THE ARENA OF INTERCHANGE

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ABSTRACT

Nature is often considered a site of pristine perfection existing outside of human interaction. It is this notion that has led humanity to draw away from the environment and has encouraged the continual degradation of the Earth today. This exploratory research investigates the world as a series of permeable and impermeable boundaries – a shifting interwoven-web of matter, where all things are drawn together. Nature is to be understood as the continual arena of interchange between all the things of the world. When nature is defined as an enmeshed experience within the interwoven fabric of the world, it can no longer be seen as a pristine site existing outside the realm of humanity. Instead, nature is inherent in all things, in all places, at all times. Humanity and all of its constructs are merely a subset, wholly and unavoidably, embedded within the greater reality of the physical world.

This practicum examines the phenomenological ways in which humanity is entwined within the natural world, with implications for how this concept may be applied to the field of landscape architecture. Delving into the idea of designing in a phenomenological manner, I engage a methodology for designing for experience through experience. The act and process of drawing is employed as a means to connect the mind with body and with its surrounding environment. Forging an alignment between these three components exposes the interconnected disposition of the world. Drawing offers clarity in thought by allowing for a merger of the body with landscape. The result of this process is an open-ended design for a park and interpretive center for Gillis Quarries, in Garson, Manitoba. While the site remains an active quarry, the interpretive design exposes the interwoven environmental and social histories that are embedded within this location. The park continually redevelops its forms as the site constantly evolves through the incessant excavation of limestone. The leisure activities of a park, paired with the industrial processes of a working quarry, evoke the interwoven condition of the world, and express the intertwined quality of humanity and landscape as nature.

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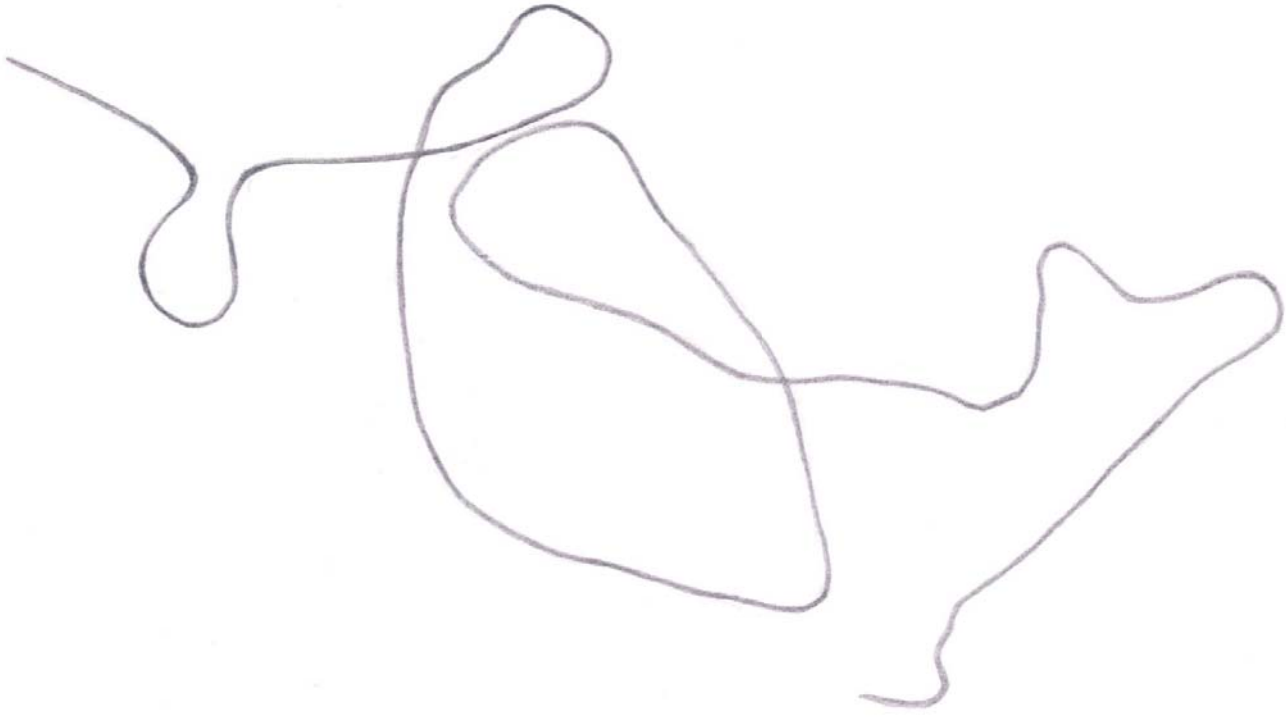
the real voyage of discovery consists in not seeking new landscapes, but in having new eyes - Proust (as cited in Dean & Millar, 2005, p. 20)

SEEKING

The tangy scent of chlorine hangs in the cool, damp air, mingling with the echoing sounds of children and adults at play. These sounds reverberate off of the high white walls painted with blue numbers that demarcate lanes. Shallow puddles, formed from the dripping wet bodies of refreshed patrons, chill the tiled floor I walk upon. The water, crystal clear, shimmers and beckons me forward, promising a peaceful release within its gravity-defying depths. Anxiously, while restraining from quenching my body's thirst, I gather with a group beneath a coloured numeric on the wall. We stand together, reflecting on the watery pool ahead. We are all attending for different reasons, but ultimately with the same determined purpose in mind - to rid ourselves of our inability - to learn to swim.



A thread in the interwoven fabric of life.

seek verb

verb intrans. Try to find, look for. (Shorter Oxford English Dictionary, 2002, p. 2737)

At the outset of this practicum my desire was to obtain a holistic understanding of the term nature. Specifically, I wanted to know how nature has been perceived historically, what the term means today, and how humanity fits within this greater idea of nature.

My research has led to an understanding that for most of history, human activity was intertwined with landscape. On a day-to-day basis, humanity tended to perceive the world as a unified existence; a series of relationships where no one thing was greater than another, as each element was required for survival (Rotundi, 2003). However as time passed and the allure of the industrial revolution grew, humanity's relationship with landscape shifted. Today, as Borasi (2006) writes, "humans demonstrate irresponsibility toward the environment because they have been separated or alienated from nature by technological progress" (p. 38). Pope (2003) furthers this concept by suggesting that nature is perceived as a site of pristine perfection only when untainted by human interaction. This has led to a prevailing notion that any site that does not reach this pristine ideal is neither natural nor nature (Pope, 2003). The consequence of these two factors is the continual degradation of the Earth today.

This exploratory research investigates the world as a series of permeable and impermeable boundaries - a shifting, woven-web of matter (Abram, 1996; Casey, 2007). Humanity and all of its constructs are merely a subset, wholly and unavoidably, embedded within the greater reality of the physical world. Nature is to be understood as the relationship between the matter of the world, at all scales, from the atomic material that composes elements to the tectonic plates that move the surface of the Earth. Nature is all things, in all places, at all times.

seek verb

verb intrans. make search or inquiry for, attempt to discover, (a thing or person suitable for a purpose etc., an unknown thing)
(Shorter Oxford English Dictionary, 2002, p. 2737).

I used landscape as a means to reveal the enmeshed realities of the world. The design of a park and an interpretive centre at Gillis Quarries, in Garson Manitoba, evokes this interwoven nature of the world by inviting visitors to explore the environmental and social histories of this area. The quarry, as well as the structures wrought from its stone, exposes the histories that are enfolded and held within the geological and soil strata of the land to our senses so that they may be studied and understood. The stories here begin with the birth of the tiny calcerific sea creatures that lived in this territory thousands of years ago; that have left their bodies to be compressed and their energy to be transformed through the formation of limestone. It is because of the human presence on the land, and the equally natural act of quarrying, that these sedimented bodies have been excavated. The resulting limestone blocks, used in the construction of memorable structures, such as the Manitoba Legislative Building in Winnipeg, the Museum of Civilization in Ottawa, as well as numerous other constructions throughout the world, permits the life stories of these sea-creatures to be sung out from upon their walls, to be experienced in new ways by visitors to these architectural edifices.

seek verb

verb intrans. attempt to find out *if, what, why*, etc. (Shorter Oxford English Dictionary, 2002, p. 2737)

I framed the inquiries of this practicum within the philosophical concept of phenomenology. According to van Manen, phenomenology is a "systematic attempt to uncover and describe the structure, the internal meaning structures, of lived experience" (van Manen, 1990, p.10). Phenomenology seeks to obtain a more thorough understanding of everyday experiences, or the lifeworld (Husserl, 1970). This 'lifeworld' is the world we instantaneously experience and engage with, prior to any reflection and rationalization (Schultz and Luckmann, 1973).

Phenomenological researchers seek to understand the way in which the world is experienced, to better know the perceivable world:

> …to *know* the world is profoundly to be in the world in a certain way, the act of attaching ourselves to the world, to *become* more fully part of it, or better, to become the world… . In doing research we question the world's very secrets and intimacies which are constitutive of the world and which bring the world as world into being for us and in us… . (van Manen, 1990, p. 5)

To know the world, is to feel, taste, smell, hear, and see the world. As Abram (1996) writes, the "*sensing body* is not a programmed machine but an active and open form, continually improvising its relation to things and to the world" (p.49). Nothing exists or can ever be wholly understood unless it is experienced. The medium for experience is the living breathing body.

The theories and concepts I discovered through my research were filtered through my own body through the act of drawing. As van Manen (2002a) explains "language is simply inadequate in describing experience. Ultimately words miss the fullness and the uniqueness of our private worlds" (van Manen, 2000a, para. 9). Submerging myself within the waters of a pool allowed me to physically relate to theories I was reading about in my review of relevant literature. In the water I could feel the breakdown of the boundaries of space and understand how it might feel to be a particle floating free and completely submerged within a more viscous medium. Furthermore, by letting the words of my review of relevant literature permeate my mind, and then trickle out through drawing, I was able to comprehend and describe the worlds of these words in a more holistic manner. Through the layering of graphite on paper, the words came together in a visual form, in a way that could be applied spatially. Drawing engaged my physical self in my thought processes, and created a physical representation of my research experience. Linearity of thought was not necessary as my mind's cyclical proclivity was free to be expressed. This was, integral to the complete comprehension of ideas. In the end, the drawings become my mind laid bare on the paper.

In writing this practicum I have tried to illustrate the interwoven and highly experiential tendencies of the project. van Manen (2002b), in his book *Writing in the Dark: Phenomenological Studies in Interpretive Inquiry*, discusses the act of writing in a phenomenological manner. He addresses the difficulties one faces when attempting to write within a qualitative inquiry and how at times "it feels as if one is writing in the dark" (p. i). He suggests opening oneself up to all the possibilities of human comprehension while attending to the underlying sensations and meanings that a text can bring to mind. van Manen organizes his first chapter, Writing Phenomenology, with the subheadings: *seeking, entering, traversing, drawing, gazing,* and *touching*. Situating himself within these headings, he describes his experience of writing; from the blankness of searching for language, to the insertion of oneself into the space of text, to passing through this world of words, to the attraction, the lure, and the hold that this world can have on a person, to the inevitable wonder that is induced, and finally the affect of astute human insight.

I was drawn to the text of van Manen, as a consequence of his ability to portray the physicality of writing. When reading his descriptions I could attempt to situate myself within his reflections. I could feel and relate to his mixed sensations of writing, and I wished to emulate van Manen's ability to immerse his readers into his world. Therefore, it is with his metaphoric themes, which evoke spatial movement through the process of writing, that I have arranged this work and the journey described through it, from research to design. This first chapter, *seeking*, is an introduction to the practicum, briefly outlining the broad field of study, the core intentions of the practicum, and the methodology. *Entering*, the second chapter delves into the history of the concept of nature in addition providing a brief overview of the history of the Manitoba landscape. The third chapter, *traversing*, discusses the theories of nature developed through my research of relevant literature and through the act of drawing. *Drawing*, illustrates my desire to engage with this practicum in a physical and artistic manner, as well as describing my attraction to Gillis Quarries in Garson, Manitoba. The fifth chapter, *gazing*, entwines the histories, theories of nature, and the act of drawing, into an investigative exploration of these themes with the site. *Touching*, builds off of the exploration *gazing* and describes the design for a interpretive centre and park at Gillis Quarries. The seventh, and final chapter, *finding*, expresses my concluding thoughts for this practicum.

I utilized van Manen's themes not only as a means to organize my writing, as chapter headings, but I also applied them to my approach to and reflections upon the design process. Each step along this journey of making has been framed through *seeking, entering, traversing, drawing, gazing,* and *touching*. I approached the site with these themes in mind. The site inventory and analysis of landscape elements reflects acts of *searching* for meaning, *insertion* into the act of understanding through drawing, *traveling* across and engaging with landscape, the acts of *attraction* and *attentiveness* to aspects of the site that display an intertwined existence, and to *affect* the site by highlighting moments of entwinement. The experiential themes allowed the design to emerge from the site. Rather than the addition and implementation of new materials and forms, existing elements were sifted through and rearranged to better reveal and display the sites inherent characteristics. This elements echo the importance of the engagement of humanity with landscape for the very existence of this site. Employing van Manen's themes permitted me to gather, or coalesce, theories and thoughts while describing my processes of moving through and designing this landscape.

seek verb

verb intrans. Go, move, proceed. (Shorter Oxford English Dictionary, 2002, p. 2737).

This practicum has been an open dialogue on van Manen's methodological themes in phenomenological experience paired with the physical and mental act of drawing have allowed me to access the design process. This discourse ranges from the exploration and development of a theoretical standpoint to the selection and design of a site.

This work is equally about the journey of discovering a new process of designing as it is about the actual design of a particular site.

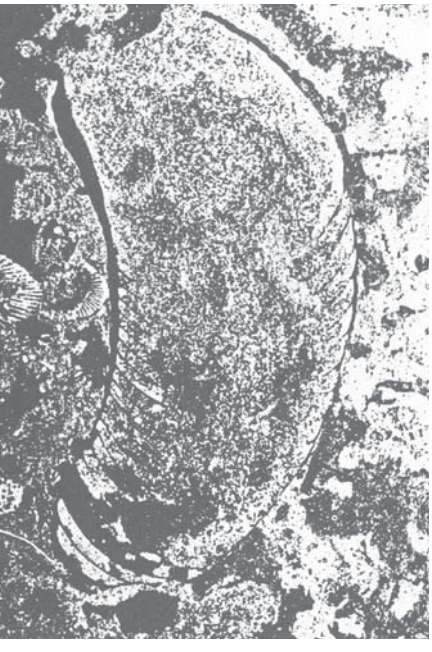
Much like life, which is the accruing of occurrences and experiences, and like the sedimentation processes that lead to the formation of limestone, this practicum has become a cumulative work. It represents an intertwining and layering of thoughts and imaginings, words and illustrations, and events and perspectives that are translated into words, drawings, and landscape.

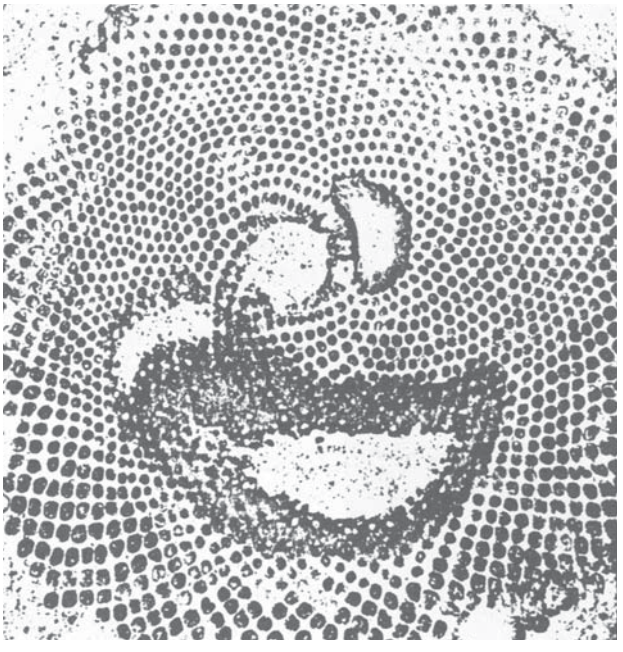
ENTERING

enter verb

a verb intrans. Go or come in or (arch.) in… **b** verb trans. Go or come into (a place, medium, etc.); go within the bounds of (a country etc.)… (Shorter Oxford English Dictionary, 2002, p. 835)

Descending the gritted stairs into the luke-warm waters of the shallow pool, the water edges up and creeps along my skin, soaking the clinging red fabric of my swimsuit. My feet hit the solid tile of the pool's floor and I reach forward to pull my whole self into the water, drenching my body. Our current abilities are assessed by the instructor: I breathe in, submerge my face in the water, and forcefully exhale the breath of my lungs through my mouth. Bubbles rush forth and race to the surface with a turbulent force. I lean backwards relaxing into the water, and lift my legs to the surface, allowing it to support my body fully. Trusting, I reach my arms and legs away from my centre and I float. The water gently laps at my body, soothingly rolling beneath and beside me, moving me. I relax further and close my eyes. All of my anxiety floats away from me here, carried away by my new liquid companion. Turning onto my front, the water does not fail me - it continues to hold me up. I nestle my face into the aqueous surface and breath out until all of the air has departed from my lungs. Turning again onto my back I point my toes and alternately flex and release the muscles in my thighs and calves - kicking, I propel myself through the water. I am swimming.





These creatures once swam within the warm shallow waters along the sea edges. From left to right: a cephalopod, - a type of mollusc, a receptaculite (images from *Garson – then and now,* 1990, permission provided), and a trilobite (image from Young, Elias, Wong, & Dobrzanski, 2008, permission provided).

enter verb

verb intrans. Penetrate deeply into or into something… (Shorter Oxford English Dictionary, 2002, p. 835)

a liquid frame:

Life begins in water. Like the tiny amoeba that is dependent upon its liquid environ for the source and transport of its nourishment, all things require water to live.

Several million years ago, the continents floated upon the Earth's surface in an arrangement quite different than that of today. During the Ordovician Period, North America, and thus Manitoba, was part of the low-lying, sea-inundated, paleocontinent called Laurentia. This accreted land mass was situated in the tropical equator. Its landscape existed in a desert-like condition, and life on the exposed arid land was limited. However, beneath the surface of the waters life flourished, as the sea harboured most living beings. Rather than in the cooler and darker depths which were less conducive to supporting life forms; life converged and burgeoned in the warm shallow waters along the sea edges. Receptaculitids and stromatoporoids prefered shallow water conditions where corals, brachiopods, molluscs, trilobites, and crinoids were abundant. Since this is where most life was located, this is also where deposits of the bodies of the calcium-rich sea-creatures began to accumulate. With time, these deposits condensed and solidified into the sedimentary form of limestone. Millions of years passed in this fashion: life flourishing and expiring within the shallow waters, bodies settling and compressing into stone. Centuries of accumulated death and sedimentation form the limestone strata of the Red River region of Manitoba (Young, Elias, Wong, & Dobrzanski, 2008).

EON	ERA	PERIOD	EPOCH		MILLIONS OF YEARS AGO
phanerozoic	cenozoic	quaternary	halocene	ice age ends	0.00
			pleistocene	ice age begins, human evolution	0.01
		tertiary	pliocene	earliest evidence of humans	1.64
			miocene		5.20
			oligocene		23.5
		paleogene neogene	eocene	formation of Himalayan and Alps mountain ranges	35.5
			paleocene		56.5
	mesozoic	cretaceous		**extinction of dinosaurs, first primates, first flowering plant**	65.0
		jurassic		**formation of Sierra Nevada, first birds, dinosaurs diversify**	146
		triassic		**first mammals, first dinosaurs**	208
	paleozoic	permian		formation of Pangaea, formation of Appalachians, major extinctions	245
		carboniferous	pennsylvanian	abundant coal forming swamps,	290
			mississippian	first reptiles	323
		devonian		first amphibians	363
		silurian		first vascular land plants	409
		ordovician		first land plants, sudden diversification of metazoan families	439
		cambrian		first fishes, first chordates	510
					570

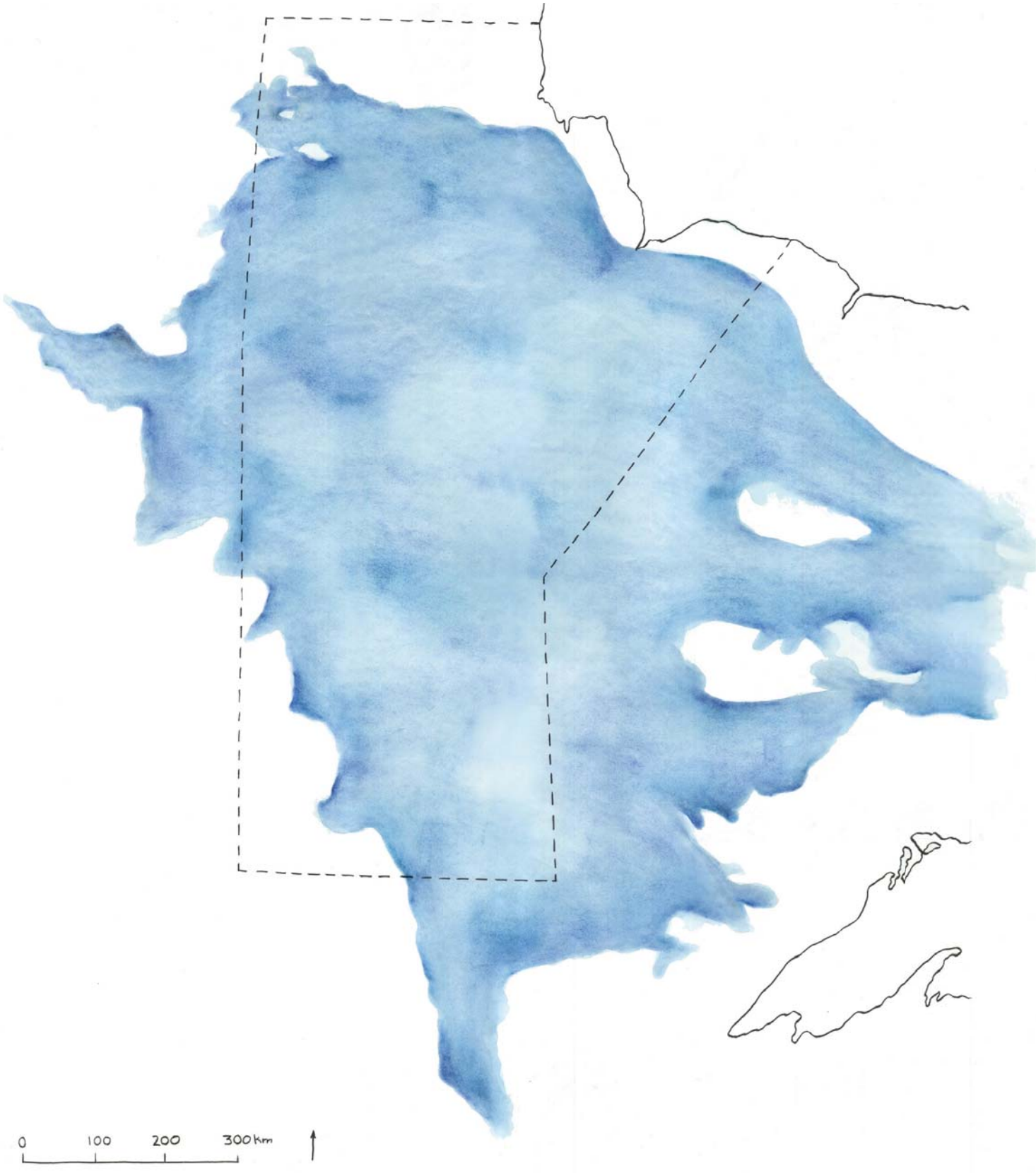
A geological time scale (Harland et al, 1990; Monroe & Wicander, 2001).

Slowly eras passed. During this time, the life in the sea gradually evolved into vertebrate animals and the growth of vegetation appeared upon the land. The vertebrate fish now swimming within the seawaters evolved into limbed amphibians. Life was emerging out of the waters and onto the land. The cold-blooded form of amphibians developed further into land-loving reptiles. Life was abundant both in and out of the water. However, this did not last; nearing the end of the Paleozoic Eon was the first great mass extinction. At this point, nearly ninety-five percent of life on Earth was lost due to a possible catastrophic environmental event such as volcanic activity (Tanner, Lucas, & Chapman, 2004). Yet, a few fit beings survived and continued the random process of evolution. These animals evolved into dinosaurs, mammals, and birds. But the evolutionary progress was cut short again by at the end of Mesozoic Eon. Another mass extinction took place, again possibly the result of calamitous environmental upheaval, this time claiming the life of approximately seventy-five percent of the living organisms (Teller, 1984).

From this point on, approximately sixty-five million years ago, the Earth entered into the Cenozoic Era of today, known also as the 'Age of Mammals'. As all these eras passed, as life rose and receded, the land was also changing. Pieces of the paleocontinent detached and drifted away from each other, slowly separating more and more as thousands upon thousands of years passed. The land was not only shifting latterly, but also vertically, enfolding back upon itself. The weather and climatic patterns began to change as well (Teller, 1984).

Extent of land coverage by the Wisconsinan Glacier complex.

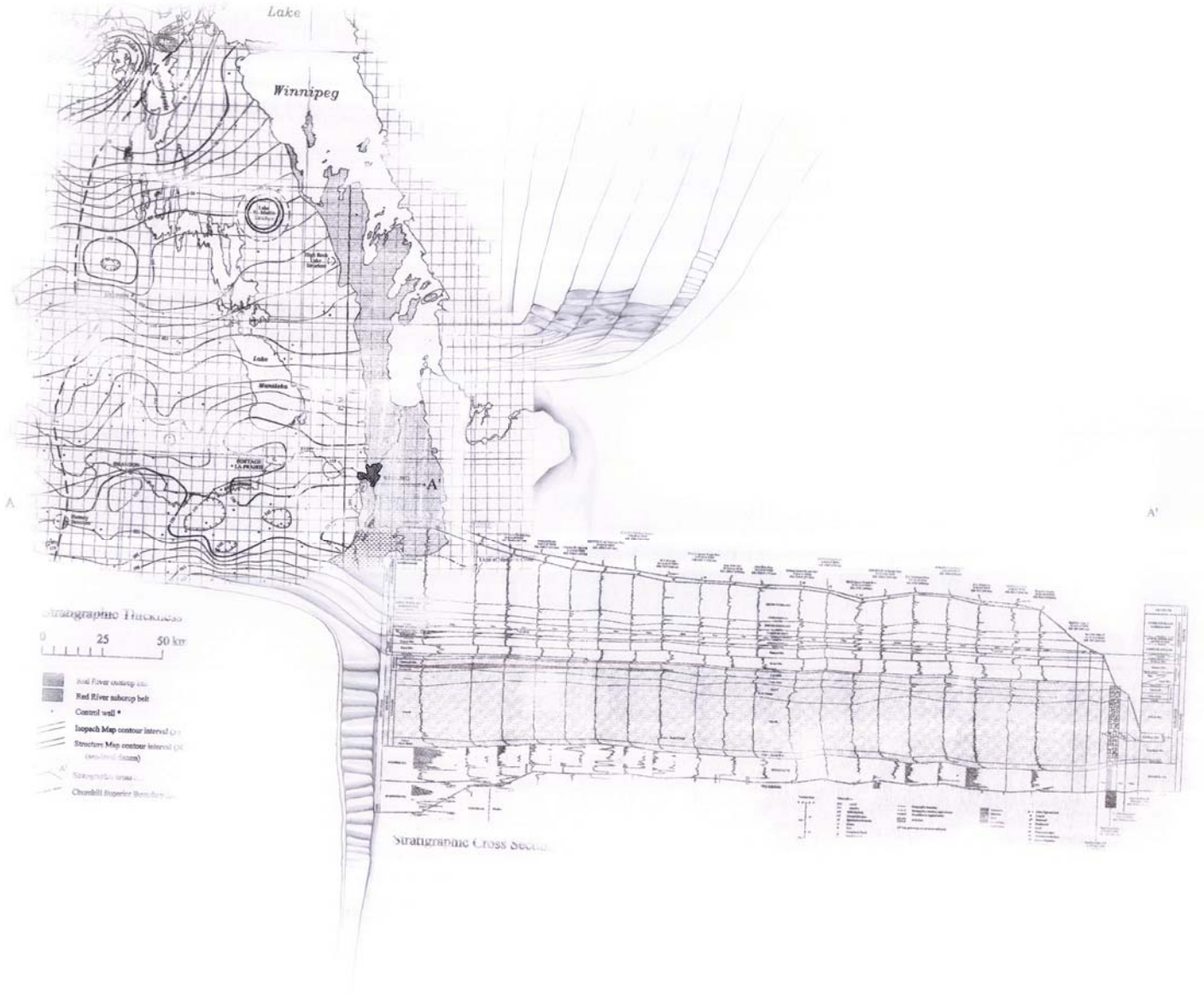
Approximately 75,000 years ago, during the Pleistocene Epoch, the last period of climatic cooling began resulting in the formation and movement of glaciers across the Earth's surface. (Teller, 1984, p. 24). The progression of the compacted and recrystallized snow (Plummer, McGeary, & Carlson, 2003) of the Wisconsinan glacier in North America fluctuated between the Arctic region of the continent and more southern points. The movement of the glacier was dependent upon variations in weather, during warmer periods the ice melted and retreated to its northern grounds, but as the weather turned colder continual accumulation of snow and the mass of its own weight caused the glacier to slide farther south into the continent. For more than 10,000 years, the glacier advanced and receded, completely inundating Canada as well as the northern parts of the United States, Europe, and Asia. The movement of the ice quarried the land, scrapping away forests and soils, displacing the geologies of the land it passed over. It was around 23,000 years ago, that this glacier made its last southern advance far into the United States, and in its progress southward, Manitoba was buried several kilometers deep beneath the immense sheet of ice.



