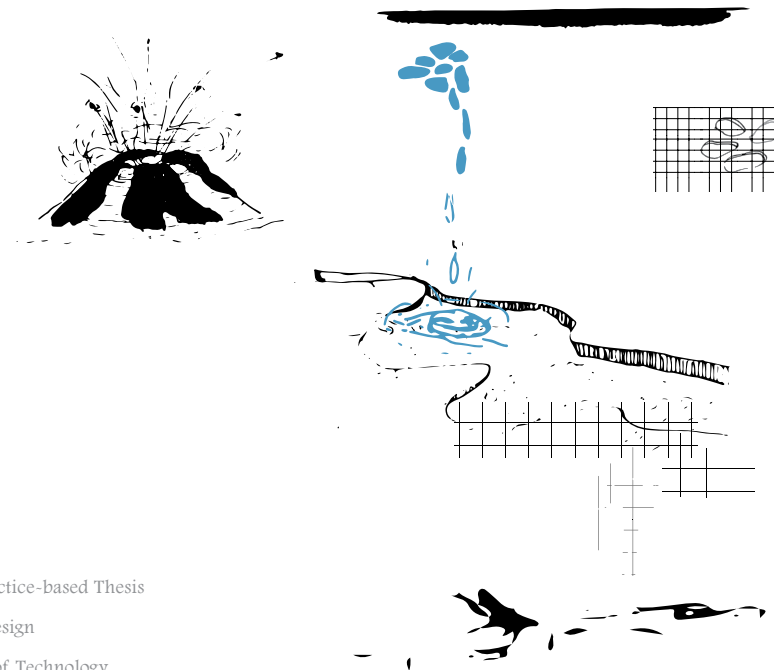


# A ROCK WITH LOTS OF HOLES: VOLCANIC IMAGINARIES OF TĀMAKI MAKĀURAU

Silvia Kostandini Ziu • 2022 • School of Art & Design



Exegesis in support of practice-based Thesis

Master of Design

Auckland University of Technology

**School of Art and Design**

An exegesis submitted to Auckland University of Technology  
in partial fulfilment of the requirements for the degree of  
Master of Design.

**Attestation of Authorship:**

I hereby declare that this submission is my own work and  
that, to the best of my knowledge and belief, it contains no  
material previously published or written by another person  
(except where explicitly defined in the acknowledgements),  
nor any material which to a substantial extent has been  
submitted for the award of any other degree or diploma of a  
university or other institution of higher learning.

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## Abstract.

**How might a volcanic material imaginary — particularly of the basalt scoria volcanic field that underlies Tāmaki Makaurau — provide ways for people to see themselves collectively?**

Our surroundings shape a sense of identity, and the interactions with spaces begin to define our experience in the city. A rock with lots of holes is a spatial design research inquiry into place-making; investigating a volcanic material imaginary to produce a public space along the coast of Takapuna, North Shore.

In an imaginative engagement with the volcanic rock, this research explores abstract and tangible ways to unfold a narrative of matter. Engaging with geographical, cultural, and social aspects that define the scoriaceous element and its connection to the Tāmaki Makaurau volcanic landscape, this project proposes a public refurbishment that engages with the volcano and shapes a public space that offers a new way for people to see each other collectively.



FIGURE 1  
Kostandini, S. Scoria rock, Photograph, 2021

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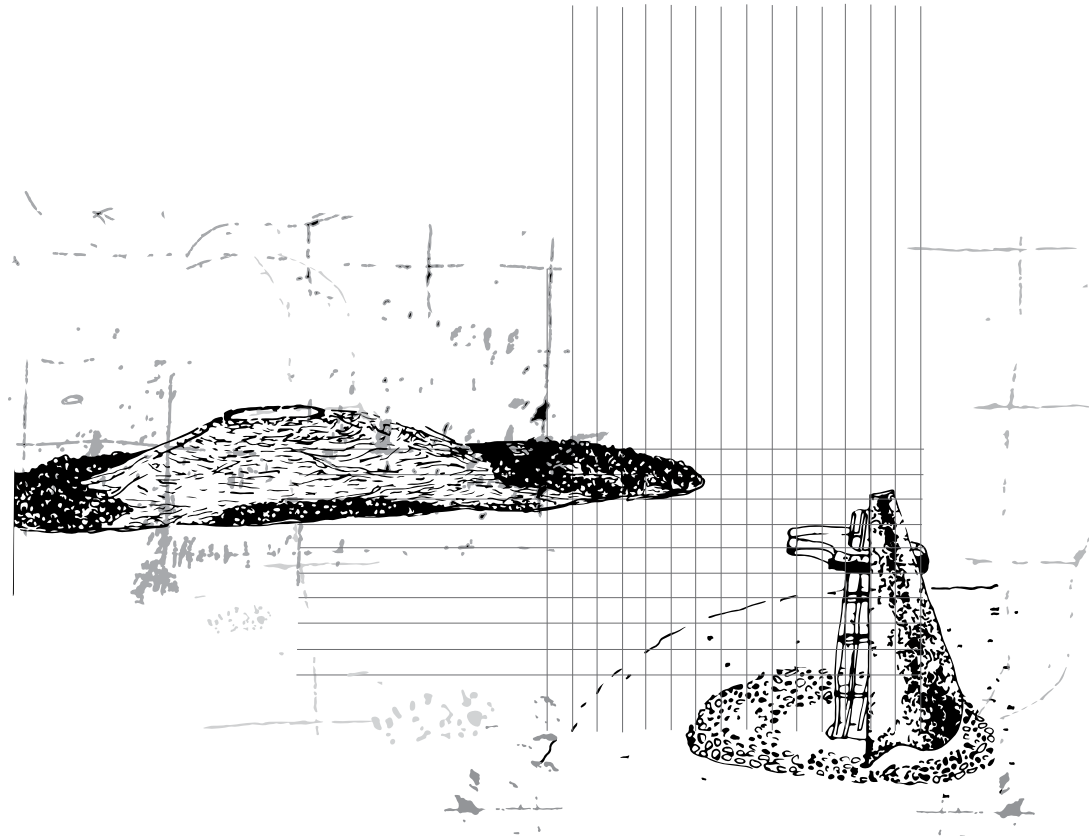


FIGURE 2  
Kostandini, S. Rangitoto and the Lighthouse, Digital / Drawing, 2021



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## I. INTRODUCTION

This research is a story of matter and imagination ~ two protagonists of a narrative that implicate material histories, aesthetics and landscape relationships.

A rock with lots of holes develops a volcanic material imaginary of Tāmaki Makaurau's characteristic rock, scoria, and in doing so conceptualizes the condition of the unstable volcanic grounds that underly our public domain. This spatial design research project investigates the current condition of public spaces in the Tāmaki Makaurau Auckland landscape, reimagining the role of those spaces and expanding on the notion of public dwelling. The urban landscape of Tāmaki establishes a relation with its volcanic territory, a layered strata of flows, elevations, and concavities of 53 volcanos. This volcanic territory, more than a terrain feature, has become a space of collective shared inhabitation. Auckland historian Lucy Mackintosh writes: "Rocks inform us about the narratives that people have constructed over time and the ways in which these narratives have continued, transformed or been silenced"<sup>1</sup>. The geoheritage role of the volcano revered as Tūpuna Maunga has framed an ancestral, spiritual, and historical connection between the landscape and its inhabitants and, for hundreds of years offered a place to gather, play, and dwell. In Tāmaki Makaurau, the Tūpuna Maunga have acquired the role



FIGURE 3  
Kostandini, S. Waimangu Volcanic Grounds, Photography, 2021

1. Lucy Mackintosh, "Shifting Grounds: History, Memory and Materiality in Auckland Landscapes c.1350-2018" (University of Auckland, 2019), 15.



FIGURE 4  
Kostandini, S. Maungakiekie Grounds, Photography, 2021

of public parks where the natural landscape shapes a sense of collective identity of belonging as a whole. In this design inquiry, a volcanic material imaginary recalls the uncertain and atmospheric sensibilities of the volcano, now covered by a pastoral landscape. Scoria fields, reflective obsidian waters, and volcanic forces have informed the design of an alternate imagining of public space which celebrates the unstable ground of Tāmaki Makaurau. The practice-led research threads materials and dwelling conditions into a spatial design practice of experimental material production and urban placemaking. As architectural theorist Paul Emmons puts it, a key principle of this practice is that “material is not mere receptacle of form, but an active aspect of design”<sup>2</sup>. Scoria is the subject of my material study and a source of artisanal experimentations and embodied methodologies. The idea of a material imaginary recognizes that materials might perform in imaginative and social ways as well as physical ones. Accordingly, materials, experiences, and myself as a designer intertwine.

My family and I moved from Italy to Aotearoa, New Zealand, in 2015. Memories of urban plazas, people gathering, and lithic constructions hold a special place in my practice and influence how I



FIGURE 5  
Kostandini, S. Maungakiekie, Photography, 2021

2. Paul Emmons, “Architectural Encounters between Material and Idea,” in *The Material Imagination: Rev-eries on Architecture and Matter*, by Matthew Mindrup (London, United Kingdom: Taylor & Francis Group, 2015), 7, <http://ebookcentral.proquest.com/lib/aut/detail.action?docID=4436179>.



think and design. The volcanic material imaginaries frame a spatial practice where culture and tradition meet and, through placemaking, blends the natural and built environment to become active public spaces. Public places have always been spaces for people to connect spatially and socially, building on a sense of collective identity embedded in the landscape and its inhabitants. The design journey seeks to consider the landscape by reflecting upon cultural, ancestral, and indigenous sensibilities, which I still have much to learn from, establishing a sense of identity intertwined with the volcanic landscape of Tāmaki. Through this process, I have explored the volcanic material identity of Tāmaki Makaurau Auckland in a journey that culminates in a design for a major new public space on the beachfront of Takapuna, North Shore.

My design proposal Scoria Field aims to foster a form of volcanic dwelling drawing on historical, atmospheric, and haptic sensibilities associated with volcanic matter. The volcano and its ancestral and spiritual values embody a landscape of shared knowledge. The spirit of the land solidifies through Māori narratives, histories, and cultural processes that frame the collective identity of Aotearoa. The identity of the Tāmaki Makaurau isthmus



FIGURE 6  
Kostandini, S. Takapuna Beach, Photography, 2021



layers traditions and stories from nineteen iwi and hapū. Thirteen of these have recognised customary associations with Takapuna Beach: Ngāi Tai, Ngāti Tamaoho, Te Patukirikiri, Ngāti Pāoa, Te Ākitai Waiohua, Te Rūnanga o Ngāti Whātua, Ngāti Whanaunga, Te Kawerau a Maki, Ngāti Whātua o Kaipara, Ngāti Whōtua Ōrākei, Ngāti Tamaterō, Ngāti Te Ata, Ngāti Maru<sup>3</sup>.

The following exegesis is structured into three sections: I. material imaginary explores the lightness and porosity of scoria in relation to spatial design. I.II material includes several case studies of the imaginative material explorations of Italian architect Carlo Scarpa and American Japanese sculptor Isamu Noguchi. I.III imaginary offers an understanding of reveries and imagination inspired by the work of French philosopher Bachelard.

The exploration of scoria's materiality becomes the driving aspect of the study, bridging learning and processes into practice-led research to uncover the existing history of the volcanic rock, challenging conventional methods and developing *il disegno architettonico*, *lavoro manuale*, and *il giornale* as a creative alternative to organize the various tools and techniques that shape the creative practice. The



FIGURE 7  
Kostandini, S. Rangitoto Field, Photography, 2022

3. Auckland Council, "The Hapū and Iwi of Tāmaki Makaurau," Auckland Council, accessed June 4, 2022, <http://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-by-laws/our-plans-strategies/auckland-plan/about-the-auckland-plan/Pages/iwi-tamaki-makaurau.aspx>.

choice to incorporate Italian terminology becomes a way to acknowledge my background through the research.

I discuss these methods in Section **II. Methodology** of Study as being porous, driven by the basaltic nature of the rock, which prompted haptic and embodied material productions. The final section discusses the proposed public place, **Scoria Field**, situated on the edge of Takapuna beach.

