NECROPOLIS

BURIAL & AFTERLIVES IN CAPE TOWN

University of Cape Town

ALEX MAGGS
MGGALE003

DESIGN
DISSERTATION
DOCUMENT

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MASTER OF ARCHITECTURE
(PROFESSIONAL)

UCT

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University of Cape Town

Necropolis: Burial & Afterlives in Cape Town

(cover)
A1

Alexander Maggs

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A2-3
David Goldblatt
Jewish Cemetery in Sutherland, 2007
Graves of Cradock 4, 1985
SA

ABSTRACT

Necropolis is a proposal for a public burial and memorial park in Cape Town for obliterated (cremated, aquamated etc) and bone remains. It explores an architecture for the final farewell to the body and spirit of the deceased, and for personal and collective remembrance.

In contrast to other South African Cities, Cape Town is unique for the popularity of cremation, which accounted for 40% of recorded burials in 2019. Architectural responses however are often piecemeal. Burial places were once part of cities' symbolic centres, and mortality understood as an inevitable spiritual journey. During modernisation however, they were exiled to cities' peripheries, far from people's everyday lives.

The chosen site is in Deer Park, at the edge of the City Bowl, through which runs a perennial stream linked to the city's historical centre. The Park has a varied heritage landscape which the design situates itself beside, together constituting a landscape of remembrance. The programme explores a secular spiritual and sacred response to burial, grief and memory. The architectural language explores a stereotomics of brick, stone and rubble in dialogue with the ground and Earth.

The primary methodology is speculative design, through hand sketching, photographing, mapping, collaging, modelling, digital modelling and rendering. Design thinking is supported by a varied literature review: firstly a collection of Cape Town and colonial European burial histories and practices. Secondly, a phenomenology of the ground, geology, and stone and rubble building. Thirdly, precedent studies of sacred and burial architecture, supported by analysis through drawing.

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Student Name: Alexander Maggs
Supervisor Name: Stella Papanicolau

This dissertation is presented as part fulfilment of the degree of Master of Architecture (Professional) in the School of Architecture, Planning and Geomatics, University of Cape Town
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A4-5
Potters field mass inhumation of unclaimed remains from Covid-19 and AIDS
Hart Island, New York, USA

PREFACE

During my practical year in 2020 I chose to study the Prestwich Memorial in Greenpoint as part of my application to the BAS Honours course. I had begun studying sacred architecture for the design of my final undergraduate project. Prestwich introduced me to the death and burial aspects of the sacred, and their relation to history and heritage.

My family are not religious, but rather a mix of atheists and spiritually inclined. While I share their political and metaphysical rejection of religion, there are several aspects I nonetheless respect. Most, if not all religions, provide a framework for confronting the major events of the human condition. Birth, coming of age, weddings, community, conflict and death. Significantly, they provide a place, an architecture, for these events. These spiritual and sacred concerns, which need not be the monopoly of religious organisations, are impoverished in our secular world.

When I initially chose the topic for my dissertation I had no idea what the final design might look like, or even what burial cultures or practises I might cater to. I was vaguely interested in burial buildings like ossuaries and columbariums, and in cremation, which is the primary - but not sole - practise in my own family and social sphere. Intuitively I found it necessary to begin by tracing as many of the histories of burial in Cape Town, from the pre-colonial to the present decade, in order to understand the predicament of burial today. Once I had done this, and to some extent located myself and my own subjectivity in this bigger picture, I began to develop a purpose and programme for my own design. What can enrich

the City, what does it need, and what I can meaningfully offer? Also what can I do in the amount of time I have.

In the end I decided not to write about grief. Grief is so varied and idiosyncratic that trying to write about it in a general fashion can be misleading rather than useful - which was the case I found with the academic literature. I have however drawn on art - especially novels and films - and my own experience to inform my work. Novels, literary language and literary voice especially have been some of the most powerful inspirations for my imagination and thinking over the past several years.

In the last three years my family lost my uncle and grandmother (and our family dog of 15 years). Perhaps the experience of grief and having to reconstruct our lives has influenced this topic choice in some way, though not consciously. In discussing it with my Father though, he reflected that it would bring solace if there were a meaningful, secular, sacred space we could inter and revisit their ashes.

I give thanks

To my supervisor Stella for her guidance, insight and generosity

To my friends, peers and teachers in Centlivres, present and past, for their inspiration and support

To my Grandparents

To Mum and Dad for their love, nurture and inspiration

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INTRODUCTION

> *"Carme had said on more than one occasion that if she died in Chile she wished to be buried in Spain, where her husband and son Guillem were laid to rest, but if she died in Spain she wanted to be buried in Chile, to be near the rest of her family. Why?... it wasn't simply a joke, it was the anguish of divided love, separation, of living and dying far from one's loved ones.*
>
> *...*
>
> *Victor bought a plot in the cemetery big enough to accommodate not only his mother, but Jordi and possibly his father's remains, if in the future they succeeded in bringing them from Spain. He realised that from this moment on he belonged definitively to Chile. "Our homeland is where our dead are buried," Carme always used to insist." (Allende, 2020: 230-231)*

In her novel *A Long Petal of the Sea* (2020), Isabel Allende narrates the story of the Dalmau family who flee Civil War Spain and after a traumatic journey begin new lives in Chile. The story explores themes of belonging, family, citizenship and identity. For Victor Dalmau, it is the burial of his family, not a passport or even a house, that symbolises citizenship and rootedness in his new homeland.

By 2050 it is projected that 75% of the world's 9.7 million people will live in cities (Burdett et al, 2007; O'Neill, 2020). It is the age of the megacity, and these millions will need to be buried. Cape town has an "alarming... growth... characterised neither by coordinated direction and management, nor by alignment with infrastructure provision, capacity,

and appropriate spatial planning" (Ewing & Mammon, 2010: 45). Its growth is mainly peri-urban sprawl, far away from established, well-resourced urban nodes and corridors. Almost all existing burial places are full, and new ones are being constructed in a similar fashion to the city's broader growth - at the extreme peripheries. The result is a growing placelessness and loss of meaning.

What is a necropolis? *Polis* is a Greek word for a city-state, or more specifically its society of citizens (Vlassopoulos, 2007: 68-81). It is a social space located in the landscape. Use of the word emphasises cities, not just countries or movements, as fundamental socio-economic forces. *Necro* means death - hence 'city of the dead'. It can be used to refer to a place in the city, a layer of it (all sites of a kind in the city), or the city itself.

This dissertation is interested in public burial, but discusses private (like family graveyards) and monumental (like statesmen's and saints' mausoleums) burial where relevant. In response to the predicament of burial in Cape Town, it focusses on alternatives to normative inhumation, specifically obliteration (cremation, aquamation, etc) and the secondary interment of bone remains. Once in dialogue with a particular site - host to its own histories and heritage - opportunities arise for remembrance beyond the private and individual, to include public and collective memories.

The first section of this document VITAMINS & INSTRUMENTS includes

three essays on theory and method which inform the following work. The second section BURIAL CULTURE begins with an overview of burial practises and meanings globally. Next a theoretical lens for studying burial, followed by a documentation of major burial cultures and their practises in Cape Town. Lastly a selective history of the modern cemetery - its origins in Northern European modernity, its application in Cape Town, its effects, and the state of burial in the present decade. The third section BUILDING CULTURE begins with a theorisation of architecture and modernity and some commonalities with mortality and burial. Next a theorisation of stone and rubble as building materials with a study of construction methods, local geology, and precedent. Lastly are several precedent studies of landscape, sacred and burial architectural works which inform the design response. The fourth section SITE documents the process of site choice, an analysis of the site and its context, and lastly histories of the site. The fifth section DESIGN DEVELOPMENT documents some of the initial design ideas and their development, and ends with a reflection (in place of a conclusion). The sixth section DESIGN RESOLUTION - to be included in the final November/ December version of this document - will include the final design proposal. At the end is a summarised LEXICON, which is also part glossary. It is an ongoing exercise like the mapping. Readers need only visit it for specific terms where necessary.

A6-9
Modern burial
Singapore

VITAMINS & INSTRUMENTS

DUALITIES (& HYBRIDS)

> *"an architecture of complexity and contradiction has a special obligation toward the whole... It must embody the difficult unity of inclusion rather than the easy unity of exclusion."* (Venturi, 1966: 23)

Much of the world is or has been divided into opposing pairs: day and night, ground and sky, living and dead. Binaries, which separate pairs into mutual exclusivity, are a common but misleading, and often destructive concept. The simplicity of a binary makes it easy to understand, but problematic when faced with the "complexity and contradiction" (Venturi, 1966) of the world. Dualities, or to use Gilles Deleuze and Felix Guattari's term 'twofold', reframe these pairs as "co-exist[ing] in a mixture rather than a dialectic relation" (Dovey, 2010: 22). Deleuze and Guattari critique Western metaphysics's "privileging [of] stable identities" - home over journey, identity over difference (Dovey, 2010: 22). Duality "as process, congealing in moments of fixity" (Roy, 2001: 232). "[B]eing emerges from becoming, identities from differences" (Dovey, 2010: 22). "The task is not to decide between an architecture of roots [home] or wings [journey] but to understand that it is always both" (Dovey, 2010: 24). In practice it is about taking a "both-and" (Venturi, 1966: 23) attitude.

Sometimes what is construed as a pair however, is actually a spectrum or plurality. Dualities are useful alternatives for moving away from binaries, but there are other useful concepts. Hybrids are individual entities, as opposed to pairs, that are "fluid rather than fixed, syncretic rather than singular" (Roy, 2001: 232), embodying a plurality of qualities or identities.

NATURE IS A PROBLEMATIC WORD

> *"Go forward, break radically with the past and the consequences will take care of themselves!"* (Latour, 2008: 3)

Architecture and building necessarily have a relationship with the Earth and with nature. By extension they then play a part in the environmental destruction that characterises the Anthropocene. That this project further addresses burial and landscape makes a consideration of this relationship especially relevant.

Modernity is a central theme in this project. Briefly, it is the product of the Enlightenment and Industrial Revolution. Modernisation is the application of a specific socio-economic agenda to a society, intimately bound up in colonialism and imperialism. It entails a shift from worlds that are typically religious, communal and dominated by natural forces and flows (like the seasons), to a secular-capitalist, individualist world dominated by technology. From the premodern to the modern.

As the narrative goes, where the premoderns lived at the whim of nature and accepted this, the moderns sought to tame nature and convince themselves of their mastery. In order to do so they dichotomised time, and space. As Bruno Latour (1993) narrates, they rejected the past and cyclical temporality and embraced a linear temporality, an eternal present - expressed in Latour's caricature above. They also convinced themselves of the separation of nature and culture - they developed a binary conception.

I think it is an expression and symptom of this that architects and architecture students seek to foster a ‘connection to nature’. As if their designs weren’t already in ‘nature’. As if ‘nature’ were some realm exclusively beyond the human - inherent in which is the idea of wilderness, or ‘pristine nature’. Our buildings are constantly inhabited by fungi, insects and a plethora of lives. There is no moment zero, when construction is ‘complete’ where this life is not present, after which they begin invading. We use the word as a vast umbrella term, which is indicative of our ignorance. The world is a big assemblage of materials and chemical processes. Our categorical distinctions are purely mental, and their implications of agency - whether something was caused by a human or not - are often wrong.

So ‘nature’ is a problematic word. My response begins by trying to think about the specific ecosystems, geosystems and hydrosystems at play in the landscape - even if I do not study them in substantial depth. I am neither an ecologist, geologist nor hydrologist. When I want to speak holistically, I speak about the Earth, which is also more specific than ‘nature’.

Following on from Latour, I do not believe in a return to the premodern as a solution to our environmental crises. We are not going to categorically relinquish concrete and smartphones. Dualities are a starting point. They do not require us to wipe the slate clean, but to begin by understanding the binaries of our world differently. It entails embracing a spiral temporality (Latour, 1993: 75) - both cyclical and linear - and acknowledging and

embracing hybrids, which move between nature and culture, and are already the hidden building blocks of this world.

It is not the intent of this dissertation to answer these questions, nor even to explore them in depth. It is however an intent to manifest the asking of these questions, both in writing and design.

B1
Mustafah Abdulaziz
Classic Club Golf Course
Palm Desert, California, USA
2015

COLLAGE & ASSEMBLAGE

> *"Collage and assemblage combine materiality and layered time. These techniques enable an archaeological density of imagery, and a non-linear narrative through the juxtaposition of fragmented images deriving from irreconcilable origins. Collage invigorates experiences of tactility, narrative and time" (Pallasmaa, 2016: 179)*

A collage is a two-dimensional image assembled primarily from found material - often fragmentary and not intended for image making. It necessitates improvisation, lateral thinking and a critical imagination of reuse. Its etymological root is *coller* (French) - to glue. There is an emphasis here on the process (verb) not just product (noun), use of the hand and also a crudity. It embodies simultaneity - the meanings of parts become "suspended" between their past and present contexts (Pallasmaa in Shields, 2014: ix). An assemblage is essentially a three-dimensional collage.

Collages typically posses an "ambiguity between figure and field [/ background]" (Shields, 2014: 12). This relates to what Pallasmaa (2005) labels the "focussed vision" of modernity and the "peripheral vision" of pre-modernity. Simplistically, Modern buildings are conceived as objects, focal points, in the landscape - 'look at me!'. The pre-modern however fit into their context, extending the existing fabric. Collage allows one to move between the two, as a DUALITY (see p16). Quite literally, they generate "transparency… a simultaneous perception of different spatial locations" (Shields, 2014: 26).

Like a sketch they maintain a degree of ambiguity, of possibility. Unlike the abstractness of a sketch however, they can also contain context and reality (narrative) through photographs and found material.

In summary: a collage, by processes of transposition, juxtaposition and fragmentation, can gather difference, and embody place, hapticity and temporality, all while maintaining a degree of ambiguity.

B2-3
Archi Maki 2

Through the philosophical reinterpretation of Deleuze and Guattari, assemblage has becoming a widely applicable "anti-structural concept that permits the researcher to speak of emergence, heterogeneity, the decentred and the ephemeral in nonetheless ordered social life" (Marcus & Saka, 2006: 101). Like *coller* to collage, assemblage is a translation of *aggencement*, the process of arrangement or organisation. On the one hand it is neither a "set of predetermined parts… [or] an already-conceived structure… [nor is it] a random collection of things" (Macgegor Wise, 2014: 91).

For Dovey this is the ideal for place theory, in that it can simultaneously address the physical, social and discursive (Dovey, 2010: 13; Latour, 1993: 5-6, 56, 64; Lefebvre, 1991: 26-46). He also posits that assemblages offer a reconciliation of "expression" and "materiality" in design (Dovey, 2010: 17). By this one might understand a polarisation between design premised on formal (abstract) composition versus construction.

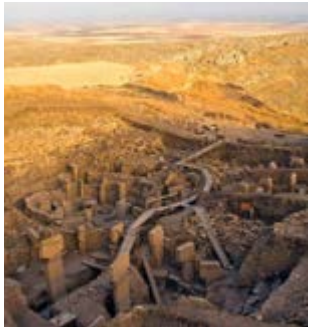
BURIAL CULTURE

C1-2
Hindu Cremation at the Ghats on the Ganges River
Varanasi, India

BURIAL PRACTISE

> *"According to most theories of early religion, a great deal, if not all, of religious inspiration has been derived from [death]" (Malinowski, 1954: 19)*

Many of world's first buildings are believed to have been sacred places. Archeologists interpret Göbekli Tepe the oldest known, still extant temple, as having been a place for death rituals and burial (Curry, 2008). Some of the primary purposes of religion include providing answers and rituals for the eternal questions and crises of human life, and in doing so constructing community. It is no surprise then that death - life's greatest crisis - is a root of religion. How people bury becomes a cosmological act. If a culture believes that human genesis happened in trees, they bury their dead in trees (Hertz, 1960: 210-211). Some animals keep brief vigil or even dispose of their dead, but their consciousness of death and mortality is disputed (Di Silvestro, 2012; Goldman, 2012).



C3
Göbekli Tepe
Turkey

> *"The word burial derives from the Anglo-Saxon birgan, some of whose other derivations and related words include barrow, burrow, borough... bringing together implications of both a mound where the dead are interred, but also a place of origin or settlement." (Worpole, 2016: 9)*

This etymology embodies several meanings. Firstly, an emphasis on the product placed in the landscape, rather than the process. English is a noun dominant, rather than verb dominant, language. Secondly, that normative burial practice in English is inhumation. Thirdly, the centrality of burial places within society.

C4-5
Hole & Mound
Subterranean &
Superterranean
Knysna, SA

In this project however ‘burial’ and ‘bury’ are used as a general terms for all rituals and practices. The verbs ‘inhume’, ‘inter’ and ‘cremate’ are specific burial practices. ‘Burial places’ include all sites from buildings to grounds. ’Burial grounds’, such as typical graveyards, are where the ground is the primary structure. ‘Remains’ is used more often than ‘corpse’ (which has positivist implications) or ‘body’ (ambiguous, as explored later), out of respect.

Burial practices broadly comprise three types: inhumation, interment and obliteration. These can take place subterraneously (below/ in the ground) or superterraneously (above the ground). Inhumation is the normative form of burial in English. Remains are subterraneously placed in an excavated then refilled hole in the ground. Interment typically refers to placing the remains in a structure, like a charnel house or columbarium, which can be either subterranean or superterranean. Obliteration, such as cremation or aquamation, is where the mass of the remains is substantially reduced. A second burial, either inhumation or interment, usually follows. Burial at sea can be understood as extensions of inhumation (where the sea has a surface and depth like the ground) or interment (where remains are placed on the sea bed etc).

Burial position is also significant. Some cultures bury their dead in a foetal position as a symbolic return to the womb, a loop of the life cycle. Some bury their dead supine or on their sides, as if they are sleeping and will wake in the afterlife. Some bury remains oriented towards a significant place, or on axis with a natural phenomenon (like the sun’s path).

In many - especially pre-modern - belief systems, death is not merely a moment, but a process. The ritual process correlates to the body's process of decay, expressed in two burials. After the first burial, while the grief of loss is fresh and the soft tissues decay, the body and soul may face or pose significant spiritual danger. Once only the bones remain, the threat passes and the remains may be reburied with other ancestors, whose state they now match (Hertz, 1960). There is a relationship here between the spiritual, ecological and psychological.

Burial can be a preparation for regular ancestor rituals. The *Famidihana* of the Malagasy (Madagascar), the *Diá de los Muertos* (Mexico and South America) and others involve retrieving remains of ancestors and parading or celebrating with them. Family relationships and history are renewed and passed on to the next generation. This comfort with bones or embalmed mummies reflect different cultural conceptions of the body (Koudounaris, 2011: 11, 14; Bennett, 2016: 53-69). In other cultures the remains remain buried, but the grave or place of burial remains a site to symbolically revisit and communicate with ancestors. In yet others, the place of physical burial is avoided, forgotten or unknown, and another place becomes the symbolic site for ancestor rituals (what in some cases can be called a cenotaph).

According to Foucault, the cemetery as a space is a 'heterotopia'. Where utopias are imaginations of perfected society, heterotopias are very real counter reflections of these. They provide a retrospective order to the chaos of life, and pierce the illusion of everyday life that forgets mortality. Heterotopias are simultaneously removed from everyday life and connected - everyone has buried relatives there. Time operates along a different rhythm - a heterochrony - of slow bodily decay and the eternality of death. They also accumulate time in the lives lived of those buried (Foucault, 1984). In pre-modern Europe, graveyards as church

C6
Butsudan (Buddhist) household shrine to spirits and ancestors
Japan

C7
Caring for the bones of ancestors
Diá de los Muertos
Pomuch, Mexico

property - exempt from tax and the law - were sites for fairs and markets (Worpole, 2003: 161). Their heterotopic condition has made them ideal for those avoiding the law and society's watchful eye -lovers, prostitutes, the homeless, illegal salesmen, traders and users of illicit goods and substances.

Burial places are foundational spaces which represent culture, belief, and claims to citizenship and ownership. They are also means by which power and control are violently asserted. In Antebellum USA, burial was not only segregated but black slaves were only permitted to bury at night. Further, there is a history of black graveyards being desecrated and neglected (Worpole, 2003: 32-34). Comparable stories constitute Cape Town's history. Burial places also manifest a relationship to the land, and land tenure systems. For some burial is a permanent occupation of land, for some an ephemeral stage in the Earth's life.

WHY CULTURE?

Firstly I would like to distinguish here between spirituality and religion. Spirituality is a more general concept, and concerns the human condition and spirit/ soul/ being/ psyche - whichever term people prefer. Religions provide orthodox structures and mythologies for spirituality, but are also socio-political forces with other agendas.

When studying burial and grieving, people tend to look to religion as the determinant for practice and artefact. The obvious reason for this is that burial is often conducted through religious organisations. However as Rosenblatt (1997: 36-37) warns: "'religion' may be inappropriate to apply to the beliefs and actions that people in other societies display at the time of a death... 'religion' may blur into what a Westerner might call 'science', 'health care', 'preventive medicine', 'farming', 'law', 'art', 'music', 'poetry', or something else". He resolves that "we can determine for a society a set of commonly held beliefs about the nature of the world and the relationships of the living with the dead".

This is especially pertinent in Cape Town, where Muslim Burial for example is largely specified by scripture and orthodoxy, but Christian Burial is not. Instead Christian burial practices are varied syntheses of what communities have inherited and developed.

So instead of trying to understand burial through religions, I try to look at 'burial cultures'. A culture is a "set of practices throgh which meanings are produced and exchanged within a group" (Williams in Garuba & Raditlhalo, 2016: 39). What is important is "what a culture does [not

just] what culture is" - what it is 'becoming' not just 'being, to go back to Deleuze and Guattari (See DUALITIES on p16). This is "to recognise the process of contestation that is at the heart of signifying practices and processes rather than simply seeing culture as a homogenous set of beliefs and practices consensually shared by members of a group" (Garuba & Raditlhalo, 2016: 39-40). Furthermore culture, especially in South Africa, should always be approached as hybrid (Garuba & Raditlhalo, 2016: 44). Families have members who belong to different denominations, or several, or none at all. In amaXhosa and other black African Capetonian communities there are commonly varying hybrids of Christianity and traditional African spirituality, and the hybridising is often conflicted. Identities are formed by numerous social forces and multiple cultural memberships (Anthony Appiah in Gevisser, 2020: xii). Descriptions of cultures and practises should never be taken as monolithic.

Religious studies are largely textual and theoretical pursuits. By thinking from a location of religion, there is a risk of not being able to see the difference between what is preached and what is practiced. Centering culture also allows a fuller range of the actors and forces at play - legal, socio-economic etc to be considered. A powerful force in contemporary burials are funeral service businesses, who might not be affiliated to any religious organisation, even if their customers are.

CAPE TOWN MAJOR BURIAL CULTURES

Within the spectrum of Cape Town burial the largest sphere are Christian burial cultures. Burial practice is not dictated by scripture or dogma - the primary determinants in Christianity - and instead varies greatly amongst communities. Most Christian communities hold an initial ritual (funeral), before the burial, followed by a tertiary ritual (wake) afterwards. There is usually no time limitation on how soon a funeral should be held after the death. The funeral might be held in a community's local temple (church), or at a funerary/ cemetery chapel, at a funeral parlour, the house of the deceased, or another place deemed appropriate. The wake is typically held at the house of the deceased's family, or at the place of the burial. The most common contemporary burial practice is inhumation, where the body is laid supine - mostly in a coffin. For some the remains must be oriented East/ West with the head to the West. When the deceased wakes in the afterlife they then face the rising sun. The orientation of many Capetonian cemeteries however do not allow this, and few communities seem to demand it. There is a variation in grave markers - mainly dependent on wealth - from simple wooden crosses as headstones, to ornately carved and inscribed stone headstones and gravestones, and even tombstones and statues. Some communities, like the Dutch Reformed (DRC) and the Catholic, historically practiced superterranean interment in loculi - especially wealthy families who built family tombs or crypts. This was however largely outlawed in the late 1800s and also neglected as communities anglicised. Examples, like at the Catholic section at Maitland and the DRC section at Seaforth, are still extant. Another practise - practised by the DRC and others - outlawed in

the late 1800s was the exhumation of remains and reburial in communal charnel houses. Globally this is still the norm in Catholic/ Southern European countries, and the places and communities they colonised around the world. There are certain denominations in Cape Town who have run out of space in their cemetery allotments and are considering using loculi in the Maitland Mausoleum (an outdoor loculus complex) as micro-charnel houses. Increasing numbers of Christians today are choosing obliteration - the most popular and readily available practise being cremation. The obliterated remains then are either scattered or inhumed in remembrance gardens or in private locations (often illegally), or interred in urns placed in superterranean containers or wall niches. These walls might be in outdoor columbaria or remembrance walls. The spatial density of obliterated remains has allowed many churches to reopen their graveyards by building such remembrance walls along an open edge. Grave revisiting is a largely personal practise; it can feature placing of grave goods like flowers and the general cleaning and maintenance of the grave. From my own experience and of those I have spoken to, grave revisiting is largely rare, and limited to those with direct family or friends (Weeder, 2006; van Heynigen, 1989; Koudounaris, 2011: 9-17; Finnegan et al, 2011; personal communication, 2022).

As mentioned earlier, many in amaXhosa and comparable African communities practice hybrid burial cultures of Christian and traditional African spiritualities. Traditionally, amaXhosa burial culture and spirituality revolves around the *iKhaya*, or homestead, where the family live and

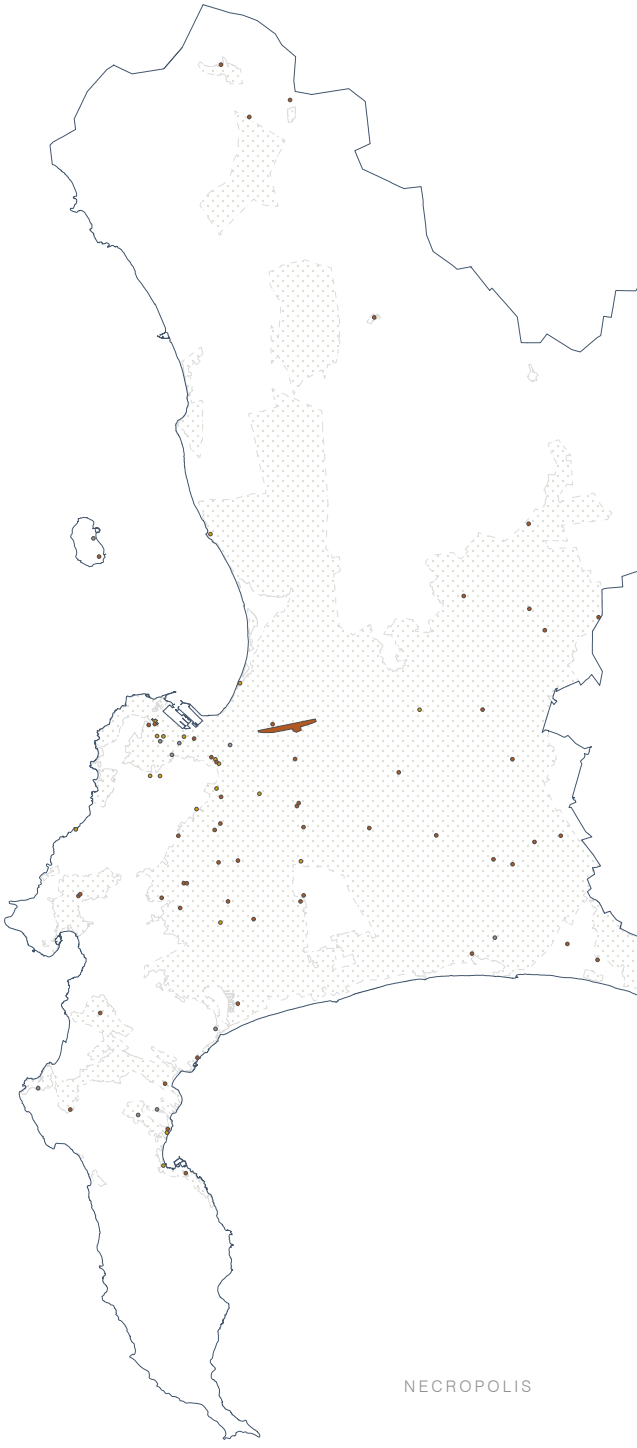
their cattle are held. The remains are inhumed near but outside the homestead, and without a grave marker. Afterwards, the site of the grave, house and possessions of the dead are traditionally abandoned and avoided. The *iKhaya* then is where the ancestors are communed with and the young introduced to them. Ritual offerings and worship of the ancestors are regular, critical practises in communities (Ngxabi in Watson, 2007: 67-68). As far as I am aware there is no isiXhosa word for a cemetery (instead the pural of 'graves' - *iingcwabo* - is used) - perhaps speaking to the rurality (as opposed to urbanity) of the culture. In the colonial Eastern Cape, Bunn (Weeder, 2006: 34) describes the culture and its relationship to land as ephemeral, communal, and predicated on oral history, compared to the modern English culture of eternal burial, property ownership and written history.

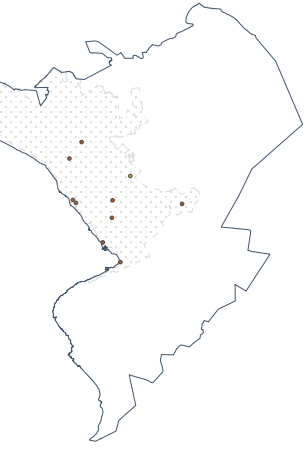
In relation to these practices, historical migrancy, and a desire to avoid Government control, black communities across South Africa have historically organised into burial societies. As Lee (2011) and Mda (1995) describe, these and burials are often primary means through which rural communities remain in contact when in the city. Through these and the taxi industry has emerged a lucrative funeral industry that arranges transport of remains and mourners between the city and rural homelands. The distance and length of time involved in such processes has created a popularity for embalming. A growing number however are choosing to bury their dead in City cemeteries. In many cases these are families and communities for whom Christianity is the sole or more important belief system. For others this is perhaps due to cost, to escape community and cultural dictates, or for whom the City is simply home.

Islam posits that people are merely stewards of their bodies, which ultimately belong to God (Sachedina, 2021: 314) - implying divine land

ownership. Historically burial grounds are not reused like by the DRC, and may not be developed, except “over long obsolete, disused graveyards” (Murray, 2005: 14). Most importantly, a burial must be performed before the sun sets or within 24 hours of death. When a person dies a ritual is held at the house of the deceased for family and close relations to visit, after which a ritual is sometimes held at the local temple (masjid/ mosque). From here the remains are taken to the graveyard or cemetery for burial. Traditionally burial involves the cloth wrapped remains being carried to the grave - no vehicle allowed (Du Plessis in van Heyningen, 1989: 157-158). The corpse is laid on its side facing Mecca or another holy place, with a framed niche before the face, where ground conditions permit (Finnegan et al, 2011: 141). With the modernisation and growth of the city, few if any Capetonian Muslims are still able to practise walking funerals, instead relying on vehicles. There has also been a growth of Muslim funeral businesses who help with the logistics of burial. Both Muslim and traditional African burial cultures ban cremation.

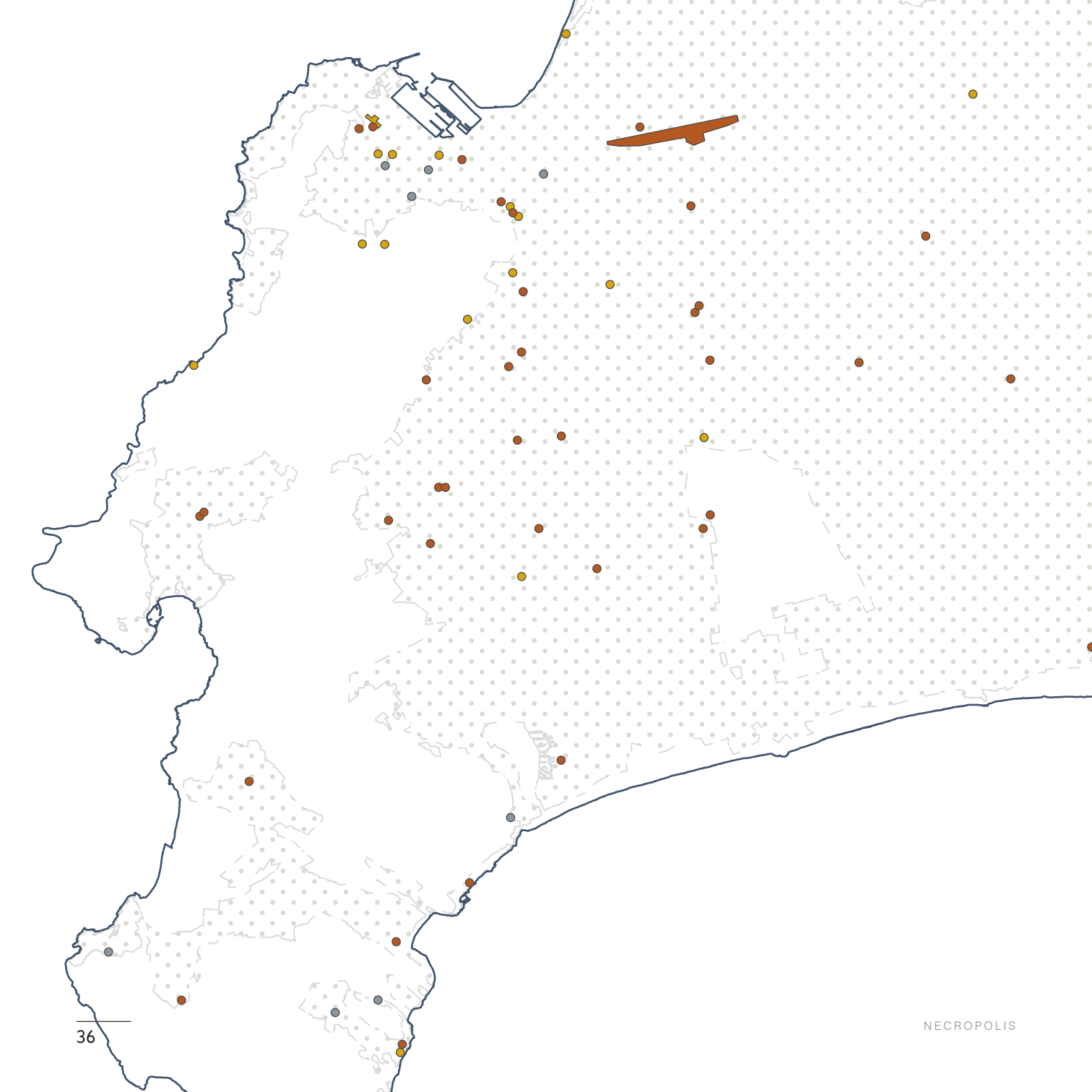
There are also a significant number of Capetonians who do not affiliate to any belief system or organised religion. The majority of communities in Cape Town are exposed to Christianity, and so even those who do not affiliate can be influenced by Christian affiliated practices. Generally though, those not actively involved in a burial culture are often unprepared for death, and are uncertain of what to do. Some in this situation find value or convenience in having a spiritual or religious organisation host the burial rituals. This might entail hosting a ritual in a temple, or having a priest or priest-figure host a ritual at the family’s home, or the burial itself at the place of burial. What is important is that the rituals and practises allow for those who remain to symbolically say goodbye to the body and spirit of the deceased. That they embody the gravity of the occasion and requisite dignity - that which might be called the sacred.

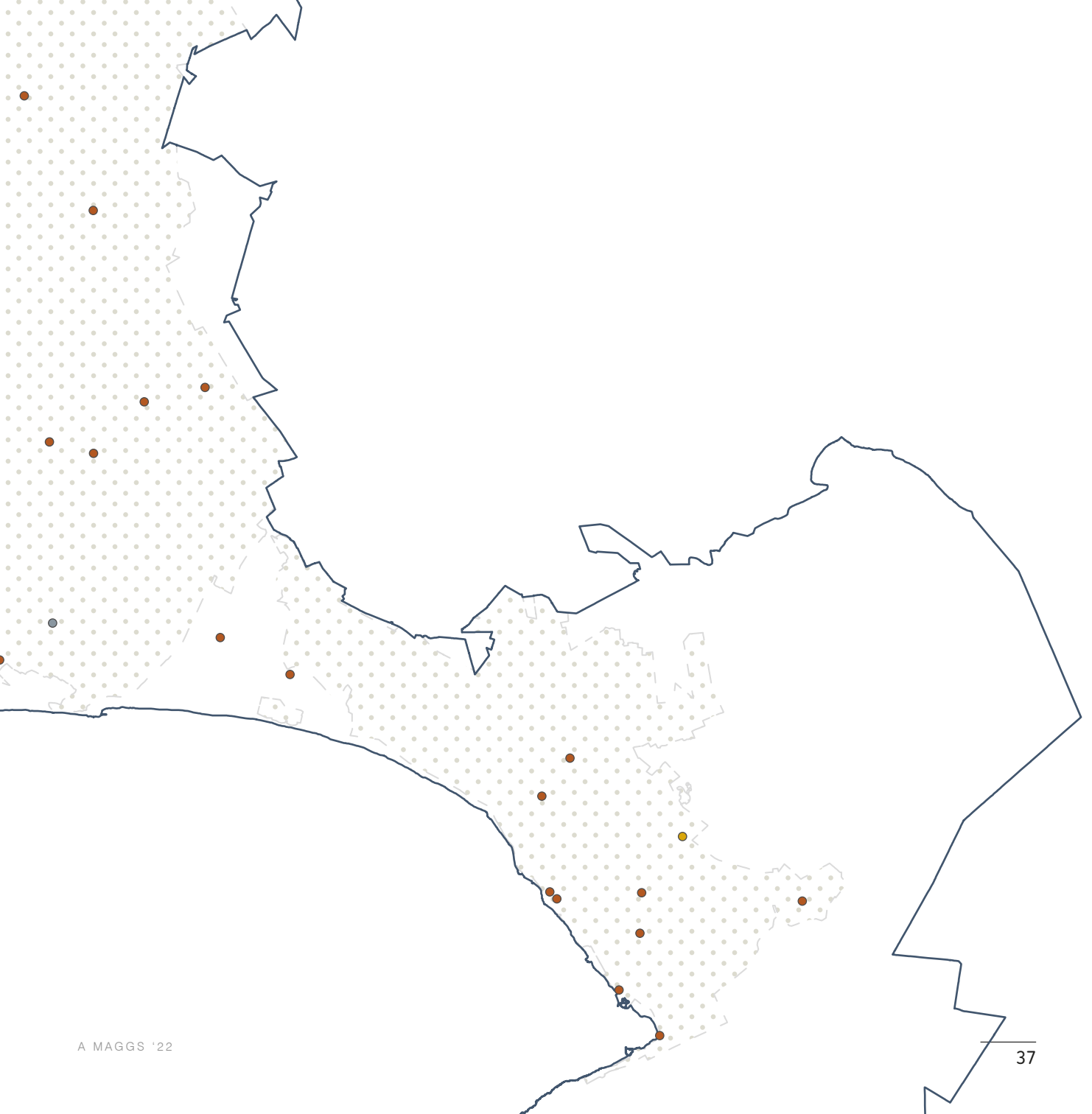




C8
As part of my work tracing the histories of (public) burial in Cape Town's necropolis I mapped all the sites rumoured, historical and present.

The red are extant sites (active and inactive). The yellow are non-extant historical sites. The blue are unconfirmed sites.





BURIAL HISTORIES & MODERNITY

NORTHERN EUROPE & MODERNITY

In the early 1800s, Northern Europe was modernising and power shifted from religion and tradition to secular government and business. Medicine and engineering were freshly professionalised on scientific lines. Where before burial belonged in the religious and sacred domain, it was shifted largely to the domain of public medicine and hygiene.

Worpole (2003: 86-98) and other historians point to France for the birth of the modern cemetery. In 1804, not long after the Revolution, mass burial - which had been a norm for urban lower classes - was banned. That same year the Père-Lachaise cemetery, designed by Alexandre-Théodore Brongniart, was built outside the city as a landscaped park. It was perhaps the first cemetery to accept perpetual burial of common people. Before then it had been common to exhume remains ten to 25 years after the first burial (when only bones remained) and reinter them in charnel houses or ossuaries. From the 1820s to 1840s, in response to rapid urbanisation and socio-political shifts like in France, British cities established public cemeteries like Père-Lachaise. New businesses like funeral services flourished, and "both middle-class and working-class circles – spent heavily" to represent their new status (Worpole, 2003, 2016: 8). From the mid 1800s onwards, city councils (a new political invention) closed inner-city burial places deemed unhygienic. Tens of thousands were exhumed and reburied in mass graves in the new cemeteries, or in Paris underground in the catacombs. In Paris crowds rioted under the chant *Pas de cimitière, pas de cité!* - no cemetery, no

city (Warpole, 2003: 30) in furious opposition to the destruction of their heritage. The first public cremations in Europe occurred in the late 1800s.

