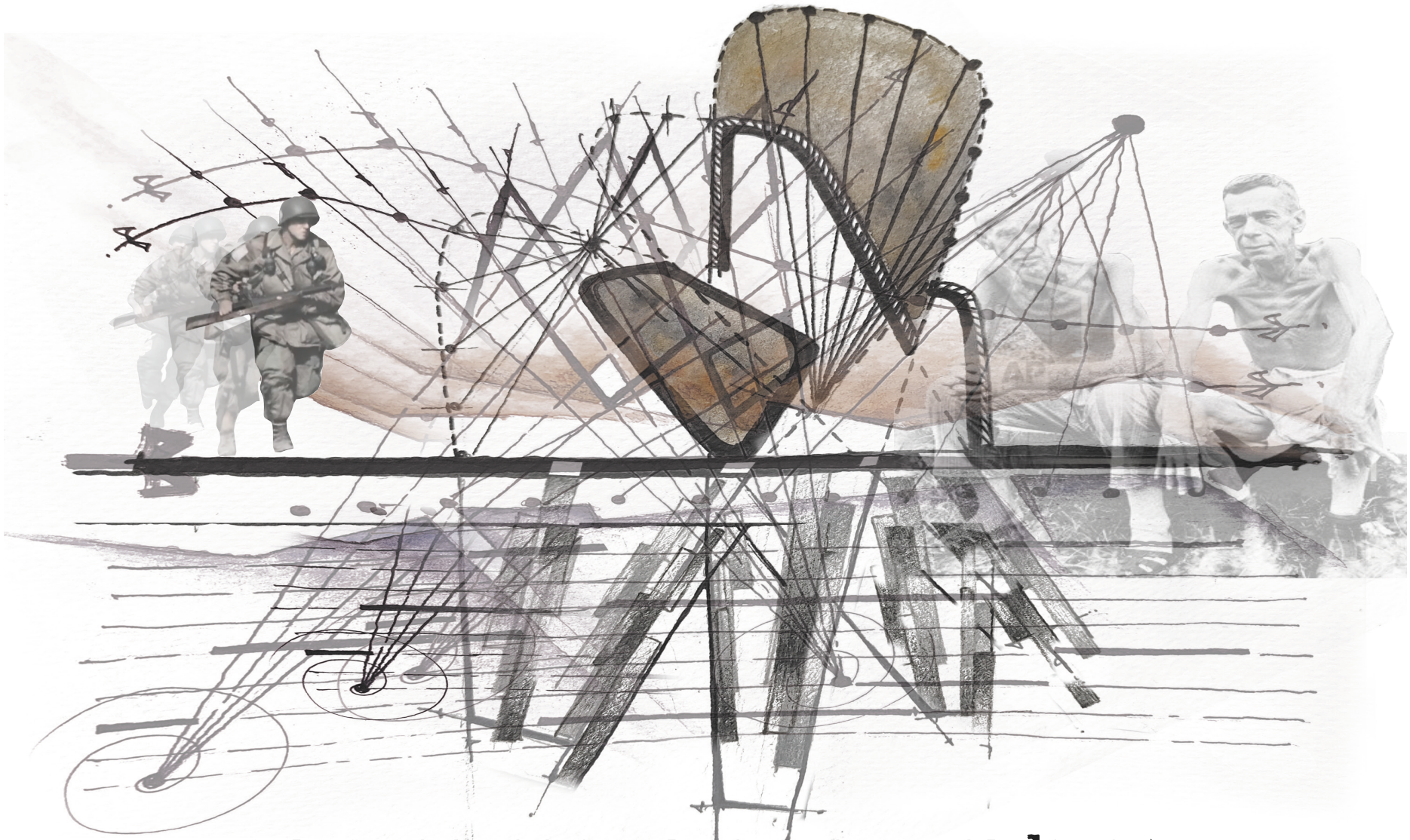

PROSTHETIC RE[MEMBER]ING

A museum and memorial park honoring the lived-experiences of the internees and guards held in the internment camps at Andalusia farm (Jan Kempdorp) during WWII

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Acknowledgments

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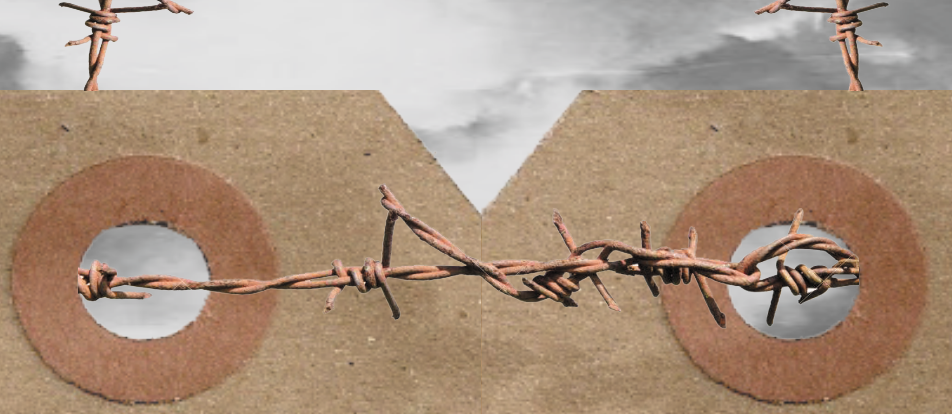
My 3 in 1 God, for all the blessings, support, trial and tribulations that He was next to me.
My ever-supportive family that carried me through the hard times and motivated me to go on.
My friends that supported me and motivated me.

This dissertation would not have been possible to complete without the above mentioned.
Thank you.



This thesis document is submitted in partial fulfillment of the requirements for the degree Masters in Architecture. All work contained in this document is my own, except where otherwise acknowledged.

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The work contained in this thesis has not been previously submitted to meet the requirements for an award at this or any other institution of higher education. To the best of my knowledge, this thesis contains no material previously published or written by any other person except where due reference has been made.

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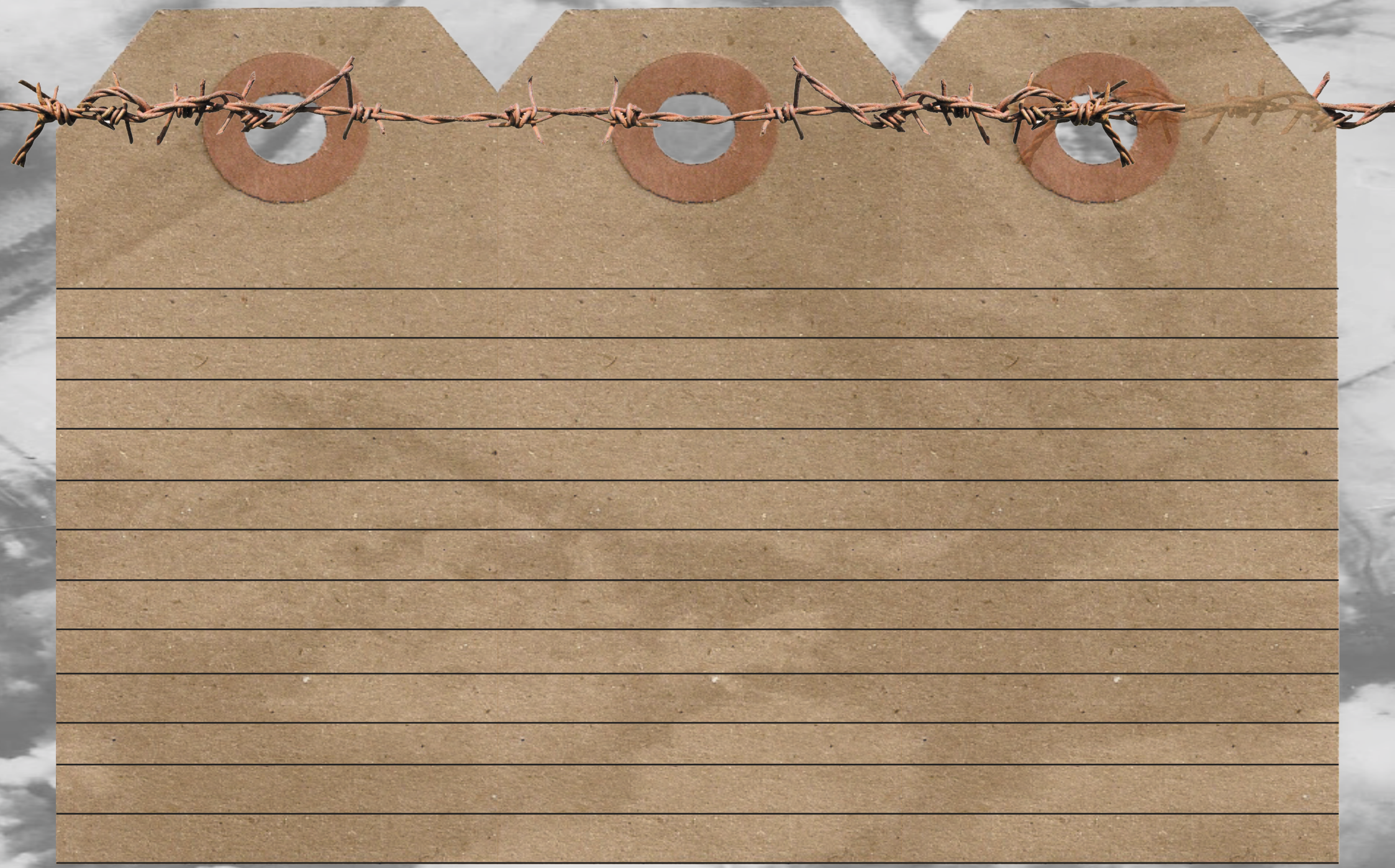
EXAMINER'S NOTES



!

Foreword:

The serious historical context of this thesis project and the use of play theory is by no means meant as a satirical approach to the suffering and difficult circumstances experienced by the occupants of the camp and their families. The notion of play is inspired by the very same occupants as they made up various games and playful acts to relief themselves, albeit for a short while, from their dire circumstances. An example of this notion can be found in the WWII film titled: *Life is beautiful*. Where the father makes up and plays games with his boy in order lessen the harsh reality of their capture in a German concentration camp.

Furthermore, being a predominantly German and Italian POW camp, the memorialization aspect of the project does not bare any reference to the fascist approach of these countries during WWII and does not aim to memorialize the Nazi regime. Evidence suggest that there were multiple South African individuals also held within the camp and in so doing the project does not focus on the nationality of the prisoners of the camp, but rather their humanistic lived experience as a being captured within the camp's borders, independent and separate of a certain nationality. The project therefore does not refer to the nationality of the prisoners except where there is a direct connection to the prisoner or guard's individual lived experience.

Glossary:

Graft-ing:

In horticulture, grafting depicts the act of integrating one plant into another, forming a union where the two partners continue to grow together (Encyclopedia Britannica, n.d.). Similarly, in architecture, the concept can be employed toward joining an interior spatial system to an existing volume/context, thus, grafting the interior system into the existing setting to arrive at a unique and dynamic formation. The grafting process establishes a design tactic that challenges the disconnection between internal and external parameters, establishing a continuum where a symbiosis exists between the interior graft and its site (R. Abudayyeh, 2021).

Iconic augmentation:

A hermeneutic process of input and output that consist out of three phases, namely: Prefiguration (the existing), Re-figuration (the state of crisis and change) and Configuration (a re-gathering and formation of a new present).

Memory-scape:

A 'non' factual scape of reflection from an experience previously lived by another or one self.

Trace-scape:

A purely factual scape that reveals itself as a residual engagement within the present.

Play:

The usage of interactive fragments/games in order to enable the transmediation of the memorable past into a contemporary experience.

Lived-scape:

A space of otherness that is located between the interaction of the memory- and trace-scape and is facilitated by a restructuring of memorable images conjoined with emotionally evocative experiences as a means of building a new collective lived experience from a historic event, without the participant having been a part of the event itself.

Trace-play:

An interactive experience and act of participation between the individual and the trace scape that enable the transmediation from trace- and memory-scape to a newly experienced lived-scape.

The use of re- :

The use re- as a prefix in this dissertation aims to create an awareness of a new body that is aware of and coexisting with the memory of an old. Meaning that a new memory can make someone re-aware of the existence of an old as the new memory consist out the old fragments from different old memories.



Abstract

Facing the inevitable waning of memory, the internment camp of WWII near Jan Kempdorp falls victim to its own temporality. The forgetting of these atrocities against humanity during war times facilitate the ruination of the sites that currently lay bare as the act of forgetting leads to the degradation that memory is inevitably subjected to. This dissertation aims to investigate how the lived experience of the prisoners held in these camps can be reconciled through a palimpsest of trace-d etchings augmented into a monumental present-scape honoring the fallen prisoners of war, irrespective of their allegiances but rather for their fragmented lived experience. It hopes to simultaneously re-dress the thresholds occupying the site and the neighboring communities, in the form of an internment-museum and public park space. Through the utilization of prosthetic memory instruments, the act of recollection and re-figuration of memories gathered in the captive's experiences, as well as the engagement generated from the introduction of an introspective play-act, the dweller lends themselves to a form of devotion towards the memory, and the realm of architectural essence. The essence dwells within the realm of the corporeal, rarely visibly observed but constantly contained within a shell, ensnared and forced to the internment of the being it occupies. However, within the being lies a thought, a dedication to the imagination and the residual body that once was. The thought relies on the trace, and the acknowledgment to the existence of a previous architectural presence ensnared within the current. The intervention further seeks to create moments of interaction with the memories and the senses through interactive games played by children in modern society that found their origin in everyday life and war times, much like the games the soldiers would play as a past time to keep them occupied as the games allow for the essence and the presence of the imagined body to dwell in a synchronized realm . The thought is concretized as an interposed image of the presence, allowing for a brief moment of passage between the boundaries that separates fact and memory.

Keywords: ***Trace, Play, Memory, Internment, Recollection***

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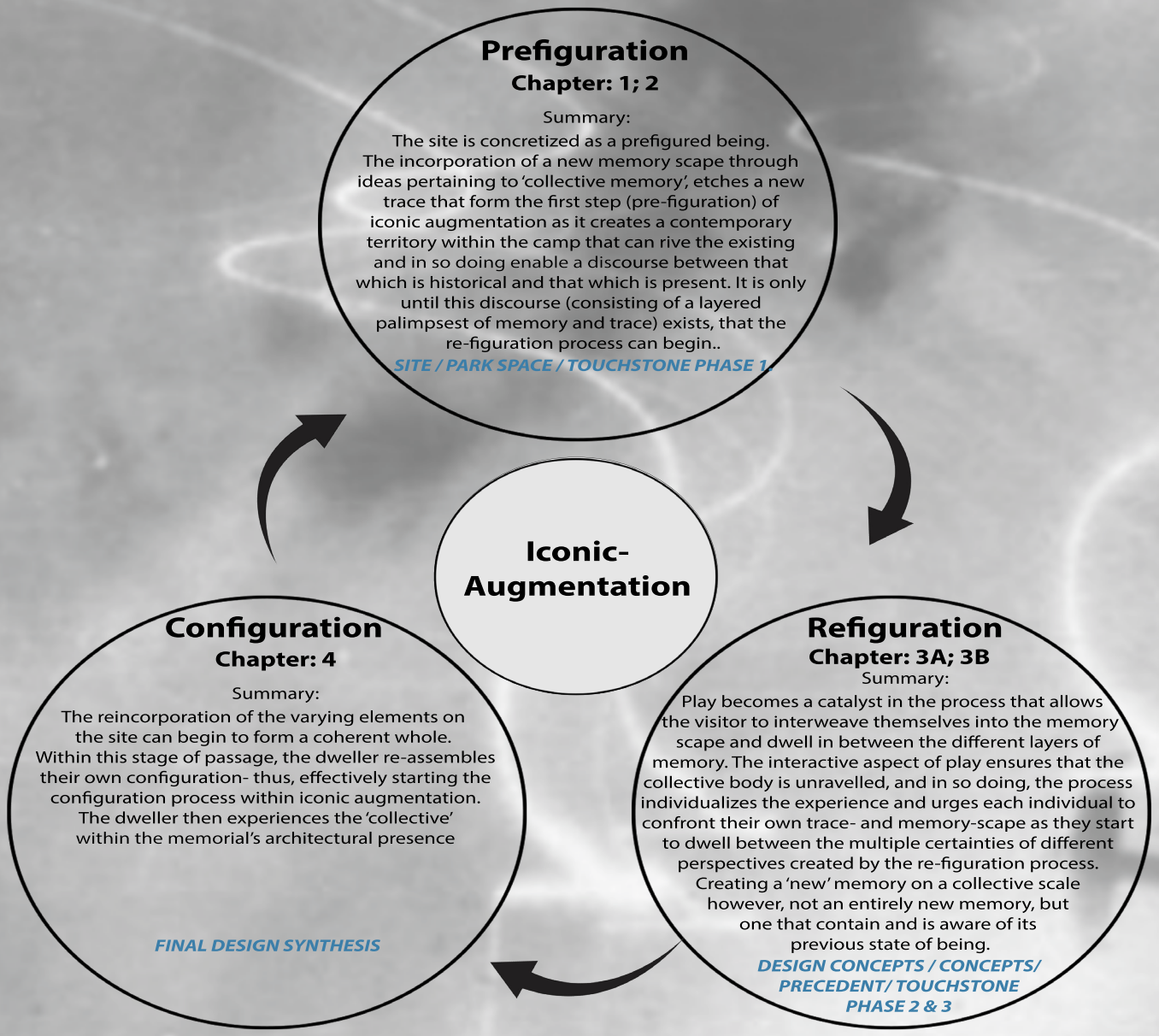
Prefiguration
Chapter: 1; 2
Summary:
The site is concretized as a prefigured being. The incorporation of a new memory scape through ideas pertaining to 'collective memory', etches a new trace that form the first step (pre-figuration) of iconic augmentation as it creates a contemporary territory within the camp that can rive the existing and in so doing enable a discourse between that which is historical and that which is present. It is only until this discourse (consisting of a layered palimpsest of memory and trace) exists, that the re-figuration process can begin..
SITE / PARK SPACE / TOUCHSTONE PHASE 1
Iconic-Augmentation
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Summary:
Play becomes a catalyst in the process that allows the visitor to interweave themselves into the memory scape and dwell in between the different layers of memory. The interactive aspect of play ensures that the collective body is unravelled, and in so doing, the process individualizes the experience and urges each individual to confront their own trace- and memory-scape as they start to dwell between the multiple certainties of different perspectives created by the re-figuration process. Creating a 'new' memory on a collective scale however, not an entirely new memory, but one that contain and is aware of its previous state of being.
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Summary:
The reincorporation of the varying elements on the site can begin to form a coherent whole. Within this stage of passage, the dweller re-assembles their own configuration- thus, effectively starting the configuration process within iconic augmentation. The dweller then experiences the 'collective' within the memorial's architectural presence
FINAL DESIGN SYNTHESIS

Introduction

Through the layering of images onto trace and ruin, the inner most memorable thought can be expressed as a gathering of architectural presence. As a palimpsestuous mechanism it allows the memorialization of the camp's past as well as a devotion to the future to take its rightful place on the forgotten site. The act of forgetting however, leads to the inevitable downfall of memory and cause a disassociation with the context where within the camp grounds lay, resulting in the current disconnect which lies within the site and its strong borders. In viewing the ruin as a proverbial burial ground for the forgotten POWs, a clear territorial ground is found.

Already, being segregated from the larger whole, the informal settlement and town forming on the edge of the site is starting to wrap around the camp grounds instead of entering its borders due to this strong territorial grounding of the site. The disconnect here alludes to a segregation between the collective & cultural memories captured within the environment. The project aims to recollect, re-enact and re-enliven the ruin through the process of trace-play as a method to mediate, re-figure the camps borders and enable the process of Iconic augmentation to re-integrate the different communities around the site.

Memorialization acts as a method of acknowledging the wound left on the landscape and honoring to the essence of the prisoners that still remains. Leaving configured traces once more, this time of a new coherent cultural memory where the town, informal settlement and memorial can become a whole as a new being.

THEMES & RESEARCH QUESTION

RESEARCH QUESTION

How can the process of memory gathering be re-enacted by the introduction of trace-play & iconic augmentation, to reintegrate the ruin and separate collective memories of the territory in order to memorialize the lived experience of the POW'S & guards ingrained in the ruins of the interments camps at Andalucia farm (now Jan Kempdorp)?

LEADING THEME

Investigating memorialization of the internment camp through the process of Iconic Augmentation and the re-remembering process as the leading theme of this dissertation, the projects aims to facilitate the redressing of the repressed memories currently still ensnared on the site by means of the following elements: the trace, play, and the displacement of memory.

BUILDING THEME

Serving as a method of acknowledging the past and paying respect to the men that passed away in the camps the memorial museum should facilitate the insertion of an imaginative reflection scape in between the realm of the memory and the senses. Whilst exploring the narrative of the camp through lens of both the guard and the prisoner. Very little information can be regarded as scientific fact, as most of the information on the camp consist of stories and memories of the individuals that had dwelled there however, the trace-games counter act the lack of information as the game itself becomes a method of re-remembering what has always already been known to us. The trace-games aim to explore the realm of the camp as a gathering of memories by the guards and the prisoners, not relying on pure fact alone but also on the core emotive experiences and stimuli humans are inherently born with. Through the process of Iconic augmentation, the building strives to (or serve as an instrument or mechanism) reintegrating the communities and allowing a re-figuration to occur on an individual level releasing the modern dweller back into a the neutral open park space to reconvene with fellow dwellers as they find rest in the park

PARK SCHEME THEME

The integration of the above named elements becomes integral to the re-figuration process of the site in its current state as well as the communities surrounding the site. The larger development scheme aims to create an in-between gathering space for the informal settlement and the town dwellers, a space where both parties are removed from their environment and set on neutral grounds. Enticing the occupants of Jan Kempdorp to remove themselves from their context - in the same way the internment camp removed people from their context - and thereafter being able to cross the boundary that is currently dividing the area. Allowing them to later to return to their context, with a re-figured memory of the place while effectively honoring the historical, as well as the futuristic, by re-figuring the collective memory embedded within the community. The camp ground becomes the facilitator in the process and experience of homecoming by the dweller, re-figuring the collective memory of the town and the informal settlement in attempt to blur the boundaries between two different communities.

Key words: Trace, Iconic Augmentation, Collective Memory[ialization], Play.

CLIENT

The increase in dark tourism attractions in South Africa plays a vital role in the growing tourism industry of South Africa. This dissertation focuses on providing the Northern Cape with another dark tourism attraction that spans across international borders. The main clients of this project is thus the Department of Tourism and more specifically the NCTA (Northern Cape Tourism Authority) as well as the families of the prisoners and guards that served large portions of their livelihood within the camp's borders.

tourism
Department:
Tourism
REPUBLIC OF SOUTH AFRICA

northern cape
SOUTH AFRICA real

USERS

The purpose of the project is to provide a place where 2 different respective users can experience a part the areas historical background as they collectively honor and recollect the individuals that served time in the camp. The groups can be identified as the following:

1. The museum and memorial visitor
2. The park visitor

INITIAL BRIEF

With the idea of a memorial and museum complex that pay tribute to the individuals that were held captive in the camp as well as the individuals that did not survive the ordeal, the program of the project will consist of 2 parts with interwoven functions. Firstly the design of a memorial park space that enables the occupants of the Vaalharts and Hartswater area to find rest in a public space where the communities can be reintegrated on a macro scale. Secondly, the design of a museum that serves as an acknowledgment of the history that the site contains and enabling the recollection of the events that occurred during the camp's lifespan in WWII. These functions where decided upon based on the content of the scheme as well as attracting various tourists that visit the area for dark tourism tours and other landmarks in the area.

Memorial park

- Follies that incites moments of participatory interaction
- Open spaces to have picnics and resting spaces
- Communal spaces
- Entrance route to the museum
- Ablutions
- Restaurant/ Coffee shop
- Smaller exhibitions installations

Museum

- Reception
- Ablutions
- Staff offices
- Museum upkeep facilities
- Storage facilities
- Exhibition spaces
- Service yard
- Staff Ablutions
- Various facilities
- Curators office



"There is a savage beast in every man, and when you hand
that man a sword or spear and send him forth to war, the beast stirs."

~George R.R. Martin

WAR

From the very beginning of the universe we live in, forces has been at war. It is a natural phenomena. War is a crucial part of what we as organisms experience and interact with in our daily lives. It creates bonds, memories, lessons and most importantly, it creates an opportunity to question. War however, comes with great loss, sorrows and intrusive memories that we can't seem to shake. It bringvs forth the part we hide in the shadows.

Many critics has voiced their opinion on what war is. Some say war exist because language has failed us, others say it's two bitter old men playing a game of chess and then fooling the youth into letting themselves be slaughtered, imprisoned and mortified for the sake of the game. Whether this is true or not, war is a part of us that we can't shake. Its a beast that cant be tamed and irrespective of our nature, we are drawn to it. It so easily consumes us and in our falleness we leave ourselves no other choice but to act upon it. The quote from the American novelist George R.R. Martin speaks towards a truth in which we find ourselves caught up in.

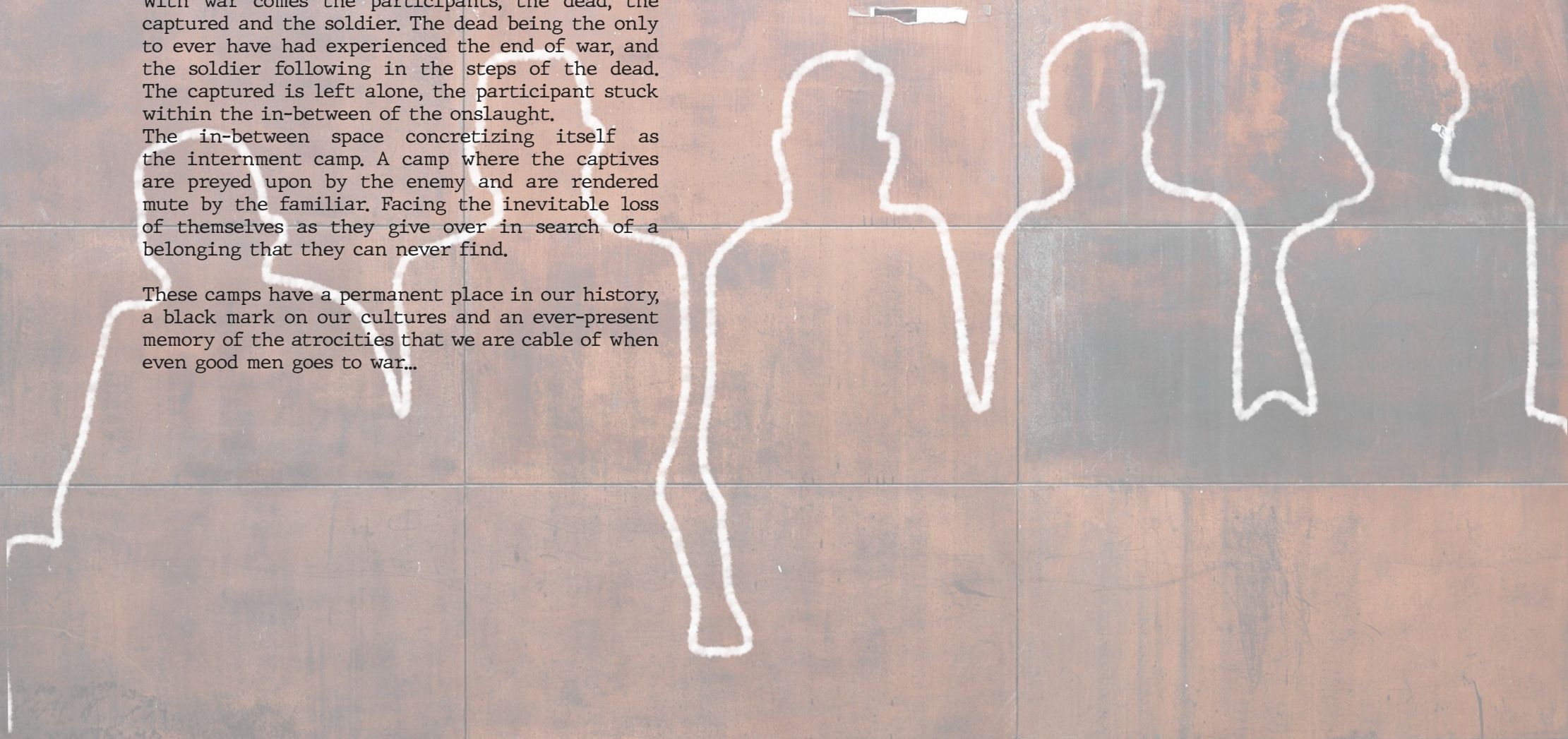
War is an inevitable part of us...



THE INTERNMENT CAMP

With war comes the participants, the dead, the captured and the soldier. The dead being the only to ever have had experienced the end of war, and the soldier following in the steps of the dead. The captured is left alone, the participant stuck within the in-between of the onslaught.
The in-between space concretizing itself as the internment camp. A camp where the captives are preyed upon by the enemy and are rendered mute by the familiar. Facing the inevitable loss of themselves as they give over in search of a belonging that they can never find.

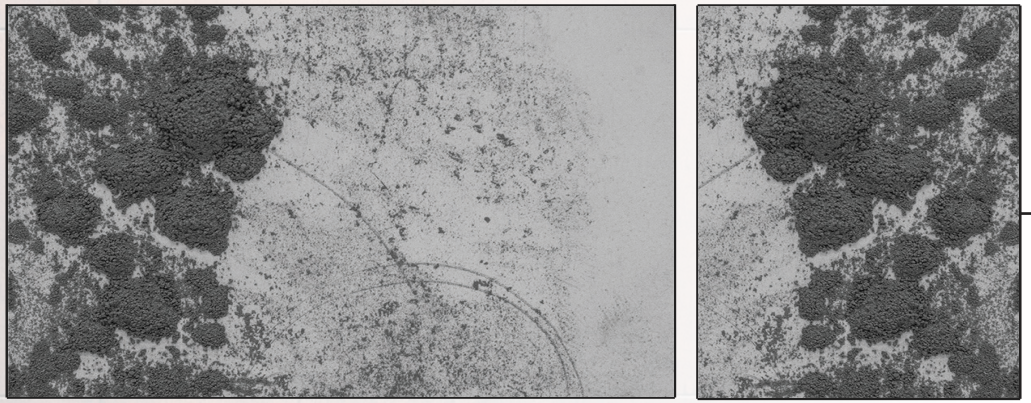
These camps have a permanent place in our history, a black mark on our cultures and an ever-present memory of the atrocities that we are cable of when even good men goes to war...





"You know, it set you at war with yourself."

~Elizabeth Wein, *Rose Under Fire*



01

CONSTRUCTING INHABITABLE MEMORY (Pre-figuration)

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01 Introduction

Located in South Africa, on the border of the Northern Cape and North West, the WWII internment camps outside of Jan Kempdorp mark a dark collective history in the region. The only surviving camp ground of the three camps has stunted the growth of the ever-expanding Vaalharts-water scheme as it demarcates a strong territorial boundary on the outer edge of the town. This remaining camp was chosen as the site for this dissertation as a blurring device in an effort to connect the two communities in the surrounding area and acknowledge the current collective memory state and experiences of the captives shackled to the camps. Through the analysis of the ruins and traces left on the site a palimpsestuous process is followed to extrude layers of memory that has been repressed through the years. The uncovering of the repressed memory through this process allows the site to transmediate the narratives from a discourse to a mode of architecture, allowing the past to not simply unfold but to become a directly livable and visceral experience to the dweller as the ruin is transferred from a repressed state to a recollectable re-enactment of historical emotion. However, very little factual information could be gathered on these camp grounds and their history in the surrounding areas as most of the recorded history is based on the memories of the internees and guards that served the camp. Through a process of uncovering factual truths an investigation into similar sites is required to form a proper understanding of the camps and their prefigured architectural presence within the Vaalharts area.

Prefiguration
Chapter: 1; 2

UNCOVERING & MERGING OF:

TANGIBLE (TRACE) & INTANGIBLE (MEMORY)

SITE
-History
-Location
-Analysis.

MEMORY TRACES
-Analysing other camps
- Collective &
Repressed memory

= Palimsestuous process of uncovering site and grounding of the camp as a collective trace- and memory scape.

SITE / PARK SPACE / TOUCHSTONE PHASE 1.

1 PROCESS OF UNCOVERING AS TOUCHSTONE

By exploring the site as a residual/trace memory, the touchstone aims to re-enact or rather make sense of the act of memory by incorporating the dweller in the selection of the defining memory fragment. This interaction is incited through the invitation to a game, where the user has to pull on the cords connected to their imagination and their configured self, in order to set the device in motion. Through this interaction the touchstone aims to achieve a clear process that separates the experience of the site, the memory of the dweller and the imagination of the dweller. The following four phases is extracted as a method of achieving this goal whilst highlighting the different elements and their interaction with each other.

1. The existing site as perceivable fact
2. The memory "keeping"
3. The re-enactment & recollection
4. The re-figured as a new site

Through the construction of the touchstone, the same process was followed as would be for an internment camp. The use of close by natural, readily available materials and different elements brought together to form a new pragmatic palimpsestuos whole. The construction elements of the touchstone are inscribed with memory, as the four columns keeping the mechanism standing were once a part of an old Orange Free State NG church senate's chair that has been discarded and left to ruin. A chair where some were condemned and others were empowered. As all four columns (legs) lean into each other they symbolize the current configuration in society as they uplift and support the sand (prefigured collective) from falling much like an hourglass that granulates the process of waining as well as recording and confining memories of a singular collective.

The touchstone further employs the player to delve deeper within their memories and explore the nature of the internment camps as 'moments of time' that caused re-figuration and the reflection of many men (nu. 2) as the sand from layer one pours over the crystal ball. Whilst this process takes place, static electricity builds and stirs the memories within ball as some of the recorded memories are resurfaced and uncovered to the player. The concrete blocks, becoming a metaphor for the imaginative, the images that our futures are built upon (nu. 3) as the player is able to select unique configurations of memories and futures that they find most dear in order to build their remembered image. The images that governs our deepest desires and our primordial needs, all falling into our new and re-figured self (nu. 4), that cause a lasting and enduring new reflection on our personal identity as well as the collective body.

Leading to the final configuration of a re-figured and re[membe]rled site as the process comes to an end and phase four becomes phase one as the hermeneutic process repeats itself from one collective state to the next and etc.

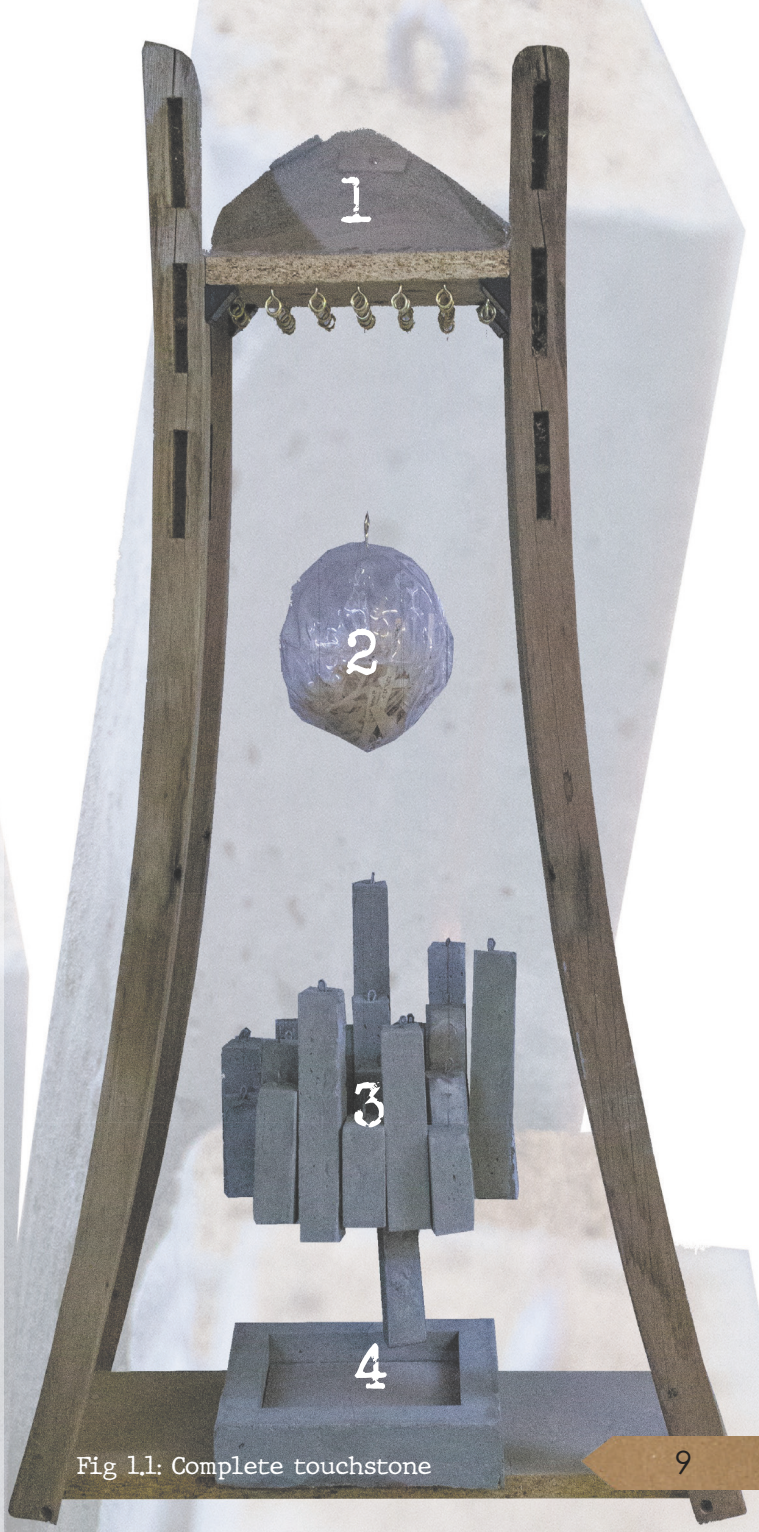


Fig 1.1: Complete touchstone

1.1 UNCOVERING THE EXISTING MEMORY TRACE

Focusing on the top of the monumental touchstone (fig 1.2), the layer represents the site as it is today, meaning that which we can take as perceivable fact. This layer resembles the landscape and the scattered ruins that lay bare in the vast open field, as they are displayed for the world to see. Being at the top of the monument emphasis is placed on the ruins as they form the pinnacle and main focus point of the natural eye.

The layer consist out of 4 elements namely:

- The ruin (wooden block)
- The memory (threading)
- The sand (time)
- The transparent sheeting (boundaries)

Figures 1.3 - 1.5 illustrate the process of uncovering as the sand start to leak and move onwards towards the revealing of a new image as the player interacts with the lower layers of the touchstone. In this process of interaction though, the player unearths old memories that becomes integral to the understanding and the collective that is about to be formed by the player. In so doing, a trace is formed that one can follow and measure as an interactive state between memory and fact.



Fig 1.2: Top layer of touchstone

Following the process phase one of the touchstone demarcates, the site analysis aims to reconstruct the architectural being of the site through reintegrating the memories of the camp's occupants and extracting a set of general principles that most truthfully describe the camps being. Through analyzing international as well as local examples of camps similar to the nature of the chosen site and compiling them as a set of principles the site can be most accurately reconstructed and be placed into context with its surroundings.

When the site can be re-placed within its own context, the ruin can become celebrated and acknowledged by the dweller as an identifiable trace of what was once an interaction between the earth, sky, mortal, and divine as time granulates and moments of the past are re-collected and re-remembered in order to create a new cognizant memory-scape (fig 1.6).



Fig 1.3: Buried memory



Fig 1.4: Uncovering memory



Fig 1.5: Resurfaced memory

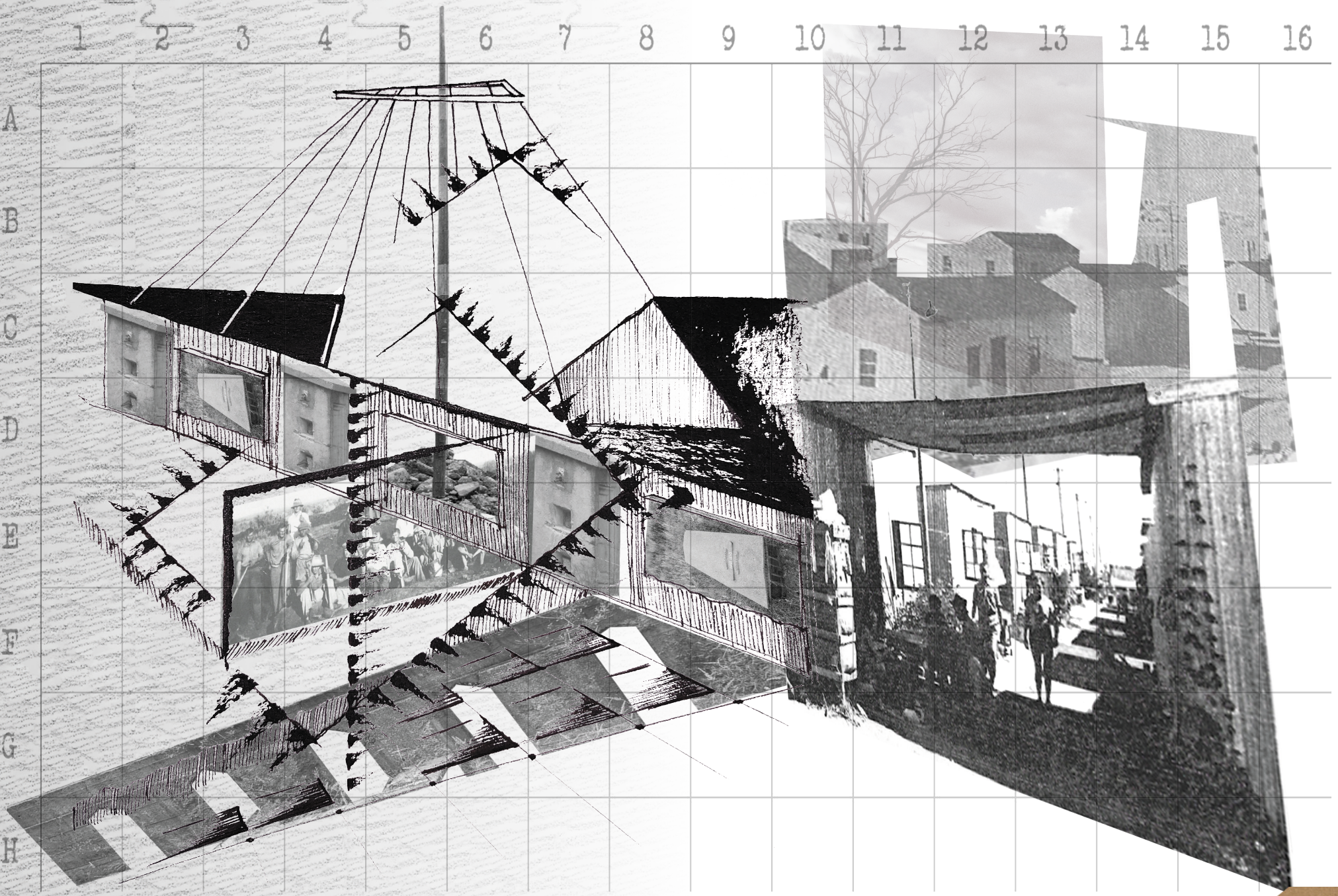


Fig 1.6: A cognizant memory-scape formed from recovered images that has been collaged.

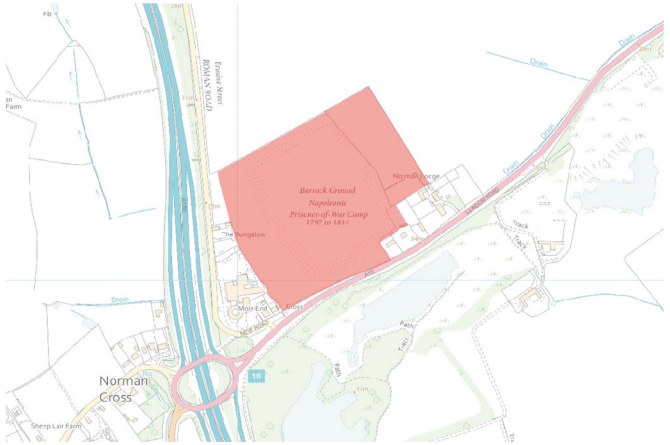
1.2 NORMAN CROSS POW CAMP

Before the idea of an internment camp, the prisoners of war would usually be held within remodeled barracks or in some cases, church crypts. These arrangements where mostly based on security and involved small groups of prisoners, as in most cases the prisoners where executed. However with the British success in the Napoleonic wars, the amount of prisoners became problematic, with all spaces available filling up with POW's. Leading to the planning of the Norman Cross internment camp (Chaimberlain, 2019).

Being the first purpose built internment camp internment camp the Norman Cross camp was built in 1796 under the master carpenter, William Adams. The Construction of the camp mainly consisted out of prefabricated structure. Being a master carpenter, Adams decided on using wood as the main structural element. This decision was based on the fact that wood was readily available, easy to build and quick to construct as the intended purpose of the camp was to only have a temporary place for prisoners to be located in (Norman Cross Prison - Peterborough Archaeology, 2002).

The layout of the camp revolved around an octagonal block house surrounded by four smaller quadrangles, where each of these quadrangles where separated by four crossroads leading to the block house. Each of these quadrangles encapsulating different functions. Each quadrangle was built as a double story block that was able to house approximately 500 prisoners each. Leading to a total of 2000 prisoners thats able to be accommodated.

During the lifetime of the Norman Cross camp (1796 - 1816) a total of approximately 1700 prisoners died (Norman Cross Prison - Peterborough Archaeology, 2002). Today the site has few remnants remaining, with shattered tombstones scattered around the site. The site still remain consecrated ground. From the analysis of this camp, principles of the character embodied by these camps can be extracted and applied to the project as will be discussed at a later stage.



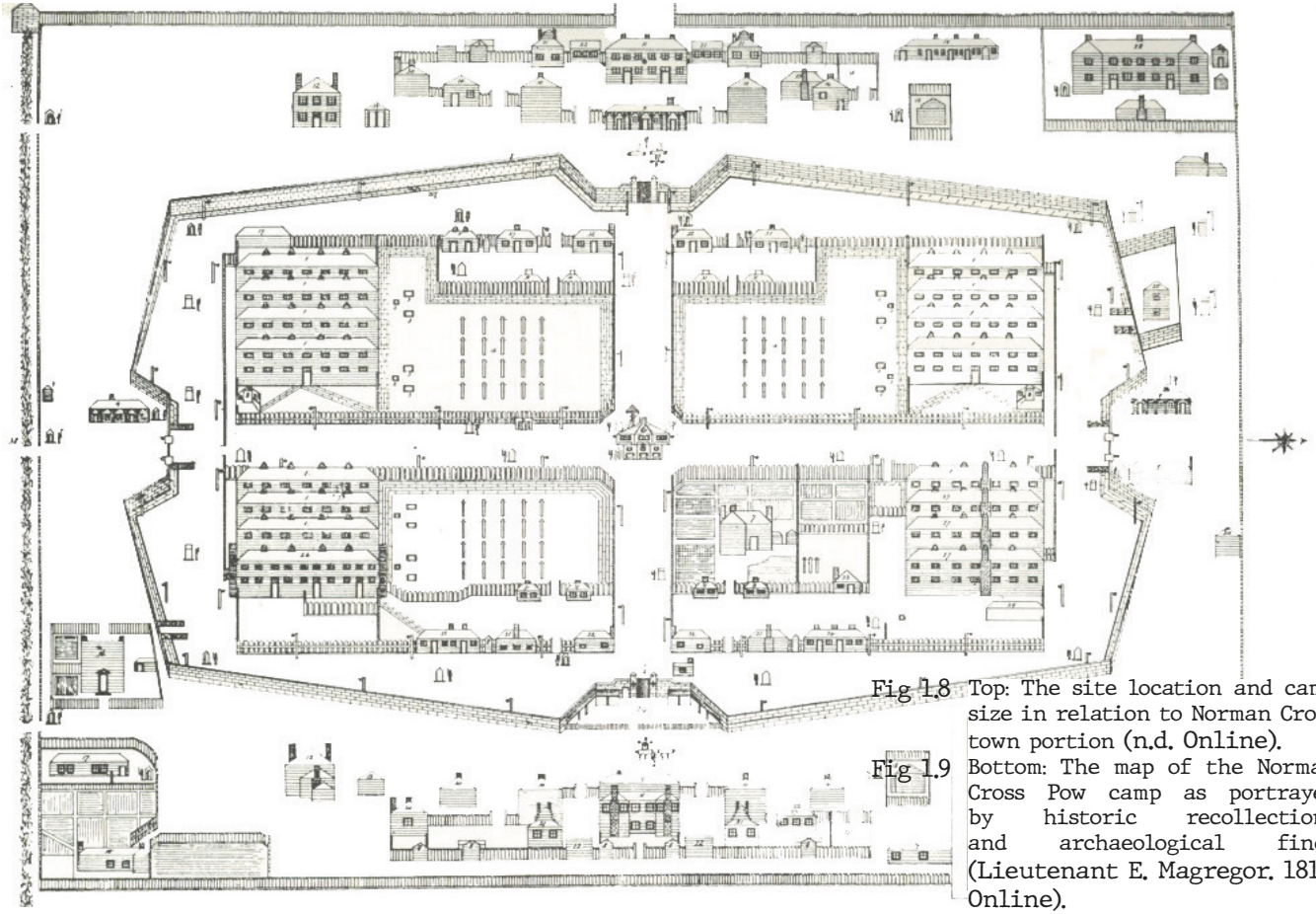


Fig 1.8 Top: The site location and camp size in relation to Norman Cross town portion (n.d. Online).

Fig 1.9 Bottom: The map of the Norman Cross Pow camp as portrayed by historic recollections and archaeological finds (Lieutenant E. Magregor. 1813. Online).

1.2.1 NORMAN CROSS CAMP ANALYSIS

By analyzing the Norman Cross camp as a starting argument for understanding the basic principles of these camps, fragments of the modern POW camp can be built up and substantiated as probable fact. Therefore allowing the memory to be concretized for the modern insertion into the chosen POW camp, where the design would later be based. Timber was chosen as the main building material and, given that the facility was seen to be a temporary measure. The timber framework for each building was prefabricated in London and then taken by cart to Norman Cross where it was assembled and cladded with weather-boarding. From this it could be assumed that the basic structure of these living units resembled something close to what the South African camps portray. These figures that are referred to are not factual but a modernized version of what is deemed to be suited for modern safety standards, according to SANS 10400. This was done to be able to apply these measures to the new design, fit for the use of the public. The images below are representative of what the Norman Cross camp looked like and illustrates the daily experiences that the prisoners had within the camp. This is important to take not of as there are some differences that would later become more evident in the WWII camps. These differences, becoming some of the main elements to what is now known as an internment camp.

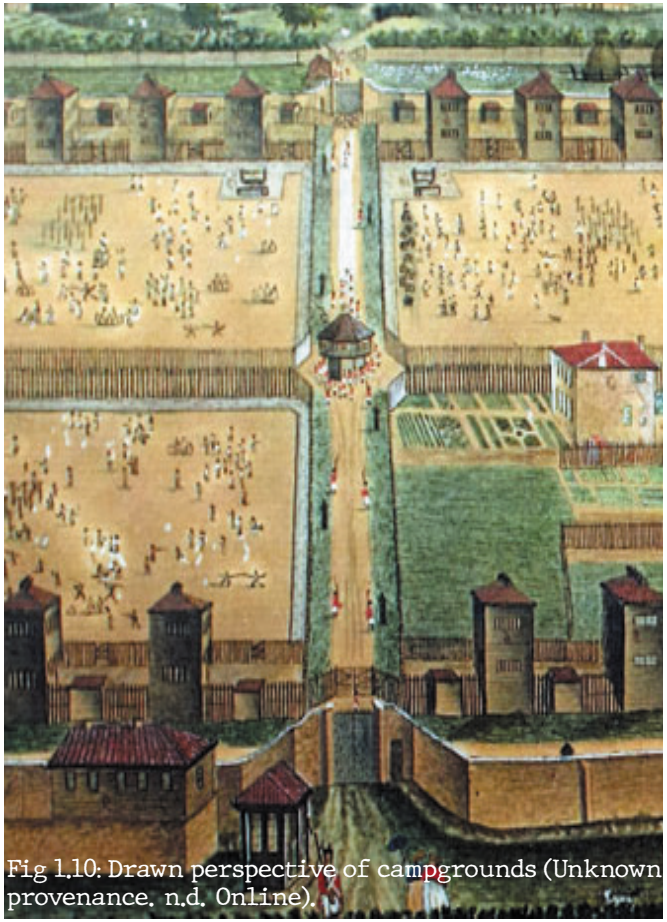


Fig 1.10: Drawn perspective of campgrounds (Unknown provenance. n.d. Online).

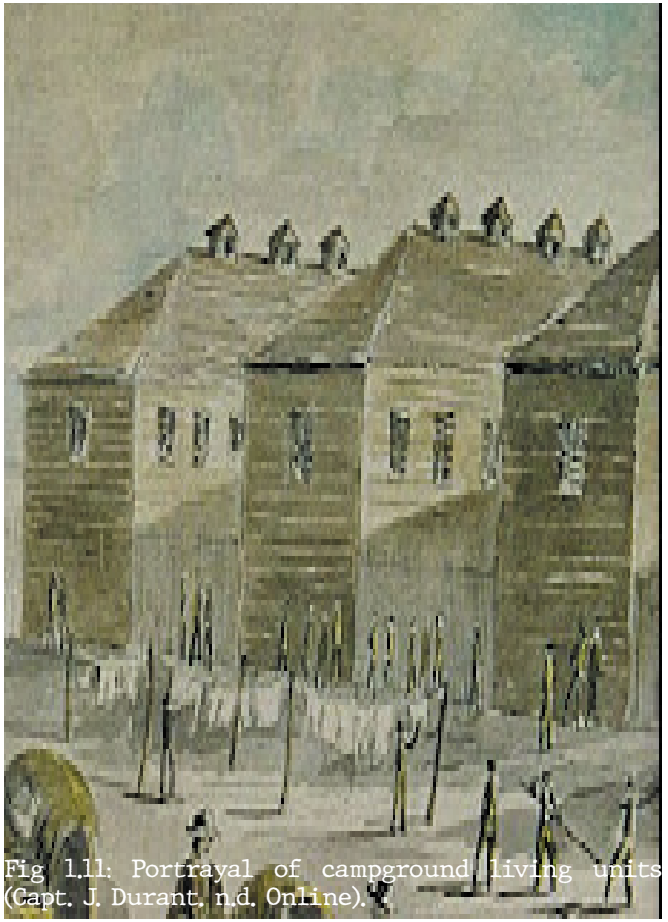


Fig 1.11: Portrayal of campground living units (Capt. J. Durant. n.d. Online).



Fig 1.12: Illustration of guard tower in camp (Capt. J. Durant. n.d. Online).

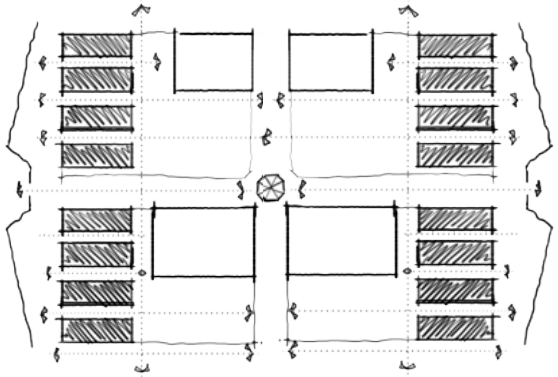


Fig 1.13: Lines of flight and grid of camp (Author).

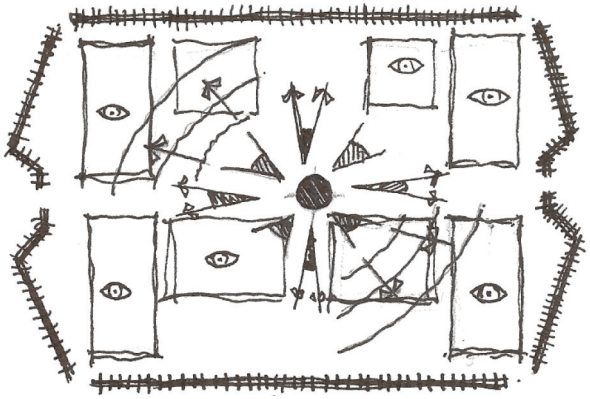


Fig 1.14: The panopticon as camp overwhatch position (Author).

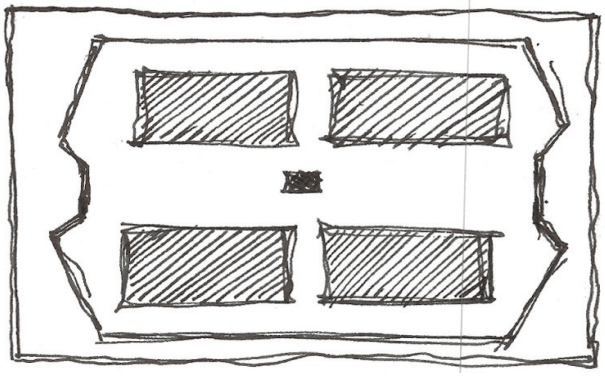


Fig 1.15: Boundaries set in place by military (Author)

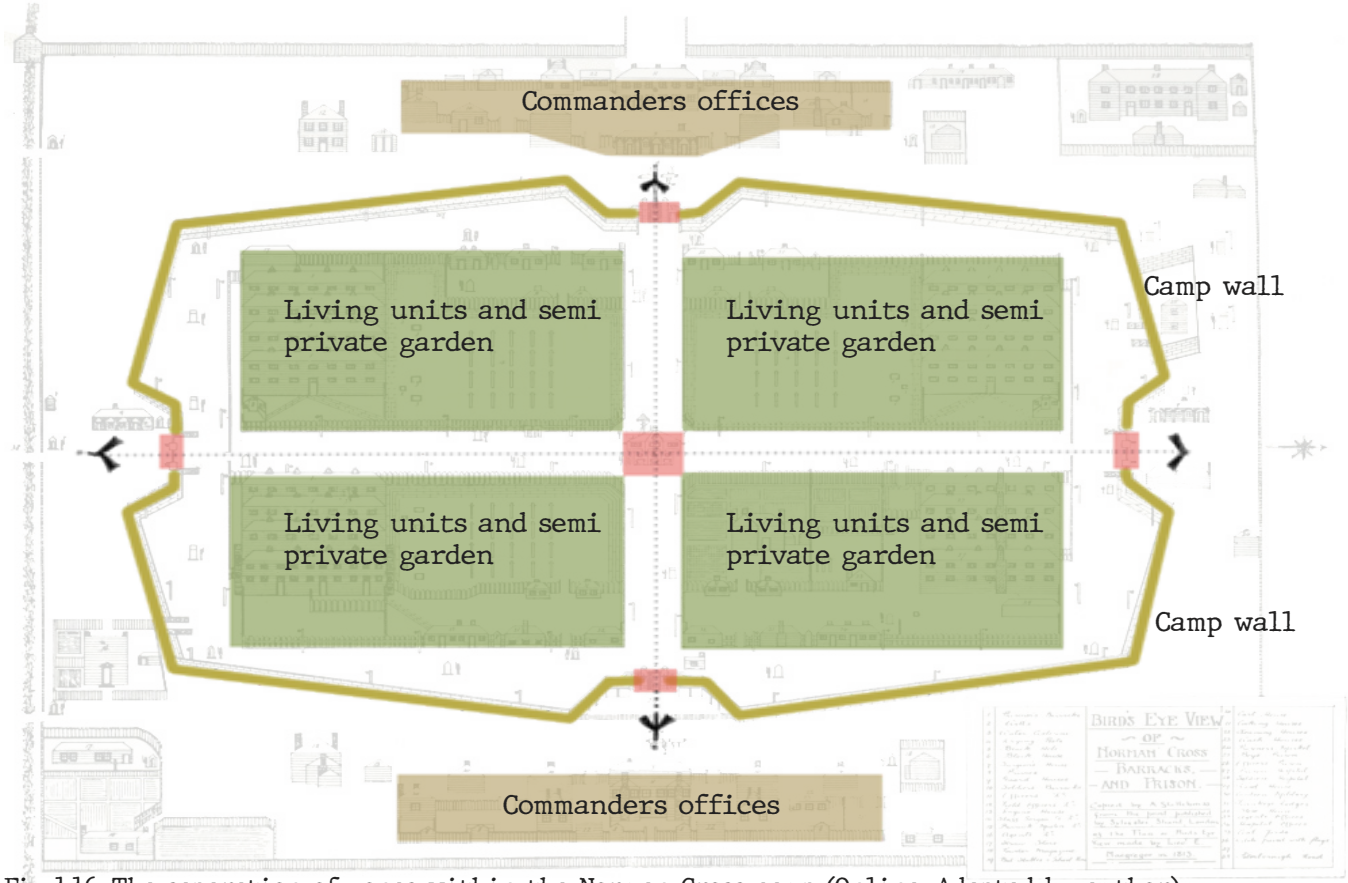


Fig 1.16: The separation of zones within the Norman Cross camp (Online: Adapted by author).

Figure 1.16 indicate the separated zones and functions of the Norman Cross camp, as it was divided into 4 sections, each forming its own community within the camp's borders. The camp has a very organized layout with a clear grid structure (fig 1.13) that allows for the different communities to have semi-private gardens and washing yards. Built central to the intersection of two main access routes, the guard tower has views across the camps courtyards and serves as a panopticon around which the camp radiates (fig 1.14). The tower also serving as bastion for the guards within the camp should there be an uprising creates a firm position of resistance and serves as a roll call area from which guards can count and direct internees. The camp has multiple boundaries that serve as layers to protect the surrounding town should the prisoners attempt to escape (fig 1.15). This lead to very few, if any, prisoners to successfully escape and return to the war effort. The Norman Cross camp might have been the first of its kind that has been discovered but through the analysis of this camp it becomes clear that readily available materials, cost efficiency and pragmatism becomes key to the creation of these camps.

1.3 MANZANAR INTERNMENT CAMP

The Manzanar camp serves as a precedent for the same era as the project that is to follow and serves as a means to examine the structures used. During WWII the bombing of Pearl Harbor lead to the internment of more than 10,000 Japanese Americans at Manzanar, after the Executive Order 9066 was signed by President Franklin D. Rosevelt (Nilsen, 2013). During the following weeks, 110,000 to 120,000 Japanese Americans were loaded on trucks, buses, trains and etc. Where they were transported to 10 different interment camps scattered across America (Gesh, 2019: Online).

The Manzanar camp was comprised out of one square mile of land. It was then divided into 36 blocks, with each being divided further into 12 barracks. Each of the barracks consisted of six rooms, a recreational hall, mess hall, laundry and public latrines. There was therefore a large problem with privacy within these camps, as well as various other issues (Ondash, 2019: Online).

The camp has since been memorialized by a white obelisk that has been erected on site. This monument is to pay respect to 150 men, woman and children that are buried within the camps own cemetery (Gesh, 2019: Online).



Fig 1.17: Monument of Manzanar (Nilsen, R. 2013. *Manzanar monument: online).*



Fig 1.18: Reconstructed guard tower (Ondash, E. 2019. *Replica of guard tower :* online).



Fig 1.19: Reconstructed living unit (Adair, N. 2018. *Manzanar barracks :* online).



Fig 1.20: Bird's eye view of the camp(Ondash, E. 2019. *Image of barracks within museum:* online).

(McDonald, J. 1942. *Two prisoners running for cover in sand storm :* Online).

1.3.1 ANALYSIS OF MANZANAR CAMP

The camp at Manzanar was erected in a quick and orderly fashion, much like what has been seen with the camp at Norman's Cross (Nilsen, 2013) (fig 1.13; 1.21). However, the historical background for this camp and the camps that were constructed in South Africa are much more alike as they where constructed during the same wartime and are strikingly similar in terms of the chosen site, as well as general look of the structures erected to house the occupants of the camp.

In conjunction with the following analysis on South African internment camps, this analysis will indicate how these structures has become a standardized method of constructing these camps during WWII. The camp started as a series of barracks that are repeated in an orderly fashion within a grid that has been set out before hand (fig 1.21). In very few cases according to the contours of the site it was located on. The barracks then developed into more permanent structures, constructed out of wood, weather-boarding and later on the addition of stone and brick (fig 1.22 - 1.28). The scale of these camps are however immense and lead to the subdivision of different areas within the camp itself, either set out according to the prisoners or the guards, much like what Norman's Cross was doing in 1796. The division was mostly to maintain order and control over the prisoners. These camps sometimes developed into cities, with gardens, shops, theaters, schools (fig 1.26), hospitals and etc. All run by the prisoners and the guards of the camp.

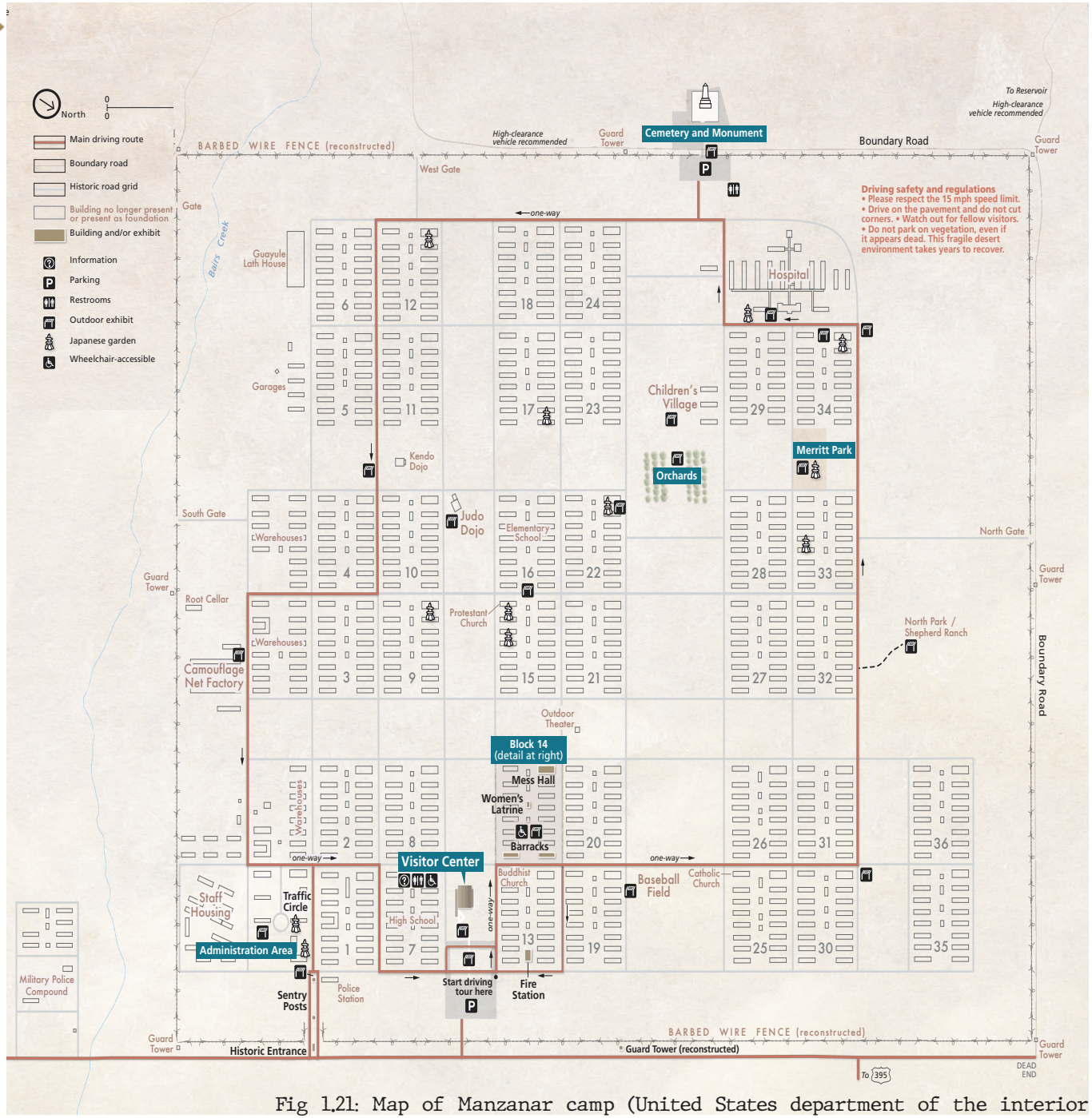


Fig 1.21: Map of Manzanar camp (United States department of the interior national park service, 1996: Online).



(United States department of the interior national park service, 1996, Online).



(Adair, N. 2018. *Manzanar barracks* . Online).



Fig 1.22: (Adair, N. 2018. *Manzanar barracks* : online. Adapted by Author).

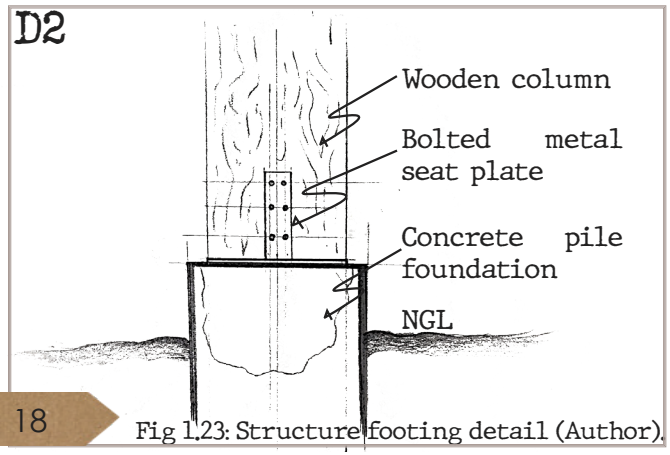


Fig 1.23: Structure footing detail (Author).

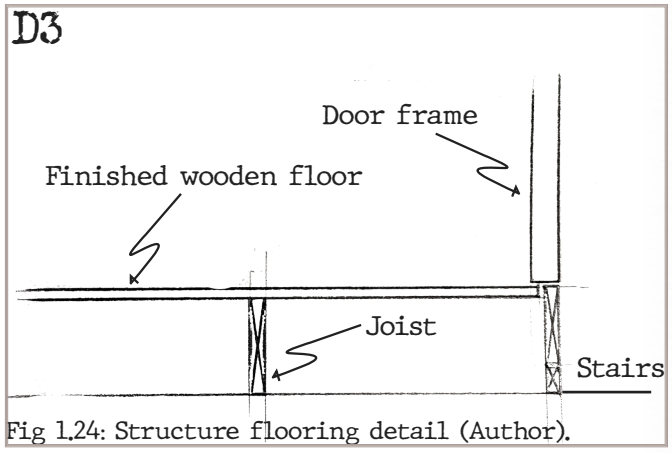


Fig 1.24: Structure flooring detail (Author).

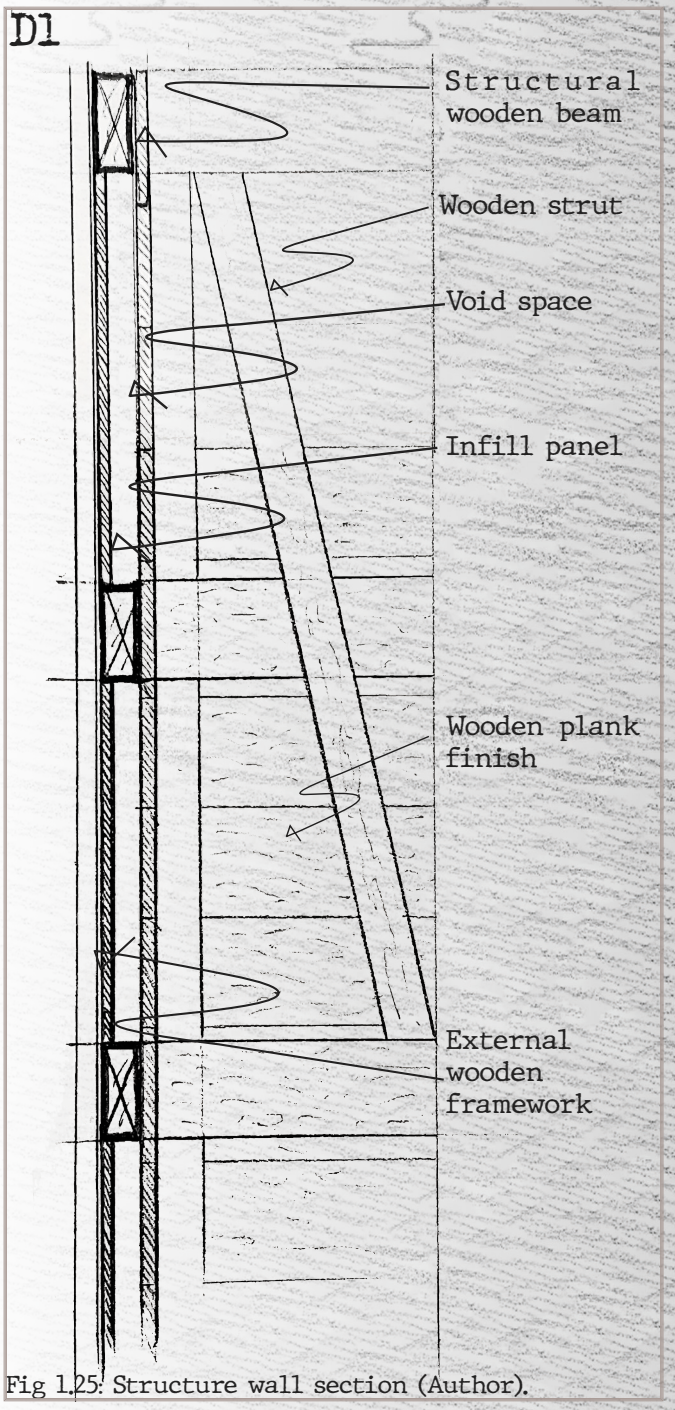


Fig 1.25: Structure wall section (Author).

Analyzing a reconstructed version (fig 1.22) of the Manzanar camp barrack unit, basic construction methods can be found. The building being lifted of the ground and placed on post to prevent water entering the structure during winter times as well as possibly preventing prisoners from trying to escape by use of tunnels within the structures.

The walls (fig 1.25) are mostly composed by layering different timber profiles and allowing for void space in between profiles as a method to insulate the structures. These construction methods will later be reinterpreted and composed into a contemporary version within the final design in an effort to pay respects to the historic structures that has fallen pray a state of decay.
Figure 1.26 serves as an axonometric explanation as to what the basic structures of the camp consist of as well as how they are put together.
The living units of camp consist primarily of timber elements as it was an easy to find, inexpensive and effectively constructed in a short time period. From the gathered information the trusses were regular King post trusses that were given extra supports on the side of the trusses in order to assist in achieving the larger span that was required. It would appear that these trusses where spaced 1500mm to 2000mm cc in order to carry the load of the slate roof.

From the analysis of the Manzanar camp, the structure of the WWII internment camp at Vaalharts can be argued to have a similar method as during the same time period South Africa had similar building methods, with a slight difference in material availability, this will be analised in the following camp, as well as a significant difference in climate because of the landscape these camps were built upon.

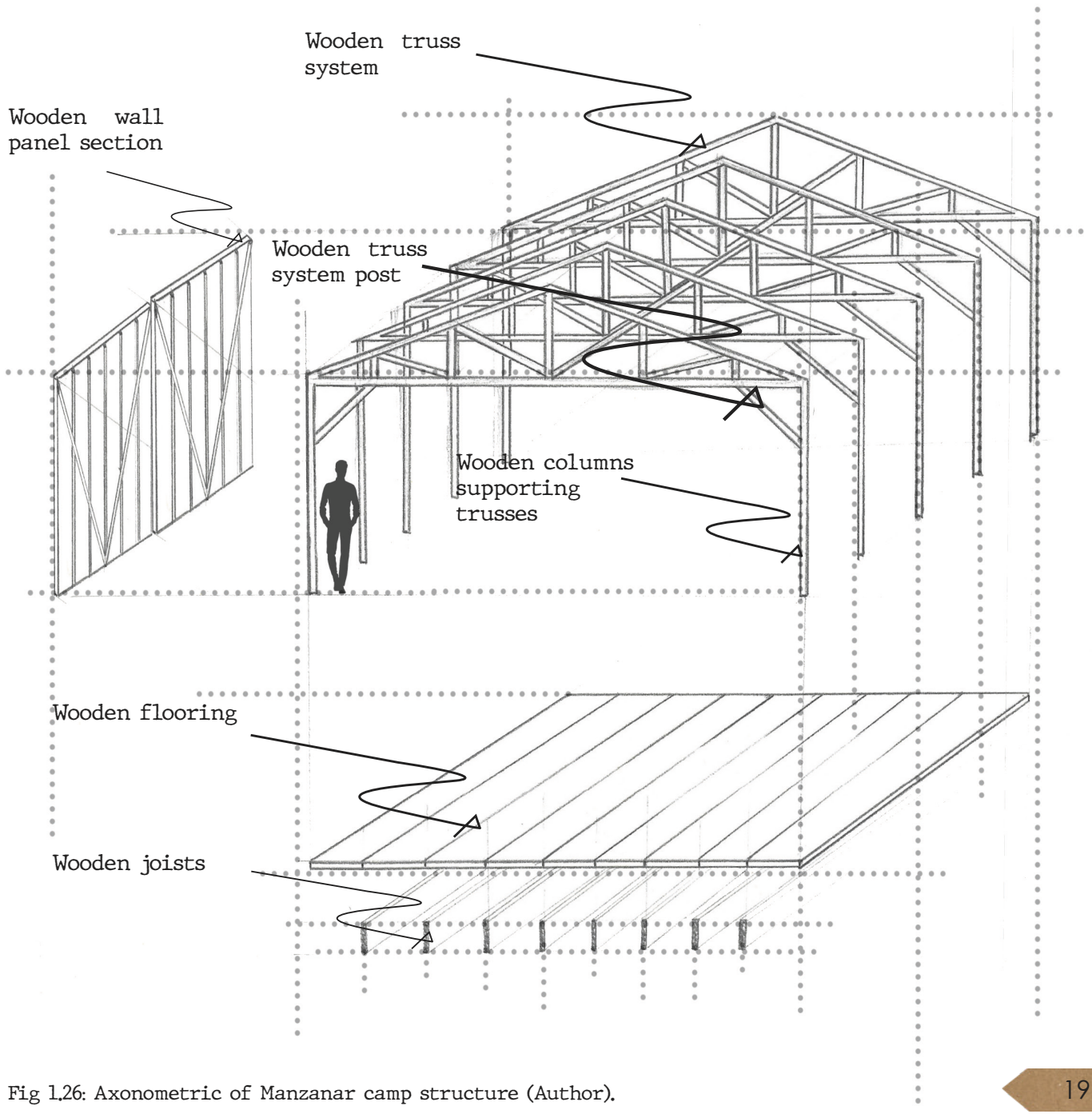


Fig 1.26: Axonometric of Manzanar camp structure (Author).

1.4 SA's INTERNMENT CAMPS

The Zonderwater camp translates to 'camp without water' and is a sentiment to the conditions set by the landscape. Being the largest camp during the African war participation in Sidi El Barrani, the camp was a temporary residence to an agglomeration of roughly 100 000 Italian POWs captured and brought down from Egypt's interment camps, through the Suez canal towards Durban's ports (Cucco, 2013). Where they were then transported to Zonderwater camp on the outskirts of Cullinan mine.

In the beginning the prisoners had to sleep in the open field in tents as no barracks has been built (fig 1.27). This however caused multiple prisoner deaths as the often unexpected storm would cause lightning to strike the metal poles keeping the tents up and in turn electrocuting the men inside (Haggis, n.d.). After the camp has been established Colonel Hendrik Frederik Prinsloo was put in charge of the camp. Col. Hendrik was uniquely suited to the task as he himself was held within in a concentration camp with his mother during the Anglo Boer war, which meant he was well accustomed to the devastation and anguish that segregation caused (Cucco, 2013). With the experience that he had came a sense of humility and an understanding that the rest of the camps not necessarily had as he allowed the prisoners to build themselves a small city.

The city consisted of 14 blocks, each with four camps that housed 2000 prisoners and each having 24 barracks with sheet metal roofs (Haggis, n.d.). Developed to house a agglomeration of 100 000 soldiers with 30km of roads, hospitals with up to 3000 beds, gymnasiums, schools and etc, the camp grounds was well protected with the Italians having their own internal 'guard' consisting of the Catholic priests that served the churches in the camp, as well as being surrounded with barbed wire fencing and armed sentries that had a view of the entire camp. The prisoners were therefor able to 'freely' circulate throughout the camp grounds. Through the lifetime of the camp 252 soldiers did not arrive for the repatriation arrangements at the end of the war, with the only trace of them now left being a monument called The Three Arches that was built by the prisoners of the camp (Haggis, n.d.).

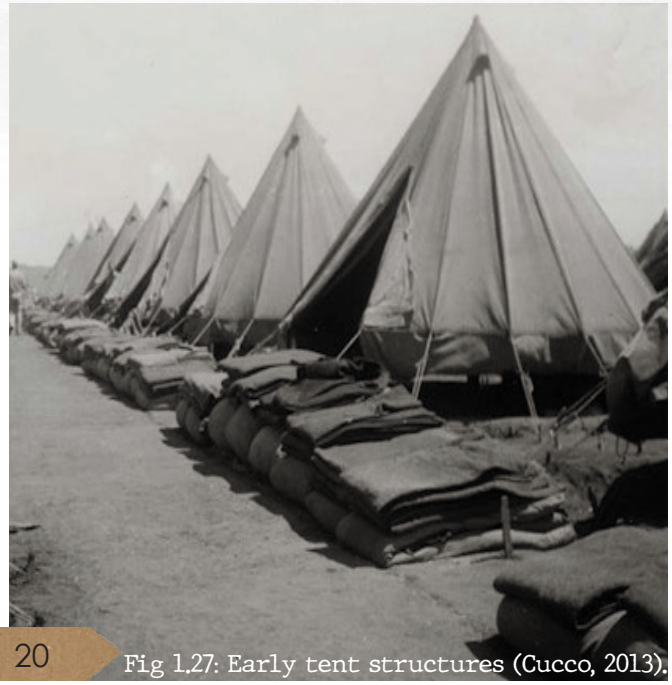


Fig 1.27: Early tent structures (Cucco, 2013).



Fig 1.28: Timber structures erected (Grasset, E. 1942).



Fig 1.29: Beginning of stonework (Grasset, E. 1942).

Figures 1.27 - 1.32 illustrate the rapid development that the camp had undergone within a two year time period and how the materials relayed the stature of the structures that they were constructed from. Stonework (fig 1.29) was mainly used for buildings such as the command offices, camp headquarters and churches. Whilst adobe and corrugated steel structures were used for the barracks and 'lesser' functions of the camp (fig 1.30; 1.31). Although the Zonderwater camp has been more prominently documented due to its size, it can still only be used as a method to explore materiality and in so doing forming a general view port towards the development that the Vaalharts camp might have undergone, as they share some overlapping accounts of prisoner stories extracted from their letters.



Fig 1.30: Adobe hospital rooms (Grasset, E. 1942).



Fig 1.31: Corrugated steel mess hall (Grasset, E. 1943).



Fig 1.32: Brickwork at camp (Junod, H. 1943).

1.4.1 ZONDERWATER MATERIAL ANALYSIS

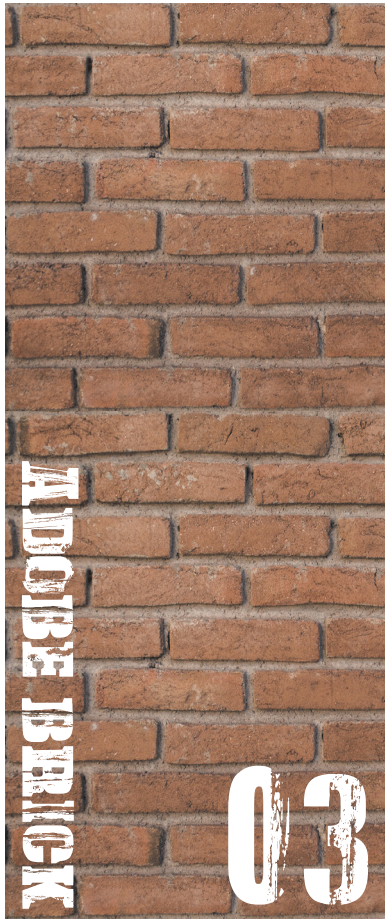
Being primarily constructed by the prisoners (fig), the material usage of the camp serve as a medium to explore the craftsmanship of these camps. There are various records of great craftsmanship by the prisoners in these camps as they sculpted and carved various trinkets out of wood and clay that were native to their homeland as a past time as well as being objects to serve as a remembrance of their families back home. In analyzing photographs of the Zonderwater camp various building materials can be identified that would substantiate the use of these materials in the Andalusia (Vaalharts) internment camps, as these camps would have most likely followed the same progression through the war. Comparing this analysis to the memories captured in the letters found of the Andalusia camps, an image of the camp can start to be reconstructed that forms a most likely explanation as to what the camps at Andalusia farm looked like.



Fig 1.33: Prisoners making bricks at Zonderwater (Junod, H. 1943).







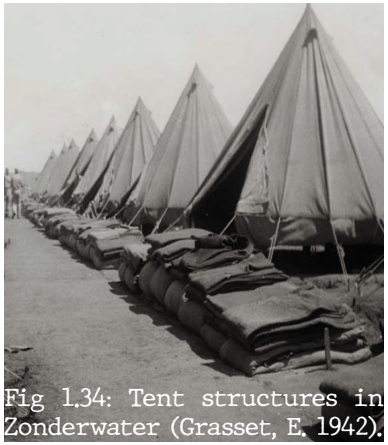


Fig 1.34: Tent structures in Zonderwater (Grasset, E. 1942).



Fig 1.35: Guard post (Grasset, E. 1942).

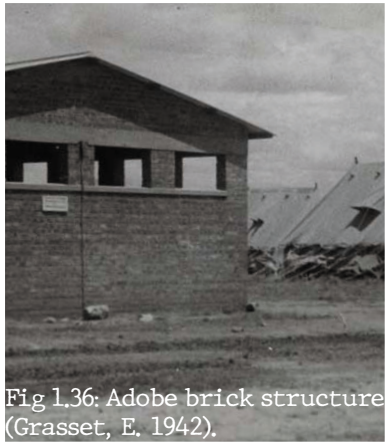


Fig 1.36: Adobe brick structure (Grasset, E. 1942).





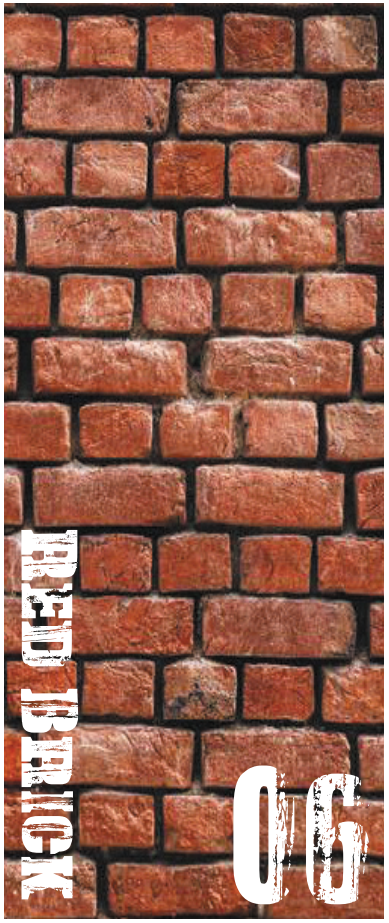








Fig 1.37: Corrugated metal structure (Grasset, E. 1942).



Fig 1.38: Sandstone entrance wall (Grasset, E. 1942).



Fig 1.39: Redbrick church (Junod, H. 1943).



Fig 140: Hospital room roofing (Junod, H. 1943).

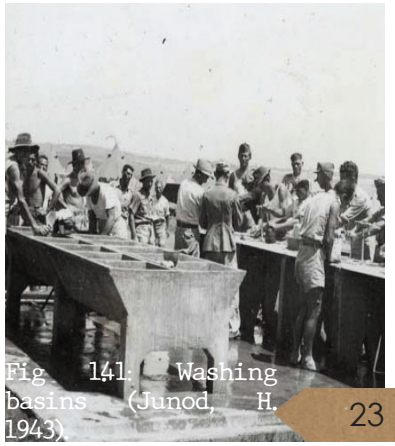
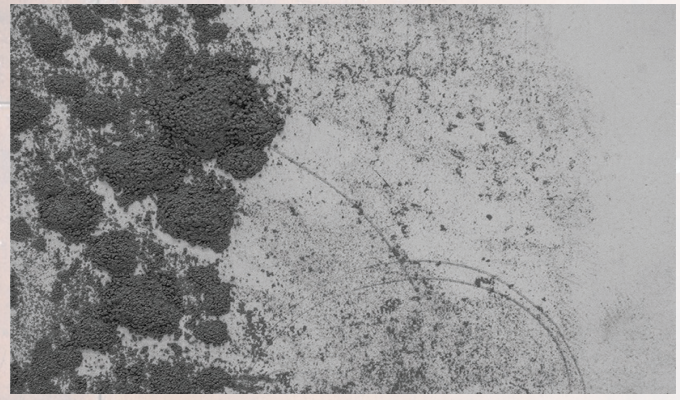
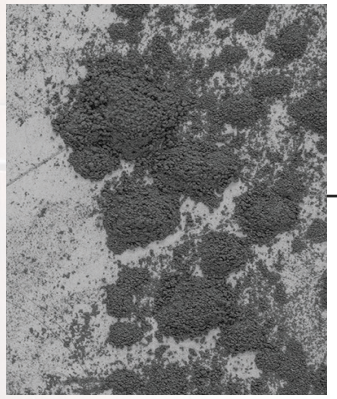


Fig 141: Washing basins (Junod, H. 1943).





REPRESSED MEMORY

Site location introduction p.14
Region History p.16
Town and site identification p.20
- The internment camp p.23
- Qualitative information p.25
- Materials and textures p.30
Internment camp mapping and memorialization p.32
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Design concepts p.40
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Final memorial park proposal p.52
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02

2.1 SITE LOCATION INTRODUCTION



Fig 2.1: Map of Africa

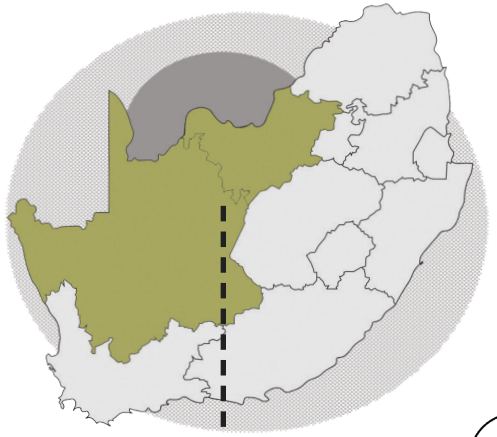


Fig 2.2: Map of South Africa

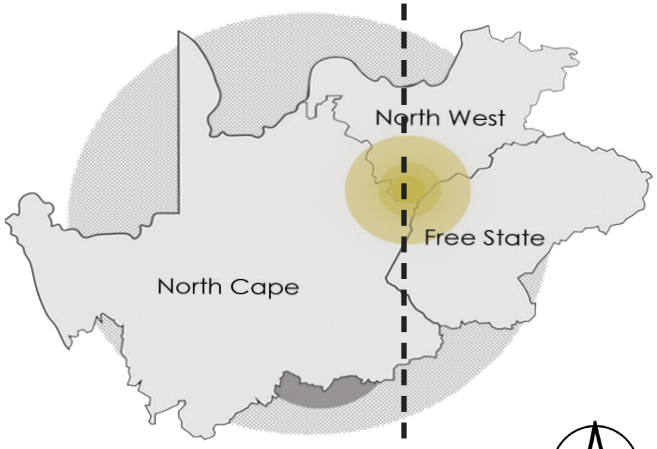


Fig 2.3: Map of Northern Cape Province

Located in the South Africa, on the border of the Northern Cape and North West (fig 2.1 & 2.2) the chosen site forms the edge of Jan Kempdorp (fig 2.6). A small town forming a part of the Vaalharts Irrigation system (fig 2.5 & 2.7), branching out of the Hartsrivier river. The name stemming back to the Khoekhoen dialect who named it, Goabgariep (Harts en gariep).

The Climate

The climate identifies it self with cosmic qualities, with an average rainfall of 450mm rain per year, 80% of which falls within the summer times. The average temperatures for summer ranging from 18 ˚C to 35˚C and winter temperatures as low as -5˚C to 16˚C. The area is prone to hail and wind storms that destroys crops and reeks havoc on the pecan-farms. To address this the inhabitants planted rows and rows of Populier/Poplar trees. Most of these trees has since been removed for various reasons, one of which is the great influx of pecan tree orchids that started to form natural barriers as well as an income to the settlement.

