

Attention is a kind of love

Embodiment, mindfulness, noticing and the
multi-sensory experience of landscapes

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Land acknowledgement

The University of British Columbia is located on the traditional, ancestral and unceded territory of the Musqueam (xʷməθkwə́yəm), Squamish (Skwxwú7mesh), and Tsleil-Waututh (Səlilwətaɬ) Nations.

Work on this graduate project was done on Musqueam (xʷməθkwə́yəm) and Treaty 7 land. Treaty 7 is in Southern Alberta and includes the Bearspaw First Nation (Stoney First Nation/Nakoda), the Chiniki First Nation (Stoney First Nation/Nakoda), the Blood Tribe (Kainai Nation/Blackfoot), the Piikani Nation (Blackfoot), the Siksika Nation (Blackfoot), the Tsuut’ina Nation (Sarcee) and the Wesley First Nation (Stoney First Nation/Nakoda). Calgary is also home to the Métis Nation of Alberta, Region 3.

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Thesis statement

This thesis explores how humans, as sensing creatures, move through and experience landscapes.

Abstract

What do we notice and pay attention to? What do we take for granted? This thesis is based on the idea that slowing down and noticing is a powerful act. Landscape architecture and design are, more generally, focused on the visual and the production of images. In this process, the importance of feelings and experiences is often lost. This project explores how we can design landscapes that promote embodied multisensory engagements with the environments that humans move through. Mindfulness is an invitation to be present in the here and now, and to connect with our bodies. Designing for the senses is one way of encouraging people to engage with their bodies and environments differently.

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Thank you to my family and friends for their support during my studies.

Critical Essay

“We see here a patient, calm attention and contemplation, rather than experience a sudden shock of excitement. Attention is a kind of love”

-Iain McGilchrist (2015, p.113)



Fig. 1: Decorations in a window along Commercial Street (Author 2020)

Introduction

As a landscape architecture student, I have been taught a new way of looking at and interacting with my environment. In plants class, I learned how to look at, touch, feel, and smell plants. I learned to take something I would have never noticed before and to really carefully pay attention to it.

In other classes, I have learned about materiality and all the small choices that add up to the built world that exists around me.

We so often and so easily take for granted that things are what they are and that the world is immovable, unchangeable, and fixed.

In reality, the world is none of these things. It is constantly changing. Sometimes, it is changed through choices actively being made by humans, as we build and unbuild it. Other times, it is changed through the seasons and days, the wind and rain and dust.

If we never notice the things around us, how can we shape them or change them? How can we enjoy the richness of all the details and wonder that make up the world around us?

I believe that the act of noticing, slowing down, and paying attention to the world you inhabit and move through is an incredibly powerful one.



Be here: Mindfulness and meditation

Our senses and perception work hard to make themselves invisible and to carry on unnoticed as we move through our lives (McLean 2017). We are highly adaptable creatures and grow accustomed to our everyday realities. Johnson observes that we mostly engage with our environments in an automatic and unreflective manner (2015). He asks, “[h]ow we can meaningfully interact with our world” (2015 p.41).

Mindfulness takes a secular evidence-based approach to Buddhist meditation practices. It was popularized by Jon Kabat-Zinn’s work on Mindfulness-Based Stress Reduction (MBSR), which launched in 1979 at the University of Massachusetts Medical School. Kabat-Zinn defines mindfulness as “paying attention, on purpose, in the present moment, non-judgmentally” (1994 p.4). The University of California, Berkeley based Greater Good Science Center defines mindfulness as “maintaining a moment-by-moment awareness of our thoughts, feelings, bodily sensations, and surrounding environment” (2020). Attention and notice are synonyms of mindfulness (Merriam-Webster 2020).

Meditation is the intentional focusing of attention (Harris 2014). One of the goals of meditation is to draw awareness to processes that happen largely unconsciously within our bodies. This is often done through focusing on the breath or sensations in the body (Harris 2014; Aswegan 2020). While meditation can help one to be mindful, one does not have to practice meditation in order to be mindful. Mindfulness is also not the same as being calm or serene (Aswegan 2020, Neff 2020). Examples of sensory focused mindfulness exercises include sipping a warm beverage or looking for everything of a certain colour in your environment (Raypole 2019).

Mindfulness can help us to question our default ways of being and to act with intention and in alignment with our values, rather than because this is the way things usually happen (Aswegan 2020, Kabat-Zinn 1994). The built environment is the result of decisions made by humans. As designers, what we can and cannot do is largely defined by our culture, norms, and governance of landscapes. Hendren discusses culture as “the inherited and sometimes arbitrary ways that things have always been done and therefore

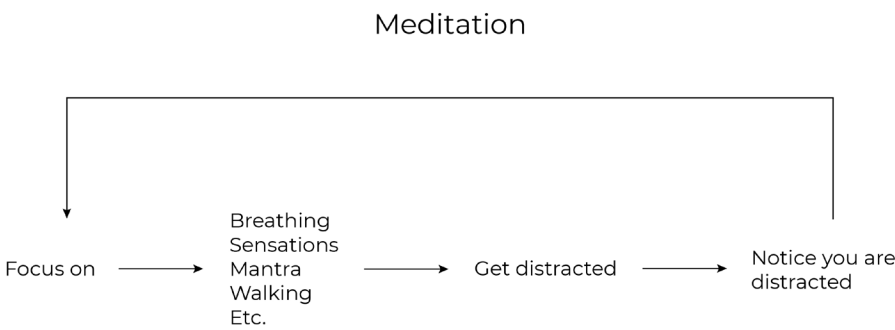


Fig. 3: The process of meditation (Harris 2014)

continue as a normal practice” (Hendren 2020 p.74). By shifting our awareness of the spaces we inhabit, we can challenge defaults that go unquestioned and alter what is expected of and possible in our landscapes.

Mindfulness is about presence and being with what is. It is an embodied experience of active participation in the world. It is also about pausing and noticing (Tabb 2017, Masuno 2019). As therapist Lisa Olivera notes, “small, slow moments collected over time create a life. Don’t underestimate the impact tiny choices can have” (2020). Desmond remarks on how noticing is a skill that we can hone by regularly practicing it (2019).

Mindfulness is an invitation to relate to our bodies and environments differently. We live in a highly disembodied culture that devalues our physicality and ignores all of the complex and remarkable things our bodies do.

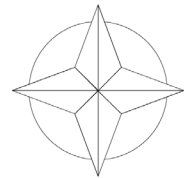
Sense of place

There is a connection between the body and places because the body is how we experience and exist in space. The senses mediate between us and the world (Ruggles 2017). Hopkins describes “[p]erception as making sense of the world and our subjective experience of reality” (2016 p.19). Our senses provide us with information about our surroundings allowing us to understand and relate to them (Hopkins 2016). Ruggles writes that, “[w]hether relying on the eyes, ears, or nose, the living human being is always dependent on the modern sensory organ, which has been trained to identify a stimulus and attribute meaning to it, to respond cognitively to likes and dislikes, and simply to pay attention or ignore” (2017 p.4).

Our bodies are continually adjusting to the spaces we inhabit and move through in various small ways. Hendren writes, “[a]ugmented by headphones or a hat pulled low, decked in seamless socks or technical Lycra or fuzzy sheepskin, wrapped tightly or loosely, rocking or fidgeting or chewing our nails — each body makes a stream of conscious and unconscious choices, knitting together a habitable personal universe minute by minute by minute” (Hendren 2020 p.141). We instinctively seek out certain experiences and qualities while avoiding others (Johnson 2015).

Sensing happens in spaces and is how we relate to them. Pallasmaa emphasizes the importance of the built environment as something that is experienced and encountered (2015). He writes, “[a]rchitecture is born of the body, and when we experience profound architecture we return to the body” (2015 p.70). He seeks to connect humans back to our biological roots (Pallasmaa 2015). Crawford describes place as an embodied relationship with landscape (2020). Johnson argues that our approach to the built environment and how we design it must be embodied. The experience of spaces cannot be separated from the bodies in which we move through them (2015).

Western culture includes a binary that separates bodies and minds with minds being valued as the place where thought and intellect live (Hendren 2020). Latour rejects this binary, writing that “[t]he body is thus not a provisional residence of something superior – an immortal soul, the universal or thought – but what leaves a dynamic



The Basic Orienting System

Mode of attention: General orientation
Receptive units: Mechano-receptors
Anatomy: Vestibular organs



The Auditory System

Mode of attention: Listening
Receptive units: Mechano-receptors
Anatomy: Cochlear organs with middle ear and auricle



The Haptic System

Mode of attention: Touching
Receptive units: Mechano-receptors and possibly Thermo-receptors
Anatomy: Skin, joints, muscles and tendons



The Taste-Smell System

Mode of attention: Smelling
Receptive units: Chemo-receptors
Anatomy: Nasal cavity (nose)



The Taste-Smell System

Mode of attention: Tasting
Receptive units: Chemo- and mechano-receptors
Anatomy: Oral cavity (mouth)



The Visual System

Mode of attention: Looking
Receptive units: Photo-receptors
Anatomy: Ocular mechanism (eyes, eye muscles, the head, the whole body)

trajectory by which we learn to register and become sensitive to what the world is made of” (2005 p.206). McGilchrist remarks on how vital our bodies are to shaping our thoughts, memories, and experiences in ways we still do not fully understand (2015). As our understanding of neuroscience grows, the idea of minds and bodies as separate is eroded and instead we can come to view our minds and bodies as linked and interrelated (Robinson 2015).

The senses are a means of bringing us back into our bodies. Ruggles writes, “[t]he senses whether painful or pleasurable, have a way of snapping us back to the here and now” (2017 p.5). Masuno remarks that honing the five senses is an important part of experiencing life’s pleasures and finding satisfaction (2019). Swedish researchers have used plants as a way to help treat depression. Through touching and engaging with plants, patients are encouraged to engage with their senses, and to be present in the here and now (Williams 2017). McLean observes that, “direct human olfactory experience results in an embodied sense of a place” (2017 p.69). Engaging with our senses helps us to be present in our bodies and in our environments.

Each person has a unique experience of their environment that is shaped by individual sociocultural-material-affective relationships and are not experienced in the same way by everyone (Crawford 2020, Drever 2019). Senses are both varied and cultural. For example, smell preferences are learned (Kwon 2018). Fetell Lee notes the importance of environments that provide appropriate stimulation and sensorial richness. She writes that “adult brains also benefit from exposure to a diverse array of sensations. In studies, adults exhibit significant activation in the emotional regions of the brain when stimulated by touch, taste, or smell” (2018 p.53). We need a basic level of sensory stimulation to maintain normal functioning, and suffer in environments that are bland and under stimulating. Much of our built environment is stripped down and drab (Fetell Lee 2018).

The sensory experience varies between people and over the course of a lifetime. Hendren writes “sensory processing anomalies run the gamut from hypersensitivity that can make a light caress feel like an assault, or the tag on a shirt a painful, irritating friction, to hyposensitivity, where the body under registers cold, heat, or pain” (2020 p.140). Sound artist John Levack Drever raises the often overlooked needs of those with non-auraltypical hearing. A wide range of factors can impact hearing in humans including aging, allergies, migraines, or a cold. Some individuals such as those with tinnitus and hyperacusis can find loud noises painful and exhausting (2019). High levels of traffic noise can reduce access to public space for individuals with these conditions.

The impact of vehicle noise on a space can be significant. In noisy spaces, people talk less and end conversations sooner. They are more likely to become agitated or get into arguments. They are also less likely to help strangers (Cerwen 2017). Even when we are not consciously aware of it, we are impacted by traffic noise. Even light traffic can flood your system with stress hormones (Montgomery 2013). Urban noise pollution can cause higher blood pressure (Roehr and Bailey 2020). As Williams writes, “just because you don’t notice certain noises anymore doesn’t mean your brain is not on some level responding to them” (2017 p.88). There are certain situations in which sounds are perceived as being less annoying and can even be viewed as exciting and contributing to

Fig. 4: The human perceptual systems according to JJ Gibson (1966 p.50)

the hustle and bustle of a space -- for example, the din of a cafe or a restaurant (Cerwen 2017).

The senses are often placed in a hierarchy with vision at the top and smell at the bottom. Pallasmaa critiques the ocularcentric nature of Western culture and the built environment professions in particular (2005). Landscape architecture has roots in the field of landscape painting (Mooney 2020; Waldheim et al. 2014; Jackson 1984) and is based in large part around visual representation techniques. Hunt observes that, in periods like the eighteenth-century, when the picturesque was popular, the visual received excessive attention and became dominant (2017).

As a visually-oriented field, landscape architecture often neglect to think about other senses or to think about how bodies actually move through and interact with space (Pallasmaa 2005). Designer Bruce Mau observes that we allow sight and sound to dominate the design imagination, while mostly designing for the visual. He describes design as being about producing images rather than feelings or experiences (2018). Cerwen notes that, despite growing interest in sound and landscape architecture, the importance of sonic design and sounds are not being fully considered in landscape design (2017).

It can be difficult to describe our sensory experiences. Artist and researcher Adam Jasper and researcher Nadia Wagner remark on how, because smell is often devalued and overlooked, English has very few words specifically devoted to describing smells (2018). Writer and perfume enthusiast Rachel Syme writes, “[o]ur sense of smell has many functions: it’s a warning system, a taste enhancer, a pheromone alarm. But it is also an instrument for wonder, for noticing that which we often take for granted, and for which we rarely have a name” (2021).

Our senses rarely work alone. Instead, we experience the world as multi-sensorial, for example, because sound is a wave we can feel it as well as hear it and the colour of a plate influences how we perceive the taste of the food on it (Lupton, Lipps and Cooper-Hewitt Museum 2018). Crawford suggests an approach based on haptic or kinaesthetic ways of relating to the world rather than the partitioned model of the five senses (2020). Roehr and Bailey observe, “[a] garden is a multi-sensory experience and a holistic living system that simulates our senses: taste, smell, sight, touch and sound constantly in different ways” (2020 p.31). For example, rain changes the way things look and smell. It also has a variety of sounds from rain drops falling against pavement to the sound of water rushing into a gutter or collecting in a rain garden. Landscape architecture uses the whole range of sensory responses (Fowler 2017; Xiao, Tait and Kang 2018 p.84).

Humans are rarely still. We do not just sit or stand in landscapes and public spaces, we also move through them. Walking is linked to physical and mental health benefits, including reducing depression and anxiety, improving self-esteem, reduced loneliness (Institute for Transportation Development Policy 2020), and feeling more energetic (Montgomery 2013). Bicycles build on this same impulse, but allow humans to move very efficiently and cover longer distances than on foot. It is easier to engage with the world around you when walking or biking (Montgomery 2013). Johnson writes, “[a] vast amount

of the information one receives about the world comes as a result of our ability to move ourselves within our environment and to move our hands over surfaces. At a very deep level, we learn the contours of our world and the possible ways we can interact with it via movement” (2015 p.44).

Sensory mapping and walking

Research on soundscape began in the late 1960s with the World Soundscape Project, based out of Simon Fraser University in Vancouver, BC, Canada, led by researchers including Murray Shaffer, Barry Truax and Hildegard Westerkamp. These researchers are credited with inventing soundwalking (Cerwen 2017; Frauke 2019; McLean 2020).

Single-sense maps focus attention on a particular sense. Sound and smell mapping is more popular than touch and taste (McLean 2020). Artist and researcher Kate McLean organizes smellwalks and makes smellmaps to switch participants from passive smelling to active smelling. She writes, “[u]sing design to present urban smellscape is a relatively new discipline; our approach takes a phenomenological perspective of re-exploring through an alternate sensory modality” (2017 p.92). These mapping processes vary in how walks are conducted and how the final maps are made (Perkins 2018). Visualizing other senses can help draw attention to them and communicate information about our environments. Ellen Lupton writes, “[v]isualization offers a rich path for experiencing sound beyond the audible. Graphic interpretations of sound illuminate patterns and structure and generate new memories and associations. Communication that bridges our senses helps connect us to each other and to the physical world” (2018, p.216).

Immersive experiences of landscapes and sensewalks can help people to consciously engage with their senses beyond the visual. While we unconsciously engage in physical processes of hearing, smelling, and touching, bringing these experiences to the forefront can transform how we relate to ourselves and the spaces we spend time in (Roehr 2020). McLean notes how the process of smell walking, and especially discussion during walks, helps to draw attention to the smaller smells of everyday life (2017).

Soundwalks can be used as a tool of urban site immersion as well as to increase awareness of urban sounds, and to learn how to describe sounds and how to listen. Westerkamp has emphasized the importance of using soundwalks to teach people to listen and educate themselves about sound (Roehr 2020). McLean writes, “[o]ne of the main ways in which smells helps to understand place better is enabling a new interpretation and a revisiting of places that we once thought that we knew... the smaller, hidden, ephemeral, transitory, volatile, nuances are revealed as will learn presence in the present” (2016 p.71).

