

The third chapter focuses on the theoretical premise in relation to a journey/route through Magazine Hill that was undertaken by the author in 2010. This approach brings the theoretical discourse in direct dialogue with the contextual realm.

Chapter 3 - Theoretical Discourse

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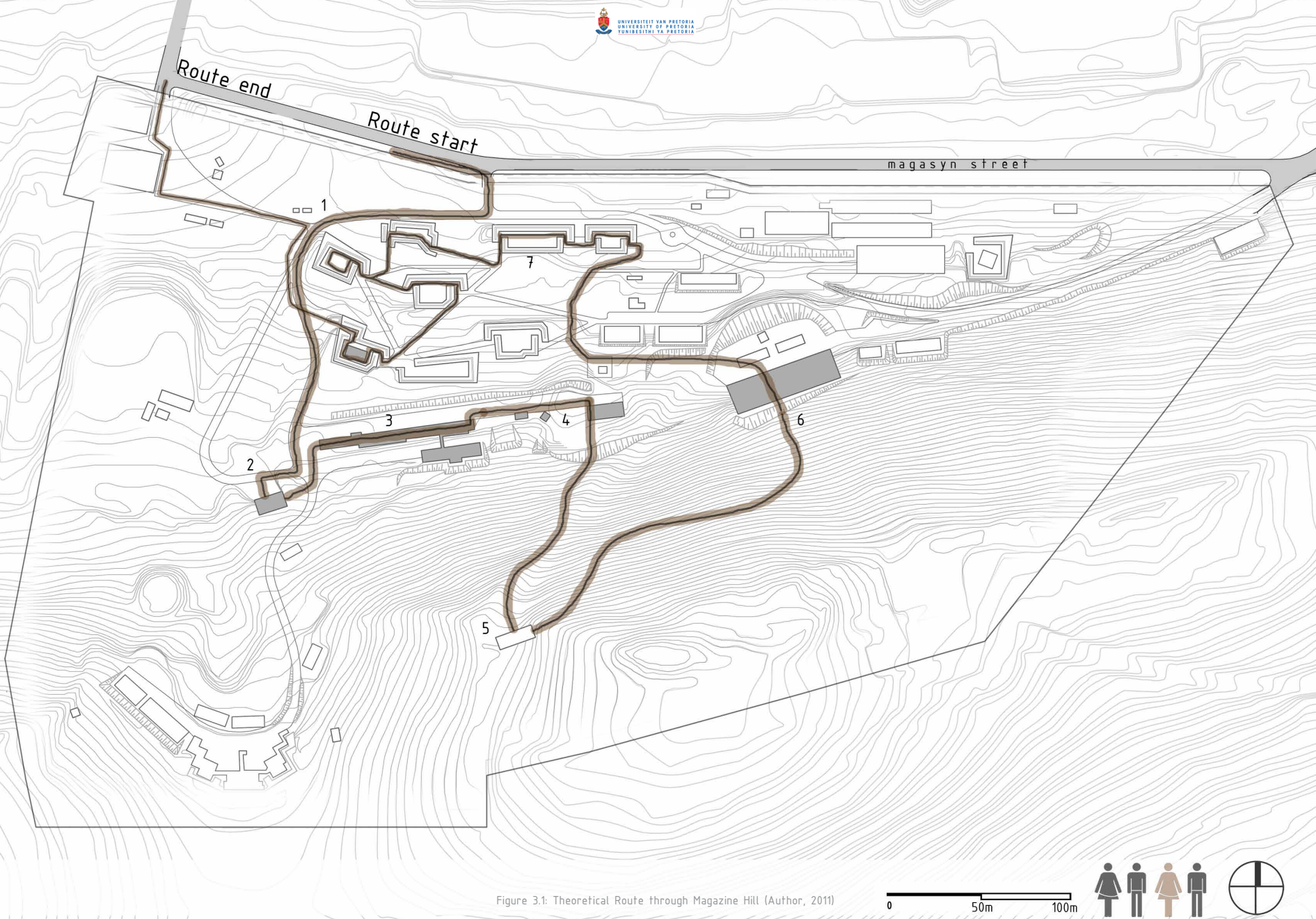


Figure 3.1: Theoretical Route through Magazine Hill (Author, 2011)

0 50m 100m



Theoretical Discourse

The theoretical premise is explained by means of a route, a single journey through the realm of the forgotten, a journey undertaken at the end of 2010 through the abandoned site of Magazine Hill. This expedition led to the discovery of spaces and artefacts frozen in time, haunted by a tragic event that concluded the finality of its existence.

In this expedition a number of theoretical discourses are explored in relation to the site. By this means, a clear connection can be drawn between the theory and the proposed context. Throughout this chapter, theories are explored within 2 major theoretical themes. The first theme investigates architecture's relationship with time, and the second premise examines the concept of weathering in architecture.

