

01

Introduction



+ “In Words, as Fashions, the same Rule will Hold;
Alike Fantastick, if too New, or Old;
Be not the first by whom the New are try’d,
Nor yet the last to lay the Old aside.”

Alexander Pope, *An Essay on Criticism*



fig. 1.1. Layered montage illustrating design intention and concept. (2010)

+ The layered concept is of a physical and historical origin. It was inspired by the Ukrainian artist Mark Khaisman, who uses packaging tape on plexi-glas in various layers to create his artistic impressions

+ Introduction

The intended project in the Lotus Gardens area, Pretoria West is to introduce to the public and create an awareness of the Military Fortification's in Pretoria. These iconic structures were built during the First and Second Anglo Boer Wars. The project will consist of a visitors centre and an archaeological didactic and research centre. The idea of the visitor is to be made aware and informed of various iconic structures within Pretoria, including Fort Klapperkop, Fort Schanskop, Fort Wonderboompoort, also buildings including the Union Buildings, Voortrekker Monument, Church Square and Freedom Park. The archaeological centre's focus will be on work done at archaeological sites and mainly the various other Fortifications within Pretoria. Therefore a primary focus being on the tourism potential being created by the project for the area.

The Fortification of Pretoria on the various ridges: Magaliesberg, Waterkloof and Waterberg, aimed at the visual safekeeping of Pretoria. The Forts ensured that people could not enter the city willingly during the Anglo Boer Wars. The concept therefore is to draw people to the Fort, a contrast to what it was intended for. The design approach is to inform the public about these historical monuments within our landscape.

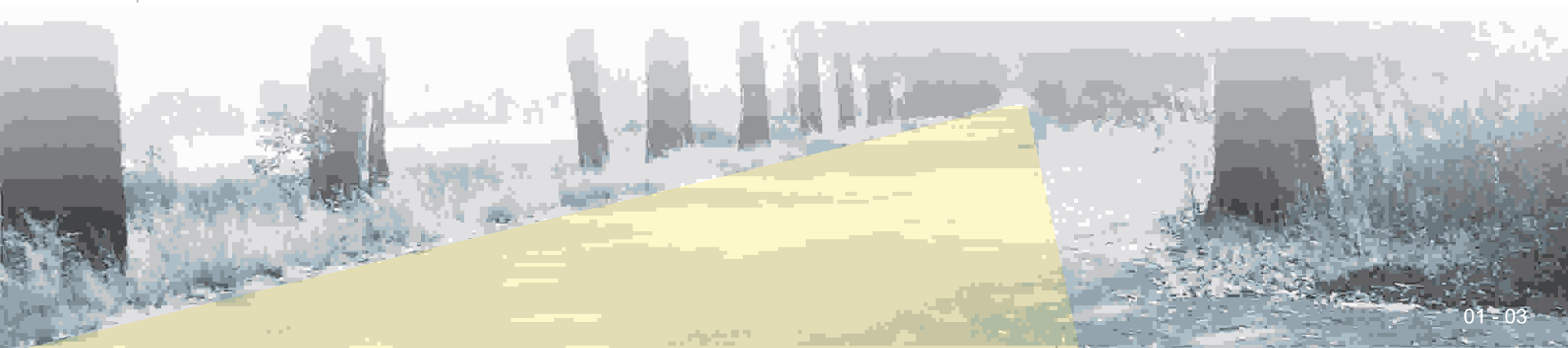
+ Vision

Memory - The site itself hosts the ruins of the West Fort (1898). History/Memory would be unveiled through the archaeological research and excavation, through which the *genius loci* (spirit of a place) of the area would be experienced on a physical and emotional level. The memory of the cultural heritage laying dormant on the site, gives rise to the incorporation of a visitors centre, that would encourage the public to explore the unexplored.

Celebration - The Archaeological and Didactic Research Centre will become a place for all the people of South Africa. By promoting cultural understanding and respect, it will promote social cohesion and the further development of a shared national identity, through the duality of information being explored.

Opportunity - The opportunity persists that the centre will be mainly used to educate the visitor about the various iconic structures and also within the field of archaeology. This will ensure that public participation is included, therefore educating people of many different races and genders in archaeology and also the Forts. This would start the concept of layering, where the opportunity exists for the discovery of more archaeological significant artifacts, dealing with the ruins. The opportunity to perceive the palimpsest of the city and its rich historical presence from the visitors centre will also influence the experience and celebration of the history of Pretoria.

Future - The vision of the centre is that it would become a didactic entity to the Western area of the city. The future concept of the centre would be to become the base and stepping stone to various archaeology works done on the other Forts and therefore informing people about these monuments and their functions of the past.



+ Architectural Problem

The specific problem is that the historical ruins of the Fort are present on the site, but we neglect it by overlooking its importance and opportunities for researchers discovering the undiscovered. The fact that most of the public and tourists visiting Pretoria, aren't aware of the significant Fortifications within the cityscape. Therefore these structures should be made more accessible to the public and researchers. One of the sub-problems are that only three of the 7 Forts in Pretoria have been restored and studied by archaeologists. The neglected Fortifications, sets an opportunity for archaeologists to restore and explore these ruins. The fact that their prominence and historical significance are not recognized diminishes their chance of survival.

+ Client

One of the proposed client's is the University of Pretoria and the Archaeology and Anthropology Department of the University of Pretoria. The Archaeology students go on various learning camps through the year to gain practical knowledge. The Department funds these trips themselves, therefore a new research/training centre would benefit the Department immensely. The centre would save the Department a lot of money and would ensure a space for the students to visit and learn. The centre would also be a didactic element to scholars, as the client/department visit schools to teach about archaeology. The centre would ensure the engagement of public and archaeologists, the interface needed to broaden both's knowledge.

The other proposed client is the Museum Park, which houses the National Cultural and Heritage Museum. They would benefit from the funds generated from the tourism aspect and will also be in charge of the Visitors/Information centre.