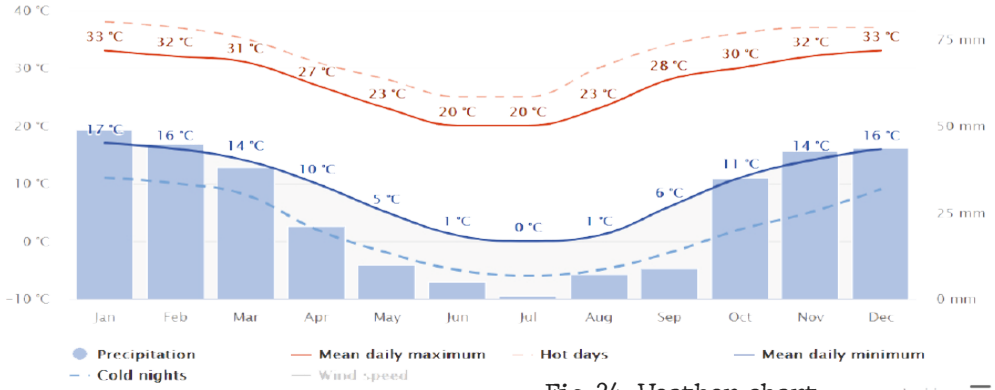


Fig 24: Weather chart

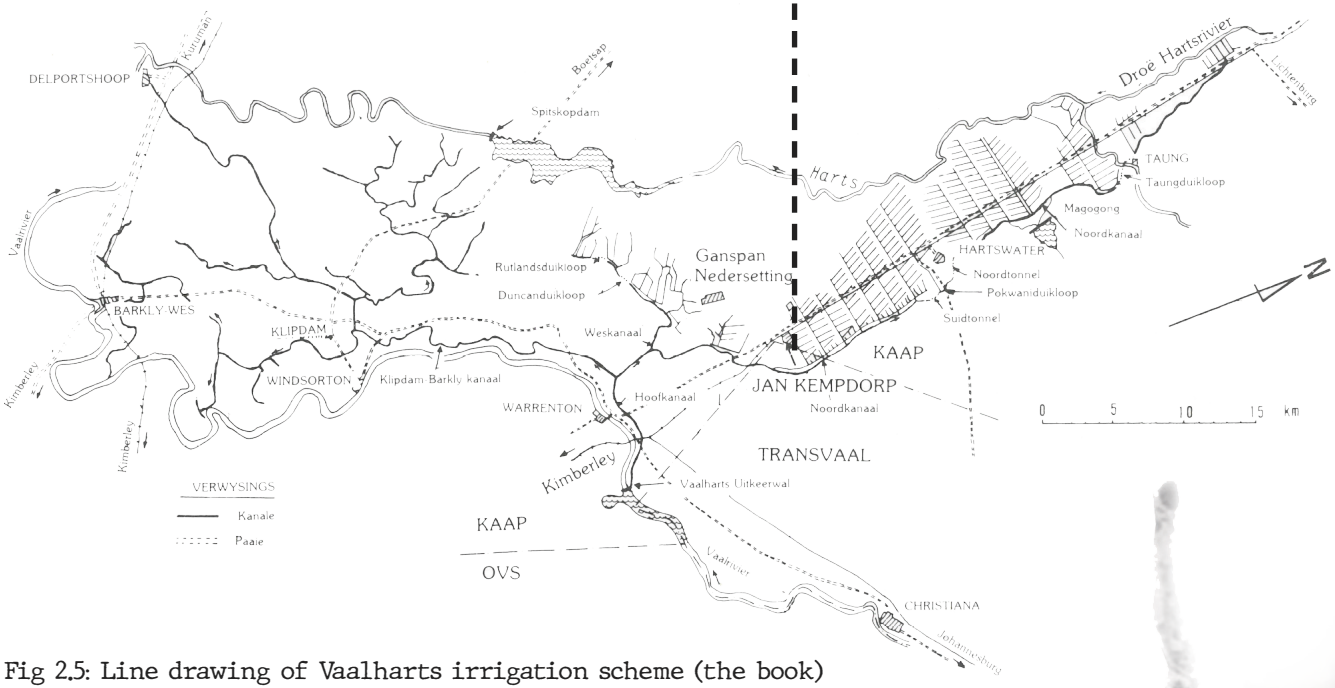


Fig 2.5: Line drawing of Vaalharts irrigation scheme (the book)

Fig 2.6: Google Earth view of Jan Kempdorp (Google Earth. 2021: online. Adapted by Author).

Fig 2.7: Google Earth view of irrigation scheme (Google Earth. 2021: online. Adapted by Author).

2.2 REGION HISTORY

The discovering of diamonds near the Vaalrivier lead to the influx in development of the larger Vaalharts irrigation system and the emerging business trade caused a quick growth in the settlement. During the 1871 Griekwaland-Wes was invaded and seized by Britain. The Britain authorities subdivided the land and let it to the settlers. Francis H S Orpen suggested that water then be channeled from the Hartsriviervallei in order to support the larger irrigation scheme as well as the residential areas. The irrigation scheme is the largest continuous irrigation scheme in South Africa and found its roots, because of the great depression in 1933. The scheme became a safe haven for thousands of jobless individuals and farmers that had to leave their farms because of the great drought. The total irrigation scheme is roughly 113 100 hectares, 36 000 of which has been placed under smaller irrigation systems and pivots with the remaining farmland serving as pastures for animals. The larger scheme was then divided by the development of the railroad, stretching out from Zimbabwe to Kimberly. With the railroad, came the train stations that still stands at Jan Kempdorp, Hartswater and Magogong. During 1938 the first group of tenants were allowed to settle, the second group in 1946 and the third group soon following in 1950.



Fig 2.8: Water canals built (African Heritage Consultants CC. 2001).

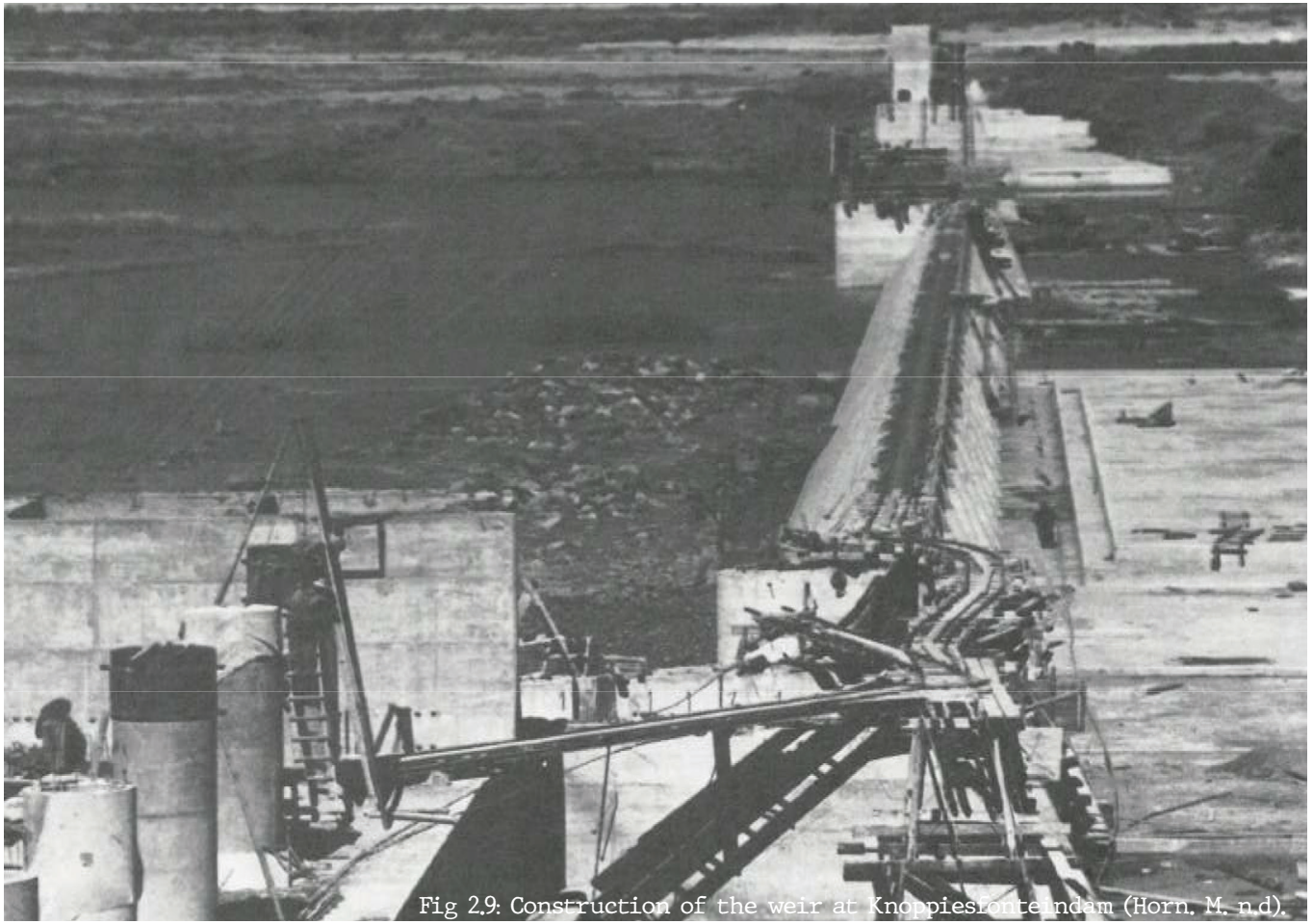


Fig 2.9: Construction of the weir at Knoppiesfontein dam (Horn. M. n.d).

The architecture that developed in the surrounding area during the end of the war, an index of partial structures can be built to consider in the final design. The most prevalent of these structures being the large canal (fig 2.8 & 2.12) systems connecting the Vaalrivier and weirs controlling the system (fig 2.9 & 2.12). These structures serves as the veins that keeps the area alive and allows the economy and produce sectors to flourish in the area. From the 1930's the surrounding area expanded quite rapidly. The irrigation systems could thus not keep up with the high demands set by the population and it was decided in the 1990's that the canals would have to be broadened by the edition of a wider but shallower canal as shown in figure 2.11. The rest of the scheme naturally developed with the edition of sluice gates being spread across the canal in order to further control and regulate the water of the area as shown on page 18.



Fig 2.10: Photograph of the completed weir (Horn. M. n.d).

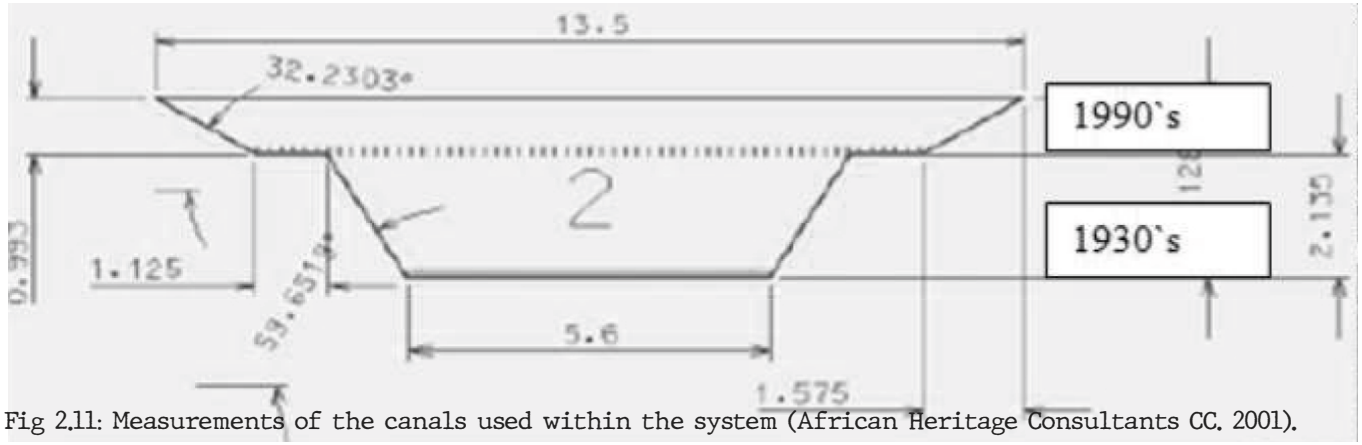


Fig 2.11: Measurements of the canals used within the system (African Heritage Consultants CC. 2001).



Fig 2.12: Construction progress on a canal (Botes. D. H. n.d).

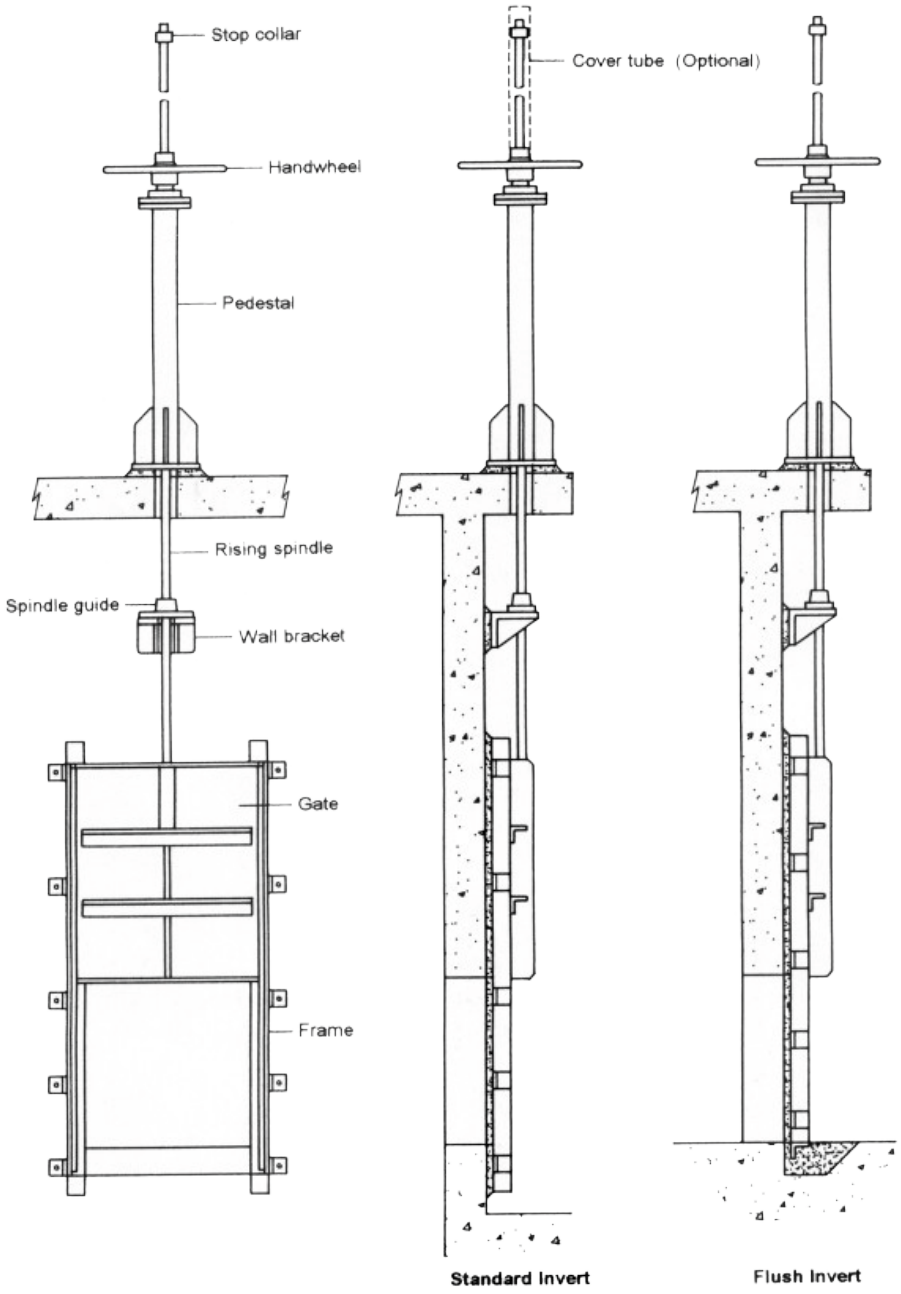


Fig 2.13: Construction of a sluice gate (African Heritage Consultants CC. 2001).



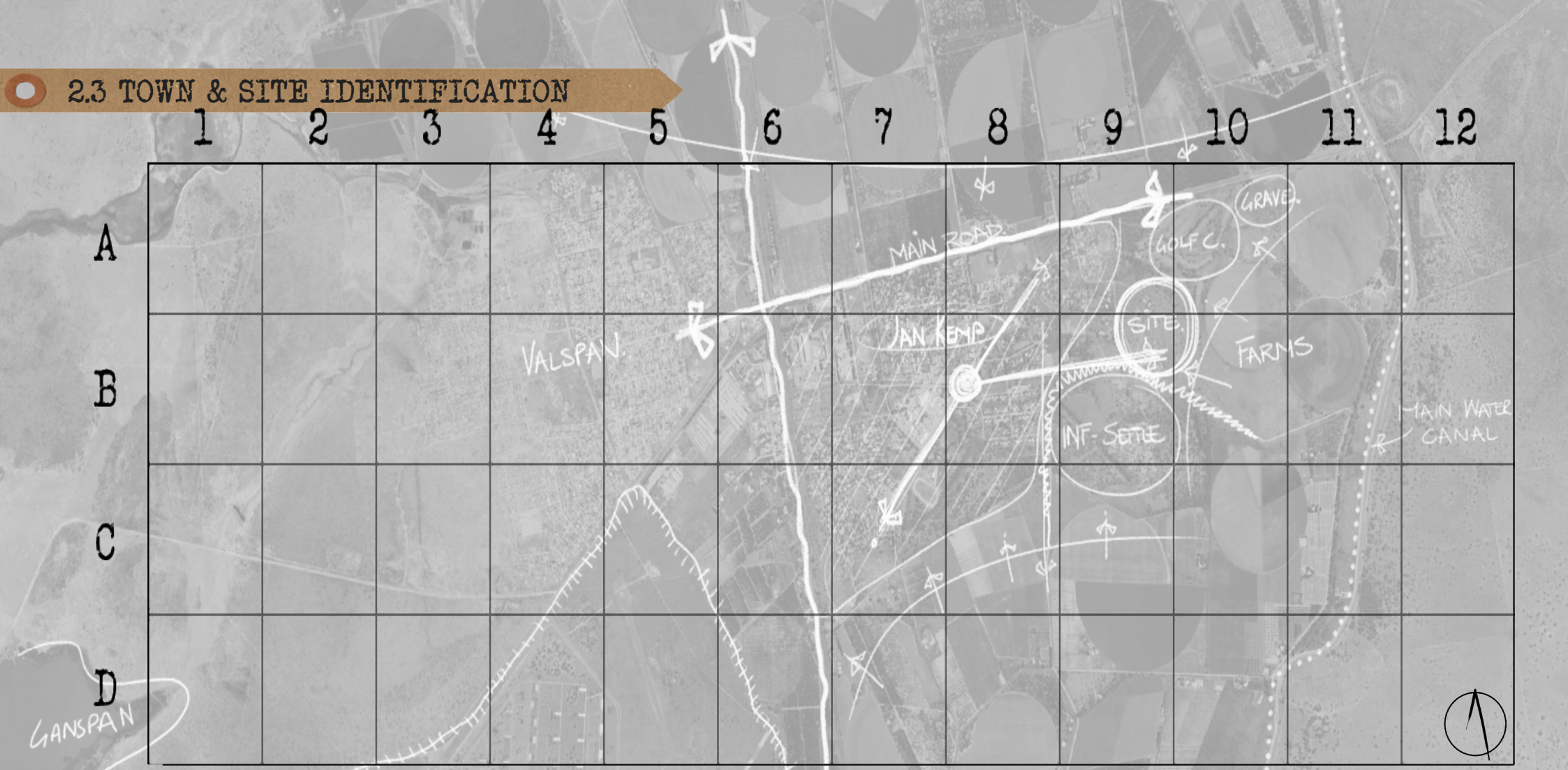
Fig 2.14: Sluice gates within the system (African Heritage Consultants CC. 2001).

The sluice gate (fig 2.13 & 2.14) has become a familiar necessity in the region. It can be defined as a steel frame that can open and close to regulate the flow of water through a sluice. The most commonly used of these systems in the area being the Wall-mounted system (fig 2.14). There are various types of wall mounted systems however, considering the time that these canals were build in. Most of the active gates are manually operated with the edition of hydraulic systems in the more recently built canals. At the top of a sluice gate there is hand wheel that one can turn to open and close the gate. The gate is usually built out of a steel plate and reinforced metal frames that allow the gate to move up and down as one would turn the wheel. The gate regulates the flow of the water through a hole in the base of the structure as shown in figure 2.13.



Fig 2.15: Walkway leading to the weir (Clark, C. 2020).

2.3 TOWN & SITE IDENTIFICATION



INTRODUCTION

In 1939 during WWII a series of internment camps were constructed on the farm of Andalusia, today known as Jan Kempdorp. The farm served as a crucial junction for the British, whom South Africa had reached an agreement with, as it was it served as the connection between Gauteng province and the Durban shipping ports. The camps played host to mainly German and Italian prisoners that were captured in North Africa during the war period. There are however some references to South African individuals that were also housed in these camps as they were deemed to pose a threat to the South African governing system at the time. The surrounding area houses the military's 93 Ammo Depot, the largest ammo depot of South Africa at the time, forming a strong militarized town that was well connected to the rest of the country as it had its own airport, railway system and infrastructure to support it.

Fig 2.16: Analyzed Google Earth Map illustrating the region layout (Goolge Earth. 2021: online. Adapted by Author).

Fig 2.17: Conceptual illustration of Jan Kempdorp

RELAXATION & RECREATION

The town of Jan Kempdorp hosts various recreational activities (fig 2.18) such as the renowned golf course[1], filled with Spring-buck and the iconic thorn trees of the Northern Cape. Further more the town has various smaller recreational activities and places to visit, such as the towns history museum[2]. The museum is filled with artifacts, farming instruments, old tractors and etc.

The town also had their own railway museum[3] that displays the different trains and railway roads of the area as they were once used during the war times. Unfortunately this museum has closed and has been replaced with a driving school. The full scale trains however are still available to inspect, although being completely covered with graffiti work from the local community. With the influx of visitors and the dark tourism industry the edition of a new museum will fit the town"s economy well.

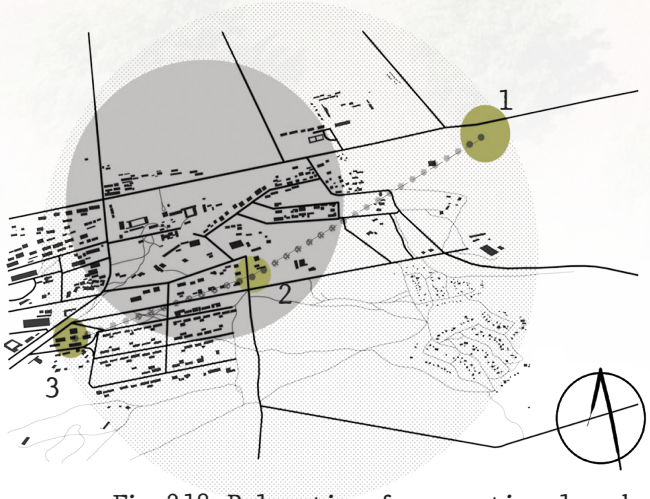


Fig 2.18: Relaxation & recreational nodes within JanKempdorp

EDUCATIONAL INSTITUTIONS

There are various educational institutions in the surrounding area (fig 2.19). Most of which are primary schools and 2 high schools[1]. There are college institutions[2], however, these institutions mainly focus on practical work that is related to farming and agricultural developments within the area. This is mainly because of the history and the economic environment of the region. The most relevant of these being the CVO school[3] that is currently located next to the site. The CVO school is currently inhabiting the old commander's headquarters of the interment camp that the design will be integrated into. The school will however not be touched, as new extensions and surrounding structures has already been erected on the site. This was able to be done by the local community as the site has not been acknowledged as a natural historic site. The design will however treat the site as an historic site and in agreement with the heritage regulations of South Africa.

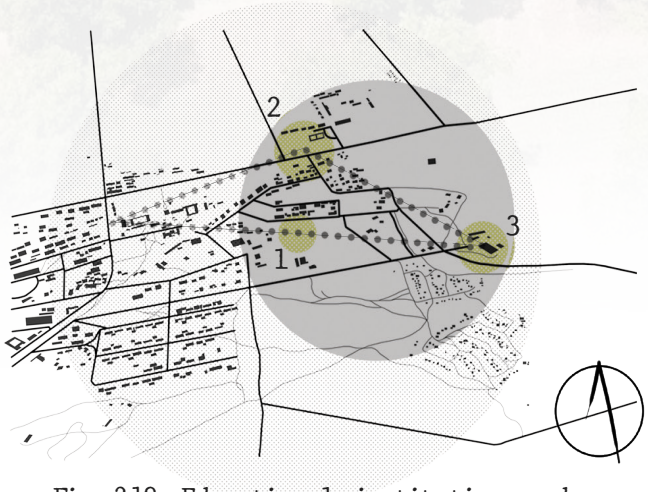


Fig 2.19: Educational institution nodes within JanKempdorp

THE INFORMAL SETTLEMENT

Currently towards the South-West of the site and the South-East of the town, a new informal settlement is staring to form (fig 2.20). The occupants of this settlement mainly consist out of the work force that supports the pecan and olive farms that make up approximately 80% of the local towns' economy. As the scheme continues to grow and expand, the influx of people that will flock towards the town will cause an inevitable growth in the footprint of the informal settlement. This will eventually cause a clash with the towns sprawl.

The new park scheme will aim to create a space for both the communities to enjoy and use as a communal gathering place. A place where the memory of the internment camp and the collective memory of the two communities can be acknowledged and expressed, in order to enliven and enrich the integration of the communities.

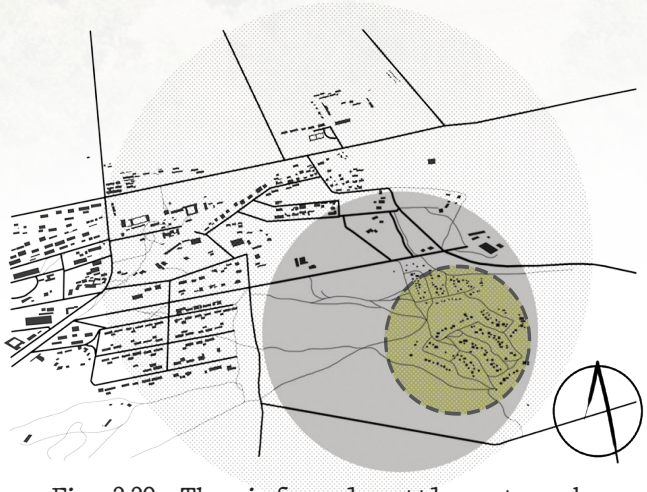


Fig 2.20: The informal settlement node next to JanKempdorp

2.4 THE INTERNMENT CAMP

During the war time in SA there were 3 internment camps in the surrounding area. One in Ganspan and two on the farm of Andalusia. Now known as Jan Kempdorp. The internment camp located to the North-East of the town and North of the informal settlement serves as the only remaining remnants of the three camp sites that was established in the area during the world war (fig 2.21). Focusing only on one of these camps, as it's the only one left, the camp outside of Jan Kempdorp was home to round about 2000 recorded German and Italian POW's. The specific camp was in use between 1939 and lasted until 1948 as there was no resources and transport available to transport the internees back to Italy and Germany when the war has passed. It is unclear as to how many housing units there were, but it is said that each living quarter unit consisted of 17 to 30 people living within each. These camps serve as a reminder of the atrocities that war has brought to our civilizations.

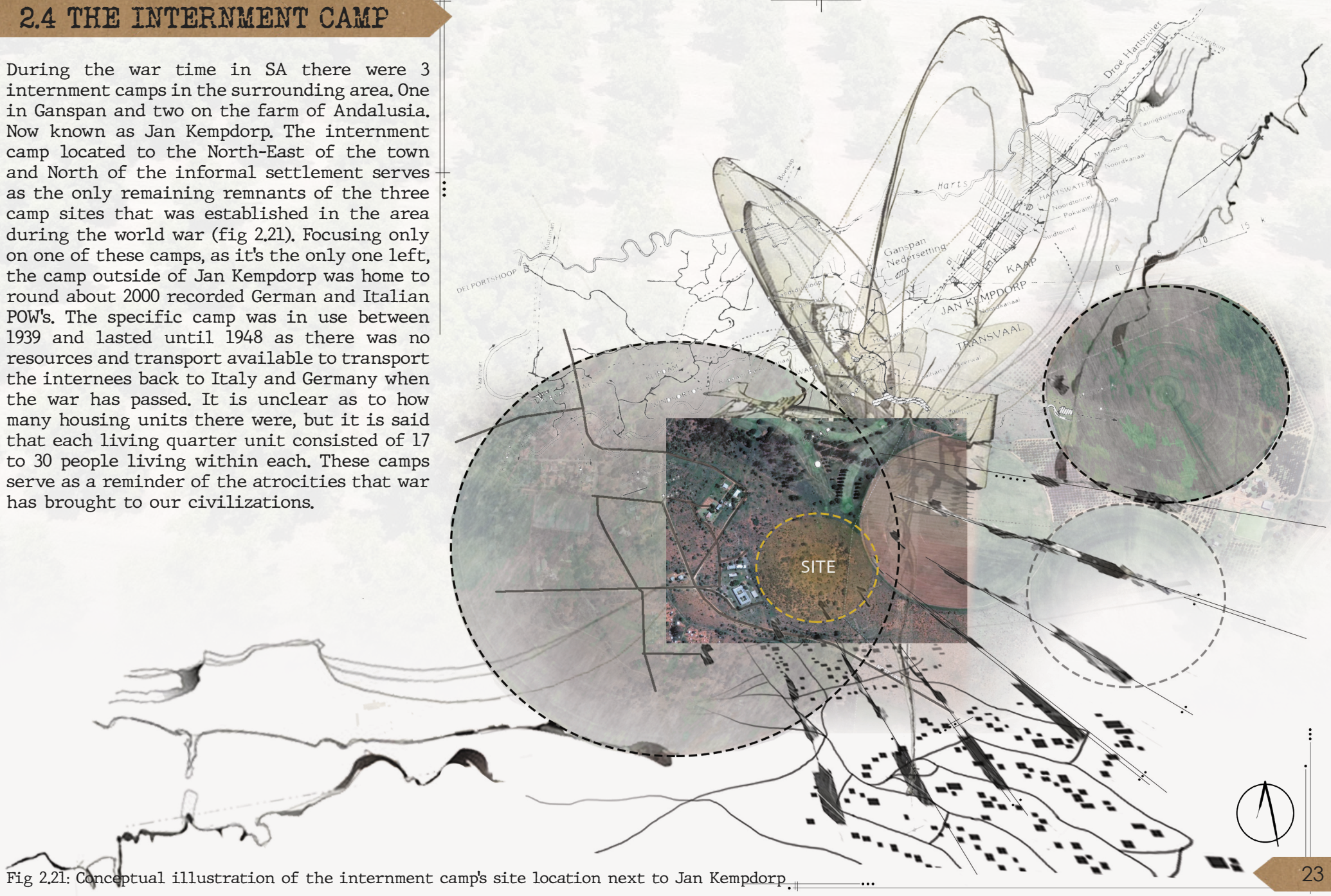


Fig 2.21: Conceptual illustration of the internment camp's site location next to Jan Kempdorp

Very little information is available on the camps' existence however, some ruins are still left on the site and serve as a reminder of what the camp used to be. The exact layout of these units are not known, but through the analysis of the previous camps, a general layout can be reconstructed with reasonable accuracy. The camp is said to have had two mess halls, each being able to house 1000 persons, and a school for the internees that they built themselves within the camp. The camp also had its own infirmary, hospital, pool and vegetable gardens. These functions were not provided by the guards, they were constructed by the internees out of local materials and consisted out of a sandstone base with a brick and metal structure erected on top of the base. With the edition of letters and notes written by the camps internees and guards, a set of drawings and memories can be gathered and imaginatively applied and stitched together to form a coherent image of what the camp looked like and what the spatial orientation would have been. The camp's borders has not been entered into and is currently a desolate and empty site that neither the town or the informal settlement has sprawled into. The only functional remnants of the camp, would be where the CVO school is currently located at as discussed earlier (fig 2.22 & 2.23).

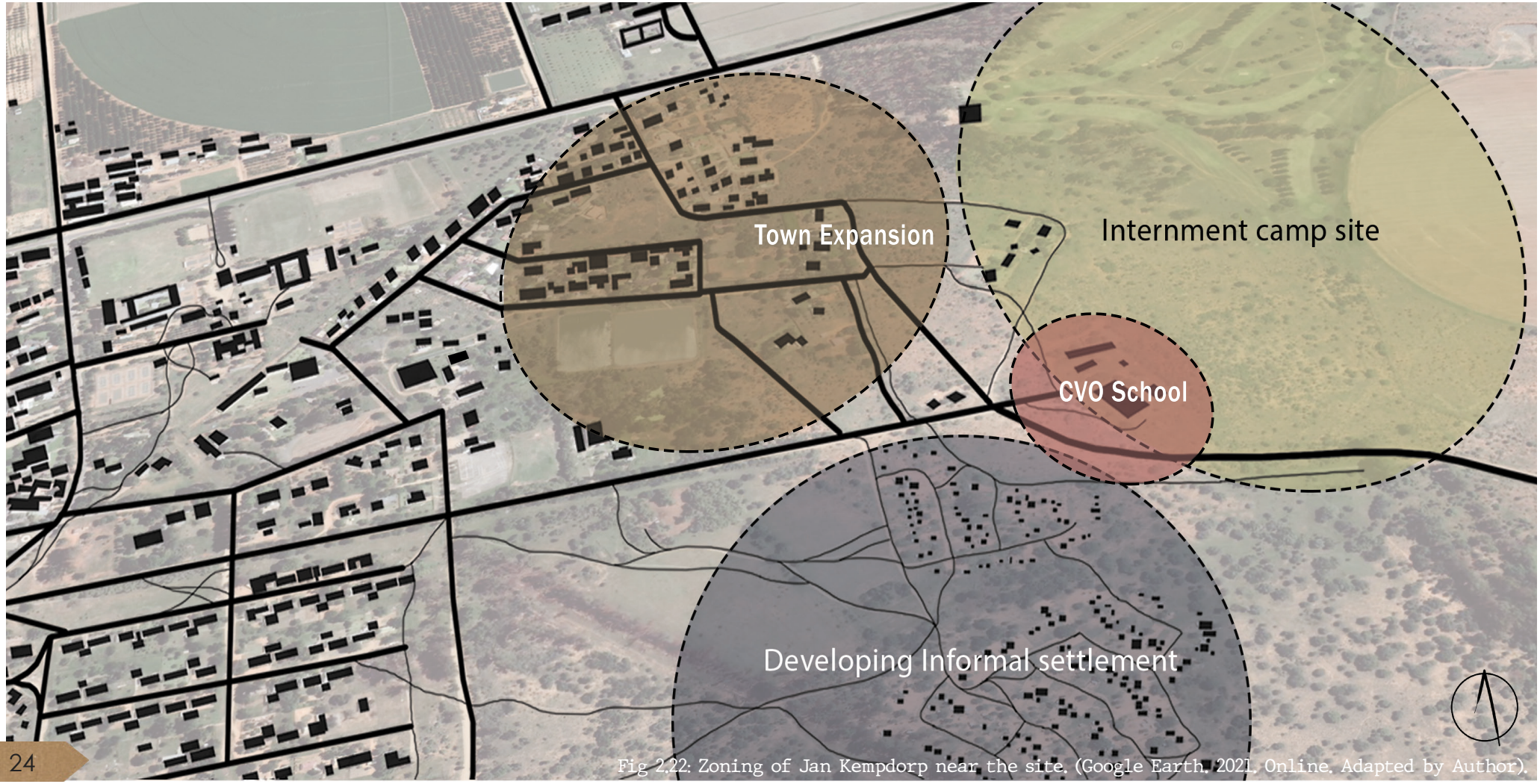


Fig 2.22: Zoning of Jan Kempdorp near the site. (Google Earth, 2021, Online, Adapted by Author).

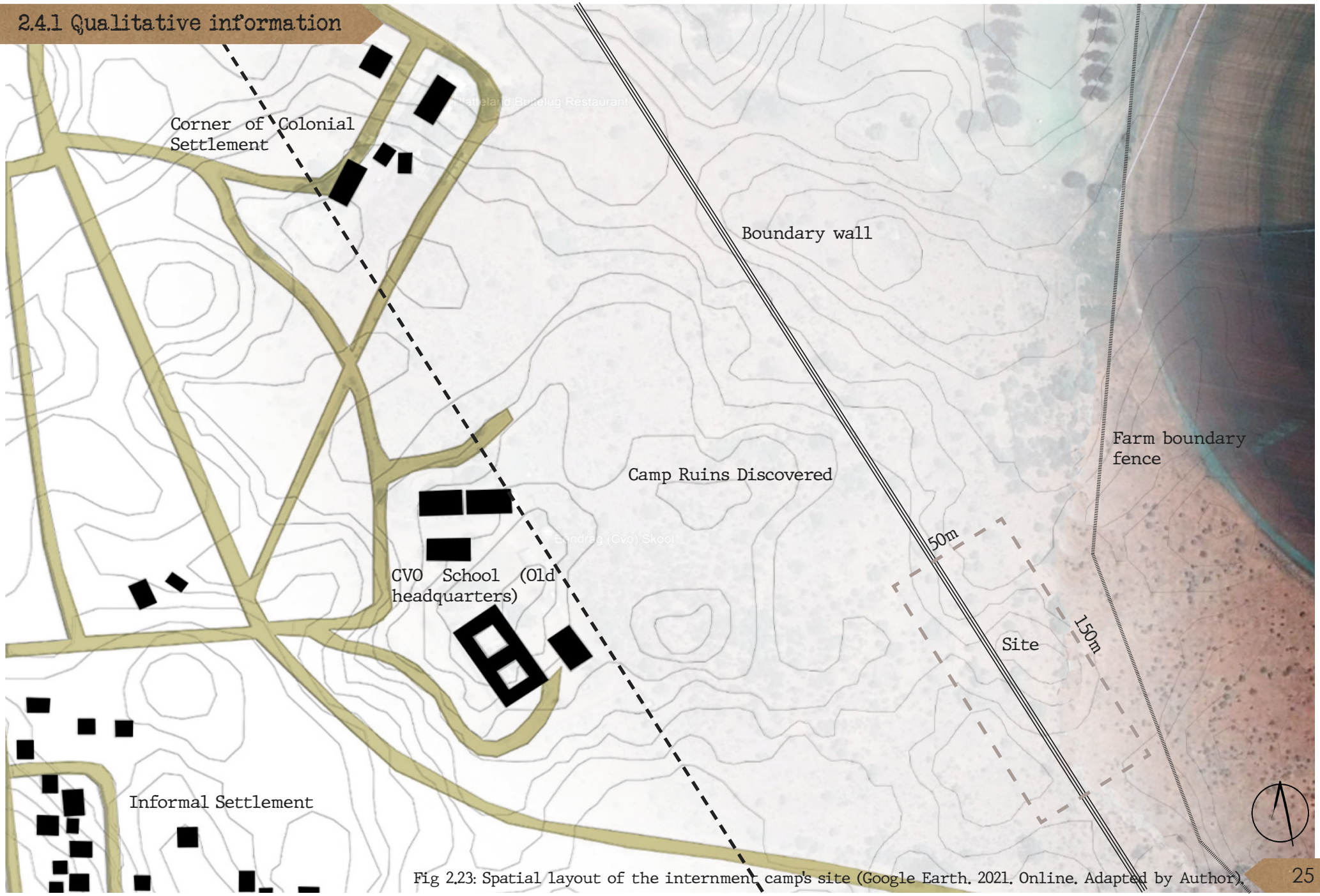


Fig 2.23: Spatial layout of the internment camp's site (Google Earth. 2021. Online. Adapted by Author).

Analyzing the site without yet knowing the full size and orientation of the camp, the first part of the site analysis is focused on the quantitative information that can be gather on the site as it is experienced today. Figure 2.24 -2.27 explain the site's zoning and access points that would later serve as the main entrances to the park.

Figure 2.28 and 2.29 explore the site as an extension of grass and rock planes that are surrounded by small koppies (fig 2.32; 2.38 & 2.39) that nestle the site in-between them but causes an overwhelming feeling of being exposed to the outside world as the site becomes somewhat of a theater stage.

Fig 2.30 serves as a section through the site as it is today, with loads of greenery and akasia trees that dominated the otherwise semi-flat landscape between the before mentioned koppies.

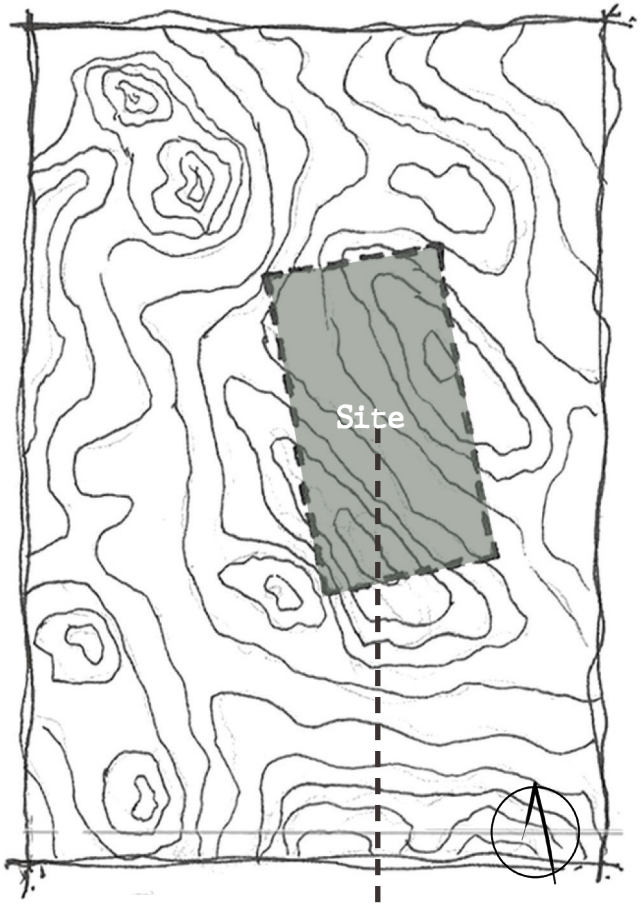


Fig 2.24: Site location on contours

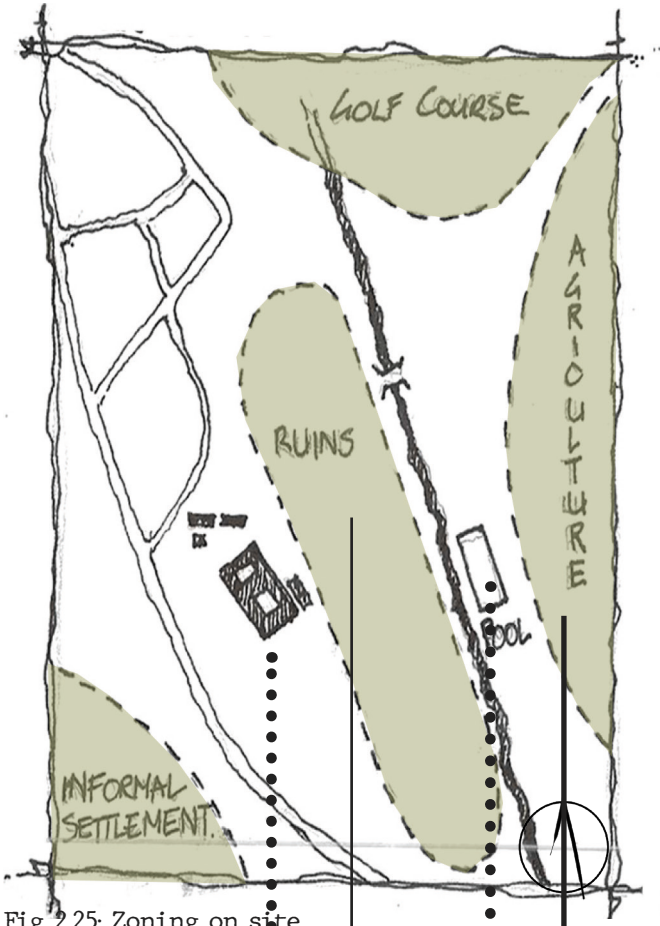
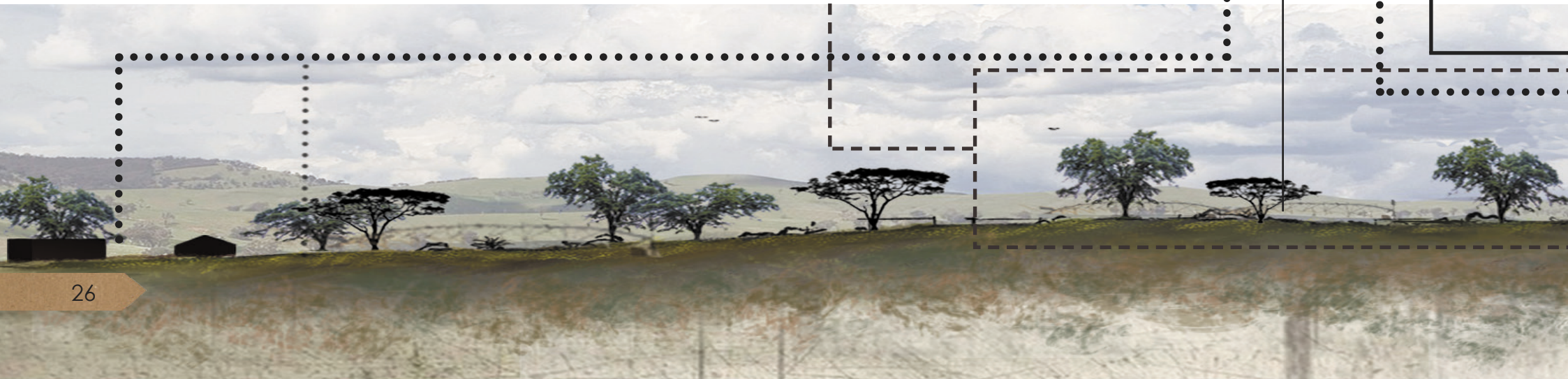


Fig 2.25: Zoning on site



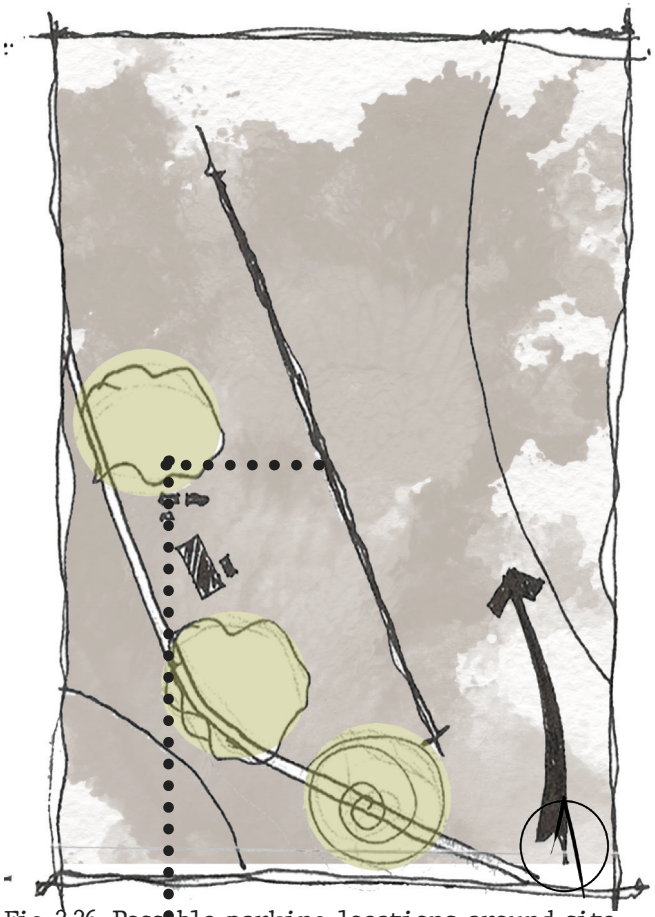


Fig 2.26: Possible parking locations around site

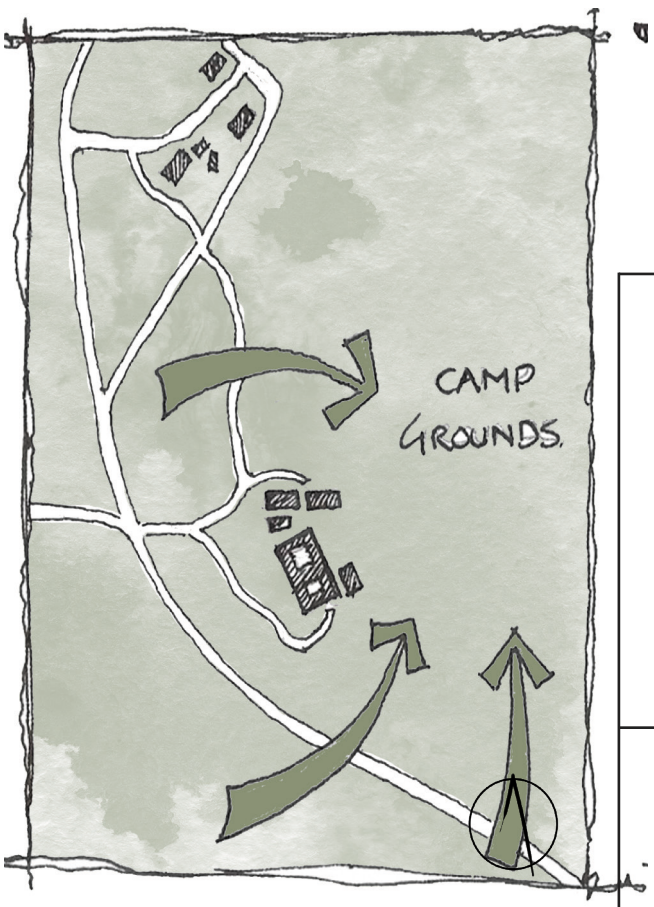


Fig 2.27: Entry points onto site

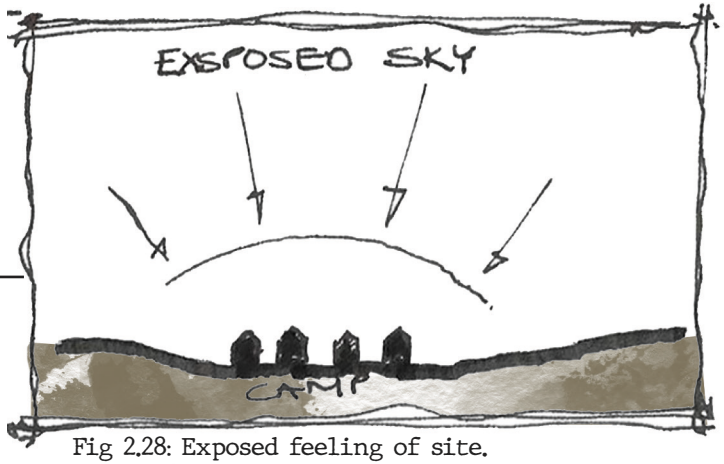


Fig 2.28: Exposed feeling of site.

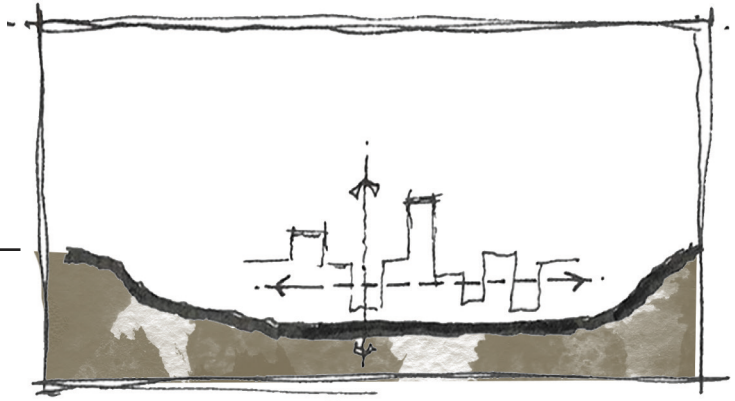


Fig 2.29: Site as a plane between two koppies



Fig 2.30: Illustrative site section (not to scale) showing site analysis nodes

Standing at what is assumed to be the main entrance of the camp. The CVO school's (fig2.31) architecture resembles that of the Cape Dutch era, with hand made gable structures and whitewashed walls. From this point on the site is imbued with various grids that make up the fabric of the landscape (fig 2.35) as the different grid of the modern and the historic separate the site into fragments. These fragments are further amplified by the various borders and boundaries (fig 2.36) that encapsulate the site and further segregate the surrounding bodies on site.

Figure 2.37 illustrates the massive pivot point systems that crawl over the landscape in circular forms as the irrigation systems expand in order to provide feed for livestock and serves as a large portion of the economy in the town as the factories that they come from are local and employ hundreds of workers.

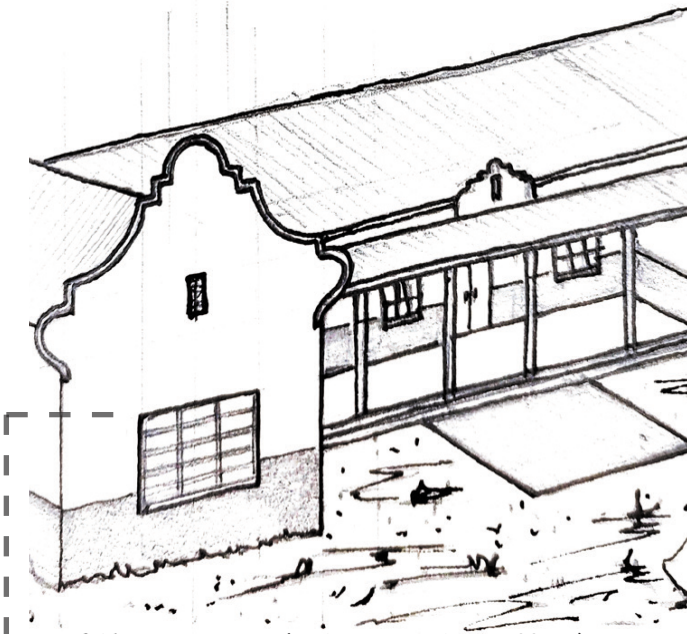


Fig 2.31: CVO School (old commanders office)

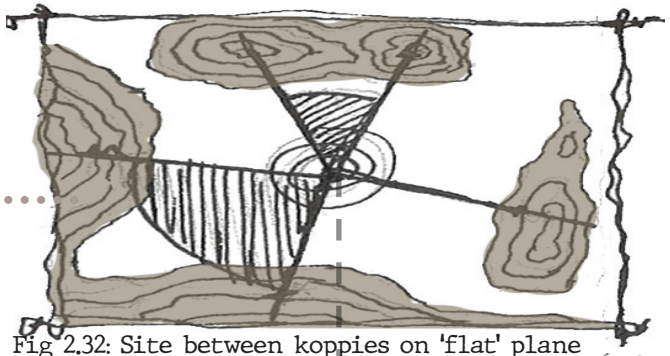


Fig 2.32: Site between koppies on 'flat' plane

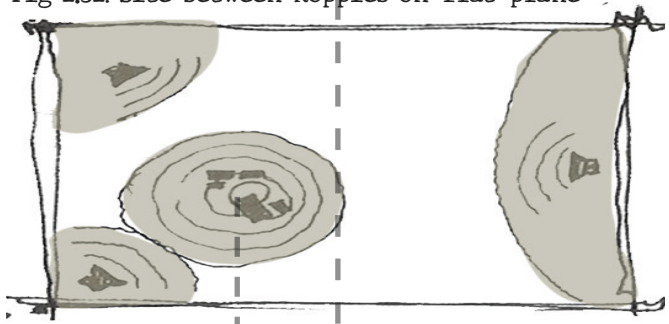


Fig 2.34: Noise factors around site

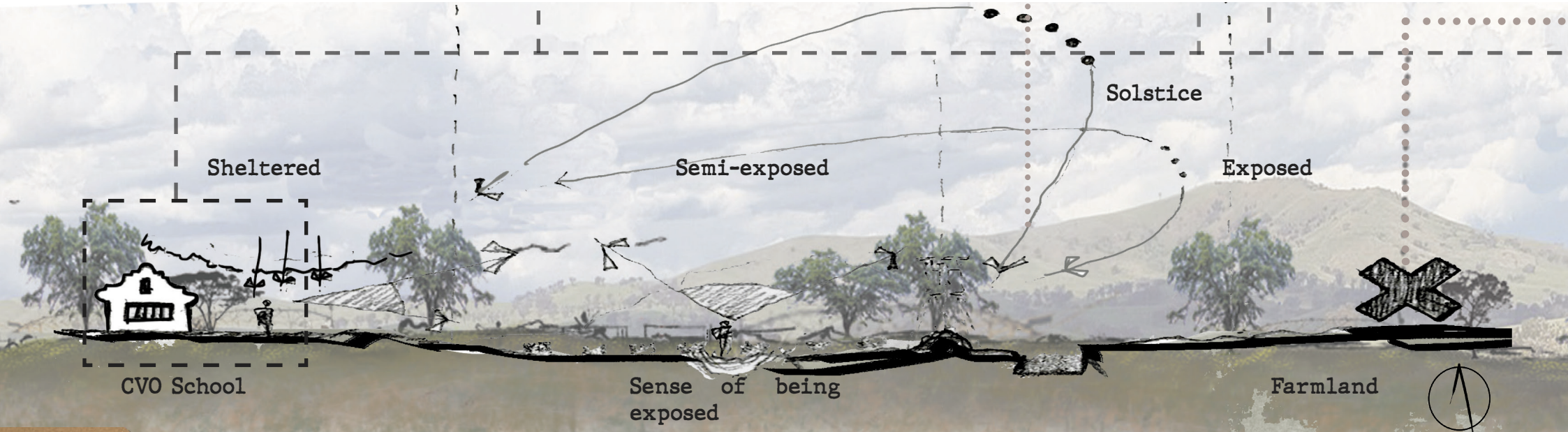


Fig 2.38: Illustrative site section (not to scale) showing solstice and general feeling on site

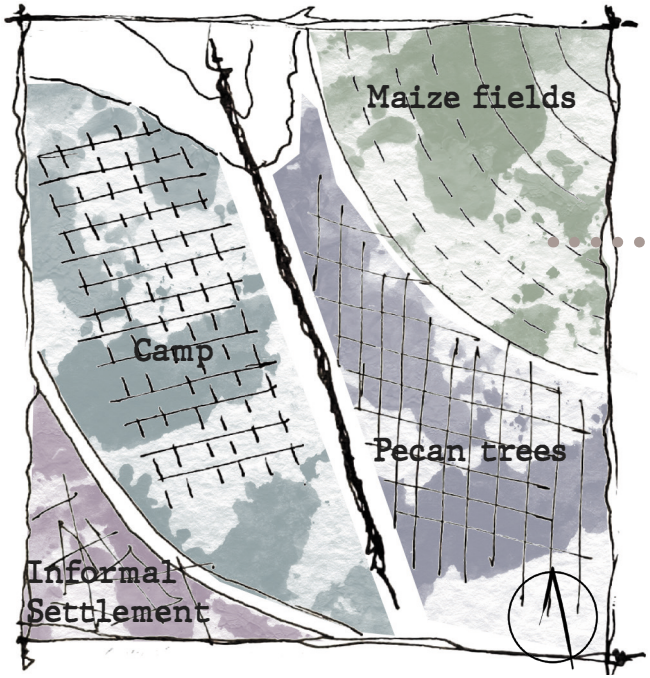


Fig 2.35: Existing grids formed on site



Fig 2.36: Boundaries and borders at the site

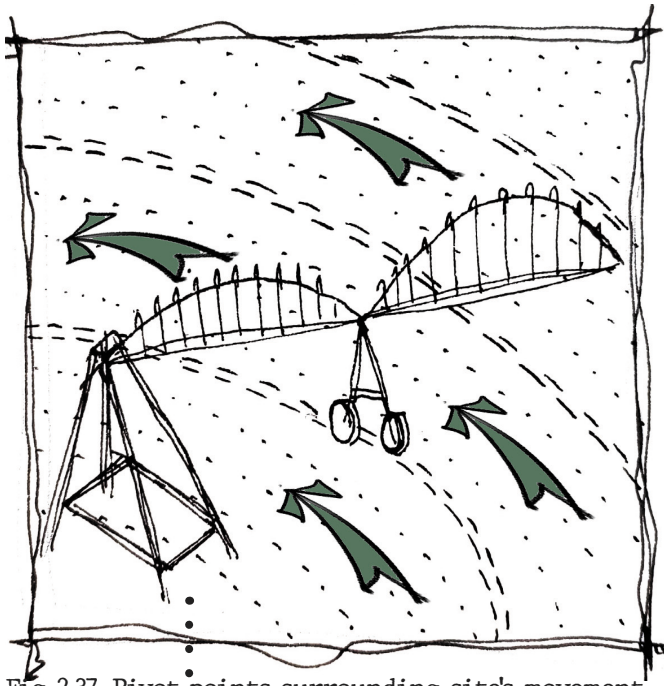


Fig 2.37: Pivot points surrounding site's movement

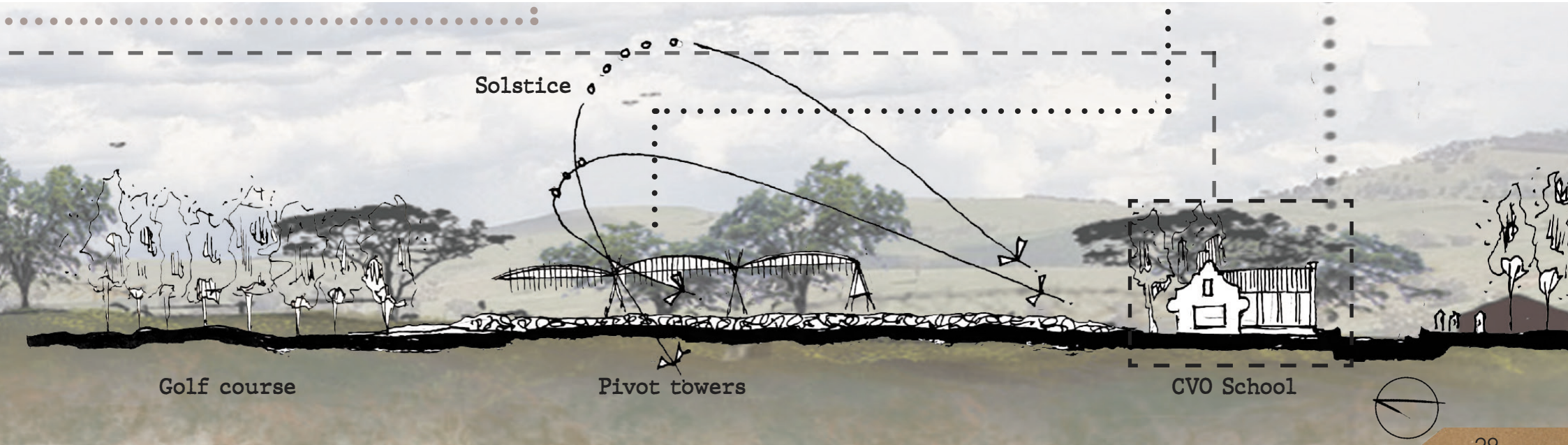


Fig 2.39: Illustrative site section (not to scale) showing site analysis nodes and solstice

2.4.2 MATERIALS AND TEXTURES

Similar to that of the Zonderwater camp, the materials used in the Andalusia camp reflects the nature of the surroundings and the materials that were predominantly available. There are however a couple of differences to the materials that has survived the decay of time.
Charcoal (fig 141) was found spread across long distances and according to the letter this was used for creating borders along the camp as well as on the roll call areas. The construction methods of this camp seem to be a bit more advanced than that of the Manzanar camp in regards to prisoner constructed sections of the buildings as there is evidence to suggest that reinforced concrete and pebble dash (fig 143 & 147) finishes were used in conjunction with wire mesh (fig 146). No evidence could be found towards the structure of the living units however, having the same shape to that of the Manzanar camp (fig 1.22), for the purposes of this dissertation it will be assumed to be a similar wooden structure as shown in fig 1.26.



Fig 240: Ruins of old swimming pool





Fig 241: Charcoal spots





Fig 242: Woods next to camp

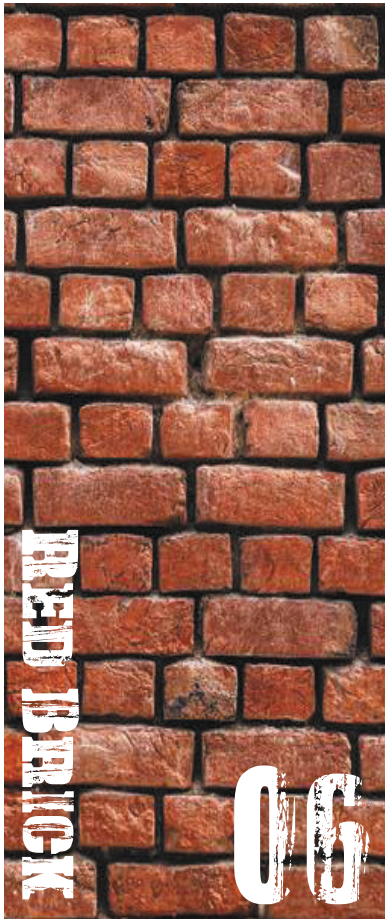




Fig 243: Steel rod in wall

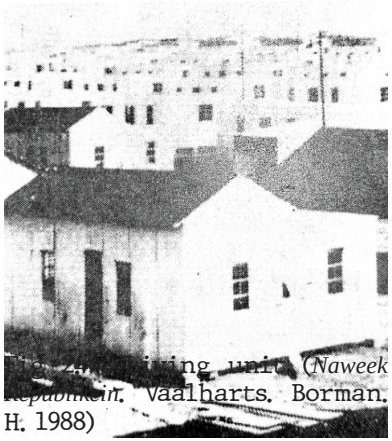












...ing unit. (*Naweek Republiekfeir*. Vaalharts. Borman. H. 1988)



Fig 245: Casket built in camp



Fig 246: Wire mesh and redbrick wall in camp



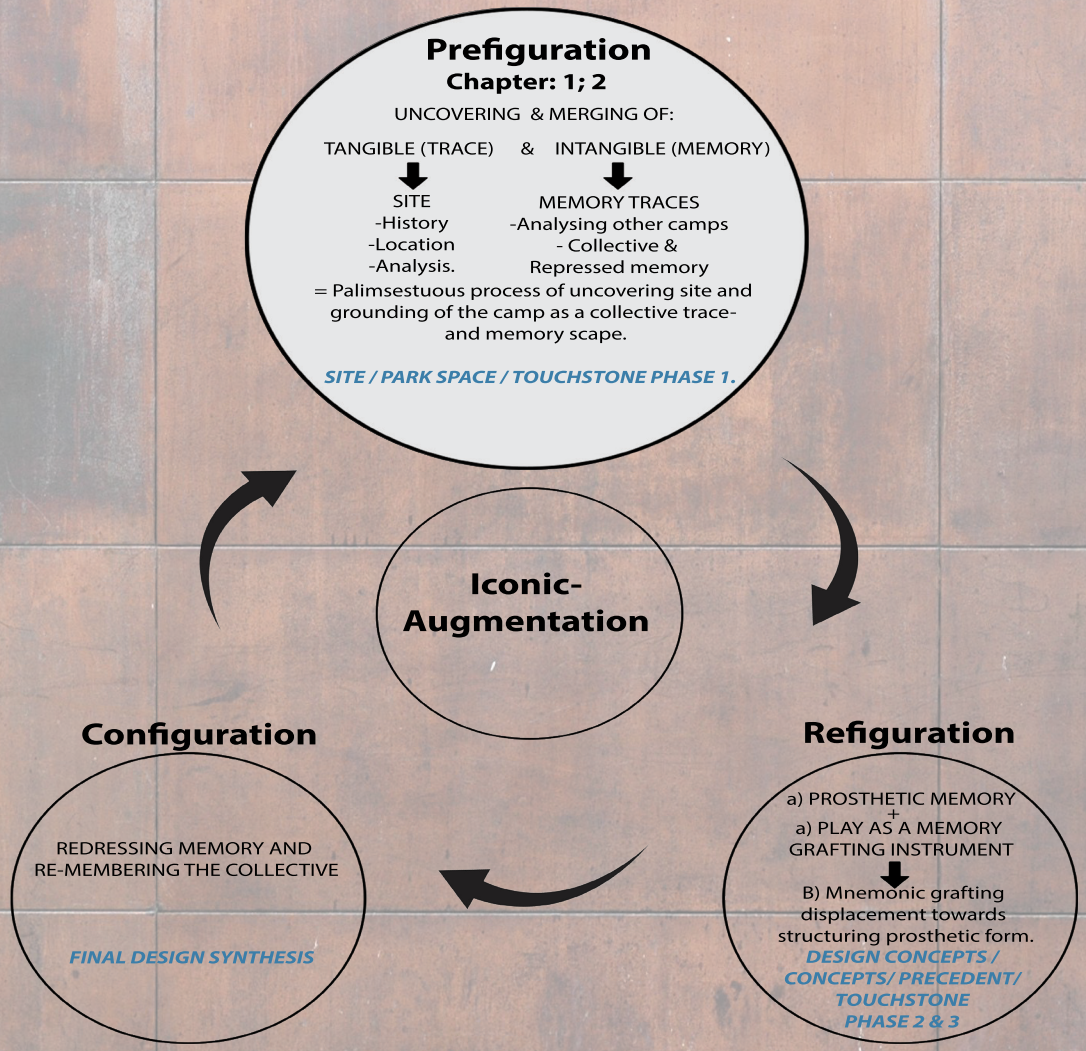
Fig 247: Unknown ruin left in camp



Fig 247: Unknown ruin left in camp

2.5 INTERMENT CAMP MAPPING & MEMORIALIZATION

Forming the start of the theoretical discourse, the following part of this dissertation aims to propose the design of a memorial park where the communities surrounding the site can come to acknowledge the history of the site as well as their own collectives by facilitating the start of the re-figurative process from the prefigured conditions of the site's repressed state and reintegrating it into the communities. By exploring collective memories and the influence of memorials on the collectives that are bonded to them, the design of the park will aim to re-establish the site as a collective of its own and unearthing the repressed memory through a palimpsestuous process on the site in an effort to act as a blurring device to the camp's current borders.



2.5.1 COLLECTIVE MEMORY & THE MEMORIAL

Collective memory, was coined by the French sociologist Maurice Halbwachs. He emphasized the endurance of memory only through the frameworks & space provided by social groups. This alludes to the notion that memory is a socially embedded construct that can only organize itself within a specific social construct or arrangement. Memorials act as the connecting tissue of collective memories and or constructs (fig 248). Memorials, if engaged with as a form of trace, brings forth a remembrance of a certain collective, and so memorials ask for a certain degree of communal participation if they are to evoke emotion from the participant. The interaction from the individual observer however allows for the collective to become the personal, and for a brief moment allows for the act of re-memory to resonate on an individual and personal level. In doing so the material, images or film that is consumed becomes an externalization of the collective and individual memory. This in turn supports the imaginative reconstruction of the past & help to construct a new personal identity within the individual participant (fig 249). However, this process is countered in the form of repressed memory.

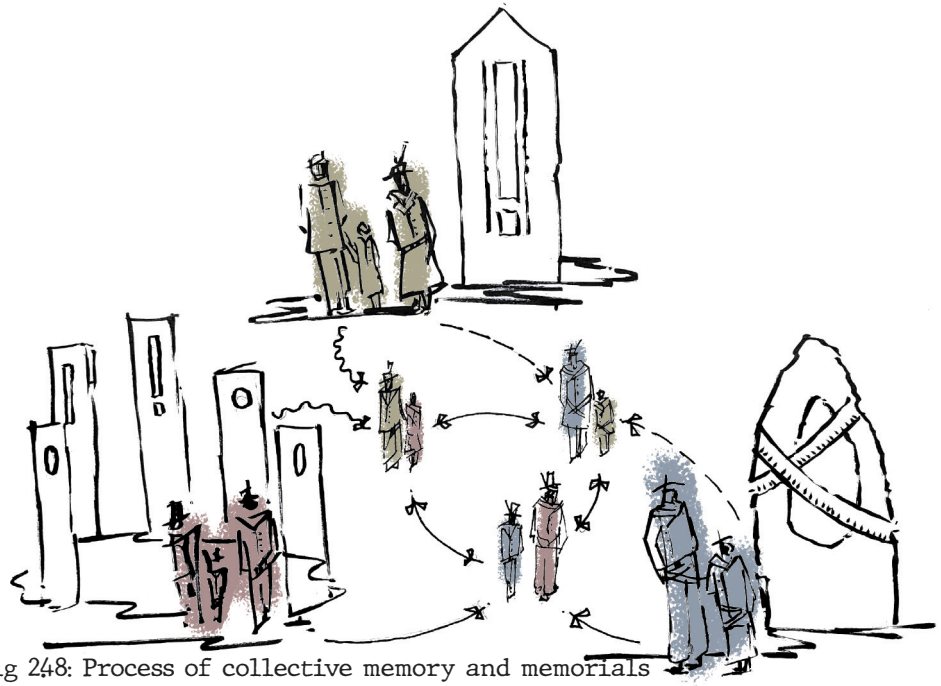


Fig 248: Process of collective memory and memorials

Repressed memories are memory fragments that we unconsciously avoid thinking about, usually because of traumatic events or experiences. The concept was developed by Sigmund Freud, a psychoanalytic scholar, who was influenced by a hypnotist Jean-Martin Charot Late 19th Century (Hanson-Baiden, 2021). Clinicians claim that these memories are a type of defense mechanism developed after a traumatic event. As the mind unconsciously hide the memory of the experience from the conscious awareness. As the memory is repressed, the individual loses the ability to recollect the experience that triggered the defense mechanism and they often forget that they have been traumatized. The effects of repressed memory have both a psychological and physical impact on the effected being leading to a change in identity and an altered lived experience as the being is slowly caused to stagnate in a certain time period. In viewing the site as a repressed memory state, the previously mentioned rings true as the site has been laying dormant ever since the camp's erasure and suffers a lack of identity as the surrounding communities has seemed to push it aside due to the fact that the collective states of the communities and that of the site are not currently able to re-figure and in so doing reintegrate with each other.

A study by Xanthi Tsiftsi suggests that we could also relive 'the architecture of lived lives' of prisoners if the camp was adapted to a museum of sorts. According to Tsiftsi, "when narrative is transmediated from a discourse to architecture, the past is not simply unfolded in front of the 'reader': it is there to be lived directly and viscerally (X. Tsiftsi, 2017). She recognizes 'evoking empathy' through small narratives as a factor that 'fills the gap' by affirming difference and connectedness and thus allowing for the re-enactment of a past experience. However, Pallasmaa explores the idea that 'good architecture invites and compels multi-sensory experiences and ways of moving and acting that can be felt in a bodily way by the appreciator.

Striving to combine the arguments of Tsiftsi and Pallasmaa the design of the memorial camp aims to incorporate a route through the site that binds the scattered ruins through the narratives told by the guards and the prisoners of the internment camp. Enabling the contemporary dweller to relive and re-enact the experiences of the camp's occupants without being a part of the historic event.

2.5.2 REPRESSED MEMORY AND THE PALIMPSESTUOUS UNCOVERING OF A COLLECTIVE BODY

Having little information on the camp and its layout other than that of a drawing drawn from memory (fig 49), the final site ordering is reliant upon the assemblage of the factual (the ruin) and that which is drawn from the memory of an experience to create a layering of information that reveal the most truthful about the camp and its topological ordering. Through using a palimpsestuous process the following part of the dissertation will aim to create an inhabitable memory scape where the new dweller can experience the history of a collective as they enter onto site.

The palimpsest metaphor explains how the earth surface works similarly to that of a parchment sheet: one that is full of inscriptions and traces left behind by society and construction, some are erased, others maintained or reconstructed with the latter becoming somewhat monumental within their surroundings in the sense that they speak both to the historical and the present.

Aldo Rossi was interested in the archaeological aspects of cities and how their monuments played on the collective memory of the city, place and inhabitants. In The Architecture of the City, Rossi stressed the importance of monuments as a notice of "a past that we are still experiencing" (ref). He argues that "with time the city grows upon itself; it acquires a consciousness and memory" and that this leads to a collective memory as more and more monuments are uncovered. Architecture is therefore not only a narrator of the past, but it also has the ability to stimulate ones memory.

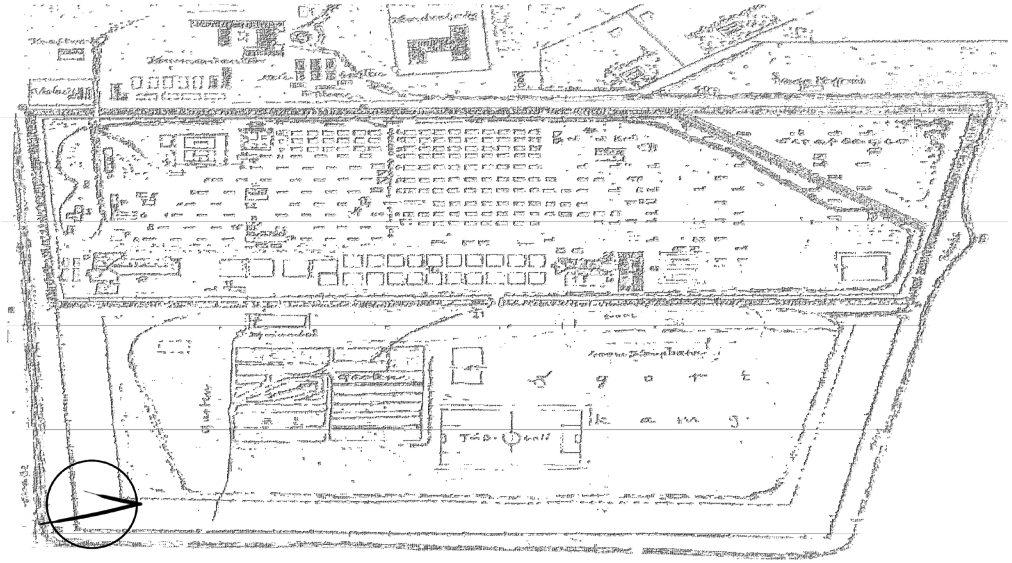


Fig 249: Map drawn from prisoners memory (unknown).



Fig 2.50: Ruin 1 found on site.



Fig 2.51: Ruin 2 found on site.



Fig 2.52: Ruin 3 found on site.

Reading the landscape of site as a palimpsest, encourages the inquisitor to look at the smaller things and situations related to the various histories encapsulated within. The current state of the site can be classified as a ruin-scape where pieces of a whole lay scattered across the landscape, serving as a remembrance of the forgotten POW camps that imprisoned so many during WWII. The landscape of the site is marked by a continuous scraping and remaking of land, that is constantly changing and affected by the local activities (fig2.53). Inquiring into this process, variable elements of trace can be uncovered through the layering of aerial photographs captured of the site from 2002 until 2021 (fig 2.54; 2.55).

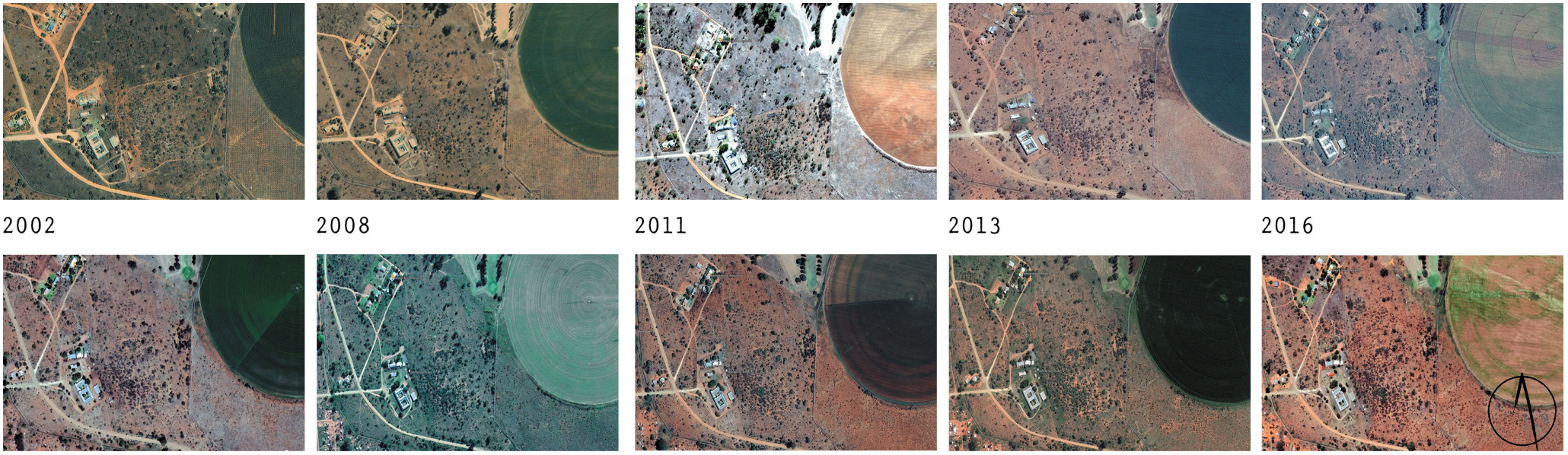


Fig 2.53: Composition of Google Earth images showing changes in landscape from 2002 until 2021 (Google Earth. 2021: Online. Adapted by author).

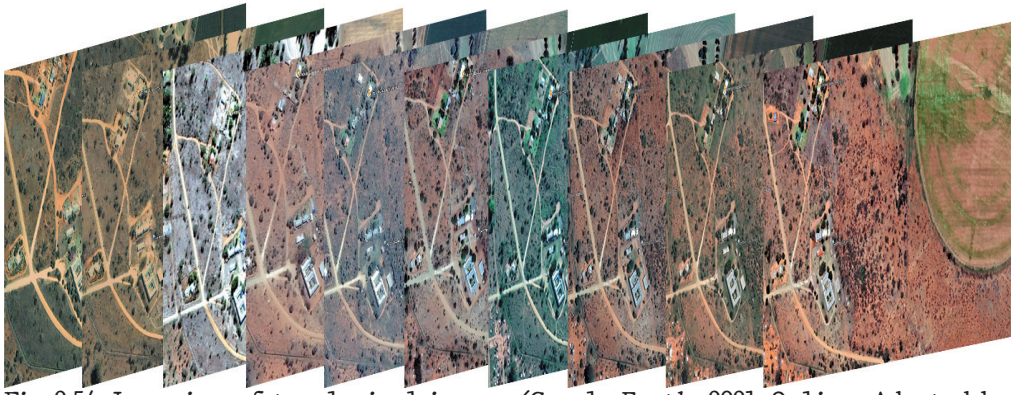


Fig 2.54: Layering of topological images (Google Earth. 2021: Online. Adapted by author).

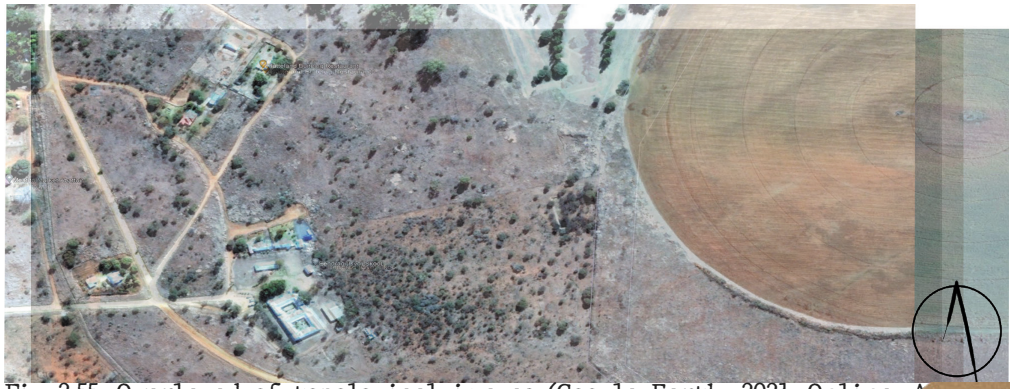


Fig 2.55: Overlayed of topological images (Google Earth. 2021: Online. Adapted by author).

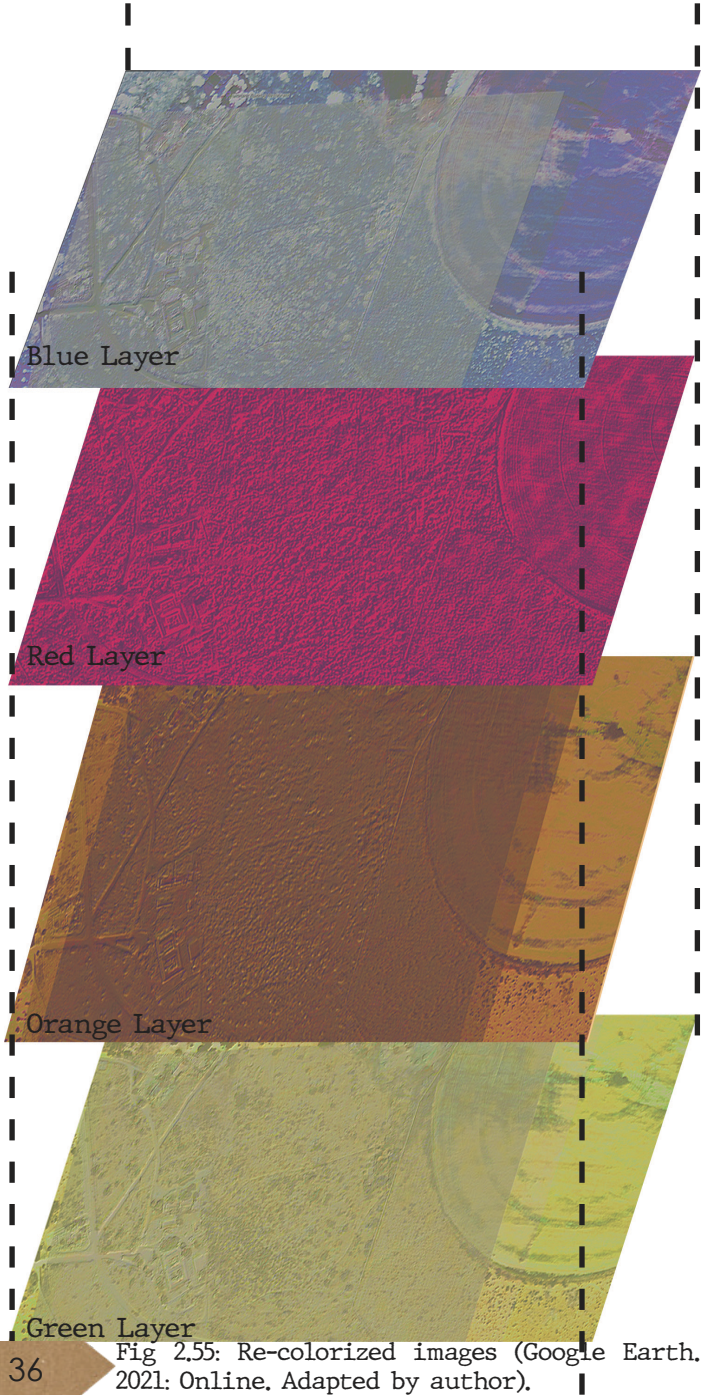


Fig 2.55: Re-colorized images (Google Earth. 2021: Online. Adapted by author).

The final overlayed composition of these images are then enhanced and re-colorized (fig 2.55) in order to bring forth a depth map op the site that provides a clearer image of the traces left on site. Fig 2.56 shows the final image of the site after the depth map has been applied to it. From the image it becomes more clear as to where ruin might be encountered on site and serve as an aid to the process of later designing a route through the site that the park dweller can walk as they stitch together the narratives of the camp's occupants. These elements of trace, however also uncovers the topological ordering of the camp as the uncovered traces can now be overlayed by the drawing of the prisoner (fig 249) in order to form a complete trace-drawing of the camp (fig 2.57). Overlaying the trace-drawing, recovers the previously repressed traces as they are now able to be grounded onto site (fig 2.58; 2.59) and begin to grant the community a past which is reconcilable as the ruins have now been given back their collective identity within the existing social structures.



Fig 2.56: Where to encounter ruin on site (Google Earth. 2021: Online. Adapted by author).

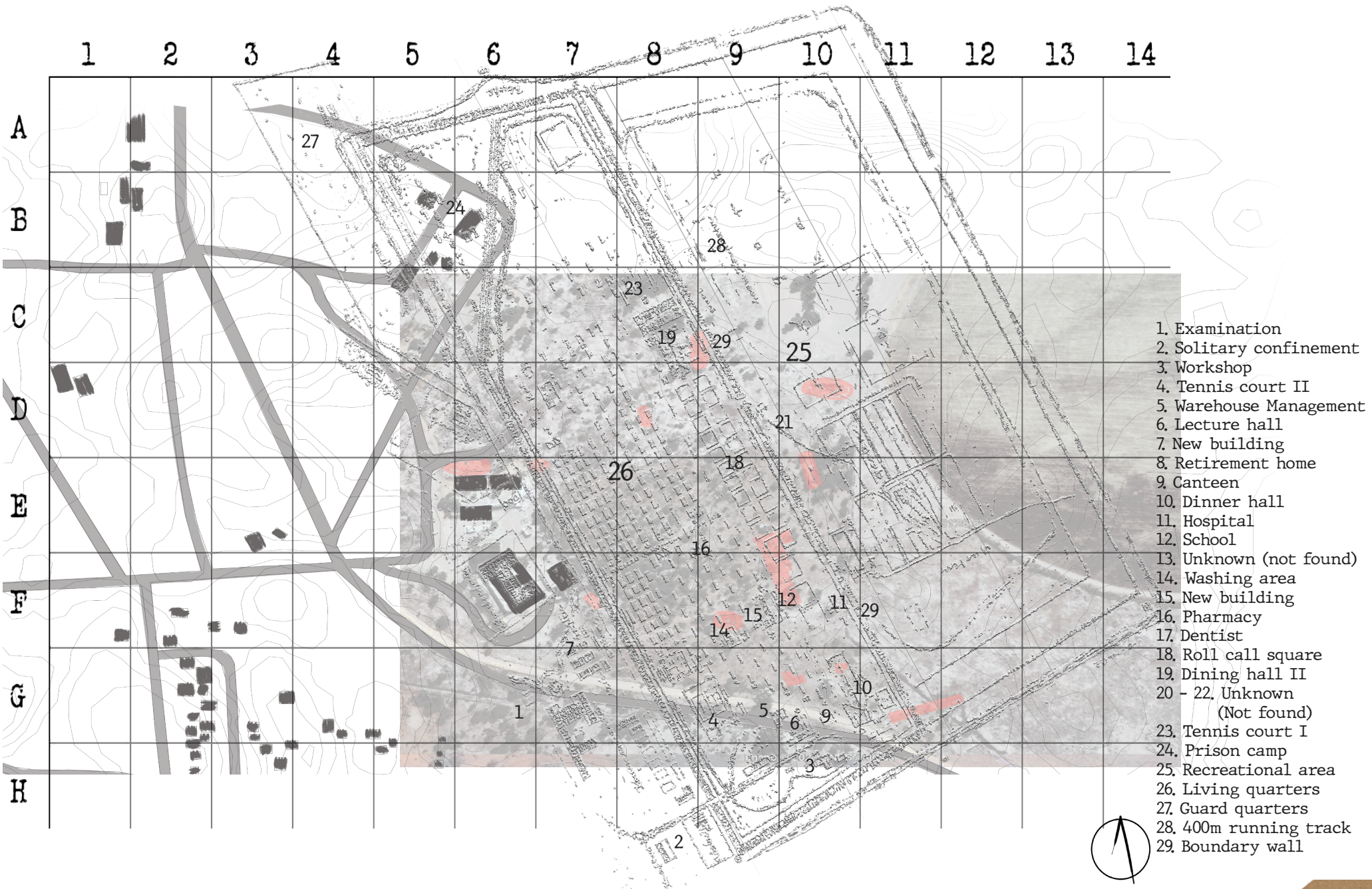
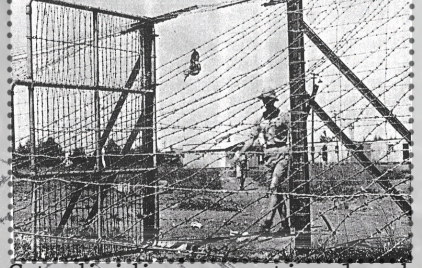


Fig 2.57: Complete trace-map of the camp (not to scale).





Gate dividing recreational and living units. (*Naweek Republikein. Vaalharts.* Borman. H. 1988)

G olf Range

Farmland





Main Bungalows & Prisoner camp

Sport/recreation facilities

Section

NORTH WEST



Living unit (*Naweek Republikein.Vaalharts.* Borman. H. 1988)



Residential edges

New School

Private property

Fig 2.58: The repressed ruin can now be placed on site and identified.