Upon arrival, a spirit of isolation was immediately sensed. For more than a 100 years the site functioned in secret remoteness, for it was the terrain's duty to remain veiled. After the explosion, when all activity abandoned the site, Magazine Hill got trapped in a single moment in time, for it was the activity of ammunition production that kept the site alive. As time passed, the architecture became archaic, because of the fact that the fabric represents a single time frame, a time of intense military activity and war, when unrest reigned in South Africa.

route part 1:
architecture and time

Throughout the history of architecture the different perceptions and interpretations of time have influenced the progression in architectural thought. By studying the transformation of historical churches, from the rectangular early Christian basilica of Old St. Peter's to the central-plan church of San Vitale, it is evident that the perception of time shifted from a linear sense of progression through time, to a cyclical sense where circular structures symbolise the infinity of time (Flemming, 2005: 129). Karsten Harries describes architecture's relation to time as an age-old "terror of time", where in ancient times memorials and shrines of massive scale were constructed to address the concept of immortality (structure transcending though time), or in industrialism, where the machine was invented to save time (Field, 2009: 9).

This relationship between architecture and time became a conceptual focal point of the Modern movement. In the Modern Era, architecture has become a symbol of the present, rejecting the tradition of the neoclassical. In a sense, architecture failed to recognise its own mortality (Field, 2009: 19). This abandonment of the historical influence separated architecture from its evolutionary state and its potential to build on a previous frame of reference. This drastic paradigm shift is aimed at creating collective architectural solutions for all countries and climates with one preset rule for functionality and aesthetic value. With the rejection of the past, architecture became a static, frozen object, commemorating only the present, with no actual reference to the past or future. The static character of Modern architecture in the continuum of time relates back to the stagnant quality of Magazine Hill's architectural heritage, frozen in a singular time frame.



Figure 3.3: Arriving at Magazine Hill (Author, 2011)



Figure 3.2: Map of Route 1 (Author, 2011)

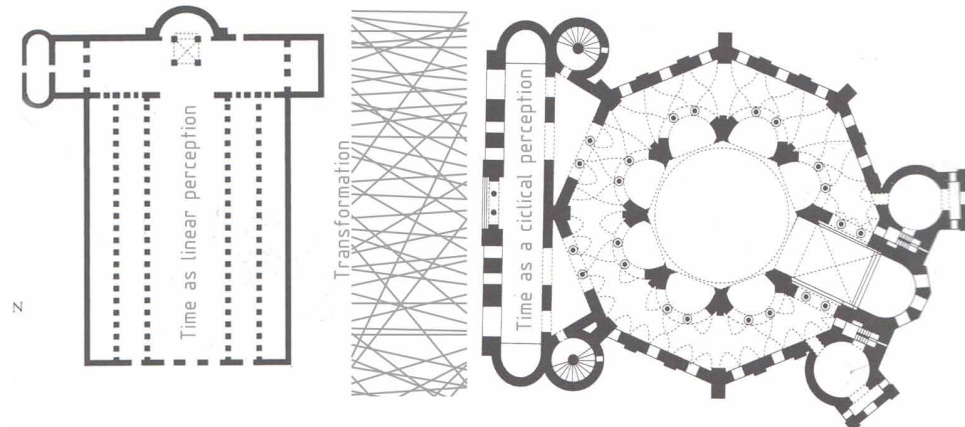


Figure 3.4: Perceptual change of time (Flemming, 2005: 125, 128, edited by Author, 2011)

As one ascend up the hill of the main ring road, the site opens up to reveal the Green Magazine, an impenetrable piece of military architecture built into the hill, exposing only the defensive stone wall that forms the entrance to the structure.

According to Juhani Pallasmaa (2000: 13) building materials/ matter also exist in strong relation to time. Each set piece of material type in the embedded fabric of architecture speaks of different geological origins, presenting its characteristics in structural support or aesthetic function. Pallasmaa (2000: 14) states that stone speaks of stability, symbolising a durable state of permanence or transcendence through time.

Directly to the east of the Green Magazine, the dust road leads to the Flame Tracer building, where armour piercing ammunition was produced in 1942 (NMDA, 1945: 2). The roof has not been repaired after the massive explosion, while sun rays penetrate the structure through the deteriorated roof beams, illuminating the weathered walls. Afrikaans descriptions on the interior surfaces guide one through the length of the building, presenting the historic method of ammunition production. The experience of the Flame Tracer Building relates both to the present (the sensory experience of the mysterious abandoned space) and to the past (the process of ammunition production). The progression through these consecutive spaces enables one to perceive time on different levels.

