Eternal Landscapes: A Reframing of Monuments in the Civic Cemetery

by

Chelsea Kinnee

Submitted in partial fulfilment of the requirements for the degree of Master of Architecture

at

Dalhousie University Halifax, Nova Scotia March 2022

Dalhousie University is located in Mi'kmaq'i, the ancestral and unceded territory of the Mi'kmaq. We are all Treaty people.

© Copyright by Chelsea Kinnee, 2022

Contents

| Abstract | iv |
|--|----------|
| Acknowledgements | V |
| Chapter 1: Introduction | 1 |
| The Current Cemetery | 1 |
| A Cemetery with No Headstones | 4 |
| Chapter 2: Boundary in the Temporal Landscape: Ephemerality in Space and Ritu | ıal8 |
| The Ephemeral Landscape as Memorial | 8 |
| Subjectivity and the Reading of Space | 11 |
| The Human Ecosystem: A Boundary in the Limitless Cosmos | 13 |
| Chapter 3: The Window: Engaging the Symbol | 15 |
| The Window | 15 |
| A Design Matrix: The Symbol, the Boundary, the Window | 17 |
| Chapter 4: The Problem with Perpetuity: Challenges of the Typical Western Ceme | etery 22 |
| The Mythology of Perpetual Care | 22 |
| Social Challenges in the Western Cemetery | 29 |
| Chapter 5: A Paradigm Shift: The New Cemetery | 33 |
| The Metabletic Method and the Memorial in a Changing Cultural Landscape | 33 |
| The Proposed Cemetery | 38 |
| The Site | 40 |
| Chapter 6: Design Proposal | 44 |
| A Cemetery for Halifax, Nova Scotia | 44 |
| Place and Siting | 44 |
| The External Dimension: Symbols in the Landscape | 48 |
| Program and Organizing Line | 54 |
| Ritual Armatures | 58 |
| Architectural Interventions | 61 |
| Boundary as Wall | 63 |
| Entry Courtyard | 66 |
| Funeral Venue | 67 |
| Crematorium | 69 |

| Chapter 7: Conclusion | 73 |
|-----------------------|----|
| The Civic Cemetery | 73 |
| References | 76 |

Abstract

Secular demands on space are shifting Western funerary culture away from traditional individual memorials. New burial modes omit the gravestone, and ash spreading rituals detach the act of remembering from the body. While these changes are culturally apparent, cemeteries remain rooted in tradition, presenting memory through the gravestone's associated symbologies. At varying scales, this thesis breaks with such symbolic norms, proposing the window as a memorial device that activates a temporal link between memory and remembering being. The window shifts the experience of the cemetery inwards, connecting with its visitor's personal subjective world, and outwards towards the immense scale and temporality of the surrounding landscape. The window engages ephemeral and intangible symbols of change in the natural world, framing their presence while acting as an armature for ritual, memory and mourning. In absence of the gravestone, perception leads, centering the emotional individual experience in the collective ceremonial landscape.

Acknowledgements

Thank you to my supervisor Catherine for the support and critique in this project and over the past years. Your encouragement and conversations have been instrumental to my growth and you have broadened my world with your incredible insights into life and architecture. Thank you for always being such an inspiration and role model.

To Matthew, my thesis advisor, thank you for the critique, the conversations, and for fueling my growing interest in landscape architecture. Your insights have pushed my thinking and I admire your conceptual eye. You've inspired me throughout this process!

Thank you to all the amazing colleagues I've met before and throughout my education. I am lucky to have found such incredible mentors in my professional pursuits and your trust and support have taught me to trust my instincts.

Thank you to my architecture friends, old and new, for the enthusiasm, support, and the constant inspiration. I look forward to seeing the amazing things you'll do in the future!

And finally, thank you to my family and friends. You have been an immeasurable source of support in times of need, and shared excitement in times of success. Thank you for believing in me and for always encouraging me to follow my dreams.

Chapter 1: Introduction

The Current Cemetery

What if to confront death we further its intangibility? What if we change our relationship with the individual memorial? I wrote these questions while walking Cimitero di San Michele's four dense acres of memorials in Venice. The visit was part of a trip that surveyed the role of cemeteries in Italian culture as a metonym for the larger Western relationship with death. As I traveled, I noticed patterns: tourists and families visit the monumental cemeteries, the graves vary from extravagant family tombs to small columbarium walls, and as in many cultures, flowers are a foremost ritual of visitation. Flower stands at cemetery gates vend these living offerings that populate the memorials, tracing visitors' efforts to ensure that their dead are seen and remembered. It is fitting to match the immense incomprehensibility and ephemerality of life and death with something as ephemeral as a flower; the grave is an armature for interaction with loved ones, and the fleeting cut flower is a ritual layer on the act of visiting the cemetery.

While flowers traditionally mark a loved one's presence, this ritual is complicated in today's Italian cemeteries where most of the flowers are plastic. Introducing colour through the plastic flower is an intended act of care, but through their enduring presence, these offerings diverge from the ritual and temporal nature of their living counterparts. The plastic flower signifies changing cultural attitudes towards death and memorials in contemporary Western society.

This line between static and fluid, physical and intangible, permanent and ephemeral is the critical concern of this



Columbarium walls, Cimitero di San Michele, Venice



Plastic floral arrangements, Milan Monumental Cemetery

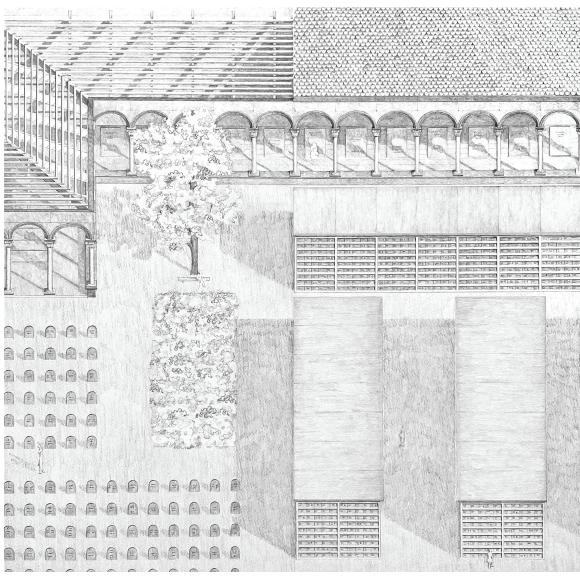
thesis. During my time in the Italian cemeteries, I grappled with personal questions: would I want to be remembered through the fixed nature of the individual memorial? Is there a different way of memorializing that makes space for a more perceptive and personal memory experience?

They are questions that almost everyone grapples with, questions with varying answers. The cemetery aims to



Graphite drawing depicts family crypts in Milan Monumental Cemetery. The crypts offer a tangible and fixed symbol of a family while assuming perpetuity. As explored in the chosen orthographic projection, such monuments result in walled and private pavilions in contrast the public nature of the civic cemetery.

accommodate everyone, but offers an inadvertently specific position through prioritizing the formalized and symbolized individual memorial. As I walked the monumental cemeteries I struggled, as many people do, to envision myself symbolized in such a way. I struggled to reconcile the fixed nature of such objects with the intangible, unpinnable, and incomprehensible idea of eternity.



Paired with the drawing of the crypt, the drawing for San Michele Monumental Cemetery considers repetition and density.

A Cemetery with No Headstones

A cemetery holds space for the dead and for those who remember them; it holds space for final wishes, grief, memory, culture, values, and the landscape itself. It is a place for difficult internal conversations and confrontations—for sadness and ceremony—but also for quiet contemplation and connection with the past. Human minds and emotions are fluid, shifting with time and space and serving as the unpredictable programmatic conditions that the cemetery holds.

Today's world, through increasing mobility, shifting demographics, and growing migration, is reinventing itself, with places like Canada diversifying and its people questioning many of the ways of the past. In this context of change, attitudes towards death are also changing, with people turning towards new practices for the disposition of bodies and memorial rituals that can exist anywhere (The Order of the Good Death n.d.; Recompose n.d.). Such informal practices challenge the traditional role of the cemetery, begging an important question: how can the cemetery remain a place for collective memory in the face of less formal means of memorialization that no longer require its physical presence?

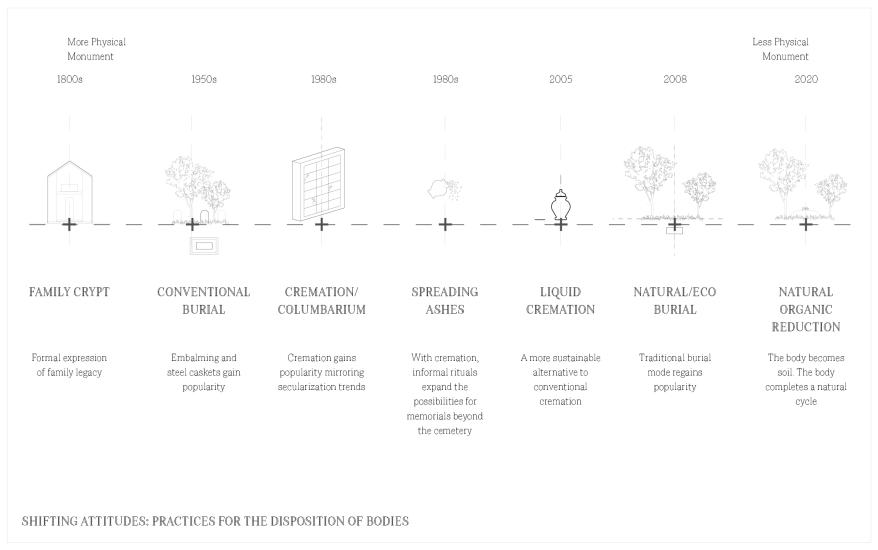
In considering this question this thesis proposes an alternate cemetery that addresses three main challenges: it must be culturally inclusive to make space for the specificities of different cultural and spiritual end-of-life values, it must encourage a safe and non-judgmental environment that supports people through times of grief and remembering, and it must serve its community in perpetuity in a regenerative and ecologically sensitive manner.

Central to the proposed cemetery is that memory does not require a memorial—at least as they exist in their traditional static form. The following chapters propose an alternate cemetery that positions the individual among architectural elements, paths and spaces that activate links between humans and the landscape. They propose a shift in the experience of remembering from emphasizing the memorial—an external, cultural object—towards prioritizing the internal, perceptive, emotional experience of the ephemeral, temporal, and cyclical landscape. The proposed cemetery encourages a conversation with ephemerality by questioning the role of permanence in the memorial—the landscape dies and regenerates, and while we might mourn or remember such past states, we perceive it as a present whole. In the proposed cemetery, the body is embedded in these natural cycles through interment practices that give back to the earth. The body is present in the future landscape—a generative offering for future life that blurs the line between past and present, engaging the continuum of natural cycles of which we are all a part.

Connecting with time and emotion, this thesis proposes *the* window as a mediator—a bridge between the body's now-intangible presence in the ephemeral landscape and the remembering visitor. The window watches, frames, extends, brackets, or any other number of actions that engage symbols of change in the landscape, allowing a multiplicity of experiences that centre on time, cycles, and memory.

As the cemetery holds its grieving visitors, it also holds public land. With growing cities comes an opportunity to preserve historically or environmentally significant landscapes for public access. The abandoned King's Quarry site in Halifax, Nova Scotia is such an opportunity and on it I propose a

cemetery without the individual memorial—a cemetery that acknowledges the complex personal dimensions of loss freed from the associated symbologies of tradition. In the absence of the traditional memorial, a broad range of interpretations and cultural associations emerge, marking a more inclusive place for both individual and collective memory.



Practices for the disposition of bodies are shifting, with new methods emerging that increase sustainability and offer less fixed means of memorialization. Such changes impact existing cemeteries whose traditional services no longer suit these less tangible remains.

Chapter 2: Boundary in the Temporal Landscape: Ephemerality in Space and Ritual

The Ephemeral Landscape as Memorial

The memorial is a cultural object that demonstrates the ritual values of its people. Across cultures, memorialization undulates from strongly physical, underpinning an expectation of eternity, to fluid and impermanent as exemplified in cultures who value spoken word.

In his chapter "Memory Hooks: Commemorating Indigenous Cultural Landscapes," Robert Coutts describes a collision of such memorial values between the Canadian government and a number of Indigenous groups (Coutts 2021, 37). The chapter considers how the Canadian government designates which sites (places) hold cultural significance and should be commemorated and protected under Canadian national park and heritage laws. The current process emerged over decades of consideration and reconsideration, and today intangible significance is recognized as such.