Walking is an important part of soundwalking. These walks usually involve moving at a slower pace and pausing frequently (Frauke 2019). Butler writes, “[i]t was also apparent that the physicality and sensation of walking in the locality is a powerful part of the sensation of being connected to place” (2007 p.369)

Sensory walks involve slowing down and can be a transformative experience for

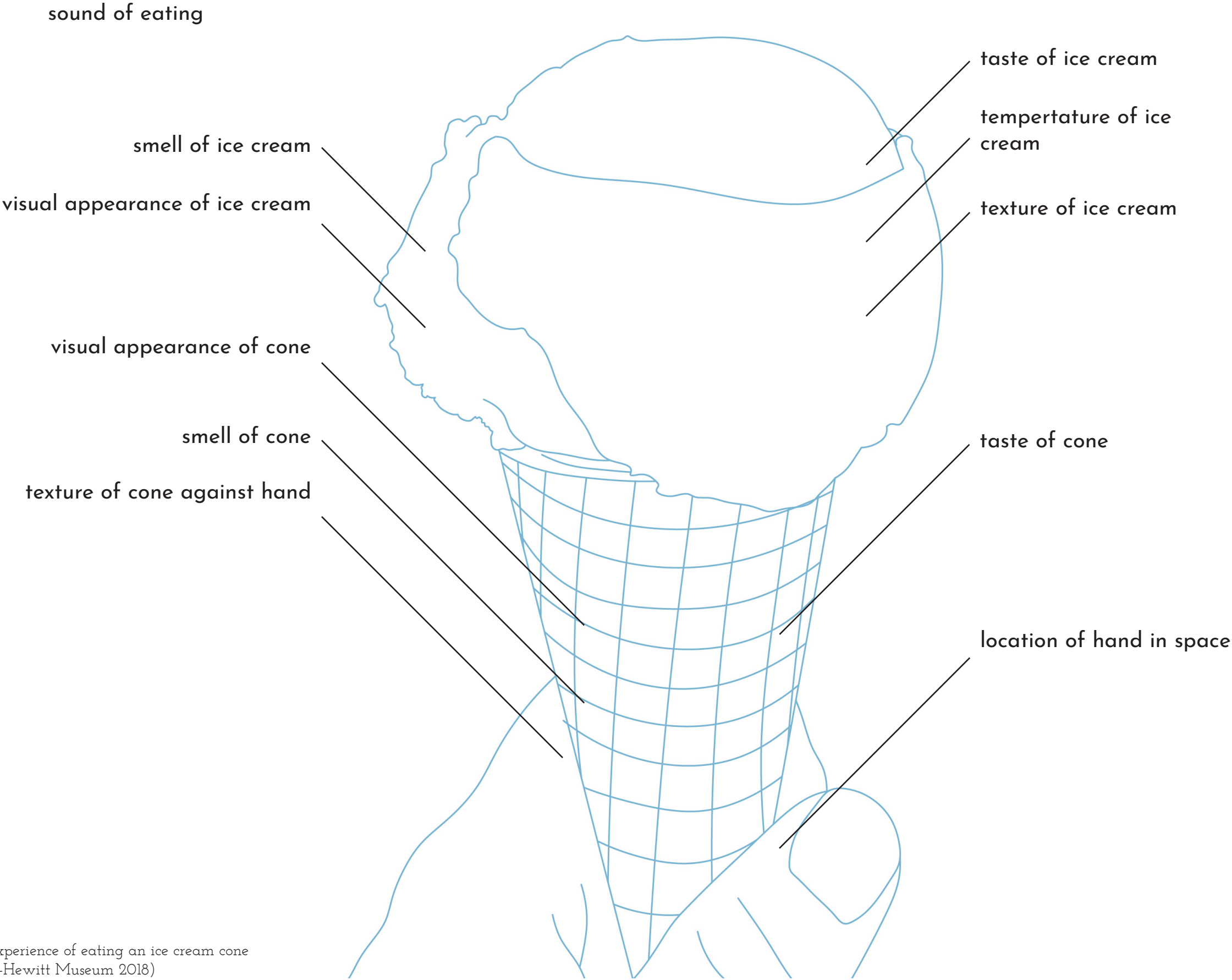
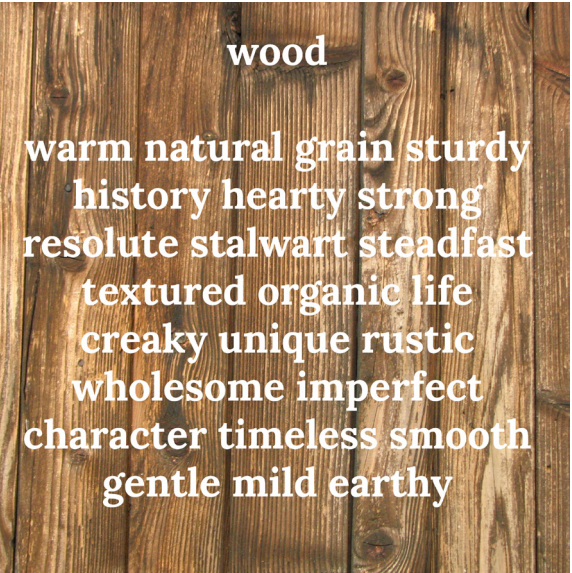


Fig. 5: The multi-sensory experience of eating an ice cream cone (Lupton, Lipps and Cooper-Hewitt Museum 2018)



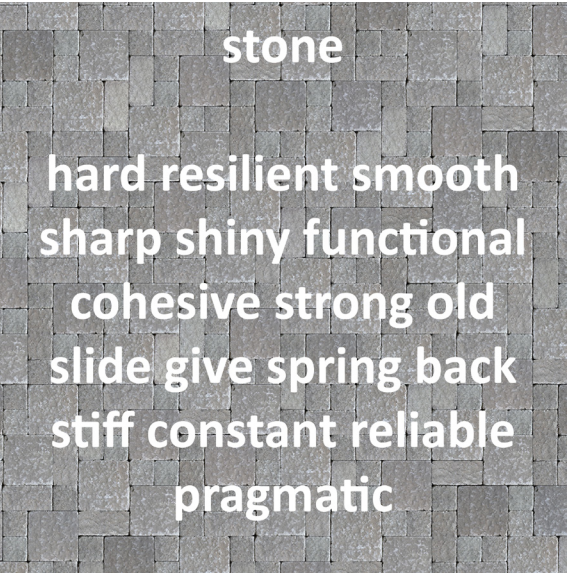
SPRAYED RUBBER

SOFT SQUISHY GIVE BOUNCE
ARTIFICIAL CUSHY COLOURFUL
UNEXPECTED PLAY CHILDISH
DOTS QUIET SPONGY CUSHION
SQUASHY YIELDING CHEERFUL
LIVELY WHIMSICAL FROLICSOME
UNSOPHISTICATED ELASTIC
PLASTIC PLIABLE



wood

warm natural grain sturdy
history hearty strong
resolute stalwart steadfast
textured organic life
creaky unique rustic
wholesome imperfect
character timeless smooth
gentle mild earthy



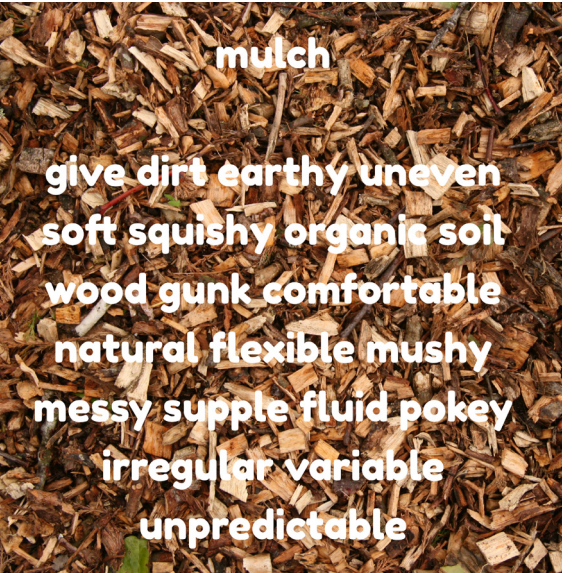
stone

hard resilient smooth
sharp shiny functional
cohesive strong old
slide give spring back
stiff constant reliable
pragmatic



brick

pretty historic
warm uniform
hard texture dense
firm coarse
detailed even
repetition



mulch

give dirt earthy uneven
soft squishy organic soil
wood gunk comfortable
natural flexible mushy
messy supple fluid pokey
irregular variable
unpredictable



grass

soft organic fresh
moist wet
comfortable delicate
alive natural silky
fragile care dirt
earthy



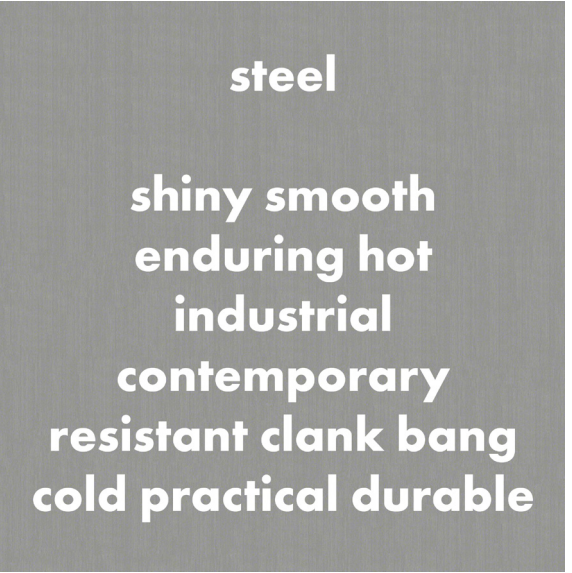
concrete

hard resilient smooth
functional boring
strong stiff
pragmatic crack rough
scratchy grey
resistant rigid level
even



asphalt

pragmatic smooth
smelly melt hot sticky
rigid level even slick
sleek uniform
predictable cheap



steel

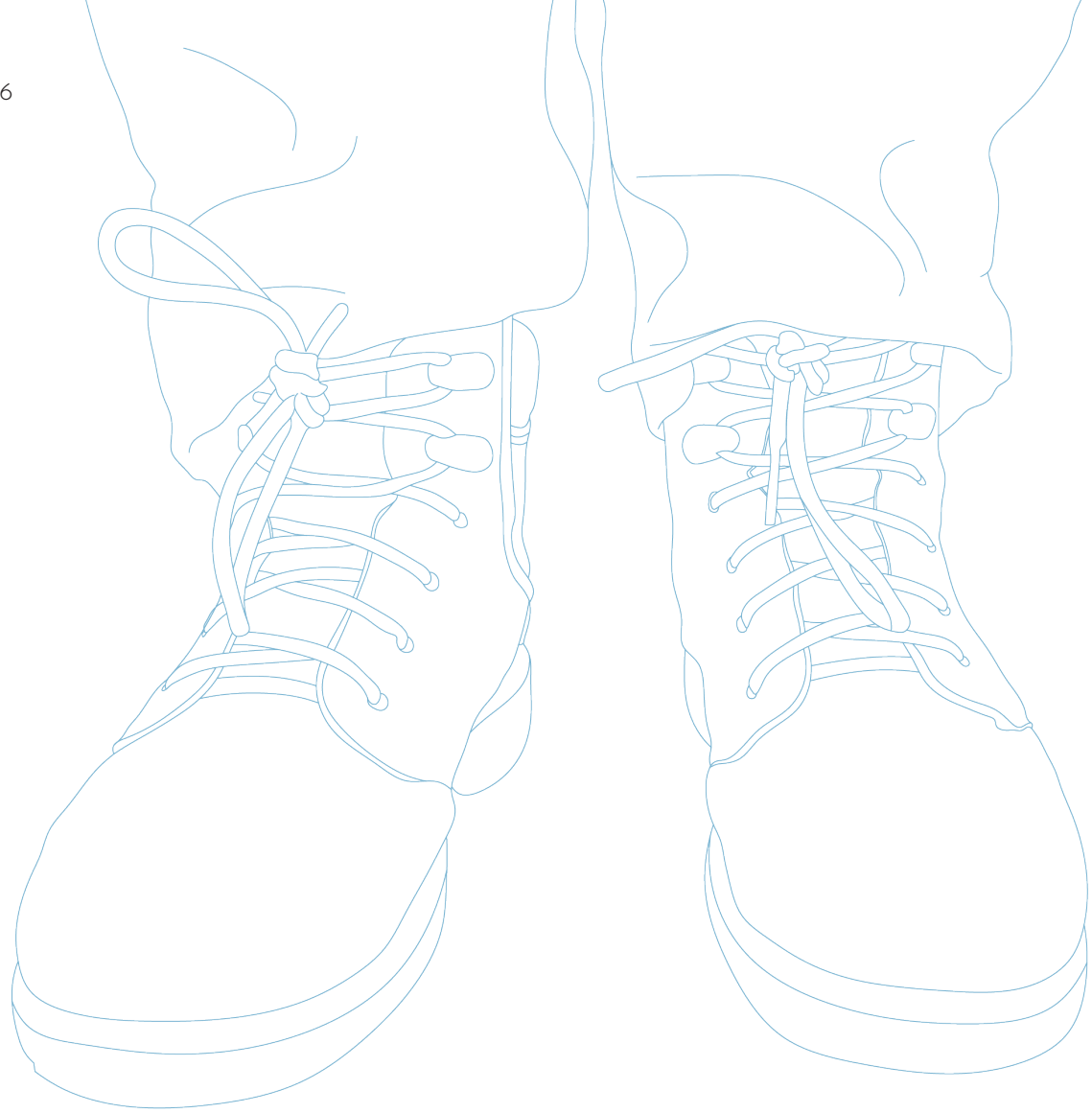
shiny smooth
enduring hot
industrial
contemporary
resistant clank bang
cold practical durable



GRAVEL

CRUNCH GIVE
LOOSE PARTS
DUST
MINERAL
RUSTIC

Fig. 6: Words describing associations and experiences of different landscape materials (Soft Surfaces Ltd 2010)



participants. After a walk led by Hildegard Westerkamp, a participant remarked, “[a]s a sound student and a student of yoga, I drew parallels between the two for their appreciation for slowness, for introspection and contemplation. Rather than through controlling our environment, yoga teaches us equanimity and to be present. Similarly, soundwalking and an awareness of the soundscape call attention to the fleeting nature of our attentiveness and the ephemerality of our sensorial experience” (Westerkamp 2017 p.7).

Design as process and practice

The senses are ephemeral and constantly changing. So is the world, our bodies, and our lives. Plants grow and evolve, materials wear and weather, the seasons change. Our environments are constantly being built and unbuilt (Gonzales 2016). They are never finished. Design is an ongoing process rather than a fixed point that we arrive at.

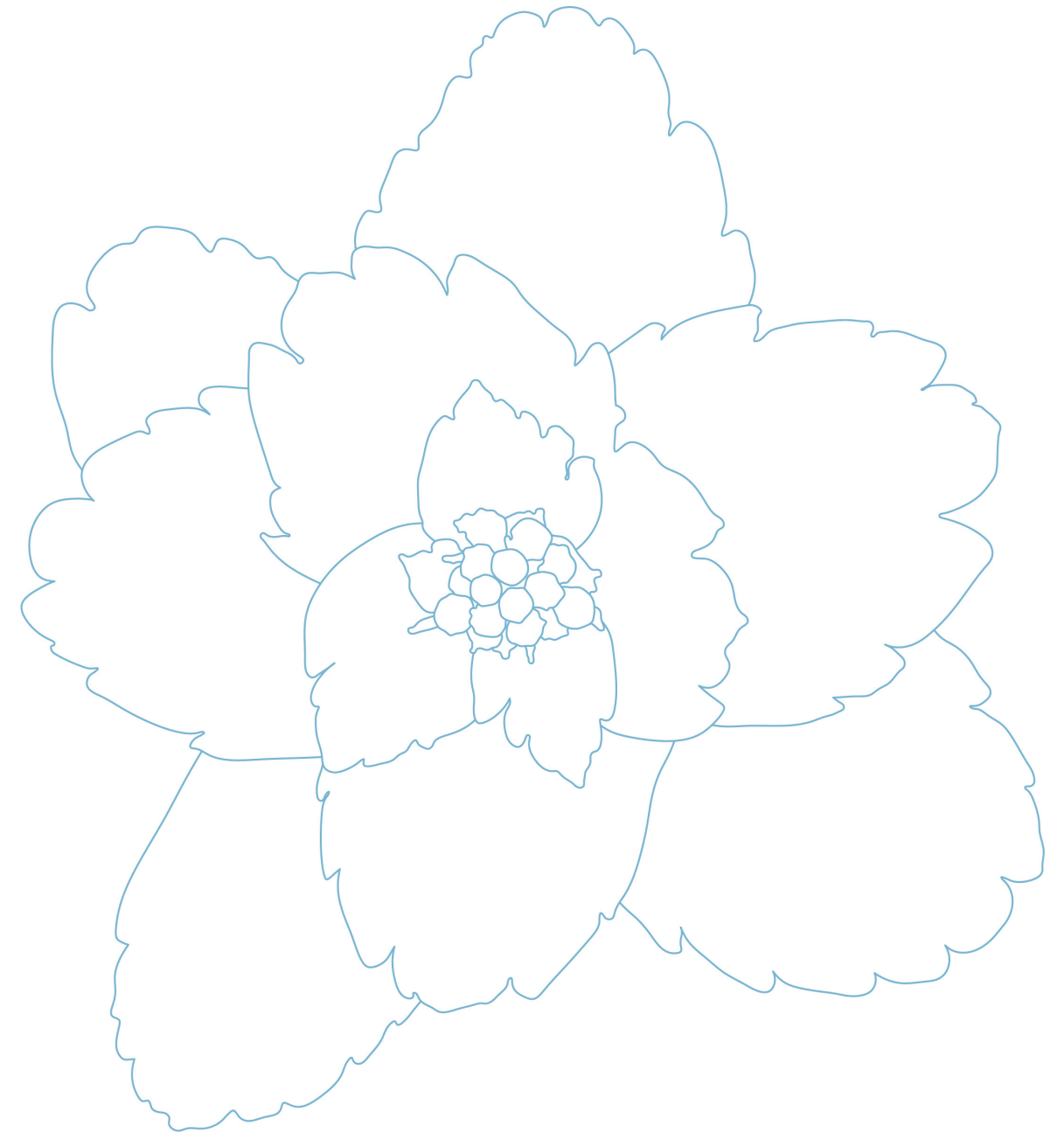
Mindfulness and meditation are a practice. Simply meditating is what makes one successful at meditating, not achieving an end goal or particular outcome.

This project approaches design in a similar way. It is about going through a process and seeing what will happen and what can be discovered (Rahm 2013). Phillippe Rahm, a Swiss architect who works on climatic design, describes his process as being about seeing what happens when he prioritizes and focuses on certain things (2013). Thibaud asks, “[h]ow design can be a way of immersing in life, pervading bodies and places, and enhancing everyday sensory experience” (2018 p.81). Bruce Mau suggests focusing on the senses as a way to find a process that brings the multi-sensory experience into design.

Conclusion

Too often, design fails to consider the sensory experiences of the users who will end up engaging with it. We must value how people interact with a place over time far more than a pretty render or diagram of a place that will not work in reality. Landscape architecture has much to gain from considering how bodies meet and perceive the world. We are uniquely placed to work with plants and materials, water, and active transportation as tools for making this possible. Integrating the rich recent research offerings of neuroscience into how we design the built world will make it more pleasant and more inclusive. By moving through the world as embodied creatures, and by taking time to slow down, pause, feel the breeze on our face, and listen to a bird chirping, we can begin to shift what is and is not possible, what is and is not valued. We can become better designers and provide users with richer ways to engage with our designs.

Planting and material choices are one of the biggest and most important tools landscape architects have to work with. If we consider the senses more carefully we can craft spaces that invite pausing, noticing, play, joy, and embodiment. We can create new ways of relating to land, our bodies, and the spaces that make up our environments.



Case studies

“Our most immediate,
most immersive
environment: the city,
which hides extraordinary
miracles of ordinary life,
if only we know how to
look for them”

-Maria Popova (2021)



Fig. 9: Signage and lighting at Jim Deva Plaza (Author 2021)

Southeast False Creek Energy Centre Stacks

Location: Vancouver, BC, Canada

Team: City of Vancouver, Pechet and Robb Art + Architecture,
Knight Signs, CDM2 Lightworks, EOS Lightmedia

Date: 2010

The False Creek Neighbourhood Energy Utility is a plant that captures energy from sewage to provide heating and hot water to nearby residents. The stacks have been made into a piece of public art that indicates how much energy is being used in the area. Resembling a hand, a portion near the fingertip lights up and changes colour depending on the level of energy being used.

