Contact Zones:
Prefigurative Infrastructure
for a Trans-formative Agenda

by
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For all water protectors on Turtle Island,

My Mum and Dad,

and my grandchildren, who's parents have yet
to leave footprints on this earth.

Contents

Abstract

This thesis proposes strategies for architecture to respond to environmental racism by questioning how design can be used as a tool to communicate radical environmental awareness. The method applied seeks to aid designers in better understanding their role within activism, specifically at sites of contention between Indigenous people and the settler-colonial system. Using principles within generative design, soft architecture, and two-eyed seeing the applied strategy unfolds as a series of 'Prefigurative Infrastructures", termed Allies, that re-evaluate the design process and propose positive alternatives. In doing so, designers and architects can be better equipped to engage in social activism and prioritize equitable place-making rather than economic growth. The methodology is then applied to sites of environmental racism in Nova Scotia illustrating the positive social impact of activating art and architecture at sites of essential resource contention.

Acknowledgements

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Thank you to my thesis committee, Catherine Venart and Roger Mullin for you consistent support and encouragement and to Clinton Cuddington for always taking risks with radical ease. Lastly, to all my studio pals who I took this journey with, I think our collective work shows the power and success of unusual collaborations.

Chapter 1: Introduction

Standing Ground in the Past

In October 2016 I visited Standing Rock, North Dakota, and witnessed protests against the Dakota Access Pipeline. The measures taken against the Sioux Nation people during these protests were terrifying displays of government control where unarmed citizens were met with military force.

Standing ground with the Sioux Nation was the first time I encountered environmental racism first-hand. This small act of bearing witness was not made easy. To get there I has to pass through two roadblocks formed by the national guard, armed police, and Dakota Access Security. The obstructed access shouldn't have surprised me as these acts are regularly kept hidden either through intimidation tactics, censored online content, or lack of news coverage. Often the infrastructure associated with these extraction projects are not just hidden but buried deep underground with an out of site out of mind mentality.

This thesis was born during an evening at Standing Rock that opened my eyes to how government can react when sovereign tribal groups resist corporate interests and act on what they are entitled to - the proper evaluation of environmental impacts associated with an oil pipeline running through their land.

During the course of writing this thesis an unprecedented series of events unfolded across the world that continue to shine a spotlight on social activism and protest. For example, the Black Lives Matter Movement is leading

a global call to action to educate, build local power, and intervene in violence inflicted on Black communities. The Wet'suwet'en First Nation protests halted cross continental rail travel in opposition of the Coastal GasLink Pipeline, and more locally the Pictou Landing First Nations protest of a toxic effluent pipeline came to an end after 50 years. These events make clear that activism is not a thing of the past, it is alive and well - possibly even at the forefront of reshaping relationships between race, space and power.

Following along with these events as best I could I began a series of investigations that started with environmental racism, progressed through the history of protest movements, arrived at the politics of design activism and landed contextualized in radical environmental awareness. These are anything but simple topics to take on and are often not discussed together. In many ways this thesis emerged from research that already challenged these specific issues, just not together. The most significant resources that set the foundation for this report are *There's Something in the Water: Environmental Racism in Indigenous and Black Communitues* by Ingrid Waldron and the research of Ann Thorpe, specifically the book *Architecture and Design versus Consumerism: How Design Activism Confronts Growth*

By undertaking this study I began seeing how these topics fit together in some areas and fell short in others. For example it seems that exploring ways to assist in situations of intractable conflict is seemingly under explored in the fields of architecture and design. Some could even argue that architects often sit complicit, designing spaces that are not neutral for Indigenous, Black or people of colour to experience.

The necessary conversations about trans-disciplinary approaches to how design and architecture can begin disassembling links that connect place, power and racism do not exist in the curriculum of architectural education. Instead as students we are encouraged to focus on standardized portfolio development that prepares us to fill conventional roles in the field.

These realizations have put me in an interesting position moving forward. I am a white female scholar who currently exists within a system that perpetuates the systemic and institutional racism I wold like to address. I realize my approach can only be a less than total solution to an ongoing problem that does not impact me directly. Instead this thesis is meant as an unlearning experience, a preliminary stepping stone and alternative to not sitting complicit as a student, designer, woman and emerging architect.

I am using this platform as a way to compile information and tools of practice for like minded architects or anyone with a desire to encourage equality and anti-racism within the built environment. More specifically, this is for people looking for ways that their design work can engage as a form of activism by acting as a starting point more than a conclusive argument about design, activism, environmental racism and how it relates to the built environment.

Collecting for the Future

We live in a society that embraces an economic system imposing infinite growth on a finite planet and confuses consumption with quality of life (Kimmerer 2013, 308). Whether made visible or not this epidemic of self destructive

practices perpetuates a cycle that impoverishes marginalized communities with great frequency. Most often these communities are targeted because they lack political power to have voice within the system and what results is the inequitable distributions of industry. Any placement of toxic environmental hazards near communities of colour and the working poor - who have been given little to no democratic engagement - is an act of Environmental Racism. (Waldron 2018, 51) These acts are the underlying issue I will being addressed moving forward in this thesis.

Ingrid Waldron states in her book *There's Something in The Water* that the real resolutions to environmental racism lie in a trans-formative agenda premised on anti-colonial and anti-capitalist organizing where the goal is to build a collective power (Waldron 2018, 108). In an attempt to address this the primary goal of the thesis will be to understand what role architecture can play in helping to communicate radical environmental awareness by asking how can architects, or anyone concerned with the built environment help to disassemble the fatal links that connect place, race, and power? Subsequently, how can it break with traditions and norms to offer new insights into ways of thinking ? I believe that finding ways to draw attention to these hidden or invisible acts of environmental racism can create stepping stones to overcome complicity and ensure governments and private corporations are held accountable.

At its core colonialist theory is one of liberation, which starts from a critical premise that solidarity can be realized through counter-hegemonic consciousness and acts of resistance. It is grounded in an oppositional politics that pushes towards a re-reading, re-imagining, and re-centering of the counter

knowledge of colonized voices (Waldron 2018, 109). This type of social reconfiguring also requires an unlearning of the current system we exist within.

To address this Chapter 2 argues that most counter culture movements strive for a post-growth society and reject socio-political system set up to move in a single direction - a direction that increasingly benefits certain people and marginalizes others.   Using Holling and Gundersons' four phase cycle of a socio-ecological system this chapter introduces the concept of prefigurative political and how it can assist in building the trans-formative agenda that begins to form the collective power previously mentioned by Waldron. It outlines two specific concepts of prefigurative politics that are then explored in various ways throughout the thesis. The first being its commitment to a participatory democracy and the second that the path to a transformation of society lies in the escalation of small-scale radical actions.

Chapter 3 follows with a breakdown of design activism and its relation to intractable injustices and the small scale radical acts within prefigurative politics. The goal of this chapter is to connect each method to the larger idea that we need to move away from consumerism as a central organizing principle in society and start shaping one based on generative practices that allow equal participation of individuals within community.

Chapter 4 emphasizes the complicated relationship between Indigenous people and the settler colonial system, discussing the use of Two-Eyed Seeing as a guiding principle for co-advancement within the collaborative process of design within activism. With this in mind, Chapter 5   situates the project within an active site of contention between Indigenous people and the settler-colonial system. This helps

position the proposed generative design strategy illustrating how architectural interventions can help communicate environmental awareness, while simultaneously contributing to the creative destruction of colonial rule. This section is connected to the Alberta Legislature's passing of a Bill on May 28, 2020 known as the Critical Infrastructure Defense Act, which is intended to protect essential infrastructure from damage or interference - caused by blockades, protests or similar activities. It is in this section that I argue the actual type of critical infrastructural in need of protection is the natural structural elements of landscapes that are critical in delivering ecosystem services such as forest, river systems, lakes, migration paths, wetlands, tidal estuaries and so on.

Chapter 6 consolidates this interdisciplinary research in the design intention as a series of creative disruptions, referred to as "prefigurative infrastructures" or "allies" that act as cracks in the system and offer alternatives to a system rooted in over consumption.

What then follows in Chapter 7 is a regenerative design activism strategy that creates a series of small gestures intended to protect critical ecosystem infrastructure. These carry out in the form of catapults, traps, tell tales and watch towers and bring attention to these sites as potential areas where conversation can begin to occur about how to move forward collectively by addressing how colonial forms of denial, guilt and empathy act as figurative barriers to trans-formative socio-political change (McCall and Hill 2016, 17).

The second aspect of this section is about communicating. As we are learning, it is generally in the interest of those in power to hide conflict and a large part of the struggle over power is how to make these operations visible. To address

this a series of apparatus are used to draw attention to the invisible violences being inflicted on Indigenous people and their land. I refer to these structures as Tell Tales, as in tell tale signs. These Tell Tales remind us of the tall tales governments use to stand behind corporate interest instead of Indigenous sovereignty and are used to draw attention to toxic infrastructure government deems essential. They can also be used to draw attention to other types of invisible violences being inflicted on Indigenous people within this process, such as oral history and land use loss.

As material manifestation these disruptions follow theory and principles of soft architectural practice, a strategy that emerged in the late 1960s around the same time counter-culture movements were addressing a different unprecedented period of societal upheaval Soft architecture theory come out of rethinking of the role of an architect in society as designers pushed back against approaches to architecture that upheld institutional and systemic racism. Inherently soft is rooted in an emerging awareness of environmental and social issues and also functions with or without the help of architect - essential criteria for the trans-formative agenda and further elaborated on in Chapter 8.

Chapters 8 also attempt to locate the disruptions throughout the different phases of design by outlining the life-cycle of the intervention itself. In this case the phase will be defined as fieldwork, fabrication, function, and predicted end-of-life - all following the guidelines of regenerative design and soft architectural practice.

During this research of re-thinking and re-imagining I have learned that there is no concrete conclusion to these question. The design intentions outlined are small and

unofficial gestures of hopeful collaborative conciliations. Accordingly, by taking authorship of Contact Zones there is a need to acknowledge that these design intention are not being used to impose closure on reconciliation. If anything they are meant to signify reconciliation as contested terrain in regards to Canada as an ongoing settler-colonial enterprise and that this is really just the hopeful beginning to a new kind of ongoing relationship.

Chapter 2: (anti) Organizational Social Structures and Counter Culture Movements

> Resistance is about grounding theories in liberatory struggle of Indigenous, Black and other radicalized people, as well as disrupting the colonial conditions that dehumanize them (Waldron 2018, 105).

Re-visioning Resistance

Resistance comes in many forms, it is not simply protest. For indigenous people resistance mainly centers on land - dispossession of, denied access to, and resource exploitation on. The cumulative impact of these types of land based injustices has resulted in the extinguishment of their sovereign rights. This historical trauma also comes with cultural dislocation, as well as being made physically and financially dependency on the state (Waldron 2018, 108).

Most counter-culture movements strive for a post-growth society because of systemic injustices like these. This stems from social narratives that express the need to move away from consumerism as a central organizing principle in society (Thorpe 2012, 2) and start one based on generative practices. This allows for equal participation of individuals in all decisions that affect their quality of life (Boggs 1977, 121).

The history of social movements in North America is one of developing methods for building power that brings about change. Specifically in situations as previously mentioned,

where those who seek change are poorly resourced, lack conventional forms of power and are financial dependent on the systems set up by the state. This chapter unpacks the social structures that perpetuate these injustices and the subsequent counterculture movements that have been building up a resistance towards it.
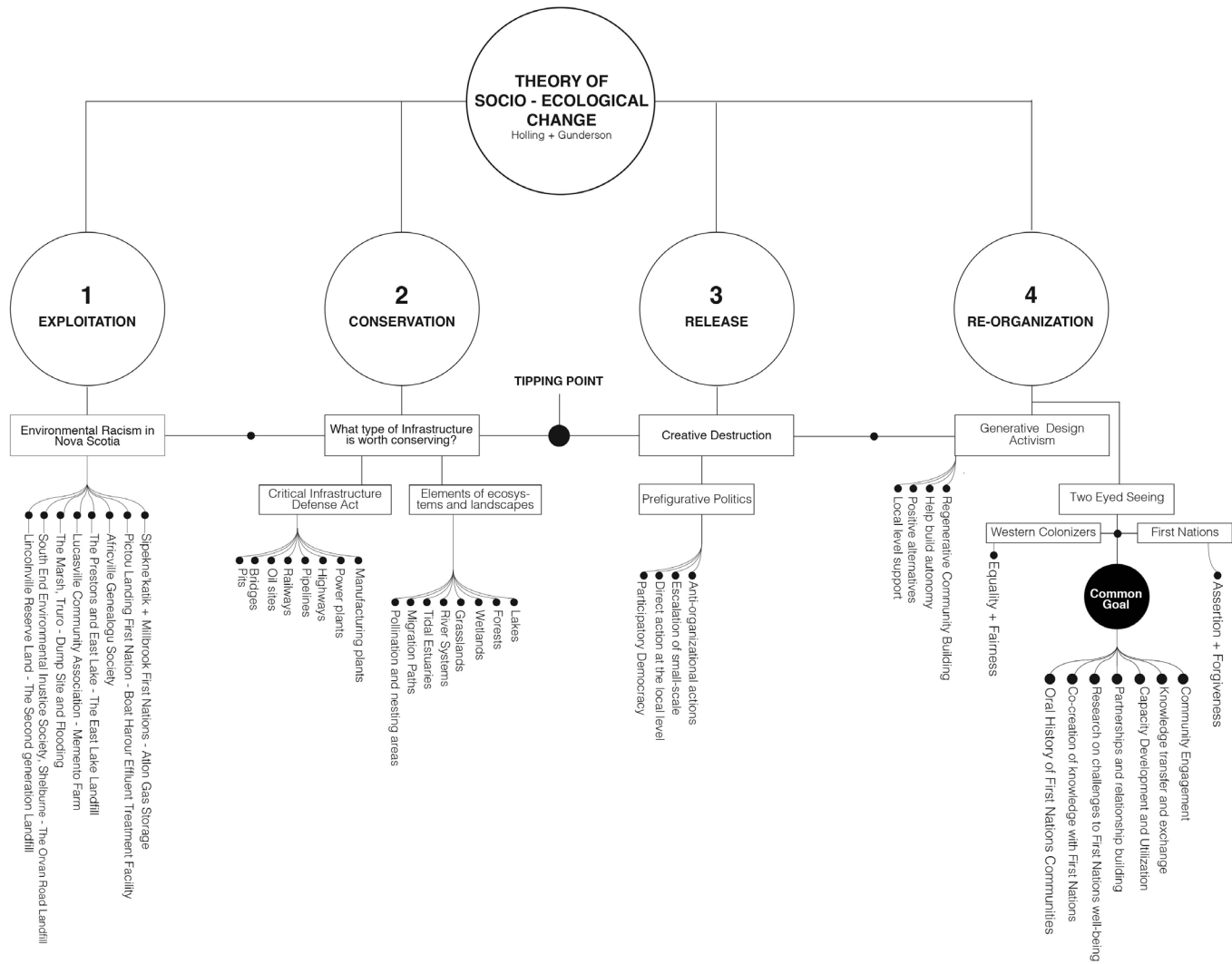
A Social Change Theory

Holling and Gunderson plot one very specific overarching pattern within society by arguing that most socio-ecological systems follow a four-phase cycle:

1) Exploitation
2) Conservation
3) Release
4) Reorganization

The first and second phases come from ecological theory in which an ecosystem's exploitation phase is dominated by a colonizing species tolerant of environmental variation and the conservation phase by species forced to adapt. (Gotts 2007, 2). The third phase, release, is sometimes referred to as 'creative destruction' because the power and resources that were once tightly consolidated within the exploitation phase are freed up and made available (Holling and Gunderson 2002, 45). This "freeing" happens after a tipping point if the system cannot rebalanced - it passes a threshold and begins crumbling. I will argue that once the collapse happens society has an opportunity to form itself into a new state in the following third and forth phases.

