Architect: Mashibane Rose Architects

Date of completion: 2009

Relevance of the project to the study: The legibility of the narrative. The clarity of communication of information, as well as the subsequent linking devices, is analysed in an intuitive manner in the following section. The aim is to communicate the experience as a user, connecting the spatial experience to the architectural expression where applicable.



#### Entrance Space – Welcome home!

Allows user to orientate him as to the direction the display will take off into. This space also serves as a pause between the initial interaction with the ticket salesman and the exposure to initial information. It might therefore be suggested that this space is intended to allow the user to orientate himself within his immediate surroundings. In contrast to the notion of placing an item in the foyer that usually is supposed to attract the user's attention, the architects here in this instance opted to merely suggest an object in space. The interpretation of this structure is left

#### Initial display – Proof of the existence of our forefathers

The first display confronts the user with archaeological evidence that our forefathers existed in Africa. This is reflected by a series of stone age tools mounted in a recessed glass display case. The overhead plane reduces in height in this space. There is a feeling of intimacy and this focuses the user on the subject material on display. The lighting level is reduced in this space.

#### How did our forefathers look and live?

The next segment of the display let the user divert back to the initial axis confronted with upon entry. It is in this space that the user questions how these forefathers looked and how they lived. Elements allowing the user to explore these elements are static displays, multimedia displays and

#### Clarity- A simplified attempt to answer this question is directed at the user

The user is now guided to a multimedia room. The room is completely dark and the user may feel disorientated. The visual material however aims to act as a means by which the user can get direction (in terms of the subject matter and in terms of displays to follow). Upon entering this room the user viewed a clock that indicates the time left until the next multi-media show is showed. After attending this room the user have the choice to select the next segment to the display he wants to attend. Signage indicates these options: Proceed above

## epoch 2///



#### The San people

This segment introduces the user to the San people, their lifestyle and the rich cultural heritage they have left mankind with. Illumination levels are increased in this section and the user is surrounded by a double seeded display. A San grave is indicated in the middle of the walkway – this exposes the user to the methods used to excavate typical displays. lower interior lighting levels.

#### Hunting as ritual

A series of freestanding elements in combination with recessed rear illuminated displays are utilized to portray the hunting process. The hunting display illuminates in an audio visual display of a typical San hunting expedition.

#### Hunting ritual as spiritual experience

The user is now taken on a journey, into the spiritual world. Firstly the emphasis is placed on the process of crossing from reality to the spiritual world, followed by the exploration of the spiritual world as source of expression and inspiration that seems to be informing reality as one should progress. The spirit world as depicted suggests a elements commonly found in rock art. The segment of the display makes use of coloured lighting and forest sounds in an attempt to seemingly place the

## epoch 3///



#### Fragile art

The user is now introduced to rock art. The space into which the user is guided to view this rock art, is the largest of the display halls. This particular space is a triple volume space, with high ambient lighting levels. The acoustic performance of the space is improved by the introduction of acoustic panels placed at strategic location in order to reduce reverberation time. lower interior lighting levels.

#### The artist

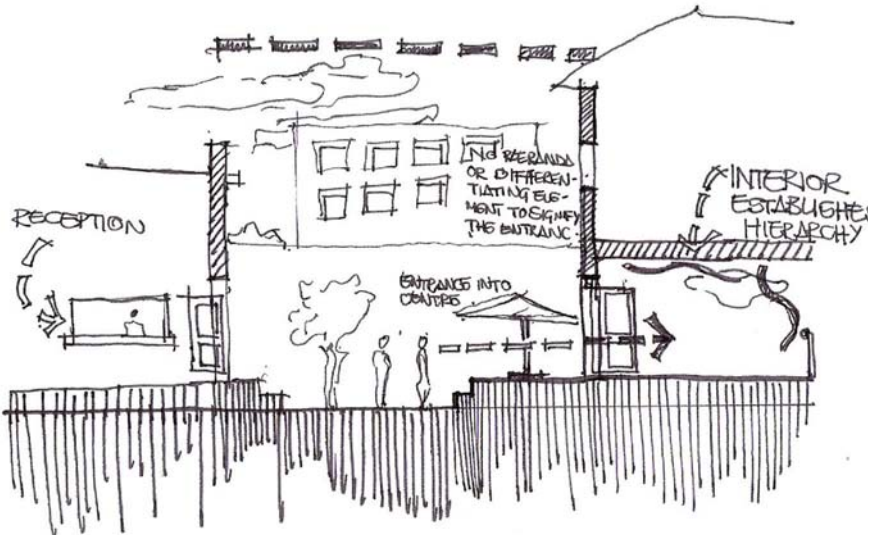
This section draws the users attention to the floor plane on which rudimentary etchings have been created in the wet concrete and left to dry. An illuminate phrase: "Who made this art" is projected on the floor. The user can now speculate who the author of each image was. The parallel to the interpretation of San rock art becomes evident to the user.