The land that was once covered by the water's of Lake Agassiz. Although the lake-water touched all of this land, it was never covered in its entirety all at one time.

The Wisconsinan glacier began is initial retreat approximately 10,000 years ago. As the ice began to dissolve, glacial lakes, such as the immense Glacial Lake Agassiz, began to form as the melt water collected on compressed land. On the land above the water level spruce dominated boreal forests developed and spread. As the melting glacier exposed more and more land, the vegetation continued to extend its territory. At some point between 9000 and 14,000 years ago, nearing the end of this glaciation period, the climate began to warm. The extent of the habitable land continued to expand, and with it the territories inhabited by flora and fauna. It was during this warming phase that a major migration of animals as well as humans - Homo sapiens sapiens, entered North America from Siberia by crossing the Bering Strait (Teller, 1984, p. 162). As the glaciers continued to melt, the land bridge across the ocean was submerged beneath raising ocean water, approximately 6000 years ago, terminating further movement across the bridge.

Even as the climatic warming trend continued, during colder periods the Wisconsinan glacier advanced on the land - pushing the waters of Glacial Lake Aggassiz deeper into the south. At times the waters reached as far into the south as the territory now known as North Dakota. However, the warming climate encouraged the periods of retreat to outstrip the distance covered by each advance of the glacier. The meltwater of retreating Wisconsinan glacier continually fed the depths of Glacial Lake Aggassiz.



An isopach image of the bedrock conditions in southern Manitoba combined with a cross-section of the land (Bezys & Conley, 1998).

Seventy-five thousand years ago, a glacial dam situated across Northern Manitoba melted and created an escape route for the trapped waters of the great Lake Agassiz. The water rushed forth, drained northwards mixed with the saltwater of the Hudson Bay. The land that was once scrapped clean by the advancing ice of the Wisconsinan glacier, was now covered with deposits of glacial till and debris captured within the ice sheet. Organic material mixed with the breakdown of geological matter built up over the limestone bedrock deposits and formed the soil substrates we see in Manitoba today (Teller, 1984).

The presence of these limestone deposits is no more obvious than in Garson, Manitoba. At this location, hundreds of acres of limestone sedimentation, known as the Upper Mottled Limestone of the Ordovician system, are held beneath several meters of overburden – the earth that has accumulated over the thousands of years since the waters of Lake Agassiz last inundated the land.

A bird's eye perspective of the towns of Garson and Tyndall, Manitoba.

'The Hill', the common name once used for Garson, is located twenty-seven miles north-east of Winnipeg, Manitoba along Highway Number 44. The village of Garson, was a namesake for William Garson, who opened the first large quarry in the area. However, after William Garson's untimely death in 1911, the village adopted the name Lyall, after Peter Lyall Sr., a contractor from Montreal, who bought the Garson Quarry, as well as all of its debt, and continued its operations. In 1915 the village was incorporated municipally and assumed the name Lyall. It was in 1927, that the council was convinced to officially rename the village Garson (*Garson – then and now,* 1990).

In 1990, the village of Garson was home to only 315 residents, but in the early 1900s it was considered a boom town, with its economy tied to the limestone industry. As this is an industry greatly affected by recession, the village has experienced many economic booms and busts.

> Today all that is left of a very vibrant industry on 'The Hill' is Gillis Quarries and several yawning pits.
>
> Were it not for the limestone 11/2 miles long and 1/2 mile wide lying under a very light overburden, Garson would not have come into existence…
>
> Geological examinations have set the depth of the limestone beds at 400 feet, though quality may decrease with depth. The mottled limestone comes in creamy buff and bluish grey. (*Garson – then and now,* 1990, p. xiii)

The stone is know world-wide for the distinct fern-like mottling that is dispersed throughout the sedimented stone.

All of these activities - the movement of the tectonic plates, the inundation of sea, the presence and absence of life tied to climatic change and glaciation - contribute, and have been woven together to form the unique geological nature of Garson.

enter verb

verb intrans. Come or fall *into* a state of condition. b verb trans. Come or pass into (a certain condition)… (Shorter Oxford English Dictionary, 2002, p. 835).

the woven world:

For most of pre-history the world was interlaced within the lives of the beings whom inhabited it. At all levels of experience, from the everyday, to that of the spiritual realms, humanity tended to perceive self and world as a unified existence. The world was understood as a series of relationships where no one thing was ever greater than another, as each element was necessary for the survival of all (Rotundi, 2003). The pre-historic humans wandering the earth were satisfied to collect their nourishment from available flora and fauna as they transgressed the landscapes through the passing seasons. They considered themselves equal to, and lived in unison with, the flora and fauna, the rocks and rivers - they saw themselves as an integral part of the greater world. Oelschlaeger (1991), in *The Idea of Wilderness: From Prehistory to the Age of Ecology*, describes this reality: "all aspects of the world, including humankind, were seen as interwoven, harmoniously coexisting in a mutually supporting system" (p. 18). The world in the eyes of the pre-historic humans was living, open and receptive; a nurturing being. But, as the centuries passed this interwoven existence gradually unraveled. The hunting and gathering techniques of survival that tied humankind to their surroundings, slowly gave way to agricultural approaches of cultivating, tending, and harvesting the land as well as domesticating animals for sustenance and companionship. This new method of survival altered the interdependency of humanity from existing with, to seeking control of their environment (Oelschlaeger, 1991).

the world unraveled:

As the glaciers that chilled the land retreated, climatic weather patterns shifted and many of the vast nourishing grasslands shrank and dried out. The reduction of a once-abundant food source put pressure on the lives of those who sought nourishment from the savanna landscape (Oelschlaeger, 1991). Those who could not adapt to the continual variation in climatic conditions did not survive such as the Woolly Mammoth, the Giant Short-faced Bear, and the Saber-toothed Tiger, to name a few. The persisting environmental fluctuations encouraged the development of species that are able to survive in a variety of environmental conditions (Weinstock, 2010). Paleolithic humans evolved in response to these great changes, "like all other species, the evolution of humans has been constrained by their relations to other living forms, and to climatic regimes and the topography of the surface of the earth" (p.147). Paleolithic humans were not tied to one specific habitat, like the savanna, instead they were able to move between varied types of environmental and climatic conditions. The bodies of *homo erectus* continually evolved, the elongation of their forms allowed for thermoregulation in the continually warming climate. The shape and size of the Paleolithic human's skull began to alter, developing an increase in the cranial capacity and changes to the jaw and teeth structures. The alterations to the skull permitted the enlargement of the frontal lobe sector of the brain - the area associated with speech. With these advancements in cognitive abilities, more social behaviors, such as hunting and gathering, began to occurs as group activities, while increased manual dexterity permitted the creation of stone tools (Weinstock, 2010). Over time, the now social humans extended their habitable ranges and the tools, that were once created to process the bounty they obtained from the landscape, were now adapted to the cultivation and dominion of the land (Oelschlaeger, 1991). It was at the point of the agricultural revolution, approximately 14,000 years ago, that humanity stepped away from nomadic traditions that had fit them so neatly into the patterns of the landscape. Pre-historic humans now moved towards a more stationary existence, one separated from wild nature. As Sewall (1999) describes, "the primary source of our estrangement from the nonhuman world is agriculture, our domestication of the land, and the consequent separation of ourselves from daily and deep engagement with the world" (p. 73). This neolithic culture of sowing land and domesticating animals altered humanity's perspective of themselves in relation towards the environment. With agriculture came fields of land separate from the surrounding landscape, and the distinction between crops to be cultivated and weeds to be eradicated (Oelschlaeger, 1991). What was once a conglomerate world of interwoven ecosystems now was defined by edges and boundaries with human controlled spaces adjacent to the wild.

population 6 billion	2000 CE
industrial revolution	1700 CE
renaissance moveable type population 500 million	1500 CE
population 250 million	1000 CE
abacus census library population 200 million	1 CE
alphabet horse-drawn vehicles road networks population 150 million	1000 BCE
maps population 100 million	2000 BCE
writing pyramids domestic horse	3000 BCE
agriculture revolution wheeled vehicles population 10 million	12000 BCE
last ice age	25000 BCE
modern humans flurish complex languages blade technology	40000 BCE
migration out of africa	100000 BCE
use of fire	360000 BCE
first tools	2000000 BCE
first humans	3700000 BCE

A time line of human history (Big Picture Small World, Inc, 2011).

the world in pieces:

With time, the boundaries - "a porous band or region in which there are continual movements of transistion back and forth between limits that prove to be putative and provisional only" (Casey, 2007, p. 69) and edges - "perimeters, limits, borders … all the ways in which something comes to an abrupt and decisive termination" (Casey, 2007, p. 68), became more and more distinct and the tools humanity utilized became more advanced. Increasingly, the surface of the Earth was converted to pasture and field. As humans became more dependant upon the crops that they sowed and the herds that they tended, nomadic traditions fell away. 35,000 years ago, long term settlements such as villages and towns began to develop and grow, with the emergence of the city form between 6000 to 5000 years ago (Weinstock, 2010). Specification and specialization was a more frequent occurrence in daily life. No longer did each person master all the tools and skills required for day-to-day survival, but instead mastered one specific task (Oelschlaeger, 1991). 500 years ago, trade, commerce, and industrialization became a way of life (Weinstock, 2010). As time passed and the allure of the industrial revolution grew, humanity's relationship with landscape continually shifted.

Between the eighteenth and nineteenth centuries, industrialization began to spread like wildfire; landscape was trenched and burned for the sake of human progress. As Pope points out, "industrialized urban construction, like industrialized warfare… evoked, not only the image of a 'battle' against natural forces, but also the sense that nature was so much raw material to fuel so much (more) industrial output" (Pope, 2003, p. 169). Rather than being revered and loved, the environment became something to be feared and to be tamed. Landscape was exploited for its benefits; it was now looked at merely as a resource, "raw material used to feed the inexhaustible appetite of aggressive urban/industrial expansion " (Pope, 2003, p.170). In order to continue the unhindered use of landscape as a resource Pope suggests that an alibi for this exploitation was constructed:

> 'the natural' would have to be reconstructed as something beyond human intervention – something heavily idealized and altogether remote – in order to compensate for the violence routinely done by new industrial practices… a romantic cult of wilderness predictably emerged… nature was, for the first time, not something that you lived in – not to mention something that you were – but something out there in a splendid isolation… (Pope, 2003, p. 170)

Depicting nature as a remote existence eased concerns over the extraction processes of the resources nearer to home (Pope, 2003, p. 170).

enter verb

verb intrans. Begin; make a beginning; engage in an activity…
(Shorter Oxford English Dictionary, 2002, p. 835).

the pieces:

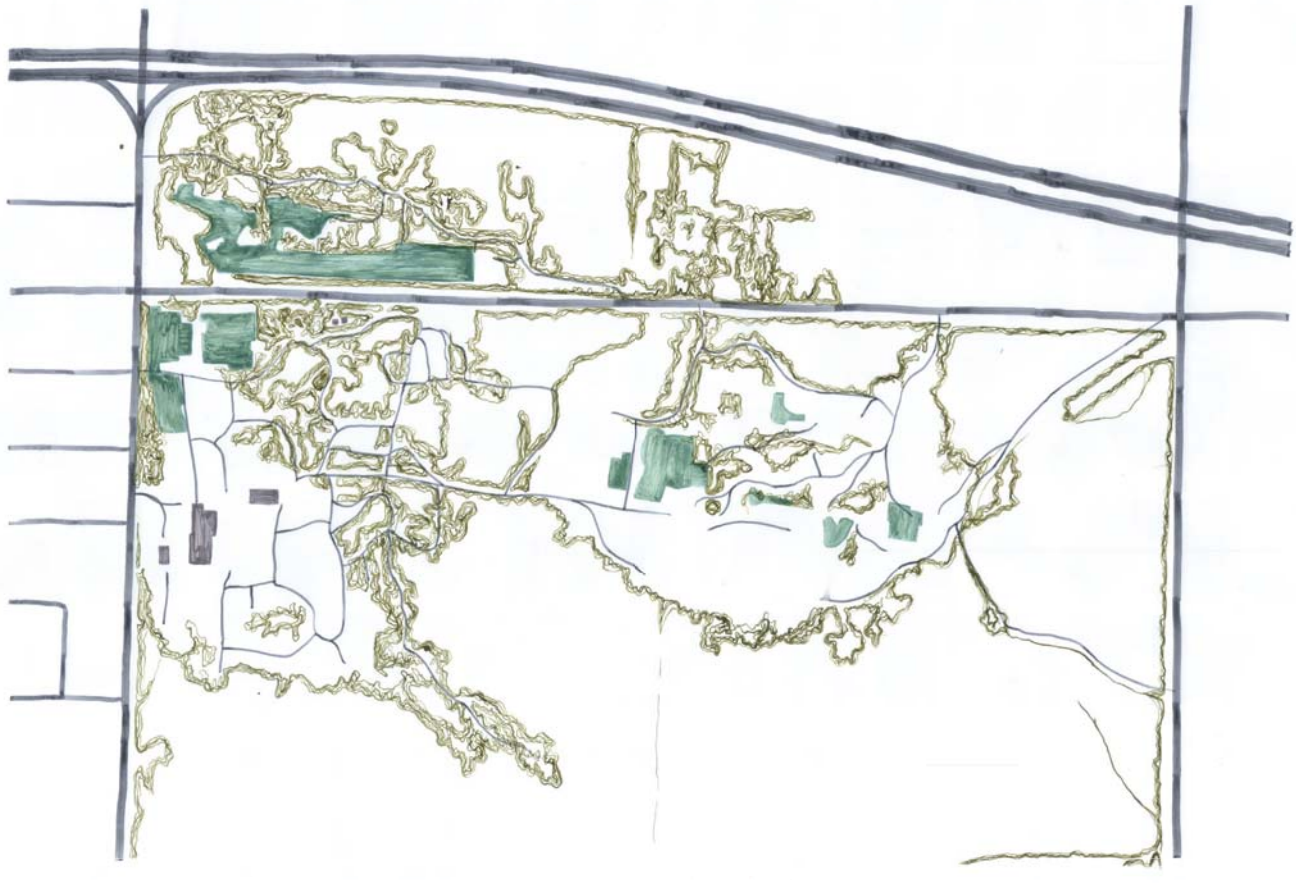
Today, nature is often defined as a pristine ideal of what the world was once thought to be (see Oates, 2003 and Oelschlaeger, 1991), or it is thought of as "that residue either left over from or unassimilated to the cultural… its cultural waste" (Grosz, 2001, p. 97). In 1964 the United States Wilderness Act defined wilderness as a place "untrammeled by man, where man himself is a visitor who does not remain" (cited in Oates, 2003, p. 26). However this romantic and idyllic place only exists in our minds, for humanity has been present on the Earth and trammeling its surface since 3,700,000 BCE. One cannot pass through an environment without altering it some way - crushing the ground plane, breaking twigs, dispersing seeds, and leaving wastes.

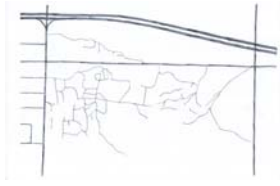
The continual destruction of the earth today is the consequence of thinking of nature as extraneous to the human condition or fuel for our consumption (Pope, 2003). When landscapes are unable to meet the imagined pristine ideal that the word nature embodies, they are converted into something considered more economically productive. Fortunate for developers, this pristine ideal of nature is nearly impossible to define and protect.

The fractalization of the world due to agricultural and industrial practices has lead to a culture that can be characterized as "psychically numb… anesthetized, we no longer gasp in sudden wonder, inspire, or become inspired as the beauty of the world enters us, for we are artificially numbed" (Sewall, 1999, p. 67). With this sedated vision, the Western vision of humanity and landscape exists within a broken perception of the world, not seeing the entwined nature of our being. Therefore a full range of potential embodied experiences - previously achieved through perception interwoven with landscape - is disabled. Instead, we continue to erect the physical and epistemological fences and boundaries that sustain a discontinuous and non-reciprocal relationship with nature (Sewall, 1999). Due to this disjunction, Western culture is blind to "the ways in which the world is woven together, the ways in which we are held within rich webs of more than human relationships (p. 124). As Jackson (1984) wrote:

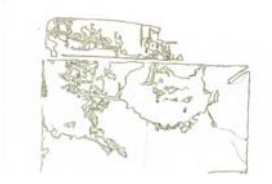
> When we see how we have succeeded in imposing our own rhythms on nature in the agricultural landscape, how we have altered the life cycle of plants and animals and even transposed the seasons, we become aware of how dangerous a role we have assumed, and there are many who say that salvation of the landscape thus depends on our relinquishing this power to alter the flow of time and on our returning to a more natural order. But the new ordering of times should affect not only nature, it should affect ourselves. It promises a new kind of history, a new, more responsive social order, and ultimately a new landscape. (cited in Phillips, 1998, p. 110)

This new relationship with landscape potentializes the enfolding of humanity back within the constructs of nature, and a re-awakening of the wholeness that we once possessed.





ROADWAYS & PATHS



VEGETATION

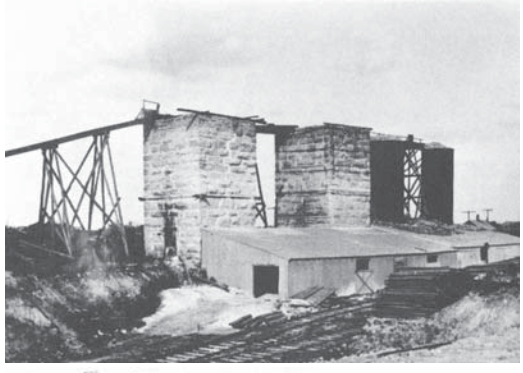
BUILDINGS

WATERWAYS

An inventory of elements with in the site of Gillis Quarries in Garson, Manitoba.

Gillis Quarries in Garson, Manitoba, is a place where nature can be witnessed as a result of the acts of humanity. The rough-hewn stone and its landscape holds the evidence of the aforementioned histories, the evolution of beings, geological change, and glaciation.

In 1823, Major Long first noted the presence of the mottled limestone of Manitoba along the banks of the Red River in Selkirk. By 1880 limestone was being quarried in East Selkirk and utilized in the building foundations within the neighbouring city of Winnipeg. At this time, the layered stone had been used to construct the walls and warehouses of Lower Fort Garry as well as Saint Andrew's Anglican Church. The sea creatures embedded within the stone structure continue to hear the voices of worshipers today, making the church the oldest still in use in western Canada (*Garson – then and now,* 1990).



crane lifting stone

Garson Quarry 1911

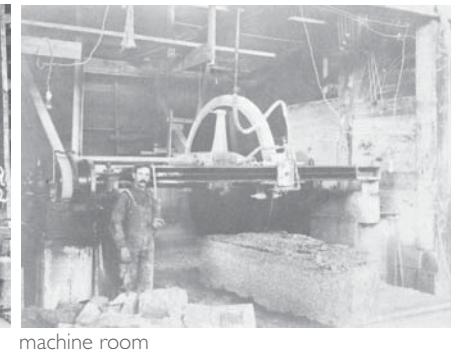
lime-producing kilns

Wallace Sandstone Company - 1917

cord wood for burning

cart full of rubble to be burnt in kilns

planing and polishing stone



machine room

Historic imagery of the quarrying activity in Garson, Manitoba. (images from *Garson – then and now*, 1990, permission provided)

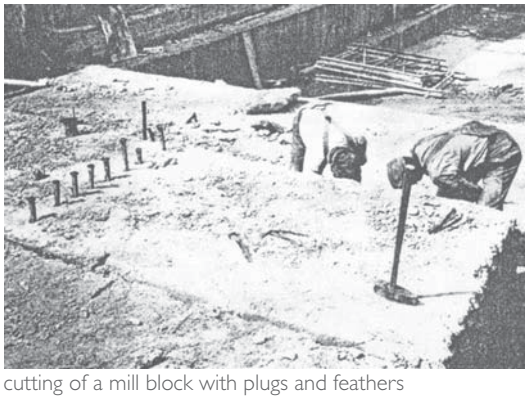
While piercing deep into the land in search of potable water, John Gunn, a farmer in the Garson and Tyndall area, circa 1896, encountered a rich deposit of limestone. After Gunn's chance discovery of the stone's presence in Garson, many farmers in the surrounding area began to quarry the stone. Within two years, William Garson opened a large quarry in the town. In 1912 Garson Quarry was sold to Peter Lyall Senior and operated under the name Wallace Sandstone Company. By 1914, Garson Quarry was the largest of three quarries employing 250 workers. The two remaining quarries, G. W. Murray Quarry and Tyndall Quarry Company, employed less than half that amount at sixty and sixty-two workers, respectively. August Gillis, foreseeing the prosperous nature of the stone, purchased Gunn's quarry on a forty-acre lot of farmland in 1915 (*Garson – then and now,* 1990).

During the Second World War (1939 to 1945) the Western Sandstone Company ceased to operate until Sam & Mal Juravsky renewed the business and activity at the quarry. Tyndall Quarry Company shut down in 1957, after the death of one of the owners. However, Gillis Quarries continued on with great success, erecting an on-site finishing plant in 1968 and purchasing the original site of the Garson Quarry from Sam & Mal Juravsky in 1973. Over the nearly hundred years of operation, Gillis Quarries Limited has expanded its holdings from a modest lot of farmland into 1800 acres of quarryable land (*Garson – then and now,* 1990).

Garson Quarry swimming hole

Garson Quarry 1943-45

Prof. Wallace of the University of Manitoba and Dr. Field's Geology class of Princetone University - 1927



cutting of a mill block with plugs and feathers

Gillis Quarry

aerial of Gillis Quarry - 1970

Historic imagery of the quarrying activity in Garson, Manitoba. (images from *Garson – then and now,* 1990, permission provided)

For nearly 200 years, the land in Garson, Manitoba has been quarried. Through this act of excavation the quarry workers and their customized machineries have been releasing the stone and its Ordovician histories from capitvity, allowing them to be experienced within constructions throughout the world. The stone quarried in Garson has been used in the construction of buildings across Canada as well as many other countries. Most notably it can be seen on the Manitoba and Saskatchewan Legislative buildings, Saint Rochs Church in Quebec City, the Lake Louise and Banff Hotels, the interior structures of the Ottawa Parliament Buildings, as well as on the facade of the Canada House in Trafalgar Square in London, England (*Garson – then and now,* 1990).

"We in Garson are very proud of our limestone. Gillis Quarries today has only 65 employees, but like David taking on Goliath, they have made their mark on the country" (*Garson – then and now,* 1990, p.xiii).

Releasing the stone from the landscape of Gillis Quarries, in Garson Manitoba.

The workers of the Gillis Quarries scrape away the earthy ground-surface of the desired excavation site in order to expose the limestone deposits beneath. The soil is then dragged away. Releasing the stone from its ancient and sedimented home is aided by machinery. Large circular diamond saws cut two or three strata layers deep into the uncovered limestone surface, sectioning the limestone into strips with vertical channels. Explosive power is used to remove a key block - the empty chasm used a reservoir for till and water seeping from the cut stone. The stone blocks are raised from their strata by wedges thrust into drilled horizontal holes located between to strata layers. Where once hooks and massive chains attached to wooden derricks, a steam-driven cable hoist, loosened and lifted or dragged the blocks away, large forklifts and trucks now remove and transport the blocks from their historic resting place to the dressing mill (*Garson – then and now*, 1990). In the early 1900s a dressing mill was constructed on the Garson Quarry property, it is in this plant that the stone is further cut, ground, shaped, and polished before it is shipped to the construction site of its destined building. The fossilific beings held within the mottled limestone sedimentation are now forever displayed to the curious eye.

Vegetation mingling with the excavated stone of Gillis Quarries, of Garson, Manitoba.

Humanity and nature appear to be seamlessly blended here at the quarry. No one element is dominant or in control. As the machinery digs deeper into the stone, vegetation creeps up and colonizes abandoned excavations. In a seemingly inhospitable site, I viewed evidence of the tenacity of nature - saplings spring up in the small fissures in the stone, nourished by the water that filters down through the layers of limestone and lightly cascades down the quarried walls. Witnessing the harmonious equilibrium present at Gillis Quarries has prompted me to re-evaluate my understanding of the concept of *nature*.

If our perception of the world is determined through our cultural upbringing, then it is this understanding that influences our ability to engage with the environment. Looking at the activities of humanity through a historic lens, as described here previously, permits one to see a pattern of the extraction of human experience from the realm of nature. In viewing humanity from this perspective, the landscape, which can be understood as everything within the surrounding environment, merely exists as supporting material for human existence (Oelschlaeger, 1991, p. 7-8). Furthermore, it is possible, as Howett states, that "our customary ways of looking at the world actually blinds us to the reality of what is there, waiting to be known intimately and rapturously" (Howett, 1993, p. 61) Equally, Berman (1988), in his work *The Reenchantment of the World*, argues for a participatory consciousness for humanity:

> For more than 99 percent of human history, the world was enchanted and man saw himself as an integral part of it. The complete reversal of this perception in a mere four hundred years or so has destroyed the continuity of the human experience and the integrity of the human psyche. It has very nearly wrecked the planet as well. The only hope, or so it seems to me, lies in a reenchantment of the world. (p. 23)

TRAVERSING

traverse noun

Movement across or through; a manner or means of doing this…
(Shorter Oxford English Dictionary, 2002, p. 3335)

one, two, three, breathe. one, two, three, breathe. one, two, three... Learning the front crawl requires exacting alternation and repetition, and for me clear vision. With sputtering exhales and choking inhales, my nose, throat, and lungs sting and ache from the constant assault of the chlorinated water. However, with the assistance of goggles, my eyesight in the water clears and with it my inability to remember to never inhale while my face is under the water. Now: one, two, three, I lift my face from the water and draw air into my lungs. I plunge my face back into the water. I watch as the small ceramic tiles glide away beneath me. One, two, three... My arms reach forward, around, and back along my body, propelling me forward, my legs kicking, assist behind me. I glide, reaching forward with one arm, turning my head to the side; breathe... a rhythm is generated. one, two, three, breathe. one, two, three, breathe. one, two, three, breathe...

traverse verb

verb intrans. Move across, cross (Shorter Oxford English Dictionary, 2002, p. 3335).

so then, what is nature and how does humanity interact with it?

All things, from the rocks and minerals that make up the earthy matter of the soil, to the water that flows through the trunks and limbs and satiates flaccid leaves of trees and plants, to the atomic particles that constitute the atmospheric air that nourishes the soft, fleshy coverings over the bones and muscular structures of animals, are connected. As Clement (2006) declares, "Everything, absolutely everything, interacts" (p. 90). Heidegger (1984), in an article entitled *The Origin of the Work of Art,* writes, "all things on earth, and the earth as a whole, flow together into a reciprocal accord" (p. 271). No one thing is ever truly and wholly separate from other things, but instead each mingles with and within the surrounding elements. This is akin to the theory of thermodynamics, where energy is never created nor destroyed, but merely altered, shifted, and moved from one location or constituent to another (Moore, Stanitski, & Jurs, 2002).