This strategy engages residents with their energy infrastructure and provides information in an inviting and interesting way about something that is usually overlooked.

(City of Vancouver 2021a; CDM2 2021)



Fig 10: Lights look like fingertips and indicate energy usage (Author 2021)

Viva Vancouver Pavement-to-Plaza: Jim Deva Plaza

Location: Vancouver, BC, Canada

Team: City of Vancouver, West End Business Improvement

Association

Date: 2016

Jim Deva Plaza is the first in the City of Vancouver's Pavement-to-Plazas program, which seeks to transform streets into engaging public spaces. The former street right-of-way is converted into a single smooth surface with spaces to gather, planting, and a megaphone soap box that references the queer history of the area and Jim Deva's activism.

In an evaluation done by The Happy City in 2019, Pavement-to-Plaza sites were compared to nearby control sites that remained unchanged. The Pavement-to-Plaza spaces were found to support social connection and created new spaces for social interaction, improved levels of social trust and sense of safety, were welcoming and showed higher levels of place attachment than control sites.

(The Happy City 2019; Fisher and Gallagher 2016; The West End Business Improvement Association 2021; City of Vancouver 2021b; City of Vancouver 2021c)



Fig 11: Jim Deva Plaza facing north (Author 2021)

Paley Park

Location: New York City, NY, United States

Team: William Paley, Zion & Breen Associates

Date: 1967

Located in Midtown Manhattan, Paley Park is a quiet respite from the bustle of city life. The park was designed to minimize noise, and create a sense of peace and refuge. Ivy on the walls and a low tree canopy muffle sounds. The waterfall provides white noise to drown out traffic from the street. Moveable chairs were selected for flexibility.

The space was studied by William Whyte and features in his 1980 film *The Social Life of Small Urban Spaces*.

(Project for Public Spaces 2015; The Cultural Landscape Foundation 2020)



Fig 12: Paley Park (Kruglov 2014)

Site

“I believe that Main Streets serve us as a net of connections, a source of knowledge about our society, and a tool for naming and framing our problems and fixing them”

-Mindi Thompson Fullilove (2020a, p.161)

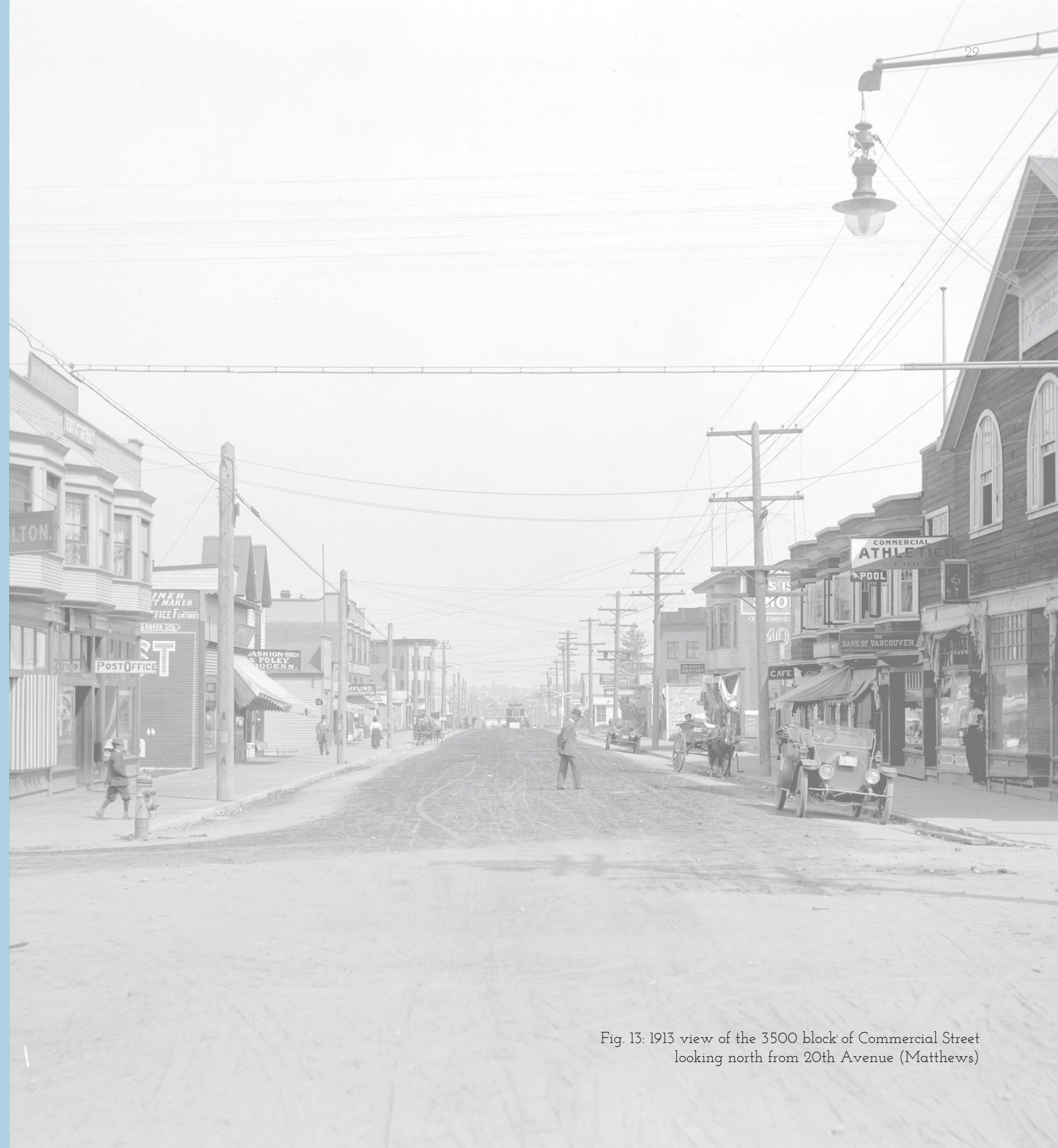


Fig. 13: 1913 view of the 3500 block of Commercial Street looking north from 20th Avenue (Matthews)

Site selection and goals

The COVID-19 pandemic has been a reminder of the importance of having services and public spaces within walking distance of homes. Mindi Thompson Fullilove describes the importance of main streets as community hubs and gathering spaces. She also emphasizes how important main streets are as spaces where people can easily run quick errands and engage in mundane activities like getting an ice cream (2020b). The Canadian Urban Institute observes that, “main streets are iconic symbols of urban life and belonging — where we go to shop and do business, eat, play and participate in civic life” (2020), while also supporting walkability for residents and employees. The pandemic has also shown us how important it is to have easily walkable destinations close to our homes. The Institute for Transportation Development Policy writes, “[w]alkability helps families manage the stress of lockdown measures by ensuring safe, healthy, reliable access to their needs. When people live close to parks and other car-free public places [...] they have places for safe socially distanced outdoor exercise and recreation” (Institute for Transportation Development Policy 2020).

During the COVID-19 pandemic, streets have changed in ways that would not have been possible under normal circumstances. The demand for outdoor public spaces has grown and streets have proven to be the ideal place to create more of them. Cities around the world have started patio programs, given over lanes for wider sidewalks, and closed streets altogether (Aljazeera 2020, Haggert 2020). Perry writes, “[p]olicy and behaviour change may take a long time, but there exists a building momentum across the world that recognises car-free streets as a critical way of tackling the urgent climate crisis, as well as a strategy to improve health and wellbeing” (2020). In this moment, we can seriously reconsider what streets are for and how we want to use them. Montgomery has observed that “all the real estate now used to facilitate the movement and storage of private automobiles is public, and it can be used any way we decide. Cities that are serious about the happiness of their citizens have already begun to confront their relationship with velocity. They are making what once seemed to be radical decisions about what — and whom — streets are for” (2013 p.173).

What are streets for?

Connection
Movement
Rest
Gathering
Play
Flow
Surprise
Habitat
Green + blue infrastructure
Resilience

Fig. 14: People waiting in line at a bakery on Commercial St (Author 2020)

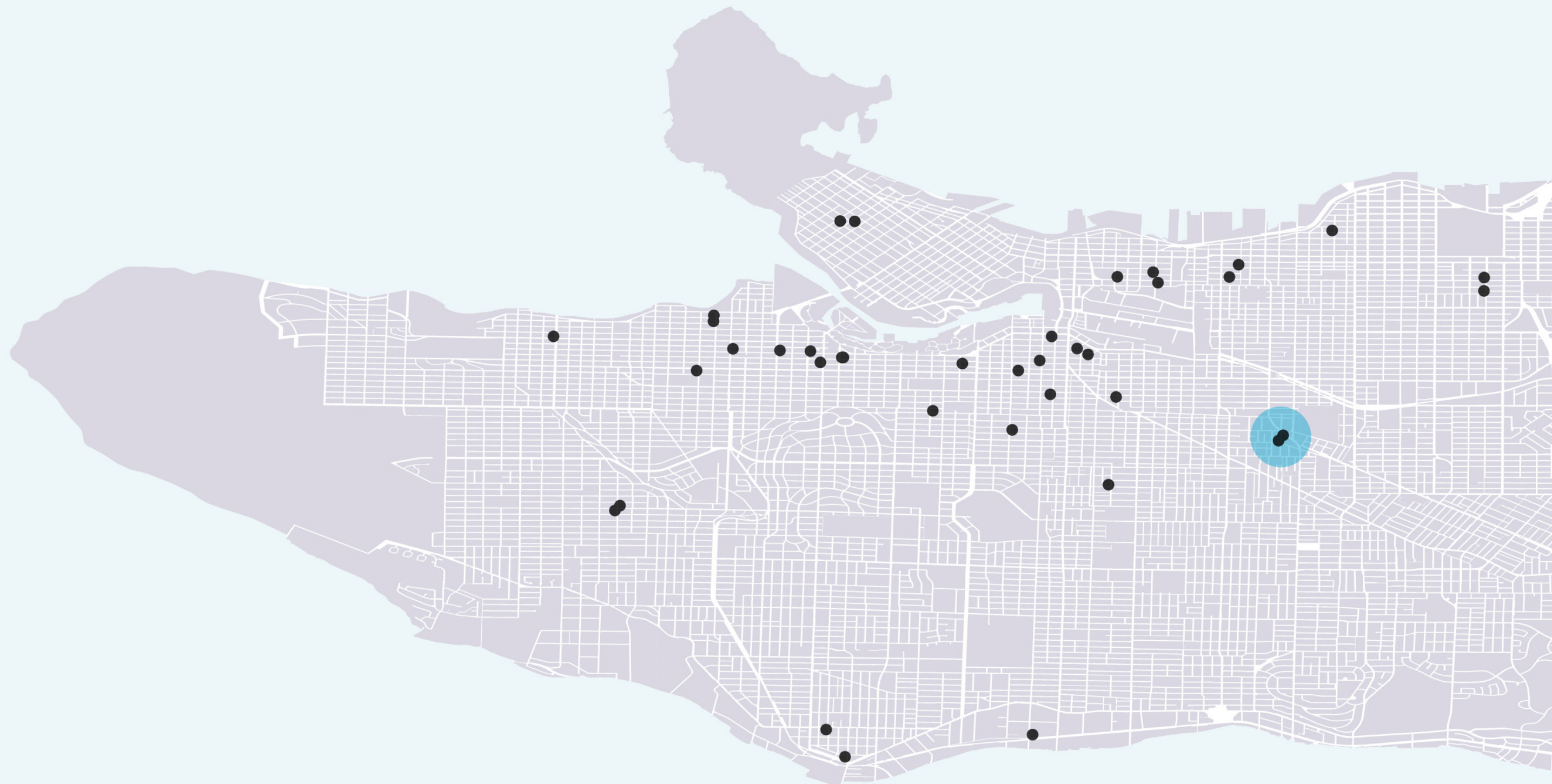


Fig. 15: Locations of cafes along side streets in Vancouver (Author 2021)

The site I have selected is a block of Commercial Street between Commercial Drive/Victoria Diversion and East 20th Avenue in East Vancouver in the Kensington Cedar Cottage neighbourhood. The street has a wide range of uses including residential, commercial, office, and light industrial with most ground floor frontages including some type of public facing business. Buildings range in age and are generally two to four storeys tall. There are residential spaces above many of the commercial frontages. Buildings go right to the edge of the sidewalk with no setbacks. The edge of both sidewalks contains a row of street trees. Most of these trees are mature. Some were planted alongside newer developments. There is parking along the street. It is located near cycling routes as well as buses and the Skytrain.

A former interurban stop spurred the concentration of activity in this space. Montgomery describes how streetcar suburbs were designed so that people were a five minute walk or a quarter of a mile from shops and streetcars (2013). In this model, residential streets with narrow lots provided enough density to support market streets and transit.

When the Skytrain’s Expo Line was built along the former interurban route, the Epworth/ Cedar Cottage stop was not included so the site sits between the Commercial-Broadway and Nanaimo Skytrain stations. The elevated Skytrain track is a visible presence on the eastern side of the site.

Today, this stretch of Commercial Street is a secondary commercial street. There has been a high degree of turnover in some of the retail spaces.

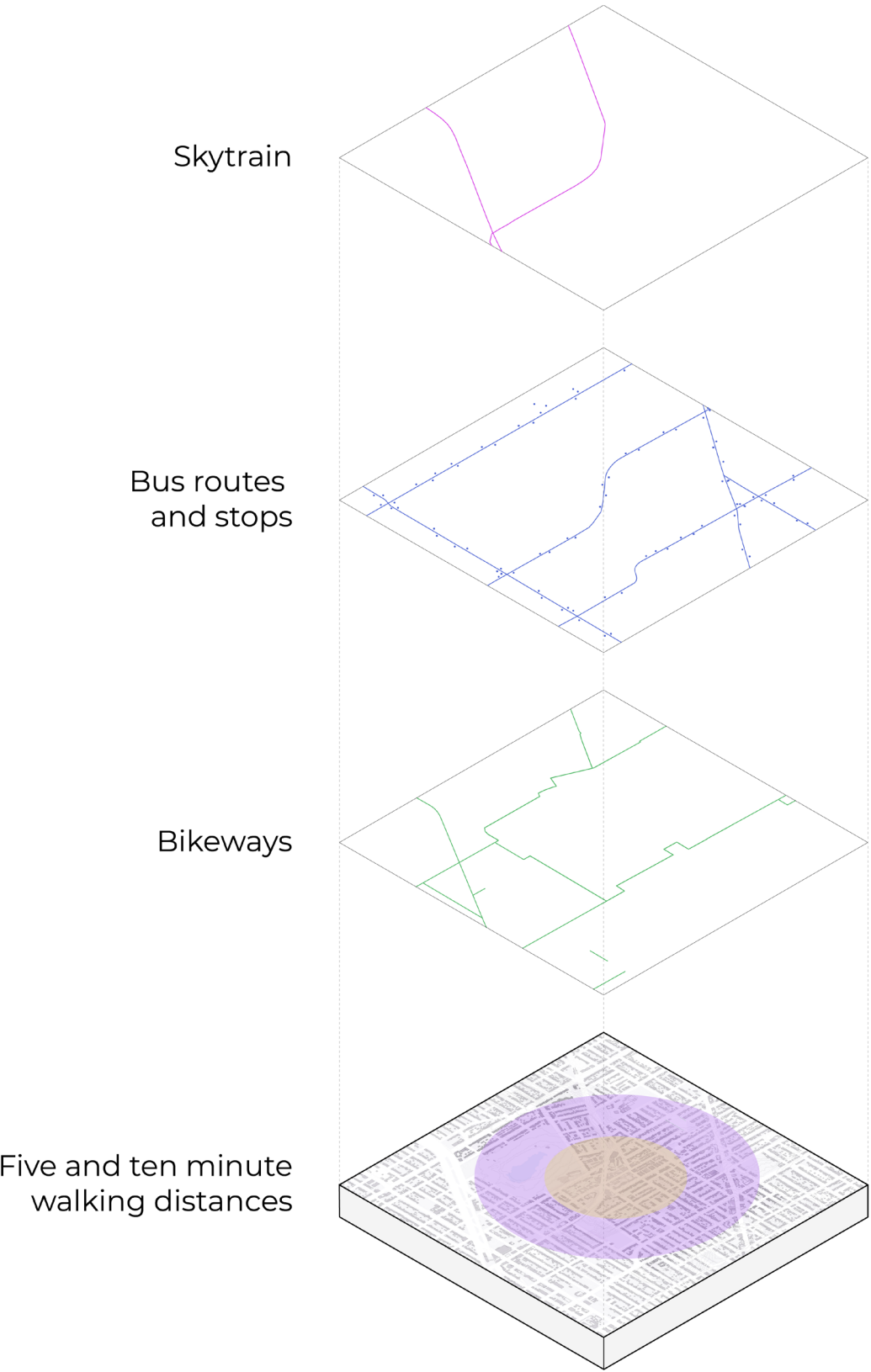
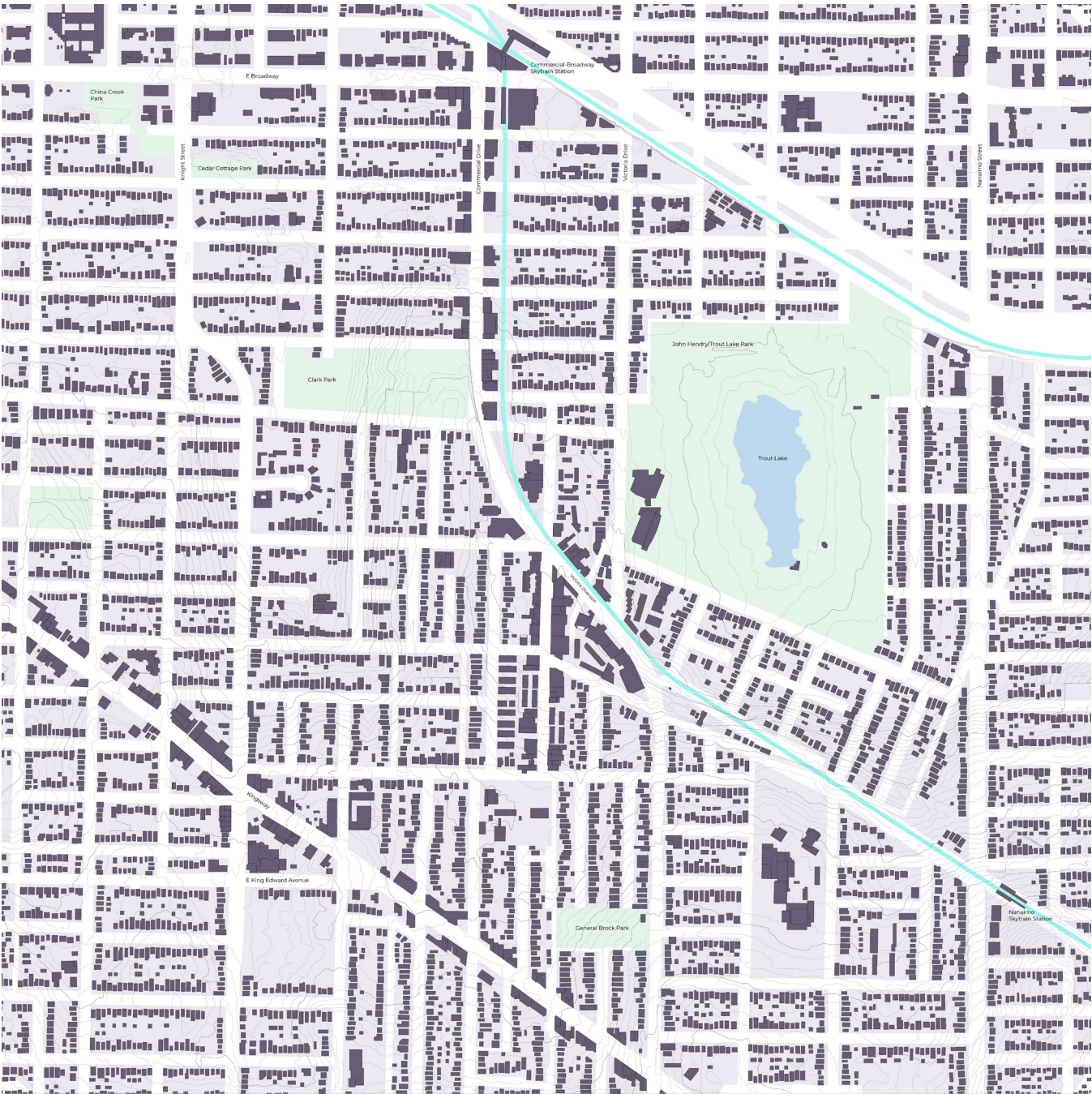