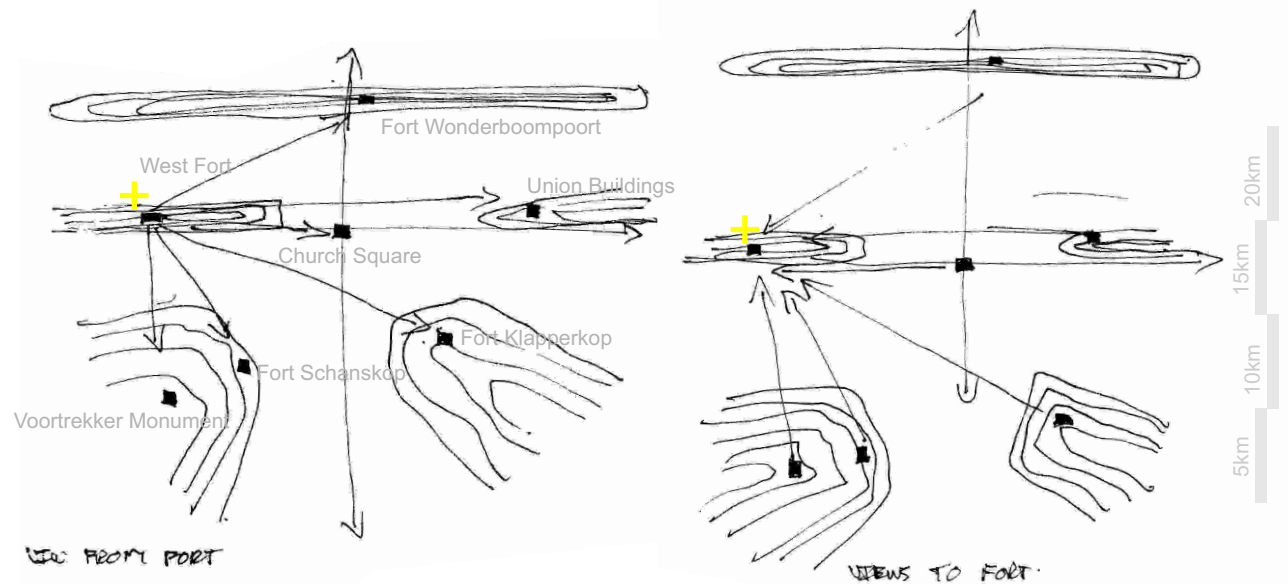


fig. 1.2. Sketch indicating relation of West Fort to other historical icons in Pretoria. (2010)

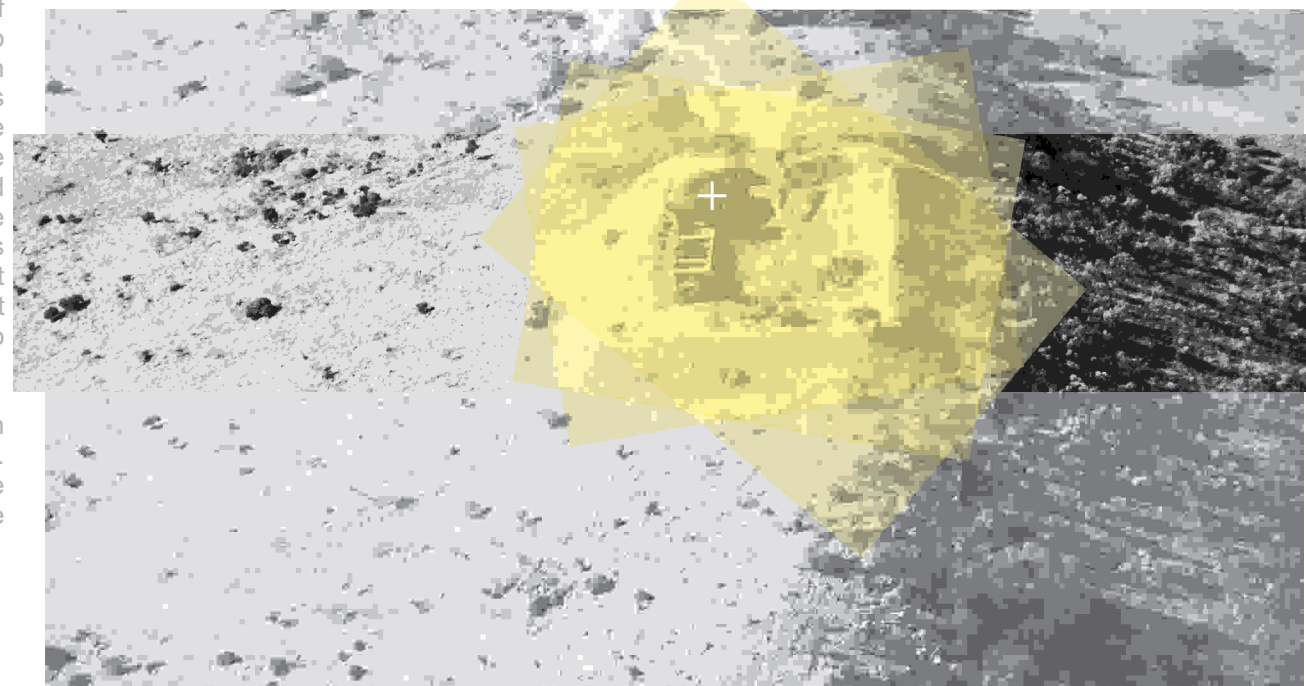


fig. 1.3. Layered image of the West Fort on the WitWaterberg ridge. (Holm Jordaan: 2008)

+ Program

The architectural program will consist primarily of a visitors/information centre and secondary to that an archaeological research and didactic centre. The visitors centre will contain information spaces informing the public on the South African Military history, the Fortification of Pretoria and specifically the West Fort history. The archaeological research area would include research spaces and didactic spaces where students and archaeologists would learn and research. The archaeological research will persist mainly on the Fortifications in Pretoria and will include other archaeological work of various cultural rich areas. The landscape will become the exhibition space, where the visitor will capture views across to the city and experience the spirit of the place, through the natural landscape.

The visitors centre will inform the public about the palimpsest of Pretoria and the history of the Fortification of the city. The archaeological research area will include research on the Fort and continue onto the other Fortifications in the city; restoring and researching these iconic artifacts. The public and tourism will sustain the building, whereas the archaeological aspect, will ensure continuous development and research into the restoration and excavation of the Forts.

Buildings in the heritage village at the foot of the mountain will be proposed to be used as accommodation for students and archaeologist using the research centre. Various other accommodation could also be included for tourists and the public, whom are visiting the city and exploring the various historical monuments.

The architectural program would then consist of:

- Visitors / Information Centre (approx. 200 tourists/day)
- Exhibition spaces (approx. 200 tourists/day)
- Archaeological research space (approx. 6 researchers)
- Exhibition spaces (approx. 200 tourists/day)
- Archival storage (Archaeological artifacts)
- Storage for archaeological tools (approx. 50m²)
- Teaching spaces (approx. 40 archaeological students)
- Offices (Curator & Manager)
- Ablution
- Parking (4/100m² of building space)
- Outdoor Performance and celebration area (150m²)

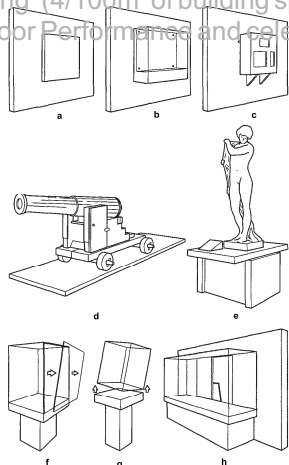


fig. 1.4. Exhibits may be of four dibasic types: a,b,c Hanging or wall mounted; d,e Free-standing and open exhibits; f,g,h Contained exhibits and display cases. (1999: 31-5)