With this in mind, it is within the space of "creative destruction" that I would like to introduce the concept

THEORY OF
SOCIO - ECOLOGICAL
CHANGE
Holling + Gunderson

1
EXPLOITATION

2
CONSERVATION

3
RELEASE

4
RE-ORGANIZATION

TIPPING POINT

Environmental Racism in
Nova Scotia

What type of Infrastructure
is worth conserving?

Creative Destruction

Generative Design
Activism

Critical Infrastructure
Defense Act

Elements of ecosys-
tems and landscapes

Prefigurative Politics

Two Eyed Seeing

Western Colonizers

First Nations

Common Goal

Sipekne'katik + Millbrook First Nations - Afton Gas Storage
Pictou Landing First Nation - Boat Harbour Effluent Treatment Facility
Africville Genealogy Society
The Prestons and East Lake - The East Lake Landfill
Lucasville Community Association - Memento Farm
The Marsh, Truro - Dump Site and Flooding
South End Environmental Inustice Society, Shelburne - The Orvan Road Landfill
Lincolnville Reserve Land - The Second generation Landfill

Bridges
Pits
Oil sites
Railways
Pipelines
Highways
Power plants
Manufacturing plants

Lakes
Wetlands
Forests
Grasslands
River Systems
Tidal Estuaries
Migration Paths
Pollination and nesting areas

Participatory Democracy
Direct action at the local level
Escalation of small-scale
Anti-organizational actions

Local level support
Positive alternatives
Help build autonomy
Regenerative Community Building

Equality + Fairness

Assertion + Forgiveness

Oral History of First Nations Communities
Co-creation of knowledge with First Nations
Research on challenges to First Nations well-being
Partnerships and relationship building
Capacity Development and Utilization
Knowledge transfer and exchange
Community Engagement

Theory of Socio-Ecological Change as described by Holling and Gunderson (2002) and adapted to incorporate prefigurative politics, design activism and two-eyes seeing as interventions for a trans-formative agenda to eradicate Environmental Racism.

of prefigurative politics as an idea that can foster anti-organizational principle to assist in forming a trans-formative agenda within the potentials of an alternative system state.

Idle No More March. Community members join hands in a round dance in SK, 2013; photograph by Jennifer Stewart (Wilkins 2013)

Towards a Prefigurative Politics

Prefigurative Politics refers to a decentralized anti-organizational social movement that seeks radical structural change. It is an attempt to found a new politics of participation and process that can be described as a spontaneous, grassroots effort dedicating itself to direct action at the local level. This includes- but is not limited to - public demonstrations, teach-ins and sit-ins. These actions are reflective of a "live practice" approach intended to create and sustain relationships and political forms that "prefigure" a desired social reconfiguration (Breines 1980, 423). These communities would not only represents the ideas of an inclusive participatory society, but also act as small gestures, that by their very existence question the oppressive system they exist within.

In other words, Prefigurative Politics attempted to develop the seeds of liberation to form a new society within the process of revolution. This would happen through the notions of participatory democracy grounded in counter-institutions (Breines 1980, 422). This also means building a community that would embody these types of post - growth relationships.

Modern day examples of this types of movement within North America include Occupy Wall Street and Idle No More, but their roots can be traced as far back as the late 1950's, paralleling the radical social and environmental

Idle No More March Demonstrators under heavy snowfall on Parliament Hill. 2013; photograph by Justin Chin (Wilkins 2013)

thought that rose within the counter culture movements of the proceeding decades.

The most important defining event for this entire period was the Civil Rights Movement of the late 1950s and early 1960s. Specifically the first sit-in movements, the voter registration projects, and two radical student organizations- the organization of the Student Nonviolent Coordinating Committee (SNCC), and Students for a Democratic Society (SDS) (Breins 1980, 419). These students movement were informal organizations considered to have New Leftist thinking and Prefigurative Political ideals, such as the notion of community being integral to unite the public and private areas of life. These groups were a result of an upsurge of protest and opposition by students to the war in Vietnam as well and their universities complicity to the war - who offered no commitments of solidarity or support to their opposition.

Understanding this political climate helps underline why there is an unwillingness to create hierarchical organization within these movements, as these types of preconceived structures would inherently undermine the core values and principles of the movement by their very existence within it (Boggs 1977, 112). Many academics argue that this utopian, anti-organizational and anti-political, approach is responsible for the movements inability to make long term radical change. This thesis argues the opposite, and attempts to highlight that the founding of a new politics of participation and process is actually its most vital aspect.

Moreover, these movements are of great interest to theorists of contemporary social movement studies and as a result many political scientists and sociologists have
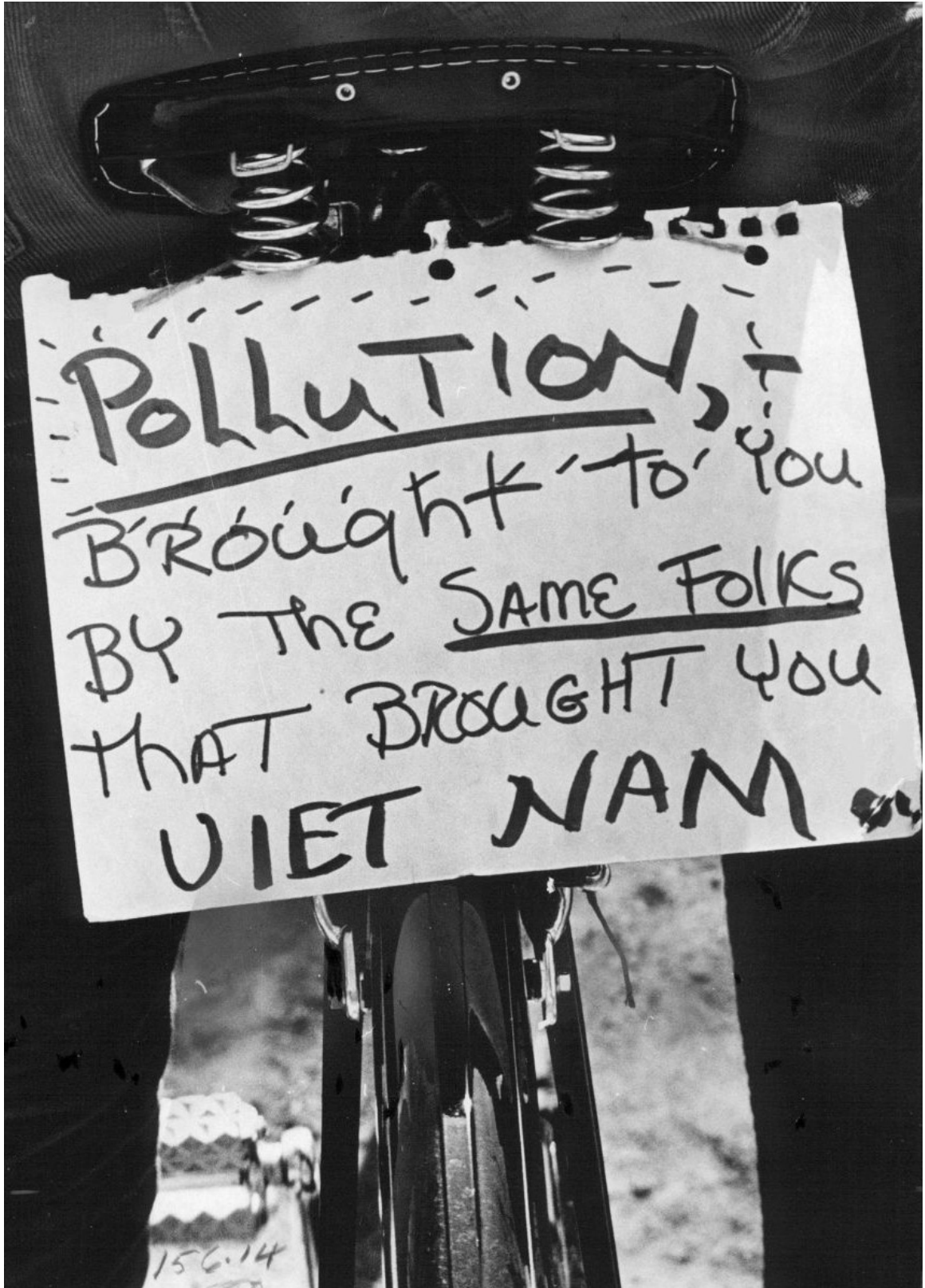
On the bike of an activist during the first ever Earth Day. 1970; photograph by Denver Post/ Ghetty Image. (Pruitt 2020)

suggested that social movement activity, in whatever form, is an accepted and significant means of influencing political process and change (Thorpe 2012, 2).

Two specific concepts of prefigurative politics will be explored in various ways throughout this thesis. One being a commitment to community and participatory democracy and the second that the path to a transformation of society lies in the escalation of small-scale radical actions against the system (Schwartz 1976, 221). The specificity of these small acts will be further elaborated in the following Chapter, proposing a linking between them and the concepts found in a type of activism rooted in design and regenerative practice.

Chapter 3: Art, Architecture, and Activism

Both negative and positive disruptions represent exchange power through deal making. As tools for communication, disruptions are also persuasive (Thorpe 2012, 117).

Refuse and Create!

In the fourth phase of Holling and Gundersons Socio-Ecological Theory of Change resilience and potential grow, unpredictability peaks, and new systems can begin establish themselves more definitively (Kish 2019, p4). It is in this fourth phase that design activism can be implemented in relation to the small scale radical acts within prefigurative politic. This intention connect it to the larger idea that we need to move away from consumerism as a central organizing principle in society and start to shape one based on generative practices.

John Holloway discusses in his book *Crack Capitalism* that social movements must continue to build on their impulses to challenging exploitations of the environment despite the shortcomings many counter culture revolutions have endured. He proposes that by refusing to program to the system and asserting alternative ways of living "cracks" are created that prefigure a post-growth lifestyle. This thesis draws upon this proposing that the path to the trans-formative agenda can be paved though the escalation of small-scale radical actions.
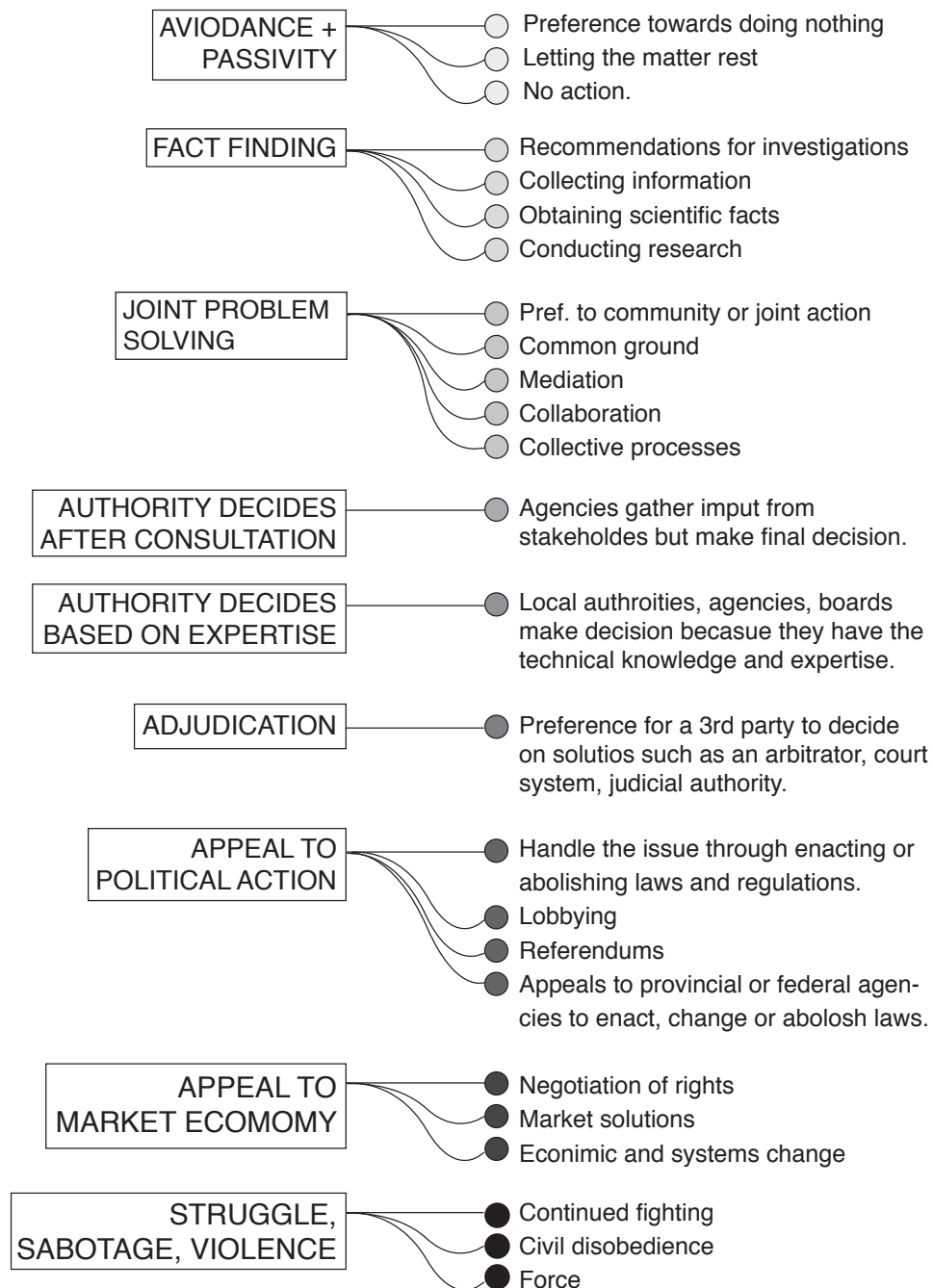
Design as Activism

Design, in general, is much slower and longer lasting than typical activist events. So inherently design activists practice a different form of activism - one that brings about change by generating long-term positive alternatives to the status quo. Design Activism then has the ability to frame and reveal problematic social and environmental issues publicly and call for change to resolve them in solidarity with a deprived, excluded, or wronged population (Thorpe 2012, 115).