Fig. 16: Public transit and active transportation in the site area



Legend

Fig. 17: Site context
1:10,000

— Skytrain Line
— Park
— 1m contour
— 5m contour



Legend

Fig. 18: Site plan
1:2500

— 1m contour
— 5m contour



Fig. 19: Elevations along Commercial Street

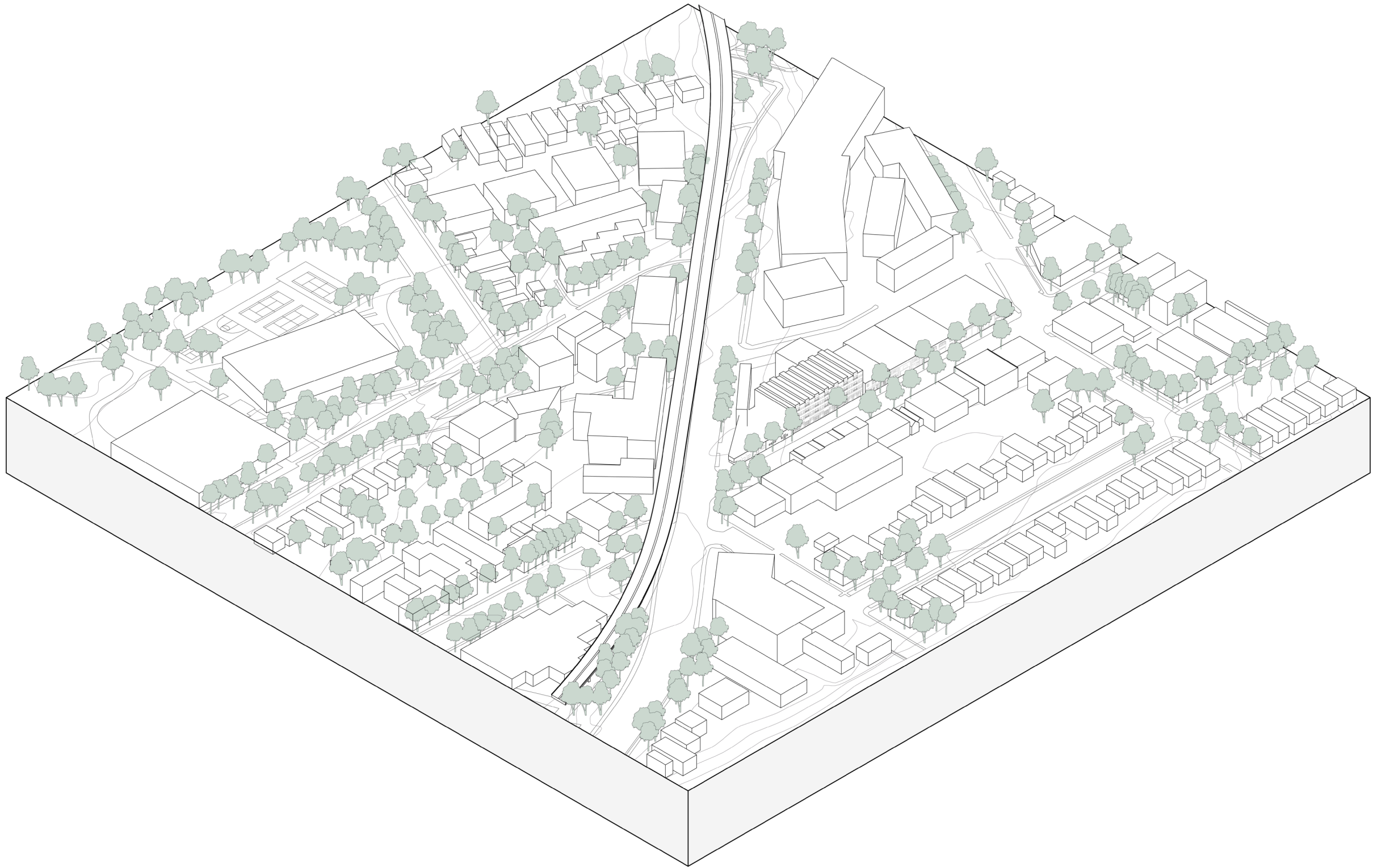


Fig. 20: Axonometric of site and context

Site history

Pre-colonial

Bruce Macdonald’s map of Vancouver in the 1850s shows several streams in the area along with active beaver populations and dams near Trout Lake (2000). The China Creek system in this area was the second largest in the Lower Mainland after the Still Creek System (Kass 2009). Gibson Creek ran near Clark Drive. Kass describes the feeling of this as “a shaded creek flowing through forest in some National Park north of here. Imagine a ravine 30 and 40 feet (9–12 metres) deep” (2009 p.3). Gibson Creek contained salmon, trout, lamprey, eels, and sticklebacks (Kass 2009).

There was no known Indigenous settlement in the area (Kass 2009), however, an important Indigenous foot trail and wagon road was located just south of the site that would later become Kingsway (Macdonald 2000; Our City Our Art 2012; Kass 2009). Common trees in the area were Douglas fir, cedar, hemlock, pine, spruce, maple, yew, and crabapple (Macdonald 2000).

Colonial

The first colonial settlement in the Cedar Cottage area occurred in 1888 when Arthur Wilson bought 43 acres of land at the corner of Knight Street and what was then the Westminster Road (and would later become Kingsway) to start the Cedar Cottage Nursery (City of Vancouver 2020; Wilson 2012). Others bought land near Trout Lake for farming (City of Vancouver 2020).

The area boomed with the arrival of the interurban streetcar system between Vancouver and New Westminster in 1891 (Wilson 2012; City of Vancouver 2020). A British Columbia Electric Railway (BCER) station, named Epworth/Cedar Cottage, was located near the junction of what is today Commercial Drive/Victoria Diversion, Findlay Street, E 18 Avenue, and Commercial Street (Wilson 2012).

At the turn of the 20th Century, the area became a bustling commercial hub with a silent movie theatre, bank, hardware store, and briefly a roller coaster (Wilson 2012). The City of Vancouver writes, “by 1910, a small but independent village with a post office, 40 stores and a two-storey school” (2020). Before amalgamation with Vancouver in 1929 the area was known as South Vancouver (Wilson 2012).

As the automobile became more popular, from the 1920s onwards, businesses moved southward towards Kingsway (City of Vancouver 2020). Streetcar service was phased out and replaced by buses following World War II as part of the BCER Rails-to-Rubbers program. The last interurban ran between Marpole and Steveston in 1958 (Hatanaka 2019).

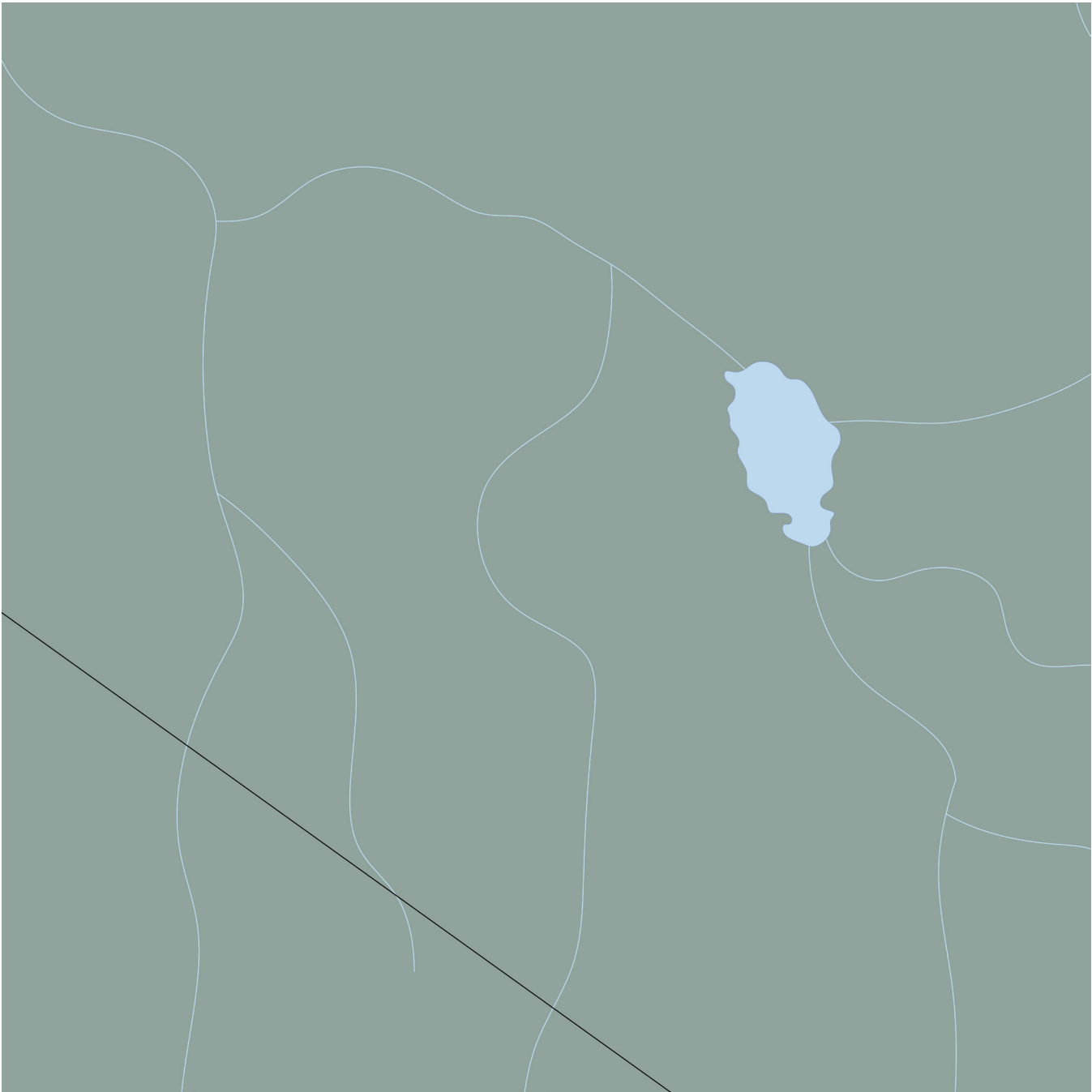


Fig. 21: Pre-colonial site context
1:10,000



Fig. 22: Kingsway Trail sign designed by Sonny Assu to mark Kingsway’s history as an indigenous foot trail and early colonial wagon road (City of Vancouver 2021d)

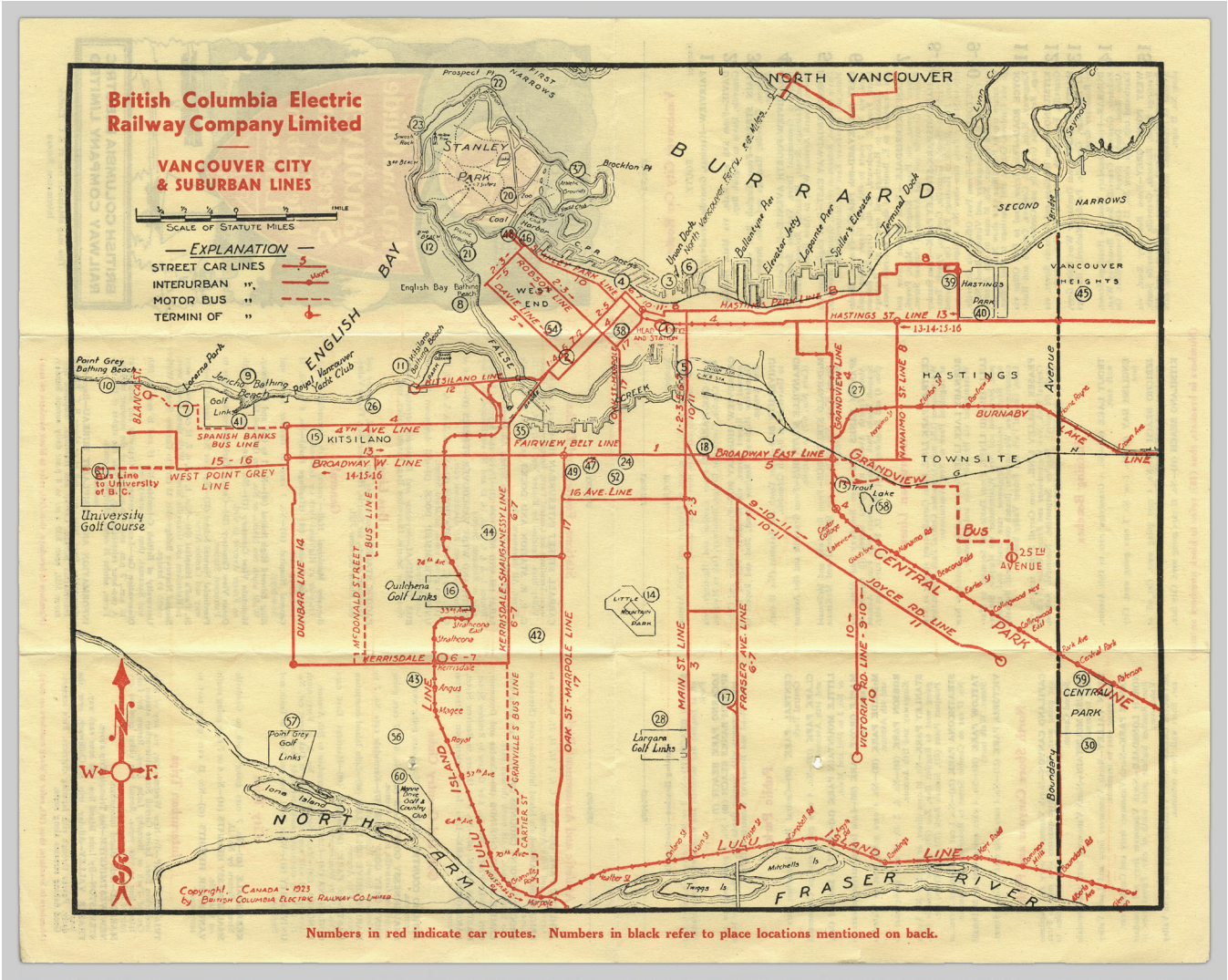


Fig. 23: Map of Vancouver streetcar and interurban lines including the Cedar Cottage stop on the Central Park Line (British Columbia Electric Railway 1923)



Fig. 24: View of Commerical Street facing south in 1907 (Major)

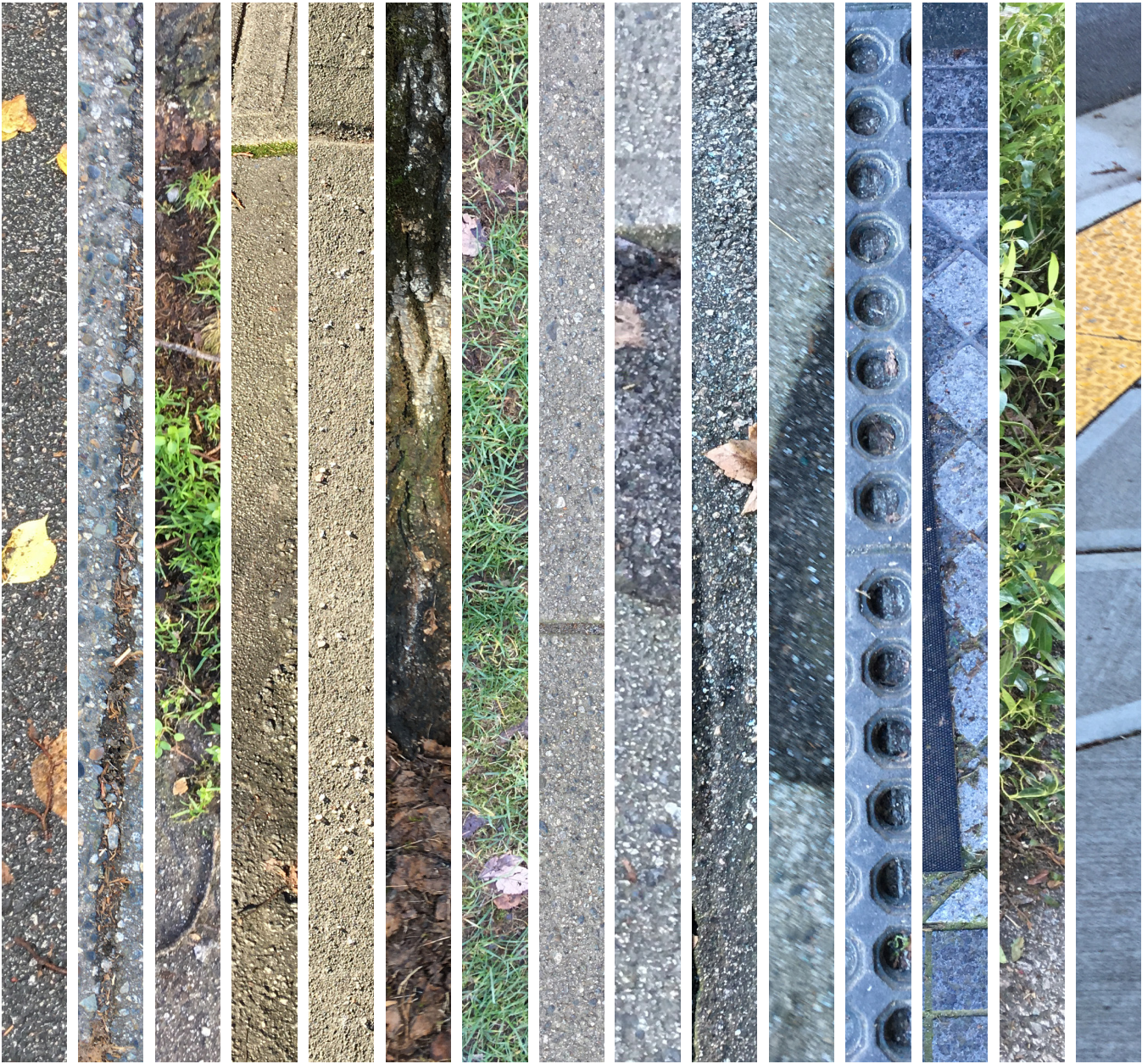


Fig. 25: Horizontal textures at the site



Fig. 26: Vertical textures at the site

Sensory mapping

Drawing on the work of soundscape researcher Hildegard Westerkamp (2017) and designer Kate McLean (2019), I carried out sensory mapping of my site. Sensory mapping is normally done in groups however, because of COVID-19 physical distancing, I carried out sensory mapping myself and recruited volunteers via Facebook.