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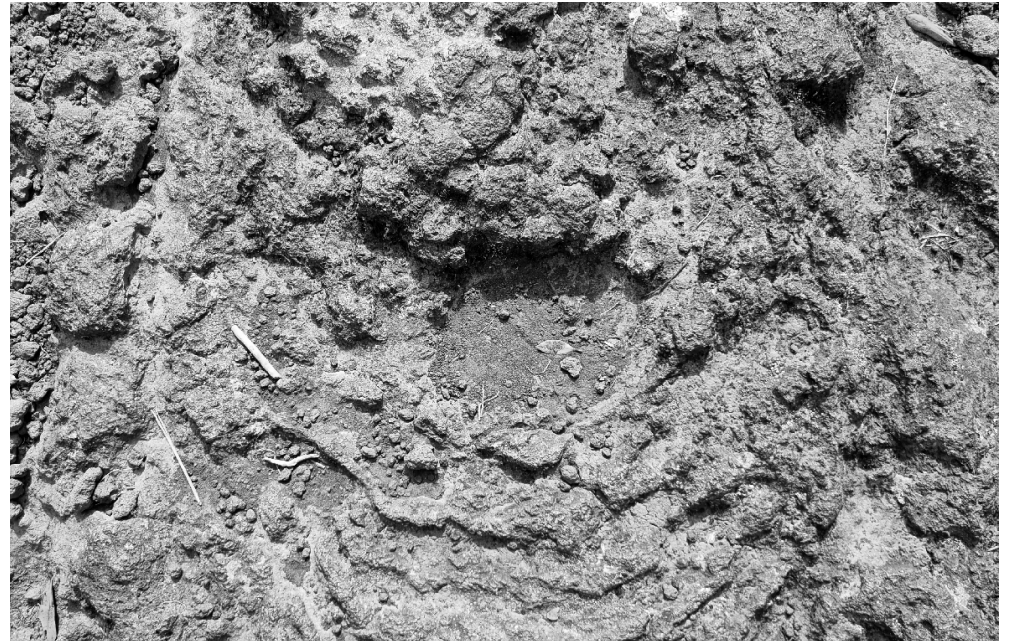


FIGURE 8  
Kostandini, S. Rangitoto\_lava, Photography, 2022



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## II. CONTEXT: material imaginaries of scoria

A rock with lots of holes is a spatial design research inquiry that prioritizes poriferous scoria as a driver for a volcanic material imaginary that informs a new approach to public place-making in Tāmaki Makaurau. Volcanic stone has been employed in forming stone walls and street curbs in urban and subur-ban contexts. However, this design inquiry imagines place and dwelling differently in relation to the rock with lots of holes. To inhabit scoria is to dwell in its indentations, to walk through its irregular surface, and think through its liquified magma state.

The lithic narratives of scoria begin in a volcano's eruptive cone and the temporality of a catastrophe. Lava flowing out from the cone offers images of destructive yet atmospheric conditions, framing a volcanic time/space relation subject to mobility, elevation, and sedimented temporalities. The explosion aerates and animates these rocks during its journey over from the volcano to our landscape. Raw scoriaceous material is texturally poriferous: solid basalt alternates with craters, voids, and interstices. Scoria's metamorphic nature offers images of solidity and liquified conditions that shift from liquid lava to rock and obsidian volcanic glass, a black reflective and polished material. Scoria's materiality solidifies through the volcanic grounds of Tāmaki ,

while its vesicles host a palpable material dimension of heritage layered through steam, lava and rock. The following sections of this chapter will discuss the imaginative dimension of this volcanic material, underpinning this design inquiry through case studies.

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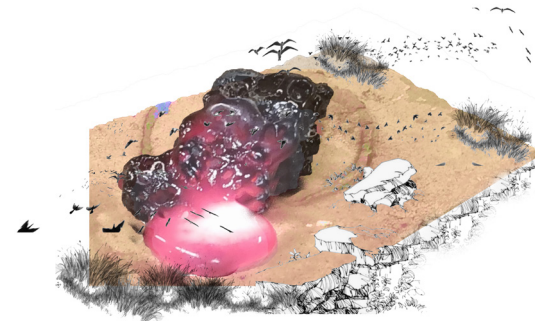


FIGURE 9  
Kostandini, S. Obsidian & Lava, Photography/Digital, 2021



FIGURE 10  
Kostandini, S. Dimensions of Scoria, Digital, 2021

## II.I. MATERIAL IMAGINARIES OF SCORIA: case studies



FIGURE 11  
Warwick Freeman. Lava Brooch, Object, 2014. Photograph by Roy Tremain.  
<https://www.objectspace.org.nz/exhibitions/in-praise-of-volcanoes/>

A range of creatives have used scoria as a material for design to craft volcanic objects, spaces, and encounters. The following case studies offer a reading of work by craftsman Warwick Freeman, architect Peter Zumthor and design studio Formafantasma; the projects develop narratives in which volcanic elements transcend their mundane matter and build on complex relationships between makers, artifacts, and landscape. These case studies are relevant to my public placemaking project, although they are of varying scales because they show how volcanic images are embodied in material artifacts.

New Zealand craftsman Warwick Freeman refers to scoria as “Tāmaki’s regional rock”<sup>4</sup>. With his object-making practice, Freeman translates volcanic materials into jewellery like Lava Brooch (2005, Fig.11), and furniture pieces such as Lava Lamp (2016). Lava Brooch is a direct relationship with the volcano, a miniature slice of rock that offers a look at the many holes of scoria. The organic form of the rock is cut into a geometric form that enables porosity to become the piece’s main focus,

4. Warwick Freeman 1953-, Given : Jewellery by Warwick Freeman (Auckland, N.Z.: Starform, 2004). 37





FIGURE 12

Warwick Freeman. *In Praise of Volcanoes*, Installation, 2017. Photograph by Sam Hartnett



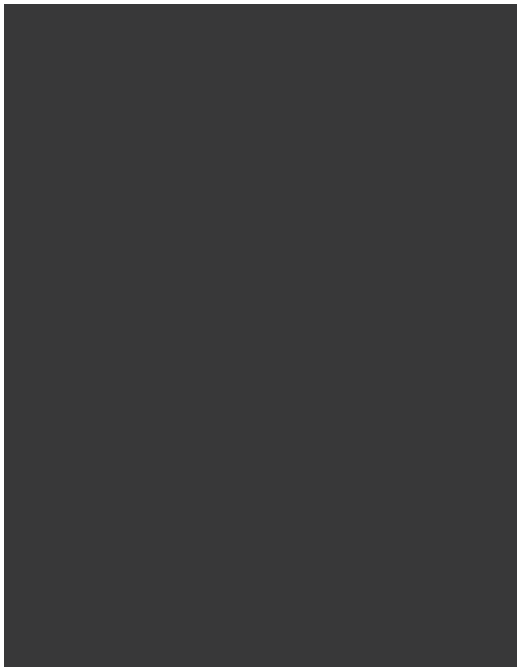


FIGURE 13  
Amoretti, Aldo. *Mechernich Peter Zumthor, Photograph*, 2014.  
<https://www.aldoamoretti.com/fine-art-prints/>

showcasing the many microvesicles and indentations through its clear cuts and smooth finish. Expanding his object-making practice, Freeman's recent work *In Praise of Volcanoes* (2017, Fig. 12) is a room-sized scale volcanic imaginary placed in the forecourt of Objectspace in Auckland. For Freeman, scoria encompasses a volcanic 'energy that is part of the land'<sup>5</sup>. In *In Praise of Volcanoes*, a spatial encounter establishes a relationship between the beholder, volcanic atmosphere, and dwelling in Tāmaki Makaurau. Timber and scoria read a condition of dwelling through volcanic proximity. Burnt timber is threaded onto steel rods to form a porous beaded screen. The installation of a black fence, almost as a burnt volcanic skin, is placed adjacent to a range of scoria tiles. The black timber planks reference the contemporary built environment in Auckland, where dwellings and households are separated by fences and constructed, in some areas, in scoriaceous materials. The fence is crafted utilizing the traditional Japanese burnt wood finish of shou sugi ban and cultivates imaginaries of fire and burning. The thin timber planks appear to be mineral rather than organic, as a volcanic skin.

Architect Peter Zumthor has also used a kind of inverted shou sugi ban in the Bruder Klaus Chapel (2008, Fig 13). The

chapel is an homage to the life of patron saint Bruder Klaus and evokes sacred memories, feelings and experiences that bond body and spirit through its materiality. The chapel's interior was formed by burning out a timber structure from within a rammed-earth shell. The shell retains the impression and image of burning, although the wood is gone. Researcher Peter Byrne writes that "burning becomes an emblematic reflection of the components of the elemental world and their relationship to architecture"<sup>6</sup>. The chapel is an asymmetric tower which encapsulates a cave; the hollowed interior offers images of fire through its textured walls and light conditions. The walls become impressed with a flowing and burned concrete texture, and the hollow perforations act as a threshold for outside elements to be transported into interior space. The chapel welcomes ephemeral sensibilities in the interior space and bonds the elemental conditions of air, water, fire and earth through its textures and surfaces.

For both Freeman and Zumthor, burning impresses the elemental qualities of fire into surfaces and spaces, developing a narrative of loss and change. Construction and fabrication create a conversation between makers, elements and spaces that embodies the landscape and its atmosphere. The insertion of elemental material imaginaries into a social setting builds upon the ability of buildings to provoke feelings not usually experienced in architecture.

6. Peter Byrne, "Enhancing Sensuous Experience: Peter Zumthor's 'Bruder Klaus Field Chapel' in Wächendorf, Germany, 2007" (Germany, Mecklenburg School of Architecture, 2015), 58.

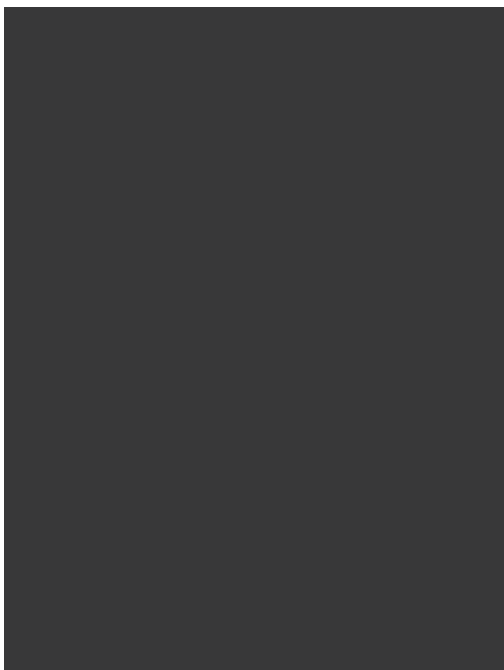


FIGURE 14  
Formafantasma. No 2.2.9.29 - Lipari, Stromboli, Volcano, Panarea  
Bowls, Photograph, 2014.  
<https://formafantasma.com/work/de-natura-fossilium#&gid=1&pid=29>

The emotive relationship between fire and stone is also explored by the Italian design team Formafantasma. Works such *De Natura Fossilium* (2014) and *Ex Cinere* (2019) explore the direct relationship between raw basaltic materials found in the Italian cities of Sicily (in the regions of Stromboli and Mount Etna) and question the links between cultural heritage, tradition, and objects. Rock becomes a collection of igneous artifacts. The collection combines various material fabrications such as the melting and casting of basalt stone to create a series of stools, coffee tables, and a clock, the objects offer a minimal and polished aesthetic that overlays geometrical and organic elements joined and embedded into each other. The series No 2.2.9.29 - Lipari, Stromboli, Volcano, Panarea bowls (2014, Fig. 14) offers an elemental narrative of rock and lava, where each of the volcanic artifacts represents a different state of metamorphic scoria. The collection of scoria bowls holds rock matter, cast and blown lava artifacts and obsidian glass, alluding to dwellings and buildings on Panarea Island. For Formafantasma, lava expresses the "enduring attractions between humans and the impossible force of nature"<sup>7</sup>.

\* \*

7. Formafantasma, "ExCinere - Formafantasma," accessed March 8, 2022, <http://formafantasma.com/work>.

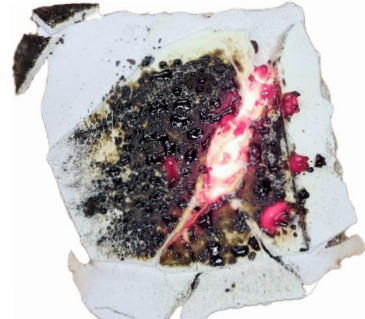


FIGURE 15  
Kostandini, S. Metamorphic Scoria, Photography, 2021.



FIGURE 16  
Kostandini, S. Metamorphic Scoria Tile, Photography, 2021.

## II.II THE MATERIAL : narrative of stone & water



FIGURE 17  
Kostandini, S. Scoria pools, Digital / Photography, 2022

Scoria morphs from fluid magma to solid stone and obsidian glass, linking liquid and solid states of matter.

I have considered solidity and fluidity by looking at Italian architect Carlo Scarpa's watery imagination, and Japanese/American sculptor Isamu Noguchi's use of stone. The two recognize in materials the power of elemental qualities to provoke strong emotions. Significantly, in their works, the handling of material reinforces the relationship between the scale of the territory and more local constructions (an interior and a garden in the case of Scarpa and a public landscape in the case of Noguchi).