A 2008 article defines Indigenous cultural landscapes as "a place valued by an Aboriginal group (or groups) because of their long and complex relationship with that land. It expresses their unity with the natural and spiritual environment. It embodies their traditional knowledge of spirits, places, land uses, and ecology. Material remains of the association may be prominent, but will often be minimal or absent" (Coutts 2021, 37). This classification of Indigenous cultural sites is demonstrated in Coutts' description of Siksikaitapiiksi (Blackfoot) elder Narcisse Blood of the Kainai First Nation's writings on the preservation of threatened cultural lands:

Landscapes are storied places, according to Blood, and the land itself is animate. Stories, songs, and ceremonies have kept knowledge of the land alive for the Siksikaitapiiksi (Blackfoot) people, writes Blood, and all places are significant. Some mark events or artifacts or are markers, such as vision quests, human and animal effigies, offerings sites, rock cairns, and battle sites. Places of significance also relate to resource use such as buffalo jumps and pounds, berry-picking spots, campsites, teepee rings, trails, and river crossings. Religious places of significance include creation sites and places related to spirit beings and the origin of medicine bundles and spiritual societies. For the Siksikaitapiiksi, such places, Blood writes, as "not simply piles of rocks, cliffs, or glacial erratics; they are places imbued with meaning and history...the equivalent of books, encyclopedias, libraries, archives, crypts, monuments, historical markers, and grottos. (Coutts 2021, 42)

This relationship between landscape and meaning marks the land itself a memorial. The land and its stories remember that which has happened, demonstrating the profound role of knowledge to memory. Actions are marked not through grand monuments as in the West, but through the significance of stories passed on through generations.

Coutts' consideration of the relationship between landscape and spoken word is mirrored in David Abram's *The Spell of the Sensuous*, where Abram argues that cultures who value spoken language experience a more deeply entwined relationship with history through the land. Oral culture engages a deep relationship between the speaker, the audience, and the landscape where the story is told, and this fluidity engages history as a continuum that retains its relevance over time. Within such conditions of place, the speaker's words are impacted by their surroundings and landscape interacts with the audience's experience of the story. Time, place, and ritual are important to the transfer of a story and the experience of its reception (Abram 1997, 75).

This living relationship between memory and story is exemplified at today's Point Pleasant Park in Halifax Nova Scotia—traditionally Amntu'kati which means "spirit place" or "place of spirits" in English. The site is the origin place of The Great Spirit Fire, which gave birth to the Mi'kmaq people. Traditionally, people from the far reaches of Mi'kmak'ik traveled to this site for the annual spring festival that symbolized the creation alongside the beginning of new life brought through the spring season (McDonald 2017). Here, meaning is assigned to the land through a long history of ritual—a temporal and spatial enactment that lives on year after year.

This way of assigning significance to the landscape underscores the role of knowledge to the experience of memory. In contrast to the shifting nature of spoken stories, the language on the traditional gravestone is fixed in time and place, evading much of the changes that keep the stories of indigenous cultures relevant over time. In reconsidering the fixed memorial, the proposed cemetery offers a more embodied association between landscape and remembering person, allowing an internally generated experience over one ascribed through tradition. This fluidity, like the spoken story, endures in the present and evades the decay that marks and fixes time on the traditional monument.

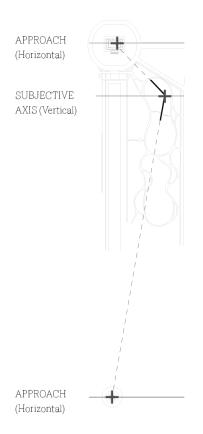
In considering how cultures who engage more deeply with the landscape use the land itself to memorialize, tomorrow's cemetery has the opportunity to build a stronger connection to both land and memory while engaging emerging cultural desires for a new typology for interment spaces.

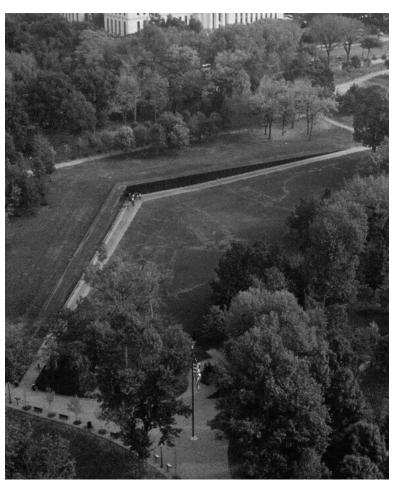
Subjectivity and the Reading of Space

Could the page, like the ground, become a zone of habitation—a zone in which experience and imagination fuse?

—Tim Ingold (Ingold 2018, 138)

In *The Eye in the Text*, Mary Ann Caws considers the interplay between text and reader and its impacts on the experience of space and place. Caws analyzes poetry as a whole and through its parts, arguing that subjectivity by both reader and author challenges the meaning of written language. The reader interprets the text along with the intentions of





The experience of Maya Lin's Vietnam Veterans Memorial is defined by two axes: the horizontal axis that marks a physical shift from the adjacent park, and the vertical axis that is dominated by a mirrored surface bearing the names of those who died in the war. The reading of the names is challenged by the visible presence of the viewer, hindering their ability to see the memorial free from their own subjective perspective. (Photo: Maya Lin's Studio n.d.)

its author, all the while projecting their own perspective and experiences into the scene. Language carries a breadth of meaning that abstracts and transforms the act of reading.

A poignant part of Caws' work speaks to the mirror—a metaphor for subjectivity. The reader peers towards the text through the mirror, but its silvering challenges their ability to read what they see free of the reflection of their own subjective position:

The question is here, as always or at least often, how to look from the inside at what we perceive outwardly, how to include ourselves in a writing which we, after all, only read; my topic, then, is the inclusion of the "I" within the text. Each of the poets discussed here uses a multiple significance of terms whenever possible, and I shall do the same: I mean the eye in the text, and the reflexivity between text and reading, as mirror and mirrored object, in an extensive interchange of function, action, and glance, the goal or rather the "spacious illusion" toward which I should like to move. (Caws 1981, 20)

Subjectivity's role in perceiving language also applies to the reading of physical space. Like a word written on a page, a path written on a landscape is challenged by the emotional and experiential perspective of the person who walks it. In Surface Textures: "The Ground and the Page," Tim Ingold interrogates the ground as a palimpsest that marks moments, creating a continuum that parallels the reading of a book: we turn a page, leaving it behind, but the page remains as a physical trace of the moment when we first encountered it. He describes such an action on the ground through artist Richard Long's performative installations that walk straight lines delineated on maps: "Long writes the earth with his feet, which leave their mark in the trodden grass of a meadow or the stony ground of a mountain plateau" (Ingold 2018, 142–144).

The landscape in the proposed cemetery is both interpretable and a palimpsest that records human interaction. The



Photograph of Richard Long's *A Line Made by Walking*, 1967 (Long 1967)

Halifax site's history as a quarry records an invasive moment of inscription on the landscape, while the rituals of the cemetery hang lighter, inscribing records of the dead, and their visitors. These marks, like the storied landscapes referenced by Coutts, retain the memory of the deceased as active traces on the landscape for the living to access.

The Human Ecosystem: A Boundary in the Limitless Cosmos

Since ancient times, human shelter has delineated between natural and human space. Such structures provide physical safety, but also reassure a psychological condition that must either understand that which it interacts with, or shelter itself from it. Since understanding the heavens is impossible, architecture is a tool for human scale—a human microcosm embedded in the macrocosm of the cosmos. In considering the spatial decisions of ancient peoples, Michael A. Rappengluck describes this need to humanize space:

These structures offered humans a 'domestic' sphere within a realm of will of nature, ensuring stability, centricity, meaning, security, familiarities, knowledge of controlling, social and power classifications [...]. Thus specific cultural systems including cosmovisions emerged, which allowed man to establish and maintain order and rhythm in personal and social life, interacting with given environmental conditions, and to answer the human questions about the whys and wherefores concerning humans and the world. (Rappengluck 2013, 387)

In Buddhism, human space is also delineated from Heavens and Earth, but here such space is considered a great emptiness—a place of simultaneous possibility and nothingness. Within the emptiness, human-made and occupied spaces offer spatial form—a sense or place for human life in the emptiness of this larger void (Sudikno 2004, 82–83).

These two examples of human space are different in origin, confronting the cosmos with fear or philosophy, but both speak to a human desire to make spaces that may be intellectually and subjectively understood in the context of the wider natural world.

Like the dwellings of ancient people, architecture is a boundary between the landscape and the human condition. The boundary mediates between known and unknown things—between what humans build and what nature builds, between light and heavy, sky and roof, floor and ground, internal and external, earth and the heavens. The boundary subdivides human and nature but also complicates the line between them, for the human boundary is modeled from nature—from the cave, the stream, the shoreline. In contrast to the shifting nature of boundaries in the landscape, architecture slows the rate of change through controlling its internal and external conditions and staving off decay.

From this seemingly fixed position of the built human world, mourners may find refuge through stability. Like spoken stories, the subject of their memory lives in their subjective reading of place, meaning and the landscape. The boundary offers a connection to the larger world if desired, or a sense of shelter through the known condition of the human-built internal landscape.

Chapter 3: The Window: Engaging the Symbol

The Window

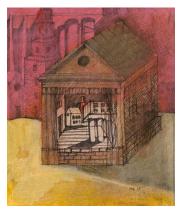
(Rossi 1981, 29-30).

For certainly the time of the theater does not coincide with time measured by clocks, nor are emotions bound to chronological time; they are repeated on stage every evening with impressive punctuality and exactness. (Rossi 1981, 29)

The clock on Aldo Rossi's Little Scientific Theatre stands motionless at 5 o'clock. It finds itself out of sync with its surrounding time until that moment arrives again each day, marking the moment when the theatre is again animated by the actors who frequent it. Inside, the actors are framed by a large glass frontage; the window implies a bleed from internal to external life while framing that which it highlights. Anything can happen in the theatre, yet here "anything" carries double meaning: anything can happen in the sense that the theatre can contain infinite possibilities, but the theatre is also prescriptive and its content contrived. The window anticipates, watches, and frames the set scene, centering both the actions within and the city outside. It is a dichotomy of the fixed nature of the theatre and the non-fixed nature of life, however Rossi posits that in the frame of the window, the actions on both sides are predetermined and predictable. The duality of the framing window anticipates that which has happened, is happening, and will happen as it frames this perpetual repetition. 5 o'clock is an ode to time's strange relationship to the theatre; the play is a linear series of predicted events, even if it is viewed at different times. The theatre waits between plays, immobile in anticipation like the window from which it watches. When the actors return, the scientific theatre is animated again

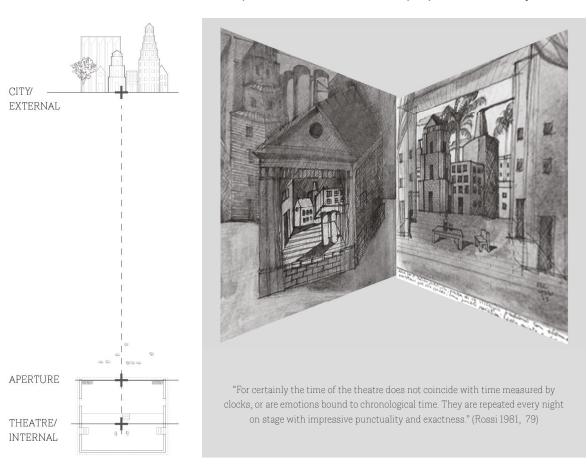


The city beyond is framed from inside The Little Scientific Theatre (Rossi 1978)



Passers-by may peer into the Little Scientific Theatre and the timely shows that it encloses. (Rossi 1978)

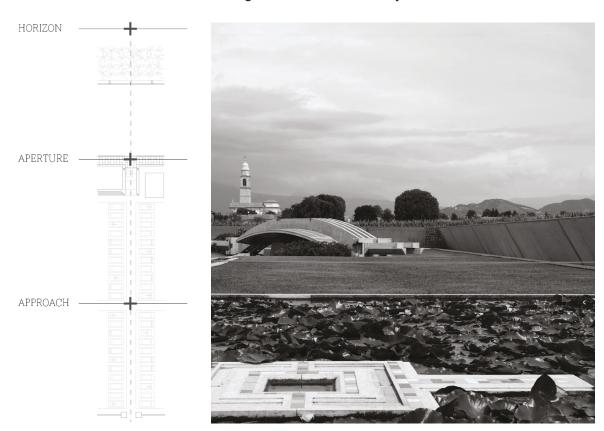
Rossi's theatre parallels the cemetery. In the traditional cemetery the memorial, like Rossi's window, divides and frames a bi-directional set of expected actions. It marks the body's slow process of change and anticipates the rituals of mourners who look to its symbology as a cue for remembering. It is this symbology that animates the link between memorial and memory, however, this link between space, time, and intangible worlds is generated not by the window, but by the interaction of humans. We perceive the division and the transition, the bi-directionality of set scenes; the window focuses perception and senses towards that which it frames—its quiet power as it watches in stillness. The window, rather than the memorial object, is the experience that defines the proposed cemetery.