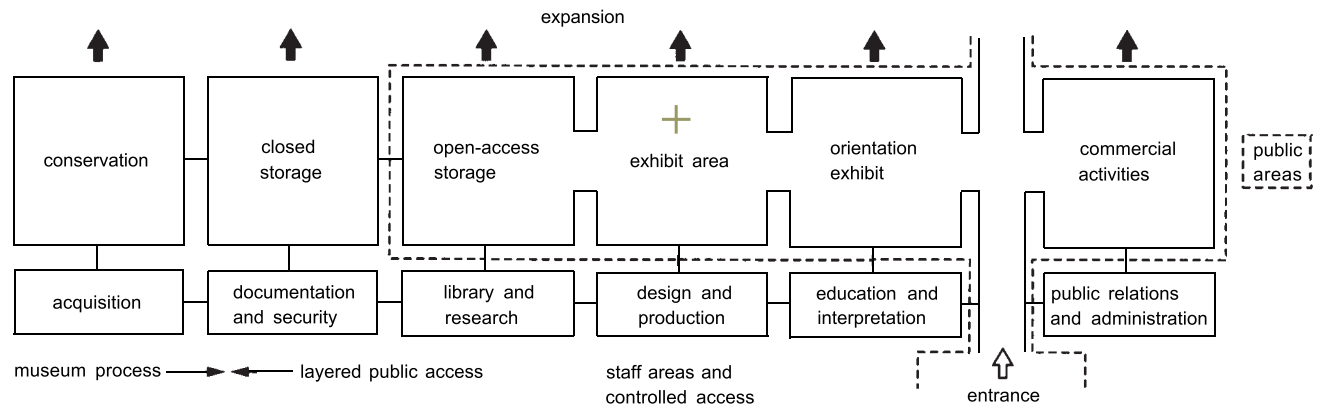


fig. 1.5. A layout concept showing a clear relationship between functions and an approach to zoning and expansion. (1999: 31-3)

Field site tools used by archaeologists illustrated below, informs the spatial size of the storage areas and informs the reader in the various tools used by archaeologists.

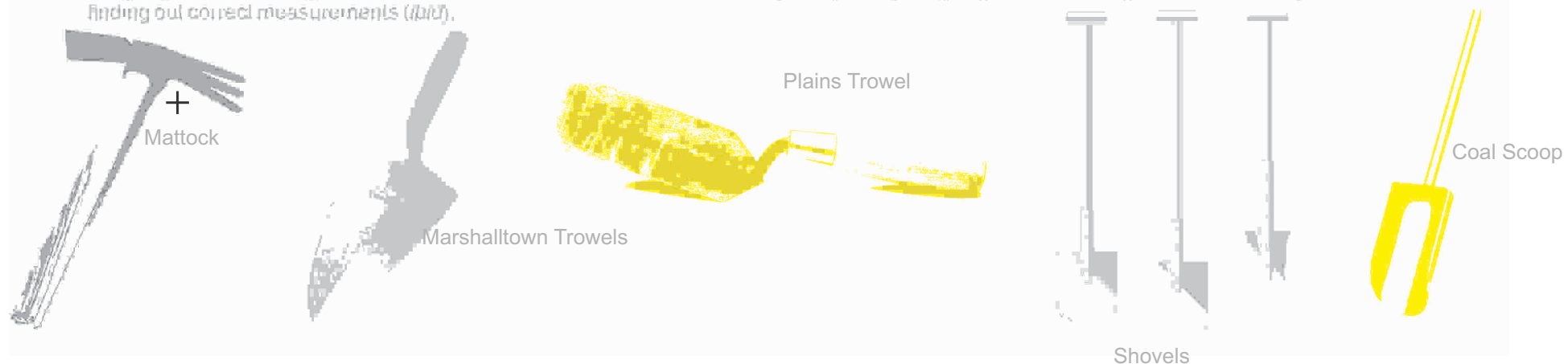
Field site equipment include digging tools, recording apparatus and safety kit. Digging tools help in breaking the soil crust and uncovering artifacts. Here is a list of the various tools used by archaeologists.

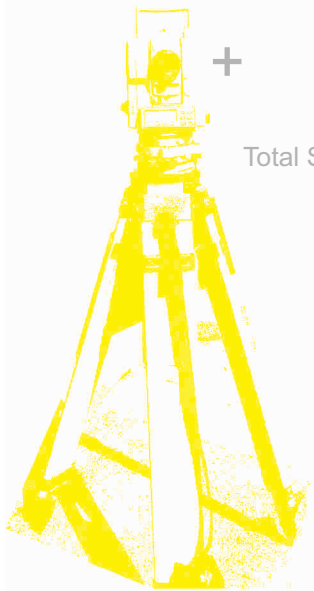
- **Mattock:** It is a digging tool similar to the pickaxe. The mattock is used to break hard ground and make the process of digging easy. The blade and handle of the mattock are perpendicular to each other. The blade is broad and resembles a chisel.
- **Marshalltown Trowels:** These trowels are commonly used in the United States. They have a sturdy body and flat blade which can be sharpened.
- **Plains Trowel:** This kind of trowel facilitates working in tight/awkward corners and in keeping the lines straight.
- **Shovels:** Shovels are of two types, i.e. round-ended and flat-ended.
- **Coal Scoop:** This is another field site tool used in collecting and carrying soil to the screeners. Archaeologists find this tool particularly useful when they have to deal with square holes.
- **Total Station Transit:** This tool is used to prepare a map of a particular archaeological site. The elements/details presented in such maps include surface topography of the site, different features of that area, positioning of the units engaged in excavation, and the relative location of artifacts.
- **Bucket Auger:** It is a handy tool that is used in exploration of buried sites. The need of using bucket auger arises in excavations of floodplain situations. The tool can be extended up to the length of 7 meters.
- **Shaker Screen:** The soil which is excavated by means of digging tools is sifted through shaker screens. This equipment has a ¼ inch mesh which helps in recovering artifacts that go unnoticed during excavation.
- **Dust Pan:** It is a simple tool used in taking excavated soil away from archaeological sites in a neat way (archaeology.about.com:2010).

TOOLS USED BY SPECIALISTS:

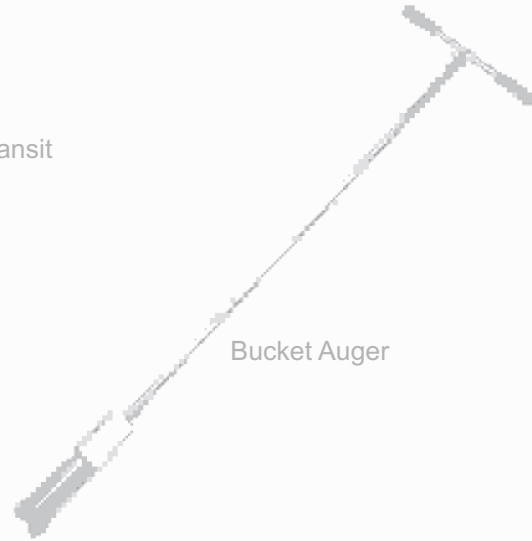
The archaeological tools mentioned below are mostly used in a laboratory environment. The information about what tools do archaeologists use in laboratories is presented below.

- **Flotation Device:** The flotation device is used to separate smaller and larger artifacts by the method of light and heavy fraction. Soil samples which contain artifacts are kept in metal baskets and washed by gentle streams of water. Light artifacts (for eg. seeds) float at the top, while the heavier objects sink down.
- **Equipment for Analysis:** Simple tools like calipers and cotton gloves are needed to carry out the analysis of artifact fragments. Gloves serve the purpose of preventing cross-contamination.
- **Nested Graduated Screens:** Nested graduated screens are used for size-grading. In the process of size-grading, the percentage of artifacts falling in different size-ranges are found out. Nested graduated screens used for this purpose have small mesh openings at the bottom and larger ones at the top.
- **Weighing and Measuring:** The artifacts obtained in excavations are carefully analyzed by weighing and measuring them. Different types of scales are used for finding out correct measurements (IBU).