Enric Miralles (2011: 21) stated that successful commemorative architecture, addressing the continuum of time, functions on 2 different layers of time. The first layer is experiential time that is directly related to the present. This layer is governed by movement and route, while further enriched by sensory experience. The second layer consists of referential time, where experience evokes memories and time frames past (Makenzie, 2011: 17-24). According to Miralles (2011: 23) it is in the referential layer where the individual can escape from reality to memory.

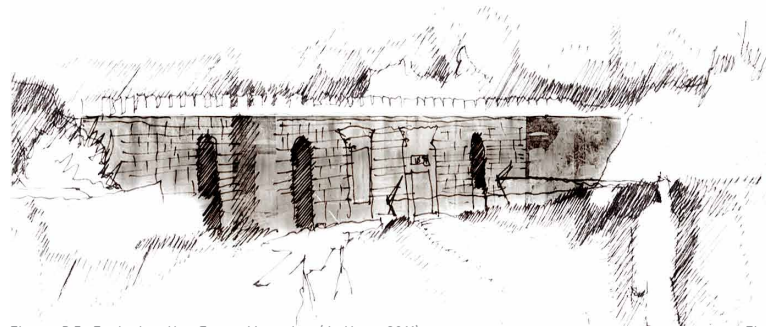


Figure 3.5: Exploring the Green Magazine (Author, 2011)

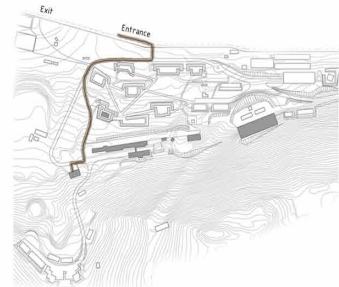


Figure 3.6: Map of route 2 (Author, 2011)

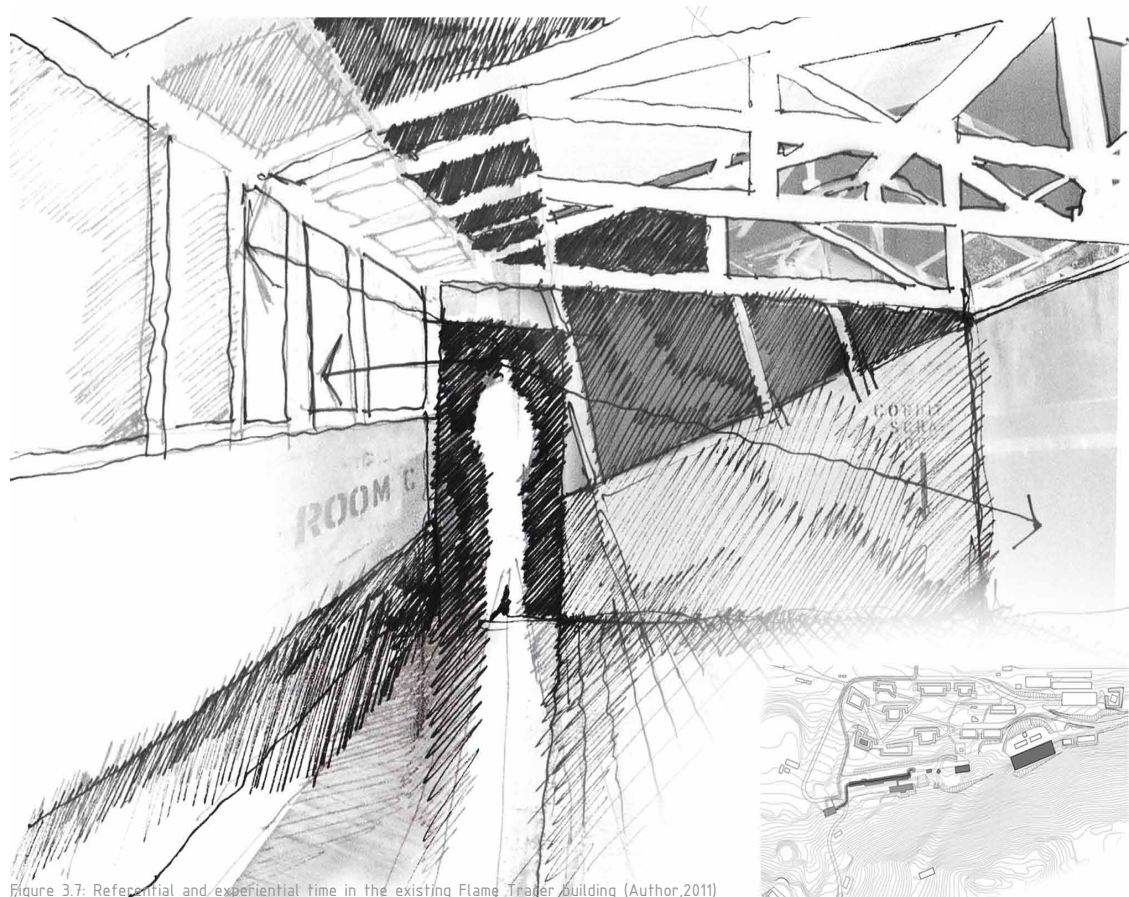


Figure 3.7: Referential and experiential time in the existing Flame Tracer Building (Author, 2011)