Internal and external dimensions of the window. (Based on drawings of the Little Scientific Theatre: Rossi 1978)

A Design Matrix: The Symbol, the Boundary, the Window

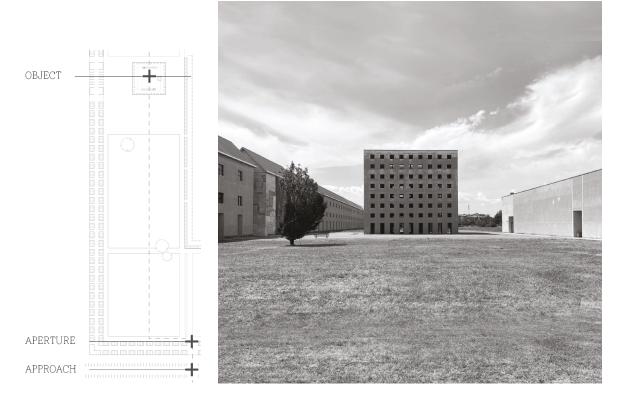
Gilbert Ryle considers the line between an action and a cultural understanding of symbology. He describes two separate acts of contracting the eyelid: one is interpreted as an involuntary twitch, and the other a "conspiratorial signal to a friend" (Geertz 1973, 312). The twitch and the wink are identical without cultural intonations and understandings of one as symbolic action and one as not. Thus the wink is distinct through association. The memorial also works in this way, but here through language and form. A stone tipped up and embedded in earth is understood as a memorial through centuries of culturally derived norms.



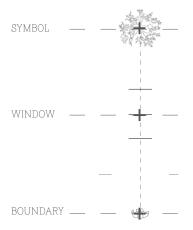
Drawing and photo consider the horizon as a symbol that Scarpa's wall at Brion Cemetery frames. This combination of burial ground and horizon externalized the experience of an enclosed space. In terms of a window, the wall is such as it expands and frames the horizon. (based on Brion Cemetery, Carlo Scarpa, 1968–1978)

The proposed cemetery relocates the memorial's assigned symbology towards less fixed symbols shared throughout humanity—to intangible or ephemeral structures embedded in the natural world that may be perceived but cannot be captured or fully understood. The symbols connect with change's constant presence in the landscape. They are the horizon, the bird in the sky, the unexpected or strange object, reflection, the play of light and shadow, decay, growth, the tide, gravity, weather, the depth of the ocean, etc.

While the traditional memorial is a tangible reminder of a loved one, its fixed nature divides it from the cycles of life and death that it seeks to symbolize. Like the human who seeks shelter from the cosmos, the memorial scales death in an attempt to shelter the living from the difficulty of confronting



Aldo Rossi's San Cataldo Cemetery addition challenges the notion of the symbol by presenting an object that cannot be reconciled with its context. It is an unexpected object in a vast courtyard that subverts the expected symbols presented in the Western cemetery. (Drawing and photograph based on Aldo Rossi, San Cataldo Cemetery, 1971)



The window mediates between the symbol in the landscape and the perspective of the visitor bounded by architecture or natural features in the site.

its enormity. In reality, like the incomprehensible symbol, death cannot be demystified. The proposed symbolic parallel between death and other unknowns reminds us that we do not understand many things but that such notions are part of the rhythmic equilibrium of the natural world. Here, landscape time and temporality are redirected symbols that hold the ritual and spatial dimensions of memory, honouring the body and its return to land, sky, water, and earth.

The symbol and boundary are intellectual poles in the experience of memory; the intangible memory is caught up in the symbol and the fixed spatial position of the remembering person is defined by the boundary. The window is the mediator, the bridge between place and memory. The window watches, frames, transitions, reflects, expands, subtracts, or engages the symbol through any number of actions that the visitor might notice and interact with.









Window actions in the landscape

Through engaging temporality and landscape symbols, the window engages memory through varying scales of engagement and interaction encountered as the visitor moves through the landscape and its bounded moments of architecture. Funerals frame the ephemerality of ritual, a wharf presents the unbridled horizon, a chapel considers the bracketed sky, a procession engages the tension between raw and processed stone, a courtyard frames erosion, a bell tower considers resonance, a cut flower marks time, a candle animates a moment, a green burial plot frames varying degrees of regrowth, a walking path frames the seasons. Such symbols are limitless in application but also subjective and noticed differently depending on the emotional and temporal conditions of those who visit.

In engaging the symbol, two actors are at play: the boundary condition that holds the visitor apart from the symbol and the window that acts on the perception of the symbol.

To begin quantifying this method, a matrix of possible symbols, boundaries, and window actions outlines possible interventions that might exist in the proposed cemetery. Like the lines of a poem, the three pieces are read through the mirror of subjectivity, creating interpretable and fluid experiences for memory and emotion. The cemetery holds us in our insecurities, questions and grief while presenting other things that we cannot understand but that are more tangible to us than death: we cannot fly like a bird but can watch them, we cannot touch the horizon but can see it, we cannot perceive the changing season but we can experience it in its moments. From the stable boundary, the window presents the symbol in the landscape, allowing us to engage with it from a sheltered place should we choose to. Through the window, this thesis is adaptable

to different sites, environments, and cultural conditions. The natural symbol is common to all humans, allowing the window to sidestep any exclusive trappings embedded in the symbology of the conventional cemetery. The window is the experience of memory that we look to as a means of connecting, watching, or any of the actions taken by the window in the landscape.

| SYMBOL | WINDOW | BOUNDARY |
|--|---|---|
| SYMBOLS IN NATURE | WINDOW ACTIONS | BOUNDARIES IN NATURE |
| Seasons Depth of the ocean Fire The tide Growth Erosion Time A bird in flight Decay Light and shadow The weather The horizon Sound Gravity | Projecting Transforming Reflecting Screening Revealing Refracting Framing Expanding Watching Dividing Uniting Marking | Depression Lake Shoreline Forest Stone Hill Jetty Bay Cliff River Foliage BOUNDARIES IN ARCHITECT Roof |
| Wind Language Movement | Bracketing Sheltering Focusing Holding | Courtyard Wall Datum Room |
| SYMBOLS IN CULTURE The cut flower Candles Ceremony Memorial An unexpected object | Shifting Opening Threshold Containing Blocking | Floor Grove Garden Fence Object Grid |

Matrix for the spatial organization of the cemetery. The window mediates between the symbol in the landscape and the boundary that holds the perspective of the visitor.

Chapter 4: The Problem with Perpetuity: Challenges of the Typical Western Cemetery

The Mythology of Perpetual Care

For centuries, death has posed spatial, spiritual, sanitary, and environmental challenges to urban centres. Bodies must be disposed of, the dead must be remembered, the city must carry adequate space for interments, and the health and well-being of citizens must be respected.

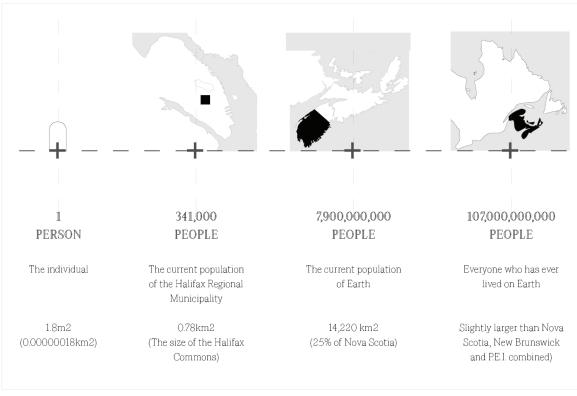
In 18th century Europe, the churchyard provided for such needs through its grounds and available spiritual rituals. Such practices allowed residents to feel supported in religious terms, however after centuries of interments, deteriorations of health and sanitation conditions in abutting neighbourhoods demanded updated strategies for the disposition of bodies. The French Parliament issued a 1776 order to move all burials outside of the country's urban centres (Bryant 2003, 801).

Other cities soon followed France's new model, and a redefined western attitude emerged towards death and the spaces that serve it. The culture evolved from one that emphasized the physicality of decay towards one that celebrated, remembered and contemplated the lives of the deceased through memorialization in the garden cemetery (Bryant 2003, 801–804).

The garden cemetery became common throughout Europe and with it the permanent individual gravestone became synonymous with the act of remembering. This shift from earlier unmarked burial modes marked a rising middle class who could now afford such practices that were previously

reserved for the wealthy (Bryant 2003, 730). This idealization of permanence is embedded in today's contemporary culture that associates the cemetery with perpetuity. In today's world, however, with its increasing population and pressures on urban space, eternity in the cemetery is not the case.

Peter Davies and Gemma Bennett describe the lifecycle of the typical Australian cemetery through four phases based in planning and business practices: the emergent phase when the cemetery is established, the transition and continuing phases when the revenue and visitation of the cemetery peaks, and the abandonment phase when the cemetery is full and visitation slowly declines (Davies and Bennett 2016, 103). Since cemeteries are businesses that rely on revenue



Conventional burial techniques are spatially intensive. Diagram estimates spatial requirements for varying timescales. Estimates assume that each body is buried in a 8'-0" x 2'-6" plot. Calculations do not account for circulation.



Capilano Cemetery (top) and North Vancouver Cemetery (bottom) both face spatial challenges and the need for expansion. Both cemeteries recently deforested and re-graded their surrounding riverside land to ease the current need for space—a phenomenon that will continue in the future as the population continues to expand. (Image data: West Map 2020)

to fulfill their promises for perpetual care, the abandonment phase challenges the cemetery's continuing service and operations (Davies and Bennett 2016, 103). As revenue fails, the cemetery financially crumbles, becoming vulnerable to land re-use and neglect. This is the inevitable future for many of today's cemeteries that claim perpetual care. The notion of perpetual care is a recent norm in contemporary death care—a notion that remains as precarious as it did in the 1700s when bodies were moved from old overcrowded churchyards to catacombs.

Cemeteries encounter these spatial challenges because they prioritize perpetuity for the individual over the community at large. Cbsolescence is the inevitable, planned, and accepted future set up by the garden cemetery model by its emphasis on owning plots in perpetuity. In reality, plots are leased for a time, at the end of which descendents must either pay to extend or choose to terminate their ancestor's claim to their burial plot. Such decisions force descendants to juggle ethics, respect, values, and practicality—decisions that are unfair in light of the distanced relationships between current generations abd those long passed.

Environmental Factors and Changes in Disposition Practices

Just as Europe redefined its spaces and attitudes towards death in the 18th century, such practices are in question again today. Embodying such contemporary shifts, under the vast Colorado skies, the Crestone End of Life Project offers the state's first legal open pyre in recent history. At first it faced objections from nearby residents, with one social media group naming themselves "Neighbors Burning Neighbors," but over time, the stigma of this unorthodox practice subsided, with many of its previous protesters



Green Burial, Sunrise Park Inter-Faith Cemetery, Halifax, Nova Scotia

signing up themselves in their eventual end-of-life plans (Doughty 2018, 23).

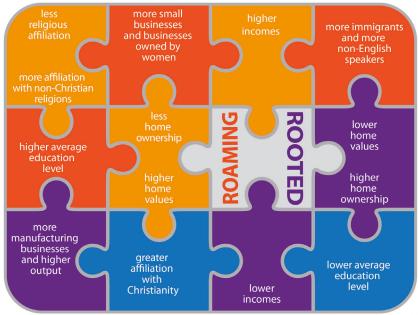
Cremation is almost as old as burial, but owing to increased ecological awareness, cost effectiveness, and a growing reluctance towards the concept of burial, it has resurfaced in the past century to become the most popular means of disposition in the North American funeral industry. In 2020 cremation represented 73.1% of Canadian funerary arrangements, compared to just 53.8% in 2005 (CANA 2021).

This shift in practice is partly symptomatic of today's environmental precarity, where people dwell on their

UNDERSTANDING CREMATION GROWTH CHAPTER AND LOWER CREMATION TRACE.



Higher cremation rate, more transient population, increased exposure to new traditions.



© 2017 Cremation Association of North America

Lower cremation rate, less transient populations, deep connections to community institutions.