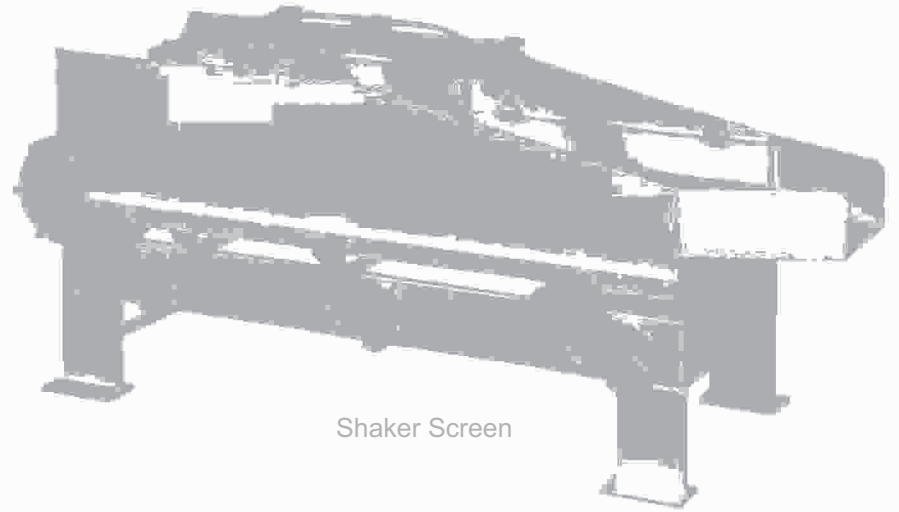




Total Station Transit



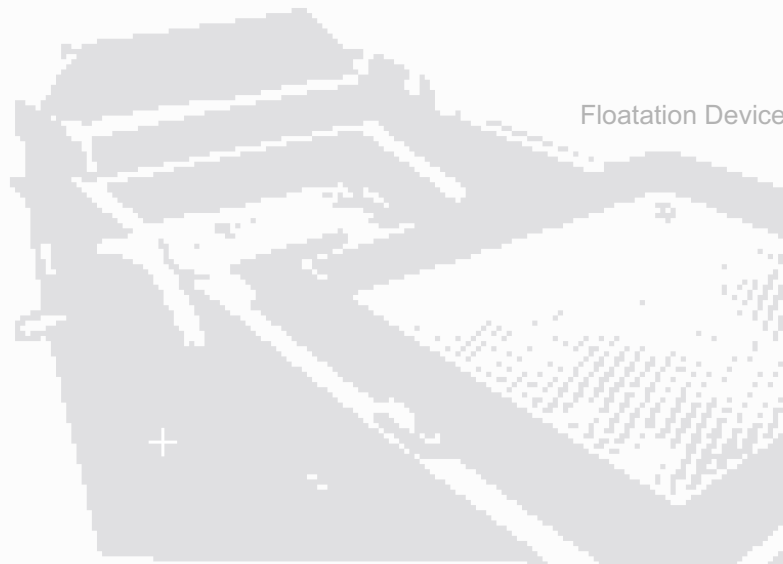
Bucket Auger



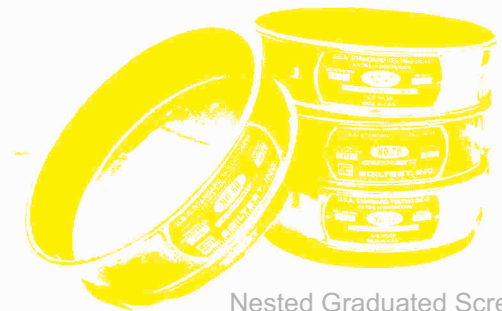
Shaker Screen



Dust Pan



Floatation Device



Nested Graduated Screens

+ Users

The following is a brief introduction for the different types of users of the proposed design. There are four types of users that will occupy the various buildings at different times of the day.

ARCHAEOLOGISTS

The archaeologists will use the Archaeology Research Centre on a daily basis. The intent of the Archaeologists on site is to work on the Fort, but the aim is to eventually work on the various remaining Forts in Pretoria. To preserve and restore the remaining ruins. Various other archaeological site in and around the area will also be used.

Archaeologists will be able to interact with the public and teach students visiting the centre. They will also have the opportunity to teach the students on site, being either work done on various Forts or field work. The archaeologists will also inform the public about archaeology and more important archaeological work done on the Forts.

STUDENTS

The archaeology students will visit the research centre to gain practical knowledge and field work experience. The students will visit and use the research centre on a bi-weekly basis or whenever they go on experiential camps or seminars.

They will use the research centre also to interact with the public. The students will use the existing heritage village to stay in and therefore interact with the local community as well. Inform the local people about archaeology and the various Forts hidden within the city.



TOURISTS / PUBLIC

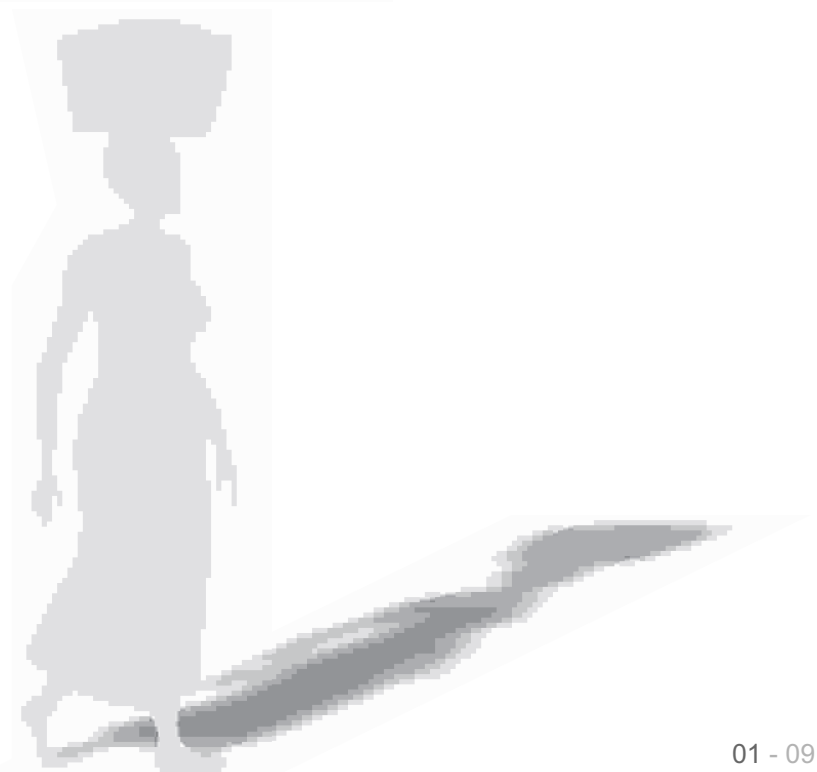
The public will be the main focus of the design. The conceptual approach of the design is focused on the public. The landscape as exhibition spaces will be used by the public (visitor) and tourists. The tourist and public's experience of capturing and recording images, will create a sensual and unique experience for each visitor. The aim of informing the visitor of the history of various iconic monuments and Fortification of Pretoria, is inherent to the conservation and restoration of the Forts in the city. The interaction between the public and archaeologists, will inform the public about the importance of the archaeological work done, be it on various Forts or on other archaeological field work.