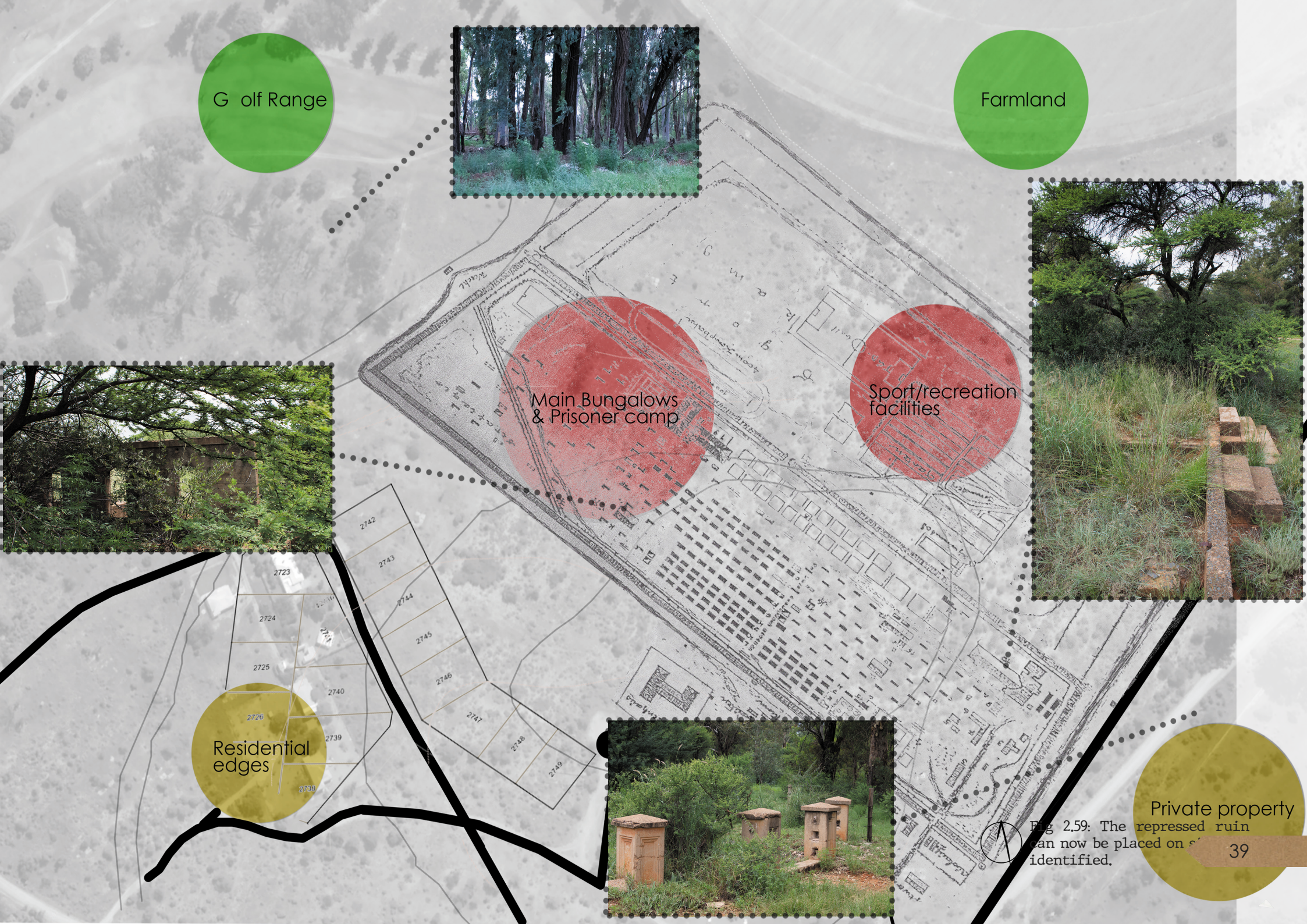


Fig 2.59: The repressed ruin can now be placed on s identified.

2.6 DESIGN CONCEPTS

2.6.1 INTRODUCTION

Through the process of the touchstone (fig 1.1 p.9), three ideas were extracted and will be investigated as a means to resolve this dissertations aims.

The incorporation of the three ideas aims to facilitate the design of a memorial park and an internment camp museum at the forgotten POW camp near Jan Kempdorp in order to pay homage to the prisoners and guards that was bound to the camp.

The three design concepts include:

1. Residual traces
2. Recollection and re-enactment
3. The 'Keeping'

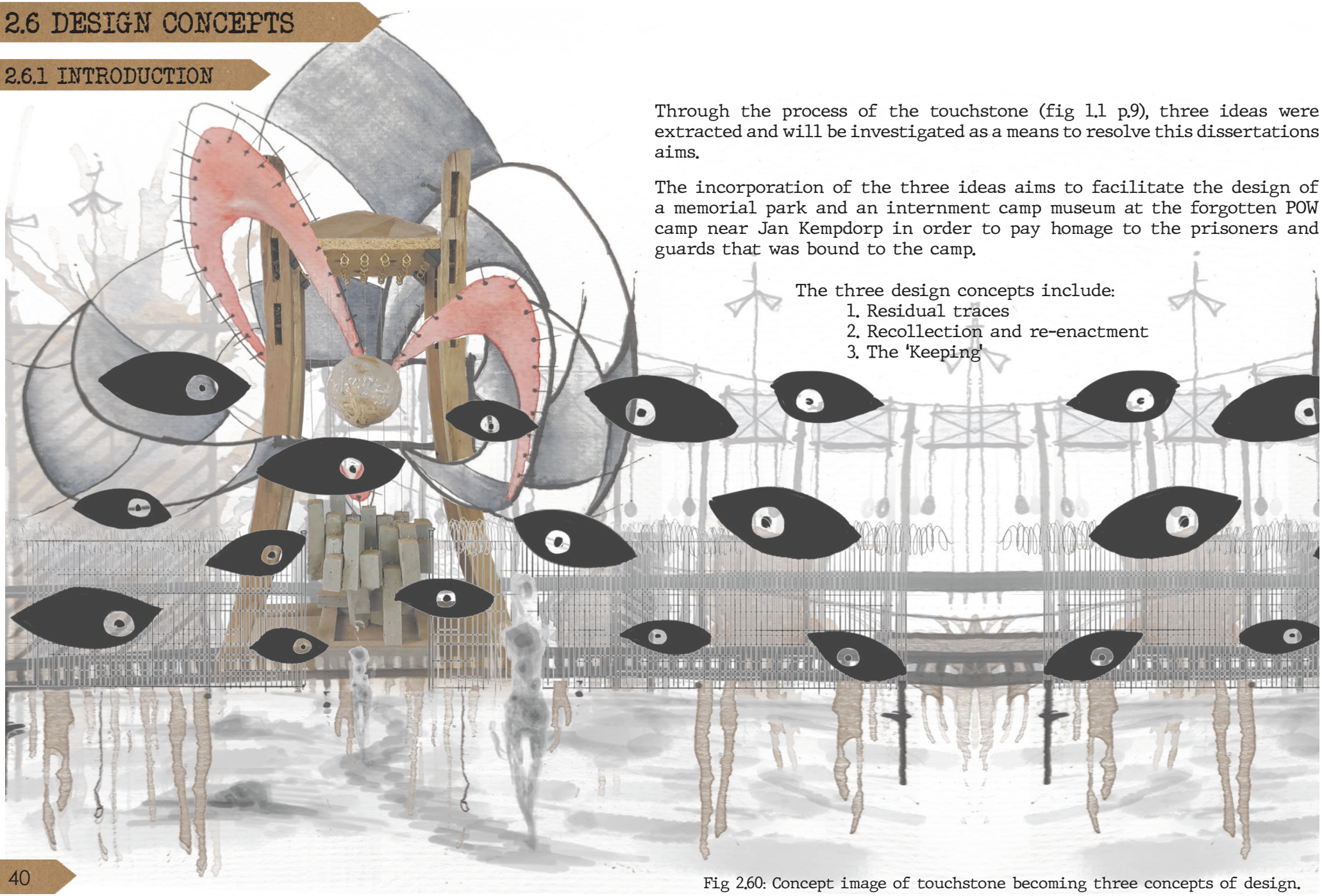


Fig 2.60: Concept image of touchstone becoming three concepts of design.

2.6.2 RESIDUAL TRACES

The concept aims to facilitate the start of the recollection process of memory, by means of factual information gathered from the site. The concept portrays the separation between the two sides of the ruins found on site, as a rock wall divides the living quarters and the 'recreational' sport grounds.

To honor the Italian and German nationality the model takes the form of a suspended bridge that spans across the rock wall and transforms into an array of tensile structures that interacts with the bridge through tensioned wires and weights that keep it integrated.

Being suspended the bridge embodies a metaphor, a suspended structure that is comprised out of the memory that the site holds. A bridge that connects the past and the future, acting as a path creator and a way finder for the beings that dwell within the in-between of this metaphor.

The wire frame running through the structure represents the tunnels and attempts at escape that the individuals underwent while held captive as well as the barbed wire fences that surrounded the camp. Effectively as in the case of the weights, restraining and ensnaring the camp's victims.

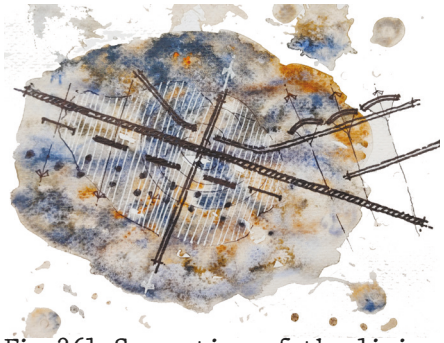


Fig 2.61: Separation of the living quarter's grid and the recreational through the boundary wall

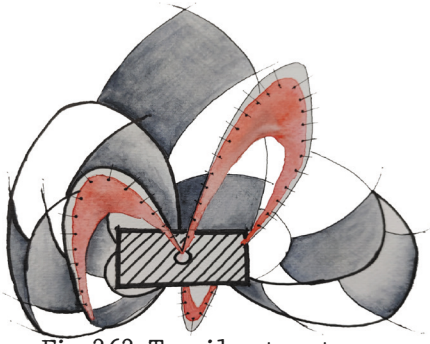


Fig 2.62: Tensile structures splurging from the 'Keeping'

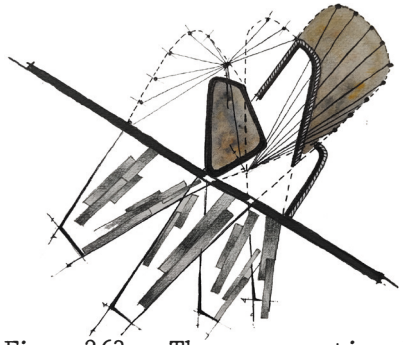


Fig 2.63: The recreational interacting with the grid of the living quarters

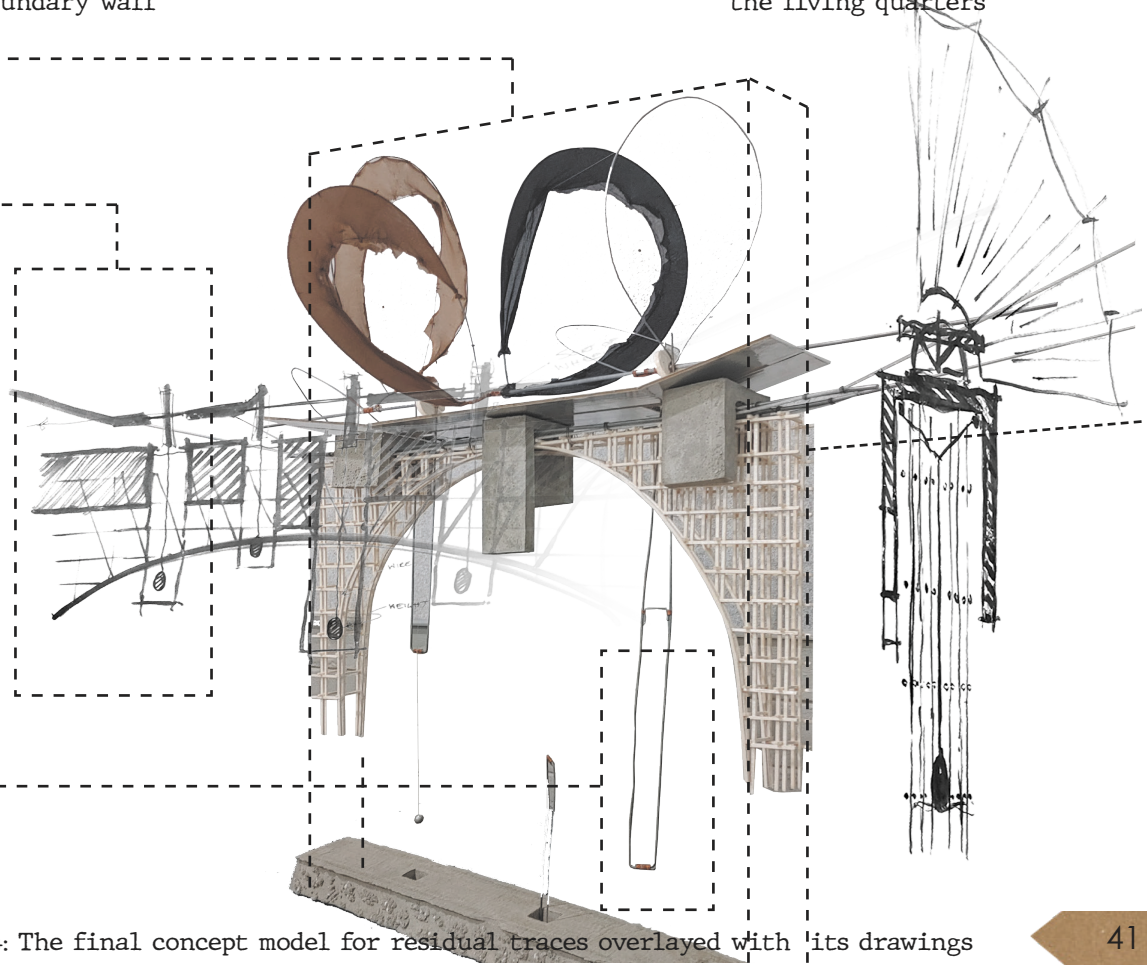


Fig 2.64: The final concept model for residual traces overlayed with its drawings

2.6.3 RECOLLECTION & RE-ENACTMENT

Once the recollection process has been set in motion the concept aims to incorporate the act of recollection and re-enactment as a means to enliven the memory held captive within the landscape. By de-constructing the process and movement of a pivot point, the model aims to form a linear path towards the equilibrium between imagination and fact in the form of a memorialized memory. This allows the dweller to, unlike a pivot point, experience an alternate sense scape with a non territorial boundary whilst still being able to interact and be held within the memory of the existing.

The concept urges the imagination to form structures that expand and form new views as the dweller progresses from the heavy stereotomic monument along the path created by the concept. Moving through the tensile view ports and reaching the edge of a next era. An era where the follies fades away and site is left as a method of giving back to the community.

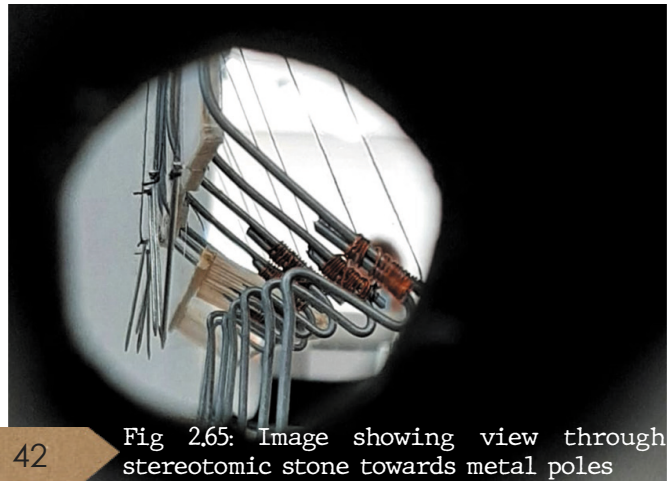


Fig 2.65: Image showing view through stereotomic stone towards metal poles

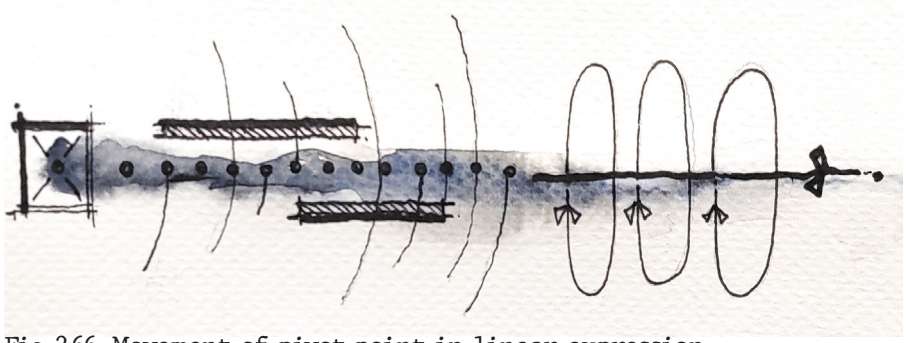


Fig 2.66: Movement of pivot point in linear expression

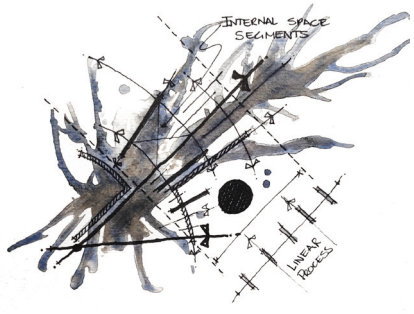


Fig 2.67: Pivot point movement

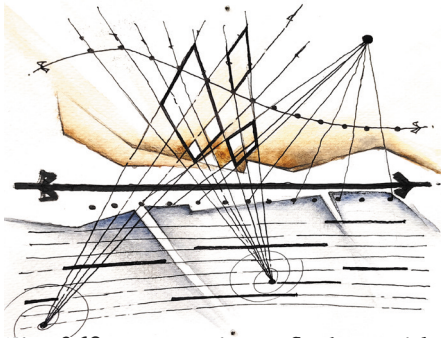


Fig 2.68: Expression of the grids exploring across the territorial boundary

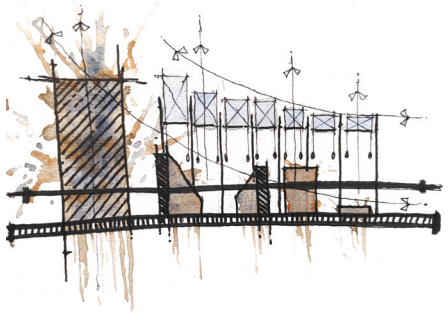


Fig 2.69: Extraction from pivot point's linear extrusion as a path to a new era

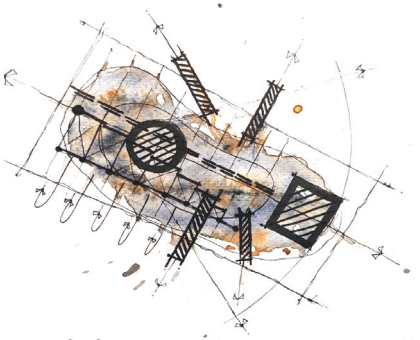


Fig 2.70: Walls being captured between two poles as pivots interpose each other

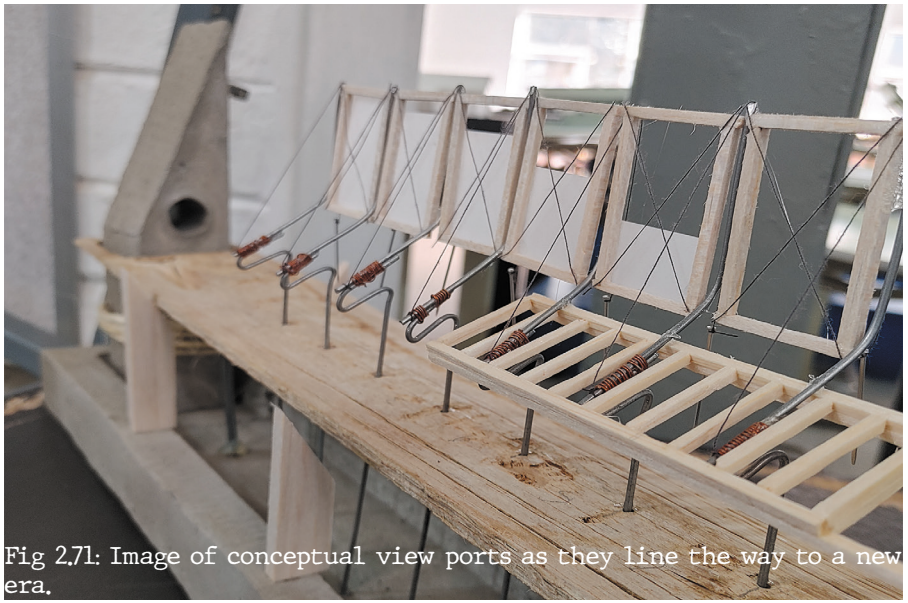


Fig 2.71: Image of conceptual view ports as they line the way to a new era.

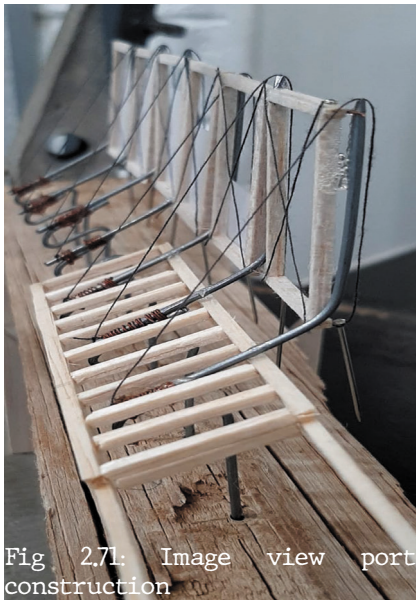


Fig 2.71: Image view port construction

2.6.4 THE 'KEEPING'

The keeping as referred to by Heidegger (a space of all thought) is represented as a flowing and ever-changing form that interweaves itself within the existing grid laid out on site. The grid was derived from the foundation walls that can still be found on site and resembles the graves of the fallen beings. By representing each of the foundation structures as a memory or a grave stone, the keeping collects all memories as it spills over the spaces and fills the grid as it grows and grows. The wood and concrete surface bed represent the site and the mirages created by the ruins, memories of gathering and thoughts most provoking, whilst the erupting steel structures sprawl out from the depths as the memory and thought is stripped and gathered within the cloud of keeping.

The twine running through the cloud represents that which is most thoughtful, a single coherent memory comprised out of multiple imaginations and facts in order create a common or collective thought that is re-embodied within the landscape as time passes by.

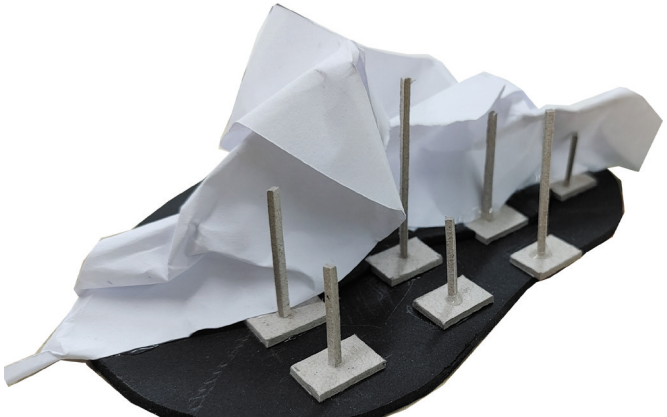


Fig 2.72: Early concept model

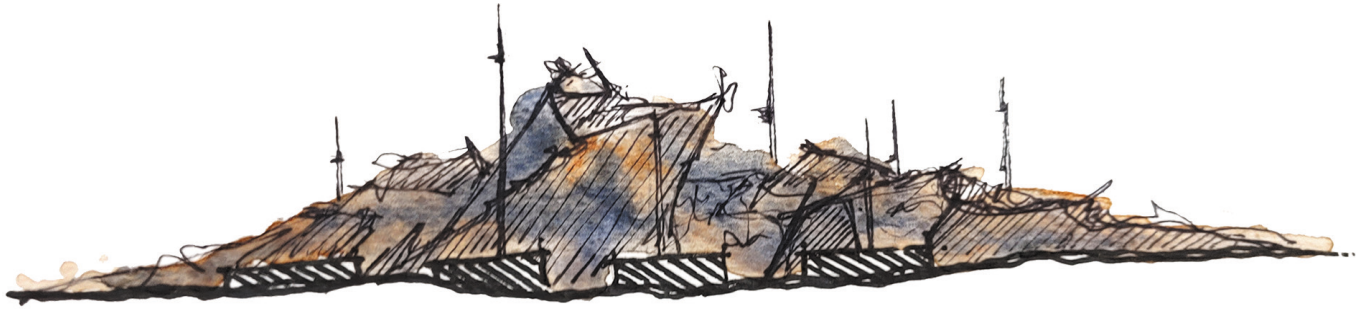


Fig 2.73: Expression of ever changing-form that flows through the camp's grid



Fig 2.74: View of internal space cerated by flowing form

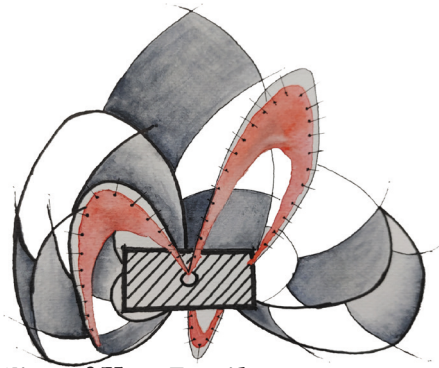


Fig 2.75: Tensile structures splurging out of the 'Keeping'

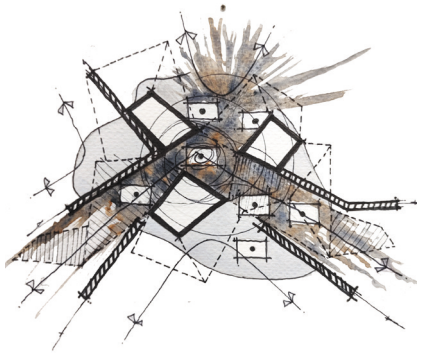
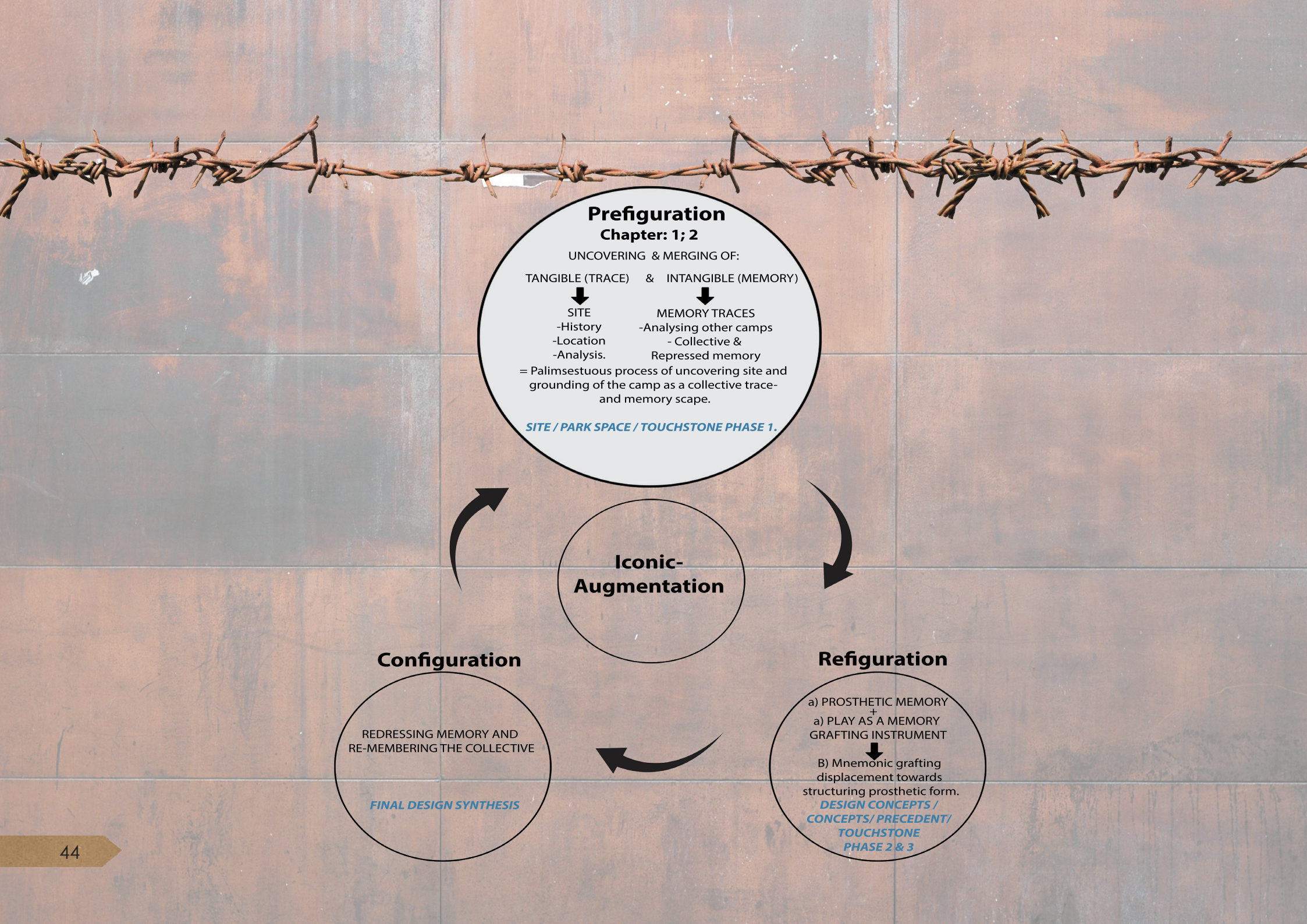


Fig 2.76: Interposing intersection onto a formal grid condition



Fig 2.77: View of metal screen wrapping around the belly of the flowing fabric


Prefiguration
Chapter: 1; 2
UNCOVERING & MERGING OF:
TANGIBLE (TRACE) & INTANGIBLE (MEMORY)
SITE
-History
-Location
-Analysis.
MEMORY TRACES
-Analysing other camps
- Collective &
Repressed memory
= Palimsestuous process of uncovering site and grounding of the camp as a collective trace- and memory scape.
SITE / PARK SPACE / TOUCHSTONE PHASE 1.
Iconic-
Augmentation
Refiguration
a) PROSTHETIC MEMORY
+
a) PLAY AS A MEMORY GRAFTING INSTRUMENT
B) Mnemonic grafting displacement towards structuring prosthetic form.
DESIGN CONCEPTS / CONCEPTS/ PRECEDENT/ TOUCHSTONE PHASE 2 & 3
Configuration
REDRESSING MEMORY AND RE-MEMBERING THE COLLECTIVE
FINAL DESIGN SYNTHESIS

2.7 MEMORY TOWARDS A MNEMONIC PLACE

Frances Yates' book *The Art of Memory* reveals how memory works; we connect images to our memories so that one memory helps another. The theory that deals with these phenomena in architecture is called "mnemonics", it concerns space and memory and the memory of place. Mnemonists structured their imaginary memory-scapes by attaching fact to emotionally evocative images that override the current lived-scape and then categorizing the selected images with an architectural space that has already familiar qualities (REF). This implies that human memory automatically connects knowledge to a form of familiarity within one's being. If this is the case, the dweller should be enabled to dwell in between the memory- and the trace scape as they attempt to re-stitch the fragments of a past, in order to recollect their sensory experiences. Referring back to the touchstones first layer as an example, the process of mnemonics is illustrate below (fig 2.78). By taking a mnemonic approach to the act of memorialising the memorial park aims to enliven factual happenings and attaching them to emotionally evocative experiences (lived-scapes), allowing for the individual participation in the act of re-remembering within the ruin. Through this a singularity forms between memorial and monument, as a future act of architectural space that transform the prefigured condition of the cultural- & collective memory. The re-figuring of signs that it's comprised of as a new collective memory honor the past in a contemplative manner, as well as a future celebratory presence of the architectural essence, as the participant honors their own position formed at moment of the participatory happening.

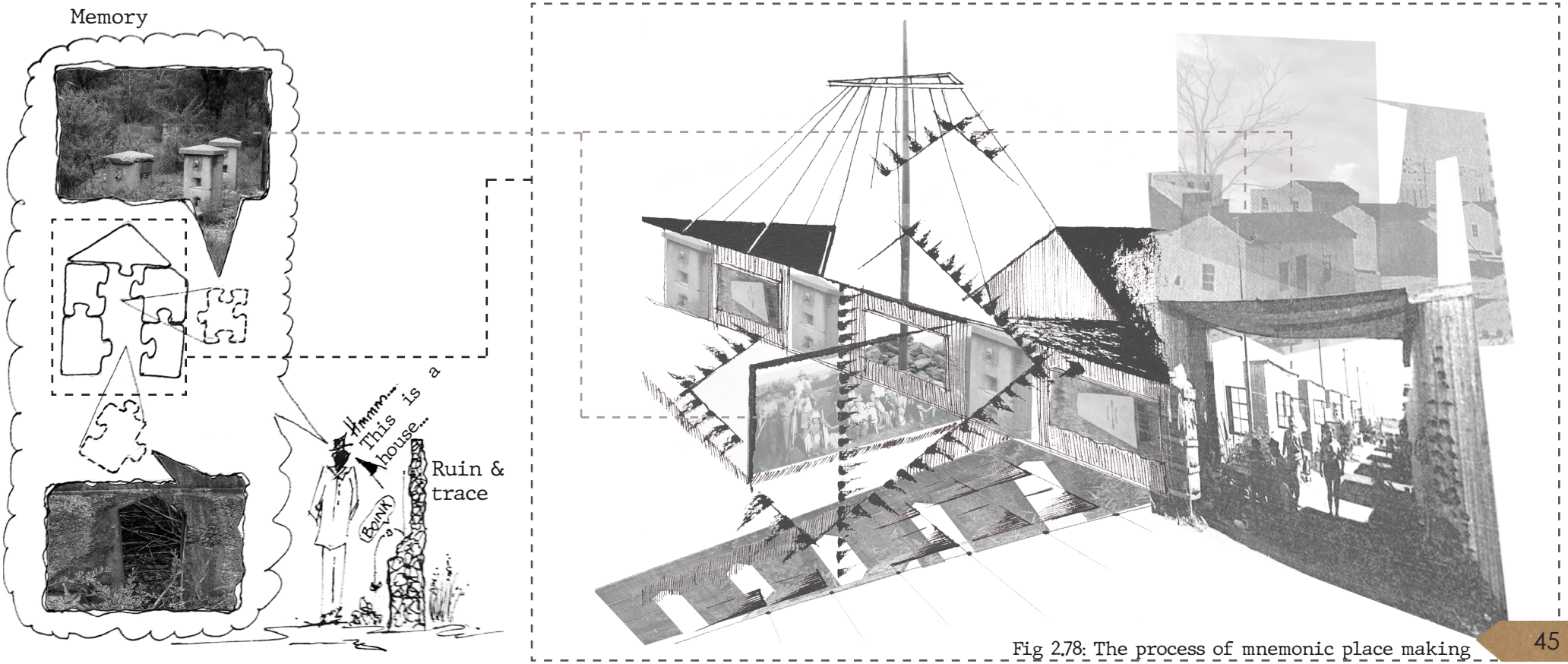


Fig 2.78: The process of mnemonic place making

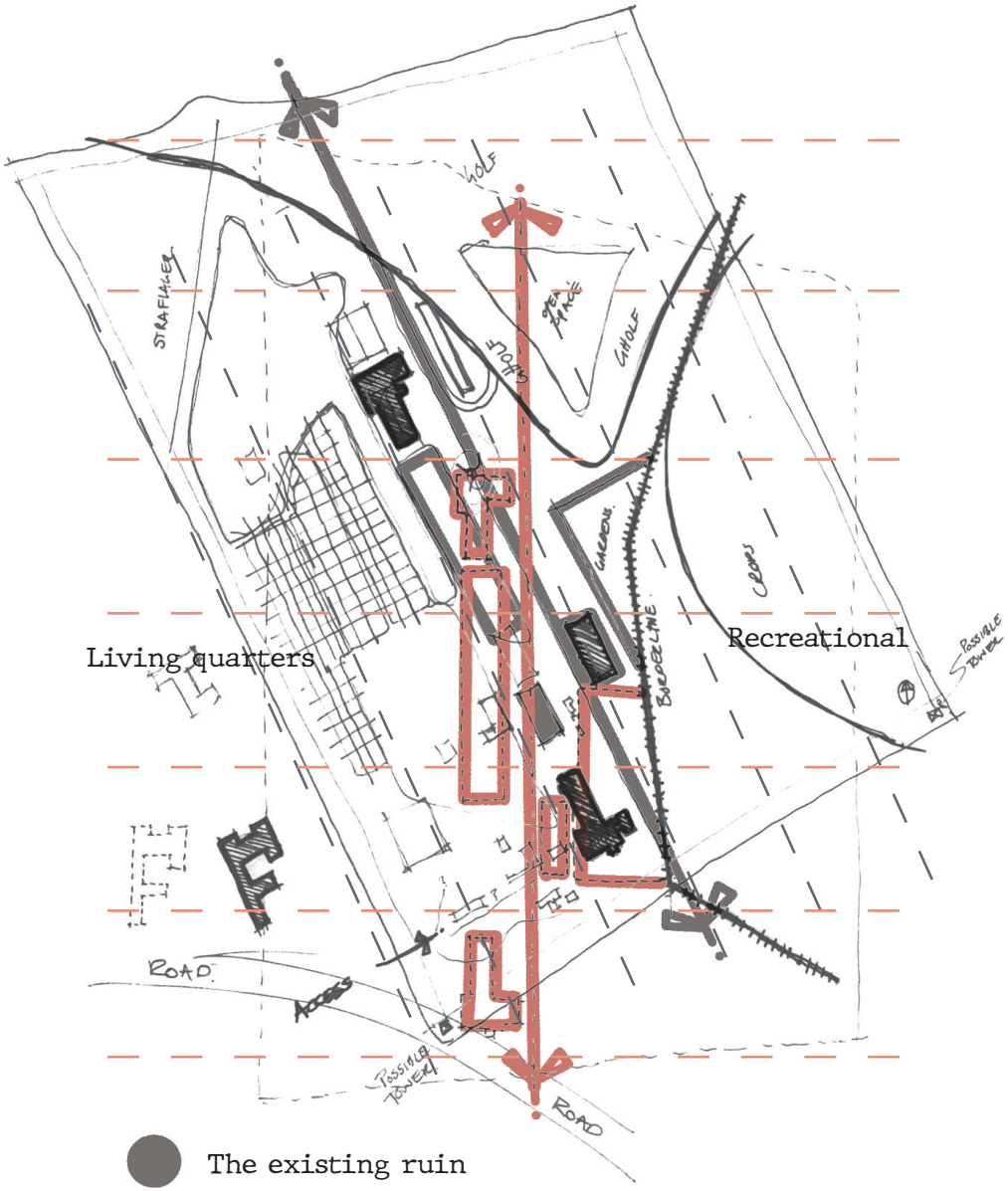


Fig 2.79: Displacement of the fact and the memory

Referring back to the grounded traces (p.36) as "presences of the past", or "moments of the past"(ref), the latter becomes more evocative, as moments can uncover an architectural experience that can be narrated. In viewing the map of the prisoner (fig 2.49) a displacement can be found between the orientation of the camp's ruins and that of the prisoners memory. Utilizing this displacement between memory and trace as a set off mark for the design of the park, the prisoner's memory-scape of the camp can be overlayed as a new grid across the camp and forming a new access that defines the entrance to the park (fig 2.79). The design further aims to reveal, cover and disjoint these moments in an attempt to juxtapose the ruin and the memory, creating a new layer of trace much like a patina of memory (fig 2.80). Interpreting the memory-scape as a pared away fragment of a larger image (fig 2.81), the modes of ruin as expressed by philosopher Robert Ginsberg can be introduced as a

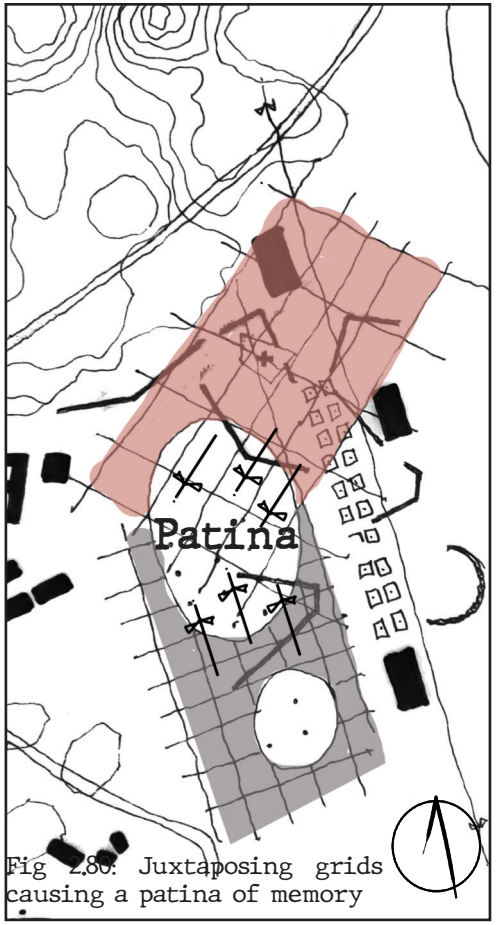


Fig 2.80: Juxtaposing grids causing a patina of memory

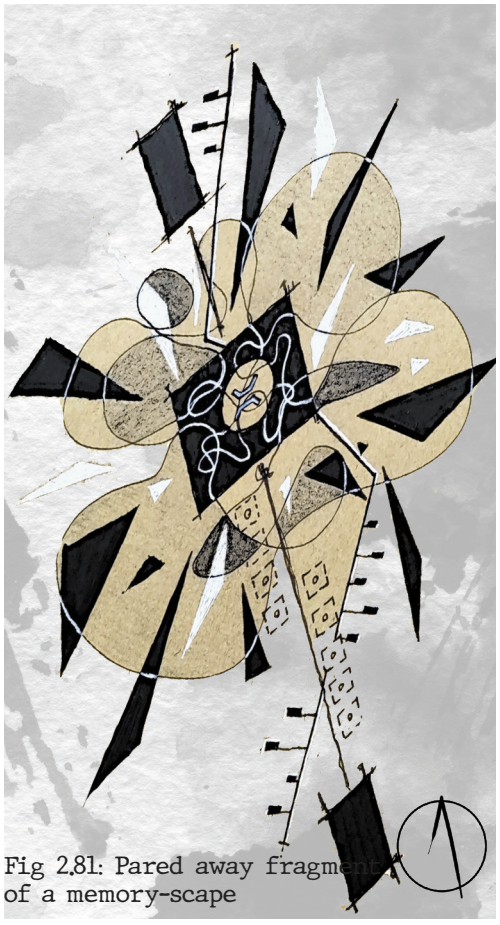


Fig 2.81: Pared away fragment of a memory-scape

method of understanding and responding to the remaining ruins of the camp. In Ginsberg's book, '*The Aesthetics of Ruin*', he states that "value is found in what the ruin is, not what it was", as well as that "value is found within a new unity worthy of enjoyment born through destructive activity" (Ginsberg, 2004: 284). Considering the function of the camp and its current site, this 'destructive activity' is compared to segregation and estrangement. Utilizing these two terms as a method of memorializtion, the crux of the parks design is unveiled within the identities that occupied it (fig 2.83). As argued at the beginning of this dissertation, the captives of these camps were stripped of their identity as they are preyed upon by the enemy and rendered mute by the familiar. The park's design relay this experience by disjointing and displacing the medals of honor that these soldiers would have fought for in battle, as they serve as the ultimate token of collective identity and their dedication to it (fig 2.82). Through the process of disjointing the medals, the core is de-centralized, symbolizing the estrangement of the prisoners from their homeland. The final de-centralized form (fig 2.84) becomes the vessel in which the museum will be inserted, to graft a new identity for a contemporary collective.

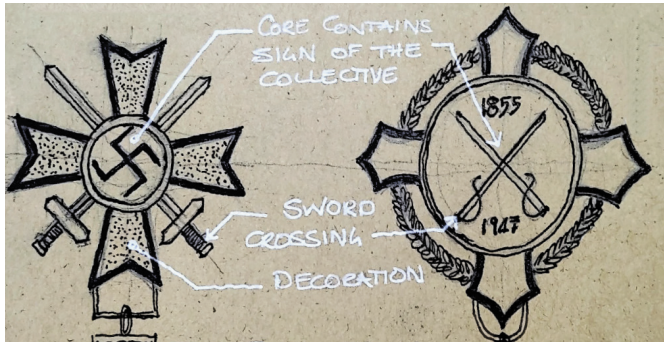


Fig 2.83: Analysis of medals of honor representing Germany and Italy

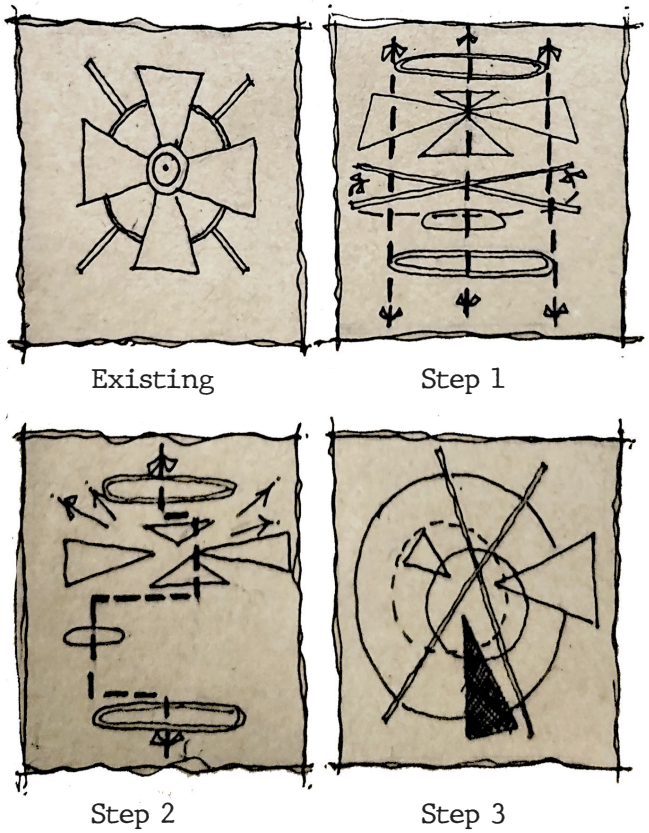


Fig 2.82: Process of disjointing the medals of honor in order to de-familiarize the centralized identities.

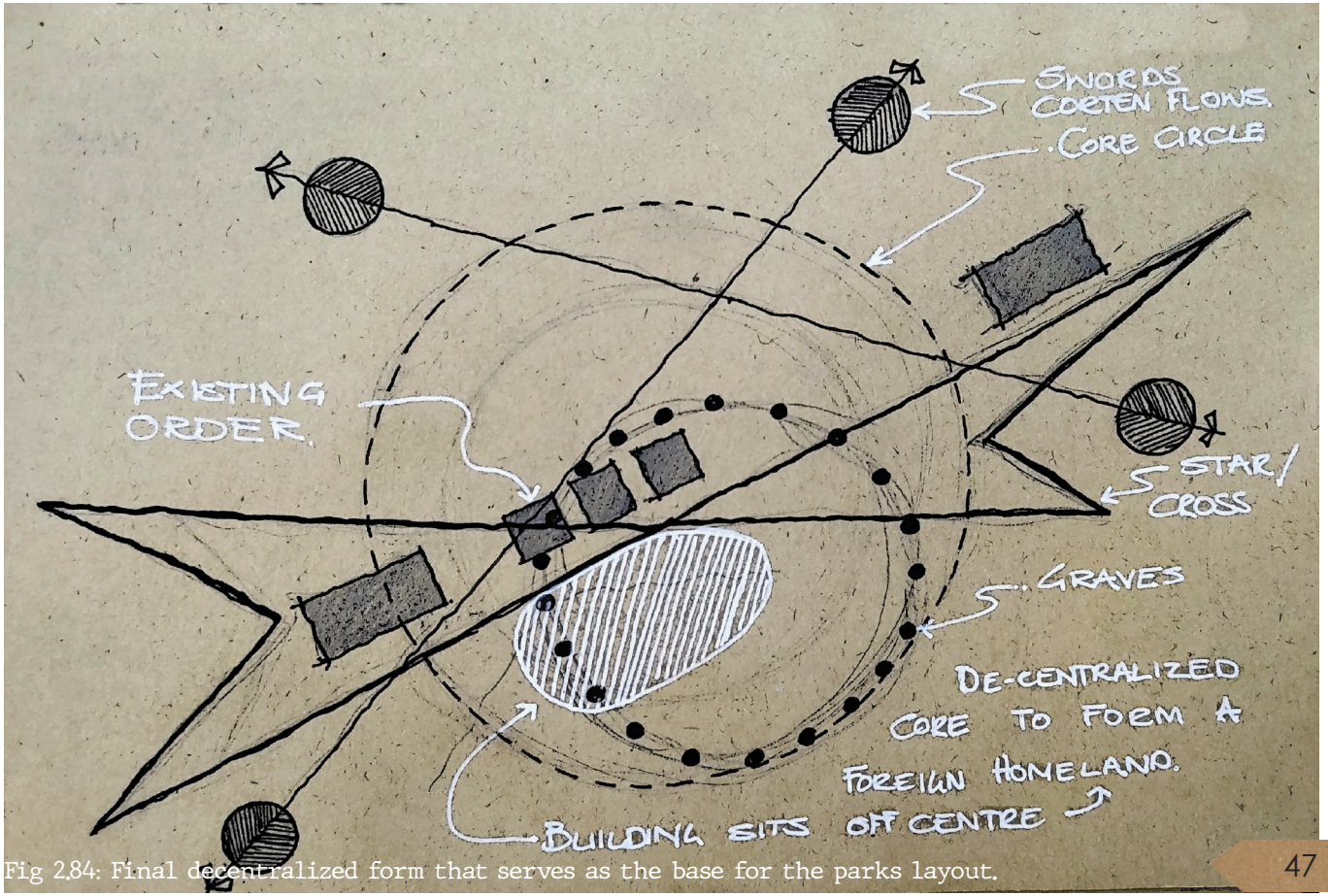


Fig 2.84: Final decentralized form that serves as the base for the parks layout.

Ginsberg continues to describe the 'ruin' as an irreparable remainder of a human construct that -by some or other destructive process- can no longer dwell in the unity of the original whole but has gathered a new type of unity that the dweller can ultimately enjoy again (Ginsberg, 2004: 284). Figure 2.85 illustrates an attempt to establish a new unity within the park through the design of Corten steel follies (fig 2.86), representing the swords on the medal of honor, that directs visual connections to key parts of the remaining ruins on the site and portrays the smaller narratives that Tsiftsi referred to earlier. The follies are designed as an integrative experience that links the memory of the prisoner to the ruin (fact) of the site in and effort to reintegrate the scattered ruins that have been uncovered on the site with the narratives of its occupants. Representing the memory of the prisoner, the follies will be specifically designed to wane over time in remembrance to the frailty of memory and the capacity to recall that which has been forgotten (fig 1.86).



Fig 2.85: A new unity being formed as small narratives are pulled in through the use of follies

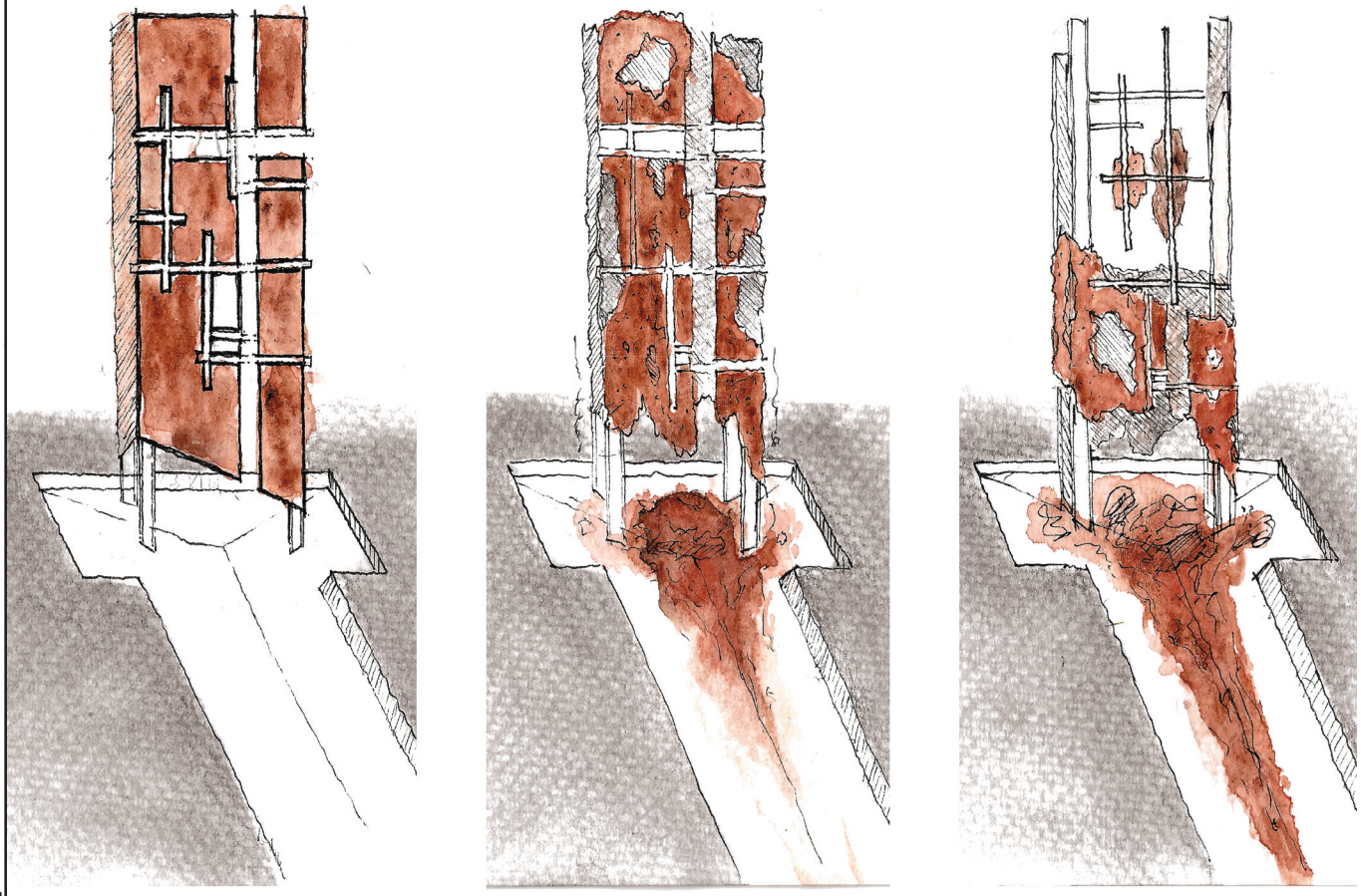


Fig 2.86: The process of a waning Corten steel follie

Considering the scale of the site, primary nodes has been selected for follies to be built in order to ensure that the park dweller experiences the memory captured within the follies. The selected nodes serve as opposites to each other, creating lines of flight across the site that connects the dweller with the other side of the camp as they are now able to gauge the extend of the camps borders. The in-between space of these nodes forms a cut through the landscape as a straight line connects the two opposite follies with a shallow canal in the landscape. As the follies wane over time and the steel forms its patina, the rust will form lines in the canal that refer to the prisoners and guards that has not made it home from the camp (fig 2.87). To ensure that these lines spread across the site, the dweller will be invited to scrub off the patina as an acknowledgment to the prisoner or guard's memory encapsulated within the steel body and effectively causing the steel to form new layers of patina until it is completely erased from the site. As the patina accumulates in the canals and starts raining, the 'bloodied' water of the canals start flowing towards the parks memorial space where a stage is placed central to the design. The stage becomes a manner of giving a voice to the repressed dweller that has just exited the proposed design for the museum as they start to re-configure their identity after the experience.

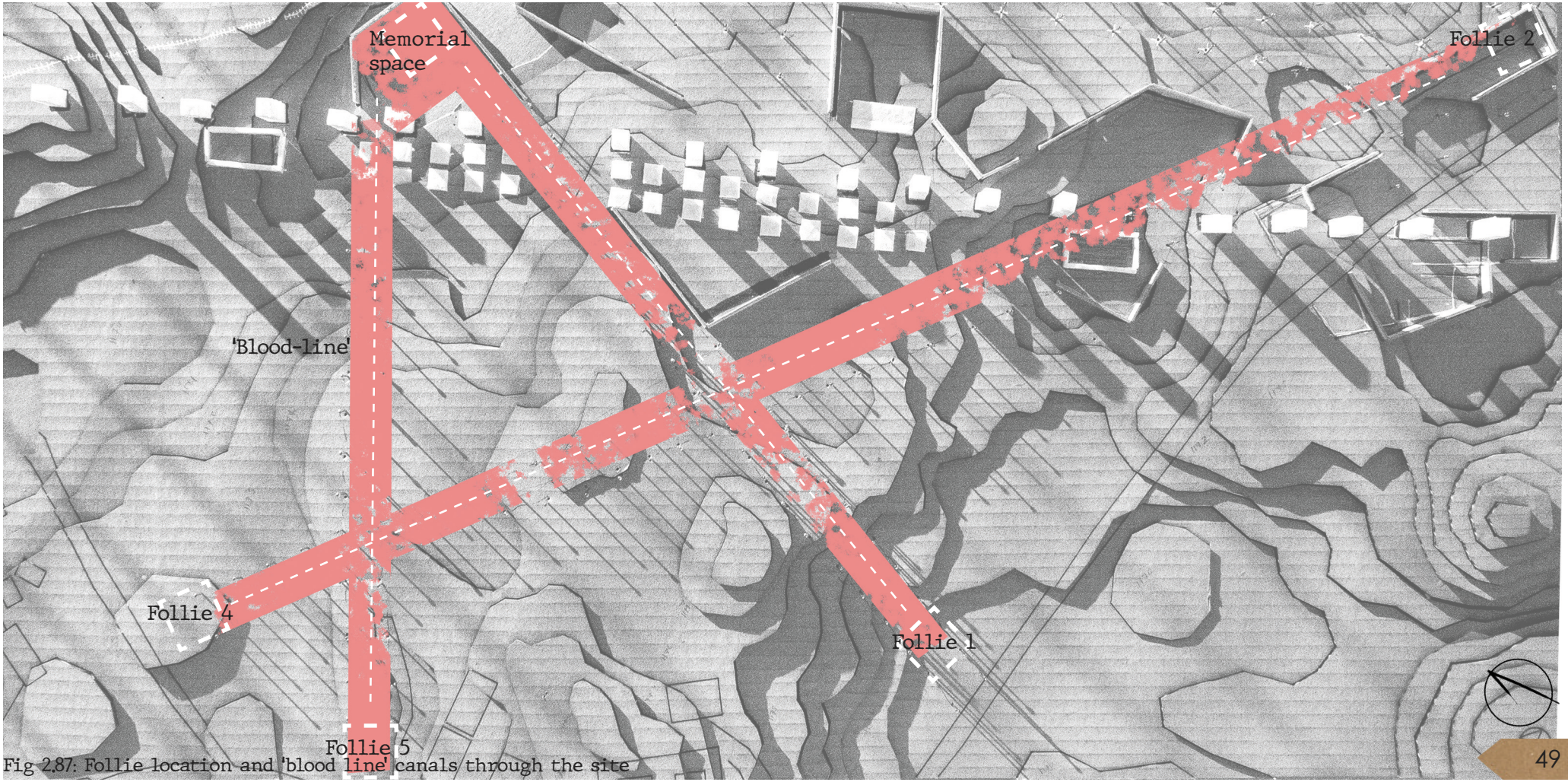


Fig 2.87: Follie location and 'blood line' canals through the site

Following the insertion of the follies, the design of the memorial park can be integrated between the existing ruin and the memory-scape of the prisoner in an effort to create a route that re-binds the scattered ruins and transmediate the ruin's previously detached collective to a new unity that can be enjoyed for what the site currently is. The concept models aim to enable the viewing of the ruins from a central space, where the dweller can observe and choose a destination to walk towards while in the park. The concept models illustrate the process of creating a singular axis along the existing boundary wall that separated the recreational and residential sides of the camp (fig 2.88 - 2.90) in an effort to blur the boundary wall and enable free access to both sides of the camp as the dweller traverses across the boundary in order to interact or gain views towards different ruins on site.

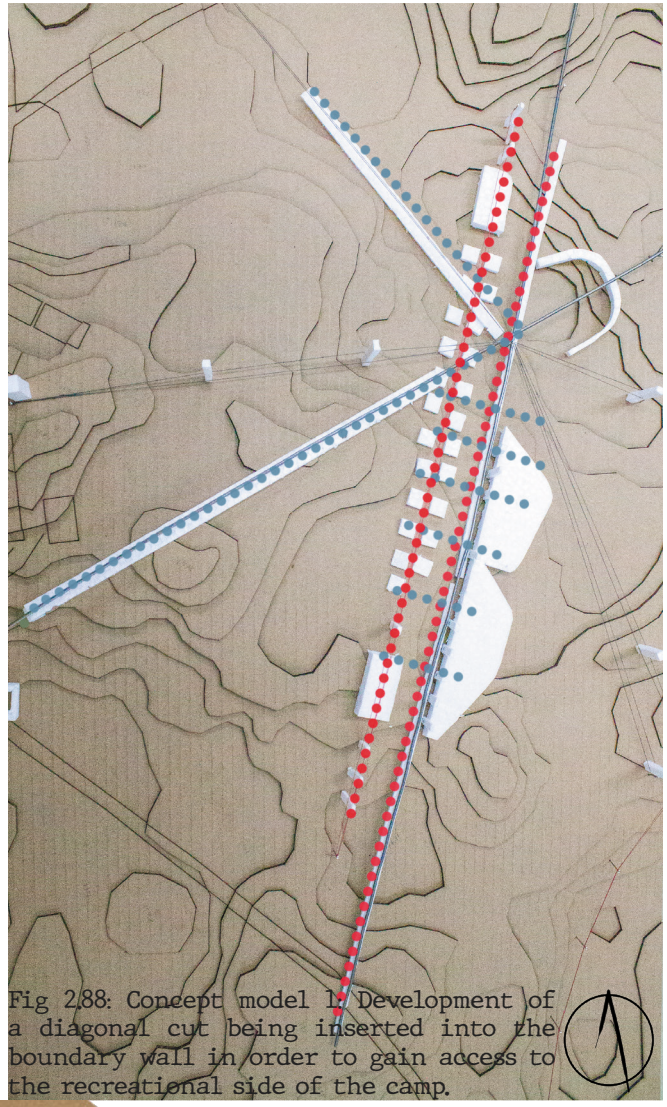


Fig 2.88: Concept model 1: Development of a diagonal cut being inserted into the boundary wall in order to gain access to the recreational side of the camp.

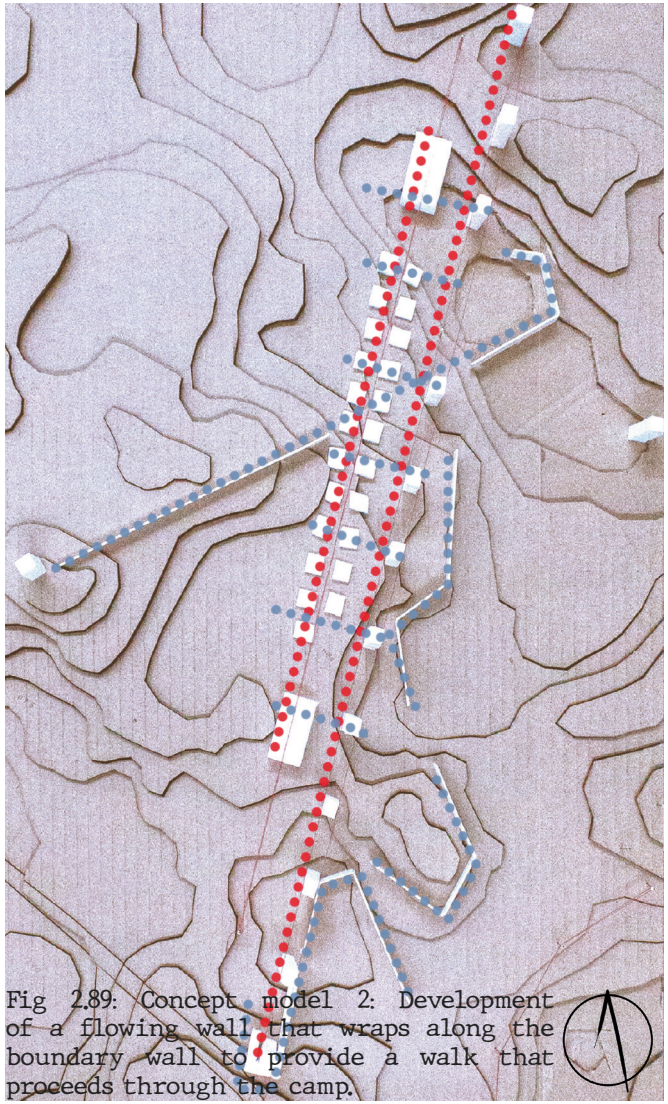


Fig 2.89: Concept model 2: Development of a flowing wall that wraps along the boundary wall to provide a walk that proceeds through the camp.



Fig 2.90: Concept model 3: Development of a flowing wall that erupts through the boundary wall to grant access to both sides of the camp.

Following the process of the of the previous models the final proposed axis of site can be seen in the figures 2.91 - 2.93; as the new walls meander through the camp grounds along the existing rock wall. The towers represented on the model symbolizes the gravestones of the unmarked graves that can be found on site. Aligning these gravestones with the rock wall, the design aims to honor these men by placing them central to the design, where their narrative is revealed and their presence on site can be acknowledged by the contemporary dweller.

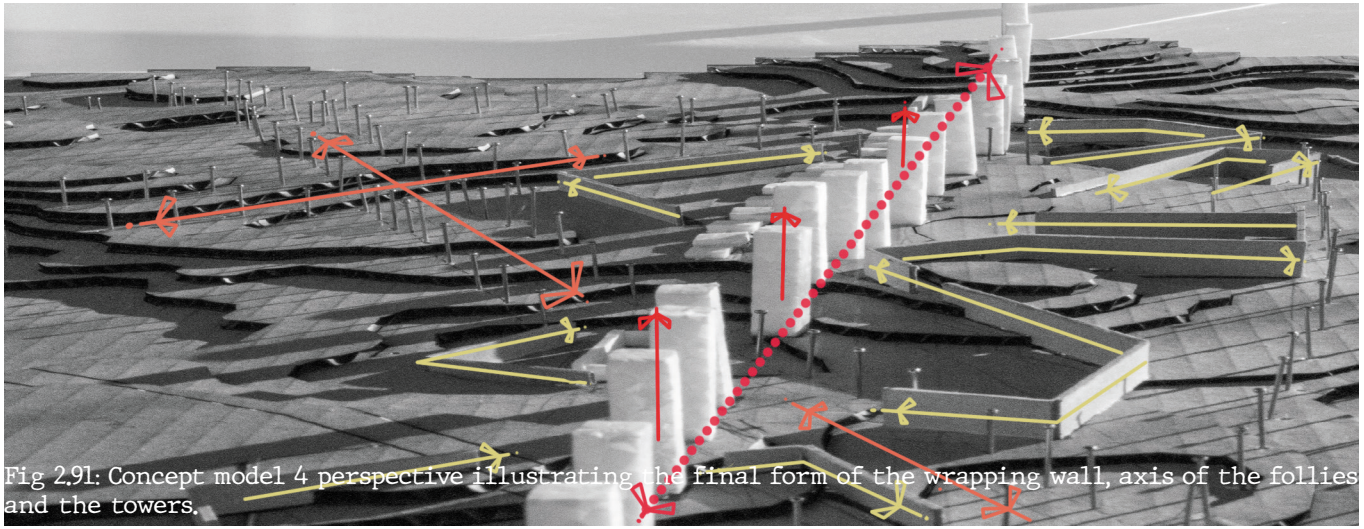


Fig 2.91: Concept model 4 perspective illustrating the final form of the wrapping wall, axis of the follies and the towers.

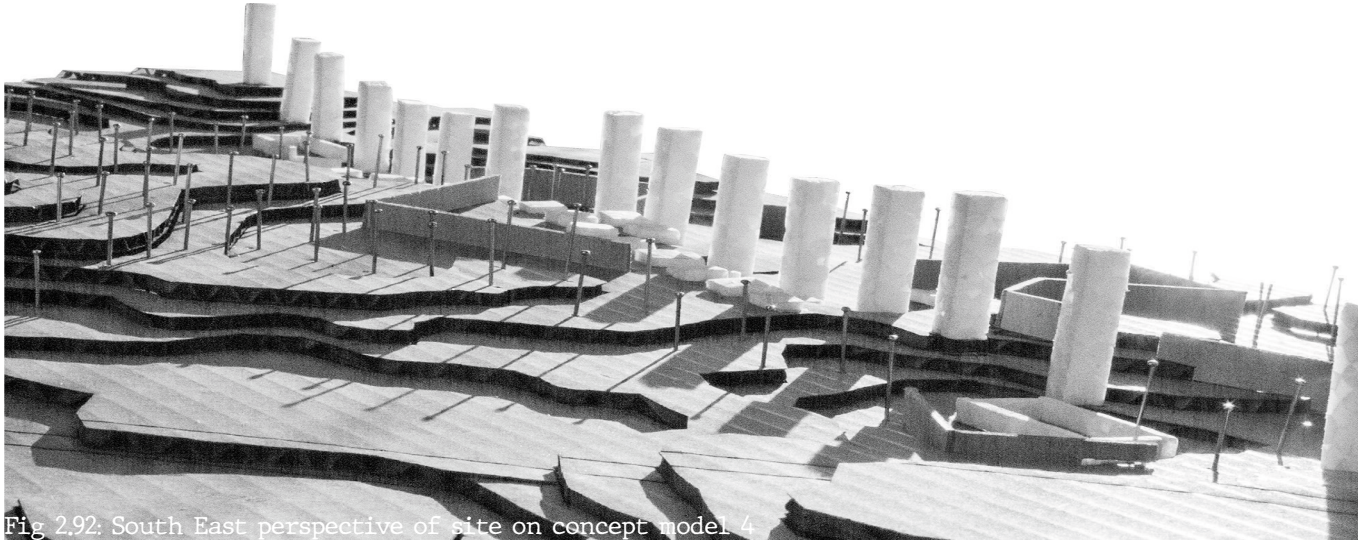


Fig 2.92: South East perspective of site on concept model 4

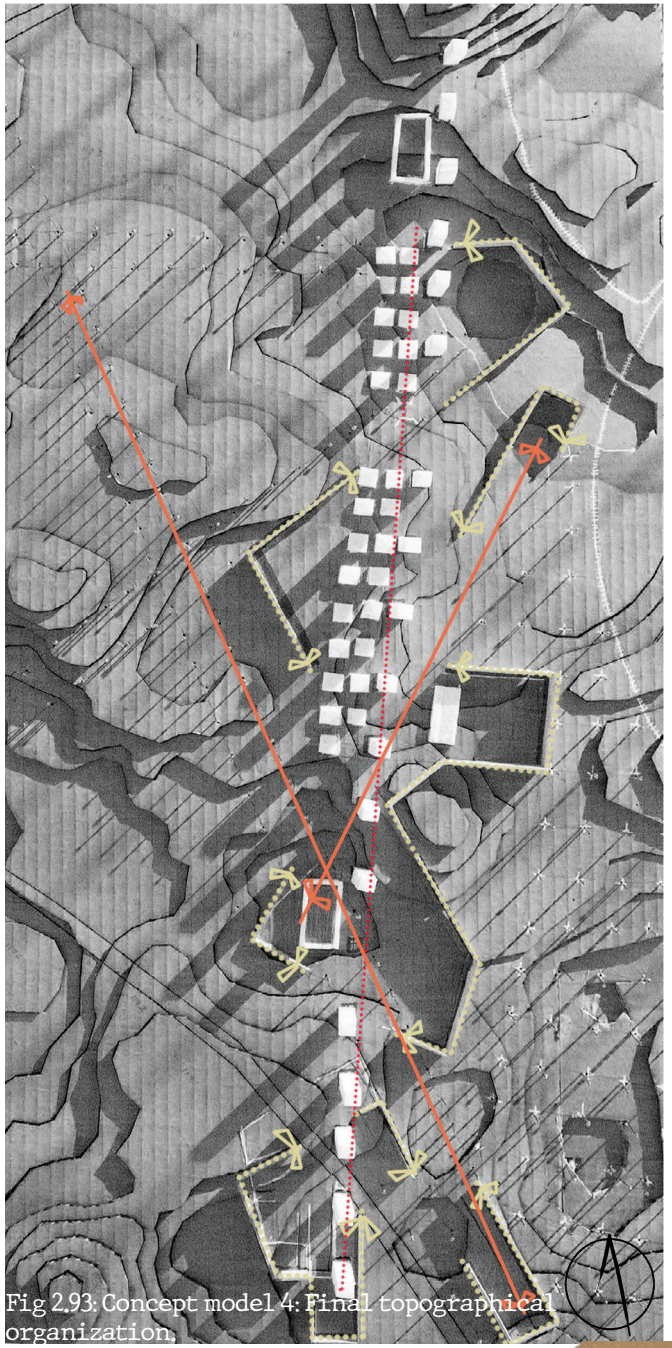


Fig 2.93: Concept model 4: Final topographical organization.

2.8 FINAL MEMORIAL PARK PROPOSAL

The final design of the park sees the edition of an axis following the memory of the prisoner (fig 2.98) serving as the main entrance route to the park as it binds the soon to follow museum and the park's reception, ablutions, park-upkeep's storage facilities other proposed structures that serve the park. The axis consist out smaller segments that resembles traces of the camp's history, lunch areas, sports facilities and herbal or vegetable gardens (fig 2.94 - 2.96). Closer to the museum the axis transforms into a more somber experience as the axis changes from the relaxed to the train cars that transported the prisoners to these camps. The train cars will serve as the main entrance route to the museum's reception space before the museum area is entered into (fig 2.97).

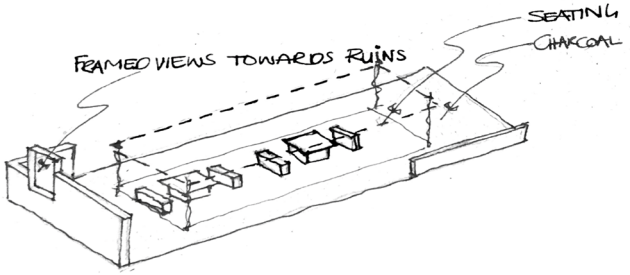


Fig 2.94: Park seating with charcoal covered earth (refer to page 30), framing views towards the camp's ruins.

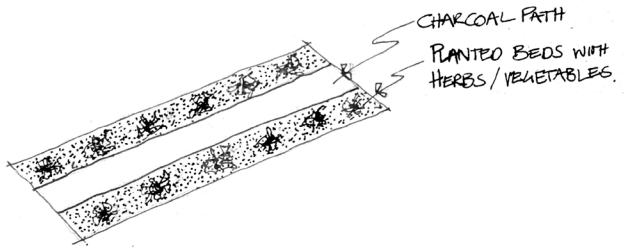


Fig 2.95: Herb and vegetable garden symbolizing the camps previous garden, with a charcoal path to walk upon (refer to page 30).

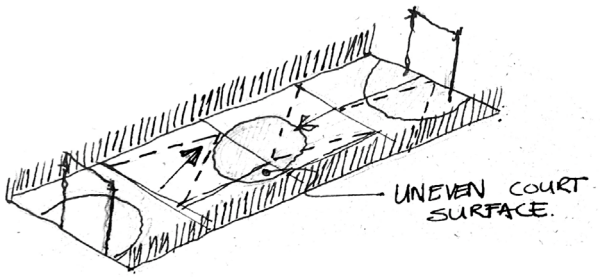


Fig 2.96: Small 2-4 person basketball court with an uneven surface symbolizing the courts of the camp



Fig 2.76: Perspective of park entrance walk.



Fig 2.98: Final Memorial park spatial organization and analysis

Now that all the axis lines have been laid upon the site, the final meandering route can be added to the park as a final stitching together of the memory- and ruin-scape to enable the park dweller to freely become a part of the history of the site, without having had partaken in the events.

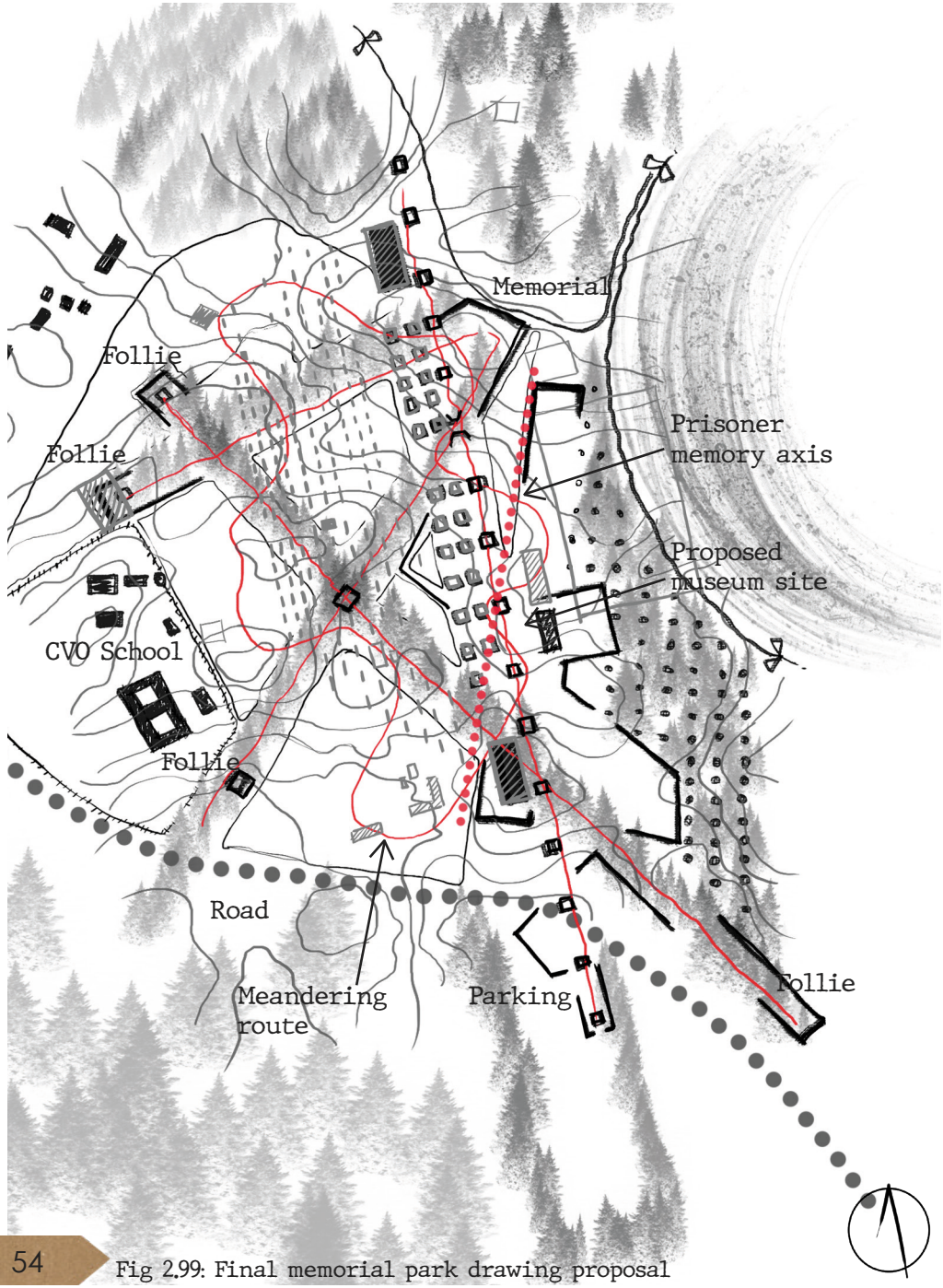


Fig 2.99: Final memorial park drawing proposal

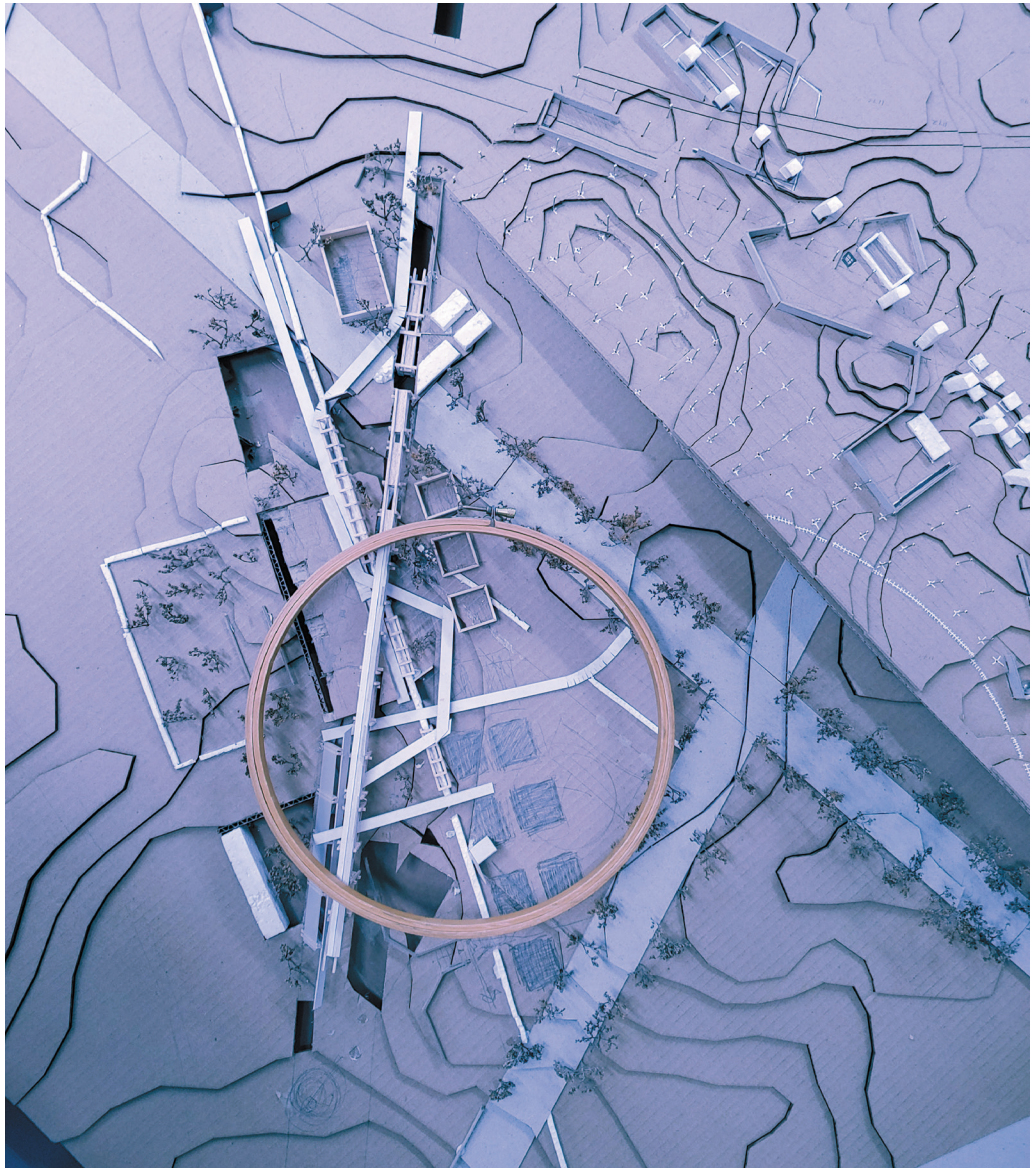


Fig 2.100: Final memorial park proposal model



Fig 2.101: Final memorial park model photo 1



Fig 2.102: Final memorial park model photo 2



Fig 2.103: Final memorial park model photo 3



Fig 2.104: Final memorial park model photo 4



02

Conclusion

In conclusion, it is noted that the ruin and the traces on site present themselves as varying tangible and intangible memories. The fragmented nature of the different memories of the site, allows it to become a layered form, a palimpsest that can be assembled into a coherent whole, created with fragmented memories. Through the coming-together of inherent primordial knowledge and new memories, the site can be concretized as a prefigured being. The incorporation of a new memory scape through ideas pertaining to 'collective memory', etches a new trace that form the first step (pre-figuration) of iconic augmentation as it creates a contemporary territory within the camp that can rive the existing and in so doing enable a discourse between that which is historical and that which is present. It is only until this discourse (consisting of a layered palimpsest of memory and trace) exists, that the re-figuration process can begin.

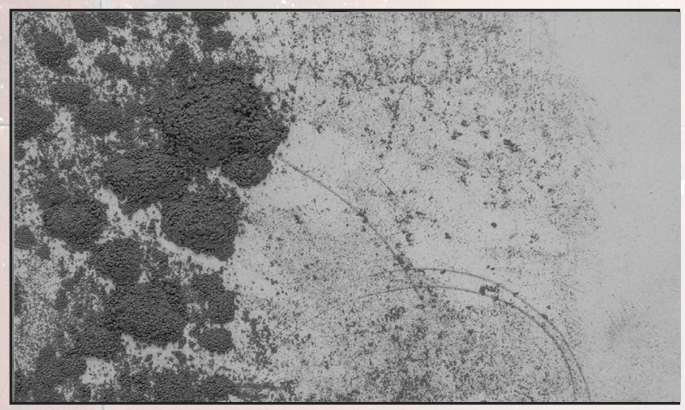
Prefiguration

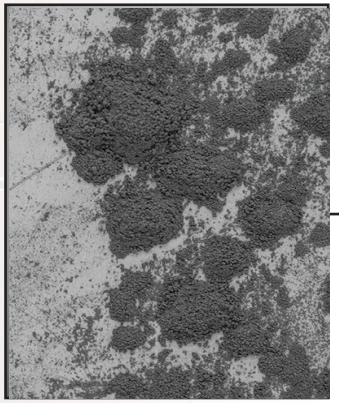
Chapter: 1; 2

Summary:

The site is concretized as a prefigured being. The incorporation of a new memory scape through ideas pertaining to 'collective memory', etches a new trace that form the first step (pre-figuration) of iconic augmentation as it creates a contemporary territory within the camp that can rive the existing and in so doing enable a discourse between that which is historical and that which is present. It is only until this discourse (consisting of a layered palimpsest of memory and trace) exists, that the re-figuration process can begin..

SITE / PARK SPACE / TOUCHSTONE PHASE 1.





Re-figuration through Prosthetic play



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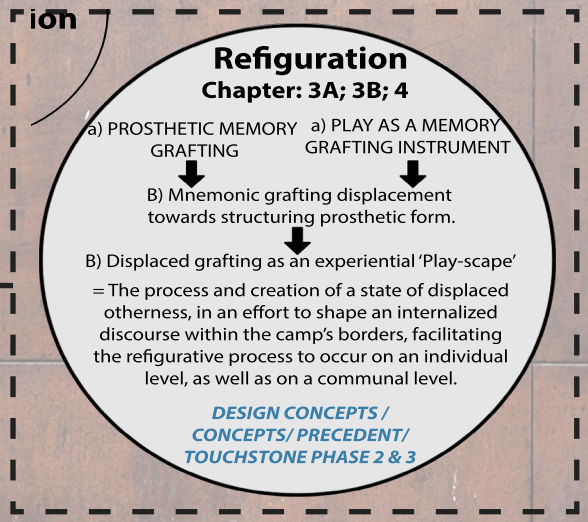
03

3A

3A.1 Introduction

The Eastern part of the camp consisted of recreational functions which relates to the imagination and its role of re-figuration in the iconic augmentation process. Through inviting and encouraging user participation, the imagination is activated within the user by use of 'play' as a prosthetic-memory instrument. The existing recreational trace on the site inhabits the imagination of its occupants, as it was considered the place where prisoners would relax and 'play' in as a means to escape their harsh reality, and in turn, they could mentally escape from their physical confines and enter the imaginary realm of their homelands from which they are estranged. The formation of vivid memories, dreams and desires, enable the prisoners to recall memories which are so thought provoking that the physical senses become a part of the revelation (according to their written letters), alluding to an overwhelming stimulus of connection between the physical memory and the prosthetic memory, without a set destination. This connection enables the prisoner to dwell within meta-physical and experience the 'in between' of the memory- and the lived-scape as well as allowing for the transfer of the most truthful experiences, which are to be gifted to their imaginative being of a homeland in various ways.



3A.2 Prosthetic memory grafting

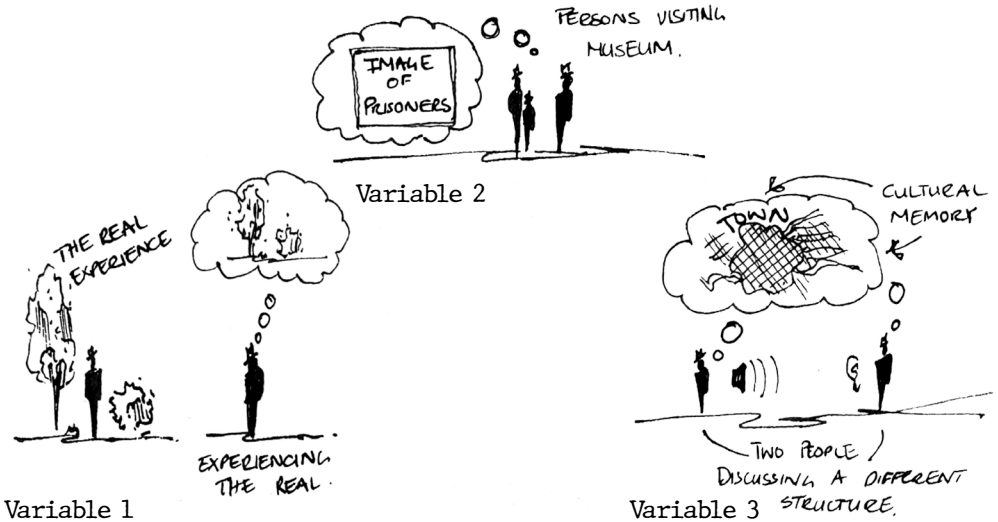
Prosthetic memories are memories that are adopted as a result of a person's experience with cultural memory that dramatizes or recreates a historicity he or she did not live (Landsberg and Grainge, 2003). These memories require an interaction with an instrument of sorts that facilitates the process of acquiring the memory on an individual level as one's own (Landsberg and Grainge, 2003) and arguably serves as a method to create architecture that individualizes a collective, enabling the re-figuration of it, creating a contemporary re-integrative collective memory that reflects the current social structure's customs. For the purposes of this dissertation these interactions will be referred to as instruments of memory and connects directly to the notion of play and games as a revelatory method of grafting memory.

The author Landsberg provides 3 variables that are crucial aspects to the use of prosthetic memory, and describe these variables as follows:

Landsberg Variable 1: In Chapter 1 the author points out the difference between having a 'real experience' and 'experiencing the real'(Landsberg and Grainge, 2003). Having a real experience means becoming involved within a historical moment and becoming a part of it, whereas the latter means that the dweller experiences a historical event but does not become involved in it. The latter, aiming to provide the experience through an indirect participation, thus termed as an "inauthentic experience". This experience relates to the generation of a feeling through the use of a medium or carrier. This medium or carrier provide dwellers with an opportunity of having an experiential relationship to a collective and or culture past that they were not involved in and did not experience.

Landsberg's second variable argues that, "Memories always circulate and interpolate people but can never return to the authentic owner, to a proper body" (Landsberg and Grainge, 2003). On that premise, when historicity has to be recalled to re-construct a cultural identity, historical narratives are required to be re-remembered and re-negotiated to match the contemporary social constructs. The notion of re-negotiation becomes a crucial aspect to the re-figurative process. The re-figurative process would serve as a key towards unlocking a new contemporary collective that reintegrates the surrounding area and the different collectives that dwells within the community.

Landsberg variable 3 introduces empathy. Separate from sympathy, it refers to the feeling of an immersive emotional engagement and understanding towards objects outwards of our self. The stance being that empathy is not self-pitying and relies less upon identification and rather recognizes the alterity of identification with a mediated distance (Landsberg and Grainge, 2003). Empathy allows for emotions similar and different to that of the subject matter being inquired upon, therefore it does not rely upon a certain subject, but rather the negotiation between different subjects. According to Landsberg, when modes of conception and structure of feeling are re-collected through mediated images and or narratives that are being integrated with each other, the act of prosthetic memory could generate a transcendence in distinctions between social structures and cultural memories as it generates a new collective sphere that unites people from different areas through a sharing of knowledge.



Variable 1 Variable 3

Through the introduction of play as a prosthetic memory instrument to uncover layers of trace, play becomes an instrument to recollect and re-remember. Play enables the "player", through a mediated process of images and smaller narratives, to transcend their collective to an individual level. This notion separate "players" from their own certainty towards a negotiative state between different individual certainties.