Regarding perpetual burial, Foucault (1984: 5) elaborates “when people are no longer sure that they have a soul or that the body will regain life [belief in afterlife], it is perhaps necessary to give much more attention to the dead body.” Civic hygiene manifested in “an obsession with death as an ‘illness.’... proximity of the dead [inside the city]... propagates death itself” (Foucault, 1984: 6). Together with emerging individualism, this hygiene ideology expressed a changing conception of the body, its boundaries and dignity. The “grotesque” medievals had been less strict about physical contact, nudity, body odour and imperfections etc. Together with their belief systems they had been more accepting of mass burial and reburial (Koudounaris, 2011: 14; Klein, 2017).

C9-10
Premodern burial Northern Europe
Theodor Hoffbauer
Charnel house at the Saints Innocents Cemetery
Saints Innocents cemetery in Paris

CAPE TOWN & MODERNITY

Modern hygiene ideology, described locally as “sanitation syndrome” (Swanson in Bickford-Smith, 1995: 158-159), arrived with middle class British immigrants, including medical and engineering professionals to bolster government institutions. The cause was also strongly championed by the local English press and clergy. As the population and maritime trade grew, the City suffered increasingly frequent epi-/pandemics, and the cemeteries became overcrowded. Superterranean burial and the reuse of burial grounds (meaning disturbed remains were often visible at the surface) became a source of Anglophile public disgust (Worden et al 1998: 181: van Heynigen, 1989: 173-229; Weeder, 2006: 27-46).

By the late 1800s civic hygiene legislation and the closure of inner-city burial places were routinely discussed in parliament. Of many site for a new necropolis (as it was called), peri-urban Maitland was the primary option. It was outside the municipal boundaries and hence responsibility. The proposal was strongly opposed by the Muslim and Dutch communities

C11
Somerset/ Prestwich Necropolis
late 1800s

as an attack on their heritage and culture. Modern transport like trains and trams expanded mobility in growing cities, but were too expensive for the poor, and made walking funerals (practised by Muslims and others) infeasible. Opposition was also based on the private ownership of the Somerset/ Prestwich necropolis land. The relationship of land, ownership and burial in the colonial imagination was aptly expressed by a Dutch parliamentarian: “many of the most distinguished colonists are related to those whose remains lie buried ‘in the said cemetery. Ties have thus been cemented, the severance of which will be keenly felt” (Marais in van Heyningen, 1989: 195). Financial and logistical difficulties constructing the new cemetery delayed the closure of all inner-city cemeteries until early 1886.

Having been closed, the Somerset/ Prestwich necropolis - though only the formal grounds - was exhumed to make way for redevelopment. The exhumed remains were reburied at Maitland. Contemporaneously, the first modern forced removals of black citizens - under the same public health legislation - were carried out in District One (today in Greenpoint) around the necropolis. Many were ‘relocated’ to the City’s first racial ‘location’ at Uitvlugt (later Ndabeni), beside the new cemetery. In the 1880s the City’s quarantine hospital had been established nearby too. This nexus illustrates an analogous treatment of ‘undesirable’ bodies through Foucault’s heterotopias of the hospital, prison and cemetery (Weeder, 2006; Foucault, 1984).

POST-APARTHEID

From the late 1990s on, the new South African Heritage Resources Agency (SAHRA) and Act, which replaced the Apartheid National Monuments Act, were put to test regarding burial. Conflict over sites at St Cyprians School, Prestwich street and others provoked public

conversation around ownership and neglected history. As Murray (2005: 10-11) identifies, many of the contested sites were 'informal' burial "spaces people claimed for themselves as sacred" since the formal colonial and Apartheid institutions excluded them. At Prestwich, a development that has also been criticised as part of a wave of inner- city gentrification entailed the exhumation of over 2500 remains. Citizen and religious groups vocally opposed the destruction of what was part of the old 'informal' burial grounds in the Somerset/ Prestwich necropolis. The site, for which at the time no record was found, had probably been built over before the original exhumation a hundred years ago, which in any event had ignored the 'informal' grounds. SAHRA proved unable to meet demands to halt exhumation and development and institute a memorial garden. In 2008 the Prestwich Memorial designed by Lucien Le Grange Architects, a museum and ossuary for the remains, was consecrated (Maggs, 2020).

Prestwich was also a reckoning of power over the body between positivist archeology, which conceives of remains as artefacts, or objects, and those - religious and other - who conceive of remains as inviolable, sacred subjects. As America (2019: 1) problematises:

> *"human bodies [are]... ambiguous and void of just one singular meaning: 'Remains are concrete, yet protean... [hence] a duality in understanding human remains as a 'person' (human, body), but... also a 'thing' (remains, corpse, cadaver, skeleton). Because of this, human remains dwell around the line between the 'real and the not-real', between 'person and non-person'"*

The events called for a rethink of archeological ethics and heritage practice, and are still being felt today (Malan et al, 2017; Shepherd, 2007).

C12
Post ‘ 94 Rituals: Exhuming &
reintering the Prestwich remains

PRESENT DECADE

The majority of burial places today are managed by the City Parks Department, and a handful by religious organisations. Surprisingly, as of 2019 the demand for cremation versus inhumation was 40% versus 60%. “Currently, 64% of burials take place on Saturdays between 11:00 and 14:00” (News 24, 2018). Of the 40 City sites only six have substantial space left, another 11 space in family allotments. Amongst Johannesburg, Cape Town and eThekwini there are apparently only five crematoria. In Cape Town there are crematoriums at Maitland Cemetery and Durbanville Memorial Park. The Coronavirus pandemic has metastasised the crisis, but also highlighted it in the public eye. The City plans to extend the Atlantis, Mfuleni and Welmoed (Blue Downs) cemeteries, and is constructing sites in Tafelsig (Mitchells Plain), Vaalfontein (outside Somerset West) and Rusthof (Strand) - mostly peri-urban places (Smit, 2020; Mlamla, 2019; Naidoo, 2019).

With the growth of cremation, some organisations, like the DRC, have chosen to reopen their graveyards for interment of ashes. Aquamation, a new privately available practice, entails the dissolution of the body in alkaline fluids. Compared to cremation it is less costly and environmentally damaging (News 24, 2022). The City has also encouraged superterranean burial, having opened a mausoleum with loculi at Maitland in 2015. Remains must be embalmed and may only be interred for a limited period of time, after which they must be moved or the contract renewed. Few have accepted the offer though, which is also relatively expensive. Besides several reservations, the only interment has been of a foreign national whose family wish to repatriate the remains (CoCT, 2015; personal communication, 2022).

C13
New grave sites at the Maitland Cemetery

C14
Gugulethu Cemetery

C15
Aquamation / AVBOB

C16
Maitland Mausoleum

AFTERLIVES & OTHER LIVES

"We expend enormous energy and vast sums of money to preserve and prolong bodily life, but in the process our embodied life is stripped of its gravity and much of its dignity" (Lock, 2004: 107). According to Lock (2004: 95), with postwar Promethean-ly effective medicine, death has almost completely lost its "social and spiritual dimension" and become a medical failure. "Culture is left to deal, often rather peremptorily, with only the final disposal of the body, and the work of grief. Moreover, many writers confirm that we no longer know how to behave around those who are dying." Death has become a taboo, as Sean O'Connor (2020) comments. Consequently burial places are increasingly foreign places of little value in everyday lives.

With the rise of cremation and waning desire to spend heavily on burial, many once grand cemeteries have become derelict and overgrown. Some see these as dangerous or wasted land, while others see them as urban parks. Ecologists add to the latter by arguing that these places act as urban wildlife habitats, for which they should be preserved (Worpole, 2003: 126-137).

C17
Highgate cemetery
London, UK

BUILDING CULTURE

D1
Constructing Sturrock dry dock
Cape Town

BUILDING THEORY

> *"the astounding increase of speed in the technological world is... causing us to live increasingly in a perpetual present*
> *...*
> *The flatness of today's standard construction is strengthened by a weakened sense of materiality... Buildings of this technological age usually deliberately aim at ageless perfection, and they do not incorporate the dimension of time, or the unavoidably significant processes of ageing. This fear of the traces of wear and age is related to our fear of death."* (Pallasmaa, 1996: 21, 30-31)

One could say that the flesh of modernity is cast in concrete (its bones in steel, and face in glass). As Watts (2019) narrates, concrete helped 'tame' rivers and oceans with vast dams, bridges and walls, at unprecedented speed. In its shadow however is the vastness of environmental devastation.

> *"Among materials, only coal, oil and gas are a greater source of greenhouse gases... we may have already passed the point where concrete outweighs the combined carbon mass of every tree, bush and shrub on the planet. Our built environment is, in these terms, outgrowing the natural one"* (Watts, 2019).

Corresponding to the urbanisation of the demographic landscape, the physical landscape is now dominated by megastructures and megacities. While the majority of concrete has been poured into infrastructure, it is

also at the heart of much modern architecture, a convenient one-size-fits all solution.

In the face of fashion, 'timelessness' is a widely espoused quality in architecture. I believe that, in practice, it is actually a deficiency of temporality, a 'flatness' of time, to use Pallasmaa's wording. Modern materials (concrete, glass, metal cladding) "tend to present their unyielding surfaces... without conveying their material essence or age" (Pallasmaa, 1996: 32) - they fear ageing and death. They stain and spall, and can at best be recycled as rubble infill. "Natural materials [however] allow our vision to penetrate their surfaces and... express their age" (Pallasmaa, 1996: 31).

There is a need then to consider the whole lives of materials and buildings, to prepare for death and the afterlife. William McDonough and Michael Braungart (2002: 92) theorise a 'cradle to cradle' ethic from the observation that "Nature operates according to a system of nutrients and metabolisms in which there is no such thing as waste". 'Waste' becomes 'food' for the next life cycle, it goes back to the 'cradle' not the 'grave'. Like modern burial however, modern burial is by nature violent, and this ethic is not feasible in a purist sense, but is still an opportunity.

Mehrotra pithily characterises the "weatherproofing" of the modern against the "weathering" of the pre-modern (Mehrotra, 2013: 247). Before the experiential flatness of modern elevations, like curtain walls, buildings were articulated with climate modulating elements like shutters and

cornices - details. Latour (2008: 3) and Frampton (1995: 1-27) both draw attention to the value of detailing in resisting the "puritanical" fixation on gestalt (Venturi, 1966: 22) of modern object buildings. This is often why lay-people prefer the pre-modern with its mouldings, 'broekie-lace' and street interface to modern blandness and indifference.

The differentiation extends to a shift from craftsmen to contractors. The division of labour and neglect of craft also alienates people, who before modernity often built much of their own buildings. There is a democratisation and ethic of care in craftsmens' detailing counter to the gesamkunstwerk of the individual modern genius (Pallasmaa, 1996: 13; Frampton, 1995: 2-3, 10-11, 24-26). It is through local materials and detailing (or craft) that building cultures can represent themselves and their sense of place.

Certain parallels - parts of the modern spirit - can be interpreted between burial culture and building culture. Christian Norberg-Schulz (1984: 166-202) described the placelessness and alienation of modern landscapes, which fail to provide people with the psychological necessities of rootedness and connection to community and landscape. Buildings look the same around the world and choose not to interface with the street. This reflects in the somatic alienation of modern single burial in peri-urban cemeteries - where burial has lost its sense of community and place in the happenings of the city. The "weatherproofing" (Mehrotra, 2013: 247) and "perpetual present" (Pallasmaa, 1996: 21) reflects Lock's (2004: 107) medicalised death, Foucault's (1984: 5) "death as an 'illness'", and perpetual burial. Weatherproofing, like modern medicine, is designed to keep decay and ageing at bay as long as possible. When death inevitably arrives it is seen as failure, rather than accepting and preparing for it. The weathering pre-moderns accepted ageing, and at

the end of their lives transitioned into afterlives. Pre-modern materials, which are much less processed, are more easily reusable or recyclable. In the afterlife they are either biodegradable or bio-neutral, unlike modern materials like plastic and concrete which take decades to centuries to degrade, inherently becoming perpetual burials.

As I wrote earlier I do not believe we are going to relinquish concrete tomorrow, but I do believe that we should be looking at alternatives. Some of these are to be found in the future, and many others can be found in the past - the premodern.

D2
Reclaiming / constructing ground
at the Foreshore
Cape Town

STONE & RUBBLE

Stone is specifically rock material that has been extracted and fragmented, whereas (a) rock can be either material or a landscape feature. Rock is material still held by the ground. Unlike timber it requires minimal land area for sourcing and is abundant in the Cape, and unlike rammed earth fairs well in the coastal climate. Attention here regarding rubble - waste fragments typically from demolished structures - is focused on stone, brick, concrete, and other material reusable or recyclable for masonry. By their very nature, both stone and rubble come with rich embodied pasts. This temporality is sometimes recent, sometimes aeonic - existing Cape rocks trace back at leat a billion years. This temporality - age and durability - that reaches towards the eternal, is what has made stone so appealing for sacred architecture (Shadmon, 1996: 10; Du Toit, 1986; Webb in New London Architecture, 2022; Council for Geoscience, 2008; Clausen, 2016: 81).

Frampton describes a distinction between tectonics and stereotomics. Tectonics refers to lightweight framed structures, stereotomics to masses of stacked or piled pieces. The prior is characteristically tensile, and celestial - it reaches for the sky. The latter is compressive, and is terrestrial - it “gravitates” and “dissolves” into the ground (Frampton, 1995: 5-7).

Masonry, or stereotomics, is often characterised as an extrusion of the ground. Furthermore, common materials like brick and stone are reprocessed ground matter. In San and many other mythologies, the ground is the realm of ancestral spirits and the past. Quite literally it is

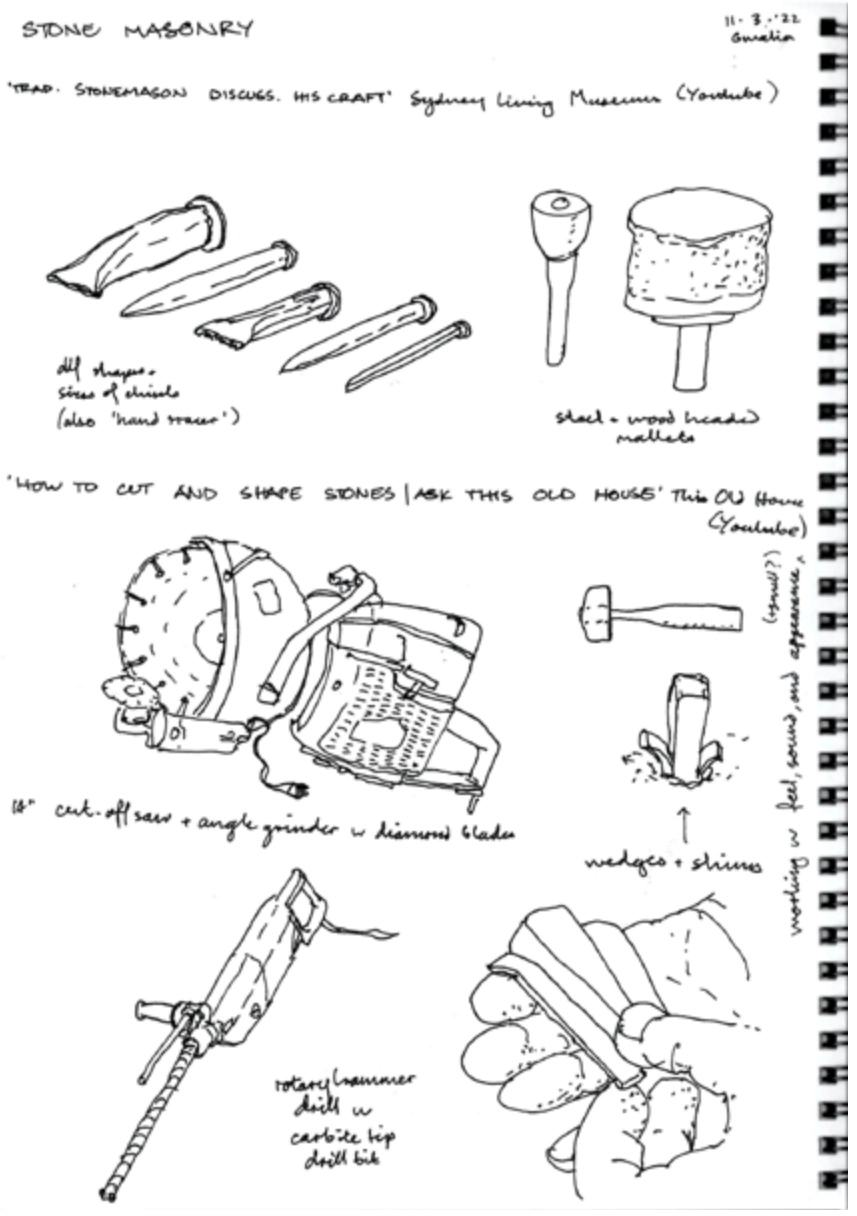
D3-4
Roman era stone & brick mass walls with rubble infill
Athens, Greece
Rome, Italy

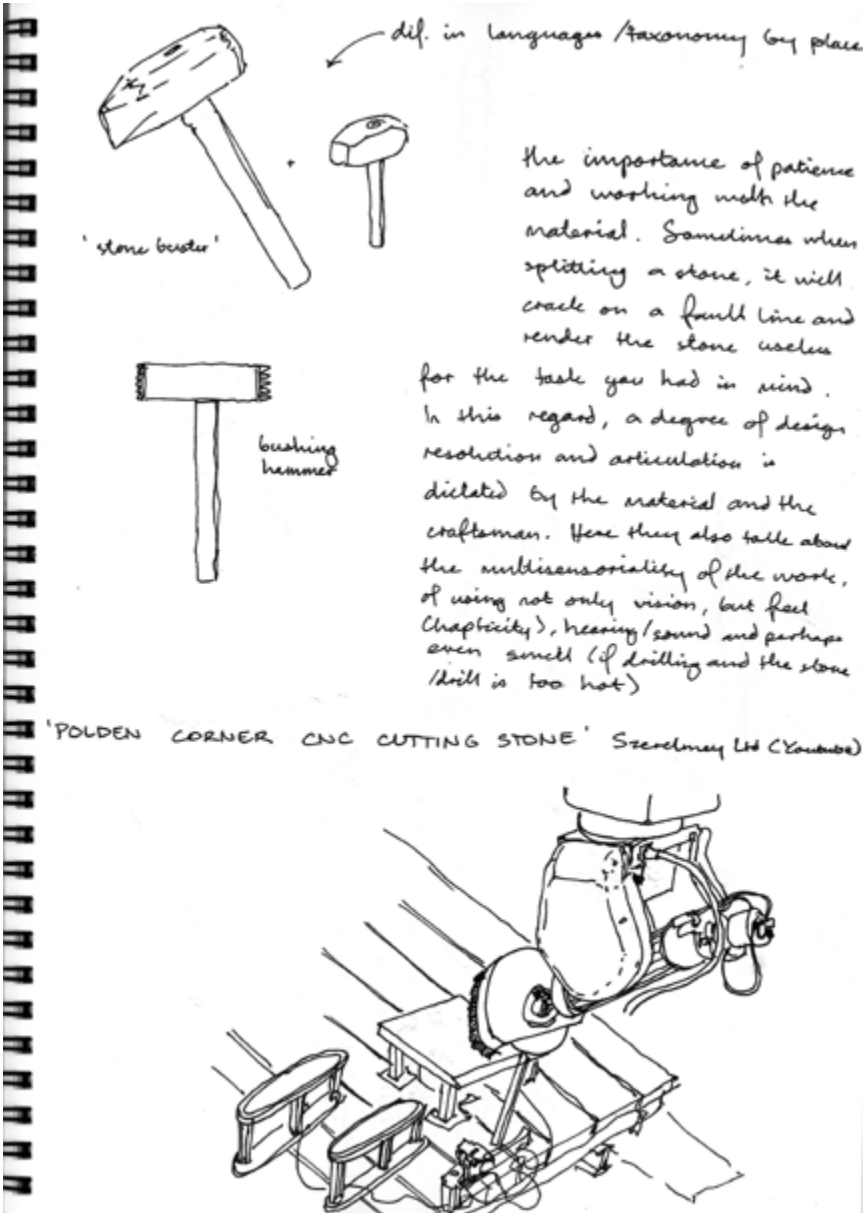
where most Capetonian ancestors are buried. To construct with it is to work with the past. The ground too can be read as an assemblage - geologically, archeologically, historically, phenomenologically.

Stone masonry is also a collage and assemblage. It is contingent on the shapes and sizes of available material and cannot fully follow a prescribed plan. As a practice it is often a hybrid of high and low-tech: masons work with hand and power tools. Boulders are split with electric saws and with hand hammered wedges.

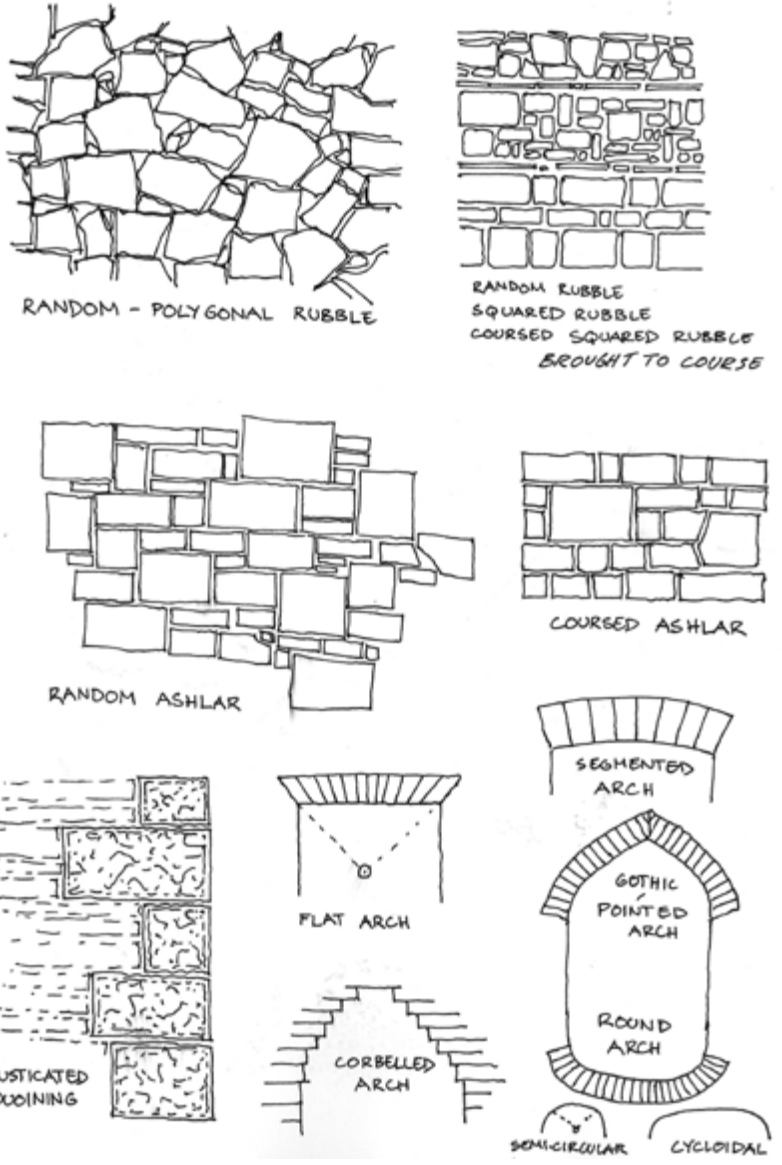
Since the postwar era and advent of modern construction, the use of stone in Cape Town (and globally) has dwindled. Today it is typically used decoratively and non-structurally. Some quarries and masons who predate the modern turn are however still operating, at reduced scope, like Clift and Sons in Paarl (Du Toit, 1986).

D5-6


STONE MASONRY
11 - 3 - '22
Gwalia
'TRAD. STONEMASON DISCUSS. HIS CRAFT' Sydney Living Museums (Youtube)
dif shapes -
sizes of chisels
(also 'hand tracer')
steel - wood headed
mallets
'HOW TO CUT AND SHAPE STONES | ASK THIS OLD HOUSE' This Old House
(Youtube)
working w feel, sound, and appearance (smell?)
18" cut-off saw + angle grinder w diamond blades
wedges + shims
rotary hammer
drill w
carbide tip
drill bit


dif. in language /taxonomy by place
'stone buster'
bushing hammer
the importance of patience and working with the material. Sometimes when splitting a stone, it will crack on a fault line and render the stone useless for the task you had in mind. In this regard, a degree of design resolution and articulation is dictated by the material and the craftsman. Here they also talk about the multisensoriality of the work, of using not only vision, but feel (haptricity), hearing/sound and perhaps even smell (of drilling and the stone/drill is too hot)
'POLDEN CORNER CNC CUTTING STONE' Szerelmey Ltd (Yeovil)

11-4-'22
Gnalia



IRISH STONE WALLS by Patrick McAfee 15.8.'22
2003. Dublin: The O'Brien Press DA 693 109 415 MACA Continuous

FOUNDATION STONES
long flat stones
structurally ideal if they can span full foundation width
biggest stones / hardest to move get placed at bottom
should sit stable w no rocking

QUOIN STONES
square shaped w ⊔ corners
for corners + edging

THROUGH + BOND STONES
Through stone length = wall width
Bond stones about ⅔ of wall width

GENERAL RUBBLE FACE STONES
Select good range of small/flat/thin stones

COPING STONES
Specific w x h x l

WHEN CHOOSING RUBBLE FROM A QUARRY

IRISH STONE WALLS CONTINUED
(see 15.8.'22)

FOUNDATIONS p70

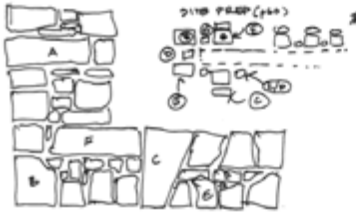
- advantage over RC in elasticity, esp if done w hydraulic lime mortar, ie. can take settlement w.out cracking / structural failure
- wide enough walls don't need foundations
- walls typically 450-600mm
- foundations min 450, rest

RULE OF THUMB:
'FOUNDATION DEPTH' = 'WALL THICKNESS' x 3

Length of each stone should run prop to base width (length parallel to wall) depth

- small walls don't rec. need foundations
- soil conditions and expansion due to moisture affect depth etc
- too much mortar will cause excess movement
- foundation stones shouldn't rock at all when placed, if rec. pin w smaller stones

BONDING p94



C THROUGH STONE
- ~~keep~~ tie wall together
- in some ~~areas~~ traditions are varied by striking out either / one end (ie stone longer than walls width)
- use one per m^2 measured on face
- stagger so they don't occur directly over another
- always lay level

A BOND STONES
- min 3/5 of depth thickness
- use x2 ~~of~~ per m^2 if through stones not available, and place on alternate faces

B QUOIN STONES
- vert. joints to be well broken and not in straight alignment over each other

F INT. CORNER STONES
- to extend into wall width as far as possible

E FACE STONES
- make up 95% of what you see
- wherever possible, length should run into the wall to give structural stability

D CORE FILL
- if using sedimentary stone, lay on its natural bed
- do not place in wall on edge

FACE BONDING p76

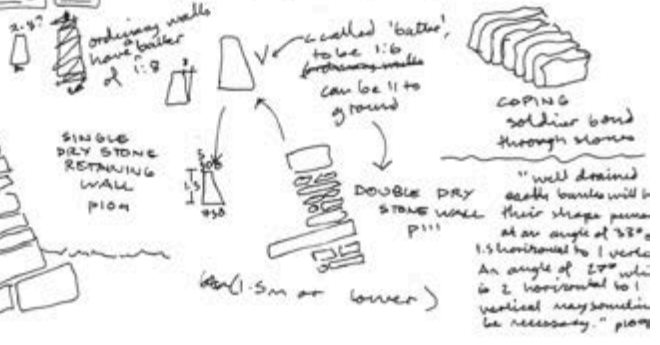
(see page(s) in notebook 1 w ashlar, coursing, rubble etc)

- keep vert joints as short as possible
- don't stack 2 big stones w joint in line
- don't stack 3 small stones w joint in line

- can fill large joints w small stones/pinnings to reduce exposure of mortar to weathering

~~don't lay stones~~

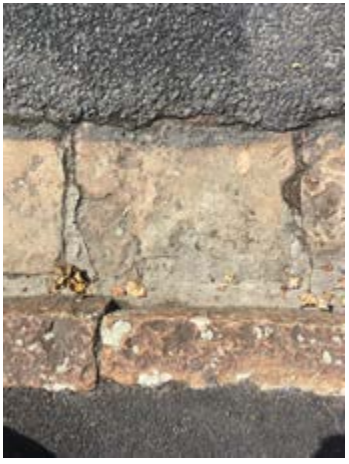
- lay sedimentary stones ⊥ to natural bed/grain
- don't lay grain at angle

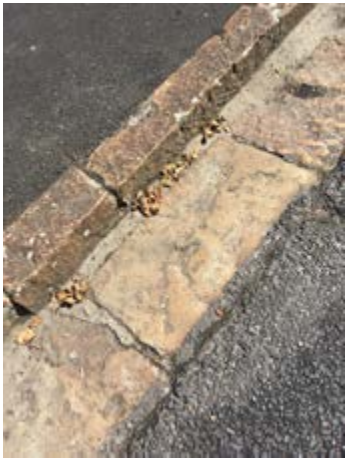


DOUBLE STONE WALLS p103

- "the centre is headed with smaller stones... carefully to fill as many voids as possible"
- for a 1.5m high wall, should have through stone every .5m i.e. at ⅓ the thickness and no more than 1m apart horizontally and be staggered vertically

- width of wall at base = ½ height
- foundations laid in [/w?] deep stone on solid ground about 150mm below surface. To be laid flat and tight together, and not rock or move
- lay largest stones first, progressively smaller as close. rises
- lay on natural beds [i.e. grain ⊥ ground] and lengths ⊥ to wall face





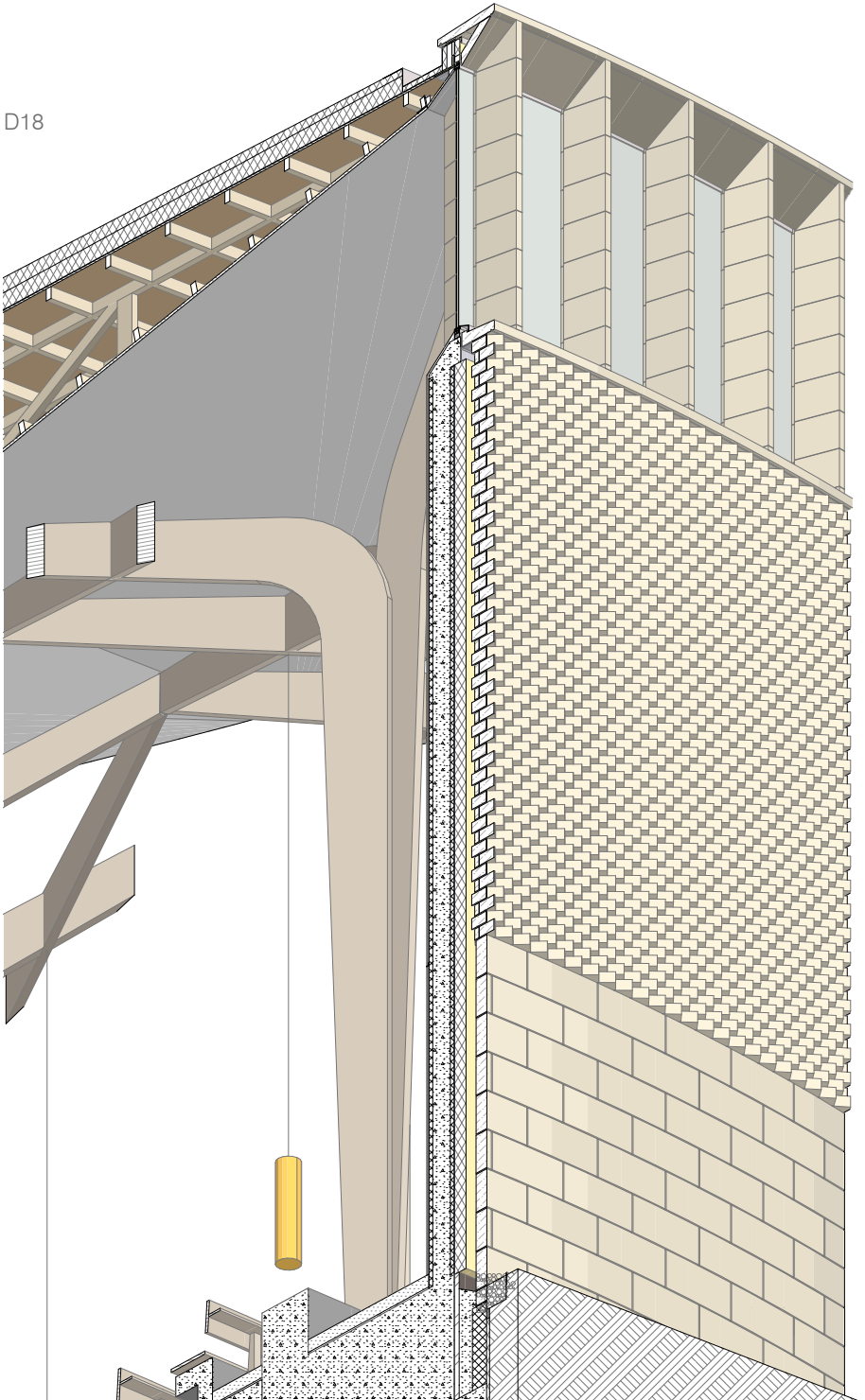
D11-14
Everyday place
Sandstone curbstones
Claremont, Cape Town

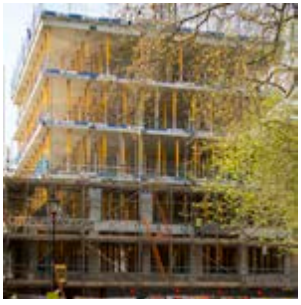
Granite curbstones
Observatory, Cape Town

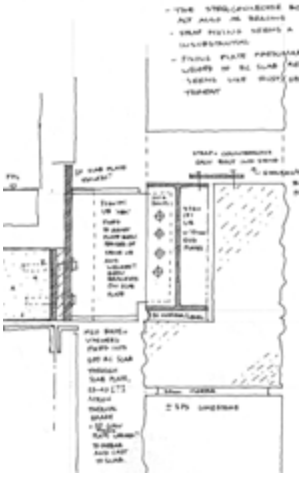
D15-17
Bishop Edward King Chapel
Niall McLaughlin Architects
2013
Oxfordshire, UK

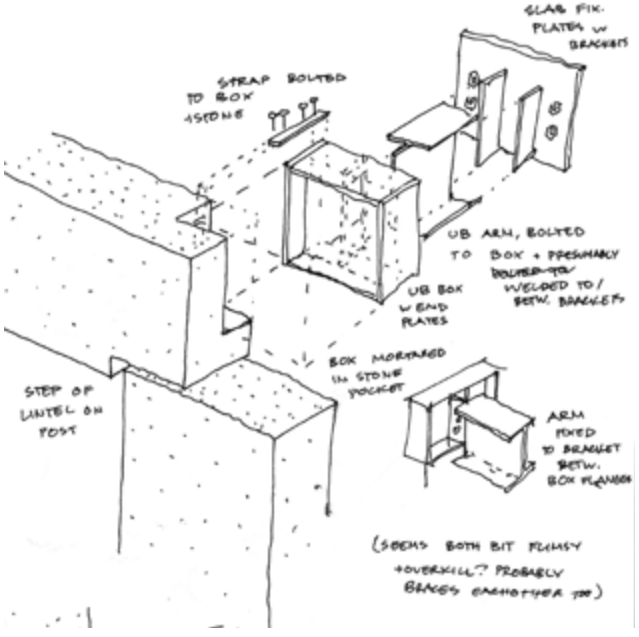
A MAGGS '22

D18



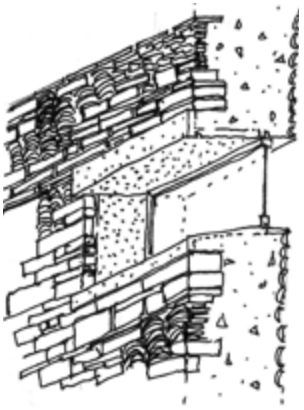


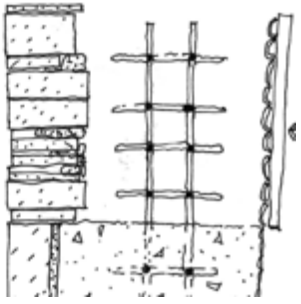




E1-9
Clerkenwell Close
Groupwork + Amin Taha, 2017
London, UK
Limestone post & lintel exoskeleton
Facade proportions express structural dynamics

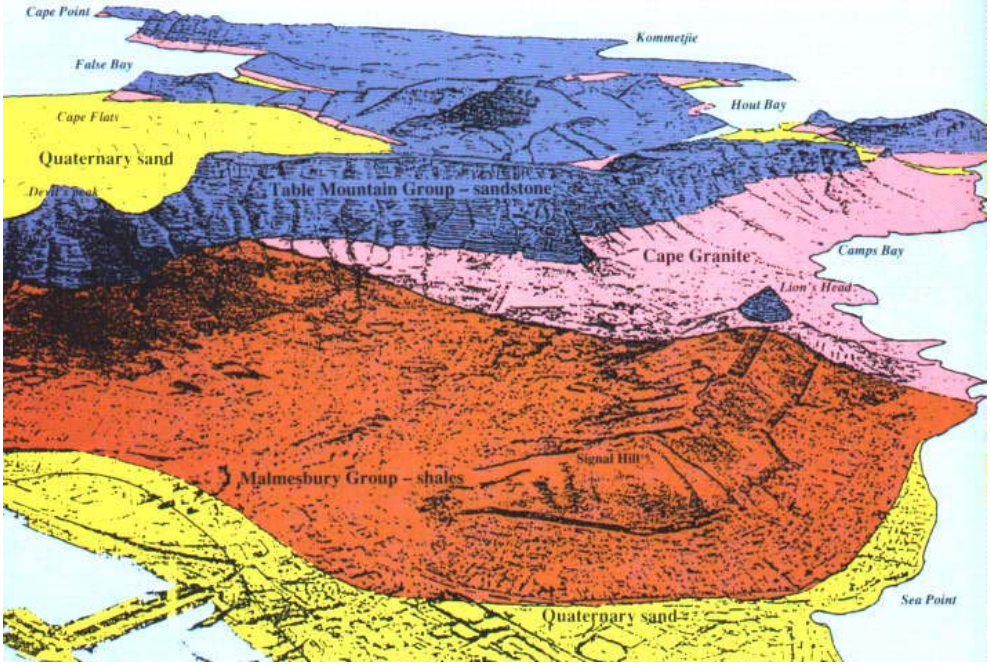
E10-16
Ningbo History Museum
Amateur Architecture Studio
2008
Wa-pan construction
Using brick, stone & ceramic rubble in drystack masonry, or additionally as permanent shuttering