The goal of this sensory mapping exercise is to experience and think about the world in a different way rather than to produce a particular visual output. Sensory walks serve as an invitation for participants to carefully consider and notice something they often overlook. Participants in sensory walks have noted how they can feel meditative and transformative. By changing the way people think about the places they inhabit we can change what is expected of and possible in the built environment.

Sound # (please record on site map)	Name and description of sound	Intensity		Duration		Like/dislike		Associations and memories the sound brought up
		low	high	low	high	like	dislike	
1		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		
2		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		
3		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		
4		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		
5		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		
6		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		
7		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		
8		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		
9		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		
10		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		
11		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		
12		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		
13		1 2 3 4 5		1 2 3 4 5		1 2 3 4 5		

Fig. 27: Sound note given to volunteers

Steps

Each step should take 15 minutes. Feel free to take breaks in between.

Step 1: Sound catching (15 mins)

Pay attention to every sound you hear. Detect and record 4 sounds.

Step 2: Ear plugs (15 mins) (skip if you don't have ear plugs)

Place ear plugs in your ears for five minutes. What does the space sound and feel like?

Remove the ear plugs and notice whether sounds are accentuated or more noticeable afterwards. Detect and record 4 sounds.

Step 3: Free listening (15 mins)

Explore the space. Detect and record sounds in the manner of your choosing.

Fig. 28: Instructions given to sound walkers

Steps

Each step should take 15 minutes.
Feel free to take breaks in between.

Step 1: Smell catching (15 mins)

Pay attention to every smell that enters your nose. Detect and record 4 smells.

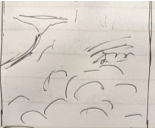

Step 2: Smell hunting (15 mins)

Seek out places where potentially interesting smells might be found. Where might there be smells you might normally overlook? Detect and record 4 smells.

Step 3: Free smelling (15 mins)

Explore the space. Detect and record smells in the manner of your choosing.

Fig. 29: Instructions given to smell walkers



#	NAME - DESCRIPTION	ASSOCIATION	15		15		15	
			INTENSITY	DURATION	DIS	DIS	DIS	DIS
1	SCATTERING (REPEATING)	URBANISM VIBRANCY, NIGHT	4	2				1
2	MUM TALKING TO BABY	COMMUNITY	2	3				1
3	BUS DRIVING ON	URBANISM, DENSITY	3	2				2
4	CAR STARTING	EVERYWHERE (UBIQUITOUS)	2	1				4
5	CAR ALARM	PANIC NIGHT	5	1				5
6	FAMILY TALKING, LAUGHING	COMMUNITY, NEIGHBOURHOOD						
7	PEOPLE WALKING ON WET CONCRETE	SIDE STREETS, NORWAY	1	2				1
8	RAIN ON ROOFING	VANCOUVER, STUNNING +	1	5				1
9	JINGLING DOG COLLAR	CHILDHOOD PET, FUTURE PET	1	2				1
10	LETTLE WIND IN EARS		1	4				1
11	MACHINE - LIKE HEATING/AC UNIT	INDUSTRIAL BUILDING	1	5				3
12	CAR DOOR SLAM	ADOLESCENT EXCITEMENT	2	1				3
13	LEAD CAR	HIGH SCHOOL PRELIMINARIES	4	3				5
14	PEOPLE WALKING, KEYS JINGLING	TRAVEL IN MOUNTAINS	3	3				3
15	MY OWN POSTERS	WALKING ALONG, NORWAY	2	5				1

Sound # (please record on site map)	Name and description of sound	Intensity		Duration		Like/dislike	Associations and memories the sound brought up
		low	high	low	high		
1	Bus passing by - engine and wheels in low frequency hum and sound absorbing on road	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	anxiety - I always worry I'll be hit while crossing the road to get to the bus stop
2	Chirping Sparrows "Tee"	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	I can hear this from my window but only at night - I can't hear it during the day because of the noise of the city
3	Kids laughing & playing tag with their dad	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	My dad always played tag with me when I was a kid
4	dog bays, jingling keys, plastic cup, plastic glass, dogs barking	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	walking of family dog
5	beet hives (low mid-high, low mid-high) in the distance, particularly near plastic (plastic) (high mid-high)	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	I can hear these also from my room, much closer to the water - I like the sound of the bees
6	plastic (plastic) (high mid-high)	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	Buying groceries, I would take out the trash when I get home
7	multiple playing (high low, plastic)	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	Reminded me of other family friends, and with them I would play
8	Children high (high low), dogs of low and mid-high barking	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	Reminded me of my first year of university
9	Piano playing over head, music, low high, plastic (plastic)	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	walking by the water @ the Broughton Park way to another, I always like to walk
10	Gas revving - I can't hear cars here they're too close to the car	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	Thinking to take to my family's photo but I'm not going to take it because it's noisy
11	Stairs - low-high-low, plastic moving close & getting further	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	Living on an ambulance made my first year of university
12	Clunking & a high-pitched (high mid-high) plastic (plastic) (high mid-high)	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	First association, I always like to walk
13	Wind whistling my papers around (clapping)	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	Reminded me of when I would read while walking as a kid, it was hard to keep my place when it got windy

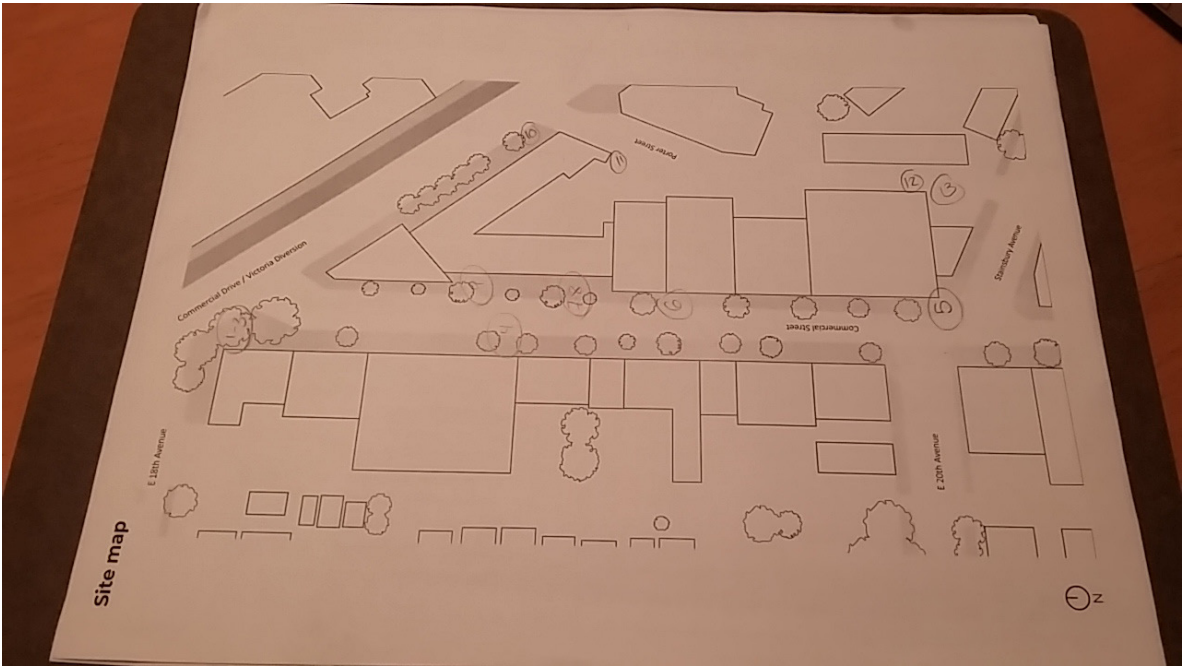
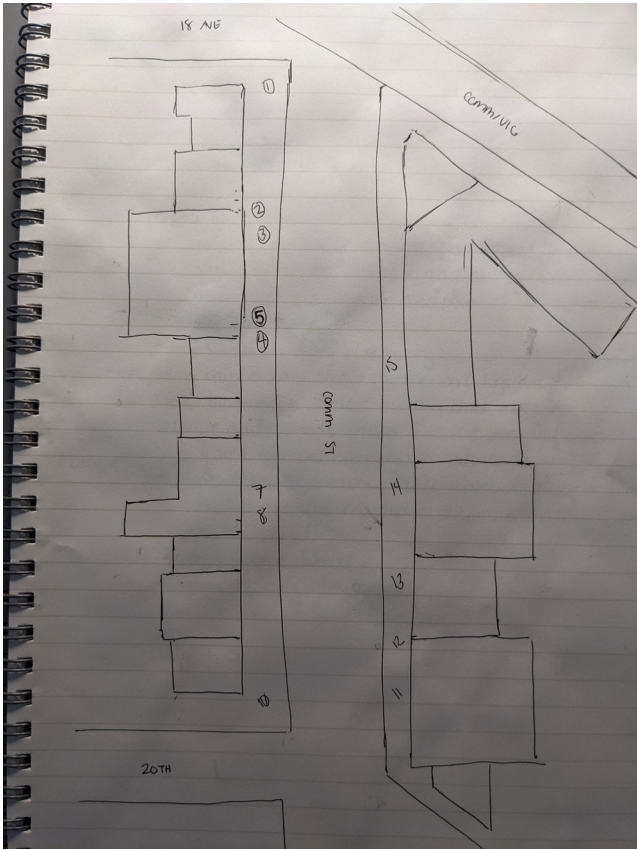