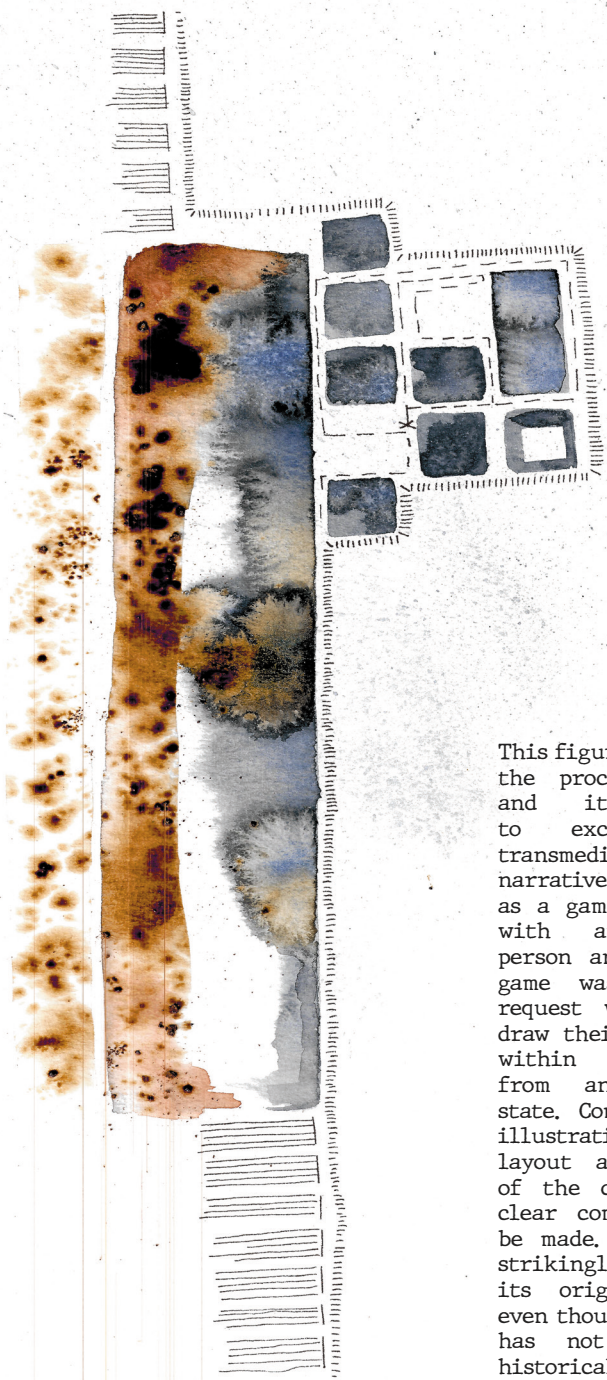
3A.3 PLAY AS MEMORY GRAFTING INSTRUMENT

Play is an activity inherent to human nature which has no outward end in itself and does not pursue a useful modification of the real world. Play is an activity which takes place in the real world, but also ignores its conditions, since it spontaneously performs an abstraction in time. "The game is neither naive nor funny" (Virilio 1992, p. 14). It is not influenced by a specific rational goal, but is an act in which sensibility and rationality coexist in the playful action, making humans free from the worldly constraints placed upon them.

Huizinga defined play as follows:

> "Summing up the formal characteristics of play we might call it a free activity standing quite consciously outside "ordinary" life as being "not serious," but at the same time absorbing the player intensely and utterly. It is an activity connected with no material interest, and no profit can be gained by it. It proceeds within its own proper boundaries of time and space according to fixed rules and in an orderly manner. It promotes the formation of social grouping which tend to surround themselves with secrecy and to stress their difference from the common world by disguise or other means (Huizinga 1973, p. 12)".

As Huizinga argues, play affects only the players involved within the interaction, and can also just occur when the players avail themselves to the degree that they accept the game. Through a free decision that is revisited and more importantly re-made each time based on the recollection of the previous game. It should be defined as a voluntary activity that becomes a source of joy or amusement to escape the reality of time. However, if the game becomes an obligatory participation, the game will tend to become a restriction, confinement and a drudgery that the player would seek to be freed from losing its core value, a devotion to the engagement of play and its abstraction. Play can therefore be seen as a method of creating participation in the narrative to uncover the mysterious. It allows for property to be exchanged however; no property can be produced during the interaction which means that only that which is most true at the moment the game is played is to be brought into question.

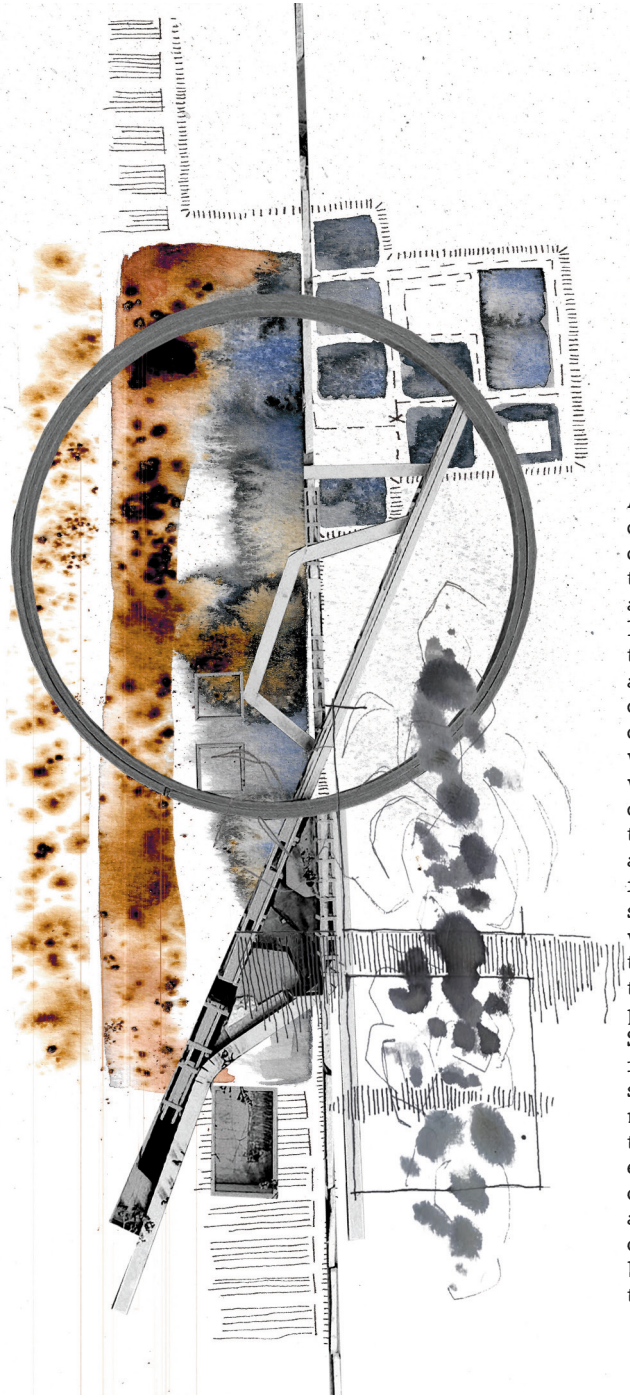


This figure illustrates the process of play and its capacity to exchange and transmediate the narratives of the camp as a game was played with an unknown person and after the game was played, a request was made to draw their experience within the camp from an imaginary state. Comparing this illustration with the layout and workings of the camp, a very clear comparison can be made. One that is strikingly similar to its originary state, even though the person has not lived the historical event.

The game as a palimpsesteous process, has a capacity for assemblage leading to a second aspect of play. Both the game and assemblage share the same transformative tension. Both oppose reality by presenting an alternative, while almost being capable of assimilating certain aspects of a primordial sanctity. The game as a combinatorial process, has a capacity for assemblage like a montage, but also as an educational and pedagogical instrument of knowledge and transformation of the world which ignores the conditions of reality since it spontaneously enables an abstraction within and of place. The game has its own rules which determine what will happen inside the temporary world it shapes, rules which are mandatory and irrefutable to structure the game, but can be encoded and transmitted meaning it must have form as well. A game requires an understanding of its parts and a continuous drive to make it work. It works on human thought "by breaking it up through the practice of creativity itself" and it accompanies and complements life in general: "it adorns life, amplifies it and is to that extent a necessity" (Huizinga 1973, p. 12).

Play can additionally be described as an uncertain process. One where in doubt must remain until the end, and is dependent on the denouement there of. When there is no longer doubt or uncertainty remaining on the outcome of the game, the game is stopped and all players restart in a re-figured form, open to choosing freely on their next participation. Furthermore, constant and unpredictable happenings within the game are necessary to keep the game ever changing, after the ending of the previous game has become clear, in order for the participant to be able to successfully reset their participatory experience within the game.

By incorporating a mnemonistic approach to this way of memorialization the recollection process, as mentioned by Plato, becomes a tangible and emotionally evocative experience through which the dweller can extract memory and knowledge. In essence the memorialization process becomes one of interaction, enabling the emotional connection between dweller and memory scape



At the end of the design process and this dissertation document, the person was again asked to draw their lived experience in the camp, but this time a conversation ensued on the narratives of the camp and what they actually were. The design was overlayed on top op the new drawing and again, clear memory fragments could be spotted in conjunction with new narratives that were inherent to the contemporary persons experiences. Suggesting that play incites a re-figurative state, and grafts a memory fragment into the individualized experiences of the contemporary dweller, and thus effectively crossing over the borders of place and time.

3A.4 PLAY AS A THOUGHTFUL RE-FIGURATIVE PROCESS

The memory 'Keeping'

Focusing on the second (fig 3.1) and third layer of the monumental touchstone (fig 1.2), the following section of this dissertation will explore the process of imaginative re-figuration incited by a participatory action.

Layer two of the touchstone represents what German philosopher M. Heidegger referred to as 'the Keeping'. Defining memory as a gathering of knowledge or rather thanking thought & a process of the imagination, the fragments concretizes the memory 'pool' which houses all thought and memory. That which has been thought and that which is still to be thought. The sphere becomes the vessel (fig 3.2), where memory is human thinking that recalls and dwells in safety. Heidegger defines 'the Keeping' as a place that gives freely, that which is most thought provoking and frees it as a gift (Heidegger & Gray, 2004). This serves as a schematic approach to that which can be described as human recollection, as it only allows for that which is most thought provoking to be gifted but not that which is most true of the gathering.
In an attempt to extract that which is most true to the gathering or collective, a new layer is needed. The layer must bring forth a participatory action that allows the collective to re-evaluate its different narratives (referring back to Tsiftsi study), recollect and then re-enact the thought captured within 'the Keeping' through an imaginative process, allowing 'the Keeping' to gift that which is most thought provoking while encouraging the collective to unlock that which is most true of the collective to them.



Fig 3.1: Second layer of touchstone

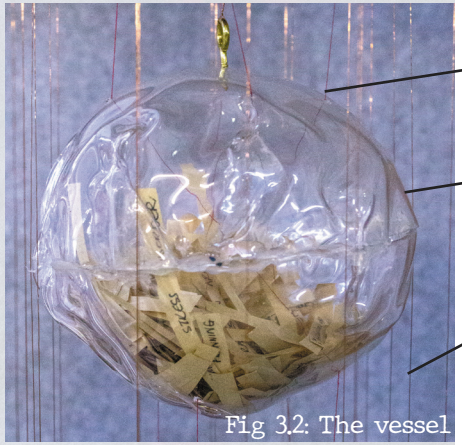


Fig 3.2: The vessel

The Re-enactment or Recollection

Referring to the third layer of the touchstone (fig 3.3), recollection as a re-enactment of experience, which involves the emotion of the imagination and the logic of thought. This layer of the touchstone urges the user to interact ('play') with that which is most true to them (not THE truth) and in so doing urging the imagination & their own memory scape as a source of recollection.

In doing so the player actively engages in both the narrative of the past as well as that of the future through an act of memory displacement (fig 3.5).

This is a vital key in the process as it is only when this takes place that the collective gathering can be individualized and re-inserted into the collective as a puzzle piece to building a contemporary collective., leading to a new coherent future projection of what can be most truthful within the defined image of the collective's 'Keeping'.

Layer elements:

Red string that pass through 'the Keeping' as they intertwine with the knowledge within the vessel to interact with the memory.

The vessel that holds human thinking (the paper consisting out of written memories of the prisoners and guards).

Copper wiring connecting the top layer of the site with the vessel and the third the third layer, allowing for an interaction between the three separate layers.

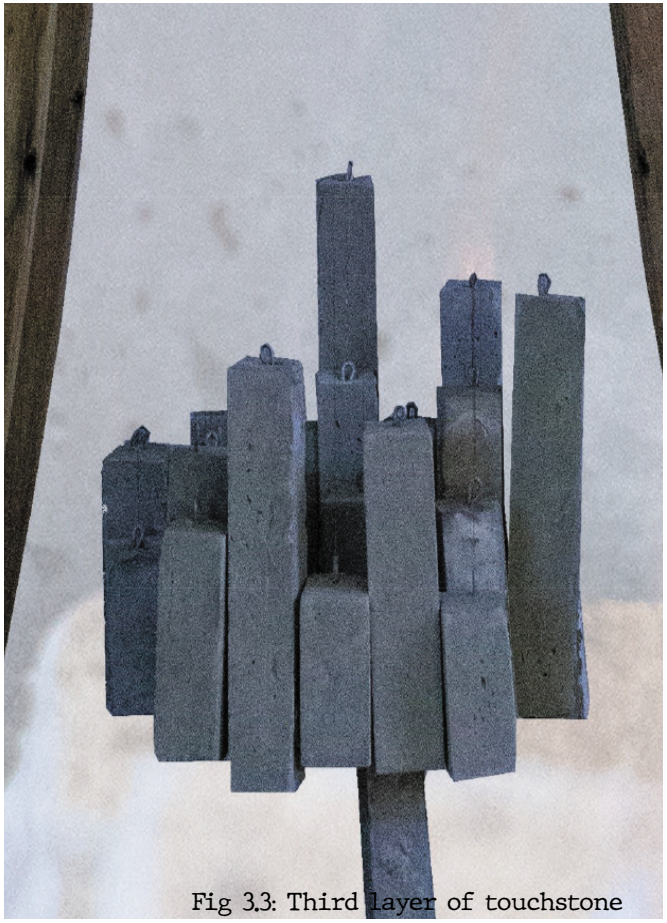


Fig 3.3: Third layer of touchstone

Layer elements:

Red string that pass through the Keeping as they intertwine with the knowledge within the vessel to interact with the memory.

Concretized memory and imagination fragments that can be 'played' with in order to activate the process of re-figuration.

Copper wiring connecting the top layer of the site with the vessel and the third the third layer, allowing for an interaction between the three separate layers.

Sand layer from to layer of touchstone



Fig 3.4: Close up of third layer

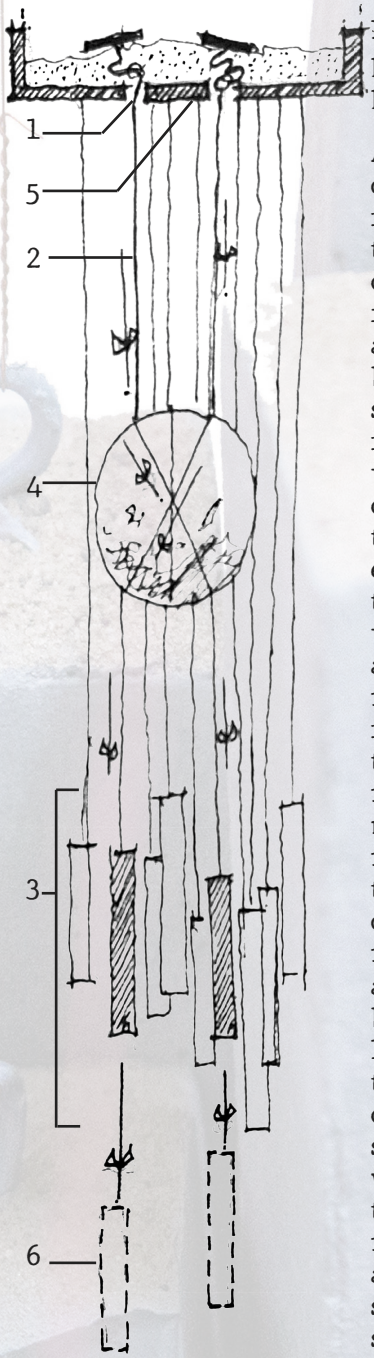


Fig 3.5: Interactive participation process

Interactive participation process:

As the third layer[3] of the touchstone is interacted with the red string[2] connected to the first layer breaks a seal[1] in the ruin's base, releasing the sand and allowing it to spill over the vessel[4]. This process causes the vessel to build static electricity, causing the memory in the vessel to flutter and stick to the red string and the interior walls of the vessel. Causing a recollection of the memories as they are revealed. Because of the sand pouring out the ruin is revealed and lowered as a prefigured being on the top layer[5], however this causes random concretizations to start descending within the third layer, as a representation of a new collective starting to take shape[6].

3A.5 CONS-CEPTIONS

3A.5.1 WAINING FRAGILITY

Correlating to the first concept, Residual traces, these cons-ception drawings (fig 3.6; 3.7) illustrates the creation of a pathway where the dweller can walk between the memory and the trace as they are incited to interact with the exhibitions of the museum.

The diagram illustrates the use of a singular monumental structure that grows out from under the soil in order to lift tensile structures that form the canopies of temporary resting positions for the dwellers along the route. This notion refers to the escape attempts as documented in the letters of the prisoners. It is written hat prisoners would dig holes and cover themselves with a layer of wood and sand (the canopy), only to later at night unearth themselves and escape (the process of the rising structure) through the fence of the now unguarded recreational side of the camp.

In addition to the route created, a shell of sorts is assembled. This shell is formed out of concrete and sandstone structures much like the ones that the prisoners would have built in the analysis of the camp. These structures are used to form a spatial organization that directs the dweller through the routes of the museum as well as providing stability to the illustration.

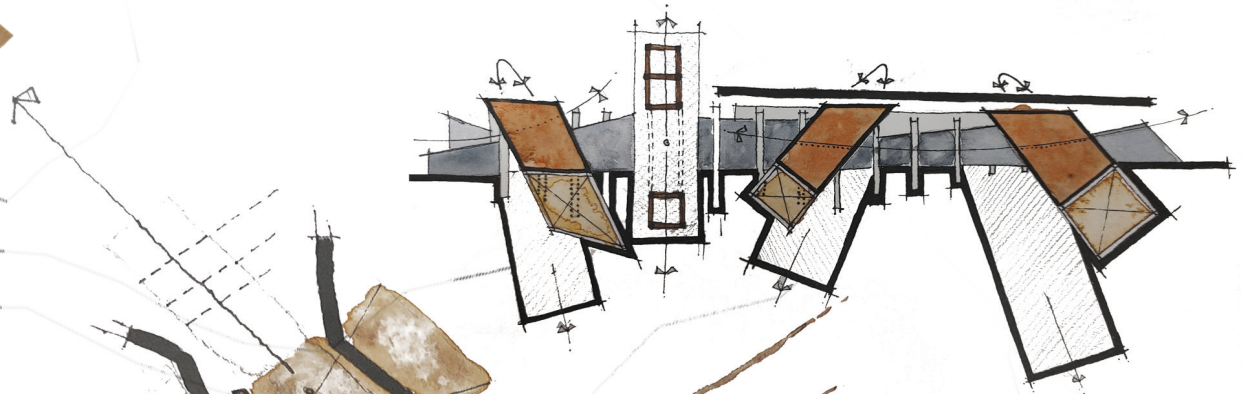


Fig 3.6: Elevation of a possible structure to aid in the design process

Fig 3.7: Spatial organization diagram to aid in the design of the museum

3A.5.2 TECTONIC RIGIDITY

Referring to the second concept, Recollection and re-enactment, these cons-ception drawings (fig 3.8; 3.9) illustrates the creation of a the creation of a similar route to that of the before mentioned. However, this cons-cept explore the route through the use of repetitious elements that from grids relating to that of the camp's, creating smaller in-between spaces where the dweller is forced to individualize their experience as the progress through a narrow linear path.

Being lifted from the soil, the walkways acts as a recollection of the camp as the living units where all raised from the soil on wooden joists to prevent water damage to the flooring.

The drawing also speaks towards the construction of the camp's living units as it represents an exploded version of the material layering and elements that the living units were constructed from.

The cantilevered concrete shell structures symbolize the toilets of the camp as they were removed from the whole and externalized from the living units. The tunnels digging into the earth resembled the second way in which the prisoners tried to escape, through digging tunnels underneath the 'long drop' toilets and crossing underneath the fencing of the camp to escape.

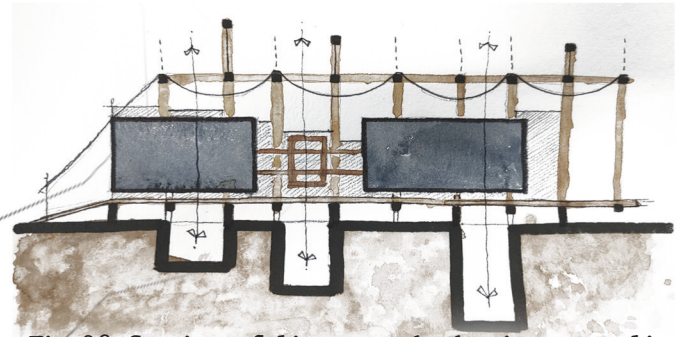


Fig 3.8: Section of linear path showing tunneling shafts

Fig 3.9: Spatial organization diagram as a second museum design route option.

3A.5.3 STEREOTOMIIC INCISION

Responding to the third design concept, The 'Keeping', the cons-ception diagram illustrates the incision into various monoliths, in order to gain access to interior spaces where the dweller can self-reflect or meditate after the experience.

Fig 3.10 illustrate a rhythmic progress of monoliths as a marching soldier's movement is recorded. This resembles the storage of memory within the ruin structures that are scattered across the site. As these monoliths are the pierced and cut into the memory and thought is provoked and the dweller can reflect.

Fig 3.11 Illustrates the piercing of these masses through a singular route that is interposed by various displaced grids that was derived from the marching soldiers rhythm.

The drawing further illustrates the interplay between spaces that interact with each other as they flow from the one space to the next or as they harshly interrupt each other. This notion becomes a methodology of design rather than a physical resolution as it resembles the displacement of spaces and grid system forming between them.

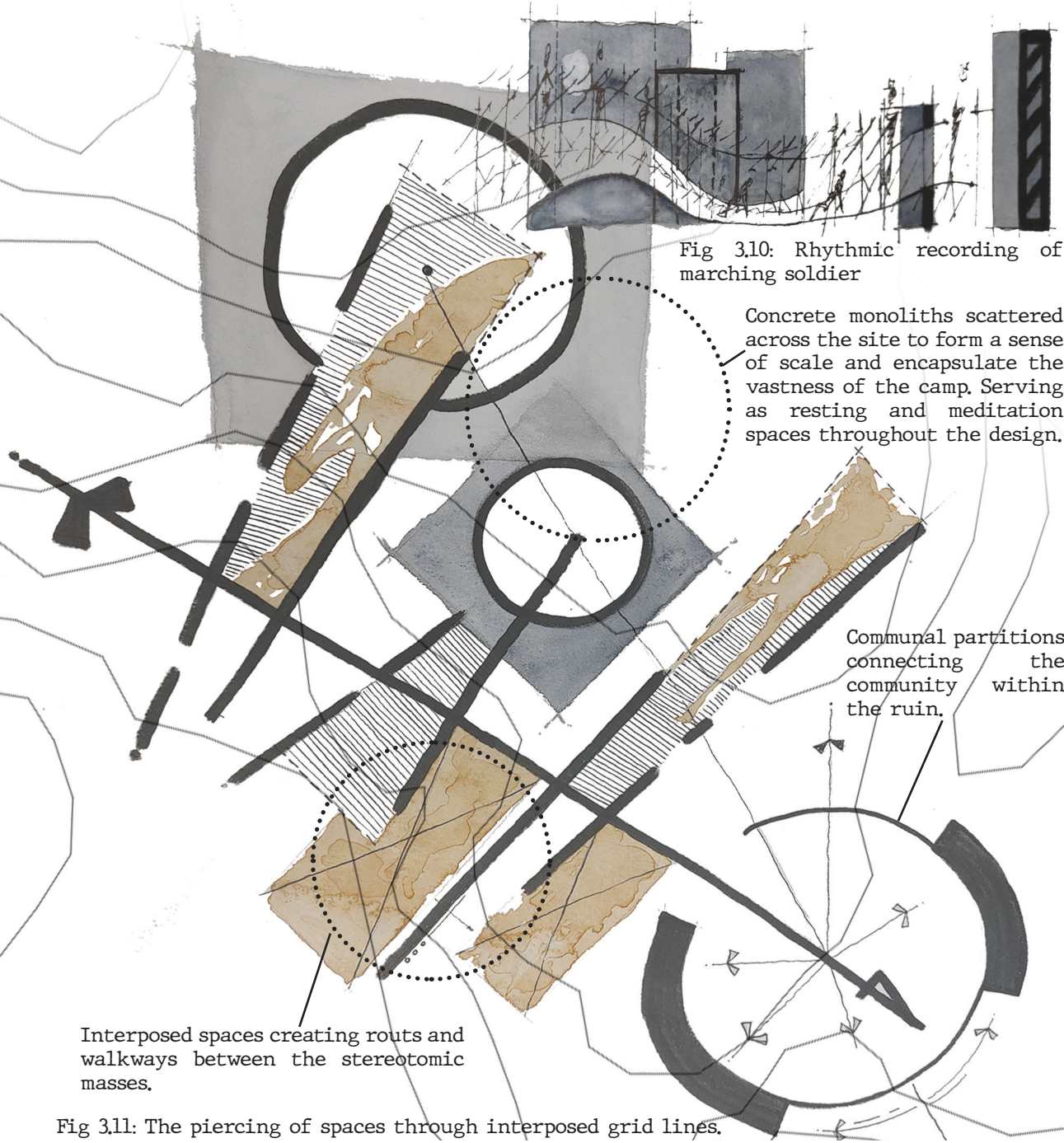
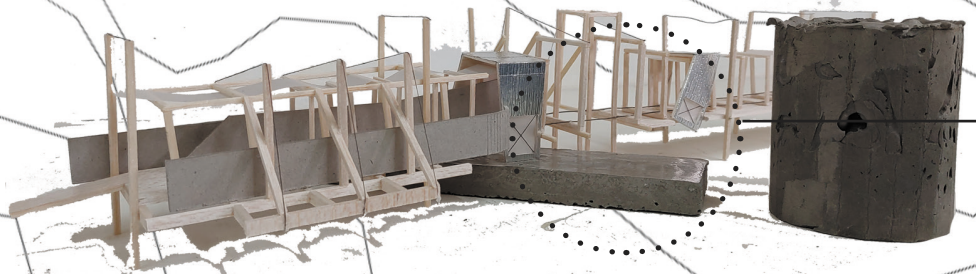


Fig 3.10: Rhythmic recording of marching soldier

Fig 3.11: The piercing of spaces through interposed grid lines.

3A.5.4 CONS-CEPT MODELS

The model aims to incorporate both forms into a singular construct by combining both the tectonic and stereotomic. The materials chosen for the model indicates the process of waining that I intend to achieve. Leaving the foundation of the building as a future ruin that becomes a remnant of the memory but a new central park for the informal settlement.



The concrete structures throughout the model resemble the existing ruins as a tectonic structure starts to oppose the strict grid and forgiving of the camp's history.

Fig 3.12: Model photo 1

Rhythmic frames form interposed spaces and provides walkways throughout the building as the dweller is distanced from artefact's and other valuables found on site. The frames resemble the workings of a train track, as the prisoners were transported via train during their time in South Africa.

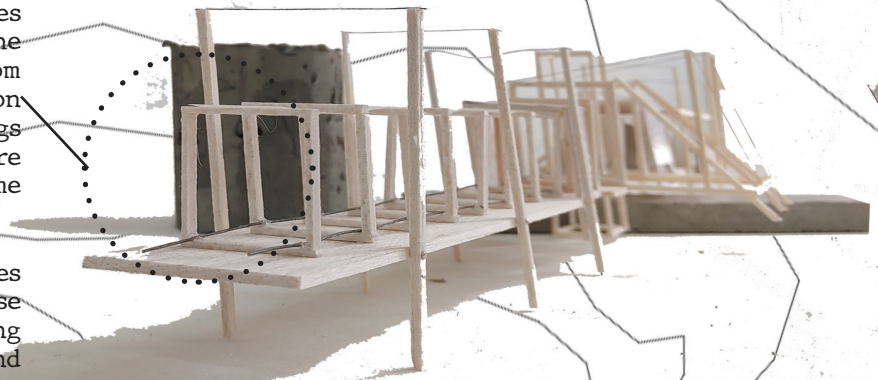
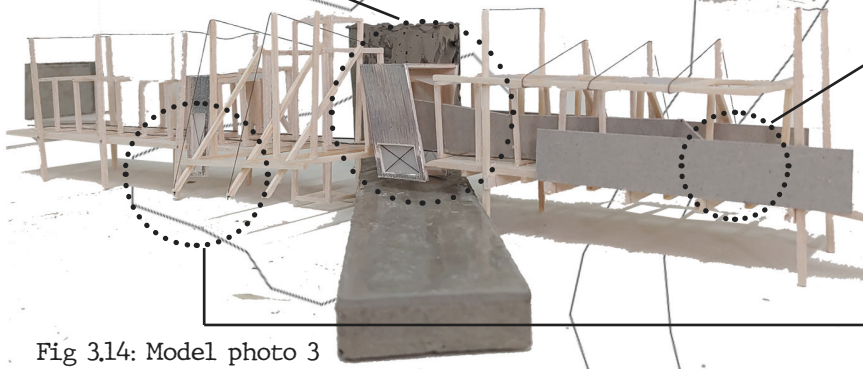


Fig 3.13: Model photo 2

Metal sheets that wrap around portal frames and lightweight bridge structures. These sheets will corrode and rust away, exposing the inner elements of the building and setting in motion a waining experience.



Non structural division walls allow the dweller to visually experience the different roots of the building.
Walking plane raised to accommodate natural growth and references the style of the camps residential units.
Tensioned cables allow for larger spanning roofs as well as portal frames that forms light weight constructions methods.

Fig 3.14: Model photo 3

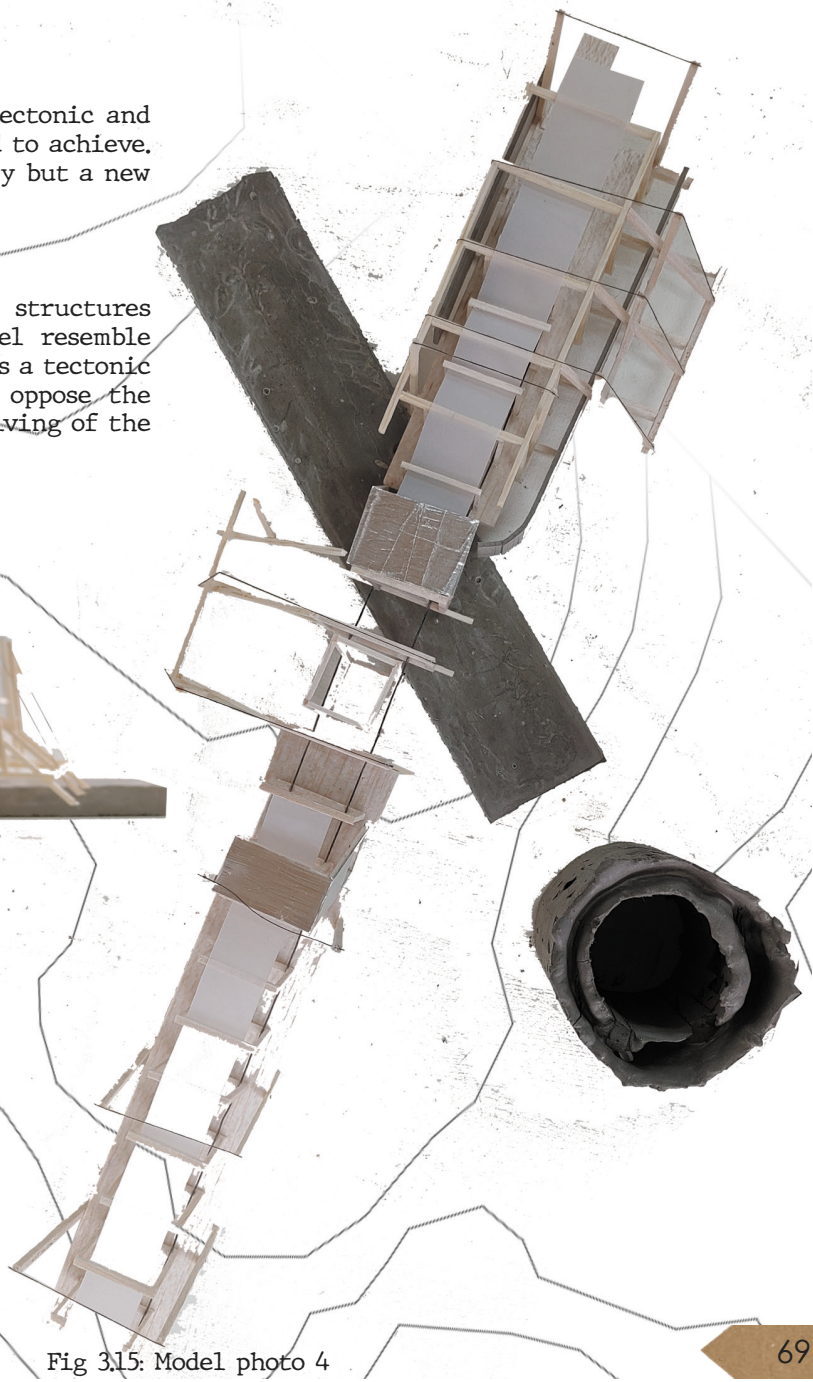


Fig 3.15: Model photo 4

Following the development of the previous model, the next two models aim to explore structural systems that can be utilized in the resolution of the design process. The models shows the usage of light-steel construction systems that is held in tension with cabling. Although this will obviously not a direct structural resolution to a design, it aims to illustrate the systems that can be utilized in an effort to form functioning structural systems in order to later refine and incorporate into a final design resolution.

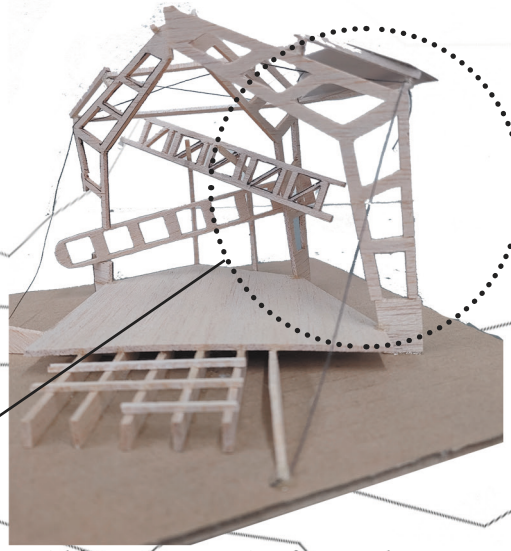


Fig 3.16: Concept model 2 view 1.

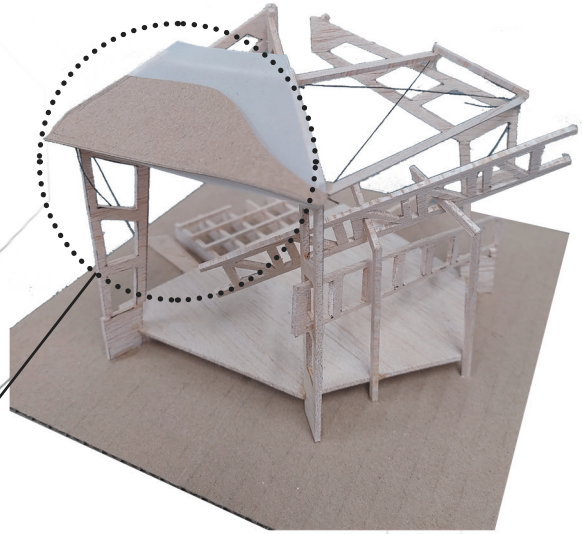


Fig 3.17: Concept model 2 view 2.

Lightweight steel structures held in tension

Lightweight steel paneling wrapping around volumes to create internal spaces

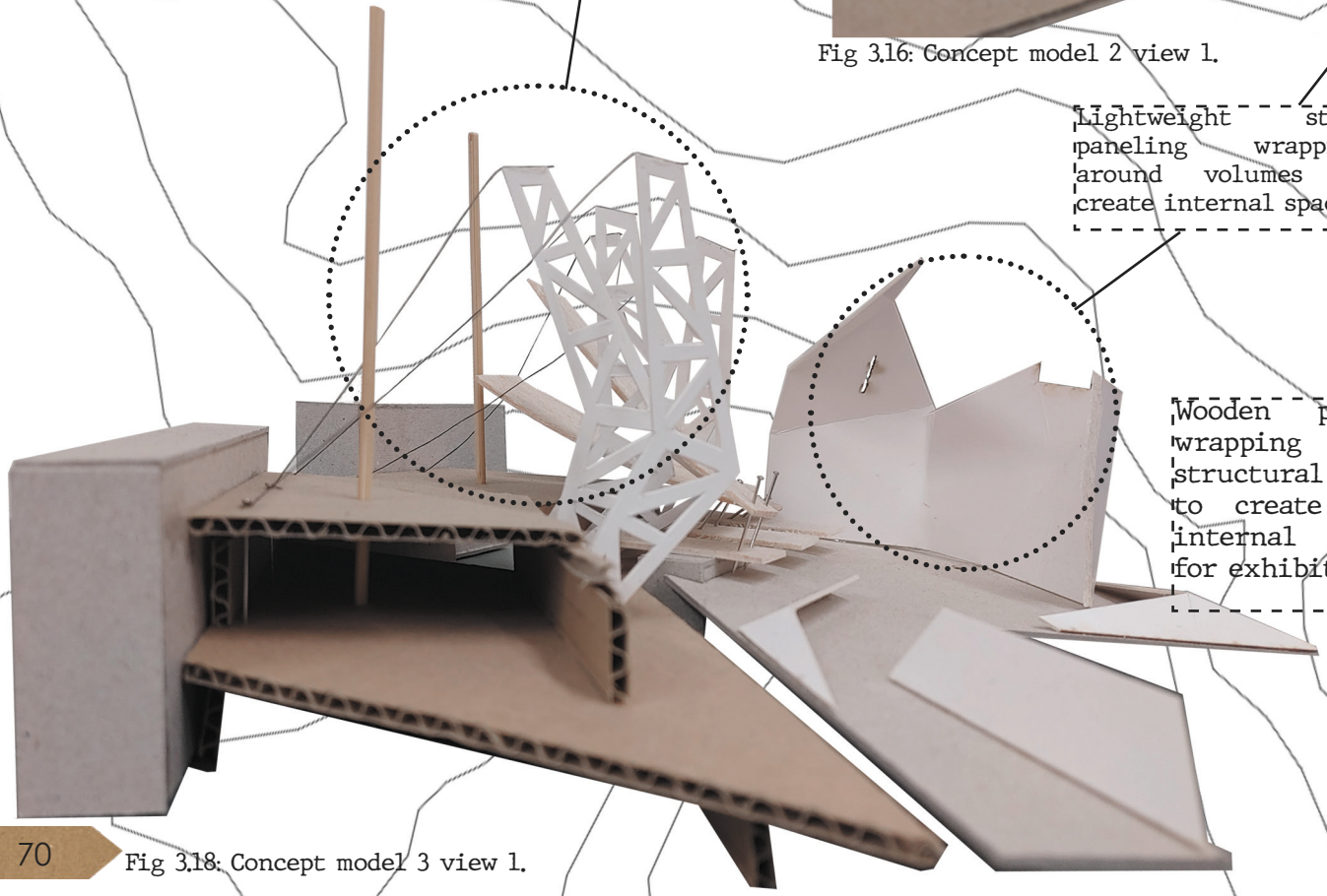


Fig 3.18: Concept model 3 view 1.

Wooden paneling wrapping through structural systems to create softer internal spaces for exhibitions.

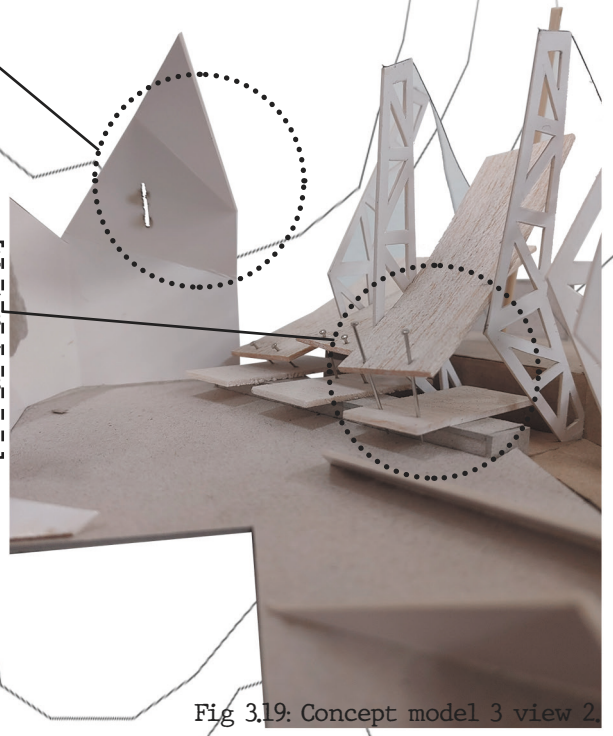


Fig 3.19: Concept model 3 view 2.

3A.6 PRECEDENT STUDY

3A.6.1 Alcorta Farmers revolt Memorial -[eCV] estudio Claudio Vekstein

The Alcorta project (fig 3.20) was erected in order to pay tribute to the Argarian rebellion of small rural tenants, mostly Italian and Spanish immigrants known as "El Grito de Alcorta" and serves as a structural and material analysis towards a complete composition for the final design in this dissertation.
The existing site consisted out of only four concrete foundation slabs that was built in 1962 for the 50th anniversary as part of a monumental project for sculptural figures in the style of Vera Mukhina's socialist realism. The site planning starts to question the grid of the town, immediately drawing focus to the square and forming a sort of monument to the future as well as a memorial to the past. The flowing forms of the structure is further accentuated by the landscaping of the project that sprawls across the square the building resides on (fig 3.20).

The monument incorporates various small cultural functions such as, a civic plaza for public celebratory acts, exhibitions, an auditorium and a permanent gallery space where artifacts can be displayed (fig 3.27). A large screen covers the north-west facade of the memorial building (fig 3.21 & 3.34). The screen's structure consist out of steel frames and rugged modular panels. Each of these modules made up of a resin base that keeps burlap and tow corn sacks molded (fig 3.23; 3.25; 3.30 - 3.352). The panel has then been strengthened by coatings of fiberglass and inserted into smaller steel frames that keep it within the larger modules.



Fig 3.20:Landscape layout (Cairoli, F. & Esmoris, G. E. 2018: Online).



Fig 3.21: Perspective (Cairoli, F. & Esmoris, G. E. 2018: Online).



Fig 3.22: Interior (Cairoli, F. & Esmoris, G. E. 2018: Online).

3A.6.2 SPATIAL APPLICATIONS

Through the analysis of the structure it becomes apparent that the structure of the building is made up of pure elements that form a single connection to the earth. The rest of the structure in the building is mostly connected through tension and kept intact by the resting or pulling from another piece of structure (fig 3.23, 3.25 & 3.28). The spatial layout of the plan lends itself to the gathering of the dweller around a central axis running on the exterior of the building. This causes the structure to become multi faceted in use, as members of the public does not have to progress through the entire space and can only enter one space if so required (fig 3.24). Leading to an event based structure that can be used for multi purposed functions and events. Although an event based structure is not the intention of the final design, it does form a part of the response that the design of the museum in this dissertation could have, as a method to sprawl out into the park as it provides spaces where events could perhaps occur.

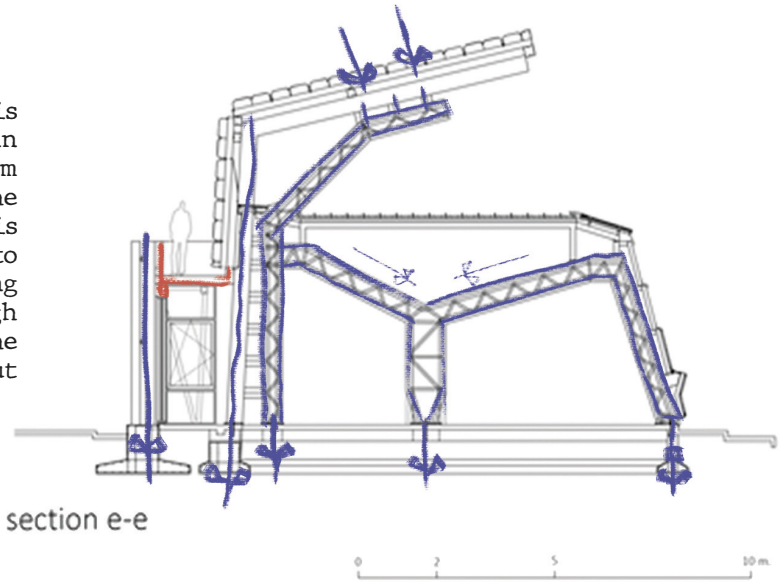


Fig 3.23: Section (Cairoli, F. & Esmoris, G. E. 2018: Online. Adapted by Author).

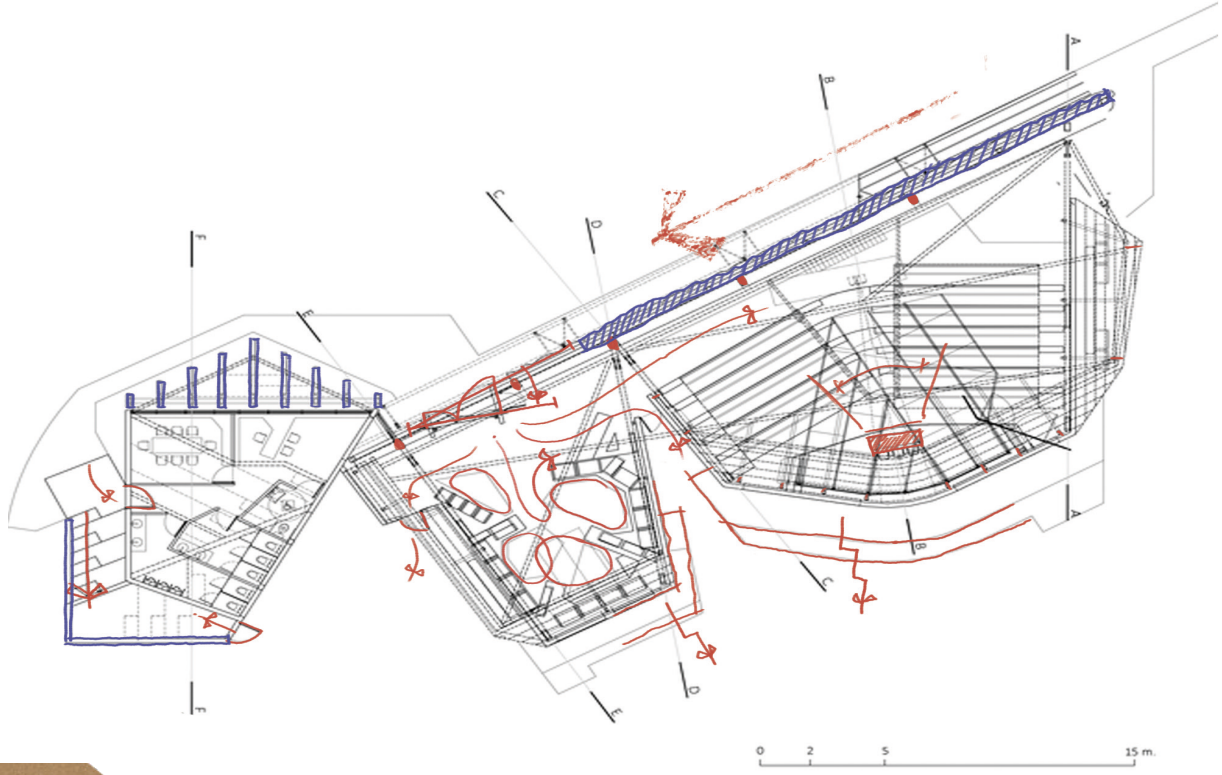


Fig 3.24: Plan and spacial layout (Cairoli, F. & Esmoris, G. E. 2018: Online. Adapted by Author).

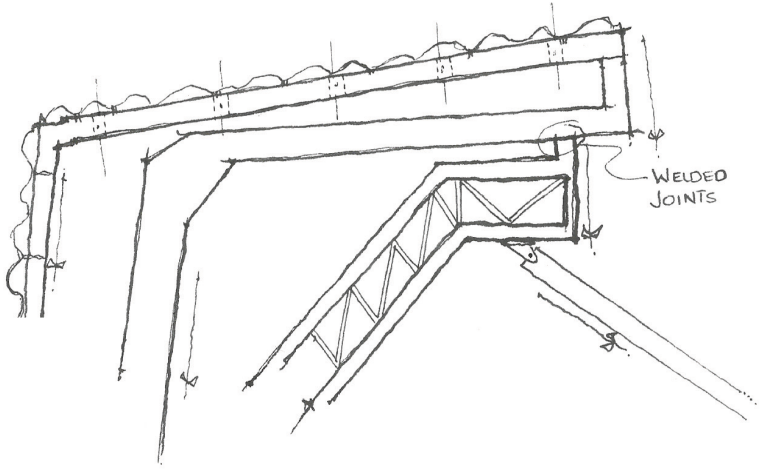


Fig 3.25: Structural elements.

3A.6.3 STRUCTURE

The interior of the building reflects the very nature of a composition built up as a whole, a constructed kit of loose parts (fig 3.26 - 3.28). The internal structures are encapsulated by the external skin of the building and then re framed by yet another layer of construction. The layering of construction elements leads to a full composition, where the dweller can experience and interact with the structural qualities of the building.

Further more the entire construction of the internal spaces relies heavily upon tensioned elements that encapsulates the dweller as they move through the spaces (fig 3.27 & 3.28). Creating a visual connection to the essence of the building's intentions.



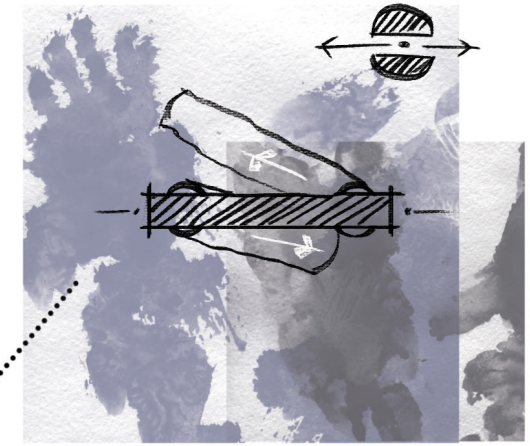
Fig 3.26: Door opening (Cairoli, F. & Esmoris, G. E. 2018: Online. Adapted by Author).



Fig 3.27: Internal space formed by layered structure
(Cairoli, F. & Esmoris, G. E. 2018: Online. Adapted by Author).

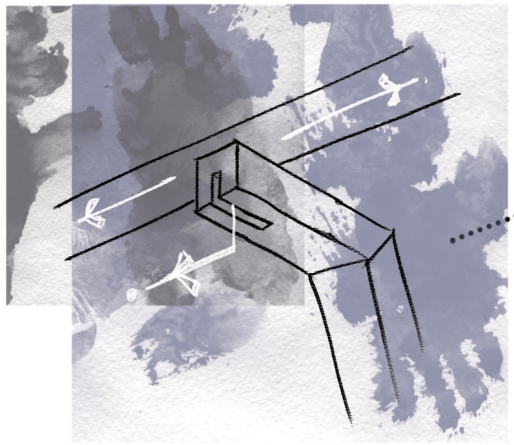


Fig 3.28: Internal space formed by layered structure 2
(Cairoli, F. & Esmoris, G. E. 2018: Online. Adapted by Author).



This detail (fig 3.30 & 3.29) illustrates one of the smaller details in the building. This serves as the connection between the 4 columns and the girder truss system that runs through out the building. Serving as a third layer of structure. The columns are broken apart and separated into 4 smaller columns that are of-set to the sides. Appearing as if dwindling.

Fig 3.30: Detail 1.



Small slits has been cut into some of the front portions of the structures that serve as scewed columns into the earth (fig 3.31 & 3.33). No particular reason was giving to this other than allowing space for the tension wiring it would seem.

Fig 3.31: Detail 2.

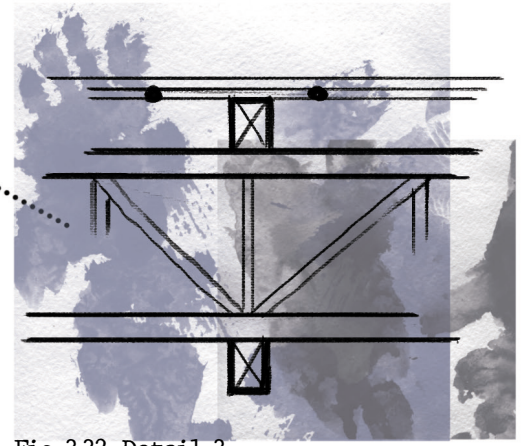


Fig 3.32 shows a section of the main truss system (fig 3.29) and its composition to form the layering of structure that give the building it's displaced and disjointed tension aesthetic.

Fig 3.32: Detail 3.

Fig 3.29: Auditorium (Cairoli, F. & Esmoris, G. E. 2018: Online. Adapted by Author).

Fig 3.33: Auditorium (Cairoli, F. & Esmoris, G. E. 2018: Online. Adapted by Author).

3A.6.5 MATERIALS

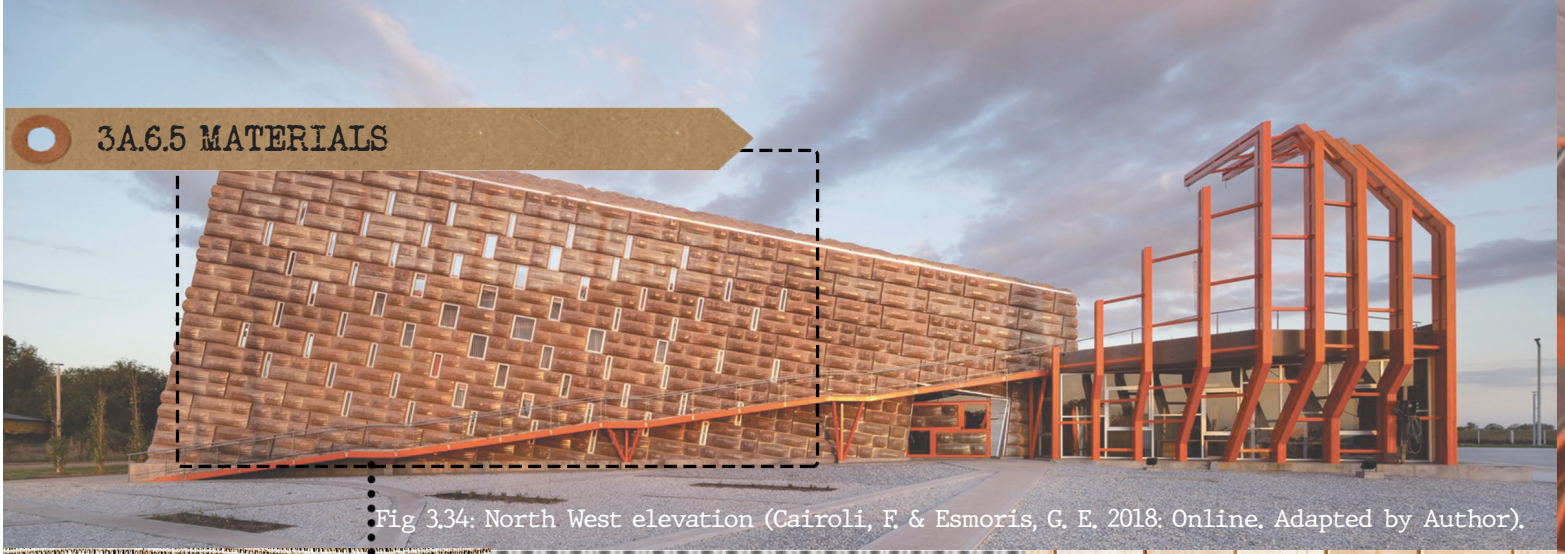
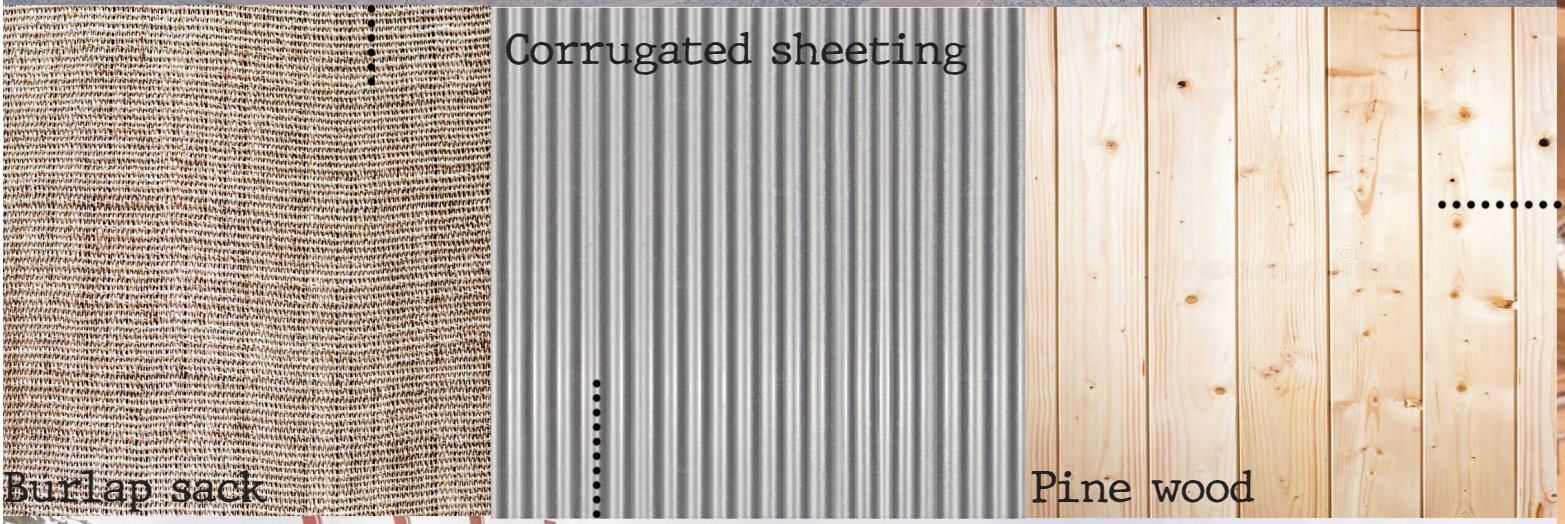


Fig 3.34: North West elevation (Cairoli, F. & Esmoris, G. E. 2018: Online. Adapted by Author).



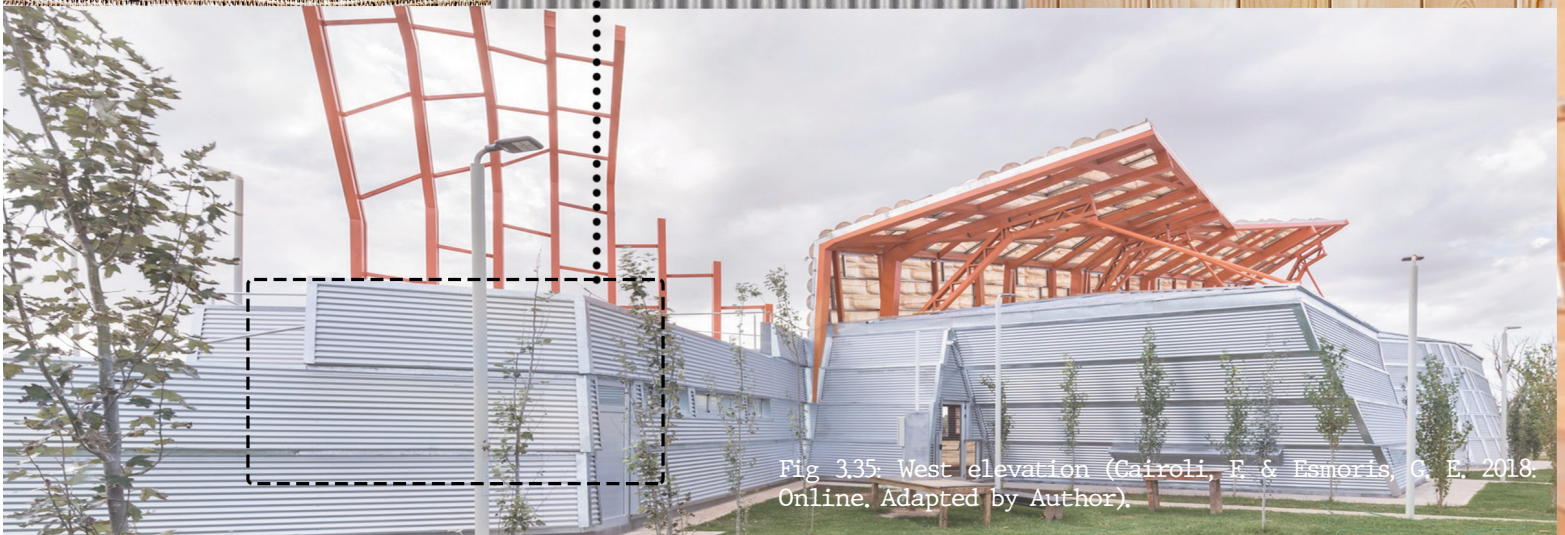


Fig 3.35: West elevation (Cairoli, F. & Esmoris, G. E. 2018. Online. Adapted by Author).

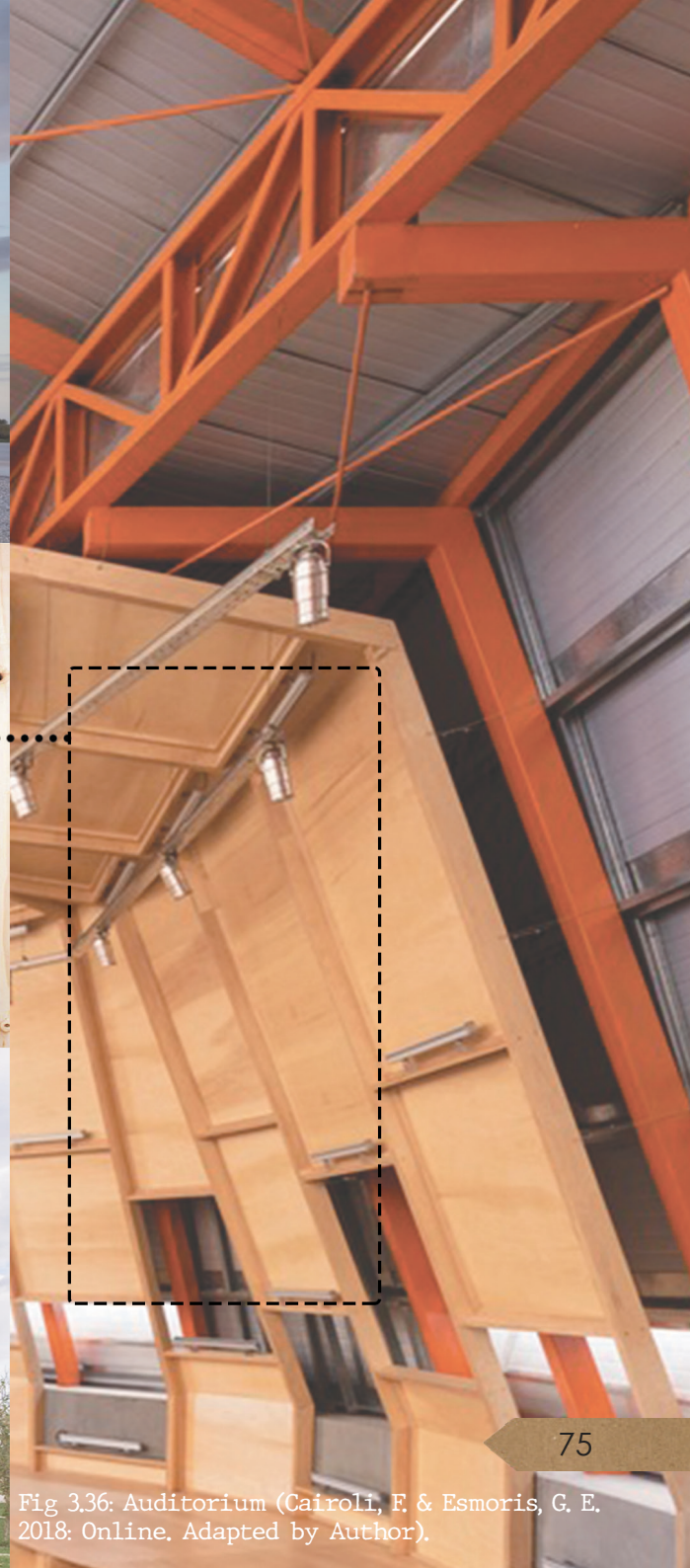
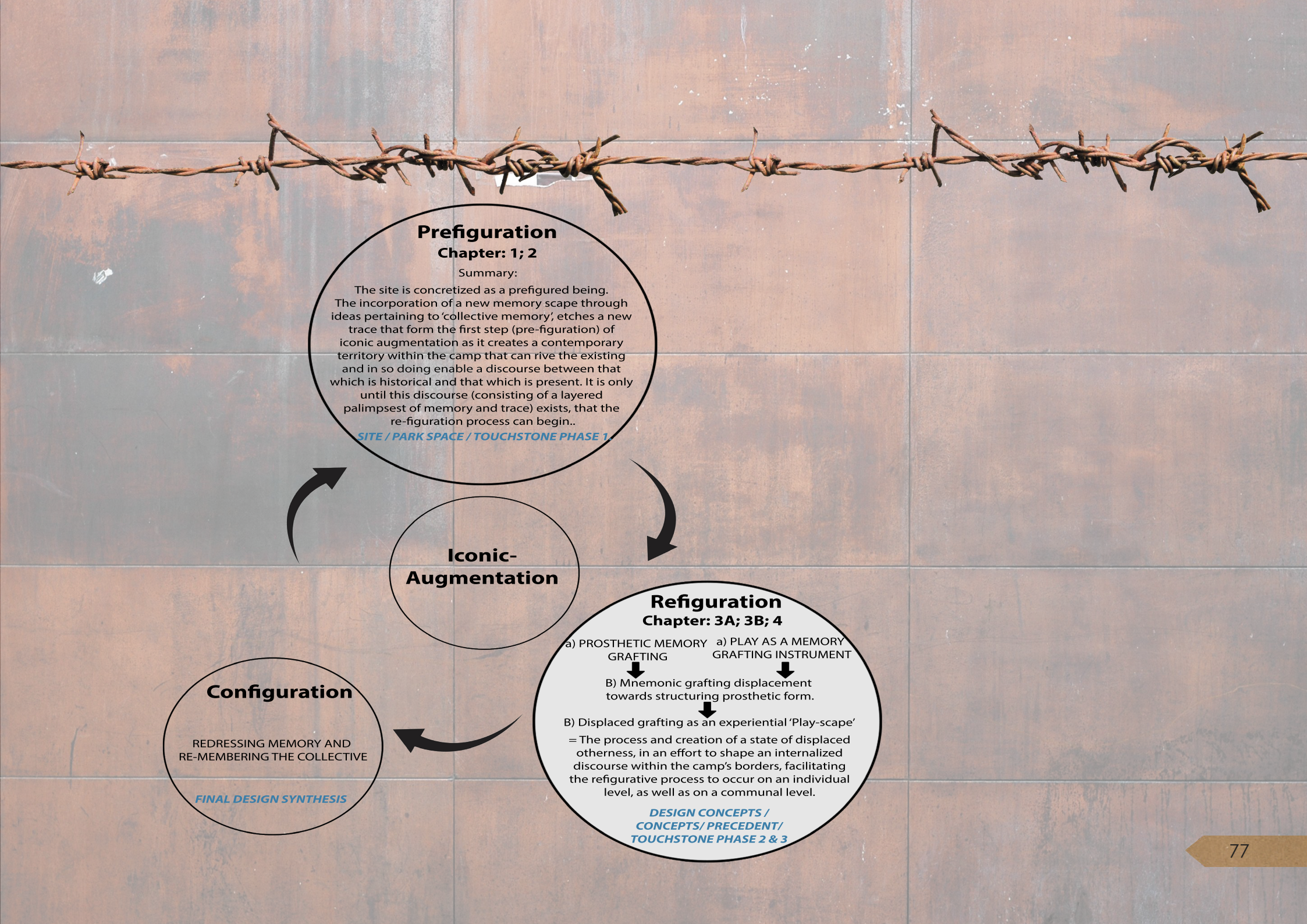


Fig 3.36: Auditorium (Cairoli, F. & Esmoris, G. E. 2018: Online. Adapted by Author).

03.B

Introduction

Following on section 03.A, this section serves as the design synthesis of the museum that is proposed as a final architectural re-figuration for the purposes of this dissertation. The proses aims to explain the originary values of the project as it aims to displace and disjoint the essence of the interment camp in an effort to re-figure the site through the design of a contemporary museum that enables the visitor to become a visceral part of the historical event through the method of play, without having played a part in the real camp.


Prefiguration
Chapter: 1; 2
Summary:
The site is concretized as a prefigured being. The incorporation of a new memory scape through ideas pertaining to 'collective memory', etches a new trace that form the first step (pre-figuration) of iconic augmentation as it creates a contemporary territory within the camp that can rive the existing and in so doing enable a discourse between that which is historical and that which is present. It is only until this discourse (consisting of a layered palimpsest of memory and trace) exists, that the re-figuration process can begin..
SITE / PARK SPACE / TOUCHSTONE PHASE 1
Iconic-Augmentation
Refiguration
Chapter: 3A; 3B; 4
a) PROSTHETIC MEMORY GRAFTING
a) PLAY AS A MEMORY GRAFTING INSTRUMENT
B) Mnemonic grafting displacement towards structuring prosthetic form.
B) Displaced grafting as an experiential 'Play-scape'
= The process and creation of a state of displaced otherness, in an effort to shape an internalized discourse within the camp's borders, facilitating the refigurative process to occur on an individual level, as well as on a communal level.
DESIGN CONCEPTS / CONCEPTS/ PRECEDENT/ TOUCHSTONE PHASE 2 & 3
Configuration
REDRESSING MEMORY AND RE-MEMBERING THE COLLECTIVE
FINAL DESIGN SYNTHESIS

3B.1 MNEMONIC GRAFT DISPLACEMENT TOWARDS STRUCTURING PROSTHETIC FORM

Having now established the former ways in which the camp conceptualized itself in section one and two (the prefigured condition) and investigated a manner of inciting a livable and participatory experience between the memory- and the trace-scape in section 03.A, the concretization of the re-figuration process can be explored through the design process of the museum. The incorporation of Eisenman's theoretical underpinning serves as a guideline towards creating a new mode of architecture containing within it an otherness to that of the already present in an effort to internally displace the existing, creating a state of crisis where in which the re-figuration of smaller narratives can start to be questioned and mediated through bringing a collective to an individualized negotiative state.

In Eisenman's *En terror firma in trails of grotextes* he speaks toward the work of Kant and an otherness in the concept of beauty and suggests that within the beautiful there was something else, which he called the sublime. He argues that before Kant the sublime was opposing to that of beauty but, with the work of Kant, the suggestion that beauty was in the sublime and the sublime was in the beauty. "Now interestingly, the sublime also has within it a condition which the conventional beautiful represses." (Eisenman. 1984. 566-570) The difference between opposing and being within forming the crux of his argument, he continues to argue that the terms of the grotesque are usually thought of as the negative of the sublime, but that this is however not the case in architecture, where the sublime is argued to deal with the aspects of the airy, aspects that tend to resist physical occupation, where as the grotesque deal with real substance, with the manifestations of the uncertain in the physical (Eisenman. 1984. 566-570).

Correlating the sublime to an emotional experience (this is incited by the games) and the grotesque to that of a memory graft (the building should act as the graft on site) a similar condition can be argued, with the emotional experience being within the memory graft and the memory graft being in the emotional experience.

Eisenman continues to explore this as a mode of architecture and enunciate the following:

> "In order to achieve the necessary internal displacement, architecture would have to displace the former ways of conceptualizing itself. It would follow then that the notion of the house, or of any form of the occupation of space, requires a more complex form of the beautiful, one which contains the ugly or a rationality, that contains the irrational. This idea of containing within, necessitates a break from the tradition of an architecture of categories, of types which in their essence rely on the separation of things as opposites (Eisenman. 1984. 566-570)."

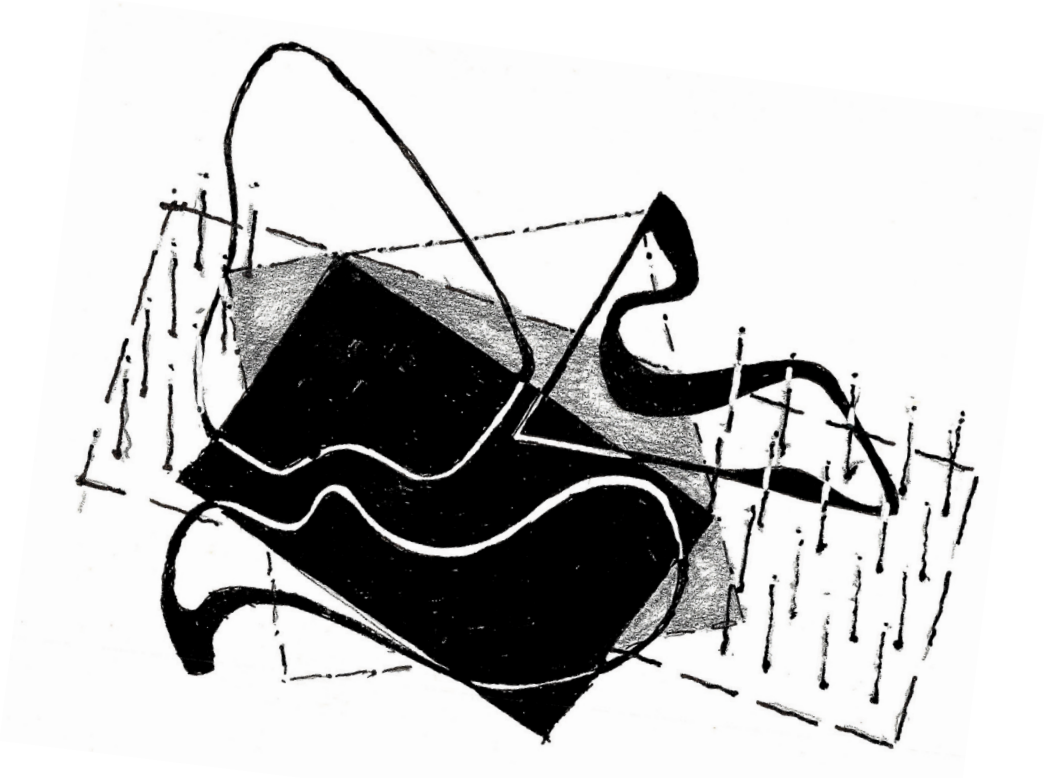


Figure 3.37.1: The grafting process as a formal expression of architectural displacement.

In order to achieve this, Eisenman identifies four principles through which one can formulate a design process of internal displacement within architecture.

1 Displacement: This is a process with regards to the design process and the designer, in this case, the architect. The design of something can be called a displacement but it might only then become a type of distortion to the displacement of a stable language. While the concept of a memory graft can be conceptualized and imaged, it cannot be designed because, it then becomes non-textual, as design by necessity requires certainty with the outcome being the making of something. Eisenman argues that in any text there is potential for traces of otherness, aspects, or structures that have been repressed by presences and that for as long as presence remains dominant there can be no textuality. Therefore, by its own nature, a condition of trace requires at the very least two texts (Eisenman. 1984. 566-570). Responding to this principle, the spatial orientation, and structure of the contemporary museum will be explored as a displacement of the old. The displacement of the camp's strict grid and the newly interposed experiential memory trace are inter-weaved in order to create a re-collectible condition within the design and in so doing, forming the first layer of text.

2 Twoness: The term suggests a condition where there is no dominance or originary value but rather a structure of equivalences, where there is uncertainty instead of hierarchy because if one text becomes primary to the other there can be no displacement (Eisenman. 1984. 566-570). The second text can also not be primary to the other as it is to be seen as internal to the other, cementing it within the other and placing it between the traditional presence and absence. Twoness, however, goes against the core principles of architecture, as architecture requires hierarchy in order to allow the dweller to become oriented within the architectural presence. This principle can however be incorporated into the design as the process of the physical game and the threshold that is created by the participatory action within the game. Twoness then becomes experiential to the architectural form, but not the form itself as the participation in the game becomes the second layer of text as expressed in the first principle.

3 Betweenness: It is defined as something which is almost this, or almost that, but not quite either. This leads to a partial unknowing and a suggestion of two weak images that are played within each other. The object must therefore have a blurring effect and must seem to be out of focus. This, however, contrasts the image of architecture as a strong image that man uses to surpass nature. Denying traditional space or enclosure, Eisenman suggests a condition of displaced architecture, that is interiority (Eisenman. 1984. 566-570). Focusing on the first part of this notion, the design aims to explore the elevation and sectional development as a method of inciting betweenness, where the texts created above can be contained within.

4 Interiority: The term has little to do with the literal interior or the inhabitable space of a building, but rather the condition of being within (Eisenman. 1984. 566-570). Interiority also deals with the condition proposed by textuality that the symbolism or meaning of any sign refers or directs to something other, not outward but inward to an already present condition (Eisenman. 1984. 566-570) referring to an inherited knowledge of something other. Interiority is however expressed within the internal and external experience of being within an experiential field of architecture. This principle will focus on the final composition of the building and the experience that the refined shape of the structure will nurture and avail to the dweller. The previous three principles facilitate the individualization of the collective, and interiority aiming to serve a process of inward reflection towards a negotiative state between individualized narratives that triggers a re-figurative state within an individual.

3B.1.1 DISPLACED GRAFTING AS AN EXPERIENTIAL 'PLAY-SCAPE'

Plato's Meno and Phaedo refers to the idea of a palimpsest as a movement from past to present (Sedley, D. 2010. p 1-116), for example, the process that grounded the memory fragments as a present state in section 2. Meno (Sedley, D. 2010. p 1-41) suggests that there is a knowledge which has been taught to us in the previous life- not to be confused with the notion of reincarnation- but however, the in-between process where the soul is without the body. Plato (Sedley, D. 2010. p 1-116) writes that it is in this 'in-between time' where we learn the inherent primordial knowledge of archetypes and form on which we base our present. The teacher of this knowledge only serves to make the dweller re-aware of that inherent knowledge they possess from the noted 'in-between' time- hence, the un-forgetting of what we know. This 'teacher' relates back to the second layer of the touchstone that represents Heidegger's 'Keeping', as it gifts to us the most thought provoking knowledge.

In viewing the existing trace of the camp as the site's past life and the memory of the prisoner as the imaginative in-between space that Plato refers to, the prisoners memory can be overlayed onto the camps existing grid and a new route can be inserted that opens up segments within the existing. Through the process of palimpsest and concretizing that which is still tangible, a complete memory scape can be built from which all memory can be recalled by the dweller on command. In so doing, an inhabitable memory scape is formed which starts to connect the personal memory to the collective memory and in turn, gives form to a new memory that is however, still aware of the past experience.

Accepting the park design as the existing context of the museum (fig 3.37), the following section will aim to illustrate how the museum fits into the park-scheme and the spatial organization that has been set by the development of the park. Focusing on the first principle of Eisenman (displacement) in combination to the writing of Plato, the start of the designing process relates to the spatial organization of the building site and the attachment of a route that facilitates the recollection of the memories that the guards and the prisoners recorded in their letters about the camp as the visitor progresses through the proposed park design in section two (p45 -p.55).



Fig 3.37: Final memorial park drawing proposal as shown in section 2

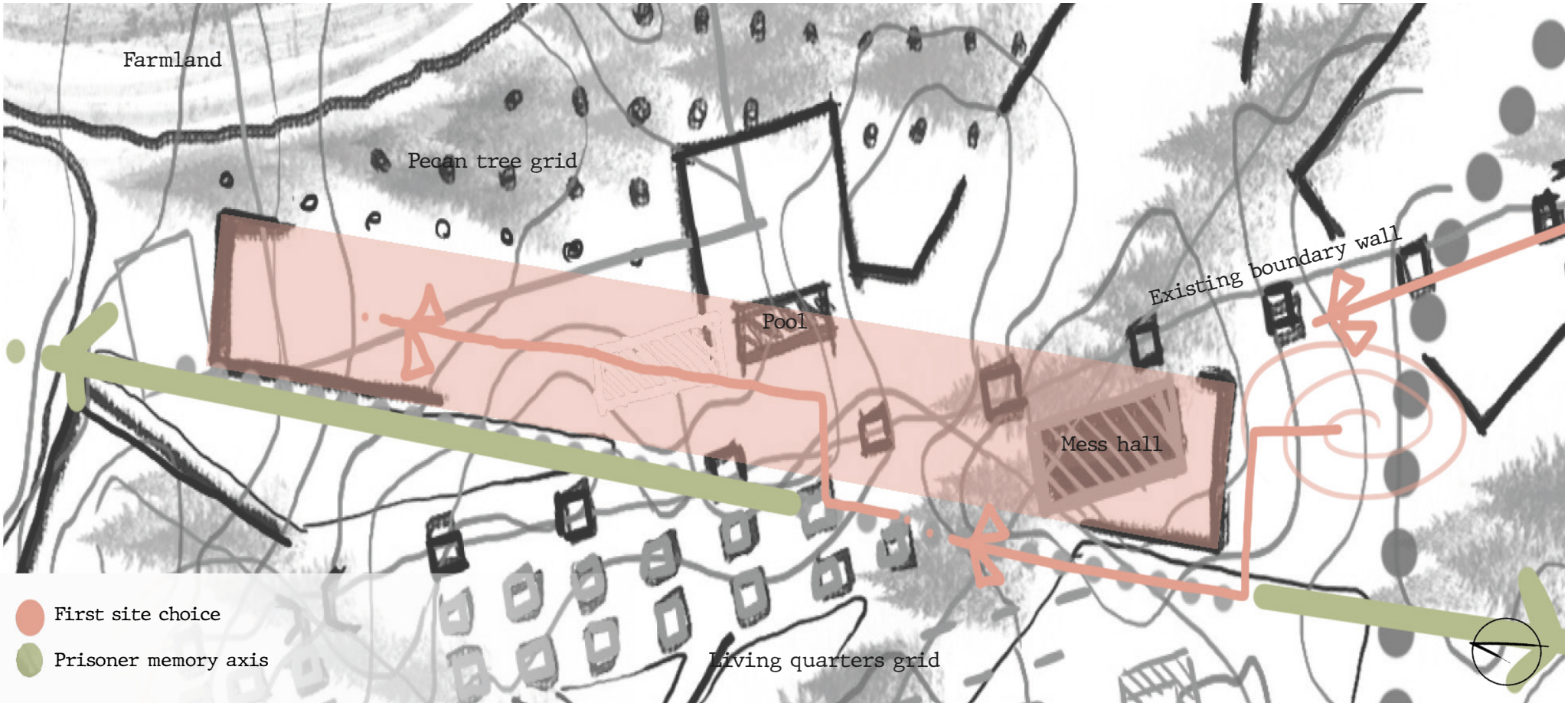


Fig 3.38: Final memorial park drawing proposal as shown in section 2

Before the exploration of design, the location of the proposed museum within the park had to be decided. Fig 3.38 shows the chosen site of the newly proposed design within the park. It was chosen due to the fact that it serves as a connecting axis between the two sides of the camp (as was expressed in section two). This would allow the museum to become properly integrated within the park as well as interacting with every aspect of the site, the ruin, the memory and the newly inserted park design as it stitches together the two sides of the camp across the existing boundary wall. The orientation of the site is also favorable as it allows ample Eastern and Western light to enter the exhibition spaces due to the fact that the building will need to be orientated directly north in order for the narrative route to fit within the alloted space.

3B.2 DESIGN DEVELOPMENT

Again following a palimpsesteous process, inspiration came from the layering of the initial concept- and the cons-ception models (fig 3.4 & 3.5). The layering of these models were used to give the camp an early three dimensional shape based on only the experience of being within the camp as it is today. The models therefore serve as a metaphor for three gifts that Heidegger's 'Keeping' unveiled to the designer as a method of expressing that which is most thought provoking of the camp to the designer and reflects the interplay between spaces that interact with each other as examined in the third cons-ception on p.68.

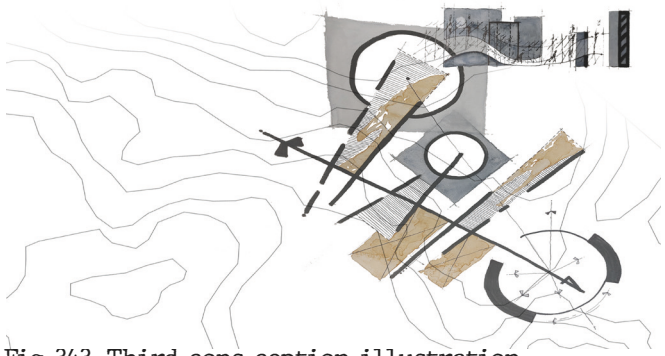


Fig 3.3: Third cons-ception illustration

In preparation for the first external review, the combination of the concepts, cons-ceptions, touchstone and first response sketches made up the first phase of the design development process. Fig 3.6 serves as the starting point for the project as it illustrates 'the Keeping' wrapping around and through the linear paths created in fig 3.5 that bear reference to concept two on p.42. This sketch demarcates the usage of a singular axis that is engulfed with a wrapping screen or walls as they serve to encapsulate the experience of the dweller.



Fig 3.4: Layering of initial design concepts

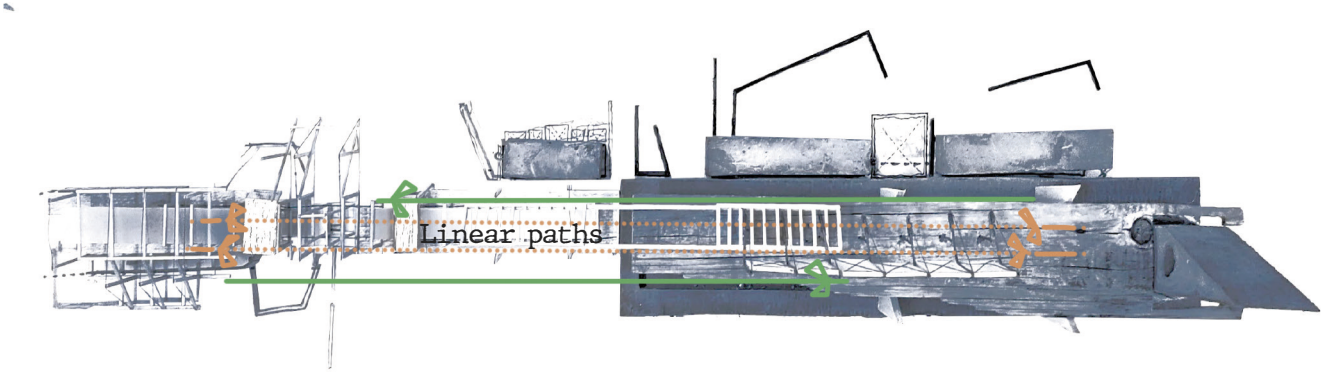


Fig 3.5: Layering of initial design concepts and the cons-ception model

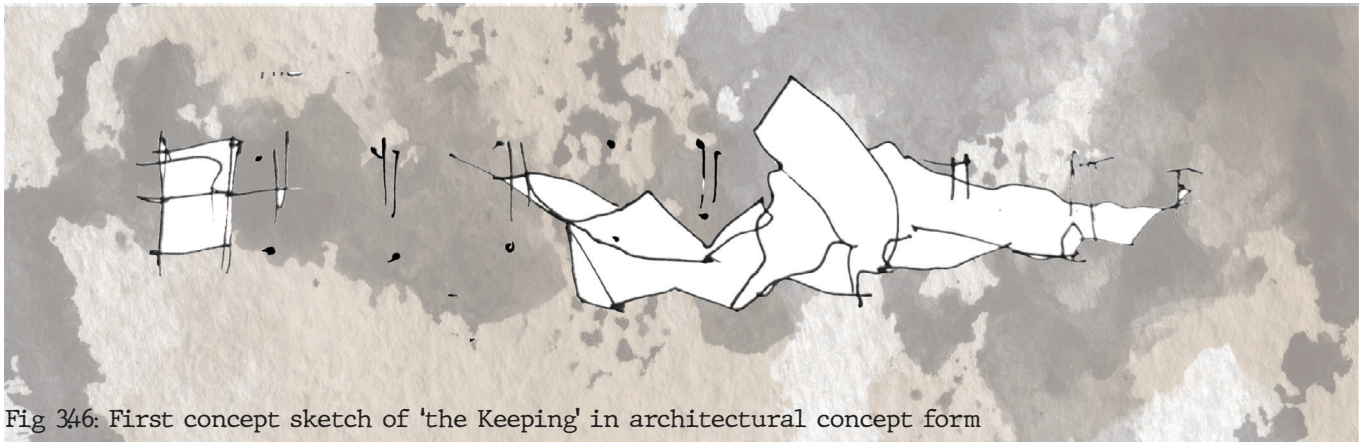


Fig 3.6: First concept sketch of 'the Keeping' in architectural concept form

Following the layering process the site was expressed as the two parallel paths, divided by an in-between space and framed on the edges by the meandering walls of the parks design (fig 3.47). These paths were separated from each other as each path reflected the narrative of a different perspective route, the one of the guard and the other of the prisoner so that the visitor would be able to experience both sides of the camp and their perspective towards the information that is held within the 'Keeping', further on referred to as the in-between space. Each exhibition would therefore house the same story but both sides would reflect a different perspective (fig 3.48).

Next, the two neighboring grids (the pecan tree's grid and the living quarters' grid as shown in fig 3.49) of the site was overlayed onto the chosen location as a means of creating an organized system of proportions that can be used within the design resolution (fig 3.50). Now having a localized grid overlayed onto the design location, the expression of a narrative can be inserted into the grid in order to create a route that the visitor can walk through as they gather information (fig 3.42).

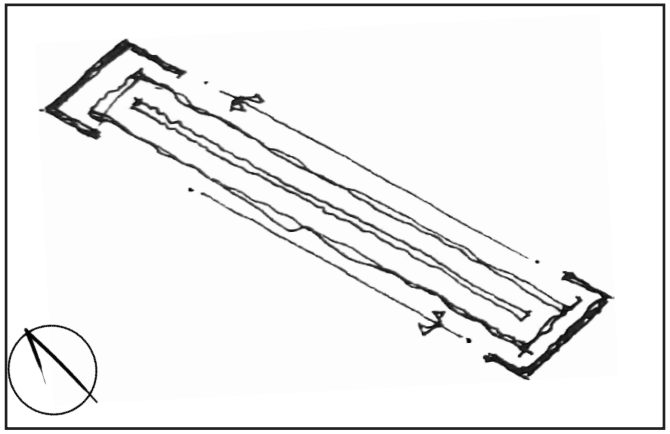


Fig 3.47: Site as two parallel paths being framed

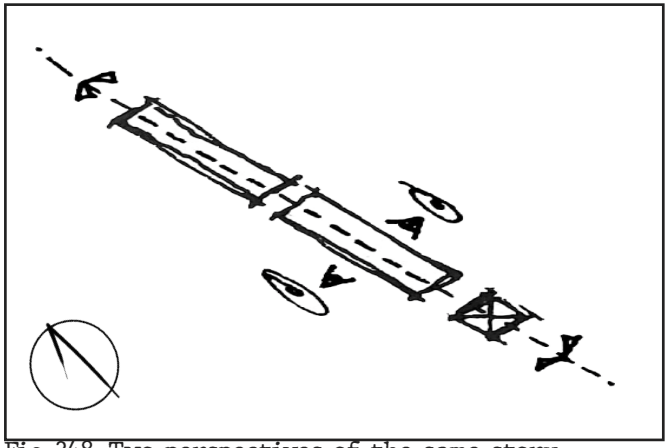


Fig 3.48: Two perspectives of the same story

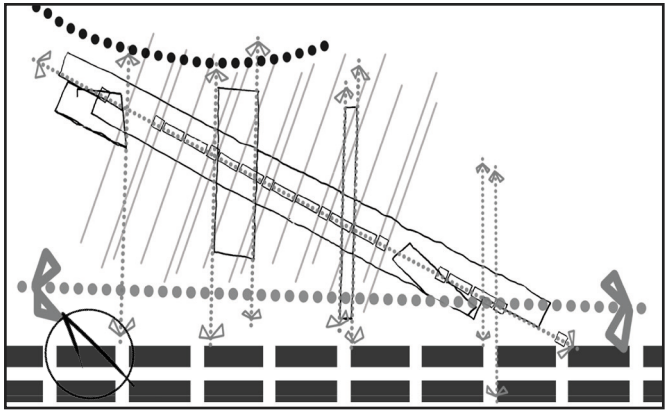


Fig 3.49: Existing grids overlayed

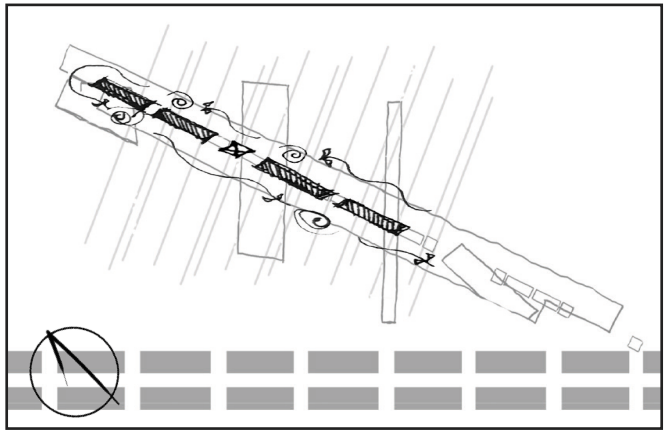


Fig 3.50: Insertion of a narrative route

Fig 3.51 illustrate the integration of fig 3.50 and the first response of addressing displaced form, as the volumes are turned off-center to the camp's existing grid. Fig 3.52 addresses the integration of fig 3.46 and the new grid that has been overlayed. The screens address the outside of the building, as they are held in place by cables that resemble that of the tent structures that they used in the camp, as well as facilitating the visitors flow through the interior space. In an attempt to further displace the grid, the screens interweave themselves through the grid and break apart the strict grid spaces within the structure.