Abram, a philosopher and cultural ecologist, extends this notion of reciprocity through his characterization of the "real world":

> The 'real world' in which we find ourselves... is not a sheer 'object', not a fixed and finished 'datum' from which all subjects and subjective qualities could be paired away but is rather an intertwined matrix of sensations and perceptions, a collective field of experience lived through many different angles. The mutual inscription of other's in my experience, and... of myself in their experiences, effects the interweaving of our individual phenomenal fields into a single, ever-shifting fabric, a single phenomenal world or 'reality'. (Abram, 1996, p. 39)

It is this phenomenal ideal: the blending of perception and experiences between all things, that nourishes my understanding of nature.

As phenomenology is a philosophy of lived experience, understanding its principles begins through an appreciation of the place of the corporeal, or the physical self, in the world. Merleau-Ponty, a prominent figure in this philosophical school of thought, emphasizes the importance of the body in his writings. For him the corporeal being cannot be overlooked for it is "the very subject of awareness" (Abram, 1996, p. 47). As Grosz notes, Merleau-Ponty further emphasizes this notion with his statement, "The body is not an object. It is the condition and context through which I am able to have a relation to objects" (Grosz, 1994, p. 86). Merleau-Ponty characterizes the sensing body not as a static piece of equipment, but rather as a participatory and receptive being that continually evolves its relationships to all things in the world, and to the world in itself (Sewall, 1999). This participatory and reciprocal process of sensual relating is often referred to as human perception.

Abram (1996) describes embodied perception in *The Spell of the Sensuous* as entering "into a sympathetic relation with the perceived" (p. 54). This merger is possible because the sensing body is entwined with all other aspects of the world, and, by extension, with the world itself:

> *We* can experience things – can touch, hear, and taste things – only because, as bodies, we are ourselves included in the sensible field, and we ourselves are entirely a part of the sensible world that we perceive! We might as well say that we are the organs of this world, flesh of its flesh, and that the world is perceiving itself *through* us. (p. 68)

Sewall, a student of Abram, provides a poetic description of this concept in her work, *Sight and Sensibility*:

> There is nothing of me that is not of this earth, no split instant of separateness, no particle that disunites me from the surroundings, I am not less than the earth itself. The rivers run through my veins, the winds blow in and out with my breath, the soil makes my flesh, the sun's heat smolders inside me… the life of the earth is my own life. My eyes are the earth gazing at itself. (Sewall, 1999, p. 267)

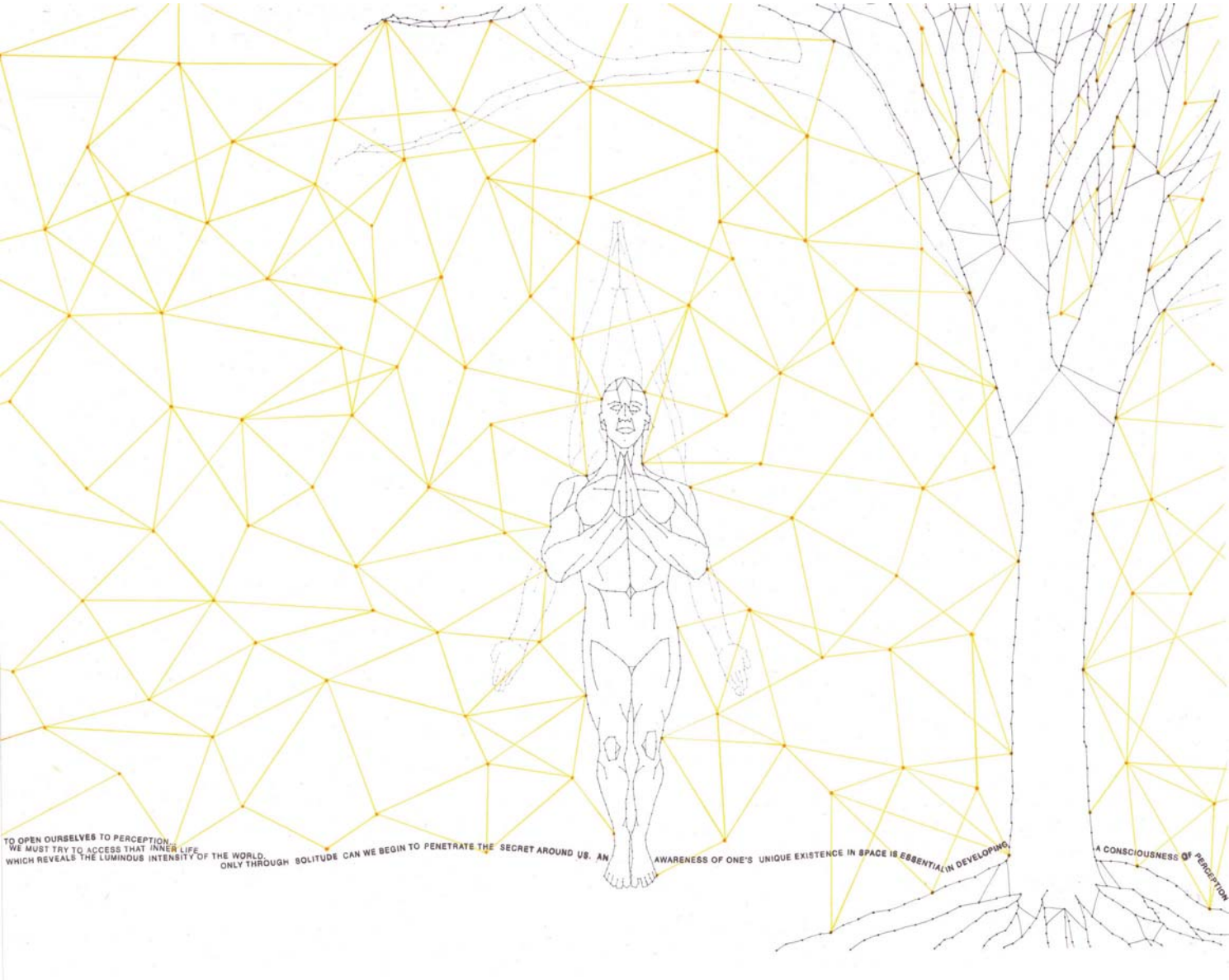
Sewall's description emphasizes this notion of being truly engaged in the world, completely attuned to surrounding rhythms and entirely entwined with all of matter. For Sewall, it is through our active senses that we are able to be "fully, wholly, and utterly in the world" (p. 14); to feel completely intertwined within 'the flesh of the world' (p. 43).

The dissolving world of Gillis Quarries, in Garson, Manitoba.

traverse verb

verb trans. fig. Go through (life, time, the mind, etc.) (Shorter Oxford English Dictionary, 2002, p. 3335)

Ellin (2006) posits five essential qualities for design that are integrated and enmeshed within the world in her book, *Integral Urbanism*. The qualities of *hybridity* and *connectivity*, *vulnerability*, *porosity*, and *authenticity* (Ellin, 2006) each present a successive dissolving of the boundaries between elements and the things of the world. This dissolving leads to an intertwined experience through engaged senses.



Hybridity and connectivity is the comprehension of the interweaving characteristic of the world. It is knowing that your presence is required for the existence of others.

hybridity and connectivity:

Hybridity and connectivity can be described as concepts that illustrate an understanding of the physical structures of the world. These terms aid in comprehending the extension of one's own body into space and the response of the structures and bodies of the receiving and surrounding elements. By understanding the entwined disposition of the world we, as Holl (2006) explains, are able

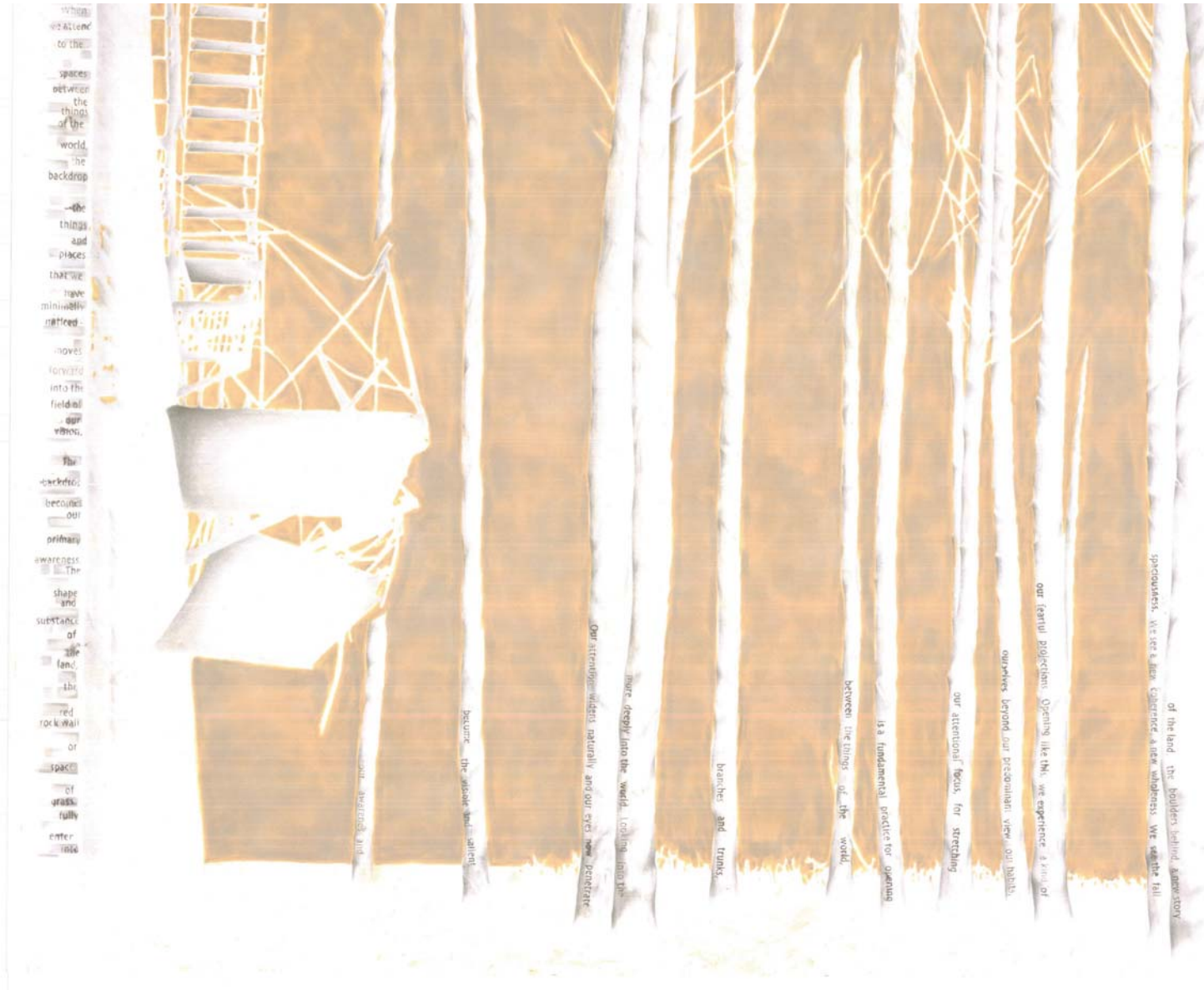
> to open ourselves to perception … We must try to access that inner life which reveals the luminous intensity of the world. Only through solitude can we begin to penetrate the secret around us. An awareness of one's unique existence in space is essential in developing a consciousness of perception. (p. 40)

Recognizing the limits of our own bodies allows us to accept the relational possibilities of other bodies. Rotundi (2003) writes about these relational qualities of the world in, *Its All One Thing*. Rotundi argues that the outer world is indispensable for the existence of the inner, more personal, world; that they are, in essence, two facets of a single entity.

> The land could not be distinct from personal or collective identity. It was not merely coexistence, it was co-creation. The organism and the environment were not separately determined. The environment was not a structure imposed on living beings from the outside but was in fact a creation of these beings. The environment was not an autonomous process but a reflection of the biology of the species. (Rotundi, 2003, p. 65)

In other words, the world cannot exist without the input of the organisms that so readily depend upon it for survival.

It is this interweaving, this connectivity, which is present between the environment and organisms, that is crucial to the existence of both. The environment changes in response to the organisms that dwell within it, and in turn, the organisms evolve, responding to the altering environment. It is through this process that the dynamic characteristics of the world become more and more evident. Our attention to the relational qualities of the world is essential in generating a holistic perception and evoking a full presence within the world. This participatory consciousness (Berman, 1981) is so much more than just blind existence; it is engaged experience. Engaged experience is the orientation of oneself in the world, it can be described as knowing who you are and how you fit within the larger constructs of the world. It is your understanding that your presence is necessary for the existence of others. Since all things are interdependent, there is a chain of life - from the microscopic organisms that live off of your skin, to the children you may bear - that is reliant upon your existence for survival.



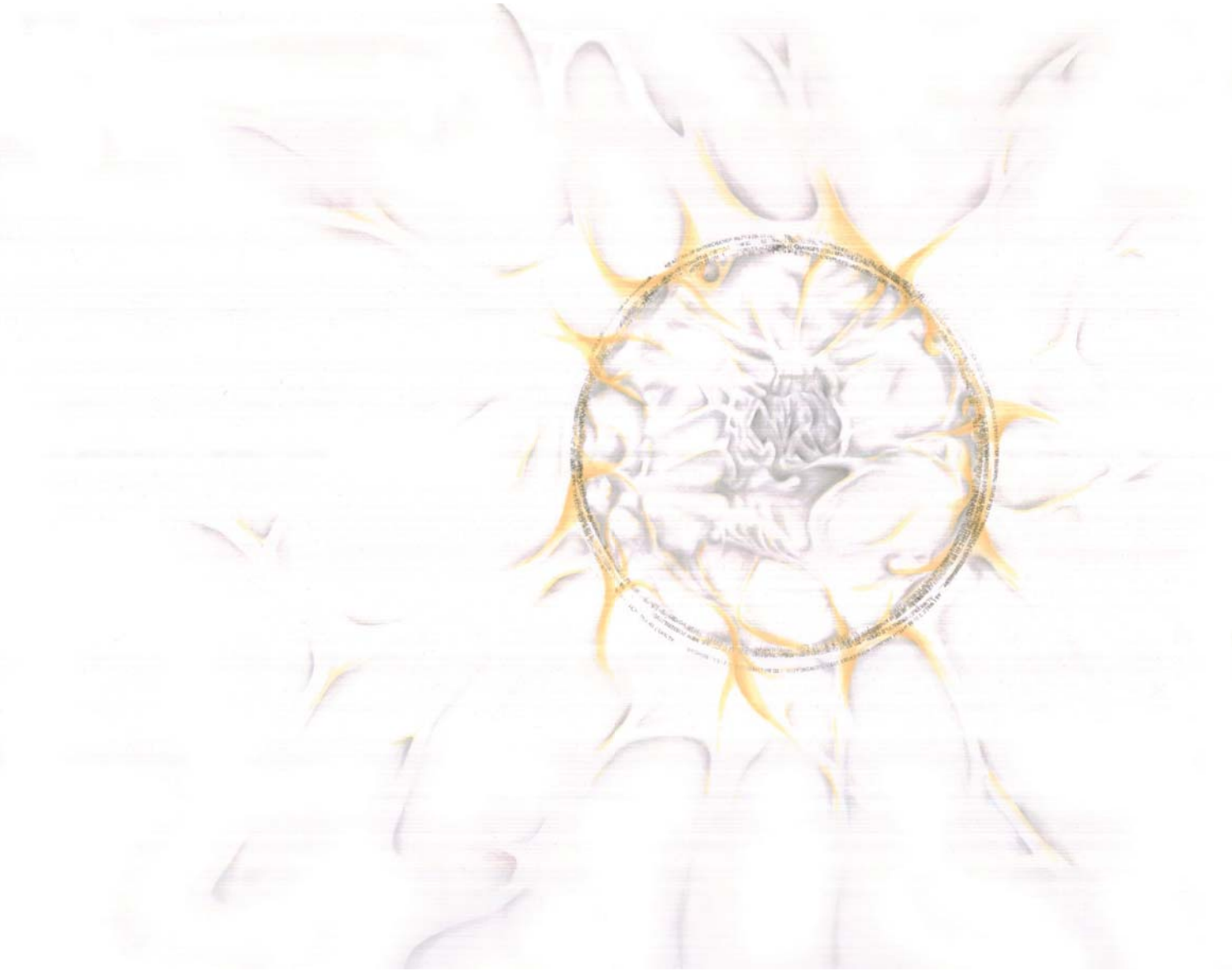
Vulnerability is the highlighting of nature within the interstitial spaces of the world by engaging our senses.

vulnerability:

In order to achieve this interconnected mode of thought, one must begin by truly looking, feeling, hearing, smelling, and tasting the world. Activating the senses allows us to become vulnerable to the world around us. Vulnerability is a quality that opens the world allowing us to sense the enchanting qualities that are present everyday. We need not travel to some untouched landscape to awaken to the magic of our surrounding world. All that is required of us is to breathe, to feel our lungs expand as the air fills them and nourishes our body, to catch the fragrant and moist smells of the earth. We ought to look at the plant-life around us, turning and reaching to the warmth of the sun, seeing the shadows that dance across our lives, across the hardwood and linoleum floors of our homes, through the lawns of our yards and parks. We should attune our ears, to hear clambering commotion of fowl as they fly away from fields and retention ponds, their wings reaching for the sky. We need only to sense the moments of our days. As Sewall (1999) writes:

> When we attend to the spaces between the things of the world, the backdrop – the things and places that we have minimally noticed – moves forward into the field of our vision. The backdrop becomes our primary awareness. The shape and substance of the land, the red rock wall or space of grass, fully enter into our awareness and become the visible and salient. Our attention widens naturally and our eyes now penetrate more deeply into the world. Looking into the branches and trunks, between the things of the world, is a fundamental practice for opening our attentional focus, for stretching ourselves beyond our predominant view, our habits, our fearful projections. Opening like this, we experience a kind of spaciousness. We see a new coherence, a new wholeness. We see the fall of the land, the boulders behind, a new story. (p. 186)

When we open ourselves in this manner we are vulnerable, and we become able to perceive the importance of the spaces between the self and the elements of the world. As these interstitial spaces become highlighted we can comprehend that nature is not just within the elements of the world themselves, but is also present in the spaces between. In actuality, it is within the interstitial spaces where relationships occur, where nature resides.



Porosity describes the reciprocity of the interstitial spaces of the world. This leads to a breakdown of borders and boundaries that separate all the elements of the world, allowing them to blend together.

porosity:

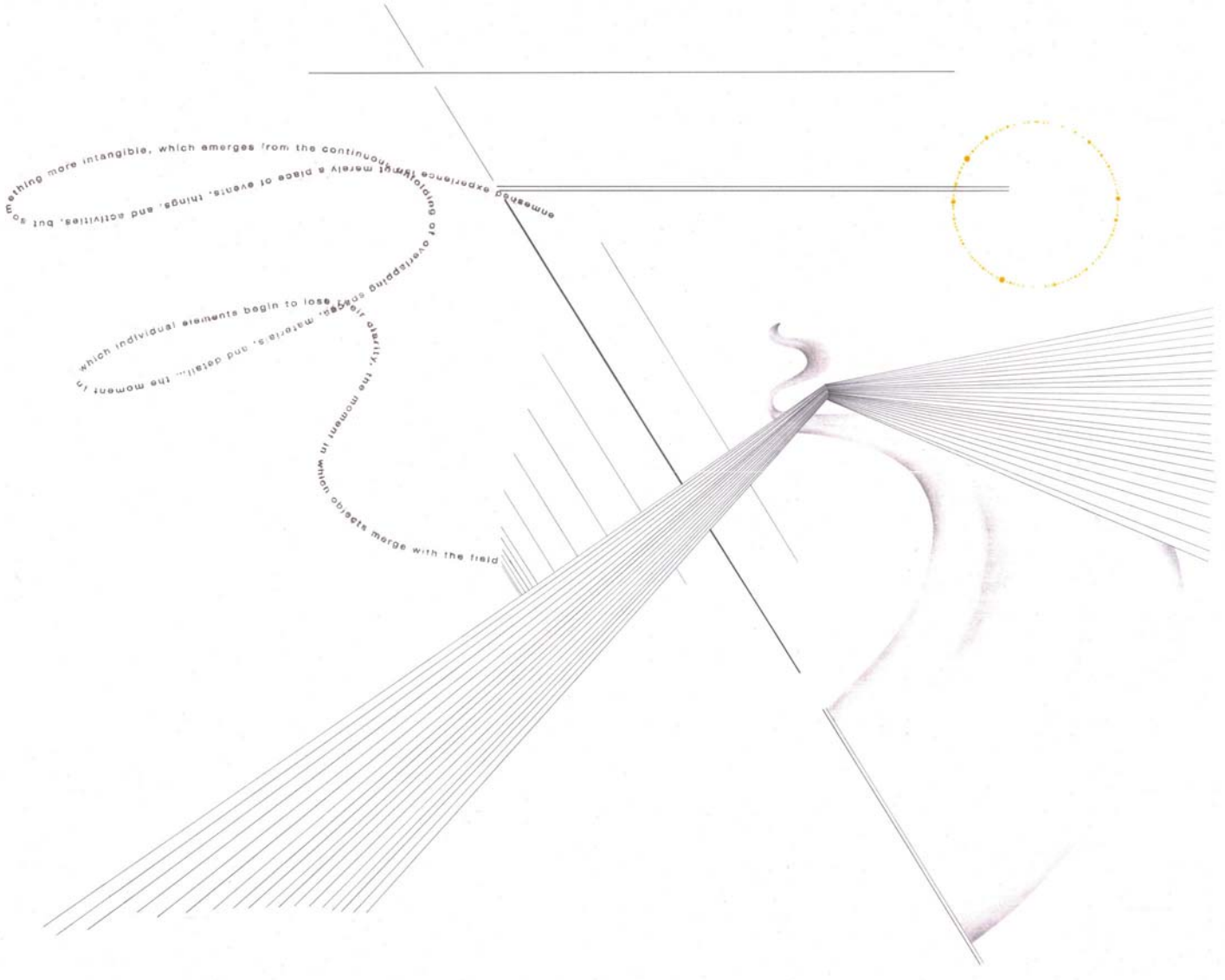
Grosz (2001) defines the significance of the space between the things of the world:

> the space of the in-between is that which is not a space, a space without boundaries of its own, which takes on and receives itself, its form, from the outside, which is not *its* outside (that would imply that is has a form) but whose form is the outside of the identity, not just of another… (p. 91)

The reciprocal space of the in-between is dependent upon the structures adjacent to it - these help to define its formlessness. This is a space where the elements of the world gently entwine together, a porous space where the boundaries between elements begin to fall away. As Heidegger writes "a boundary is not that at which something stops, but, as the Greeks recognized, the boundary is that from which something beings its essential unfolding" (Heidegger, 1978, p. 332). Like the elusive horizon described by Casey, these boundaries are "never a sheer border or perimeter… [but] an arena of interchange" (Casey, 2007, p. 69). The boundaries between elements are dynamic, shifting and receding in response to the morphing of adjacent forms. Much like boundaries of cells within living bodies, these spaces are:

> open and indeterminate; more like membranes than barriers, they define a surface of metamorphosis and exchange. The breathing, sensing body draws its sustenance and its very substance from the soils, plants, and elements that surround it; it continually contributes itself, in turn, to the air, to the composting earth, to the nourishment of insects and oak trees and squirrels, ceaselessly spreading out of itself as well as breathing the world into itself, so that it is very difficult to discern, at any moment precisely where this living body begins and where it ends. (Abrams, 1996, p. 46-47)

These porous attributes provide an opportunity for invasion of consciousness. They allow for the extension of elements into the void spaces existing between them. This creates an opportunity for penetration, for nature - the void or in-between, to infiltrate us and for us to penetrate into nature in turn.



Authenticity describes nature as the life-force flowing through the relationships between all the matter of the world.

authenticity:

This shifting, enfolding, and unfurling matrix of interdependent elements and relationships characterizes the limitlessness of experience and perception. Perpetual sensorial movement connects us to all of the things of the world and even to the cosmos itself; it leads the things of the world into subtle contact and conversation with each other (Abram, 2007, p. 163). Authenticity delves into the experiential qualities of elements and space, akin to the idea of *genius loci* or the 'spirit of place'. Genius loci is a distinct quality or character that is unique to each and every environment (Norberg-Schulz, 1979). This character is created through an assimilation of a diverse assortment of influences, such as geological and geographical attributes as well as social, cultural, and historical traits (Motloch, 2001, p. 37). It is the cumulation and layering of these aspects that evoke the essence of a site and permit one to have a enmeshed experience. Holl (2006) describes this phenomena in *Questions of Perception*,

> Enmeshed experience is not merely a place of events, things, and activities, but something more intangible, which emerges from the continuous unfolding of overlapping spaces, materials, and detail… the moment in which individual elements begin to lose their clarity, the moment in which objects merge with the field. (p. 45)

Nature is located in the merging quality of elements. It is the combination of elements, the overlaps and the subtle separations between that permit a life-force to flow through. Nature resides within this relational life force; it is not the individual elements, but the relations between the matter of the world. It exists at all scales, from the atomic material that composes elements to the tectonic plates that move the surface of the Earth. Nature is all things, in all places, at all times.

The interconnected tendencies of Gills Quarries in Garson, Manitoba.

traverse verb

verb trans. Cross (a mountain, river, etc.) in traveling; journey over, along, or through; cover (a distance) in journeying. (Shorter Oxford English Dictionary, 2002, p. 3335)

The world is a series of permeable and impermeable boundaries - a shifting, woven-web of matter (Abram, 1996; Casey, 2007). Within this matter, humanity and all of its constructs are merely a subset, wholly and unavoidably, embedded within the greater reality of the physical world. Nature can to be understood as the relationship between the matter of the world, where the interactive and enmeshed existence of elements permits a reciprocal experience. This reciprocity allows for equality between all the things of the world. For "our sentient bodies are entirely continuous with the vast body of the land, that 'the presence of the world is precisely the presence of its flesh to my flesh'" (Abram, 1996, p. 68-69).

As I walk through Gillis Quarries, the interconnected tendencies of humanity within landscape are made evident. I can visualize the enfolded space of the world, the shifting of boundaries and matter. No one element ever stands alone, fully and complete within itself, but instead participates and interacts in a multitude of ways with everything around it. For example, the limestone, in a highly reductive manner of speaking, can be understood a network of historical, existing, and even future stories. The limestone formed from the collection and compression of once-living sea-matter, now acts as a stone base to support living soil and vegetation. At the same time the limestone is excavated and used as a material for the construction of structures that will witness new events and stories. Reading about the interconnected disposition of the world, and even viewing through abstract imagery such as photography is not enough. This intertwined characteristic of the world needs to be experienced and perceived through all of our senses.

As Meyer (2007) writes, "we need design strategies that make visible the past connections between individual human behavior, collective identity, and these larger industrial and ecological processes" (p. 64). Meyer continues by suggesting that a large park situated on a disturbed or industrial site:

> provides an immersive, aesthetic, collective experience in a vast landscape, one too large to grasp at a glance and so extensive that it implicates multiple systems and processes. This somatic, haptic, and yes, aesthetic experience transforms abstract knowledge into embodied knowledge. It has the capacity to move one to act in ways that reading might not. (p. 71)

The landscape of Gillis Quarries in Garson, Manitoba.