Rather than being resistant here design perpetuates a different form of activism, one that is regenerative and builds power by creating compelling visions of a better society. In the case of this thesis these visions parallel the small scale radical alternatives described within prefigurative politics allowing designers to step away from conventional forms of activism that are often seen a fundamentally negative, and begin seeing a constructive avenue to bring about change with generative design.

Design in a Conflict Management Framework

Design activism in this thesis is also about better understanding the problem, rather than acting with certainty towards a single solution proposed by one person or biased social group. This chapter also attempts to view architecture and design in terms of political methods for change by considering how design as activism can work within a conflict management framework - that specifically deal with cases of intractable social and environment injustices. The following illustration lists types of preferences for how conflict can be managed. Depending on the type of frame selected, different design strategies would be used to work towards a solution. It is here that an

AVIODANCE + PASSIVITY
- ○ Preference towards doing nothing
- ○ Letting the matter rest
- ○ No action.

FACT FINDING
- ○ Recommendations for investigations
- ○ Collecting information
- ○ Obtaining scientific facts
- ○ Conducting research

JOINT PROBLEM SOLVING
- ○ Pref. to community or joint action
- ○ Common ground
- ○ Mediation
- ○ Collaboration
- ○ Collective processes

AUTHORITY DECIDES AFTER CONSULTATION
- ○ Agencies gather imput from stakeholdes but make final decision.

AUTHORITY DECIDES BASED ON EXPERTISE
- ○ Local authroities, agencies, boards make decision becasue they have the technical knowledge and expertise.

ADJUDICATION
- ○ Preference for a 3rd party to decide on solutios such as an arbitrator, court system, judicial authority.

APPEAL TO POLITICAL ACTION
- ● Handle the issue through enacting or abolishing laws and regulations.
- ● Lobbying
- ● Referendums
- ● Appeals to provincial or federal agencies to enact, change or abolosh laws.

APPEAL TO MARKET ECOMOMY
- ● Negotiation of rights
- ● Market solutions
- ● Econimic and systems change

STRUGGLE, SABOTAGE, VIOLENCE
- ● Continued fighting
- ● Civil disobedience
- ● Force

Conflict Management Frames existing within cases of Intractable Environmental Injustice (Lewicki, Gray and Elliott 2003, 23) deals with disputants preference for how conflict should be managed. Depending on the type of frame selected, different design strategies would be used to work towards a solution.

intersectional approach to fighting different forms of oppression can be utilized.

In a scenario between Indigenous people and the settler-colonial system several issues become crucial to consider - the role of First Nation Community or revolutionary organization, the role of government, the level of corporate interest, and the question of whether/how the struggle to transform can be productively conducted within a capitalist state safeguarded by other dominant institutions.

An architect or designer can also play an important role if we consider that space has the ability to dictate interactions. In terms of exchange or bargaining power, most spaces constitute a sort of spatial offering concerning how it may be used or accessed that serve as constant points of bargaining or negotiation (Thorpe 2012, 175). Framing space around common means of power in this way can focus attention on desired areas in need of public awareness. Structure, object or material/spatial process can all work together to draw attention.

A case then can be made that designers have a hugely important role to play in transforming our current systems into one that would support a sustainable world because they experiment with innovative approaches that can illustrate problem solving tactics to complex situations. This thesis places a focus on how design activists understand power and agency within the free space of Indigenous land based activism, the material representation within that free space, and the collaboration of all parties involved.

What this framework doesn't elude to is an important concept for mutual co-advancement called Two-Eyed Seeing. This is a specific type of mediation tool that has potential to

enable integrative trans-cultural, trans-disciplinary and collaborative work to happen. The following chapter expands on this approach in relation to reconciliation, highlighting the role art possesses in transferring power to the audience and community - all within scenarios of intractable injustices between Indigenous people and the settler-colonial system.

Chapter 4: Guiding Principles for Co-Advancement

> I was particularly interested in locating the Aboriginal voice on the land. Asking people to address the land directly was an attempt to hear political protest as poetic action (Belmore 1996).

Two-Eyed Seeing

In this time of reconciliation, Indigenous peoples continue to call for more meaningful and respectful research that is deriving from their unique world-views (Peltier 2018, 1). As language fundamentally shapes these world-view the 'concept' of respectful representation is specifically amplified in Indigenous culture by understanding that two different languages equates to two different minds, and subsequently two different perspectives. Two-Eyed Seeing provides a more comprehensive breakdown of how language defines cultures.

The concept of Two-Eyed Seeing was coined by Mi'kmaq Elder Albert Marshall from the community of Eskasoni, located in the Traditional Territory of Mi'kma'k, as a guiding principle for the new consciousness needed to enable integrative trans-cultural, trans-disciplinary and collaborative work (Peltier 2018, 3). Two-Eyed Seeing in his language is known as *Etuaptmumk*. It refers to seeing from one eye with the strengths of Indigenous knowledge and ways of knowing, and from the other eye with the strengths of Western knowledge and scientific ways of researching, then learning to use both of these eyes together for the mutual benefit of all (Bartlett, Marshall and Marshall 2012, 335).
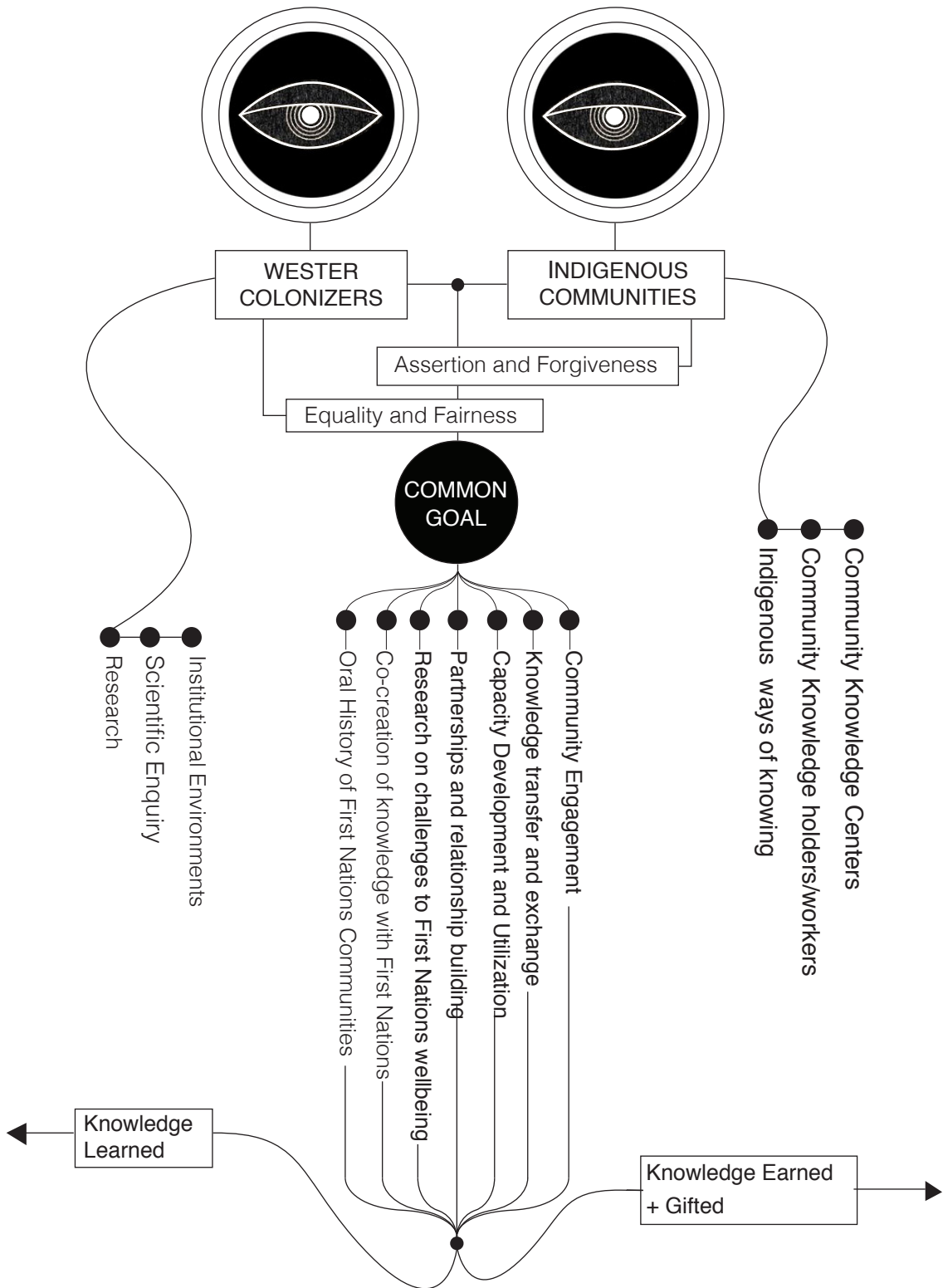
Diagram of Two Eyed Seeing illustrating the guiding principle for the new consciousness needed to enable integrative trans-cultural, trans-disciplinary and collaborative work to happen between Indigenous communities and Western colonizers.

Peoplehood

Peoplehood is also a fundamental aspect of Two-Eyed See-
ing because it helps illustrate the way in which Indigenous
people use language and connect to nature. It is made up of
4 interconnected threads where one cannot be addressed
without informing the others:

1. Territory
2. Sacred history
3. Ceremonial cycle
4. Language

Everything communicated in Mi'Kmaq language gives
meaning to a sacred history which dictates the use of the
land which is crucial to the appropriate execution of ceremo-
nial cycles which in term is performed in many of the lan-
guages that those ceremonies encompass (Thomas 2013.
5). This illustrates the unique characteristics of the Mi'Kmaq
language and how it is fundamentally different than Western
ways of communication.

The issued discussed within Two-Eyed Seeing brings to light
two very important questions: Firstly, what happens when
you have a group of people who have language with no
common root, but who must operate within a foreign frame-
work? Or more specifically, how do Indigenous people find
successful ways of functioning within a colonized world?
(Thomas 2016).

Unsettled Art

Indigenous land based art and activism is most often a response to the way in which colonial-sellers institutions exclude, ignores, and re-imagines First Nation culture by highlighting that the protocols, concepts of time, and ethics within these Institutional are a fundamentally different language than that of First Nations People. This speaks to the larger issue that reconciliation as a concept is problematic in many ways, and seen to Western Colonizers as something with an end point, rather than an opportunity for co-exiting in a respectful, inclusive manner indefinitely.

Rebecca Belmore outside the Thunder Bay Art Gallery performing Artifact #671B. 1988; photograph by Bill Lindsay and J. David Galway (Martin 2017)

Rebecca Belmore is an Anishinaabe-Canadian whose work blends sculpture and performance to examine unresolved historical traumas and misrepresentation among Canadian First Nations peoples. In the performance titled, Artifact #671B, Belmore tagged her body like an artifact in a museum using the Shell corporate logo as a method of bringing attention to the corporate incursion on First Nation space. In doing so, she revealed the duplicity of a company

Ayum-ee-aawach Oomama-mowan: Speaking to Their Mother by Rebecca Belmore. 1996; photograph by Michael Beynon (MacDonald 2019)

that provided corporate sponsorship of the Olympic exhibition. Belmore is also responsible for many sculpture and performance artifacts that draws attention to the effects of colonization on First Nation women.

Her artwork entitled Ayum-ee-aawach Oomama-mowan: Speaking to Their Mother was a response to what is now referred to in Canadian history as the Oka Crisis. During the summer of 1990, many protests were mounted in support of the Mohawk Nation of Kanesatake and their struggle to maintain their territory. This object was taken into many First Nations communities and reservation inviting Indigenous people to speak to they land they wished to protect (McCall and Hill 2016, 6).

How Do We Begin?

How do we begin unlearning stories and systems that normalized colonial relations of power? To approach is question it requires us to enter into a relationship with Indigenous people, who have done much of this decolonizing thinking for us, and simultaneously recognizing a responsibilty to acknowledge these influences on our thinking and take analytical cues from the work of Indigenous scholars, artist and activists while not appropriating this knowledge for our own (McCall and Hill 2015, 15). This can allow for work to continue from our own positions while understanding the limitations of our specific world-view. Working together through artistic and critical practice can become a powerful way of acknowledging and respecting difference, while being aware of the power relations that have previously informed historical processes guised as collaboration.

In this thesis collaboration is not expected to be a seamless cooperation where differences are eliminated. It is a chance to explore the potential for growth in conflicts created by these differences (McCall and Hill 2015, 17). It is within the incompleteness that is currently colonial reconciliation that opportunities to re-imagine what our shared spaces may look like in the future.

Before we move further into the specifics of design in relation to Indigenous activism, the next chapter will unpack more fully Environmental Racism in Nova Scotia, with the intention to illustrate how and where generative design can aid in reshaping relations of race, space, and power.

Chapter 5: Environmental Racism In Nova Scotia

> The real resolutions to environmental racism in Nova Scotia lie in a transformative agenda premised on anti-colonial and anti-capitalist organizing where the goal is to build a collective power (Waldron 2018, 108).

Radicalized Spaces

One all-too-common act in Canada is the placement of toxic hazards near communities of color and the working poor. These communities are targeted because they tend to lack political power within the system while simultaneously being dependent on that very system for their survival and what results is the inequitable distributions of industry. Any placement of toxic and environmental hazards near communities of colour and the working poor - who have been given little to no democratic engagement in decision making regarding the location of these facilities - is an act of Environmental Racism (Waldron 2018, 51).