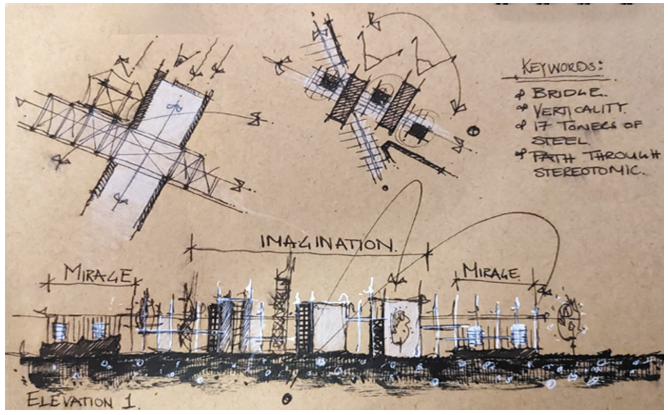


Fig 3.51: First exploration of form within new grid

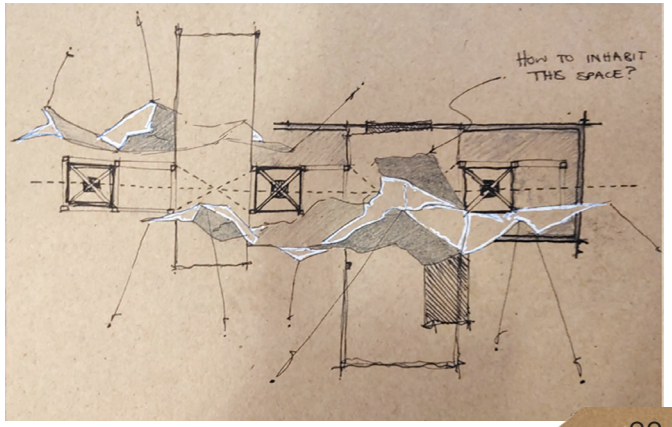


Fig 3.52: Second concept sketch

In conjunction with the overlaying of grids, two separate design responses were built from the conceptual responses to the site. These models act as a text to investigate, in order to identify a suitable architectural presence for the new design. The development of the two models therefore aim to form a set of knowledgeable ideas that can be incorporated into the design of the final proposed museum. The first of these models aim to explore the camp's rigid structures, analyzed in section one of the book (fig 3.53), that was used to build the barracks units in order to construct a contemporary version of these structural pieces (fig 3.54). Renderings of model show the usage of materials and repetitive wall segments as the dweller progresses through a linear path of repetitive wooden structures alongside the existing boundary wall (fig 3.55).

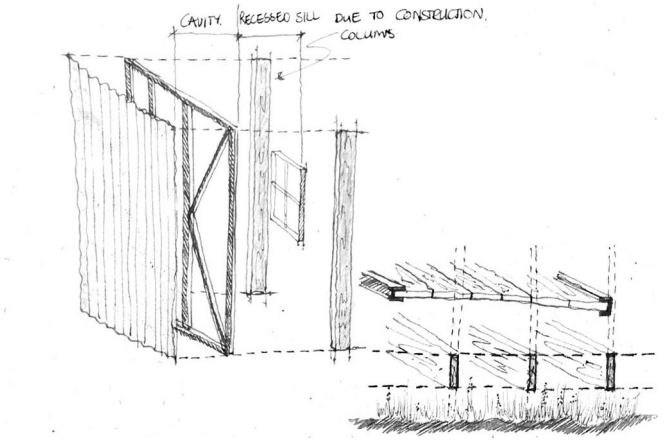


Fig 3.53: Exploded view of camp structures

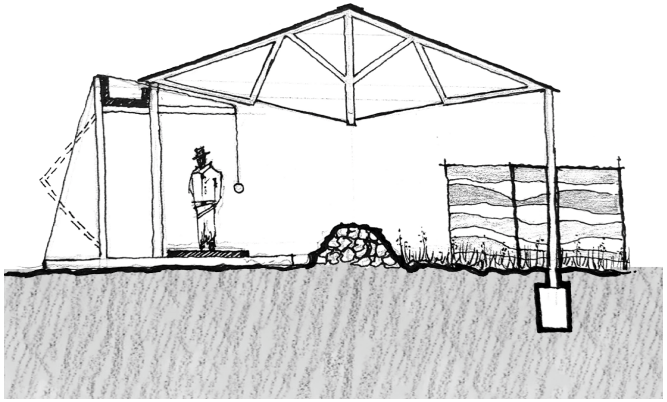


Fig 3.54: Contemporary version of camp structural systems

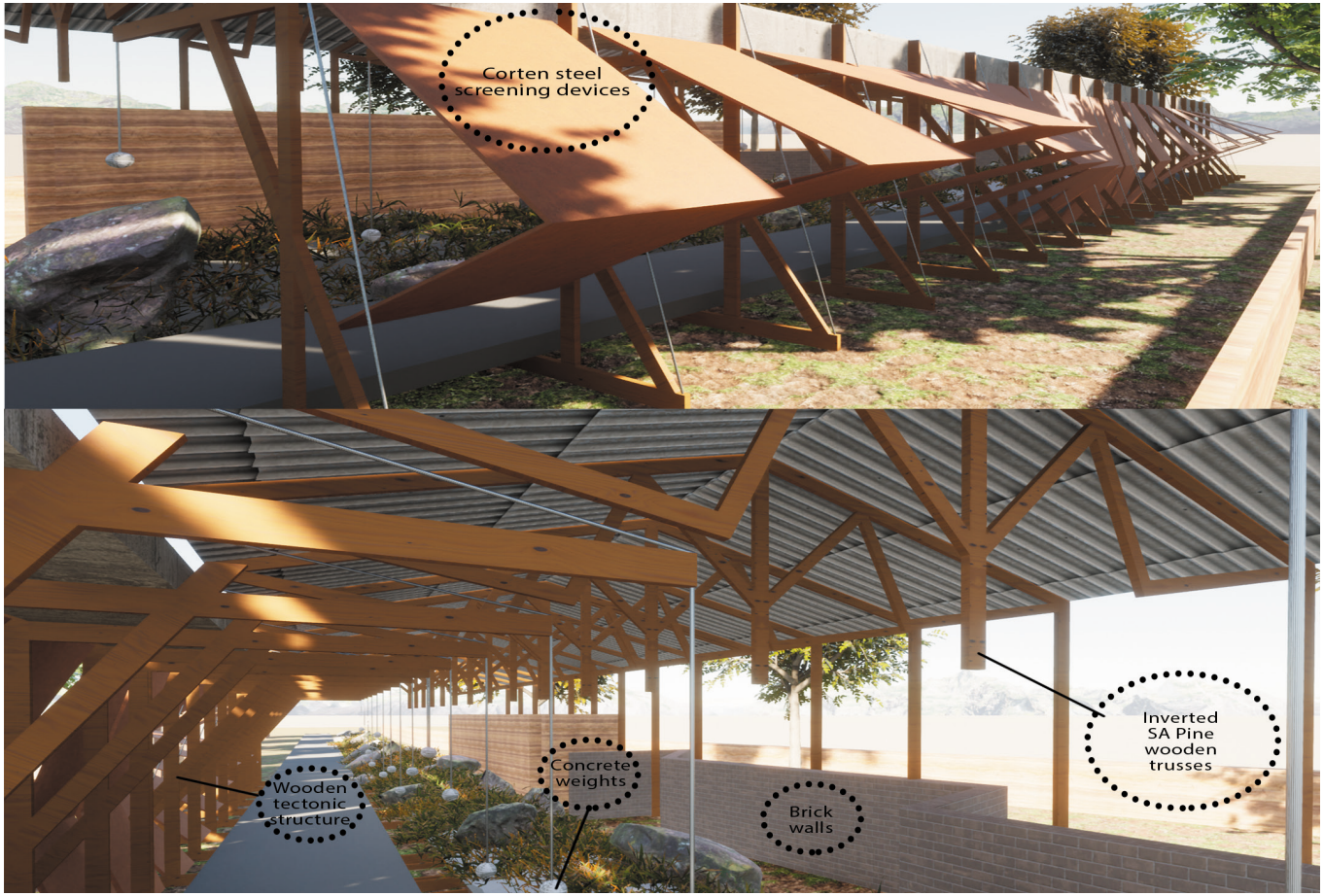


Fig 3.55: Renderings of model showing materials and interactive wall segments as the dweller progresses through a linear path along side the existing boundary wall.

Extracted knowledge:

The usage of two different repetitive wooden frame systems connected by a tensioned wire in order to form a coherent structural grid relates back to the temporality and repetitive nature of the existing camp's former structural systems. The linear route and repetitive structure however, forms a monotonous experience where the interaction between the dweller and the structure fall short, as play requires the facilitation of moments of participatory action to occur.

The second model reflects the nature of the man made landscape. The model brings forth the innovation and the total dominance that the man made insertions within the Vaalhardts scheme embody and has on the landscape (fig 3.59).
Focusing on the pivot point systems, the model aims to explore the structure of a pivot point as an inhabitable space (fig 3.56) and then displacing and disjointing the structure to form the making of an architectural space where in the dweller can meander (fig 3.57).

The outer shell of the model is formed by segmented pieces of textured concrete with circular cutouts (fig 3.58 & 3.59) resembling pivot point fields that dominates the landscape within the area as it is today. The model also reflects the strict grid system that divide the landscape as massive arching columns support the roof structure that covers the interior of the model.

The roof of the model (fig 3.60) resemble the pivots themselves, as they sprawl out over the landscape resulting in various undulations that start to almost mimic the surrounding area's small koppies. The roof structure becomes an unfolded displacement of the structure in figure 3.56 as the pivot point is disjointed and spread open to form the undulating truss system in figures 3.60 and 3.61

Extracted knowledge:
Even though the model dominates over the landscape, the displacement and disjointing of the pivot point facilitates the creation of a meandering route instead of the monotonous linear route. The roof becoming an extension of the landscape as it undulates creates a twoness within the landscape as they start to mimic each other.

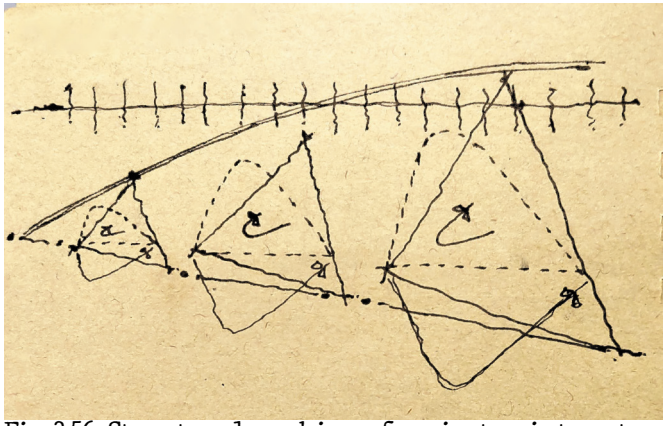


Fig 3.56: Structural working of a pivot point system towards an inhabitable space

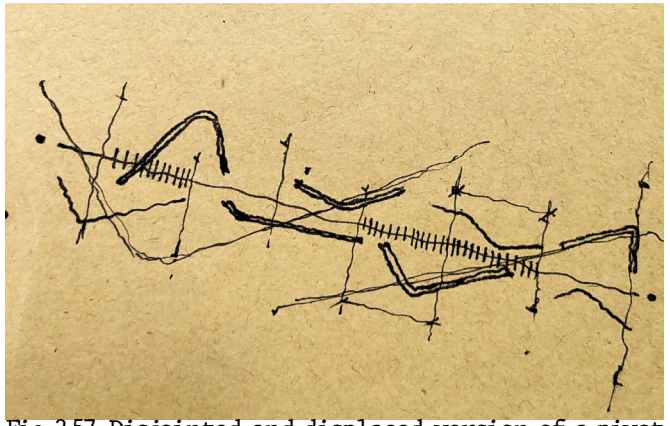


Fig 3.57: Disjointed and displaced version of a pivot system's inhabitable space



Fig 3.58: External concrete walls meandering past the existing rock wall.


Fig 3.59: Google earth image of Vaalharts scheme (Google Earth. 2022: Online)

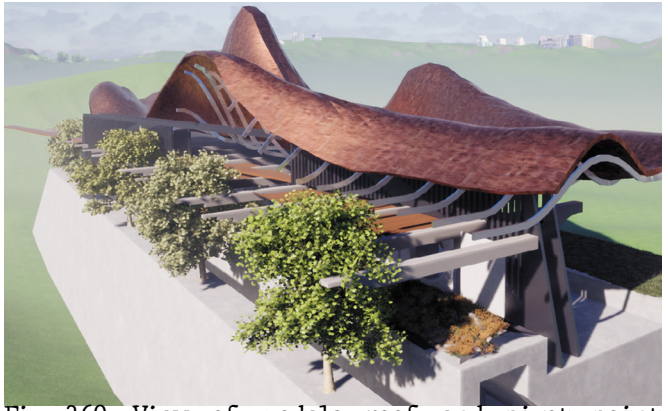


Fig 3.60: View of models roof and pivot point structure

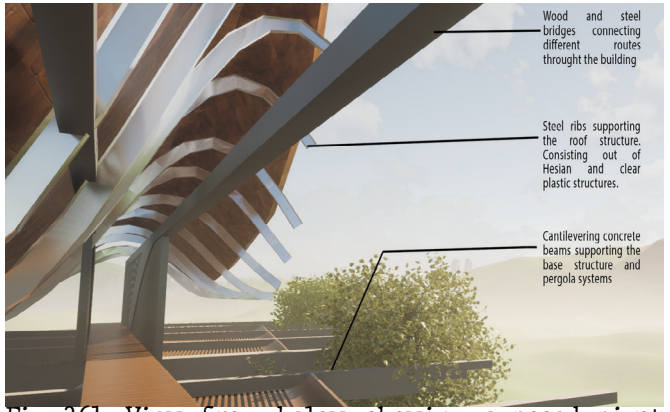


Fig 3.61: View from below, showing exposed pivot point trusses

Next, the translation of the conceptual work is combined with war as a method of design (a bullet fired from a .308 striking a wooden plank and splintering is analyzed) to define the first conceptual form of the building, expressed as an attempted displacement of the old camp's living quarters (fig 3.62 & 3.63). Employing the extracted knowledge, the first form of a building was designed in and effort to respond to the site. The structure served as a rudimentary text from which the project could grow and expand towards a finished project (fig 3.64 - 3.68).

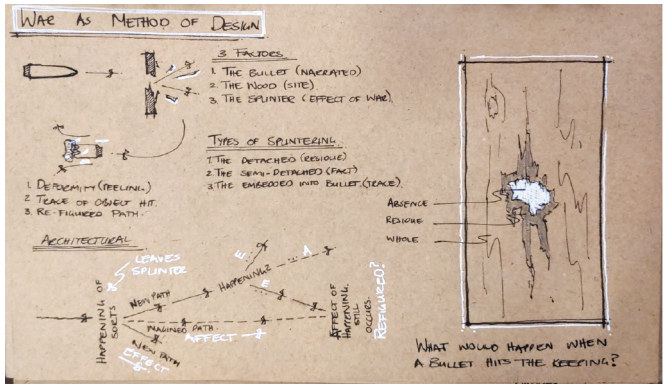


Fig 3.62: Exploration of war as a method of design.

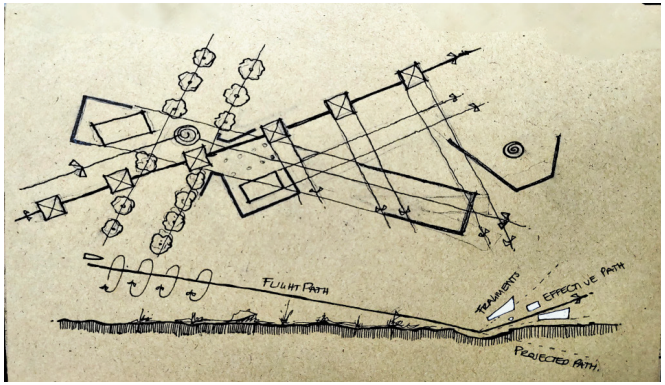


Fig 3.63: Theoretical site layout according to bullet's flight path.

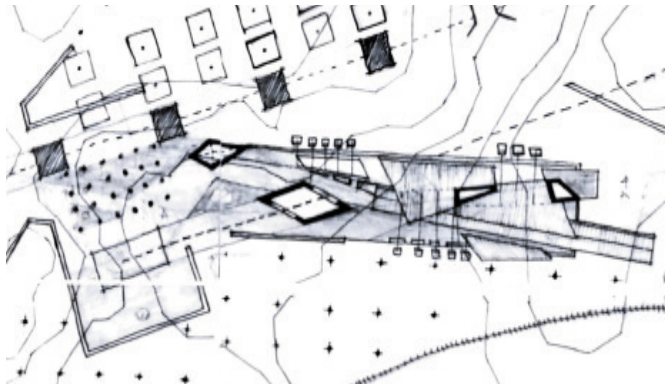


Fig 3.64: Concept roof plan

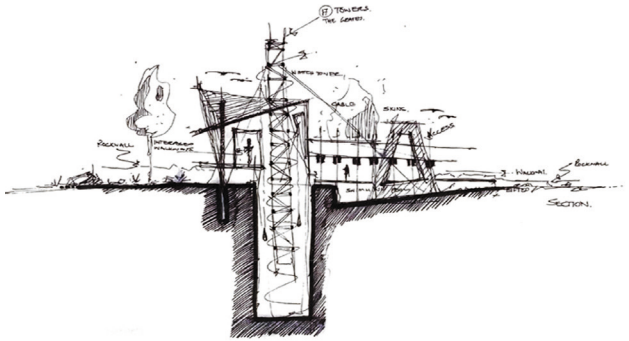


Fig 3.65: Concept section

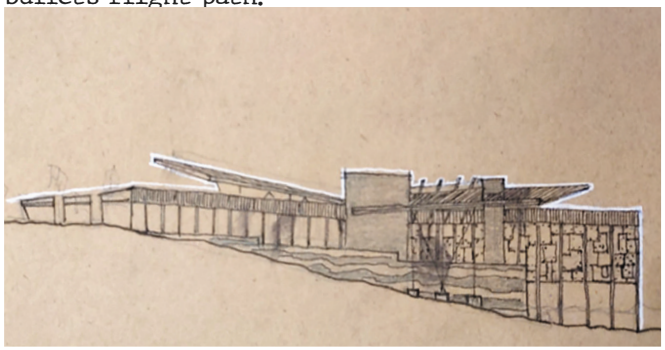


Fig 3.66: Concept elevation

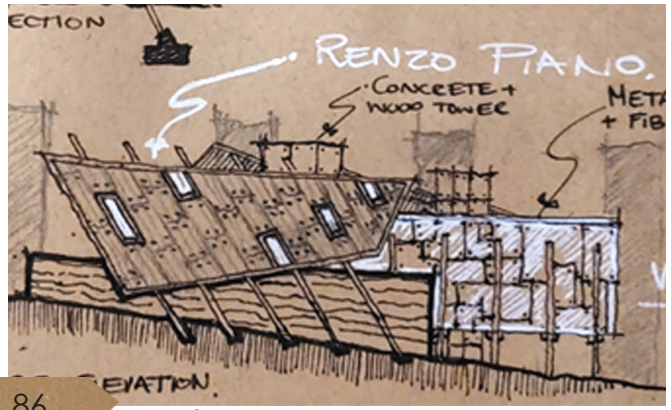


Fig 3.67: Concept elevation

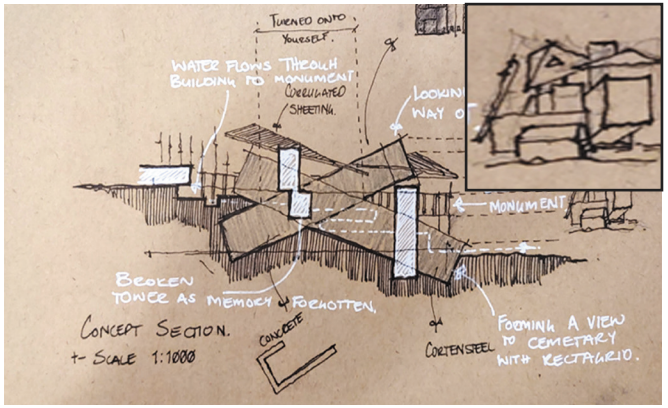


Fig 3.68: Sectional exploration

Fig 3.62 define the project, it explores the war as a method of grafting trace and memory through a participatory action which becomes the pulling of the trigger. Fig 3.63 illustrates the aftermath of the action as the bullet (narrative strikes the earth and splinters it). The extrusion of a narrative as a bridge-way erupting from the landscape (fig 3.66 & 3.67) forms part of the conceptual elevation as concrete masses rise up from the camp's grid to carry the roof structures, becoming internal void spaces where the visitor is isolated within an empty chamber, simulating the essence of the camp. The roof becomes the cracks of the earth's crust as the bridge-way tears it apart. Fig 3.68 illustrates the sectional exploration tying in the displacement of the medals of honor to a sectional plane within the landscape of the building, as a manner of taking the basic forms (triangles, rectangles and etc) of the camp and displacing their orientation as seen in the smaller sketch on the right hand side of image. The design of sectional details (fig 3.69) explore a layering of elements as seen in the analysis of the camp's structures.

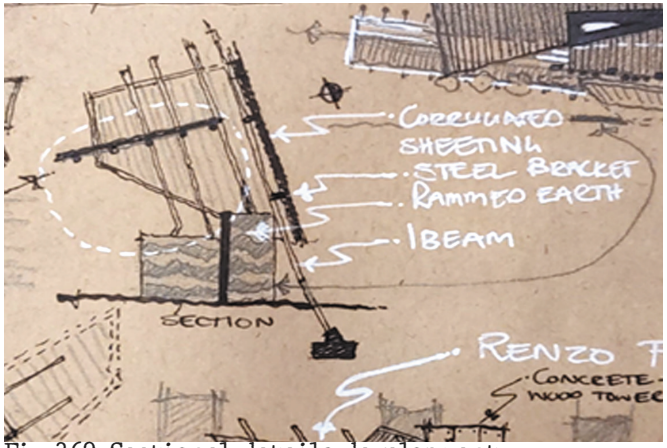


Fig 3.69: Sectional details development

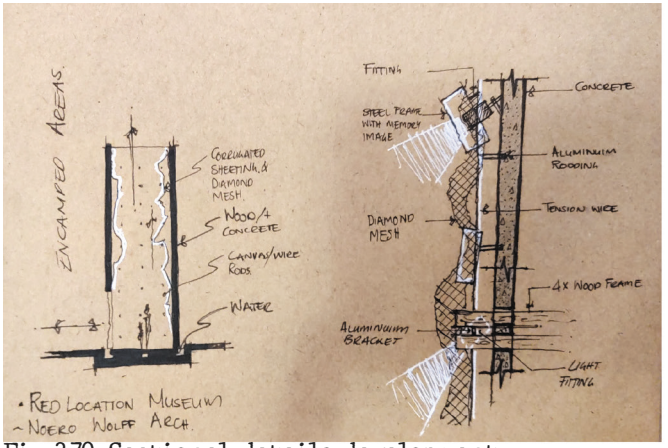


Fig 3.70: Sectional details development

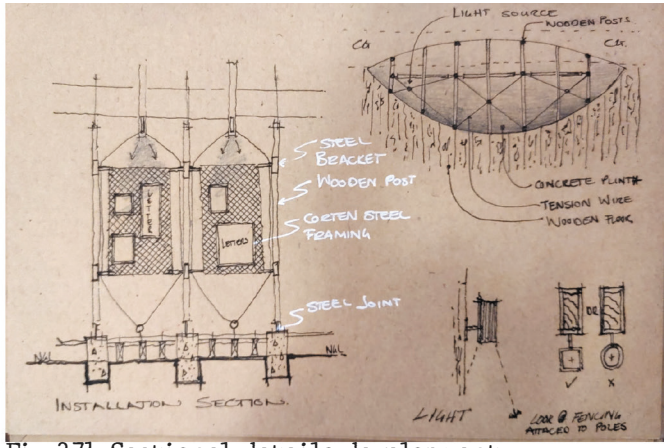


Fig 3.71: Sectional details development

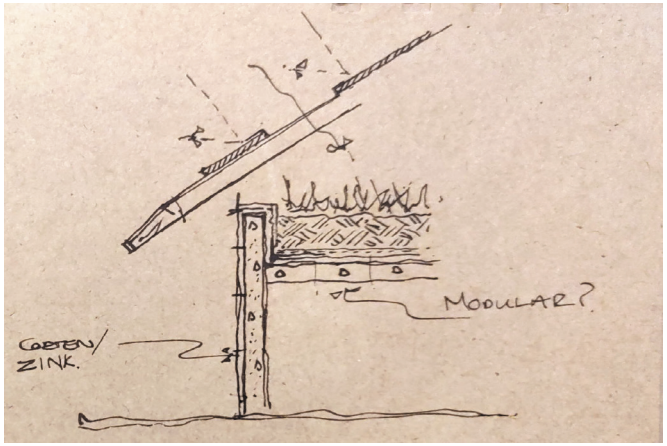


Fig 3.72: Sectional details development

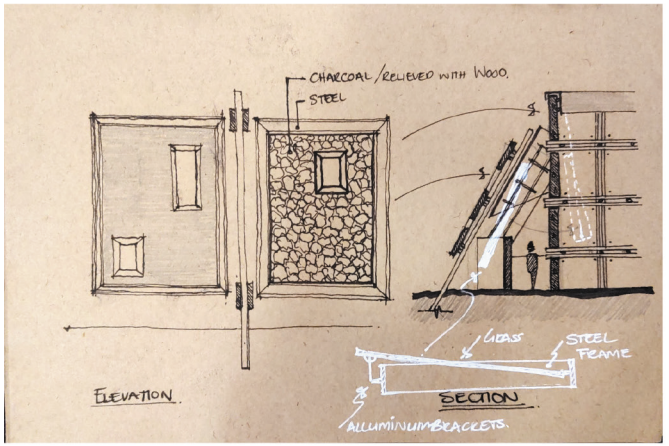


Fig 3.73: Sectional details development

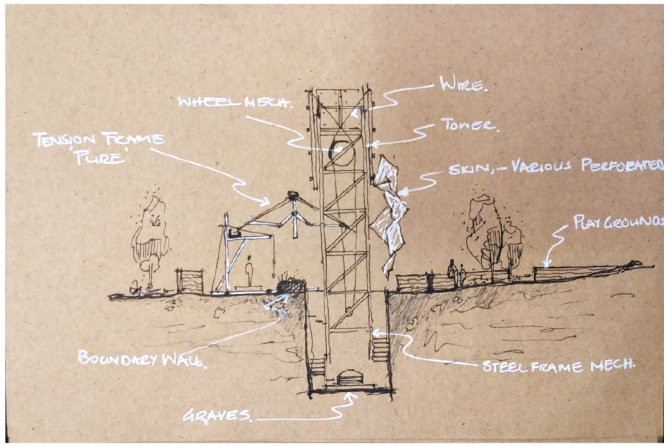


Fig 3.74: Sectional details development

Figures 3.69 - 3.74 illustrates structural details that was explored in order to form basic constructional resolutions to accommodate the theory and the extracted knowledge texts of the conceptual models. The design of layered systems that become exhibition spaces (fig 3.69 - 3.71 & 3.73) conceptualize ways of reincorporating the 'body' of the camp into the contemporary museum.

The development of towering structures that houses the sarcophagi of the fallen POW's form a linear route through the camp. As the visitors would enter the burial room and interact with the narrative of the POW, the steel structure would slowly start to descend into the earth as it seals of the sarcophagus and complete an electrical system that turns the tower into a beacon that lights up the park space around it. This serves as a conceptual idea to honor and acknowledge the fallen POW's as their story is recollected.

The design proposal of a field chapel refers to the letters of the POW's as they wrote that the camp was absent of a man of God (fig 3.75).

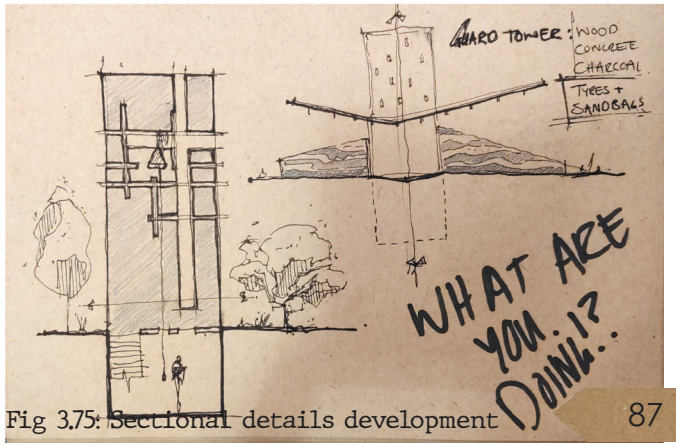


Fig 3.75: Sectional details development

In response to external review one, the design was elongated to fit the accommodation requirements of a museum and expressed as a compilation of the camp's grid structure (fig 3.50 & 3.55) and the first conceptual building response (fig 3.64 -3.68). A reworked concept sketch now illustrated the flow of the POW between two spaces (fig 3.76).

The development again saw the formation of two parallel narratives however, the in-between space that separated them became a fluid meandering wall that connects both sides of the narratives (fig 3.77). The western side of the model (fig 3.79) taking the form of a strict grid structure, resembling the construction of the camp and the eastern side reflecting the 'playful' nature of the recreational, as various displaced wall panels create a play of light to spill into the spaces as the visitor walks through the route and the screens mimic the progressive movement of the visitor (fig 3.78).

The floating roof structures and wall paneling becomes a method of layering and displacing the grid formation of the camp and the surrounding pecan fields. The development of an elevational experience however, was yet undeveloped and did not resemble the camp's architectural presence.

Although the conceptual section became a more evocative experience as the mirroring of the section became a directly translatable progression of a plan resembling the nature of the conceptual process. As the plan is layered over the mirrored section a new formal plane is established (fig 3.80). The palimpsestuous process of re-tracing the plan onto the sectional development forms the conceptual development of the coming form.

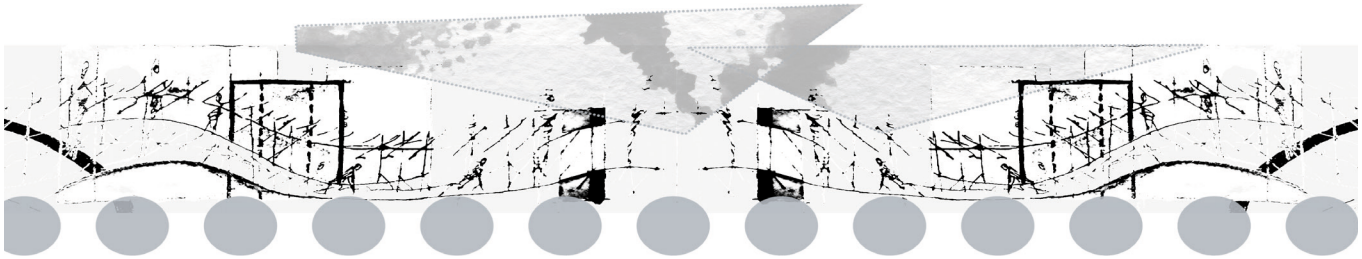


Fig 3.76: Reworked conceptual sketch

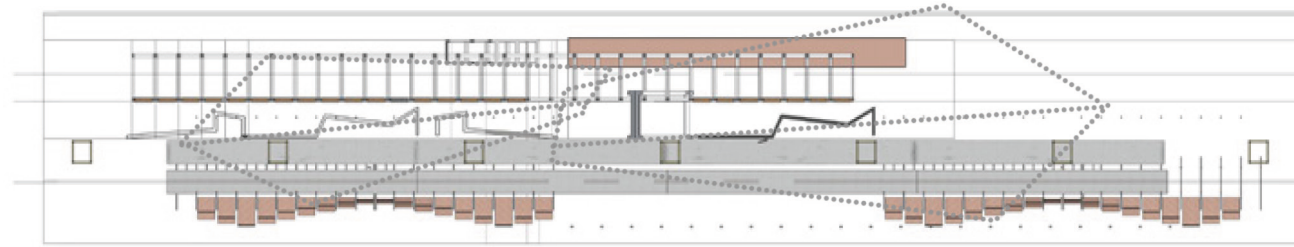


Fig 3.77: Conceptual plan form two

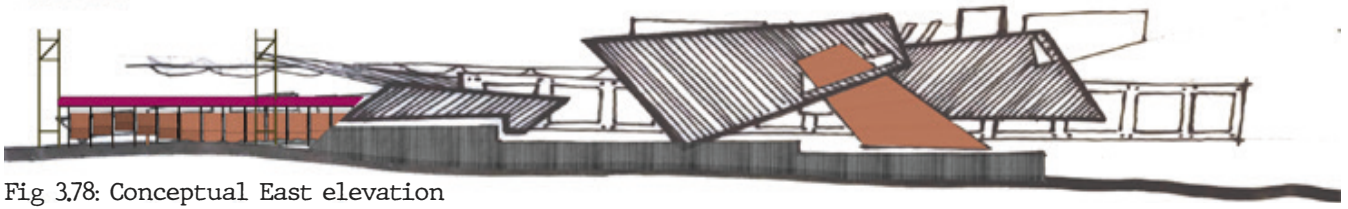


Fig 3.78: Conceptual East elevation

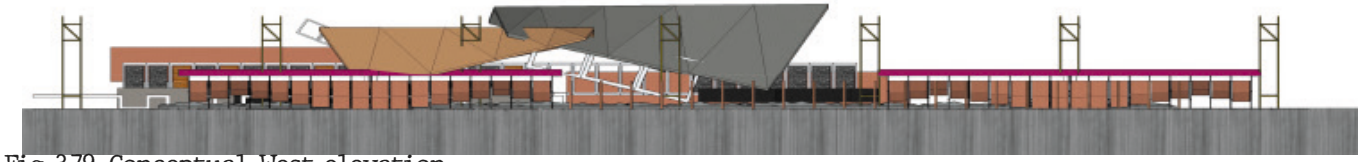


Fig 3.79: Conceptual West elevation

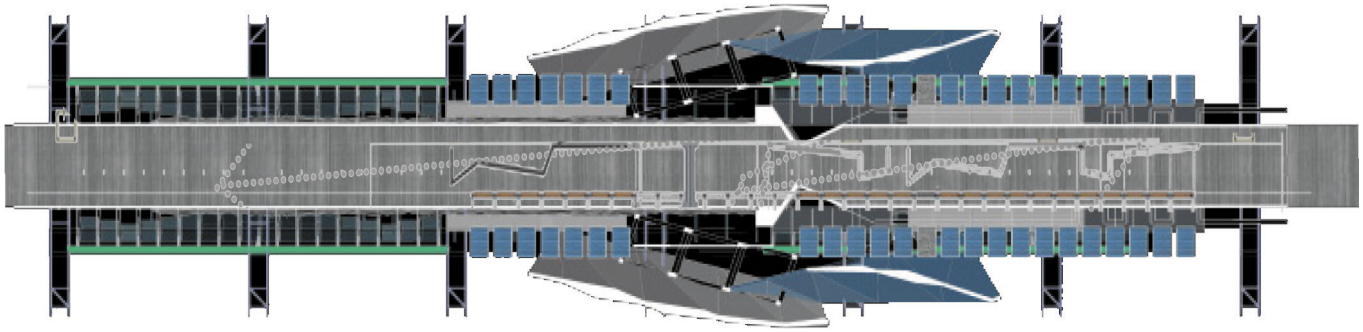


Fig 3.80: Conceptual section being mirrored to form new plan

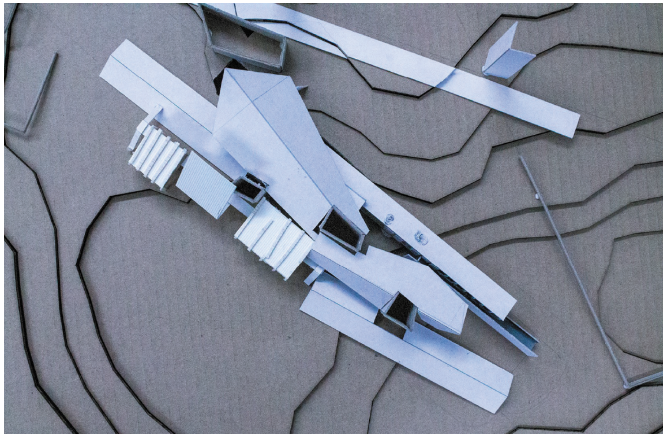


Fig 3.81: Conceptual model

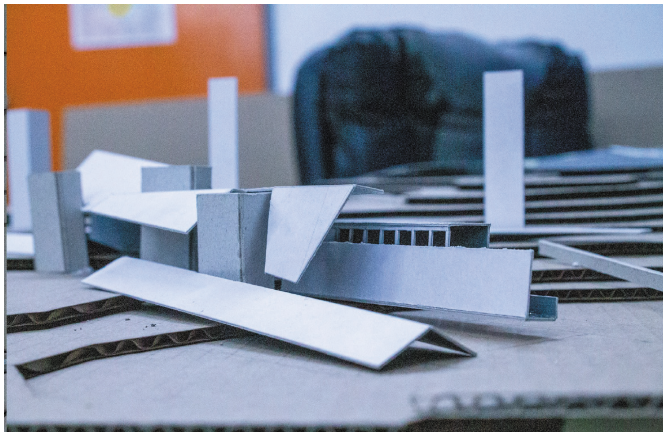


Fig 3.82: Conceptual model

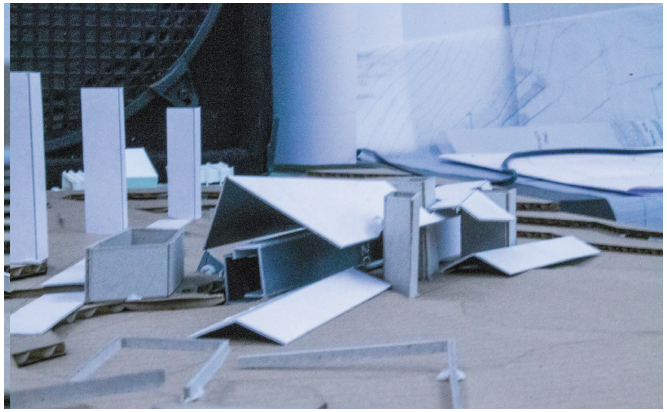


Fig 3.83: Conceptual model

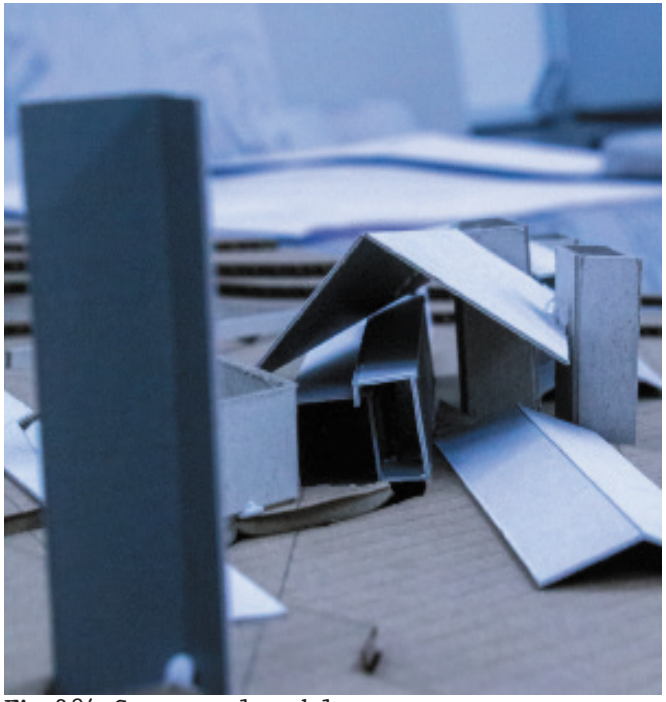


Fig 3.84: Conceptual model

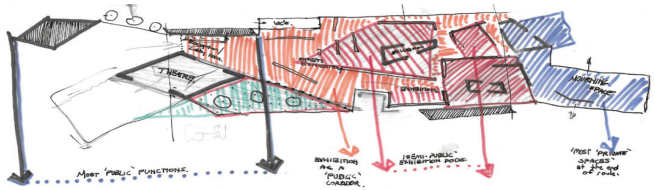


Fig 3.85: Planning development

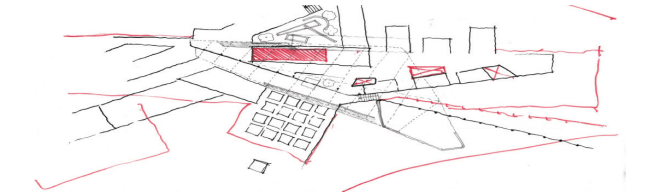


Fig 3.86: Planning development

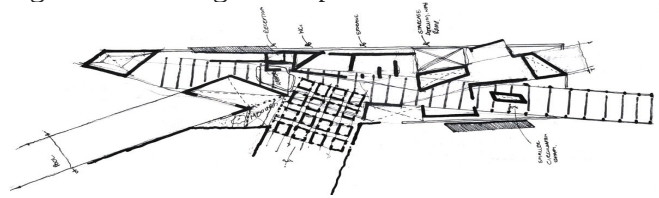


Fig 3.87: Planning development

Expressing the train of thought, the second concept model aimed to create a flow of structure that bent the narrative routes to facilitate a more expressive route as the visitor is lured from one side of the structure to the other. The concrete masses became a metaphor for the fixed points of a pivot, as the route started to bend at each of these nodes (fig 3.81).

Referring back to fig 3.61, the building now started to resemble the impact of a bullet as the building sharded out of the existing rock wall (fig 3.82), releasing all of the contained knowledge. Albeit not the intention of the design, a curious concept emerged from this notion.

The displacement of the rock wall as a manner of disjointing the information within... This meant that the rock wall itself became a form of Heidegger's 'Keeping'. This lead to the decision to move the site backwards on the axis, over the boundary wall and in so doing, changing the entire dynamic of the project as the project now crossed over ruins which is classified as heritage structures.

A rethinking of the project occurred and the incorporation of a new narrative incited. The rock wall now became a metaphor for the in-between, reversing the role of the in between and the parallel narrative routes. The change in methodology caused the in-between to become the narrative, inciting the narrative lines to become 'interior' to the 'Keeping', embedding the already present condition (the signifier) with the something other.



Fig 3.88: Planning development

Expressing the site as the pulled-apart sections of the boundary wall, the narrative line diverted away from the existing boundary wall as meandering walls enclosed the new narrative line (fig 3.88).

The grid of the existing role call platforms was extended across the existing boundary wall and proportioned the exhibition spaces as linear volumes cutting into the narrative line, creating interstitial spaces that the visitor can dwell within as they participate in games within the in-between of memory (prisoner's narrative line) and trace (existing boundary wall).

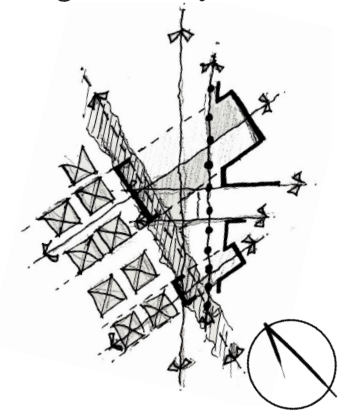


Fig 3.89: Planning development

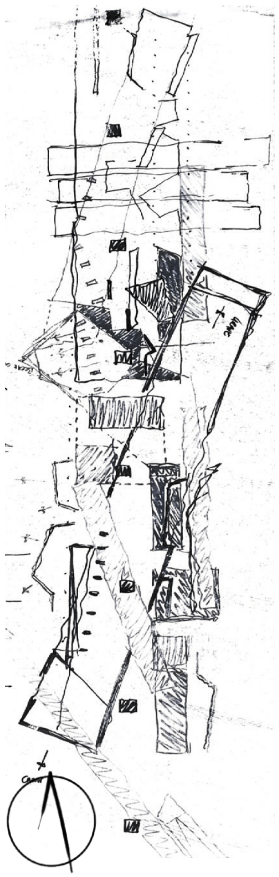


Fig 3.90: Planning development

Overlaying previous segments of planning exercises, a new massing diagram evolved (fig 3.90), as extracted elements of the old was reincorporated into a new whole. Forming the crux of the narrated route, the letters of the prisoners and guards were compiled again, as more letter were uncovered. The stitching together of the memories created a storyline of the camp's experience. fragmentizing the linear route, the design process aimed to explore the story as an expression of architectural presence (fig 3.92).

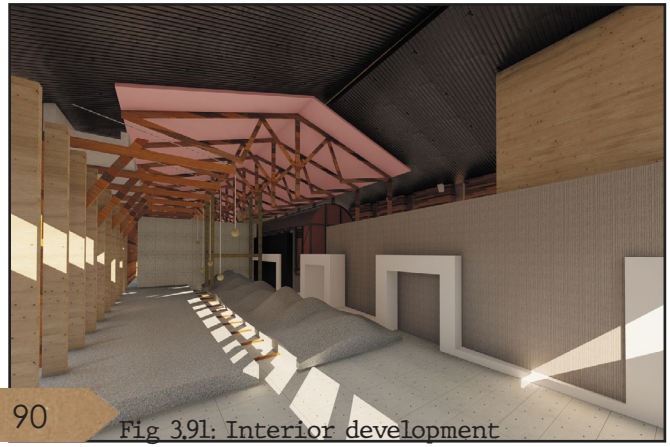


Fig 3.91: Interior development

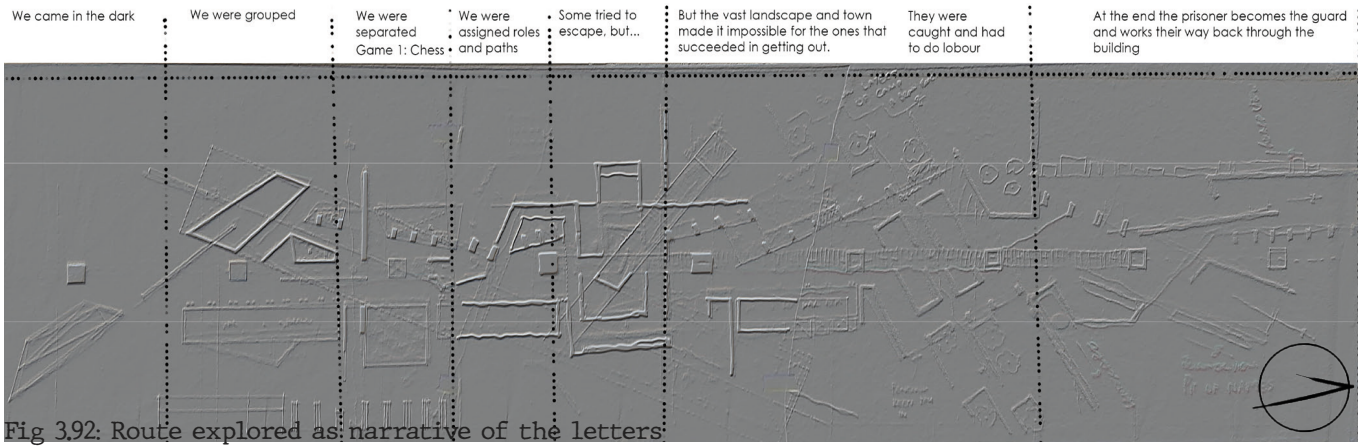
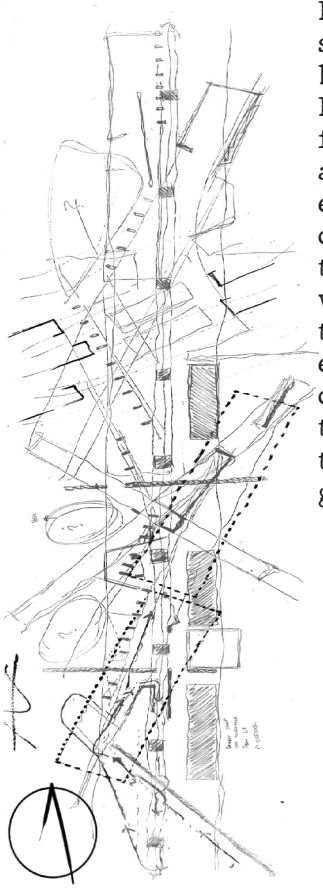


Fig 3.92: Route explored as narrative of the letters



Following the massing sketch, new formal planes had to be constructed. Figure 3.93 served as the first attempt at creating a layered drawing that explored different dimensional planes as trace, memory and play were to be stitched together in a coherent experience where in the dweller could meander through the museum as they participated in the games.

Fig 3.93: Planning development

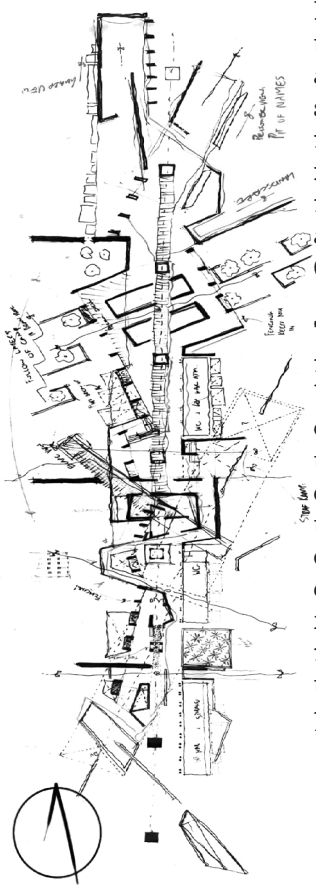
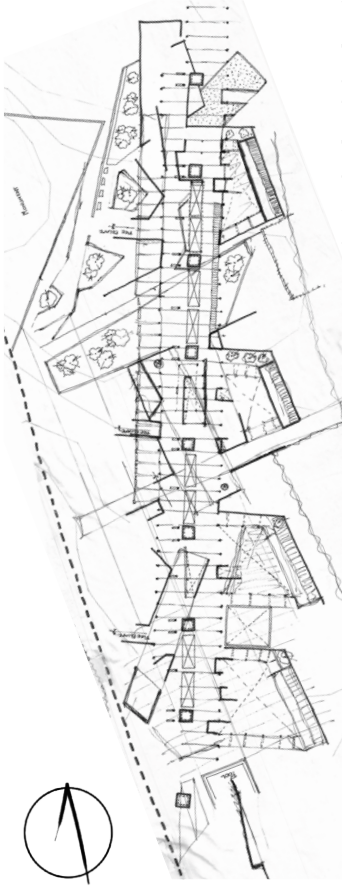


Figure 3.94 illustrates the formalization of an architectural form, that shape an experiential route through the incorporation of the narrative route (fig 3.92) and the massing sketch (fig 3.93).

The development of a new spatial organization became very nebulous, causing the dweller to be comprehensively disorientated, leading to the eventual 'forgetting' of the narrative experience and therefor failing to transfer the memory and the trace to the new dweller as the project aims to do.

Fig 3.94: Planning development



Re-tracing the development of the spatial organization, a 'final' plan (fig 3.95) was designed through the amalgamation of figures 3.64; 3.77; 3.93 and 3.94. Aiming to enliven layers of trace and memory, the grid systems of the camp were used to form the spatial dimensioning, and the narrative of the prisoner's memories, orientated the dweller through the plan. The plan further more incorporated various segments that allow the dweller to exit the structure into courtyard spaces that served as reflective pausing destinations along the route.

Fig 3.95: Planning development



Fig 3.96: East elevation development



Fig 3.97: South elevation development

This phase of development however, lead to an extensively large structure, unbefitting to the locality of the project, causing the inevitable disconnect between the site and the communities in the area. A further investigation brought up questions of contextual validity as the building now sprawled out across the landscape and the amount of visitors would not suffice to provide the building with sufficient upkeep. However, the development of various design principles and theoretical understanding proved to be extremely valuable in an effort to sculpt a coherent design.

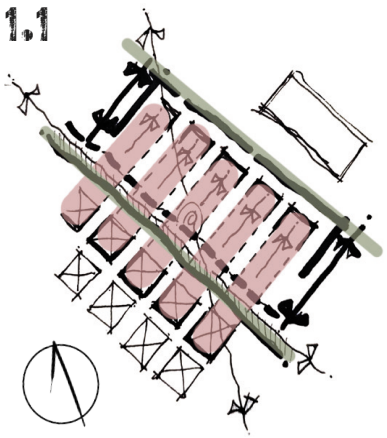


Fig 3.98: Development

In preparation for external review three, the design process was re-traced from the previous external reviews. The moments shaped by previous design explorations were re-incorporated into the design of the new development.

The extrusion and disjunction of the existing boundary wall, accompanied with the insertion of the camp's grid within the disjointed space became a method of creating an interstitial space and in so doing creating a manner of developing 'interiority'. The identity of the camp was now expressed as something within itself, as the existing wall carried the essence of the camp.

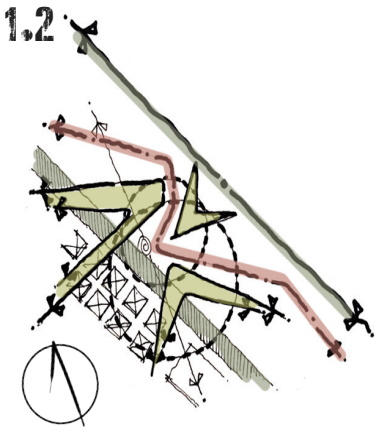


Fig 3.99: Development

Following the process of extrusion and disjunction, the displaced medals of honor were inserted within the interstitial space, causing the identity of the wall to be displaced. The wall no longer only resembled separation, confinement and relinquished identity, it now became a place within it self, signifying a condition 'interior' to itself as it expressed a homecoming and an acknowledgment of estranged identity.

A place of 'twoness', where the displacement of identity is expressed as identifiable and experiential narratives rather than a system of hierarchical structures.

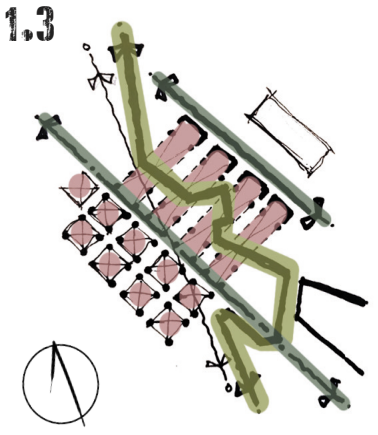


Fig 3.100: Development

Next, the incorporation of the memory-scape and the narrative route ensued. Represented in light green, a meandering path was inserted next to the linear memory line of the prisoner. The meandering route allowed the visitor to cross between the two sides of the camp as moments of participatory action in-between the memory and the trace ensue

This brought to light a new theoretical underpinning. The interstitial spaces become moments of participatory action within the in-between of the trace and the memory, enabling the visitor to become a part of the camp's historicity without having taken part in the event.

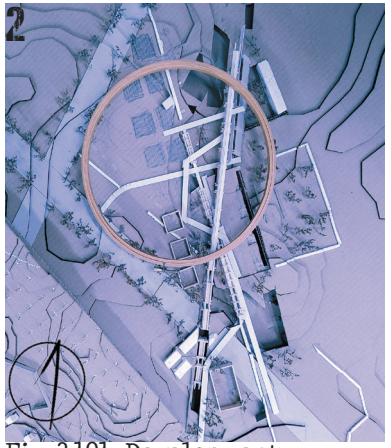


Fig 3.101: Development

Expressing the previously mentioned in an architectural form, the model aims to incorporate the larger park scheme's route and the design of the new museum space.

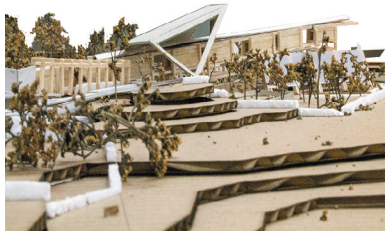


Fig 3.102: Development



Fig 3.103: Development

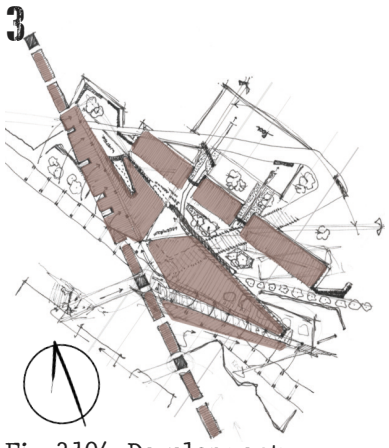


Fig 3.104: Development

Constructing the first of the new conceptual ideas into a roof plan, figure 3.104 illustrates a fragmentized body placed within the extruded space of the existing boundary wall. The new fragments serves as lived-scape fragments that erupts from the collision of the trace- and the memory-scape.

Initially forming a part of the park's route, the sweeping routes were incorporated into the layout of the meandering path that runs trough the building. They are used to define the entrances and exits of the building as they serve as method of binding the graft (building) into the already present park design.



Fig 3.105: Development

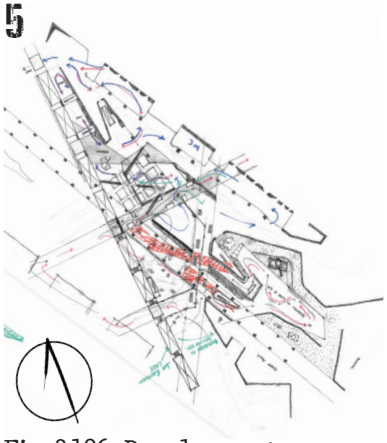


Fig 3.106: Development

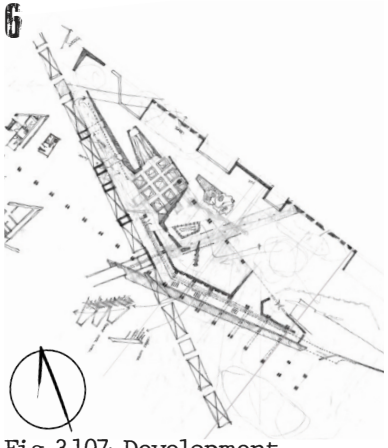


Fig 3.107: Development

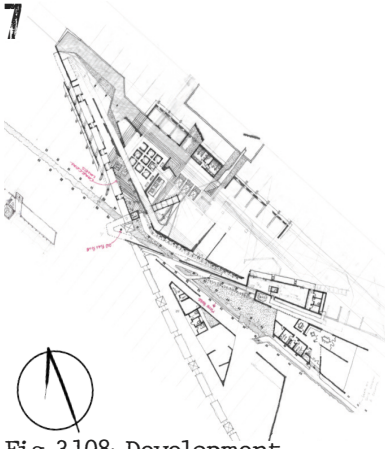


Fig 3.108: Development

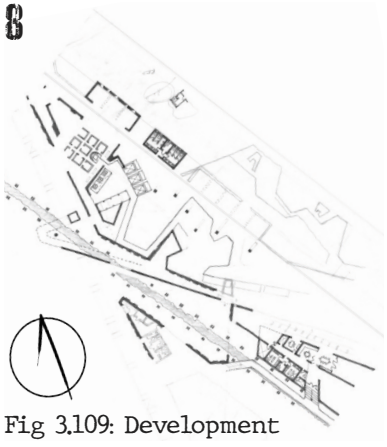


Fig 3.109: Development

Quickly developing the new spatial organization lead to the drafting of a comprehensive planning system that incorporates the four principles of Eisenman. Figure 3.110 illustrates the last development of the spatial experience within the wall before the project took its final form.

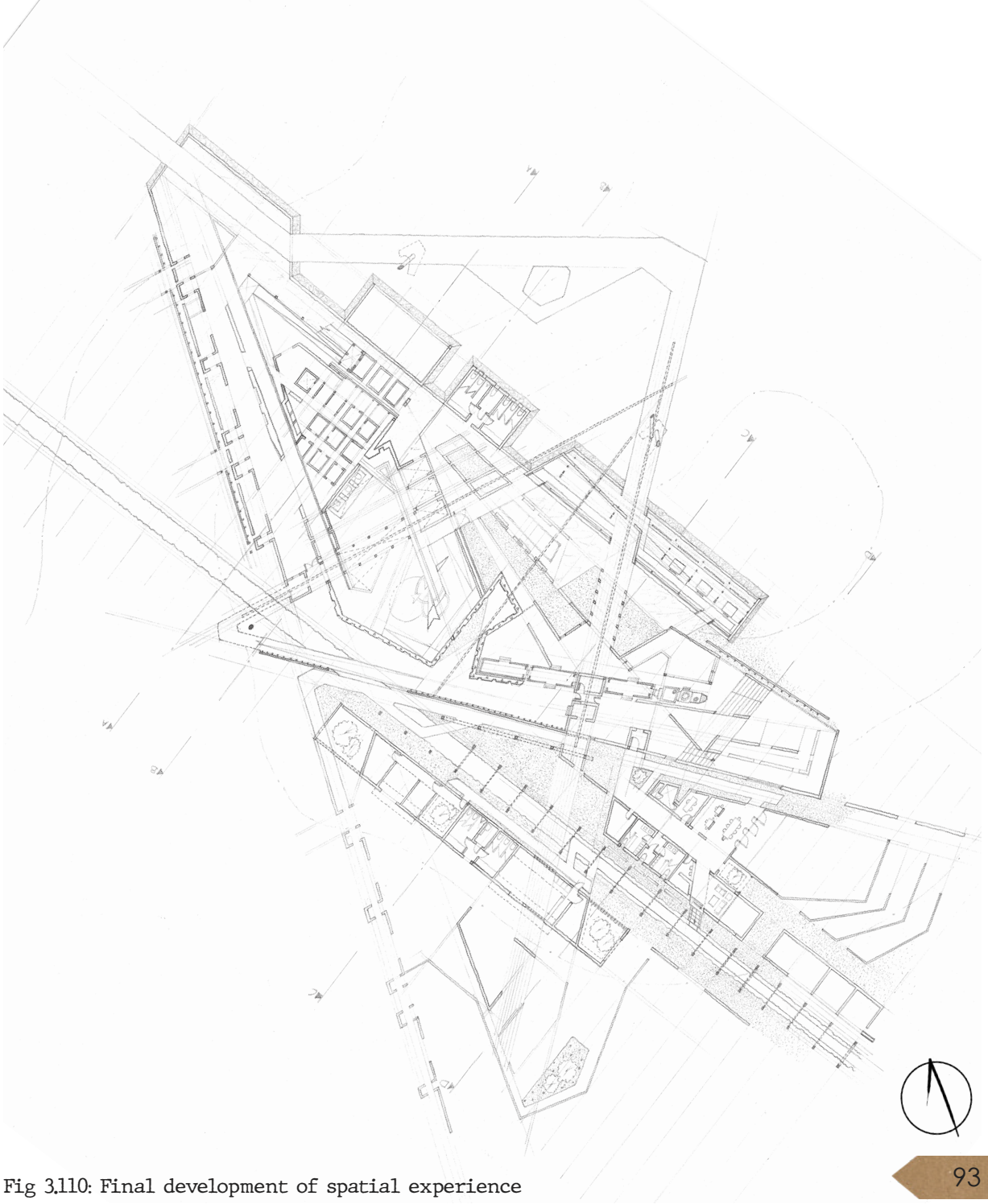


Fig 3.110: Final development of spatial experience

3B.3 ROOF DEVELOPMENT

After the spatial organization came the development of the roof systems. Drawing inspiration from the prisoner's method of escape, the roofs form a covering of the body as roof fragments cover the building's walls that embedded themselves into the site as the prisoners would. The prisoner would dig a hole large enough for their body in the recreational side of the camp and cover themselves with scrap pieces of wood as they poured sand over themselves. They would then wait until night and lift the pieces off of them. The prisoner would then be able to more easily try and escape through the fencing of the camp, as the recreational side of the camp was not heavily guarded at night due to all the prisoners being recalled to the living quarters of the camp in the afternoon.

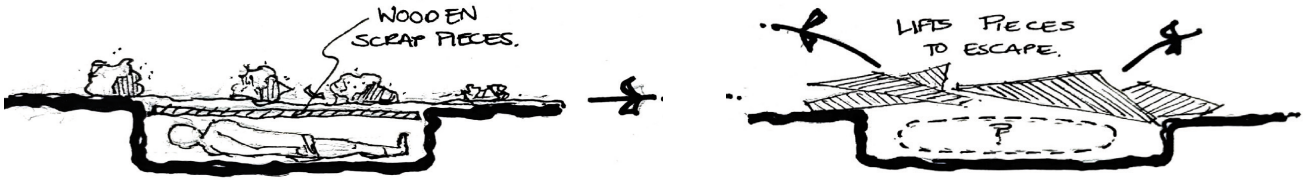


Fig 3.111: Method of prisoner escaping

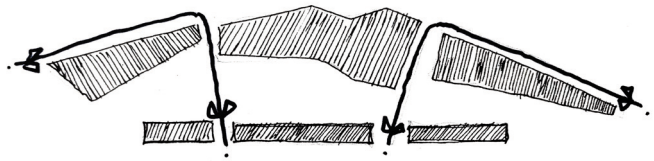


Fig 3.112: Method of prisoner escaping

However, the contemporary landscape also had to be addressed. The edition of curvilinear gutters, mimicking the water canals built by the prisoners and guards, became a method of water management as well as a manner of incorporating the crucial role that the prisoners had in the creation of the Vaalhardts area and its economic viability as it is known for today.

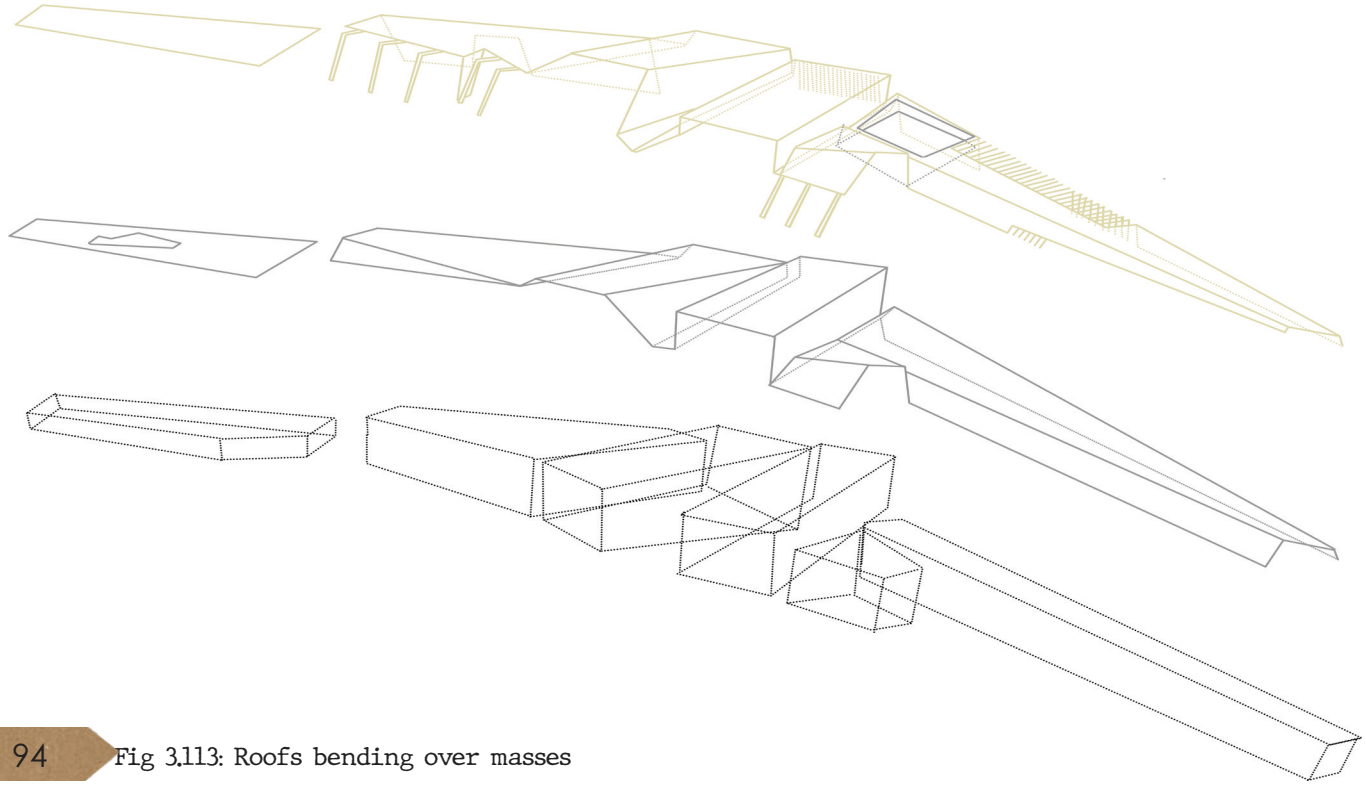


Fig 3.113: Roofs bending over masses

Outlining the main masses of the spatial diagram, figure 3.113 illustrates the bending of a flat plane over the masses as a method of creating a form for the proposed roof system. However, this caused a lot of water management issues and it didn't quite fit the nature of the project, so it was decided that the roof had to be restructured.

Through the restructuring process the roofs were further fragmented, allowing for a better flow of water and hierarchy within the roofing systems.

A new concept model was built illustrating the incorporation of the roof structure with that of the plan (fig 3.116 & 3.117).

The edition of the model now brought forth the connection between the floor and the roof. The next step in the design process was to incorporate the new construction systems that would be required to connect the roof- and the floor-planes.

Again looking to the context and the local structural systems, it was decided to incorporate the usage of pivot point towers and steel frame systems (fig 3.115) as explored in the precedent study on pages 71 - 75, as they are readily available in the area and is locally produced in the factories outside of Jan Kempdorp.



Fig 3.114: Roof fragments uplifted in the landscape

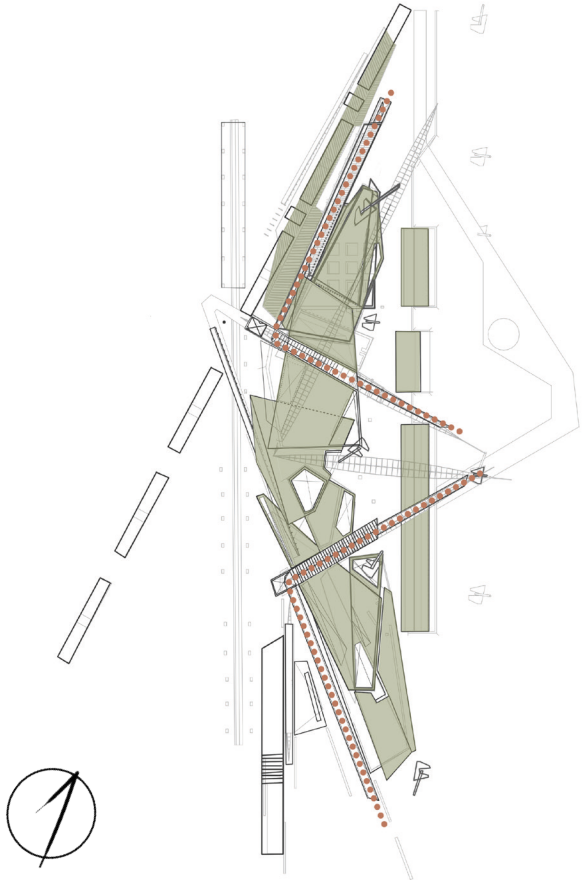


Fig 3.115: Fragmented roof diagram with gutters and pivot point towers construction

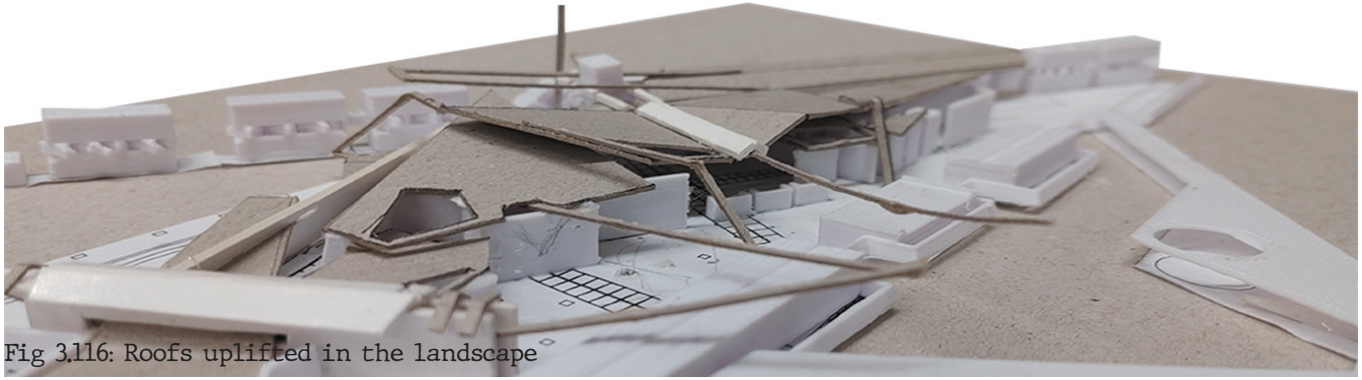


Fig 3.116: Roofs uplifted in the landscape

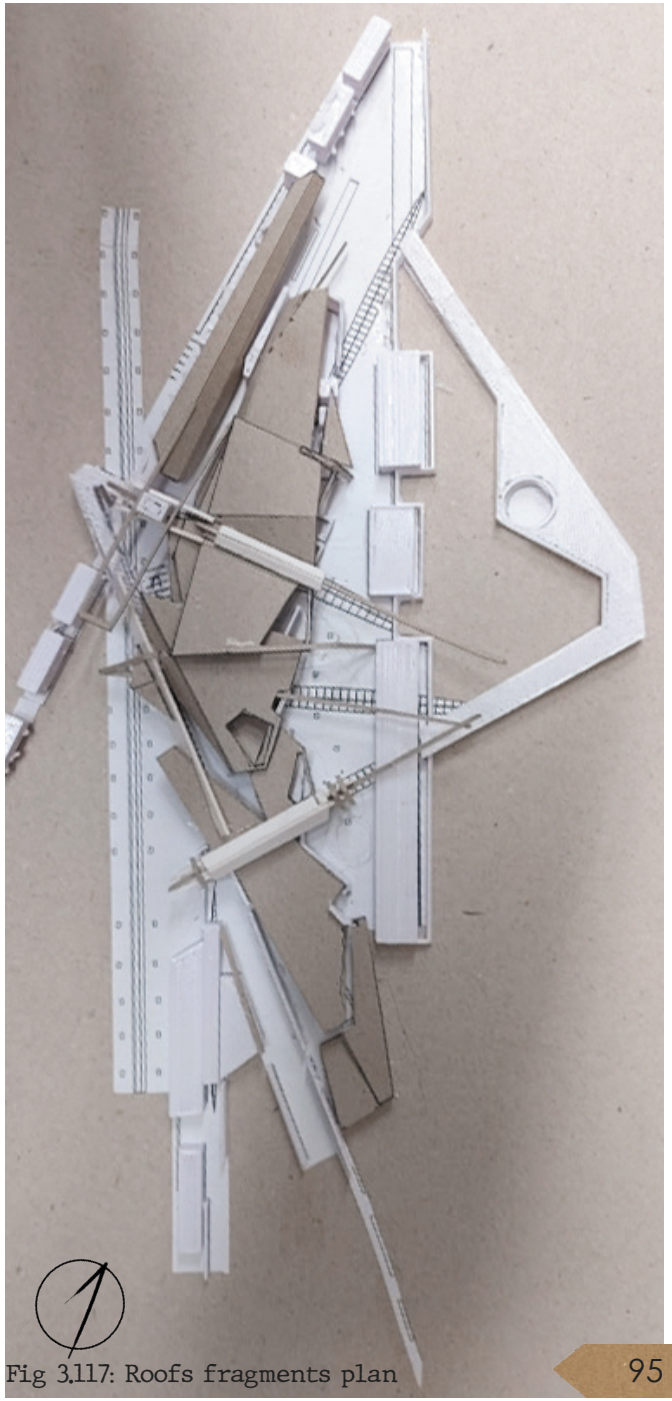


Fig 3.117: Roofs fragments plan

3B.4 SECTIONAL DEVELOPMENT

Having established the two conditions (trace- and memory-scape), the development of a place within these conditions (lived-space) was the next phase of the design. Referring back to the images of the camp (fig 3.118), a representative elevation and sectional diagram was drawn (fig 3.119 & 3.120).

Following the course of displacement, the sectional development focuses on the creation of 'betweenness'. Figures 1.119 and 1.120 demarcate the set off mark for the process, as they are displaced and overlayed onto each other in order to create a blurring of both images, creating a set of 'weak' images. Fig 3.121 illustrates the reincorporation of the drawings as they begin to form a new whole, which contains something of the elevation and something of the section, but is not entirely either.

It is within this condition that Eisenman's 'betweenness' is confined and expressed within the museum.

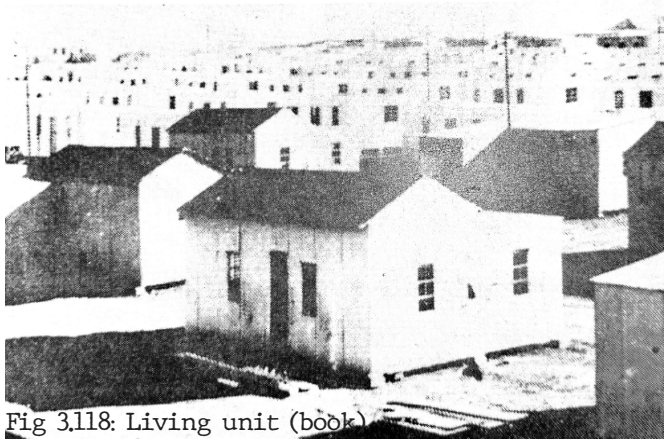


Fig 3.118: Living unit (book)

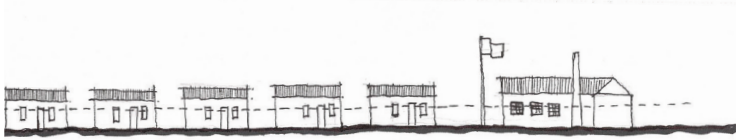


Fig 3.119: Living unit (book)



Fig 3.120: Living unit (book)

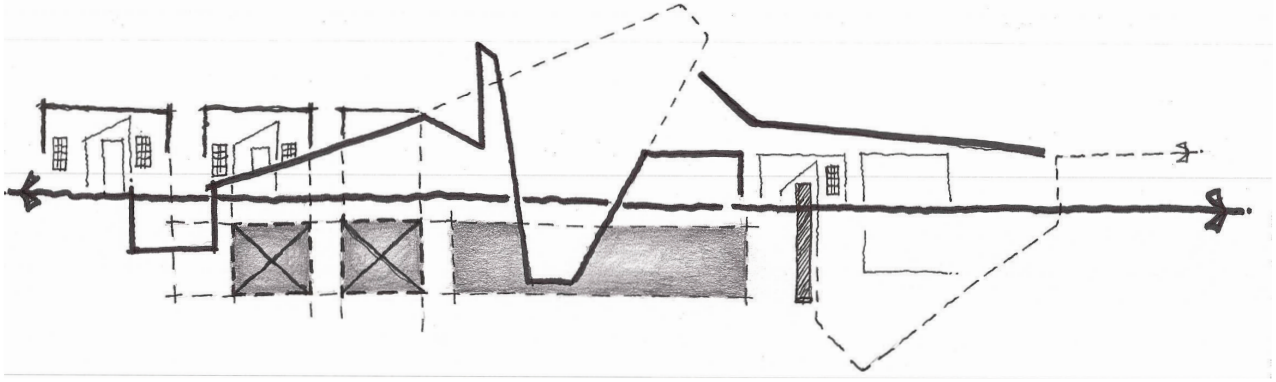


Fig 3.121: The creation of 'Betweenness'

Relating to the spatial development, the sectional development serves as integration of the lived-scape and the trace-scape. Figure 3.121 was not only to be present in the sectional development but also in the spatial development of the project. Referring back to the spatial development (fig 3.122 - 3.124), the integration of figure 3.121 is used to organize the spatial development and in so doing the diagram generates a relationship between the old, the new and in being an abstraction, the yet to come. Figures 3.125 to 3.131 illustrate sectional developments as the camp was reconstructed as a contemporary version of itself through the integration of precedent and trace.







●Ordering spatial development of fig 3.121

Fig 3.122: Spatial development

Fig 3.123: Spatial development

Fig 3.124: Spatial development

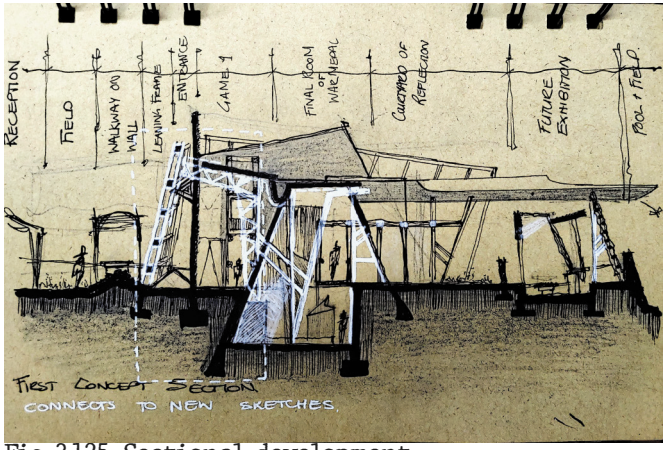


Fig 3.125: Sectional development

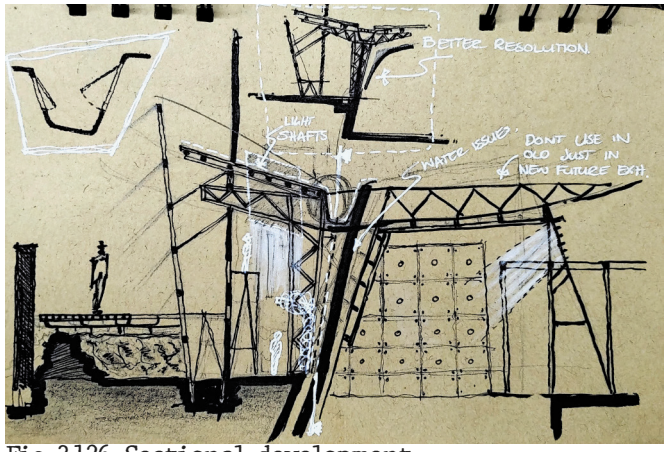


Fig 3.126: Sectional development

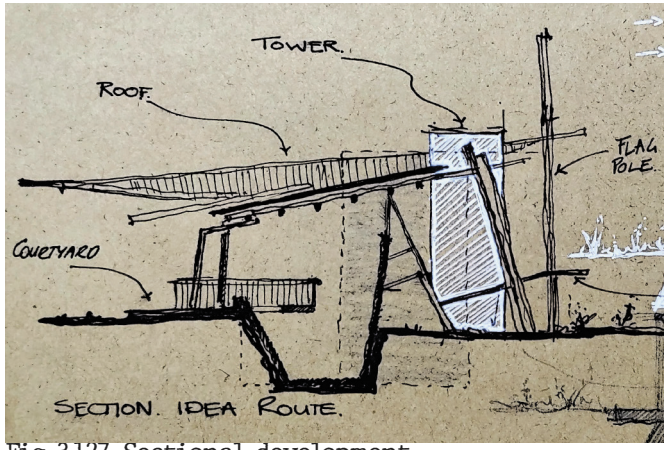


Fig 3.127: Sectional development

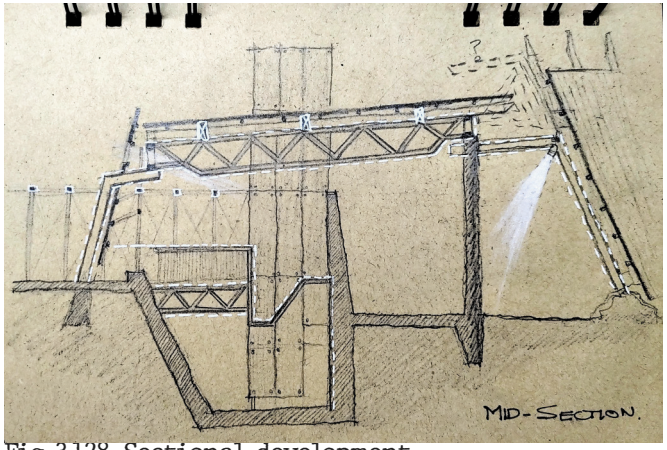


Fig 3.128: Sectional development

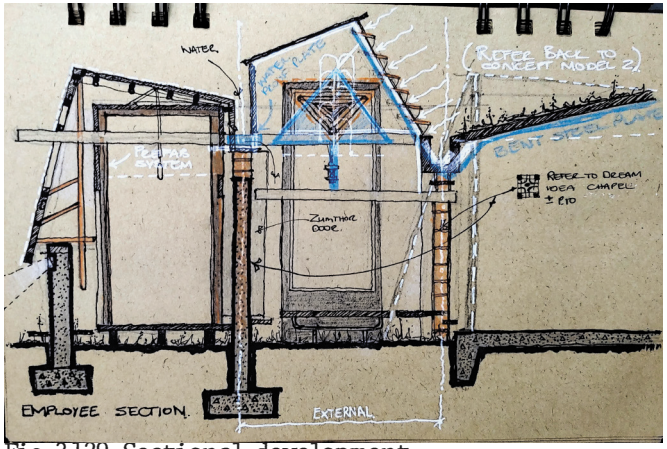


Fig 3.129: Sectional development

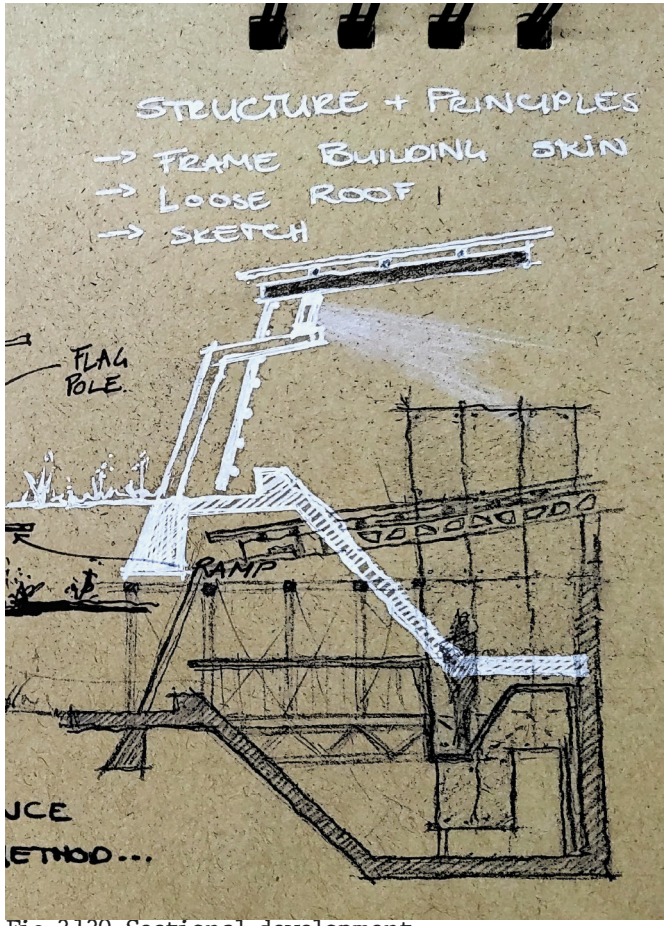


Fig 3.130: Sectional development

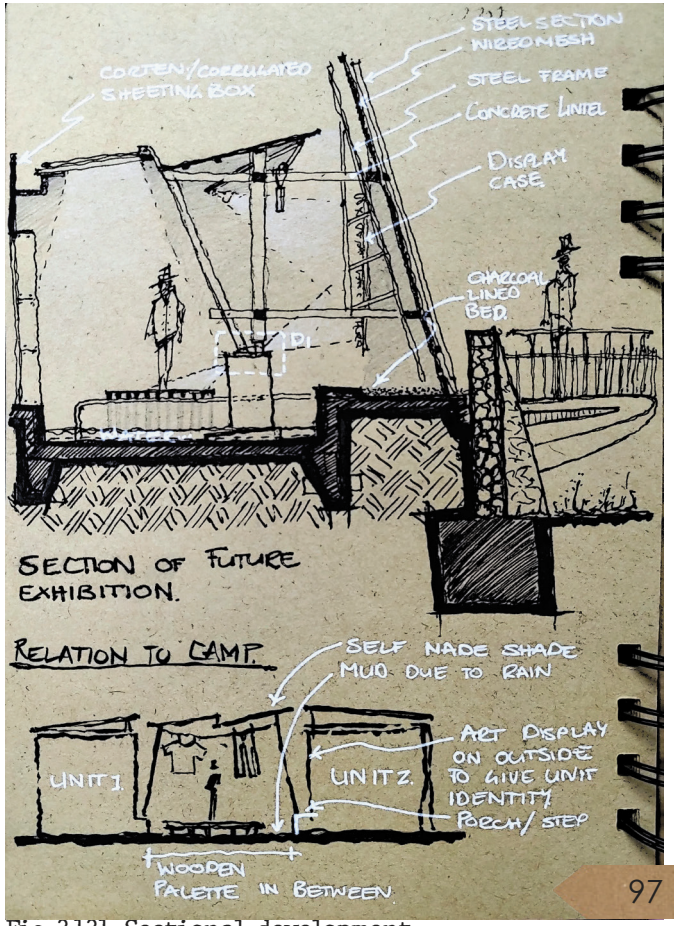


Fig 3.131: Sectional development

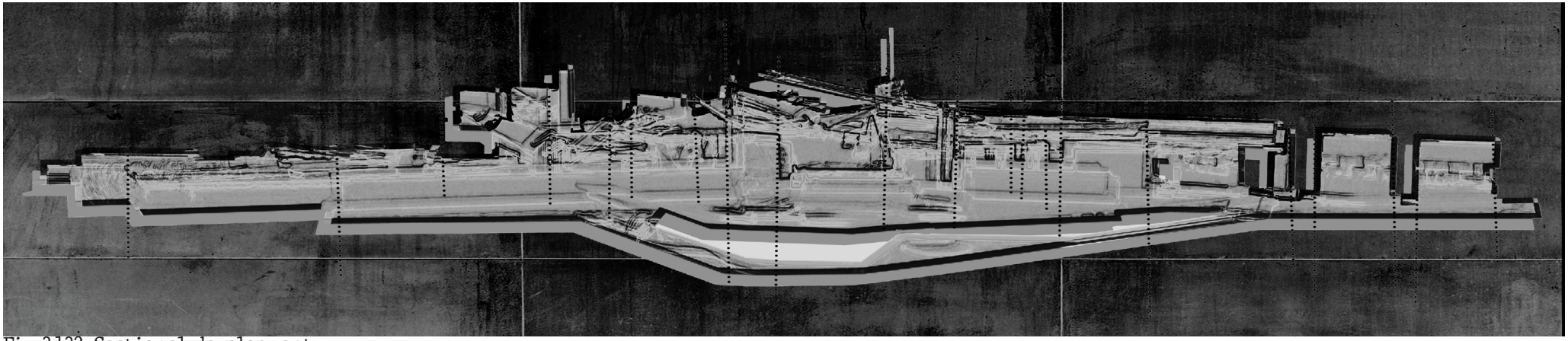


Fig 3.132: Sectional development

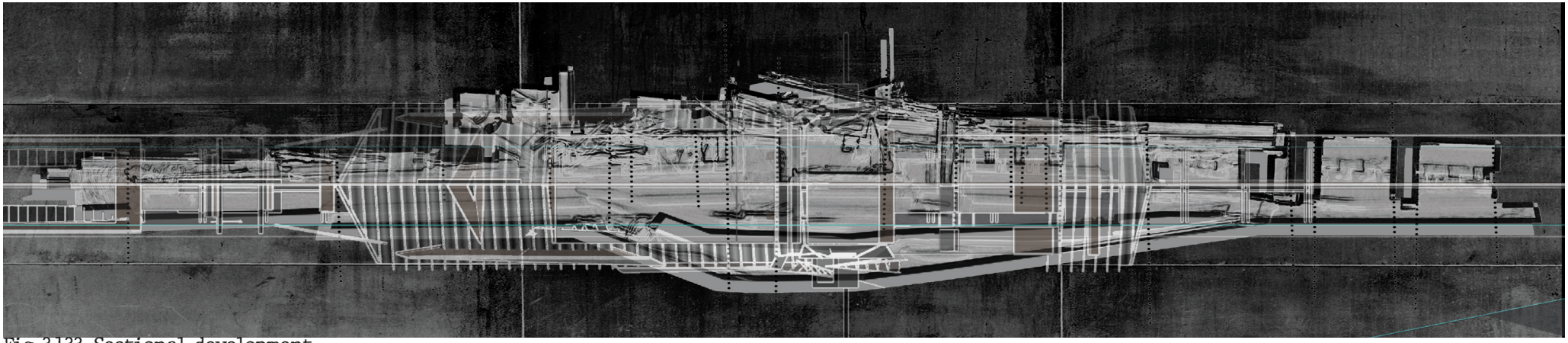


Fig 3.133: Sectional development

Exploring the model (fig 3.114 -3.117) as a reflection of figure 3.121's process, figures 3.132 - 3.134 aimed to explore the contemporary three dimensional version as 'betweenness' to illustrate the final process of creating a place of otherness. Effectively trying to displace the existing memory and trace into a contemporary collective that still carries recognizable and recollectable moments of the past.