The tourists and public will sustain the project, through donations, entrance fees, the curio shop and the use of the café/restaurant. Informing the public about the importance of the Fortifications, the archaeological research to uncover this legacy and monuments in the city is the main focus of the scheme.

LOCAL COMMUNITY

A sub-problem is to ensure the interaction of the local community with tourists and visitors. The aim is to incorporate the local communities into the design and an informal market area, where the local people will interact with the visitor, gaining knowledge on various levels, but also with the visitor being informed about the local culture and opportunities in the area.

The archaeological students will also interact with the local community when they stay in the heritage village. The local people will in a sense be informed about archaeology and this could create opportunities for them.



+ Architectural Intention

The main architectural intention, is to acknowledge the significance of the architectural and historical ruins, and the possibility of the different layers emerging to the surface. The archaeological and architectural presence in the area, will ensure that the heritage will not go forgotten. The main focus will be the didactic influence on the public and the students, where the visitor will be informed about the history and also archaeology. The intention is to let the visitor experience the landscape and the spirit of the place, and reflect back upon the views being framed towards the city. The visitor becomes the observer capturing “images” of various other iconic structures, but also learning and experiencing the art of archaeology. The landscape becoming an exhibition space in itself creates a poetic, tranquil scene for the visitor.

+ Pretoria

The following is a brief introduction into the history of Pretoria, to familiarize oneself with the origin of the city and the history that follows it. The first homestead in the Pretoria area was probably the home of J.G.S. Bronkhorst, who settled in the Fountains Valley in 1840. More Boer families put down roots around the nearby Elandspoort settlement. In 1855, two years after the Sand River Convention conferred formal independence on the territory north of the Vaal River, the residents of Elandspoort had the village proclaimed the ‘kerkplaas’ for central Transvaal. The following year it became the township of Pretoria, which, at the time, consisted of about 80 houses and 300 residents (2007:200).

Commandant-General Marthinus Wessel Pretorius had bought a large amount of land in the area, which was taken over by the government as they foresaw the development of a large centre. The town proper began to take shape in 1855 as a result of Andries du Toit, a presidential advisor, exchanging of one of his Basutho ponies for the entire area known, today, as Arcadia. He spent the next two years surveying his property with pegs and chains (*ibid*).



fig. 1.6. 1900 map indicating the initial layout of Pretoria by Zytse Wierda. (1987:50)

Stephanus Meintjies developed the area and was honoured by having a nearby hillock named Meinjieskop. This resulted in Pretoria extending from Potgieter Street in the west to Prinsloo Street in the east and from Boom Street in the North to Scheiding Street in the South (2007:201).

The initial full designation of the city was Pretoria Philadelphia ('the brotherhood of Pretoria') and it was not named after M.W. Pretorius, but after his brother Andries, victor of the Battle of Blood River. When Marthinus Pretorius failed to unite the Transvaal and the Orange Free State during his presidency he resigned and was replaced by Reverend Thomas Francois Burgers in 1870 (*ibid*).

Pretoria was declared the official capital of the independent Voortrekker Republic of the Transvaal in 1860. Not long after its establishment it became known as the 'city of roses' because its climate encouraged the growth of rambler roses, which covered gardens and hedges all around the city. In 1888 J.D. Cilliers, a resident and avid gardener, imported Jacaranda trees from Rio de Janeiro to plant in his Myrtle Grove garden. These trees flourished and as a result the city is now aptly known as the 'Jacaranda City', with about 50 000 Jacarandas lining its streets.

The British annexed the Transvaal in April 1877, which resulted in a steady flow of immigrants and migrants. During the Transvaal War of Independence the British withdrew and Paul Kruger took over. After the Anglo-Boer War Pretoria was named the capital of the new British colony and when the Union of South Africa was created in 1910 it became the administrative capital (*ibid*).

The grid system of Pretoria city was laid out by Sytse Wierda (1839 – 1911) and based on the Roman *urbis quadrata*, whereas the town was quartered by the intersecting cross of the *kardo* and *decumanus* (1987: chapter 3).