Environmental racism has two components: The first is distributive and spatial, concerned primarily with the inequitable distributions of health risks associated with industrial polluters and other types of environmentally hazardous activities. The second is procedural, focusing on institutional mechanisms that perpetuate inequitable distribution of these activities (The ENRICH Project 2020). This thesis will primarily focus on the distributive/ spatial ramification of these acts, aiming to call attention to the hidden harms and power dynamics that exist within Environmental Racism.

The Environmental Noxiousness, Racial Inequalities and Community Health (ENRICH) Project addresses the many limitations of the environmental justice movement in Nova Scotia, including how race is subsumed within class and where industry gets placed in the province. Their mission is to use community-based participatory action, student training, translation research, community engagement, and art to mobilize a range of approaches that address the socio-economic and health effects associated with environmental racism in Mi'kmaq and African Nova Scotian communities (The ENRICH Project 2020).

The map on the following page represents information Waldron and her colleagues have been collecting over the past 6 years. It illustrates the spatial pattering of industry in Nova Scotia - specifically material deprivation levels and toxic facility siting in correlation to Indigenous and Black Nova Scotian communities.

Material deprivation refers to the inability to afford basic resources and services such as housing, access to heath care, and sufficient food. When layered with toxic facility siting, First Nation communities and Black Nova Scotian communities it becomes evident very quickly that there is a pattern to the ways in which historical processes and relations of power shape present day realities for Indigenous and Black Nova Scotian communities.

Pulp and Protest

Of the many cases of environmental racism within Nova Scotia, the Pictou Landing First Nations (PLFN) battle
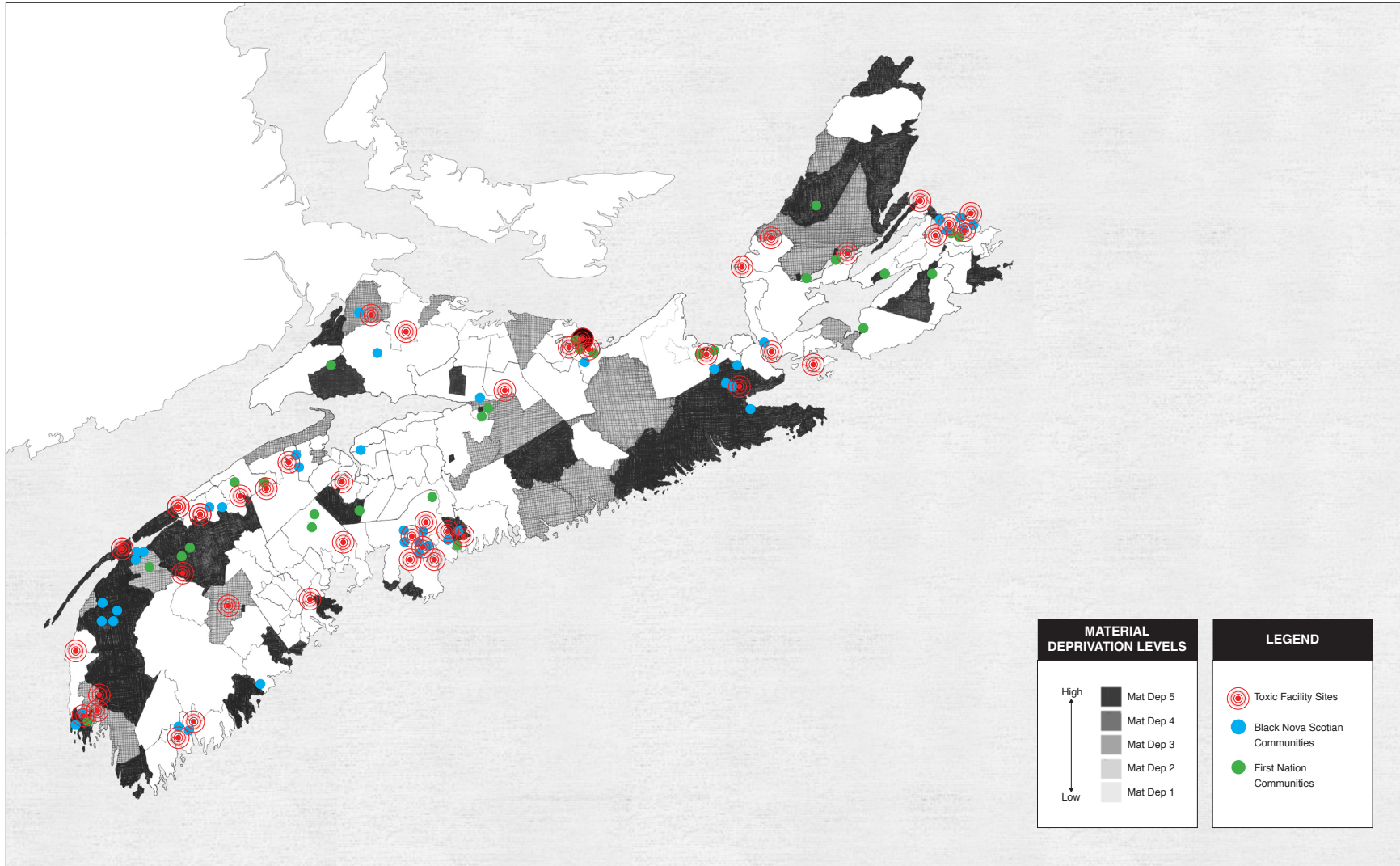
Map of Nova Scotia illustrating spatial pattering of industry - specifically material deprivation levels and toxic facility siting in correlation to Indigenous and Black Nova Scotian communities (base map from the ENRICH Project 2020).

MATERIAL DEPRIVATION LEVELS

High
- Mat Dep 5
- Mat Dep 4
- Mat Dep 3
- Mat Dep 2
- Mat Dep 1
Low

LEGEND

- Toxic Facility Sites
- Black Nova Scotian Communities
- First Nation Communities
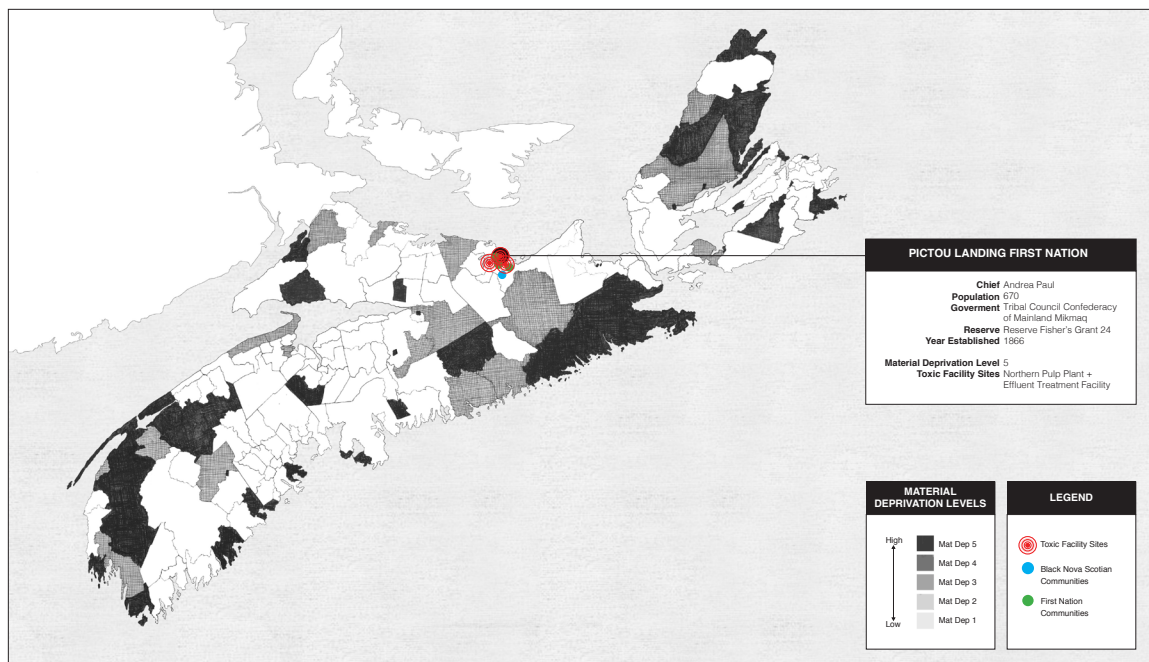
Map of Nova Scotia illustrating material deprivation levels and the Pictou Landing First Nation Community in correlation to toxic facility sitings (base map from the ENRICH Project 2020)

with a pulp Mill will be explored in more detail as it has been a 50 year protest against the mill using a tidal estuary as a effluent treatment facility. The community has been fighting for the relocation of the facility for decades and it is an active site of remediation and negotiation between the community, the industry and the government.

PLFN has been an active site of environmental racism and ongoing protest since 1967 when a local pulp mill began operation. It has given rise to many protests and created deep division and tension between the surrounding communities. Peoples' connection to their land, wellbeing, health, homes, water, air and businesses are all harmed by the mills emissions and effluent processing facility.

Until January 2020 the Northern Pulp Mill pumped millions of gallons of effluent into a tidal estuary on first nations land. The bill that was passed in 2014 to relocate the pipe was successful, and the mill is currently closed for operations

The Mill on Abercrombie Point, NS, 1990; photograph from Wikimedia Commons (Osmond 2019)

but as it currently stands the community of PLFN will continue to bear the burden of this industrial process and the long-term health impacts associated with it.

The closure of the mill gives hope and voice to those who led the groups that have protested and campaigned for its closure. The current political and social climate interwoven within this history offers a unique position to act and co-advance together. In many way this is just the beginning of a process of reconciliation not as a means to secure closer, but rather as a place from which to begin the hard work if rethinking relationships and renegotiating responsibilities (McCall and Hill 2015, 200).

Chapter 6: Architectural Allies

The barricade is not inherently violent. It could also be seen as an "opening onto a different relationship - to the land and to one another - that both acknowledges the violence of settlement and resource extraction, and affirms shared obligations to care take the land for the wellbeing of future generations (McCall and Hill 2016, 17).

Pulping an Architectural Theory

This thesis encourages unusual collaborations and attempts to 'pulp' a theory comprised of prefigurative politics, design activism, two-eyed seeing, and soft architectural approaches to land based activism. These theories are all essential to an intersectional approach of forming a trans-formative agenda. Pulp is a strategy that has begun to tap into the urgency that lies outside the usual framework dictated within institutional architectural education (Connah 1981, 34), recognizing that architectural projects or ideas often fall short of required or known solutions, specifically within situations that are complicated and intractable.

Collaboration recognizes that a key tool for bargaining with power is to disrupt it, not simply in the form of negative disruptions, but by making positive ones that offer alternatives that are considerate of the long term. This specific approach is referred to as "generative design activism" and connects to the larger idea that design activism first and foremost prioritizes the transformation of current systems into those that support a regenerative world (Thorpe 2012, 4).

This generative design theory unfolds as a series of "prefigurative infrastructures" or small-scale disruptions intended to protect critical ecosystem infrastructure and

communicate radical environmental awareness. In general sense, these disruptions can be spatial (land occupations), temporal (short-lived street protest) or resource-based (a community establishing control over its water supply).

## Soft Architectural and the Ally

In the case of this thesis however these positive disruptions will be referred to as Allies and take the form of catapults, traps, watch towers, and tell tales. They are small, rough, and unofficial gestures that have the ability to act as creative conciliation. They are symbolic, somewhat incomplete, emotional, and hopeful collaborative instances.

These Allies follow principles of soft architectural practice which is an approach to design that emerged in the social upheaval period of late 1960's along side Prefigurative Politics. Soft architecture comes from rethinking the role of an architect in society, one that was constrained by institutionalized approaches to architecture and upheld systemic racism by existing complicity within the system.