route part 4: The temporal layers of time

Upon exiting the Flame Tracer building, the dirt road continues east, passing exposed foundations of completely destroyed buildings and staircases that lead into the veld on the hill. These paths had failed to be remembered, for they lead into the unknown. The road ends at the old MRG3 Kitchen building where a large boulder had crashed through the northern wall. Again different temporal layers of time are present through the experience of the interior.

Luke Filed explains that in order to become aware of the passage/movement of time, one must engage with the 7 temporal layers or perceptions of time (Field, 2009: 47). The first layer deals with the event, the single moment of action experienced in isolation or through interaction with other individuals. This first layer is temporal and time is reduced to seconds and minutes.

The second layer addresses daily cycles, which is the first layer where the movement of time is observed through variances in light quality (movement of sun and shadow) and temperature (morning to evening). According to Field (2009: 51), technology is separating architecture from this temporal layer, by introducing mechanised space that regulates thermal comfort in terms of temperature, ventilation and light qualities. This temporal layer functions within a daily basis, therefore time is reduced to hours and days (Illus. 30). The third layer acknowledges seasonal cycles, where time can be read by looking at the length of the light ray against the wall, and the time of year by observing the angle of the ray (Field, 2009: 54-55). Magazine Hill is in a strong relationship with the seasonal temporal layer, for each rain season reveals mortar shells and unexploded ordnance that have been veiled under layers of soil and grass (Fig. 16). This places the site in a dialogue with the seasonal dimension in the continuum of time. The fourth and final layer that is applicable to the passage of time on Magazine Hill, is the temporal layer of generations. In this layer time is reduced to years, where the different influences of different generations become eminent by studying the composition of architectural fabric (Field, 2009: 54-55). This stratum of time is embedded in the framework of the site and presented through the development of the terrain (Illus. 31). By studying this layer, one becomes aware that Magazine Hill was the cross point of Boer, British and Black, each adding its own addendum to the ominous presence of the site.



Figure 3.9: Magazine Hill in relation to the daily passage of time, shadow lines depict daily time (Author, 2011)

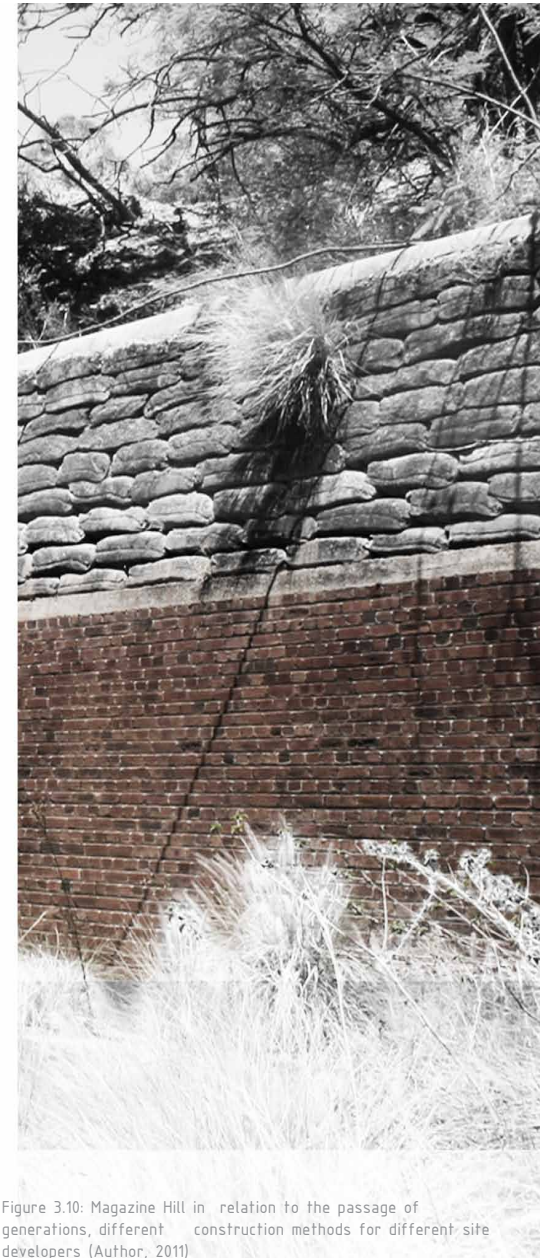


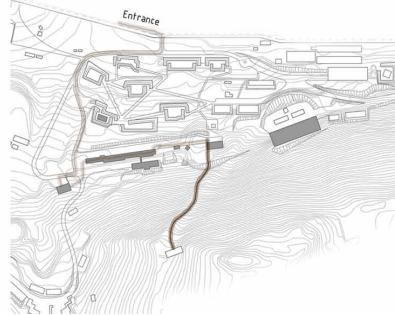
Figure 3.10: Magazine Hill in relation to the passage of generations, different construction methods for different site developers (Author, 2011)

From the MRG3 building the journey continued to the peak of Magazine Hill, where only the ruins of Fort Commeline bore testimony to all the events that formed the history of the site.