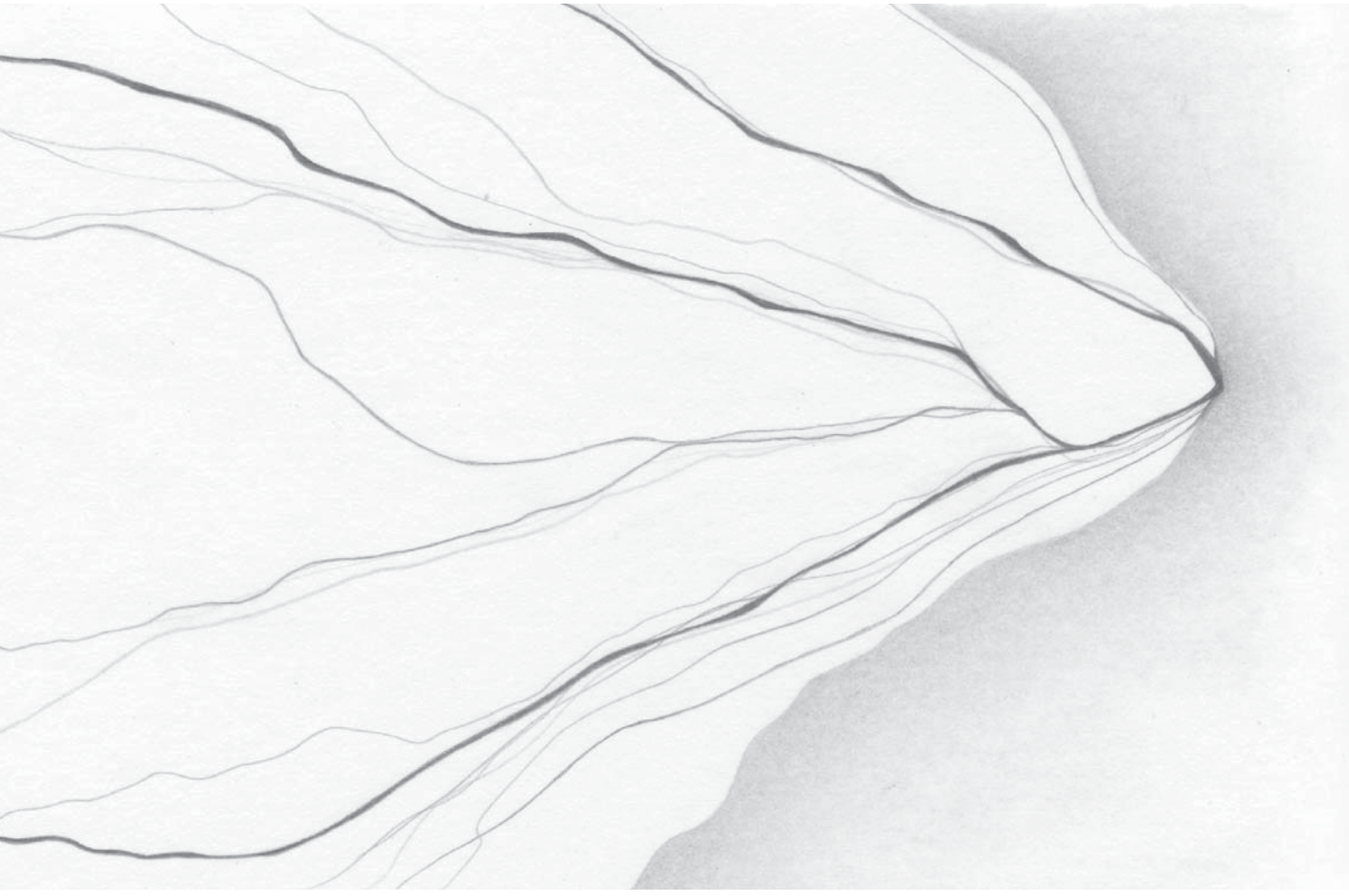
Situating a large park on a site such as Meyer describes, could offer the ability to fully engage a visitor. By traversing a large park, one's perception can be sensorally activated, causing one to become fully immersed within in an experience. Revealing the *nature* in a disturbed site, like that of Gillis Quarries, can aid people in seeing *nature* in their everyday lives and may even alter their "state of mind… attitude, feelings, images, [and] narratives" (Beck, ecological enlightenment, in Meyer, 2007, p. 71). A large park maintains a unique cultural and environmental experience, which is able to "make visible the unspoken and invisible relationships between abstract systems" (p. 80). Using a large park to expose the *nature* of the world, the interwoven tendencies of all elements, requires the conception of the site as:

> an aesthetic experience of unspoken and invisible relationships that can overcome the 'blindness of everyday life' and the self-centeredness of consumer society. It urges us to imagine the large park as the multitudinous field of individual spatial practices whose intersections and overlaps improve one's attentiveness and offer a sense of collective activity and 'conflictual coexistence'. (p. 80)

DRAWING

draw verb
Cause to move, pull… (Shorter Oxford English Dictionary, 2002, p. 753)

I am at ease in the water; a place I once found so terrifying is now almost ritually a part of my routine. I crave the water, and when I am not here I think of it constantly. It is a physical and psychological release, an escape. The constant attention to my physical state and the need for continuous movement to remain afloat, permits my mind to interrupt its incessant wanderings and focus on the present. The act of swimming binds my mind to my body, allowing the two to exist as one.



Pulling elements from the edges of our awareness.

draw verb

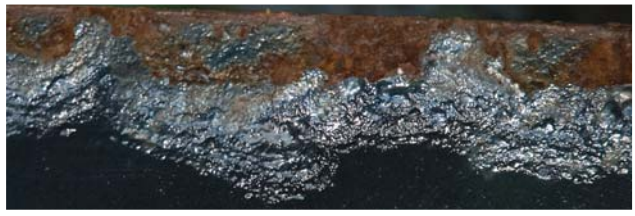
verb intrans. Come *together;* move or make one's way *towards*…
(Shorter Oxford English Dictionary, 2002, p. 753)

Every particle within the universe is connected and interdependent. Everything is related as a part of a living whole. In order to access and appreciate the immensity of this notion, one must closely attend to the world around them. As Sewall describes, "attention weaves together mind and matter… we don't perceive anything without it, yet unwittingly we often let it languish, diminish, go unconscious" (Sewall, 1999, p. 111). To truly attend to the world, to integrate the mind with surrounding forms and matter, takes effort. To attend is to perceive, to experience and to understand. Each individual accesses this method of interaction in his or her own way. Permitting oneself to be vulnerable to the powerful environmental activities and motions that are continually occurring around them can optimize interconnectivity.

For Grosz, this attention comes to the seeker by the way of art. *In, Chaos, Territory, Art: Deleuze and the Framing of the Earth*, she writes:

> Art is the opening up of the universe to becoming – other… Art is the most direct intensification of the resonance, and dissonance, between bodies and the cosmos, between one milieu or rhythm and another. It is that which impacts the body most directly, that which intensifies and affects most viscerally. Through the plane of composition it casts, art is the way that the universe most directly intensifies life, enervates organs, mobilizes forces. (Grosz, 2008, p. 23-24)

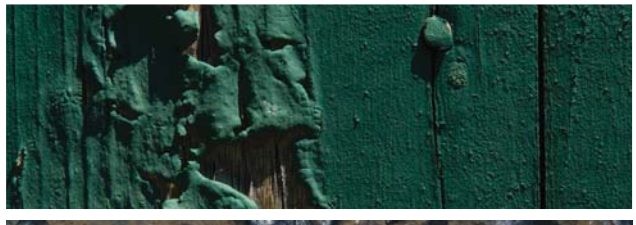
Through the designer's mind set and in the generative act of making one is allowed to access the harmonious equilibria of the universe. Acting through our imagination, we elaborate upon details of the surrounding landscape, navigating through the past and the here-and-now, and pulling elements from the very edges of our awareness (Sewall, 1999, p. 214). As Gaston Bachelard describes, "The imagination is not, as the etymology suggests, the faculty for forming images of reality; it is the faculty for forming images which go beyond reality, which sing reality" (Bachelard, 1987, p. 116).



Colours dance in the daylight while the shadows enhance the crystallized formations of textured materiality.

My eyes searching, become the portals to my other senses.

I fall into the blank spaces, the empty chasms of the images.



I feel space enclose and expand around me, the hilly formations, the caverns,

the sweeping extents are there for my wandering exploration,

landscapes waiting to be known.

I feel the silky, the curling, blistering fabrics of these worlds

skim, abrade, and chafe against the bare flesh of my body. I inhabit this space, this void.

draw verb

verb trans. Devise, contrive; set in order, arrange. (Shorter Oxford English Dictionary, 2002, p. 753)

One way I have learned to sing the world is through the eye of the camera. The use of macro-photography allows for a hyper-awareness of reality. This method of viewing permits an abstraction of an object's identity, as well as a magnification of the presence of nature as the relational life force in and amongst all things of the universe. Viewing objects at a close range removes all context and meaning from their forms and allows the viewer to enter into the images from their own imagination.

By submerging oneself into the mysterious forms depicted here, the viewer may entwine with the objects in an intimate way. They experience moments that might ordinarily be overlooked, activate their imagination, and may even cultivate a new way of seeing. As Saue articulates, "to imagine something, to closely focus one's thoughts upon it, has the potential to bring that something into being... If one can imagine something, then it has at least the potential to exist" (in Sewall, 1999, p. 221).

Drawing is the act of taking into one's body that which exists in the external world, and disseminating that which is exists in one's mind. Taking images inside one's own self and returning them outside again. This is a bodily process. This is drawing. The reason for this series of bodily actions is to acquire the physical literacy which enables us to repeat this cycle of images constantly and without hesitation. As a result, mankind acquires the ability to let images flow in and flow out, easily and freely between one's own senses and the environment.
(Hara, in Germer, H. & Neeser, T., 2010, p. 178)

Akin to the act of imagining is the act of drawing. Hill, in, *The Language of Drawing*, examines this action:

> Drawing turns the creative mind to expose its wanderings. Drawing discloses the heart of visual thought, coalesces spirit and perception, conjures imagination; drawing is an act of meditation, an exorcism of disorder, a courting of artistic ideas; above all it is the lean instrument of visual formulation and the vortex of artistic sensibility. (Hill, 1966, p. 1)

Drawing is an act of fusion, a merging between the self and the experiential qualities of the world. It is the accessing of an individual's raw perception, their initial and unprocessed reactions. It is also an outlet and a language for describing contact and coexistence with the surrounding universe. Hill (1966) elaborates on this idea when he defines the language of drawing as the means through which we may pursue an understanding of experience.

> Drawing diagrams experience. It is a transposition and a solidification of the mind's perceptions… a visual thought process, which enables the artist to transform into an ordered consequence what he, perceives in common (or visionary) experience. …drawing is actually a form of experiencing. (Hill, 1966, p. 8)

A continuous thinking process is linked with the action of the body through the activity of drawing. As Rosenberg describes, in drawing, "physical and mental processes are linked isomorphically and crimped together. The process of drawing is at one and the same time mental and physical" (Rosenberg, 2008, p. 109). The entwining of mind and body with the surrounding environment permits access to places out of reach through normative means of reasoning alone. Through this unification, one has the ability to extend generative thoughts attuning the mind to the limitlessness of the imagination. This allows us: "to empty one's mind of all thought and refill the void with a spirit greater than oneself" (Hill, 1966, p. 5). Rosenberg (2008) further postulates that:

> in an ideational drawing one tries to release from grasp what one knows, re-view what is to be know and how it can be known, and develop the otherly arrangements. … the known and the not-yet-known and possibly even the not-knowable work at each other. They operate on one another in much the same way as the sea and land operate on each other - the sea (unknowingly) constantly redrafts the shape of the shore. (p. 112).

A dialogue between the intellectual and instinctual.

Drawing can be construed as thought processes laid bare on a surface. It is a dialogue between the intellectual and instinctual aspects of one's self, the extension of the physical energy of the body out onto the page (Kovats, 2005). Drawing is the physical representation of what goes on in the mind; a visual narrative, where from the drawn line flows one's innermost thoughts and base desires. The language of drawing allows us to converse, to refine, connect, develop, and articulate our thoughts in ways that words cannot. It is not merely a method through which one represents the real world, but an enhanced way for one to *perceive* the world.

> Visual ideas are never born whole from ether. They are the consummation of complete participation in experience. By which we mean total experience, everything - visual and nonvisual, concrete and conjured, empirical and fantastic - that is the configuration of our lives. In order to apprehend meaning in our experience it is essential for us to see, and drawing is the instrument of an inquiring eye that teaches us to see. (Hill, 1966, p. 39)

The rich world of the quarried landscape at Gillis Quarries in Garson, Manitoba.

draw verb

Take in; attract… (Shorter Oxford English Dictionary, 2002, p. 753)

The site of Gillis Quarries in Garson, Manitoba, has a rich characteristic of life to it. There appears to be a delicate balance between water and air - at once visible - suspended and framed, and then invisible - submerged and merged within the stone matrix. A constant tension is present and the air tingles with possibility. When I am at the site of Gillis Quarries, my body too is in tension – moving through the landscape, while my mind is purposely adrift and unfettered.

The alchemy of the site exists in its possibilities and its unnamed history the stories untold and waiting to be uncovered from the rubble of cast-off stone fragments and freed from the encasement of the calcerific rock formations.

Walking through the site on an warm late-summer day, I feel the sun's heat reflecting off the soft pale-coloured stone. Warmth radiates around me, as a gentle breeze rustles the dehydrated leaves of nearby vegetation. The heat engulfs my body, seeming to warm me from the inside out. Gravel crushes beneath my feet, punctuating each step I take along the horizontal cut surfaces of the quarry. Each horizontal level steps downward, reaching into the depths of the limestone deposits. Equipment abandoned for the day, sits waiting to dissect the stone into perfect blocks, or alternatively to crush the discarded limestone rubble into useful gravel fragments. Planes of water reflect the cloud-speckled sky - perfect mirrors embedded within the stone landscape. The water beckons me forward, inviting me to submerge myself within it, I see the water and all I desire is to gently descend into it; to feel the surface engulf me as I engage the watery underworld. I wish to feel the skim of the surface, to feel the level of the water raise up along my body, caressing my skin and limbs with its gentle poetry. The lure of the water pulls me in - seducing me with its promise for simplification and escape. The water seems as if it is a porthole through which I may enter an alternate dimension. Time, it seems, slows on the other side of the crystal-clear and calm meniscus.

The landscape that draws one through Gillis Quarries in Garson, Manitoba. The perfect planes of feathery rock formations, laced with fringes of dark vegetation rustling as a breeze gentle grazes the site and ripples the otherwise glassy surface of the waterways and settling ponds.

Paths meander throughout large piles of stone megaliths that rise from the land like the ruins from another time. Walking along these jagged corridors I glimpse embedded sea-creatures showcased within the stone masses. Gently, a cooling breeze tugs at my hair as it bends and twists the golden grasses that are drying between the stone monuments. Walking here feels like a journey through time or perhaps one without time - this seems an ageless space. I feel a connection when transgressing this landscape, a thread that binds, tying me to this land and its history. The stories whisper on the wind, caressing my ears and filling my mind with whispers that take me on journeys to a time of ancient seas, of ice-bound land, of first settlements, the cutting of stone, and of smoldering heat and burning minerals.

Rustling vegetation - trees reach for and graze the sky with their leafy branches.

Across the blacktop of old Highway 44, a white crushed limestone trail leads through the forest. Trees scratch and graze the sky above, providing shelter from the sun's heat, while moisture radiates up from the rich nourishing soil. Beneath angular and broken stone blocks grace the edges of the path, guiding the way forward and punctuating the scene. My curiosity drives me forward, ever through the landscape, as my mind clambers over the stony mounds of castaway stones. The beauty of this site entrances me. I imagine peeling back the forested layers and revealing the hidden quarried landscape beneath. The lake-water glistens in the distance between the leafy foliage and paths wind and descend to the lake's edge. The stepped edges of the quarry submerge into the deep blue waters of the lake that stretches here along the length of the highway. I too vanish here; my mind drawn deeper and deeper into its liquid depths.

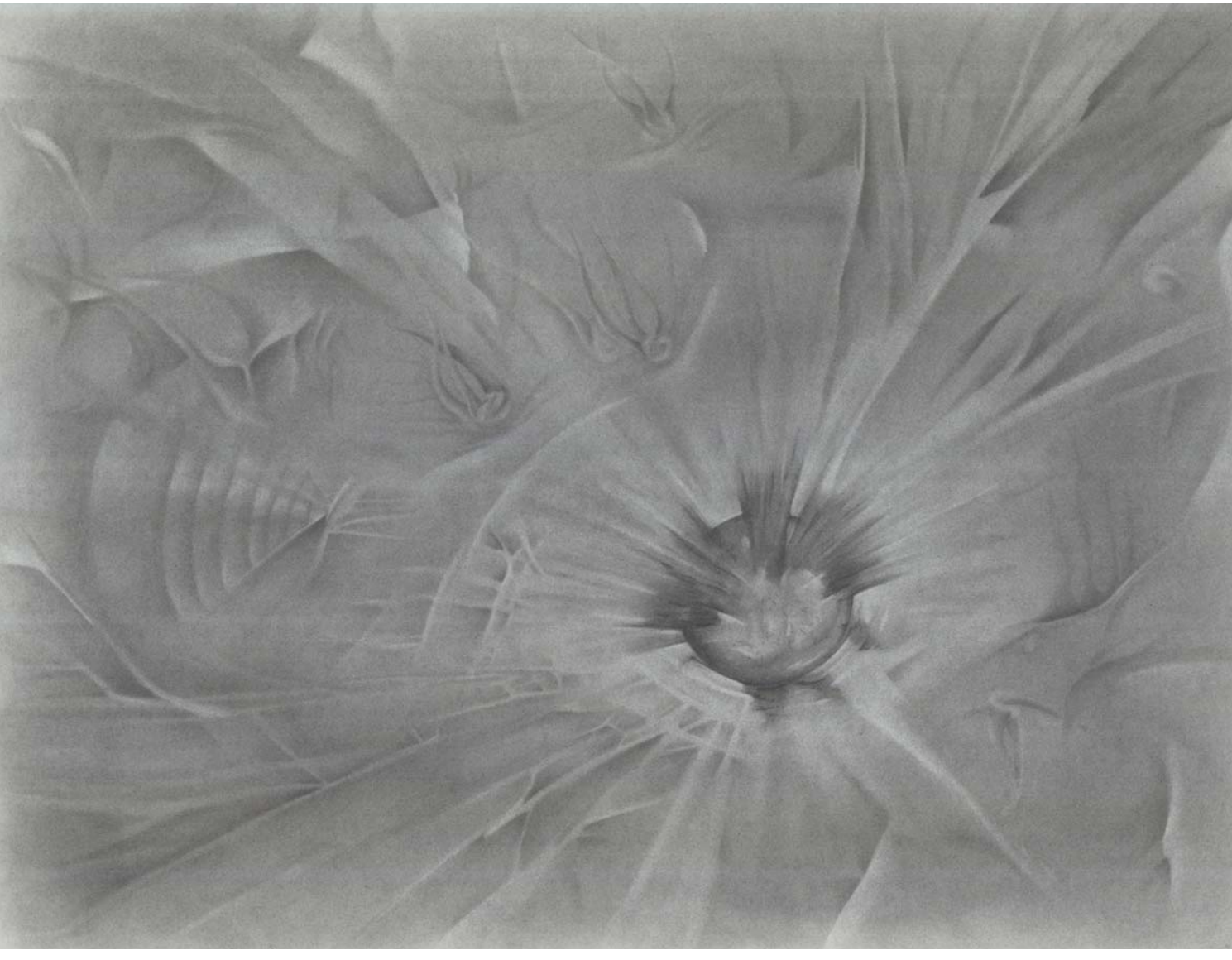
> At the moment we see something beautiful, we undergo a radical decentering… When we come upon beautiful things… they act like small tears in the surface of the world that pull us through to some vaster space… we find we are standing in a different relationship to the world than we were a moment before. It is not that we cease to stand at the center of the world, for we never stood there. It is that we cease to stand even at the center of our own world. We willingly cede our ground to the thing that stands before us. (Scarry, 1999, p.111-112)

GAZING: Submerging self in the voids of space and of the mind

gaze verb

verb intrans… stare vacantly or curiously. (Shorter Oxford English Dictionary, 2002, p. 1077)

Pushing myself to the bottom of the pool. I can't reach. I cannot make myself - my weighty body - sink. The ring sits on the tiled pool floor. Shimmering, its refracted image seems to shift and shudder - even though I know it is stationary. I dive. I slice through the water with my body, its gentle glide against my flesh is refreshing. I push and pull my body, wiggling downwards - reaching. I feel dizzy and my head tingles as the pressure of the water surrounds me. The water engulfs my body, resisting my urgent thrust and the propels me effortlessly to the surface. I move to deeper water to try again. Swirling and dancing, the water continues to resist me. As I come closer to the bottom of the pool, the pressure is overwhelming, I feel dizzy and sick. Turning to the surface I desire air. I need air. But there is only water. The water seems so deep. Looking up, the sheer volume above me is terrifying. Swirling panic, lights, blue, and bubbles, I surface and gasp at the abundant oxygen. Now, with each breath, it is the intake of air, rather than its absence, that makes my head spin. Relief. I dive again...



Looking into the voids of the world, where life begins.

gaze verb

verb trans. Look fixedly at, stare at. (Shorter Oxford English Dictionary, 2002, p. 1077)

the beginning:

> In the beginning' is chaos, the whirling, unpredictable movement of forces, vibratory oscillations that constitute the universe. Chaos here may be understood not as absolute disorder but rather as a plethora of orders, forms, wills. (Grosz, 2008, p. 5)

To gaze into the chaos – where all things are born – is to look into the void. This abyss gestates the beginning of life: the arrangements and configuration of forms and structures brought forth from the multitude of substances floating free. Particles emerge and converge, suspended within a liquid frame. These intertwining liminalities form our whole, our phenomenological existence, all that remains without the corporeal - our reaching consciousness and perceptions. The whirling potentials of chaos surround us, floating and enfolding. The world as our womb - we are submerged within it, connected to life by visible and semi-visible strands. Nurtured, we exist for it, and it exists for us.

The enfolded space of life.

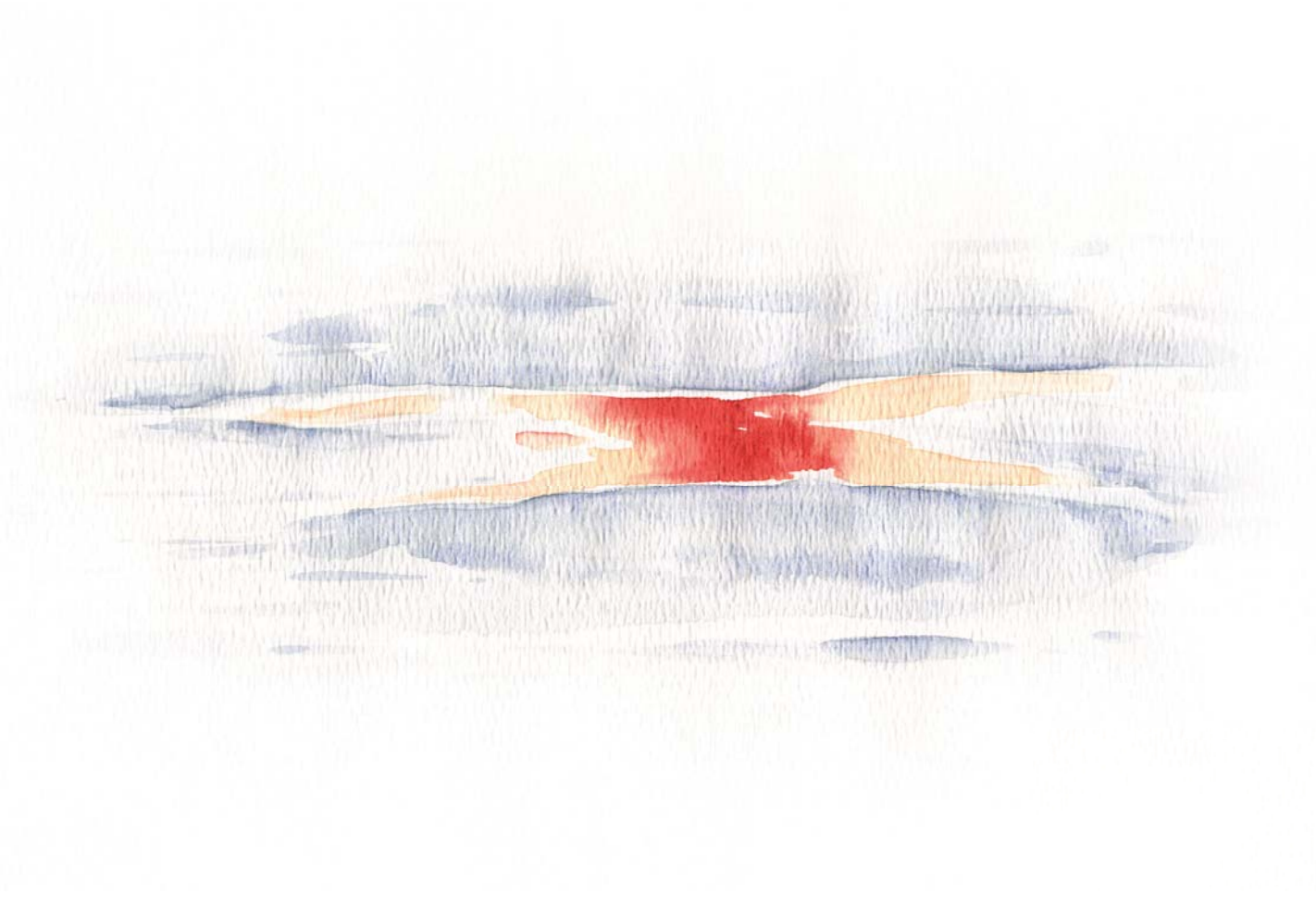
the liquid frame:

The chaos can be seen as a liquid world with *flowing, gliding, streaming, swirling, gushing, surging, cascading, rolling, rushing, drifting,* and *ebbing* particles. Here there is rhythm:

> …always a mode of resonance or harmonious vibration, an oscillation extracted from the fluctuating, self-differentiating structure of the universe... nothing is self-identical, all substance is movement, modes of contraction/dilation or difference/repetition and generates not only perceptions... but... rhythm. (Grosz 2008, p. 19)

It is easy to be swept away by Grosz' description of rhythm, to let the words flow over your ears and mind like water. She continues:

> [rhythm] is what connects the most elementary and primitive bodily structures of even the most simple organisms to the implacable movements of the universe itself... This force... runs through all of life and connects the living in its various forms to the nonorganic forces and qualities of materiality itself. (Grosz 2008, p. 19)

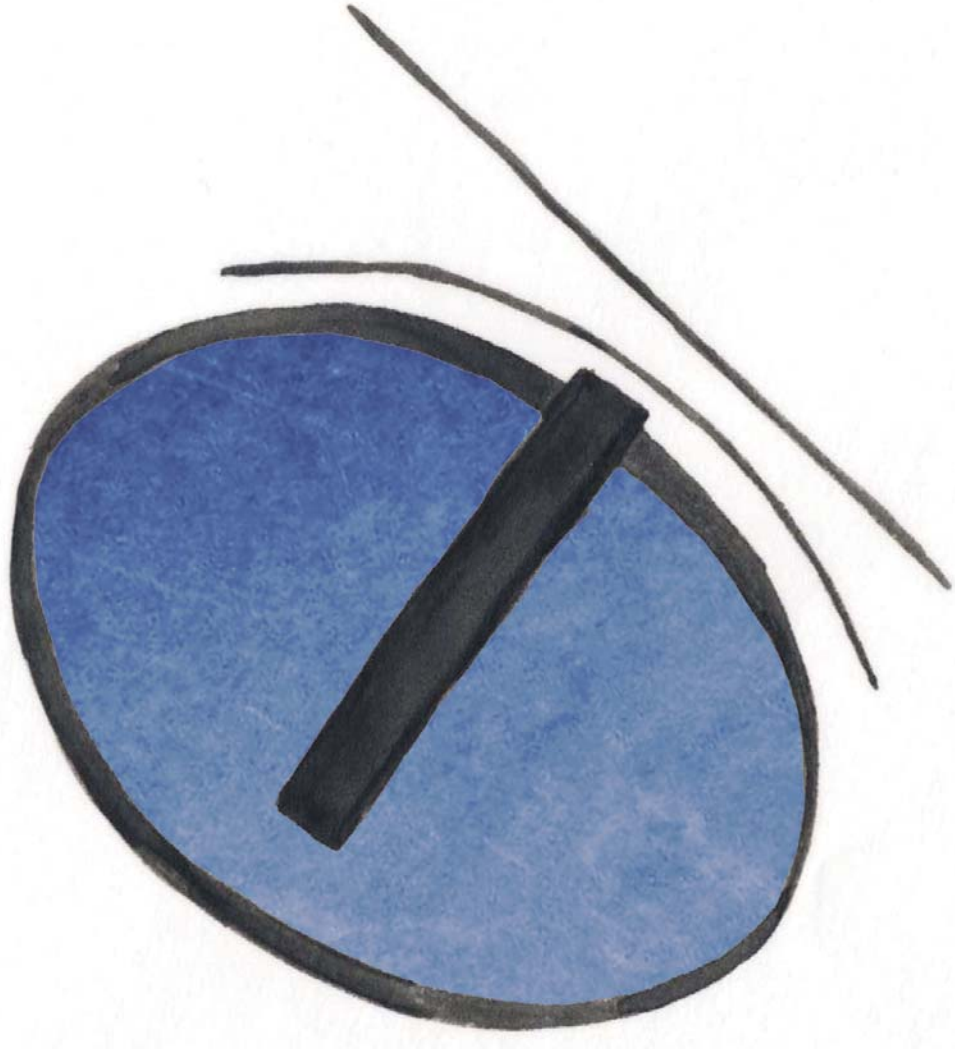


My intimate relationship with water.