The current states of economic, political, and climactic crisis are further prompting a repositioning of the role of architecture and the performance of infrastructure (Bhatia and Sheppard 2015, 34). Many concepts within soft architecture are being seen as relevant counterpoints to the permanent and hard systems we associated with institutional approaches to problem solving. Combining the principles of these theories can begin the process of creating spaces that are generative to community, help build autonomy and provide alternatives to a system rooted in suppression and taking too much.
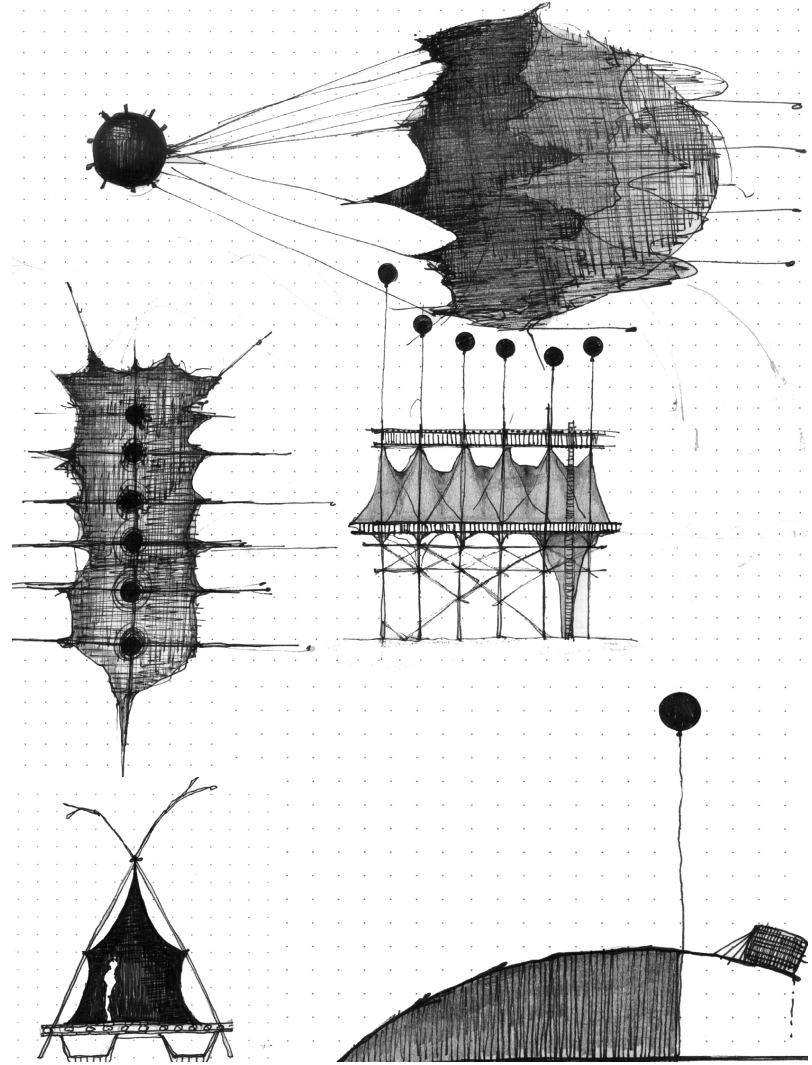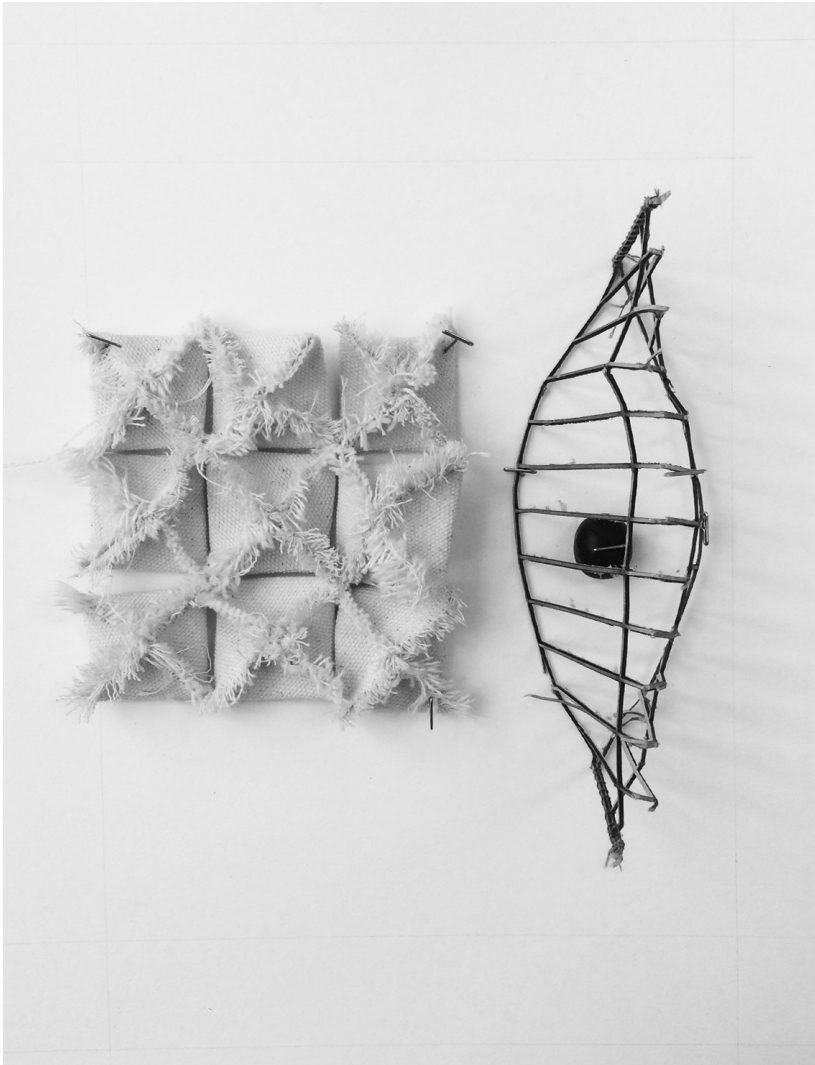
Sketch models and drawings of tentative allies - Successful trap and catapult configurations
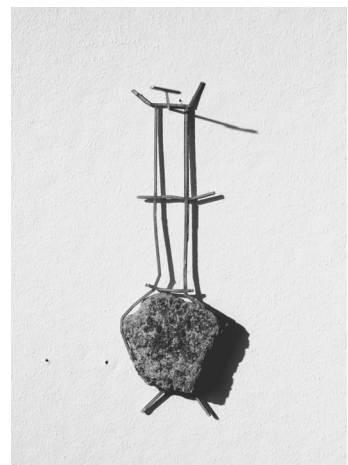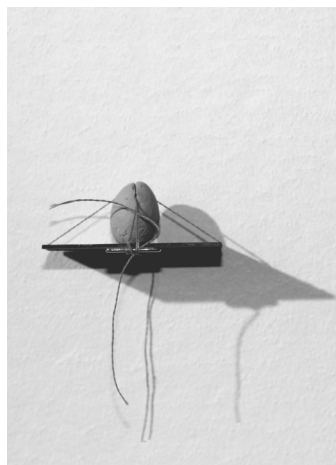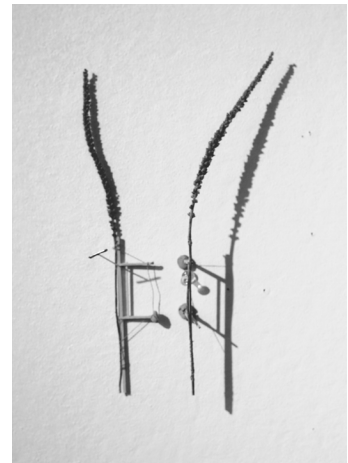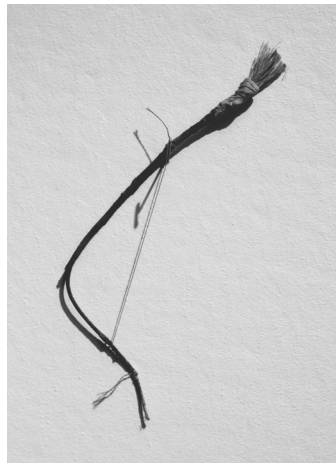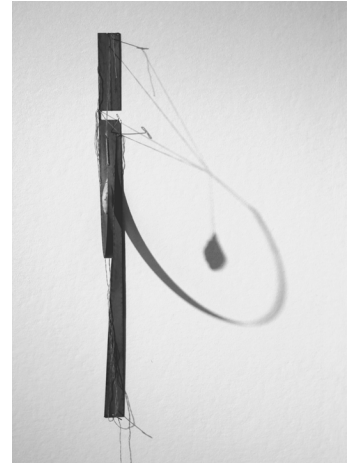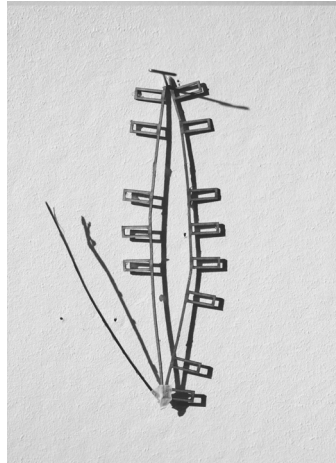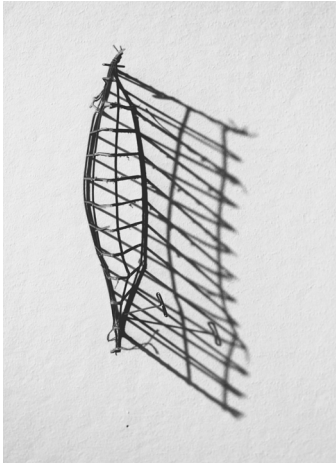
A Range Of Unique Instances
Proposed as a way to map / plot / point radical acts of environmental awareness. These models
have te ability to represent violence as a condition that isn't always visualized.

TRAP NO.1
Used to catch and trap. Can also be used as a shelter with the addition of a tarp. Made form wood and string

TRAP NO.2
Base structure for trapping. Can trap most things, but intended as a component of a water catchment
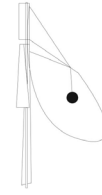
CATAPULT NO.1
For flinging things and protection if necessary. Made from wood, wire and found materials.

LADDER NO.1
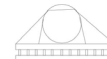Free standing and adjustable ladder with weighted base of found materials. Made from wood, rock and twine.

BROOM NO. 1
For cleaning and flying. Can also be used to level.
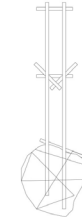Doesn't work for everyone

TOOL NO.1
Multipurpose too. Made of found brush, wire and wood. Free standing with adjustable handles.

TOWER NO.1
Free standing with weighted base

TRAP NO.3
Multipurpose tool for finding stability,

TOOL NO.3
Scalable tool for leverage. Can be

A range of Unique Instances - defined.
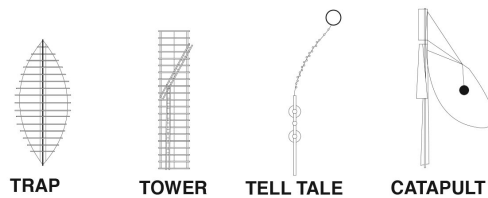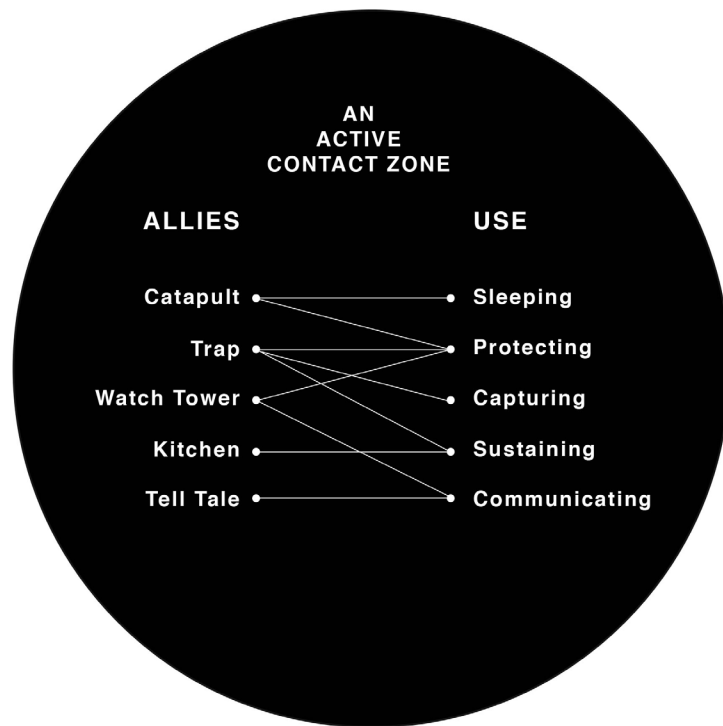
A Space of Encounter

Collectively the watch tower, trap, and catapult form a barricade offered as a space of encounter where people geographically and historically separated come into contact with each other and establish hopeful ongoing relations. A space we often associated with colonizing, radical inequality and intractable conflict can be transformed into a place for the assertion and support of indigenous sovereignty - a Contact Zone.

Similarly to questioning the multiple definition of critical infrastructure before we move forward the term barricade also needs to be clarified.
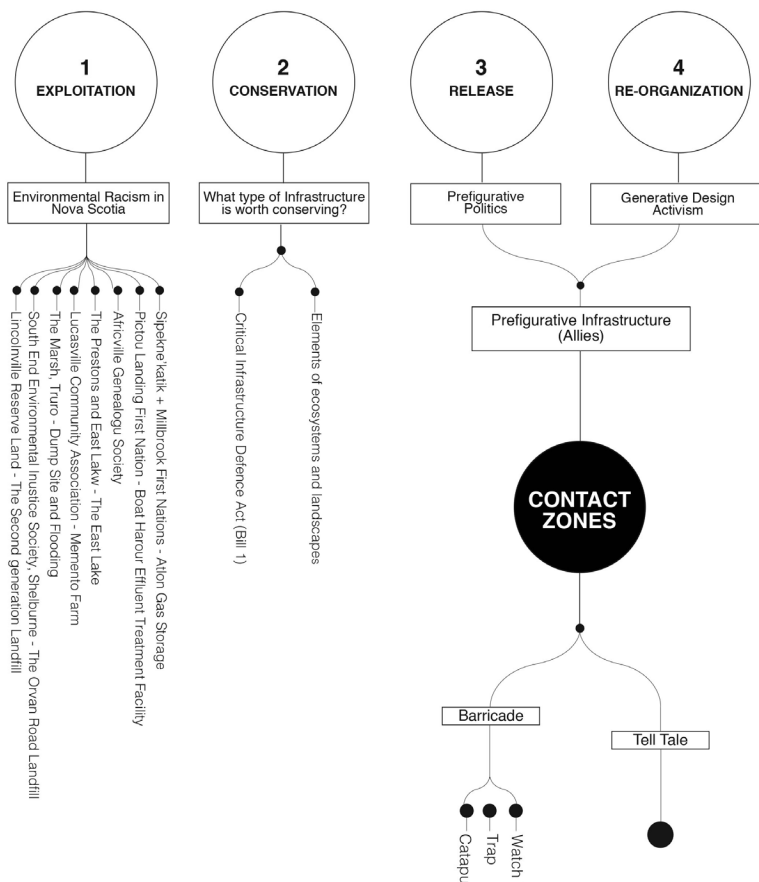
Using the Theory of Social Change by Holling and Gunderson (2002) to position the Contact Zone and its components.

In this case, and in many cases of seemingly irreconcilable conflict between Indigenous and non-Indigenous communities the barricade is often mistaken as the violent embodiment of an impasse rather than an opportunity for transcendence or transformation - but the barricade is not inherently violent. It can also be seen as an opening onto a different relationship to the land and to one another - that both acknowledges the violence of settlement and resource extraction and affirms shared obligations to care take the land for the wellbeing of future generations (McCall and Hill 2016, 17).

**AN
ACTIVE
CONTACT ZONE**

ALLIES   **USE**

Catapult   Sleeping

Trap   Protecting

Watch Tower   Capturing

Kitchen   Sustaining

Tell Tale   Communicating

TRAP   TOWER   TELL TALE   CATAPULT

Function within an active Contact Zone.