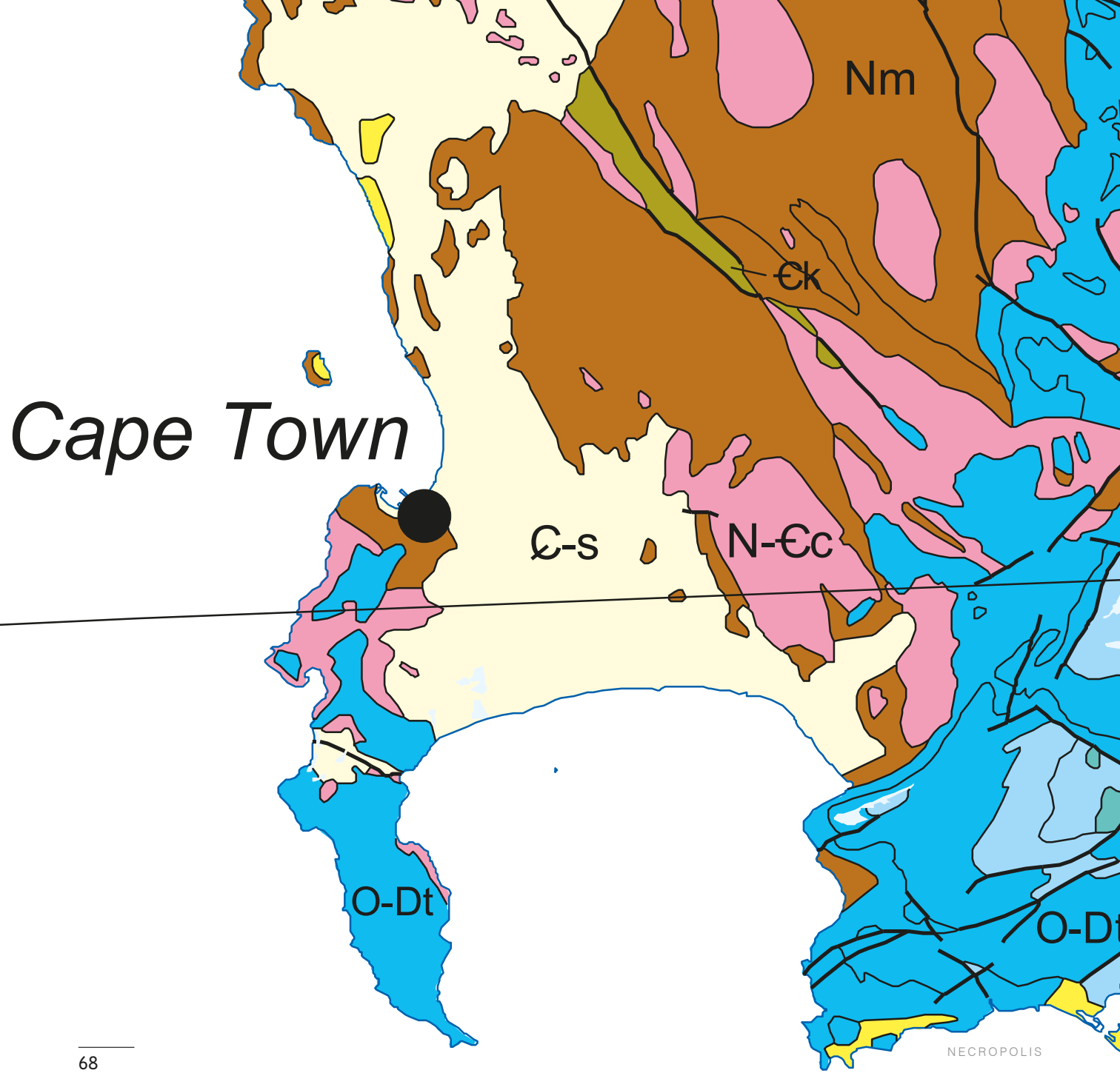


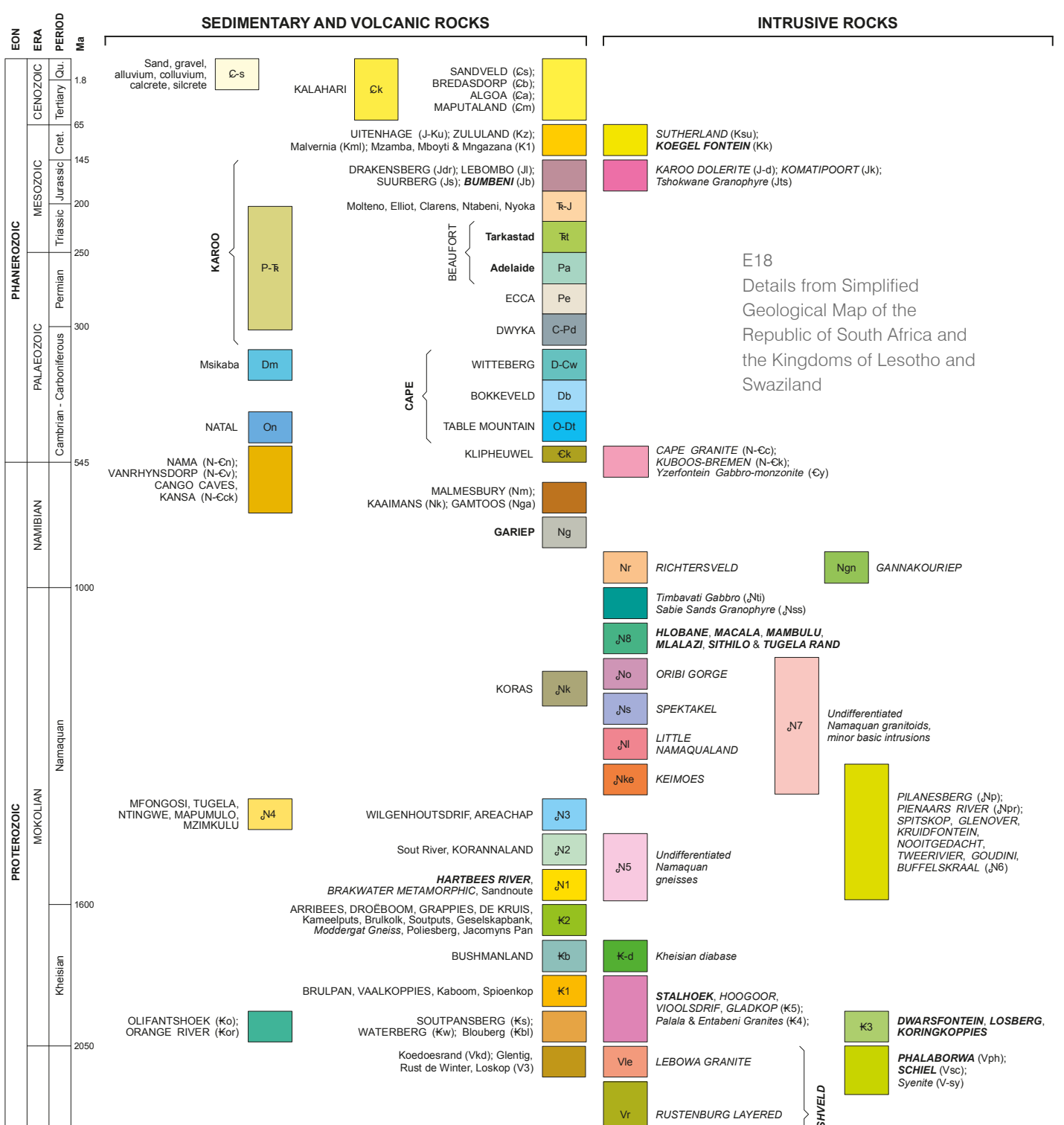
CAPE GEOLOGY

Rocks comprise three types: igneous, metamorphic and sedimentary. Igneous begins as molten minerals, or magma, which then either cools below (intrusive - up to 16 km) or above (extrusive) the ground. The other types are recompositions of eroded igneous and other material. Metamorphic are recrystallisations of material by heat, pressure or chemicals. Sedimentary are ancient compactions or cementations of material. There are 4 main lithological types constituting the Cape peninsula. The Table Mountain group sandstones (including quartzite) are sedimentary, Malmesbury shale (from which slate derives) is metamorphic, Cape granite is intrusive igneous, and holocene and quaternary sand(stones) are sedimentary (sand, gravel, alluvium, colluvium, calcrete and silcrete). Sandstone is the softest but messiest and least durable rock. Granite and shale are much harder and stronger. Granite is more widely quarried. Shale however is slightly more durable, especially in harsh sunlight. Also available in the Western Cape are calcrete (sedimentary) and dolomite (metamorphic), the prior comparable to sandstone, the latter to shale (Shadmon, 1996: 10-20; Council for Geoscience, 2008; Du Toit, 1986; Compton, 2006: 75, 82).



E17
Schematic geology of Cape Peninsula


Nm
Ck
Cape Town
C-s
N-Cc
O-Dt
O-Dt



E18
Details from Simplified Geological Map of the Republic of South Africa and the Kingdoms of Lesotho and Swaziland

PRECEDENT

MAITLAND CEMETERY

MAITLAND, CAPE TOWN

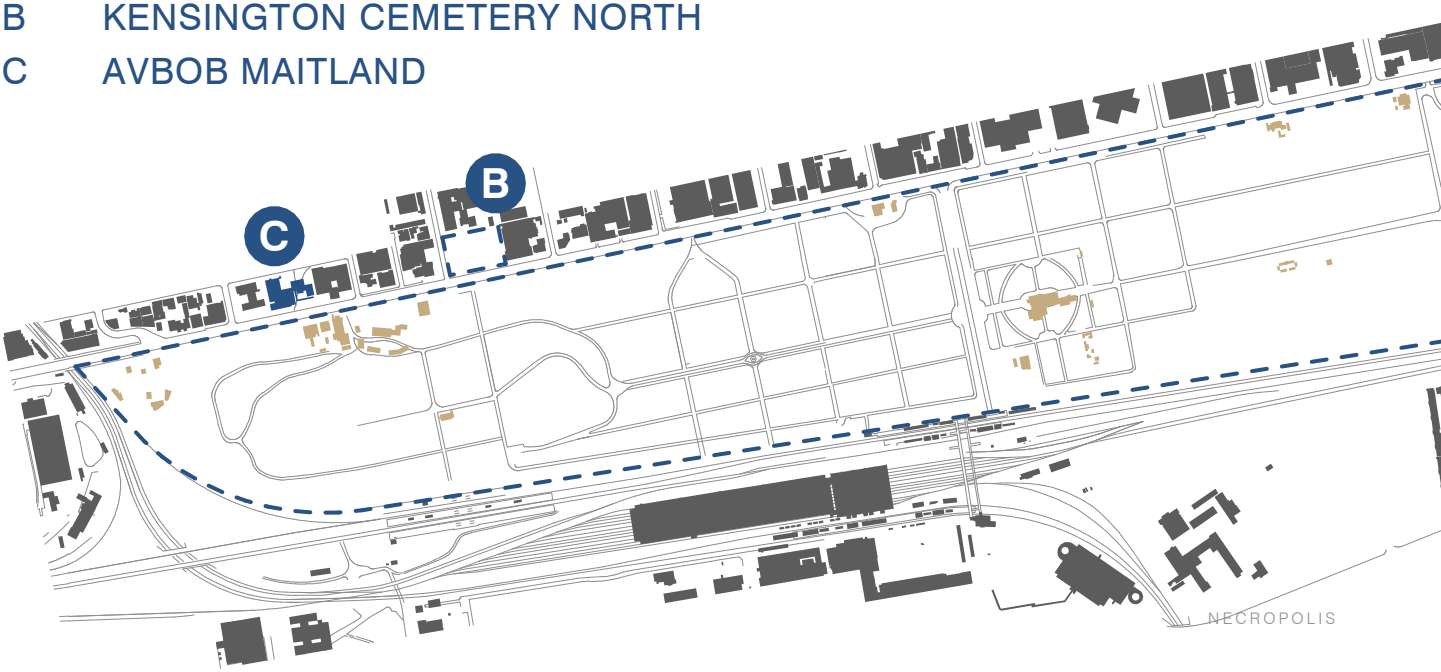
Key lessons: Programme & operation

Maitland Cemetery was designed to replace the Somerset/ Prestwich Necropolis, which had been in use since the 1700s and was finally closed in 1886. Maitland opened to inhumation burials in 1884, and was the City's first and flagship modern cemetery, wherein they applied lessons from modern cemeteries in Northern Europe. Several other cemeteries

A MAITLAND CEMETERY

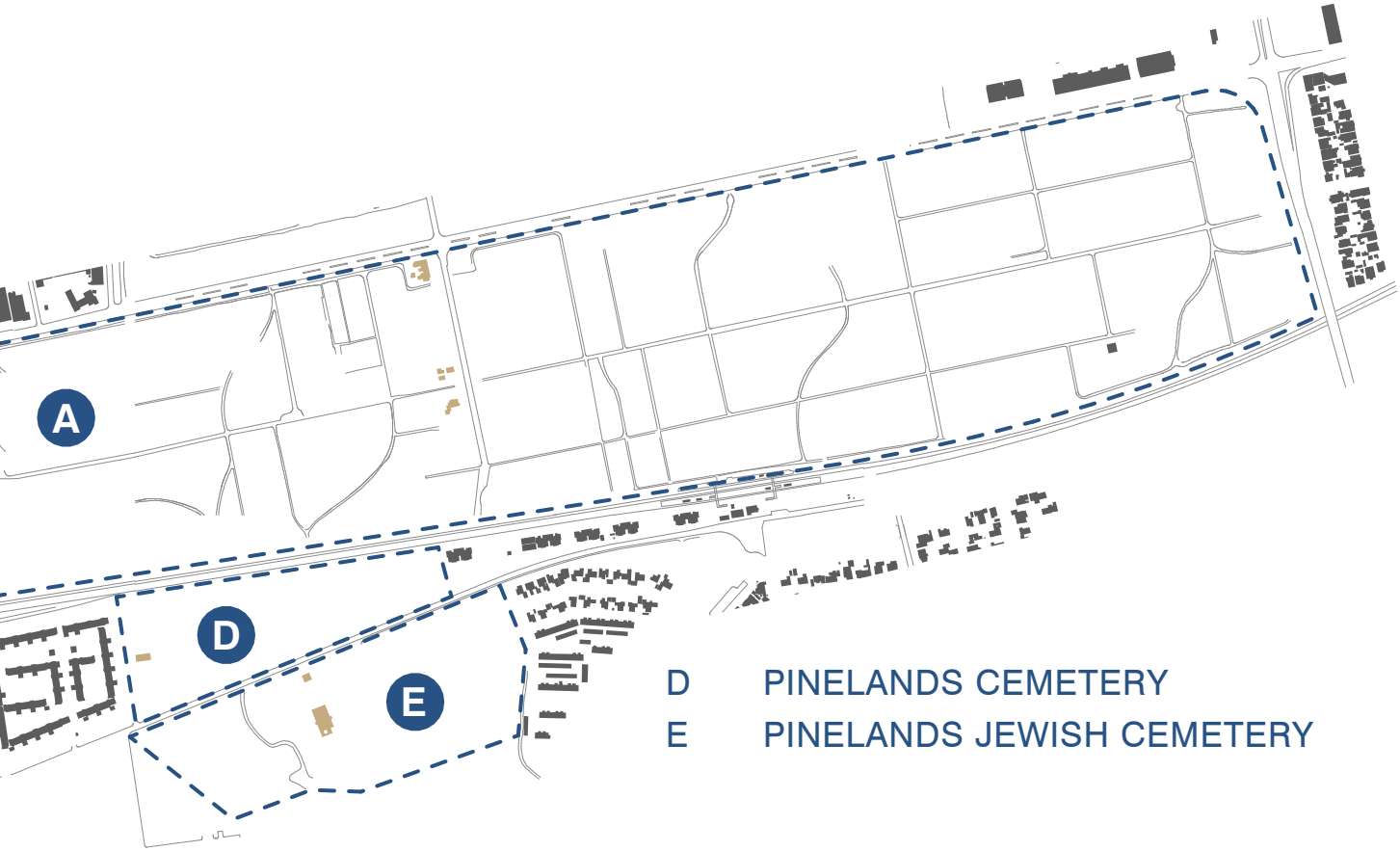
B KENSINGTON CEMETERY NORTH

C AVBOB MAITLAND



were built around it in the following decade. The cemetery is notoriously dangerous and largely vacant. Burial in perpetuity was written into both bylaws and contracts and has yet to be replaced. The vast size of the cemetery gives it an anonymous, coldly institutional character.

F2



D PINELANDS CEMETERY
E PINELANDS JEWISH CEMETERY

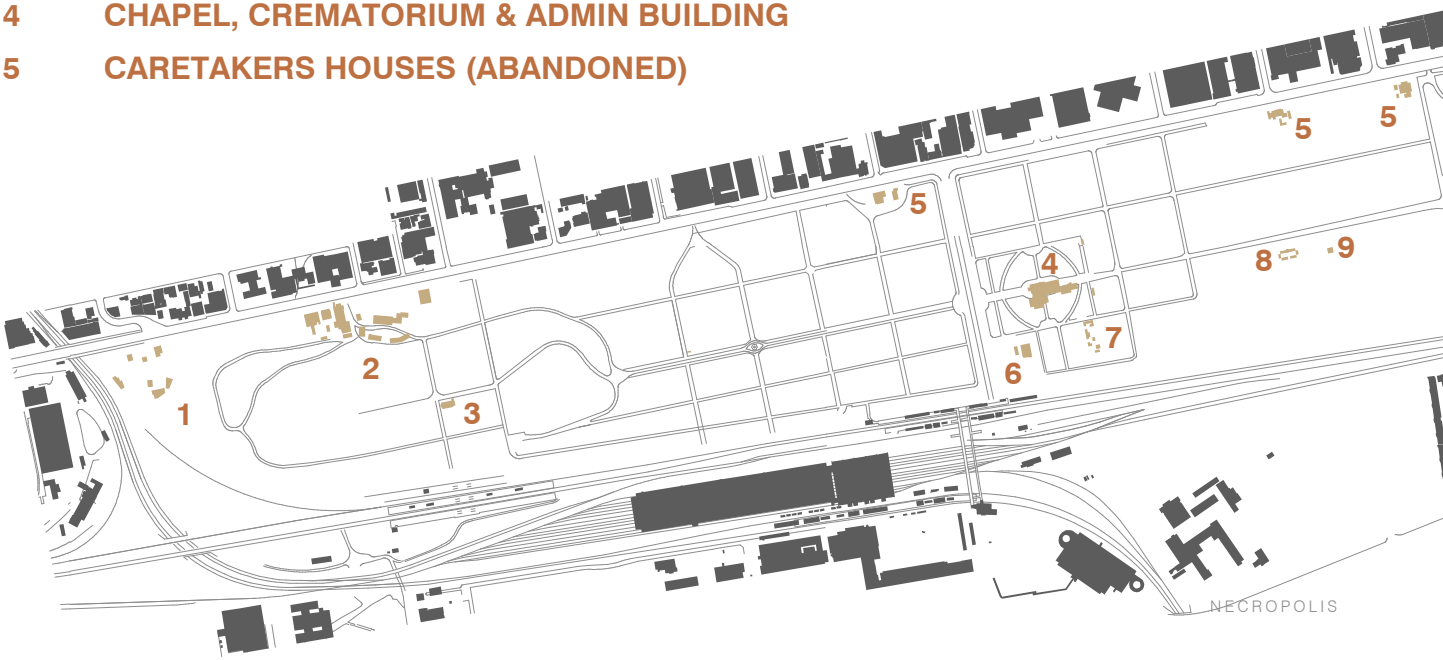
A MAGGS '22

The chapel was built in the 1930s (seats about 230 adults), and the crematorium in the 1960s/1970s (see following spread). Since then several niche walls and a gated outdoor columbarium complex for cremated remains have been built.

My primary interest here is in the programme which is unpacked in greater detail in PROGRAMME DEVELOPMENT on page 120.

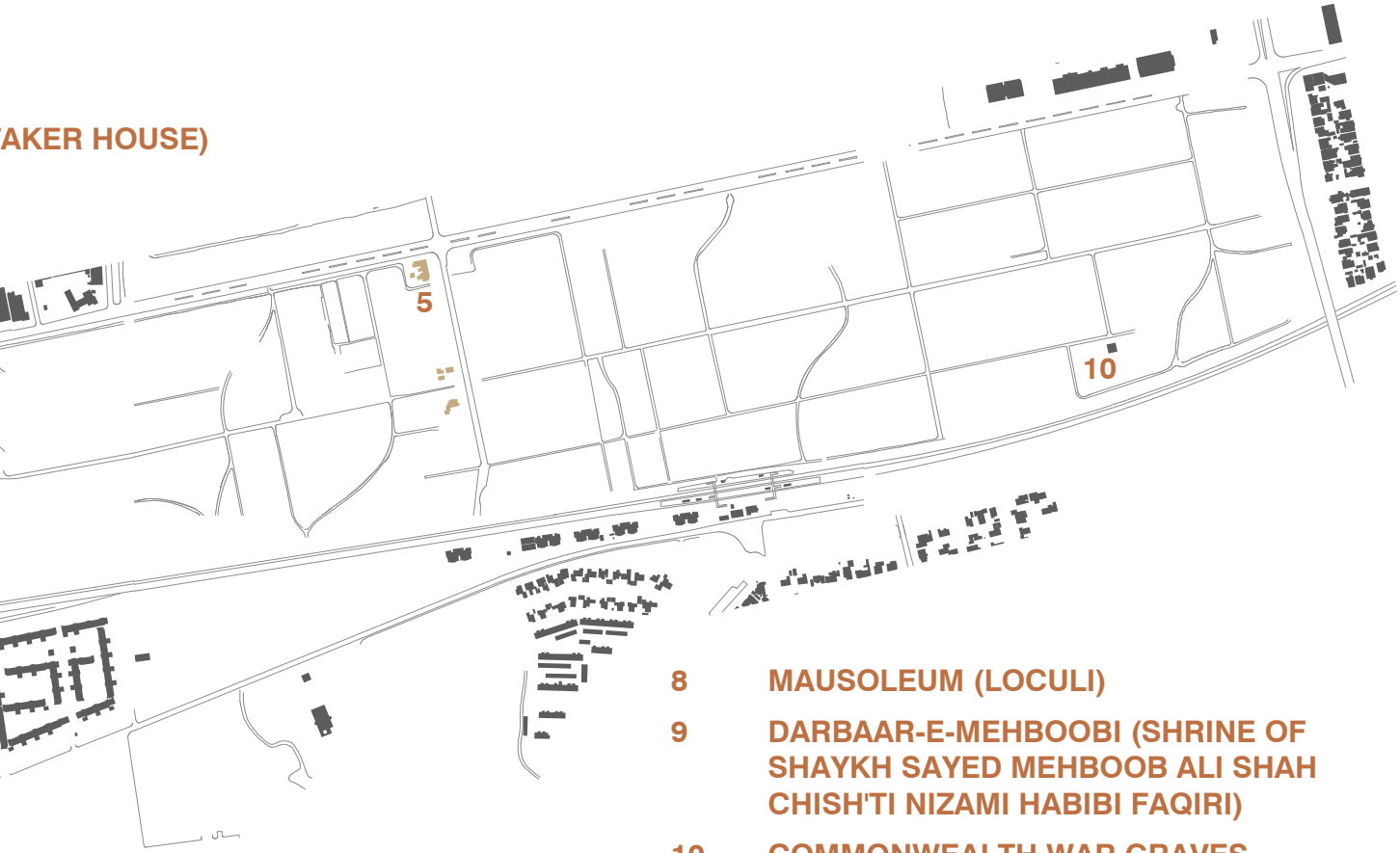
F5

1 INFORMAL SETTLEMENT (ON PRASA LAND)
2 MAINTENANCE FACILTIES
3 CATHOLIC CHAPEL
4 CHAPEL, CREMATORIUM & ADMIN BUILDING
5 CARETAKERS HOUSES (ABANDONED)
6 ADMIN BUILDING (EX-CARET
7 OUTDOOR COLUMBARIUM



F3-4
Maitland Cemetery Chapel & Administration
The smoestacks of the first cremators were hidden in the Chapel's steeple, softening their character. However those for the current cremators are exposed, as can been seen in the background

AKER HOUSE)

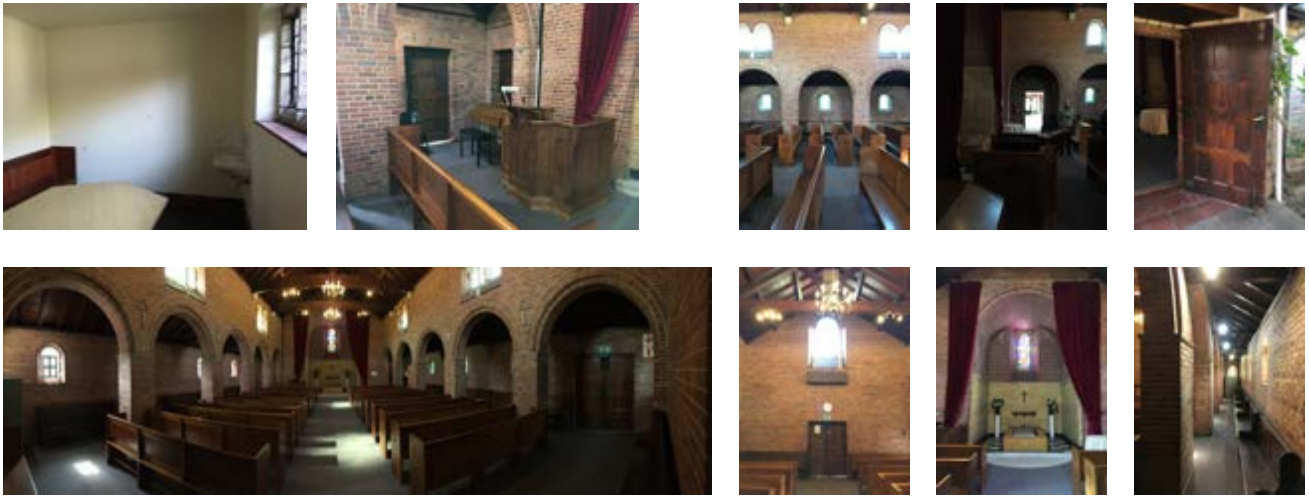


A MAGGS '22

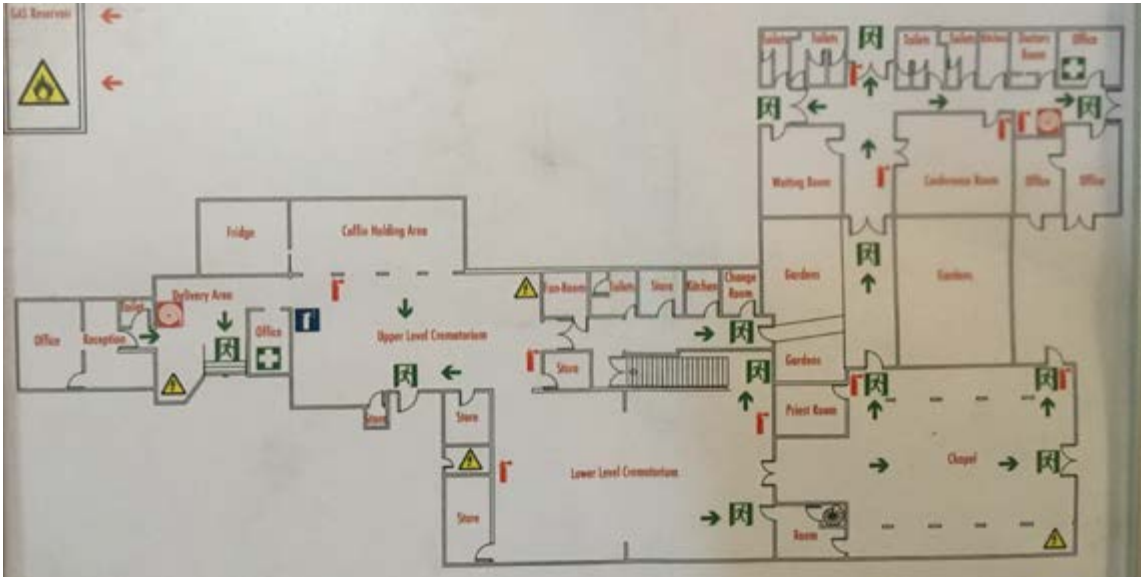
8 MAUSOLEUM (LOCULI)

9 DARBAAR-E-MEHBOOBI (SHRINE OF SHAYKH SAYED MEHBOOB ALI SHAH CHISH'TI NIZAMI HABIBI FAQIRI)

10 COMMONWEALTH WAR GRAVES



F6-15
Chapel interior
Fire Escape plan for Chapel, Administration & Crematorium (nts)



F16-18
Administration building
attached to Chapel

F19-26
Burial of cremated remains

F27-30
Superterranean
Interment
Catholic family tomb
with loculi
Sufi Shrine
Mausoleum (loculi)

PRECEDENT

KIRSTENBOSCH BOTANICAL CEMETERY

NEWLANDS, CAPE TOWN

1913 opened

Key lessons: Landscape, Paths, Borders, Filters, Served / service

I have been visiting Kirstenbosch since my parents took me as a toddler, so the lessons have been learned from years of observation.

The primary maintenance and nursery facilities are used as buffer between the gardens and Rhodes Drive (the arterial road beneath). This also makes them as accessible as possible to large trucks bringing and taking things.

There is a contrast between direct and meandering paths, always in dialogue with the topography. Service roads also act as the major pedestrian routes, instead of having separate public/ private circulation systems (like in shopping malls). Though not always designed, there are splendid spatial sequences that take the visitor through thick vegetation before releasing them at a view point looking over the City. There is a careful gradation between Gardens and Mountain, with no need for a fence along most of the boundary.

F40-44
Acropolis Pathways
Athens, Greece
Dmitri Pikionis
1957 completed

Key lessons: Path, Landcsape, Narrative, Materiality

Stone offcuts and spolia - rubble, both from recent demolitions (many premodern buildings were being knocked down to make way for modern concrete apartment blocks) and from ancient ruins.

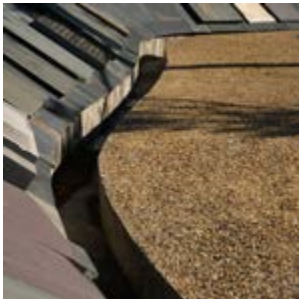
‘Writing’ histories and heritage of a landscape into the ground’s surface.

Stories that unfold as the visitor takes each step

F45-52
Seaforth Cemetery
Simonstown, Cape Town
Roelof Uytenbogaardt
1975 completed

Programme: Landscaping (pathways, terraces, retaining & feature walls), Cenotaphs

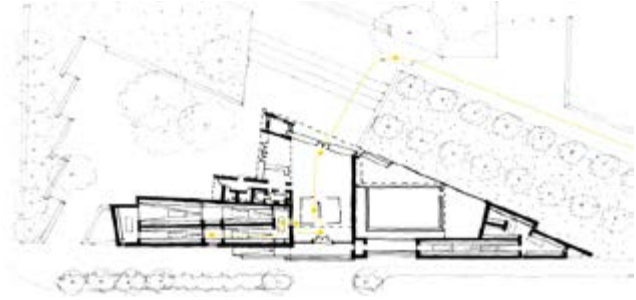
Key lessons: Path, Landscape, Borders, Parts & Whole

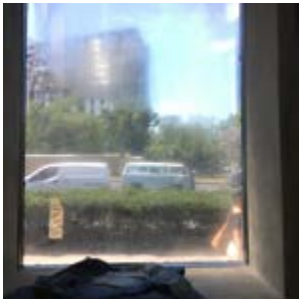


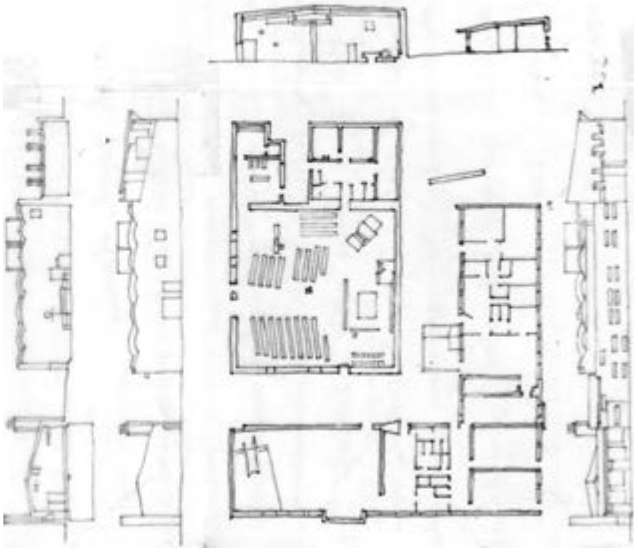
F60-65
Prestwich Memorial
De Waterkant, Cape Town
Lucien Le Grange
Architects & Urban
Planners
2005 - 2008 & 2011

Programme: Ossuary, Visitors Centre with exhibition space, Cafe/ Tea Room

Key lessons: Threshold - everyday / eternal, Spatial narrative, Materiality

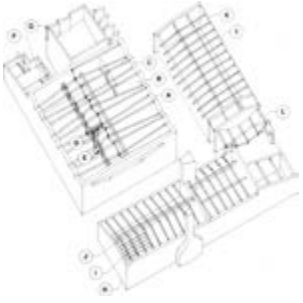






F66-72
St Petri Church
Klippan, Sweden
Sigurd Lewerentz
1962 - 1966

Key lessons: Sacred & Profane, Spatial narrative, Materiality & tectonics/ sterotomics, Geometry



SITE

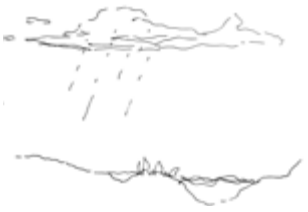
G1

CHOOSING A SITE

> *"unless planners, architects and landscape designers take seriously the issue of how to create new kinds of [burial places] within the weave of the modern urban fabric, there is a real danger of creating cities without memory, cities in denial of death and humanity"* (Worpole, 2003: 31)

Urban burial places have often been at the peripheries of cities, but in smaller, premodern cities - including Cape Town - were at least still within easy walking distance. They were important social spaces - not only as residences for the ancestors - and functioned as symbolic centres of cities. Cape Town's functional cemeteries today are mostly far from the communities they serve, and are usually rarely visited wastelands ensconced in industrial areas. As described in previous sections, modernity has involved a loss of the body's spiritual meaning, and for many death is conceived as an illness or taboo. These attitudes both helped cause the predicament of modern cemeteries and are fed by that predicament. Worpole's charge at the beginning here became my first guiding principle in choosing a site.

In San cosmology the world is divided into three horizontal realms: the underground, the ground and the heavens. Alone they are separate and dull. The entity which brings these realms to life and unites them - the vertical axis - is water. Water which rains from the sky, wells from the ground and runs in rivers. Water is the blood of the world. In shamanic practice, this travers-ive, liminal quality makes it a medium for spiritual



G2

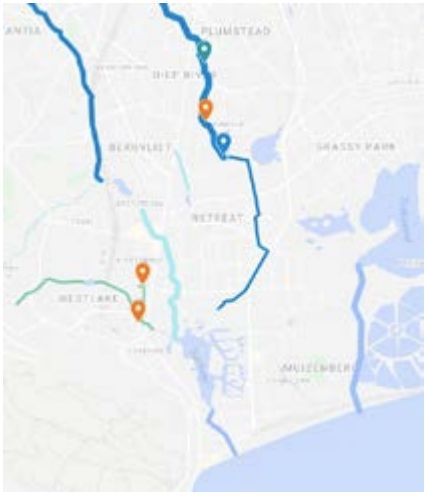
G3-6

journey. Springs and streams are portals to the underground - the realm of the dead. There are commonalities here with Egyptian, Indian, Greek and many other mythologies. Rivers are crossings between the realms of the living and the dead, the everyday and the eternal (Lewis-Williams & Pearce, 2004: 51-65; Bernard, 2013).

Water is the reason that people have settled in Cape Town for centuries. Until modernisation, the City's hydro-network of rivers, streams, springs, aquifers, *vleis*, *grachts* (canals), *leiwaters* (irrigation channels) and dams had a strong presence. Some like Buitengracht, Buitenkant and the Liesbeeck were primary structures in the order of the urban fabric. People could not but be aware of them, and of the water cycle. As the City modernised, many people no longer needed to walk to fetch water, but could twist a nearby tap and have it gush out in abundance. The hydro-network was buried in sewers, hidden behind walls and straightjacketed into canals and pipes. Nature had been tamed, and like the body and death, rivers and water lost much of their meaning.

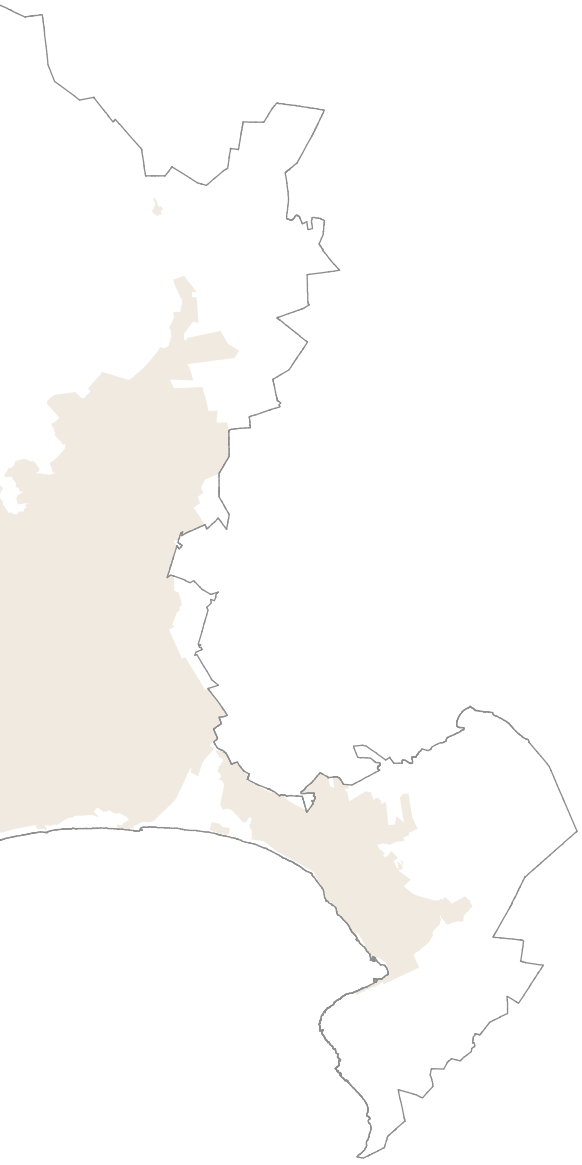
As a medium that can travel across the fractured borders of the living and dead, and of nature and culture, water is an opportunity to reconsider these borders. So I began tracing waterways in the City in order to find and choose a site.

I began by tracing waterways on Google Earth and Street View, looking for adjacent sites that I could use. The first two that I chose and then visited were in Diep River and Westlake. The waterways were entirely canalised and the flora largely alien. According to Penelope Bernard (2013: 142), in Nguni spirituality water that has been substantially canalised or dammed - the flow obstructed - is rendered spiritually lifeless. These were largely lifeless, empty sites with little to work with.



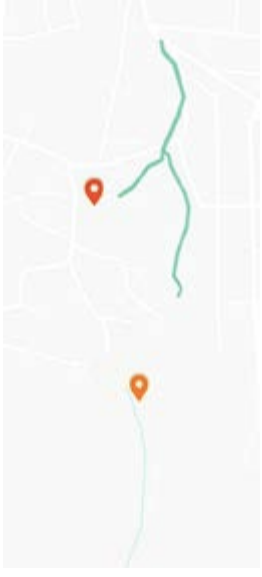
G7

G8



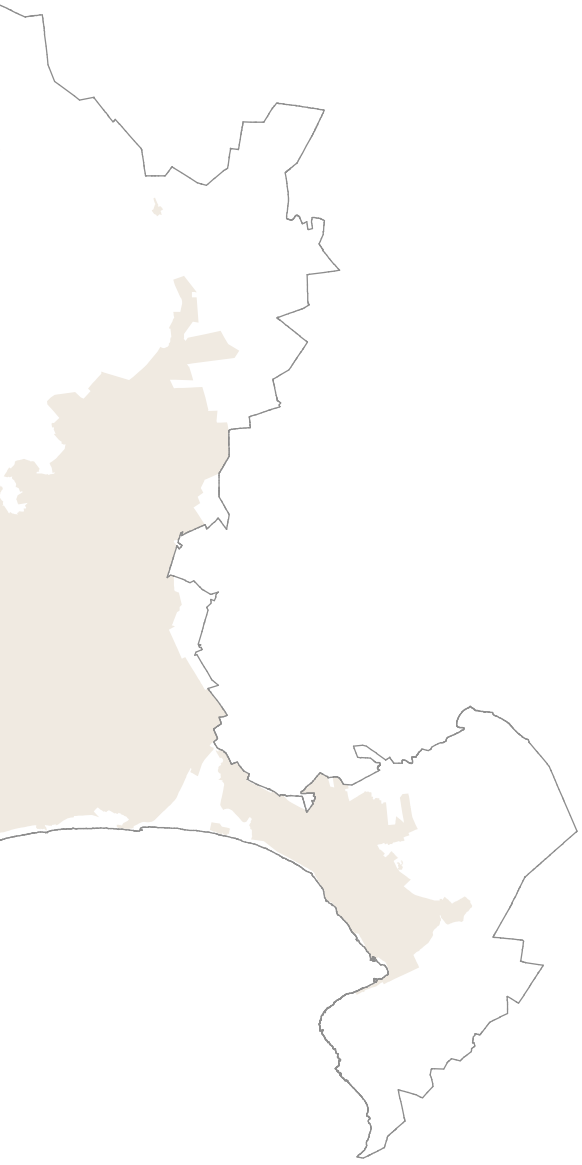
G9-10

The third site I considered was the Platteklip stream in Oranjezicht/ Vredehoek. The stream runs down the Mountain through Platteklip Gorge, and enters the City through Deer Park before being subterraneanously canalised until it feeds into the bay somewhere in the harbour. I was vaguely aware of this stream from its links to Cape Town history and its use in previous student projects. I found that the parks were well used by a variety of people, and that they also contained other rich histories. The nature of the site in relation to the City, its histories and historical centre made it a workable choice, so I chose it.