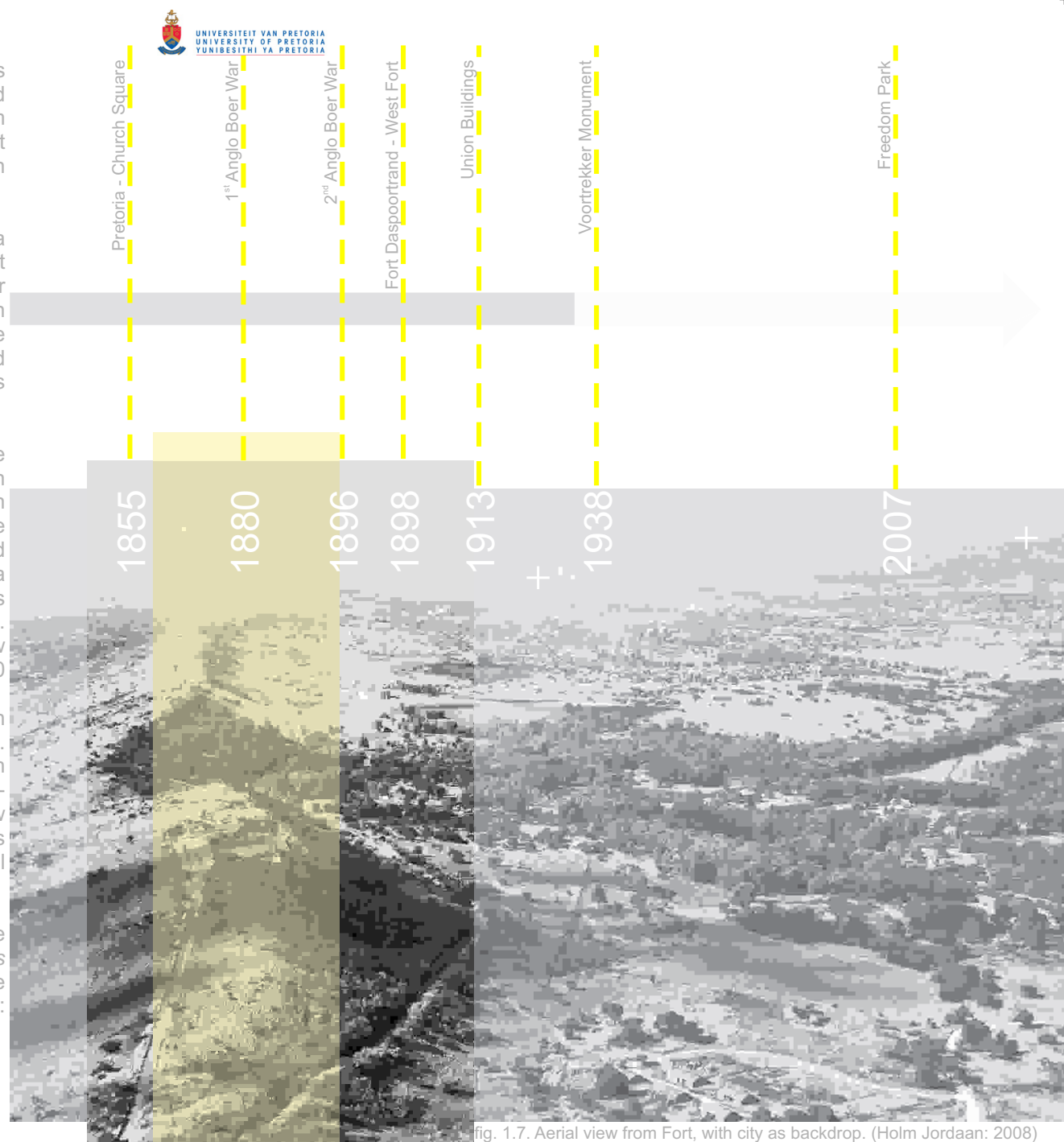


fig. 1.7. Aerial view from Fort, with city as backdrop. (Holm Jordaan: 2008)

ICONIC MONUMENTS

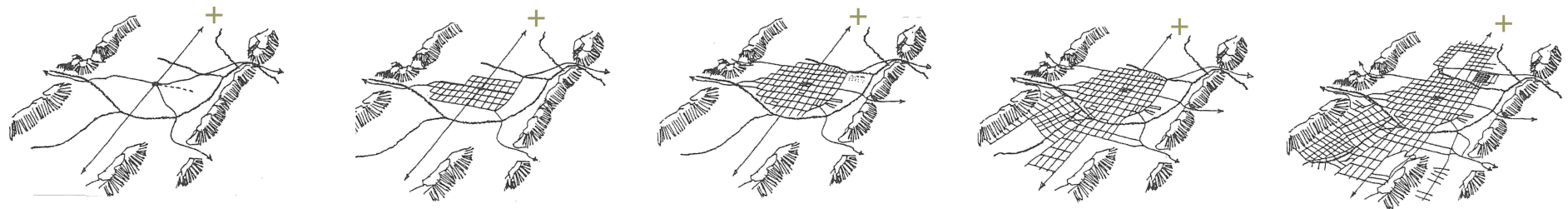
Pretoria, the capital city of South Africa, is discussed in terms of the influential effect of monuments and the monumentalising of structures of ideological significance built on its surrounding ridges, which more than any other natural assets, define its sense of place and influenced the original urban conceptualisation. These icons and military fortifications are significant tourist attractions in informative layered historical entities to the city. They are therefore discussed, with reference to their influence in the authors design decisions and concept.

The Union Buildings (1913), designed by Sir Herbert Baker (1862 - 1946), were built on the lower slope of Meintjieskop where there was an excavation from which slate was quarried. This building was the seat of government of the Union of South Africa, but in a sense it is a cultural monument, emblematic of the unity of the two Western colonial groups, Afrikaans and English, who jointly ruled the country to the exclusion of the indigenous black people. However, when former president Nelson Mandela was inaugurated there in 1994 the Union Buildings were appropriated by the new democracy. Even though it was not intended to be a monument in the traditional sense of the word, historically the Union Buildings have been afforded the status of a monument as a place of cultural significance (1996:96).

Some decades later the Afrikaners commemorated their ancestors trek from the Cape Colony to free themselves from British rule by building a monumental fortress, the Voortrekker Monument (1938), positioned on an elevated site on the Time Ball Hill, belonging to a geological range, which is not of any strategic or historical relevance to the theme of the monument, to be optimally visible from the old Pretoria-Johannesburg highway. The architect, Gerhard Moerdyk (1890 - 1958), designed this edifice to remind viewers of the indigenous roots of the Afrikaner by quoting elements of indigenous African stone buildings such as Great Zimbabwe. The Voortrekker Monument has commonly been designated an Afrikaner sacred place until its privatisation as a museum some years ago. It stands in a south/north relationship with the Union Buildings which, under British rule, the Afrikaners came to view as a Neo-classical colonial British place, not belonging in Africa. At present it retains the title of “monument”, but has been privatised for business purposes and attracts more visitors than any other monument in the country (1996:98).

In 2004, the mental image of Pretoria changed because another ridge, Salvokop (initially known as Time Ball Hill), had become the locus of the ANC (African National Congress) Government's venture to build Freedom Park, a monument to the struggle against apartheid. This monument to the struggle to free South Africa from the apartheid regime is called by the state president the “most ambitious heritage project ever to be undertaken in South Africa”. The design was to be decided on the basis of an international competition and according to the competition documents the cost of the total architectural project was estimated just under seven billion rand. Since no official winner had emerged from the three runners-up announced in July 2003, the Department of Cultural Affairs has appointed a team of traditional healers to allow indigenous people to play a part, landscape architects, architects and planners to design Freedom Park. The first stage, the “Garden of Remembrance”, has been completed in 2005 at an approximate cost of seventy million rand. The location, selected by a state department of culture because of its high visibility from the Johannesburg freeway, was consecrated by the state president. As in the case of the Voortrekker Monument it has no strategic or historical significance with respect to its function to be a place of remembrance for some two thousand black South Africans who died in the armed struggle against the previous government and whose spirits will come to rest there (1996:99).

The iconic monuments that are focused on in the study are the most prominent and serve as the greatest tourist attractions in Pretoria. The Union Buildings is the second most visited tourist attraction in South Africa (*ibid*).



+ Indicates West Fort site in relation to Pretoria

fig. 1.8. Initial layout and development of Pretoria through the ridges. (1987:50)

+ Concept

The Fortification of Pretoria excluded enemies and ensured a secluded environment during the Anglo Boer Wars. The inversion of this condition is the concept of this project. The building would be inviting and a didactic architectural experience, inverting the concept of seclusion, therefore questioning the original purpose of the forts.

The visitors centre will bring the public to the fort and ensure participation and information regarding the fortification and also archaeology.

The idea of exploring with different views from the fort, will inform the visitor about the various other fortifications and historical icons in the city scape. This informs the concept of the visitor being drawn to the fort, but then experiencing the cities' palimpsest from this vantage point. This idea of a palimpsest informs the layered historical approach of how the various other historical icons are viewed and reflected on from the fort.

Layering as a generator is inspired by the layering of the archaeological work done. The physical layering of the ground and the layering of time interlocks with the palimpsest of Pretoria. The layered concept will be experienced on a physical and emotional level, through the layered use of materials, nature and how they interact and bring forward the spirit of the place. The emotional layering is experienced through the use of space and the progression through these spaces. The various views through which the visitor perceives important icons references the layered approach towards the city and the inverse thereof. The hierarchal layering of spaces will define usage and how the program of events are experienced.