For Scarpa, elemental qualities allow things to obtain ontological significance. According to architectural theorist Michael Cadwell, Scarpa is like the German philosopher Martin Heidegger, who "will not let things be, he stuffs them with being."<sup>8</sup> Such sensibilities can be seen in the renovation of the Fondazione Querini Stampalia, a Venetian palazzo, renovated by Scarpa in 1958. Here, he responds to the Venetian landscape in

8. Michael Cadwell, "Strange Details," in *Writing Architecture* (Cambridge, Massachusetts: Massachusetts Institute of Technology, 2007), 6.



FIGURE 18  
Yin, Simon. Fondazione Querini Stampalia Carlo Scarpa, Photography, 2021.





FIGURE 19  
Kostandini, S. Huia Rock, Photography, 2021.

terms of the *Aqua Alta* (high tide) by welcoming water inside the building and elevating the floor of the original gondola entrance (Fig. 18) The elevated floor and its relation to water act as a fluid threshold of arrival, an invitation for the visitor. The liquid, sinuous nature of water transmutes from one material to another as we move through the building, flowing through reflective marble, polished floors and gleaming glass. Cadwell explains that visitors 'swim in a liquid ambience'<sup>9</sup>. Materials guide the visitor through the space in a narrative that offers an experience through textures, ornaments and movement.

While Scarpa offered a narrative of water in Italy, sculptor Isamu Noguchi developed a narrative of stone in North America. His spaces offer new ways to occupy and hold space, according to co-curator of the Noguchi Museum, Noemi Frangos, who suggests that:

'Noguchi's aptitude for thinking and working across disciplines helped him to develop a haptic (physically experiential), interscalar intelligence based on material intuition. His ability to localize, situate, and engage time-space relationships in the form of non-site-specific works gave him an architect's command of scale'.<sup>10</sup>

9. Cadwell, 5.  
10. Naomi Frangos, "On Sculpture, Architecture and Scalar Play," 2019.





FIGURE 20

Noguchi, Isamu, 1904-. 1982. California Scenario: det.: overview.

[https://library-artstor-org.ezproxy.aut.ac.nz/asset/ARTSTOR\\_103\\_41822000486900](https://library-artstor-org.ezproxy.aut.ac.nz/asset/ARTSTOR_103_41822000486900).

For Noguchi, the landscape can create both intimacy and social relations. In *Californian Scenario* (1984, Fig.20), Noguchi was asked to design the park in between corporate buildings in California's Costa Mesa. Now known as the Noguchi Garden, it has become a regenerative public oasis. The landscape intervention offers a series of sculptural areas characterized by a distinctive use of materials and composition. The different areas — Forest Walk, Land Use, Desert Land, Water Source, Water Use, Energy Fountain, and Lima Bean — are a microcosmic representation of California: each symbolizes different geographical characteristics of the landscape. It is also an homage to the flora of California, incorporating various indigenous plants and organic materials. The Noguchi Museum publication notes the "selection of local flora whose steady growth has resulted in a presence equal to the corresponding manmade elements."

<sup>11</sup> The play of angular planes, organic forms, and natural elements enable imagined journeys and transform the visitor into a giant. For Noguchi, the relationship between human scale and landscape is experienced as an embodied act. The material imaginaries of stone, water and plants prompt play and exploration. For Noguchi: "if sculpture is the rock, it is also the space between rocks and between the rock and a man, and the communication and contemplation between." <sup>12</sup>

The work of Scarpa and Noguchi offers a sense of materials as invisible flow that move us through space. Both materials create a dialogue with the natural environment.

As I considered these projects in parallel with my own material and drawn explorations (described in Section II) I began to consider the relationship between the ground of Tāmaki and the waters of the Waitematā Harbour. How could a local intervention enter into a relationship with the scale of the wider territory? Could space ripple outwards as a series of haptic intercalar areas and inhabitable spaces?

\* \*

11. The Noguchi Museum, "California Scenario: The Courage of Imagination," The Noguchi Museum, accessed January 27, 2022, <https://www.noguchi.org/museum/exhibitions/view/california-scenario-the-courage-of-imagination/>.  
12. The Noguchi Museum, "Models for Spaces," The Noguchi Museum, accessed May 5, 2022, <https://www.noguchi.org/museum/exhibitions/view/models-for-spaces/>.



FIGURE 21  
Kostandini, S. Takapuna Rock Pools, Photography, 2022.

## II.III THE IMAGINARY: reveries

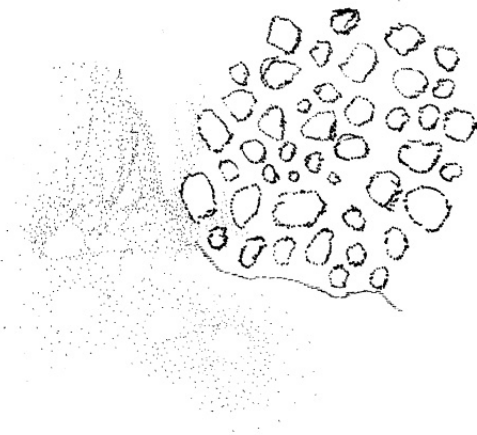


FIGURE 22  
Kostandini, S. Water & Rock, Drawing, 2022.

We do not experience matter purely for its physical properties but imagine in a deeper sense. The concept of an imaginary offers a way to understand the complex exchange between materials, reveries, stories, uses, experiences and practices. Imaginaries materialize the immaterial by giving animacy to inanimate elements.

French philosopher Gaston Bachelard described the imaginary as a force by which reveries thread through materials as 'direct images [that surface] from the matter.'

<sup>13</sup> For him, elements manifest in subconscious ways and offer images of forms and events through which we imagine our presence in the world and the possibilities for action that lie open to us. Over the course of his career, Bachelard made readings of the four elements of alchemy — earth, air, fire and water — identifying rock as an imaginative bridge between mortals and the the powerful, pre-human forces on Earth.

13. Gaston Bachelard, "Rocks," in *Earth and Reveries of Will: An Essay on the Imagination of Matter* (Dallas: Dallas Institute of Humanities and Culture, 2002), 141



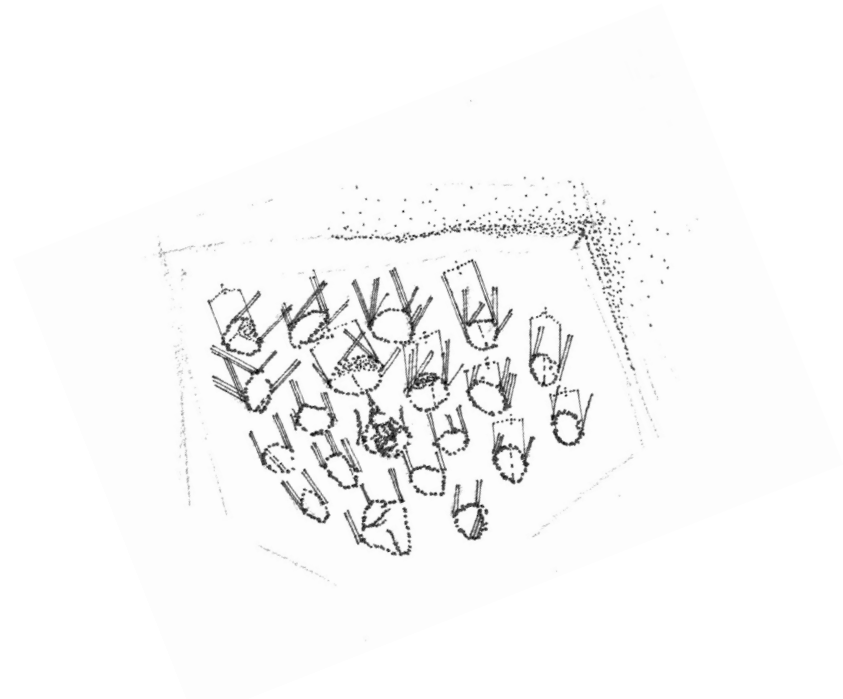


FIGURE 23  
Kostandini, S. Vesicles, Drawing, 2022.

Similarly, Scarpa identified how imagination and intuition offer a sense of possibility. Theorist of material imagination Carolina Dayer writes, "Scarpa's definition of intuition reveals his quest for an active imagination that composes possibilities."<sup>14</sup> Intuition embodies practices that blend the conceptual frameworks and physical studies of materials.

Material imaginaries drive intuition and creative practice, where materials are not simply applied to forms but generate forms and prompt narratives. Scoria offers an image of this mingling of references, connections, dialogues and analogies with images and forms. As I worked, the proliferating holes of scoria seemed to become a state of mind, a feeling associated with discovering linkages between fictive and tangible, like minuscule connections between stony vesicles.

\* \*

14. Carolina Dayer, "Material Intuitions: Tracing Carlo Scarpa's Nose," in *The Material Imagination: Reverties on Architecture and Matter*, ed. Matthew Mindrup (UK: Ashgate, 2015), 11.



FIGURE 24  
Kostandini, S. Obsidian & Scoria, Photography, 2021



FIGURE 25  
Kostandini, S. Lava Vesicles , Photography, 2021





FIGURE 26  
Kostandini, S. Lava and Huia , Photography, 2021





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### III. METHODOLOGY OF STUDY: A study of many holes

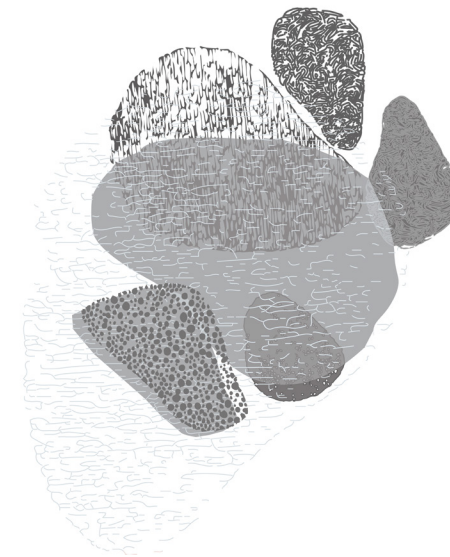


FIGURE 27  
Kostandini, S. Lava Rocks , Photography, 2021

Prompted by this scoriaceous imaginary, I have invited scoria to lead my research as a participant. The porous texture of the igneous rock suggests stone bodies and landscapes be understood through clustering, voids, and solidified liquid matter. In pores, holes, and their configurations, I have sought new spatial sensibilities for individuals and the collective public.

In this section, I describe the three main movements of my creative practice using Italian terms: *il disegno architettonico*, *lavoro manuale*, and *la linea*. The choice to incorporate Italian terminology becomes a way to thread my heritage through the work, linking to Scarpa and Formafantasma (two of my key project references), to recognize the distance I am crossing as I become entangled with Tāmaki, and to point to the way imaginaries of matter and energy can resonate across cultures. These three methods interlock digital and analog methods to congeal, as Bachelard would say, 'images that stem directly from matter'<sup>15</sup>, and ultimately a design proposal for a rocky Takapuna headland.

\* \*



15. Bachelard, "Rocks," 4.

FIGURE 28  
Kostandini, S. Scoriaceous Textures, Digital / Drawing, 2021



### III.I

## IL DISEGNO ARCHITETTONICO: tracing an imagined landscape

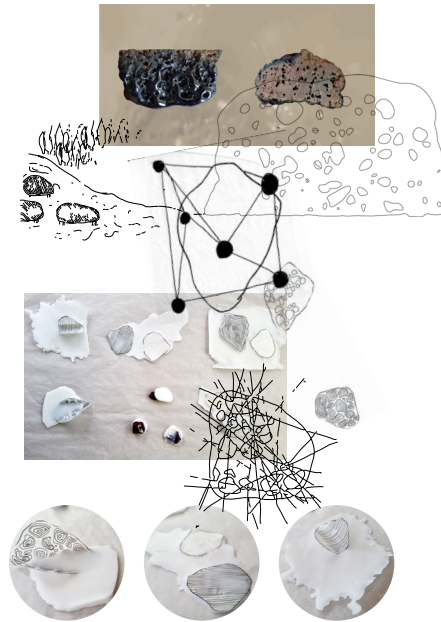


FIGURE 30  
Kostandini, S. Mindmap\_scoriafromhome01,  
Digital / Drawing / Photography, 2021

*Il disegno architettonico* is the practice of mark-making, planning, and mapping varied conditions, threading the many layers of the project into an experiential landscape and mapped narrative. Paul Emmons writes, "*disegno* carries two fused senses: as a concept of the imagination and as a physical work of drawing."<sup>16</sup> In doing so, *Il Disegno* links design to delineation, the tracing of lines that hold together imaginative and tangible aspects of the research.