G11

G12

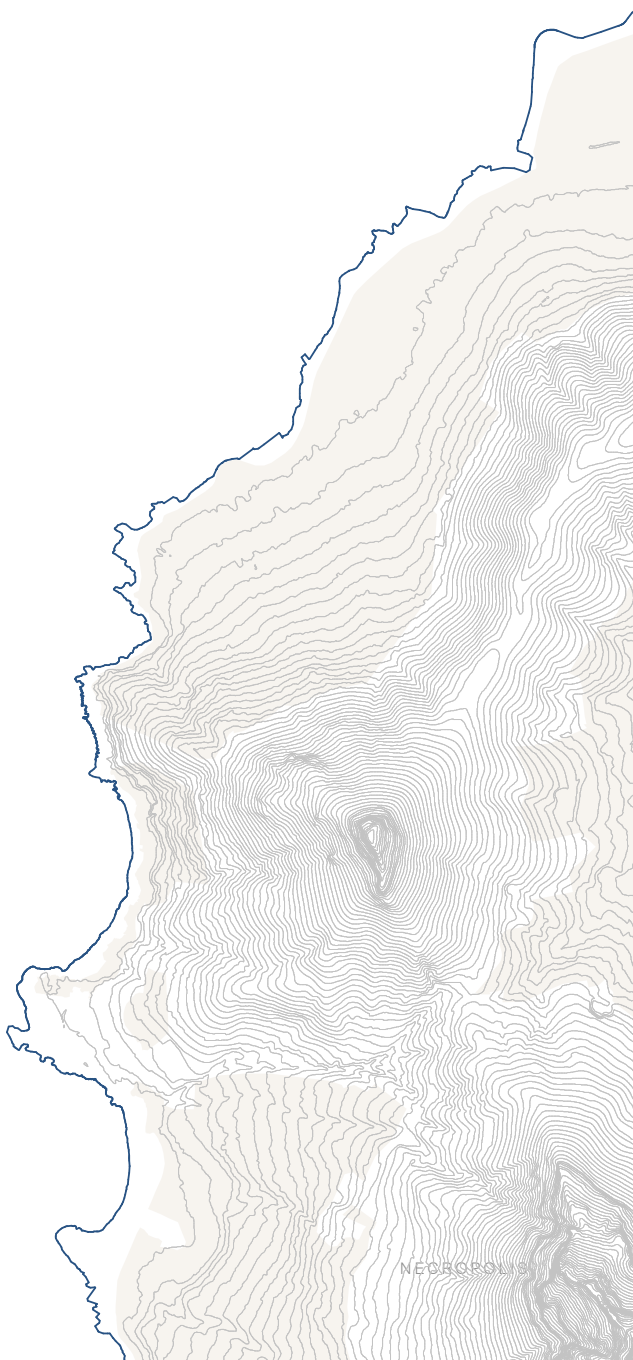


G13

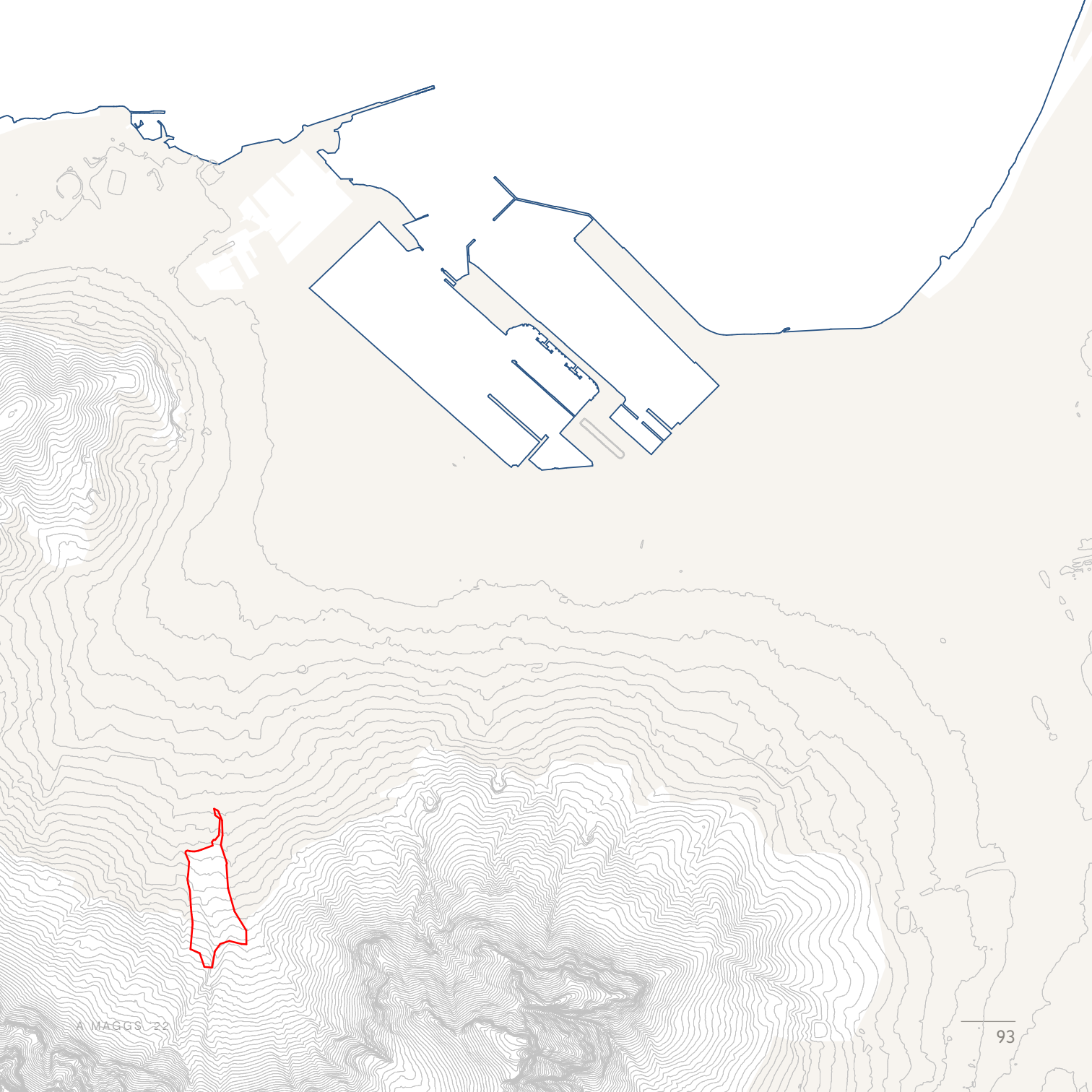
CITY BOWL:
TOPOGRAPHY & BUILT

The area of interest - at the centre of which is the site - is outlined here in red. The parameters of this area will be explained later.

The map here shows how the area of interest is a puncture into the built fabric. A moment where the hard boundary between City and Mountain becomes a porous border zone.

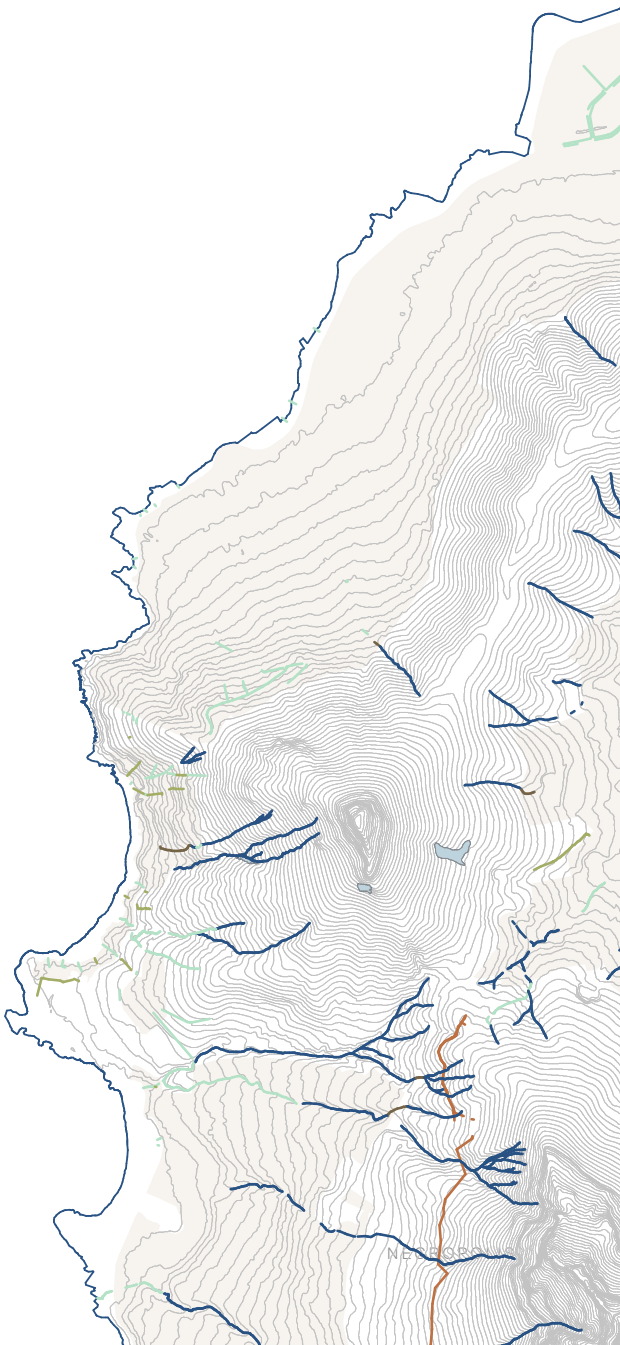


G14

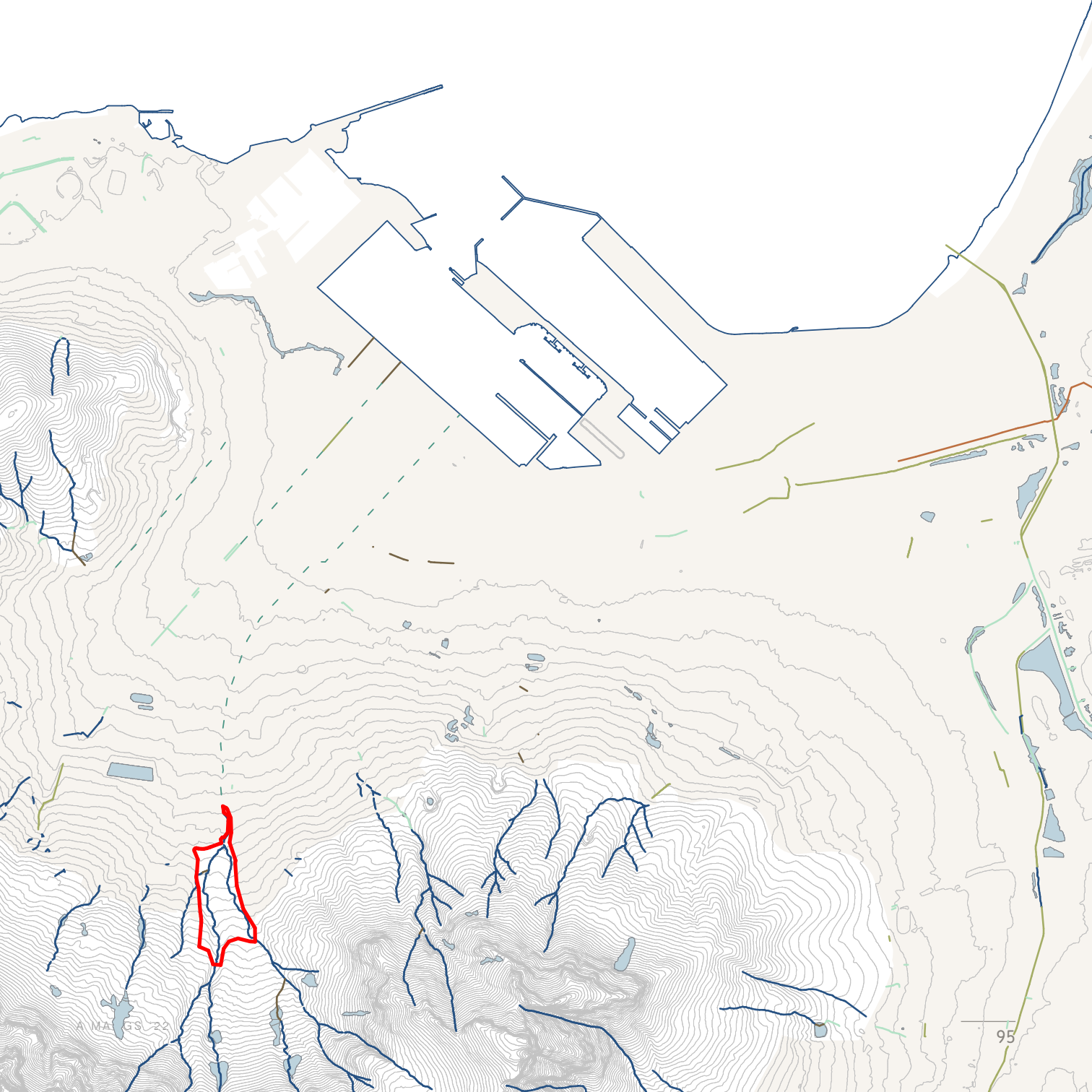


CITY BOWL HYDROSYSTEM //AMISSA

- Bulk Water Reticulation
- Wetlands & Stormwater_Waterbodies
- Canals Composite & Lined (30)
- Underground channels / buried canals
- Channel Open (32)
- Gap Connector/Flow Path (33)
- Natural River/Stream & Extensions (34)
- Unspecified (-2)



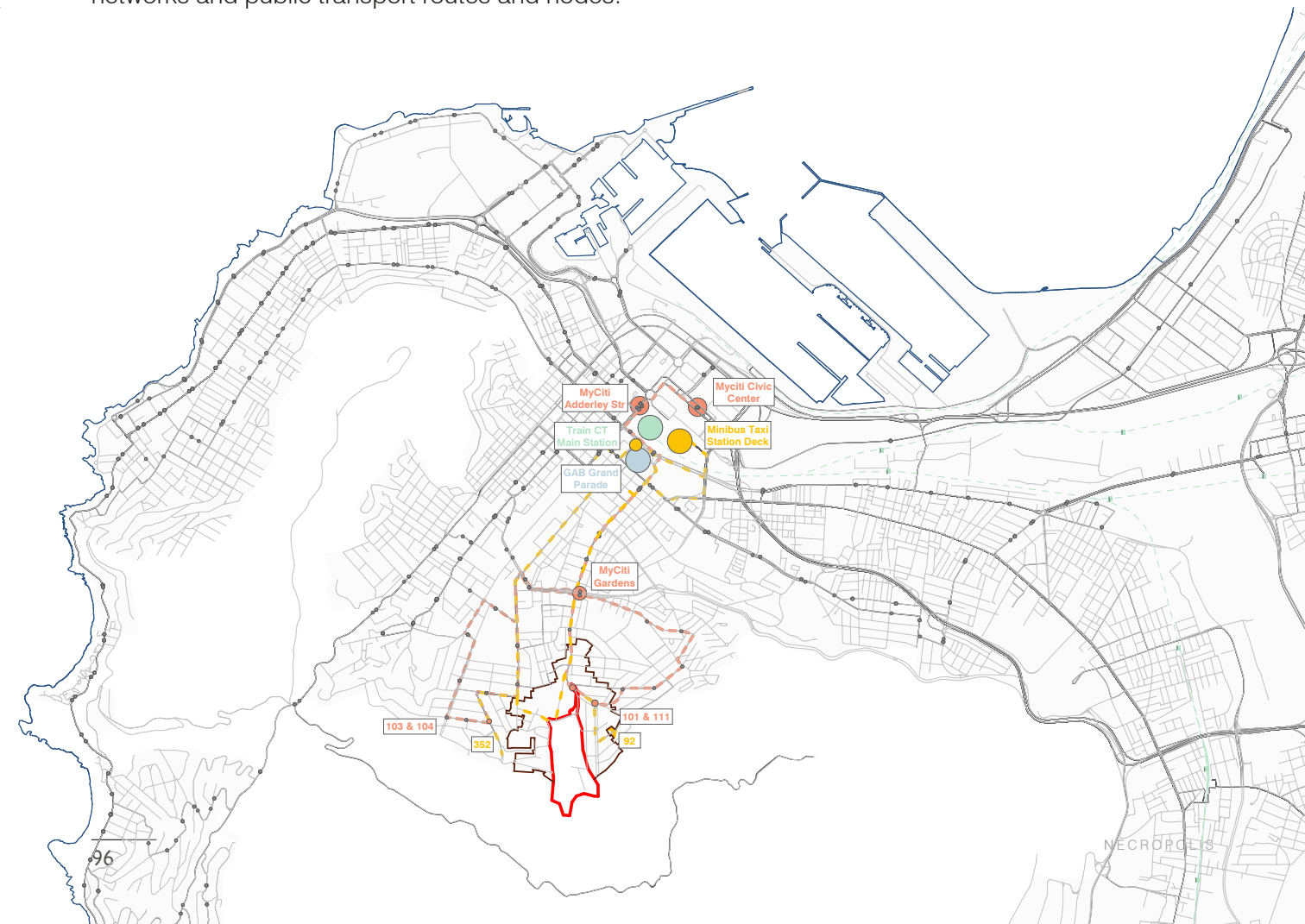
G15


A MAGS 22
95

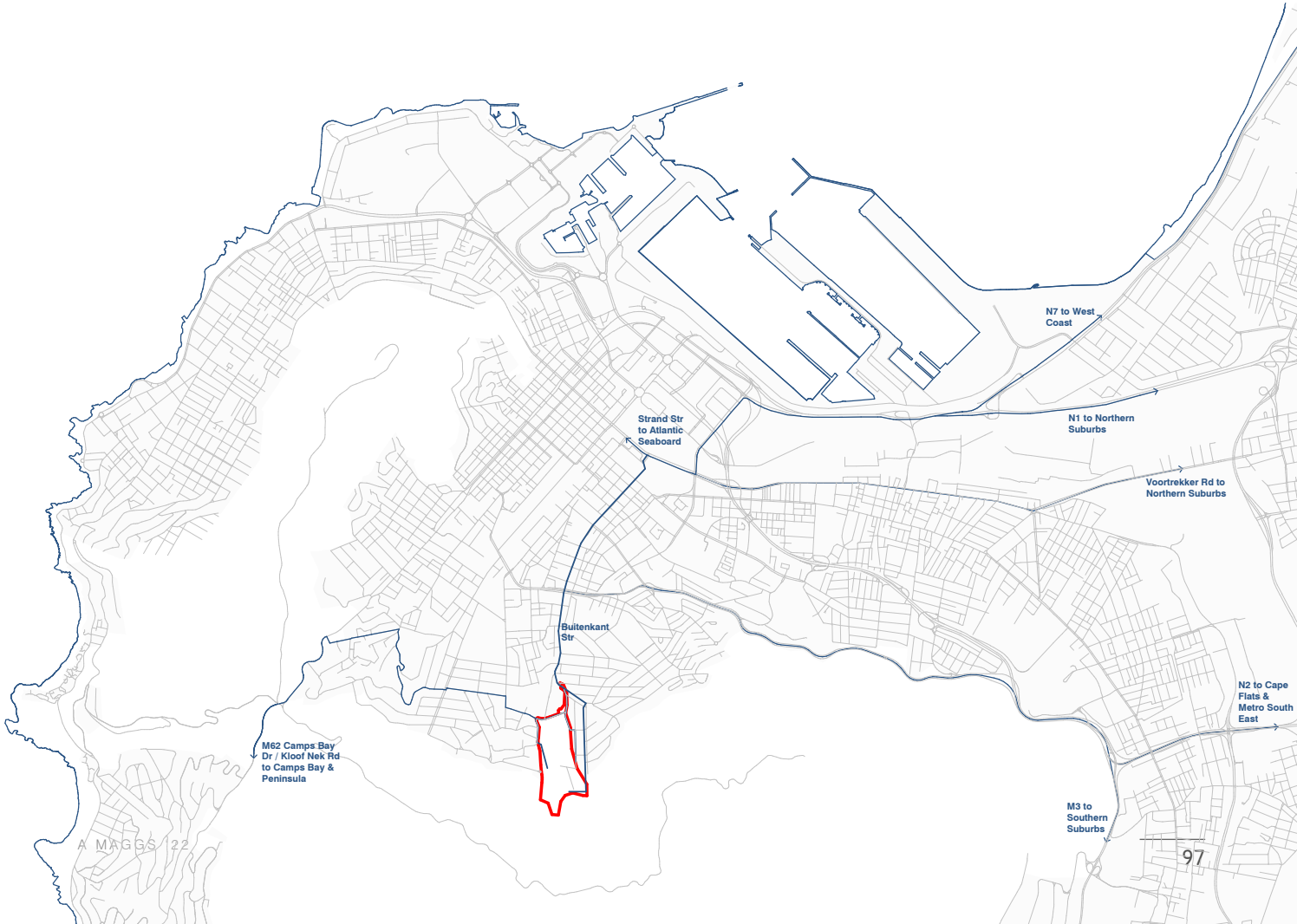
CITY BOWL ACCESSIBILITY: PUBLIC & PRIVATE TRANSPORT

Given its proximity to the CBD, and the centrality of the City Bowl in Cape Town's urban history, the site is highly accessible both by means of road networks and public transport routes and nodes.

G16



G17


N7 to West Coast
N1 to Northern Suburbs
Strand Str to Atlantic Seaboard
Voortrekker Rd to Northern Suburbs
Buitenkant Str
N2 to Cape Flats & Metro South East
M62 Camps Bay Dr / Kloof Nek Rd to Camps Bay & Peninsula
M3 to Southern Suburbs

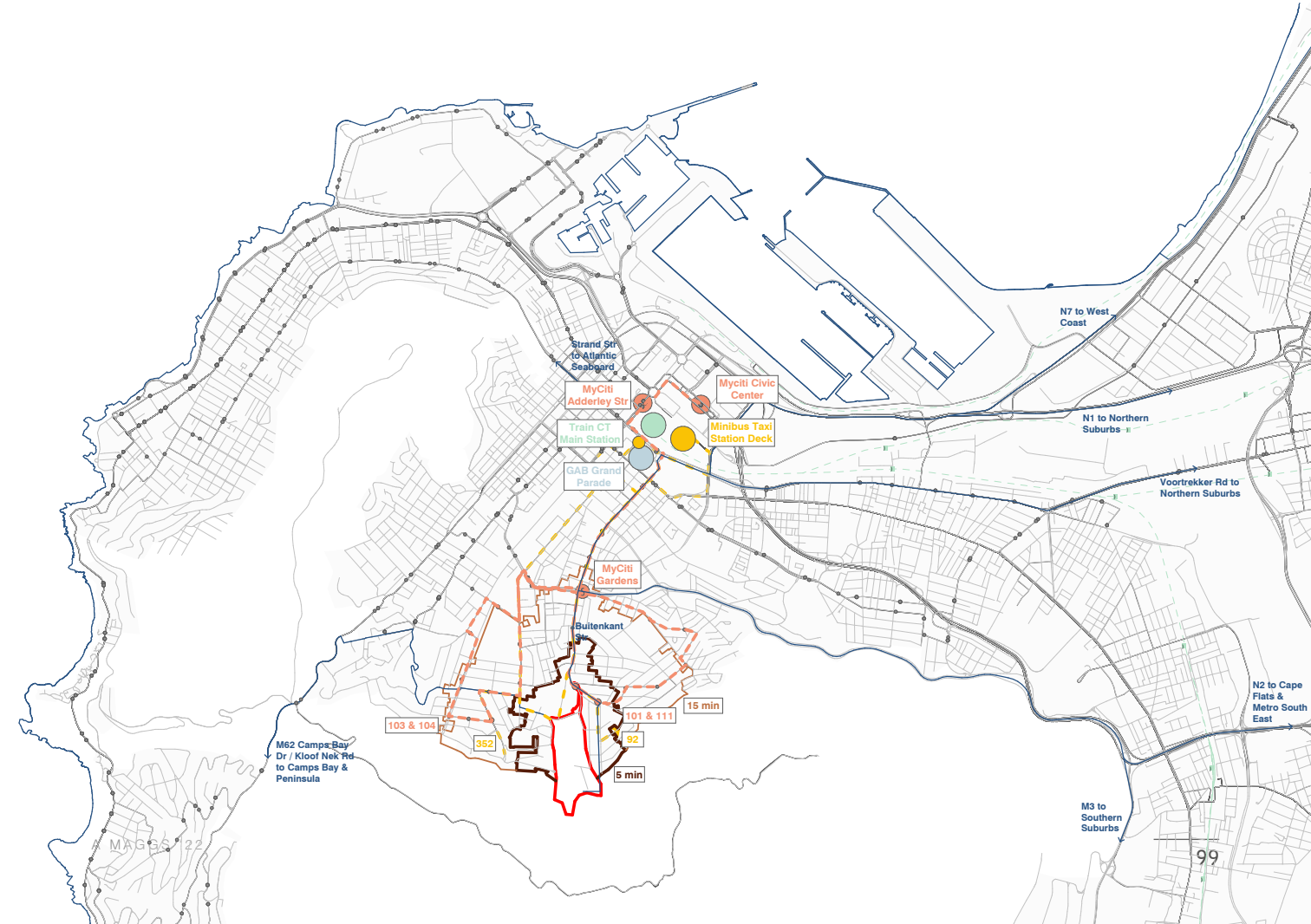
CITY BOWL ACCESSIBILITY: WALKING RADII

The map here is of the erven accessible within roughly 5 and 15 minute walking distances

G18

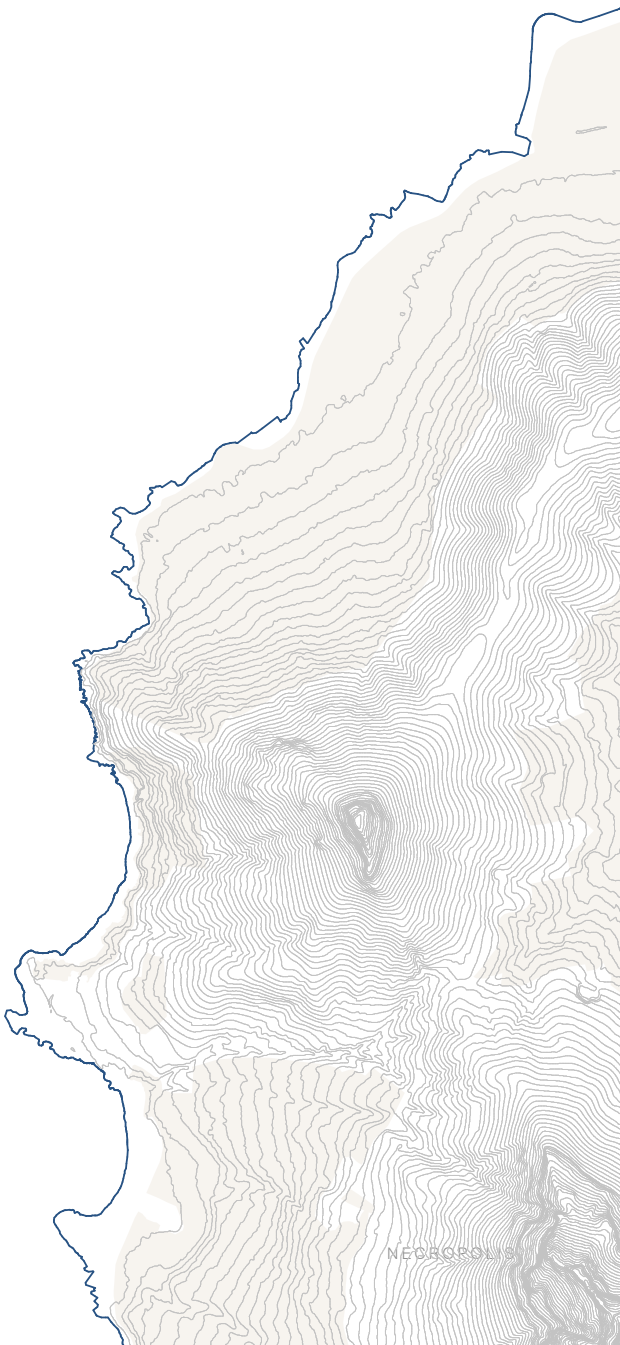
CITY BOWL ACCESSIBILITY: COMBINED

G19

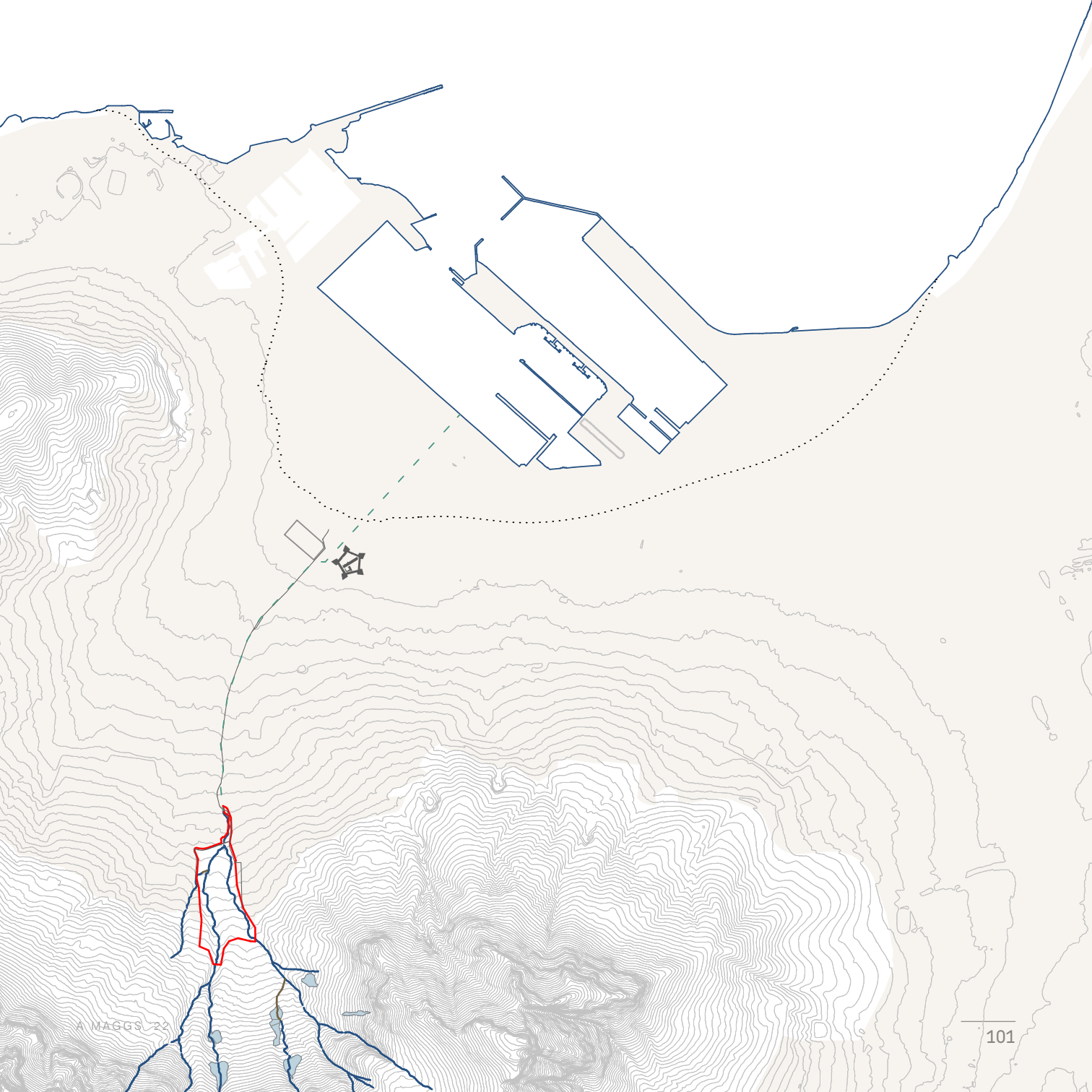


PATH & PLACE IN THE CITY: PLATTEKLIP / BUITENKANT

The historic mouth of the Platteklip ran between the Castle and Grand Parade, and during colonial development, its course was canalised along and then under Buitenkant street. There is an urban implication of a path from a symbolic centre of the City up to the site.



G20

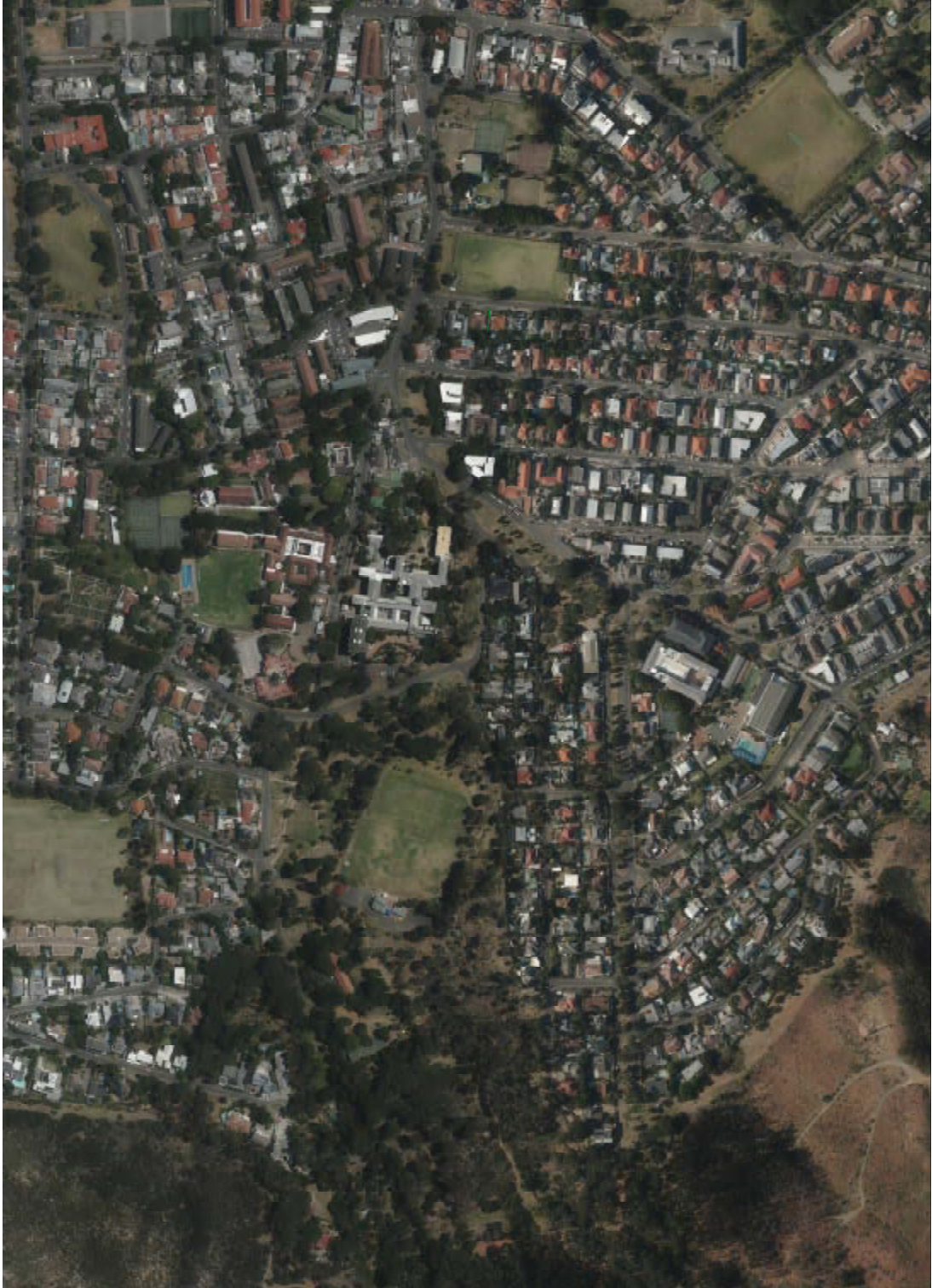

A MAGGS 22

WALKING THE PLATTEKLIP / BUITENKANT

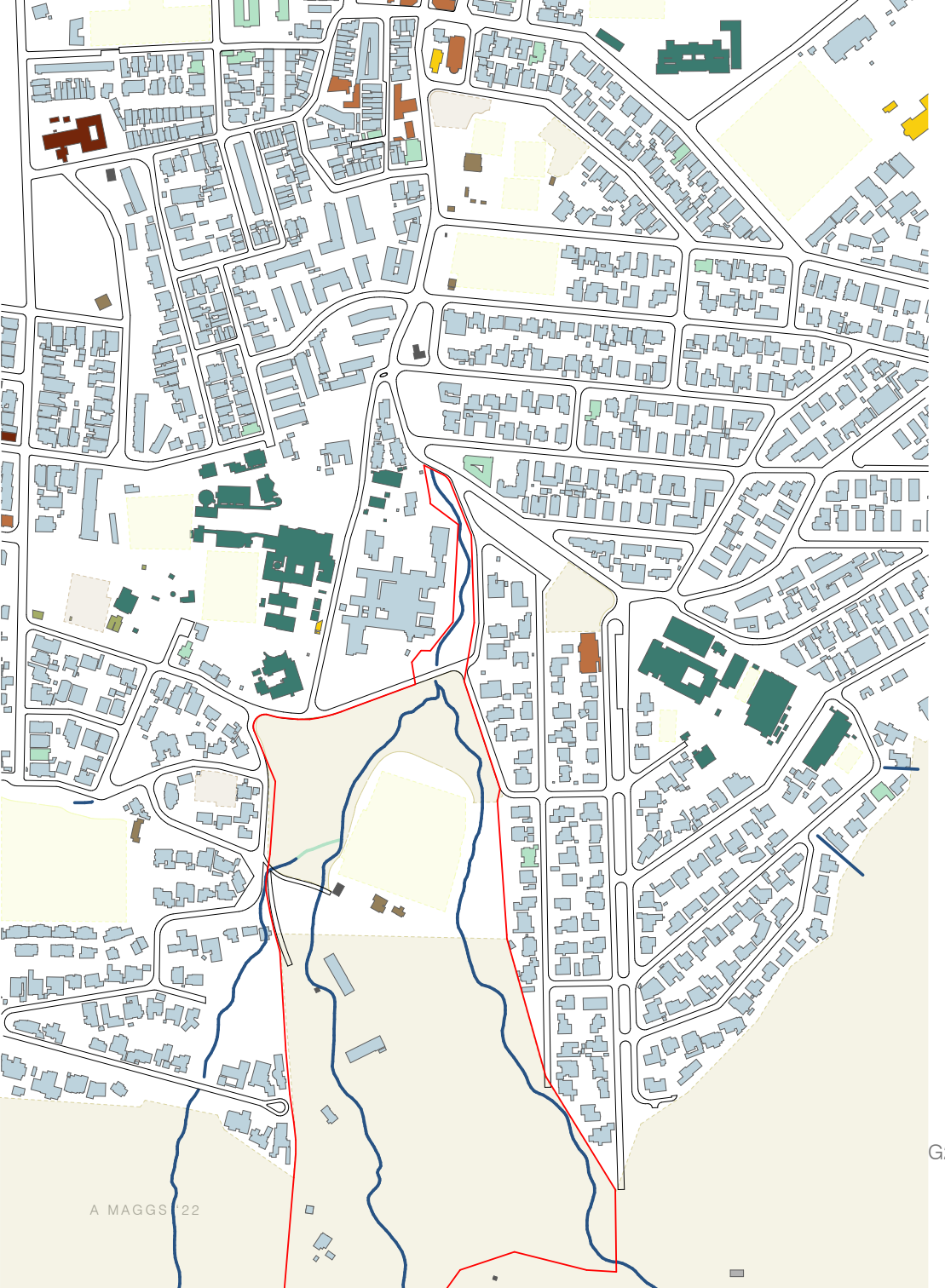
Walking up Buitenkant, an arterial road in the City Bowl, you pass various sites of historical significance as well as traces and uses of the stream and its water.