Water rules my life, it controls who I am and how I act. My body involuntarily reacts to water, it clings to my flesh, filling me out and filling me in. At times I feel weighted down and drowned in its presence. When it leaves my body I can feel it move from the tips of my fingers inward and out, and I am left to feel vacant and hollow, yet buoyant as if floating in a pool.

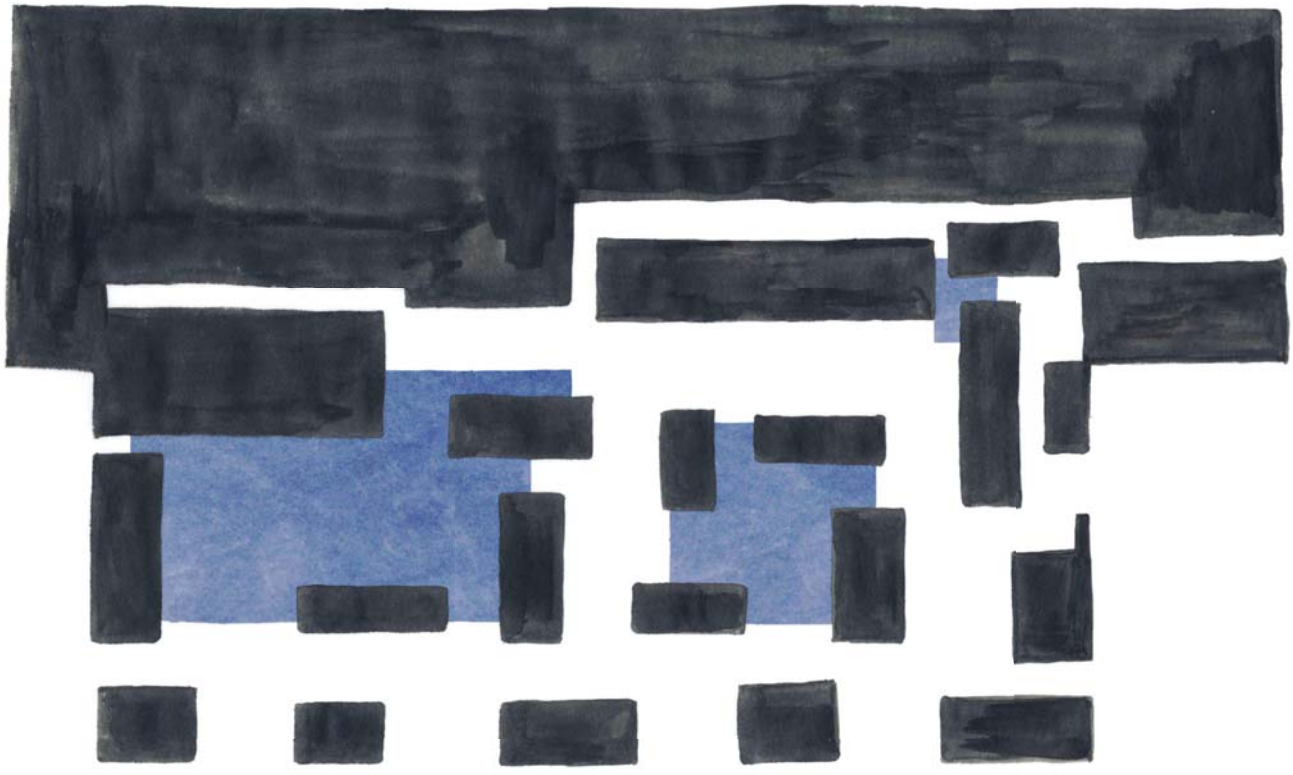
I used swimming as a means to access to the site phenomenologically - for this land was formed through an intimate relationship with water. Swimming allowed me to act out the theory, to comprehend the relationships within the void and even further, to the relationships between the elements of the world. *In the water I am the particle flowing free in its liquid environment, I can feel the simultaneous contradictory sensations of limitlessness as well as the crush of my surroundings against my body. I participate in a world where the silky flow of water over and past my flesh engulfs me dulling my senses, and while muffled noises and refracted light sharpen the focus of my vision and my mind.* While swimming, my thoughts are simple – breathe and move beneath water. Relinquish control and rise to the surface where the light is clear, fresh, and cast in a hues of blue.

These psychosomatic qualities of water are employed in the design's of both Tadao Ando's Water Temple in Japan as well as Peter Zumthor's Therme Vals in Switzerland. Both designers utilize water as a means to engage both the mind and the body.



Engaging the mind and body with water in Tadao Ando's Water Temple.

By cutting through a reflective oval pond and holding back the water, Ando offers access into the spiritual realm of the Shingon Buddhist temple by a procession through the aqueous world. I imagine approaching the semi-circular form of the pond, the mirror-like sheen of the water mirroring nearby objects. The sky is drawn down onto the water's reflective surface, just as I am drawn to the stairway entrance into the temple that parts and penetrates the centre of the pond (Futagawa, 1993). The hilly landscape of the Awaji Island falls away, terminating in a sweeping view of the inland sea of the Osaka Bay. (Frampton, 2003). This vista rises before my eyes and disappears from view. I choose to ease my body down into the cool and calm depths of the under-water world. I imagine descending the narrow and dry concrete staircase of the Water Temple, down through the green lotus-covered pond. Progressing down the length of the stairway I am aware of the crushing weight of the water on either side of me, restrained by concrete walls, and the presence of the blue sky above. As I pass into spiritual realm below I choose to leave my worries floating free with the lilies on the pond surface above.

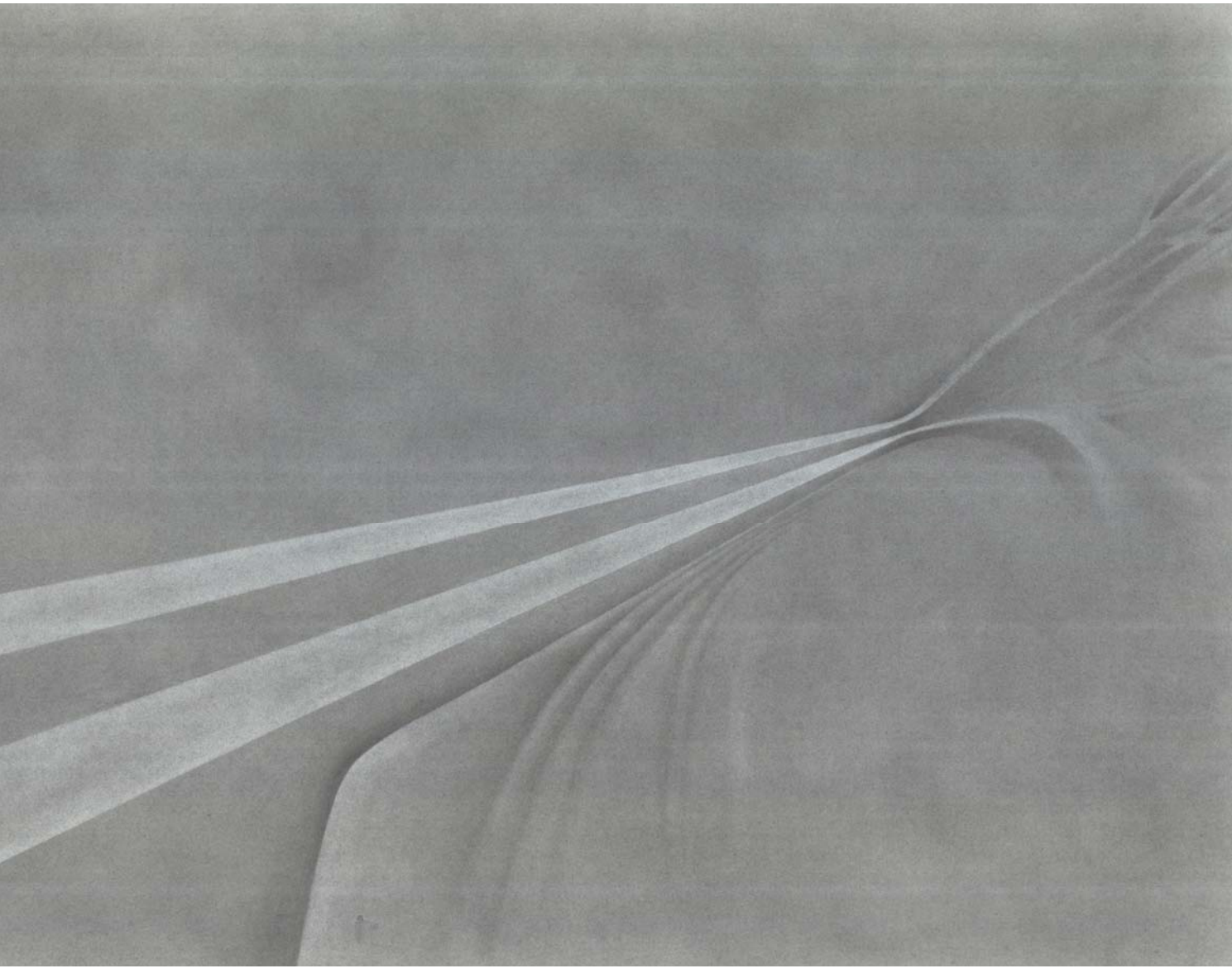


Exploring the etheral qualities water exudes in Peter Zumthor's Thermal Vals.

This ethereal quality of water can also be found within the Therme Vals in Switzerland. I imagine myself within Zumthor's design that transforms the hard stoney formations of the Alps into the meditative structure of a spa. I imagine echoing sounds reverberating off of the stone walls, masked by the delicate resonance of flowing and dripping water. The water hangs in the air, its misty presence reflected in the suffused lighting, filtering down through the stone roof structure above, and in the iridescent tones of the gneiss stone walls. I lose myself within the meandering organization of the baths, the narrow passageways lead me curiously on, its wandering form slowing my pace. In places, pools of water gush and gather at the base of the walls, their temperatures varying (Zumthor, 2007). I bathe my body in their depths, the liquid engulfs my form, and draws me into a deep state of relaxation through its caressing motion. Atomized particles and soft light fills my eyes and mind with a dreamy essence of being. My physical and mental aliments melt and then drift away from me on the watery medium circulating within the Therme Vals.

The world is blue at its edges and in the depths. This blue is the light that got lost. Light at the blue end of the spectrum does not travel the whole distance from the sun to us. It disperses amoung the molecules of the air, it scatters in water. Water is colourless, shallow water appears to be the colour of whatever lies underneath it, but deep water is full of this scattered light, the purer the water the deeper the blue.
(Solnit, 2005, p. 29)

I filled the site of Gillis Quarries in Garson, Manitoba, with water. I imagined the return of this fluid presence, the way it might cascade into the empty chasms and fill the voids of the site to their brims - the forest, land, and sky are submerged. Drawing the ancient water into the site gave me insight into the immensity of the glacial Lake Agassiz. The drawing became a view port into how this landscape may have existed several million years ago. It is a way to imagine myself within its depth and extension, to interact with the quality of life it may have contained. It illustrated a living, yet drowned environment, a place that is simultaneously crushed by the weight of settling water yet is filled with the weightless buoyant beings of ancient and aqueous creatures, floating and surviving within the limits of this liquid world. Drawing the site immersed beneath Lake Agassiz, I imagined a peaceful place of gentle lapping and rolling waves, filled with refracted sunlight that flickered its way into the dark depths of the sea and shimmered over a landscape of hardened stone. I became aware of the vacancy and sense of loss on the landscape when the water departed.



The continual unfolding and refolding of life within space.

the retreated water:

Hundreds of years ago, the earth was contrived as a living organism:

> the lapidifying (stone-forming) juice theory, hypothesized a fluid or juice that circulated through the earth's body in the veins, and cracks, and pores beneath its surface just as blood ebbed and flowed within the human body. This succus lapidescens, combined with the principles of heat and cold, was the origin of stones and minerals. The mineral or stony matter was held in solution by the liquid succus until it evaporated out by the action of heat or deposited its matter through the action of cold. (Merchant, 1980, p. 26)

The life, the minerals and nutrients that flowed within the fluid of the earth, is now embraced and clutched within the strata of landscape skin. As the liquid departed the once malleable flesh of the land, consolidated and hardened into stone.

The exposed wonders of Gillis Quarries, of Garson, Manitoba.

The act of quarrying, the pulling back of the earth's flesh to expose the hard surfaces beneath can be seen as a revelatory act rather than one of decimation and destruction. It is a liberation of that which was once held so tightly in the dark before. Quarrying exposes the stories of the land, its deeply rooted passions and secrets, the sedimented stories of those who worked to cut and expose the Pleistocene histories that had been hidden and encased away for thousands of years. Acting simultaneously with the extraction is a layering of the site, and Garson as a whole, with new stories and experiences - from those who continue to diligently extract the mottle limestone to those of the community who continue to witness the wonders of this place:

> One sultry oppressive summer afternoon, my mother and I heard a low whirring sound coming from the East. This was in 1915 or 1916. The volume increased, we rushed out, and people were lining up along the road past our house (now Hwy. 44). There we saw it. A sight I shall never forget. Flying low, just about at eye level was a solid mass of dark butterflies. I put out my hand and it was covered with them, but they didn't stop. This great body was a bit wider than the road, and men said it was about 1/6 of a mile long. There were millions of butterflies, I can even remember the heavy sound and the faint musty smell of them. There were stragglers catching up and the entire mass moved as one body flying west at the now Garson corner. It swerved south-south-west and was seen in Bird's Hill. The body moved fast, where it settled no-one knew… (*Garson – then and now,* 1990, p. 126)

TOUCHING

touch noun
a The faculty of perceiving by physical contact with part of the body. **b** The sensation produced by touching something; the quality of a thing as perceived by touching… (Shorter Oxford English Dictionary, 2002, p. 3307)

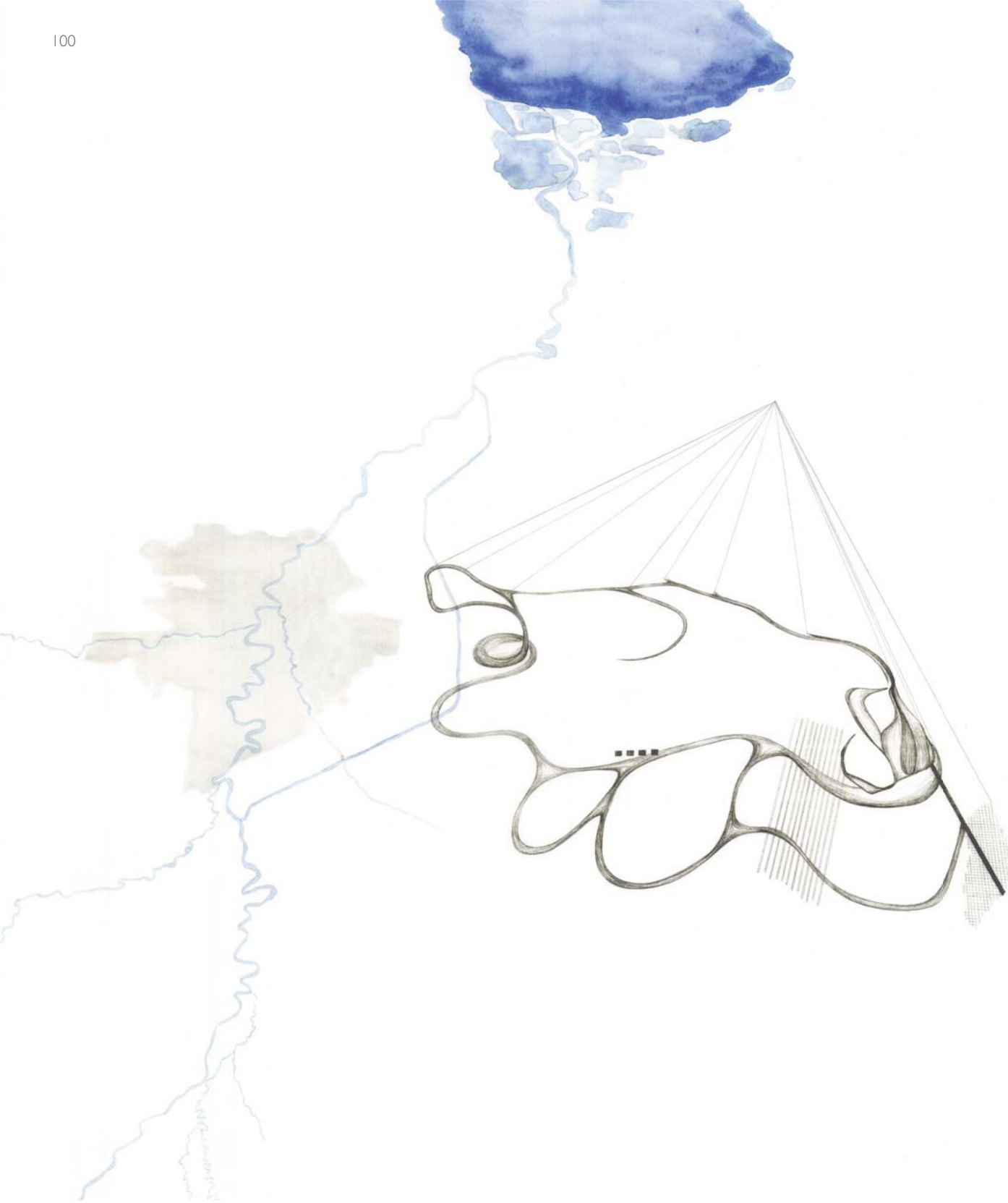
I slowly descend into the deep water. The cool liquid wraps itself around my body, swirling about my bare legs, my stomach, my chest and arms. My hands glide along the rippled glassy surface, weaving the water between my fingers as my limbs acclimatize to the chilly environment. At first the temperature is uncomfortable, but soon I am glad for it's refreshing power. I inhale deeply and letting my body rise, I reach out to the water, churning it as I propel myself forward with my legs and arms. In the water I am aware of my every breath, I am conscious of each part of my body and how it moves and reacts to its environment.

Seeling, entering, traversing, drawing, gazing, and touching at Gillis Quarries, in Garson Maniotba.

touch verb
verb trans. Come into, or be in, physical contact with (Shorter Oxford English Dictionary, 2002, p. 3307)

revisiting the site and envisioning changes

As one moves throughout the site a plethora of textures can be seen and touched; the layers of dust that have settled on the lush and at times crisp vegetation that carpets the site, the smooth faces of the cut limestone blocks and ground planes, the glassy surfaces of water that at times both distorts and perfectly reflects the surrounding landscape, and the intricate constructions of the metal machinery that is used to extract the stone from the ground. While the eye traverses the numerous formations present of the site, it sends one's imagination churning. Each section of Gillis Quarries has its own characteristics, the presence of the stone ties the site together. This allows one to remember where they are, although at times it is possible to forget when you are. The site is seeped in historic artifact – piles of stone blocks waiting to be finished and used in grand projects act as galleries with fossils on display, all the while emulating ancient ruins. Long-standing stone structures, the lime-producing kilns, exhibit their slow decay. As the stones fall away little by little their inner workings, a flaking metal cylinder and cone coated with white powered lime, are exposed to the observer's eye.



The emergence of Gillis Quarries Park and Interpretive Centre from its context.

touch verb
verb intrans. have mutual contact or common ground… (Shorter Oxford English Dictionary, 2002, p. 3307)

the program:

The excavation of the land at Gillis Quarries in Garson, Manitoba demonstrates how humankind's labour can reveal an irresistible beauty. The design of a park and an interpretive centre at this site, evokes the interwoven nature of the world by inviting visitors to explore the environmental and social histories of this area.

Gillis Quarries was once an active part of the community life in Garson. People of the town flocked to the site for both educational and recreational activities. Schools used the site to teach their students about the geology of the area and methods of quarrying. The frozen ponds and lakes were used by the people as hockey rinks during the winter, and in summer as swimming holes. Over the years these sorts of activities have diminished. My intention is to bring, the people of Garson and others such as school groups, tourists, and hikers back to the site without restricting its use as a productive quarry. This will be achieved by enhancing existing elements on the site, the creation of interpretive trails through less-frequently used areas, and by providing an Interpretive Centre. I believe that encouraging people to visit the Gillis Quarry Park and Interpretative Centre could assist in generating a greater respect and appreciation for the land and the processes that reveal it. Exposing the entrenched narratives here encourages visitors to experience the entwining aspects of this world.

The park and interpretive centre will fully immerse the visitor into the environmental and social histories of this area of Manitoba. The Interpretive Centre will filter the stories of this tract of land through the intertwined viewpoint of nature; featuring interactive displays of the geological features of the area, images of the social histories of Garson, and artifacts from the quarrying methods in Gillis Quarries. By showcasing imagery and artifacts visitors can experience the depths of the water of Lake Agassiz and the barren landscape around, can realize the chill and movement of the azure glacier masses, the establishment of human populations living on and with this land, the slice of the plow into the soil, the bite of the drill into the stone, ultimately leading to a multitude of constructions from this limestone throughout the world. These experiences will encourage visitors to realize that the very presence of this uniquely beautiful landscape is inexplicably tied to all of these activities - the Ordovician seas and the Wisconsinan Glacier for its geological creation and the act of quarrying for its revelation. This promotes an understanding of nature as all things, in all places, at all times, while providing a rich and active experience could help to demonstrate how humanity is inexhaustibly tied to the natural world.

Gillis Quarries Park and Interpretive Centre situated in relation to its context.

Visitors to the Gillis Quarries Park and Interpretive Centre will gain an appreciation of the ever-changing relationships of the Earth's physical and biological systems as well as how the social and economic orders of the world are reliant upon these systems (The Working Group on Environmental Education, 2007, p. 6). This knowledge, as well as the experiences within the Interpretation Centre may permeate the visitors' minds and bodies as they progress away from the Centre. Venturing forward out into the park and viewing the uniqueness of this excavated quarry land, they carry with them reflections of what once was, and what may be again.

Traversing the designed site will provide an opportunity for visitors to the park to submerge themselves within the entwined social, geological, and industrial histories of the quarry. Subsequent visits will allow them to witness the continual evolution of the quarried forms as the site persists in its active removal of limestone. The quarrying activity continually shifts the topography of the site, as vegetation keeps recolonizing the upturned geology. The fluid forms of The Gillis Quarries Park can evoke the interwoven nature of the world that I explored throughout this practicum, while assisting in the portrayal of the enmeshed experience of humanity within nature.

The plan of the Gillis Quarries Park and Interpretive Centre.

A The Interpretive Centre, gains its suggested curvilinear forms from the idea of how all the histories, the environmental, social, and industrial processes, of this area are enfolded into each other – in order to fully understand one of these historical themes you have to take into account all of them.

B Exiting the Interpretive Centre to the south is a linear path of smooth-cut limestone blocks emerging onto a ledge overlooking the currently productive quarrying portion of the site. This ledge has been prepared for the extraction of limestone blocks, like other areas of the active quarry. The overburden as been removed from the bedrock strata and has been piled along the west edge. The limestone bedrock has been prepared with vertical cuts several strata layers deep.

C The pathways feature interpretive devices articulating the geological and social histories, as well as the industrial processes; these pathways sweep through the site like a dry waterway, and cut through the landscaped elements they pass. The interpretive devices are engraved text or images, audio, artifacts, and landscape features. This can be seen here, where piles of limestone blocks have been rearranged to rise, in a linear fashion, southwestward, out of channels cut within the ground plane.

D The four limestone kilns along old highway number 44 have been cleaned of graffiti and restored in sections. A restored track is built here at the height of the kilns, so that visitors can view the means through which the crushed limestone pieces reached the top of the kilns to be burnt into lime. Digits are etched into the side of the kiln; visitors dial this number to access the social history through an audio listening device.

E The numerous piles of limestone blocks remain on site in storage for later use in construction projects. The natural vegetation remains in place and visitors are encouraged to explore the scale of the excavated material by wandering at will through this area.

F The sweeping path cuts through an existing immense pile of limestone rubble. The rubble that has been removed is crushed into a smaller dimension and used to construct a retaining gabion wall.

G A bridge is constructed out of product from the quarry. This elevated structure provides access to the northern section of the site by passing over the old highway number 44. At the apex of the bridge, over the highway, digits are etched into the structure; visitors can dial this number to listen to a personal account of an event that occurred along this highway.

H The bridging structure continues out over the lake and connects into an amphitheater. Quarried limestone is arranged into the bowled form to be used as an assemblage area for tour groups and even for the projection of films.

The plan of the Gillis Quarries Park and Interpretive Centre.

I An existing pile of rubble has been rearranged into stepped terraces to allow for the passage of a gravel path northward. Etched into the terraced structure are dates aligning with information visitors gained in the Interpretation Centre.

J The path forks; continuing westward, it loops around an existing rectangular pool that had been cut into the limestone bedrock. Visitors can view data etched into the base of the pool, which corresponds with a water report that they reviewed within the Interpretation Centre.

K Large boulders, some in mounds, some standing alone, punctuate the forest alongside the path. A large wooden derrick has been reconstructed and attached to one of the stone blocks, so that visitors can see how the massive stone was once moved around the site.

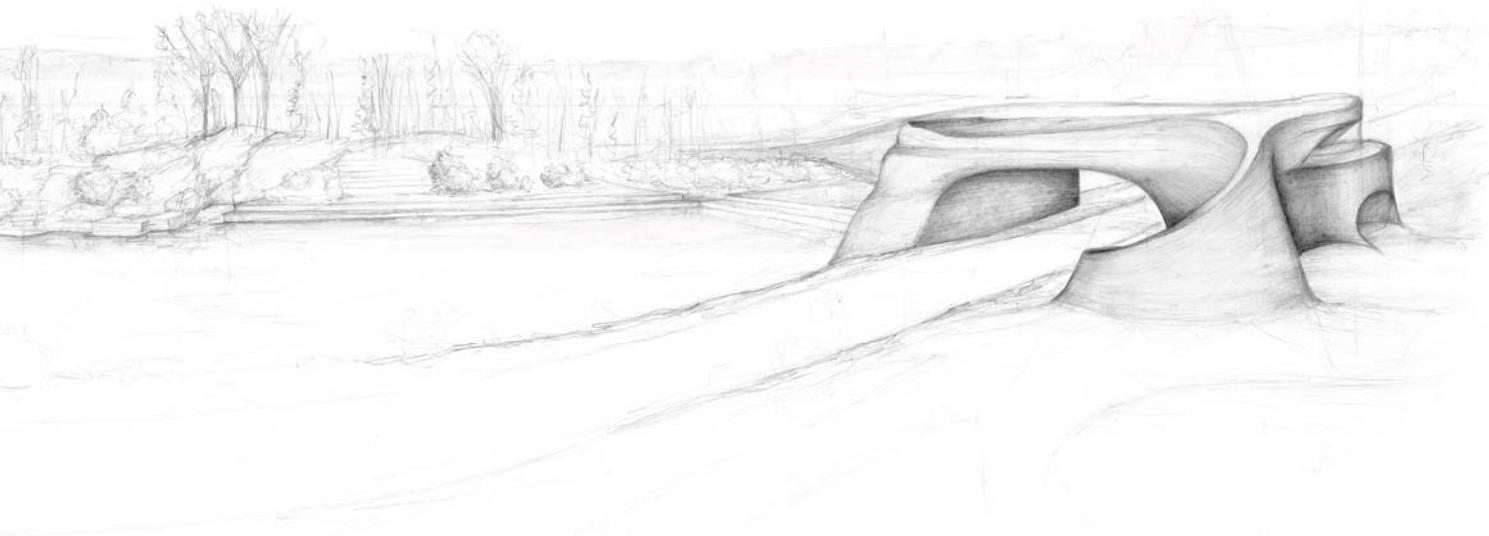
L A secondary path diverges southward, leading down to the water's edge where rubble has been cleared away for a sandy swimming beach. Visitors are encouraged to lounge on the sand and swim in the waters of the lake.