In the specific context of my work, *disegno architettonico* traces the grounds for analytical and abstract explorations as a collection of lines and links. Mindmap\_scoriafromhome01 (Fig. 30) materializes a volcanic stratum of layered references, connections and analogies between scoriaceous images, three-dimensional models and porous drawings. The method offers a new sense of dwelling in architectural drawing, as Associate Professor Sue Gallagher explores; “we conjure imaginary worlds formed through outlines, textures, scale, and annotation”<sup>17</sup>, an intuitive act that offers a new way to inhabit the confabulated mappings. Rather than an

16. Emmons, *Drawing Imagining Building: Embodiment in Architectural Design Practices* (Milton, UNITED KINGDOM: Taylor & Francis Group, 2019), 2, <http://ebookcentral.proquest.com/lib/aut/detail.action?docID=5744719>.

17. Sue Gallagher, “Home-Body: A Spatial Inquiry into Queer Material Imagination : [A Thesis Submitted to Auckland University of Technology in Fulfillment of the Requirements for the Degree of Doctor of Philosophy (PhD), 2020]” (Thesis, Auckland University of Technology, 2020), 107, <http://hdl.handle.net/10292/13755>.



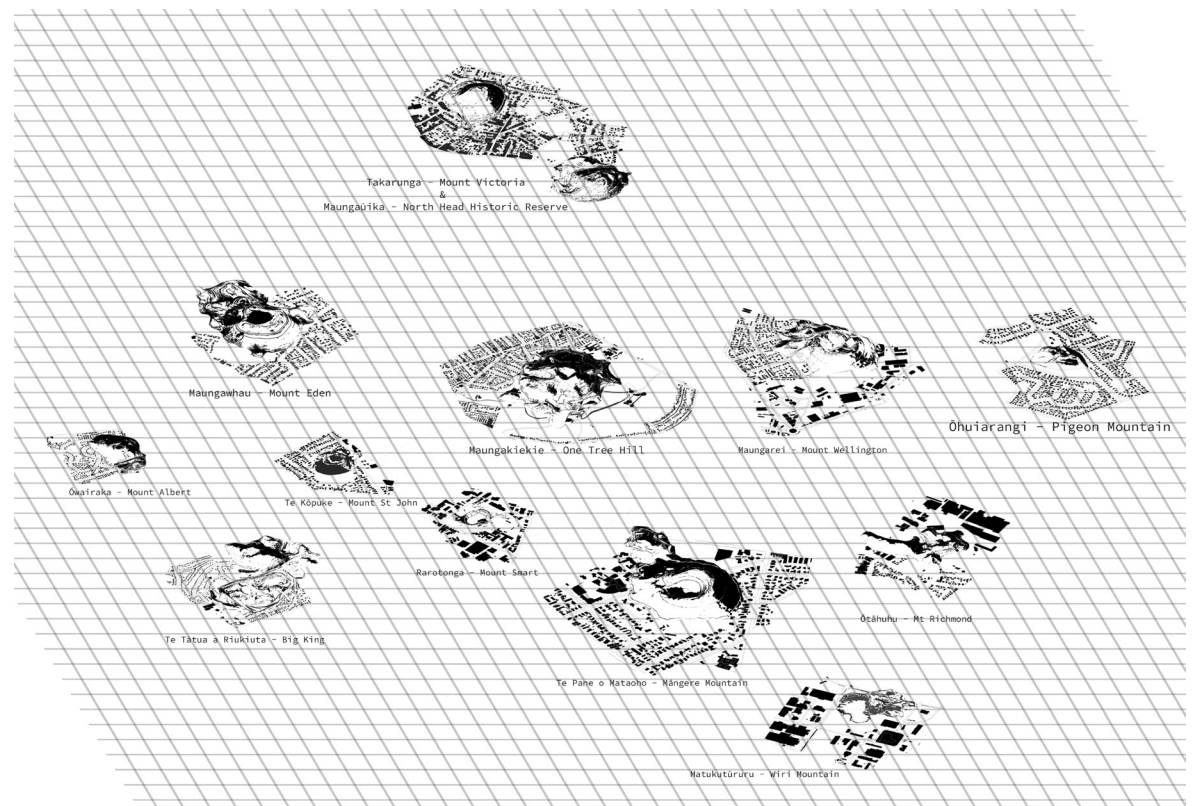


FIGURE 31  
Kostandini, S. TamakiVolcanoes\_1, Digital / Drawing, 2021

outline of a form, my disegno layers ideas of the imagined world, embedding them in existing conditions.

As the research progressed, *Il Disegno* interlocked macro and micro landscape relations. In *TamakiVolcanoes\_1* (Fig. 31), the drawing (inspired by Giambattista Nolli's map of Rome <sup>18</sup> ) frames a spatial relation between landscape and its geo-heritage features and establishes a bond between the scoria and its geographic home. The drawing maps a macro relationship to the volcanic landscape and frames a relationship between the fourteen Tūpuna Maunga. The drawing illustrates where occupancy has conglomerated around the volcano's cone, locating the research and developing a sense of place.

By tying conceptual and physical aspects together into a tool for analysis and imagination, I retranslated the grounds of discovery and disclosed a language for the project. This can be seen in *TakapunaImaginaries\_01* (Fig. 32) , a plan articulating the site's materiality through drawings of porosity, irregular grids and spontaneous marks to offer an imaginative and fictive sense of occupancy. The open-ended mark-making (as Emmons put it) allows "non-mimetic images [to] project their implications for a future

building.” <sup>19</sup> In doing so, these imaginative spaces suggest spaces for dwelling, surface conditions and human activities. These woven analog-digital drawings drew out materiality and unpacked new possibilities.

\* \*

18. "Nolli Map," accessed June 14, 2022, <https://ohiostate.pressbooks.pub/exploringarchitectureandlandscape/chapter/nolli-map/>.  
19. Paul Emmons, *Drawing Imagining Building: Embodiment in Architectural Design Practices* (Milton, UNITED KINGDOM: Taylor & Francis Group, 2019), 3, <http://ebookcentral.proquest.com/lib/aut/detail.action?docID=5744719>.



FIGURE 32  
Kostandini, S. TakapunaImagaries\_01, Digital / Drawing, 2022.



### III.II IL LAVORO MANUALE: poring over scoria

Pore<sup>1</sup>: to read or study with steady attention or application.

- to gaze earnestly or steadily
- to meditate or ponder intently

Pore<sup>2</sup>: a minute opening or orifice, as in the skin

- a minute interstice, as in a rock<sup>20</sup>

*Il lavoro manuale* is how my artisanship is embodied in my practice, in which crafting, fabricating, and investigative tools and techniques are explored in relation to a poriferous material condition. The method encompasses a flow of making practices where exploration of the material is developed as a creative/iterative mode of production as I literally pore<sup>1</sup> over the material. Laboring over scoria's poriferous qualities generated an archive of artifacts that bond materials, processes, my own body, and imagined narratives.

Holes, voids, and crevices develop as solidified explorations through a multi-stage mold-making and casting process. Drawn networks of lines and patterns translate into three-dimensional surfaces and spatial conditions as forms and voids cast from

20. "Definition of Pore | Dictionary.Com," [www.dictionary.com](https://www.dictionary.com/browse/pore), accessed June 14, 2022, <https://www.dictionary.com/browse/pore>.



FIGURE 33  
Kostandini, S. Pouring\_Scoria, Photography, 2022.

one another. Technologies such as 3D printers and laser-cutters mapped the textured holes of the rock onto various materials and translated them into molds for casting the complex and repetitive pores<sup>2</sup> of scoria.

Digital tools did not drain objects of their spiritual energy but enabled a poriferous practice exploring surfaces, solids, and voids. In Poriferous\_Concrete I produced a series of solidified concrete artifacts sized to fit my hands. The process reminded me of solidifying lava: viscous forms of wax, clay, and concrete all offered a reverie of volcanic atmosphere and became an analogy for the dual nature of igneous rock.

*Il lavoro manuale* was haptic, articulating interfaces between material, body, light, shadow and water. The combination of natural elements and The Poriferous collection enabled me to shift scapes in my imagination, from the macro of inhabitation to the micro of dwelling and from landscape to its minutiae. In those crafted spaces, their proximity and the in-between, I began to imagine inhabitable places. Volcanic material imaginaries offer a reverie driven by matter rather than form, a contemplation of scoria's materiality as an element of the earth shaped

by nature's forces -- from vascular indentations to metamorphic glass, the everchanging state of the material evoked a reading of, as researcher Gregory Brais Sioui defines, "formants"<sup>21</sup> of solidity.

\* \*

21. Formants: as the sensitive phenomena between object and space. Natural or anthropogenic | tangible or intangible | elements that constitute sensory event (as it causes aesthetic appreciation)| Sioui, Gregory Brais, "AMBIANTAL ARCHITECTURE - Defining the Role of Water in the Aesthetic Experience of Sensitive Architectural Ambiances," SHS Web Conf. 64 (2019): 64. <https://doi.org/10.1051/shsconf/20196403003>.



FIGURE 34  
Kostandini, S. Porous\_Concrete, Photography, 2022.

### III.III LA LINEA: a collection of wavering lines

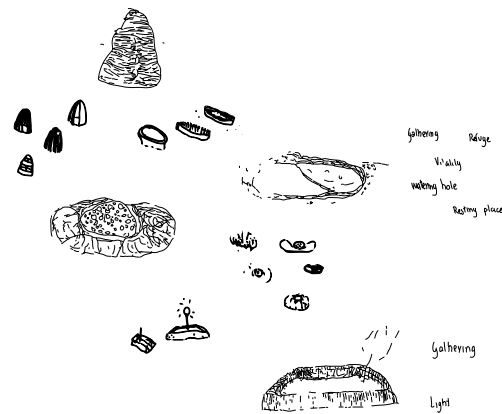


FIGURE 36  
Kostandini, S. The Wax Island, Digital, 2022.

*La Linea* is a practice that mediates a scoriaceous material imaginary through lines, delineating pores, holes, stone bodies, landscape mementos, grounds of discovery, things, spaces, places, and speculations. It centers on the qualities and performances of lines. It describes how the conditions disclosed in the imaginative play of *il disegno architettónico*, and *il lavoro manuale* are marked and impressed into the two-dimensional planes of a journal. These planes hold the traced histories of many holes: across scale, from micro to macro abstract images retraced as speculative spaces, fictive concavities, and occupied spatial environments.

My journal became the agent of a spatial relation between myself, conventions of drawing, and the lines I traced on site. It was an active companion which I carried everywhere, collecting memories, documenting site explorations, and sketching partial ideas. Images of Maungakiekie (One Tree Hill), Maungawhau (Mount Eden), and Takapuna are archived in my journal. As liquid ink solidified

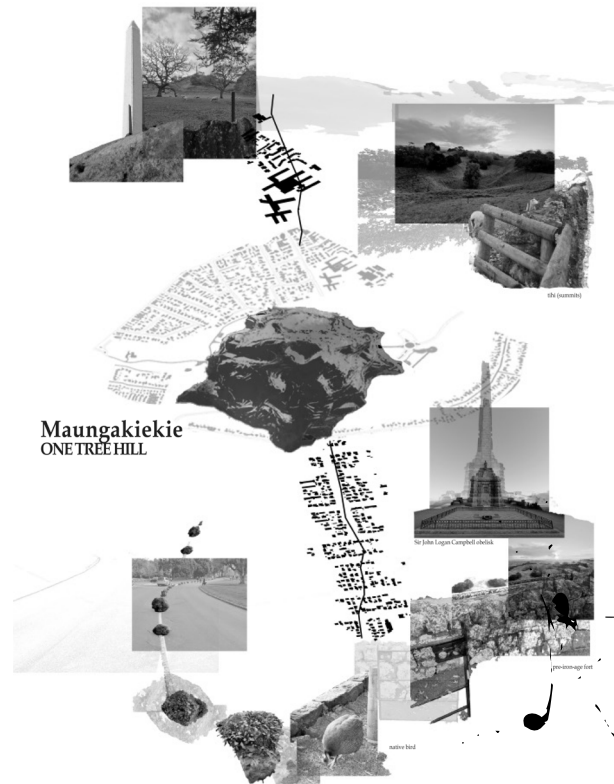


FIGURE 37

Kostandini, S. Maungakiekie\_sitevisit, Digita/Photography, 2021.