Fig. 30-33: Materials returned by volunteers

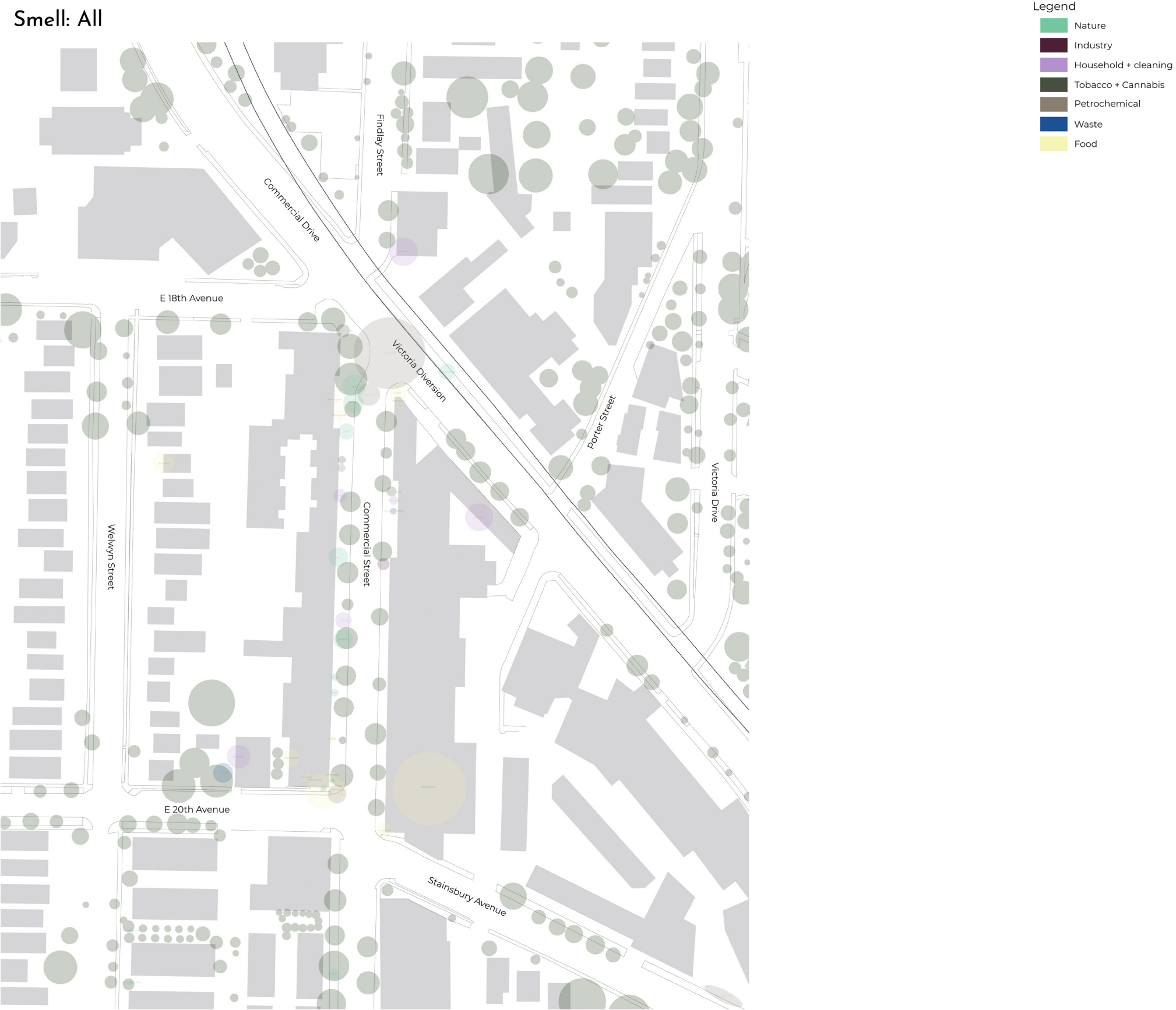


Fig. 34: Map of all the smells recorded during smell walks
1:2500

Smell: Food



Fig. 35: Map of food related smells
1:2500

Smell: Petrochemical



Fig. 36: Map of petrochemical related smells
1:2500

Smell: Household + cleaning

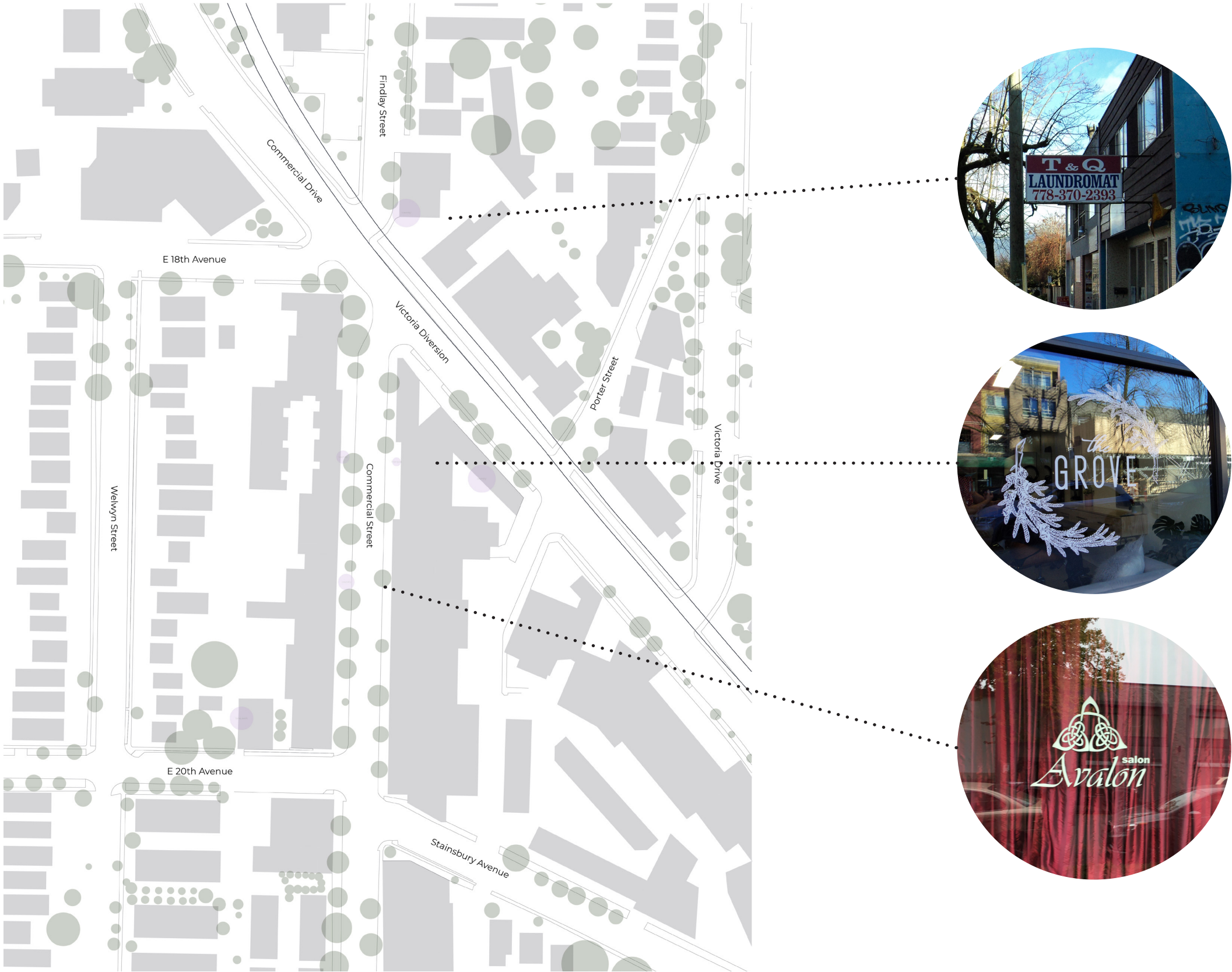


Fig. 37: Map of household and cleaning related smells
1:2500

Sound: All

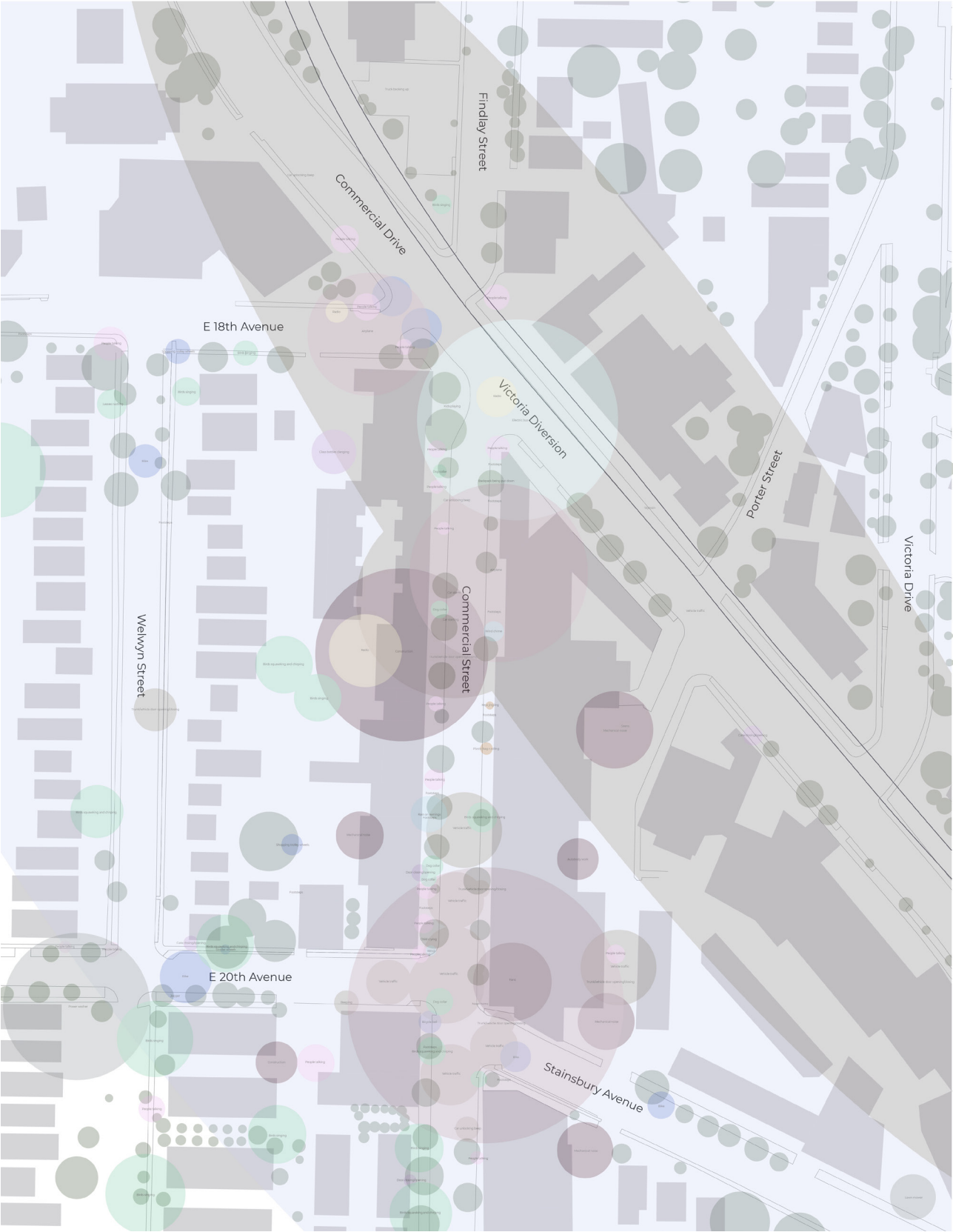


Fig. 38: Map of all the sounds recorded during sound walks
1:2500

Sound: Human



Fig. 39: Map of human related sounds
1:2500

Sound: Skytrain

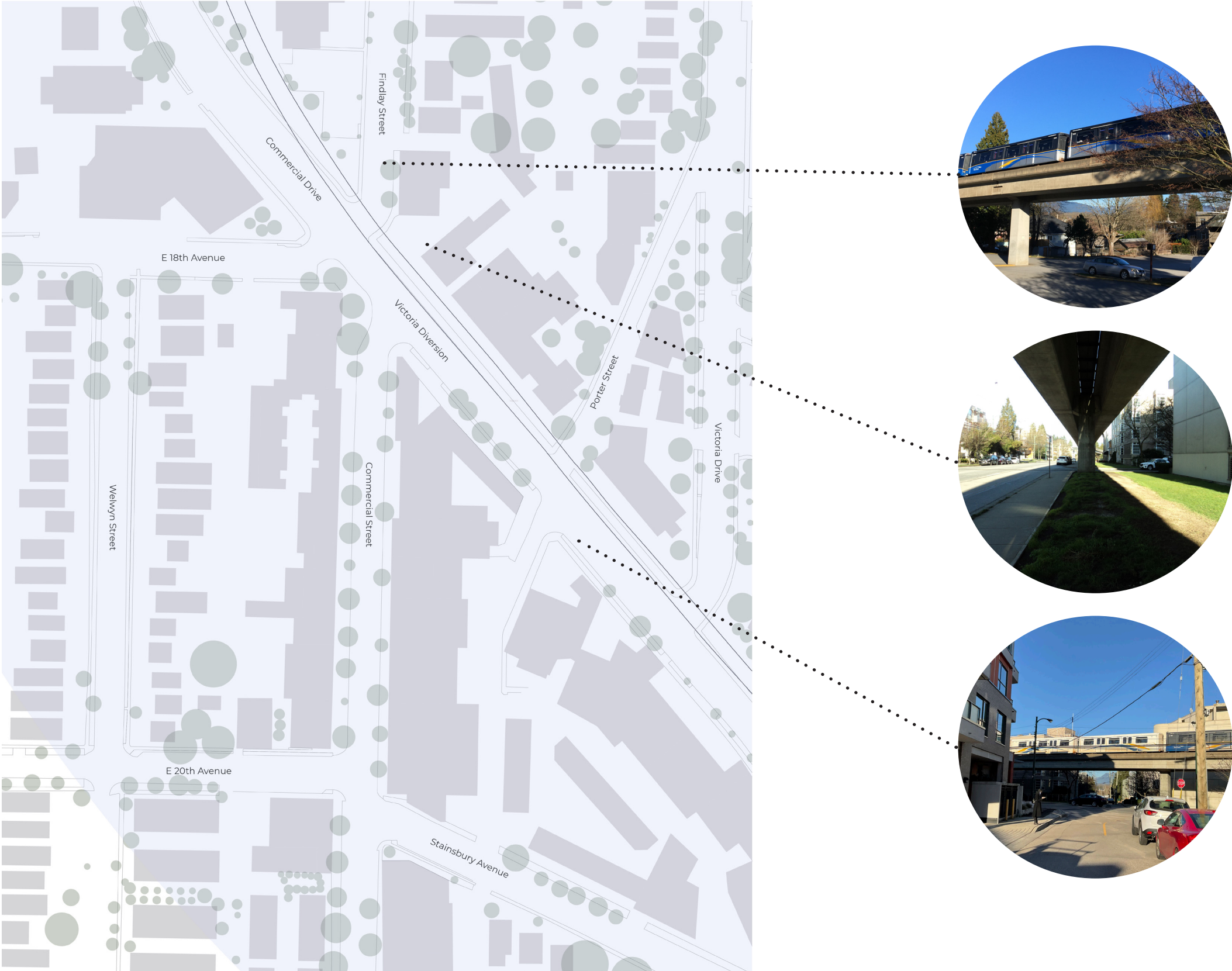


Fig. 40: Map of Skytrain related sounds
1:2500

Sound: Nature



Fig. 41: Map of nature related sounds
1:2500

Design

“A building is encountered; it is approached, confronted, related to one’s body, moved through”

-Juhani Pallasmaa (2005, p.63)



Fig. 42: Zoomed in site plan

Principles + objectives

Prioritizing active transportation and movement

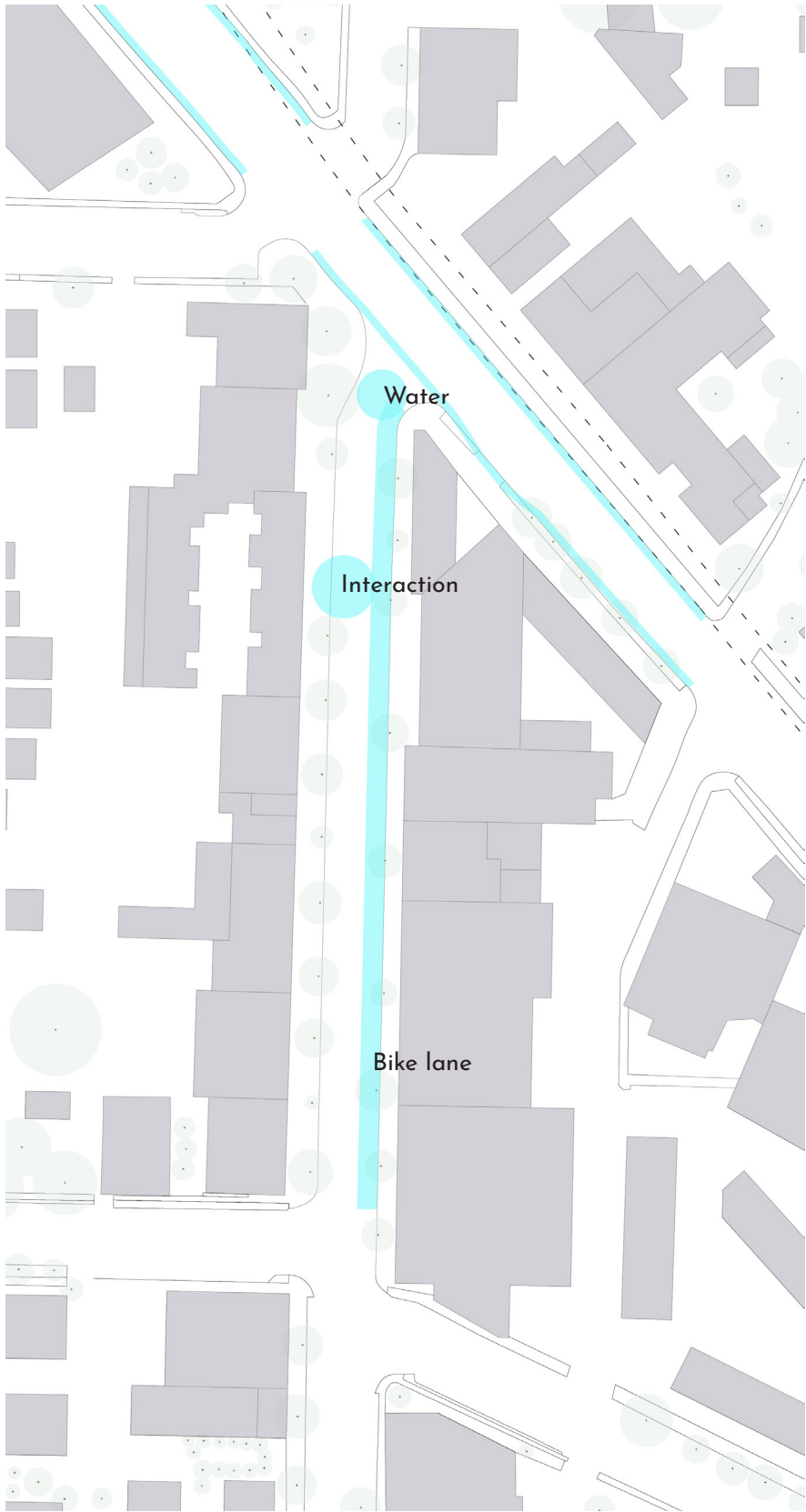
Providing a range of materials and experiences

Minimizing the negative impact of vehicles

Providing opportunities for interaction

Creating moments of rest and pause

Add



Amplify



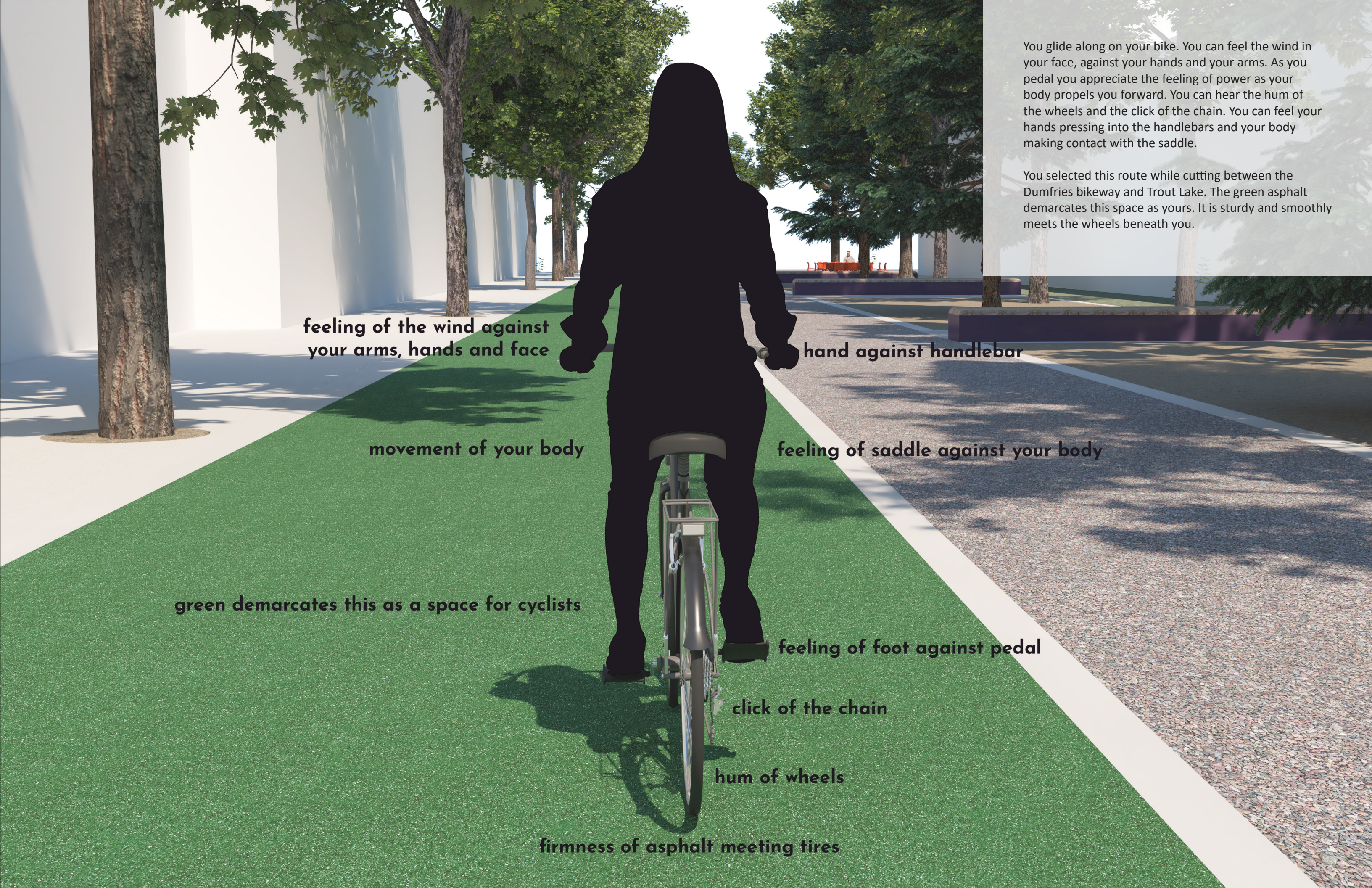
Subtract



Fig. 44: An approach of amplifying positive experiences on site, adding new experiences, and subtracting or masking unpleasant experiences was taken



Fig. 45: The add/subtract/amplify approach was combined with specific site features and strategies (Lygum 2018; Xiao, Tait and Kang 2018; Cerwen 2017; Thibaud 2018; Abros 2021; Conners 2016)



You glide along on your bike. You can feel the wind in your face, against your hands and your arms. As you pedal you appreciate the feeling of power as your body propels you forward. You can hear the hum of the wheels and the click of the chain. You can feel your hands pressing into the handlebars and your body making contact with the saddle.

You selected this route while cutting between the Dumfries bikeway and Trout Lake. The green asphalt demarcates this space as yours. It is sturdy and smoothly meets the wheels beneath you.

feeling of the wind against your arms, hands and face

hand against handlebar

movement of your body

feeling of saddle against your body

green demarcates this as a space for cyclists

feeling of foot against pedal

click of the chain

hum of wheels

firmness of asphalt meeting tires

You walk across the hard and smooth paving stones to a bench. The wood seat is smooth as is the colourful metal base beneath it.

You notice a sign that tells you the plant behind you is Dwarf Japgarden Juniper (*Juniperus procumbens 'Nana'*) and that it has nice blue-green foliage. You turn and reach behind you. The raised planting bed makes it easy to grasp the plant between your fingers while you take a closer look.

hardness of pavers

blue-green foliage

plastic of sign
information on sign

smell of

feel of wood bench against your legs

look of wood



birdsong

**sweet spicy smell reminiscent of
Christmas trees**

flat and stiff needles

crunch of gravel

smell of soil

You walk along a gravel pathway. It feels soft and you can feel the shifting of the small rocks beneath your feet.

You notice conifers planted among the usual deciduous street trees. A bird fluttering around the branches of one of the trees catches your eye and you can hear bird song off in the distance.

Another handy sign tells you that this tree is Fraser Fir (*Abies fraseri*) and that it smells sweet and spicy. It reminds you of Christmas trees. It is fresh and calming. You reach out to touch it. The needles are flat and stiff.



You stop at a planting bed. It is raised so that the plants are easy to reach and engage with. You notice some French lavender (*Lavandula stoechas*). The smell reminds you of some lotion you use before bed. The rich pink colour is striking. The metal planting bed is shiny and cool as your hand grazes it while reaching in to sniff the lavender. Solid rock pavers support your feet.

Next to it is another member of the mint family: thyme (*Thymus vulgaris*). You stop to smell it as well.