M Existing meadows in the forest condition have been converted into mown picnic areas. The tables are rough cut from large blocks of limestone, to show visitors the precision of the finishing equipment, and they are etched with historic imagery from the quarries and Garson.

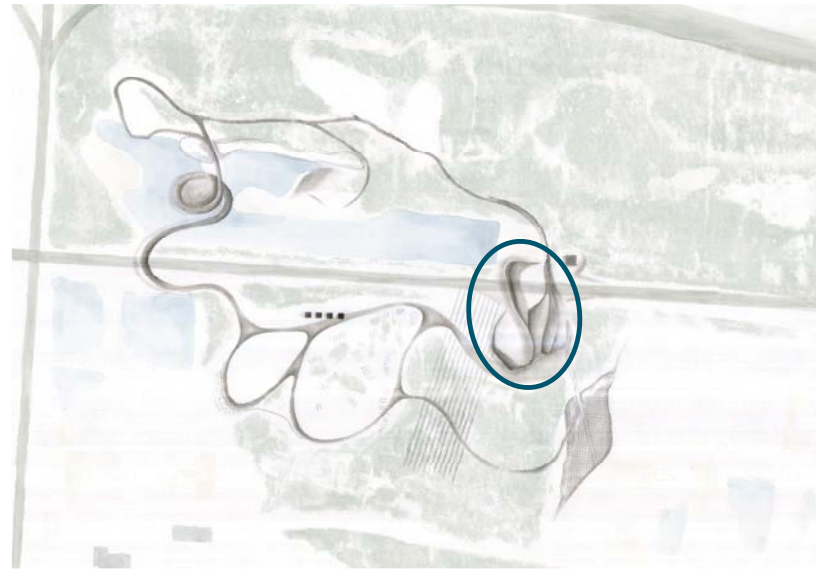
N A wall reaches out alongside the gravel path through the forest, welcoming visitors back into the Interpretive Center. At this point the Centre can be accessed from a plaza situated on an existing limestone ledge. This ledge looks out over the large lake of Gillis Quarries, and is etched with digits to be dialed into the handheld listening device allowing visitors to listen to a personal account of the quarry.

While reinforcing the experiences and information gained within the Interpretative Centre, the forms of the park will also display numerous uses and applications of the quarried stone. Pathways, trails, walls, buildings, and even site furniture will be constructed from the limestone, making the park and interpretive centre a showcase for the Gillis Quarries product. Visitors to the site will be able to visualize how the stone may be employed in their own projects and take a piece of this history and their experiences at the park home with them.

Like the histories of the site, the design of Gillis Quarries Park and Interpretive Center should be continually evolving. The quarry is to remain a productive excavation site, so as the quarry's forms and needs change with time, so too will the park. The layout and structures will progress, altering to refit into the persistently shifting landscape.



The reaching and folding forms of the Interpretive Centre.



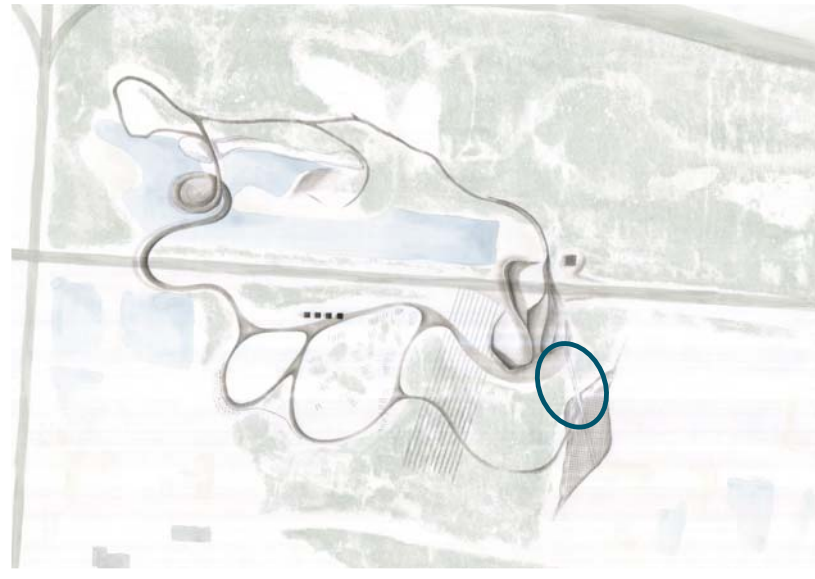
touch verb
verb trans. Imbue with a specified quality; affect mentally or morally… (Shorter Oxford English Dictionary, 2002, p. 3307)

the design: a possible encounter with Gillis Quarries Park

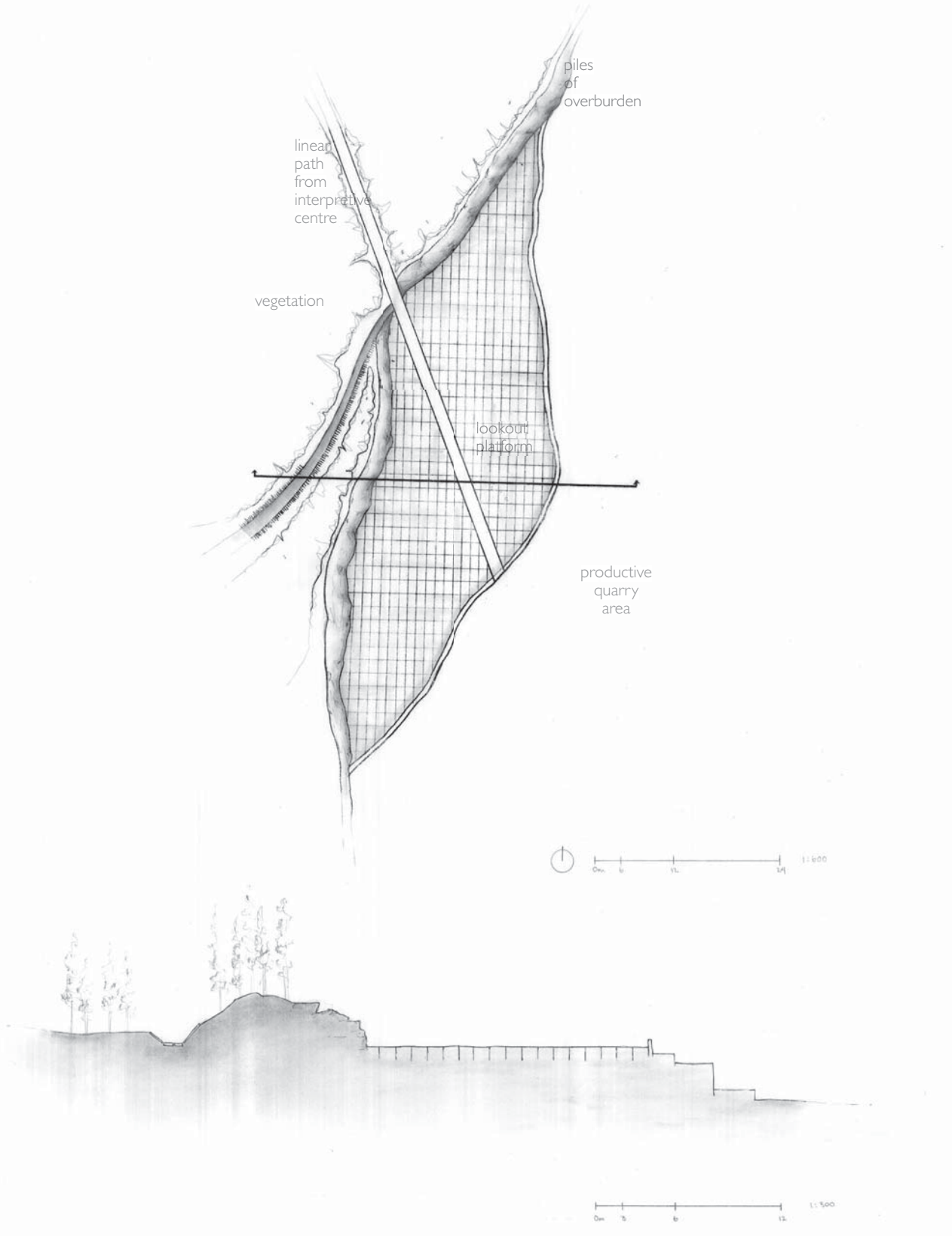
The Interpretive Centre rises out of the ground in front of you, the smooth curving walls of the limestone structure warm in the heat of the mid-day sun. The reaching and folding forms of the building pull you in, promising to intertwine you into the environmental and social histories of the area. A limb of the building reaches out to the roadway, inviting you to park your vehicle within the circle of its embrace.

Once inside the Centre you are met with interactive displays of the geological history of Manitoba. Photos and stories of the social history of Garson are relayed to you here at the Center. They describe the ways in which the people of Garson are tied to the geological nature of their land by the industrial process of quarrying. It is these that release the evidence of the evolution of beings, geological changes, and glaciation from the limestone sediments.

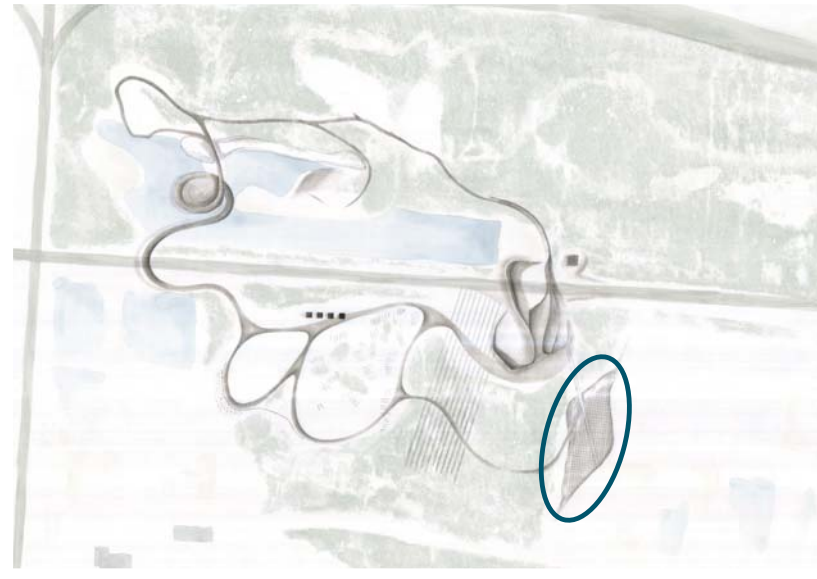
A linear path cutting through the dense fabric of the forest.



Stepping out of the Interpretive Centre the sun is bright and instantly warms your skin. Your eyes are drawn to a cool and enticing linear path that cuts its way through an aspen forest. The dense fabric of the forest surrounds you; the repetitive white structure of the trunks creates an ever-evolving view as you amble down the pathway. The large rectangular limestone paving, which you now know is cut with diamond tooth saws, is smooth beneath your feet and the path is too wide for the trees to touch overhead. The trembling canopies are limited to the regions on either side of the walkway, however their shadows still flicker and move across the stone. The shade patterns of lightness and darkness seemingly dance with the ancient beings, of the Ordovician seas you just learned about in the Interpretive Centre, fossilized within the sedimented structure of the limestone.

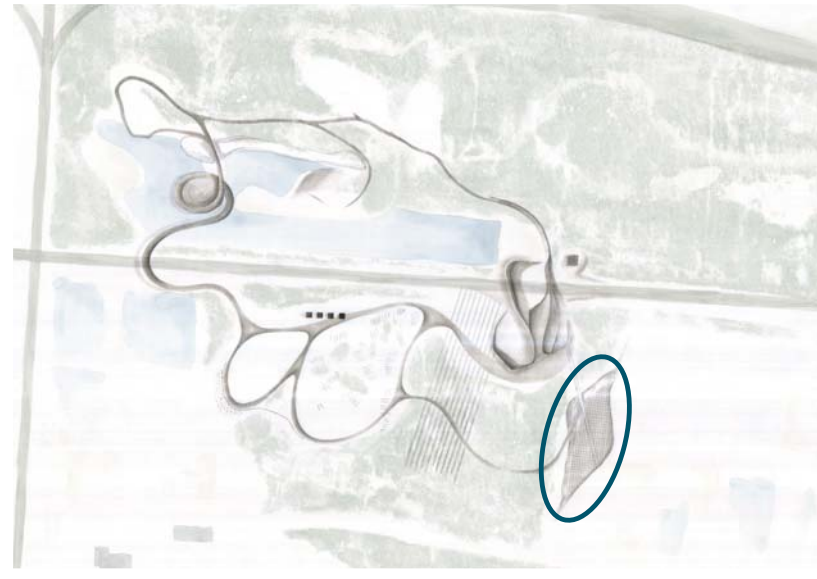


The platform overlooking the excavating activities of Gillis Quarries.



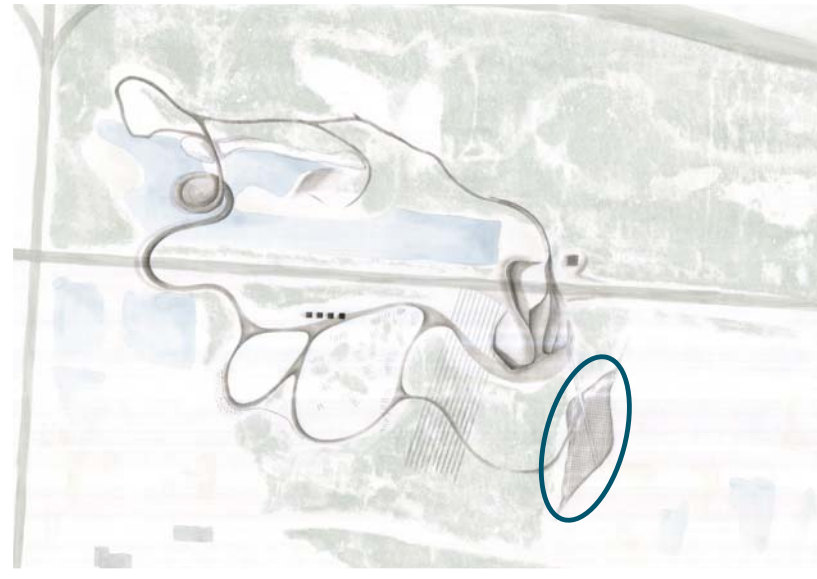
Water trickles, glistening the side of the stone wall. Having percolated down through the layers of vegetation and soil strata above, the water now leaks from the stepped cut faces of the limestone, quenching the thirst of the parched quarry. The water collects in cut depressions, barely rippled by the light breeze of the day. The pools pull the sky down onto the ground plane, reflecting the soft blue expanse and the wispy clouds above. Dark and luscious vegetation creeps in at the edges and the infrequently used sections of the excavated site, reclaiming the upturned soil and exposed earth for its own. You stand at the edge of a stone outcrop, gazing out over the activities of the quarry. The stone platform has been prepared, like others in the quarry, with deep verticals cuts, reaching down into the stone strata below. The dark world of the buried stone reaches upwards from the cuts and mingles with the bright light of the day.

The machinery of Gillis Quarries cutting deep into the stone limestone strata.



You witness the workers of the Gillis Quarries scrape away the earthy ground-surface of the desired excavation site in order to expose the limestone deposits beneath - the soil is dragged away. Releasing the stone from its ancient and sedimented home is aided by machinery. Large diamond-toothed saws gently hum in the foreground, preparing another flat surface for the extraction of stone blocks. The saws cut two or three strata layers deep into the uncovered limestone surface, sectioning the limestone into strips with vertical channels. Explosive power is used to remove a key block - the empty chasm used as a reservoir for till and water seeping from the cut stone. The stone blocks are raised from their strata by wedges thrust into drilled horizontal holes located between two strata layers. Where once hooks and massive chains attached to wooden derricks, a steam-driven cable hoist, loosened and lifted or dragged the blocks away, as was described in the Interpretive Centre, now large forklifts and trucks remove and transport the blocks from their historic resting place (*Garson – then and now,* 1990). Conical mounds of gravel continually grow in the distance as the metal machinery pummels cast-off stones into smaller and smaller fragments.

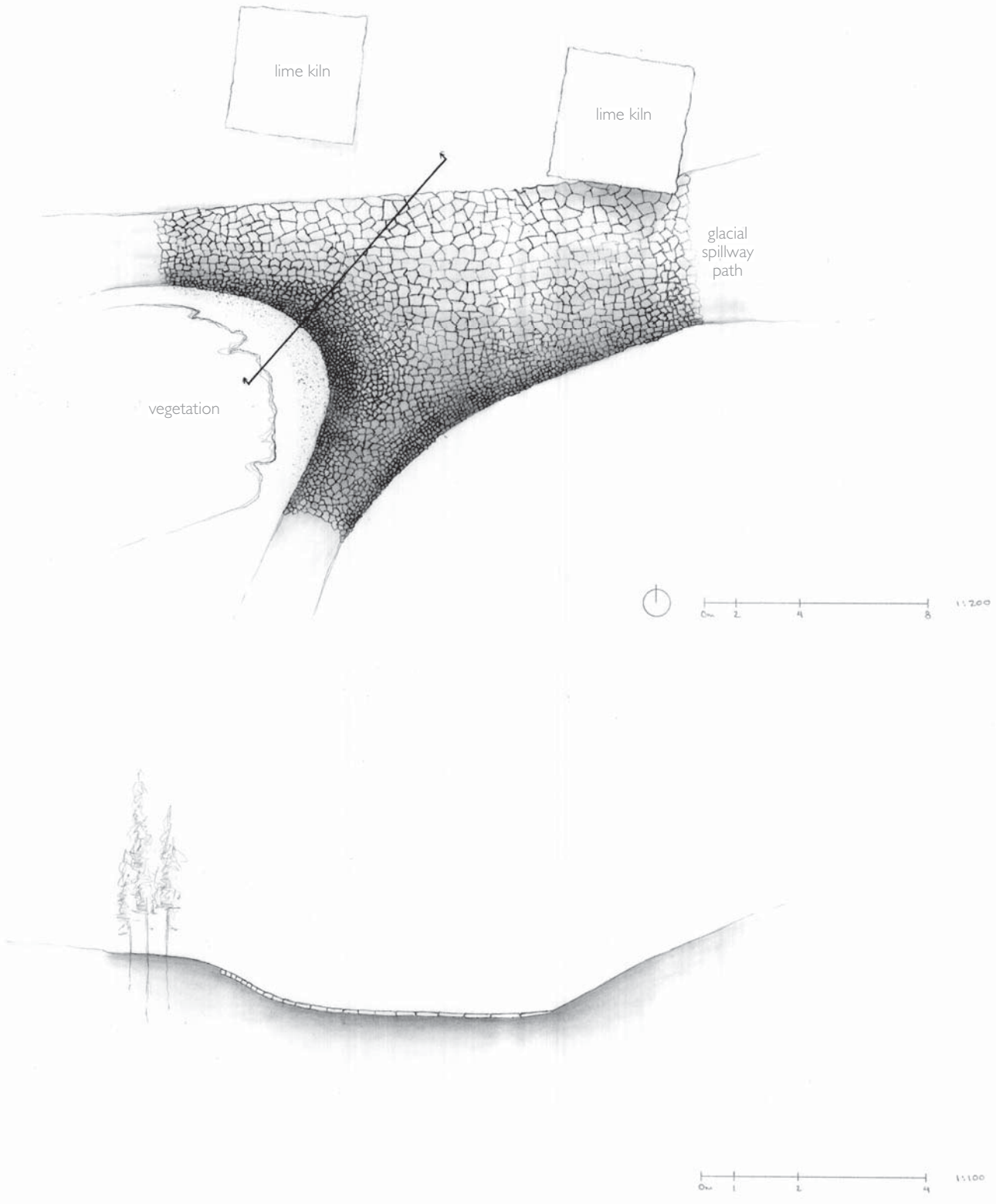
A view out into the activities of the quarry from the looking platform.



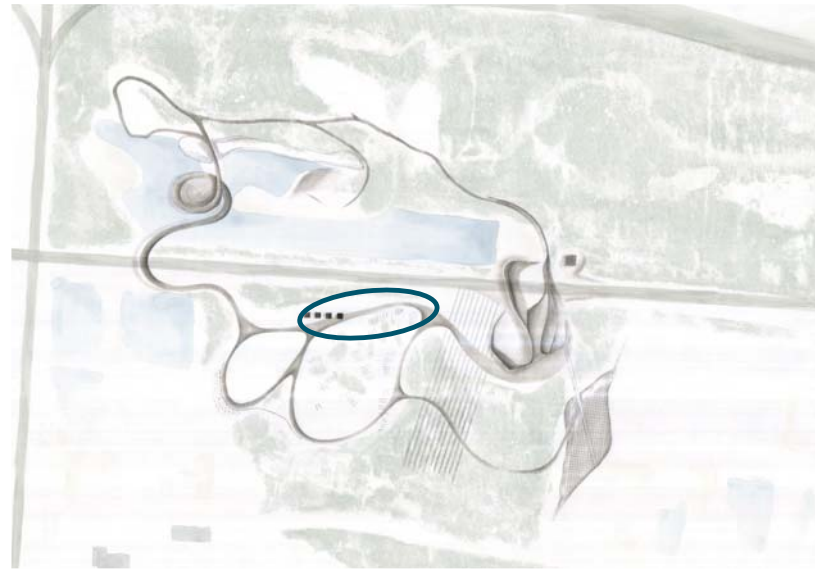
Historical images are etched into the stone barrier at the edge of the outcrop showing the excavation site over its lifetime. Recordings, accessed by entering digits into a handheld listening device, tell you of personal accounts of the quarry. You dial it in and listen to the following narrative:

> The hill was not tree covered as now and was higher than it is now. The hill was men (and horse) made with the great abundance of overburden removed before the stone beds were reached. There could be 10-12 feet of overburden and loam above the stone. I begin to count but get lost in the large packed group of men. I judge there must be 250 men there. … many wear large straw hats, rolled up sleeves and open shirts. They look tired, so do the teams of horses lined atop the hill with drooping heads. Oh, how hard those men laboured down there in the quarries – with pick and shovel. We school children would stand on the banks and watch and pity them down there in that vast pit. (*Garson – then and now,* 1990, p. 125)

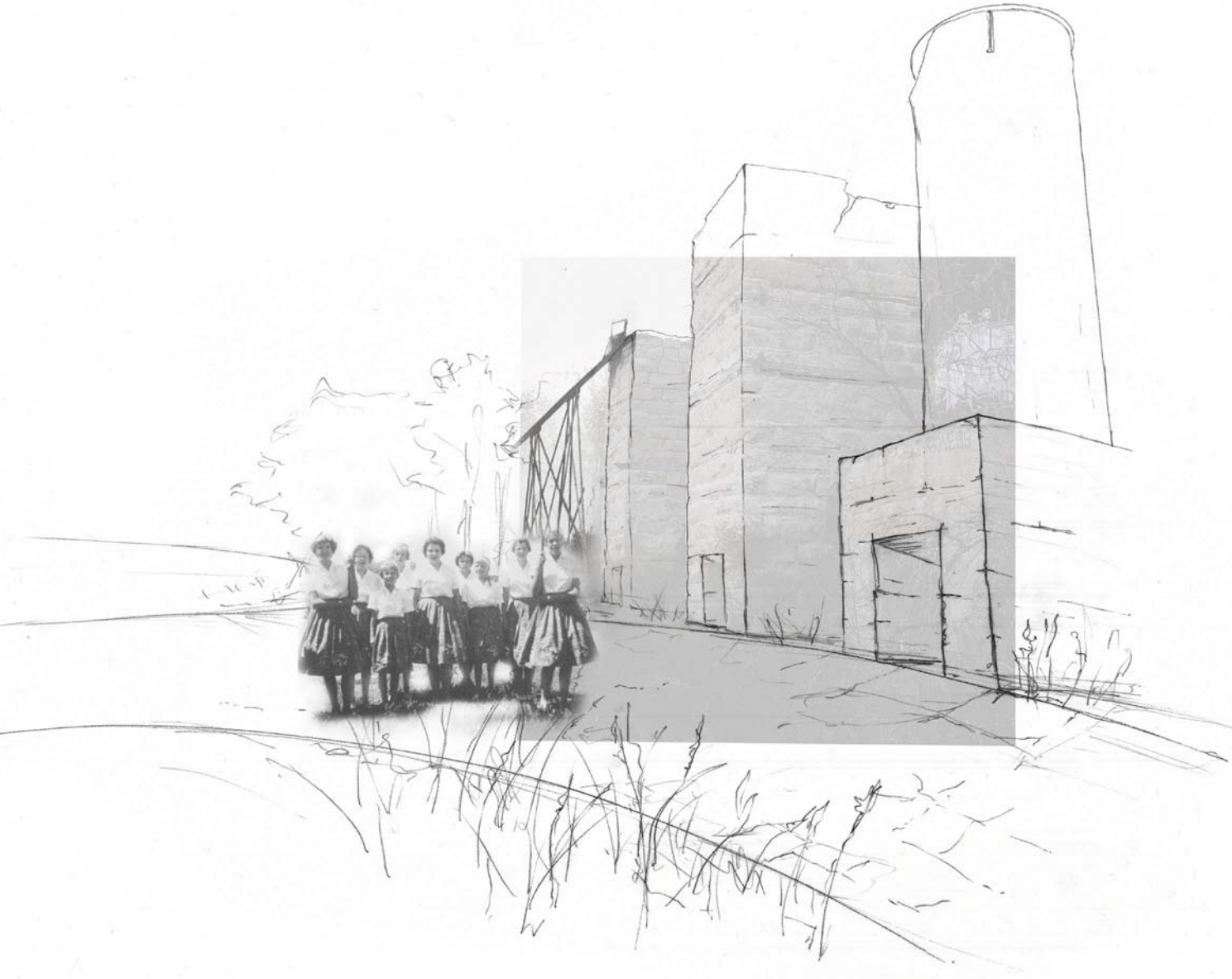
A group of school children arrive at the outcrop, dashing in front of you to see the goings-on in the active quarry. You smile at their obvious delight in the massive machinery and the unique world it has created.



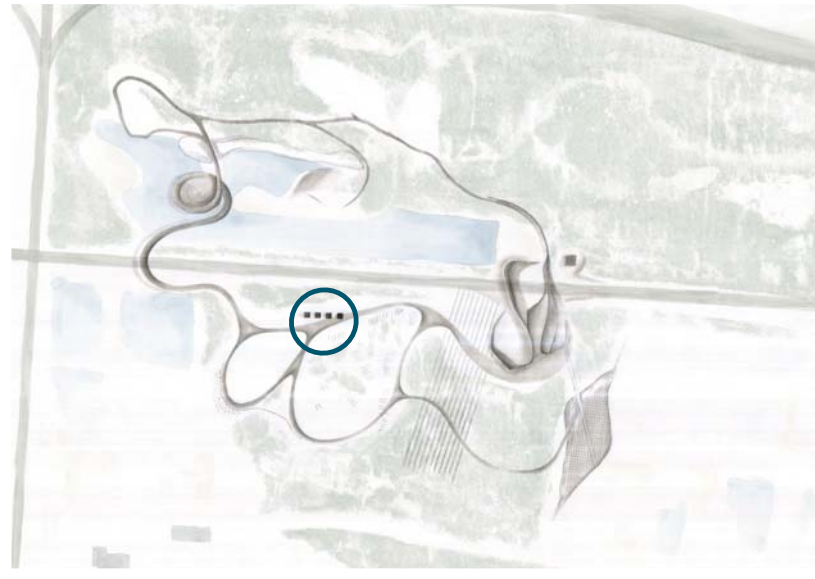
The path sweeping through the site of the Gillis Quarries Park.