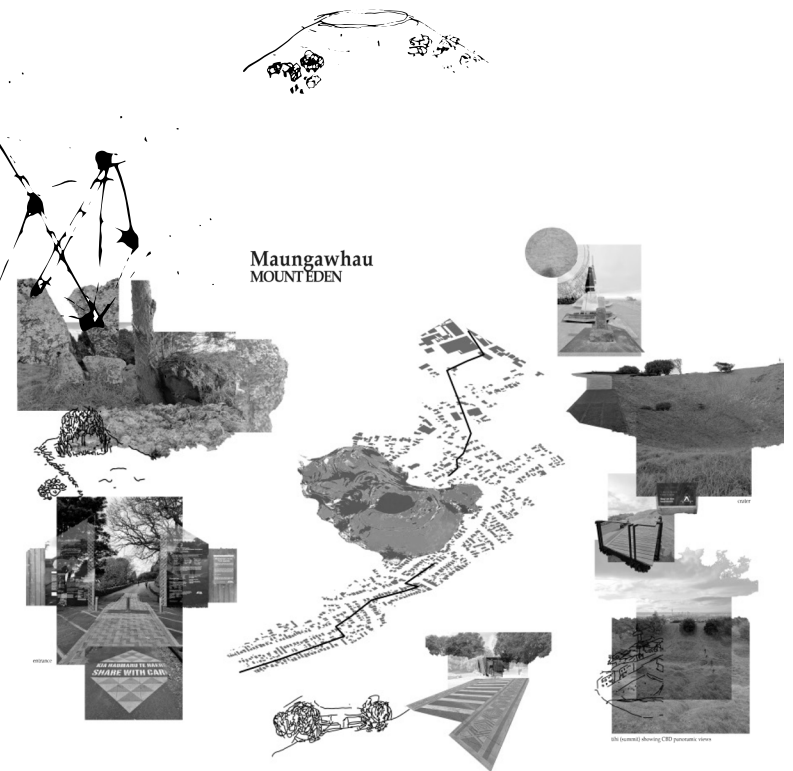


FIGURE 38

Kostandini, S. Maungawhau\_sitevisit, Digita/Photography, 2021.

into static images, sketches of landscape exploration began to etch scoriaceous identities in my memory. The Volcano (figure 39) is a drawn volcanic landscape of ash and smoke. The textured quality of the line describes a volcanic atmosphere of solid nature where the weight of the line seems almost to solidify the fictive landscape. The same relation was investigated in Rangitoto Imaginary (Fig.40) . In this instance, the weight of the texture is shifted to one of the hand and each of the lines translates the hand's pulse into a volcanic texture.

My freehand drawn lines are what Scarpa would call *tremblottant*, revealing "slightly different qualities each time they are traced."<sup>22</sup> And as Emmons identifies, the method becomes a metaphor for a spatial practice where drawing is considered a "process of generating ideas with the internal senses of fantasy and cogitation that draw upon external sense experiences."<sup>23</sup> These lines' shivering, uncertain condition respects the wavering and variable conditions of imagined spaces and "the warm and tumultuous possibilities of island-dwelling on the edge of the world."<sup>24</sup>

\* \*



FIGURE 39  
Kostandini, S. The Volcano, Digita, 2021

22. Emmons, *Drawing Imagining Building : Embodiment in Architectural Design Practices*, 2019, 7.  
23. Emmons, *Drawing Imagining Building : Embodiment in Architectural Design Practices*, 2019, 7.  
24. Sarah Tradewell, "Volcanic Matter: The Architecture of White Island," *Architectural Design*, 2003, 42.

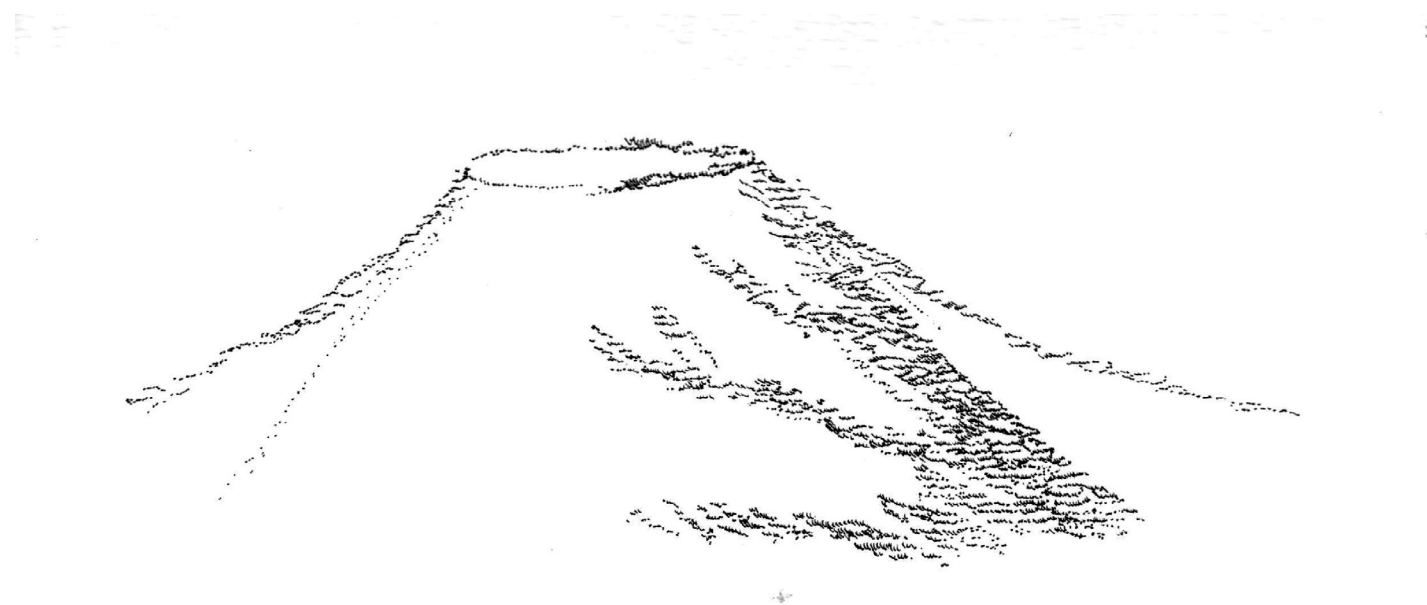
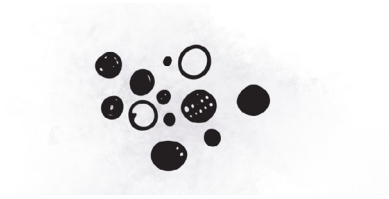


FIGURE 40  
Kostandini, S. Rangitoto Imaginary, Digital, 2021



The three methods work alongside; they layer, spill over, and intermingle like the products of a volcano. They frame a relation to volcanic terrain that goes from the macro to the landscape to the micro of my own body. *La linea* acts as an explosive, various, and porous representation of place; *il lavoro manuale* collects, reforms, and solidifies three-dimensional constructions; and *il disegno architettónico* reframes place through imagining inhabitation.

\* \*



#### IV. SCORIA FIELD: a volcanic imaginary of public placemaking

The first time I described scoria I referred to it as 'A rock with lots of holes'; since then, the poriferous nature of the stone has driven an experimental practice of images and forms. The many holes of scoria informed a series of drawings and material objects initially in the design process, which developed later into an experiential spatial design of volcanic imagery and porous forms. Holes became inhabitable spaces, textured surfaces, and landscape, in the proposal for a public space on Takapuna beach. The following chapter is structured into three sections. III.I MATERIAL IMAGINARY explores the material imaginary of scoria in my design. III.II SITE introduces key aspects of the site analysis undertaken in this design inquiry of Takapuna and its relation to Tamaki's landscape. III.III SCORIA FIELD discussed the proposed design of a new public space sited on the edge of Takapuna beach. Through the exploration of scoria a distinct material imaginary underpinning this design research offers alternate approaches to designing public spaces, when configuration are imaged through holes and voids.

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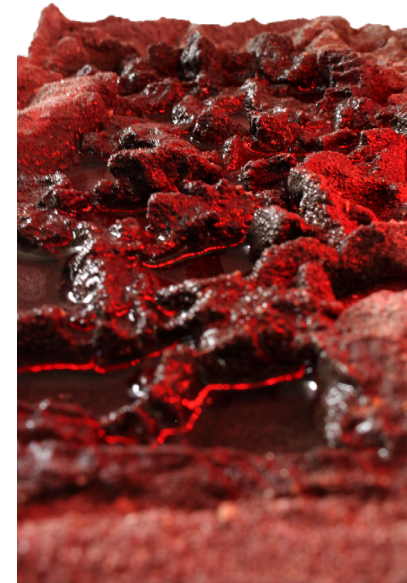


FIGURE 41  
Kostandini, S. Volcanic Pools, Photography, 2022

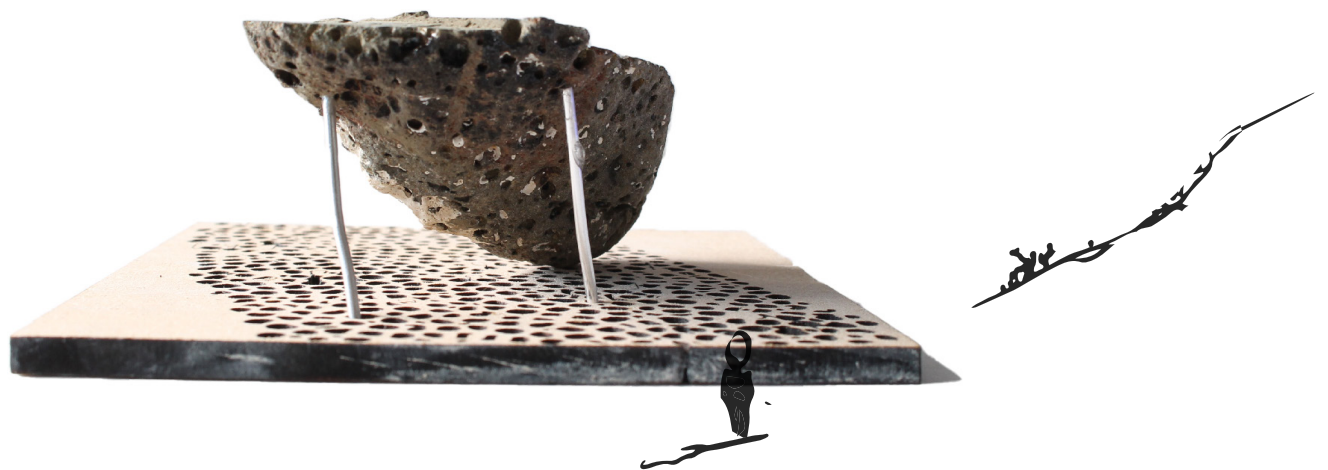


FIGURE 42  
Kostandini, S. Scoria\_Model1 , Photography, 2022

## IV.I MATERIAL IMAGINARIES: scoria



FIGURE 43  
Kostandini, S. PorousConcrete\_Model3 , Photography, 2022

Images of porous scoria rock and volcanic atmospheres have tumbled throughout my design process and produced a distinct material imaginary of a scoria field. The rock, its texture and nature have been drivers for the design inquiry that explores materials through a range of media. Imaginatively studying the many holes of scoria I have crafted images of volcanic temporalities through scoriaceous grounds. The project draws on the forces of the volcano. Images of flowing magma and solidifying lava recall the unpredictable forces and mobile terrains. Volcanic atmospheres are conceptualized in the Porous series, where the hand-held material objects translate the images of volcanic temporality through a layered process of *il lavoro manuale*. As I was crafting the collection, a material imaginary from the viscous lava flowing out of the cone of Rangitoto and liquid magma solidifying into new grounds began to inform my design. The volcanic temporalities of flows and solidity countered the seemingly solid nature of the scoria rock. In (Fig.44) the archive showcases the layered process where a



FIGURE 44  
Kostandini, S. Volcanic Processes , Photography, 2022



FIGURE 45  
Kostandini, S. Porous pools , Photography, 2022

stratum of aggregates, water, and steam transforms materials into solid elements. The process becomes a reminder of the molten nature of volcanic materials, and each surface offers a new way to imagine scoria's holes. The interplay of materials and forms offers images of solidifying volcanic grounds and inhabitable holes. The many holes of scoria translate into inhabitable spaces, pores, and hollows as I arrange and re-arrange their configuration. Holes and their configurations offer a haptic condition in the design where the surfaces with many holes are imagined as scoriaceous experiences. In the Poriferous series (Fig. 43 -45 -46 -48) the collection shows a range of spatial arrangements that reimagine scoriaceous encounters of tactile and aesthetic sensibilities. The holes are arranged as elevated islands in the water, perforated ground conditions, and concave pools, restoring a sense of volcanic atmosphere. The volcanic atmosphere is reimaged as a scoriaceous encounter, an aesthetic experience of the dual nature of landscape as images of holes filled up with water reinforce images of lava pools, concave layered basins and elevated islands. In the images holes appear as gaps and interstices but also hollows to see through and surfaces to walk onto. The spatial arrangements offer images of tactile and aesthetic experiences.