Figure 3.11: Fort Commeline ruins (Auhfor, 2011)



Figure 3.12: Map of route 5 (Author, 2011)



The sense of dereliction and ruination of the structure places strict emphasis on the abandonment of military formations throughout the world, for their inherent characteristic of tension and war makes them irrelevant in contemporary society. Still, their durability of architectural fabric lets them transcend through time. The Shivering Sands Army Fort Towers, located along the Thames River in England also form part of this realm of dereliction, despite its strong relation to heritage and significance relating to the Second World War. The towers were designed by Guy Maunsell to withstand German assaults along the river, protecting the United Kingdom's capital at all costs. After the British forces abandoned the towers in 1958, this naval site also got trapped in a single moment in time, similar to the structures on Magazine Hill.

Why does abandoned architecture have the same smell of death everywhere? Is it because the smell we sense is in fact one created through our eyes? (Pallasmaa, 1986: 453)

In the Geometry of Feeling (Pallasmaa, 1986: 452), an article that studies the phenomenology of architecture, Juhani Pallasmaa states that architecture exists in a secondary realm that is separated from the everyday. This realm includes the emotional forces of ruination and abandoned architecture that evokes the imaginary. The primary feelings of architecture create effect and ambiance that transcends into the metaphysical realm, re-establishing architecture's connection to the dimension of time. These primary feelings of architecture are also greatly influenced by multi-sensory experience (Pallasmaa, 1986:p448-453). By making sensory experience part of the interpretation of architecture, not only the realm of the imaginary is entered, but also the realm of time. By experiencing the texture of weathered space and smelling the decay of fabric, the dimension of time is breached as one relates back to the history of the structure by means of referential experience. The atmosphere of abandoned architecture is thus a function of both referential and sensory experience.



Figure 3.13: The Shivering Sand Army Fort Towers in the Thames river, 1943 (Gutteridge, 1994)



Figure 3.14: Aerial view looking down at the defence towers (1943) (Gutteridge, 1994)

route part 6:
Phenomenon of landscape

From the summit of Magazine Hill one descends through the thicket of Lantana plants, discovering mortar shells, bent structural beams and remnants of what used to be the Central Magazine. Further down the mound the route stops above a crater in the hill, a hole in the landscape where the Red Magazine exploded. Throughout time, the landscape had been inhabited, formalised and scarred, but still functions according to the intangible laws of nature. Since the tragic event in 1945, Magazine Hill is still in a process of natural healing. Each rain season uncovers unexploded ordnance on the hilltop above the crater, which is then removed by explosive specialists (personal communication Du Plessis, 19 November 2010). When the next rain season manifests, undiscovered ammunition is again concealed to be exposed and removed in the next natural cycle. In this sense the landscape consists of different layers of information and artefacts that are found to be trapped in a conceptual continuum of revealing and concealing.

The Norwegian architectural theorist, Christian Norberg-Shulz (1976: 414) states that the landscape consists of many layers of phenomena that exist in relation to other layers, ultimately creating 'place'. The landscape can thus be considered as a comprehensive phenomenon or construct. By understanding the arrangement of the different phenomena, one is able to determine environmental quality and spatial atmosphere in relation to time and historical events (Norberg-Shulz, 1976: 414). In essence Norberg-Shulz is analysing the genius loci (spirit/character) of place, through understanding the structure and arrangement of the different phenomena (temporal layers).

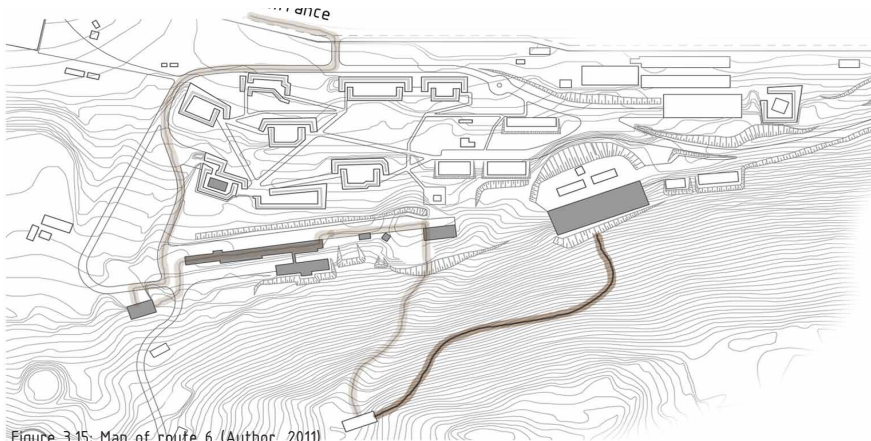


Figure 3.15: Map of route 6 (Author, 2011)