Behind you notice a silver birch tree (*Betula pendula*) with interesting grooved bark. The etched white with spots of black is beautiful.

smell of thyme

texture and appearance of birch bark

pop of pink flowers

smell of lavender

hardness of pavers

coolness of metal

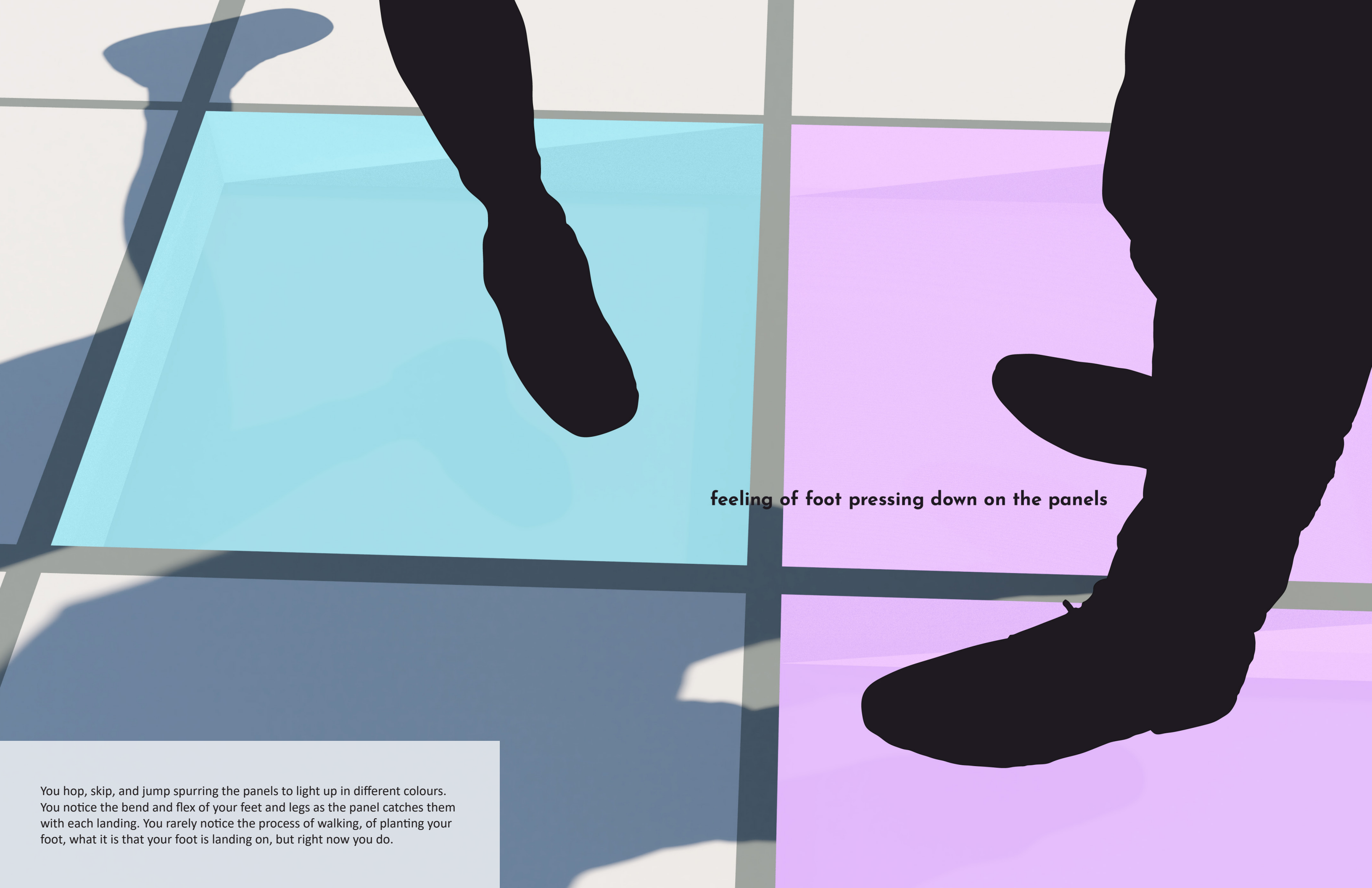
Out of the corner of your eye you see a man walking on some panels. They light up as he steps on them. You nudge your friend, point over to it and walk over to check out the panels for yourself.



feeling of plastic panel

sound of walking on the panels

draw of the illumination of the panel



feeling of foot pressing down on the panels

You hop, skip, and jump spurring the panels to light up in different colours. You notice the bend and flex of your feet and legs as the panel catches them with each landing. You rarely notice the process of walking, of planting your foot, what it is that your foot is landing on, but right now you do.

You picked out this particular spot because of the pleasant cacophony around you. You can hear birds in the trees, the water rushing in the fountain, the hum of bikes rolling along, and people talking, laughing, and playing. It is kind of like the pleasant din of a cafe. You do not want quiet here. You want this delightful mixture of activities unfolding around you. You alternate between reading the magazines you brought with you, feeling the glossy paper in your hand, and people watching, while sipping your latte the warm coffee flavoured milky liquid on your tongue, the feeling of the cup in your hand.

sound of people talking

sound of people talking

smell of coffee

taste of coffee

feeling of cup

coolness of metal table

plastic feeling of chair

sound of fountain

sound of cyclists

feeling of pavers

Next to the fountain you can hear the sound of rushing water. The air feels cool and moist. The water is mesmerizing. The sound is peaceful and calming.

feeling of coolness

sound of rushing water

masking of traffic noise

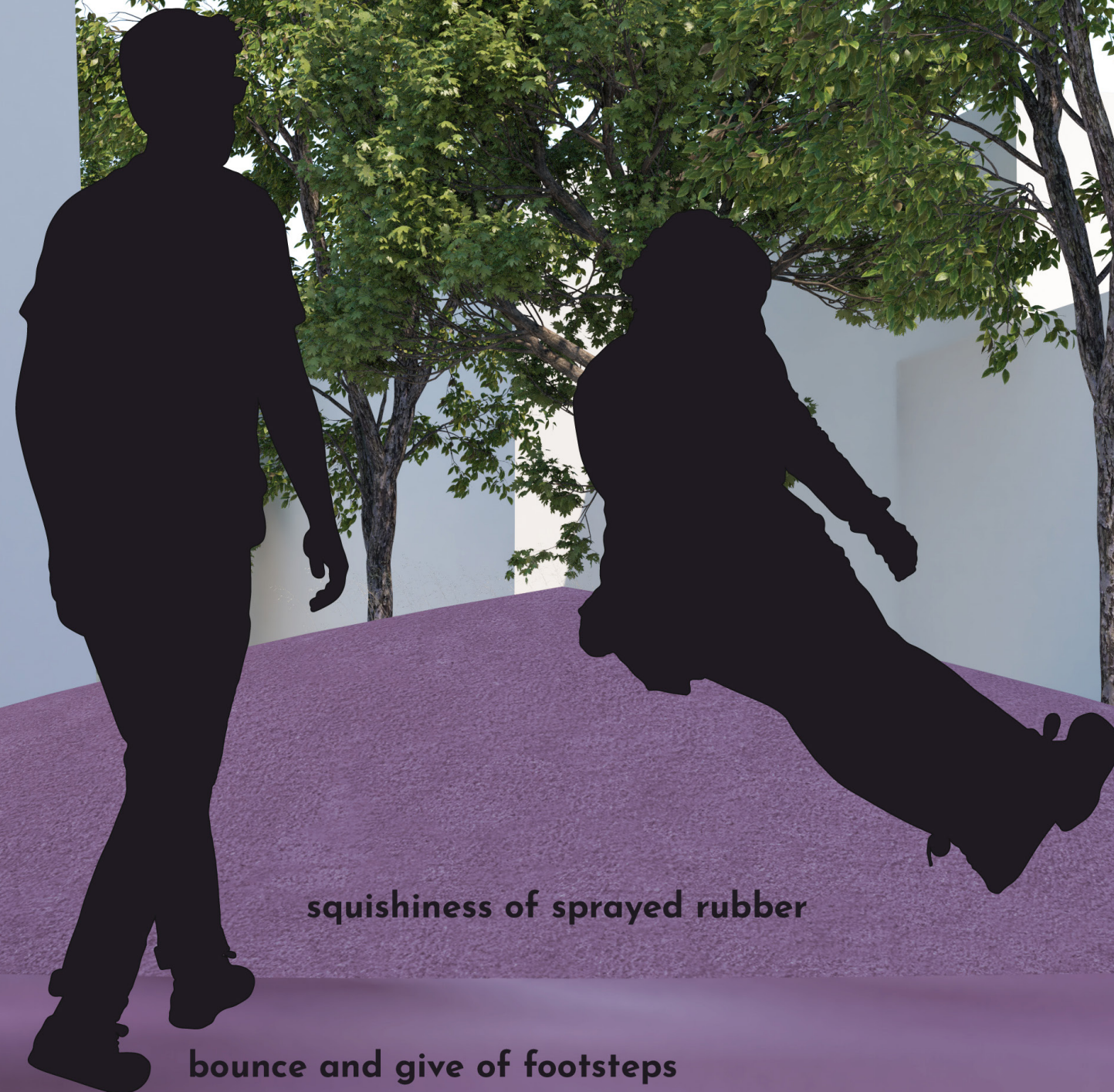
feeling of humidity and moisture in the air

look of tile

look of marble

hardness of paving stones

sound of Skytrain



squishiness of sprayed rubber

texture of sprayed rubber

bounce and give of footsteps

surprise of colourful and unexpected material

You are first drawn in by the pop of colour. Then you notice that the sprayed rubber is squishy beneath your feet. You sit on one of the mounds and relax.

sound of Skytrain



informative sign

sound of rain falling

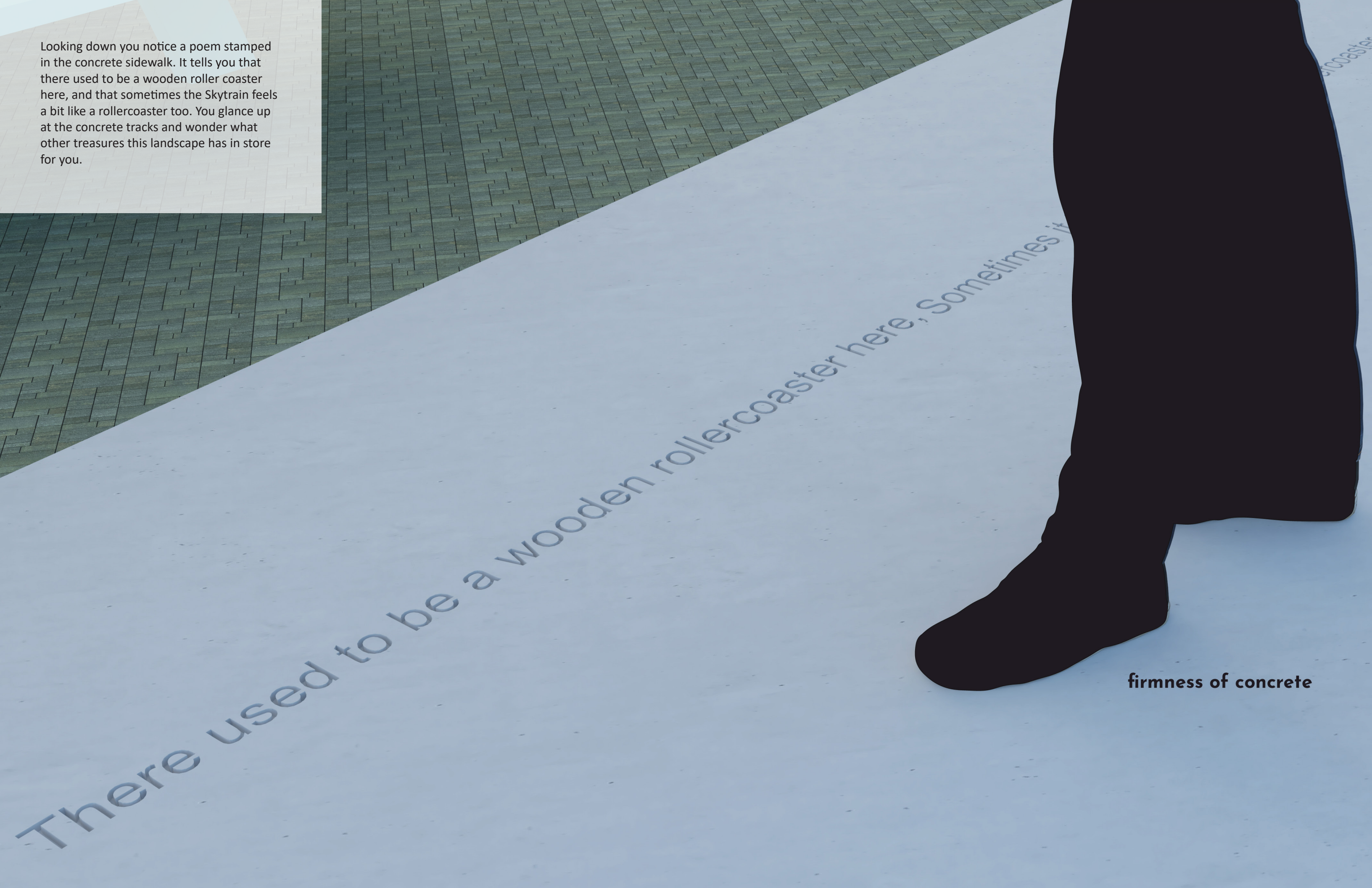
smell of wet earth

feeling of painted wood picnic table

It is raining so you picked this spot to meet up with your friends. It is dry under the Skytrain tracks. You listen to and watch the rain fall. You notice a fresh crisp smell. The air feels moist and humid.

Every few minutes a train rumbles above.

Looking down you notice a poem stamped in the concrete sidewalk. It tells you that there used to be a wooden roller coaster here, and that sometimes the Skytrain feels a bit like a rollercoaster too. You glance up at the concrete tracks and wonder what other treasures this landscape has in store for you.



firmness of concrete

Conclusion and bibliography

“Stand facing the breeze with your eyes closed. Open your mouth and taste the air. Can you taste salt on your tongue?”

-Deborah Cracknell (2019, p.95)



Fig. 57: Mural outside the Chance Cafe (Author 2020)

Conclusion

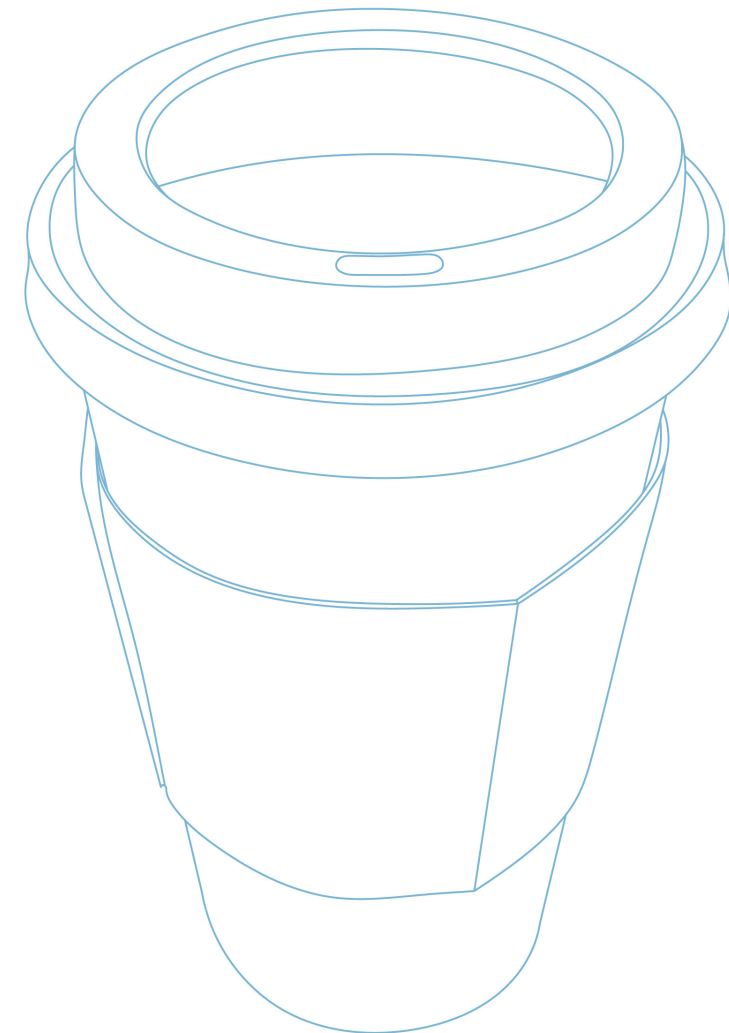
The more I learn about how my body meets and perceives the world, the richer my experience of spaces is. By valuing and noticing our sensory perception, by thinking about ourselves as embodied creatures, we can design differently and have richer experiences of the world.

As designers, we need to ensure that our processes pay closer attention to how bodies operate in space. As Bruce Mau (2018) suggests, we need to spend more time thinking about how spaces will work for people than what they will be like as images. We do not need more pretty renderings filled with stock people doing activities that are unlikely to ever occur in a space. We need to think about what it is like to be a person in that space.

I comment on renderings, cutouts and CAD blocks with caution knowing that I have used them too, knowing that they are very much tools of the trade. As Ellen Lupton notes, there is power in visualization and how we can use it to represent and consider the other senses (2018). This project will live on as a visual report.

I have tried to represent bodies in spaces, interacting and engaging with them. I have tried to represent people touching and noticing plants. I have used serial vision to try to represent movement through space. While working on my renders, I found it helpful to move through a 3D model of my design. This inspired changes that I would not have made in plan, section, or axonometric. I have intentionally chosen to present my design using renders because I felt that they were a good tool for representing the material and experiential qualities of spaces.

Landscape architecture is well-placed to consider the multi-sensory experience and to bring our growing awareness of neuroscience to the built environment professions. We are good at thinking about multiple scales and components of a space at once. The spaces we design will be richer, more diverse, more inclusive, and more engaging if we can do this.



Bibliography

Aljazeera. December 30, 2020. “Here Are Some Ways That COVID Is Transforming Cities Everywhere.” <https://www.aljazeera.com/economy/2020/12/30/here-are-some-ways-that-covid-is-transforming-cities-everywhere>. Accessed: April 24, 2020.

Ambros, Eric. 2021. “Piezoelectric Floor Tiles and Harvesting Energy from Pedestrians.” <https://blog.piezo.com/piezoelectric-floor-tiles-and-harvesting-energy-from-pedestrians>. Accessed: May 3, 2021.