ROOTED

North America sees increasing shifts in how and where it memorializes its dead—a fact that is deeply connected with the demographics and culture of those who seek end-of-life services. (Diagram: CANA 2021)

personal environmental impact at death with increasing fervency (The Green Burial Council n.d.). This is for good reason, for the disposition practices of the 20th century set an environmentally intensive precedent. Over the century, growing opposition to signs of decay led to a conventional burial mode that promised perpetuity through embalming bodies before burying them in steel caskets shrouded in concrete vaults.

Recent decades see these ways rejected by many, and cremation was the start of a new era of practices related to the disposal of bodies. Liquid cremation or alkaline hydrolysis followed as did eco-burial—a return to old burial practices that rejects the conventional use of embalming fluids and steel caskets. Eco burial places the body in a cloth or pine enclosure and buries it shallower in the earth, encouraging faster decomposition that gives back to the soil. Visitors find the body through GPS, where they encounter no memorial but know that the earth carries the memory of their loved one through its ongoing cycles of regeneration.

Green burial, while environmentally superior to conventional burial, complicates perpetuity. Each interment requires a 4'-0" x 8'-9" plot and takes 25 years to decompose entirely (The Green Burial Council n.d.). In response to such challenges, Katrina Spade invented and refined a process that she calls Recompose, or natural organic reduction, that is now legal in six states in the United States. She argues that composting is the most natural means of disposition that connects most symbolically and environmentally with the land. Natural organic reduction parallels composting but advances the process to six to eight weeks, producing one cubic yard of enriched soil that can be distributed in a memorial place or sustainable forest (Recompose n.d.).

These changes in disposition practices beg new means of memorialization, and while funeral homes and cemeteries address cremation through columbarium walls, they have yet to offer a broader departure from such traditions of individual memorialization. With remains in the form of ash or soil, new opportunities arise for informal monuments and a more deeply embedded relationship with the landscape in the cemetery's grounds.



Recompose is a recently approved means of disposing of bodies. The body is placed in a vessel that advances degradation to four to six weeks, producing soil that may be spread back into the landscape. (Olson Kundig n.d.)

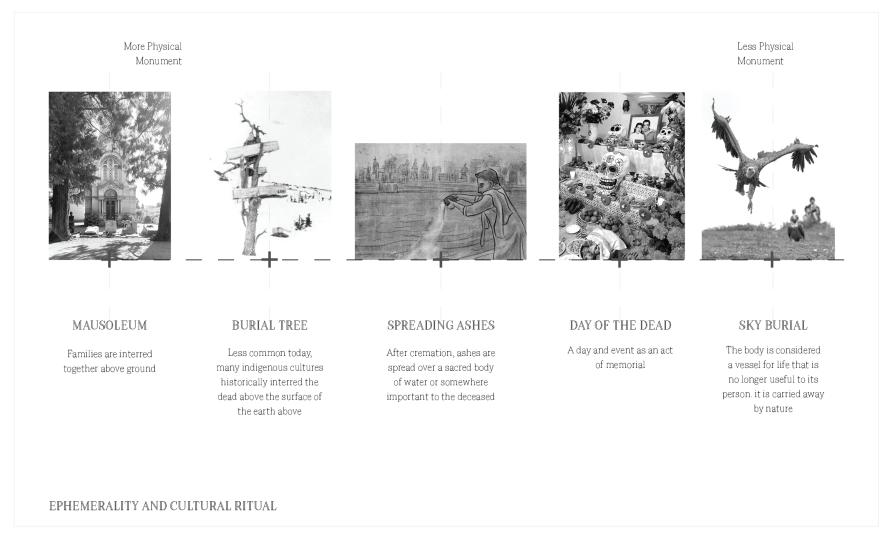
Social Challenges in the Western Cemetery

In line with diversifying disposition and memorial practices, today's North American cemeteries are fraught with declining visitation—a phenomena that is furthered by two social conditions (CANA 2021).

The first is that shifts in practices for the disposition of bodies are generating increasing demand for informal interment outside of the traditional cemetery (CANA 2021). Of those who pass today, many opt for informal monuments based in new traditions: in park benches, the internet's extensive collection of web memorials, a planted tree, the donated body, and the spreading of ashes. The second is that death is a stigmatized topic in Western culture—avoided in conversation and steeped in discomfort.

This avoidance of death is exacerbated by a funeral industry that hides both the body and its funerary journey (The Order of the Good Death n.d.). Most of today's funeral homes are privately owned and driven by economic means. In prioritizing profit they prioritize efficiency and density, leading to deforested lawns, hard rulebooks of accepted practices, and high costs to grieving families. There are exceptions, with many funeral homes providing equitable and desirable support, but the result of many of the industry's standards is that many people find themselves in environments that do not fit their spiritual, emotional, and personal needs in a time of great vulnerability.

This failure to meet needs is of particular concern to immigrant communities and those who do not conform to the values of the dominant cultural group. In their article "Does Place Matter? Burial Decisions of Muslims in Canada," Guliz Akkaymak and Chedly Belkhodja speak to challenges for



Since the 19th century Westen funerary practices have centred around tangible and seemingly permanent memorials. Other cultures, however, do not prioritize such permanence, instead engaging in less tangible and more fluid rituals. Such rituals are precedents for a different way of remembering in the proposed cemetery that engages the role of change in emotion, memory, and the landscape.

Muslim Canadians when planning for death. Islam requires that bodies be buried as soon as possible, ideally within 24 hours of death—a requirement that many funeral homes are unable to accommodate due to business hours and the extensive paperwork that accompanies death (Akkaymak and Belkhodja 2020, 374). While the cemetery itself cannot change government policies, it should be adaptable to make space for cultures with specific spiritual practices. This end-of-life challenge that many Muslim people face illustrates the cemetery's role in encouraging feelings of acceptance and belonging in a country of resettlement. It brings up a question that many people face when their place of birth does not match their place of death: where does one belong in the face of eternity?

[T]he body of the deceased can only be buried either here or there. The preference for the burial location, therefore, serves the last opportunity to express the feelings of belonging and the grave is the materialized form of such belonging. [...] If a person, for example, feels unwelcome in the country of resettlement, his/her sense of belonging would be impaired, and vice-versa. Therefore, burial in the country of settlement can be considered an expression of affiliation and belonging to the adopted homeland as well as a legitimization of claims for inclusion. (Akkaymak and Belkhodja 2020, 376)

If Western culture is to be inclusive, its cemeteries must be so also. They must accept a broader range of interment practices that engage growing diversity in today's cities. They must foster a more fluid, open-minded, and non-prescriptive memorial landscape. In foregoing the individual memorial, remains are free to turn on axis, be scattered in the forest, engage in ritual, and make space for the personal and spiritual needs of the deceased and loved ones left behind.

This tension between formal and informal memorialization mirrors the precarity of life, begging questions about the best means of memorializing within the solidity of the formal cemetery. For many people, the memorial provides the comfort of a physical mark to visit and remember loved ones, but in the face of changing practices and cultural attitudes, today's cemetery faces a unique moment of opportunity for re-invention.

Chapter 5: A Paradigm Shift: The New Cemetery

The Metabletic Method and the Memorial in a Changing Cultural Landscape

We live in the primary structure of daily realism, in contrast to the secondary structure of science

—Bertha Mook (Mook 2009, 29)

The understanding of practices and beliefs is inextricable from time, place, and cultural consensus. In the Middle Ages, splitting the atom was impossible. Global culture did not possess the knowledge and technology required to harness and unleash the power of the atom. Reflecting from contemporary times, Jan Hendrik van den Berg asks, "Why only now, and not before, has the atom been split and its tremendous energy released? Is it really so certain that, for instance, medieval matter would have allowed this artifice?" (Van den Berg 1971, 286). He asks this question with the undertone that if we want future cultures to take us seriously then we must take the realities of older cultures seriously as well—that these same limits exist in contemporary thinking. The reality in the Middle Ages was that the atom could not be split, thus making the matter of the time fundamentally different than that which we experience today. Upon the realization of new ideas and mathematical concepts, cultures shift to usher in a new experience of reality for all involved (Romanyshyn 2008, 506).

Van den Berg describes all aspects of culture through this lens. Until we knew of the existence of electricity, it did not exist. Until we knew about fire, it did not exist. Until we considered new ways of thinking about the memorial they

did not exist. The metabletic method considers six principles (of non-disturbance phenomena, of reality, of change, of synchronicity, of the unique event, and of emphasis) as a method for understanding and interpreting cultural change (Mook 2009, 28–30). Through considering the principles, it is apparent that large scale cultural changes cannot happen until that culture has already shifted enough to accept such changes.

While it helps to describe scientific endeavours, the metabletic method also relates to cultural moments. Illustrating this, Van den Berg describes the invention of childhood. He describes this in terms of synchronicity of change, which describes how one change manifests in new structures and new ways of life across all aspects of culture. Before the invention of childhood, children were considered and treated as smaller versions of adults. After the notion of childhood was solidified in the 18th century, culture transformed to make space for children's unique needs through new education techniques, child social expectations, children's clothing, child psychology and in all other sectors of a child's life (Mook 2009, 27–30). The acknowledgement of childhood shifted Western culture in a way that affected almost all notions of daily life.

Such changes as described above happen on many scales and are often propelled through artistic production. The Cubists reflected such changes through the medium of art. John Berger describes Cubism as situated in a time when religion was endemic in Western culture and sought to describe all aspects of cultural life. The movement challenged this idea of a common understanding of the world as linear and describable through religion. As an art form and a concept, it gave space to other ideas that are

not purely physical, but are not spiritual either; it was an act of defiance towards cultural norms that "changed the nature of the relationship between the painted image and reality, and by doing it expressed a new relationship between man and reality" (Berger and Overton 2016, 125). This idea is metabletic: the Cubists launched the world towards a new cultural understanding of space and time, but such desires for explanations outside of religion were already in motion in the West. Cubism changed art, but also reflected a changing society as it trickled into artistic production and philosophy for subsequent generations.

In contemporary times, Valerio Olgiati's book *Non-Referential Architecture* considers another change at the cultural and societal scale, here defined in architectural terms. Olgiati argues that today's Western world no longer subscribes to one common religious or cultural value system, engaging instead a plurality of ideas and beliefs. In past centuries ornamentation originating from religious architecture seeped into public space and celebrated a homogeneous belief system. Olgiati argues that we can no longer make such assumptions of united public sentiment. Architecture must not be a reflection of values, but a tool for sense-making and creative thinking (Olgiati and Breitschmid 2019, 50). Like the Cubists, Olgiati responds to a metabletic shift in a society that faces increasing secularization and diversification.

Non-referential architecture implies an internal reading of space where the visitor's imagination or subjectivity drives the experience. This same condition applies to the proposed cemetery, where in the absence of the memorial—what Olgiati would consider an assumed cultural value—the cemetery prioritizes sense-making. Architecture in the



Photograph of crypt, Camposanto Monumentale di Pisa



Photograph of family Crypt, Milan Monumental Cemetery



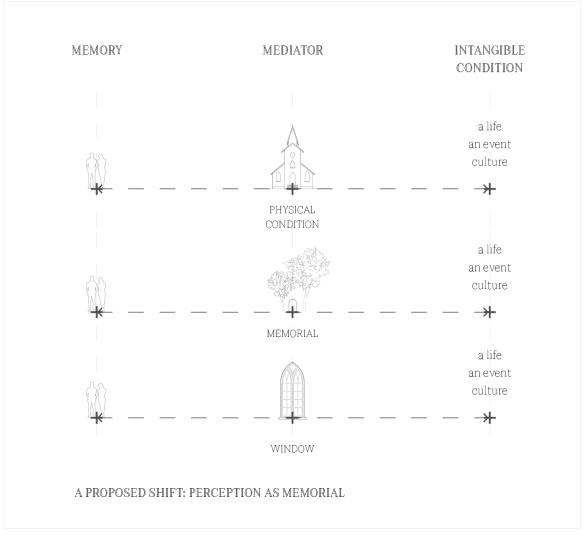
Photograph of family Crypts—a neighbourhood of monuments at Milan Monumental Cemetery

cemetery is an armature for emotion and subjective thought. The window is a point of contact and reflection that engages the creative mind and its position in the cycles of change in the landscape beyond.

This thesis is situated in a moment of cultural change that, as defined by the Metabletic method in terms of childhood and the synchronicity of change, seeps into all aspects of cultural life. Past western cities and communities were localized, requiring cooperation and consistent beliefs to maintain resilience in the face of political and environmental adversaries. The civic realm reflected both stability and a collective societal structure—it was a tangible backdrop to everyday life. Today, such structures have shifted. With increasing globalization and connectivity through the internet, the individual has increasing agency within the collective structures of civic life. Differences are more respected today than in the past and through this acceptance most people are free to pursue their individual identities and value systems. In today's Western cities this is clear in the diversity of religious institutions, political parties, educational facilities, philosophies, romantic and family pursuits, and almost all other facets of life.