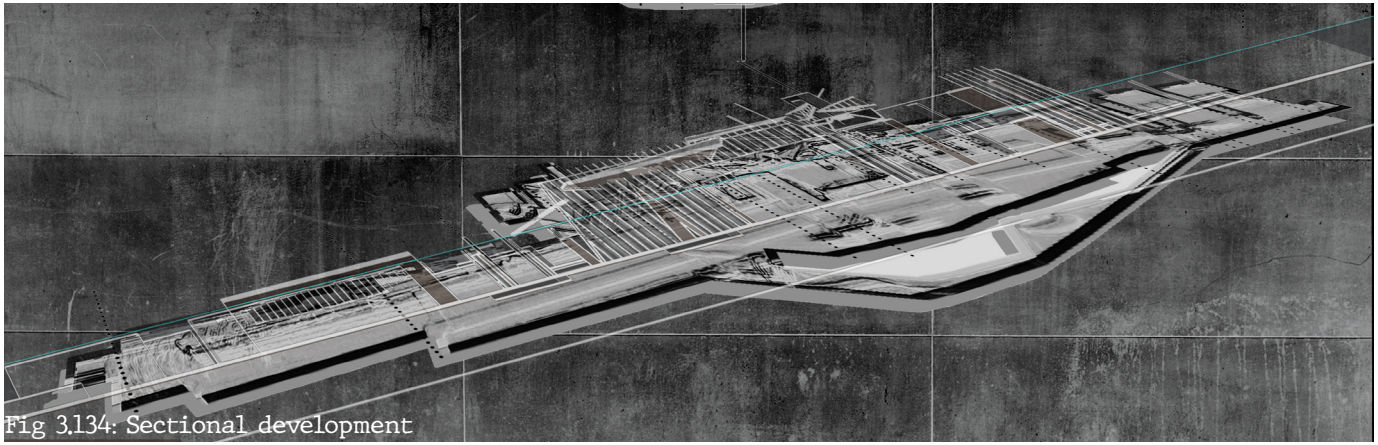


Fig 3.134: Sectional development

The final proposed sectional development in preparation for external review three aims to concretize and integrate the individual bodies created by the conceptual phase and its explorative layers. The generation of working sections (fig 3.135 - 3.138) aim to establish the connection between the trace-, memory- and lived-space within the new museum.

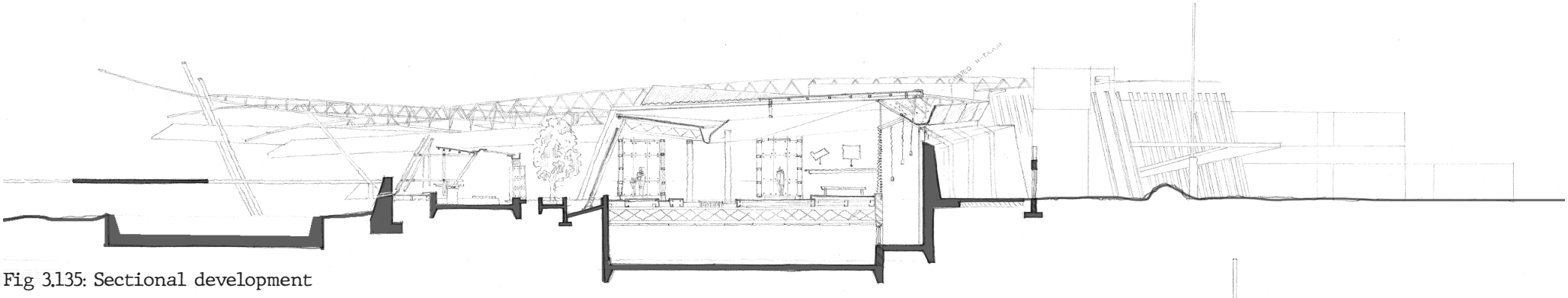


Fig 3.135: Sectional development

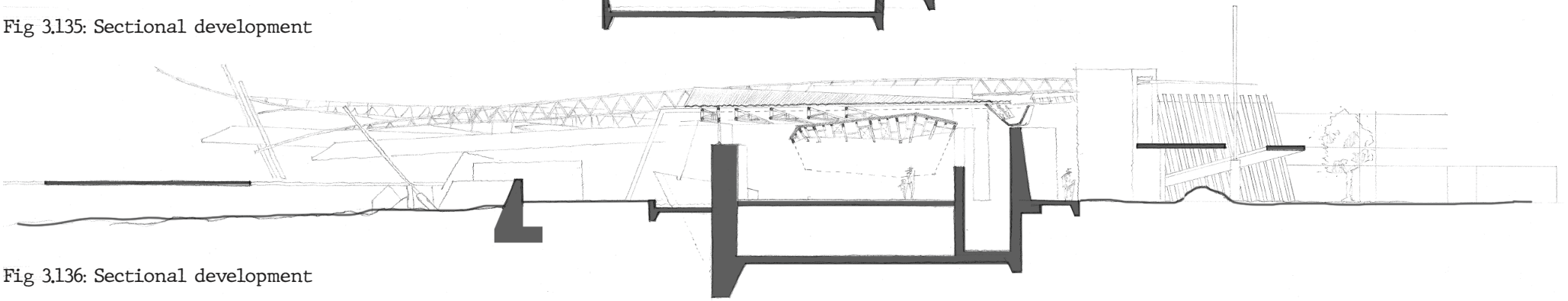


Fig 3.136: Sectional development

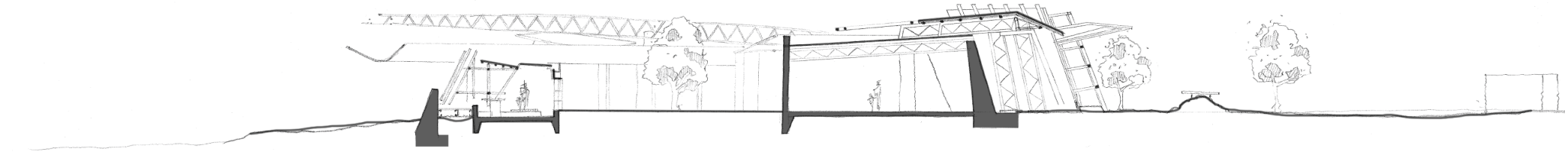


Fig 3.137: Sectional development

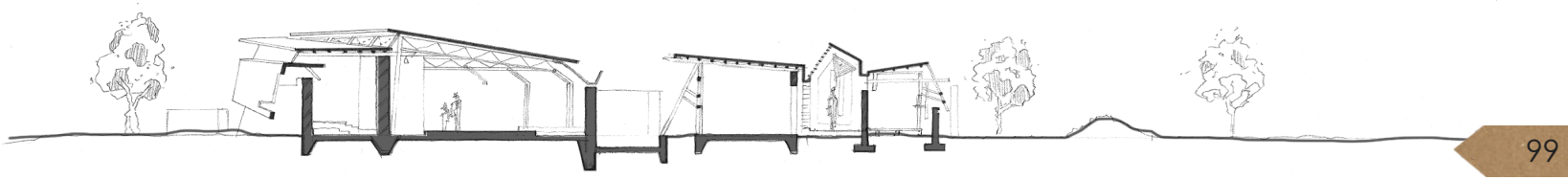


Fig 3.138: Sectional development

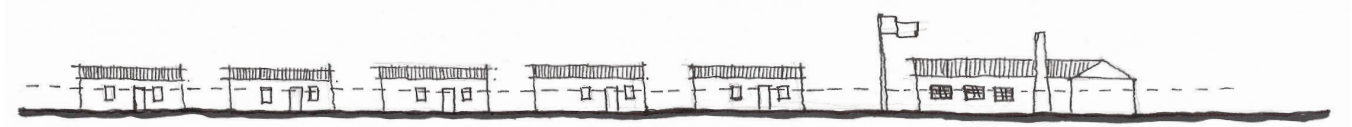


Fig 3.139: Historic camp elevation representation

The historic elevation of the camp (fig 3.139) resembles the nature of the camp, a grid system that sprawls over the landscape, dominating and disregarding the context as it grows and grows. The earlier stages of the design aimed to illustrate the essence of the camp, as redesigning the presence would just lead back to its originary value. Figures 3.141 - 3.143 illustrate the process of exploring three different conceptual responses to the essence of the camp. The development of the elevations for the second external (fig 3.144 - 3.146) aims to create a displacement within the normative structuring of the camp.



Fig 3.141: Elevational development



Fig 3.142: Elevational development



Fig 3.143: Elevational development



Fig 3.144: Elevational development external 2



Fig 3.145: Elevational development external 2



Fig 3.146: Elevational development external 2

Again, exploring the model (fig 3.114 -3.117) as a reflection of figure 3.121's process, figures 3.3.147- 3.148 aimed to explore the contemporary three dimensional version as 'betweenness' to illustrate the final process of creating a place of otherness. Effectively trying to displace the existing memory and trace into a contemporary collective that still carries recognizable and recollectable moments of the past. The elevational development before external review 3 aims to further reflect the lived experience of the camp, as a manner of pulling apart the originary values of the camp and displacing them into a three dimensional experience. The visitor can now experience the essence of the camp in a contemporary manner without having been a part of the historicity of the camp's actual experience, revealing the trace, the memory and the present in one composition as a blurred image of the historic palimpsests conjoined with imaginary images of the current future.

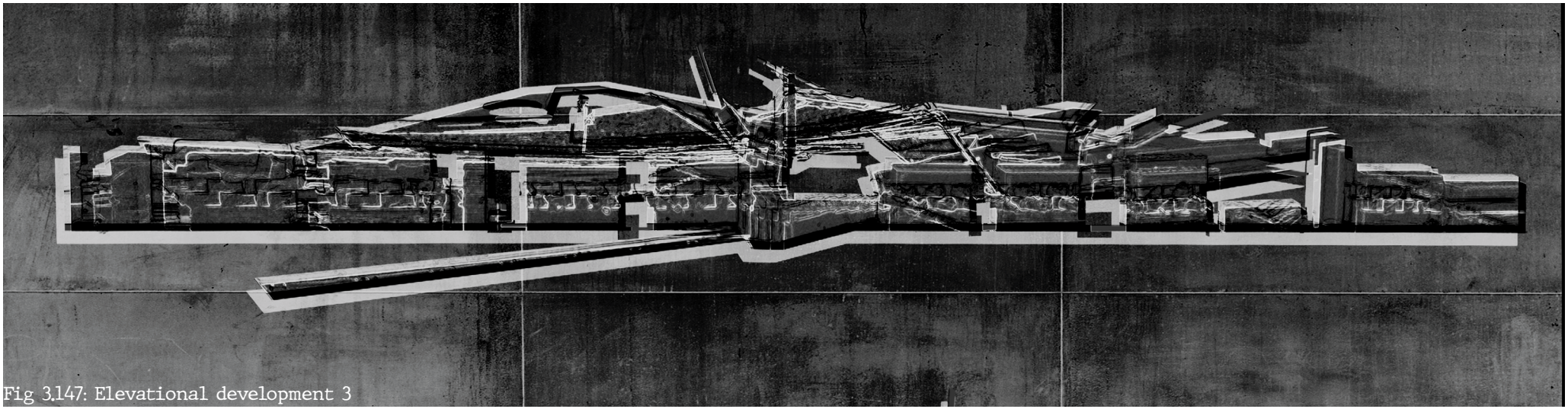


Fig 3.147: Elevational development 3

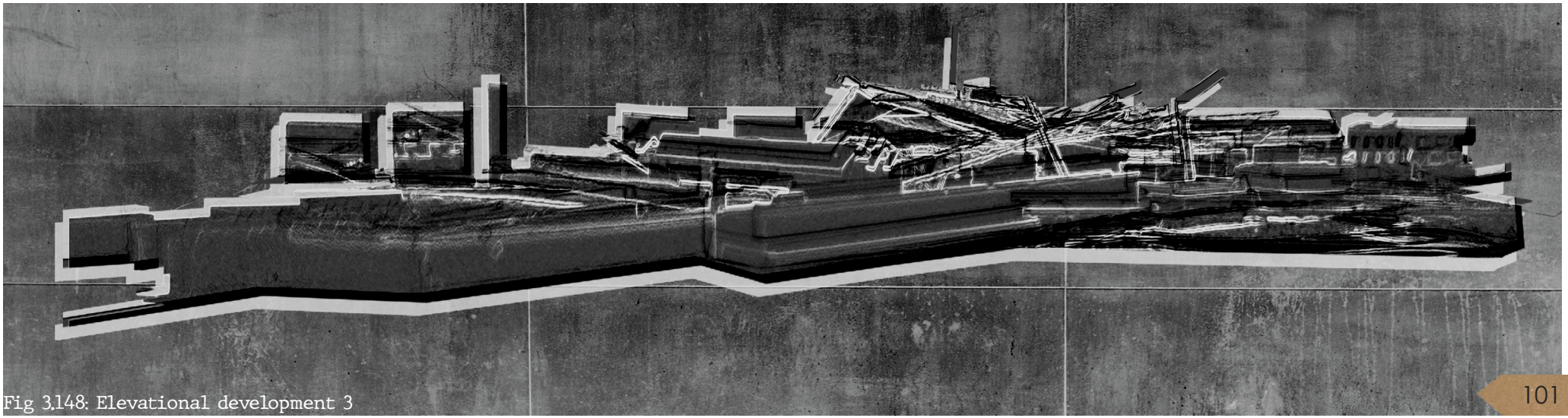


Fig 3.148: Elevational development 3

The final exploration of the elevational development, sees the proposed museum to become an amalgamation of the camps historic spatial organization and morphologies. However, the blurring of the historic creates moment of time where traces can be found and moments where new traces or memory can be grafted, contemporising the museum as a manner of facilitating the experience of the real whilst not having become a part in the real experience, as Landsberg suggests.

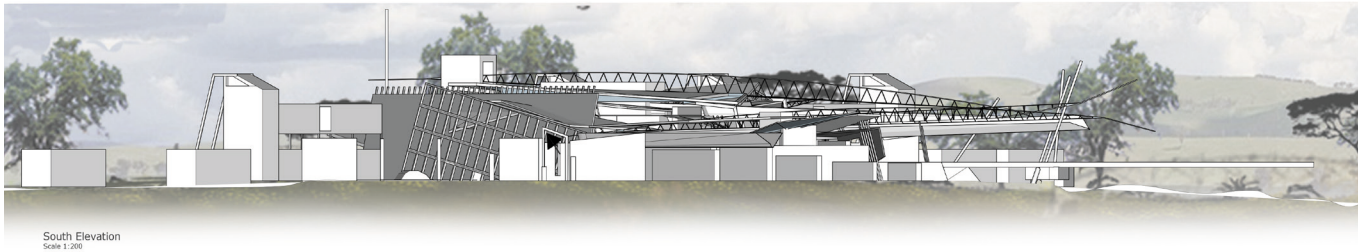


Fig 3.146: Elevational development external 3

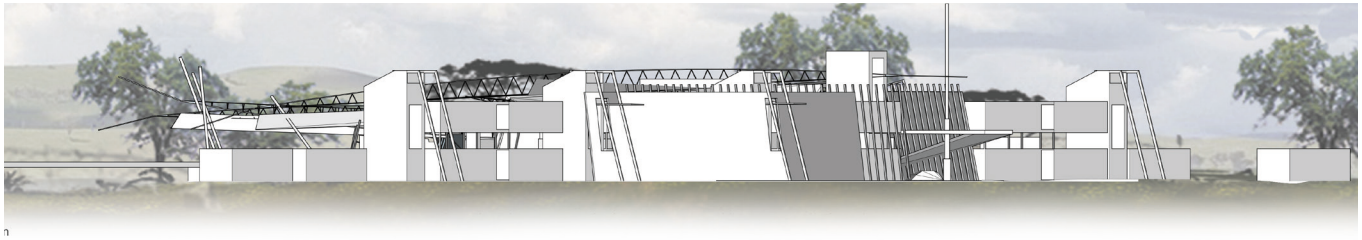


Fig 3.147: Elevational development external 3

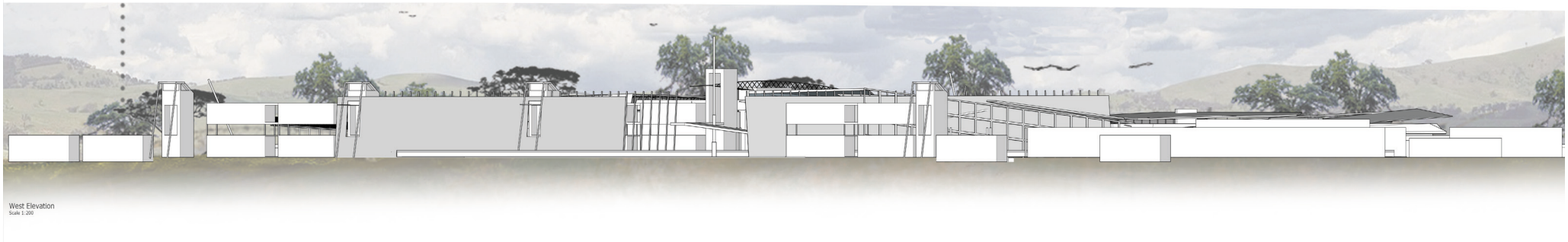


Fig 3.148: Elevational development external 3

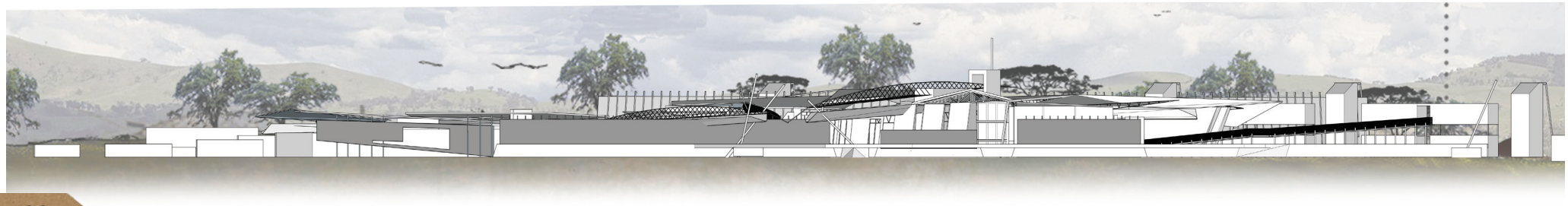


Fig 3.149: Elevational development external 3



Conclusion

In this harmony between form and matter, wrote German play-writer Friedrich Schiller, we can realize beauty and human nature, so that "man is only completely a man when he plays". A game is therefore a simple form of instrumental art where "the contract on the aleatory (chance, luck or uncertain outcome) is only the formulation of an essential question on the relative perception of the moving; the pursuit of form is only a technical pursuit of time. Play becomes a catalyst in the process that allows the visitor to interweave themselves into the memory scape and dwell in between the different layers of memory. The interactive aspect of play ensures that the collective body is unraveled, and in so doing, the process individualizes the experience and urges each individual to confront their own trace-scape as they start to dwell between the multiple certainties of different perspectives created by the re-figuration process. The re-figuration of the individual leads to the inevitable augmentation of the camps memory and it presence, facilitating the individual's confrontation with their own 'bump' into the act of memory. The senses are overwhelmed and a recollection/ un-forgetting occurs. Refreshing and augmenting the memory in a granular fashion. Creating a 'new' memory on a collective scale however, not an entirely new memory, but one that contain and is aware of its previous state of being. This leads to the configuration of a new figure that is compared to the sublime and the grotesque. Shaping a new figure that is aware of the old and the new at once.

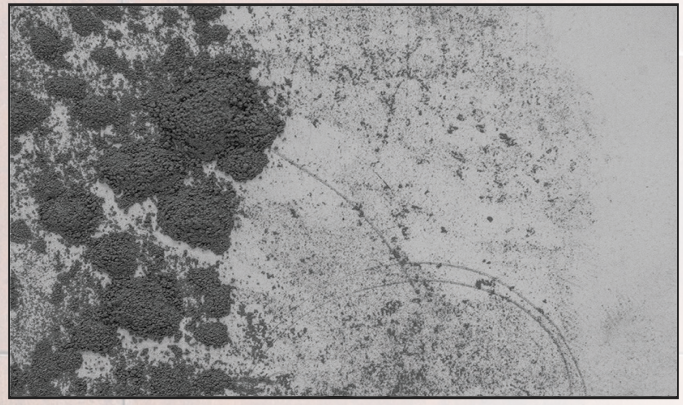
Refiguration

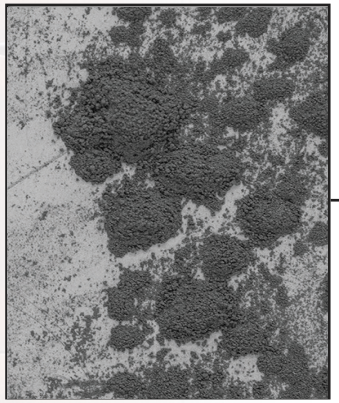
Chapter: 3A; 3B

Summary:

Play becomes a catalyst in the process that allows the visitor to interweave themselves into the memory scape and dwell in between the different layers of memory. The interactive aspect of play ensures that the collective body is unravelled, and in so doing, the process individualizes the experience and urges each individual to confront their own trace- and memory-scape as they start to dwell between the multiple certainties of different perspectives created by the re-figuration process. Creating a 'new' memory on a collective scale however, not an entirely new memory, but one that contain and is aware of its previous state of being.

DESIGN CONCEPTS / CONCEPTS/ PRECEDENT/ TOUCHSTONE PHASE 2 & 3





Configuration of a prosthetically augmented being

04

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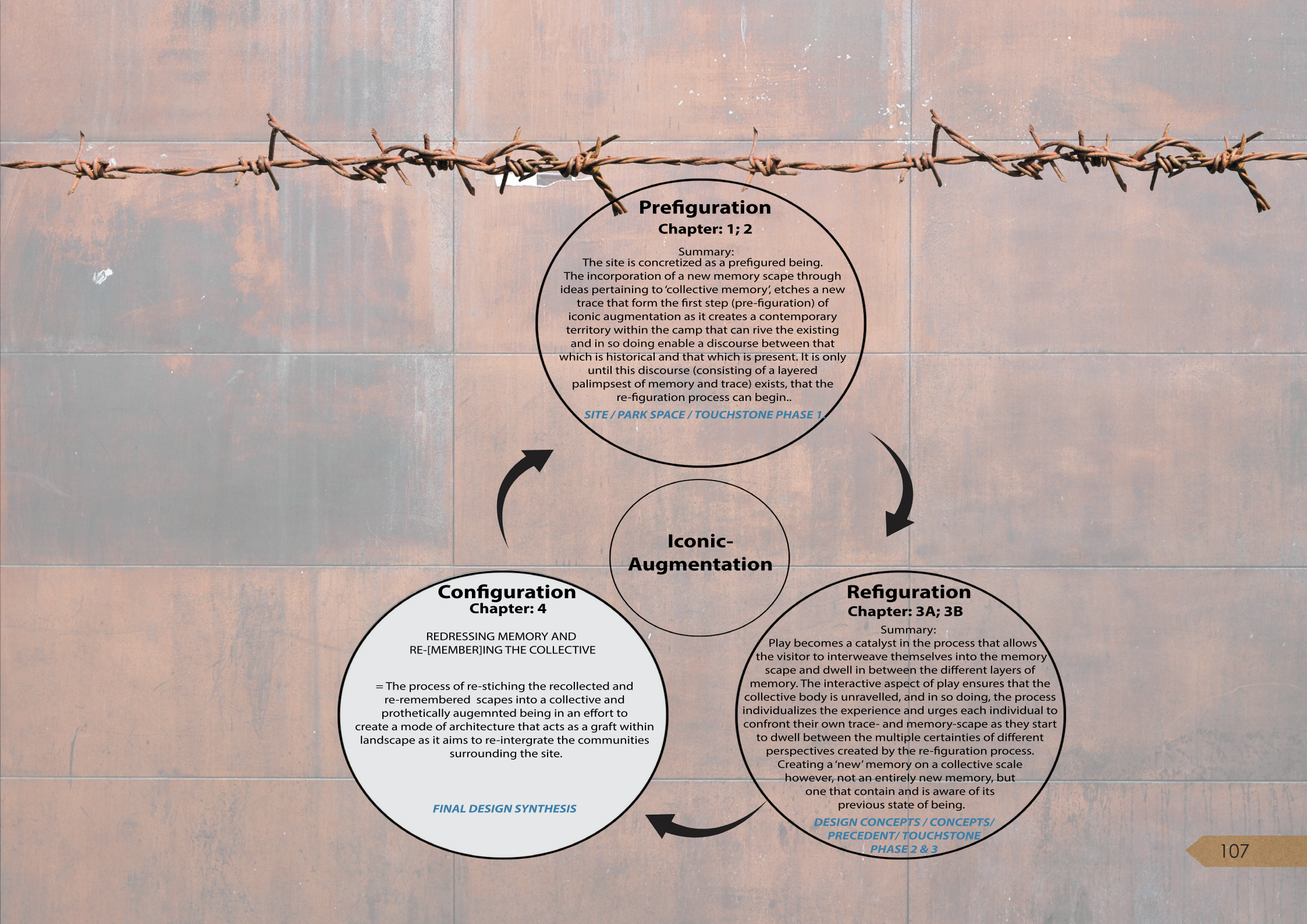
04

Introduction

Working towards the final stage of the iconic-augmentation process, the final chapter aims to configure a new collective body within the site and re-structuring the collectives into a singular contemporary collective within the Vaalharts-area. As a process the configuration stage of augmentative inquiry into the site, the design aims to re-[member] the memories and allow for an individual to be released into the larger park scheme within a participatory action of play. The re-dressing of the previously pared memory enable a reflective state that opens up the players to dwell between the memory- and sense-scapes as the museum frees them in a re-figurative disposition where they are able to re-negotiate the collective memory from an individualized experience, in order to form a contemporary and more inclusive collective memory within the scheme. Facilitating the process of re-stitching the fragmented communities surrounding the site.



Prefiguration
Chapter: 1; 2

Summary:
The site is concretized as a prefigured being. The incorporation of a new memory scape through ideas pertaining to 'collective memory', etches a new trace that form the first step (pre-figuration) of iconic augmentation as it creates a contemporary territory within the camp that can rive the existing and in so doing enable a discourse between that which is historical and that which is present. It is only until this discourse (consisting of a layered palimpsest of memory and trace) exists, that the re-figuration process can begin..

SITE / PARK SPACE / TOUCHSTONE PHASE 1

Iconic-Augmentation

Refiguration
Chapter: 3A; 3B

Summary:
Play becomes a catalyst in the process that allows the visitor to interweave themselves into the memory scape and dwell in between the different layers of memory. The interactive aspect of play ensures that the collective body is unravelled, and in so doing, the process individualizes the experience and urges each individual to confront their own trace- and memory-scape as they start to dwell between the multiple certainties of different perspectives created by the re-figuration process. Creating a 'new' memory on a collective scale however, not an entirely new memory, but one that contain and is aware of its previous state of being.

DESIGN CONCEPTS / CONCEPTS/ PRECEDENT/ TOUCHSTONE PHASE 2 & 3

Configuration
Chapter: 4

REDRESSING MEMORY AND
RE-[MEMBER]ING THE COLLECTIVE

= The process of re-stiching the recollected and re-remembered scapes into a collective and prothetically augemnted being in an effort to create a mode of architecture that acts as a graft within landscape as it aims to re-intergrate the communities surrounding the site.

FINAL DESIGN SYNTHESIS

The Configuration as the proposed design

The final phase of the touchstone brings forth the suggested new site as the player has now interacted with phase two and three of the touchstone and the concrete block has now settle on the base layer of the touchstone.

Through the interaction of the imagination (phase 3) and the fact (phase 1) a new re-enactment and recollection is formed. Leading to a re-figuration within the gathering as well as in the imagination. This process effectively influences the past, present and the future as the logical and the emotional is interchanged and forms a new coherence within that which is perceived as most true within the gathering.

Through the process of Iconic Augmentation the touchstone allows for the collective gathering to be individualized and recollected in an effort to re-figure the self, and in so doing the collective as a whole. Whilst still being able to pay tribute to the memory that it arose from as well as creating a future where the ruin is memorialized as an intangible flux scape. Unchained to its destination but able to be transferred into the dweller as a [memol-realization of a lived experience that is now implanted within the lived-scape of the contemporary dweller.



Fig 4A: Touchstone phase 4

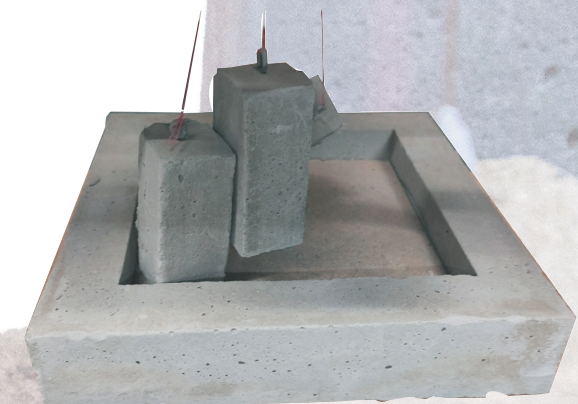


Fig 4A1: Touchstone phase 4 concrete blocks settling on sand that fell from phase 1

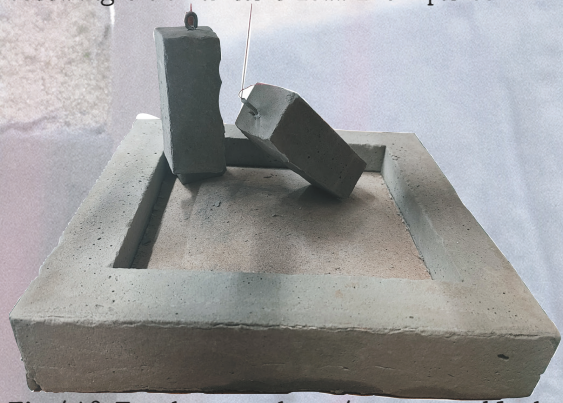


Fig 4A2: Touchstone phase 4 concrete blocks settling on sand that fell from phase 1

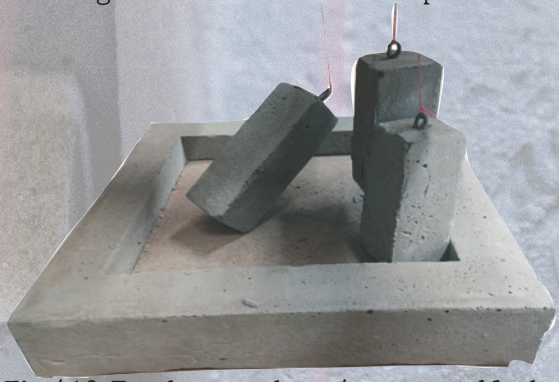


Fig 4A3: Touchstone phase 4 concrete blocks settling on sand that fell from phase 1

Through using displacement as a method of forming a narrative within the memorial grounds, the process of transitioning from one space to the next becomes an exchange of memory. The dweller is taught a version of the memory, and as they pass through the memorial, a new layer of the previous memory is enlivened and re-collected to the dweller through their interaction within it. The process of displacement consist primarily of the 'splitting up' or the removal of one object in relation to another. Moreover, when the imagination is inserted into the distorted image, a new memory is born. However, the new memory isn't entirely unique- but exists alongside the awareness of the original memory, with new parts added to it.

The combination of play and displacement leads to the concretization of an architectural presence on site. The player/ individuals are brought together and re-introduced to each other in as a re-figured collective, freed and gifted with new knowledge on an individual level. Following this process, reflection is introduced as a method to combine and share the journey that the visitor has experienced as they re-integrate themselves into the new collective. Forming a new coherent collective, that is aware and understanding of the previous collectives. The individual has now transcended back into a collective state where they dwell in a concretized version of their reality or rather that which has become most truthful to them as a mediated collective. This leads to the establishment of a new relationship between the sign and signifier, shaping a new culture and a redressed memory that is shared within the surrounding communities as the collective is re-released into the larger park scheme with a shared re-memory.

Bringing to light the final phase of the design, the design synthesis and technical resolutions.

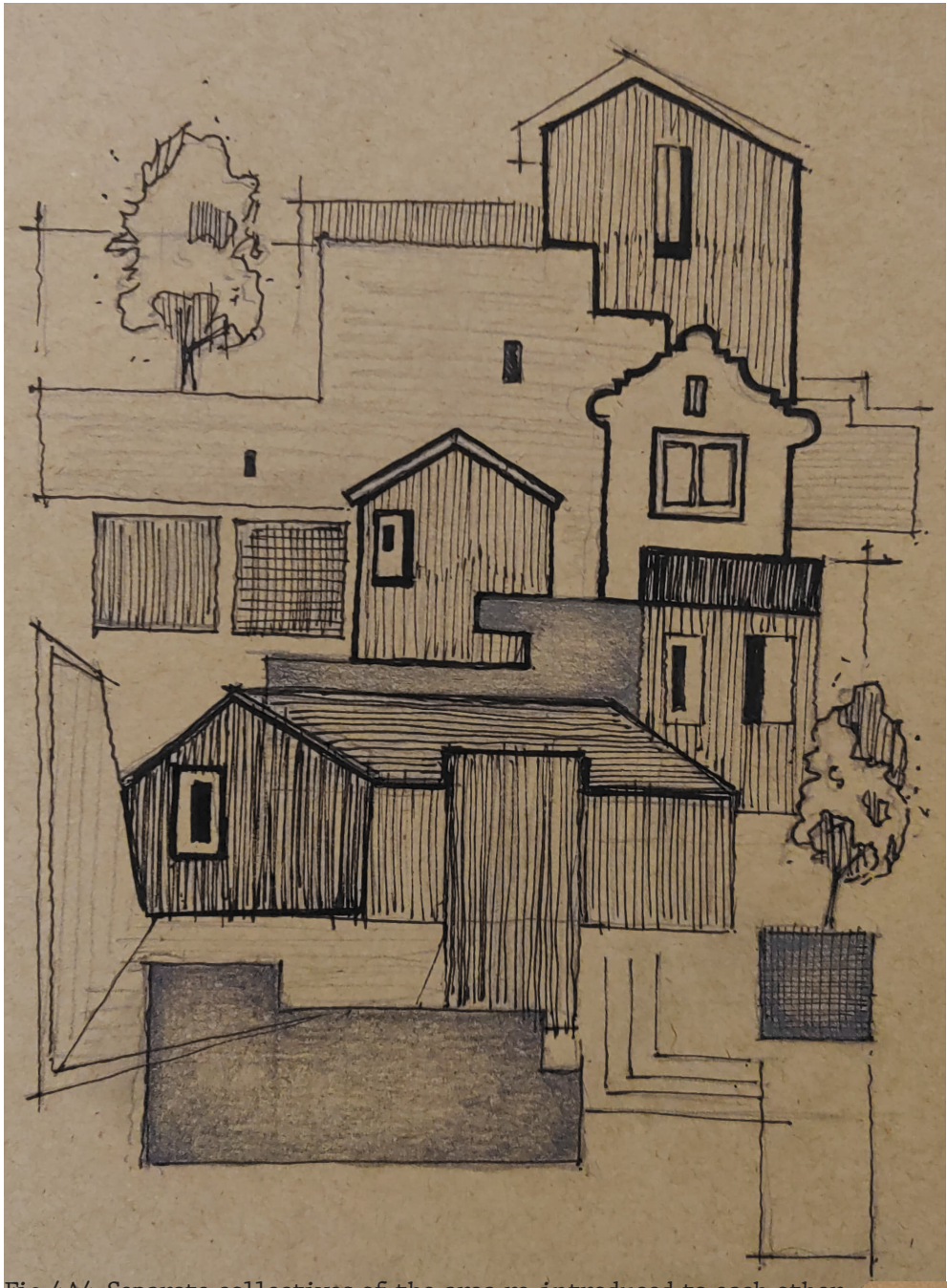
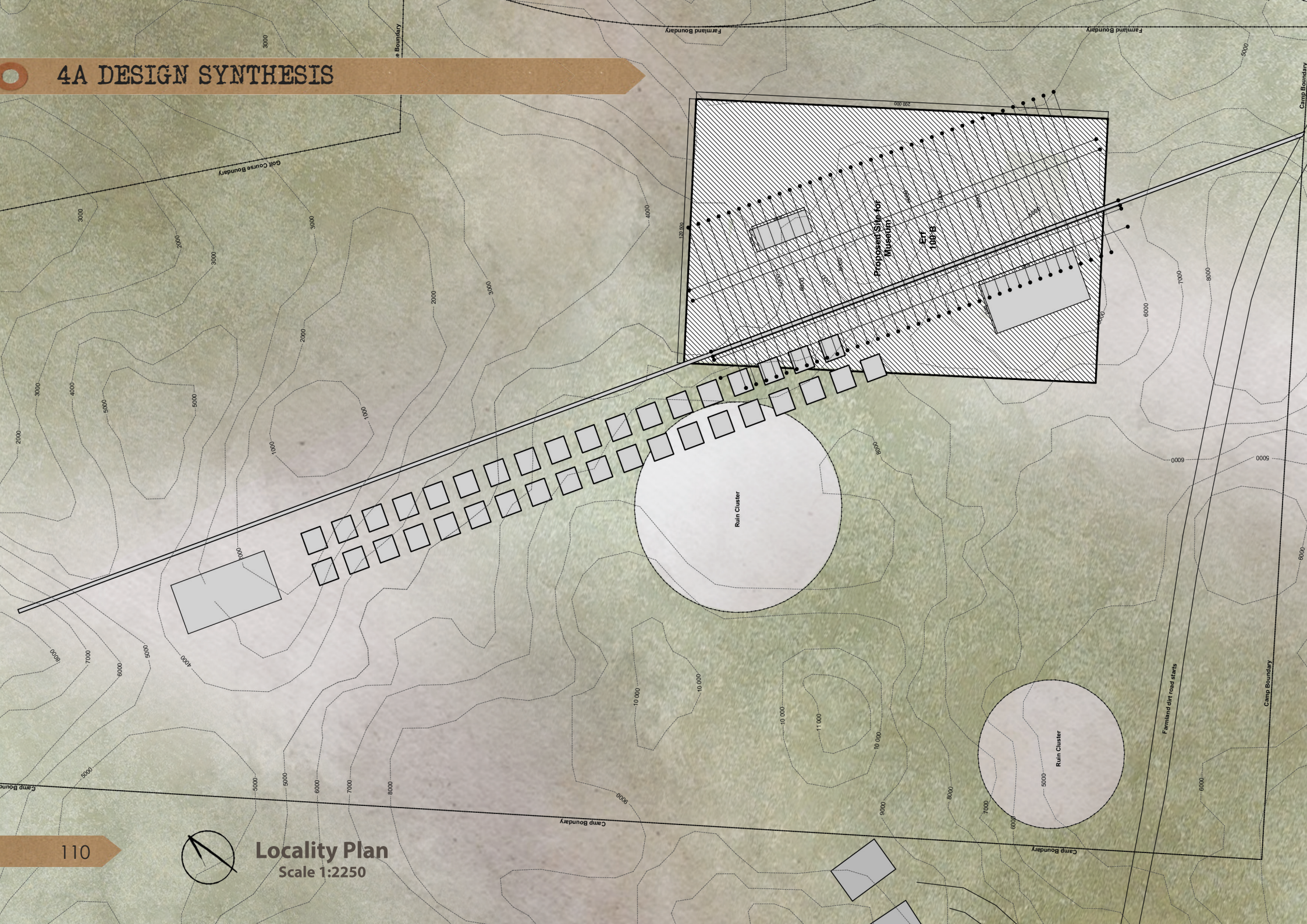
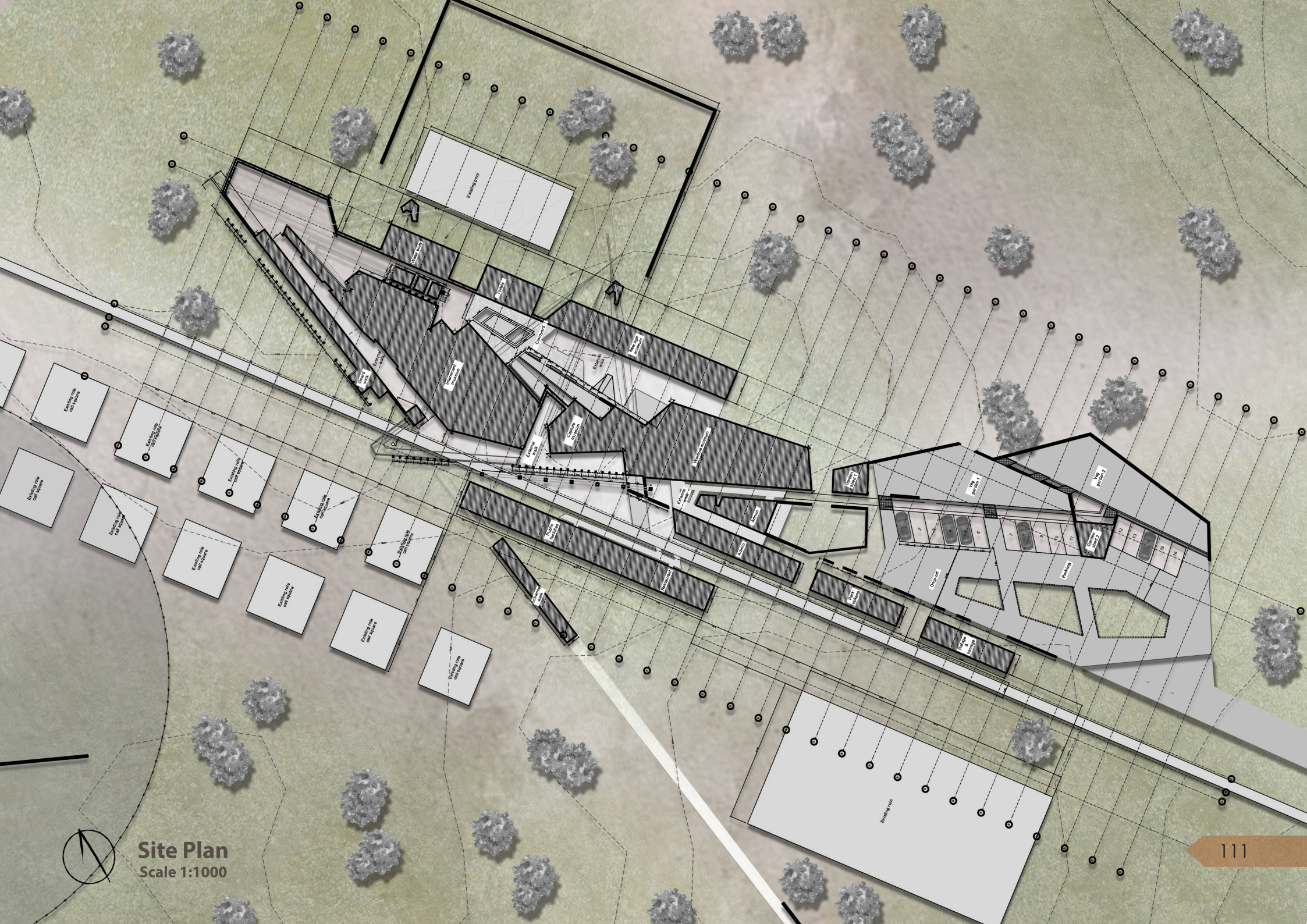


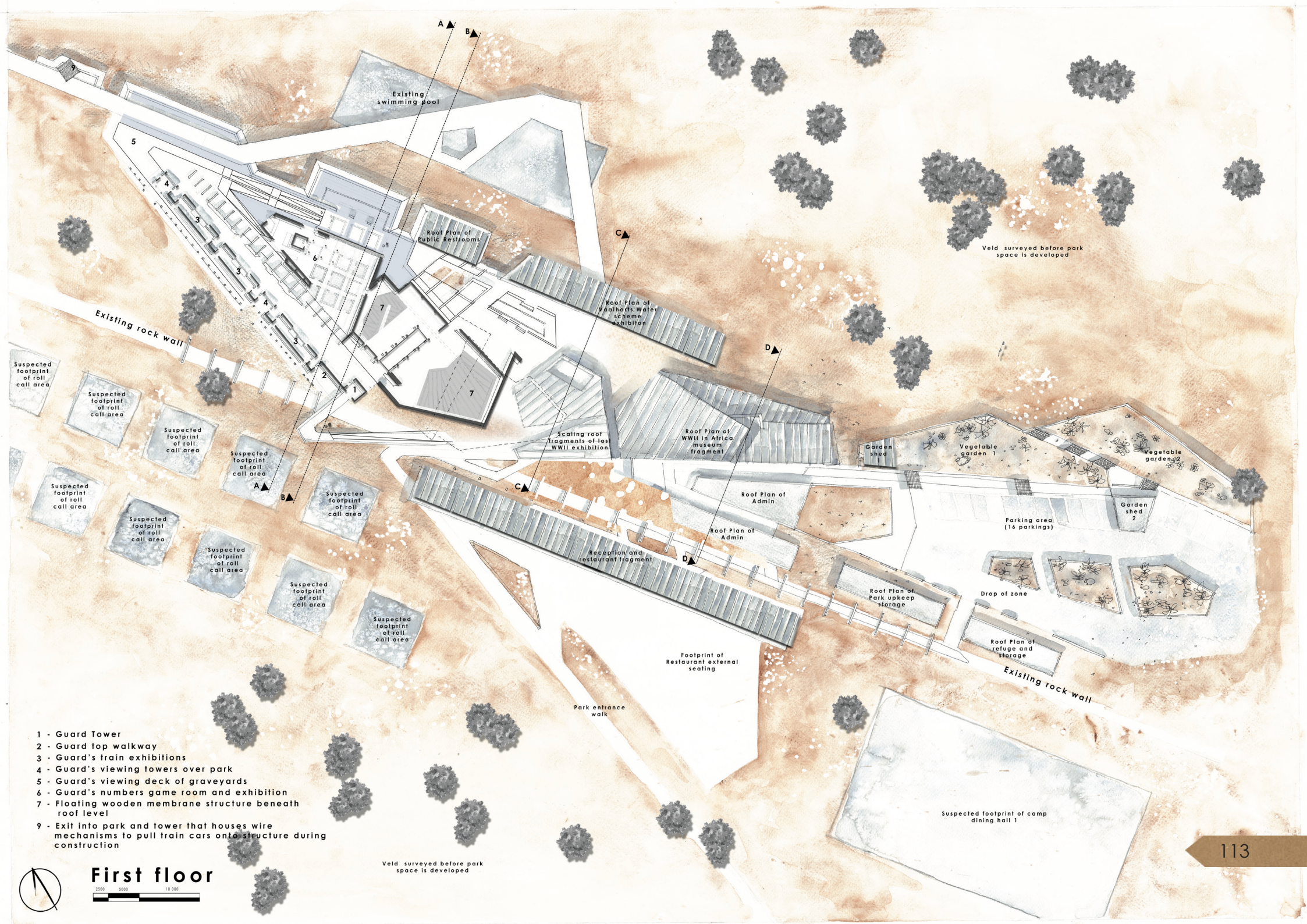
Fig 4A4: Separate collectives of the area re-introduced to each other as a new collective thats aware and originating from the first.

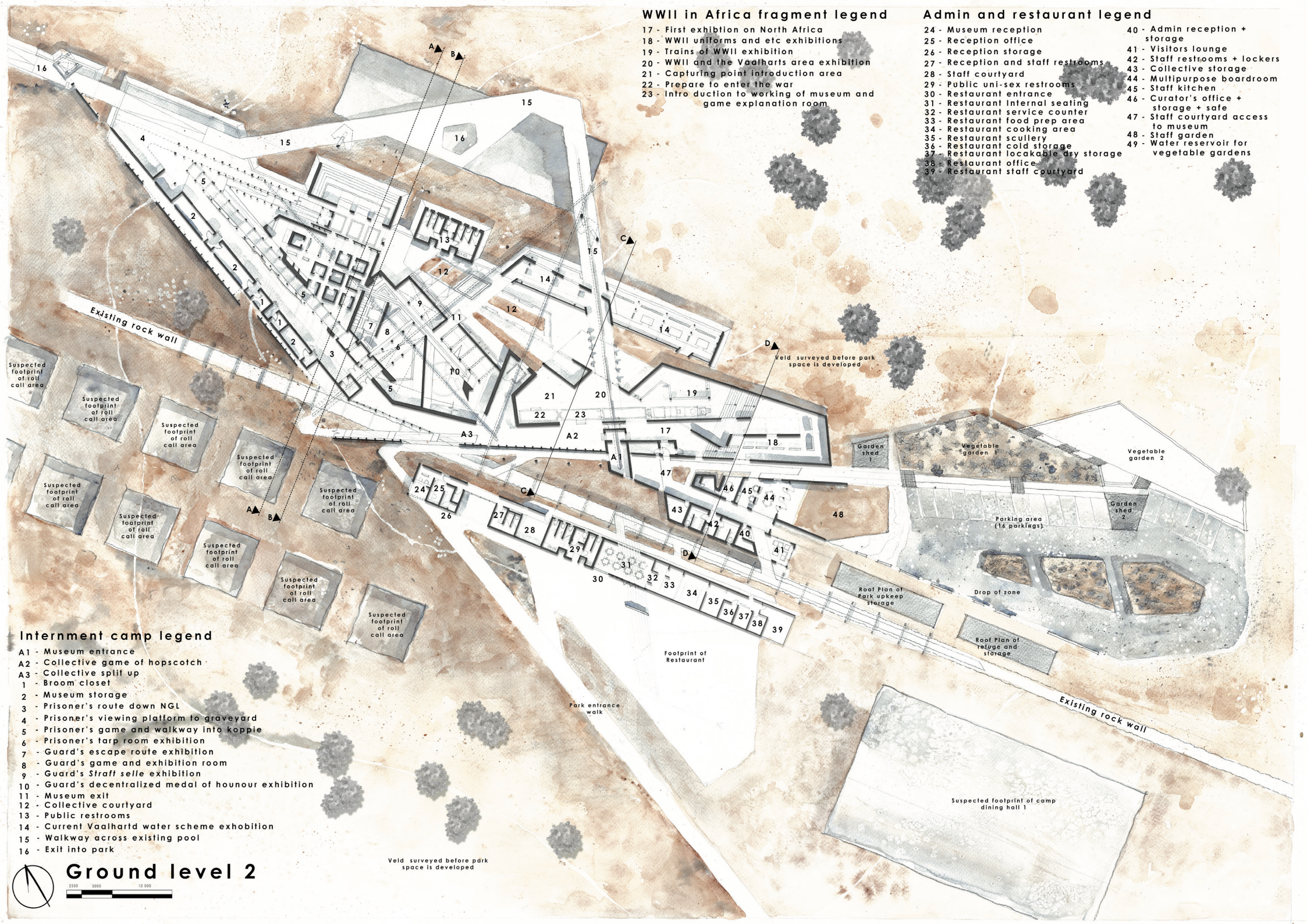


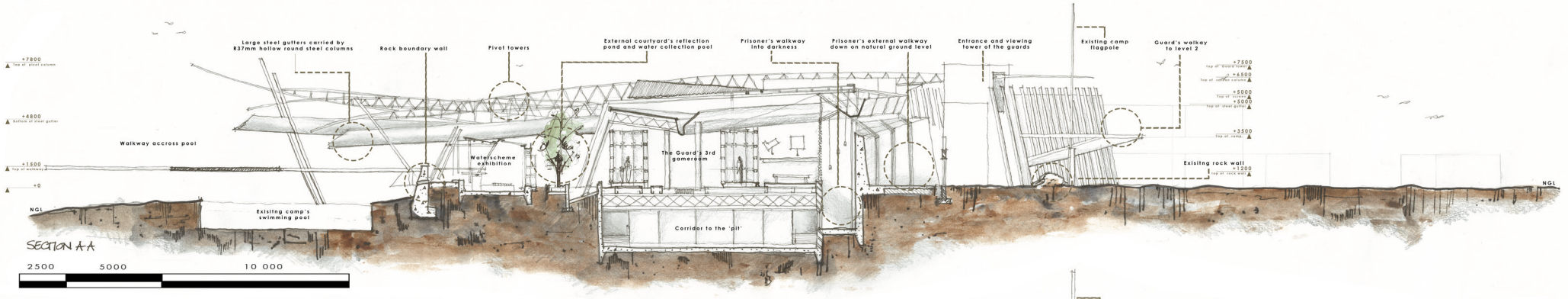
Locality Plan
Scale 1:2250

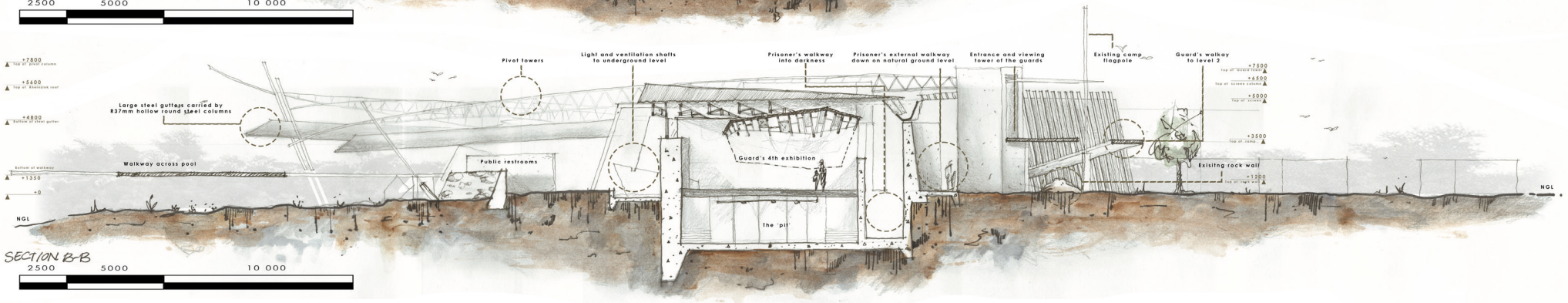

Existing pool
Viewing deck
Kiosk
Entrance
Reception
Entrance lobby
Courtyard
Entrance ramp
Existing ride on square
Existing ride on square
Existing ride on square

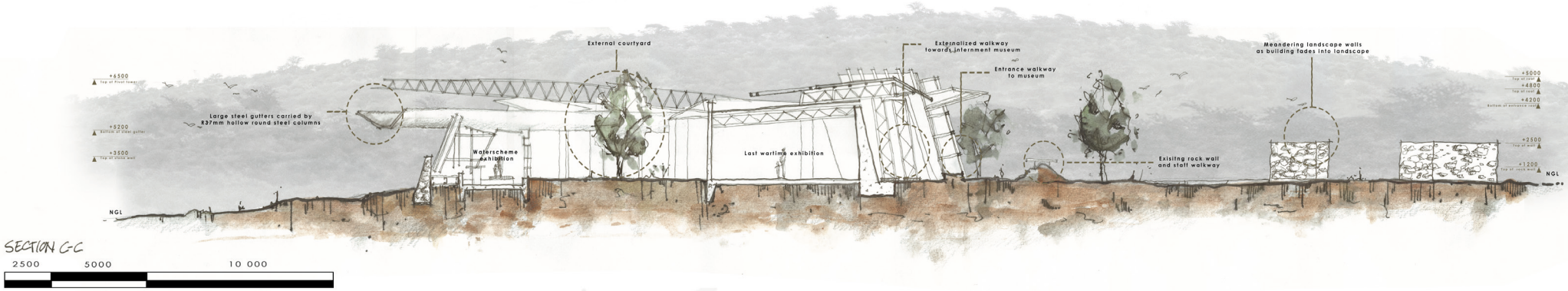

Existing swimming pool
Landscape cut
Landscape cut
Landscape cut
Veld surveyed before park space is developed
Footprint of Current Vaalharts waterscheme exhibition
Existing rock wall
Suspected footprint of roll call area
Suspected footprint of roll call area
Suspected footprint of roll call area
Suspected footprint of roll call area
Suspected footprint of roll call area
Suspected footprint of roll call area
Suspected footprint of roll call area
Suspected footprint of roll call area
Suspected footprint of roll call area
Suspected footprint of roll call area
Footprint of WWII in Africa musuem fragment
Vegetable garden 1
Vegetable garden 2
Footprint of Admin
Footprint of Admin
Footprint of Reception
Existing rock wall
Parking area (16 parkings)
Garden shed 2
Landscape cut
Drop of zone
Park upkeep storage 1
Park upkeep storage 2
Park upkeep storage 3
Footprint of Restaurant
Refuge area footprint
Footprint of Restaurant external seating
Existing rock wall
Park entrance walk
Suspected footprint of camp dining hall 1
Veld surveyed before park space is developed
1 - Broom closet
2 - Museum storage
3 - Prisoner's route down NGL
4 - Prisoner's viewing platform to graveyard
5 - Prisoner's game and walkway into koppie
6 - Prisoner's tarp room exhibition
7 - Prisoner's escape route exhibition
8 - Prisoner's *Straft selle* exhibiton
9 - Prisoner's decentralized medat of honour exhibition
10 - Prisoner's ramp to exit
11 - Reflection and water storage pond
12 - Exit into park
Ground level 1
2500
5000
10 000

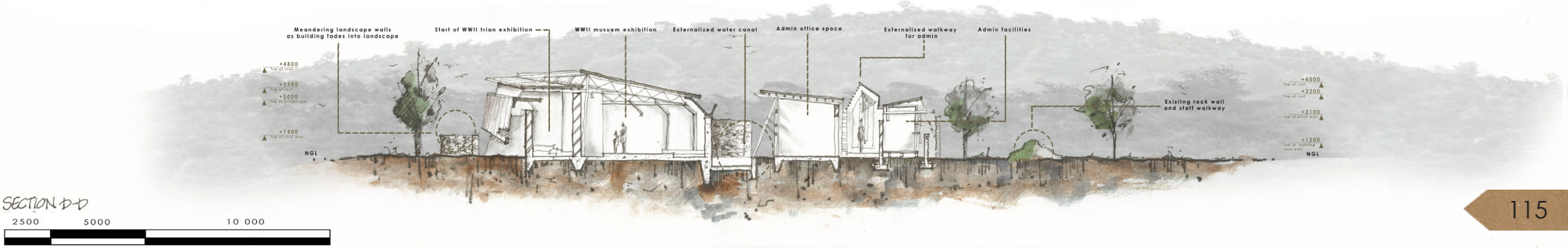

A
B
C
D
Existing swimming pool
Roof Plan of Public Restrooms
Roof Plan of Vaalharts Water scheme exhibition
Veld surveyed before park space is developed
Existing rock wall
Suspected footprint of roll call area
Scating roof fragments of last WWII exhibition
Roof Plan of WWII in Africa museum fragment
Garden shed 1
Vegetable garden 1
Vegetable garden 2
Roof Plan of Admin
Garden shed 2
Parking area (16 parkings)
Reception and restaurant fragment
Roof Plan of Park upkeep storage
Drop of zone
Roof Plan of refuge and storage
Footprint of Restaurant external seating
Park entrance walk
Suspected footprint of camp dining hall 1
1 - Guard Tower
2 - Guard top walkway
3 - Guard's train exhibitions
4 - Guard's viewing towers over park
5 - Guard's viewing deck of graveyards
6 - Guard's numbers game room and exhibition
7 - Floating wooden membrane structure beneath roof level
9 - Exit into park and tower that houses wire mechanisms to pull train cars onto structure during construction
First floor
2500 5000 10 000

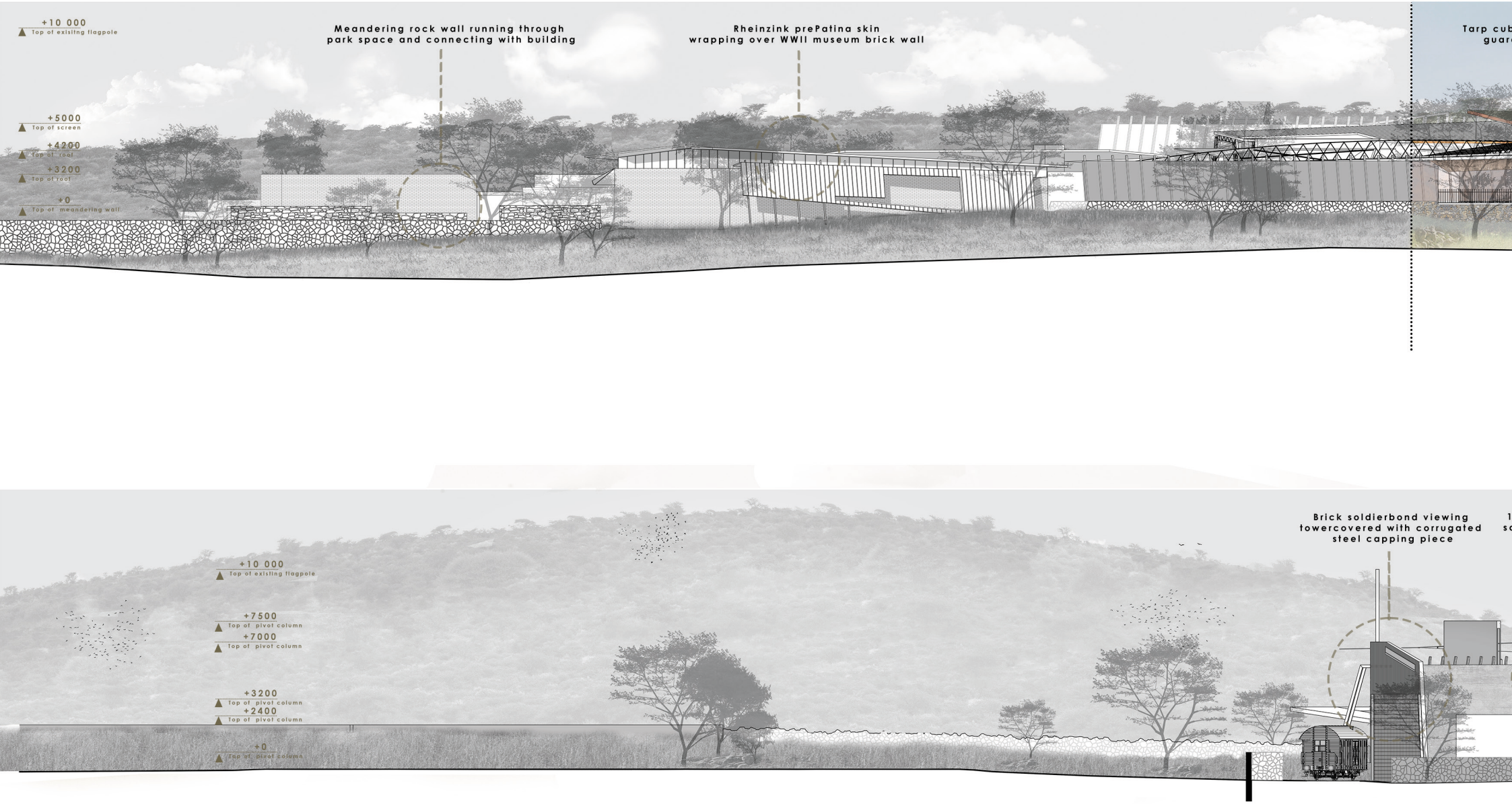

WWII in Africa fragment legend
17 - First exhibition on North Africa
18 - WWII uniforms and etc exhibitions
19 - Trains of WWII exhibition
20 - WWII and the Vaalharts area exhibition
21 - Capturing point introduction area
22 - Prepare to enter the war
23 - Intro duction to working of museum and game explanation room
Admin and restaurant legend
24 - Museum reception
25 - Reception office
26 - Reception storage
27 - Reception and staff restrooms
28 - Staff courtyard
29 - Public uni-sex restrooms
30 - Restaurant entrance
31 - Restaurant Internal seating
32 - Restaurant service counter
33 - Restaurant food prep area
34 - Restaurant cooking area
35 - Restaurant scullery
36 - Restaurant cold storage
37 - Restaurant lockable dry storage
38 - Restaurant office
39 - Restaurant staff courtyard
40 - Admin reception + storage
41 - Visitors lounge
42 - Staff restrooms + lockers
43 - Collective storage
44 - Multipurpose boardroom
45 - Staff kitchen
46 - Curator's office + storage + safe
47 - Staff courtyard access to museum
48 - Staff garden
49 - Water reservoir for vegetable gardens
Existing rock wall
Veld surveyed before park space is developed
Suspected footprint of roll call area
Garden shed 1
Vegetable garden 1
Vegetable garden 2
Garden shed 2
Parking area (16 parkings)
Drop of zone
Roof Plan of Park upkeep storage
Roof Plan of refuge and storage
Footprint of Restaurant
Park entrance walk
Suspected footprint of camp dining hall 1
Internment camp legend
A1 - Museum entrance
A2 - Collective game of hopscotch
A3 - Collective split up
1 - Broom closet
2 - Museum storage
3 - Prisoner's route down NGL
4 - Prisoner's viewing platform to graveyard
5 - Prisoner's game and walkway into koppie
6 - Prisoner's tarp room exhibition
7 - Guard's escape route exhibition
8 - Guard's game and exhibition room
9 - Guard's Straft selle exhibition
10 - Guard's decentralized medal of hounour exhibition
11 - Museum exit
12 - Collective courtyard
13 - Public restrooms
14 - Current Vaalhartd water scheme exhobition
15 - Walkway across existing pool
16 - Exit into park
Ground level 2
2500 5000 10 000

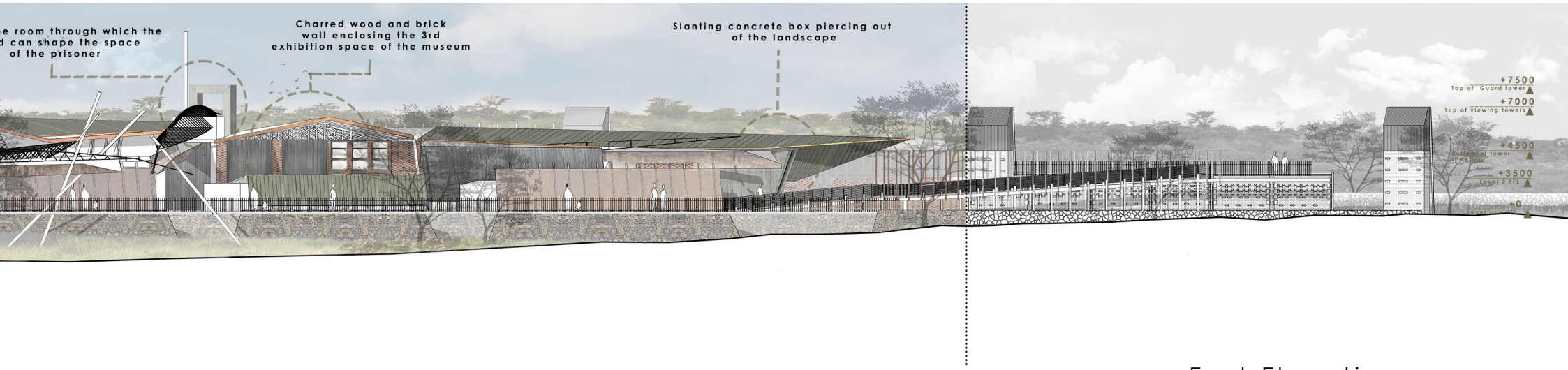

Large steel gutters carried by R37mm hollow round steel columns
Rock boundary wall
Pivot towers
External courtyard's reflection pond and water collection pool
Prisoner's walkway into darkness
Prisoner's external walkway down on natural ground level
Entrance and viewing tower of the guards
Existing camp flagpole
Guard's walkay to level 2
Walkway accross pool
Waterscheme exhibition
The Guard's 3rd gamesoom
Exisitng rock wall
Exisitng camp's swimming pool
Corridor to the 'pit'
NGL
SECTION A-A
2500
5000
10 000


Pivot towers
Light and ventilation shafts to underground level
Prisoner's walkway into darkness
Prisoner's external walkway down on natural ground level
Entrance and viewing tower of the guards
Existing camp flagpole
Guard's walkay to level 2
Large steel gutters carried by R37mm hollow round steel columns
Walkway across pool
Public restrooms
Guard's 4th exhibition
Exisitng rock wall
The 'pit'
NGL
SECTION B-B
2500
5000
10 000


External courtyard
Externalized walkway towards internment museum
Entrance walkway to museum
Meandering landscape walls as building fades into landscape
Large steel gutters carried by R37mm hollow round steel columns
Waterscheme exhibition
Last wartime exhibition
Exisitng rock wall and staff walkway
NGL
SECTION C-C
2500
5000
10 000

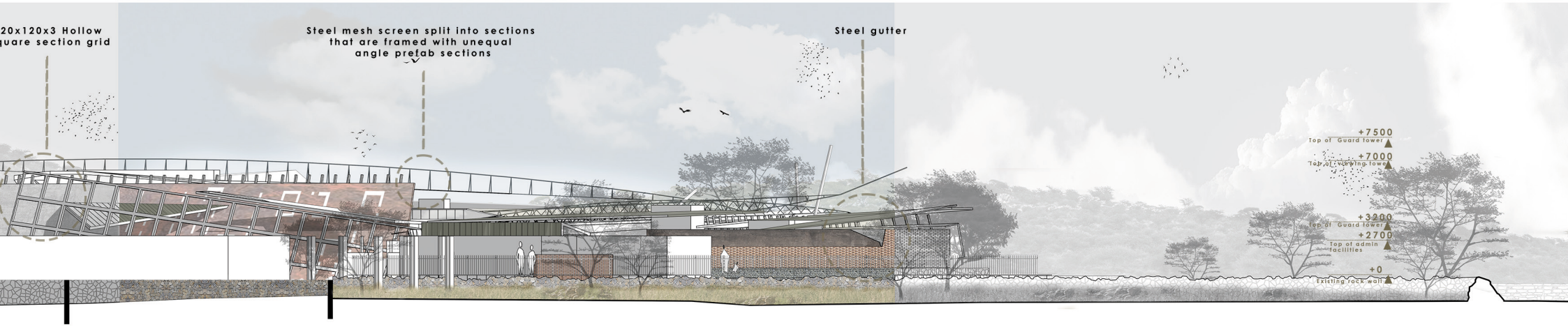

Meandering landscape walls as building fades into landscape
Start of WWII trian exhibition
WWII musuem exhibition
Externalized water canal
Admin office spoce
Externalized walkway for admin
Admin facilities
Exisitng rock wall and staff walkway
NGL
SECTION D-D
2500
5000
10 000


+10 000
Top of existing flagpole
Meandering rock wall running through
park space and connecting with building
Rheinzink prePatina skin
wrapping over WWII museum brick wall
Tarp cub
guar
+5000
Top of screen
+4200
Top of roof
+3200
Top of roof
+0
Top of meandering wall
+10 000
Top of existing flagpole
Brick soldierbond viewing
towercovered with corrugated
steel capping piece
+7500
Top of pivot column
+7000
Top of pivot column
+3200
Top of pivot column
+2400
Top of pivot column
+0
Top of pivot column



East Elevation

2500 5000 10 000

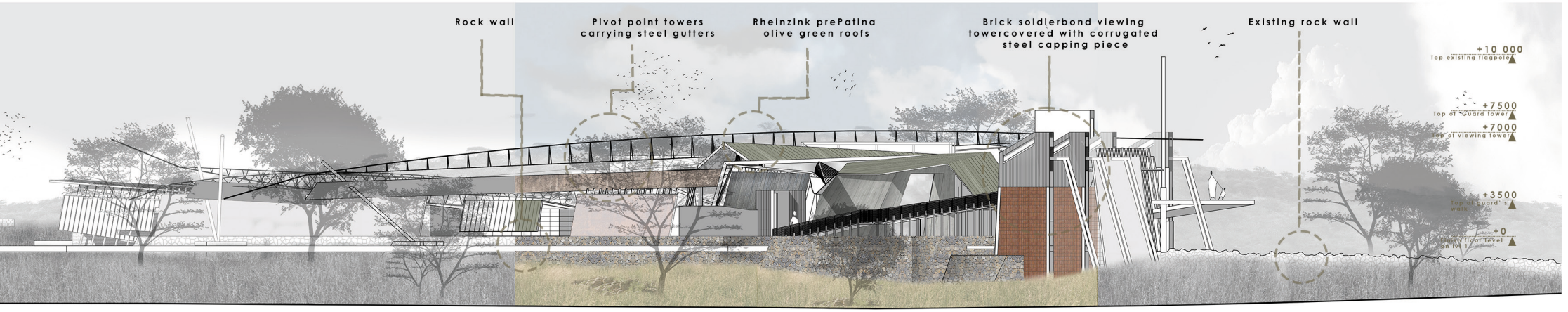


South Elevation

2500 5000 10 000

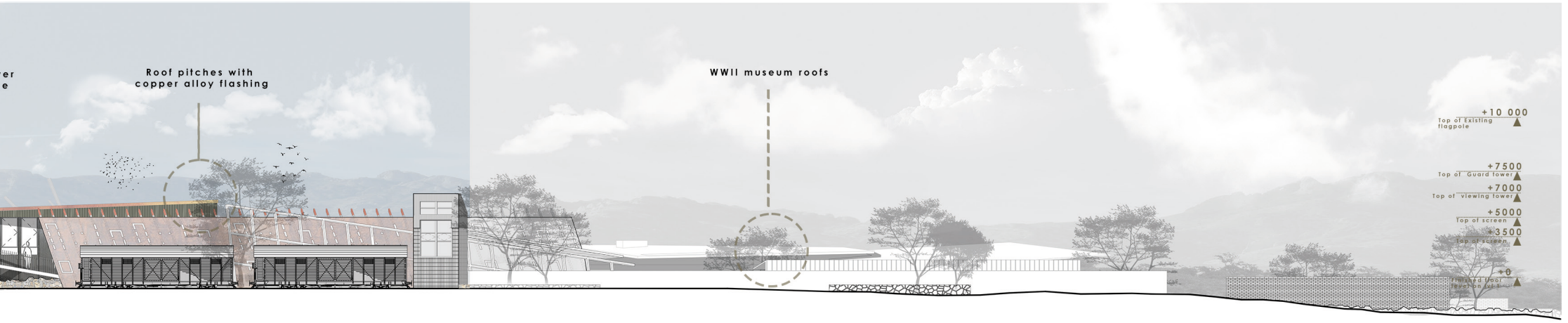

Top of pivot column
+10 000
Top of existing flagpole
+7800
Top of guard tower
+7000
Top of viewing tower
+3200
Top of roof
+0
Finish floor level on lvl 1


+10 000
Top of existing flagpole
+7500
Top of guard tower
+7000
Top of viewing tower
+5000
Top ofscreen
+3500
Top of screen
+3000
Top of brick wall
+0
Finish floor level on lvl 1
Viewing platform towards cemetary
Train cars that transported the prisoners to the camp
Viewing towards camp grounds
Concrete guard tow
and guards entranc
to fist exhibition



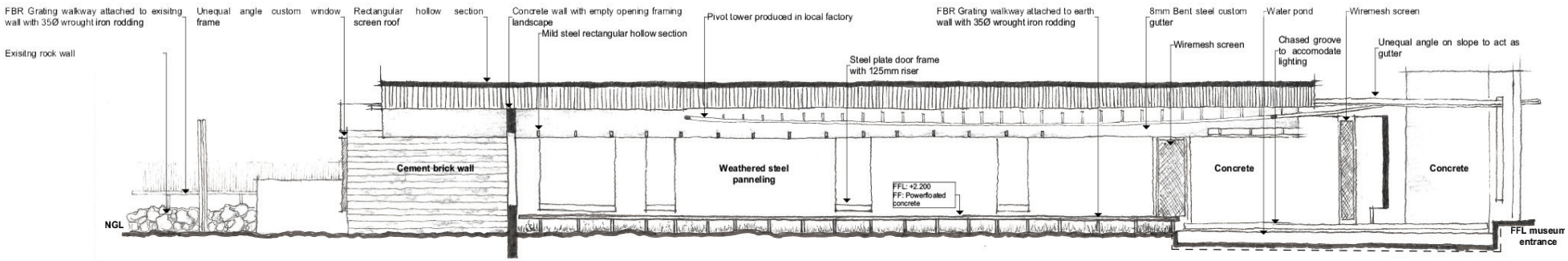
North Elevation

2500 5000 10 000



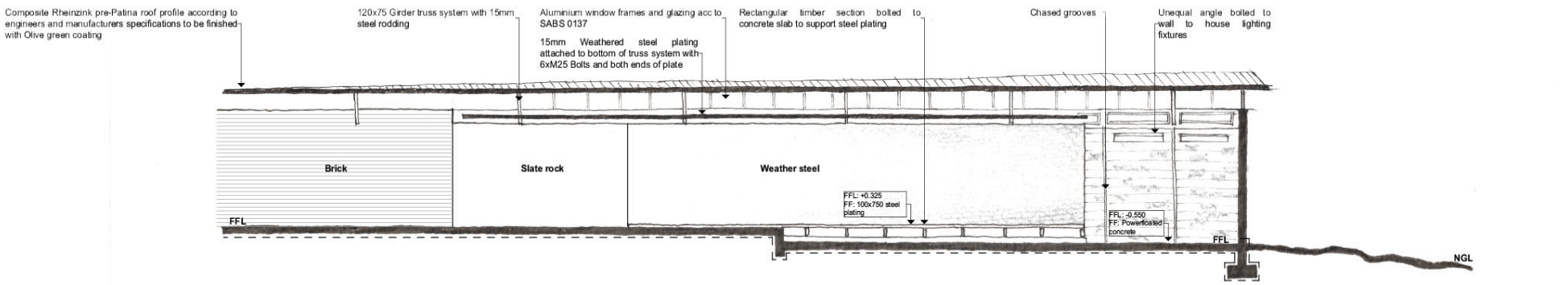
West Elevation

2500 5000 10 000



Section G-G

2500 5000 10 000



Section H-H

2500 5000 10 000



North West view of building



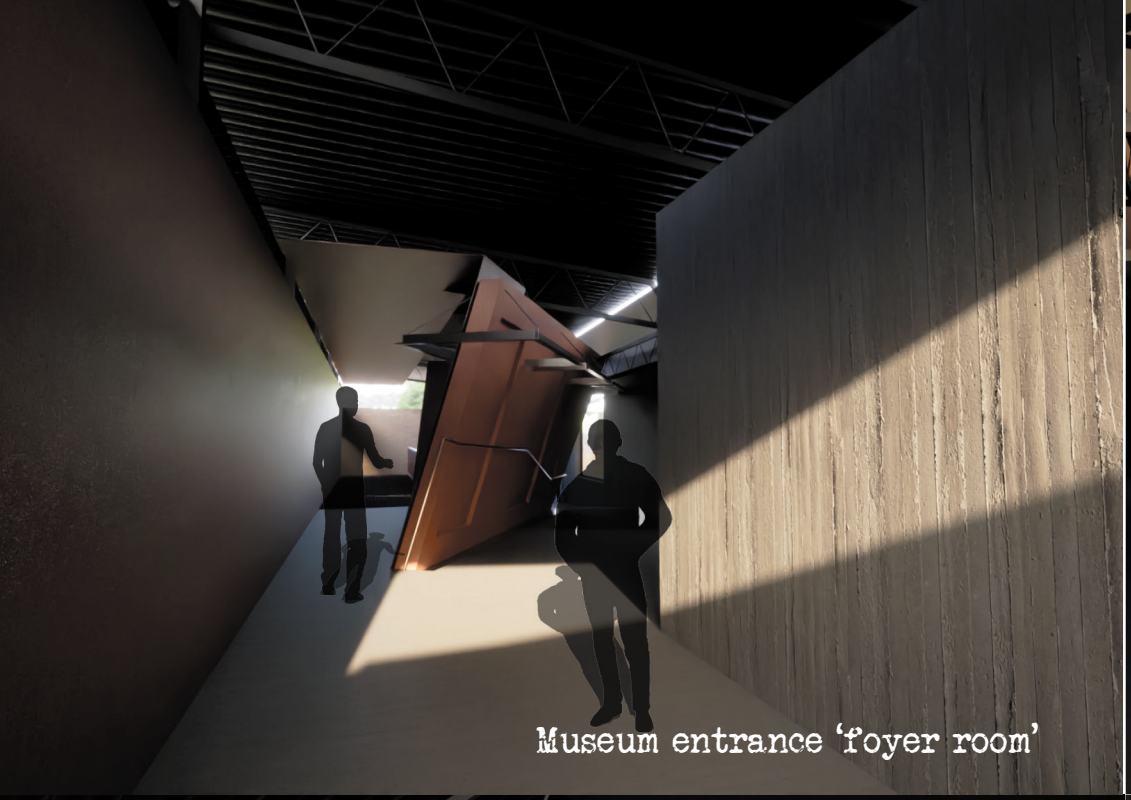
Restaurant entrance and walk



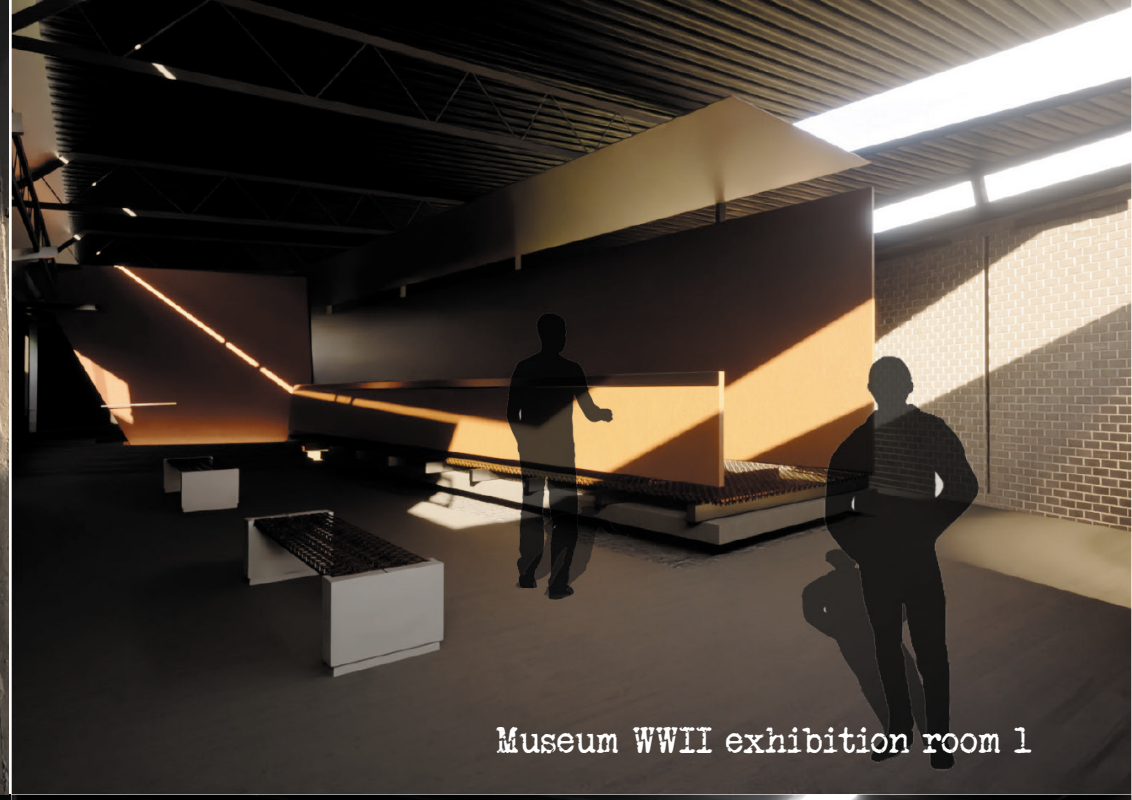
Restaurant from South West



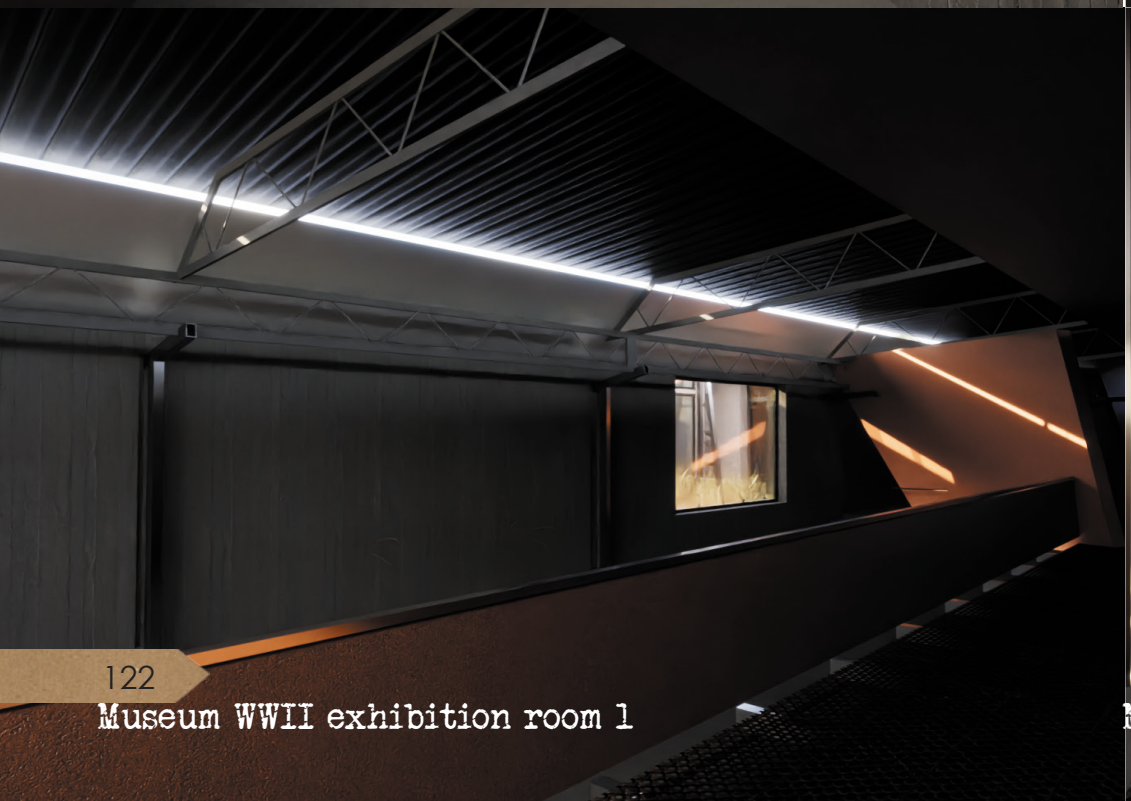
Museum entrance



Museum entrance ‘foyer room’



Museum WWII exhibition room 1



Museum WWII exhibition room 1



Museum WWII exhibition room 2



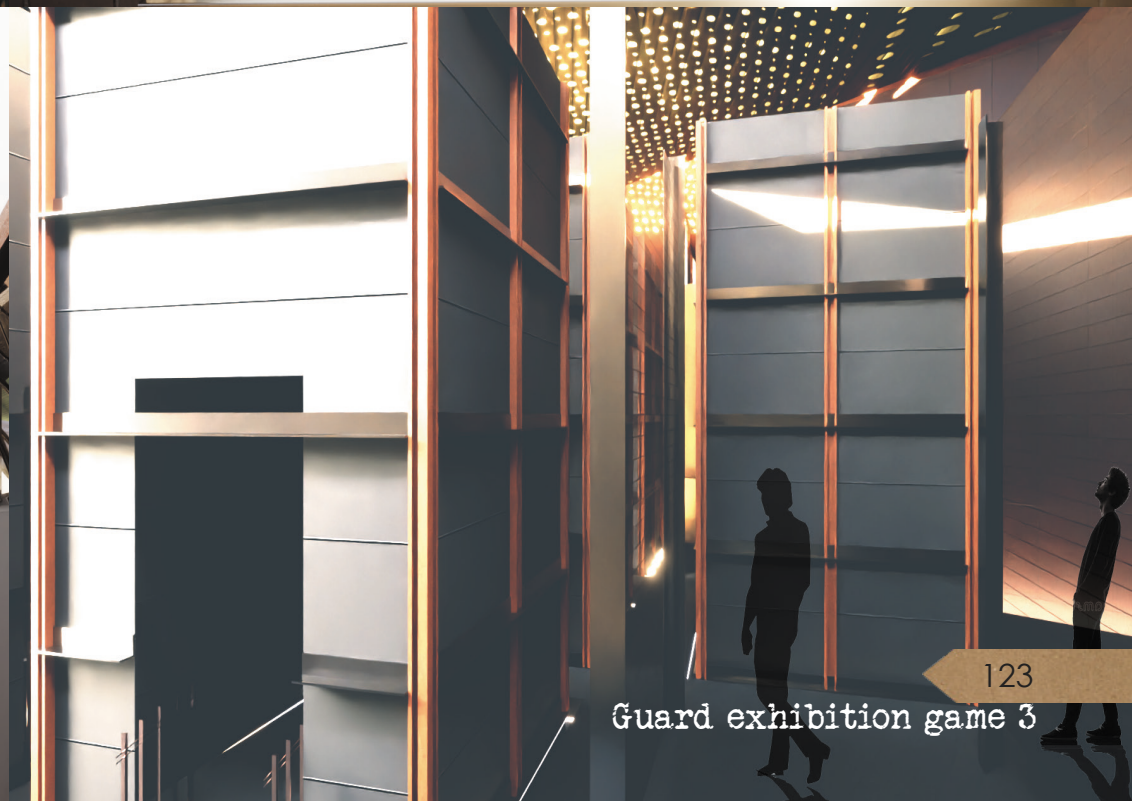
Museum external walk 1 where roles are assigned



Exhibition walk 2 view from guard tower



Exhibition walk 2 bottom corridor



Guard exhibition game 3



Admin building South East



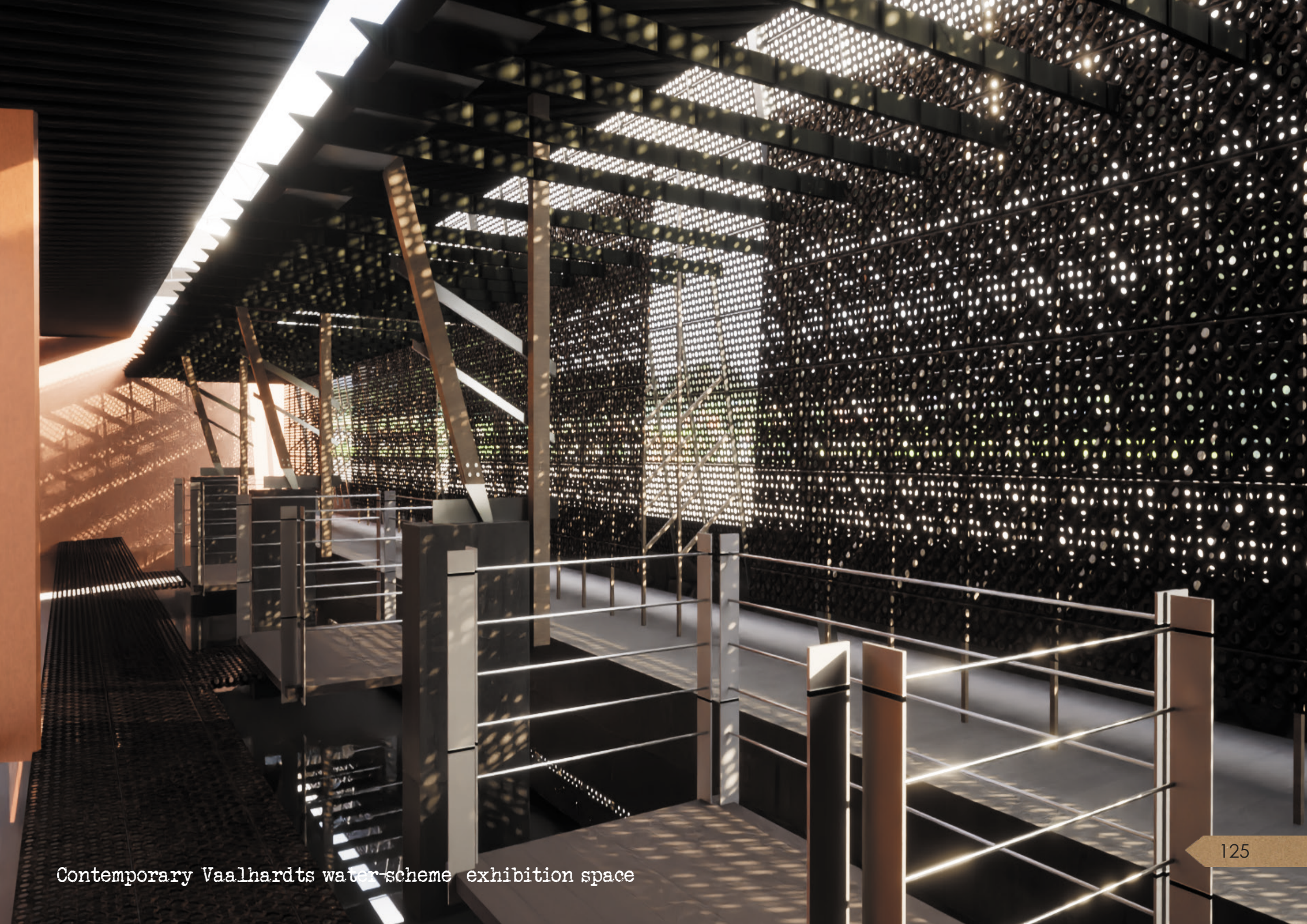
Admin building external walkway



Admin building's staff courtyard



Admin building's staff courtyard



Contemporary Vaalhardts water scheme exhibition space

4B.1 TECHNICAL INVESTIGATION

4B.1.1 ENVIRONMENT AND MICRO CLIMATE

Climate:

Jankempdorp is part of a semi arid climate zone of South Africa. The town experiences a generally hot and climate with little rainfall and humidity. The local persons spend most of their time outside, only to seek shelter from the sun during mid-day times. Considering the experience of the climate, appropriately responding to the climate would necessitate the incorporation of passive climate systems such as passive solar systems, the maximization of cross-ventilation as well as a higher level of insulation (Architective 2015; 107).