A path sweeps out in front of you, the paving reminiscent of the dry melting glacial spillways, or draining water ways depicted within the Interpretive Centre. Smaller fragments of the pavement build up on the inside edges of the curves while remaining large and smooth on the outside. The fluid form of the walkway slices through the landscape elements it passes. *Stone channels that cut into the land pause in their linear direction southward when they reach the path, only to resume on the other side. The channels fill and then begin to rise above the ground plane in the distance. Thinking back to the Interpretive Center you remember how approximately 75,000 years ago, during the Pleistocene Epoch, the last period of climatic cooling began resulting in the formation and movement of glaciers across the Earth's surface (Teller, 1984, p. 24). The progression of the compacted and recrystallized snow (Plummer, McGeary, & Carlson, 2003) of the Wisconsinan glacier in North America fluctuated between the Arctic region of the continent and more southern points. The back and forth movement of the ice quarried the land, scrapping away forests and soils, and displacing the geologies of the land it passed over. At the base of each of the channels heading northward is etched the latitudinal data and years of major glacial retreats.

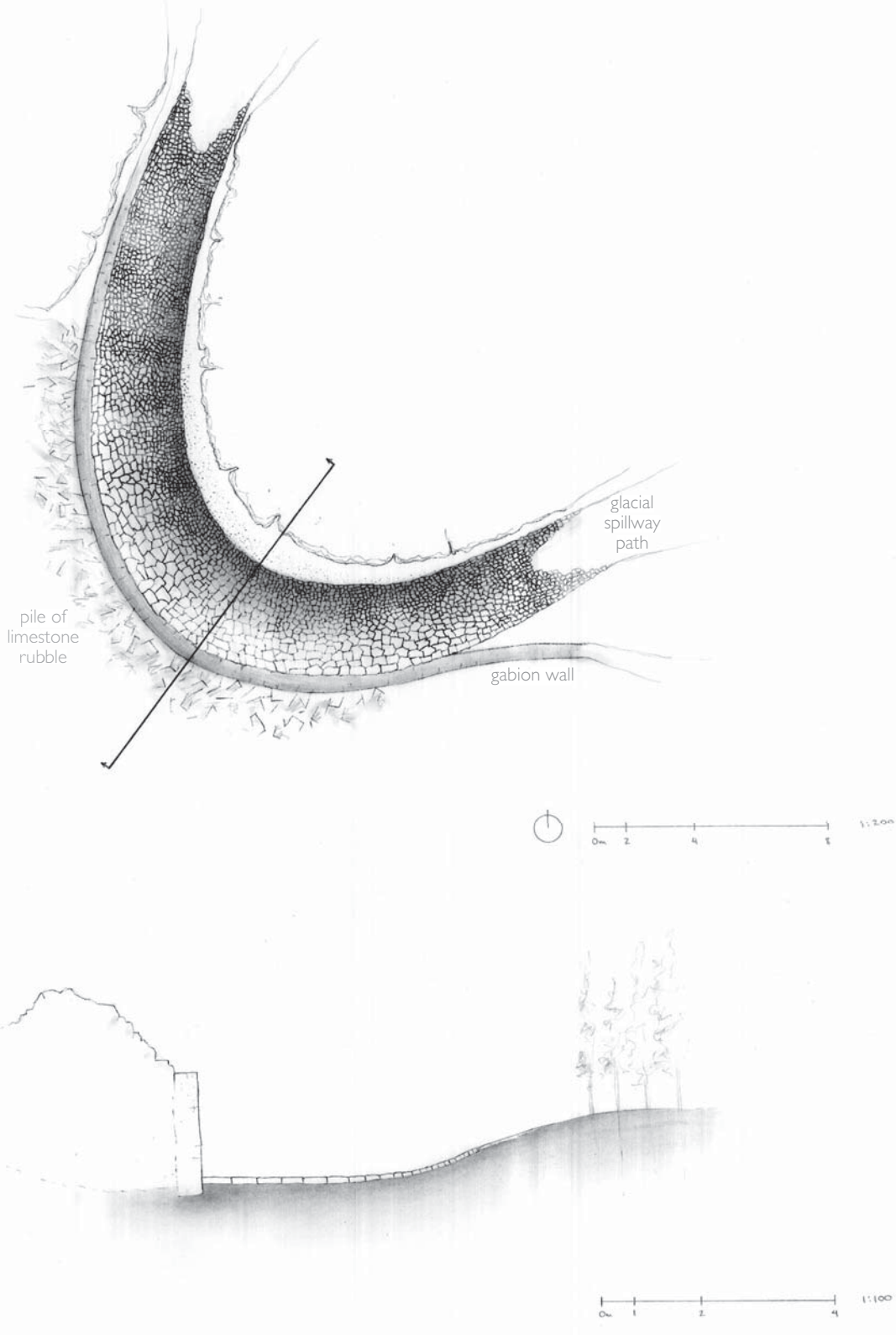


Engaging with the slow decaying forms of the aging limestone kilns.

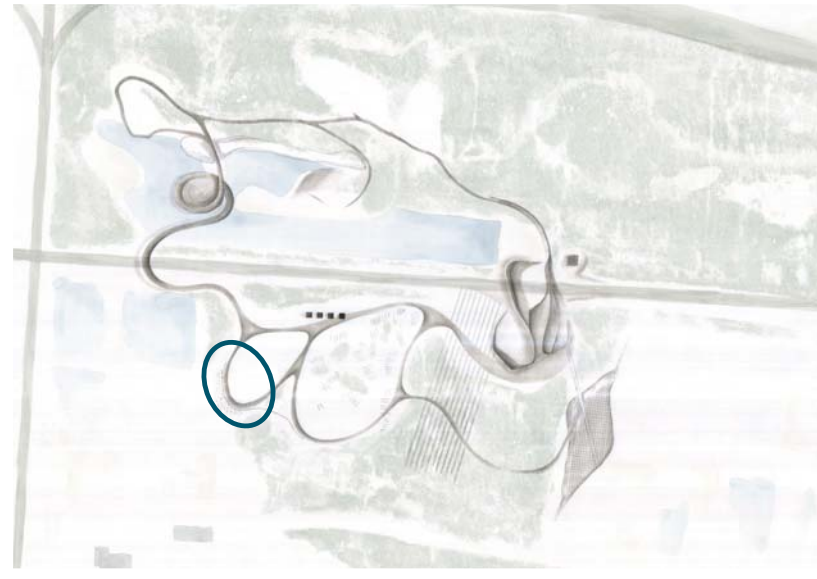


The slowly decaying kilns stand next to you, like sentinels looking out over the landscape. Their massive bodies reach up into the sky as their cavernous mouths yawn at the base of each kiln and bear a flaking metal cone tooth. Remnants of their prior use, the white dust of lime, coat the kilns throat. At the top of the most preserved kiln a track has been reconstructed, while sitting at its base is a cart full of limestone fragments, seemingly waiting to be loaded into the top of the kiln to be burnt into lime powder and released at its base. Depressing the appropriate sequence of numbers engraved into the stone of one of the structures, words whisper into your ear about a rare mirage that once took place at this site:

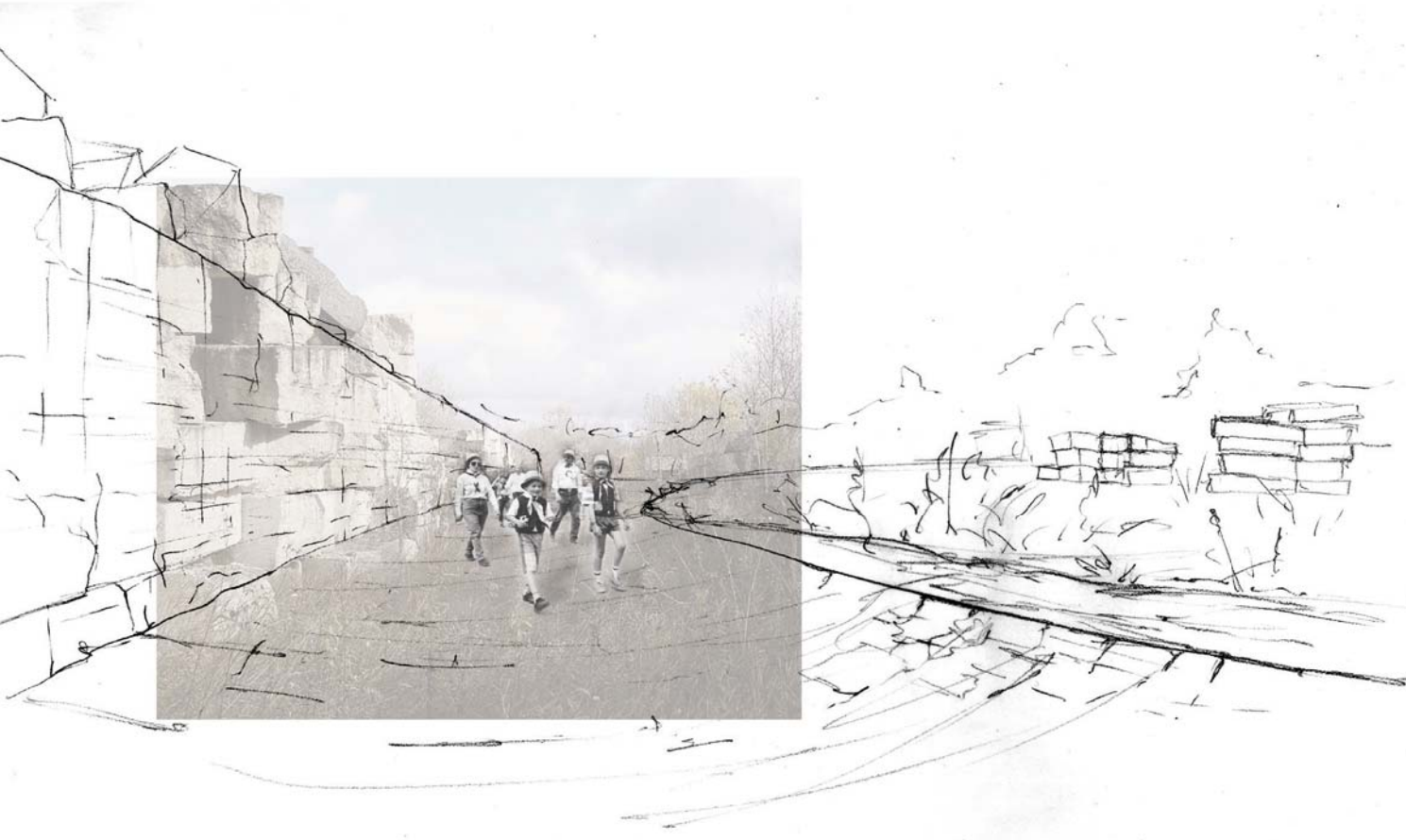
> My father and Frank Blue had just climbed the long inclined stairway to the top of the lime kilns at 7 am to check the 'Burn' looking north. My father and Frank saw Lake Winnipeg. It was a cool and sunny summer morning. They saw Gimli with its buildings and fishing boats out off shore, also cars. Everything they said was close and crystal clear. My father went into the Quarry and encouraged all the workers to go up and see it. The mirage lasted about fifteen to twenty minutes. I'm sorry I missed it. (*Garson – then and now,* 1990, p. 126)



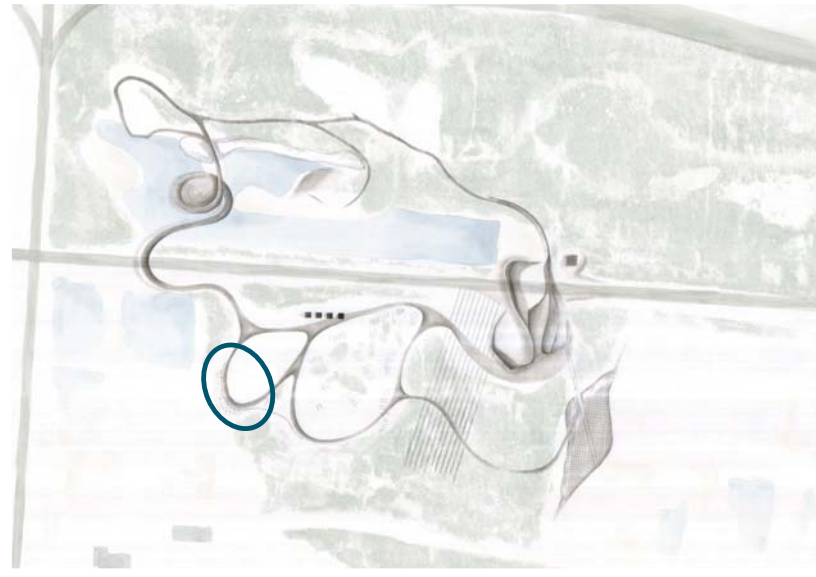
The sweeping path cutting through a pile of cast-off stone fragments.



Around the corner the fluidity of the walkway cuts through an immense pile of large stone fragments. The rubble has been compressed and held into a vertical wall by restraining steel mesh. The gabion wall retains the stone boulders, preventing them from spilling out over the walkway, and guides your movements forward.

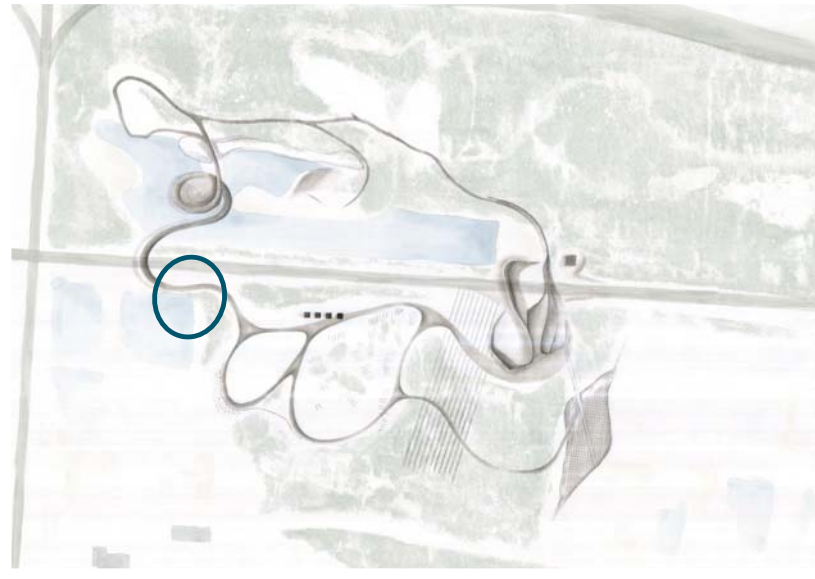


The gabion wall that holds the massive limestone fragments from tumbling onto the pathway.



Behind you lies a field of tall grasses weaving themselves through a maze of cut stone blocks. The children, from the outcrop, are running amidst these massive stone piles. Their laughter echoes off the lines of rough-hewn limestone blocks that are stored here, waiting to be called up for use. The children's laughter fades into the distance as you step into the field. You lose yourself in the sound of the gentle rustling of drying grasses grazing against cool stone. The blocks piled high above you frame your views and focus your attention on the present.

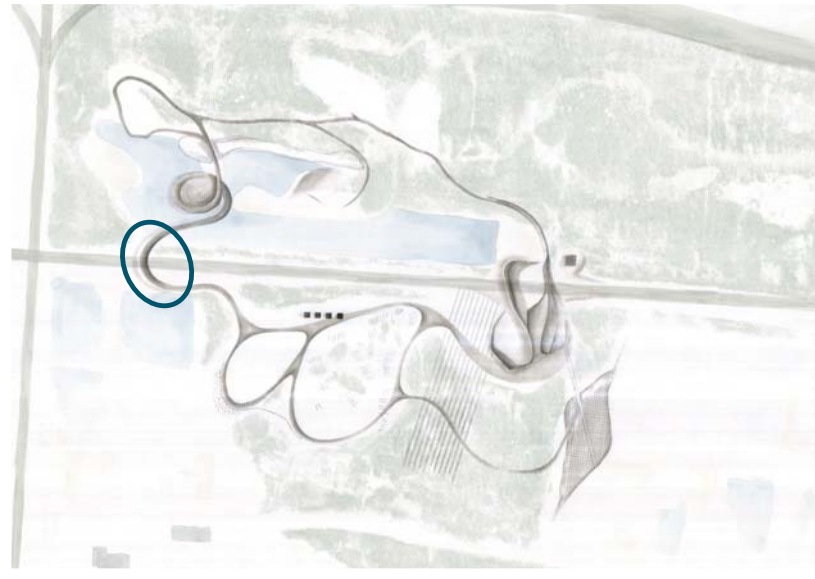
A view of the Gillis Quarries Office and Dressing Plants.



As the path continues it edges alongside a square pond fringed with rushes. Looking out over the pond, the Gillis Quarries Office and Dressing Plants can be seen. A recollection plays from the listening device:

> The huge stone plant or mill on the Garson Quarry property was built between 1903 and 1906. Its worth was in the millions. After the stone was quarried it was dressed, going through the stages of being planed, lathed, fluted, dimensioned, cut, and polished by masons and trimmed and carved. Then the block pieces would be ready for its specific building. (*Garson – then and now,* 1990, p. 120)

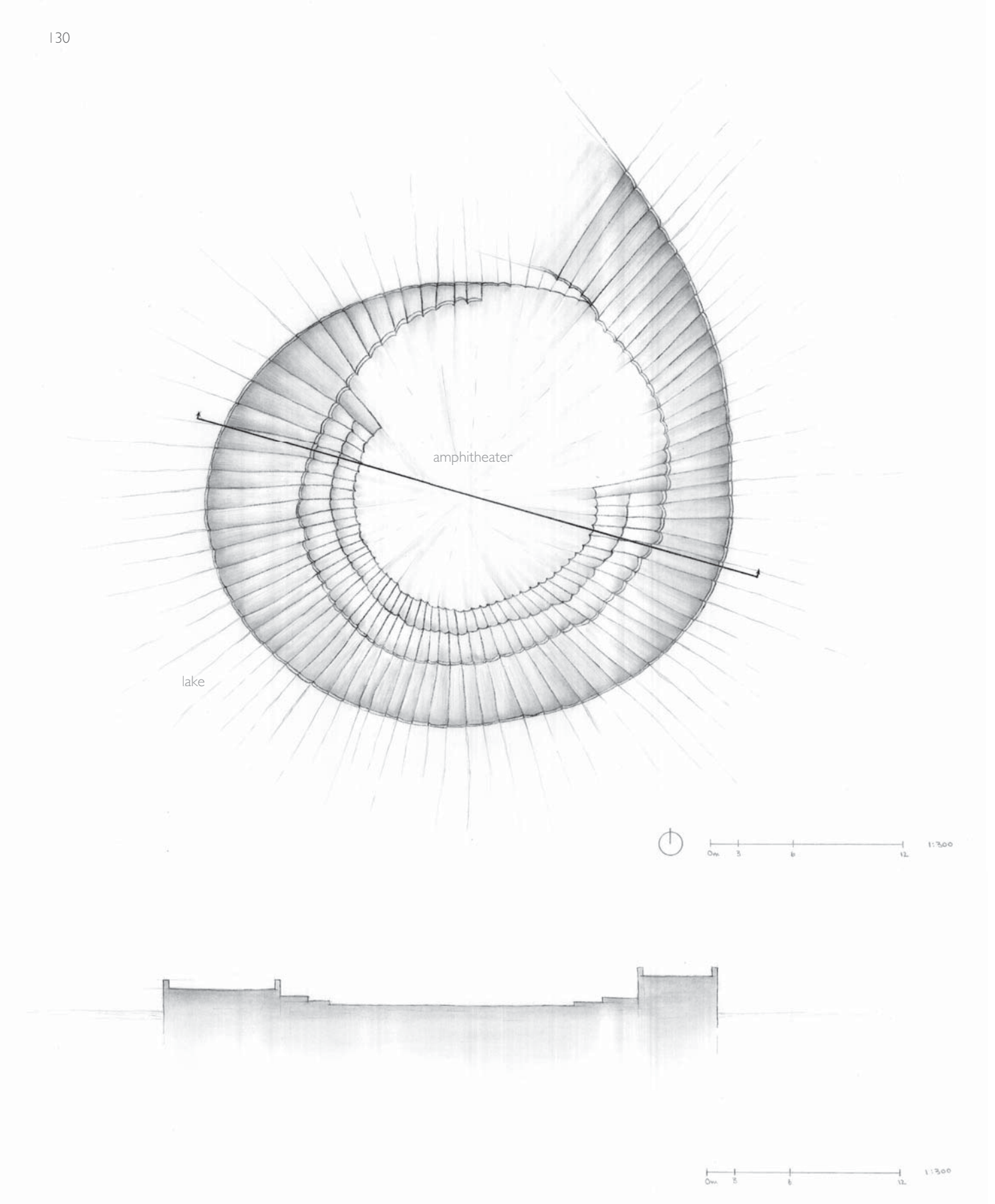
The rising structure of the bridge crossing the highway.



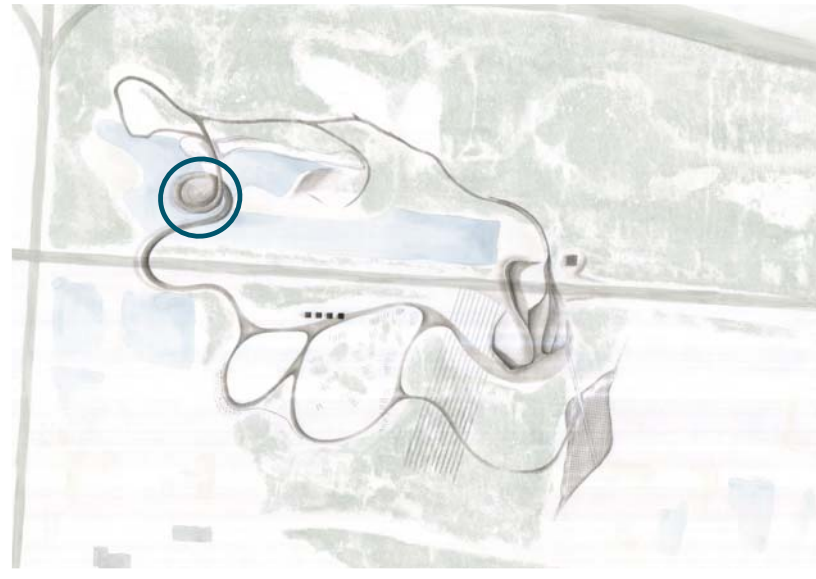
Raising up and off of the ground plane, a system of archways support the stone walkway as it ascends and crosses over the highway. The curving form and repetitive nature of the arches reminds you of the Receptaculitids fossils seen in the Interpretation Center. At the apex of the bridge's height is etched the year Highway 44 was diverted from traveling through Garson. The audio that plays describes the activity that once ran through the town with the active highway.

> Dust was always heavy in the air and hard riding jolts taken for granted. Automobiles before 1916 were a rare oddity, horses shied at them or ran away. If a car made it thru the village all the way from Winnipeg, it was a topic of conversation for days. There were many bicycles and quite a few motorcycles.
>
> Finally the hard surface came through on…Highway #44, in 1932. Of course by then the gravel roads were becoming hard packed and cars were increasing. Still after a heavy rain, roads would develop deep ruts and even teams had hard going. The hard surface was a great boon. The intersection road going north was surfaced in 1973, and those beautiful sidewalks still seem a great luxury to me. (*Garson – then and now,* 1990, p. 123)

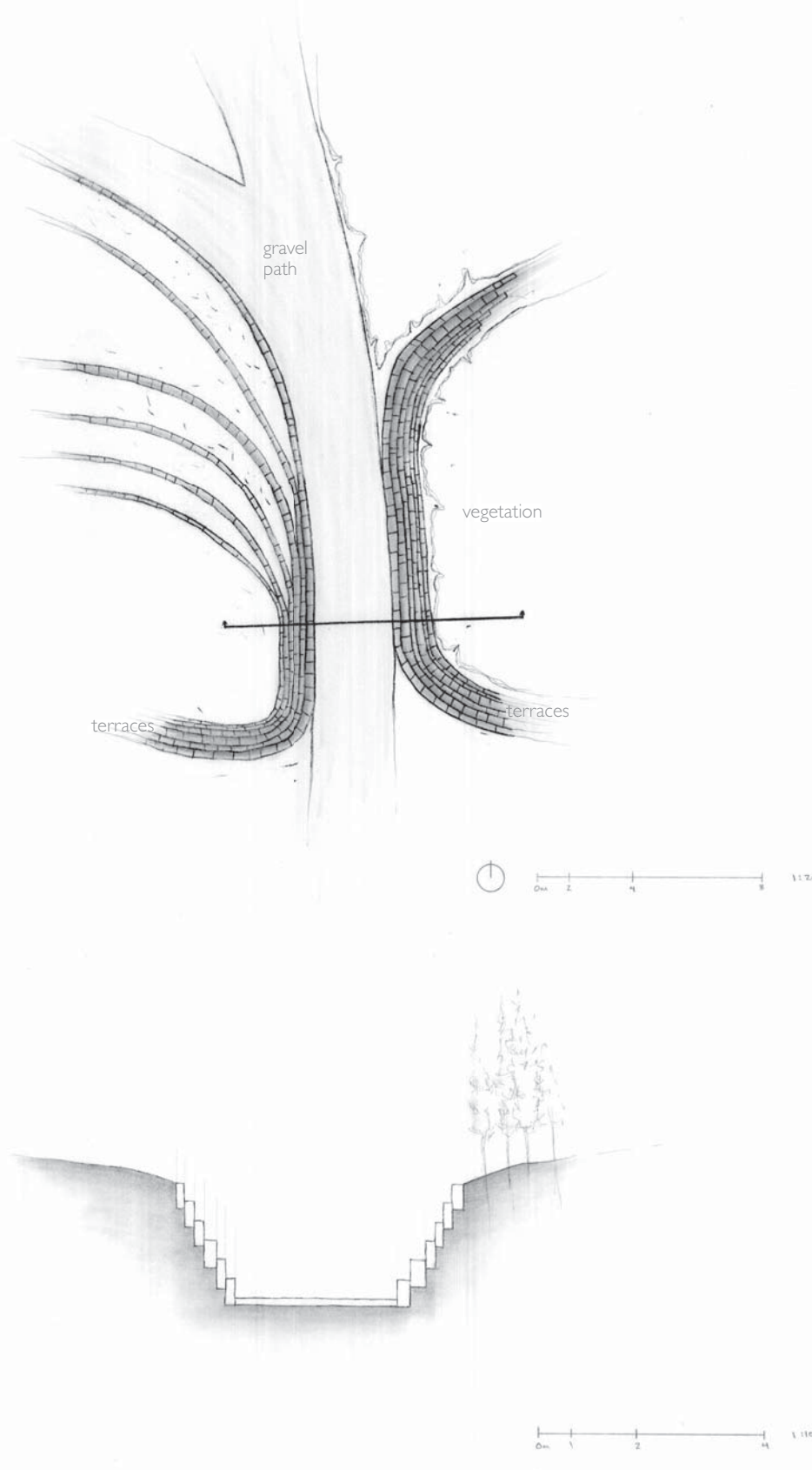
From the height of the bridge you can see long vistas across the surrounding landscape. The town, the buildings of the quarry, and even the deep blue long rectangular lake that runs along the edge of the highway come into view as the walkway curves back towards the park. As you cross the lake, the wind picks up and cools your heated skin.



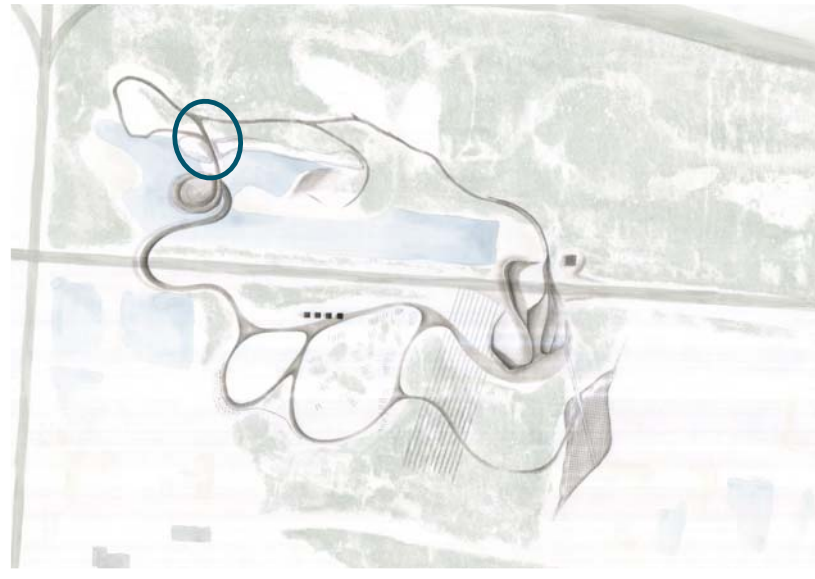
The coiled form of the Phylum Brachipoda-shaped amphitheater.