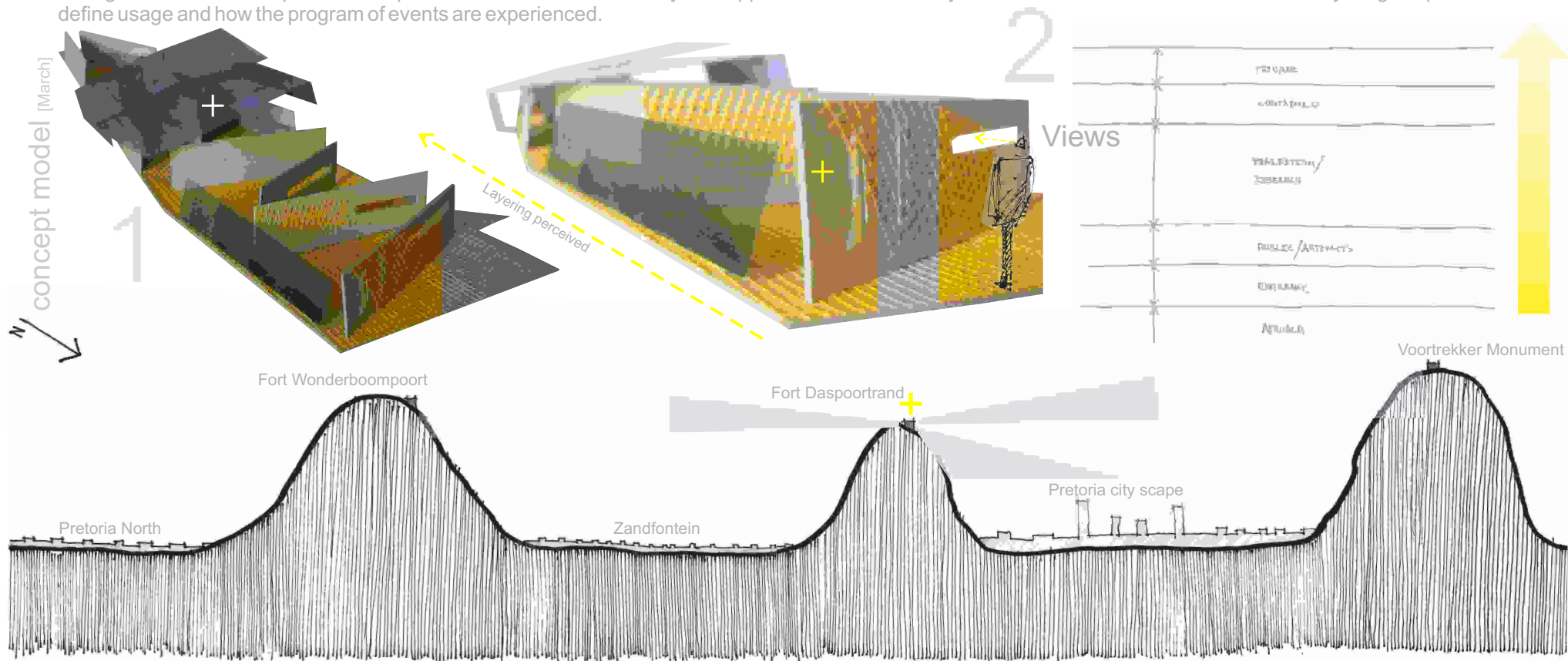


fig. 1.9. Section indicating views from West fort. (2010)

Camera = Latin for "room"
 Obscura = Latin for "dark"

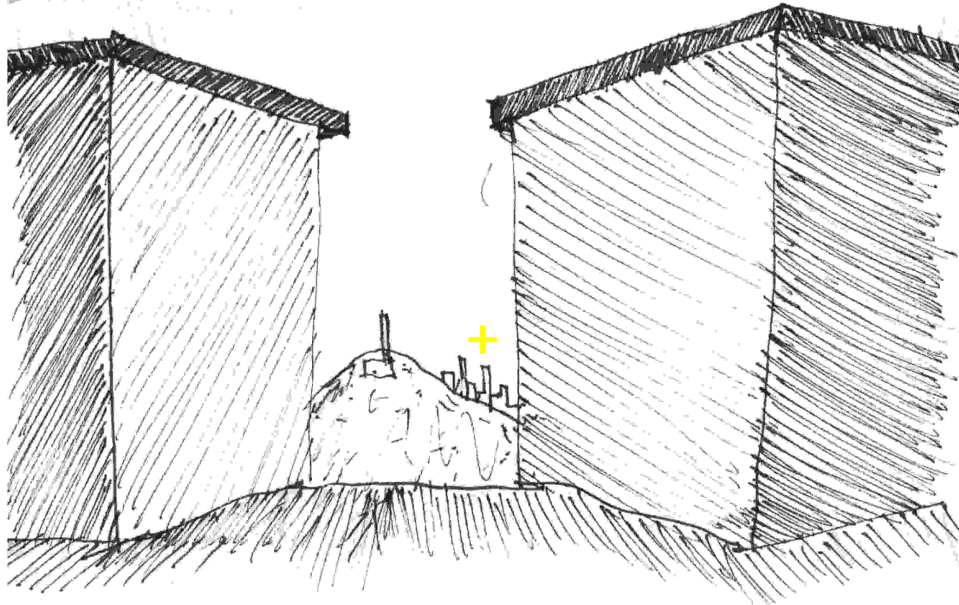
A brief introduction into the term "*camera obscura*", which was first used by the German astronomer Johannes Kepler in the early 17th century. He used it for astronomical applications and had a portable tent camera for surveying in Upper Austria (Brightbytes.com:2010).

The development of the *camera obscura* took two tracks. One of these led to the portable box device that was a drawing tool. In the 17th and 18th century many artists were aided by the use of the *camera obscura*. Jan Vermeer, Canaletto, Guardi, and Paul Sandby are representatives of this group. By the beginning of the 19th century the camera obscura was ready with little or no modification to accept a sheet of light sensitive material to become the photographic camera (*ibid*).

The other track became the *camera obscura* room, a combination of education and entertainment. In the 19th century, with improved lenses that could cast larger and sharper images, the camera obscura flourished at the seaside and in areas of scenic beauty (*ibid*).

The concept of camera obscura is a generative concept into the creation of various views towards the iconic monuments within the city from West Fort. The concept of the Fort is the point from which views will be captured and processed by the visitor and therefore experiencing the palimpsest of the city. In essence the visitor becomes the camera, capturing and experiencing views and history. The road to discovery; where the experience becomes the discovery of the undiscovered, where archaeology also relates to the concept of discovery.

The Fort's intention of visibility is now also brought back into the inverse, where its intention of visibility and views to keep the enemy out, contributes to the views/visibility of the user. The experience through the building also relates to the concept of the camera (user) relating to the historical icons discussed previously, but also interaction and viewing of archaeology. The viewing also relates to the learning/observing of the information exhibited.



- VIEW THROUGH FORT TOWARDS CBD.