G21

USE / FUNCTION



G22

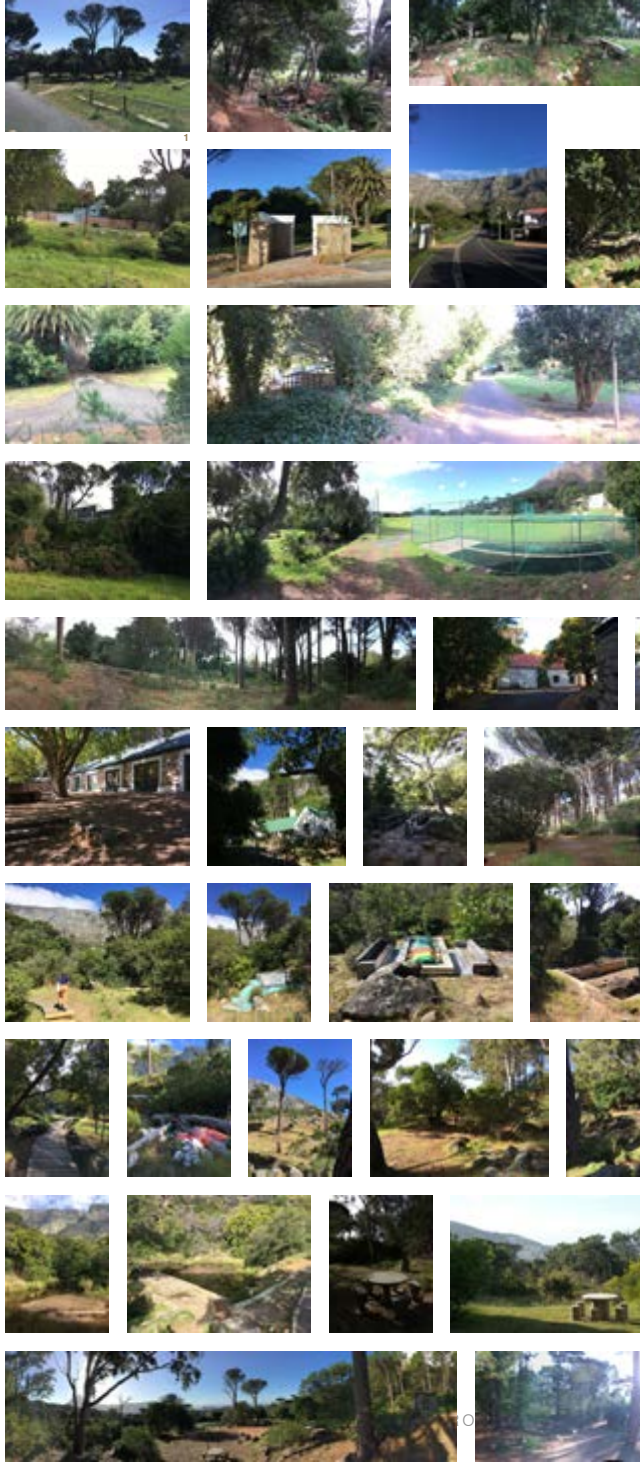

RESIDENTIAL
RESIDENTIAL & WORK FROM HOME
COMMERCIAL
UTILITY / MUNICIPAL
SPORT (SCHOOL & CLUB)
AGRICULTURE
SCHOOL
HEALTH CARE
RELIGIOUS
SPORTS FIELD
AGRICULTURE
PARK
G23
A MAGGS 22

WALKING THE SITE: VAN RIEBEECK & DEER PARKS

The area of interest, which in this map is where the tree canopies are mapped, includes three parcels of land. The first, at the top here, is City owned open land besides a road, through which the perennial stream runs, and at the bottom is canalised underground.

The second is van Riebeeck park, a well maintained and used City Park, sometimes used for neighbourhood markets, and with a sports field leased to a school in the middle.

The last is Deer Park itself, a part of Table Mountain National Park. It is largely veld and woodland, with various social and religious heritage features. It is used by picnickers, dog-walkers, herbalists, runners, homeless people, pilgrims and others.



G24

MAJOR TANGIBLE HERITAGE FEATURES

Expanding on the site histories (following part) described earlier, there are 5 major features of tangible heritage on the site:

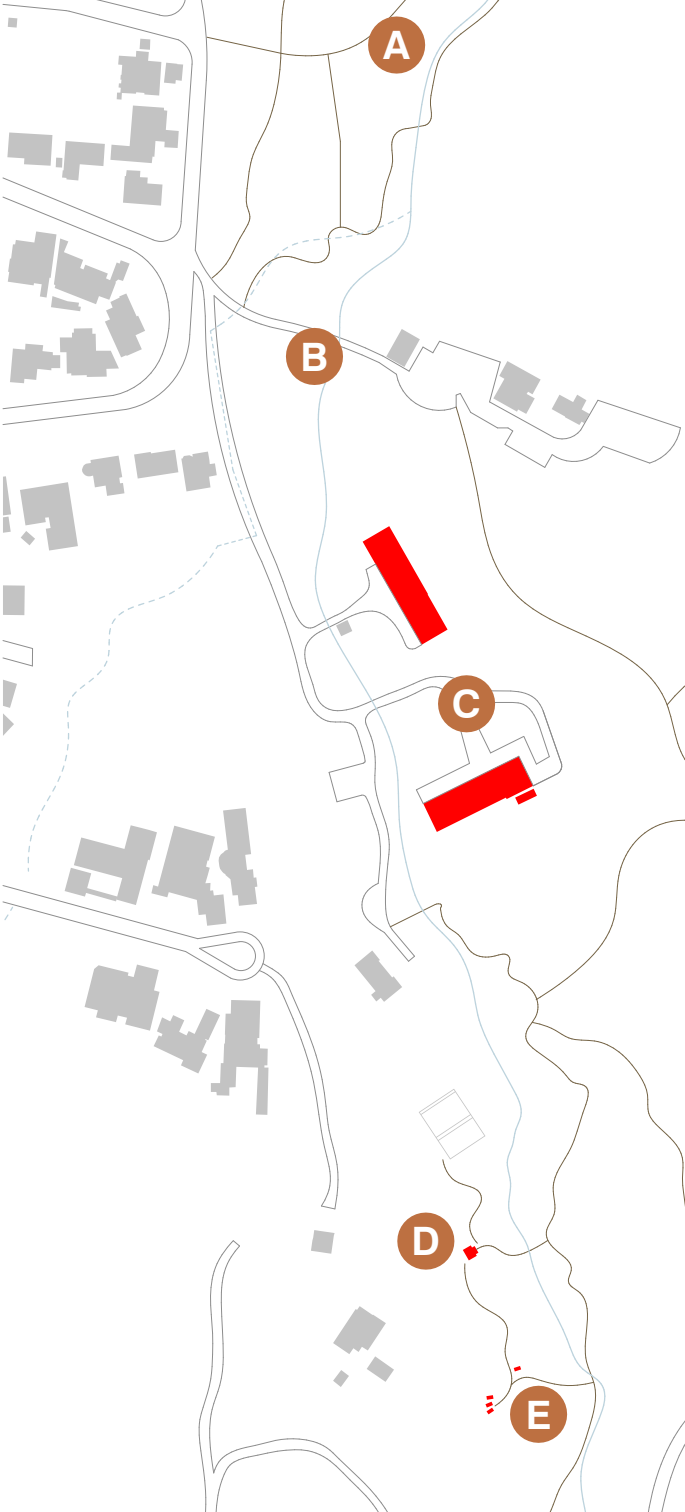
The first is the water itself, and its largely uncanalised course through the site.

The second is the Ring of Rocks, a site linked to the history of women slaves, and later celebrations of emancipation.

The (combined) third are the Wash Houses, related to the modernisation and sanitisation of the City's laundry industry.

The fourth is the Kramat of Sayed Abdul Haq, a local Sufi Muslim spiritual leader from the late 1600s / 1700s

The fifth is the graves of several *Auliyah* or 'friends of Islam' - Sayed Jabaar, Sayed Muhammad Haq al-Qadri, Sayed Muhammad and Sayed Mohammad Illahie



G25

G26
A //amissa - Platteklip Stream

G27
B Ring of Rocks

G28
C Lower & Upper Wash Houses

G29
D
Kramat of Sayed Abdul Haq

G30
E
Graves of Auliyah

SITE HISTORIES

> *"When one uncovers the history of a 'place', it is through means of title deeds - ownership and power, however, when one uncovers the history of a 'place' through its Water - one uncovers the popular history of that place"* (von Zeil, 2018)

As described in the choice of site, the //amissa - the City Bowl's hydrosystem - was the reason people had gathered and settled in this corner of the inhospitable Cape for centuries. It is not unlikely that Khoe herders followed the stream up from the coastal plains to pasture their cattle near the water source. Before colonial development of the landscape, the area would have been a gradation of Fynbos and Afromontane/ Afrotemperate Forest.

By the early 1600s, Autshumao and the //Ammaqua - a group of Khoisan traders - had their camp near the mouths of several streams at Table bay. From there they traded with passing European ships on route from or to India and South East Asia. After they landed in 1652, Van Riebeeck and a VOC detachment built their first fort and water infrastructure near the camp, and later forced the //ammaqua away from the area (Mellet, 2020: 95-119). This site would today be near the Golden Acre mall and the western edge of the Grand Parade. The Dutch named one of the perennial streams the Platteklip, and built the later and current castle beside it, its moat fed by the waters. This locates the mouth of the Platteklip and its waters as a historical centre and umbilical cord of Cape Town.

As the colonial settlement developed, the streams were diverted into a

G40

hydro-network of grachts and leiwaters to serve households and farms. They became arterial routes that also served as borders - Buitenkant on the Eastern edge along the Platteklip, and Buitengracht on the Western edge. The Platteklip also became a resource and site in the growing

G41-42

laundry industry. By 1730, as many as a hundred - mostly slave - women, with some children in tow, would gather along and walk up Buitenkant everyday with the City's laundry, contributing to its informal name Slave Walk. Their destination was a popular site high upstream called the Ring of Rocks, possibly a part of either the Nooitgedacht, Oranjezicht or Rheezicht farms. Here the launderers could stand amongst the rocks in the shallow stream beneath the shade of trees. The physically laborious process involved beating the laundry against the rocks, then leaving it

to air dry. Archeology of the site has found hundreds of pins, buckles and buttons lost during this process. Elizabeth Grzymala Jordan (2005) describes how labour at the Cape was strictly gendered, and that women slaves were largely confined to the household. This means that laundry was not only a rare chance to leave the house, but also for them to gather. After Emancipation in 1834 many of the women and their descendants continued the trade. On December first, the anniversary of Emancipation, "there was a celebration along Platteklip... Early in the afternoon they would leave their washing and dance waltzes to improvised music" (Lison in von Zeil, 2018).

> *"Fragments of children's dolls, marbles and play-play porcelain tea sets give hint of kids nearby. Musical instruments, like a found Jews Harp, broken bottle-glass, and clay pipes indicate how they could have spent their lighter moments."* (Ashby Cape Trekking, nd)

For decades farmers and landowners downstream from the Ring of Rocks had complained about pollution from the laundry. Outdoor laundry in the stream was finally banned as part of the civic sanitation movement of the late 1800s - the same movement that saw the closure of the Somerset/ Prestwich necropolis and the establishment of Maitland cemetery. The City devised a way to modernise and sanitise the laundry practise, and on April first 1888 the Wash Houses - two large stone sheds - were inaugurated by the mayor. After initial protest by the launderers towards the Wash Houses' requisite fees, and the general imposition into their livelihoods and space, they accepted the institution. Working at basins with taps was more comfortable than bending over in a cold stream. In the 1940s the Wash Houses were closed following the introduction of piped water and electricity into houses (washing machines too were beginning to become available). This implies too that the practice lost

G43-44
Arthur Elliott
Field of Springs
Nooitgedacht Farm

G45-47
Platteklip wash houses

the collective character of the past several centuries, that now laundry was done individually or in small groups. There is no mention of a non-agricultural, ecological awareness of the pollution. After the closure the buildings were used for a while as stables. In 2006 they were renovated as guest accommodation for Table Mountain National Park.

In the lead up to the civic sanitation movement, between 1838 and the 1860s, the new British government at the Cape began enclosing the hydro-network, reconstructing them as brick sewers buried underground. The last open waterway, in District 6, was buried in 1901. Today the majority of the Platteklip flows underground beneath Buitenkant street. Besides the rare aural presence carried up through manhole covers in the streets, the hydro-system faded from the City's consciousness. Today some of it has been exhumed, such as the stretch of the old Heerengracht in the Adderley street traffic island. Besides this though, the stretch of the Platteklip - coming down the gorge, through the parks and channeled underground at the top of Upper Buitenkant street - is the

only remaining stream in the City Bowl that is largely unwalled and widely publicly accessible (there are one or two other short stretches buried in Upper Gardens suburbia).

Situated on the west bank of the stream in the middle of today's Deer Park is the open air Kramat (south east Asian term for a shrine built around the grave of a local Muslim saint or religious leader) of Sayed Abdul Haq, a Sunni-Sufi spiritual leader. Very little is recorded of Abdul Haq, who was apparently brought to the Cape by the Dutch as a slave from or via Indonesia and Malaysia (so sometime between the 1650s and early 1800s). "Oral history relates that the grave of Sayed Abdul Haq was discovered by a lady who used to do her washing at the mountain stream. She regularly saw a person performing his prayers at this site" (Cape Mazaar (Kramat) Society, 2010: 48; VOC News, 2019). The Kramat is a simple built platform, about three by two metres, cut into the slope. Steps lead up to it; in the centre is a raised tomb framed by benches either length. The tomb has no tombstone but instead covered by brightly coloured clothes, pinned down with stones. There is nothing special about the contemporary path to the Kramat and the only signage is a colourful rag tied to some branches, in accordance with Islamic aesthetics. There are four other graves above the Kramat, which belong to *Auliyah* (friends of Allah) Sayed Jabaar, Sayed Muhammad Haq al-Qadri, Sayed Muhammad and Sayed Mohammad Illahie - perhaps followers of Abdul Haq (Cape Mazaar (Kramat) Society, 2010: 48).

Just beneath van Riebeeck Park in Gorge Road is the Kramat of Tuan

G48-49
Kramat of Sayed Abdul Haq
Graves of Auliyah

Sayed Abdul Malik, who died in the late 1700s. In the early 2000s there was a public debacle over the rumoured presence of graves belonging to Abdul Malik's followers. The Kramat is situated on the street but in the property/ erf of St Cyprians School (a label but no built structure is drawn in the 1944-1966 City Survey (CoCT, nd)). The school (built on the previous farm Nooitgedacht) had intended to develop land near the Kramat but was halted to allow for public discussion and archeological inspection. Ultimately no firm evidence (archival or archeological) was found but the event remained an early exercising of post-democratic heritage legislation, a dispute between oral memory and colonial and scientific history, and between the historically marginalised Muslim community and the white Anglophone community (Green & Murray, 2005: 4-16).

In 1939 the Cape of Good Hope Nature Reserve was established, and the mountain (everything above 152m above sea level - the lower wash house is 155m) proclaimed a National Monument in 1958. It was renamed Cape Peninsula National Park in 1994 (with some expansion in land in between), and finally renamed Table Mountain National Park in 2004.

DESIGN DEVELOPMENT

All drawings are oriented North up unless otherwise stated

ARCHI MAKI 1

In early March I visited the the Seaforth Cemetery in Simons Town, the site of an architectural intervention in 1975 by Roelof Uytenbogaardt (see P81). I was struck by several things, but of special relevance here: the contrast between the old and new burials, and the crafting of the topography, of the ground. The whole was greater than the sum of its parts.

When I approached this first Archi Maki exercise I wanted to construct a landscape of this sort as an assemblage. I gathered a range of objects, in various states of decay. Out of these I began intuitively collaging with a rough set of compositional principles and joining methods. I sawed, filed, nailed, chiselled, sanded and drilled. I used my father's tools, none of which were the perfect size for the tasks - either too small or too big. This is the simple reality of living in the world - the perfect tools are rarely available. One forgets this though when ensconced in the world of

thoughts and theory. Which is another reason history is valuable.

I propose seeing this assemblage as a metaphorical landscape, a piece of ground. It has a topography and a set of site forces. One might see the elements as not merely fixed and joined, but as excavated, embedded and placed. There is an ambiguity between figure (the parts) and field (the space formed).

When we visit a place, say a beach, we can be struck by its beauty or sublimity. We want to possess or record it in some way. We take a photograph or pick up a shell or pebble. When we return home however, we find these dull and lifeless. They have lost most of their aura, but not all of it. They remain eidetic - they remind us faintly of the experience.

In the assemblage here the previous lives of the objects are largely unclear. However there is also a new dialogue amongst them. Their compositional relationships, and what is legible of their past, generate a new material narrative

H1-3

PROGRAMME DEVELOPMENT

The development of the programme was largely intuitive, and involved asking not only what was necessary but what could enrich the site.

Two local institutions - both large landscape works - acted as precedent: Maitland cemetery and Kirstenbosch Botanical Garden. Another large landscape work, the Woodland Cemetery in Stockholm - in which Sigurd Lewerentz was involved in - was secondary precedent. The characters of these sites and Deer Park are quite different.

The permanent staff body at Maitland includes: a manager, receptionist, clerk, foreman, ground staff and crematorium staff. In policy South African cemeteries should have a landscaper, though this could be performed by the foreman. Maitland also historically had permanent caretakers who lived on site.

I was not able to go inside the maintenance facilities at Maitland - which in any event is not a useful precedent for Deer Park landscape-wise. I was able to speak to a cemetery official about maintenance, and they confirmed that no earth moving or heavy machinery is dedicated to the site. There are several houses built along the Northern perimeter of the cemetery which were occupied by full time staff, who performed as care takers as well, though unfortunately the City is no longer able to do so.

The idea of a tea room, such as at Kirstenbosch, and probably an old Victorian institution, is essentially a day time restaurant and cafe with a more formal, institutional character, equipped to host formal events. The tea room needs kitchen and cleaning staff, waiters and a manager. The tea room space could be leased to a private operator.

Necessary to a park like Kirstenbosch are large nursery facilities in conjunction to the maintenance facilities. These are made largely private so that the public do not interfere, but can be made sufficiently publicly

visible so that there inner-workings can be understood.

From my experience of small museums and heritage sites (Denis Goldberg House of Hope, Prestwich Memorial, Central Methodist Church, Alexandra Interpretation Centre, Hout Bay, Clanwilliam and various other rural town and neighbourhood museums), a small museum like the one I am proposing needs about four staff roles: a receptionist, cleaning and maintenance staff (who can serve the other functions on site), tour guides and a director. The latter two do not need to be permanently on site, and can serve several museums. Further building on my experience of museums and heritage interpretation, I devised a four part programme. Firstly the services: offices, a kitchenette, public and private toilets, store room. Secondly space for permanent exhibitions. The third and fourth spaces can blend into one another: a variable exhibition space and a workshop/ lecture room. I am also including an outdoor seminar/ gathering room, and a forecourt.

Cemeteries like Woodland and Malmo Eastern Cemeteries have flower and grave goods stores nearby, though I would imagine the business success of these depends on the size of the cemeteries and health of the grave revisiting culture. This is why in my current design schemes I am exploring including the store into the Tea Room, so that it might serve as an extension of it, rather than a free-standing entity. These functions could also be performed by informal traders. Ultimately such decisions would depend on the traffic of the scheme in reality.

The scheme going forward will include a range of secondary memorial spaces - especially collective memorials for events like Covid. There is no major precedent for these. Ideas are loosely provoked by projects which are often idiosyncratic.

DESIGN IDEAS & DEVELOPMENT

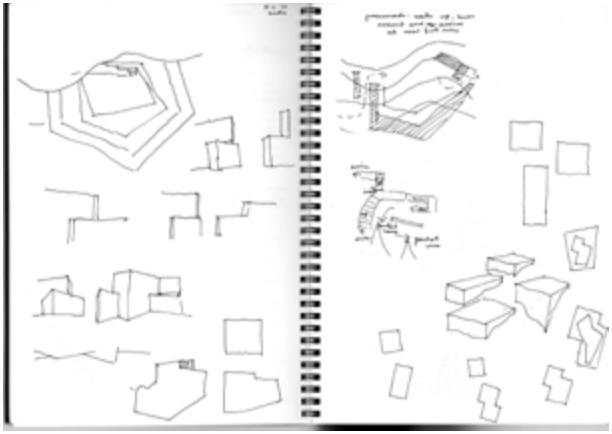
My design process began with a variety of spatial and form ideas, as well as how to use or deal with geometry, topography, grounding, space, light, mass, material etc

One of two important areas of concern was how to deal with the topography, grounding and the river, and how burial and park space might coexist. I investgated both terraces, step wells and cloisters. In these investigations there were also thoughts about regular and irregular geometry - how those spoke to contrasting classical and romantic approaches, and suggestions of sacred and profane.

There were also thoughts about how the scheme might extend out into the City through pathways lined by pavilions.

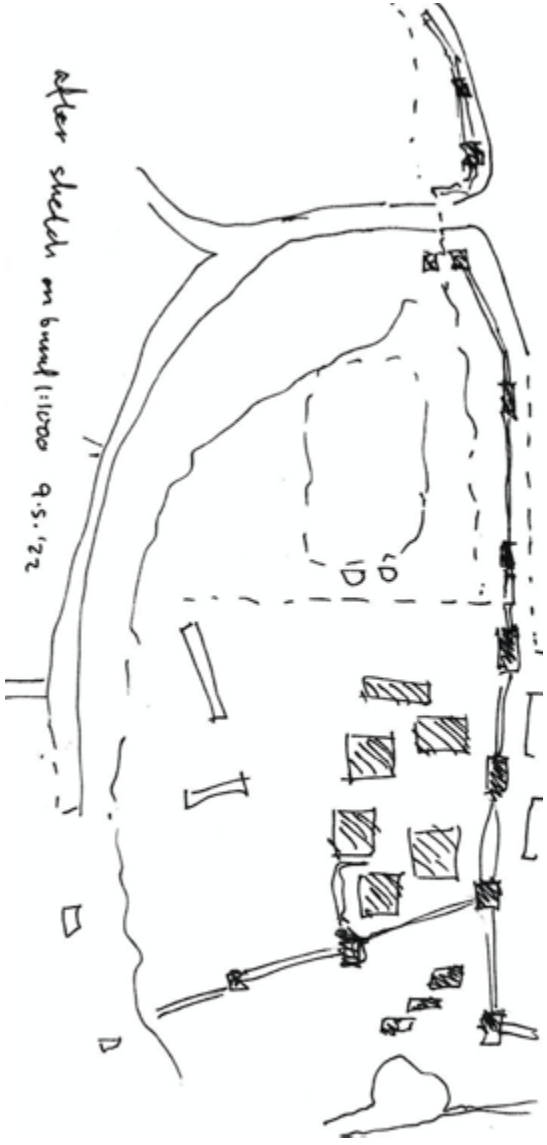
H4

H5



H6

H7



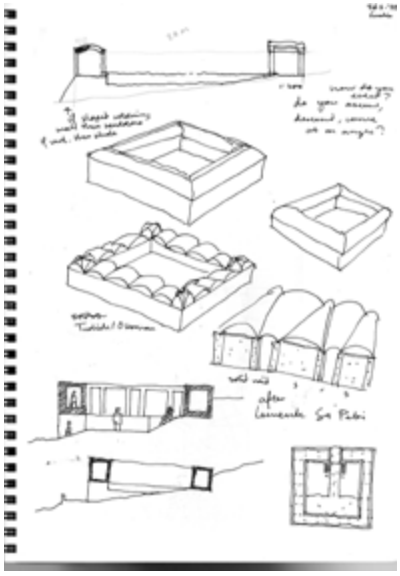
H8

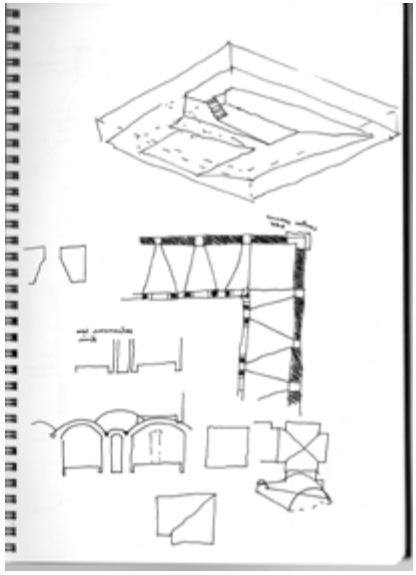
The second area of concern were form, spatial, material and detail ideas for the primary functions - the burial spaces and chapels.

From the initial ideas of terraces and step wells, I developed an enclosed cloister design as a burial space. These were square columbarium cloisters, where the outer wall was lined with niche walls and the inner courtyard was a landscaped lawn. One entered from below and walked up a ramp into the courtyard, secure from park-goers and vandalism.

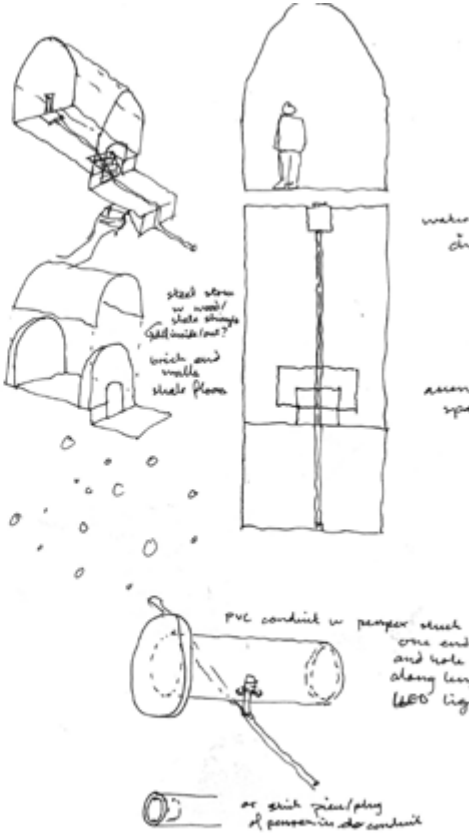
The chapels took inspiration from a variety of vernacular Cape building practices - corbelled and reed houses, and masonry vaults - as well as ideas of form and spatial enclosure from rock formations and caves.

H12

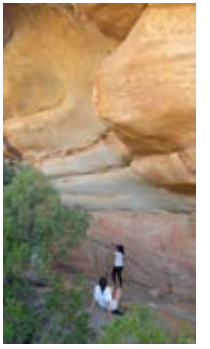




H9-11

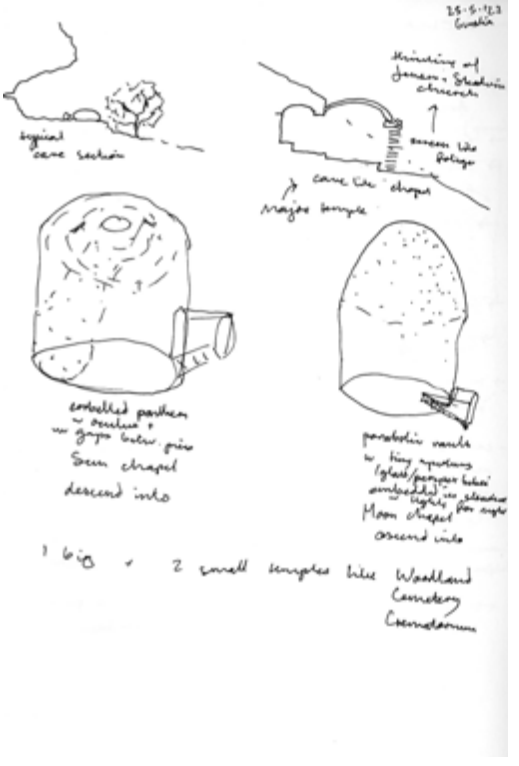


H16

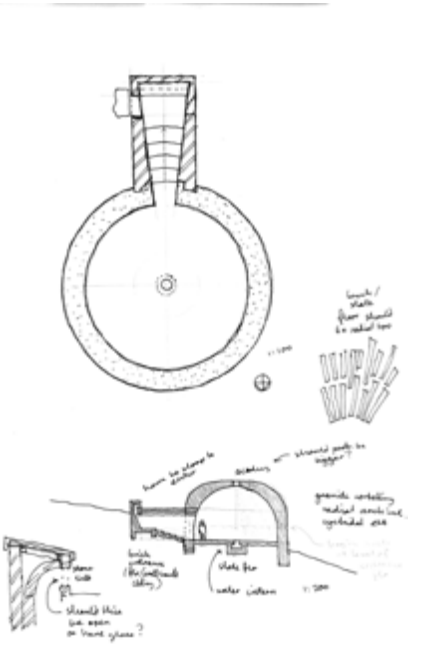


H19

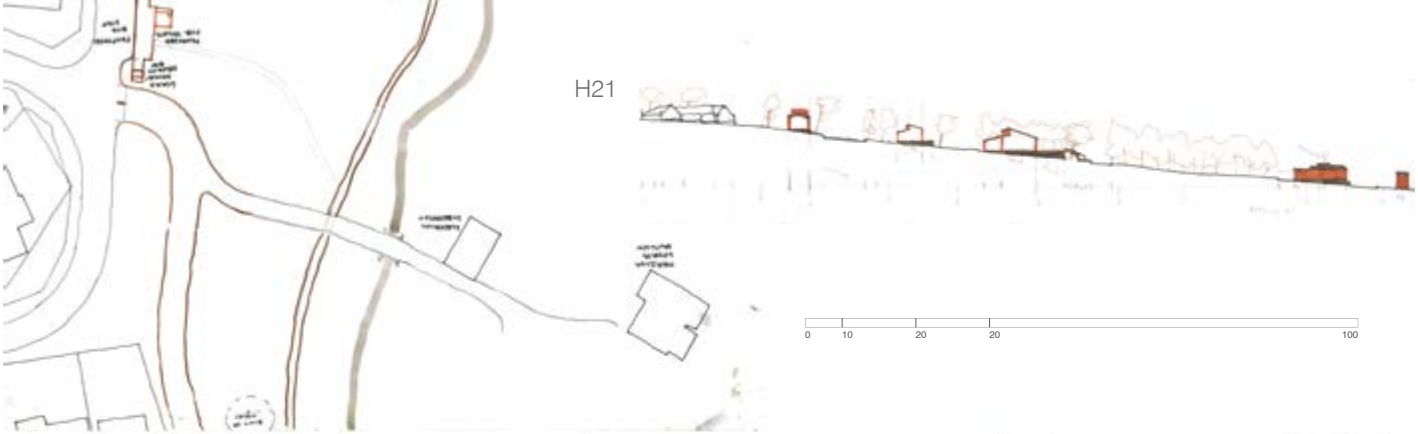
H13-15



H17-18



The objective of my first scheme was to place the complete programme on the site and develop a spatial narrative. I chose to work in the North Eastern corner of the site because it was the least used, unoccupied by tangible heritage, and most affected by invasive alien vegetation - meaning site works would allow for more water-wise indigenous reforestation.


H21
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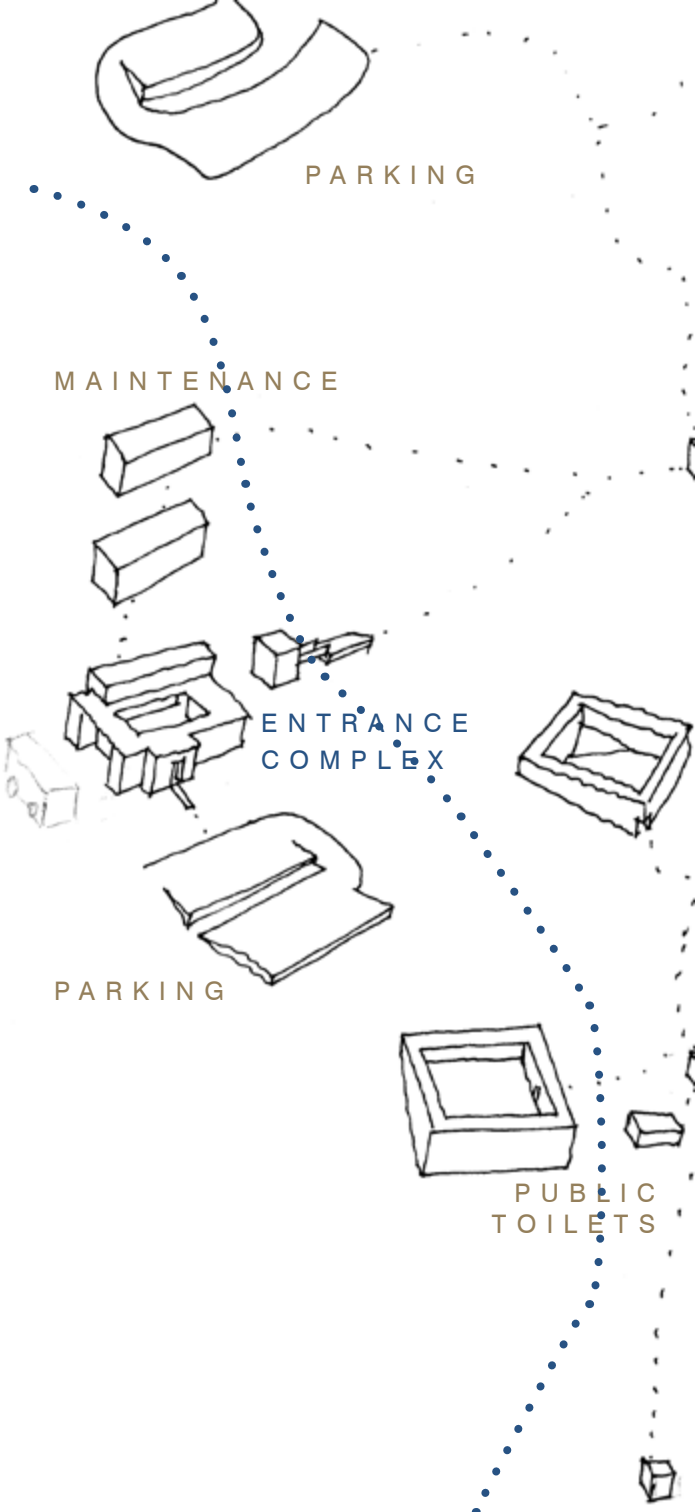
H22

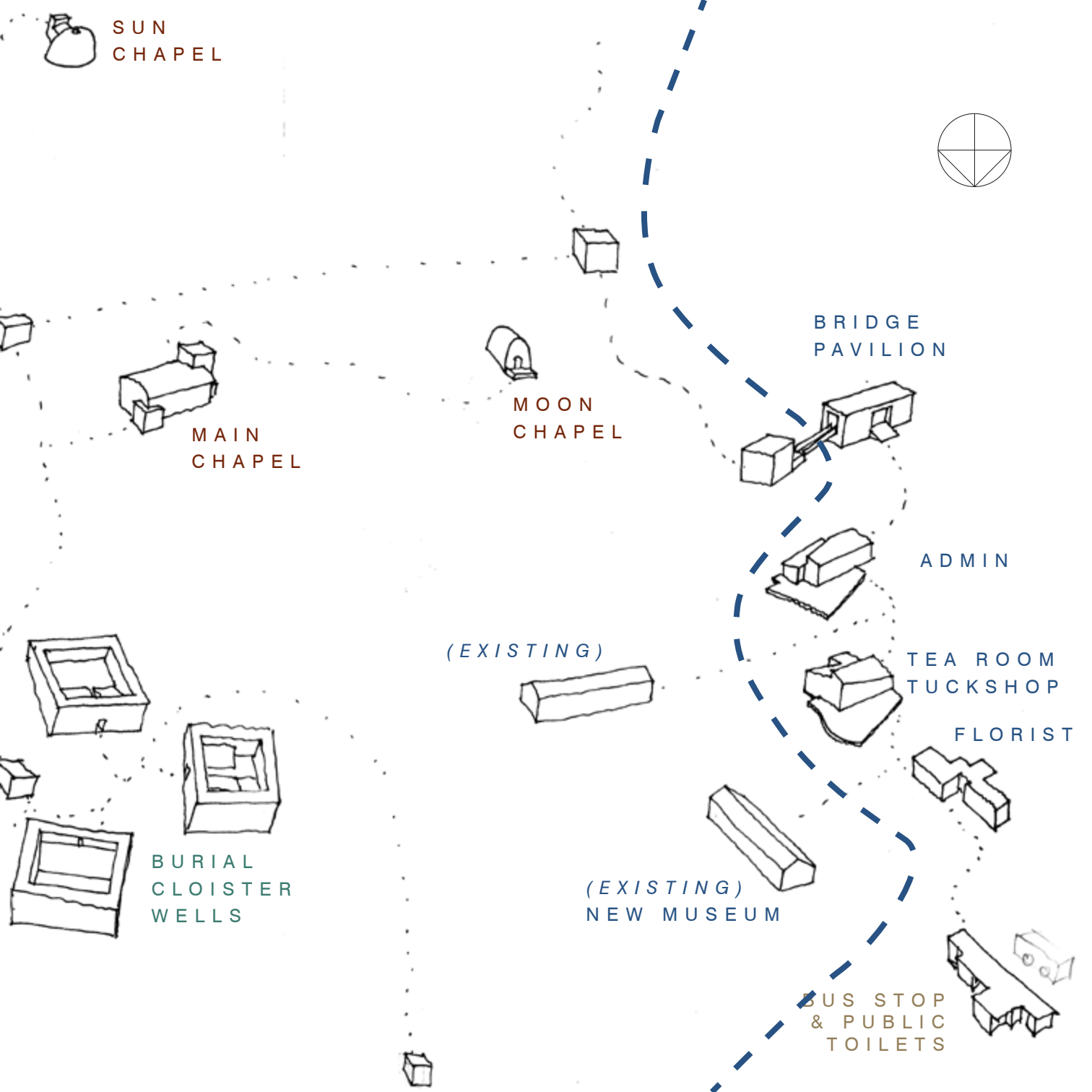
(please note North is down in this drawing)

The major approach of this scheme begins in the bottom right hand corner of the spread with a proposed bus stop and existing road entry through van Riebeeck Park leading up into Deer Park. The road takes the visitor past a flower and grave goods shop, a tea room, administration building, as well as the existing entries to the wash houses. The road first comes towards the stream and follows its course, bringing it into the visitors awareness, before they are lead away and have several buildings mute its visual and aural presence. Finally the road turns to meet the stream at an entrance pavilion that frames a bridge across. The stream here is used as a symbolic border between City and burial space, everyday and eternal. Along a woodland path is a main funerary chapel, along with 2 smaller ones. Later a series of burial cloisters, enclosed courtyards lined by colonnades with burial walls. Beyond these are the maintenance buildings and a secondary entrance, which crosses the second stream bed, which is dry in summer.

The narrative of the scheme and aspects of the design were largely successful, but the public/ private articulation of the burial cloisters, and the interstitial spaces were unsuccessful.