#### Elements depicted by art

The initiation process – the initiation process is often depicted by primitive art, as a result modern man is able to speculate as to the significance of rituals and customs involved in this process. Struggle- Several struggle events are depicted by rock art. Art therefore become a means that depicts protest.

#### Where to from here

The user now proceeds up the staircase into the store upon which the journey is completed. The user is flanked on both side by artwork and information questioning where society is headed. The journey progresses toward a brighter illuminated installation. The implication can be compared to climbing out if the ground and into the light.



## 6.2 Main Building – University of the Free State Campus

Architect: Bannie Brits Architect and Urban Designer

Date of completion: 2007

Relevance of the project to the study: Successful local historical intervention, altering build fabric and introducing new work in order to spatially manipulate the programme, circulation and function. The level of detailed intervention in this instance contributes to the cultural significance of the place.

### 6.2.1 Alteration to the Building Structure

The initial brief required Brits to alter the old Main Building in order to house the so called “gold collar” employees of The University of the Free State. Brits (2011) remarks that he followed the basic principle of ‘wellness’ as design generator. He therefore proceeded to investigate elements that would affect the physical, the intellectual and the spiritual needs of the user. Addressing the stigma of superiority by making the administrative building accessible to all, Brits facilitated renewed relevance between architecture and the user. Scott (2005:153) acknowledges this notion in stating:

The object of alteration is to translate a building into the present and in doing so, making it suit modern day life.

This accessibility into the building, though not always physical, is frequently present as visual accessibility. Brits’ design requires the manipulation of and often the penetration through the base plane in the walking zones along the east-west axis.

The tectonic nature of the intervention challenges the user to understand the working of the building. At first it may appear that the intervention seems to have been too elaborate in its expression; Scott (2005:127) reassures that the potency of ruination is spatial, but subsequently remarks (2005:75) that at the same time a certain ‘savagery’ is required in the alteration of existing fabric.

The resulting legibility enables the user to distinguish between new work and existing architecture. An oculus placed centrally in the dome on the ground floor foyer, allows a layered vista, showcasing the intervention to the observer. It is evident that the contrast between new and old still provides a cohesive aesthetic outcome.

Provision for natural light to penetrate the building is evident in position, size



*Illustration 6.2 Intervention detail in the University of the Free State Campus Mail Building*

and orientation of external window openings, most of which are fronting south. Brits (2011) admits that it was of utmost importance to allow natural light to penetrate the building in the new intervention. He (ibid.) also utilises effect lighting extensively in order to accentuate building components, such as with the up and down lighting positioned in the corridor in an attempt to showcase the structural expression of the transverse arches.

The old building had two symmetrically placed staircases on its most east and west sides. The user therefore had to move through the entire width of the building if vertical circulation was required (ibid.). This challenge was addressed by installing additional vertical circulation in the form of a quick access staircase and an elevator.

### 6.2.2 Exposing the Existing

Brits exposes the internal roof structure to the user. The crude nature of the building materials on display is contrasted by the finesse applied in order to expose construction materials as architectural elements.

In order to retain the user's visual interest, the architect initiated strategically placed partial demolitions in the soffit. These openings connect the first and ground floor and as a result allow the interior space to alter in volumetric composition.

### 6.2.3 Introduction of a New Hierarchy

In the previous layout of the building the rector's office was placed in east wing of the building. Brits challenged this placement in his new proposal by relocating the rector's office to a centrally accessible placement. This new placement happens in close proximity to the foyer and if viewed in plan, it seems as if the architect recognises the foyer as the 'heart' of the building, with secondary administrative functions extending from this central core. Ching (1996:339) notes that the placement of central core spaces in a building results from hierarchy being introduced to the building. In this instance, such hierarchy is established by the placement and the size of the foyer in relation to its surroundings (ibid.). Brits refers to this arrangement as that of a working club – a configuration where individuals are treated equally in the context they are employed.