Aswegan, Toni. 2020. *Mindfulness Meditation*. https://tonitalkstherapy.teachable.com/p/mindfulness-meditation/?utm_source=student_mailer&utm_medium=email&utm_campaign=purchase_notification_with_tax_details. Accessed: October 20, 2020.

British Columbia Electric Railway. 1923. *Map and Guide to Vancouver Street Car and Interurban Lines*. <https://open.library.ubc.ca/collections/bcbooks/items/1.0376523#p3z-4r0f>. Accessed: December 18, 2020.

Butler, Toby. 2007. “Memoryscape: How Audio Walks Can Deepen Our Sense of Place By Integrating Art, Oral History and Cultural Geography.” *Geography Compass* 1 (3): 360-372.

Canadian Urban Institute. 2020. “COVID-19 Has Hit Canada’s Main Streets Hard.” <https://bringbackmainstreet.ca/>. Accessed: December 18, 2020.

Cerwén, Gunnar, Carola Wingren, and Mattias Qviström. 2017. “Evaluating Soundscape Intentions in Landscape Architecture: A Study of Competition Entries For a New Cemetery in Järva, Stockholm.” *Journal of Environmental Planning and Management* 60 (7): 1253-1275.

CDM2. 2021. “Southeast False Creek Energy Centre Stacks.” <https://cdm2lightworks.com/projects/southeast-false-creek-energy-centre-stacks/>. Accessed: April 30, 2021.

City of Vancouver. 2020. “Kensington-Cedar Cottage.” <https://vancouver.ca/news-calendar/kensington-cedar-cottage.aspx>. Accessed: December 18, 2020.

City of Vancouver. 2021. “False Creek Neighbourhood Energy Utility (NEU).” <https://vancouver.ca/home-property-development/southeast-false-creek-neighbourhood-energy-utility.aspx>. Accessed: April 30, 2021.

City of Vancouver. 2021. “Jim Deva Plaza.” <https://vancouver.ca/street=s-transportation/jim-deva-plaza.aspx>. Accessed: April 30, 2021.

City of Vancouver. 2021. “Pavement-to-Plazas.” <https://vancouver.ca/streets-transportation/pavement-to-plazas.aspx>. Accessed: April 30, 2021.

City of Vancouver. 2021. “Kingsway Trail” in Public Art Registry. <https://covapp.vancouver>.

[ca/PublicArtRegistry/ArtworkDetail.aspx?FromArtworkSearch=True&ArtworkId=532](https://www.vancouver.ca/PublicArtRegistry/ArtworkDetail.aspx?FromArtworkSearch=True&ArtworkId=532). Accessed: April 13, 2021.

Conners, Deanna. 2016. “Why Pine Trees Smell so Good.” Earthsky. <https://earthsky.org/earth/why-conifer-christmas-trees-pine-spruce-fir-smell-terpenes#:~:text=Small%20terpenes%2C%20known%20as%20monoterpenes%2C%20contain%20two%20isoprene,-among%20others%2C%20give%20conifer%20trees%20their%20distinctive%20scent>. Accessed: May 3, 2021.

Cracknell, Deborah. 2019. *By The Sea: The Therapeutic Benefits of Being in, on and by the Water*. New York, NY: Hatchette Books.

Crawford, Nicole. 2020. *The Restorative Assemblage of Place: An Exploration of the Material, Symbolic, and Embodied Dimensions of Place Within the Restorative Experience*. UBC: Vancouver, BC, Canada. <https://open.library.ubc.ca/clRcle/collections/graduateresearch/42591/items/1.0390688>. Accessed: May 2, 2021.

Desmond, Tim. 2019. *How to Stay Human in a F*cked-Up World: Mindfulness Practices for Real Life*. New York, NY: HarperOne.

Drever, John Levack. 2019. “‘Primacy of the Ear’ – but Whose Ear?: The Case for Auraldiversity in Sonic Arts Practice and Discourse.” *Organised Sound : An International Journal of Music Technology* 24 (1): 85-95.

Fetell Lee, Ingrid. 2018. *Joyful: The Surprising Power of Ordinary Things to Create Extraordinary Happiness*. New York, NY: Little Brown Spark.

Fisher, Gavin and Margaret Gallagher. July 28, 2016. “Plaza Honouring LGBTQ Activist, Community Pioneer Jim Deva Opens in Vancouver’s West End.” CBC. <https://www.cbc.ca/news/canada/british-columbia/plaza-honouring-lgbtq-activist-community-pioneer-jim-deva-opens-in-vancouver-s-west-end-1.3699761>. Accessed: April 30, 2021.

Fowler, Elizabeth. 2017. “Acoustic Delay.” In *Sound and Scent in the Garden*, edited by D. Fairchild Ruggles. 31–52. Washington, D.C: Dumbarton Oaks Research Library and Collection.

Frauke, Behrendt. 2019. “Soundwalking.” In *The Routledge Companion to Sound Studies*, 1st ed., edited by Michael Bull, 249-257. London, UK; New York, NY: Routledge.

Fullilove, Mindy Thompson. 2020. *Main Street: How a City’s Heart Connects Us All*. New York, NY: New Village Press.

Fullilove, Mindy Thompson. September 10, 2020. “The Social and Ecological Aspects of the Psychology of Place.” The Yale Mental Health Symposium. <https://www.theyalementalhealthsymposium.com/speakers>. Accessed: December 18, 2020.

Gibson, James J. 1966. *The Senses Considered as Perceptual Systems*. Boston: Houghton

Mifflin.

Greater Good Science Center. 2020. “Mindfulness.” <https://greatergood.berkeley.edu/topic/mindfulness/definition>. Accessed: December 18, 2020.

Gonzales, Gabrel Alec Kosovsky. 2016. “Unbuilt.” Master’s Thesis. University of Washington. <https://digital.lib.washington.edu/researchworks/handle/1773/38030>. Accessed: May 2, 2021.

Harris, Dan. 2014. *10% Happier: How I Tamed the Voice in My Head, Reduced Stress Without Losing My Edge, and Found Self-Help That Actually Works : A True Story*. New York, NY: It Books, an imprint of HarperCollins Publishers.

Hatanaka, Risa. 2019. “Streetcars Before Buses: British Columbia Electric Railway.” University of British Columbia Library. <https://digitize.library.ubc.ca/digitizers-blog/streetcars-before-buses-british-columbia-electric-railway/>. Accessed: December 18, 2020.

Hendren, Sara. 2020. *What Can a Body Do?* New York, NY: Riverhead Books.

Hopkins, Jessica. 2016. “Sensory Informants: A Guide to Mapping Ephemeral Data.” Master’s Thesis. Northeastern University. <https://repository.library.northeastern.edu/files/neu:cj82n663c>.

Hunt, John Dixon. 2017. “Beyond Ekphrasis, Beyond Sight, Beyond Words...” In *Sound and Scent in the Garden*, edited by D. Fairchild Ruggles. 13–30. Washington, D.C: Dumbarton Oaks Research Library and Collection.

Institute for Transportation Development Policy. 2020. “Why Walkability.” <https://www.itdp.org/2020/10/15/pedestrians-first-tool-guides-cities-on-the-path-to-walkability/>. Accessed: December 23, 2020.

Jackson, J.B. 1984. *Discovering the Vernacular Landscape*. New Haven, CN: Yale University Press.

Jasper, Adam and Nadia Wagner. 2018. “Smell.” In *The Senses: Design Beyond Vision*, edited by Ellen Lupton and Andrea Lipps, 50–65. New York: Cooper Hewitt, Smithsonian Design Museum, Princeton Architectural Press.

Johnson, Mark L. 2015. “The Embodied Meaning of Architecture.” In *Mind in Architecture: Neuroscience, Embodiment, and the Future of Design*, edited by Sarah Robinson and Juhani Pallasmaa. 33–50. Cambridge, MA: The MIT Press.

Kabatt-Zinn, Jon. 1994. *Wherever You Go There You Are*. New York, NY: Hachette Books.

Kass, Dan. 2009. “Historical Walking Tour of Gibson Creek Through Kensington–Cedar Cottage.” http://www.vcn.bc.ca/gibbys/docs/GFS_09Nov_Booklet.pdf. Accessed: May 2, 2021.

Kirkland, Rhiannon Myfanwy. (@rhiannnok). 27 February, 2021. “Hey #Vancouver Folks, There’s a Few Spots With Tucked Away Neighbourhood Cafes That Are on Side Streets...” Twitter. <https://twitter.com/rhiannnok1/status/1365719212879056898>

Kruglov, Roman. 2014. *Paley Park*. <https://www.flickr.com/photos/romankphoto/14193213895/in/photolist-nCcW1p-68xHvQ-bTzAVg-bEESN9-bTzARZ-bEESR9-7C9fbQ-dfco4q-zdqpG8-GfCfWJ-8BNkQT-iifaju-iiftDC-QXkTLJ-3xT5rY-88j4at-4thiPY-87uL1m-iifeU1-dGCoI4-6UT8mj-dwX26Z-4t3H2z-4t7Mvs-4txGgo-uahjC7-3xT3Ms-5DnTaT-5Ds7fW-5DrXtU-5tnAHD-atbA4X-bEEKqE-5J3ZD8-5J8g2U-5J3ZP8-5J3Ze2-5J3Zqr-4tdcDr-dwX1YT-2W3zuf-4thhku-dwX1Pe-atee8h-RdT4Mu-QH3pum-d52o2d-2kMtCFT-2kMgdpR-2hDhoc1>. Accessed: May 2, 2021.

Kwon, EunSook. 2018. “The Creation of Soul Scent: Invisible Beauty.” In *Designing with Smell: Practices, Techniques and Challenges*, edited by Victoria Henshaw, Kate McLean, Dominic Medway, Chris Perkins and Gary Warnaby. 102–110. New York, NY: Routledge.

Latour, Bruno. 2004. “How to Talk about the Body? the Normative Dimension of Science Studies.” *Body & Society* 10 (2-3): 205-229.

Lupton, Ellen. 2018. “Visualizing Sound.” In *The Senses: Design Beyond Vision*, edited Ellen Lupton and Andrea Lipps, 204–217. New York: Cooper-Hewitt, Smithsonian Design Museum.

Lupton, Ellen, Andrea Lipps, and Cooper-Hewitt Museum. 2018. *The Senses: Design Beyond Vision*. New York: Cooper-Hewitt, Smithsonian Design Museum.

Macdonald, Bruce. 2000. *Vancouver: A Visual History*. Vancouver, BC: Talonbooks.

Masuno, Shunmyo. 2019. *The Art of Simple Living: 100 Daily Practices from a Japanese Zen Monk for a Lifetime of Calm and Joy*. Translated by Allison Markin Powell. New York, NY: Penguin Books.

Matthews, James Skitt Major. 1907. *Item : CVA 371-821 - [View of Cedar Cottage Road (Commercial Street) at the B.C.E.R. tracks at18th Avenue]*. <https://searcharchives.vancouver.ca/view-of-cedar-cottage-road-commercial-street-at-b-c-e-r-tracks-at18th-avenue>. Accessed: December 18, 2020.

Matthews, James Skitt Major. 1913. *Item : LGN 504 - [View of the 3500 block Commercial Street looking north from 20th Avenue]*. <https://searcharchives.vancouver.ca/view-of-3500-block-commercial-street-looking-north-from-20th-avenue>. Accessed: December 18, 2020.

Mau, Bruce. 2018. “Designing LIVE.” In *The Senses: Design Beyond Vision*, edited by Ellen Lupton and Andrea Lipps, 20–23. New York: Cooper-Hewitt, Smithsonian Design Museum.

McGilchrist, Iain. 2015. “Tending to the World.” In *Mind in Architecture: Neuroscience,*

Embodiment, and the Future of Design, edited by Sarah Robinson and Juhani Pallasmaa. 99–122. Cambridge, MA: The MIT Press.

McLean, Kate. 2017. “Smellmap: Amsterdam—Olfactory Art and Smell Visualization.” *Leonardo (Oxford)* 50 (1): 92–93.

McLean, Kate. 2019. “Sensory Mapping.” In *International Encyclopaedia of Human Geography*, Second ed., 153–168. Amsterdam; Boston: Elsevier Ltd.

Merriam-Webster.com. 2020. “Mindfulness.” <https://www.merriam-webster.com/dictionary/mindfulness>. Accessed: October 5, 2020.

Montgomery, Charles. 2013. *Happy City: Transforming our Lives through Urban Design*, First ed. New York: Farrar, Straus, and Giroux.

Mooney, Patrick F. 2020. *Planting Design: Connecting People and Place*. London, UK; New York, NY: Routledge.

Neff, Kristin. 2020. “Mindfulness.” <https://self-compassion.org/videos/#>. Accessed: October 5, 2020.

Olivera, Lisa. 2020. “More and More, I Am Noticing How Small Moments Become Everything.” Instagram. <https://www.instagram.com/p/CIUKXWZDyol/>. Accessed: December 18, 2020.

Our City Our Art. September 28, 2012. “Pop Culture Meets Aboriginal Art Along the Kingsway Trail.” <https://ourcityourart.wordpress.com/2012/09/28/pop-culture-meets-aboriginal-art-on-the-along-the-kingsway-trail/>. Accessed: December 18, 2020.

Pallasmaa, Juhani. 2005. *The Eyes of the Skin: Architecture and the Senses*. Hoboken, NJ; West Sussex, England: Wiley-Academy.

Pallasmaa, Juhani. 2015. “Body, Mind, and Imagination: The Mental Essence of Architecture.” In *Mind in Architecture: Neuroscience, Embodiment, and the Future of Design*, edited by Sarah Robinson and Juhani Pallasmaa. 51–74. Cambridge, MA: The MIT Press.

Perkins, Chris. 2018. “Part II Representing Smell Introduction.” In *Designing with Smell: Practices, Techniques and Challenges*, edited by Victoria Henshaw, Kate McLean, Dominic Medway, Chris Perkins, and Gary Warnaby. 39–41. New York, NY: Routledge.

Perry, Francesa. April 29, 2020. “Cities Around the World Are Seeing Dwindling Numbers of Fossil-Fuel Powered Cars on Their Streets During Lockdown, and Many Are Planning to Keep It That Way.” BBC. <https://www.bbc.com/future/article/20200429-are-we-witnessing-the-death-of-the-car>. Accessed: January 17, 2021.

Popova, Maria. 2021. “The Social Life of Small Urban Spaces.” Brainpickings. <https://www.brainpickings.org/2013/08/22/the-social-life-of-small-urban-spaces-whyte/>. Accessed: May 3, 2021.

brainpickings.org/2013/08/22/the-social-life-of-small-urban-spaces-whyte/. Accessed: May 3, 2021.

Project for Public Spaces. 2015. “Paley Park.” <https://www.pps.org/places/paley-park>. Accessed: April 30, 2021.

Rahm, Philippe. November 13, 2013. “Open House Lectures: Philippe Rahm ‘Constructed Atmospheres’.” Harvard Graduate School of Design. <https://www.youtube.com/watch?v=NP6EBTwGcug>. Accessed: April 24, 2021.

Raypole, Crystal. May 24, 2019. “30 Grounding Techniques To Quiet Distressing Thoughts.” Healthline. <https://www.healthline.com/health/grounding-techniques> Accessed: April 20, 2021.

Robinson, Sarah. 2015. “Nested Bodies.” In *Mind in Architecture: Neuroscience, Embodiment, and the Future of Design*, edited by Sarah Robinson and Juhani Pallasmaa, 137–160. Cambridge, MA: The MIT Press.

Roehr, Daniel. 2020. “Sense...ible - Parks and Gardens.” In *Historic Gardens and Society: Culture - Nature - Responsibility*, 381–389. Regensburg, Germany: Schnell and Steiner.

Roehr, Daniel and Bailey, Sean. 2020. “Gardens are ... Buildings: A Garden’s Role in Unprecedented Times.” *Landscape Architecture* 27 (9): 24–34.

Ruggles, D. Fairchild. 2017. “Introduction: A World of Senses.” In *Sound and Scent in the Garden*. Washington, D.C: Dumbarton Oaks Research Library and Collection.

Soft Surfaces Ltd. 2010. “Black & Light Green Wetpour Rubber EPDM.” Flickr. <https://www.flickr.com/photos/softsurfaces/6210121691/in/album-72157627690778245/>. Accessed: May 4, 2021.

Syme, Rachel. January 25, 2021. “How to Make Sense of Scents.” *The New Yorker*. <https://www.newyorker.com/magazine/2021/02/01/how-to-make-sense-of-scents>. Accessed: January 30, 2021.

Tabb, Philip James. 2017. *Serene Urbanism: A Biophilic Theory and Practice of Sustainable Placemaking*. New York, NY: Routledge.

The Cultural Landscapes Foundation. 2020. “Zion & Breen Associates.” <https://tclf.org/pioneer/zion-breen-associates>. Accessed: April 30, 2021.

The Happy City. 2019. “Well-Being Assessment: Pavement-to-Plaza Program.” <https://thehappycity.com/project/pavement-to-plaza/>. Accessed: April 30, 2021.

The West End Business Improvement Association. 2021. “Jim Deva Plaza.” <https://westendbia.com/jim-deva-plaza/>. Accessed: April 30, 2021.

Thibaud, Jean-Paul. 2018. “Part III Smellscape Design and monitoring introduction.” In *Designing with Smell: Practices, Techniques and Challenges*, edited by Victoria Henshaw, Kate McLean, Dominic Medway, Chris Perkins, and Gary Warnaby. 79–81. New York, NY: Routledge.

Waldheim, Charles, Andrea Hansen, James S. Ackerman, HathiTrust ETAS Collection, and Isabella Stewart Gardner Museum. 2014. *Composite Landscapes: Photomontage and Landscape Architecture*. Ostfildern, Germany: Hatje Cantz Verlag.

Westerkamp, Hildegard. 2017. “SOUNDWORK: The Natural Complexities of Environmental Listening: One Soundwalk - Multiple Responses.” *BC Studies*; Vancouver 194: 149–162.

Williams, Florence. 2017. *The Nature Fix: Why Nature Makes Us Happier, Healthier, and More Creative*, First ed. New York, NY: W.W. Norton & Company.

Wilson, Stevie. June 27, 2012. “YOU SHOULD KNOW: About The History Of The Cedar Cottage Neighbourhood.” *Scout Magazine*. <https://scoutmagazine.ca/2012/06/27/you-should-know-about-the-history-of-the-cedar-cottage-neighbourhood/>. Accessed: December 18, 2020.

Xiao, Jieling, Malcom Tait, and Jian Kang. 2018. “The Design of Urban Smellscapes With Fragrant Plants and Water Features.” In *Designing with Smell: Practices, Techniques and Challenges*, edited by Victoria Henshaw, Kate McLean, Dominic Medway, Chris Perkins and Gary Warnaby. 83–95. New York, NY: Routledge.