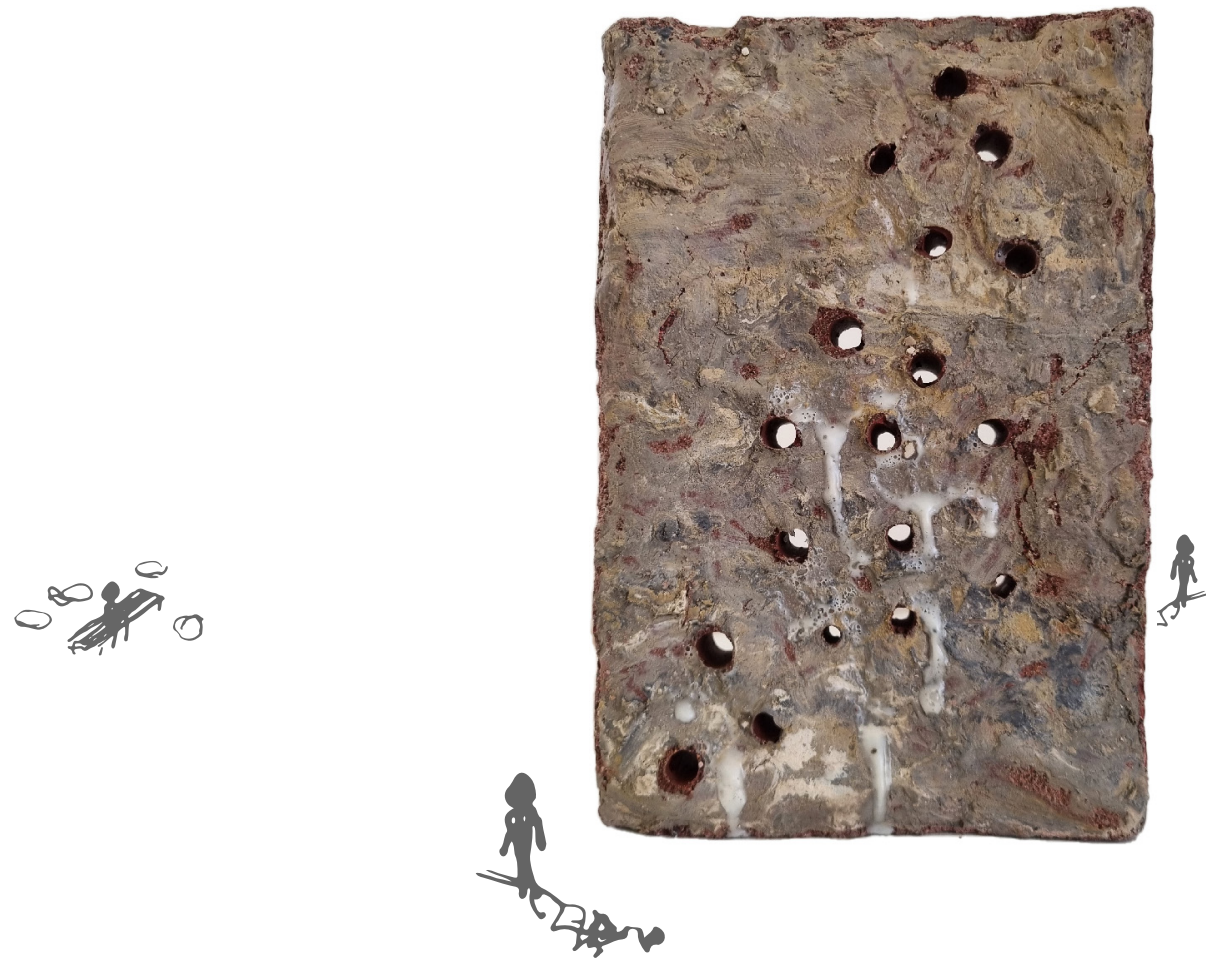


FIGURE 46  
Kostandini, S. Inhabiting a Volcanic Wall, Digital /Photography, 2022





FIGURE 47  
Kostandini, S. Scoria & Takapuna, Photography, 2022

The volcanic imaginaries offer an experience reimagined as a scoriaceous encounter. The scoriaceous landscape offers a new way to think of public placemaking, where surfaces create a dialogue between materials and the landscape. Poriferous surfaces, pools of water, and unstable grounds reimagine what an encounter with the volcano would be, offering a new way to think of space in public practice. Materials create a dialogue between Takapuna and the proposed spaces in Scoria Field.

\* \*



FIGURE 48  
Kostandini, S. *Compose\_Porous*, Photography, 2022

## IV.II

## SITE: Takapuna

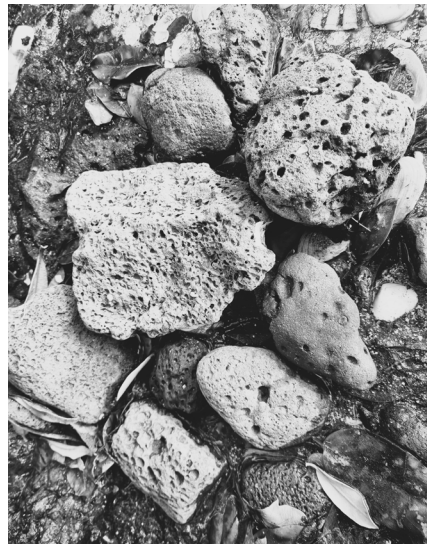


FIGURE 49  
Kostandini, S. Scoria & Takapuna, Photography, 2021

Months ago, I found myself walking along Takapuna beach, searching for scoria. Unfamiliar with types of rock, I started looking closely at my surroundings; at the marine bodies and rocks that inhabited the landscape. Rangitoto, across the Waitematā Harbour, was a reminder of the power of those sedimented temporalities. I began collecting rocks, picking up the most porous and irregular shapes. In that first embodied engagement with scoria, it became my research co-dweller, a participant in a materialized narrative of volcanic force, time and porous relationships. It constantly reminded me that we dwell together in volcanic indentations, we walk through its irregular surface and think through its once-liquified and aerated matter.

After moving to Aotearoa New Zealand seven years ago, I was introduced to Te Ao Māori, about which researcher Rachel Shearer writes 'there is no separation between spiritual and material worlds'<sup>25</sup> in a landscape of highly ancestral and

25. Rachel Shearer, "Te Oro o Te Ao : The Resounding of the World : A Thesis Submitted to Auckland University of Technology in Fulfilment of the Requirements for the Degree of Doctor of Philosophy (PhD), 2018" (Thesis, Auckland University of Technology, 2018), 18, <http://hdl.handle.net/10292/11712>.



FIGURE 50  
Kostandini, S. Takapuna Scoria Reef, Photography, 2022

spiritual force. Although there are many narratives and epistemologies (both indigenous and imported) that I have yet to unfold, I began to imagine the energies embedded in the land and the lives of its inhabitants inscribed within the volcano's sensibilities. The land, as *whenua*, offers an ancestral connection between territory and the spirit of the land.

On Takapuna beach, Rangitoto (the name means 'blood sky') over the water monumentalized a volcanic relationship between myself and the living lithic universe. The very beach I walked on was embedded in volcanic time; layered, as Sarah Treadwell identifies as 'premised on mobility and subject to pressure.'<sup>26</sup> Takapuna offers dynamic interrelations between body and deep volcanic time, looking across to Rangitoto, backing onto Lake Pupuke, and turning away from the Onepoto basin. I wanted, as Jeffrey Jerome Cohen says:

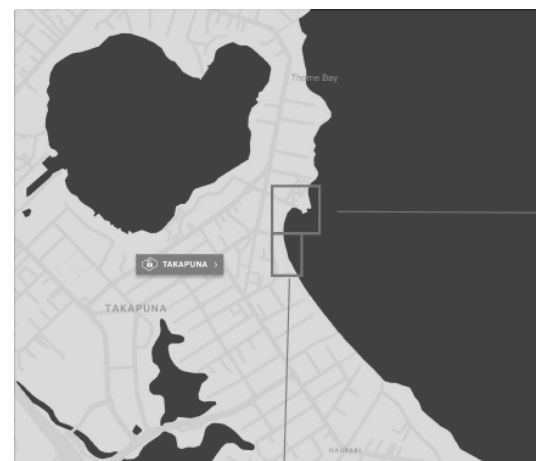
' to enter a human-lithic-world participation that gathers millennia, layered and deep, opening to expansive historical scales, material insistence, environmental embroilment, densely sedimented temporalities, a community of peoples, things, and forces enmeshed through story and stone.'<sup>27</sup>

<sup>26</sup> Sarah Treadwell, "Volcanic Matter: The Architecture of White Island," *Architectural Design*, 2003, 3.  
<sup>27</sup> Jeffrey Jerome Cohen, "Time: The Insistence of Stone," in *Stone, An Ecology of the Inhuman* (Minneapolis, London: University of Minnesota Press, 2015), 78.

Rocks are lithic objects that archive volcanic time. The creation of volcanic landscapes can be ancient and slow but also catastrophically sudden. The lost Pink and White Terraces of Mount Tarawera in the central North Island were once arranged in a large stepped silica formation, a place of rest and refuge at the bottom of the volcano. Treadwell writes of them as steam and water basins, "separated by a line of scrubby vegetation but connected in proximity and awareness."<sup>28</sup> They were a popular tourist attraction for Pākehā until they were obliterated in 1886 by a violent eruption and buried under lava, ash and rock. Their memory and loss offer an image of the uncertainty of living on volcanic terrain. Recognizing the precarious nature of unstable ground opens up possibilities for a spatial design project that responds to the forces of fire, water and earth that colonial reclamations and urban development have suppressed.

\* \*

28. Sarah Treadwell, "Pink and White Descriptions," *Architectural Theory Review* 15, no. 3 (December 1, 2010): 269. <https://doi.org/10.1080/13264826.2010.524307>.



TAKAPUNA'S NEW TOWN SQUARE: WAIWHARARIKI ANZAC

PROPOSED AREA FOR INTERVENTION : TAKAPUNA BEACH



FLOOR PLAN (NOT TO SCALE)

FIGURE 51



#### IV.III

### SCORIA FIELD: a new coastal public space for Takapuna



FIGURE 52

Kostandini, S. Takapuna Site Analysis\_2, Digital/ Photography, 2022

The research has culminated in the design of a new public space for Takapuna, located on the coast at the end of the beach. The chosen site currently hosts a carpark, a boat ramp and a local café; my redesign aims to offer a new non-directive typology of spaces for play and public use. The proposal articulates a volcanic material imaginary by drawing on past histories, existing material conditions, and my own material explorations.

Takapuna holds the history of a pre-colonial culture with its spiritual connection to Mataaho (the guardian of the Earth's secrets) and Ruaumoko (the god of earthquakes and volcanoes), and a material relation held by proximity with its volcanic neighbor Rangitoto <sup>29</sup> ("blood sky"), Lake Pupuke, and Te Uru Tapu (sacred grove). The site responds to the relations between the volcanic sill of land and the Waitematā (obsidian waters) waters. The volcanic nature of the site is visible through cavities and voids in the ground, and the maunga on the skyline.

29. Auckland War Memorial Museum, "Rangitoto Island," Auckland War Memorial Museum, accessed April 22, 2022, <https://www.aucklandmuseum.com/visit/whats-on/online-exhibitions/living-with-volcanoes/city-of-volcanoes/rangitoto-island>.

The name Takapuna derives from “taka”, a knoll, and “puna”, a spring. It was believed fresh water once flowed from Maungauika (North Head) to Takapuna. The source of the spring becomes starting point for the elemental conditions of the site. The design is informed by the image of permeating the volcanic terrain. The research proposes places for new activities that revitalize the historical significance of the waterfront through the materiality of solidified porosity and liquified sensibilities.

Ideas that emerged through reveries of my drawings and artifacts elaborated into a haptic presence and material language for the new space. The intervention is designed to transcend architectural conventions and instead offer places for physical and physical encounters. The public place becomes a space to connect, rest, gather and swim, inspired by the relationship to the existing scoriaceous reef edge and its everchanging relation to the Hauraki Gulf. The proposal posits a scoriaceous public place that incorporates concave pools, layered hollow canapes, eruptive changing rooms, and elevated grounds. Recalling the spatial arrangement of the Pink and White Terraces, the proposal describes a system of surfaces where the terrestrial and aquatic ecologies offer shifting conditions of elevations and depression.