## 6.2.4 Lighting

Provision for natural light to penetrate the building is evident in position, size and orientation of external window openings (most of which are fronting south). Brits (2011) admits that it was of utmost importance to allow natural light to penetrate the building in the new intervention.

The cellular nature of the old building has been re-evaluated and this informed the removal of internal walls that block off natural illumination. In order to introduce as much natural light to the building as possible, partitioning has been kept to a minimum. In instances where interior partitioning had to be introduced, light is allowed to pass through by the introduction of glass as material choice. The result is an open space along the east-west axis that is well illuminated, despite the fact that it is located deep inside the building. Given the demand on higher illumination levels, the architect introduced additional lighting above work stations. Brits (ibid.) also utilises effect lighting extensively in order to accentuate building components, such as with the up and down lighting positioned in the corridor in an attempt to showcase the structural expression of the transverse arches.

## 6.3 //hapo:

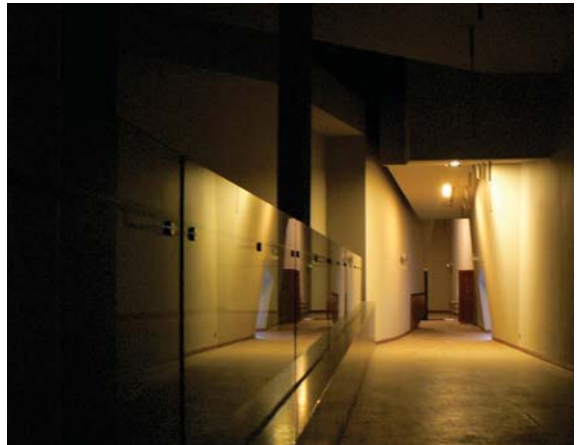
Architect: Mashibane Rose Architects

Date of completion: 2012

Relevance of the project to the study: This project is a contemporary South African Museum. Construction has been completed upon the visit to the site. This precedent will investigate the articulation of services and the manipulation of natural illumination.

### 6.3.1 The Articulation of Services

Recessed floor power sockets provide electricity to freestanding display elements. These floor plugs become a sculptural element, because of both their seemingly ad-hoc arrangement and stainless steel cover plates. An open ceiling, exposing overhead services, introduces the user to the workings of the building. The result is a sculptural manipulation of both the base and overhead plane. Hausladen & Tichelmann (2010:191) state that the



*Illustration 6.3 Tectonic expression of the //hapo exhibition space*

placement of electrical services in the floor screed is flexible in the installation as cabling requires no trucking, thus adding to the ease of installation. The challenge, however, is to predetermine the position of junction boxes and floor plug sockets accurately before installation, as irregularities may affect the placement of furnishings in relation to these fittings. Wall sockets are placed at an approximate height of 450mm above fixed floor level. The power supply to these sockets has been recessed into the boarded wall, covered in a floated plaster render and painted. When not exposed, overhead services are hidden behind ceiling board or partially exposed, as in the instance of the restaurant where services are exposed through perforated steel metal sheeting. The effect is enhanced by the introduction of coloured lighting strategically placed in the ceiling void.



### 6.3.2 The Manipulation of Natural Illumination

Form is utilised as the facilitator between natural light and artificial light. The separation of the interior and exterior structure makes it possible to create depth. It is this depth that determines the intensity of natural illumination in the interior environment. It may be argued that natural lighting is purposefully projected into the building by intentional manipulation of interior tectonics. This notion accentuates the stark forms evident in the design.

### 6.4 Zurich Art Gallery:

Architect: SAM Architekten

Date of completion: 2005

Relevance of the project to the study: Introduction of HVAC system into a historically sensitive building.

#### 6.4.1 Ventilation

Cool fresh air enters through vents placed in the roof structure. The cool air is then transferred to the individual rooms and enters the interior spaces at the bottom through vents placed in the walls. Heat cumulated in the room flows upward and exits the building at the top through vents located in the roof structure. The building therefore functions like a chimney and transfers warm air out of the building (Hausladen & Tichelman 2010:214).