H23

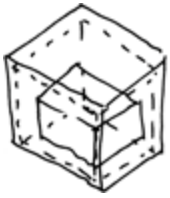

SUN
CHAPEL
MAIN
CHAPEL
MOON
CHAPEL
BRIDGE
PAVILION
ADMIN
(EXISTING)
TEA ROOM
TUCKSHOP
FLORIST
BURIAL
CLOISTER
WELLS
(EXISTING)
NEW MUSEUM
BUS STOP
& PUBLIC
TOILETS

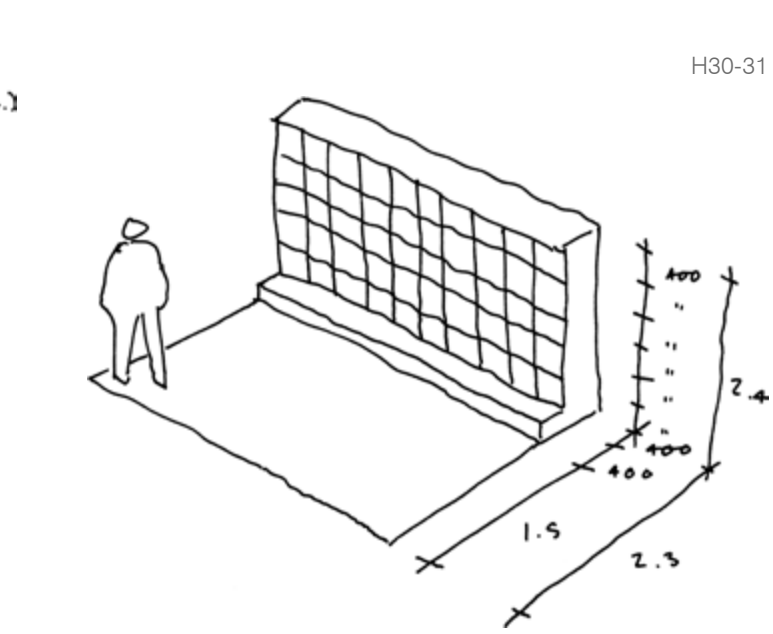
The basic burial module I've been working with is a wall of niches, each 400mm cubed. This can comfortably accommodate whatever material and structure I choose and a 150x200x250mm urn for ashes.

Bone remains however can need containers up to 700x500x250.

standard inhumation: 1ha = 2 000 graves
grave can be up to 2m^2
0.5 to 5 graves /m^2 without circulation

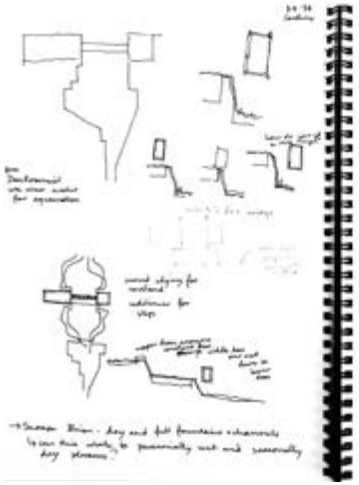
niche wall with 5 rows of 400 x 400 x 400 niches for urns and containers
31 graves /m^2 without circulation
1ha = 310 000 graves

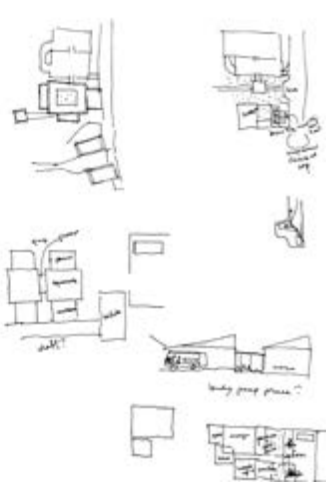




H30-31

H32



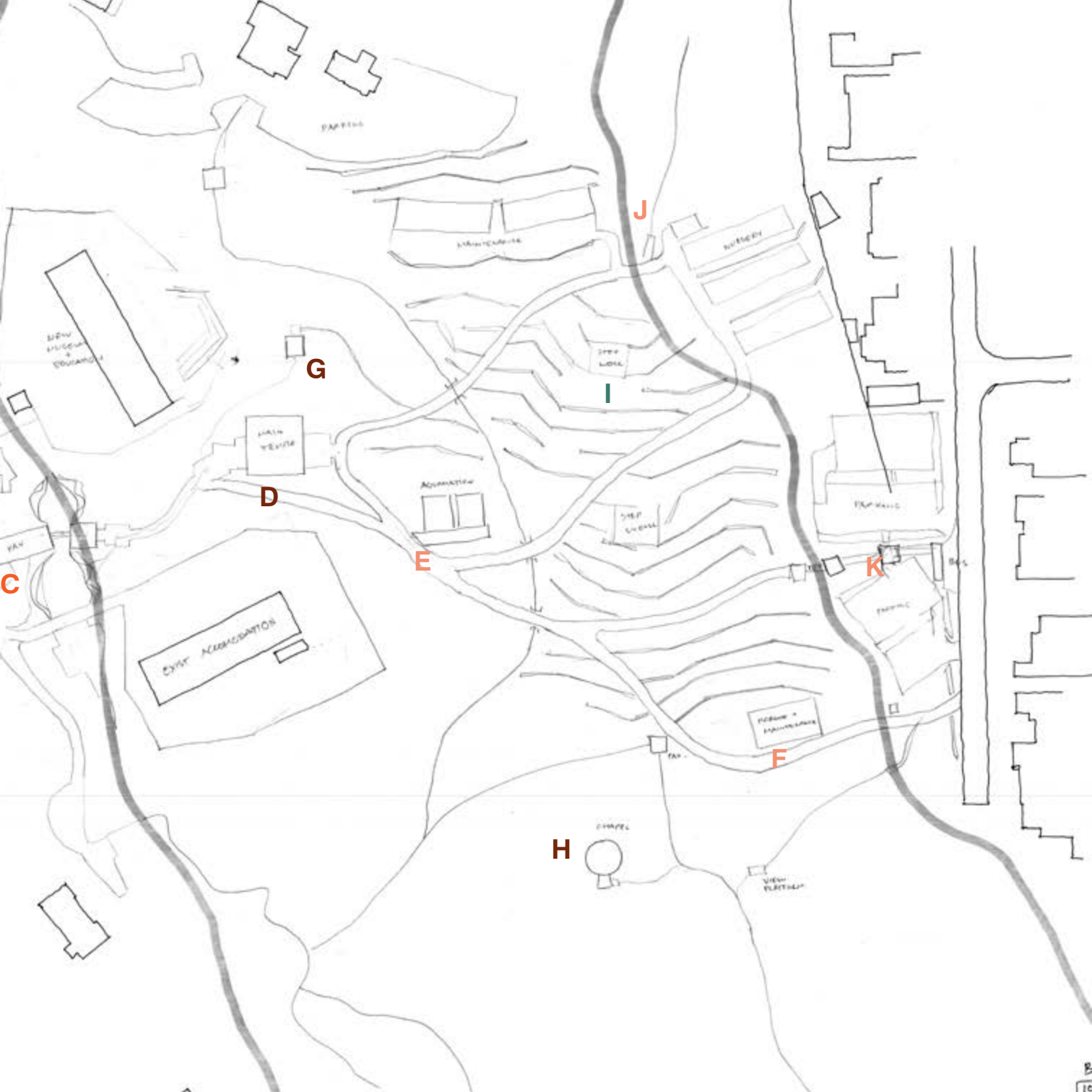


H33

For the second scheme the programme and narrative are largely the same although here I have introduced an aquamatorium and morgue, and replaced the cloisters with terraces. Aquamation is an alternative to cremation whereby the corpse is dissolved in an alkaline solution. A series of dams lined by wetland planting are also introduced beside the bridge pavilion. This is a nod to various projects in

A FLOWER & GRAVE GOODS SHOP
B TEA ROOM & ADMIN
C BRIDGE PAVILION
D MAIN TEMPLE
E AQUAMATORIUM
F MORGUE & MAINTENANCE
G MOON CHAPEL
H SUN CHAPEL
I BURIAL TERRACES
J MAINTENANCE & NURSERY
K PARKING & 2nd ENTRANCE

H34


J
G
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H

the city aiming to restore wetland and riverine ecosystems.

The intent of this scheme was to design a full flagship city cemetery. What are all the functions such a place needs?

The day after I finished this plan however, I looked at it and imagined the site preparation for such a scheme and was horrified at the idea. Most of the site would be turned into a wasteland, the vegetation all cut down.

The question then is what is appropriate scale for this cemetery? How do I calibrate the invasiveness of my design? This links to another problem I am grappling with here, the articulation of borders and relationship of burial and recreational park space. Also the relationship with the heritage and existing uses of the broader site.

H34

J
G
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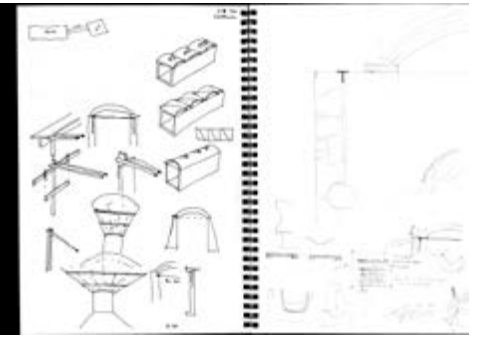
In a pair of models I began to explore space, light, and to think about structure.

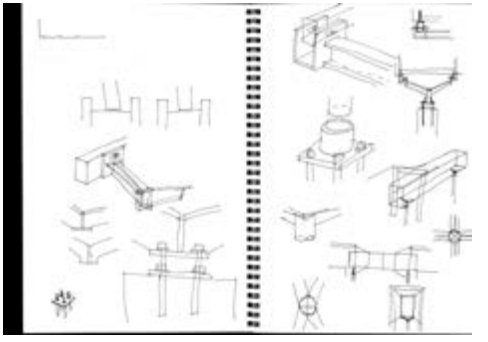
In the first I explored the detail resolution of the bridge pavilion. The pavilion would be a cavernous stereotomic mass and the bridge a lightweight tectonic structure. With a pavilion either side, the whole is designed to envelop the visitor from sound and light before taking them across the river, its sound and humidity emphasised by the structure's openness. The intent of this moment is an architectural threshold between the everyday and the eternal.

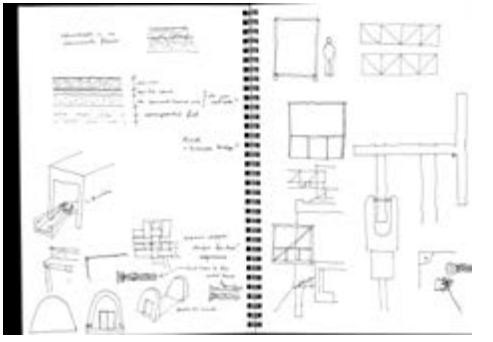
In the second I sought to test simple natural lighting devices and spatial articulation and geometry.

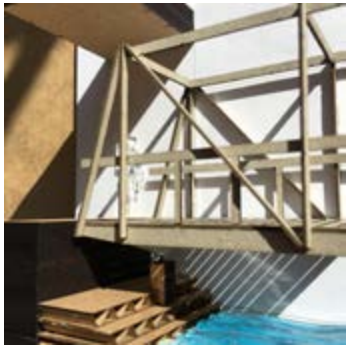
H40

H48-53





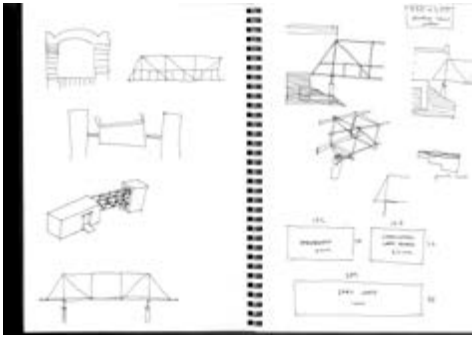


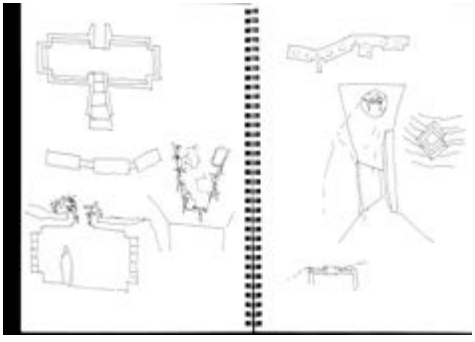


H41-42

H43-44

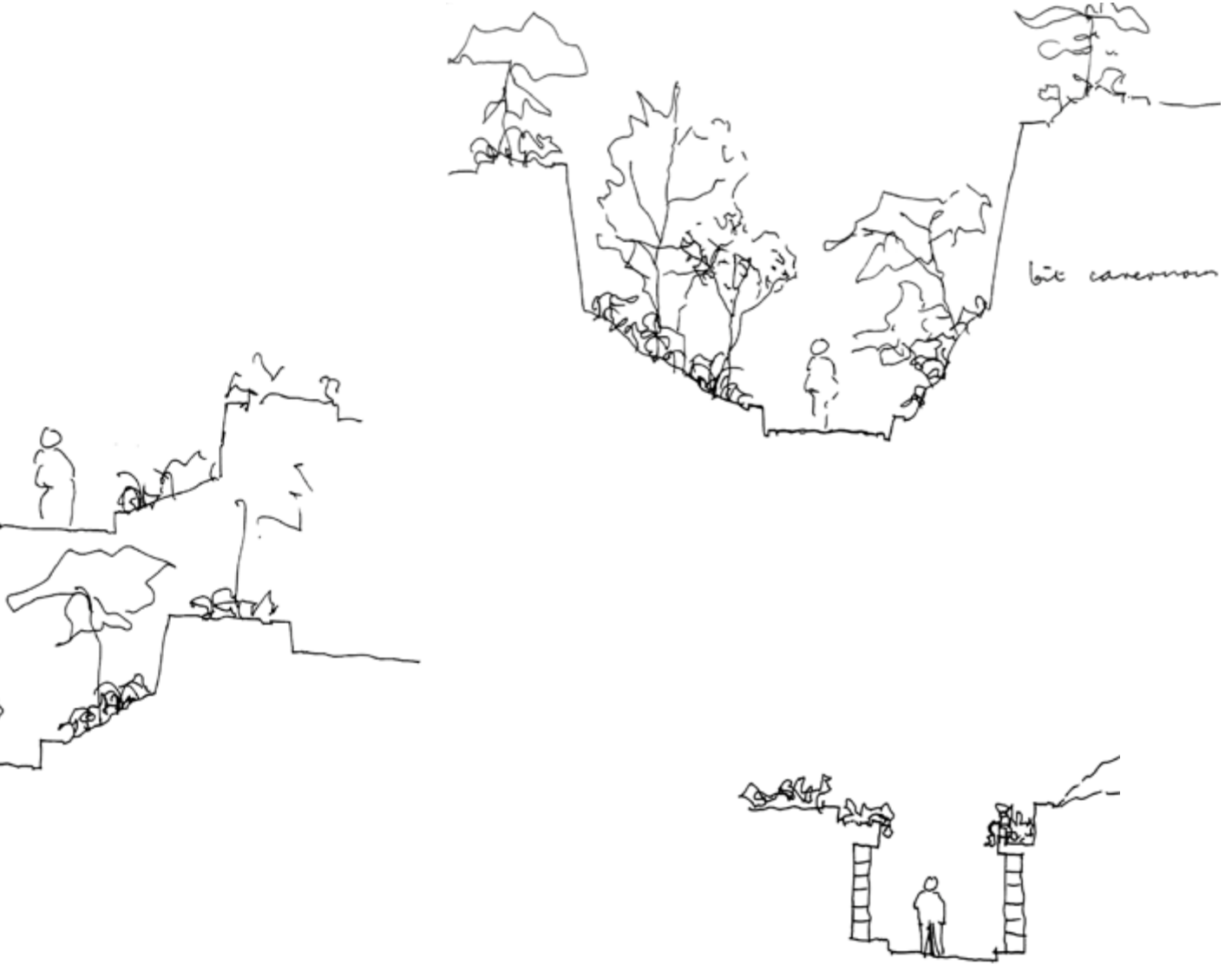
H45-47





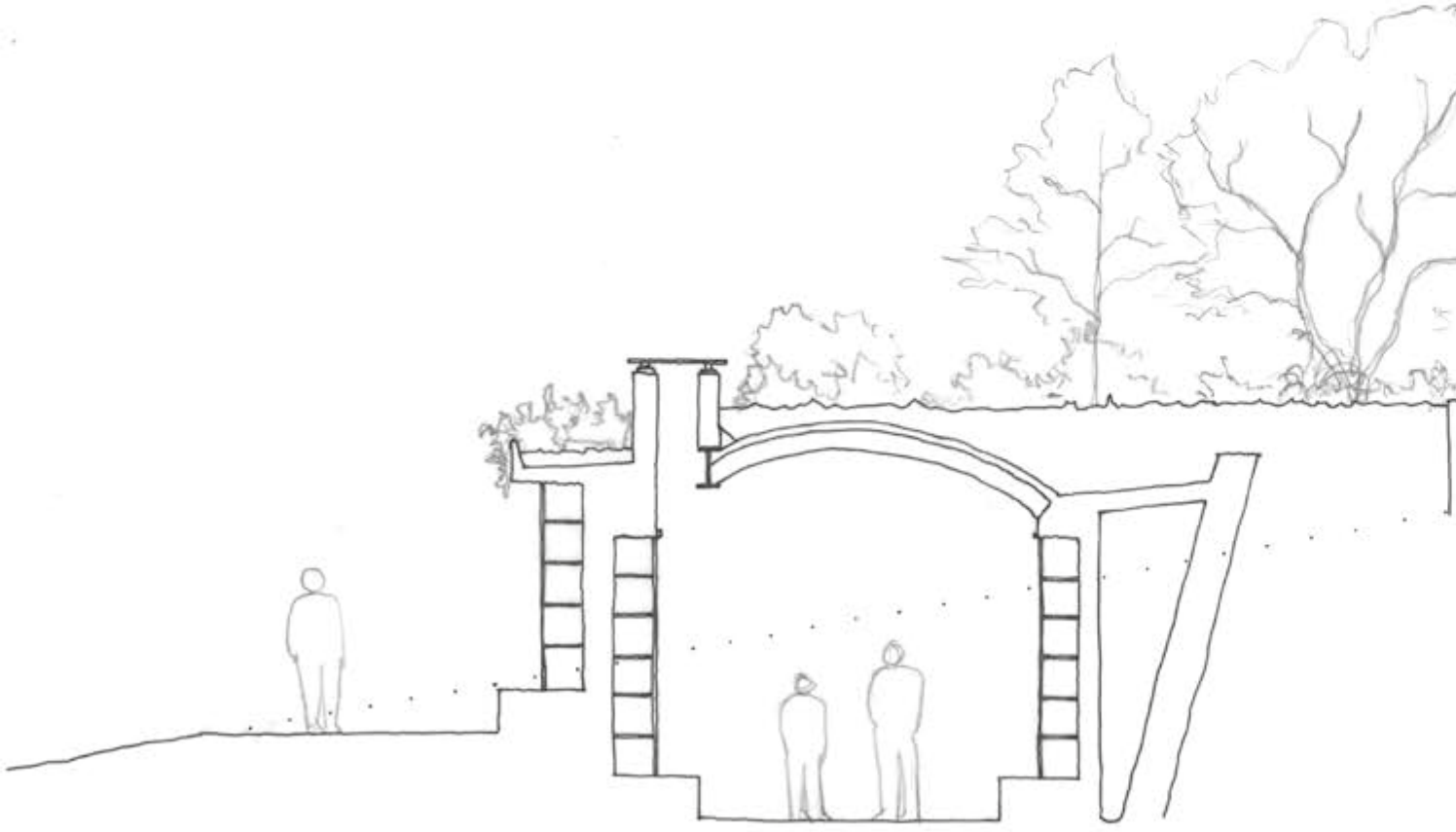
In these conceptual sections I began to explore a greater variety of options for the niche walls and also for the burial of ashes: terraces, chambers and other spaces, built on, in and under the ground's surface. Establishing if you like a lexicon I can draw on and develop. The niche walls are designed as an architectural metaphor of semi-burial, by being embedded against or in a cut in the Earth, often with the vegetation spilling over on top.

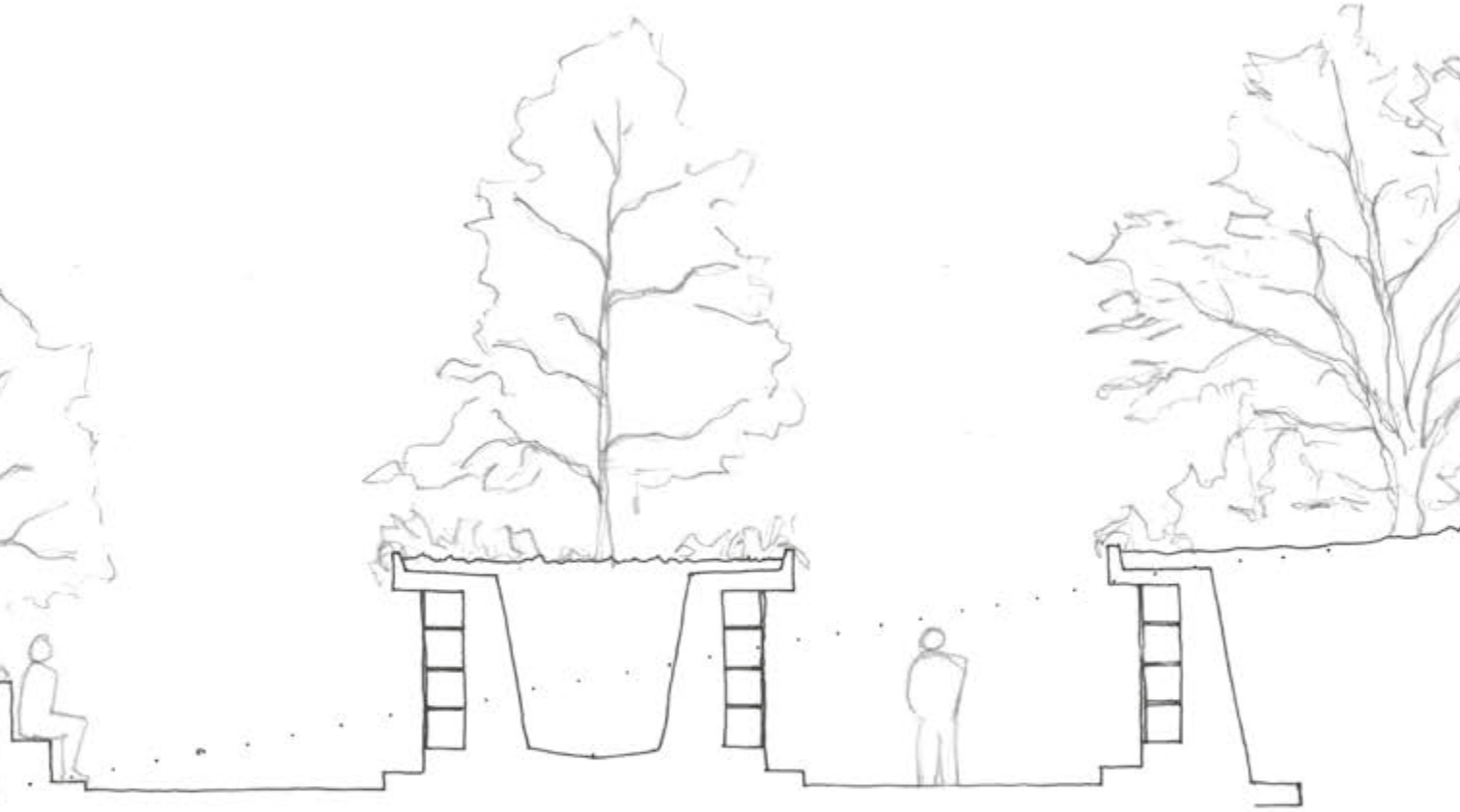
In the process I found various opportunities, such as the chance to make a seemingly subterranean chamber with only a half to the third of the excavation otherwise necessary by doubling up with superterranean terraces.



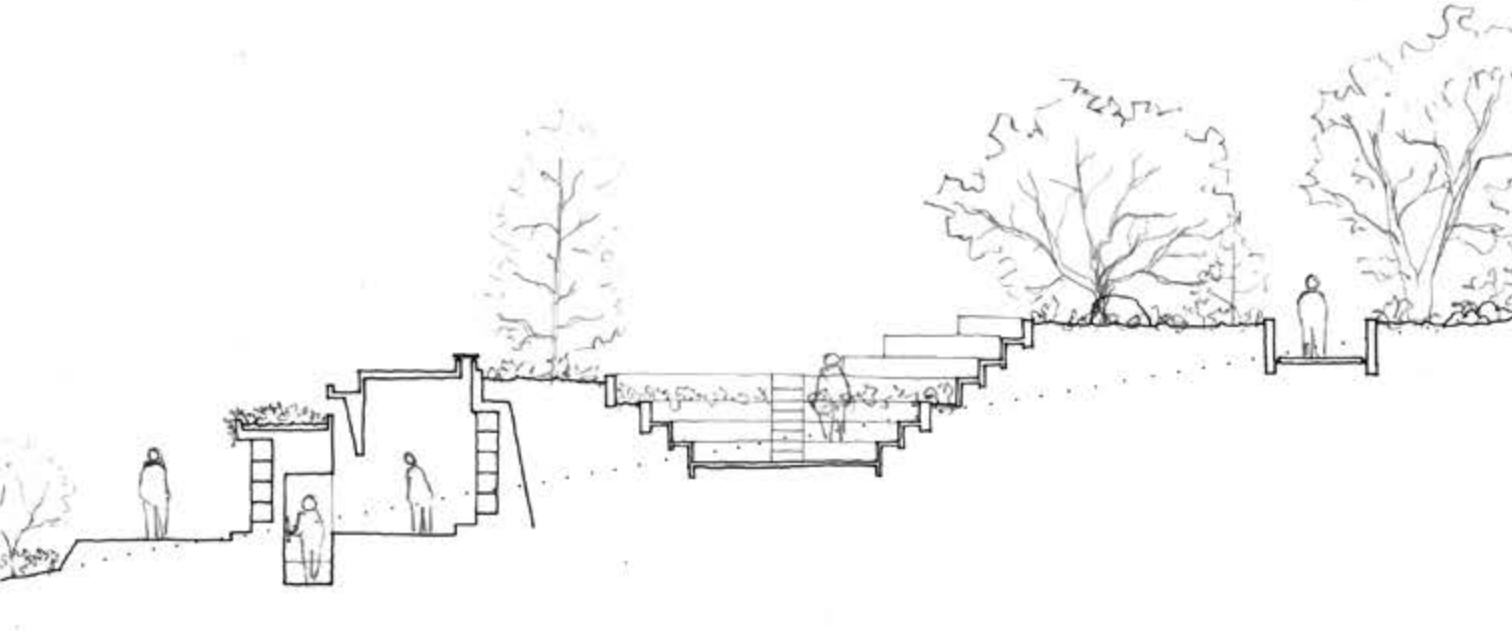
H54-57

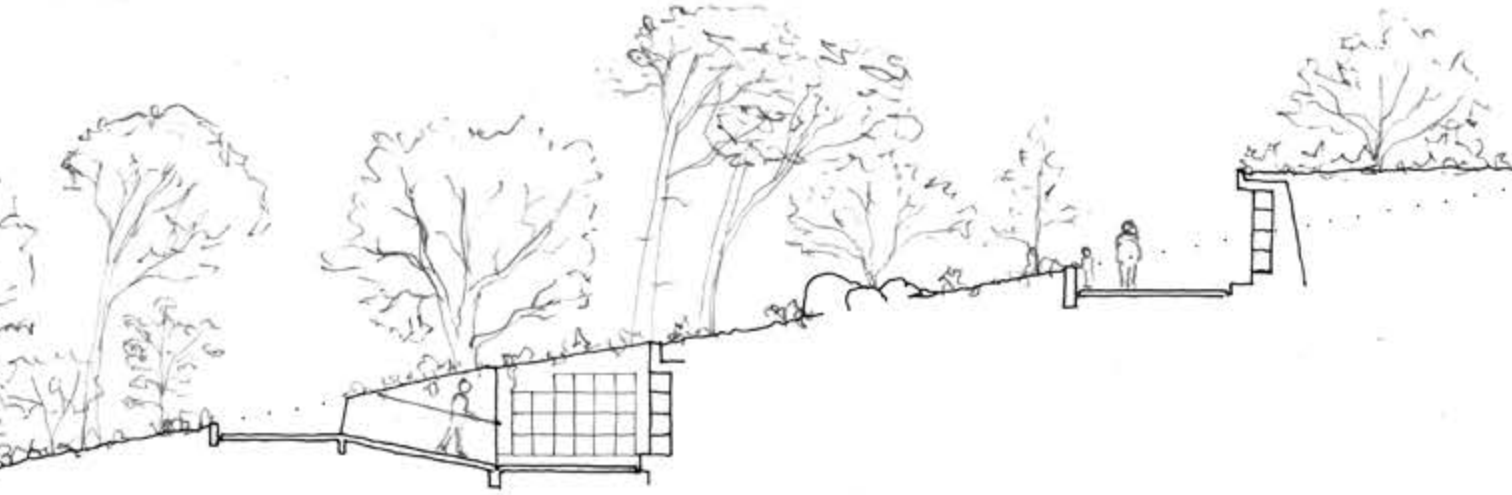
H58





H59





REFLECTION

In looking back on the work so far, I reflected on the development of the design question and its impact on programme. I was torn over whether to include an aquamatorium and mortuary. By including these I would address the full burial process in my dissertation. Neither of the crematoria in Cape Town have mortuaries attached, requiring transport back and forth between the place of the ritual/ funeral, mortuary and crematorium. This makes cremation - especially for those elsewhere in the province - more expensive. For the living, watching remains be obliterated can be a powerful moment of reckoning with the body and mortality - something I wanted to probe. However for many it can instead be a moment of horror, and not of meaningful reckoning - there is good reason for videoing and photographing being banned inside crematoria.

However, including these functions in my programme would be more work than I could meaningfully do. I also doubted whether the site could accommodate this many functions and still act as a park. In puzzling through these issues a word came to mind that brought some clarity: goodbye. What is the architecture that holds the living as they say goodbye to the deceased. I realised that the burial temples/ chapels could be a more meaningful place for everyone to say goodbye, and that the ritual could involve an open or closed coffin. So the design question had begun to split into two: the moment of final goodbye and the reckoning with bodily mortality.

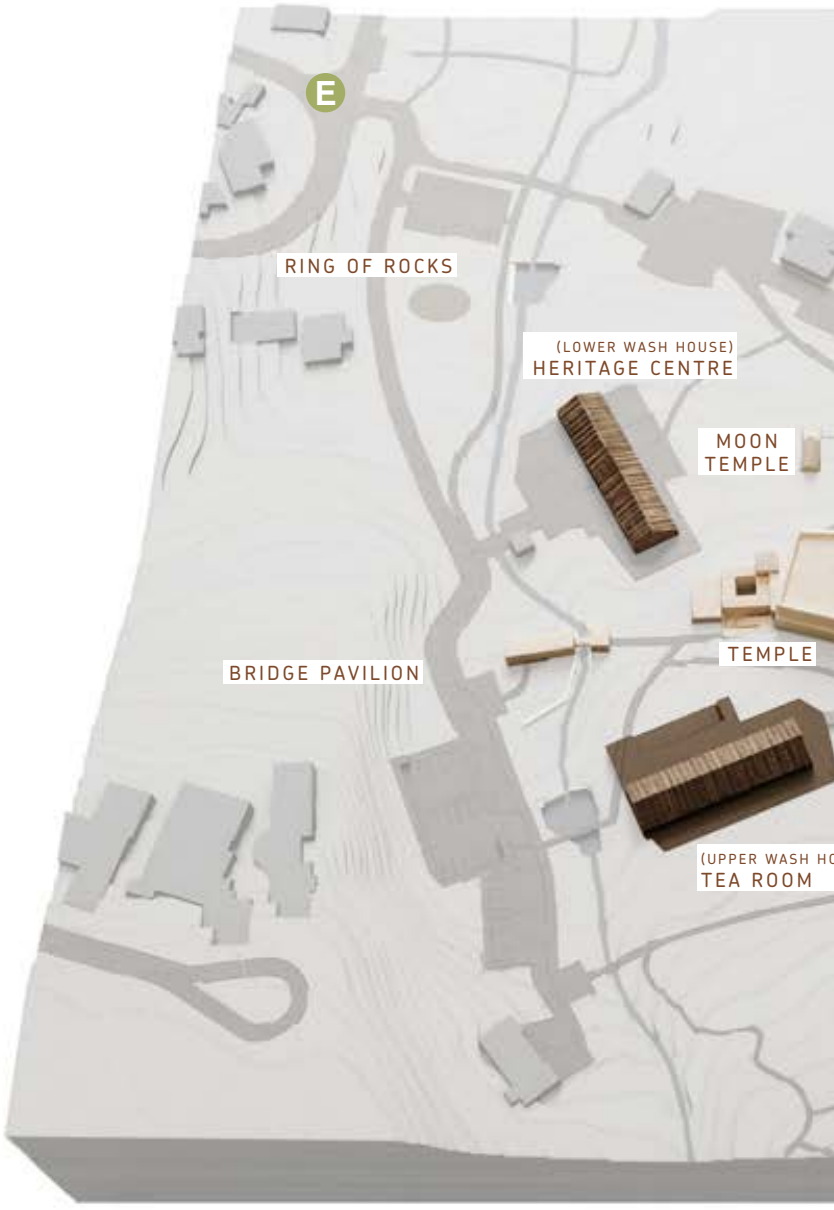
Secondly, what was substantial enough for a masters dissertation? The aquamatorium and mortuary are much larger and technically complex, but largely out of bounds to visitors. That technical complexity also minimises room for architectural expression.

Thirdly, logistically and financially the City cannot support having several obliteration facilities. It currently has three and is building a fourth. Furthermore, even if there were more, the facilities can only obliterate so many bodies in a day. There typically is a break, sometimes of weeks, between a ritual/ funeral and an obliteration. Given this reality, its unlikely that a group could arrive at the site, hold a ceremony and then take the body straight to obliteration - which was what I had in mind for my design.

So in summary, the design enquiry becomes an architecture for the final goodbye, and a landscape for personal and collective remembrance.

DESIGN RESOLUTION

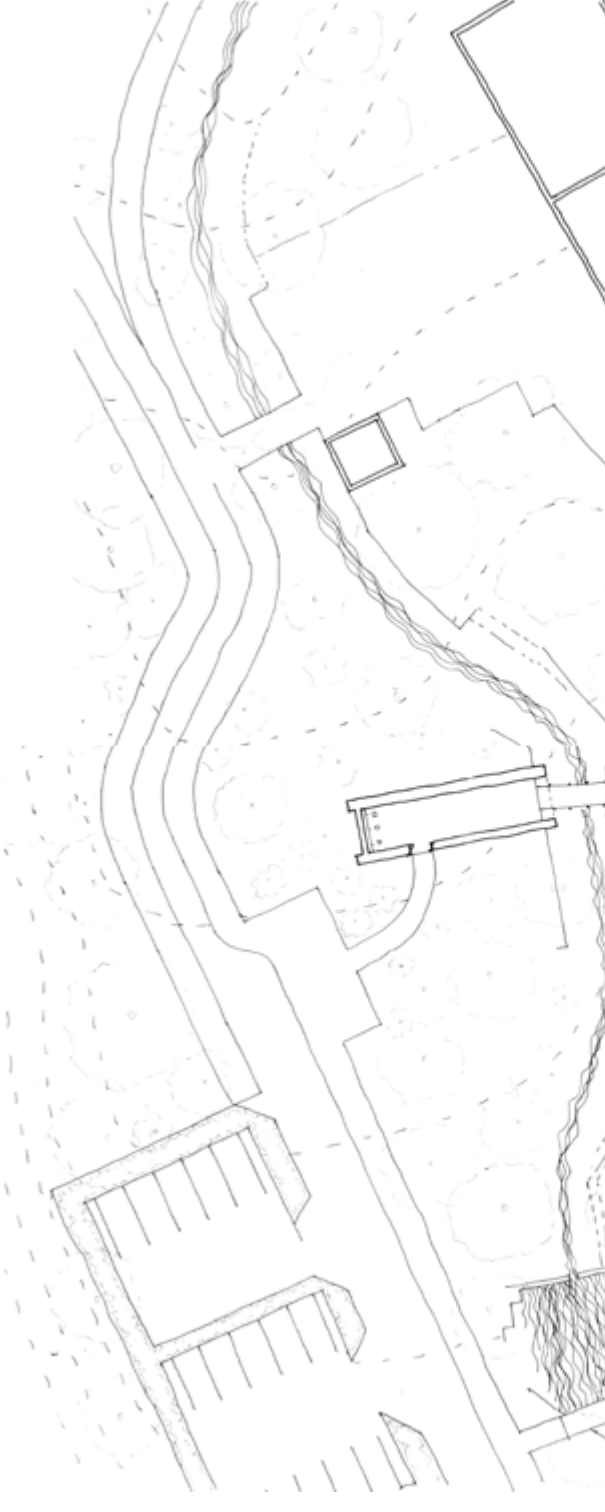
All drawings are oriented North up unless otherwise stated