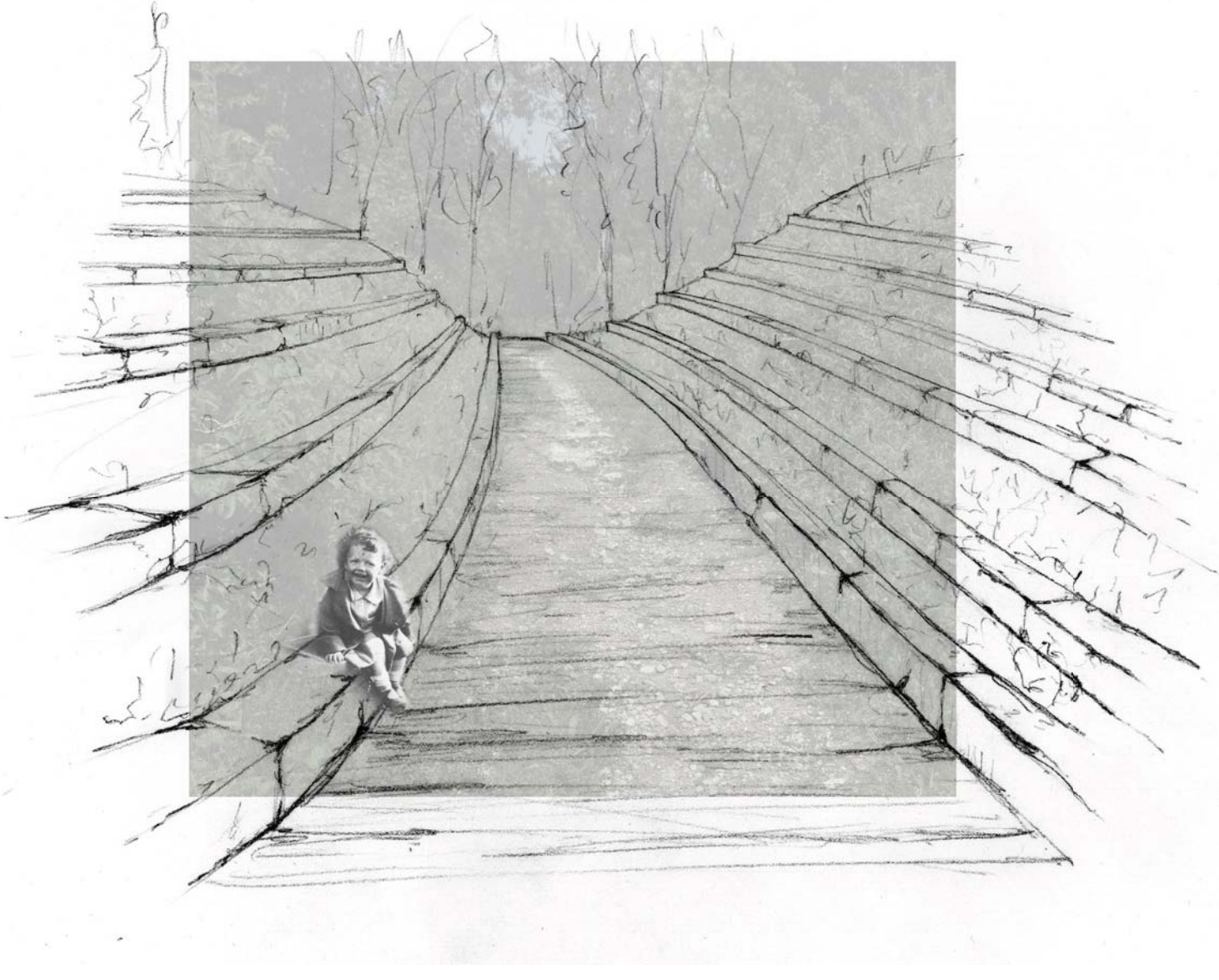
The stone walkway winds back upon itself, creating a bowl-like shape. The Phylum Brachipoda-shaped amphitheater is filled with school children listening intently to a park guide describe the site and its history. The coiling form is covered with the fossils that are predominantly found within Gillis Quarries, and the dates of their living existence etched into the stone beneath them.



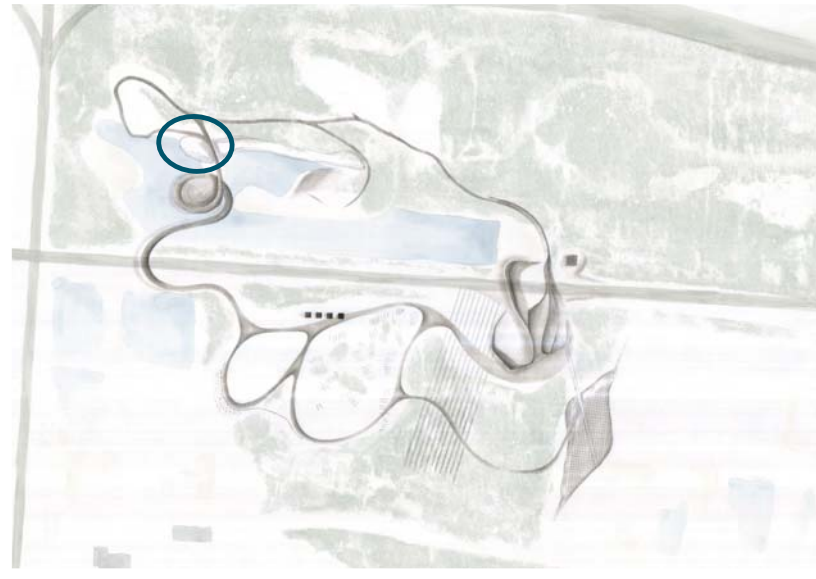
The terraced chasm leading away from the amphitheater.



As you continue along the path the landscape steps back into terraces. Contained by a rough-hewn limestone edge, the wild grasses and shrubs strain to escape their stone constraints. The pattern in the stone varies slightly from terrace to terrace; dates are engraved into each stone level making you aware that each terrace equates one strata level of the limestone sedimentation.



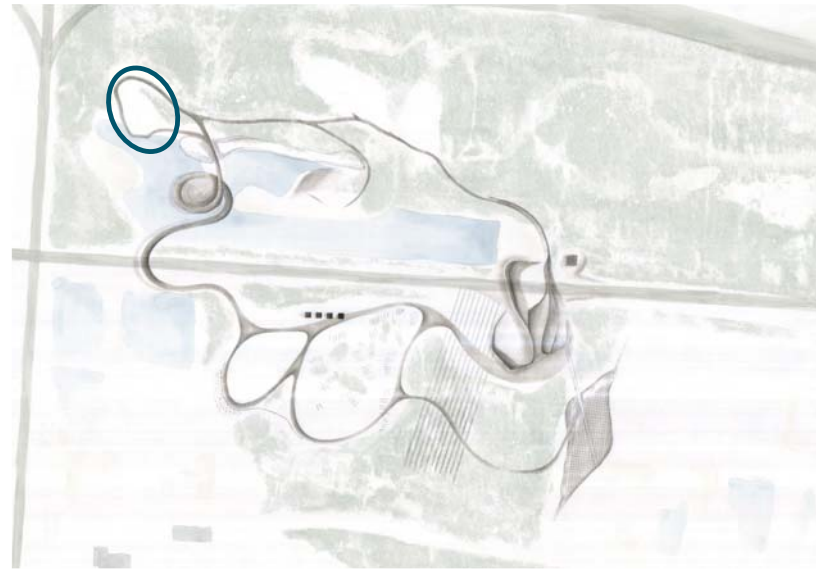
Passing through the terraced chasm, before the diverging path.



Further along, the limestone terraces seem to break down, and strew themselves across the path as tiny gravel pieces pave the way forward. The stone and vegetated chasm opens up before you and stretches out into multiple paths.

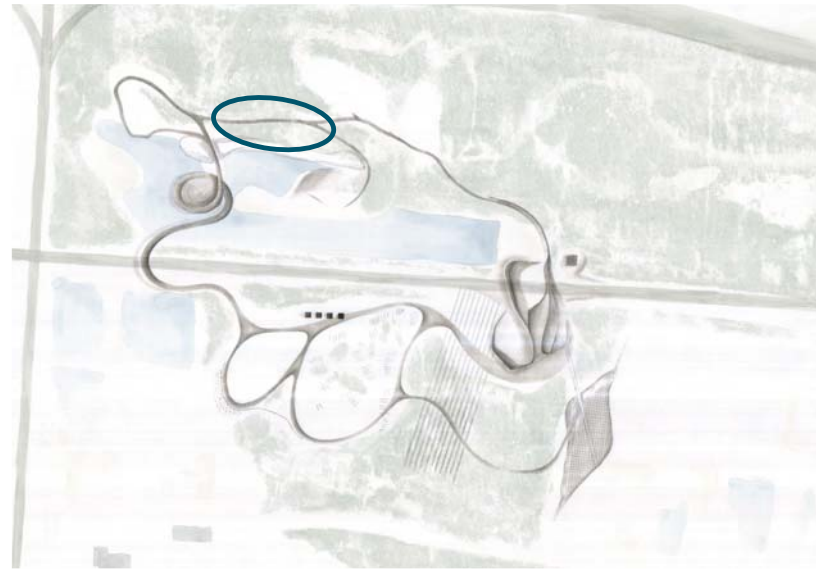
Taking the path leading left, you wander down by the lake's edge. Large limestone fragments form the path adjacent to the water, you bend down and touch the clear calm water with your finger tips. In areas, the blue water is nearly over-grown with reeds. Small waterfowl hide within the vegetation, waiting until you pass to resume their chattering call.

The watery world of a rectangular pool depressed into the limestone bedrock.



The landscape shifts from a watery world into one of scraped bedrock that is strewn with discarded boulders. Spruce trees, encroaching into this stony world, grasp and weave their thirsty roots down through the cracks in the stone to nourish their bristly branches. Depressed into the bedrock, sits a rectangular pool, its glass-like waters display the world beneath the meniscus. Algae clings to the saturated grass roots as tiny insects float through this liquid world. Etched into the base of the pool is the data from a water quality report you read in the Interpretive Center, the sparkling clear water seems to substantiate the report's findings of purity. Time seems frozen here as you sit on one of the many large limestone blocks set askew throughout the site, and reflect on the serene world around you.

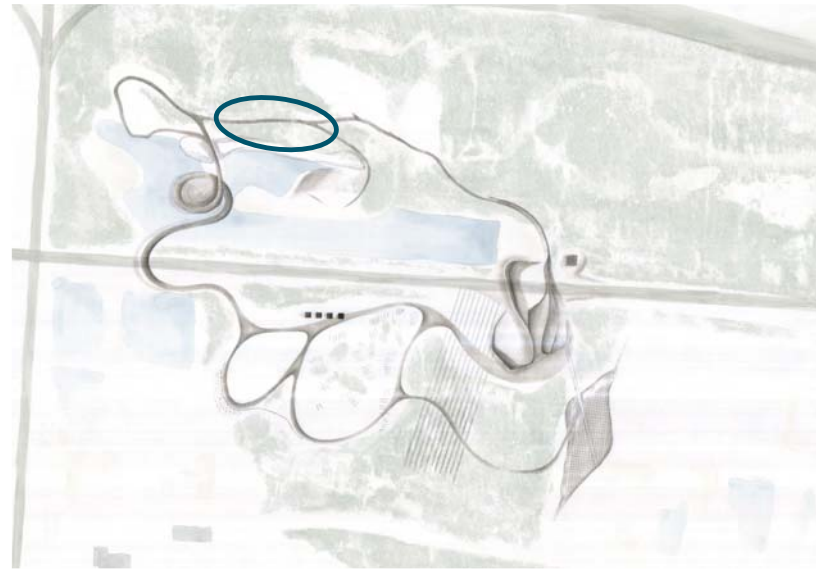
Markers indicating an audio interpretive node.



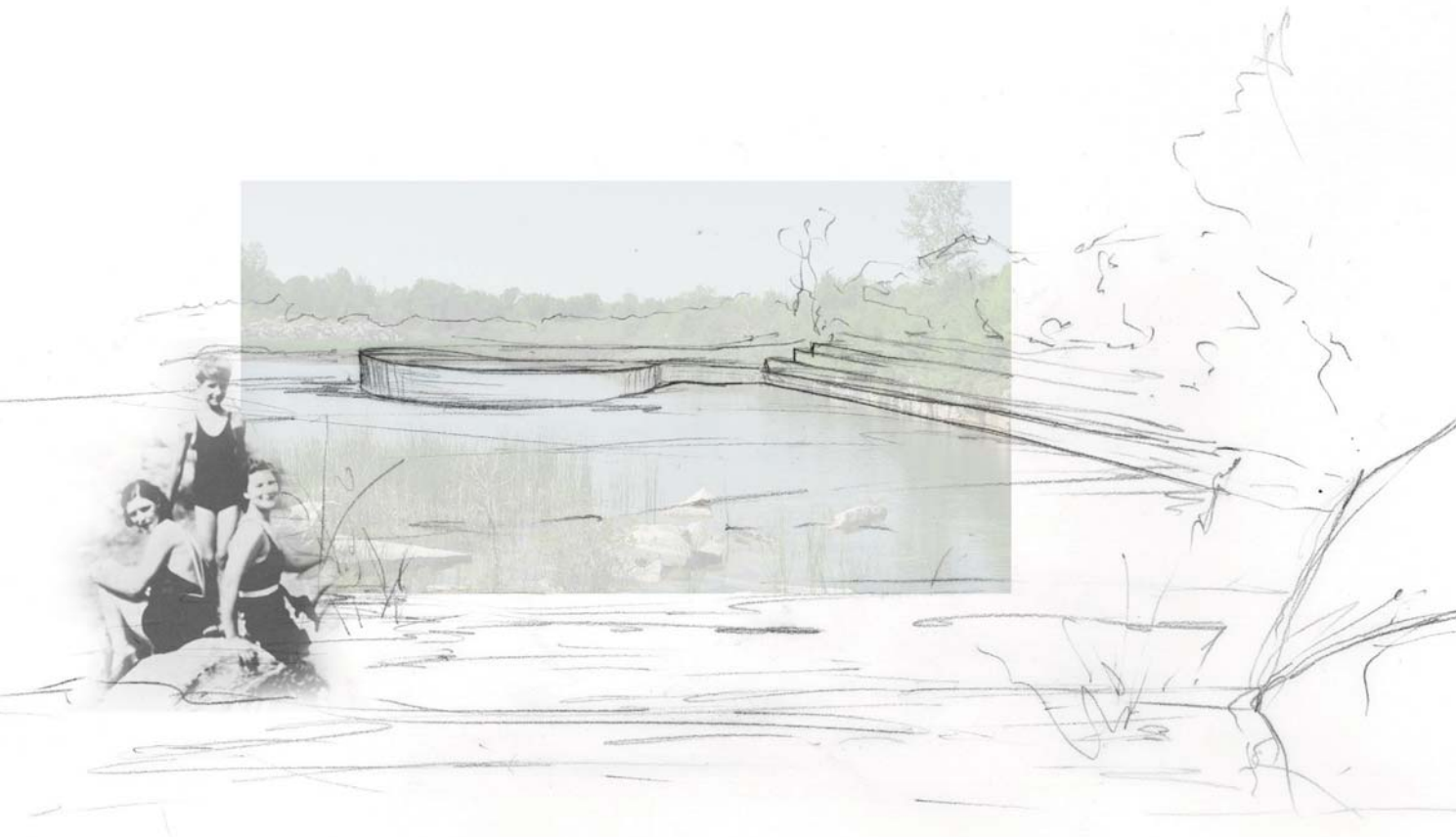
Your feet lightly crunch the crushed limestone as you continue along the path listening to another audio piece:

> When the quarries were very productive there was heavy traffic on the highways, mostly teams, buggies, democrats, and big sleighs and cutters in the winters. There was lots of horse energy. Many heavy roads were built throughout the woods into the quarries. All the roads were built up with crushed rubble and the quantities of overburden removed from the stone beds, also gravel from the pits in the area. (*Garson – then and now,* 1990, p. 123)

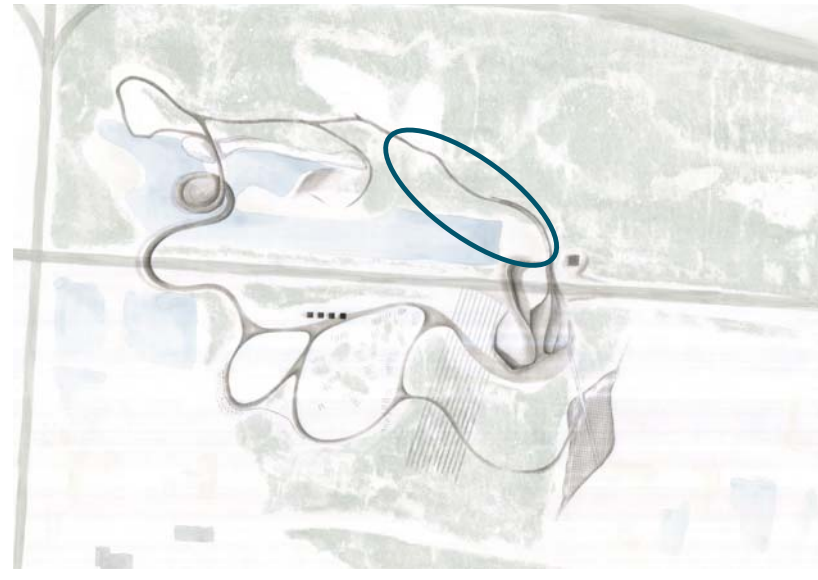
The wooden guy derrick emerging from the vegetated structure of the forest.



The rough forms of massive limestone blocks peek out from their entwined existence in the forest. Like the erratic boulders left in by the Wisconsinan glacier you learned about in the Interpretive Centre, their forms entice you further down the walkway. One of the boulders is chained to a large and imposing wooden structure rising out of the forest. You recognize its form, from the historic images shown in the Interpretive Centre, as the wooden guy derrick that was once used to lift or drag the loosened quarried stone block from its source.



Swimmers soaking up the heat of the summer day on the sandy lake shore of the beach.



Breaks through the trees reveal the lake nearby. Young families play on the sandy beach, half hidden by a turn in the landscape. Bodies in swimwear lounge on the warm sand, soaking up the heat of the warm summer day, while others cool in the clear waters of the lake.

As the forest closes in on the path, the sun's light is blocked until it is only a thin diffusion of glimmers peeking through the dense canopy above you. The randomness of the limestone block earlier along the path, begin to regulate and form into a sweeping wall. Beginning flush with the ground, the wall rises in height as it progresses with you along the pathway. Trees reach over the partition's height, revealing the continuing intimacy of the forest on the other side. You graze your hand along the wall etched with a time line of the history of this unique land; it is cold and almost damp in contrast to the heat of the day. The cool of the forest abruptly ends as the land slopes downwards and deposits you on a flat limestone bedrock ledge at the end of the lake. The wall you followed so closely now leaves your side to enfold into the built forms of the Interpretive Centre. The ground plane steps down and disappears into the deep luscious blue of the lake. Your eyes linger over its glassy surface, before you turn to once again flow into the structure of the Interpretive Centre, completing a visit to the Gillis Quarries Park and Interpretive Centre while listening to one last recollection of the site:

> The quarries made Garson a unique and fascinating place. The strata of rock beds with tiny springs running down over their faces leave a special beauty, the clean stone smell after a rain. How we loved our geology walks we had with our teachers around the quarries and holidays spent in their swimming holes. (*Garson – then and now,* 1990, p. 122)

Gillis Quarries Interpretive Centre and Park.

FINDING

Once in, I hate to leave the water. I would prefer to stay in this aqueous state, than emerge from it. I dread the feeling of gravity taking hold of each inch of my exposed body as it rises out of the water and into the air. My body once weightless, is now heavy, I feel as if I am being dragged down towards the centre of the earth. But, emerge from the water I must, for I am not an aquatic being. I enjoy my lessons immensely. Each time I dip myself into this fluid world and feel the defining meniscus - the delineating edge of water below and above - I lose myself for a while. All my cares and worries seem to dissolve in the water, diffused from my body and into this liquid environment to drift away. In the water all my attention and bodily energy is unified and focused upon the balanced rhythm of movement. I feel relaxed and at ease in this luxurious escape – at home now in the water.

find verb

verb trans. Become aware of... (Shorter Oxford English Dictionary, 2002, p. 959)

Every time I enter the water I feel the connection - the thread of energy that binds all living organisms together. I understand how all life is wound into one constantly evolving element.

I once thought of humanity as a blight on the Earth, a parasitic existence that was draining the life-blood from the world. But each time I dove futher into my research, I couldn't help but notice the ways in which humanity is inexplicably tied to the definition of nature. Throughout most of human history, humanity's way of life was inescapably ingrained within the natural world. From day-to-day activities to those more spiritually bound, humans perceived themselves as part of a unified whole with landscape. The world was seen as a network of entwined relationships, where each element contributed equally to the survival of all (Rotundi, 2003). However, as humans took more and more control over their surroundings, their perception of their entwined existence with landscape shifted. Instead of seeing nature as an integral part of life, it is now often considered a site of pristine perfection - a place existing outside of human interaction (Oates, 2003). This notion has lead humanity to draw away from an enmeshed experience with nature.

Like the watery world I visited weekly, for my swimming lessons, nature can be seen as a woven web of permeable and impermeable boundaries (Casey, 2007). Within this theory the world is a succession of shifting experiences – where nature is the continual interchange between all the things of the world (Abram, 1996). This reciprocal and interwoven reality includes human existence; as "we live in an interdependent world, with every single life in relationship with many other lives" (Sewall, 1999, p. 124). When nature is defined as the intertwined relationships between all of the elements in the world it can no longer be seen as a pristine site existing outside the realm of humanity. Instead, nature resides in all things, in all places, at all times. Accordingly, we, as humans, are embedded into the natural world; everything we are, all the things we do and create - are natural.

find verb

verb trans. Come to have, obtain, receive, experience. (Shorter Oxford English Dictionary, 2002, p. 959)

This holistic idea of nature became very apparent to me the first time I visited Gillis Quarries in Garson, Manitoba. The stepped stone landscape has been cut into the earth by the excavation of the stone for construction purposes. Prior to seeing the site, I expected to be appalled by the brutal extraction of the stone. Instead I was overwhelmed by the unique beauty of the site and soon realized that its very presence relies upon human activity. For if John Gunn had not pierced into the landscape so long ago, this site would not exist. I found myself wanting to bring people to the site, to allow them the opportunity to entwine themselves within experiential qualities of the site, to have them discover its inherent peaceful serenity.

Integrating a park and an interpretive center within Gillis Quarries reveals the interwoven environmental and social histories that are embedded within this area. Rather than leaving these stories to remain encased within the stony ground, they are relayed through artifacts, imagery, sounds, and landscape, to be experienced by those who visit the site. As Gillis Quarries is to remain an active excavation site, the ever-evolving forms of The Gillis Quarry Park and Interpretive Centre redefine the definition of a park. Where a park was once a pristine place for outdoor leisure, here it is this leisure activity paired with the industrial processes of a working quarry. The sweeping forms of the park evoke the interwoven nature of the world, and explore the enmeshed existence of humanity within nature. The process of excavation on the site has revealed the geological history of Manitoba to be studied, while the years of inhabitation in this area have layered the site with social histories. The constantly developing forms of Gillis Quarries Park and Interpretive Centre provide an opportunity to share this unique history and landscape.

find verb

verb trans. Learn through experience or trial... (Shorter Oxford English Dictionary, 2002, p. 959)

The highly phenomenological approach to this study and design permits a layering of experiences. Phenomenology seeks "not to explain the world, but to describe as closely as possible the way the world makes itself evident to awareness, the way things first arise in our direct, sensorial experience" (Abram, 1996, p. 35). This work was an attempt to understand the way in which the world is experienced and making meaning through this experience. The experiences referred to here are those of a person within a designed landscape and the experiences of designing a landscape. Phenomenology was a way to activate my experiences of researching and of the site, in order to design a place that facilitates an enmeshed experience within the site of Gillis Quarries.

By framing the inquires of this practicum within the philosophical concept of phenomenology, I was able to describe the interconnected realities of nature. The phenomenological language provided the vocabulary necessary to evoke the enmeshed experiences of the perceivable world. Understanding the intertwined tendencies of humanity and nature was dependent upon the phenomenological notion that "our sentient bodies are entirely continuous with the vast body of the land" (Abram, 1996, p. 68) and that "the body is [the] very means of entering into relation with all other things" (Abram, 1996, p. 47).

Since, as Max van Manen writes, "Lived experience is the starting point and end point of phenomenological research" (van Manen, 1990, p. 36) I decided to fully integrate myself within the act of research by engaging my body. I submerged myself in the theories, filtered them through my mind, and drew them out of my body.

Swimming permitted a comprehension of the world of words that evaded me before. By fully submerging myself within the cool waters of a pool I could relate to the literature I reviewed. I could understand the way it felt to be a lonely particle floating free within the greater pool of life, or pretend to be the ancient sea creature living in the waters above the land in Garson, Manitoba. While under the water I could study the quality of light – the way it flickers to the bottom of the pool and illuminates the tiles; I was able to look out from within this fluid world and see the blurred sights and hear the muffled sounds of life above the watery surface. Engaging my body in the research activated my mind and freed it to explore new realms and possibilities of designing landscape.

Continuing this act of bodily engagement within the research of this practicum, I employed the processes of drawing. Through this method of representation I was able to intertwine my mind with my body and with the surrounding environment. Forging an alignment between these three components exposed the interconnected disposition of the world. Drawing offered clarity in thought through the merger of the body with landscape, and provided a physical representation of my research that could be applied spatially.

Organizing this practicum with themes extracted from van Manen's book *Writing in the Dark: Phenomenological Studies in Interpretive Inquiry*, provided a structured way to progress through each stage of this practicum. The themes *seeking*, *entering*, *traversing*, *drawing*, *gazing*, and *touching* were used as a way to coalesce all aspects of this work together. They were a means of linking the developed theory with my experiences in a way that was productive for designing, as well as helping me to organize my approach to designing the site and arranging this document. Each chapter of this document relates the characteristics of one theme; directing my investigation of the site, and ultimately aiding in the design of the park and interpretive centre at Gillis Quarries. The experiential themes depict methods of bodily engagement with place. They permitted the design to materialize from the site's physical and historical characteristics, and to convey the intertwined quality of humanity and landscape as nature.

find verb

verb trans. Arrive at, reach; reach by natural or normal process; *arch*. reach the conscience or understanding of. (Shorter Oxford English Dictionary, 2002, p. 959)

As a result of the journey through this practicum, I now have a deeper appreciation of the complexity of the world. I can visualize all things as part of one whole, all ruthlessly evolving forward through life. We, humans, everything of this world, evolve together; we strive to feel connected and to assimilate ourselves into the greater existence.

> Life bares pools of liquid space in places impossible not to share.
> (Johnson, 2009, p. 12)

Last night I dreamt of water - of submerging myself in a pool. Within the sepia tones of my dreamscape, my red swimsuit resisted against the forward thrust of my body as I dove into the swimming pool. My hair streamed out behind me, dancing with the water surging around my body. All of my cares washed away as I entwined myself with the aqueous world. A continuous stream of thoughts floated in and out of my mind as I flowed through the liquid. My arms making sweeping circles as I repeatedly swam the length of the pool, drew the glistening water to and from my form, creating swirling ripples within the fabric of this world. My body grew tired, exhaustion setting in from the constant exertion of moving myself forward and around in the water. But still, upon reaching the end of a lap, I turned again to begin another. Stretching out, I took a deep breath and I placed my face in the water, not wanting to leave, for in the water I felt enmeshed with my world - and free.

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