These changes in the relationship between civic and individual life are reflected in cemeteries that have shifted from celebrating family positioning towards individuals and their end-of-life desires for memorialization. When thinking about the cemetery, such fluidity and choice is critical—like the question of where one belongs in the face of eternity, an equally important question asks how one wants to be memorialized. As the world continues to shift its focus to the needs of the individual, the cemetery must and will react to such changes as defined in the metabletic method.

I propose that through architectural boundaries, windows and the landscape, the proposed cemetery responds to today's metabletic conditions of change with perceptive conditions that encourage participants to draw personal conclusions about that which they experience. The future civic cemetery is one derived by a multiplicity of persal desires that reflect a time of growing diversity and inclusivity—an idea that aligns with the complex emotional dimensions of the individual as they mourn, remember, and reflect in the memorial landscape.

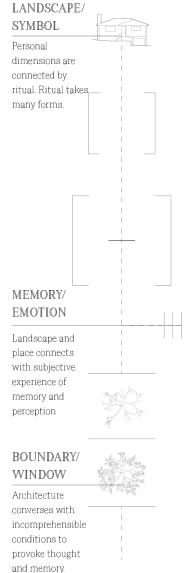


Like the symbol or memorial, the window mediates between an intangible condition and the subjective experience of memory

The Proposed Cemetery

As I have discussed in the preceding chapters, a place for emotion and memory cannot subscribe to a universal spatial form or set of symbols. The cemetery must allow a breadth of interpretations that connect with any number of personal experiences. In the proposed cemetery, these conditions are cared for through three principles that situate the experience of space and the landscape through ritual, emotion and memory:

The first is the symbol, here redirected from headstones or religious connotations towards the vastness and temporality of the landscape that situates the experience of personal and civic life. The symbols turn away from the static grave marker





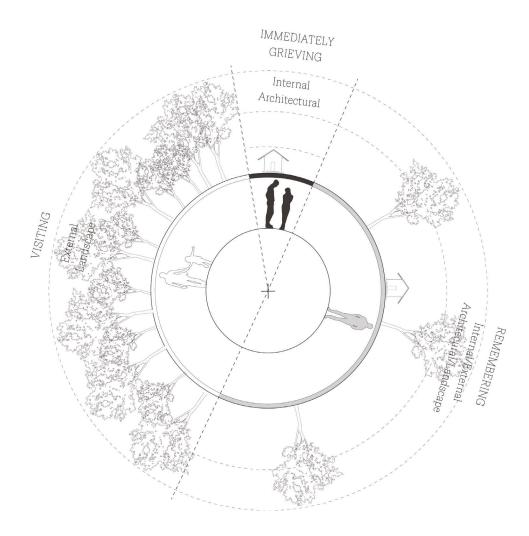
The window in the landscape. The window connects with the symbolic, temporal, and environmental conditions of a given site, engaging the subjective experience of the visitor as they navigate it through different emotional perspectives.

towards things that we can sense but cannot reconcile. In a space dedicated to death—humanity's greatest unknown—the symbolic parallel with other unknowns reminds us that we do not understand many things but that such notions are part of the equilibrium of the natural world.

The second principle is the boundary—a human or natural enclosure that shrinks the vastness of nature to engage the human scale. The boundary dampens or encourages a conversation with the symbol, offering different experiences depending on the visitor's emotional needs. The boundary manifests as architecture—the human interventions that center the experience of the cemetery.

The third principle is the window—the point that mediates between the boundary and the surrounding symbols in the landscape. The window watches, frames, focuses, divides and expands, shifting in action and orientation depending on the symbol and the boundary that it engages.

A second overarching concept in the proposed cemetery is that time acts on all three principles to situate three main types of visitors: those who experienced a recent loss and/or are grieving, those who return to remember or reflect on someone whose death is not recent, and community members who are not associated with the site through a death but who walk its grounds or contemplate among its architectural and natural features. The cemetery acknowledges the presence of the three user types, catering to each through varying symbols, boundaries, and windows that make space for varying emotional perspectives in the built and natural worlds. These relationships with the window define the multiplicity of experiences that the cemetery affords.



The cemetery engages three primary types of visitors who interact with the site in different ways at different times through different emotions.

The Site

Cemeteries are liminal spaces. Pavel Grabolav and Helena Nordh describe them as spaces that interweave bereaved and deceased, private mourning and green infrastructure (Grabolav and Nordh 2020, 35). They are public space, but distinct from recreational programs through their significance as places of memory and mourning. In selecting a site with such divisions in mind, the proposed cemetery must not interfere with existing park infrastructure in the city; to merge the proposed cemetery with recreational landscapes

is inappropriate because it undermines the identity of both typologies in their respective communities.

The proposed cemetery must also remain distinct from existing cemeteries, for the adjacency of traditional gravestones risks unintentional hierarchy between different types of interments. Existing cemeteries must be retained, for they carry emotional and historic significance for individuals and the collective.

The proposed cemetery should thus seek undeveloped land. Such pursuits are complicated in today's costly and competitive real estate markets, however the cemetery's perpetual operation affords predictions and foresight into the growth of urban places. The urban edge is the ideal place to find such land and is thus proposed as the ideal location for the programs suggested in this thesis.

The urban edge is tomorrow's city, and if tomorrow's city is to be green, its undeveloped and ecologically sensitive landscapes must be protected and planned for—a feat that suits the proposed cemetery's indefinite operational timeline. Untouched landscapes are threatened by development as urban areas grow. Through the regenerative aspects of their interment programs, burial grounds may advocate for and protect undeveloped ecological areas. Cemeteries are temporal both through their connection to the fluidity of human ritual, and through their connection with ongoing cycles of change in the landscape. When selected carefully, a site selected for a cemetery is an opportunity for future visitors to experience history, memory, emotion, and the seasonal and geomorphological conditions of the landscape over the course of time.

Interment in the New Cemetery

As it shifts away from the individual memorial, the proposed cemetery offers a lighter human trace in the landscape than its conventional typology suggests. It turns to disposition types that become part of the land, regenerate it, and connect with cycles of nature. Accommodating both ecological and spiritual needs, the cemeteries must allow for multiple interment conditions that make space for varying cultural values.

Many cultures and religions require burial, which must be provided through green or eco practices. Green burial, for its spatial requirements, presents the cemetery's greatest challenge to perpetuity. Burial zones in the proposed cemetery type should allow long term use through allowing a hundred year cycle of slow and continual over-burial. The timespan must be long as to avoid the ethical challenges of disturbing graves that is seen as disrespectful in many cultures. A body takes approximately twenty-five years to decompose depending on soil conditions, making this the minimum timeframe between burials from a logistical standpoint (The Green Burial Council n.d.). The timeline must, however, be longer so that family members and friends are not disrespected or upset by their loved one's grave being disrupted. To mitigate these social issues of over-burial, at least four plots should accept burials, rotating in use every twenty-five years. Each zone is active for twenty-five years before ceasing to accept new burials with the exception of extenuating situations like a desire for proximity to loved ones. After twenty-five years, the next plot becomes active, then the next, then the next. The result is four sites that depict different timescales of vegetation, with older plots hosting more mature plants and newer plots

hosting smaller plant life like grasses and ground cover. Once all four plots have been active, seventy-five years have elapsed since the first site was closed, meaning that those who were buried have long become a part of the earth and most of those who knew them in life are also deceased. The site can now once again become active to serve the next generation, and descendents of the deceased are not faced with the decision of whether to extend their predecessors' burial leases.

Moving beyond these more formalized green burial plots, the site must also house less formal places for scattering ashes and soil. These are to be provided through an extensive naturalized network of walking paths that engage the natural world. In relating to the landscape and its natural processes of regeneration, the proposed cemetery type offers a wide range of interment potentials, cultural associations and rituals and an alternate to the usual prescriptive nature of the conventional cemetery.

Chapter 6: Design Proposal

A Cemetery for Halifax, Nova Scotia

Halifax, Nova Scotia carries a long history of settlement and multiple urban cemeteries. Today, six of ten cemeteries remain active, all of which will be full in the next five years (Halifax Regional Municipality n.d.). The city plans to address this problem through building a new cemetery, but unless a new operational and spiritual strategy is adopted, this solution will only create the same problems a hundred years after construction. The proposed cemetery responds to Halifax's problem by broadening the availability of disposition types in a vast new parkscape that renews itself through the act of accepting its city's dead. I propose a cemetery that is a disposition place, a memorial park, a place for ceremony, and a place for contemplative leisure.

I propose a site in Purcell's Cove for its intricate topography, access to water and views, and its proximity to peninsular Halifax. The city anticipates that a future bridge will connect this area to the peninsula, eventually increasing the cemetery's accessibility and urban impact. If a bridge is not carried out, the neighbouring community of Spryfield is one of the most rapidly growing areas of the Halifax Regional Municipality and will continue to sprawl and surround the selected site.

Place and Siting

The former King's Quarry served Halifax's demand for ironstone and black slate from the late 1700s until the beginning of the 20th century (Halifax Military Heritage Preservation Society n.d.). The site marks a strategic point at the mouth of the Northwest Arm that allowed workers



The selected site is positioned at the mouth of the Northwest Arm, a threshold between two bodies of water and a site of connection with other historic places in the surrounding landscape. It sits apart from existing cemeteries that currently populate the city. (Image data: Explore HRM n.d.; Halifax Regional Municipality n.d.b.)

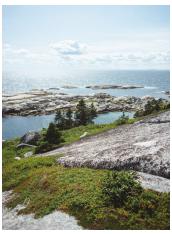
to barge materials to peninsular Halifax while acting as a threshold between the wider Halifax Harbour and this smaller body of sheltered water. The presence of stone and water defines the site as it defines the Nova Scotia coastline; it is an erosive relationship that shaped the



Coastal birch forest, Nova Scotia (Photo: Hauser 2018)



Winter landscape, Polly's Cove, Nova Scotia (Photo: Hauser 2018)



Summer landscape, Polly's Cove, Nova Scotia (Photo: Hauser 2018)

morphology of the coast for millennia, imbuing a sense of place to the human experience of much of the province's terrain. Rocky landscapes challenge tree growth, leading to low forests and textured ground cover that shifts from deep green to vibrant red as the seasons pass. King's Quarry is symbolic of these coastal conditions, bounded by the arm and its rocky shores at one side, and Purcell's Cove Road at the other. The site is covered in a short, wild birch forest that regrew since the quarry was decommissioned in the early 20th century. Thirty meters of topographical change defines this site and is accentuated by two former extraction points still inscribed on the landscape. The upper point looms highest and provides views of the surrounding region and open ocean. A small lake emerged below through the process of quarrying, further accentuating the changes imposed on the land through extraction. Lower in the site, a second horseshoe-shaped extraction point gestures away from the site and towards the arm.

In selecting a site so defined by stone and water, the proposed cemetery considers the landscape for its cycles of environmental change. Here the perceived permanence of stone is challenged through human interaction, highlighting the precarity and temporality of the natural world that changes with time and external forces. Tim Ingold talks about this in terms of the palimpsest where past and present collide at the surface of the ground (Ingold 2018, 141) and this tension is clear in the face of the interaction between human and stone, water and stone, and memory and landscape. The carved landscape is a monument to the past, just as new interactions undertaken here will also become embedded in the story of the site and the city that it serves.



Photograph of existing road looking south. Short birch forests are prominent on the site.



Photograph of King's Quarry's upper extraction site that represents the highest point of the site. Quarry activity led to the formation of a small lake below, here frozen.