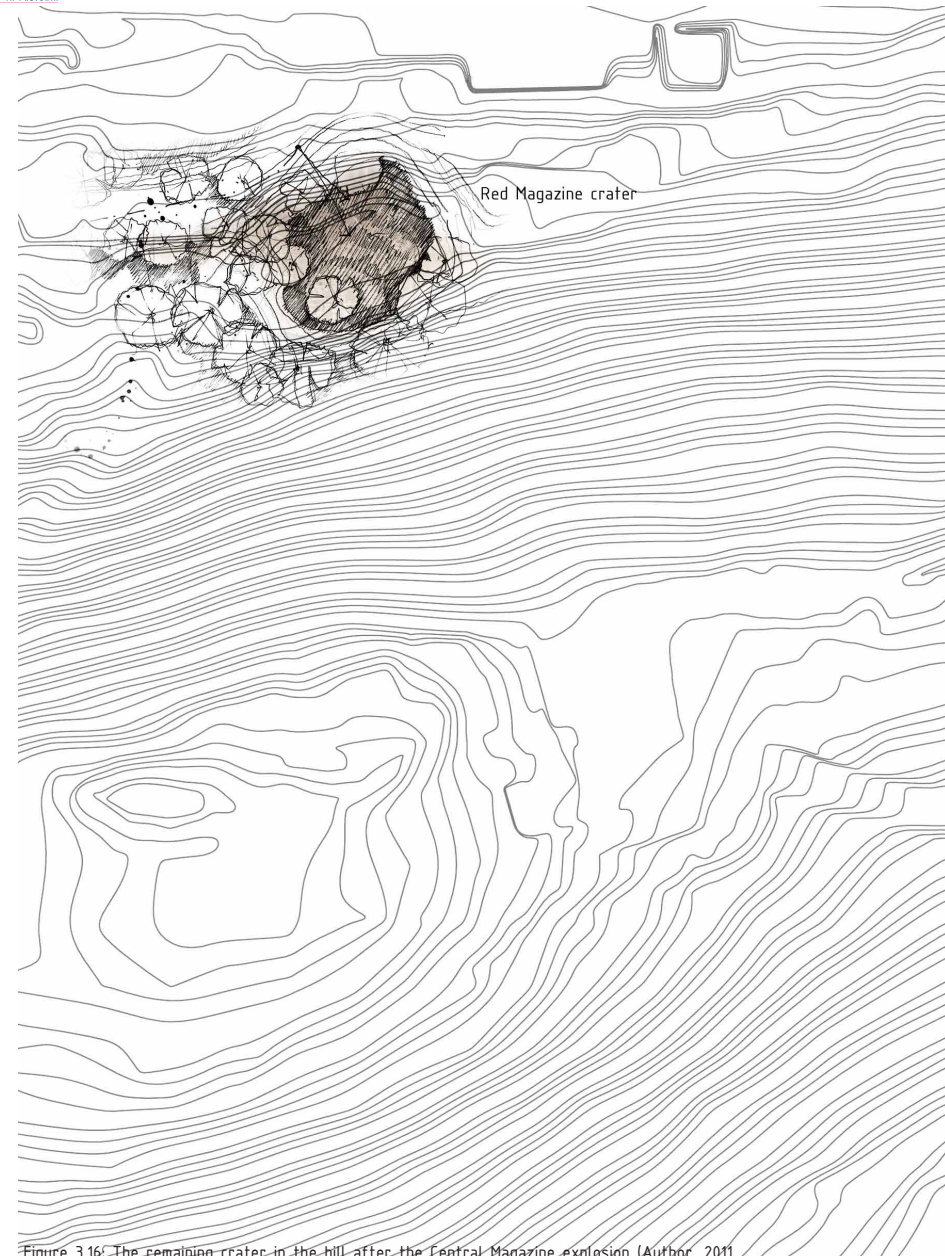


Figure 3.16: The remaining crater in the hill after the Central Magazine explosion (Author, 2011)

route part 7: The forces behind ruination

From the crater the journey through Magazine Hill continued to the ammunition bunkers, where the bomb and shell filling facilities were located, hidden within the landscape. The route forms a labyrinth, a series of wagon roads that open up into hidden, submerged spaces. From within the sunken rooms the overhanging trees form a natural canopy that defines the space vertically. The stereotomic character of the ammunition bunkers speak of a permanent language, transcendence, and immortality. On the other hand, severe weathering accompanies these structures, exposing the porosity of the stone. This aspect symbolises a duality and contradicts the concept of the structure's immortality. The passing of time is thus presented through the process of weathering and decay, confirming the structure's existence in the continuum of time.