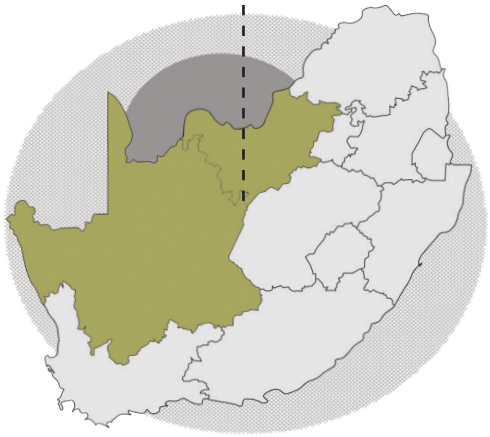


Fig: 4.1: Map of South Africa.

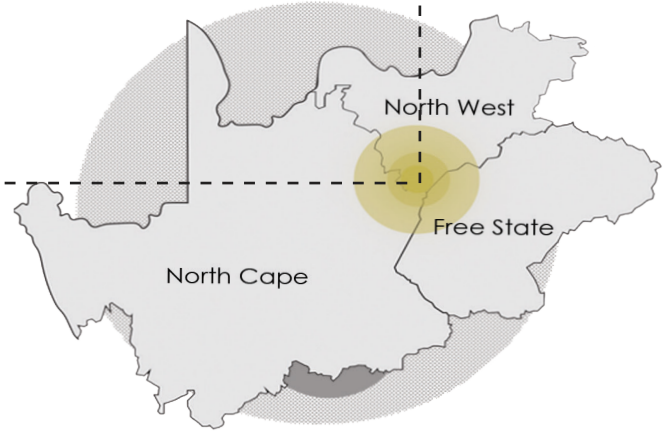


Fig: 4.2: Location of site .

Topography and soil Classification:

Ever since the addition of the irrigation systems in the Vaalharts area and the abundant growth of pecan trees, the Jankempdorp soil has become a mixture of sand, clay and mulch that create a deep surface-bed for the trees to thrive in. The soil on the chosen site can be classified as a non-cohesive soil that has been formed through the weathering of rocks that become a mixture of gravel and sand.

According to the engineer the soil conditions on site does not warrant for any extensive structural systems to be designed. The structural systems of the project is therefore only dependent on the historical or archaeological findings on site and their integration into the proposed design.

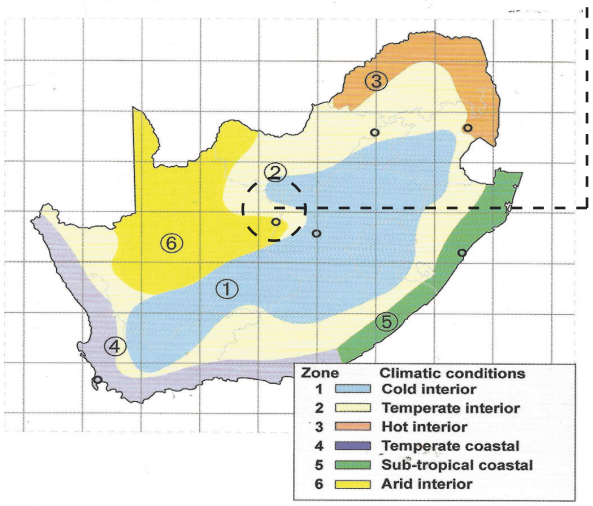


Fig: 4.3: Climatic zone map acc SANS (SANS10 400-XA; 2011).

The chosen site is located on a flat plane outside the town with the contouring of the site predominantly meandering from North to South.



Fig: 44: Arial view of site (Google Earth 2022: online. Adapted by author).

Vegetation:

The natural plant life in the area consist mainly of grassland, scattered Acacia trees (mostly Sweet thorn), wild flowers, succulents and dense bushes. Most of the larger plants found on site have taproot systems. The most predominantly being the Sweet thorn trees. These trees have the ability to fix nitrogen and feed the various grasses and plants living in its shade (A. Aubrey, 2022: online). The Sweet thorn trees play host to an abundance of bird species that nest in the tree as the thorn act as natural protection against the various snake species and other predators in the area and therefore forms a crucial part in the ecological systems of the site.



Fig. 4.5: Rocky gravel textures on site



Fig. 4.6: Bushes, grassland and Sweet thorn Acacias



Fig. 4.7: Thorn bushes and large rocks on si

Physical barriers:

The proposed site has an ensemble of barriers including its own internal barriers. To the north the site is barred by the existing golf estate and the edge of the colonial town. The East of the camp is becomes farmlands that sprawl into the camp's historical boundary. Moreover the South and West of the camp forms on a boundary between the colonial town and the informal settlement (fig 4.8).

The site itself contains it's own barriers as the ruins and the existing rock wall form smaller internal barriers through which the design can not sprawl as it could be classified as heritage estate (fig 4.9), leading to the acquisition and the incorporation of the Burra-Charter.

This document sets out guidelines and the process to follow when a design has a historical and or cultural heritage impact. Albeit that the chosen site has not been confirmed as such by any council, the design of the new proposal addresses the site as if it were to be declared as site of significance.

As far as possible the building was therefore moved off of any possible ruin locations according to the memory of the prisoner and the site analysis done in the previous chapters. However, a more proper study is to be done including archaeological surveys if the project were to be constructed outside of this masters degree.



Fig: 4.8: Aerial view of site illustrating barriers (Google Earth 2022: online. Adapted by author).

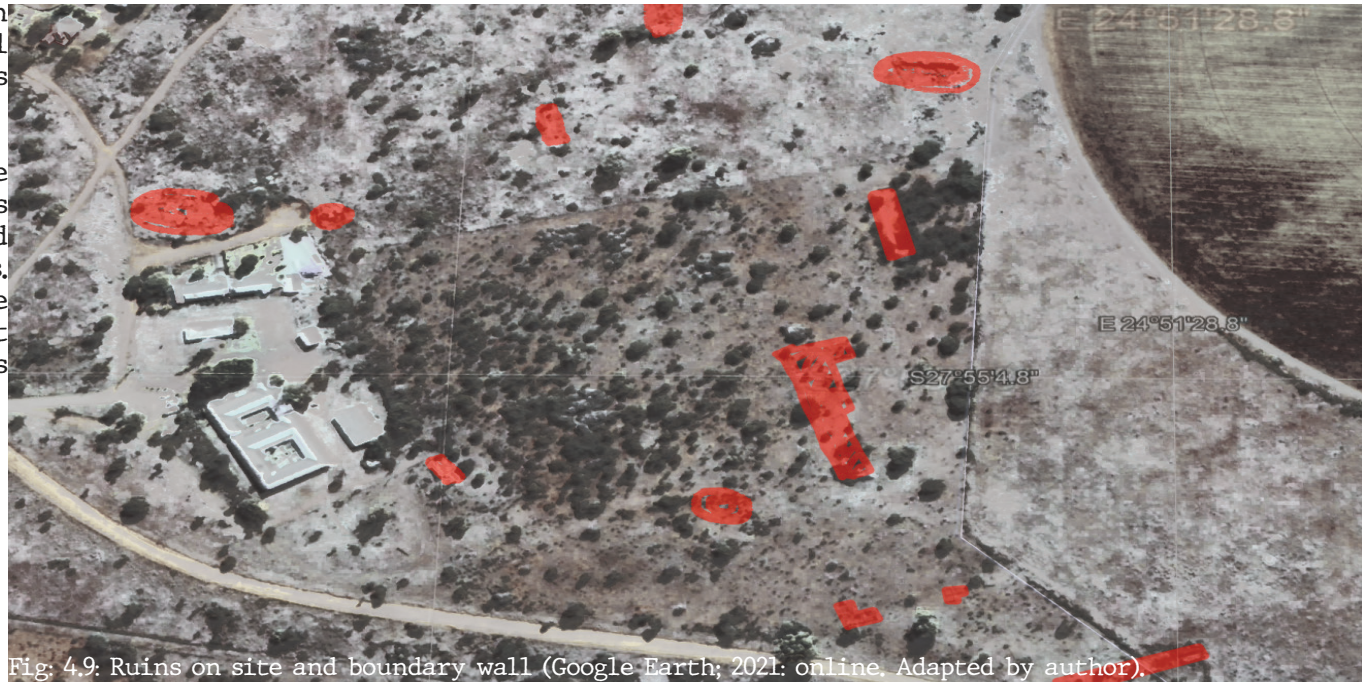


Fig: 4.9: Ruins on site and boundary wall (Google Earth; 2021: online. Adapted by author).



Fig: 4.10: Burra-Charter process stages (The Australia ICOMOS. 2013).

The Australia ICOMOS Charter for Places of Cultural Significance (here forth referred to as ICOMOS) primarily concerns themselves with techniques of cultural and heritage conservation and is closely connected to UNESCO. Under article 6 if the ICOMOS document the process of the Burra Charter is explained in conjunction with page 10 (fig 4.10) of the ICOMOS document (The Australia ICOMOS. 2013).

Stage 1 to 3 of the charter deals specifically with historical information on the location of the project and its cultural and historical impact on the essence of the works being conserved. Within this document stage 1 to 3 is dealt with in the site analysis chapter. Although article 3 of the charter list under subsection 3.2 that work can not be permitted based on conjecture, this thesis is not based on the physical as much as on the metaphysical. Purely because the information on the site and its occupants are only retained within the memories of the captives and the guards that served there. Thus the project can only be based on the little remnants thats left and the 'conjecture' of malleable memories.

Stage 4 and 5 of the process forms a part of the design development process and the methods used to implement a coherent and responsive design within the conservation area as well as creating a place that respectfully contributes to the present whilst honoring the cultural and historical heritage properties captured within the site. These attributes of the design will form the bulk of the current chapter as it sets out the final stages of this dissertation.

Storm-water and water collection systems:

The vaalharts scheme receives little rainfall during the year, with may months seeing perhaps one or two rainy days if any. Whilst rain does occur on the site, the incorporation of lower laying areas are taken into consideration in the design of the park scheme as well as the final design proposal.

The contouring of the site allows the newly proposed park segments to tunnel water towards the proposed memorial site as a means of controlling the water as well as giving the dweller a memorable experience as they approach the memorial pool.

The design of the roof structures and the large gutter systems that mimic the water canals through the landscape is strategically bent and pointed towards the existing swimming pool of the camp as well as a newly designed waterways that serve the museum and the communal vegetable gardens to the staff entrance of the design.

The rain water is also utilized as a passive cooling system in the building, as the structures are predominantly open and water can enter the building. The floor system thus allows for the water to seep through the decking and accumulate in small reservoirs beneath the floors of the structure. These water reservoirs will receive treatment to ensure that the growth of insects and various mold do not occur.

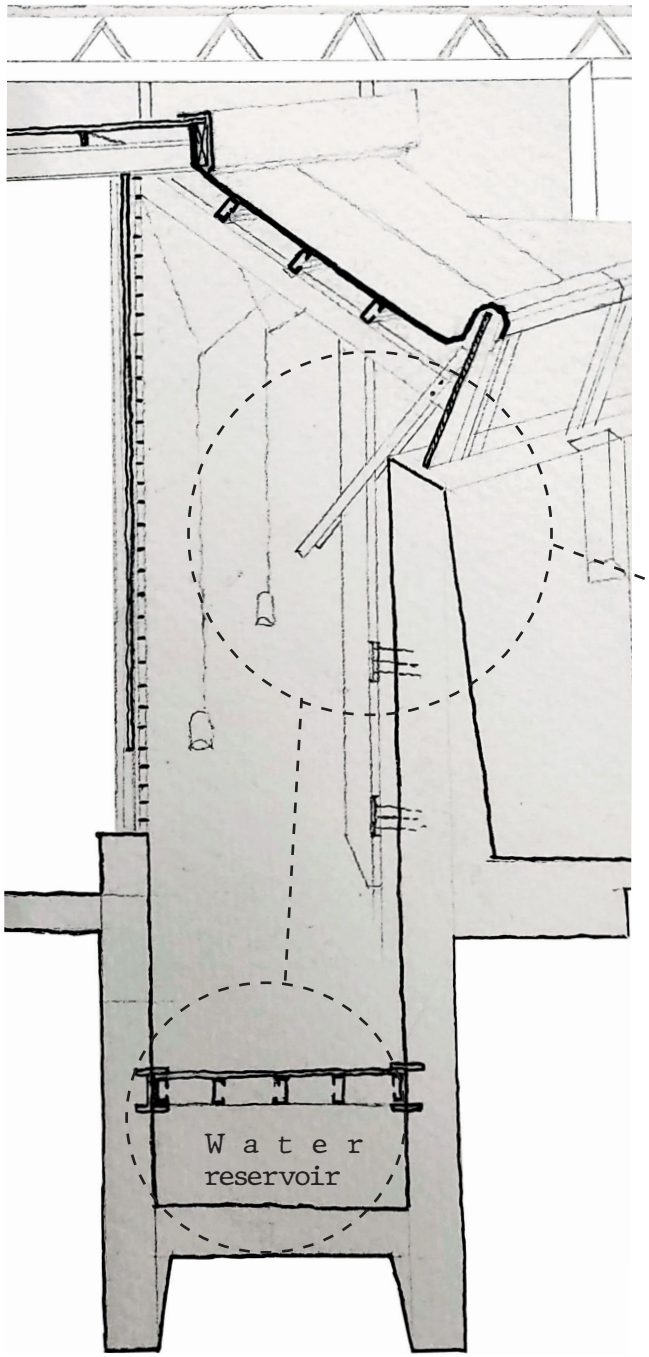


Fig: 4.11: Passive cooling water reservoir.

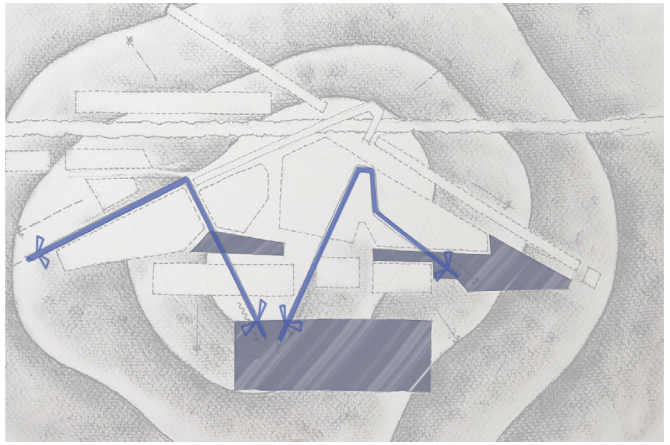


Fig: 4.12: Water collection areas on key plan

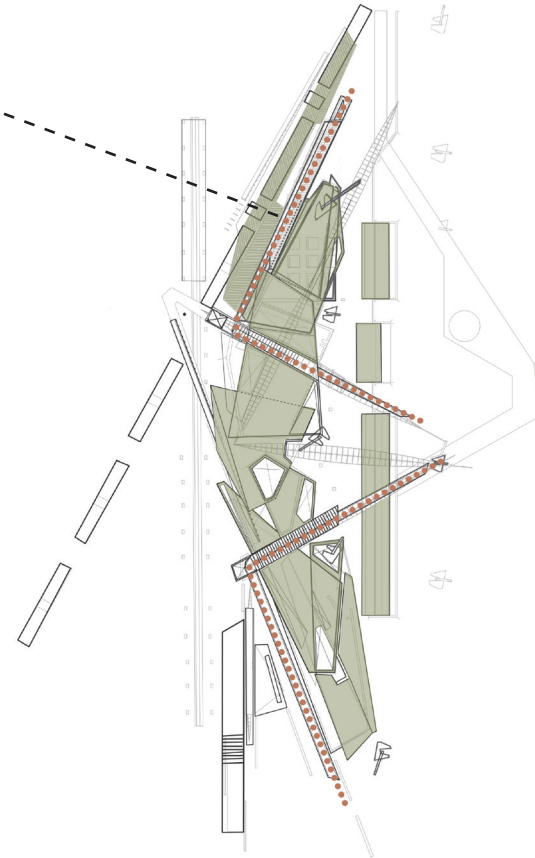


Fig: 4.13: Gutter positions between roof fragments

User behavior and building requirements:

The spaces required for the design of the museum stems from the principles set out by play (player, rules or boundaries and platforms where on or within the game occurs) as well as the general function of exhibition spaces that accompany the museum typologies.

The primary spaces of the design consist therefore of large exhibition spaces with centralized platforms or spaces where upon the game occurs as well as secondary spaces for the dweller to view the game if they would prefer not to participate within the game.

As discussed before, being split into two separate narrative routes, the design requires spaces of common ground where the one narrative dweller can see glimpses of the other route and or interact with the dweller that is actively experiencing the other narrative route.

The profile- and user-requirements

C1- Exhibition hall occupancy where goods are displayed primarily for viewing by the public

C2- Museum occupancy comprising museum, art gallery or library.

The incorporation of admin facilities and a small scale restaurant space that serve the building dwellers are required to help the building with its upkeep as well as creating a desirable space for the public to visit more than once.



Fig: 4.14: Museum train exhibition



Fig: 4.15: Museum of WWII in Africa exhibition

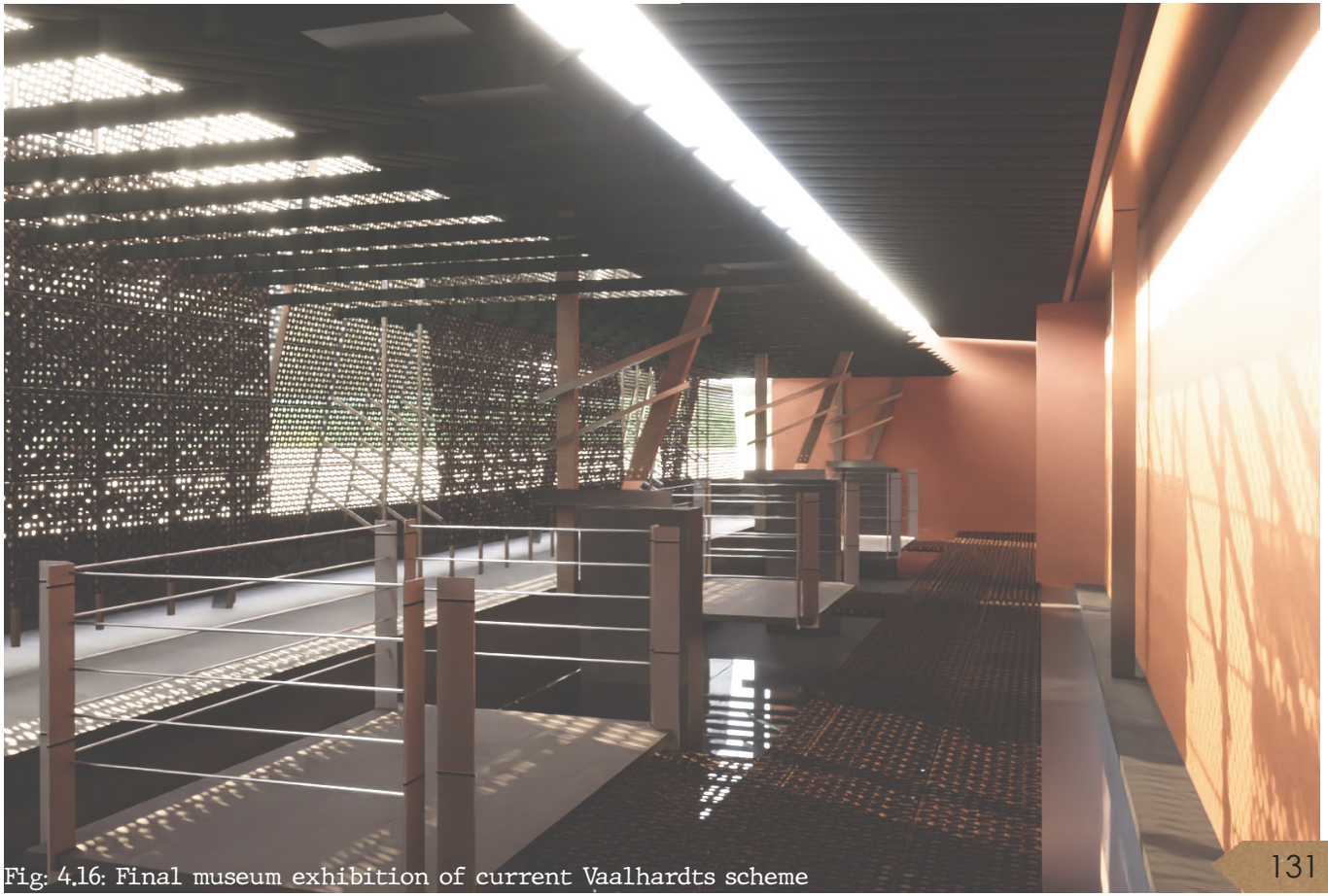


Fig: 4.16: Final museum exhibition of current Vaalhardts scheme

4B.1.3 Building Services:

Ventilation:

The ventilation of the structures in the design find their origin in the layering of structures much like the camp's architecture resembled. Albeit for different reason than the camp, the new museum extracts from the principles discussed in the site analysis and exaggerates the principle of layering solid and void spaces in order to enable sufficient cross ventilation as well as referring back to the elemental awareness that the camp's occupants were exposed to.

The usage of readily available profiles and materials is incorporated into the design and left exposed to the elements as the void spaces in between these connections allows for the flow of wind, water and earth throughout the design as the elements and landscape is sucked into the structures.

Furthermore the layering of structure was utilized as a method of articulation as well as a method of inserting cavities into solids wherein which exhibitions can be installed or the dweller can rest in through out their journey.

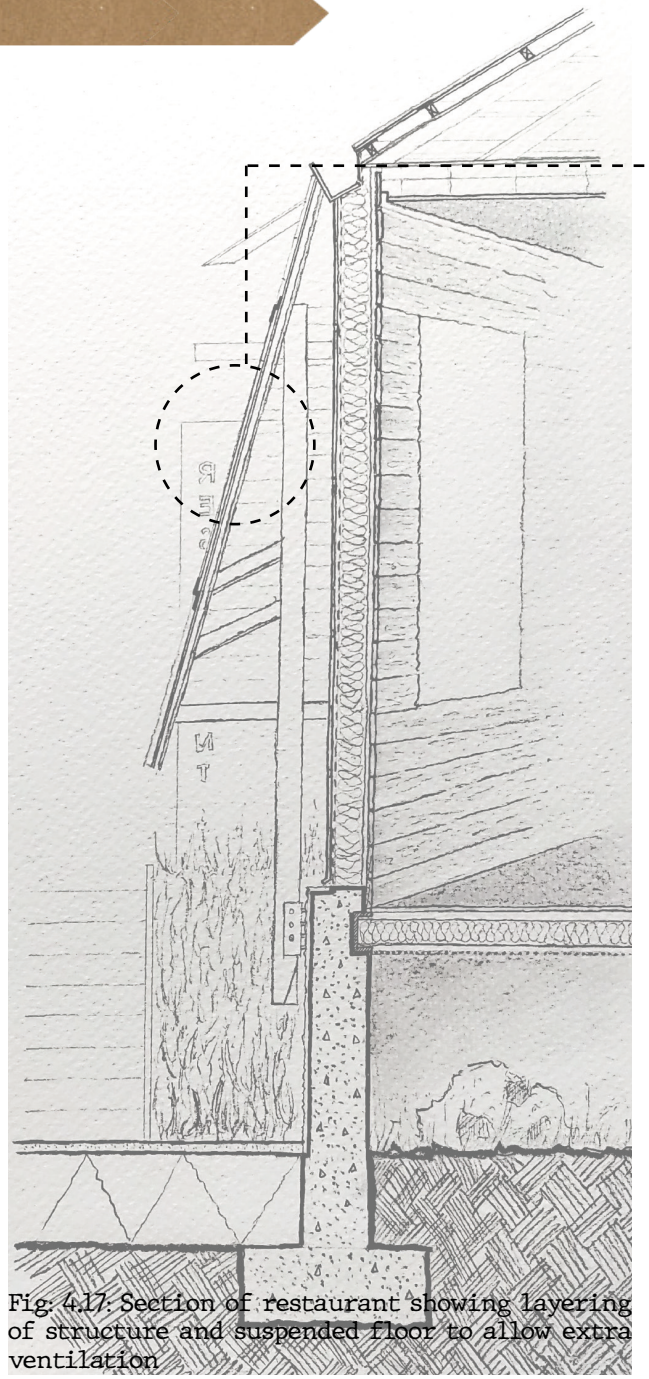


Fig: 4.17: Section of restaurant showing layering of structure and suspended floor to allow extra ventilation

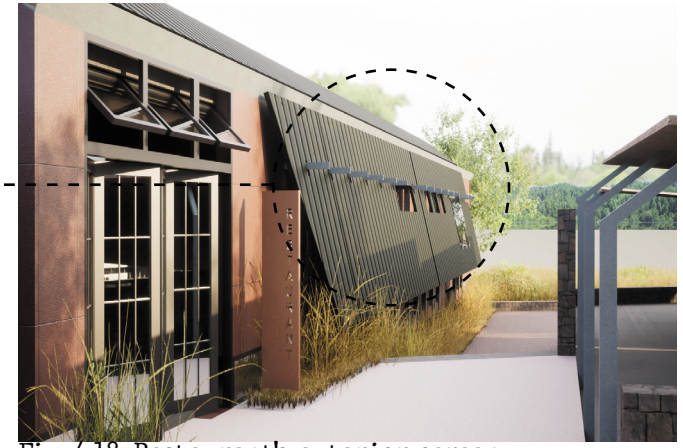


Fig: 4.18: Restaurant's exterior screen



Fig: 4.19: Intermittent external walkway and courtyard for admin facilities



Fig: 4.20: Externalized museum exhibition

Access:

Two types of access points are available to the site as the dweller arrives from the left hand side (the colonial town's side). The entrance to the new park space is open access to pedestrians with the addition of external parking to visitors. Furthermore pedestrians are invited to meander through the camp's old borders as they find themselves entering the park from the South West of the camp.

The main axis to the museum forms a linear line from the parks edge towards the reception of the museum[1] as it directs dwellers to the ticket office as well as the restaruant[2] and other public services of the design.

The walkway from the reception to the museum's entrance[3] redirects the dweller off of the memory axis as the dweller is re-orientated and walks across the old existing rock wall as they decent back into the dark entrance of the museum where they are forced to make their first decision. This narrative leads back to the letter of the prisoners and the guards, as they wrote that they where brought on a long journey in the dark into un unknown location and then forced to make decisions that predicted their future experiences within the camp.

1. Museum reception
2. Restaurant
3. Museum entrance

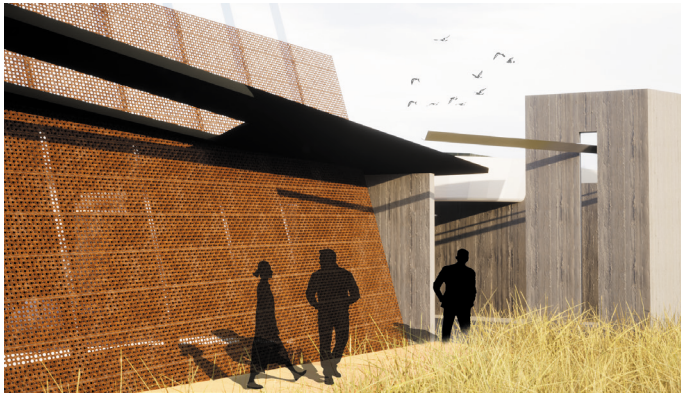


Fig: 4.21: Museum entrance



Fig: 4.22: Park entrance



Fig: 4.23: Plan of access to scheme

Circulation and spatial layout:

Being predominantly on the natural ground level the design has few places where vertical circulation is required, other than to address the contours of the site. The spatial layout through the design leads as follows:

1. Reception
2. Entrance
2.1 Choice of exhibition
2.2 WWII war exhibition
2.3 WWII prisoner trains exhibit
24 WWII final stages exhibit
3. Capture and first game
4. The dwellers are split up based on the outcome Of their game.
5. The dweller assigned as guard proceed upwards with the ramp and begins the guard's written narratives
6. The dweller assigned as prisoner proceeds on ground level and begins the prisoner's written narratives.
7. Museum storage
8. Museum cleaning closets
9. The prisoner and the guard is placed on separated but equal level as they proceed to the next exhibition space.
10. Ramp from 1st floor to ground
11. The guard's exhibition and game (ground floor)
12. The prisoner's game and exhibition (underground floor)
13. The guard's second to last exhibition (ground floor)
14. The escapee exhibition (underground)
15. The guards final game (ground floor)
16. The prisoners game as the guard shapes their experienced space (underground)
17. Prisoners capturing and straft selle exhibition (underground)

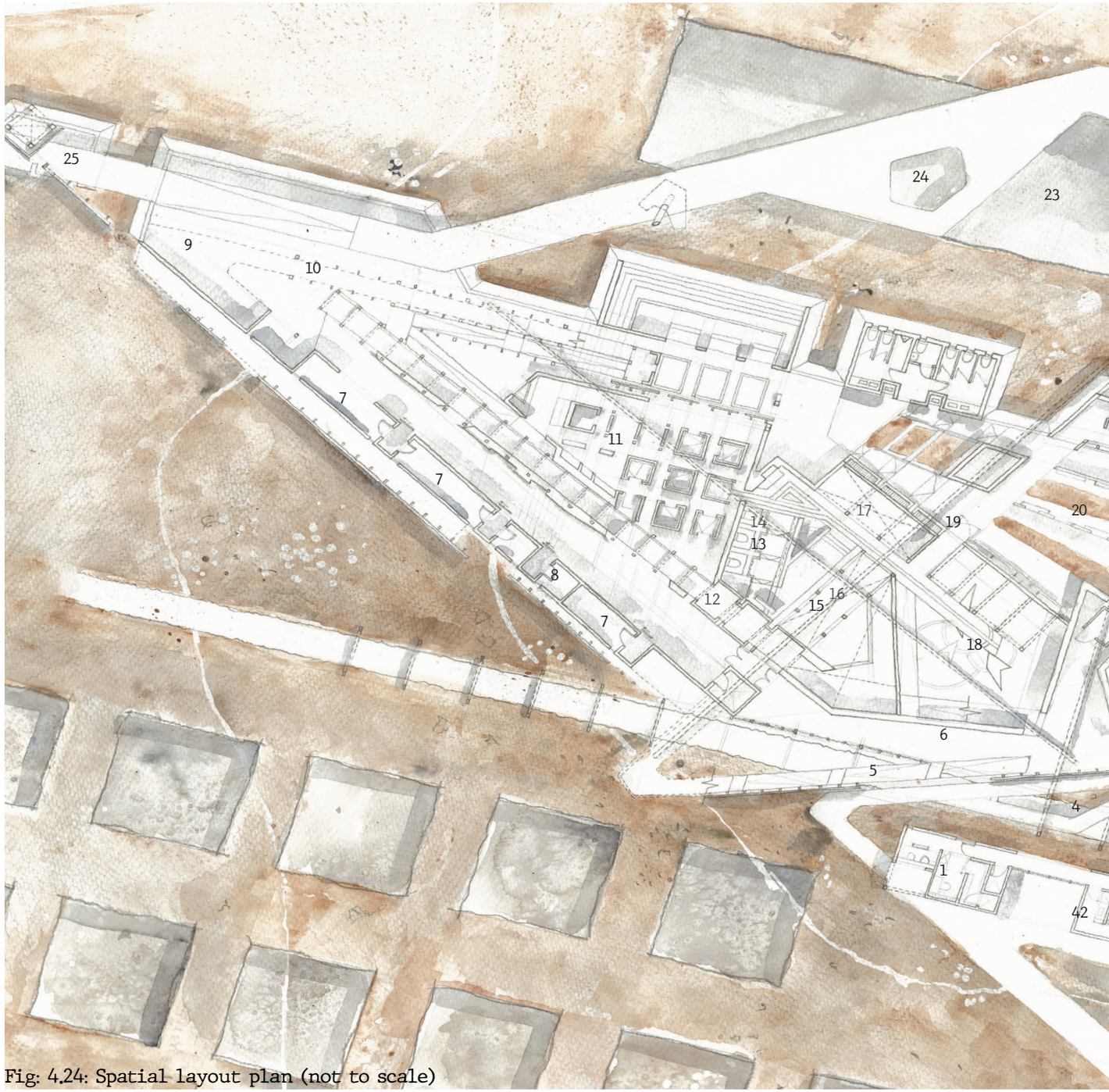
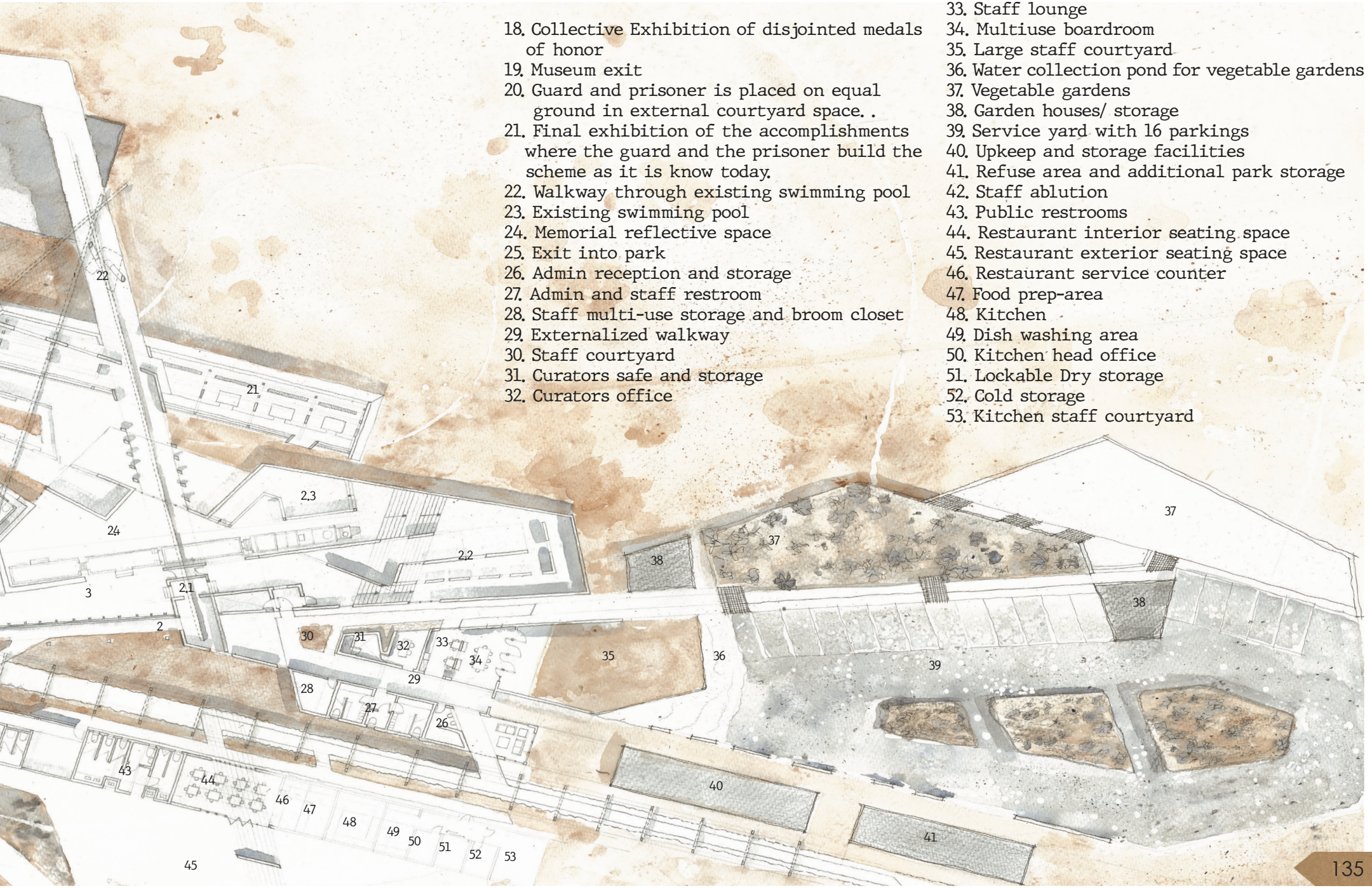


Fig: 4.24: Spatial layout plan (not to scale)



18. Collective Exhibition of disjointed medals of honor
19. Museum exit
20. Guard and prisoner is placed on equal ground in external courtyard space. .
21. Final exhibition of the accomplishments where the guard and the prisoner build the scheme as it is know today.
22. Walkway through existing swimming pool
23. Existing swimming pool
24. Memorial reflective space
25. Exit into park
26. Admin reception and storage
27. Admin and staff restroom
28. Staff multi-use storage and broom closet
29. Externalized walkway
30. Staff courtyard
31. Curators safe and storage
32. Curators office
33. Staff lounge
34. Multiuse boardroom
35. Large staff courtyard
36. Water collection pond for vegetable gardens
37. Vegetable gardens
38. Garden houses/ storage
39. Service yard with 16 parkings
40. Upkeep and storage facilities
41. Refuse area and additional park storage
42. Staff ablution
43. Public restrooms
44. Restaurant interior seating space
45. Restaurant exterior seating space
46. Restaurant service counter
47. Food prep-area
48. Kitchen
49. Dish washing area
50. Kitchen head office
51. Lockable Dry storage
52. Cold storage
53. Kitchen staff courtyard

The main circulation of the museum is divided into three types of routes.

- Path of the Guard on NGL
- Path of the Guard on lst lvl
- Path of the Prisoner underground
- Path of the Prisoner on NGL
- Collective path

The visitor starts on a collective route[1] towards the entrance of the museum. Arriving at the entrance, the visitor is confronted with a decision... go right and experience the remnants of WWII in Africa and how the prisoners got to the camps, or go left and be immediately be captured within the camp's section of the museum.

Going left, the visitor is incited to play the first game. In this case an adapted wartime version of Hopscotch. The visitor bargains a piece of their belonging and throws it across the playing field. Depending on where the piece comes to rest, the visitors are separated and assigned a role. A guard (red line) and a prisoner (green line).

After the game, the visitors each walk on the path of their assigned role, with the guards going up into the tower[2] and the prisoners staying outside on the natural ground level[3] as they descend with the landscape towards the view of the cemetery, where the two routes are reminded of their mortality. As the viewing point is reached the two paths turn away back into the building towards the next exhibitions.

Turning back, the prisoners now decent into the earth through a long narrow corridor[4] as they move into the dark, damp and cold of the *straft sell* exhibitions. The guards now also descend back onto ground level as the enter into a large concrete and corten steel structure[5].

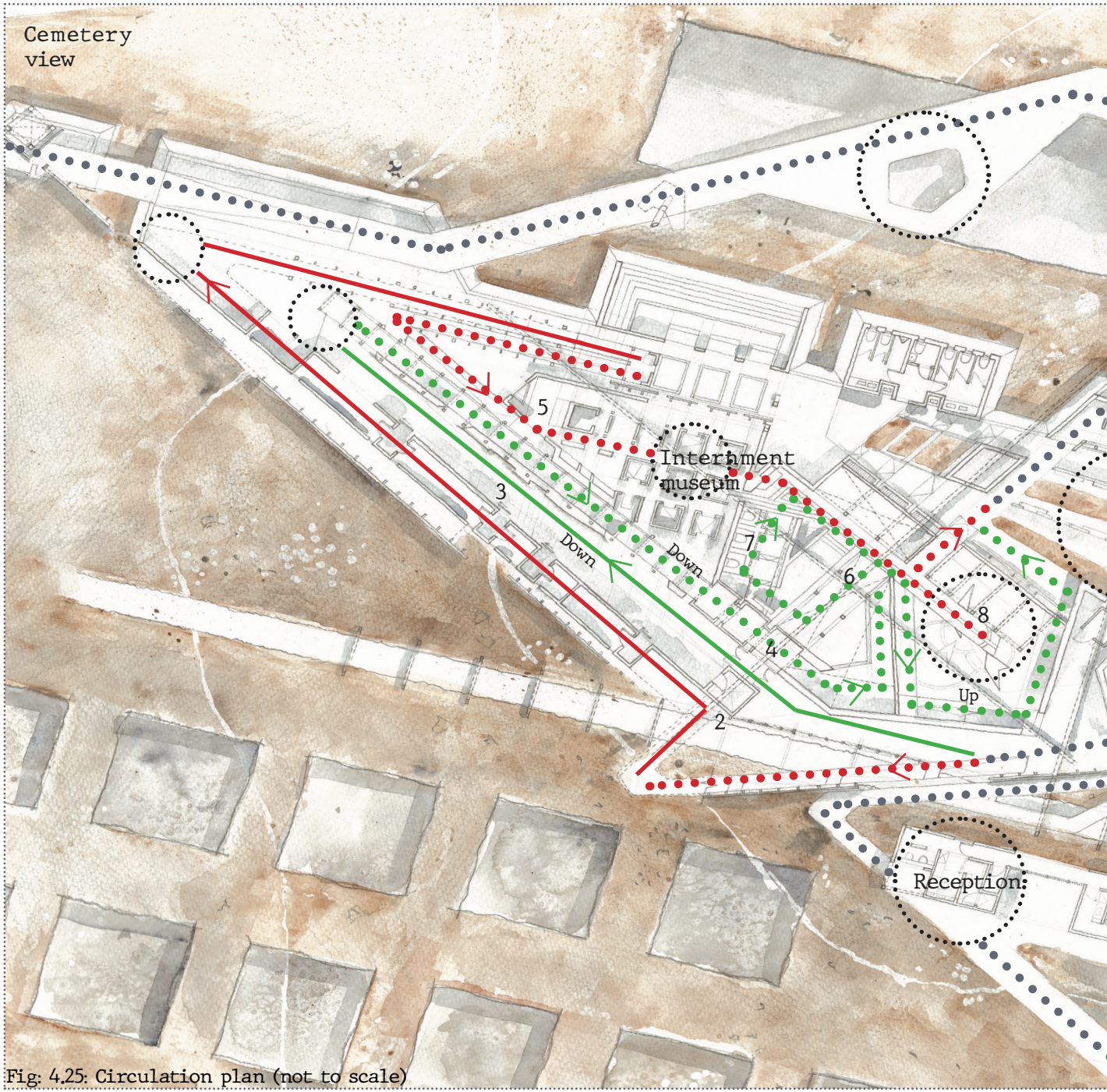
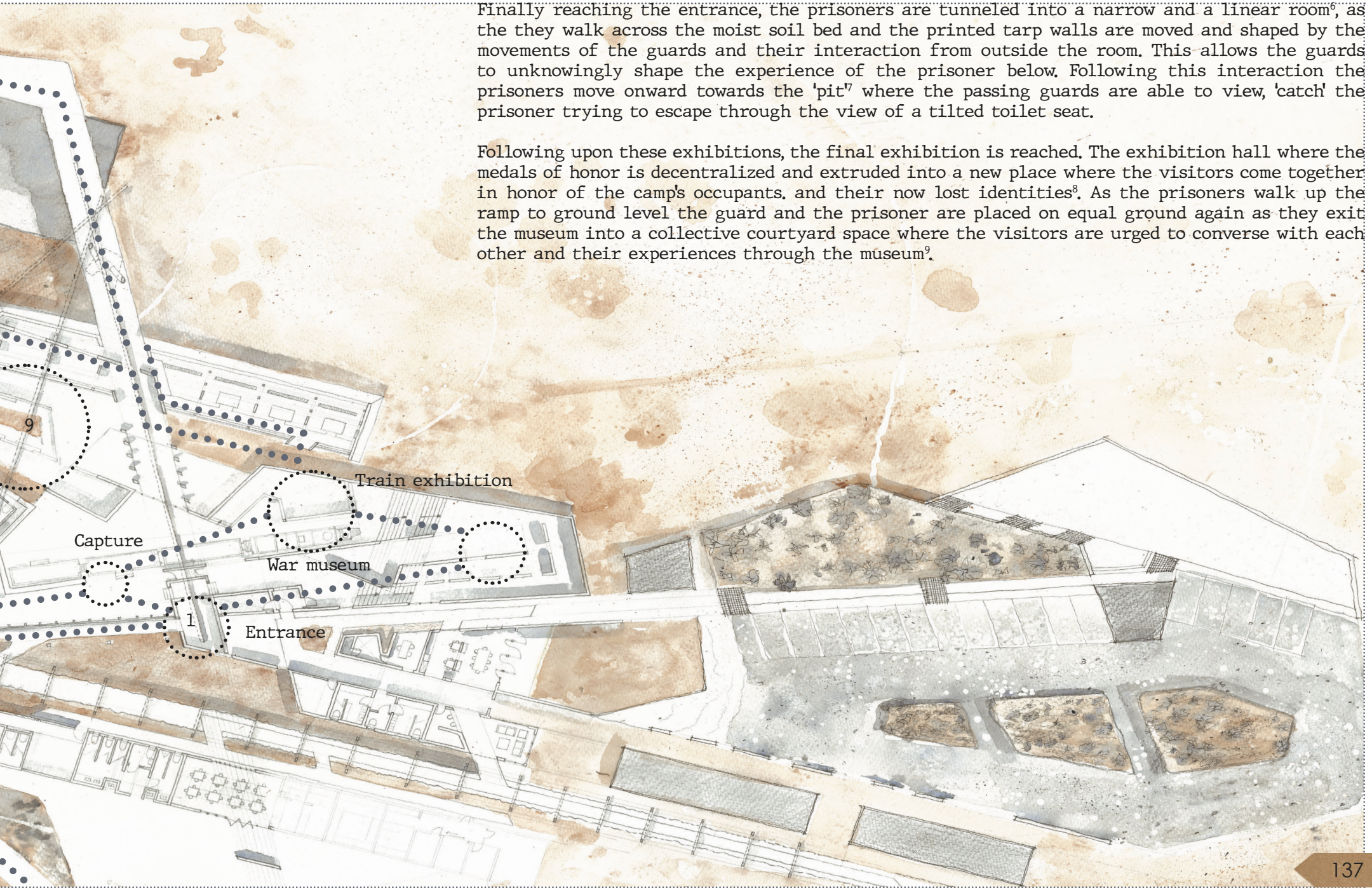


Fig: 4.25: Circulation plan (not to scale)

Finally reaching the entrance, the prisoners are tunneled into a narrow and a linear room[6], as the they walk across the moist soil bed and the printed tarp walls are moved and shaped by the movements of the guards and their interaction from outside the room. This allows the guards to unknowingly shape the experience of the prisoner below. Following this interaction the prisoners move onward towards the 'pit'[7] where the passing guards are able to view, 'catch' the prisoner trying to escape through the view of a tilted toilet seat.

Following upon these exhibitions, the final exhibition is reached. The exhibition hall where the medals of honor is decentralized and extruded into a new place where the visitors come together in honor of the camp's occupants. and their now lost identities[8]. As the prisoners walk up the ramp to ground level the guard and the prisoner are placed on equal ground again as they exit the museum into a collective courtyard space where the visitors are urged to converse with each other and their experiences through the museum[9].



Fire:

In the event of a fire multiple void spaces has been provided where the dweller can collectively gather with exits that surround the collective spaces allowing for access into the park or an open external courtyard space. Additionally multiple fire hose reels and or fire extinguishers at intermediate spaces as well as exits and entrances.

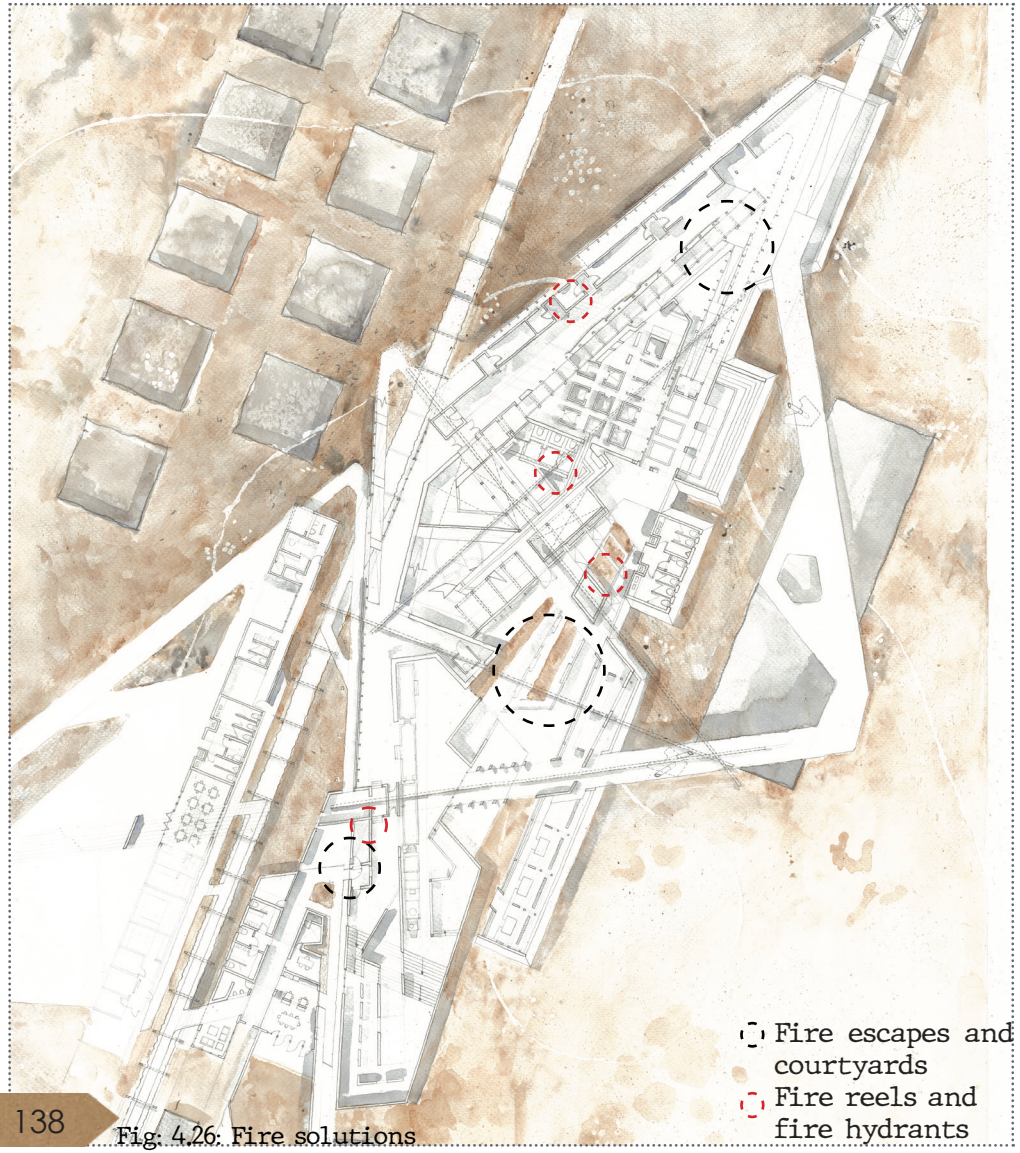


Fig: 4.26: Fire solutions

Restrooms:

Public restrooms has been provided both outside the reception as well as the collective courtyard of the museum. The restrooms at the reception can be used for both the restaurant and the museum as dwellers enter the complex. Both restrooms utilizes a bio rock package plant and receive water from the municipal water supply that runs past the CVO school around wraps around the site.



Fig: 4.27: Renderings of restroom facilities

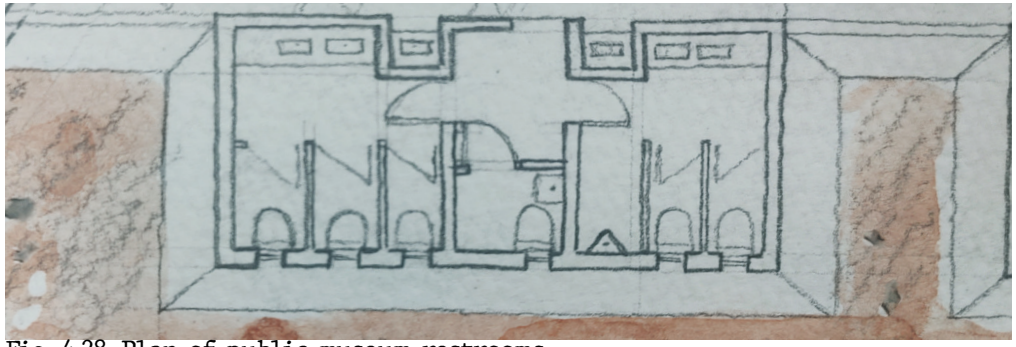


Fig: 4.28: Plan of public museum restrooms

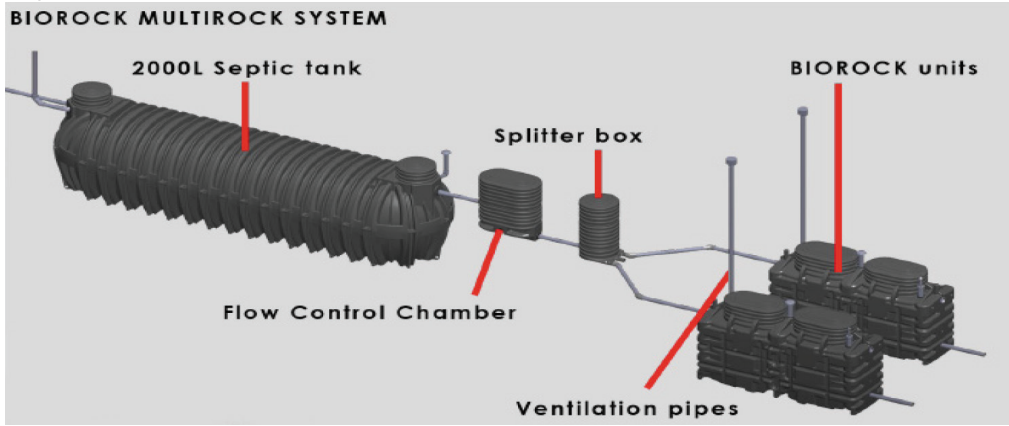


Fig: 4.29: Bio-rock multirock system (Biorock, 2022: online. Adapted by author).

Conservation, preservation and re-use:

Given the nature of the project and elaborate design the preservation of the site is of utmost importance and is achieve in various ways.

Firstly the project's footprint is lifted from the natural ground level as much as possible to ensure that there is minimal impact and disturbances on the site and the possible archaeological remnants that could be buried there. However, the placement of the site has been done in such a manner that it is least possible to contain any historical artifacts or remnants from the camp.

Secondly the modern insertion re-uses the concrete facilities and precast-blocks that are already present in the towns factories as the production of the massive water canal systems and weirs play a crucial role in the development of the scheme and has since caused an abundance of precast concrete sections.

Thirdly the re-use of the scaffolding and form works to form parts of the exhibitions spaces allows the cost of the project to lowered as well as allowing the wastage of material to be minimized throughout the process as well as project close-out.

The re-incorporation of wasted wooden pallets from the local olive and pecan farms that are treated and torched to be re-used in the museums exhibition in various ways. From floor and wall finishes to interactive exhibition space. Futher more the incorporation of crushed pecan shells to form an external floor treatment and various finishes throughout the structure.

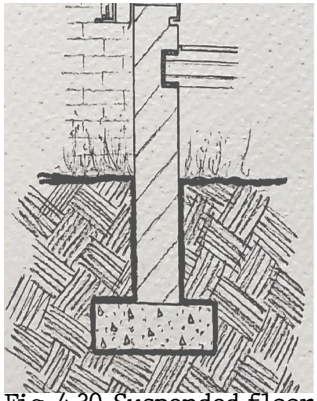


Fig: 4.30: Suspended floor

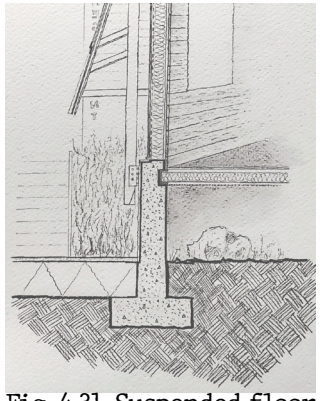


Fig: 4.31: Suspended floor

Last but not least, because of the deep soil bed in the area, the removed top soil as well as the excavated area's soil will be reused and reworked into the vegetable gardens and the park space where level changes is required.



Fig: 4.32: Steel form work

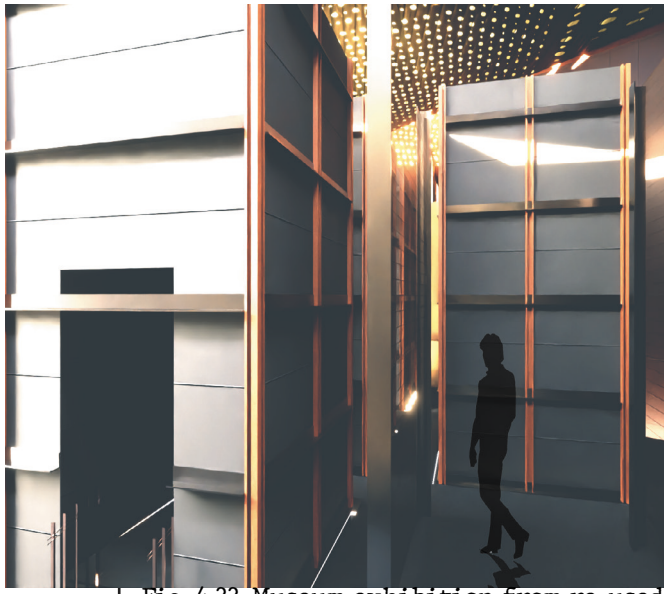


Fig: 4.33: Museum exhibition from re-used steel form work

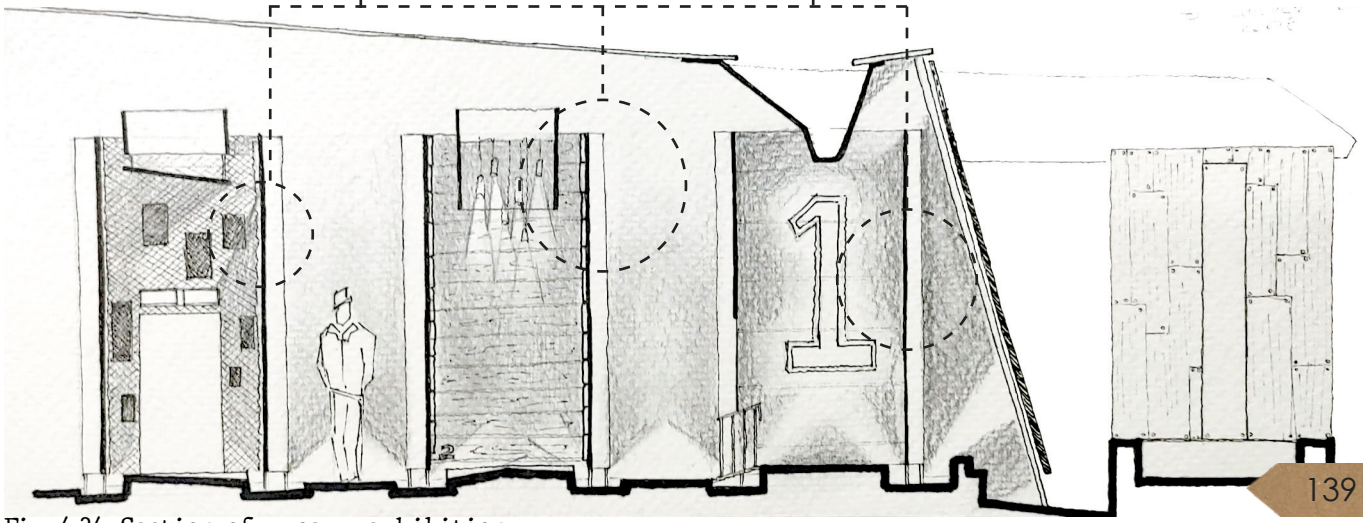


Fig: 4.34: Section of museum exhibition

Energy and environmental sustainability:

Through the use of the previously mentioned passive ventilation and cooling systems, the amount of energy required to artificially cool the building is minimized.

The assemblage of materials and the manner in which they create void space between each other act as a method of articulation of structure as well as a manner of deepening the insulation cavity between the interior of the building and the external membrane that is exposed to solar levels.

Moreover the usage of layered materials is fully utilized on the west elevation with large permeable screens that cover the facade and its openings and in so doing limiting the amount of solar exposure on the facade but allowing for maximized airflow from the predominantly west and east winds.

Large roof overhangs and the layering of roofs creates gaps through which hot air can escape out of the building as well as creating horizontal layers that block solar gain as much as possible.

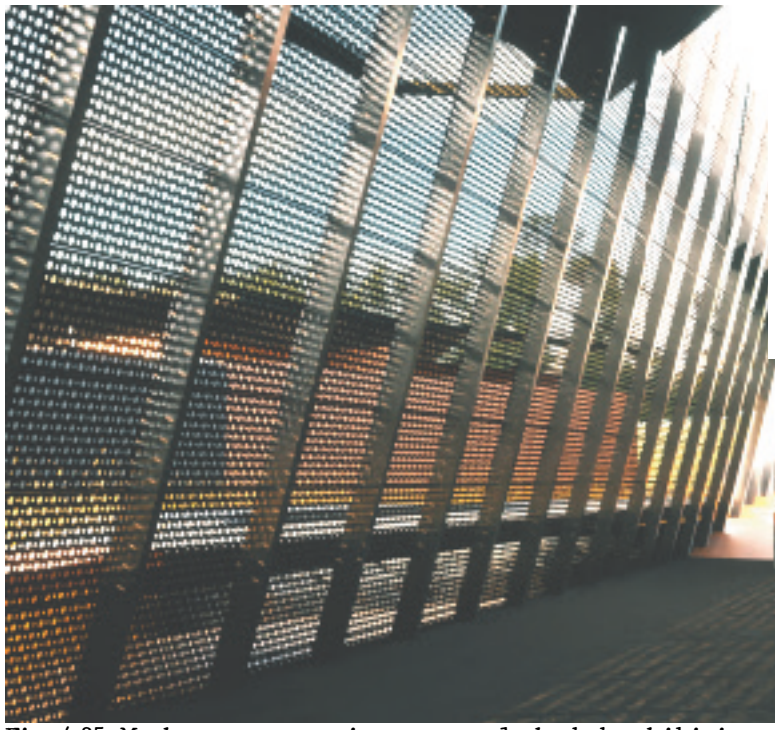




Fig: 4.33: Exterior of western screen

Fig: 4.35: Mesh screen creating external shaded exhibition

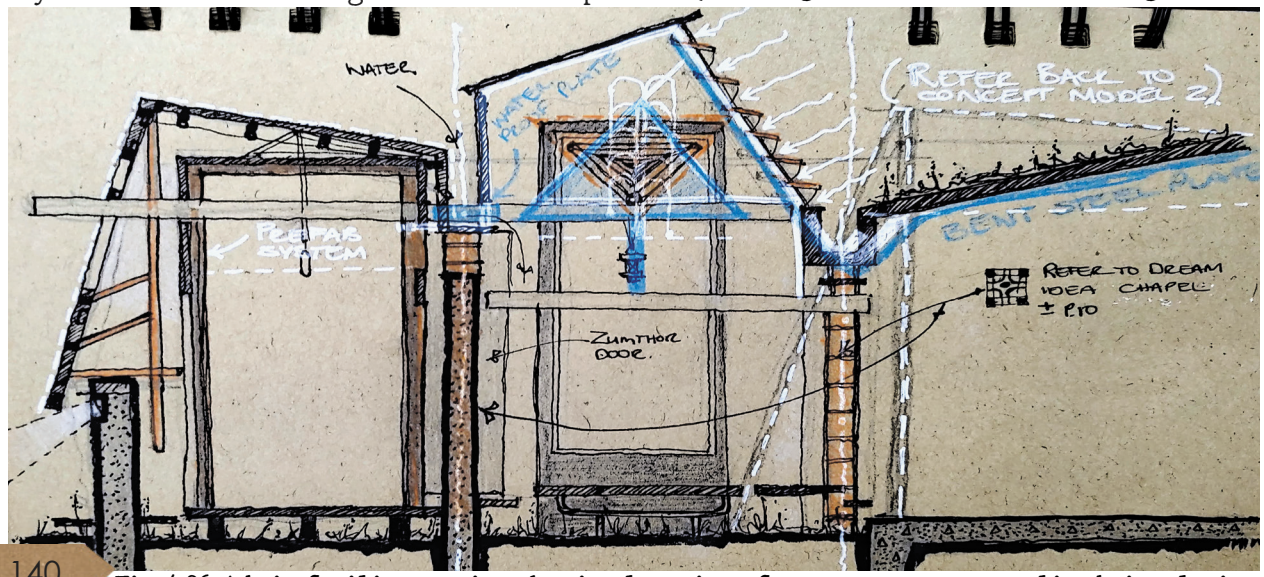


Fig: 4.36: Admin facility section showing layering of structure as externalized circulation

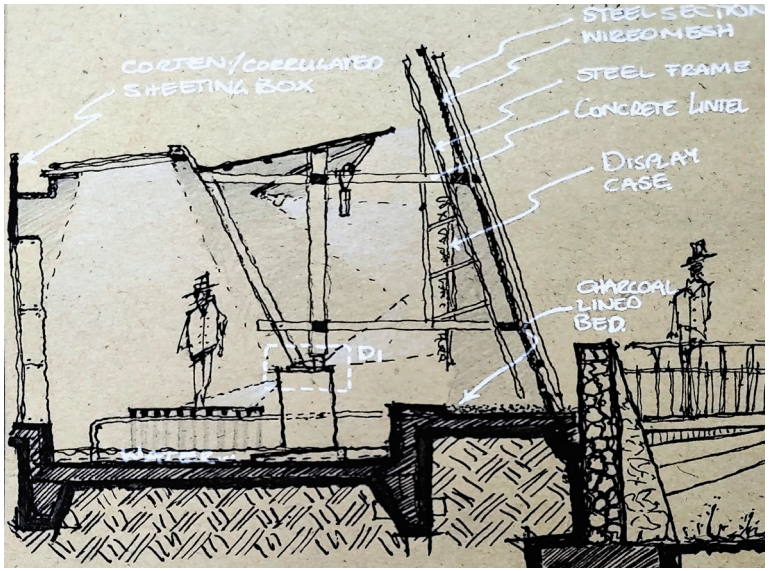


Fig: 4.37: North-East exhibition section with permeable barrier

Form-giving and material choice:

The chosen materials for the project reveals the nature of the surrounding area as well as the aesthetics and nature of the camp's embodied presence on the site. Furthermore the chosen material were selected for minimal upkeep work and expenditures as the building ages within the landscape.

The formgiving of the museum, as previously mentioned, references the undulating landscape as the building itself resembles a repressed state within the landscape as it flows with the lines of the surrounding hillsides.

Furthermore the design aims to create a contemporary displacement of the camp's architectural presence as discussed in the works of Eisenmann and Landsburg earlier in this dissertation.



Fig: 4.38: Museum exhibition derived from fenced guard towers and train stations

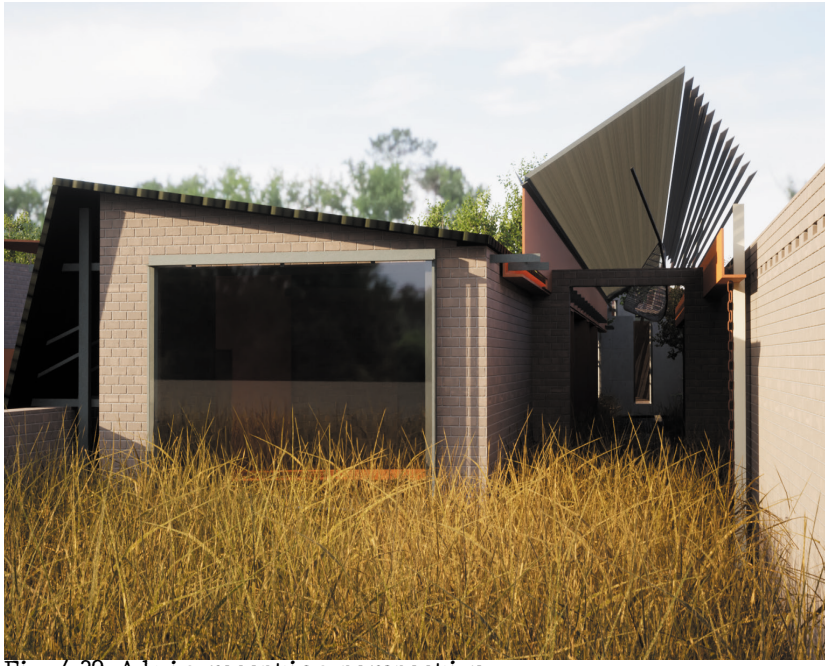


Fig: 4.39: Admin reception perspective



Fig: 440: External walkway between office spaces

Super structure:

Predominantly consisting out lightweight steel and wood, the super structure of the building becomes a series of 240x120x6 rectangular hollow sections space at 5000cc, with a lipped channel frame and steel rod girder truss system. Tapered on the edges, the girder trusses connect and rest on a perpendicular girder truss to form rectilinear sections that can be prefabricated and assembled on site as many of the camp's structural systems were made. The rectilinear roof truss system further rest on the afore mentioned rectangular hollow sections that form the column system, connecting the floor to the wall and the roof.

Interior finishes mostly consist of concrete- or brick walls selectively finished with sandstone, charred wood or metal alloy sheeting. Although the Museum spaces has predominantly an open truss system, the ceiling boards for the restaurant consist out of clear white rectangular polycarbonate sheeting and the ceiling boards for the administrative functions for a mixture of fiberglass grating and layered plywood sections resting in an equal angle frame.

The roof construction for the project mainly consist out of Rheinzink sections that has been bent and cut on site to fit the profile of the roof. The Rheinzink profile is fixed to the manufacturers prescribed purlin systems, in this case most likely a 100x75x2.5mm steel purlin spaced at 1000 to 1200cc.

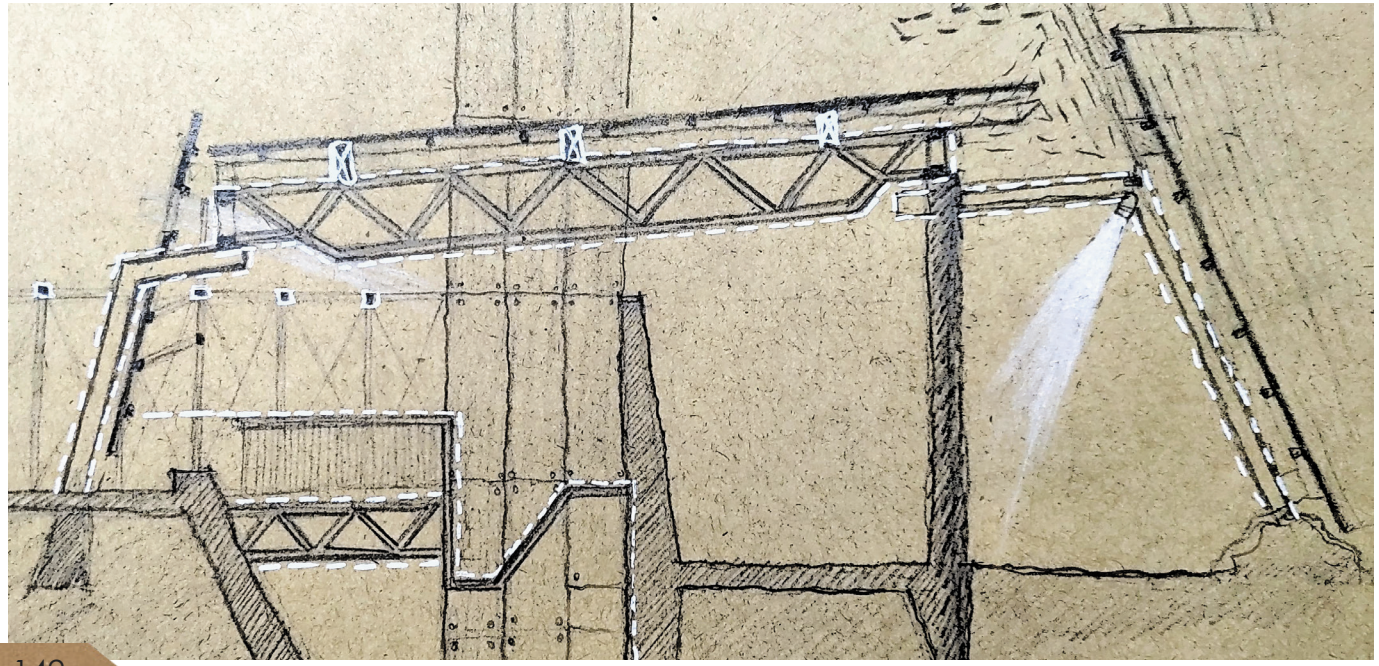


Fig: 441: Concept sketch of building construction (not to scale)

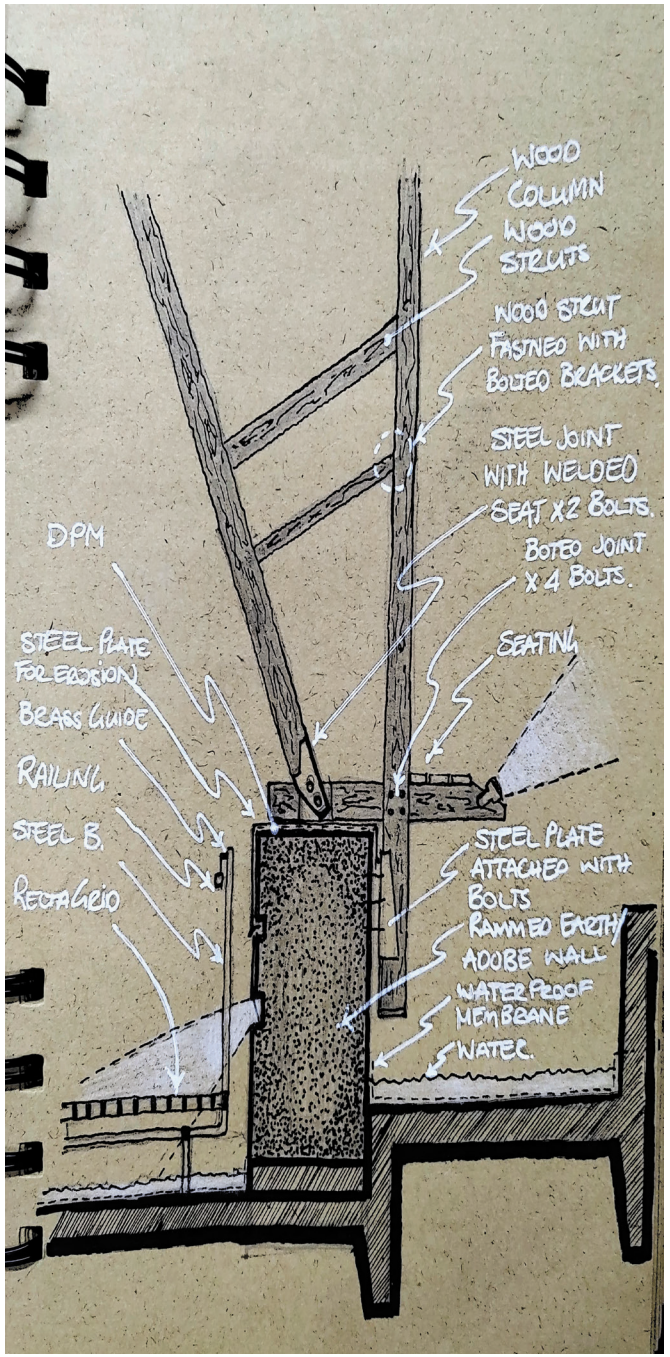
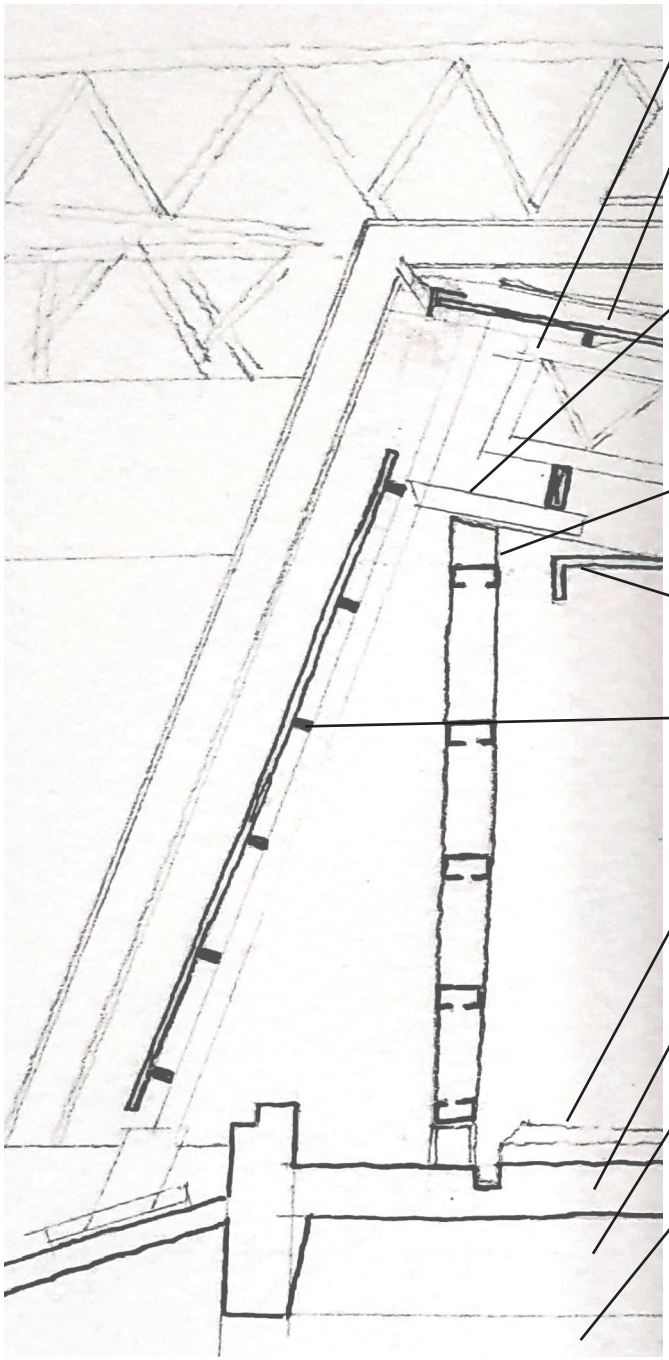


Fig: 442: Construction of modern exhibition space



100x75x3 Lightweight steel girder truss with 15mm steel rod reinforcement

Rheinzink prePatina series roof covering

8mm steel alloy gutter to be cut acc to specifications on site

240x120x6 Rectangular hollow section column with bolted steel plate footing.

Concrete wall with form work left in place to become part of exhibition space

Re-used steel form work to be gathered from castings and transformed into exhibition capsules

Charred wooden light boxes with a hammered copper finish bottom plate that reflect light down into the exhibition space

Charred wood screen and 75x50 wooden purlins screwed to steel column with self tapping screw according to manufacturers specifications

Canted concrete footings, surrounded with an off-set low level reflection pond, that serve as an uneven surface for the participant as the experience the exhibition

Concrete raft foundation

Compacted fill

Earth

Fig: 443: Section BB segment 1

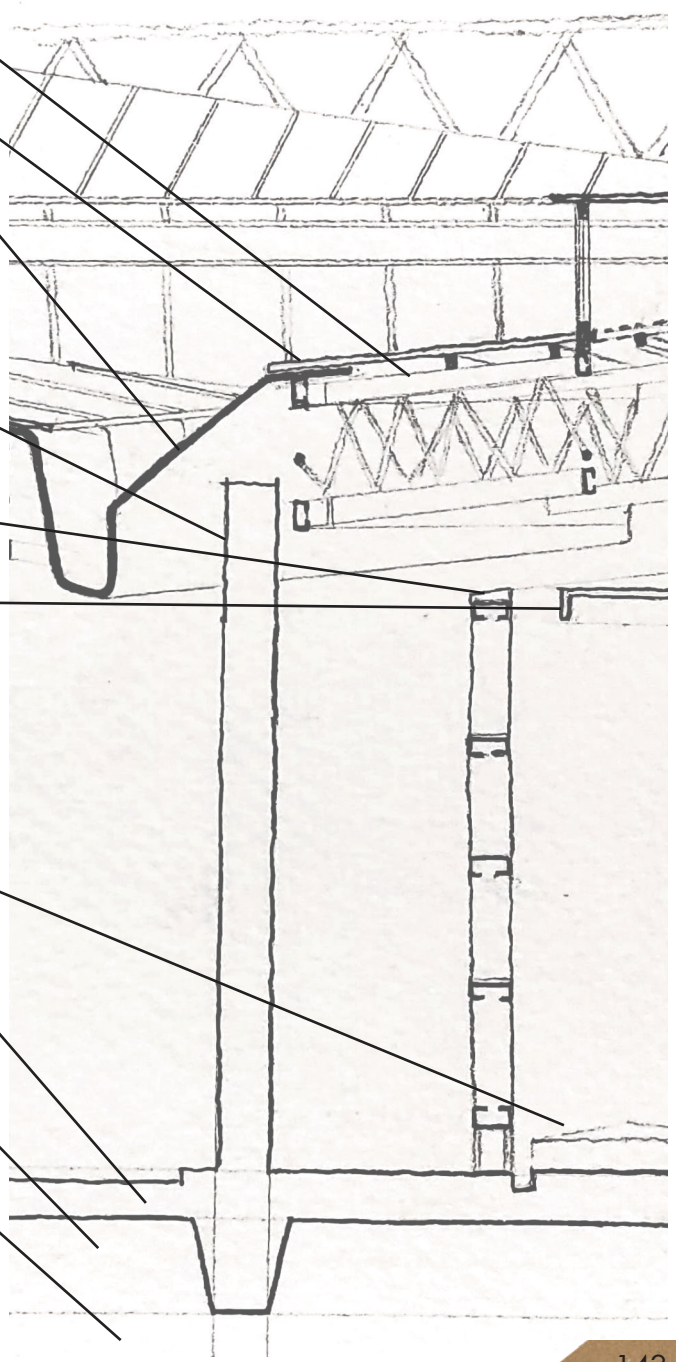
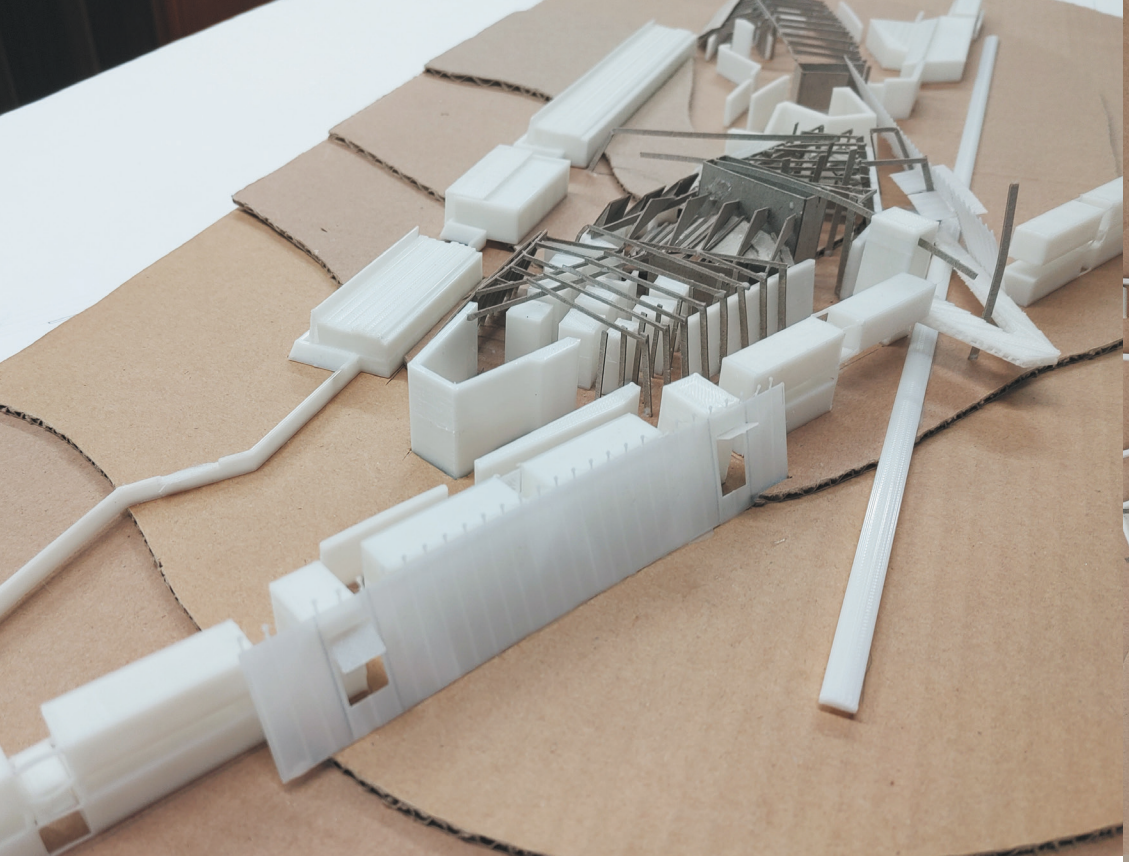
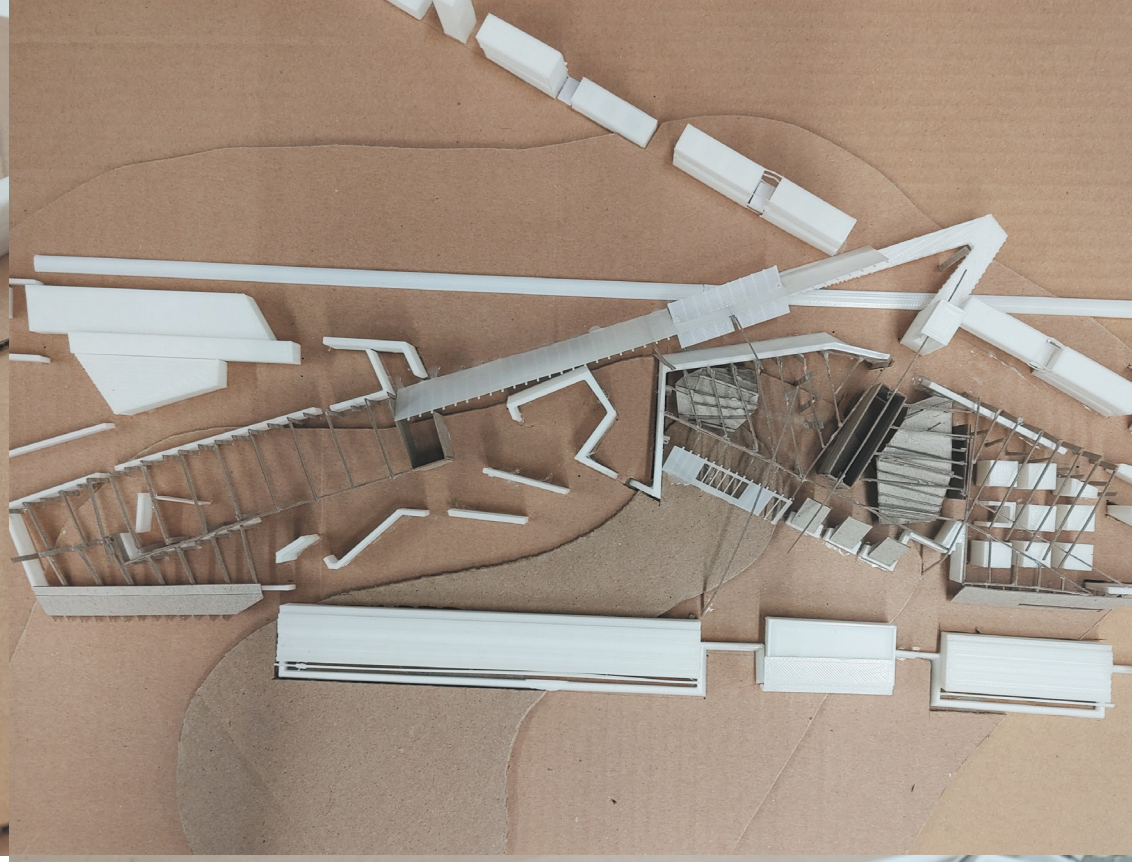


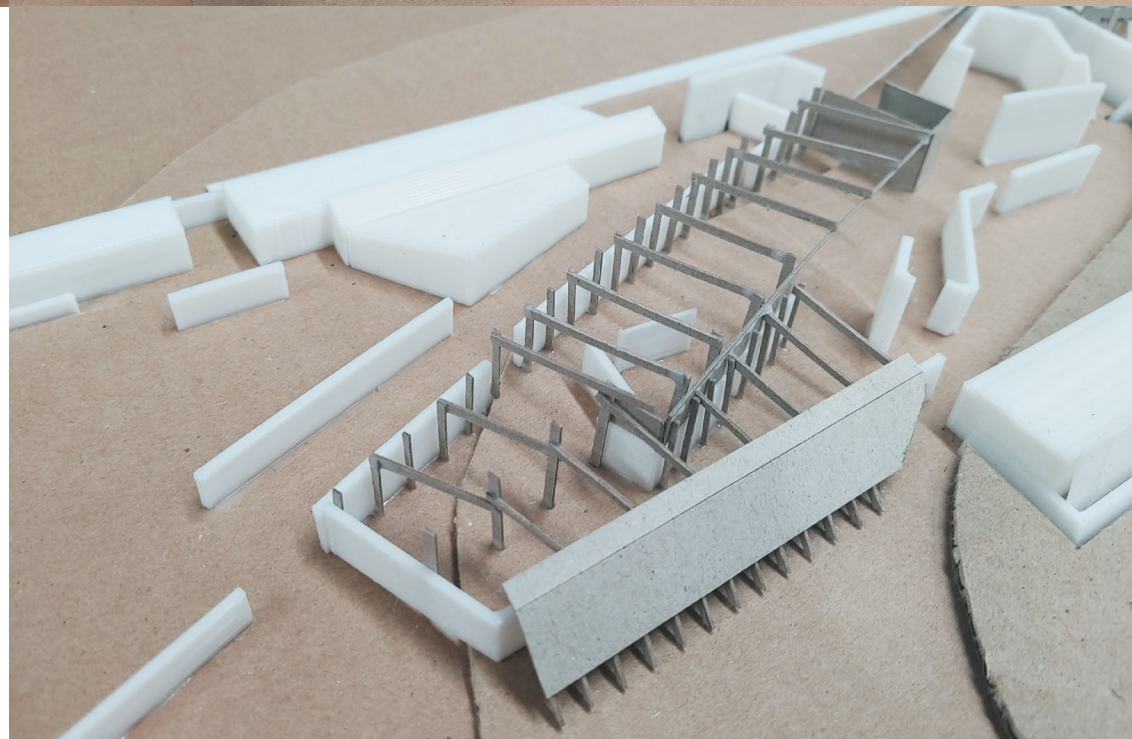
Fig: 444: Section BB segment 2

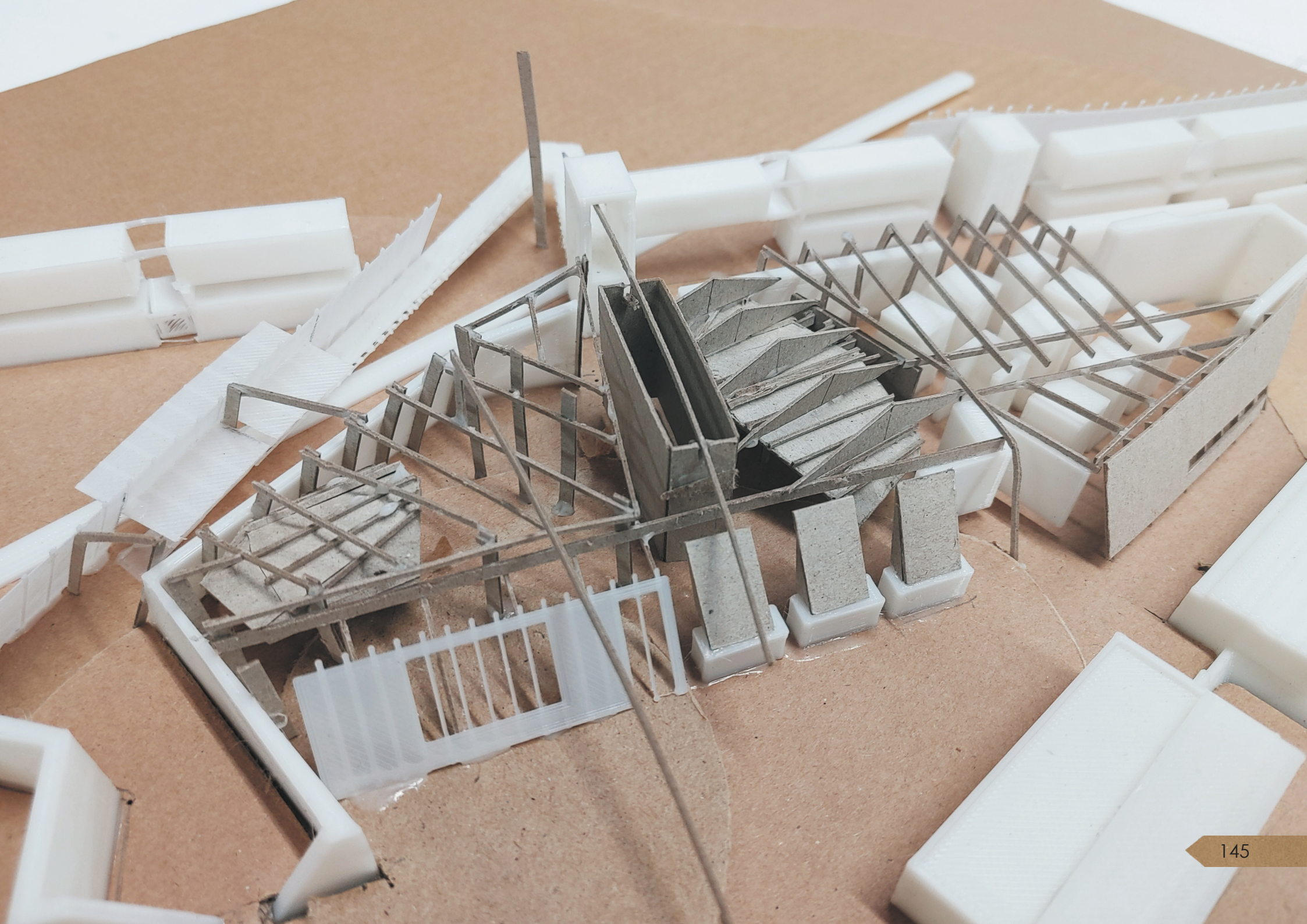




Super structure model:

From the construction model a more clear picture can be constructed as to how the structural bodies align themselves through the design. The use of the afore mentioned structural prefabrication sections accommodate the 8m to 10m roof spans of the building as well as creating deep trusses that facilitate the insertion of large gutters, clerestories and natural ventilation spaces.