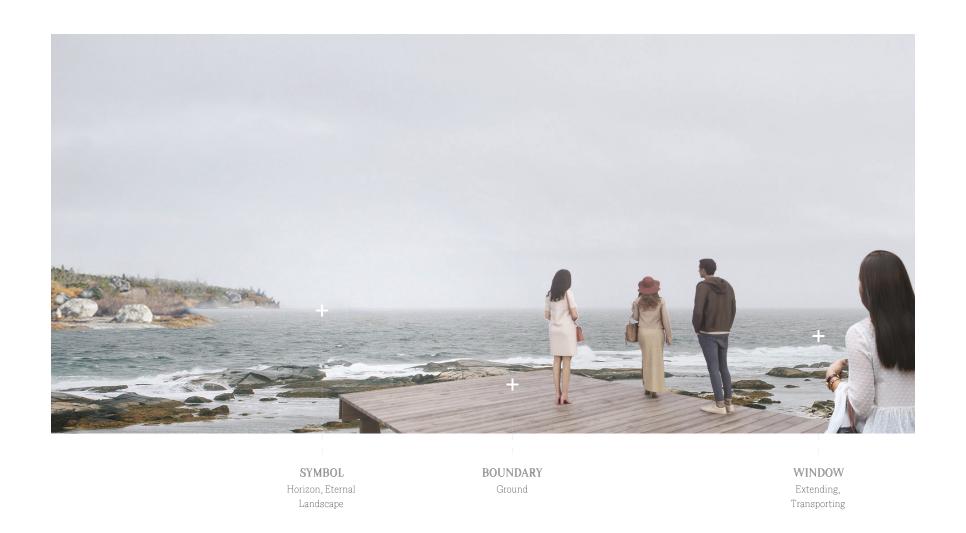
The External Dimension: Symbols in the Landscape

When analyzed in terms of their role in the larger structure of a city and culture, gardens symbolize human attempts to understand and shield themselves from the larger natural realm. In *The Enclosed Garden*, Saskia De Wit analyzes such spaces, elaborating on how the walled garden creates an internal horizon that scales down the natural world. Within this boundary, the garden is controlled and predictable through human design and action. Beyond such internal horizons, however, the walled garden expands its reach into the surrounding landscape, borrowing views and signaling towards adjacencies as a way of controlling interactions with that which lies beyond its borders. She elaborates on such ideas through considering the ocean and the vastness of its horizons:

The ocean is boundless; freedom, air and the appeal of the distant horizon are attributes of the 'oceanic' sense of space: universal, timeless and unrelated to place and perception by the senses. Against that we can pit walking barefoot along the beach and feeling the grains of sand, the palpability of the earth or the 'erotic' sense of space: physical sensation, feelings of finitude, safety and individuality and an awareness of both place (topos) and time (the moment).

In the enclosed garden this polarity emerges as its most distinctive quality: the paradox of the infinite in the finite, the extremes heightened by being present simultaneously. (Aben and de Wit 1999, 14)

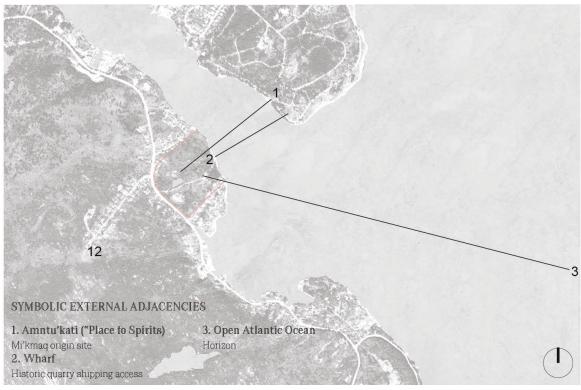
De Wit's paragraphs reflect the role of the horizon in the proposed cemetery—the "paradox of the infinite in the finite." The horizon underlies the experience from many vantage points in King's Quarry's. To the east, it takes the form of the open Atlantic Ocean, implying notions of infinity as the earth curves away and disappears. In other directions, the flat treed landscape disappears into the surrounding Nova Scotia land mass. The expansion invites contemplation,



The horizon is accessed from many points in the site, here from the site of the old wharf that once served King's Quarry. The horizon expands the experience of the cemetery out towards the vastness of the ocean beyond.

interacting with visitor and their confrontation with life and death in the cemetery. The horizon is seen most clearly from the two extraction points: the upper point allows expansive views in all directions, and the lower point is more directional, turning away from the cemetery and out towards the ocean beyond.

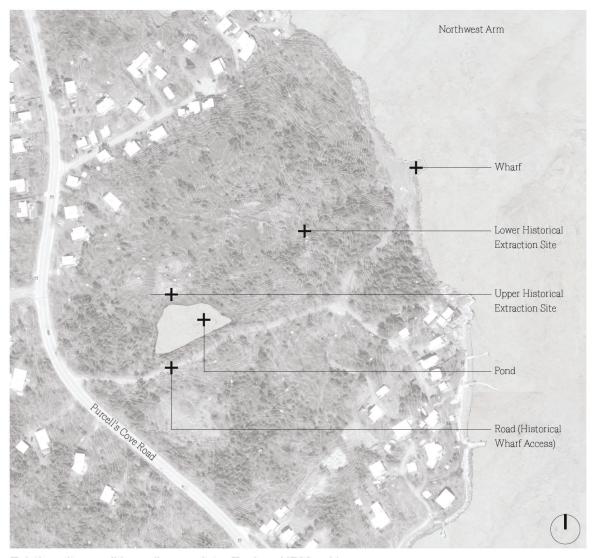
The horizon is the constant point of reference between the experience of the cemetery and the landscape beyond, but alongside it, other points in the landscape are visual, spiritual and symbolic points of reference to the experience of time and change. Across the arm in today's Point Pleasant Park, Amntu'kati or "Place of Spirits" embodies part of the Mi'Kmaq origin story. It was the traditional site of the spring festival that marked creation and the changing of seasons (McDonald 2017). At the water, an old wharf traces the past



King's Quarry map. The site reaches out to external symbolic points in the landscape. (Image data: Explore HRM n.d.)

life of the quarry, depicting the point of departure for raw materials headed for the city. In the surrounding hillsides, a network of quarries document this place's history of extraction.

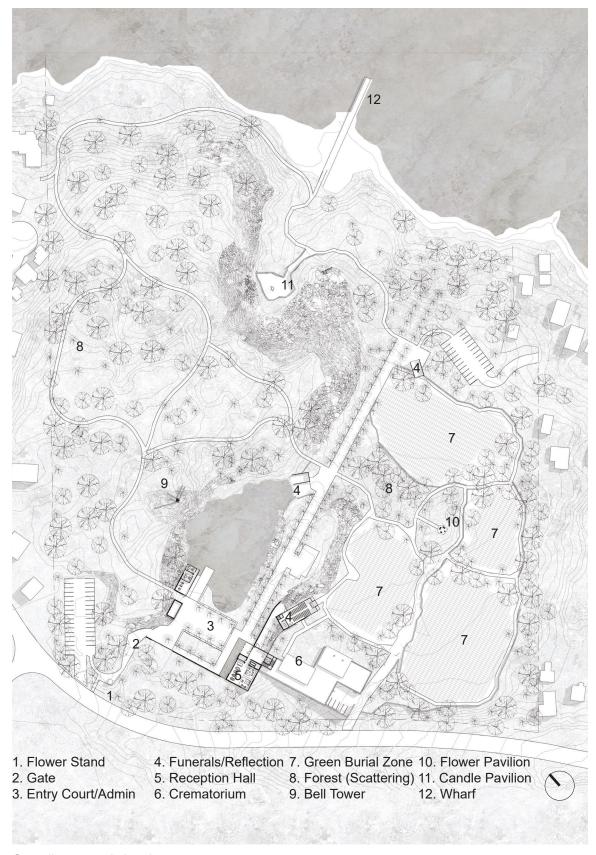
These external connections broaden the experience of space beyond of the walls of the cemetery, inviting the visitor to converse with the world beyond. Such ideas are external symbols accessed from an internal boundary, catering to visitors who are open to engaging with De Wit's paradox



Existing site conditions. (Image data: Explore HRM n.d.)



Conceptual model describes the site's topography and features. Two extraction points are depicted in stone, with sight and symbolic lines gesturing to views and points in the landscape beyond the boundaries of the site.



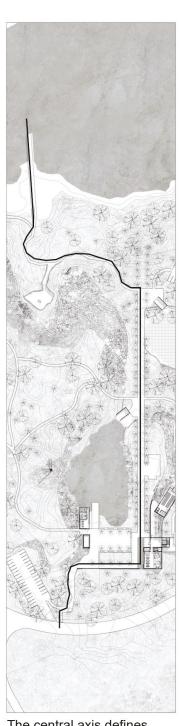
Overall proposed site plan

and the larger questions of permanence that the cemetery engages (Steenbergen and Wouter 2003, 42).

Program and Organizing Line

The site's existing features define the proposed cemetery—the water, the forest, the topography, the extraction points, the wharf, the old road that once accessed the water. These features orchestrate an interplay between interment zones and architecture, landscape and memory. A central axis bridges two realms: perceptively and ritually in the north-south direction as it connects road to water, and formally in the east-west direction where it delineates the upper informal forest from the lower green burial zone.

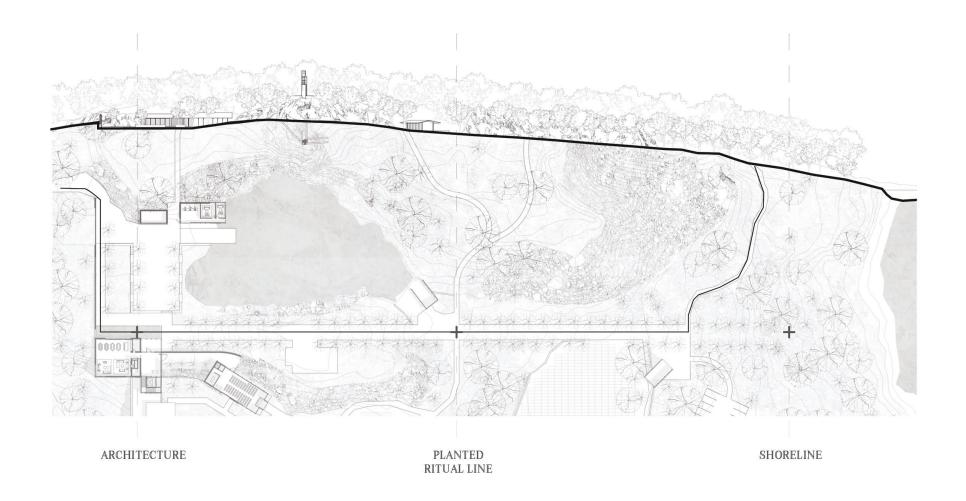
the north-south direction, the axis begins with architecture—a funeral venue and crematorium that cater to the more immediate timescale of loss-and ends at the old wharf and the boundless horizons of the ocean beyond. The axis defines circulation while dissolving in formality and stability as it traverses the site. Through how it engages the landscape, the axis encourages subjective readings, emotional moments, and fleeting rituals. Like Richard Long's straight walks, it frames infinite enactments of subjective experiences and interpretations in the landscape. It is contrived, evidencing the human hand through two rows of evenly spaced trees that define its boundaries. Through their human conception, the trees blur the boundary between what we know, can control, and can anticipate. They are both architecture and nature as they exist through human interaction but change over the seasons and years. Like the buildings, the trees interact with the site, staying low as their roots hit stone and changing with the natural forces that sculpt their growth. The axis is a built artefact that we



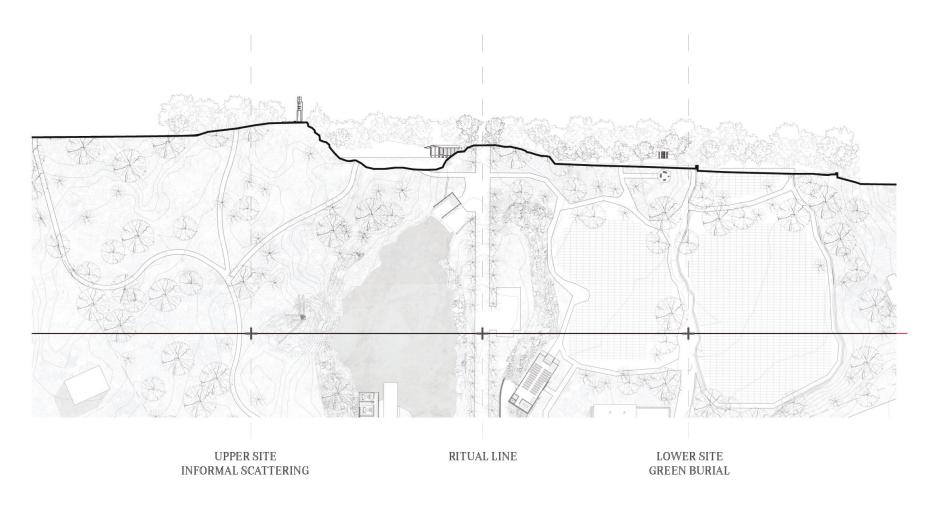
The central axis defines circulation in the site, following the site's old road and connecting the street and the wharf.



Topography and overall axonometric site view. The central axis is visible as a row of planted trees.



North-south section cuts through the central axis that defines circulation in the cemetery. At the street, the architecture represents stability and formality with programs that address the immediate timescale of loss. While moving along the line further into the site, this formality dissolves through the fluidity of the landscape—both planted and left to its own devices.



East-west section cuts across the central axis. The axis follows the flat topography of the existing road, mediating vertically between the lower and upper burial grounds. The small lake flanks the road, highlighting the steep nature of the upper extraction point above.