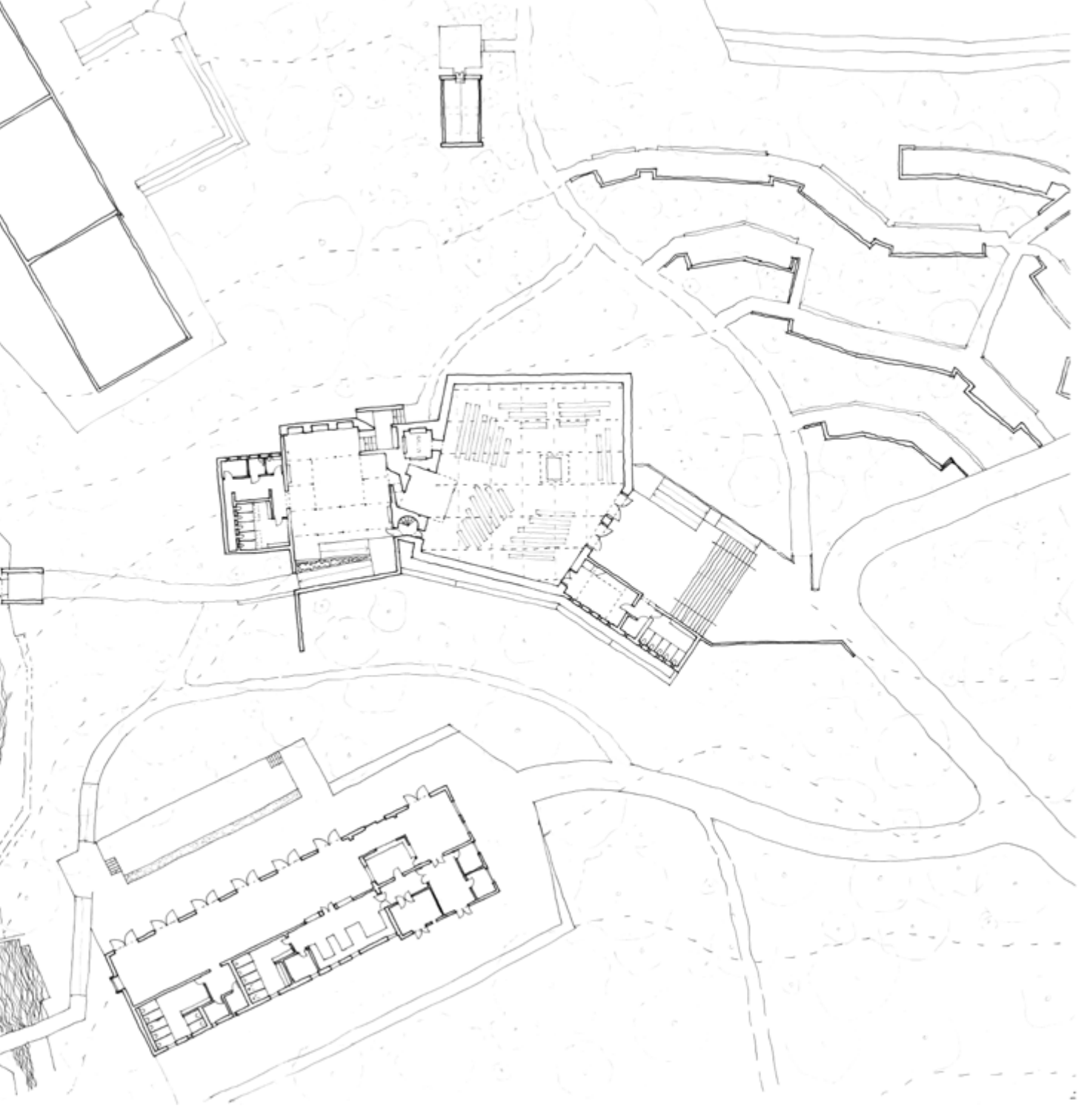

E
RING OF ROCKS
(LOWER WASH HOUSE)
HERITAGE CENTRE
MOON
TEMPLE
TEMPLE
BRIDGE PAVILION
(UPPER WASH HO
TEA ROOM

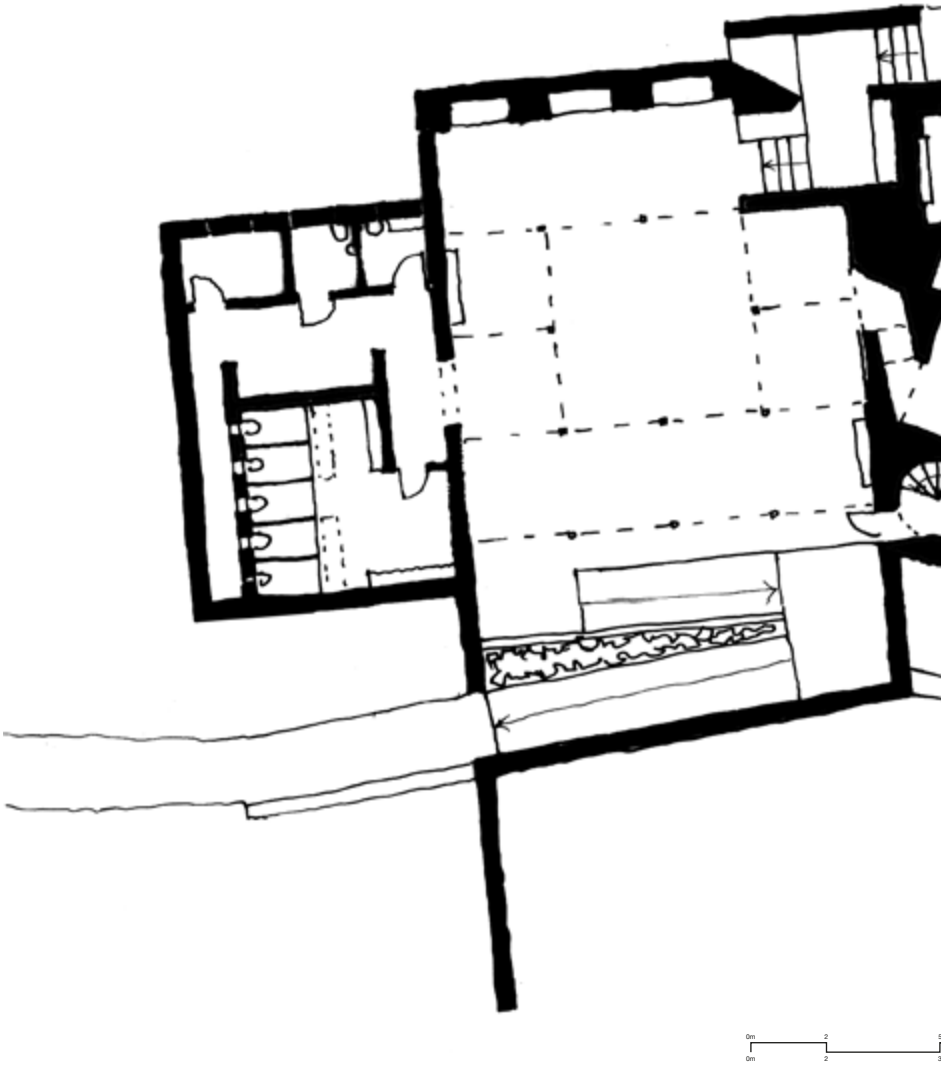
0 10 20 20

NURSERY
MAINTENANCE BUILDINGS
BURIAL TERRACES
STEP WELL
ADMIN
SUN TEMPLE

100






0m
2
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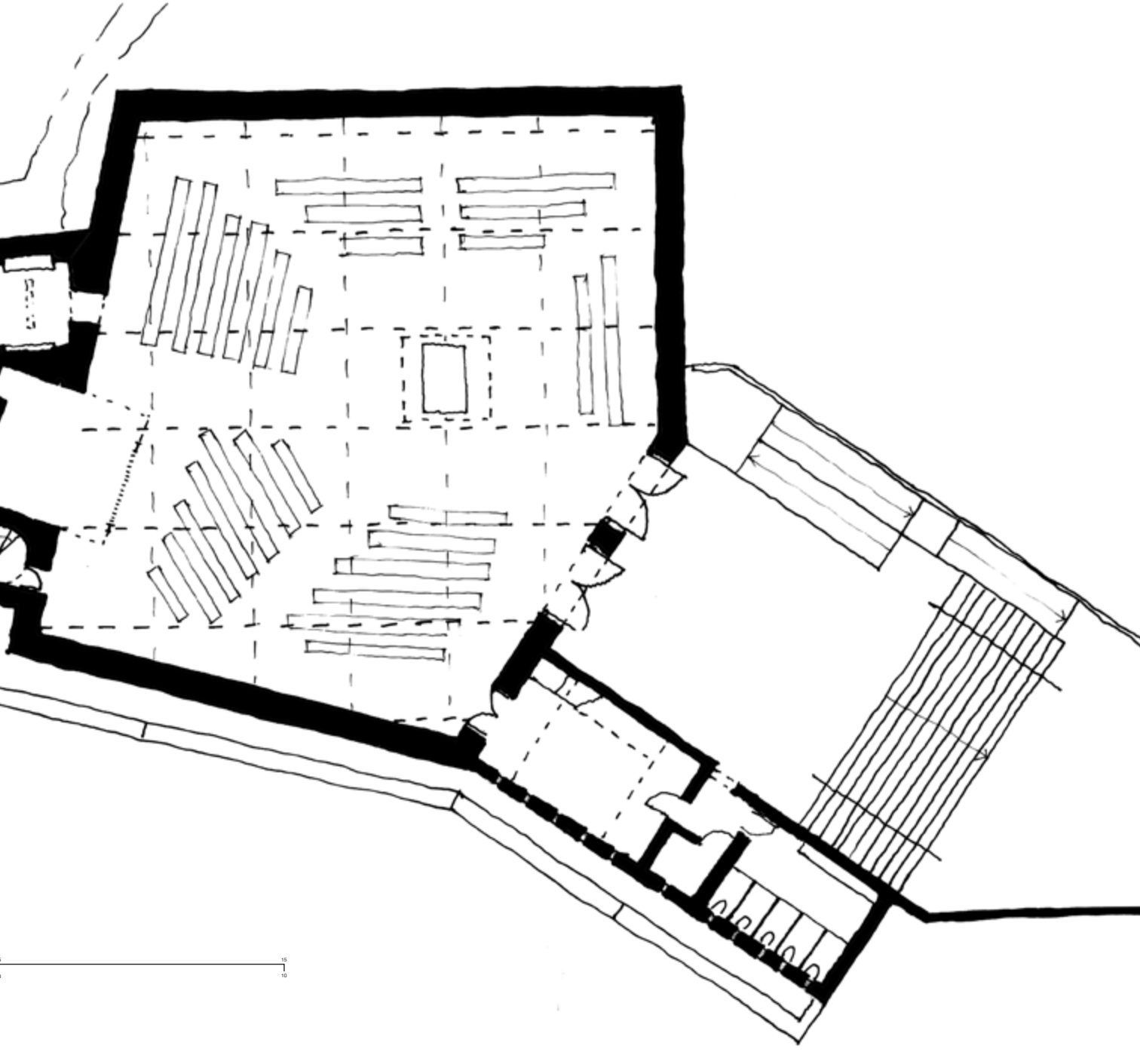

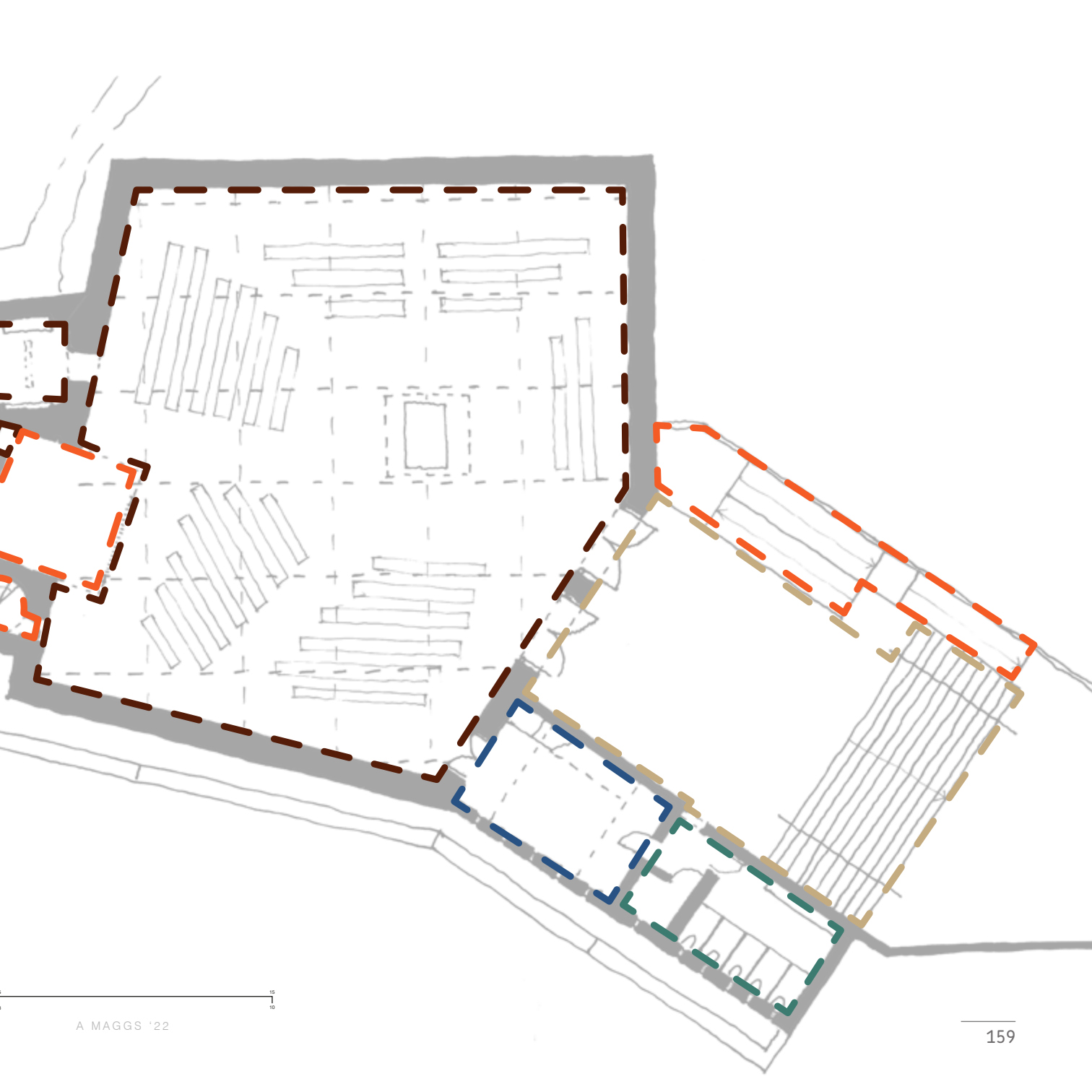

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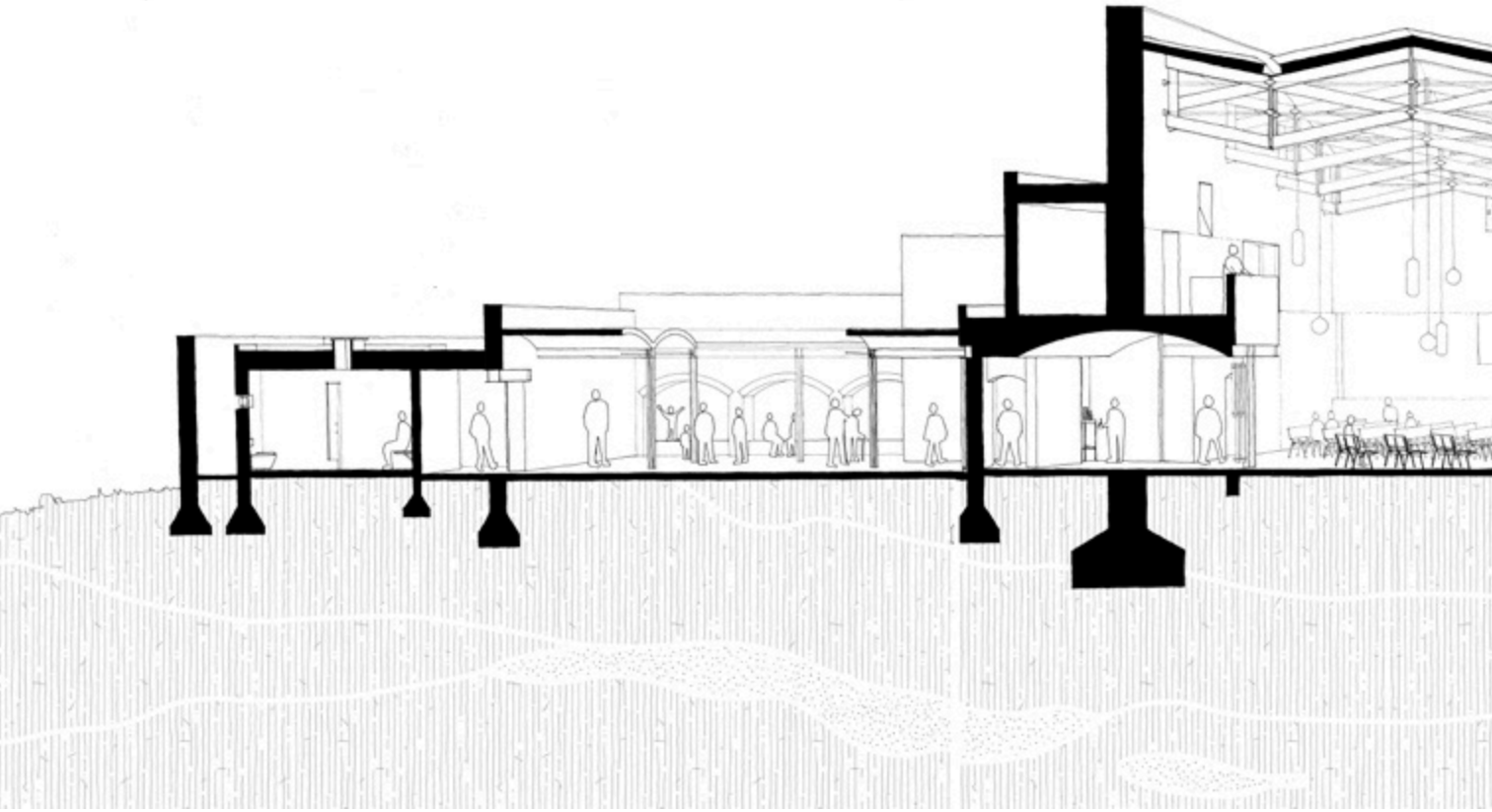
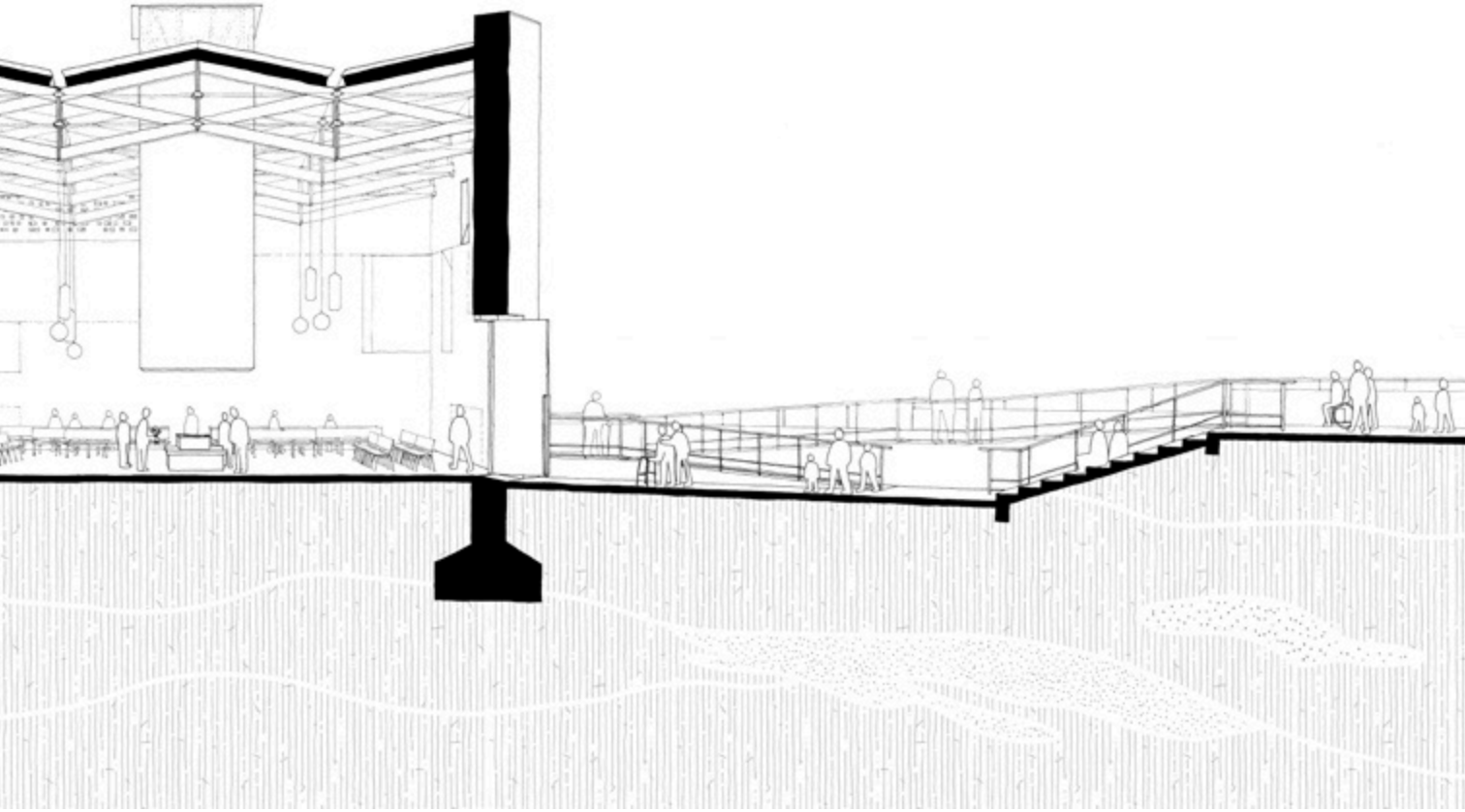
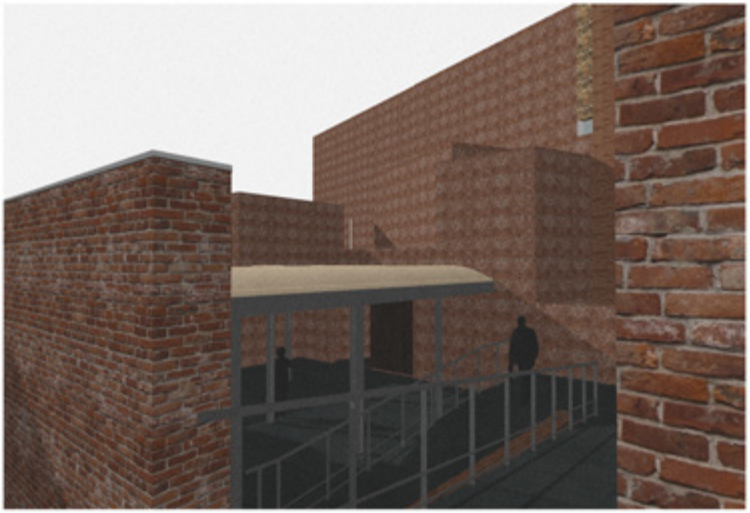
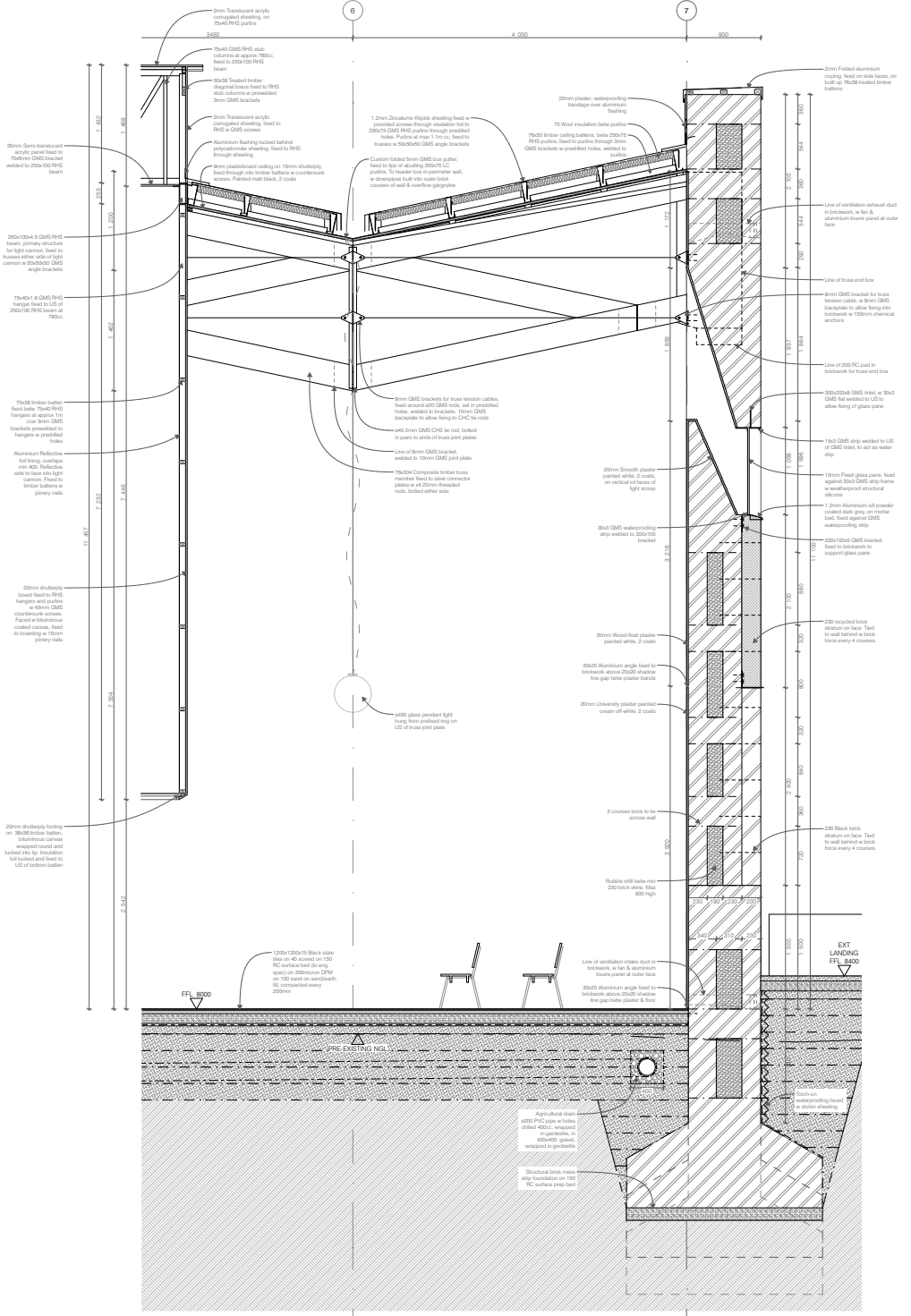
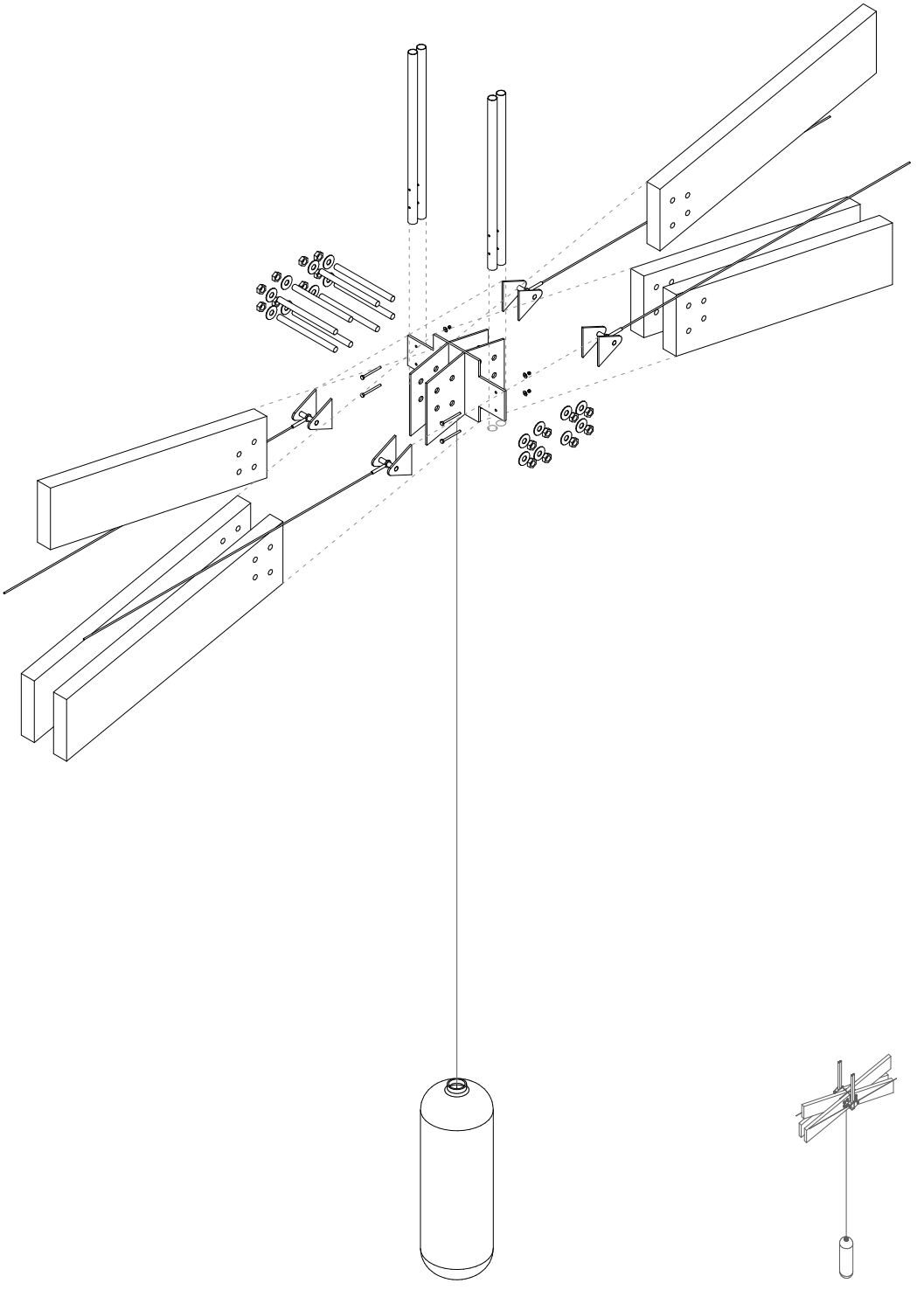
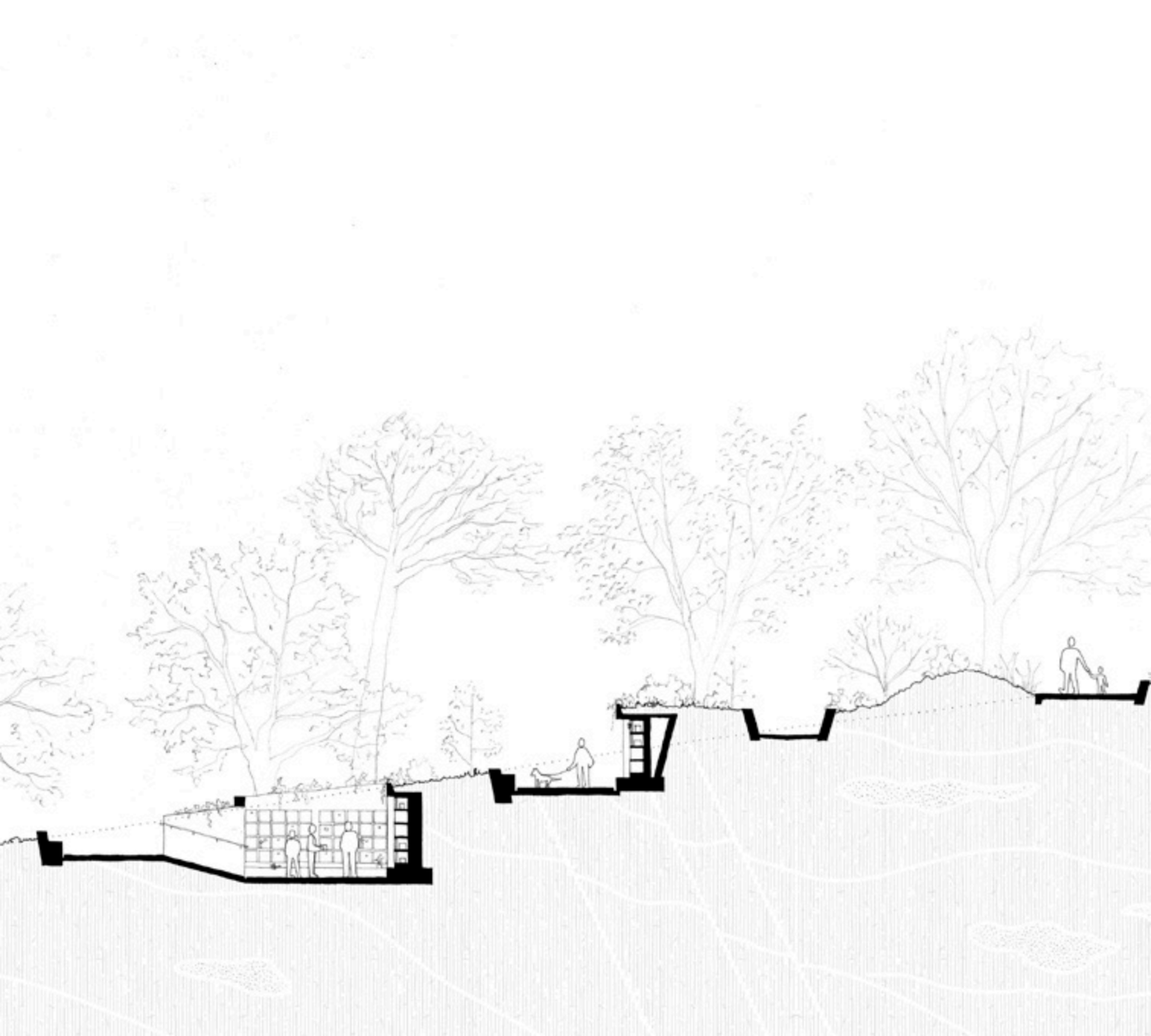


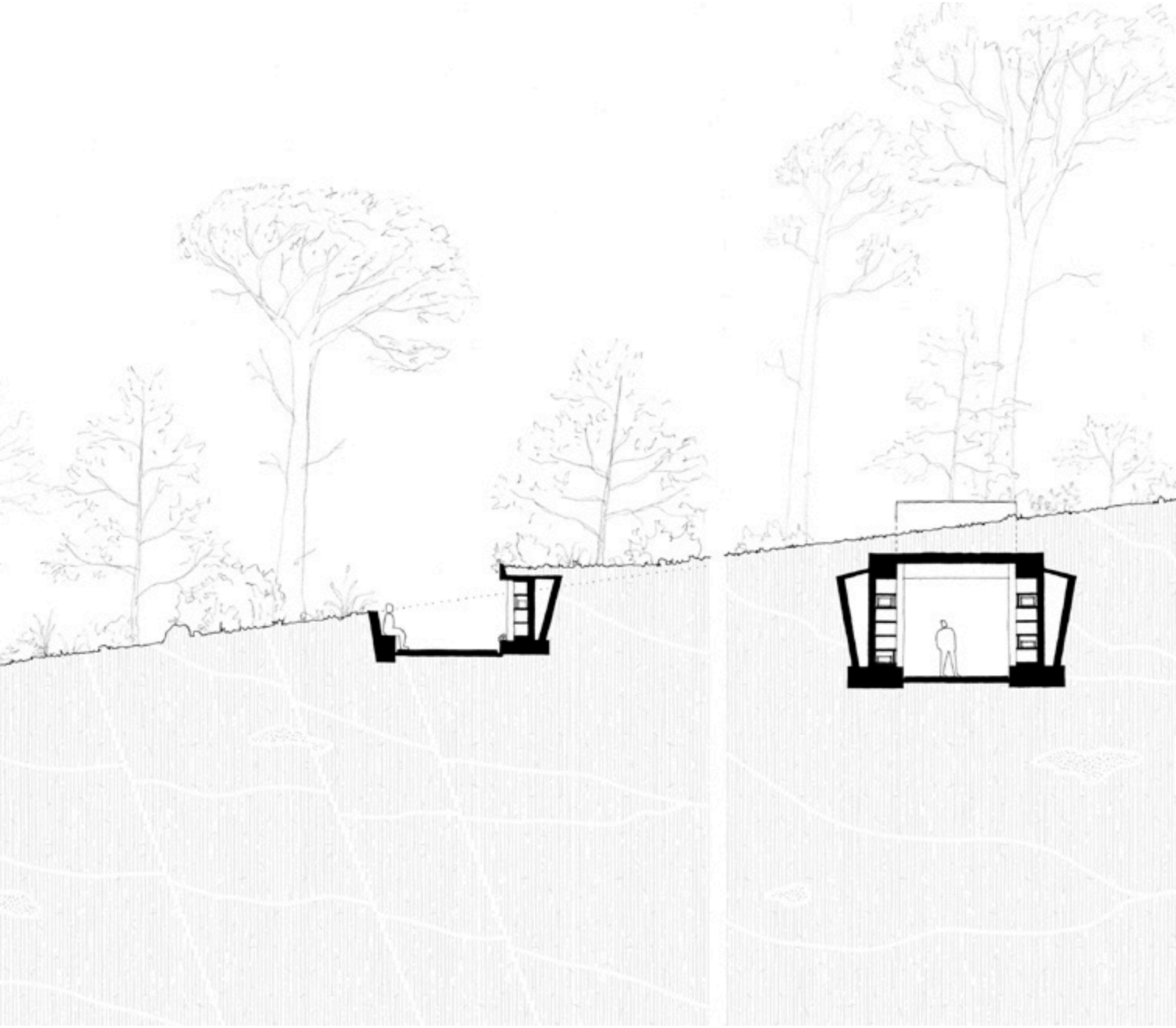


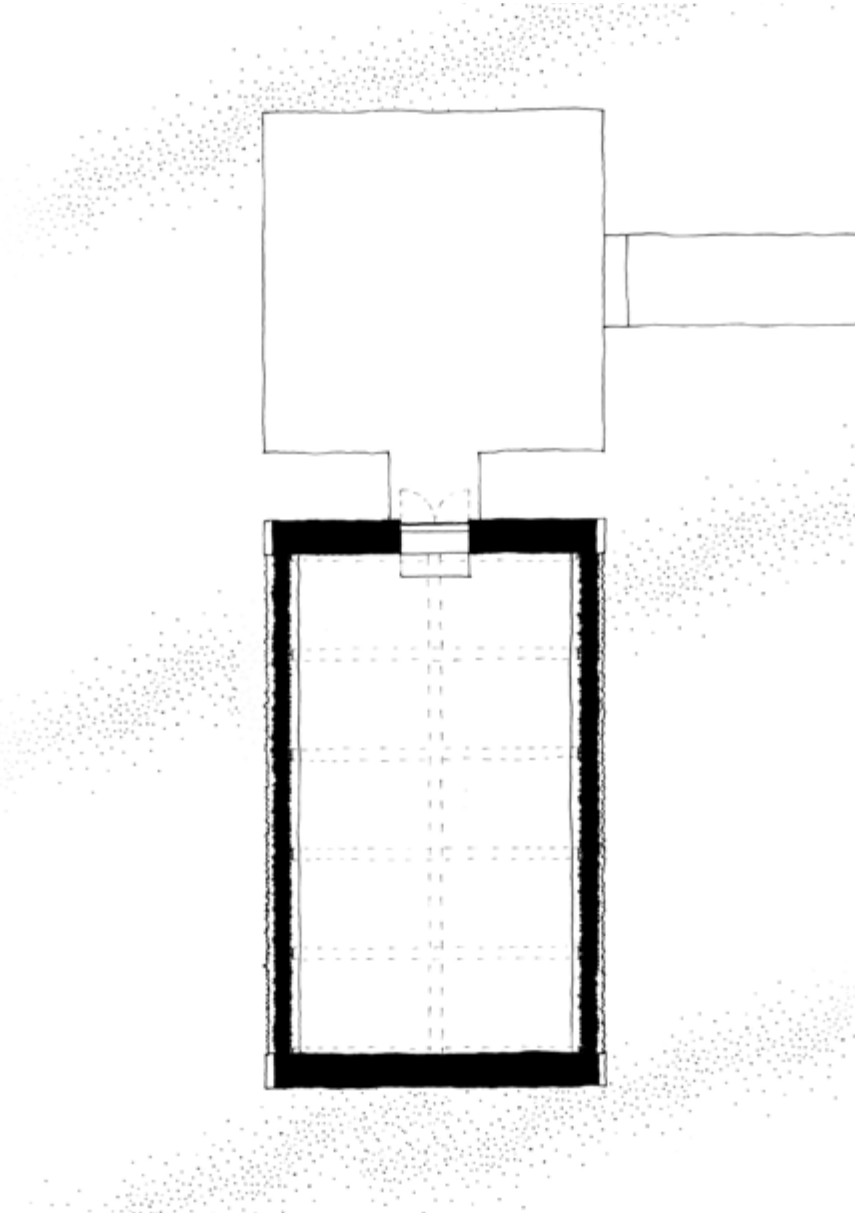


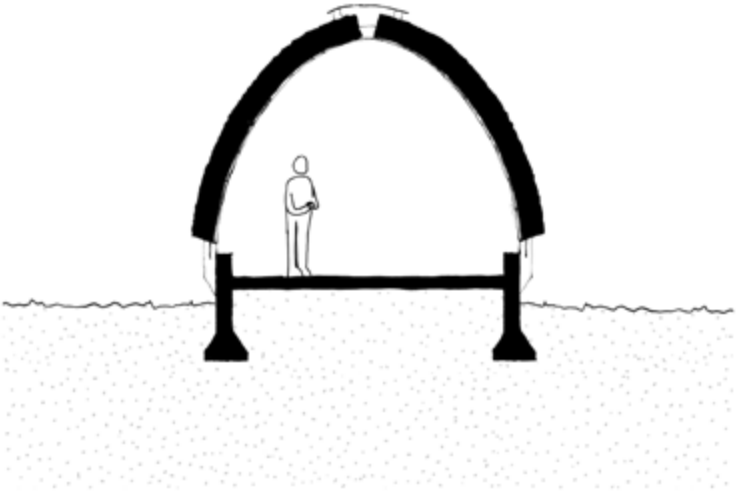

6
7
3450
4 050
900
2mm Translucent acrylic corrugated sheeting, on 75x40 RHS purlins
75x40 GMS RHS stub columns at approx 780cc, fixed to 250x100 RHS beam
50x38 Treated timber diagonal brace fixed to RHS stub columns w prewelded 3mm GMS brackets
2mm Translucent acrylic corrugated sheeting, fixed to RHS w GMS screws
Aluminium flashing tucked behind polycarbonate sheeting, fixed to RHS through sheeting
9mm plasterboard ceiling on 15mm shutterply, fixed through into timber battens w countersunk screws. Painted matt black, 2 coats
20mm Semi-translucent acrylic panel fixed to 75x8mm GMS bracket welded to 250x100 RHS beam
250x100x4.5 GMS RHS beam, primary structure for light cannon, fixed to trusses either side of light cannon w 50x50x50 GMS angle brackets
75x40x1.6 GMS RHS hanger fixed to US of 250x100 RHS beam at 780cc
75x38 timber batten fixed bwtw 75x40 RHS hangers at approx 1m ccw 3mm GMS brackets prewelded to hangers w predrilled holes
Aluminium Reflective foil lining, overlaps min 400. Reflective side to face into light cannon. Fixed to timber battens w joinery nails
20mm shutterply board fixed to RHS hangers and purlins w 40mm GMS countersunk screws. Faced w bituminous coated canvas, fixed to boarding w 15mm joinery nails
20mm shutterply footing on 38x38 timber batten, bituminous canvas wrapped round and tucked into fgs. Insulation foil tucked and fixed to US of bottom batten
1.2mm Zincalume Kliplok sheeting fixed w provided screws through sisalation foil to 250x75 GMS RHS purlins through predrilled holes. Purlins at max 1.1m cc, fixed to trusses w 50x50x50 GMS angle brackets
Custom folded 6mm GMS box gutter, fixed to lips of abutting 250x75 LC purlins. To header box in perimeter wall, w downpipes built into outer brick courses of wall & overflow gargoyles
8mm GMS brackets for truss tension cables, fixed around ø20 GMS rods, set in predrilled holes, welded to brackets. 10mm GMS backplate to allow fixing to CHC tie rods
ø40 2mm GMS CHS tie rod, bolted in pairs to ends of truss joint plates
Line of 8mm GMS bracket, welded to 10mm GMS joint plate
78x304 Composite timber truss member fixed to steel connector plates w ø4 20mm threaded rods, bolted either side
ø450 glass pendant light hung from prefixed ring on US of truss joint plate
1200x1200x15 Black slate tiles on 40 screed on 150 RC surface bed (to eng. spec) on 300micron DPM on 100 sand on sand/earth fill, compacted every 200mm
FFL 8000
PRE-EXISTING NGL
20mm plaster, waterproofing bandage over aluminium flashing
75 Wool insulation betw purlins
78x50 timber ceiling battens, betw 250x75 RHS purlins, fixed to purlins through 3mm GMS brackets w predrilled holes, welded to purlins
2mm Folded aluminium coping, fixed on side faces, on built up 78x38 treated timber battens
Line of ventilation exhaust duct in brickwork, w fan & aluminium louvre panel at outer face
Line of truss end box
8mm GMS bracket for truss tension cable, w 8mm GMS backplate to allow fixing into brickwork w 150mm chemical anchors
Line of 200 RC pad in brickwork for truss end box
300x200x6 GMS lintel, w 30x3 GMS flat welded to US to allow fixing of glass pane
15x3 GMS strip welded to US of GMS lintel, to act as water drip
15mm Fixed glass pane, fixed against 30x3 GMS strip frame w weatherproof structural silicone
1.2mm Aluminium sill powder coated dark grey, on mortar bed, fixed against GMS waterproofing strip
200x100x5 GMS bracket fixed to brickwork to support glass pane
20mm Smooth plaster painted white, 2 coats, on vertical int faces of light scoop
30x3 GMS waterproofing strip welded to 300x100 bracket
230 recycled brick stratum on face. Tied to wall behind w brick force every 4 courses.
20mm Wood-float plaster painted white, 2 coats
30x20 Aluminium angle fixed to brickwork above 20x20 shadow line gap betw plaster bands
20mm University plaster painted cream off-white, 2 coats
3 courses brick to tie across wall
230 Black brick stratum on face. Tied to wall behind w brick force every 4 courses.
Rubble infill betw min 230 brick skins. Max 900 high
Line of ventilation intake duct in brickwork, w fan & aluminium louvre panel at outer face
30x20 Aluminium angle fixed to brickwork above 20x20 shadow line gap betw plaster & floor
EXT LANDING FFL 8400
Agricultural drain ø200 PVC pipe w holes drilled 400cc, wrapped in geotextile, in 400x400 gravel, wrapped in geotextile
Structural brick mass strip foundation on 150 RC surface prep bed
Torch-on waterproofing faced w dorken sheeting
11 497
7 232
7 446
7 904
2 542
1 492
1 468
283
200
1 492
1 172
1 839
3 216
3 380
2 100
2 400
1 500
944
760
1 937
1 964
1 098
946
11 100
850
825
800
640
360
750
230
4 150
2 232
940
1 115
230
1 500