Sub-structure:

Foundations- The project utilizes a wide range of foundations due to the scope of the project but mainly the design focuses on strip, raft and pile foundations.

Strip foundations- These foundations are primarily used on the external walls of the complex as most of the load bearing walls are located on the outer edges of the buildings.

Raft foundations- Primarily used or spaces with less load to carry and spaces that requires an infill between to larger wall sections. Utilizing raft foundations in conjunction with strip foundations aims to create larger expansion joints that allow the separate structures that are in close proximity to each other to move freely without disturbing the rest of the structure.

Pile or pad foundations- These foundations are primarily used where load bearing columns are located. Moreover these foundations are used to minimize the size disturbance of soil close to any ruins that are on site around the newly proposed design. Furthermore these foundations are used to carry the column structures of cantilevering spaces where grid systems has been put into place, in the case of the restaurant and admin facilities that are located close to the existing rock wall.

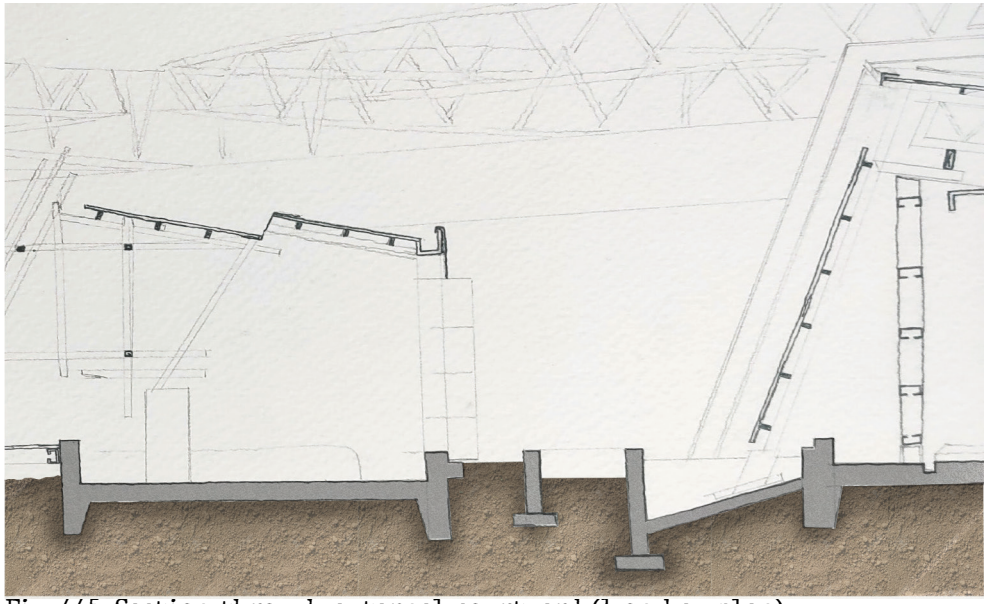


Fig: 445: Section through external courtyard (1 on key plan).

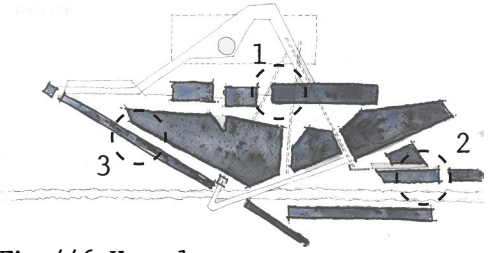


Fig: 446: Key plan

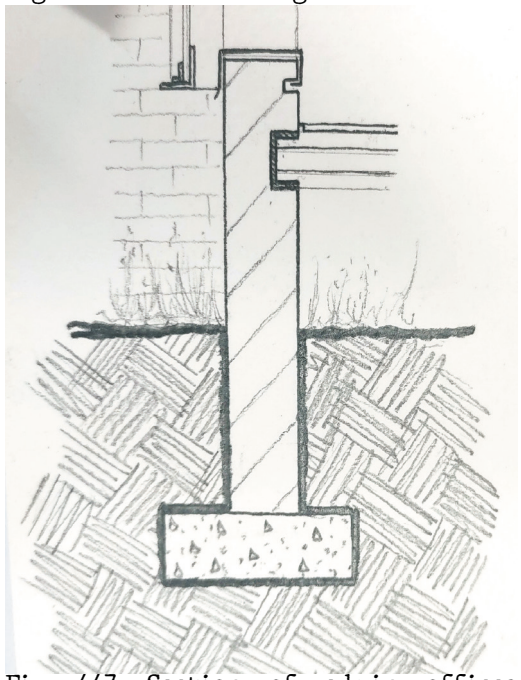


Fig: 447: Section of admin offices foundations (2 on key plan).

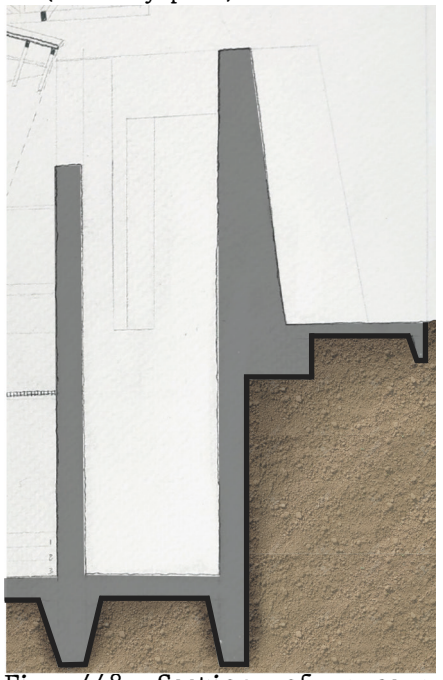


Fig: 448: Section of museum walkways (3 on key plan)

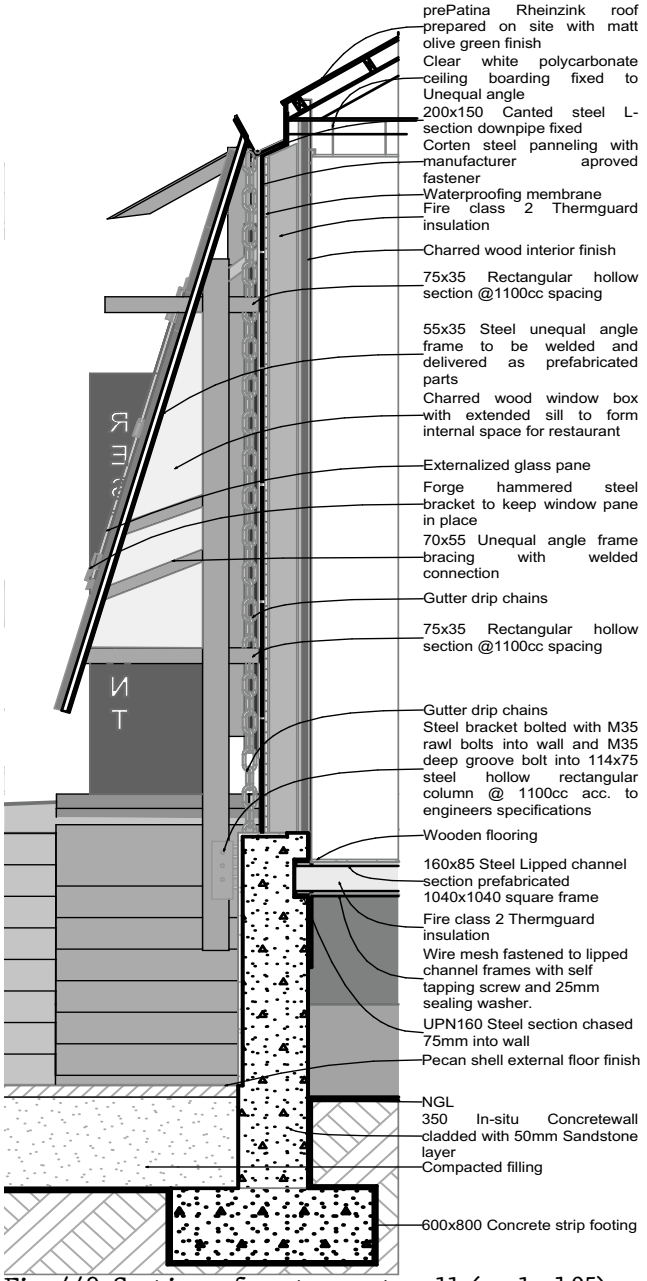


Fig: 449: Section of restaurant wall (scale 1:25).

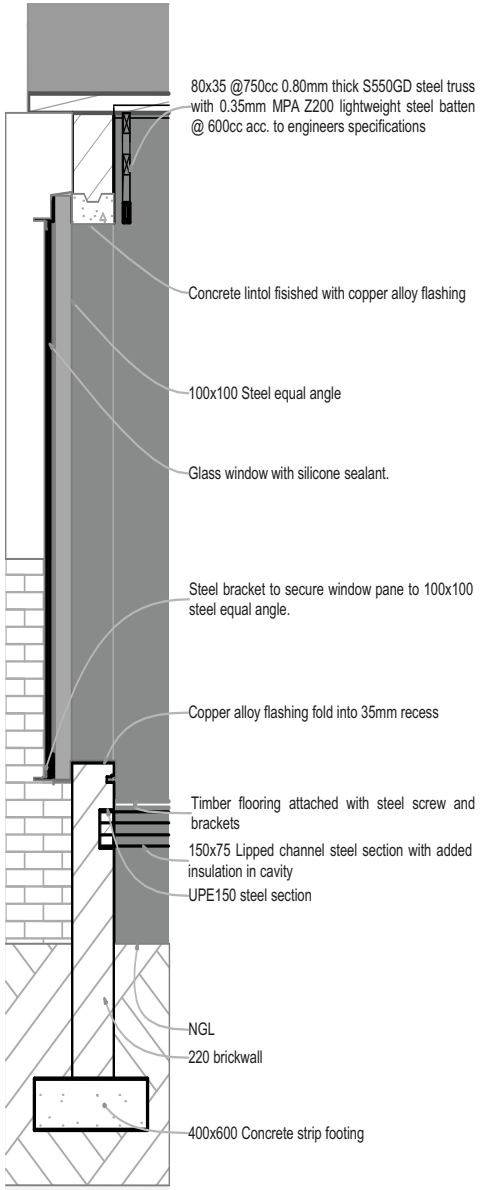


Fig: 4.50: Section of admin visitors lounge wall (scale 1:20).



Conclusion

Following the principles of displacement in CPT2, the reincorporation of the varying elements on the site can begin to form a coherent whole. Within this stage of dwelling, the dweller re-assembles their own configuration- thus, effectively starting the configuration process within iconic augmentation. The dweller then experiences the 'collective' within the memorial's architectural presence. In reflection I argue that through physical architectural interventions the utilization of the displacement principles, it is possible for this step of Iconic Augmentation (configuration) to occur successfully and effectively re-integrating the communities that dwells within the Vaalharts scheme as they collectively experience and imagine a future presence that can be acted upon.



Prefiguration
Chapter: 1; 2

Summary:
The site is concretized as a prefigured being. The incorporation of a new memory scape through ideas pertaining to 'collective memory', etches a new trace that form the first step (pre-figuration) of iconic augmentation as it creates a contemporary territory within the camp that can rive the existing and in so doing enable a discourse between that which is historical and that which is present. It is only until this discourse (consisting of a layered palimpsest of memory and trace) exists, that the re-figuration process can begin..

SITE / PARK SPACE / TOUCHSTONE PHASE 1

Iconic-Augmentation

Refiguration
Chapter: 3A; 3B

Summary:
Play becomes a catalyst in the process that allows the visitor to interweave themselves into the memory scape and dwell in between the different layers of memory. The interactive aspect of play ensures that the collective body is unravelled, and in so doing, the process individualizes the experience and urges each individual to confront their own trace- and memory-scape as they start to dwell between the multiple certainties of different perspectives created by the re-figuration process. Creating a 'new' memory on a collective scale however, not an entirely new memory, but one that contain and is aware of its previous state of being.

DESIGN CONCEPTS / CONCEPTS/ PRECEDENT/ TOUCHSTONE PHASE 2 & 3

Configuration
Chapter: 4

Summary:
The reincorporation of the varying elements on the site can begin to form a coherent whole. Within this stage of passage, the dweller re-assembles their own configuration- thus, effectively starting the configuration process within iconic augmentation. The dweller then experiences the 'collective' within the memorial's architectural presence

FINAL DESIGN SYNTHESIS



Conclusion to thesis

The remnants of the camp can now be occupied and expressed as gathering of architectural presence and memorable thought. The utilization of a palimpsetuous process to uncover and re-collect (pre-figuration) serve as methodology of memorializing the occupants of the camp as well as a method of inciting reintegration within the surrounding communities as the design does not act as an honoring device but rather as a facilitating graft to the individualized process of memorialization .

This project revealed that in order for architecture to become an act of re[memberling, the collective states surrounding the gifted site has to first be individualized in order for a reintegration of two separates collective identities (re-figuration). Furthermore, the project revealed the nature of the camp in a different light. Not necessarily by the despair of the war, but rather by the methods of 'playful' and individualized coping with such despair and in doing so, the project contemporized the nature of the camp in such a manner that both the historical and the present becomes a part of the coalescent act of re-remembering. This notion, leading to the memorialization and honoring of the camp's historical context, forming a new memorable experience in the present that is aware and originating from the historical but has been transmediated to form a collective-re-figuration of the present body.

This collective-re-figuration subsequently leads to the formation of a new and more coherent cultural and collective memory (configuration) in the surrounding areas of the camp and in so doing reversing the nature of the camp from a segregative territorial border to a collective and cultural mediator, a place where different identities are invited to come together to share identity and negotiate contemporary collectives instead of stripping away the visitors identity and estranging them from their context.

In memory of their presence

This memorial page serve as a reminder of the persons that did not survive the lifespan of the camp and that lie buried on the site. A total of 17 marked graves can be found on site, however records indicate that there are various unmarked graves that lay scattered round the site.

Reminder: This dissertation does not condone the actions or aim to memorialize the identity, nationality or belief systems of these soldiers. This memorial page is to honor the now absent presence of these men and their collective experiences as a part of a larger humanistic whole.



Reflection

I chose this project to challenge me as an architect and myself on an emotional level as I am not an emotional thinker and you can generally find me on the side of the logical tinkerer that explores the world one blueprint at a time. Now that this design is 'complete', all I can say is... Wow was this a ride, a trial, even a right of passage to myself as an aspiring professional architect.

Reflecting back on the project it became clear that the scope of the project might have been to extensive and to intricate for me as a young un-experienced student and even perhaps for a one year architectural thesis program. However, through the course of the design, the design made me as person grow along side it. Design became a personal and individualized experience that I have never lived to this extend before. The camps has been a large part of my childhood as I grew up in the surrounding areas and have swam in the very canals that was built by the occupants of these camps and lived off of the crops that these canals feed life to.

Still as I was writing the final pages of this document, new ideas surfaced and new gears started turning. In general, this project was full of beautiful ups and downs. The irony being that as much as the camp grounds lead to the stripping away of the identity of its occupants, it gave me back my identity in the process of re-integrating and re-remembering myself and the times I spent within its borders as a child, even though years after its essence has gone...

Acknowledgments

Academic Supervisors: Prof. J. D. Smit, P. Smit, H Raubenheimer and M. Bitzer

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My 3 in 1 God, for all the blessings, support, trial and tribulations that He was next to me.
My ever-supportive family that carried me through the hard times and motivated me to go on.
My friends that supported me and motivated me.

This dissertation would not have been possible to complete without the above mentioned.
Thank you.

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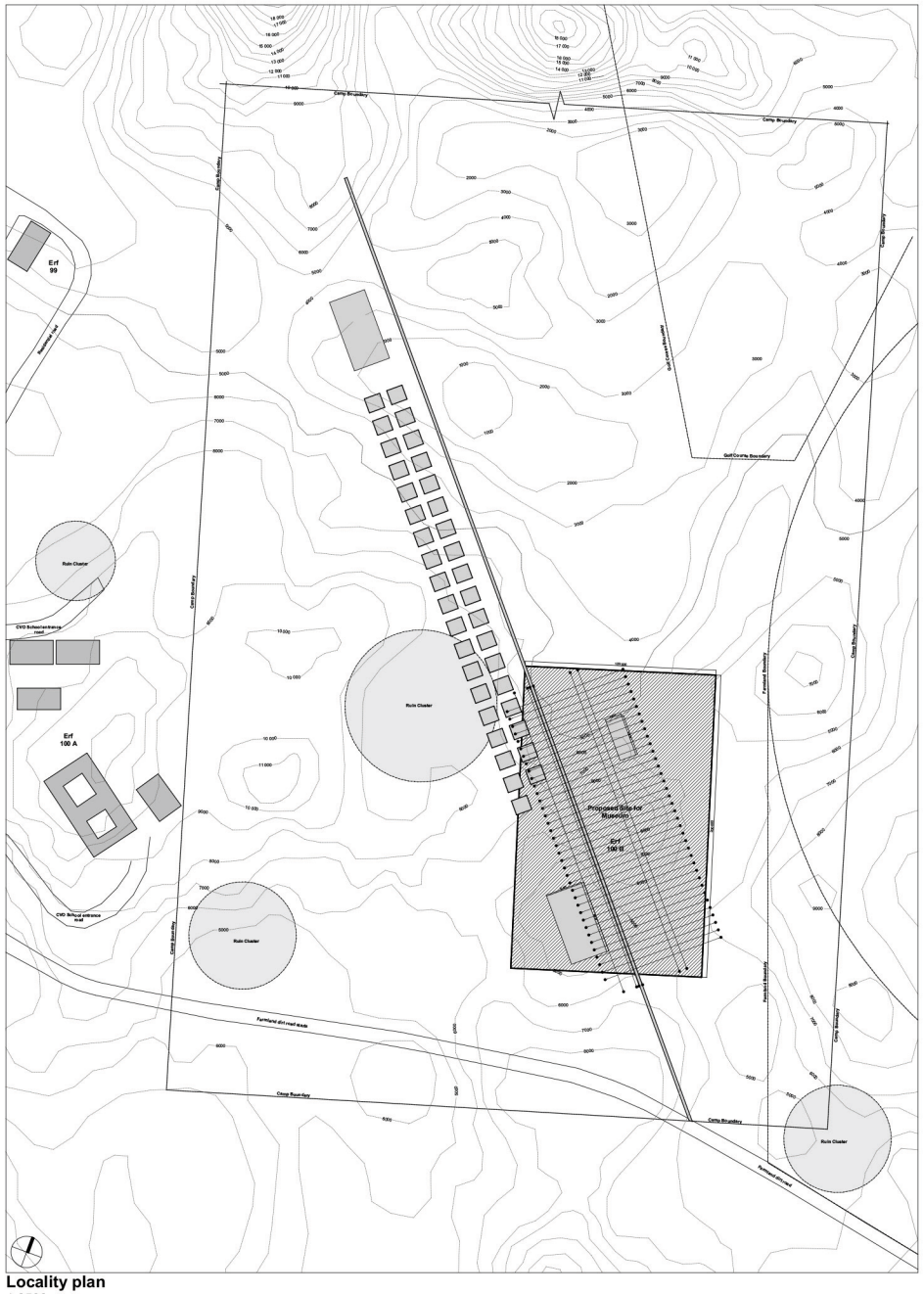

Locality plan
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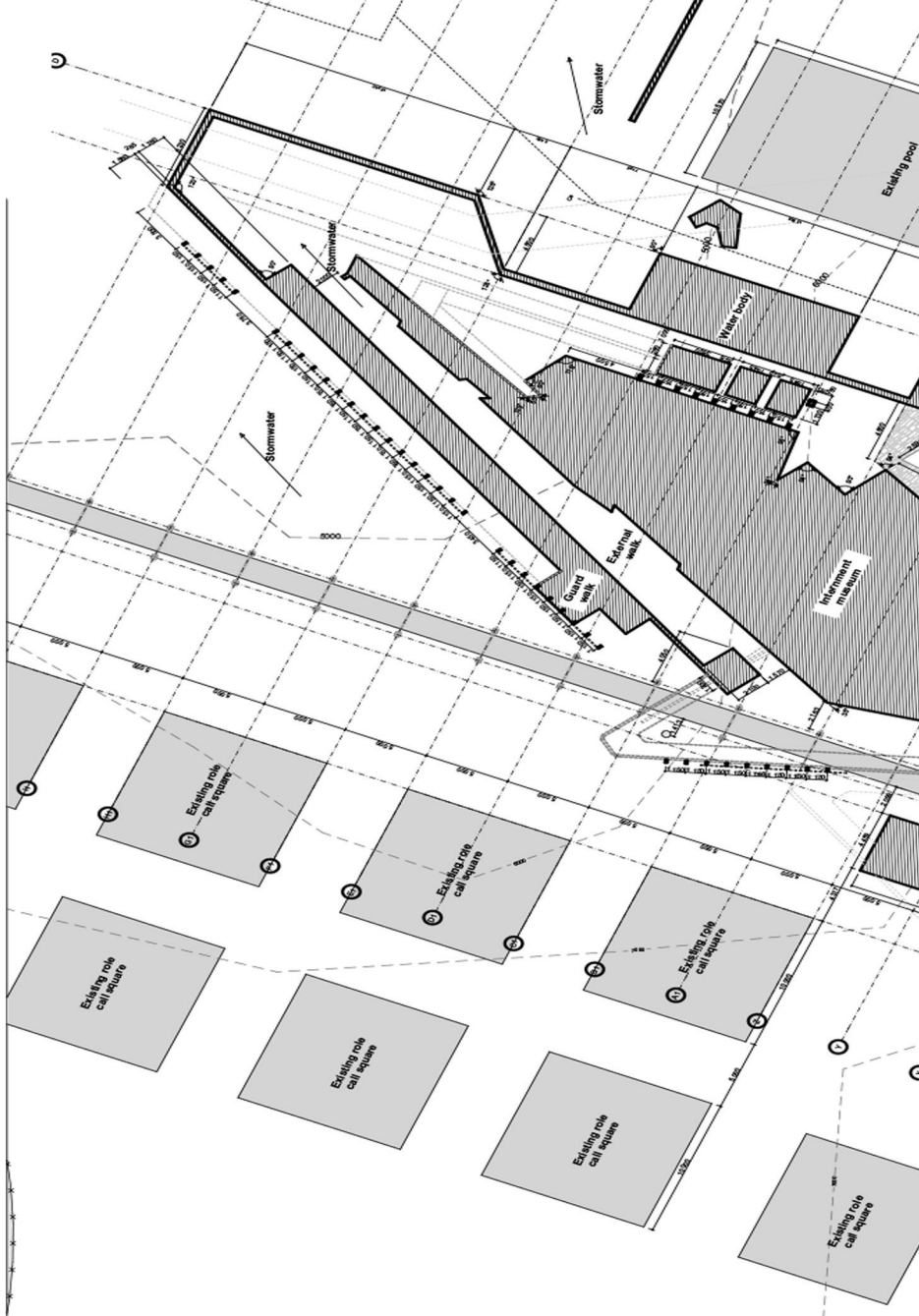

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Drawing Title: Tekening-opskrif: **Site & Locality**

Project: Projek: **Prosthetic re[member]ing**

Areas: Oppervlaktes:
Erf: m²
Existing Building: m²
Additions: m²
Total Coverage: %

Client: kliënt:

Scale: Skaal:

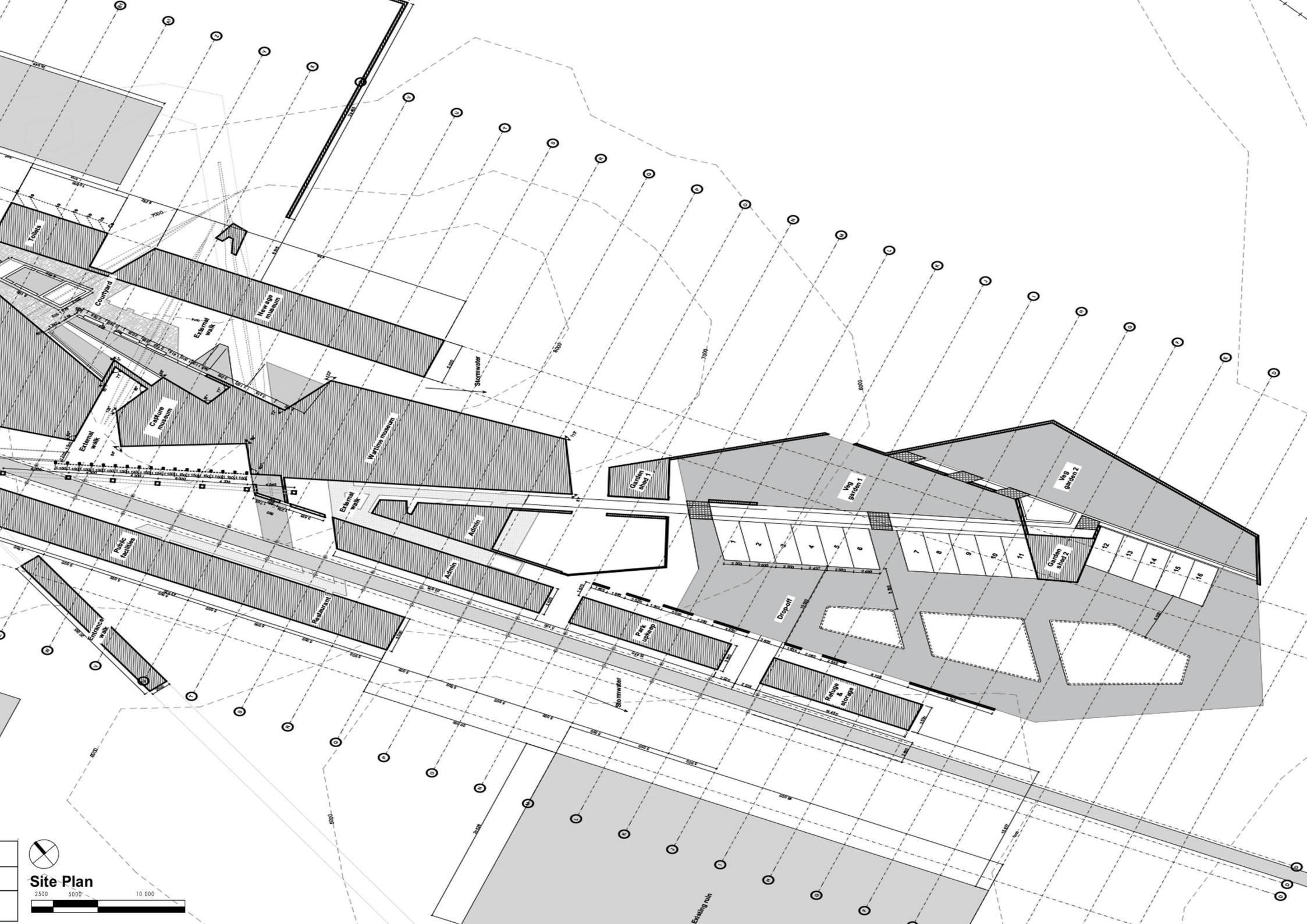
Drawn: Geteken:

Date: Datum:

Checked: Nagesien:

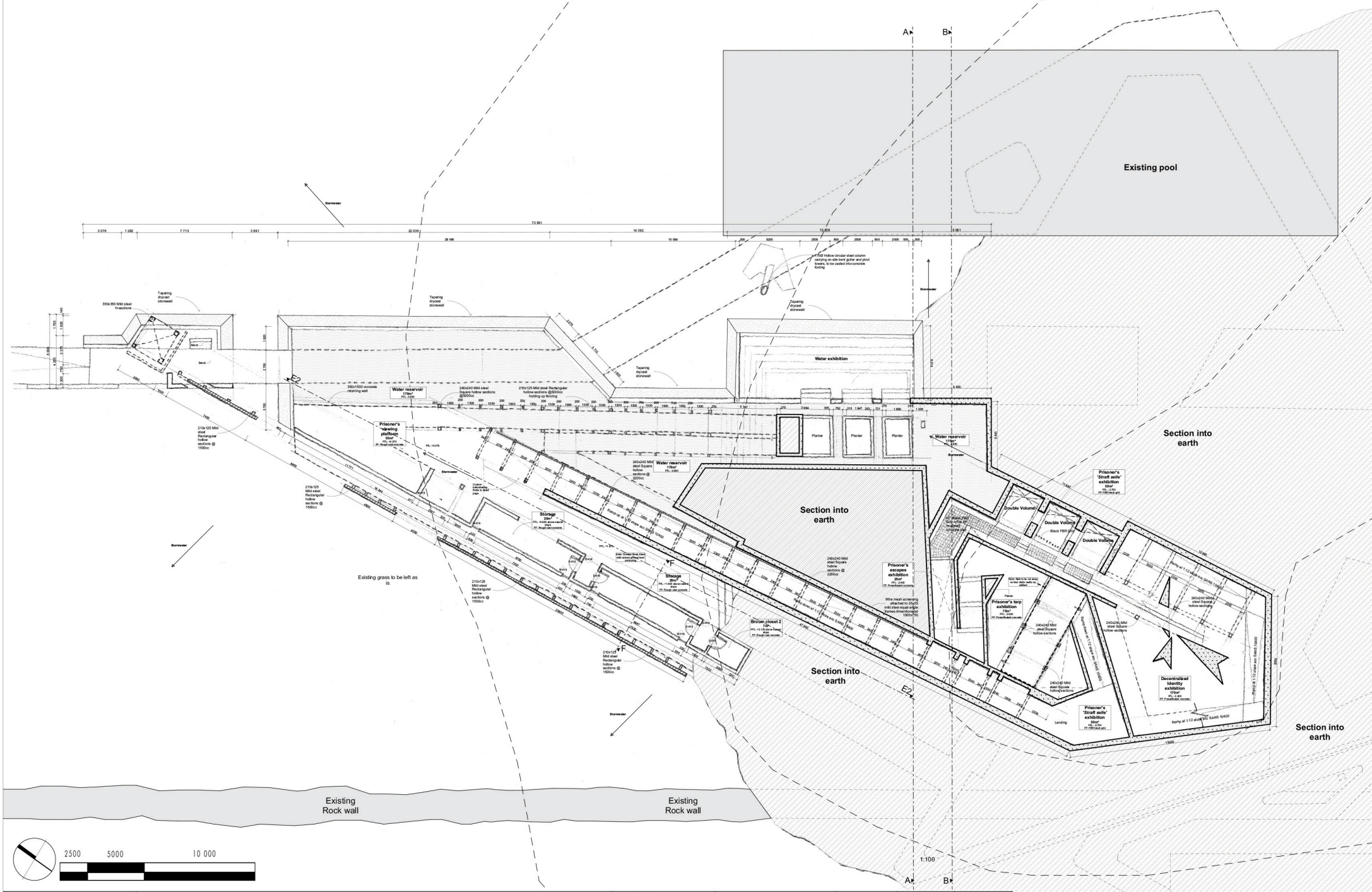
Drawing no: Tekeningnr:

Revision no: Hersieningnr: 1



Site Plan

2500 5000 10 000



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Drawing Title: Ground level 1
Project: Prosthetic re[member]ing
Areas: Erf: m²
Existing Building: m²
Additions: m²
Total Coverage: %

Client:

Scale:
Drawn:
Date:
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Drawing no:
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C
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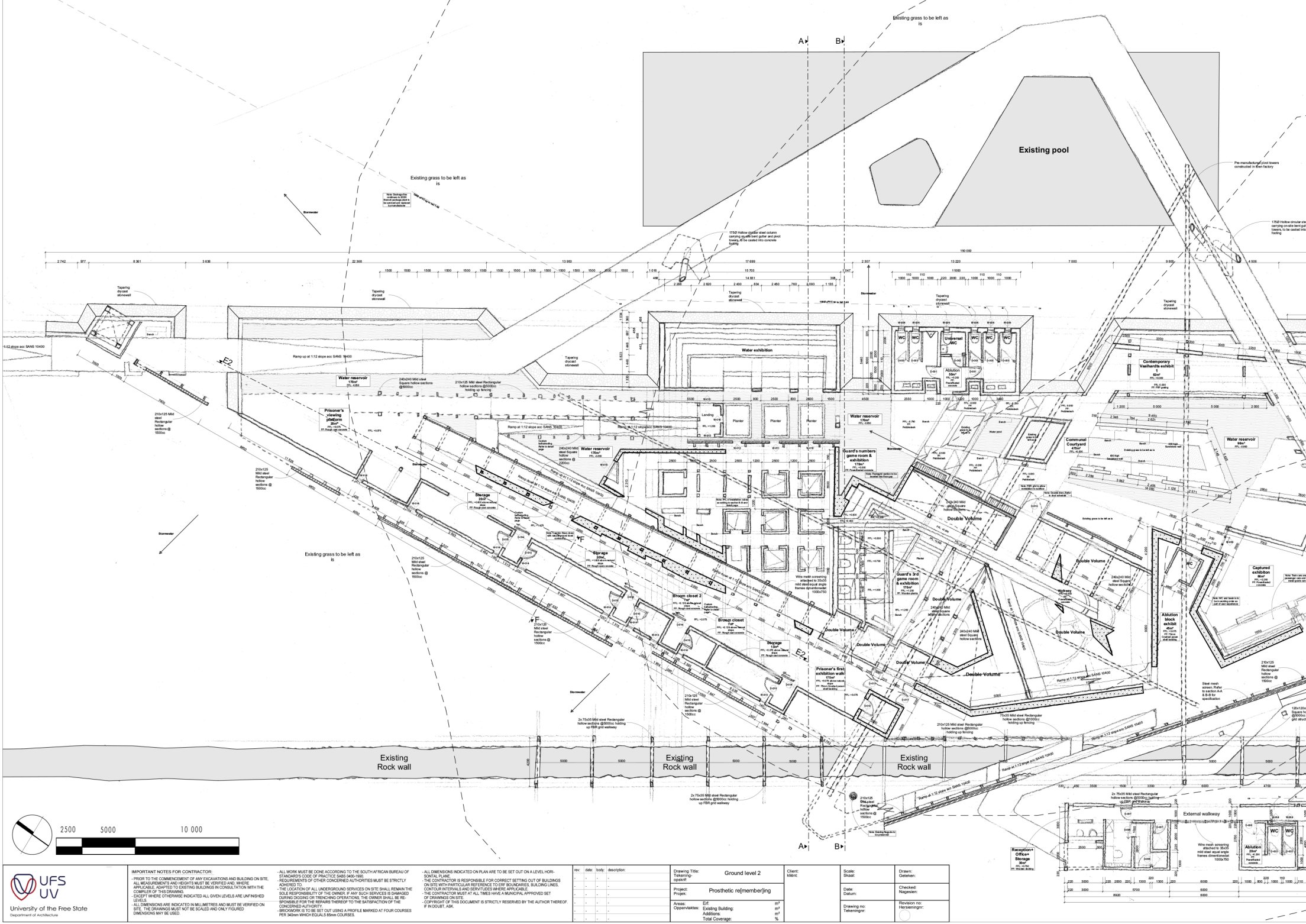
Stormwater



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Drawing Title: Ground level 2
Tekening-opskrif:

Project: Prosthetic re[member]ing
Projek:

Areas: Erf: m²
Oppervlaktes: Existing Building: m²
Additions: m²
Total Coverage: %

Client:
Kliënt:

Scale:
Skaal:

Drawn:
Getek:

Date:
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Revision no:
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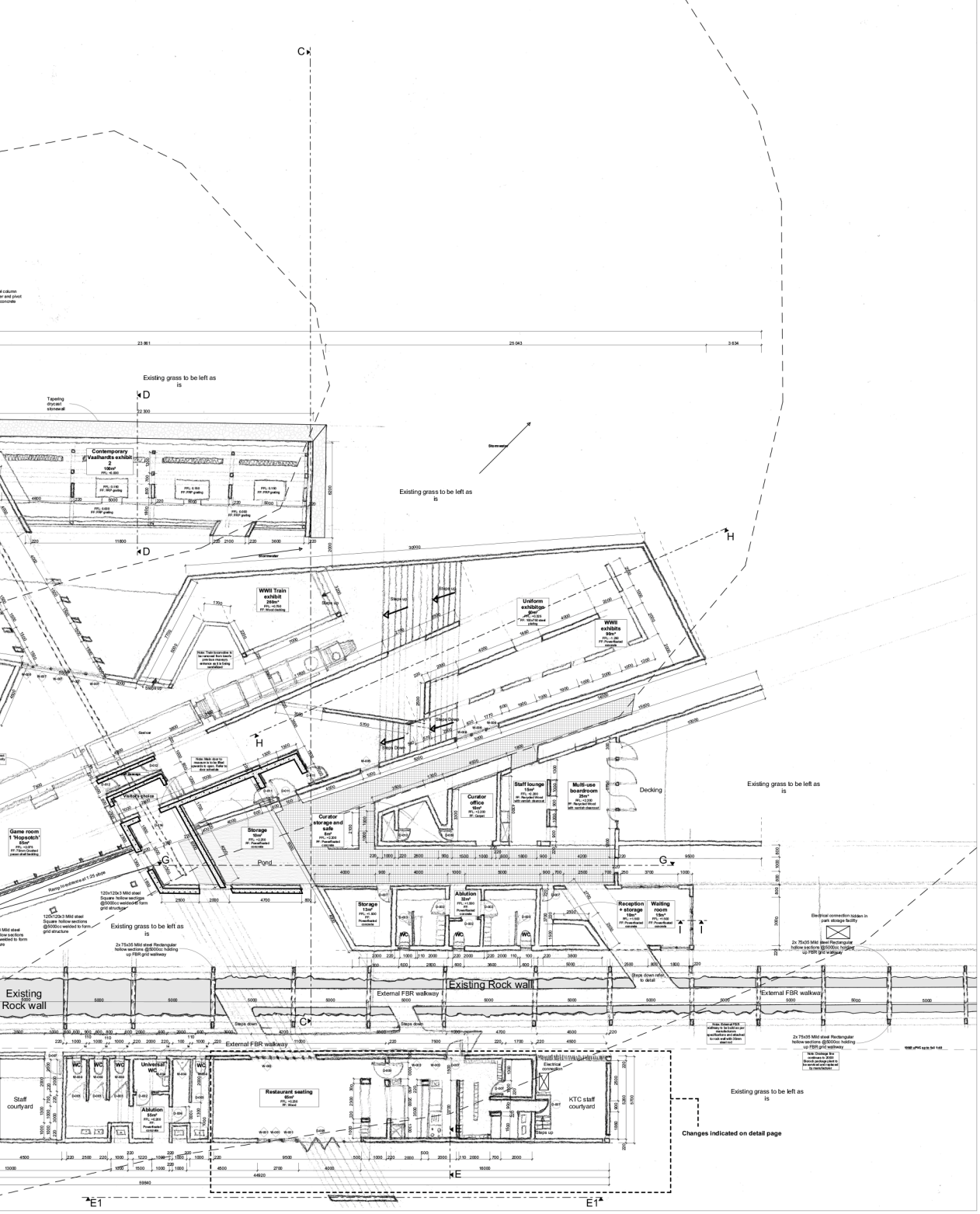
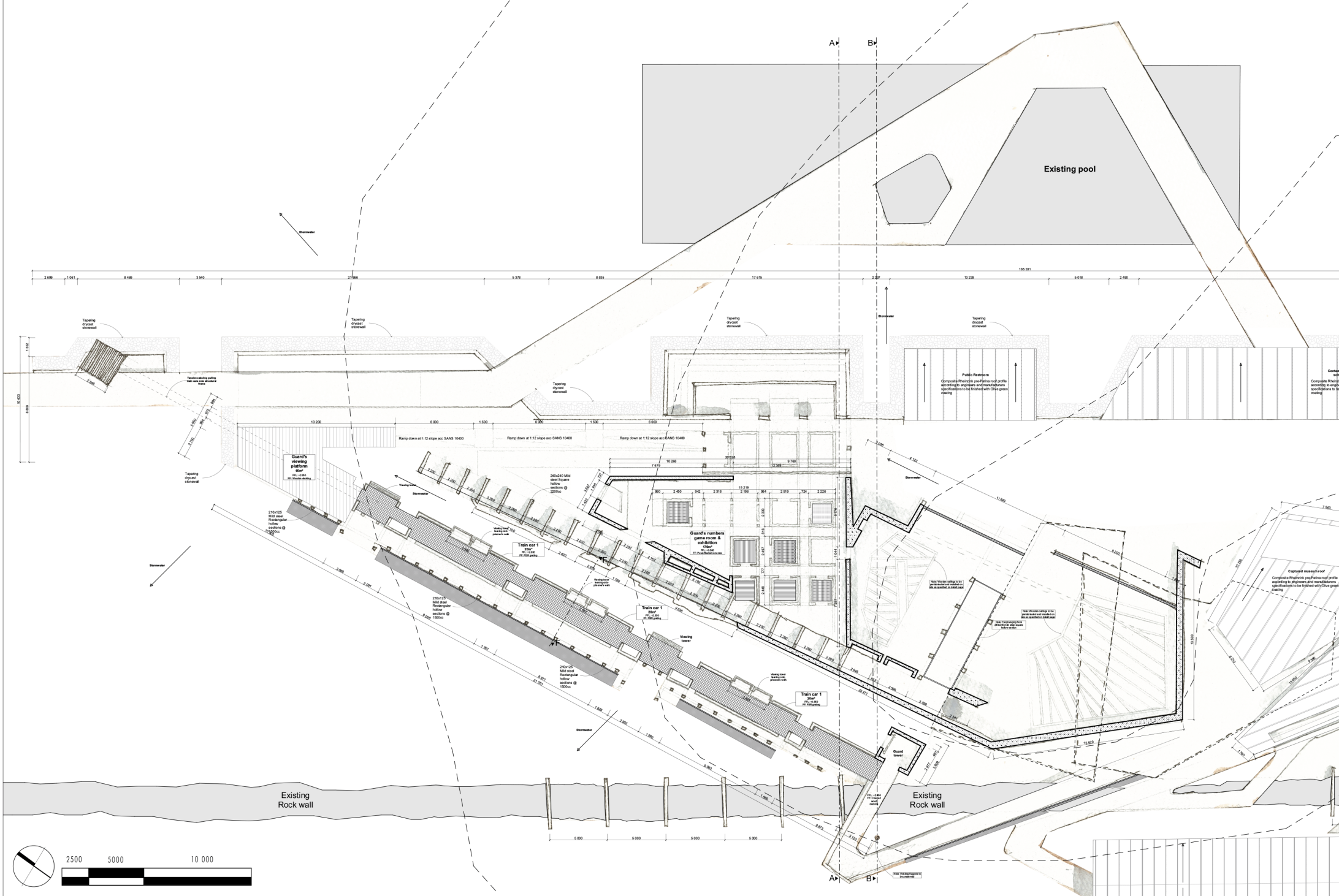


Existing grass to be left as is
Contemporary Vaalhardts exhibit 2
WWII Train exhibit
Uniform exhibition
WWII exhibits
Staff lounge
Multi-use boardroom
Curator office
Curator storage and safe
Storage
Game room 1 'Hopsotch'
Pond
Decking
Existing grass to be left as is
Storage
Ablution
Reception + storage
Waiting room
Existing grass to be left as is
Existing Rock wall
External FBR walkway
Existing Rock wall
External FBR walkway
Staff courtyard
Universal WC
Ablution
Restaurant seating
KTC staff courtyard
Existing grass to be left as is
Changes indicated on detail page



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Drawing Title: First floor and roof plan
Tekening-opskrif:
Project: Prosthetic re[member]ing
Projek:
Areas: Erf: m²
Oppervlaktes: Existing Building: m²
Additions: m²
Total Coverage: %

Client:
kliënt:

Scale:
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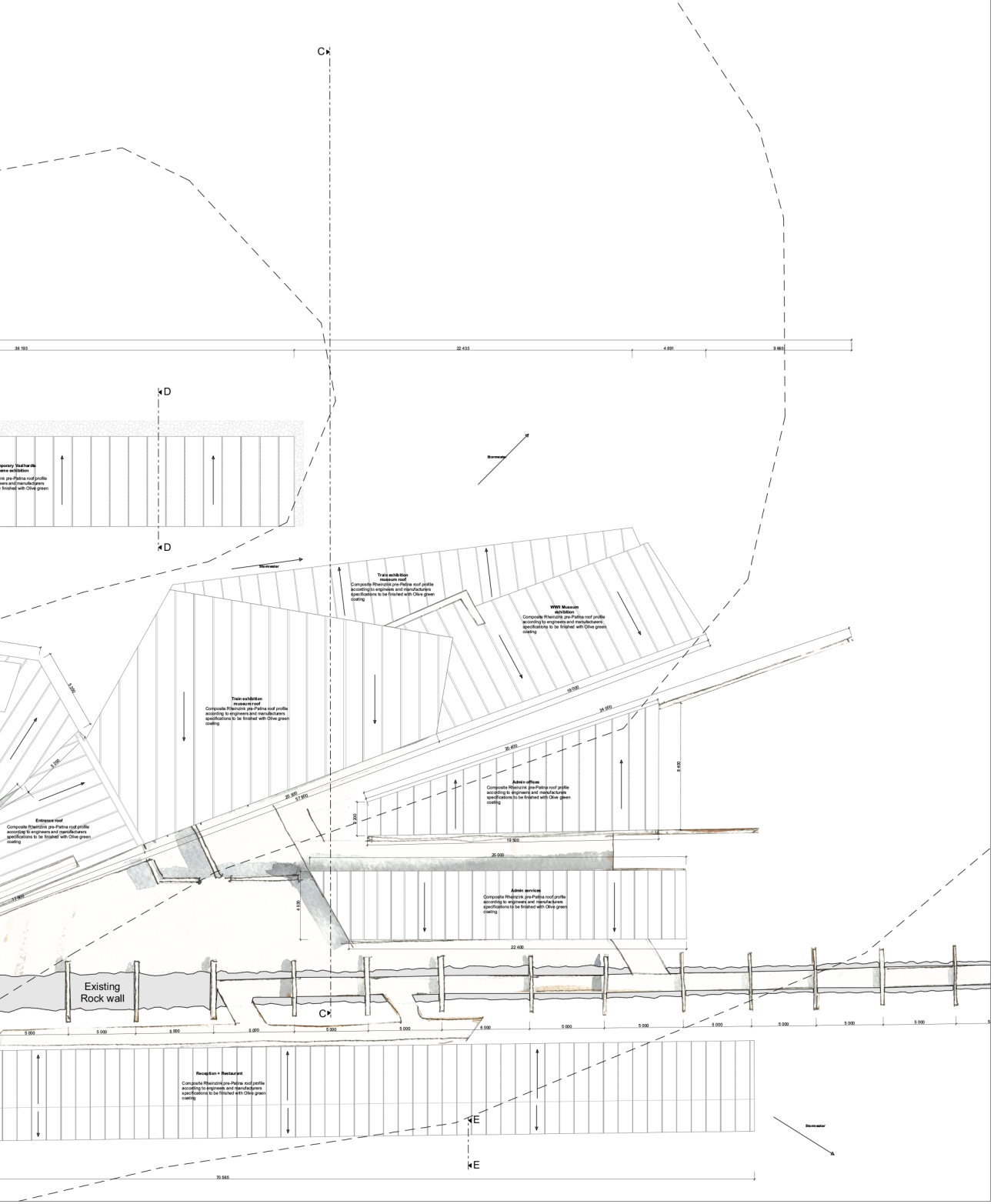
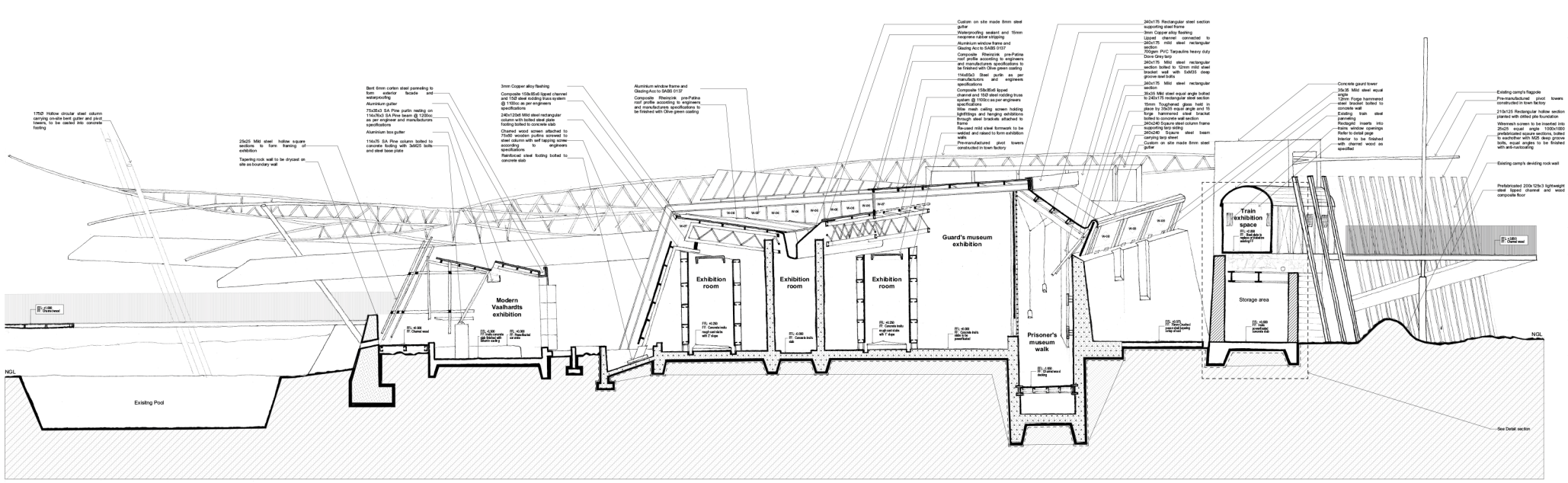


C
D
D
Stormwater
Stormwater
Train exhibition museum roof
Composite Rheinzink pre-Patina roof profile according to engineers and manufacturers specifications to be finished with Olive green coating
WWII Museum exhibition
Composite Rheinzink pre-Patina roof profile according to engineers and manufacturers specifications to be finished with Olive green coating
Train exhibition museum roof
Composite Rheinzink pre-Patina roof profile according to engineers and manufacturers specifications to be finished with Olive green coating
Admin offices
Composite Rheinzink pre-Patina roof profile according to engineers and manufacturers specifications to be finished with Olive green coating
Entrance roof
Composite Rheinzink pre-Patina roof profile according to engineers and manufacturers specifications to be finished with Olive green coating
Admin services
Composite Rheinzink pre-Patina roof profile according to engineers and manufacturers specifications to be finished with Olive green coating
Existing Rock wall
C
Reception + Restaurant
Composite Rheinzink pre-Patina roof profile according to engineers and manufacturers specifications to be finished with Olive green coating
E
E
Stormwater



Section A-A

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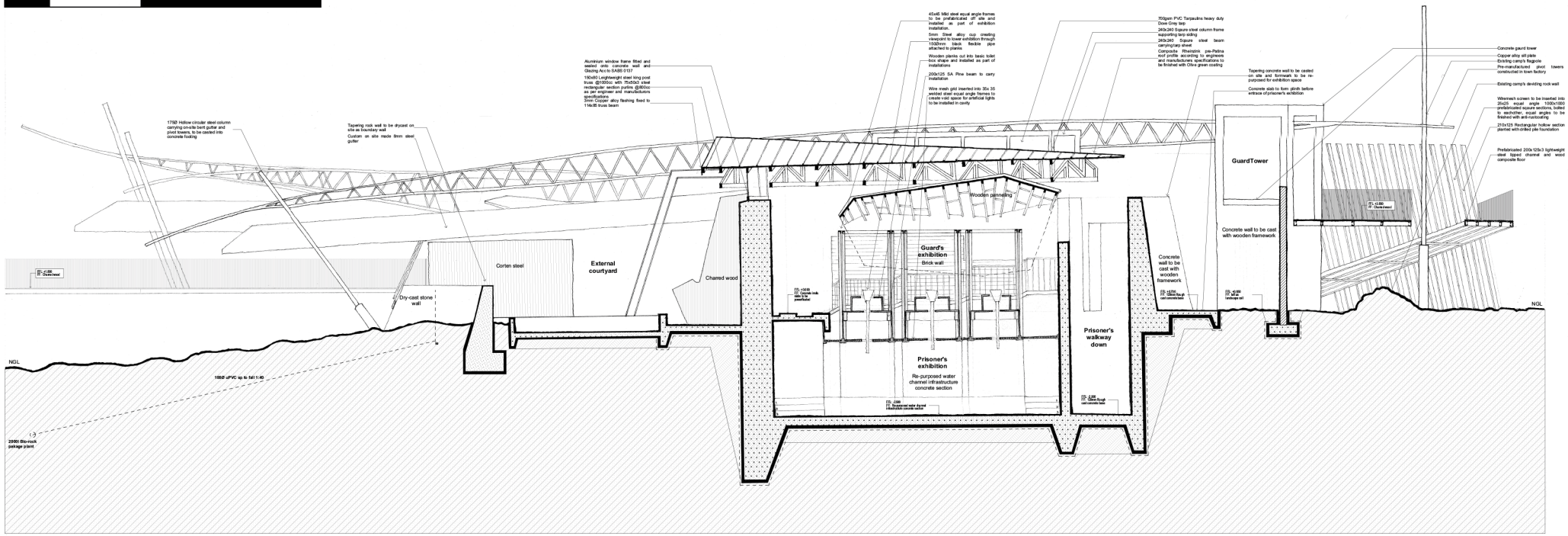

Section B-B

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Drawing Title: Sections
Tekening-opskrif:
Project: Prosthetic re[member]ing
Projek:
Areas: Erf: m²
Oppervlaktes: Existing Building: m²
Additions: m²
Total Coverage: %

Client:
Kliënt:

Scale: 1:50
Skaal:
Date:
Datum:
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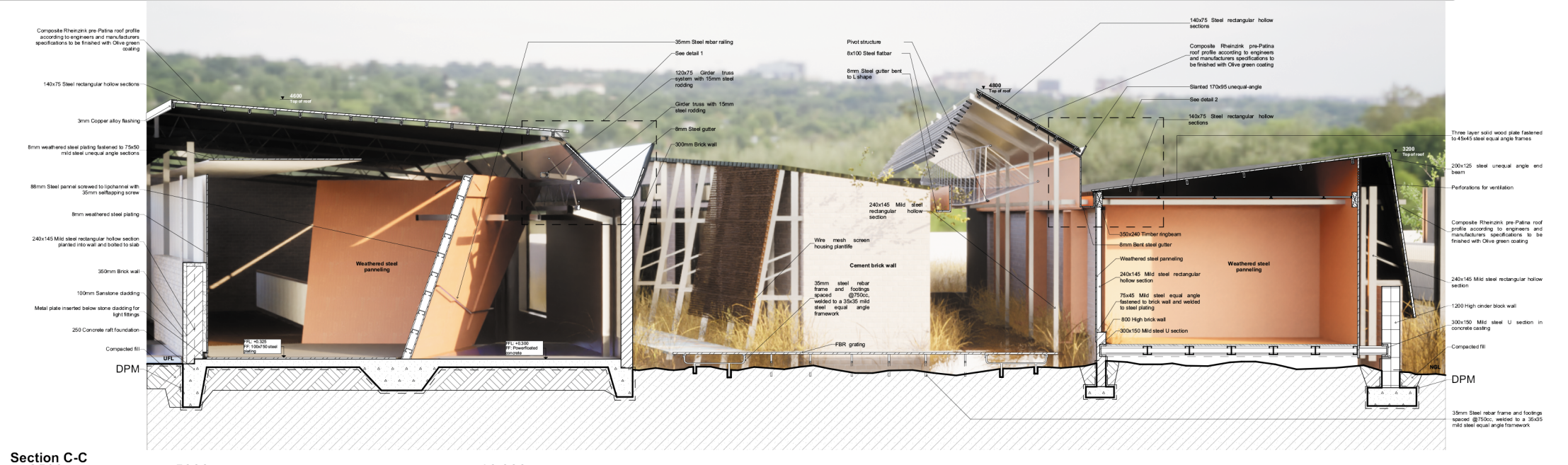
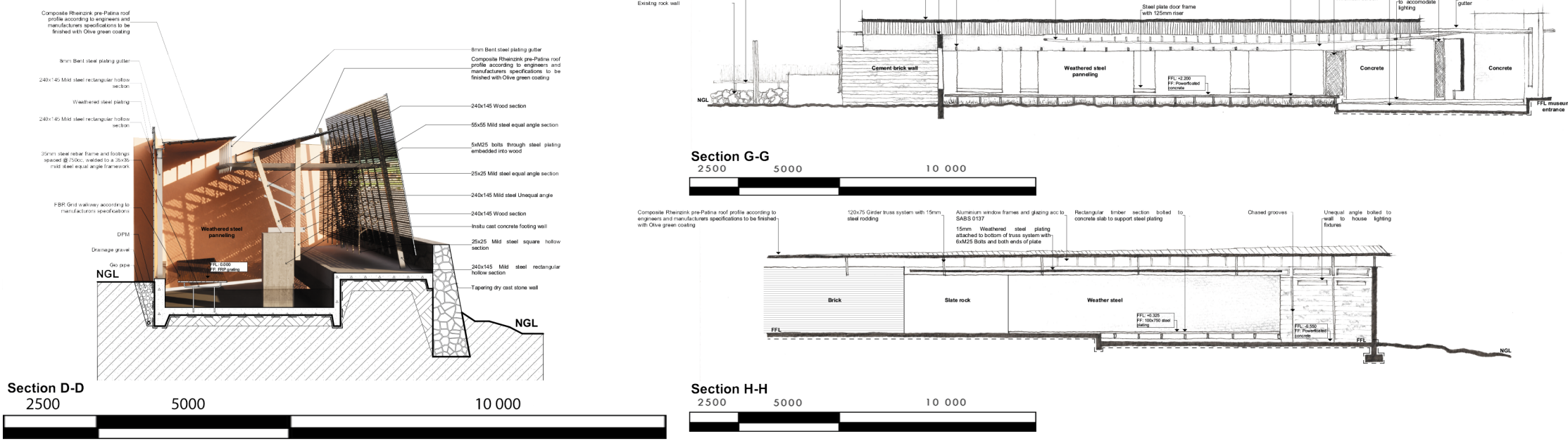


Section C-C

2500 5000 10 000



Section D-D

2500 5000 10 000

Section G-G

2500 5000 10 000

Section H-H

2500 5000 10 000

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IMPORTANT NOTES FOR CONTRACTOR:

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Drawing Title: Tekening-opskrif: **Sections 3D**

Project: Projek: **Prosthetic re[member]ing**

Areas: Oppervlaktes:

Erf:	m²
Existing Building:	m²
Additions:	m²
Total Coverage:	%

Client: kliënt:

Scale: Skaal: **See drawing**

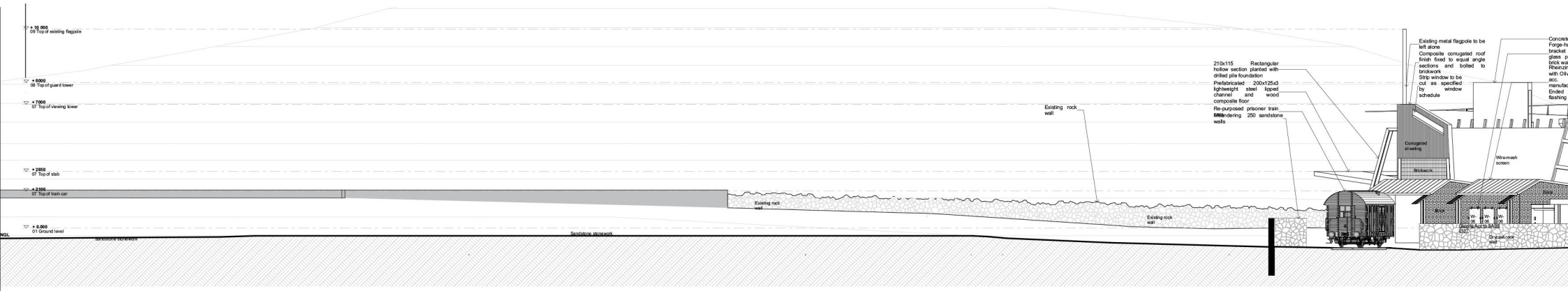
Drawn: Geteken:

Date: Datum:

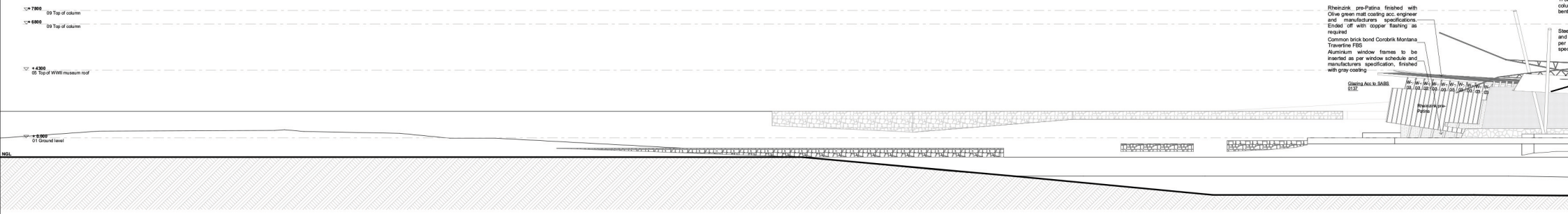
Checked: Nagesien:

Drawing no: Tekeningnr:

Revision no: Hersieningnr:



South Elevation



North Elevation

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Drawing Title: Tekening-opskrif: Elevations

Project: Projek: Prosthetic re[member]ing

Areas: Oppervlaktes: Erf: m²
Existing Building: m²
Additions: m²
Total Coverage: %

Client: kliënt:

Scale: Skaal:

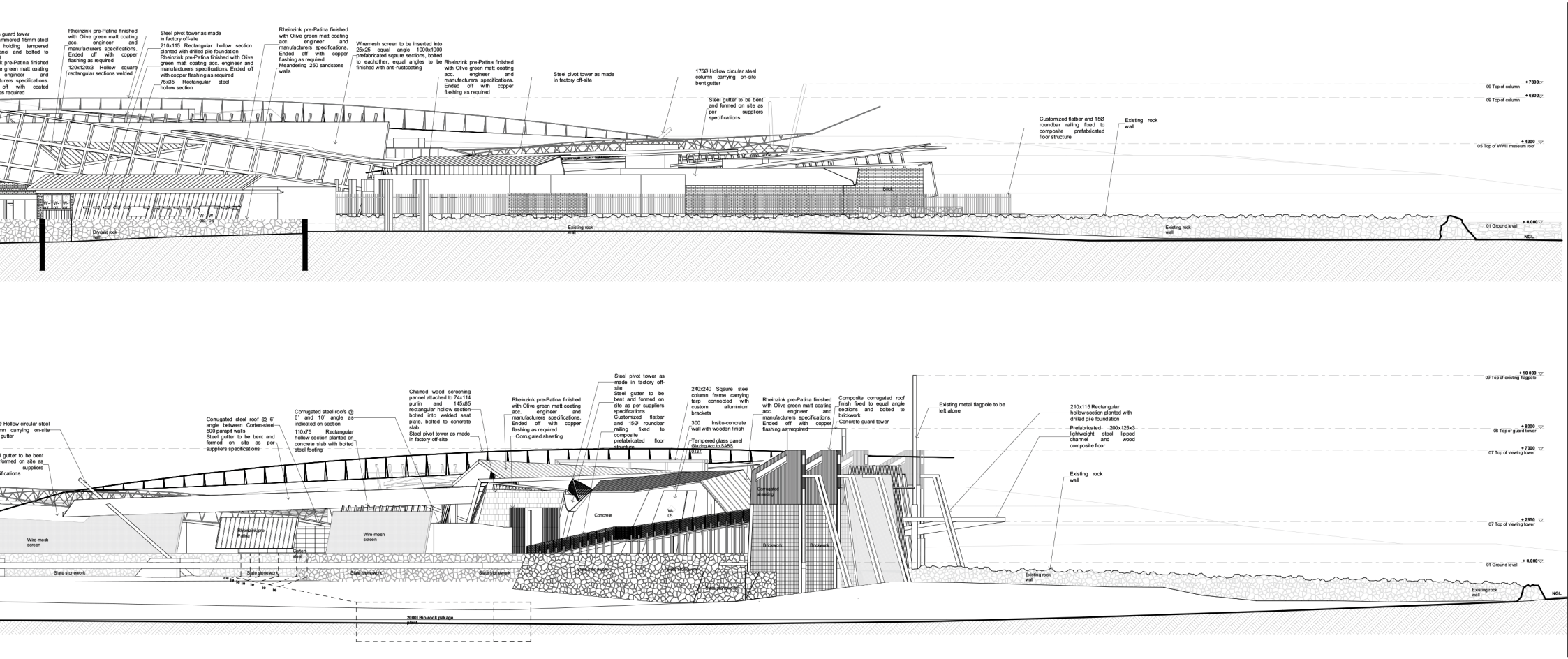
Drawn: Geteken:

Date: Datum:

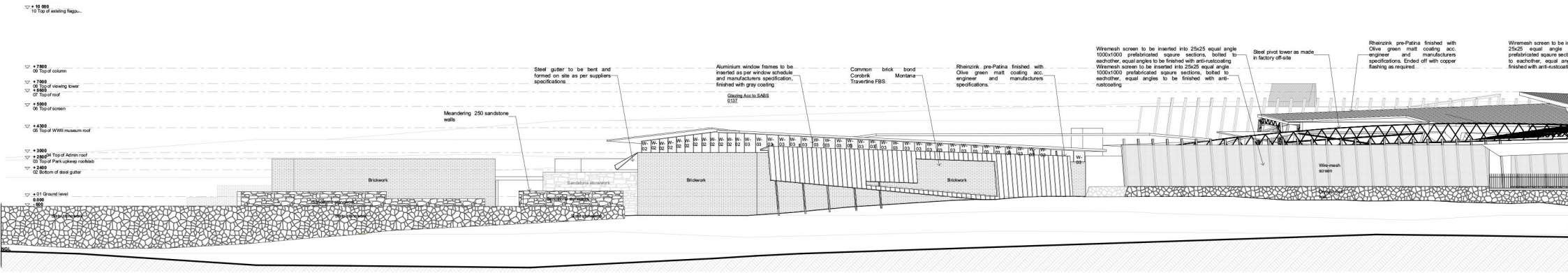
Checked: Nagesien:

Drawing no: Tekeningnr:

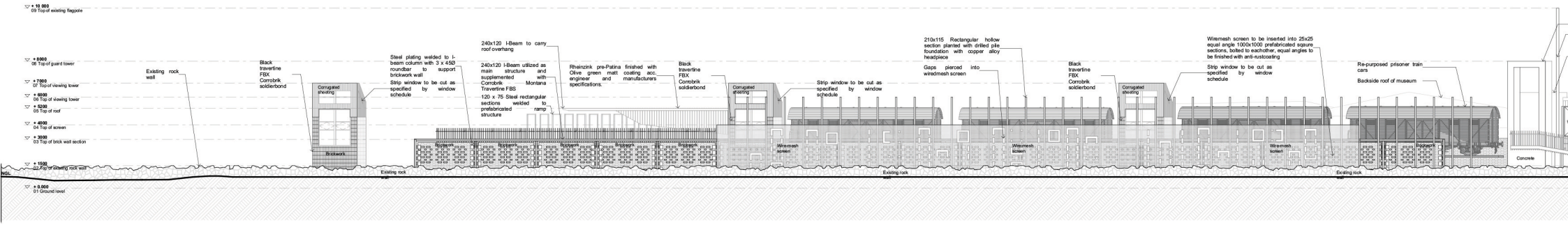
Revision no: Hersieningnr:



Rheinzink pre-Patina finished with Olive green matt coating acc. engineer and manufacturers specifications. Ended off with copper flashing as required
120x120x3 Hollow square rectangular sections welded
Steel pivot tower as made in factory off-site
210x115 Rectangular hollow section planted with drilled pile foundation
Rheinzink pre-Patina finished with Olive green matt coating acc. engineer and manufacturers specifications. Ended off with copper flashing as required
75x35 Rectangular steel hollow section
Rheinzink pre-Patina finished with Olive green matt coating acc. engineer and manufacturers specifications. Ended off with copper flashing as required
Meandering 250 sandstone walls
Wiremesh screen to be inserted into 25x25 equal angle 1000x1000 prefabricated sqaure sections, bolted to eachother, equal angles to be finished with anti-rustcoating
Rheinzink pre-Patina finished with Olive green matt coating acc. engineer and manufacturers specifications. Ended off with copper flashing as required
Steel pivot tower as made in factory off-site
175Ø Hollow circular steel column carrying on-site bent gutter
Steel gutter to be bent and formed on site as per suppliers specifications
Customized flatbar and 15Ø roundbar railing fixed to composite prefabricated floor structure
Existing rock wall
09 Top of column
09 Top of column
05 Top of WWII museum roof
01 Ground level
NGL
Drycast rock wall
Existing rock wall
Existing rock wall
Steel pivot tower as made in factory off-site
Steel gutter to be bent and formed on site as per suppliers specifications
Customized flatbar and 15Ø roundbar railing fixed to composite prefabricated floor structure
Rheinzink pre-Patina finished with Olive green matt coating acc. engineer and manufacturers specifications. Ended off with copper flashing as required
Corrugated sheeting
Charred wood screening pannel attached to 74x114 purlin and 145x85 rectangular hollow section bolted into welded seat plate, bolted to concrete slab.
Steel pivot tower as made in factory off-site
Corrugated steel roofs @ 6' and 10' angle as indicated on section
110x75 Rectangular hollow section planted on concrete slab with bolted steel footing
Corrugated steel roof @ 6' angle between Corten-steel 500 parapit walls
Steel gutter to be bent and formed on site as per suppliers specifications
Wire-mesh screen
Wire-mesh screen
Corten-steel
Rheinzink pre-Patina
Concrete
Corrugated sheeting
Brickwork
Brickwork
Existing metal flagpole to be left alone
210x115 Rectangular hollow section planted with drilled pile foundation
Prefabricated 200x125x3 lightweight steel lipped channel and wood composite floor
Existing rock wall
09 Top of existing flagpole
08 Top of guard tower
07 Top of viewing tower
07 Top of viewing tower
01 Ground level
NGL
Existing rock wall
Existing rock wall
State stonework
State stonework
State stonework
State stonework
State stonework
State stonework
2000t Bio-rock pakage plant



East Elevation



West Elevation

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Drawing Title: Tekening-opskrif: Elevations

Project: Projek: Prosthetic re[member]ing

Areas: Oppervlaktes: Erf: m²; Existing Building: m²; Additions: m²; Total Coverage: %

Client: klient:

Scale: Skaal:

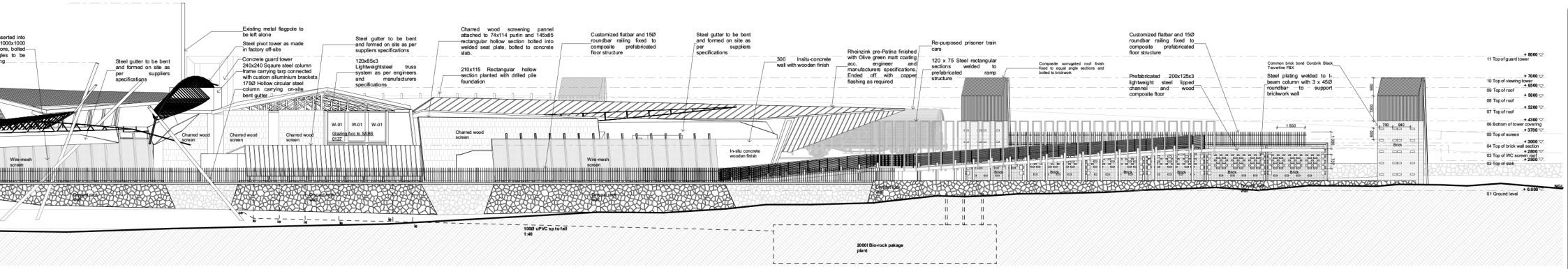
Drawn: Geteken:

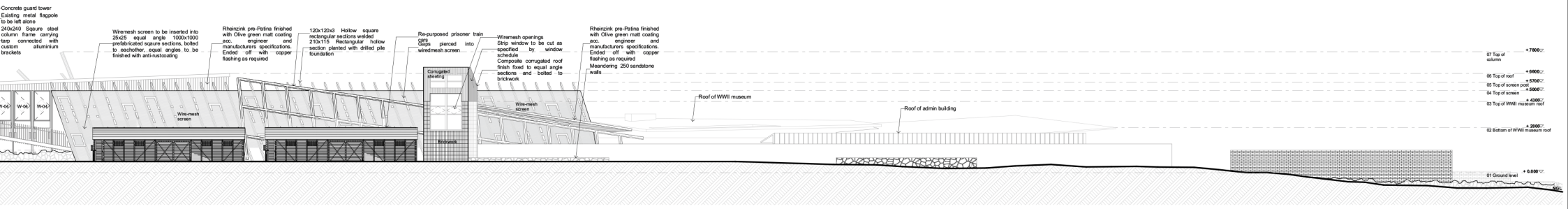
Date: Datum:

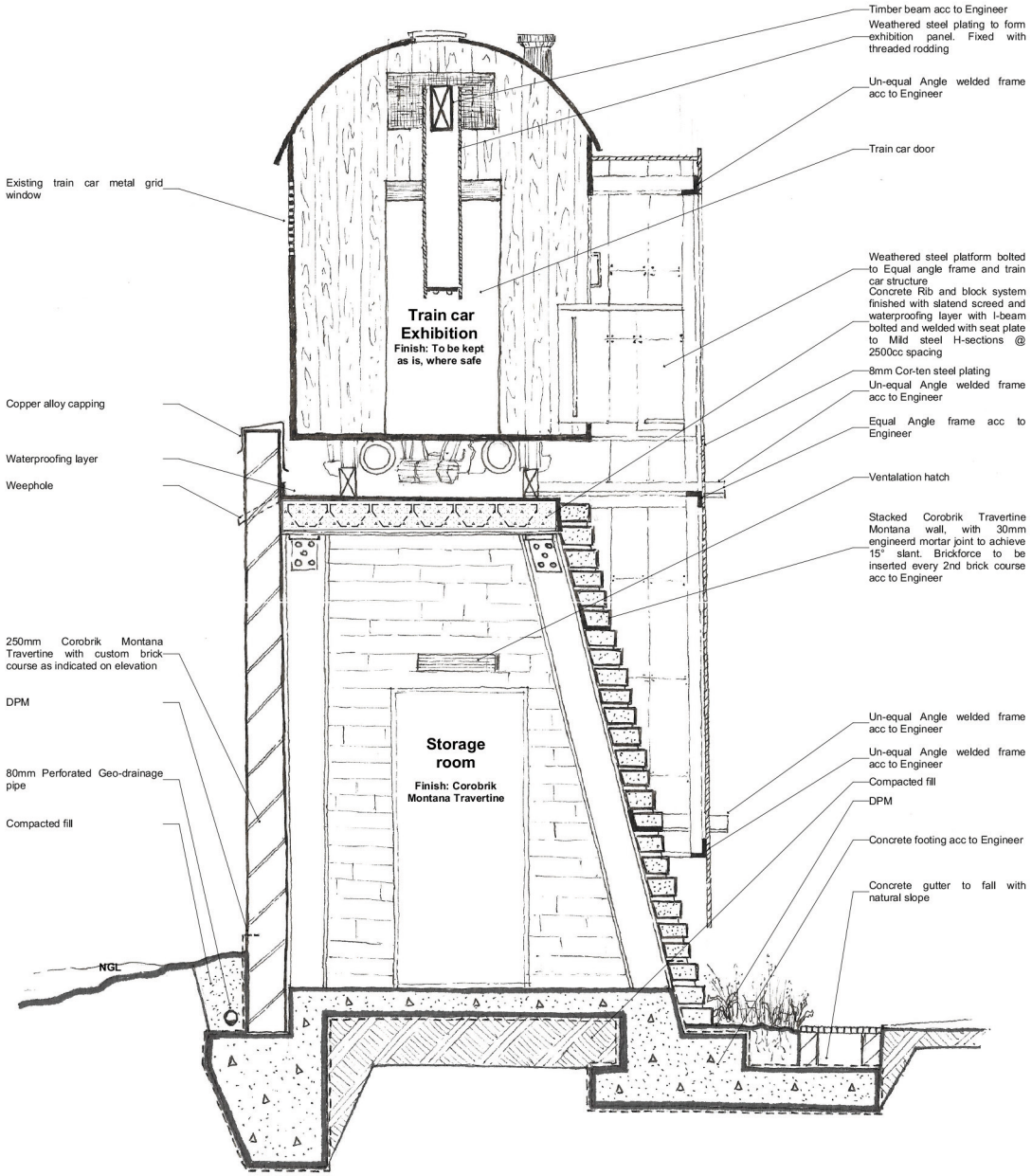
Checked: Nagesien:

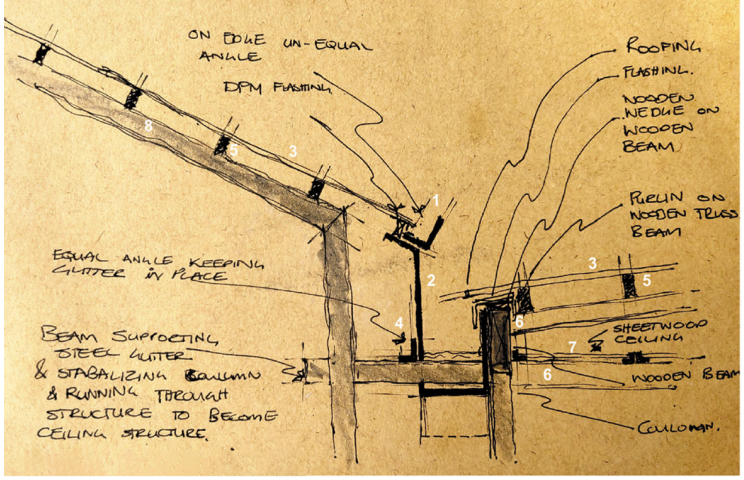
Drawing no: Tekeningnr:

Revision no: Hersieningnr:


serted into
1000x1000
ons, bolted
gles to be
ng
Steel gutter to be bent and formed on site as per suppliers specifications
Existing metal flagpole to be left alone
Steel pivot tower as made in factory off-site
Concrete guard tower 240x240 Sqaure steel column frame carrying tarp connected with custom alluminium brackets
175Ø Hollow circular steel column carrying on-site bent gutter
Steel gutter to be bent and formed on site as per suppliers specifications
120x85x3 Lightweightsteel truss system as per engineers and manufacturers specifications
Charred wood screening pannel attached to 74x114 purlin and 145x85 rectangular hollow section bolted into welded seat plate, bolted to concrete slab.
210x115 Rectangular hollow section planted with drilled pile foundation
Customized flatbar and 15Ø roundbar railing fixed to composite prefabricated floor structure
Steel gutter to be bent and formed on site as per suppliers specifications
300 Insitu-concrete wall with wooden finish
Rheinzink pre-Patina finished with Olive green matt coating acc. engineer and manufacturers specifications. Ended off with copper flashing as required
Re-purposed prisoner train cars
120 x 75 Steel rectangular sections welded to prefabricated ramp structure
Composite corrugated roof finish fixed to equal angle sections and bolted to brickwork
Customized flatbar and 15Ø roundbar railing fixed to composite prefabricated floor structure
Prefabricated 200x125x3 lightweight steel lipped channel and wood composite floor
Common brick bond Corobrik Black Tawertine FBX
Steel plating welded to I-beam column with 3 x 45Ø roundbar to support brickwork wall
Charred wood screen
Wire-mesh screen
W-01
Glazing Acc to SABS 0137
In-situ concrete wooden finish
Brick
1 500
1 000
700
940
800
1000
1200
1000 uPVC sp to fall 1:40
20001 Bio-rock pakage plant
11 Top of guard tower + 8000
10 Top of viewing tower + 7000
09 Top of roof + 6500
08 Top of roof + 5800
07 Top of roof + 5200
06 Bottom of tower covering + 4300
05 Top of screen + 3700
04 Top of brick wall section + 3000
03 Top of WC screen roof + 2800
02 Top of slab + 2500
01 Ground level + 0.000
NGL

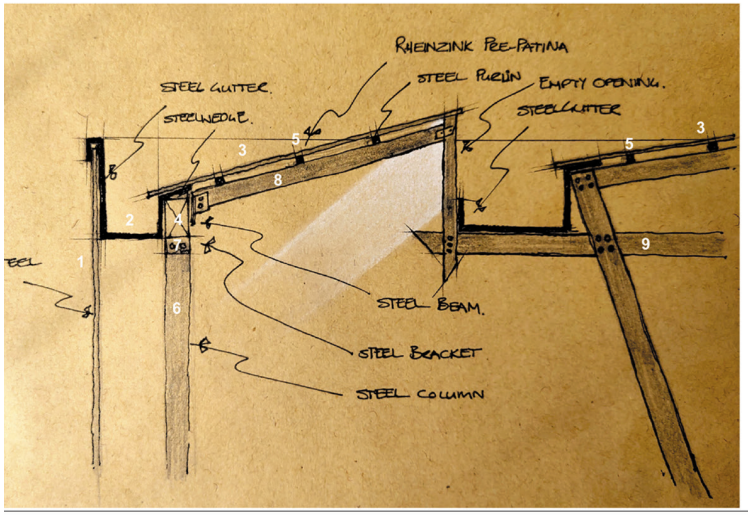

Concrete guard tower
Existing metal flagpole to be left alone
240x240 Sqaure steel column frame carrying tarp connected with custom alluminium brackets
Wiremesh screen to be inserted into 25x25 equal angle 1000x1000 prefabricated sqaure sections, bolted to eachother, equal angles to be finished with anti-rustcoating
Rheinzink pre-Patina finished with Olive green matt coating acc. engineer and manufacturers specifications. Ended off with copper flashing as required
120x120x3 Hollow square rectangular sections welded
210x115 Rectangular hollow section planted with drilled pile foundation
Re-purposed prisoner train cars
Gaps pierced into wiredmesh screen
Wiremesh openings
Strip window to be cut as specified by window schedule
Composite corrugated roof finish fixed to equal angle sections and bolted to brickwork
Corrugated sheeting
Rheinzink pre-Patina finished with Olive green matt coating acc. engineer and manufacturers specifications. Ended off with copper flashing as required
Meandering 250 sandstone walls
Wire-mesh screen
Brickwork
Roof of WWII museum
Roof of admin building
07 Top of column + 7800
06 Top of roof + 6600
05 Top of screen pod + 5700
04 Top of screen + 5000
03 Top of WWII museum roof + 4300
02 Bottom of WWII museum roof + 2800
01 Ground level + 0.000
NGL





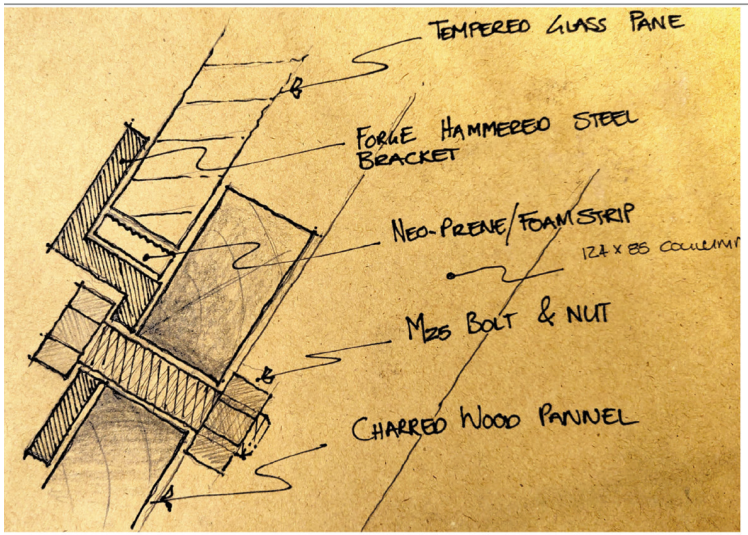
Admin external walkway roof section

1. Tilted unequal angle to form gutter
2. 8mm bent steel gutter
3. Rheinzink pre-Patina composite acc to engineer's and manufacturor's specifications
4. Equal angle welded to mild steel rectangular hollow sectoin to keep gutter in place
5. Steel purlin acc to engineers specifications
6.Mild steel rectangular hollow section
7. 3 Layer plywood ceiling resting in 35mm equal angle frames
8. Steel truss acc to engineer's specifications



Contemporary Vaalhardts exhibit roof section

1. Corten steel panneling
2. 8mm bent steel gutter
3. Rheinzink pre-Patina composite acc to engineer's and manufacturor's specifications
4. Mild steel hollow section beam
5. Steel purlin acc to engineers specifications
6.Mild steel rectangular hollow section
7. Steel bracket bolted to steel section
8. Steel truss acc to engineer's specifications
9. Timer trusses acc to engineers specifications



Glasss pane detail for restaurant

1. Tempered glass pane
2. Forge hammered steel bracket
3. Neoprene/ foam strip
4. M25 bolt and nut
5. Charred S.A.P timber sections

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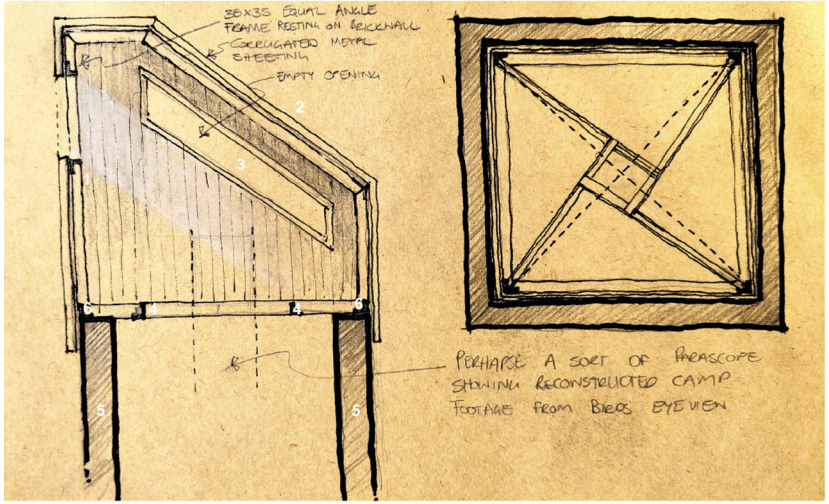
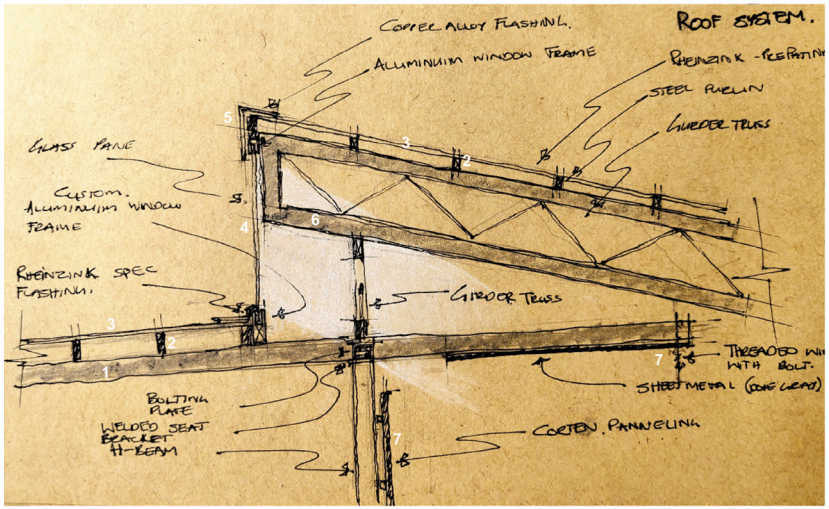
Department of Architecture

Drawing Title: Tekening-opskrif: **Train car Exhibition Section**		Scale: Skaal: **1:20**	Drawn: Geteken:
Project: Projek: **Prosthetic Re[member]ing**		Date: Datum:	Checked: Nagesien:
Areas: Oppervlaktes:	Erf: m² Existing Building: m² Additions: m² Total Coverage: %	Drawing no: Tekeningnr:	Revision no: Hersieningnr:



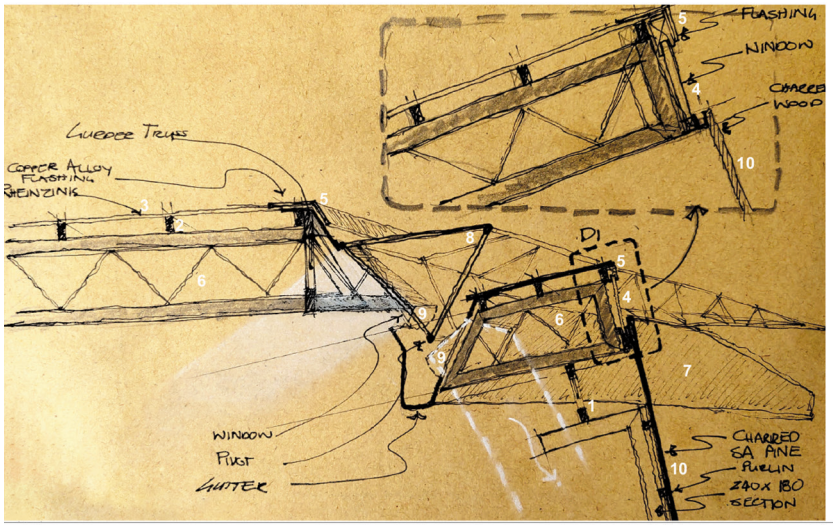
Guard viewing tower steel 'capping' roof structure

1. 35x35 Prefabricated equal angle frame
2. Corrugated steel sections
3. Empty window opening
4. 50x50 Prefabricated equal angle frame
5. Corobrik Black Travertine FBX 300mm thick wall
6.50x50 Prefabricated equal angle frame bolted to brick wall



WWII Museum roof clerestorey section

1. Mild steel rectangular hollow section truss acc to engineers specifications
2. Steel purlins acc to engineers specifications
3. Rheinzink pre-Patina composite acc to engineer's and manufacturor's specifications
4. Glass pane acc SABS 0137 guidelines in aluminium window frame
5. Copper alloy flashing
6.Mild steel rectangular hollow section truss with 15mm steel rodding reinforcement
7. 15mm steel alloy sheeting attached to truss with threaded rodding



Guard's exhibition space roof section

1. Mild steel rectangular hollow section truss acc to engineers specifications
2. Steel purlins acc to engineers specifications
3. Rheinzink pre-Patina composite acc to engineer's and manufacturor's specifications
4. Glass pane acc SABS 0137 guidelines in aluminium window frame
5. Copper alloy flashing
6.Mild steel rectangular hollow section truss with 15mm steel rodding reinforcement
7. 8mm custom on-site bent steel gutter
8. Pivot tower constructed in town factory
9. Window openings
10. S.A.P charred timber

SafeAssign Originality Report

ATRE7904 MAIN On • Document Final Submission

Waldo Coetzer

Submission UUID: c3b0e0a3-32d0-3899-2124-107992bddb72

Total Score: Low risk 1 %

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Attachment 1 1 %

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4 *dokumen*
1 *dokumen*
2 *dokumen*
3 *dokumen*

Top sources (3)

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4 *dokumen*
1 *dokumen*

Excluded sources (0)