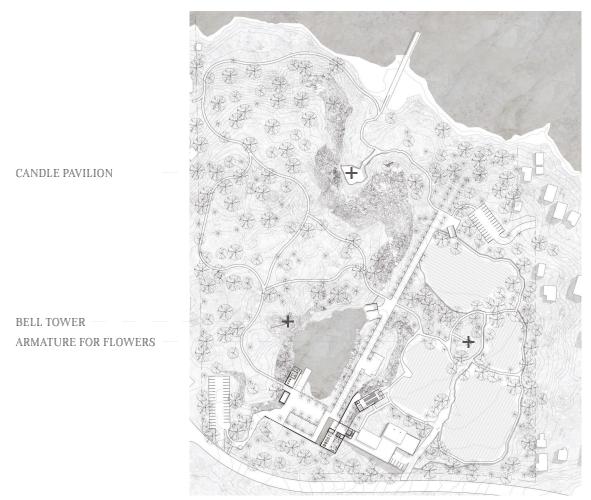


The armatures are light steel among the heaviness of the surrounding stone

understand and relate to with our bodies; we understand the planted trees for their predictability as a line, but this line carries the incomprehensible condition of death and memory that is ephemeral like a walk, a poem, or a spoken story. The timescale of immediate grief is supported by the architecture of the line that carries and encloses during vulnerable times.

Ritual Armatures

Just as the planted trees interact with the boundary between human and nature, three sculptural armatures for ritual



Three ritual armatures populate the landscape: the bell tower at the upper extraction site, the armature for flowers at a hill between the four green burial plots, and the candle pavilion, tucked into the lower extraction point to face outwards towards the adjacent landscape.



The bell tower sits at the high point of the site. Through human symbology it alludes to time, but here the wind rings the bells unpredictably, interacting with the weather and the conditions of the site. Viewed from different moments, three triangular frames gesture to different internal and external points in the landscape: Amntu'kati or Point Pleasant Park, the adjacent quarries, and the horizons of the ocean beyond.

sit in the landscape, engaging with time and change and connecting with the longer timescales of visiting the cemetery. The armatures—a bell tower, an armature for flowers and a candle pavilion—are less stable than the buildings that shelter a more recent loss near the street. They sit lightly on the ground, appearing as though a strong wind might topple them. They are steel—a material that alludes to permanence while interacting with the fleeting nature of ritual, and a nod to the withheld potential of the iron in the quarry's stone. The armatures display time, reflecting the impossibility of capturing and holding a moment by interacting with rituals that mark such moments of interaction.

At the upper extraction point, the highest point on the site, the bell tower looks over the internal and external landscape. Internally, it anchors the green burial grounds below, and externally it is seen from the landscape beyond as a symbol of the cemetery. The bell engages time for its tradition of marking time and significant moments, but here the wind controls the bells, ringing them sporadically and disengaging the traditional rhythm that the bell signifies. Like the window in Aldo Rossi's theatre, the bells are animated through resonance for a moment before their sound waves dissipate and they wait in still anticipation again.

At a high point between the four green burial zones, the flower armature is a place for offerings that trace a visiting person's presence. Standing at this point, time is viewed through the four burial grounds in varying stages of growth and regrowth. The flower armature itself connects with a more immediate passage of time; the cut flower marks a moment of reflection before wilting and disappearing. Like the monuments of the traditional cemetery, the armature is a

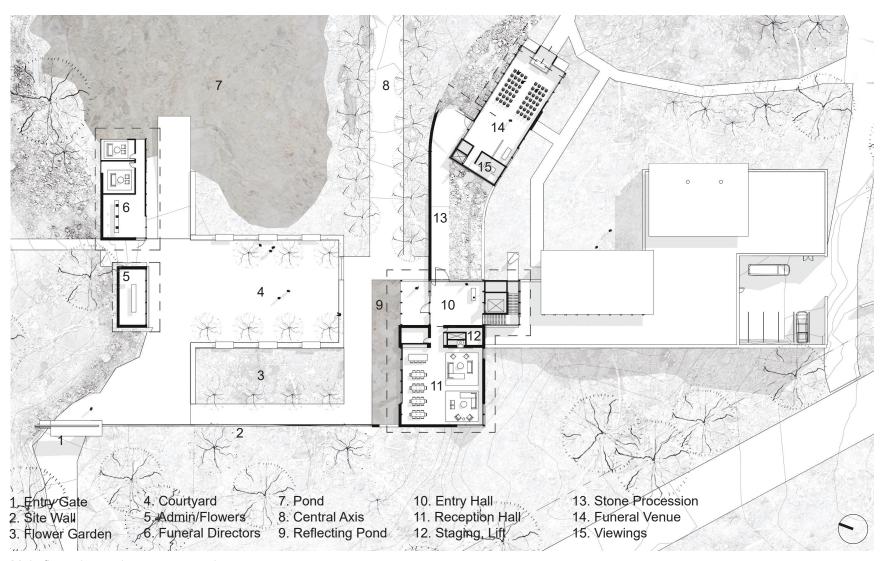
monument to many temporal dimensions displayed together in one place and time.

Looking beyond the internal context of the site, the candle pavilion is an ode to a fleeting moment and a symbolic link to the nature of the rocky coastline. A candle is lit, capturing an animated moment of ritual before it fades out and sits again in stillness. Fire, here an incomprehensible condition, is an energy with visual form, but an energy with ambiguous presence that transforms with every instant that it is perceived.

Through considering the fleeting nature of time in the cemetery, the armatures aim not to be pessimistic or hopeless in the face of death. Like the flowers in the Italian cemeteries, they are a layer of interaction that add meaning to visiting the cemetery. The armatures are a fleeting physical record of interaction that animate the act of remembering; a memorial to the individual in one moment and the larger role of collective memory in another.

Architectural Interventions

In contrast to the ritual armatures that consider the ephemerality of the landscape and look beyond the cemetery's internal grounds, the more stable nature of architecture serves a more immediate condition of loss and grief. The architecture is a boundary between the landscape's symbols and the perspective of the grieving person. It mediates such conversations—at times sheltering them and at times encouraging them. In contrast to the lightness of the ritual armatures, the proposed buildings are composed of ironstone quarried from the site, engaging the heaviness and assumed stability of the ground. They converse with the ground, remaining low, solid and steady, sitting on, in, or



Main floor plan and entry courtyard

adjacent to the stone that composes much of the site. Like the row of trees that blurs the boundary between human and landscape, the buildings are also so. Stone eroded by nature is pinned against stone extraction points and then again against the stone wall, built from the land but made distinct through the act of piling and assembling. Stone denotes private or shielded programs like the back of house and crematorium service spaces.

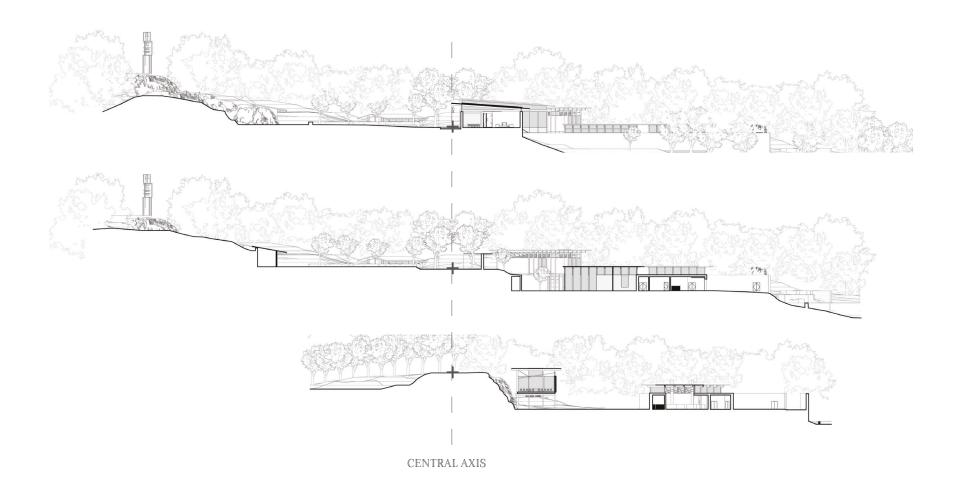
Within the solidity of the stone buildings, wood and glass provide moments of lightness that support ritual programs within the weight of the surrounding earth. Four of such spaces exist in the funerary building: A funeral venue doubling as a contemplation space rests beside a rock wall, a reception hall sits within a built stone volume, a waiting area and ceremony room sit against the stone crematorium, and the roof of the cremation room sits on stone. Through their interaction with the ground and the surrounding site, the architecture is quiet and interpretable in the landscape, offering a backdrop to emotion while marking a nonjudgemental space that holds the complexities of human emotion.

Boundary as Wall

Moving into the site from the street, the visitor walks a short path through the forest, rounds a curve, and meets a gate in an ironstone wall. The wall is straight, crossing contours and dividing the city from the memorial experience of the cemetery. It is a human action inscribed on the landscape, working with the axis of the street to define a boundary with the everyday world. Looking towards the gate, the bell tower is first revealed to the visitor—a symbol of possible future



Entry threshold in the ironstone site wall. This moment marks the first interaction with the cemetery. In the distance, the bell tower symbolizes possible future prospects into the landscape beyond.



Sections cut through the entry courtyard. The funerary building mediates vertically as it interacts with the topography. At times the building becomes the topography, at times it sits in the topography, and at times it departs from the topography altogether, standing beside and in contrast to its solidity.

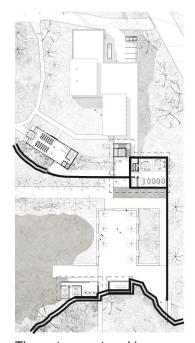
interactions with the landscape. The gate is a threshold whose tectonic lightness differentiates it from the stone and wood of the buildings. It bridges between the built stone wall and the raw stone cliff that draws the visitor into the cemetery.

Entry Courtyard

On passing through the gate, the visitor emerges into the entry courtyard. It is an outdoor room bounded by the wall, administrative buildings and a funeral venue. The architecture frames the pond, limiting the experience to the immediate context of the surrounding site. A flower garden shifts with the seasons, supplying offerings that may be placed in the flower armature as the weather allows. In its bounding through human elements, the entry courtyard shelters the visitor from the larger symbols engaged by the armatures and the wider vistas offered in the surrounding



Intersection point: visitors enter the funerary building or walk along the central axis into the landscape beyond.



The entry courtyard is bounded by stone, first in terms of the site's natural topographical features (double line) and second through a built stone wall that follows a continuous datum

landscape. From the entry courtyard, the visitor may either access the funeral venue and crematorium or move along the main axis into the surrounding ritual and interment zones in the larger site.

Funeral Venue

Entering the funerary building, the visitor faces a layered experience of stone and wood. The entry and reception hall break an otherwise solid stone wall that serves as an edge to the entry courtyard. On passing through the wall, the visitor may either remain on the upper level and engage in a funeral or meditation room, or walk down the stairs to the crematorium on the lower level.

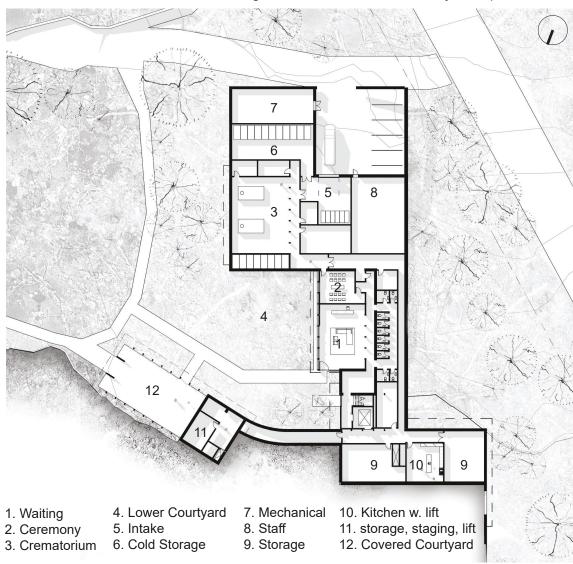
The funeral venue is accessed by following a built stone wall that fades into the natural stone topography as it curves to align with the venue. The venue shifts the otherwise orthogonal nature of the building, angling to face the green burial zones and flower armature below. Entering this space marks a shift from the solidity of a grounded procession into the lightness of wood that is held suspended above the surrounding landscape. When inside, the experience is bounded physically by wood walls and visually by natural stone. It offers a lightness among the heaviness of its program and the stone that defines the site. The visitor faces an open end-a window that frames the burial grounds. The window marks layers of ceremony; it carries a grieving friend remarking on a life, it invites a quiet moment of contemplation from a sheltered place, and it watches the ongoing exchange of energy in the wilting flower and the regrowing landscape in the burial grounds beyond.