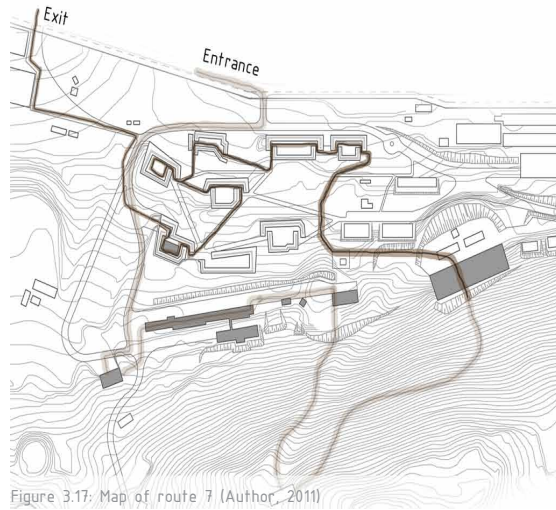


Figure 3.17: Map of route 7 (Author, 2011)

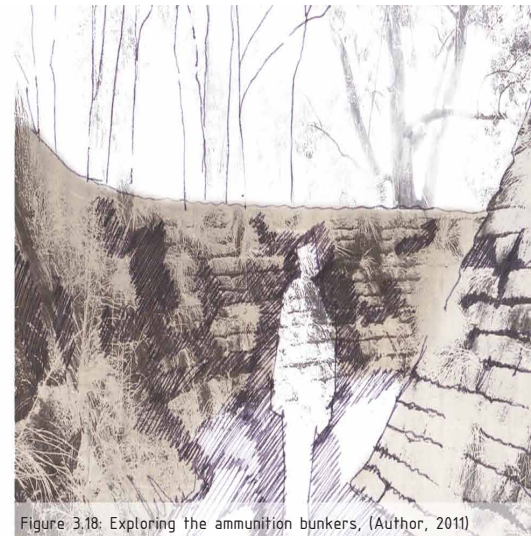


Figure 3.18: Exploring the ammunition bunkers, (Author, 2011)

The erosion of a surface through weathering exposes newer surfaces of the same material in its depth, at once the erasure of one surface and the revelation of another. Exposure also involves sedimentation and the gathering of residual deposits, the combination of which –subtraction and addition– is a testimony to the time of the building. In this sense architectural duration implies a past that is caught up in the present and anticipates the future (Leatherbarrow & Mostafavi, 1993: 64)

Throughout the history of architecture, the process of weathering has been considered to have a negative impact on design. This statement is supported by the early Modern's ideal with whiteness, which Le Corbusier referred to as The Law of Ripolin (Leatherbarrow & Mostafavi, 1993: 72). This law was grounded in 2 main arguments. The first debate critiques the idea of the house as a museum that accumulates dead objects. The second argument comments on the physical accumulation of residual deposits, brought on by the process of weathering (Leatherbarrow & Mostafavi, 1993: 72–74). Although Le Corbusier rejected the possibilities of architecture persisting in time through the process of aging, Venetian architects designed for the anticipation of weathering. The Pallazzo Ducale, Venice (1340–1419) by Filippo Calendario proved that weathering can productively transform a structure over time. In the tectonic resolution of Pallazzo Ducale's building facades, imbedded gutters around openings allow rainwater to stain the white Venetian finish. In this case the whitewash was invented to create simultaneity of light and shadow (Leatherbarrow & Mostafavi, 1993: 39)



Figure 3.19: Pallazzo Ducale, Venice (1340–1419) by Filippo Calendario displaying design anticipating weathering (Leatherbarrow & Mostafavi, 1993: 40)

Mostafavi and Leatherbarrow's theoretical discourse is also present in the De Bijenkorf Department Store, Rotterdam (1955–1957) by Marcel Breuer. Carlo Scarpa's Brion-Vega Cemetery, San Vito di Altivole (1970–1981) is another example where the building anticipates the change of materiality in the continuum of time (Leatherbarrow & Mostafavi, 1993: 98). Tectonic resolution includes the addition of slits and cuts into flat facades, where the weathering and staining of architectural surface conclude the finishing detail of the building. Scarpa's window details for the Banca Popolare in Verona, also express the relationship between time and decay by embedding rain water drips that promote water staining into the building facade, to showcase the effect of time on architectural surface.