The first space proposed is The Aqua Basins, a system of pools with layered concavities. The concave depressions are embedded into the landscape as a series of water displacements that host zones of regeneration and vitality. The intertidal pools invite water into the landscape through an opening that offers a new relationship to the sea with a continuously shifting tide. The new landscape offers an encounter where water is spatially ever-changing

The second zone of the intervention is the Scoriaceous Pavilion, a series of layered canopy structures that explore scoria's poriferous and organic character. The structure recreates a poriferous surface in the form of many hollow perforations. The ceiling evokes the porous formalities of the stone and transports the beholder in vesicles of the rock. Through momentary perforation and solidity, we see a world framed through holes, offering light and shadow as effective qualities of the pavilion. Such states direct and transform the natural elements of the space into a narrative that complements and enhances it. The narrative also aims to reactivate the pre-colonial history of the Takapuna spring with water as a new ground condition. The pavilion sits upon a poriferous textured ground that addresses the existing relations between Taka and Puna by holding rainwater,



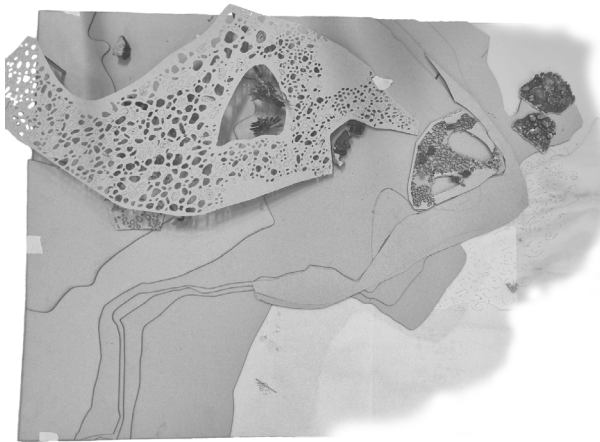


FIGURE 53  
Kostandini, S. Working Model\_02, Photography, 2022

purifying it, and offering a flowing system of fountains.

The third space proposed is The Eruptio Chambers, elevated vertically, become a viewing platform for the public to eat, drink and gather. The chamber offers a material narrative where the earth's surface is elevated to act as a viewing platform. The platform hosting a new business offers a space for new activities for the public. The new elevation cultivates volcanic imaginaries by relating to fertile volcanic grounds, celebrate the existing pōhutukawa trees, and implement more plants and greenery in the public space.

The volcanic material imaginaries establish a new dimension of heritage. Scoria Grounds is reimagined considering the tension between the volcano and its forces. Rather than the volcano being the static, green post-colonial formation that we now know, I have reimagined its unstable, layered grounds with a sense of wildness subject to risk and uncertainty. Those sensibilities are embedded in the proposal and offer a tension between the beholder and a hitherto forgotten dynamic. Scoria Grounds is framed around moving lava flows, air rocks, and layered lithic bodies that are embedded into the landscape and offer a new material culture. The volcano reclaims its landscape and offers a new way for the collective of Tamaki to see themselves.



FIGURE 54

Kostandini, S. Scoriaceous Pavilion Grounds, Photography, 2022



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## V. CONCLUSION

To conclude the research, from the volcano to scoria, the design incorporates a framework in which materials and atmosphere are bound together to construct relationships between the public and the natural environment. The research explores identity through scoriaceous public spaces, where Tāmaki Makaurau's forces, its volcanos, oceans, and natural landscape are incorporated into the design. Materials offer a new sense of cultural identity through physical, temporal, and ecological values. The volcanic material imaginaries reframes the condition of dwelling in unstable grounds and swimming in lava pools. Scoria Field reimagines what it's like to dwell in volcanic grounds conceptualizing the relation between materials, many holes, and public spaces.

The material imaginaries offer a spatial framework that conceptualizes the volcano and scoria as a new way to think of materials and design. Scoria's porous body is explored to shape new material conditions and, alongside volcanic temporalities, offers scoriaceous encounters as new experiences in the space. The dialogue between holes, voids, and volcanic materials translates into a series of surface conditions that re-establishes a volcanic narrative in Takapuna.

The landscape and its moments of uncertainty

are replaced with the dwelling condition that recalls the volcanic landscape and what it is like to inhabit unstable grounds. Takapuna beach, reimagined as Scoria Field, develops a visual continuation of the earth's surface where materials layer geographical, spiritual, and aesthetic values into the work. The space recalls a sense of volcanic atmosphere through materials conditions and aesthetic encounters that offer a new experience in the public eye. The dialogue between body and materials elevates the public experience and offers new ways for people to see each other as co-dwellers through volcanic terrains.

Rock with lots of holes considers the public as the networks of individuals and communities as their collective histories embedded into the Tamaki Makaurau volcanic fabric; with Scoria Field, public places intertwine spatial relationships with shared experience where the space becomes a destination. As we collectively dwell in Scoria Field, we see each other as volcanic co-dwellers, an identity layered through a stratum of lava, voids, and scoriaceous grounds.

\* \*

**Please note that the findings of this research inquiry will be included in the documentation and reflection on the exhibition of the design proposition.**



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## VI. RESEARCH OUTCOMES



FIGURE 55  
Kostandini, S. Rock With Lots Of Holes Exhibition, Photography, 2022





FIGURE 56  
Kostandini, S. Rock With Lots Of Holes Exhibition\_2, Photography, 2022



FIGURE 57  
Kostandini, S. Scoria Field, Photography, 2022



FIGURE 58  
Kostandini, S. Rock With Lots Of Holes Exhibition\_3, Photography, 2022





FIGURE 59  
Kostandini, S. Inhabitable Scoria, Photography, 2022



FIGURE 60  
Kostandini, S. Inhabitable Lava Grounds, Photography, 2022



FIGURE 61  
Kostandini, S. Inhabitable Scoria Collection, Photography, 2022





FIGURE 62  
Kostandini, S. Inhabitable Lava Grounds\_2, Photography, 2022



FIGURE 63  
Kostandini, S. Poriferous Grounds, Photography, 2022



FIGURE 64  
Kostandini, S. Inhabitable Lava Grounds\_3, Photography, 2022





FIGURE 65  
Kostandini, S. Inhabitable Scoria Collection\_02, Photography, 2022



FIGURE 66  
Kostandini, S. Inhabitable Lava Grounds\_04, Photography, 2022



FIGURE 67  
Kostandini, S. Inhabitable Lava Grounds\_05, Photography, 2022





FIGURE 68  
Kostandini, S. Inhabitable Lava Grounds\_06, Photography, 2022



FIGURE 69  
Kostandini, S. Dwelling through Poriferous Surfaces, Photography, 2022



FIGURE 70  
Kostandini, S. Holes, Gaps And Interstices, Photography, 2022





FIGURE 71  
Kostandini, S. Solid Fire Grounds, Photography, 2022



FIGURE 72  
Kostandini, S. Marine Sponge and Scoria from Takapuna, Photography, 2022





FIGURE 73  
Kostandini, S. Rock With Lots Of Holes Exhibition\_4, Photography, 2022

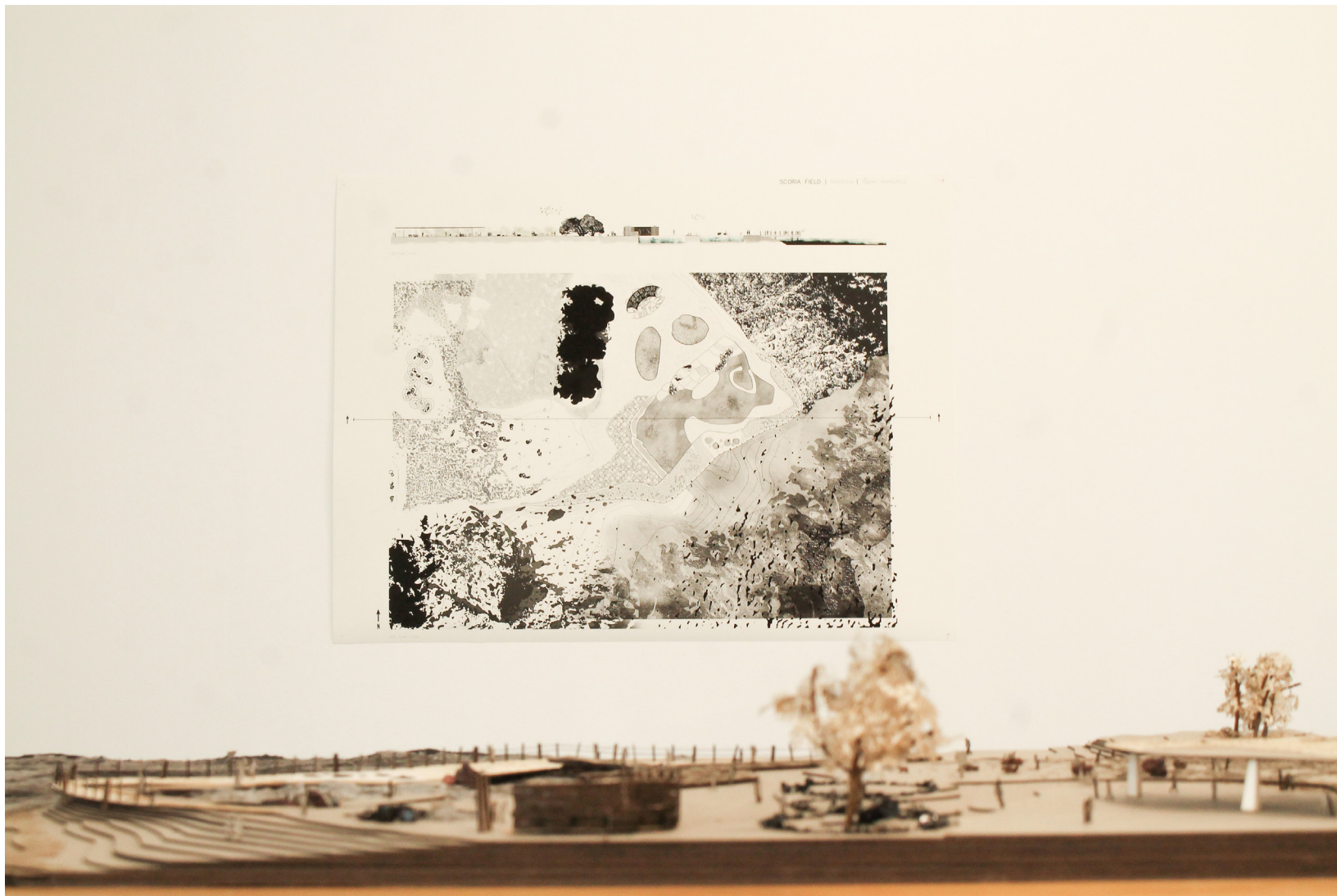


FIGURE 74  
Kostandini, S. Scoria Field Model and Site Plan, Photography, 2022





FIGURE 75  
Kostandini, S. Scoria Field Model, Photography, 2022

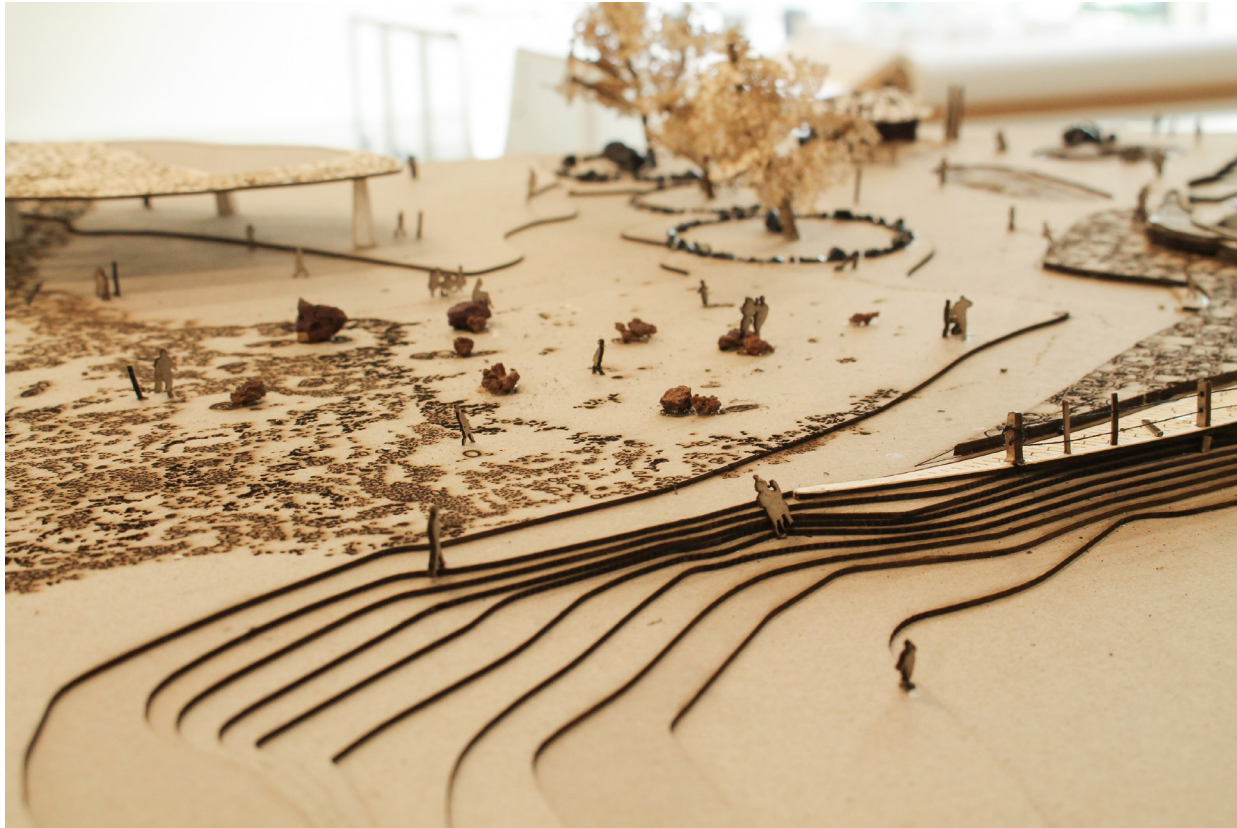


FIGURE 76  
Kostandini, S. Inhabiting Scoria Field, Photography, 2022



FIGURE 77  
Kostandini, S. Pohutukawa Trees, Photography, 2022





FIGURE 78  
Kostandini, S. Waitemata Black Obsidian Waters, Photography, 2022



FIGURE 79  
Kostandini, S. Aqua Basins, Photography, 2022





FIGURE 79  
Kostandini, S. Scoria Field\_2, Photography, 2022



FIGURE 80  
Kostandini, S. Inhabitable Scoria Field Series, Photography, 2022





FIGURE 81  
Kostandini, S. Poriferous Entrance Grounds, Photography, 2022



FIGURE 83  
Kostandini, S. Scoriaceous Pavilion, Photography, 2022



FIGURE 84  
Kostandini, S. Pohutukawa Trees and Obsidian Glass, Photography, 2022