The funeral venue focuses out towards the green burial plots and flower pavilion beyond. It is a light wood volume in contrast to the heaviness of the adjacent natural stone found in some parts of the site.

Crematorium

Some cultures engage more directly with the process of cremation. In Japan, for example, relatives remove remaining bones from ash with chopsticks and place them in a ceremonial jar as an act of care for the dead. In Hinduism, where a relative traditionally lit the pyre, a relative now enters the crematorium to begin the process of cremation. The crematorium here hosts conventional cremations and natural organic reduction with the ability to expand or shift



Lower floor plan. This level carries programs related to the crematorium along with back of house circulation that allows bodies to move to the upper floor funeral venue. Two wood spaces define interaction zones: the waiting and ceremony space, and the crematorium room itself.

changes. In allowing public integration and flexibility, the crematorium expands its ability to connect cross-culturally.

When arriving for a cremation, the visitor enters through the upper courtyard, then descends to the lower level where they emerge into a wood volume with a waiting room. The room is nested in the heavy stone walls of the crematorium, but focuses outward towards a lower courtyard. The funeral venue and natural rock wall frame a layered view of the courtyard garden with its controlled plantlife, towards the wild cycles of regrowth in the natural burial plots, and the flower armature in the distance. It is a layering of human interaction—a layer of boundaries between the grieving person and the symbols of change in the landscape beyond. Beyond the waiting room, the visitor may enter a small ceremony room for a private goodbye before entering the entering the crematorium if they wish.

Pragmatically, the crematorium controls crossover between user groups through careful circulation. Workers and bodies enter the building through a secondary access point off the street where bodies pass through intake, storage, and preparation rooms, before entering the crematorium itself. Should a group desire a viewing at a funeral, the body moves through the lower level to a lift in the stone plinth on which the funeral venue sits, then rises into a small room that accompanies the funeral.



The crematorium waiting room looks out towards the lower courtyard, engaging a layered experience of human and natural gardens and vegetation. In the distance, the green burial sites and flower pavilion mark time as watched by the window.



Light and heavy elements, crematorium courtyard

Chapter 7: Conclusion

The Civic Cemetery

Nine years ago, when I began working with the dead, I heard other practitioners speak about holding space for the dying person and their family. With my secular bias, "holding the space" sounded like saccharine hippie lingo.

This judgement was wrong. Holding the space is crucial, and exactly what we are missing. To hold the space is to create a ring of safety around the family and friends of the dead, providing a place where they can grieve openly and honestly, without fear of being judged.

Everywhere I traveled I saw this death space in action, and I felt what it means to be held. At Ruriden columbarium in Japan, I was held by a sphere of Buddhas glowing soft blue and purple. At the cemetery in Mexico, I was held by a single wrought-iron fence in the light of tens of thousands of flickering amber candles. At the open-air pyre in Colorado, I was held within the elegant bamboo walls, which kept mourners safe as the flames shot high. There was magic to each of these places. There was grief, unimaginable grief. But in that grief there was no shame. There were places to meet despair face to face and say, "I see you waiting there. And I feel you, strongly. But you do not demean me."

In our Western Culture, where are we held in our grief? Perhaps religious spaces, churches, temples – for those who have faith. But for everyone else, the most vulnerable time in our lives is a gauntlet of awkward obstacles. (Doughty 2018, 233)

When I think of the word civic, I think of stability. Of the collective nature of community life and the structures that hold it together. Of the expectation that the institution will catch me in times of need. Of care and the embedded social contracts implied by the word collective. Whether accurate or not, this idea or illusion of the civic touches all parts of collective life—from the healthcare system, to the law system, to the structures that negotiate trade and the economy, and to the perspective of the individual who exists among these forces. The civic realm underscores life in a Canadian city, and it also underscores death. Harolders, a group of individuals who spend deliberate time in

cemeteries, watch and ponder the slow change and growth of accumulated memorial monuments over time (Coupland 1994). They do this in part to confront their own mortality, and in part to feel close to the collective nature of both their city and the precarity of the shared human condition. In writing this thesis, I have felt myself a Harolder of sorts, confronting a piece of civic infrastructure that many people do not spend time thinking about. As I have discussed in the previous chapters, the cemetery faces an existential crisis in the face of a changing culture that favours the individual over the collective and relies less and less on its physical positioning for memorialization. In this shift away from the formal cemetery, the Harolder also faces a crisis: how can one Harold without a cemetery?

The landscape, like the human body, is constantly shifting—growing and receding and moving over time. The landscape exists because of the cycles of life and death that redefine it while allowing it to thrive. Change in the landscape is itself a symbol of death, but in the case of the landscape we tend not to mourn such changes, but to accept them as a part of the natural cycles of the Earth. Mourning is complicated, but death is not. The cemetery I have proposed considers these cycles as such: as an interplay between the complexity of human emotion and perception, and the stable predictability of change in the natural landscape; between the temporality of the landscape and the temporality of emotion and memory. The boundary and window mediate these complexities, shielding or exposing landscape death through architecture that make space for ritual, refuge, silence, and mourning.

As the world changes, and culture diversifies and globalizes, cemeteries should rethink the old models of mono-cultural

and formal burial. The cemetery that I have proposed in this thesis reframes the symbols caught up in the cemetery, allowing an experience that caters to the individual through perception—the only true constant that all humans share while interacting with space. Through the subjective lens— Mary Ann Caws' mirror-we read the landscape and project our memories onto it through assigned meaning. The memorial is not the connecting fibre between living and dead, but a symbol of remembering applied to a fixed object. In engaging symbols in the natural world, the window is an armature for rituals and the temporalities of memory, emotion, and circumstance embedded in such acts. Through the window and the symbol, the proposed cemetery reclaims autonomy over the personal and subjective experiences of change and loss-through meaning, memory, and the eternal and perpetually changing landscape.

References

- Aben, Rob, and Saskia de Wit. 1999. The Enclosed Garden: History and Development of the Hortus Conclusus and its Reintroduction into the Present-Day Urban Landscape. Rotterdam: 010 Publishers.
- Abram, David. 1997. The Spell of the Sensuous: Perception and Language in a More-than-Human World. New York: Vintage Books.
- Akkaymak, Guliz, and Chedly Belkhodja. 2020. "Does Place Matter? Burial Decisions of Muslims in Canada." *Studies in Religion/Sciences Religieuses* 49, no. 3: 372–88.
- Aldo Rossi, San Cataldo Cemetery Addition, Modena, 1971
- Berger, John, and Tom Overton. 2016. *Landscapes: John Berger on Art*. London; New York: Verso.
- Bryant, Clifton D. 2003. *Handbook of Death and Dying*. Gale Virtual Reference Library. Thousand Oaks, CA: SAGE Publications, Inc. https://search-ebscohost-com.ezproxy. library.dal.ca/login.aspx?direct=true&db=e000xna&AN=525888&site=ehost-live.
- CANA (Cremation Association of North America). 2021. CANA Anual Statistics Report: Featuring Final 2019 Data, Newly Released 2020 Data, and Projections to 2025. https://cdn.ymaws.com/www.cremationassociation.org/resource/resmgr/members_statistics/StatisticsReport2021-short.pdf.
- Carlo Scarpa, Brion Cemetery, San Vito d'Altivole, 1978
- Caws, Mary Ann. 1981. *The Eye in the Text: Essays on Perception, Mannerist to Modern.*Princeton: Princeton University Press.
- Coupland, Douglas. 1994. "Harolding." The Coupland File. https://coupland.tripod.com/ nr3.html.
- Coutts, Robert. 2021. Authorized Heritage: Place, Memory, and Historic Sites in Prairie Canada. Winnipeg: University of Manitoba Press.
- Davies, Peter J., and Gemma Bennett. 2016. "Planning, Provision and Perpetuity of Deathscapes—Past and Future Trends and the Impact for City Planners." *Land Use Policy* 55: 98–107.
- Doughty, Caitlin. 2018. From Here to Eternity: Traveling the World to Find the Good Death. New York: W.W. Norton & Company.
- Explore HRM (Halifax Regional Municipality). n.d. Base Imagery. Halifax Open Data. Map from GIS data, using Explore HRM. https://www.arcgis.com/apps/webappviewer/in-dex.html?id=425cf408196648db994be8f53206f75c.

- Geertz, Clifford. 1973. "Thick Description: Towards an Interpretive Theory of Culture." In *The Interpretation of Cultures*, 3–30. New York: Basic Books.
- Grabolav, Pavel and Helena Nordh. 2020. ""Philosophical Park": Cemeteries in the Scandanavian Urban Context." *Sociálni Studia / Social Studies*, 17 no. 1: 33-54.
- The Green Burial Council. n.d. "The Case for Green Burial." Accessed November 15, 2021. https://www.greenburialcouncil.org/case_green_burial_home_funeral. html#:~:text=Green%20burial%20is%20a%20way,and%2For%20preservation%20 of%20habitat.
- Halifax Military Heritage Preservation Society. n.d. "Purcell's Cove Quarries." Accessed February 5, 2022. https://hmhps.ca/sites/purcells-cove-quarries.
- Halifax Regional Municipality. n.d.a. "Explore HRM." Accessed March 3, 2022. https://www.halifax.ca/home/maps/explorehrm.
- Halifax Regional Municipality. n.d.b. "*Municipal Cemeteries*." Accessed March 5, 2022. https://www.halifax.ca/parks-recreation/parks-trails-gardens/municipal-cemeteries.
- Hauser, Shane. 2018. Photographs of Nova Scotia Landscape.
- Ingold, Tim. 2018. "Surface Textures: The Ground and the Page." *Philological Quarterly.* 97, no. 2: 137.
- Long, Richard. 1967. "A Line Made by Walking." Tate Modern. https://www.tate.org.uk/art/artworks/long-a-line-made-by-walking-p07149.
- Maya Lin Studio. n.d. "Vietnam Veterans Memorial." Accessed November 4, 2021. https://www.mayalinstudio.com/memory-works/vietnam-veterans-memorial
- McDonald, Michael W. 2017. "History of Halifax, A Mi'Kmaw Perspective." *The Nova Scotia Advocate*, July 12, 2017. https://nsadvocate.org/2017/07/12/history-of-halifax-a-mikmaw-perspective/#:~:text=The%20area%20of%20downtown%20Halifax,of%20 the%20Mi'kmaq%20people.
- Mook, Bertha. 2009. "The Metabletic Method: An Interdisciplinary Look at Human Experience." *Phenomenology & Practice* 3, no. 1: 26–34.
- Olgiati, Valerio, and Marcus Breitschmid. 2019. *Non-Referential Architecture*. Zurich: Park Books AG.
- Olson Kundig. n.d. "Recompose Seattle." Accessed September 28, 2021. https://olsonkundig.com/projects/recompose-seattle/.
- The Order of the Good Death. n.d. "Death Positive Movement." Accessed February 25, 2022.https://www.orderofthegooddeath.com/death-positive-movement/.

- Rappengluck, Michael A. 2013. "The Housing of the World: The Significance of Cosmographic Concepts for Habitation." *Nexus Network Journal* 15, no. 3: 378–422.
- Recompose. n.d. "Our Model." Accessed December 8, 2021. https://recompose.life/our-model/.
- Romanyshyn, Robert D. 2008. "The Despotic Eye: An Illustration of Metabletic Phenomenology and Its Implications." *Janus Head* 10, no. 2: 505–527.
- Rossi, Aldo. 1978. Drawing of The Little Scientific Theatre. Fondazione Aldo Rossi. http://www.fondazionealdorossi.org/opere/1970-1979/teatrino-scientifico-1978/.
- Rossi, Aldo. 1981. A Scientific Autobiography. Cambridge, MA: MIT Press.
- Spade, Katrina. 2013. "Of Dirt and Decomposition: Proposing a Resting Place for the Urban Dead." Master's thesis, University of Massachusetts Amherst. https://scholar-works.umass.edu/cgi/viewcontent.cgi?article=2213&context=theses
- Steenbergen, Clemens, and Reh Wouter. 2003. *Architecture and Landscape: The Design Experiment of the Great European Gardens and Landscapes*. New York: Prestel.
- Sudikno, Antariksa. 2004. "Space in Japanese Buddhist Architecture." *Dimensi Journal of Architecture and Built Environment*, 10, no. 1: 75–84.
- Van den Berg, Jan. 1971. "Phenomenology and Metabletics." *Humanitas*. 7, no. 3: 279–290.
- West Map. 2020. Maps of West Vancouver. https://westmap.westvancouver.ca/html5Viewer/?viewer=WestMap 2019.Default Viewer