All vents that allow for the circulation of fresh air both in and out of the building are controlled by a building management system. This assures that the interior temperature is always optimal. The additional cooling of the structure by the HVAC system is therefore kept to a minimum. Heat gain has also been reduced by introducing horizontal shutters to south-facing windows (it should be remembered that this building is located in the northern hemisphere, heat gain is therefore experienced on the southern facade). The shutters are also controlled by the building management system. In this instance, the architects have used the existing building and by minor alteration allowed the building to function efficiently (ibid.).

## 6.5 Mapongubwe Museum – University of Pretoria Campus, Pretoria

Architect: Balthi du Plessis

Date of completion: 2002

Relevance of the project to the study: This project serves as an example to identify possible shortcomings of exhibition centres. The museum's link to the University of Pretoria and its placement within a historically significant building makes the Mapungubwe museum relevant to the proposed study.

The Mapungubwe Museum on the campus of the University of Pretoria forms part of its museum collection. It offers artefacts on display mostly from the Iron Age. Amongst others, the well-known Golden Rhinoceros (synonymous with Mapungubwe) is housed.

According to Sian Tiley-Nel, curator of the museum, the collection was accumulated as a result of excavations by the university at the site from 1933 until today and it is still expanding. The Mapungubwe display has to accommodate an ever increasing amount of artefacts, as the excavation continues. The University is the legal custodian of the collection and must therefore apply the expert knowledge to conserve its current content and possibly convey its intention to the user.

### 6.5.1 The context

Located on the top floor of the Old Arts Building, the exhibition is housed in a rectangular room with boxed out joinery carcasses cladding all the walls from floor to ceiling. The participant will be aware of 5mm grooves between joinery carcasses, clearly insinuating a modular rhythm. There are two types of visual communication to the user in accordance to this rhythm.

The first is a physical display of artefacts on clear perspex shelves. Each display niche is viewed through glass and internally illuminated from the top. The second display method is that of rear illuminated signage housed in an

aluminium 'snapper frame'. Three central pediments are placed in the space.

These are approximately 1300mm in height with a small glass display case on top. The Golden Rhinoceros is located in one of these small glass boxes. The floor finish is a tan-coloured industrial carpet, and the ceiling is an innovative system of wooden laths weaved together like a carpet and fitted into a standard 600x400mm ceiling t-grid.

### 6.5.2 Critique

The narrative of the exhibition proves to be illegible from the exterior of the Old Arts Building. This uncertainty continues throughout the building into the exhibition itself. Visiting an exhibition should be an event, but in contrast, this display feels isolated, as if held captive by the architecture it resides in. In one of the interviews with the curator, it was hinted that for all practical reasons it is impossible to alter the built fabric of the Old Arts Building because of its historical value. One must then ask the question: Is the Old Arts Building the appropriate structure to house a contemporary exhibition that requires dynamic expression?

The exhibition seems distant. Display niches are too deep and this dwarfs displays at times. Similarly, the display shelves, hooks and pediments, although made from clear perspex, create a visual cocktail that seems uncontrolled. The participant now has to engage with each artefact individually if he wants to understand its context.

There seems to be no hierarchy between elements on display. The famous Golden Rhinoceros and the ceramic beads next to it carry the same visual impact. Poor illumination levels, as well as a cold light temperature, render displayed artefacts as stark and dull. A mixture of low voltage halogen lamps and cold white LED replacement lamps are used for the internal illumination of the exhibition.

The central displays are externally illuminated by means of a linear track lighting system with good colour rendering, but excessively wide beam

angles. Ambient lighting levels therefore remain low.

Most of the rear illuminated information panels are badly faded, making them illegible. Communication of alternative information is communicated by small black lettering on a clear background. The opportunity is therefore lost as a result of insufficient communication, poor illumination and poor presentation of subject material.

A multimedia display on the eastern wall showcases British documentaries on Africa, which have little immediate relevance to the display, or the imposed heritage.

Interior design is the primary interface between the user and architecture. It demands control and clarity in both planning and the execution toward the end product. There is, however, no visual material or documentation available from either the University of Pretoria or the designer, apart from rudimentary and unresolved line drawings of the space. The result speaks for itself; with the intervention seemingly turning its back on the architectural envelope that houses it.

According to the curator, there are plans to expand the current exhibition into an adjacent display hall presently being repaired. One can only hope that this mythical expansion will be representative of the world heritage site it presently fails to communicate.