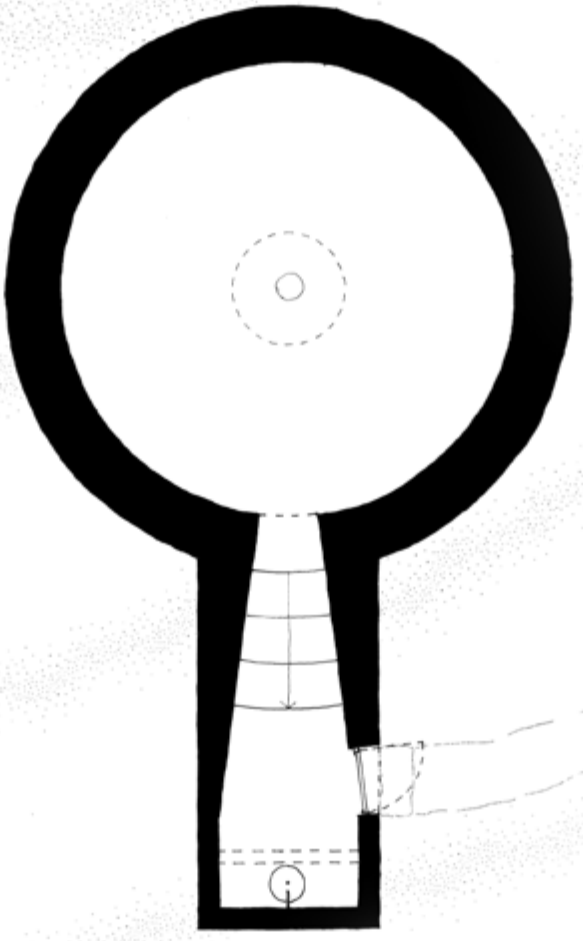


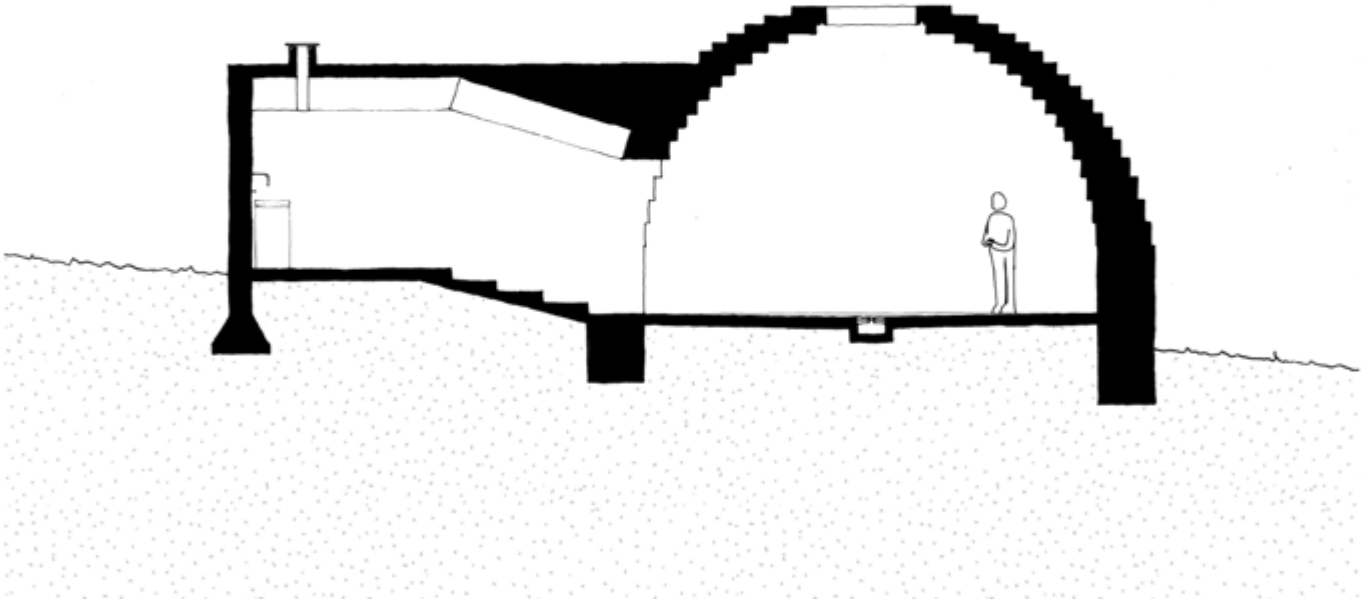












BACK MATTER

LEXICON

BEGRAAFPLAAS (Afrikaans)
Burial place, cemetery

BEGRAFNIS (Afrikaans)
Burial, interment

BURIAL GROUND
A generic term used in this paper for sites where the ground is the primary structure

BURIAL PLACE
A generic term used in this paper for any type of burial site including land and buildings

CATACOMB

CEMETERY
Public burial ground, often containing denominational sections

CENOTAPH
A memorial for people buried elsewhere (empty tomb)

CHARNEL HOUSE
A place where bones are collected en mass, often in curated masses

COLUMBARIUM
A place for the interring of cremated remains, typically in niched walls
("from columba, or dove, since the early Romans regarded them as similar in design to a dovecote" Worpole, 2003: 96)

CORTEGE
Funeral procession / group of people

CREMATION

CRYPT

IDLAKA (isiXhosa; plural: AMADLAKU)
Grave, tomb, interment; plural also refers to a cemetery

GRAF (Afrikaans; plural: GRAWE)
Grave, tomb

GRAVE MARKER
Generic term for any marker of a grave

GRAVESTONE
A marker, typically an inscribed stone slab, laid flat on the grave
see also HEADSTONE and TOMBSTONE

GRAVEYARD
Denominational burial ground, typically beside a religious temple

HEADSTONE
An upright marker, typically an inscribed stone slab, at the grave's head
see also GRAVESTONE and TOMBSTONE

HYPOGEUM
Underground/ excavated burial place

INHUMATION
Burial of (largely) untreated corpses in excavated pits or trenches in the ground

INTERRING
Burial of corpses in a built structure, often superterranean

KERKHOF (Afrikaans)
Graveyard

LOCULUS (plural LOCULI)
A place with niched walls for interring coffins
See Igualada Cemetery, Spain by Miralles & Pinos (1994)

MAQBARA (Arabic)
Cemetery; graves of all Muslims

MAUSOLEUM

MEMENTO MORI (latin?)
Reminder of death

NATURAL BURIAL
Burial in biodegradable or no coffin, near the ground surface with plants to grow from and help decompose the corpse

NECROPOLIS (latin)
City of Death/ the dead

INGCWABA (isiXhosa; plural: IINGCWABA [?])
Grave, tomb

UMNGCWABO (isiXhosa; plural: AMAGCWABO [?])
Burial, interment

OSSUARY
A place where bones are collected after having been interred elsewhere
See Prestwich Memorial, Cape Town; Choeung Ek Genocidal Centre, Cambodia; Douaumont WWI Ossuary, France

PERPETUAL BURIAL
Burial in perpetuity guaranteed in contract

QABR (Arabic)
Grave

SECONDARY BURIAL
Reburial in a second place

SEPULCHRE

SINGLE BURIAL
Burial of an individual only, as opposed to group/ mass burial

THANATOLOGY

TOMB

TOMBSTONE
Lid of a tomb/ grave that also acts as a marker
See also GRAVESTONE and HEADSTONE

TUMULUS

TEXT REFERENCES & INTERVIEWS

CoCT Cemetery official, personal communication, August 24, 2022.

AFP. 2022. EXPLAINER | The process behind Archbishop Desmond Tutu's 'water cremation'. News 24. 2 January. Available: https://www.news24.com/news24/southafrica/news/explainer-the-process-behind-archbishop-desmond-tutus-water-cremation-20220102

Allende, I. 2019. A Long Petal of the Sea. Trans. Caistor, N & Hopkinson, A. 2020. London: Bloomsbury. 229-231.

America, B. 2019. Prestwich Place Memorial: The Treatment Of Human Remains. [online] Centre for Curating the Archive. Available at: <http://www.cca.uct.ac.za/news/prestwich-place-memorial> [2020, 28 August].

Ashby, N. nd. https://capetrekking.co.za/information-notes/platteklip-wash/ [Accessed 2022 May 11].

Bernard, PS. 2013. "Living Water" in Nguni Healing Traditions, South Africa. Worldviews, 17(2), 138–149. http://www.jstor.org/stable/43809484

Bickford-Smith, V. (1995) Ethnic pride and racial prejudice in Victorian Cape Town : group identity and social practice, 1875-1902. Cambridge: Cambridge University Press. 123, 158-159.

Bickford-Smith, V. Worden, N. & van Heyningen, E. (1999) Cape Town in the twentieth century : an illustrated social history. Claremont, South Africa: David Philip.

Burdett, R & Rode, P. 2007. The Urban Age Project. In Burdett, R & Sudjic, D ed. The Endless City. London: Phaidon. 8-23.

Cape Mazaar (Kramat) Society. 2010. Guide to the Kramats of the Western Cape. Cape Town: Cape Mazaar (Kramat) Society. 10-13; 46-49.

Chen, A. 2017. The Opposition of Craft. In Holm, MJ., Kjeldsen, K. & Kallehauge, M.M. Ed. Wang Shu, Amateur Architecture Studio. Humlebæk, Denmark: Louisiana Museum of Modern Art. 177-184.

Clausén, M. (2016) Sacred architecture in a secular age : anamnesis of Durham Cathedral.

New York: Routledge.

Compton, J. S. (2004) The rocks and mountains of Cape Town. Cape Town, South Africa: Double Storey Books. 82.

O'Connor, S. 2020. The Community Leader. How to Die. 1:5. [Podcast, 21 December]. Available: https://howtodie.co.za/episodes/episode-5-the-community-leader

Curry, A. 2008. Gobekli Tepe: The World's First Temple?. Smithsonian Magazine. Available: https://www.smithsonianmag.com/history/gobekli-tepe-the-worlds-first-temple-83613665/

Dovey, K. 2010. Place as Assemblage. in Becoming places. New York: Routledge. 13-30.

Ewing, K, & Mammon, N. 2010. Cape Town DenCity: Towards Sustainable Urban Form. In M. Swilling, A. Davison, L. Metelerkamp, B. Nussbaum, & L. Thompson-Smeddle Eds. Sustaining Cape Town: Imagining a Livable City. 41–58. Stellenbosch: African Sun Media. Available: https://doi.org/10.2307/j.ctv21ptz1c.6

Finnegan, E., Hart, T. & Halkett, D. (2011) The 'informal' burial ground at Prestwich street, Cape Town: Cultural and chronological indicators for the historical cape underclass. South African archaeological bulletin. 66 (194), 136–148.

Foucault, M. (1984). trans. Jay Miskowiec. Of Other Spaces: Utopias and Heterotopias. Architecture /Mouvement/ Continuité

Frampton, K. & Cava, J. (1995) Studies in tectonic culture : the poetics of construction in nineteenth and twentieth century architecture. Cambridge, Mass: MIT Press. 1-27.

Garuba, H & Raditlhalo, S. 2016. Culture. in Shepherd, N & Robins, S ed. New South African Keywords. Johannesburg: Jacana. 35-46.
Hertz, R. 1960. A Contribution to the Study of the Collective Representation of Death. In Robben, A. C. G. M. Ed. 2004. Death, mourning, and burial : a cross-cultural reader. Malden, Mass: Blackwell Pub. 197-212.

Gevisser, M. 2020. The Pink Line: Journeys Across The World's Queer Frontiers. Jeppestown: Jonathan Ball. xii.

Goldman, J. 2012. Death rituals in the animal kingdom. BBC. Available: https://www.bbc.com/future/article/20120919-respect-the-dead

Green, L & Murray, N. 2005. Life Space and Burial

Space in the Post-Apartheid City. Journal for Islamic Studies. Cape Town: UCT. 24 & 25. 4-16.

van Heyningen, E. (1989) Public health and society in Cape Town, 1880-1910. ii; 157-250. (van Heyningen, 1989: 92)

Jordan, EG. 2005. 'Unrelenting toil': Expanding archaeological interpretations of the female slave experience. Slavery & abolition. [Online] 26: 2. 217–232.

Klein, AJ. 2017. Death in the City of Light : The Culture of Death in Paris from the Middle Ages through the Nineteenth Century. Bard College. Available: https://digitalcommons.bard.edu/senproj_s2017/273. 1-37.

Koudounaris, P. (2011) The empire of death : a cultural history of ossuaries and charnel houses. London: Thames & Hudson. 9-17.

Lee, R. (2011) DEATH 'ON THE MOVE': FUNERALS, ENTREPRENEURS AND THE RURAL–URBAN NEXUS IN SOUTH AFRICA. Africa (London. 1928). [Online] 81 (2), 226–247.

Lewis-Williams, J. D. & Pearce, D. G. (2004) San spirituality : roots, expression, and social consequences. Cape Town: Double Storey. 51-69.

Latour, B. (1993) We have never been modern. Cambridge, Mass: Harvard University Press.

Latour, B. 2008. A Cautious Prometheus ? A Few Steps Toward a Philosophy of Design. Networks of Design. Annual International Conference of the Design History Society, Sep 2008, University College Falmouth, Cornwall, United Kingdom. 1-13.

Lewis Williams, JD & Pearce, D. 2004. San spirituality : roots, expression, and social consequences. Cape Town: Double Storey. 51-69.

Lock, M. 2004. Displacing Suffering: The Reconstruction of Death in North America and Japan. In Robben, A. C. G. M. Ed. 2004. Death, mourning, and burial : a cross-cultural reader. Malden, Mass: Blackwell Pub. 107.

Macgegor Wise, J. 2014. Assemblage. In Gilles Deleuze: Key Concepts. Stivale, C, Ed. 2nd Ed. New York: Routledge. 91-102.

Maggs, A. 2020. INDEPENDENT WORK REPORT. University of Cape Town. [unpublished].

Maggs, A. 2021. Bishop Edward King Chapel Niall McLaughlin: Building Case Study. University of Cape Town. [unpublished].

Malan, A, Halkett, D, Hart T & Schietecatte, L. 2017. Grave Encounters: Archaeology of the Burial Grounds, Green Point, South Africa. Cape Town: ACO Associates.

Malinowski, B. 1954. Magic, Science and Religion. In Robben, A. C. G. M. Ed. 2004. Death, mourning, and burial : a cross-cultural reader. Malden, Mass: Blackwell Pub. 19-22.

Mda, Z. (1995) Ways of dying. Cape Town: Oxford University Press.

Mehrotra, R. 2013. Working in Mumbai: The Kinetic City as Generator of Practice. Digest of South African Architecture. 18: 246-247.

Mellet, PT. 2020. The Lie of 1652. Cape Town: Tafelberg: 95-167.

Mlamla, S. 2019. City of Cape Town's appeal for cremations over burials causes ire. Cape Argus. 27 November. Available: https://www.iol.co.za/news/south-africa/western-cape/city-of-cape-towns-appeal-for-cremations-over-burials-causes-ire-38046430

Naidoo, S. 2019. Major South African cities running out of burial land. Weekend Argus. 5 October. Available: https://www.iol.co.za/weekend-argus/news/major-south-african-cities-running-out-of-burial-land-34113390

O'Neill, A. 2020. Estimated global population from 10,000BCE to 2100. Statista. 23 September. Available: https://www.statista.com/statistics/1006502/global-population-ten-thousand-bc-to-2050/

News 24. 2018. New sites explored as burial options. News 24. 13 March. Available: https://www.news24.com/news24/new-sites-explored-as-burial-options-20180312

Norberg-Schulz, C. (1984) Genius loci : towards a phenomenology of architecture. New York: Rizzoli. 166-202.

Pallasmaa, J. 1996. The eyes of the skin : architecture and the senses. London: Academy Editions.

Pallasmaa, J. 2016. Matter, Hapticity and Time Material Imagination and the Voice of Matter. Building material (Architectural Association of Ireland). (20), 171–189.

Rosenblatt, P. 1997. Religion in Grief in small-scale societies. In Parkes, C. M. et al. ed. Death and bereavement across cultures. New York: Routledge. 36-37.

Roy, A. 2001. "The Reverse Side of the World": Identity, Space, and Power. In AlSayyad, N. Ed. Hybrid Urbanism: On Identity Discourse and the Built Environment. Westport: Praeger. 229-237.

Sachedina, A. 2021. MUSLIM BELIEFS ABOUT DEATH: From classical formulations to modern applications. In Stearns, P. N ed. .2021. The Routledge history of death since 1800. London: Routledge. 304-319.

SA Venues. nd. Slave's Walk. Available: https://www.sa-venues.com/attractionswc/slave-walk.php [Accessed: 2022 May 10].

Shadmon, A. (1996) Stone : an introduction. 2nd ed. London: Intermediate Technology Publications. 10-20.

Shepherd, N. 2007. Archaeology dreaming:

post-apartheid urban imaginaries and the bones of the Prestwich Street dead. Journal of Social Archaeology, pp.3-18, [online] 7(1). Available at: http://jsa.sagepub.com/cgi/content/abstract/7/1/3 [2020, 28 August].

Shields, J. (2014) Collage and Architecture. [Online]. London: Routledge.

Di Silvestro, R. 2012. Are Other Animals Aware of Death?. The National Wildlife Federation. Available: https://www.nwf.org/Magazines/National-Wildlife/2013/DecJan/Animals/Animal-Mourning

Smit, S. 2020. The Covid-19 burial problem for South Africa. The Mail & Guardian. 14 April. Available: https://mg.co.za/article/2020-04-14-the-covid-19-burial-problem-for-south-africa/

South Africa Nature Reserves. nd. A Biological Hotspot: Table Mountain National Park. Online. Available: https://www.nature-reserve.co.za/table-mountain-national-park-biology.html#:~:text=A%20Brief%20bit%20on%20the,the%20Table%20Mountain%20National%20Park. [Accessed 2022 August 3].

Du Toit, M. 1986. Local building stone in Cape Town. UCT.

Venturi, R. 1966. Complexity and Contradiction in Architecture. New York: Museum of Modern Art. 22-23.

Vlassopoulos, K. (2007) Unthinking the Greek Polis: Ancient Greek History beyond Eurocentrism. Cambridge: Cambridge University Press. 68-81.

VOC News. 2019. Sayed Abdul Haq kramat in Vredehoek vandalised (PHOTOS). Available: https://www.vocfm.co.za/desecration-of-sayed-abdul-haq-mazaar-in-vredehoek-sparks-concern-and-speculation-photos/ [Accessed 2022 July 4].

Weeder, M. I. (2006) The palaces of memory : a reconstruction of District One, Cape Town, before and after the Group Areas Act. Thesis (M.A. (Public and Visual History))--University of the Western Cape, 2006.

Worden, N. Bickford-Smith, V. & van Heyningen, E. (2004) Cape Town : the making of a city : an illustrated social history. Pbk. ed. Cape Town: David Philip.

Worpole, K. (2003) Last landscapes: the architecture of the cemetery in the west. London: Reaktion Books Ltd.

Worpole, K. (2016) Housing the dead: environmental, economics and cultural factors have all shaped funerary architecture throughout the ages. The Architectural review (London). 240 (1436), 3-8.

von Zeil, C. 2013 - 2018. Blog. Reclaim Camissa. Available: http://www.reclaimcamissa.org/blog [Accessed 2022 May 10].

IMAGE REFERENCES

A1
Model by author.

A2
Goldblatt, D. 2007. Jewish Cemetery, Sutherland, Western Cape, 16 December, 2007. Available: https://www.mutualart.com/Artwork/ Jewish-Cemetery--Sutherland--Western-Cap/ A8AE65FB23167E41 [2022, 13 April].

A3
Goldblatt, D. 1985. The salute of the banned African National Congress at the graves of four assassinated black community leaders. http://www. vam.ac.uk/content/articles/d/david-goldblatt-and- the-v-and-a/ [2022, 13 April].

A4
Jackson, L. 2019. Bodies Buried in Potter's Field as New York's Coronavirus Deaths Mount. Available: https://www.reuters.com/article/uk-health- coronavirus-usa-hart-island-idUKKCN21R352 [2022, 13 April].

A5
Arutyunova, S. 2020. The first known AIDS victims are buried together on the southern end of Hart Island. Available: https://time.com/5913151/hart- island-covid/ [2022, February 22].

A6-9
tanahpek. 2020. Kwong Wai Siew Peck San Theng. Available: https://www.atlasobscura.com/places/kwong-wai-siew-peck-san-theng [2022, 13 April].

B1
Abdulaziz, M. 2015. Classic Club Golf Course. Palm Desert, California, USA. Available: https://www.mustafahabdulaziz.com/4958s5gha3i4gtmtvipam1d9fbjv5i-at3hj [2022, 11 September].

B2
Drawing by author.

B3
Model by author.

C1-2
Baraty, N. 2011. Manikarnika cremation ghat. Available: https://www.flickr.com/photos/vwmang/6303625266 [2022, 13 April].
Ghosh, S. 2019. Life at the Cremation ghat. Available: https://www.saumalyaghosh.com/ blog/2019/1/the-cremation-ghat [2022, 13 April].

C3
Becker, D. nd. Monumental round-oval buildings with their characteristic T-shaped monolithic pillars at Göbekli Tepe. Available: http://www.sci-news.com/ archaeology/gobekli-tepe-neolithic-skull-cult-04996. html [2022, 13 April].

C4-5
Photographs by author. 2021.

C6
Kawauchi, R. 2019. Family Reuninion. Available: https://www.nytimes.com/interactive/2021/09/21/magazine/japan-photographs-rinko-kawauchi.html [2022, 13 April].

C7
Pietrzak, J. 2017. Senior Venancio Tuz Chi, washing the bones of his father - Pomuch, Campeche. Available: https://www.huffpost.com/entry/bone- washing-a-day-of-the_b_8403284 [2022, 13 April].

C8
Drawing by author.

C9
Hoffbauer, T. nd. Charnel house at the Saints Innocents Cemetery, Paris. The mural of a Danse Macabre is visible at the wall. [etching]. Available: https://commons.wikimedia.org/wiki/File:Charnier_ at_Saints_Innocents_Cemetery.jpg [2022, 13 April].

C10
Hoffbauer, T. nd. Engraving depicting the Saints Innocents cemetery in Paris, around the year
1550 without its frame. [engraving]. Available: https://commons.wikimedia.org/wiki/File:Saints_ Innocents_1550_Hoffbauer_NoFrame.jpg [2022, 13 April].

C11
Unknown. Late 1800s. Greenpoint. In Malan, A, Halkett, D, Hart T & Schietecatte, L. 2017. Grave Encounters: Archaeology of the Burial Grounds, Green Point, South Africa. Cape Town: ACO Associates. 8.

C12
Malan, A. 2004. Prestwich bones. In Malan, A, Halkett, D, Hart T & Schietecatte, L. 2017. Grave Encounters: Archaeology of the Burial Grounds, Green Point, South Africa. Cape Town: ACO Associates. 12.

C13
Harrison, D. 2021. New grave sites at the Maitland Cemetery near Cape Town. Available: https://www. dailymaverick.co.za/article/2021-07-29-cape-town- cemeteries-filling-up-fast-as-covid-drives-record- number-of-burials/ [2022, 13 April].

C14
Mbadamane, L. 2020. Gugulethu graveyard. Available: https://www.dailysun.co.za/dailysun/ News/christmas-at-the-graveyard-20201226 [2022, 13 April].

C15
Mortlock, M. 2019. A process used around the world, now

introduced to Cape Town. Available: https://www.enca.com/news/pictures-field-25-november-2019 [2022, 13 April].

C16
CoCT. 2015. MAITLAND MAUSOLEUM. Available: https://resource.capetown.gov.za/documentcentre/Documents/Graphics%20and%20educational%20material/Mausoleum_Brochure%202015.pdf [2022, 13 April].

C17
Akmen, T. nd. Highgate attracts tens of thousands of visitors each year. Available: https://www.theguardian.com/books/2019/feb/24/highgate-cemetery-karl-marx-vandalism-security-fears [2022, 13 April].

D1
Unknown. 1940s. Construction Of The Sturrock Dry Dock, Cape Town. Available: https://www.flickr.com/ photos/hilton-t/3862401854/in/photostream/ [2022, 13 April].

D2
Unknown. 1940s. Aerial View of Cape Town Docks. Available: https://www.flickr.com/photos/hilton-t/3953443298/in/photostream/ [2022, 13 April].

D3
Roman Acqueducts. nd. Late Roman aqueduct bridge in northern Athens. Available: http:// www.romanaqueducts.info/technicalintro/constructionmaterials.htm [2022, 13 April].

D4
Roman Acqueducts. nd. The Arcus Neroniani in between The Via Statilia and the Via Grattoni. Available: http://www.romanaqueducts.info/aquasite/ romaclaudia/foto23.html [2022, 13 April].

D5-10
Drawings by author.

D11-14
Photographs by author. 2022.

D15
Niall McLaughlin Architects, 2013. Bishop Edward King Chapel. Available: https://www.archdaily. com/ 611186/bishop-edward-king-chapel-niall-mclaughlin- architects [2022, 13 April].

D16
Niall McLaughlin Architects, 2013. Bishop Edward King Chapel. Available: https://www.archdaily. com/ 611186/bishop-edward-king-chapel-niall-mclaughlin- architects [2022, 13 April].

D17
Stamford Stone. 2014. Case Study Ripon College's Bishop Edward King Chapel. Pierre et Marbre & Steen en Marmer. Vol 1.

D18
Drawing by author. 2021.

E1
Soar, T. 2017 15 Clerkenwell Close. Available: https://www.archdaily.com/891018/15-clerkenwell- close-groupwork-plus-amin-taha-architects [2022, 13 April].

E2
GROUPWORK + Amin Taha Architects. 2017. 15 Clerkenwell Close. Available: https://www.archdaily. com/891018/15-clerkenwell-close-groupwork-

plus- amin-taha-architects [2022, 13 April].

E3
Drawing by author.

E4
GROUPWORK + Amin Taha Architects. 2017. 15 Clerkenwell Close. Available: https://www. archdaily. com/891018/15-clerkenwell-close-groupwork-plus- amin-taha-architects [2022, 13 April].
E5
GROUPWORK + Amin Taha Architects. 2017. 15 Clerkenwell Close Elevation & Section. Available: https://za.pinterest. com/pin/429812358183740786/ [2022, 13 April].

E6
The Stonemasonry Company Limited. 2018. The Stonemasonry Company Limited- 15 Clerkenwell Close Load-bearing Stone. Available: https://www. youtube.com/ watch?v=sAYim1E78l0 [2022, 21 March].

E7
Drawing by author.

E8
Soar, T. 2017 15 Clerkenwell Close. Available: https://www. archdaily.com/891018/15-clerkenwell- close-groupwork-plus-amin-taha-architects [2022, 13 April].

E9
GROUPWORK + Amin Taha Architects. 2017. 15 Clerkenwell Close. Available: https://www. archdaily. com/891018/15-clerkenwell-close-groupwork-plus- amin-taha-architects [2022, 13 April].

E10
Drawing by author.

E11
Shu, Wang. nd. Wa pan. In Holm, MJ. et al. 2017. Ningbo History Museum. In Holm, MJ., Kjeldsen,
K. & Kallehauge, M.M.
Ed. Wang Shu, Amateur Architecture Studio. Humlebæk, Denmark: Louisiana Museum of Modern Art.

E12
tibetreis. 2009. Academy of Art Hangzhou, Wang Shu. Available: https:// www.flickr.com/photos/ tibetreis/3730907400/in/ photostream/ [2022, 13 April].

E13
woman mending. 2016. Available: https:// thewowander. tumblr.com/post/142346235170. [2022, 13 April].

E14
Shu, Wang. nd. Wa pan. In Holm, MJ. et al. 2017. Ningbo History Museum. In Holm, MJ., Kjeldsen,
K. & Kallehauge, M.M.
Ed. Wang Shu, Amateur Architecture Studio. Humlebæk, Denmark: Louisiana Museum of Modern Art.

E15
Drawing by author.

E16
Baan, I. 2009. Ningbo Historic Museum, Ningbo China – Wang Shu. Available: https://iwan. com/ portfolio/wang-shu-ningbo-historic-museum/ [2022, 13 April].

E17
UCT Dept Geological Science. nd. Schematic geology of Cape

Peninsula. Available: https://www. fergusmurraysculpture.com/south-africa/the-cape-floral-region-8-pages/iii-cape-peninsula-geology/ [2022, 13 April].

E18
Council for Geoscience. 2008. SIMPLIFIED GEOLOGICAL MAP OF THE REPUBLIC OF SOUTH AFRICA AND THE KINGDOMS OF LESOTHO AND SWAZILAND. [Map]. Scale: 1: 2 000 000. Pretoria: Council for Geoscience. Available: https://www. geoscience.org.za/images/DownloadableMaterial/RSA_Geology.pdf [2022, 13 April].

F1
City of Cape Town. 2018. Aerial Imagery.

F2
Drawing by author.

F3-4
Photographs by author. 2022.

F5
Drawing by author.

F6-30
Photographs by author. 2022.

F31
City of Cape Town. 2018. Aerial Imagery.

F40
Agni Pikionis-Dimitris Pikionis Archive. 1954–1957. Dimitris Pikionis, Philopappou Hill, 1954–1957. Available: https://www.noguchi.org/isamu-noguchi/digital-features/noguchi-in-greece/ [2022, 17 June].

F41
Benaki Museum-Modern Greek Architecture Archives. nd. The landscaping plan for the Acropolis, completed in 1957. Available: https://www.architectural-review.com/essays/reputations/dimitris-pikionis-1887-1968 [2022, 17 June].

F42
Champion, R. 2018. Available: https://www.tarn.studio/commentary-blog/2019/3/18/dimitris-pikionis-1 [2022, 17 June].

F43
Drawing by author. 2018

F44
Agni Pikionis-Dimitris Pikionis Archive. 1954–1957. View of the Saint Dimitrios Loumbardiaris courtyard and the path leading to Filopappou Monument, 1954–58. Available: https://www.documenta14.de/en/notes-and-works/24119/dimitris-pikionis-1887-1968- [2022, 17 June].

F45-46
Photographs by author. 2022.

F47
Unknown. nd. land map indicating the burial grounds of the various religious communities. In Vio, G. 2006. Roelof Uytenbogaardt: Senza Tempo / Timeless. Padova: Il Poligrafo. 83.

F48
Photograph by author. 2022.

F49
Uytenbogaardt, R. nd. Plan. In Vio, G. 2006. Roelof Uytenbogaardt: Senza Tempo / Timeless. Padova: Il Poligrafo. 83.

F50-52
Photographs by author. 2022.

F60
Photograph by author. 2020.

F61
le Grange, L. nd. Prestwich Memorial. Available: https://www.lucienlegrangearchitects.com/prestwich-street-memorial [2020, 15 November].

F62
Drawing by author. 2020.

F63-64
le Grange, L. nd. Prestwich Memorial. Available: https://www.lucienlegrangearchitects.com/prestwich-street-memorial [2020, 15 November].

F65
Photograph by author. 2020.

F66-67
Drawing by author. 2022

F68-69
Bach, A & E. nd. Sankt Petri, Klippan. Available: http://hicarquitectura.com/2017/06/aeb-14-sigurd-lewerentz-sankt-petri-klippan/ [2022, 8 June].

F70
Dehlin, J. nd. Available: https://arkdes.se/en/sigurd-lewerentz-death-life-architect-book/ [2022, 8 June].

F71
Unknown. nd. Available: https://miguelgarciamachin.wordpress.com/2013/04/04/sigurd-lewerentz/ [2022, 8 June].

F72
Ford, ER. 1996. Framing. In The details of modern architecture. Volume 2, 1928 to 1988. Cambridge, Mass: MIT Press. 343.

G1-2
Drawings by author.

G3
Challis, S. 2013. 'Rain snakes' from the Senqu River. In New light on Qing's commentary on San rock art from Sehonghong, Lesotho - Scientific Figure on ResearchGate. Available: https://www.researchgate.net/figure/Detail-of-the-Rain-Snake-Shelter-tracing-the-arrow-indicates-potential-cut-strokes_fig11_271749243 [2022, 4 June].

G4
Elliott, A. nd. The Platteklip Stream at the top of Government Avenue, showing the sluice on the left, diverting water to Hope Mill. Available: http://hdl.handle.net/10019.2/5376 [2022, 5 June].

G5
Harding, S. 2016. Harding and his film crew in an underground tunnel in Cape Town. Available: https://www.huffpost.com/entry/cape-town-tunnels-drought_b_9619340 [2022, 19 May].

G6
Photograph by author. 2022.

G7-8
Drawings by author.

G9-10
Photographs by author. 2022.

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Drawings by author.

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Photograph by author. 2022.

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G22
City of Cape Town. 2018. Aerial Imagery.

G23
Drawing by author.

G24
Drawing & Photographs by author.

G25
Drawing by author.

G26-30
Photographs by author. 2022.

G40
Unknown. nd. Historic photo of upper reaches of Platteklip stream. Available: https://capetrekking.co.za/information-notes/platteklip-wash/ [2022, 19 May].

G41
Ashley, G. 1877. Road to Table Mountain (shows washing drying over bushes). Available: https://plattekliptrust.co.za/ [2022, 19 May].

G42
Ashley, G. 1877. Cape wash place in the Platte Klip ravine. Available: https://plattekliptrust.co.za/ [2022, 19 May].

G43
Elliott, A. nd. Vault at Oranjezicht, Cape Town (E1971). In Fransen, H. 1969. Architectural Beauty of the old Cape as seen by Arthur Elliott. Cape Town; AA Balkema. 28.

G44
Elliott, A. nd. Courtyard at Nooitgedacht, Cape Town (E7689). In Fransen, H. 1969. Architectural Beauty of the old Cape as seen by Arthur Elliott. Cape Town; AA Balkema. 23.

G45-47
Unknown. nd. Available: https://capetrekking.co.za/information-notes/platteklip-wash/ [2022, 19 May].

G48-49
Photographs by author. 2022.

H1-3
Model by author.

H4-6
Drawings by author.

H7
Model by author.

H8
Drawing by author.

H9-11
Drawings by author.

H12
Photograph by author. 2021.

H13
Grendon, P. 1987. Constructing a matjieshuis, Nourivier. Available: https://digitalcollections.lib.uct.ac.za/collection/islandora-5073 [2022, 9 September].

H14
Fleminger, D. nd. A matjieshuis is a traditional Nama dwelling, which locals of Lekkersing will happily show visitors. Available: https://southafrica.co.za/visiting-lekkersing.html [2022, 9 September].

H15
Northern Cape Environmental Heritage Trust. nd. Available: https://www.capeheritage.org/corbelled-houses/ [2022, 9 September].

H16-18
Drawings by author.

H19
Photograph by author. 2021.

H20-22
Drawings by author.

H23
Drawing by author.

H30-33
Drawings by author.

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Drawing by author.

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UNIVERSITY OF CAPE TOWN
IYUNIVESITHI YASEKAPA • UNIVERSITEIT VAN KAAPSTAD

PRE-SCREENING QUESTIONNAIRE OUTCOME LETTER

STU-EBE-2022-PSQ000032

2022/07/26

Dear Alexander Maggs,

Your Ethics pre-screening questionnaire (PSQ) has been evaluated by your departmental ethics representative. Based on the information supplied in your PSQ, it has been determined that you do not need to make a full ethics application for the research project in question.

You may proceed with your research project titled:

Necropolis: Burial & Afterlives in Cape Town

Please note that should aspect(s) of your current project change, you should submit a new PSQ in order to determine whether the changed aspects increase the ethical risks of your project. It may be the case that project changes could require a full ethics application and review process.

Regards,

Faculty Research Ethics Committee