Tell Tale Signs

The Tell Tales within this generative design activism strategy also help to address this transformation by materializing as balloons in the landscape. As we are learning, it is generally in the interest of those in power to hide conflict and a large part of the struggle over power is how to make its operations visible. These tell tales draw attention to the invisible violences being inflicted on people and the land and give presence and power to the hidden harms and unrecognized power dynamics of environmental racism.   They act as instruments that convey information of the processes occurring below the ground, drawing attention to the tall tales governments use to stand behind corporate interest.
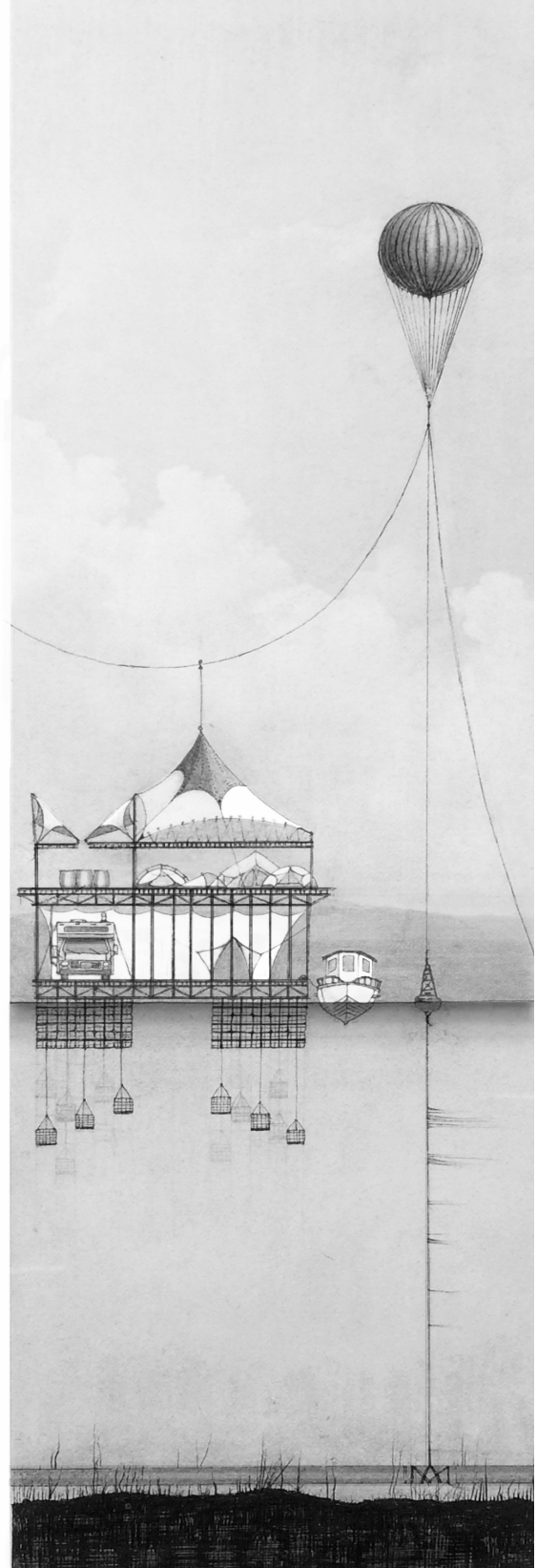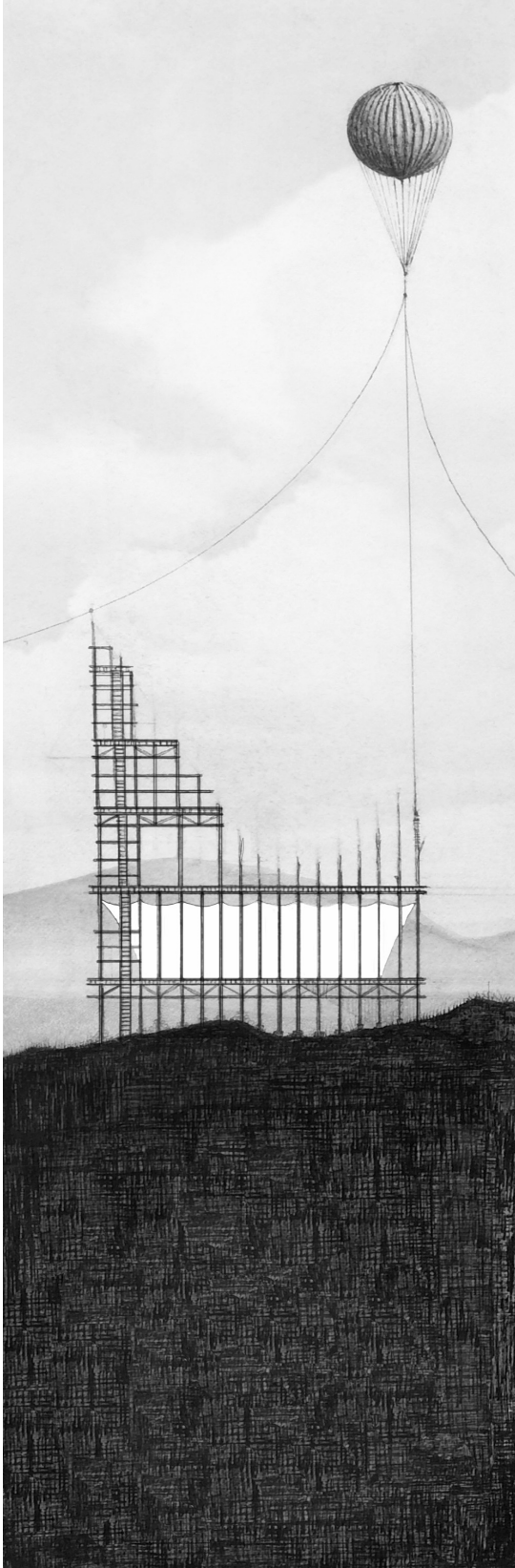
Land and water based Tell Tales acting as instruments that convey information of the processes occurring below the ground.

Land-based Tell Tale sketch model.

Planting Seed Bombs

The Allies proposed in the thesis combine to create a larger system. The Tell Tales act as a target for the catapults' function and the barricade is a station point for where the catapults are equipped with seed bombs. These catapults are strategically positioned in the direction of the tell tales enabling them to fling the seed bombs towards the areas in need of remediation. They also provide an opening into the barricade and to the watch tower - allowing access into the site - where conversations can begin to occur about how to move forward collectively.

TRAP no.1   TOWER   TELL TALE   CATAPULT   LADDER   TOOL   TRAP no.2   TRAP no.3
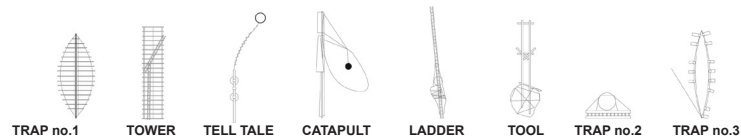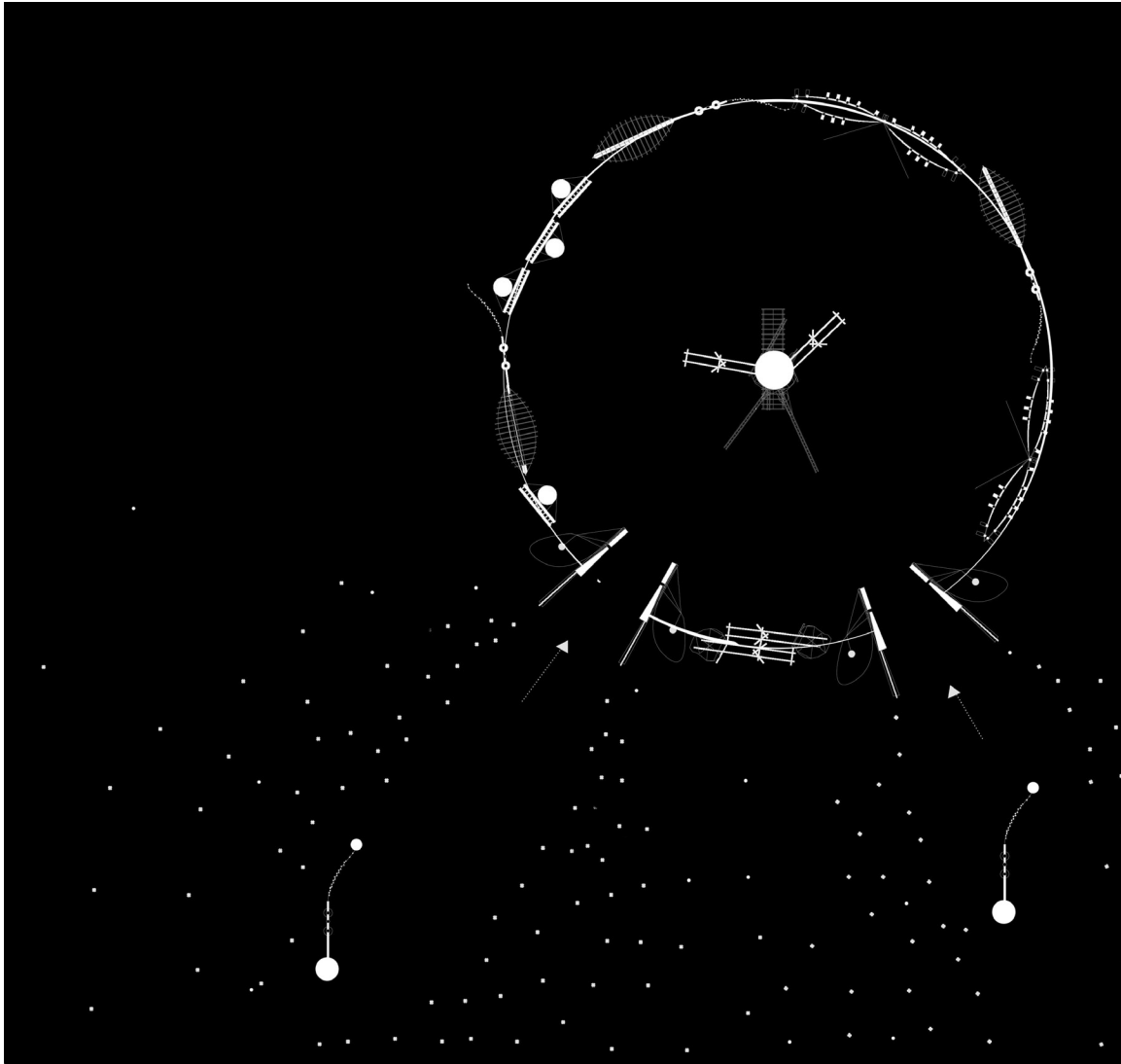
Barricade Plan : Illustrating the strategic location of tell tales, catapults and seed bombs, as well as entry points into the active center.

Recognizing that this is an experimental and inventive undertaking the site-based work within this thesis is seen within a continuum of experimentation and refinement - constantly being informed and educated about what may work and what does not. To elaborate on this further, I will place these instances in the context of Environmental Racism within Nova Scotia.
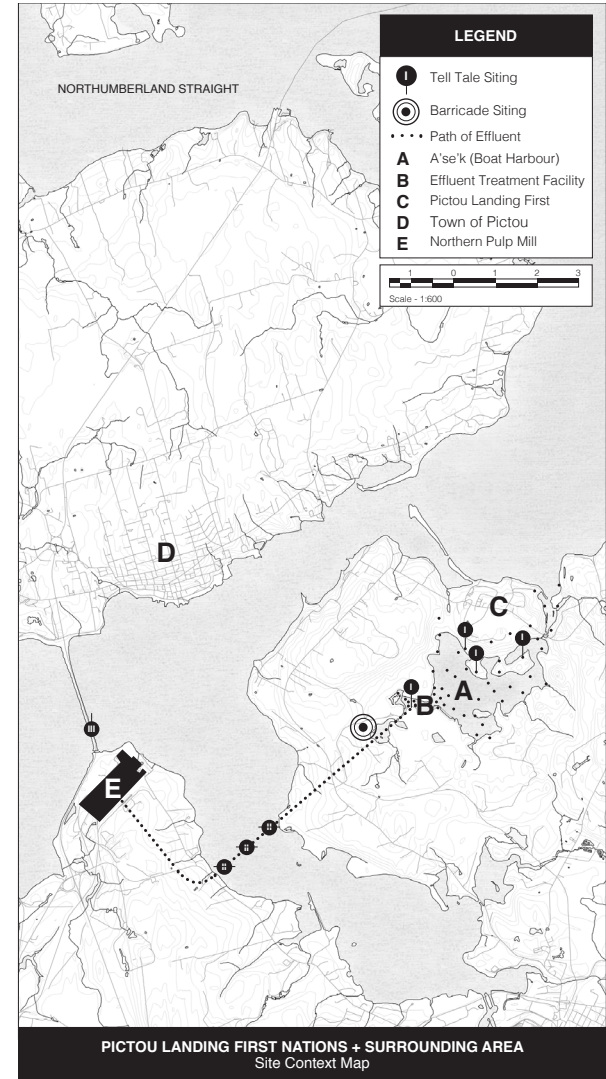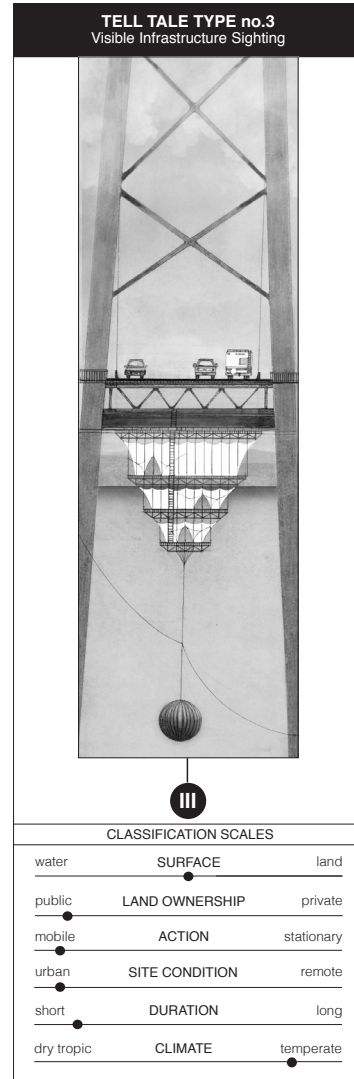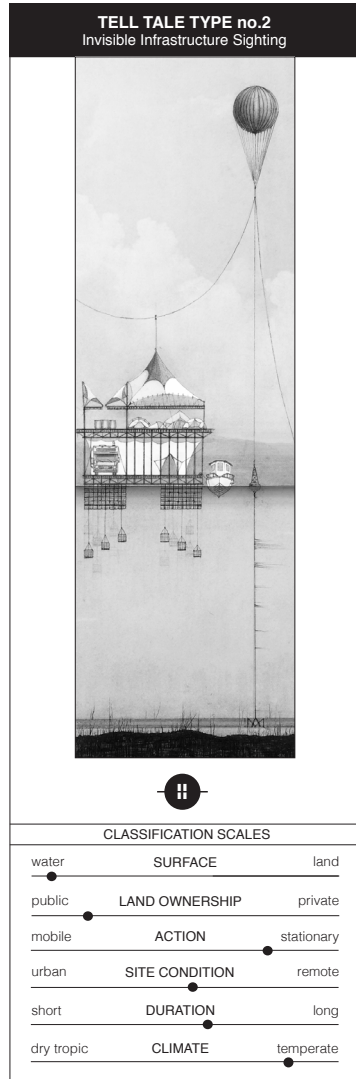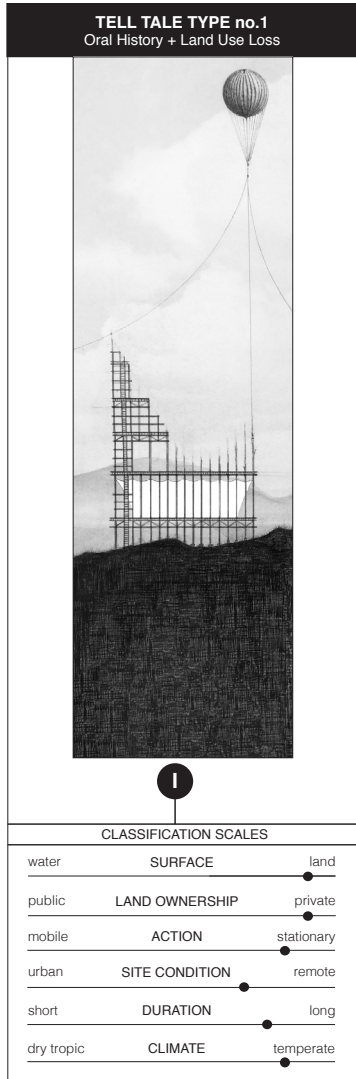
Chapter 7: The Other Room

The land can show the bruises of an abusive relationship, however it is not just land that is broken - more importantly it is our relationship to it (Kimmerer 2013, 254).