The processes of weathering and decay of built fabric form an evidential platform that proves the fact that architecture persists in time. Enric Miralles further states that the passing of time further enriches sensory experience of space, through the process of weathering (Makenzie, 2011: 17–24). This statement presents the fact that weathering reconnects architecture to a temporal dimension, as well as the continuum of time. In this sense, age related deterioration confronts architecture with its mortality and the necessity of change.

This relationship between architecture and time stresses architecture's dependency on time. The one cannot exist without the recognition of the other. Hapticity and Time (2000:76), an article by Juhani Pallasmaa concentrates on the fact that contemporary architecture has lost the connection with the ephemeral dimension of time. David Leatherbarrow also comments on this statement, by proclaiming that contemporary architecture is disregarding the passage of time by not incorporating the transformation of architectural materiality, into the design process.

In the Past is a Foreign Country (Loventhal, 1985:84), the author proclaims that history is the vessel for understanding the present. To expand on this theoretical assertion, one can state that the past and the present are separated in time but unified through weathered space. Therefore decay in architecture can breach the time divide, addressing both experiential and referential time. Furthermore, by incorporating the anticipation of weathering into design, the limited life spans of contemporary architecture can be addressed in a tectonic sense.

The Greek term, *techne*, does not refer to art or craftsmanship, but to make something appear within what is present (Heidiger, 1997). The historical layers of Magazine Hill will in the same sense be explored and unravelled through time, exposing different layers of significance within the present fabric. One architectural intervention cannot present and preserve all inherent phenomena, but can take the first drastic step to initiate a dialogue with the intrinsic memory of Magazine Hill. As the journey comes to an end, and one leaves the last submerged bunker, the realisation occurs that memory has just been experienced, on a multi-sensory level, evoking the imaginary, relating to both experiential and referential time.

In construing an architectural project, the introduction and consideration of the time of weathering brings the project closer to a condition of actually based on its potential transformations through time...weathering brings the virtual future of a building into dialogue with its actual present, as both are entangled in its past. (Leatherbarrow & Mostafavi, 1993: 112)



Figure 3.20: Tectonic detailing anticipating weathering at Brion Cemetery (Leatherbarrow & Mostafavi, 1993: 102)

Is it possible that weathering is not only a problem to be solved, or a fact to be neglected, but an inevitable occurrence, to be recognised and made use of in the uncertainties of its manifestation? (Leatherbarrow & Mostafavi, 1993: 16)

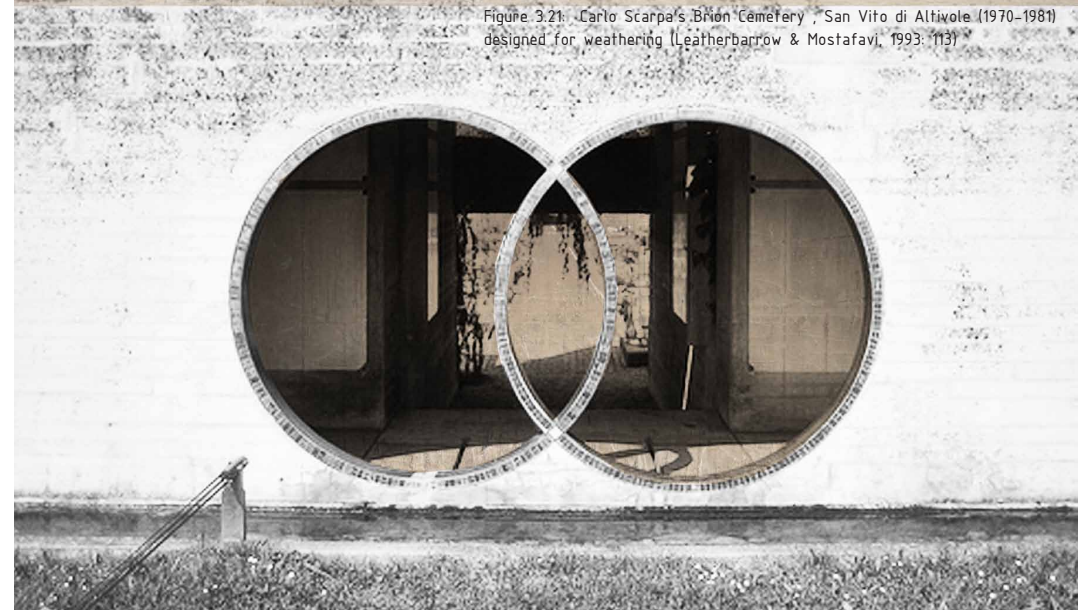


Figure 3.21: Carlo Scarpa's Brion Cemetery, San Vito di Altivole (1970–1981) designed for weathering (Leatherbarrow & Mostafavi, 1993: 113)