FIGURE 85  
Kostandini, S. Poriferous Fountains, Photography, 2022

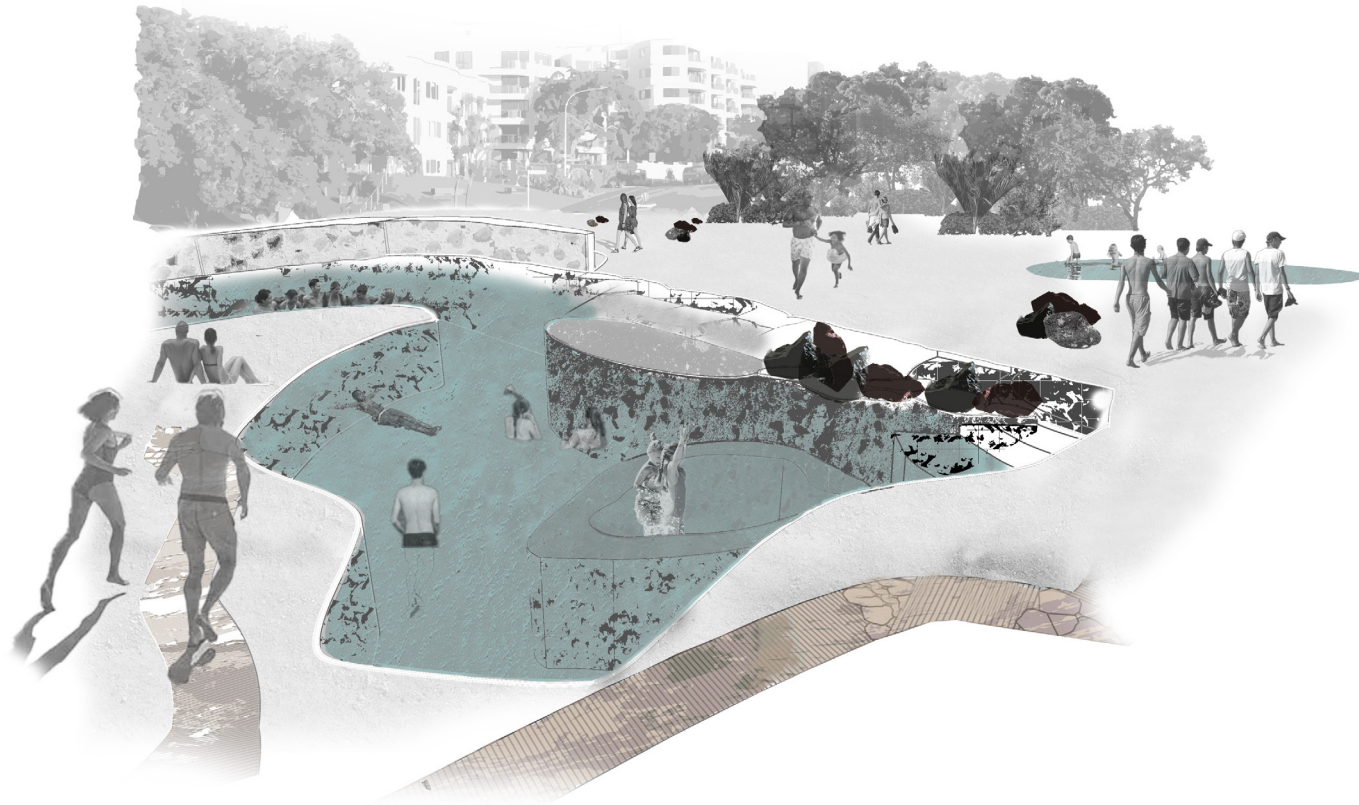


FIGURE 86  
Kostandini, S. Waitemata Harbor Views, Photography, 2022





FIGURE 87  
Kostandini, S. Scoria Field Site Plan and Section, Photography, 2022

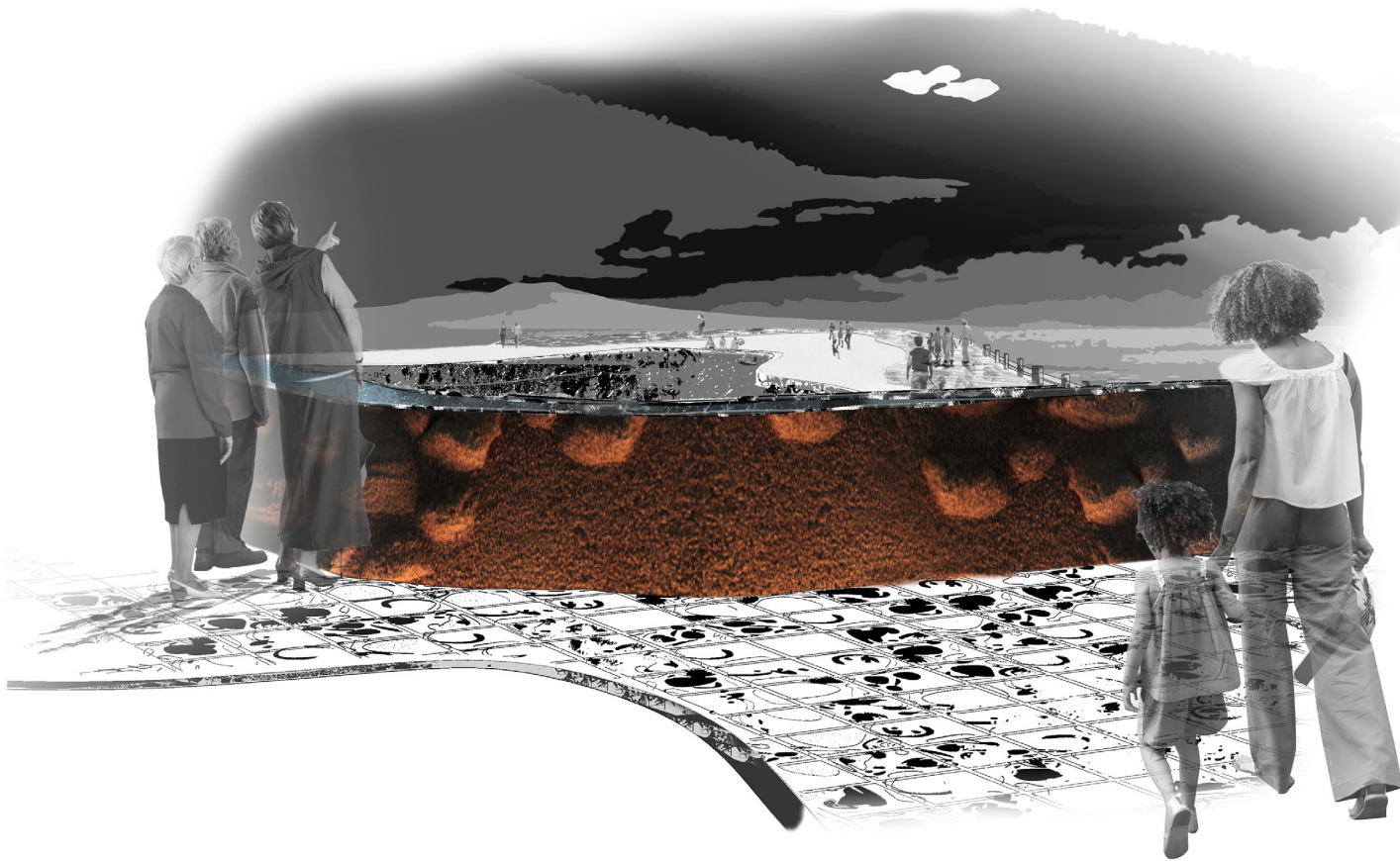


**AQUA BASINS**  
Saturday • 4.30pm

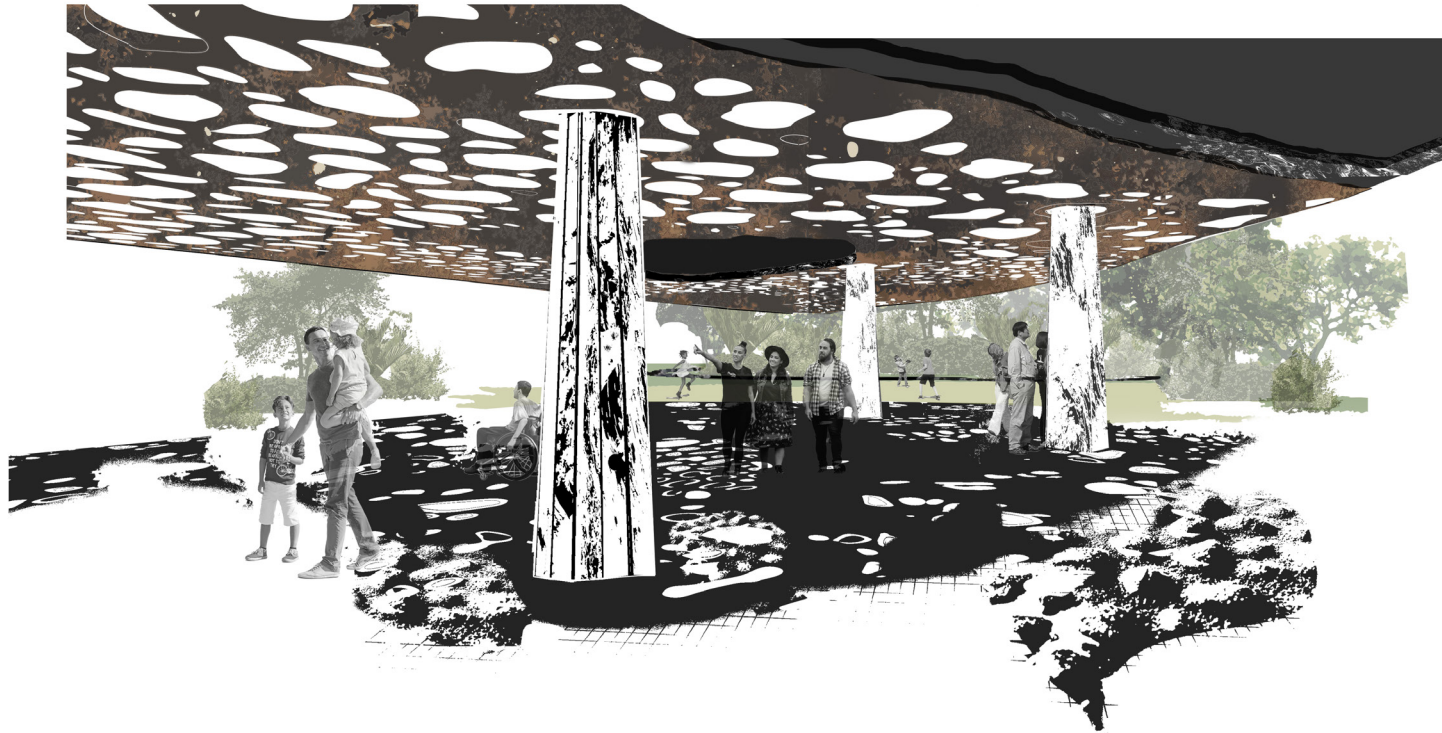




**POROUS FOUNTAINS**  
Tuesday • 3.30pm



**THE VIEWPOINT**  
Thursday • 8.30pm



**SCORIAEIOUS PAVILION**  
Sunday • 12.30pm



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