Speaking Truth to Power

The Prefigurative Infrastructure Allies frame or expose issues in a process sociologist Tim Jordan calls "speaking truth to power". It speaks truth by revealing exploitative power through a "manufactured vulnerability" that explicitly tests the fairness and ethics of the status quo (Thorpe 2012, 176). To manufacture this kind of vulnerability design activists often place themselves in vulnerable situations - or cases of intractable conflict. Using the Pictou Landing First Nations battle with a pulp mill this chapter explores the site specific conditions of a case of Environmental Racism and engages the series of allies to speak truth to power though a series of spacial and landscape investigations.

Boundary Surrounds

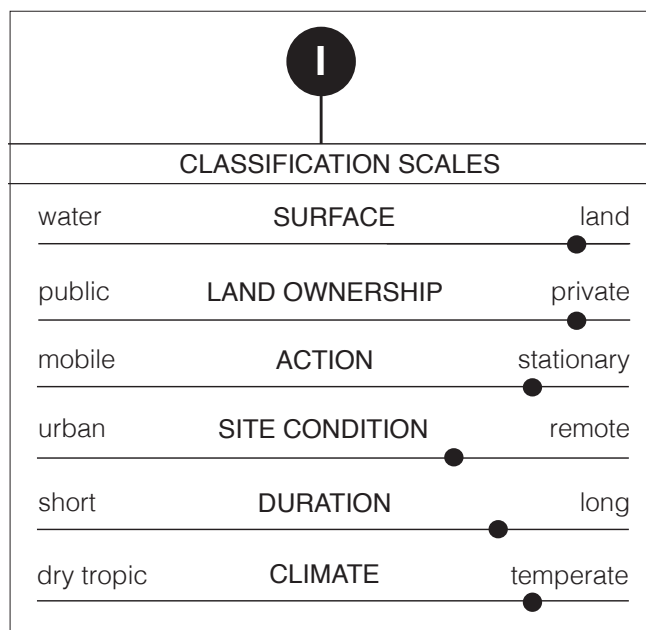The map on the following page illustrated the relationship between the mill and the first nations community, showing the location of the effluent pipe running through A'se'k (Boat Harbour) which was turned into a treatment facility for effluent processing in the 1970s. Three different types of Tell Tales have been classified with a sliding scale to help understand what type of conflict scenario is in need

TELL TALE TYPE no.1
Oral History + Land Use Loss

TELL TALE TYPE no.2
Invisible Infrastructure Sighting

TELL TALE TYPE no.3
Visible Infrastructure Sighting

I

II

III

CLASSIFICATION SCALES

water	SURFACE	land
public	LAND OWNERSHIP	private
mobile	ACTION	stationary
urban	SITE CONDITION	remote
short	DURATION	long
dry tropic	CLIMATE	temperate

CLASSIFICATION SCALES

water	SURFACE	land
public	LAND OWNERSHIP	private
mobile	ACTION	stationary
urban	SITE CONDITION	remote
short	DURATION	long
dry tropic	CLIMATE	temperate

CLASSIFICATION SCALES

water	SURFACE	land
public	LAND OWNERSHIP	private
mobile	ACTION	stationary
urban	SITE CONDITION	remote
short	DURATION	long
dry tropic	CLIMATE	temperate

LEGEND

- **I** Tell Tale Siting
- Barricade Siting
- Path of Effluent
- **A** A'se'k (Boat Harbour)
- **B** Effluent Treatment Facility
- **C** Pictou Landing First
- **D** Town of Pictou
- **E** Northern Pulp Mill

NORTHUMBERLAND STRAIGHT

Scale - 1:600

PICTOU LANDING FIRST NATIONS + SURROUNDING AREA
Site Context Map

Boundary Surrounds Map: Illustrating relationships between the mill and the first nations community, showing the effluent pipe running through A'se'k as well as three different types of tells tales (base map from Google Maps, n.d).

of visual attention : Oral History and Land Use Loss, Visible Infrastructure, and Invisible infrastructure. Using these specific classification is useful when considering where the Tell Tales are located and how long they need to be active. These ideas tie into the overall life cycle of the barricade itself, which is explain in further detail in the next chapter.

	CLASSIFICATION SCALES	
water	SURFACE	land
public	LAND OWNERSHIP	private
mobile	ACTION	stationary
urban	SITE CONDITION	remote
short	DURATION	long
dry tropic	CLIMATE	temperate

Sliding Scale Classification Chart for understanding protest type.

Good Medicine for Oral History Loss

The Oral History and Land Use tell tale in the following map illustrate the types of intractable and invisible violence being inflicted on the community by the pulp mill's location and processing procedures. In Mi'kmaq A'se'k (Boat Harbour) means "the other room" and was once a thriving tidal Estuary that was used to fish, hunt, forage and pass on the traditional knowledge of land stewardship to the younger generations. The Mi'kmaq people use their land to build community and to carry their culture forward. A treatment facility within A'se'K has devastated these important practices from occurring. The map uses information collected from The
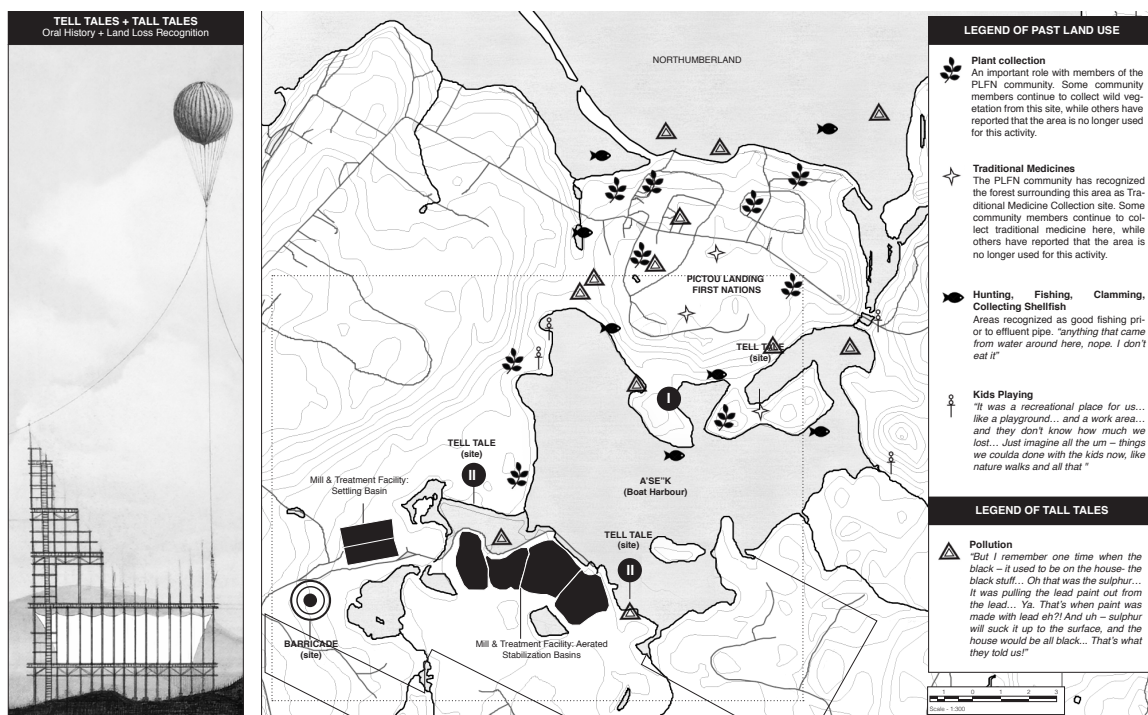
Oral History and Land Use Loss Tell Tale and Map of A'se'K that illustrated how and where pollution is effecting the land (Google Maps, n.d.)

Health, Environments, and Communities Research (HEC) Lab to illustrate four specific types of oral history and land use losses as a direct result of the pollutants caused by the placement of the mill.

1. Plant collection: An important role with members of the PLFN community. Some community members continue to collect wild vegetation from this site, while others have reported that the area is no longer used for this activity.

2. Traditional Medicines: The PLFN community has recognized the forest surrounding this area as Traditional Medicine Collection site. Some community members continue to collect traditional medicine here, while others have reported that the area is no longer used for this activity.

3. Hunting, Fishing, Clamming, Collecting Shellfish: Areas recognized as good fishing prior to effluent pipe but some

members say that *"anything that came from water around here, nope. I don't eat it"*

4. Kids Playing: *"It was a recreational place for us… like a playground… and a work area… and they don't know how much we lost… Just imagine all the um – things we coulda done with the kids now, like nature walks." - PLFN Community member*

5. Pollution: *"But I remember one time when the black – it used to be on the house- the black stuff… Oh that was the sulphur… It was pulling the lead paint out from the lead… Ya. That's when paint was made with lead eh?! And uh – sulphur will suck it up to the surface, and the house would be all black... That's what they told us!" - PLFN Community member.*

The map below locates three Tell Tales in areas needing urgent remediation and are paired in this thesis with the Ally seed bombs. One located on the settling ponds, one on the stabilization basins and one in A'se'k.The Barricade is placed in close proximity of these sitings enabling it to reach all three areas with the seed bomb medicine. Given that design projects unfold differently over time, the following chapter will consider how the prefigurative Infrastructure Allies correlate to different phases of a Contact Zones life cycle.

Oral History and Land Use Loss Tell Tale and Map further illustrating location of Tell Tales and the barricade (base map from Google Maps, n.d.)

Tell Tale Signs at the aeration ponds in Boat Harbour's effluent treatment facility, Nova Scotia.

Chapter 8: Contact Zones

Disruptions stemming from design activism may arise within protocols, visualizations or social narratives, but they are often material and spatial; they concern the way form configures space, the way materials are sourced and assembled, and the way users can operate spaces and forms. Most often these design disruptions are creating positive alternative "offers" (Thorpe 2012, 143).

Long Term Offerings

Slow, durable and adaptable design gives a longer term focus and has the ability to change our patterns of interest and commitment to the built environment. With this in mind a long term offering can also be seen in terms of infrastructure, that encourages different kinds of behaviors and actions to happen. This approach works well when placed within a narrative or a site specific situation such as a reoccurring act of Environmental Racism by offering alternative narratives about what is important or valued. This is possible in part because space constitutes a sort of "spatial offer" concerning how it may be seen, used or accessed (Thorpe 2012, 177).

This chapter presents a spatial narrative within a Contact Zone using soft architecture though the organization and representation of materials. Treating the Contact Zone as an spatial offering that opens into a different relationship between people and the land - one acknowledging the violence of settlement and resource extraction while affirming shared obligations to care take the land for future generations (McCall and Hill 2015, 17).
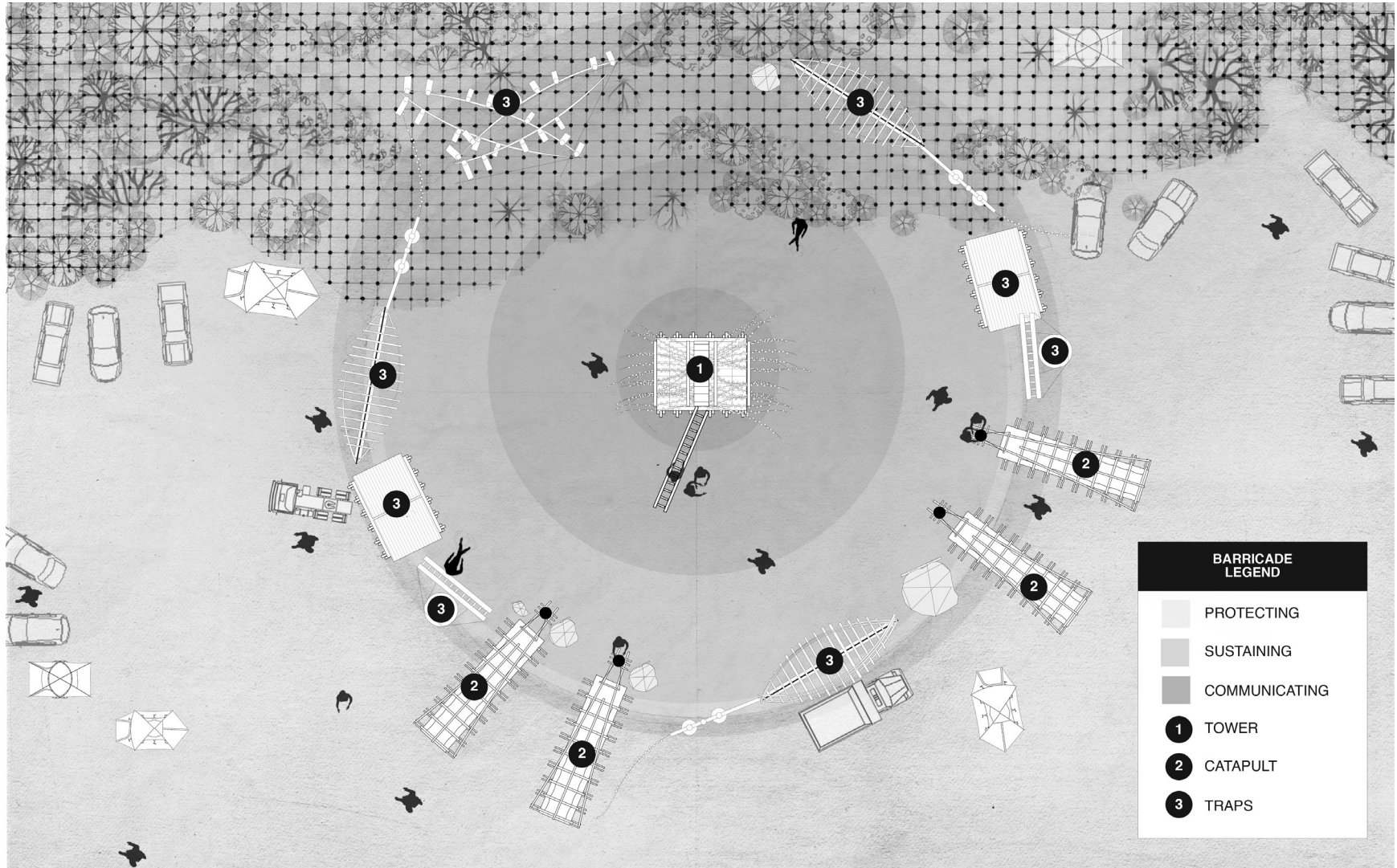
This illustration shows the infrastructure configuration within the contact zone and the seed bombs being prepared for activation. As showing how and where it protects, sustains and communicates.