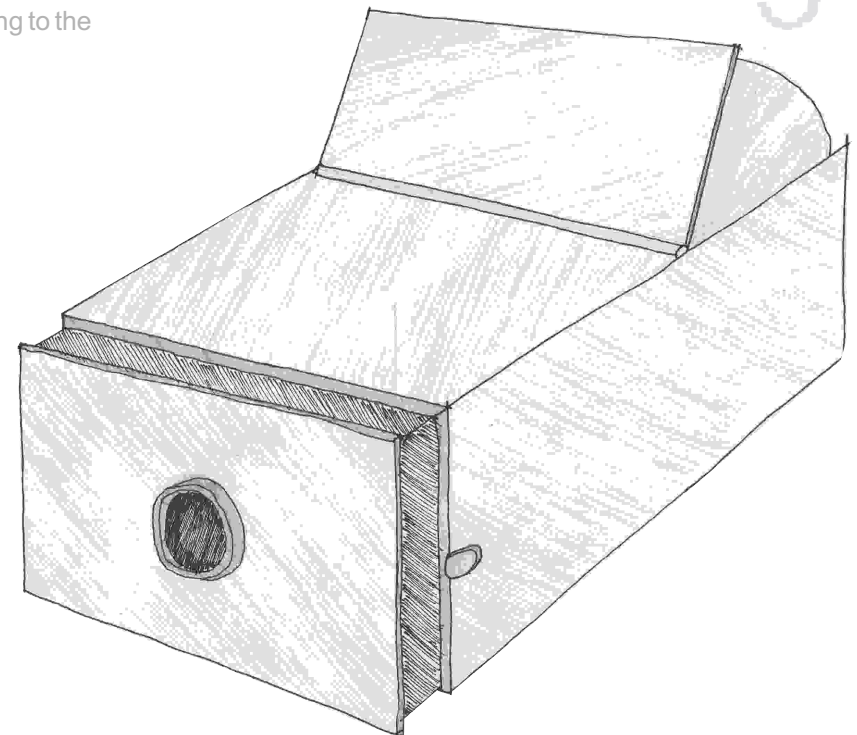
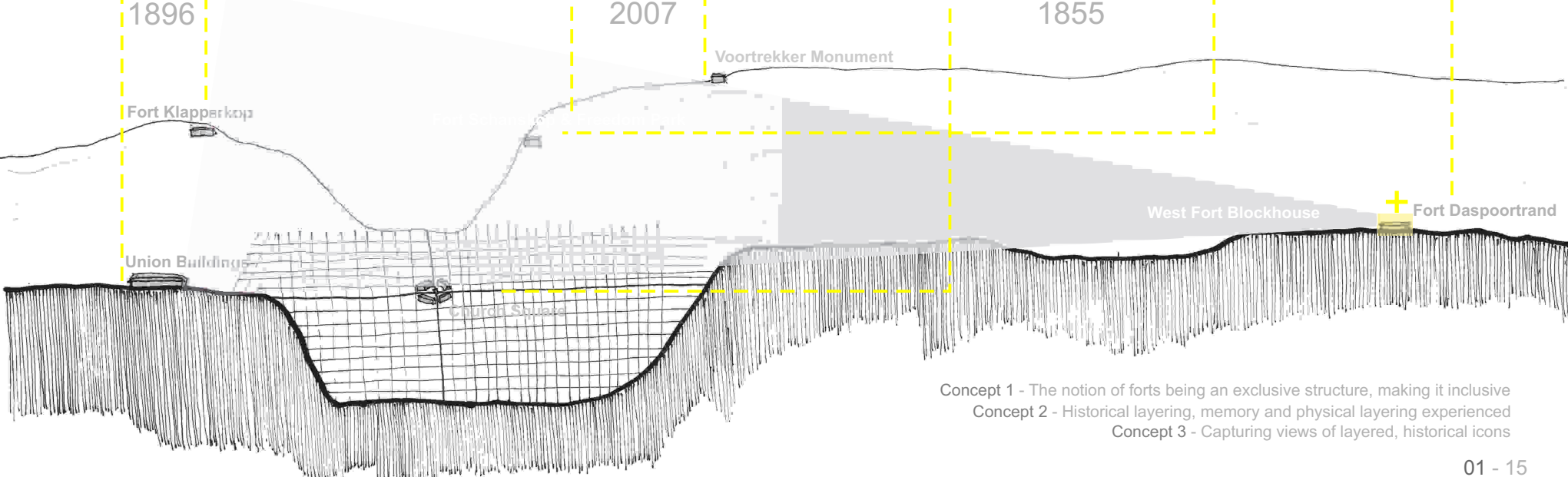
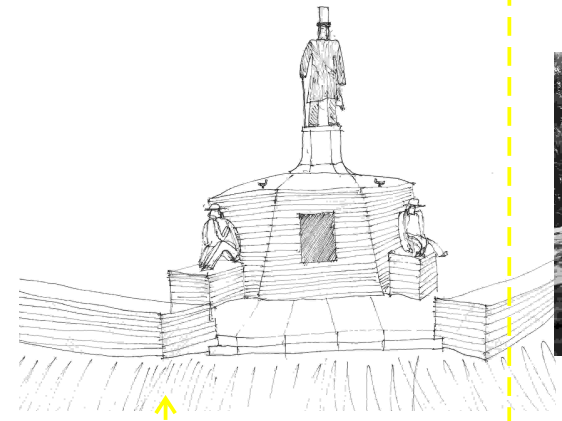
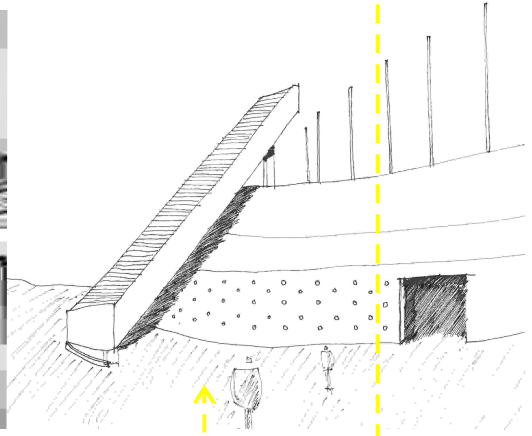
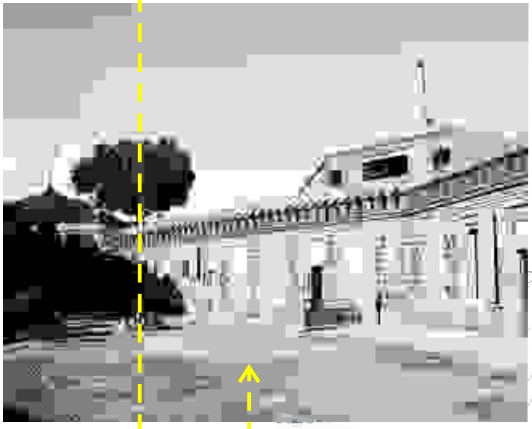


fig. 1.10. Sketch of a 1946 camera. (2010)



Concept 1 - The notion of forts being an exclusive structure, making it inclusive
 Concept 2 - Historical layering, memory and physical layering experienced
 Concept 3 - Capturing views of layered, historical icons

fig. 1.11. Section indicating iconic views from West Fort. (2010)