BARRICADE LEGEND

PROTECTING

SUSTAINING

COMMUNICATING

1 TOWER

2 CATAPULT

3 TRAPS

The Soft Side of a Barricade

In simplest terms soft architectural practice is rooted in an emerging awareness of environmental and social issues. It practices non-ownership thinking and help enables ongoing responsiveness by operating through feedback and resilience. Its can been seen as a generative process acknowledging fluid and indeterminate situations that allow for reactions and adaptation. The possibilities within soft systems make an appropriate pairing when considering design and construction of the Prefigurative Infrastructure Allies within a Contact Zone.

Applying a spatial narrative is seen in soft architectural terms as a mechanism of storytelling that can provide soft power to a group and enable change by calling attention to a real life circumstance. Creating these scenarios can help visualize different kinds of futures while also capturing physically intangibles things such as hopes, fears, beliefs, and dreams while converging thinking about divergent futures (Bhatia and Sheppard 2015, 61). It is also a way for a non-indigenous person, like myself, to begin unlearning stories and systems that normalize colonial relations of power.

Regenerative Disruptions

As this thesis now positions and defines a soft system approach to the prefigurative infrastructures (Allies) - ones that act as long term offerings and try to conceive of a better future - it will be essential to understand the phases within the Allies life cycle and critically consider the creative potential of each. This will ensure they an continue to build
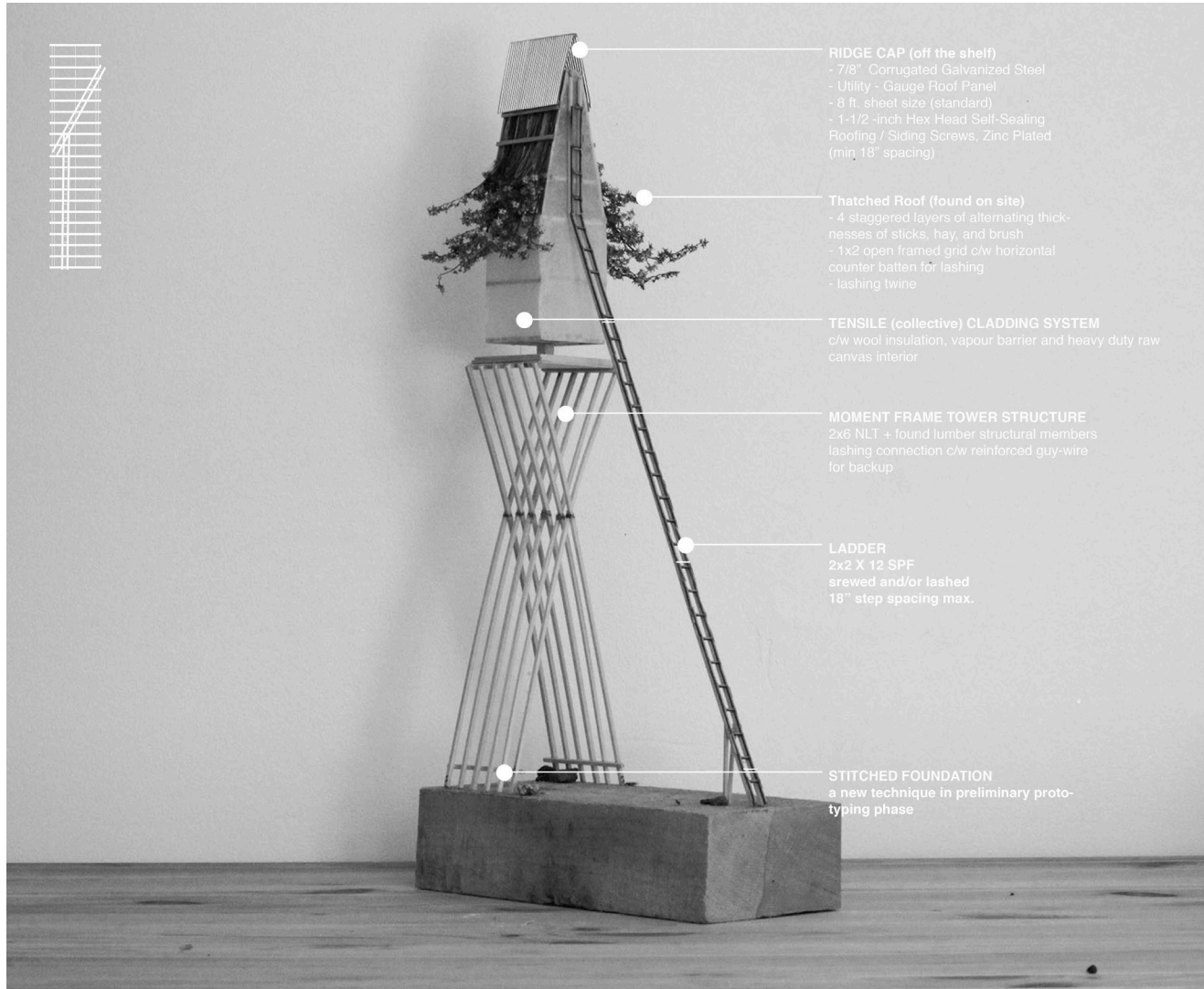
upon and illustrate more positive alternatives as their lives progress.

The phases will be defined as fieldwork, fabrication, function and predicted end-of-life, all following the guidelines of regenerative and holistic design practices.
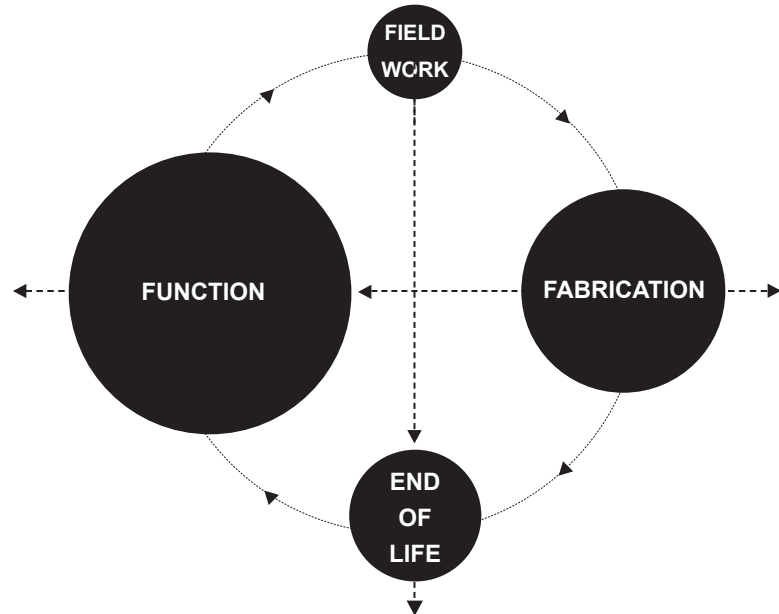
Life- cycle of an Ally: Possible points within the "allies" life-cycle that can call attention to positive alternatives considerate of the long term.
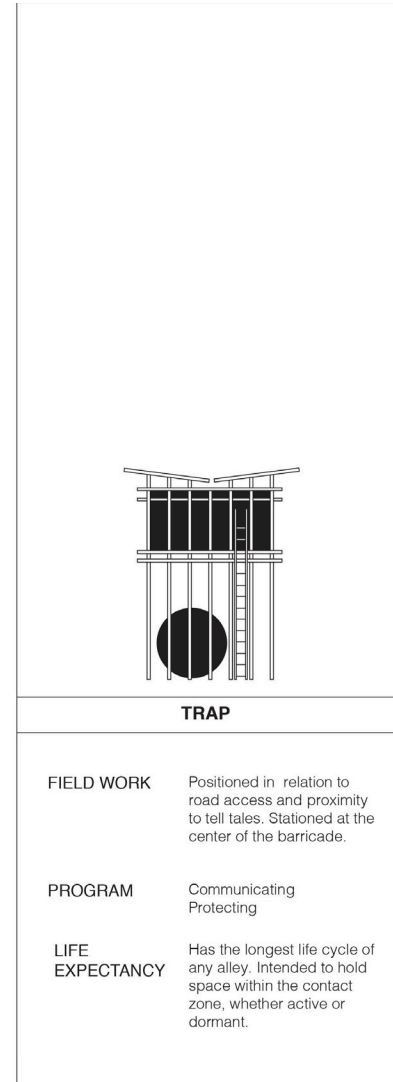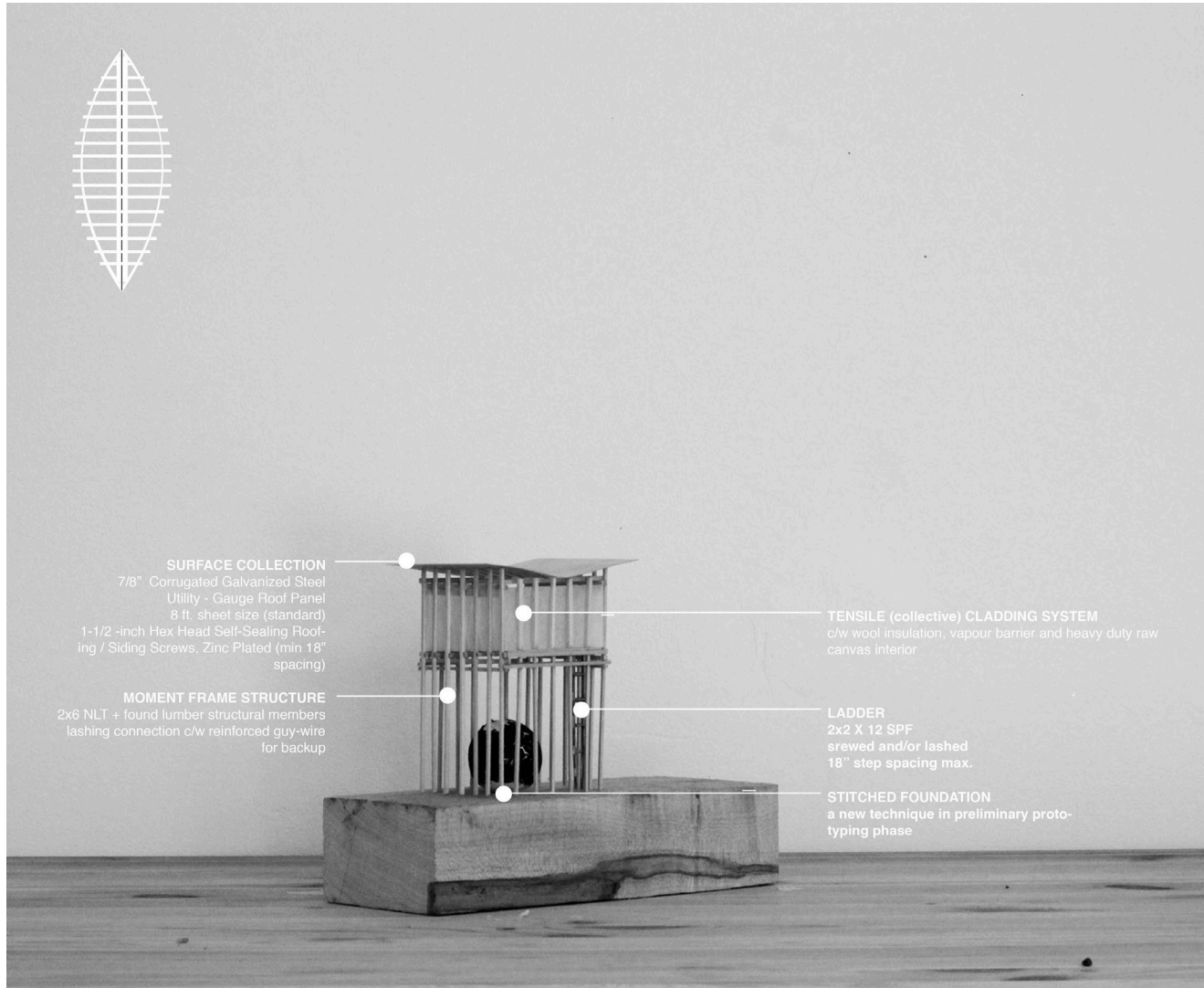
1. Field work requires looking for and recording evidence of past land use or land use loss and positioning any structural tactics accordingly - such as Tell Tales.

2. Fabrication treats infrastructure as a kit of parts making it portable, lightweight, re-configurable and easily deployable. This phase often involves "resources" such as skills, expertise, siting and other specification that sometimes require a redistribution of resources or creative resourcefulness This phase often involves "resources" such as skills, expertise, siting and other specification that sometimes require a redistribution of resources or creative resourcefulness .
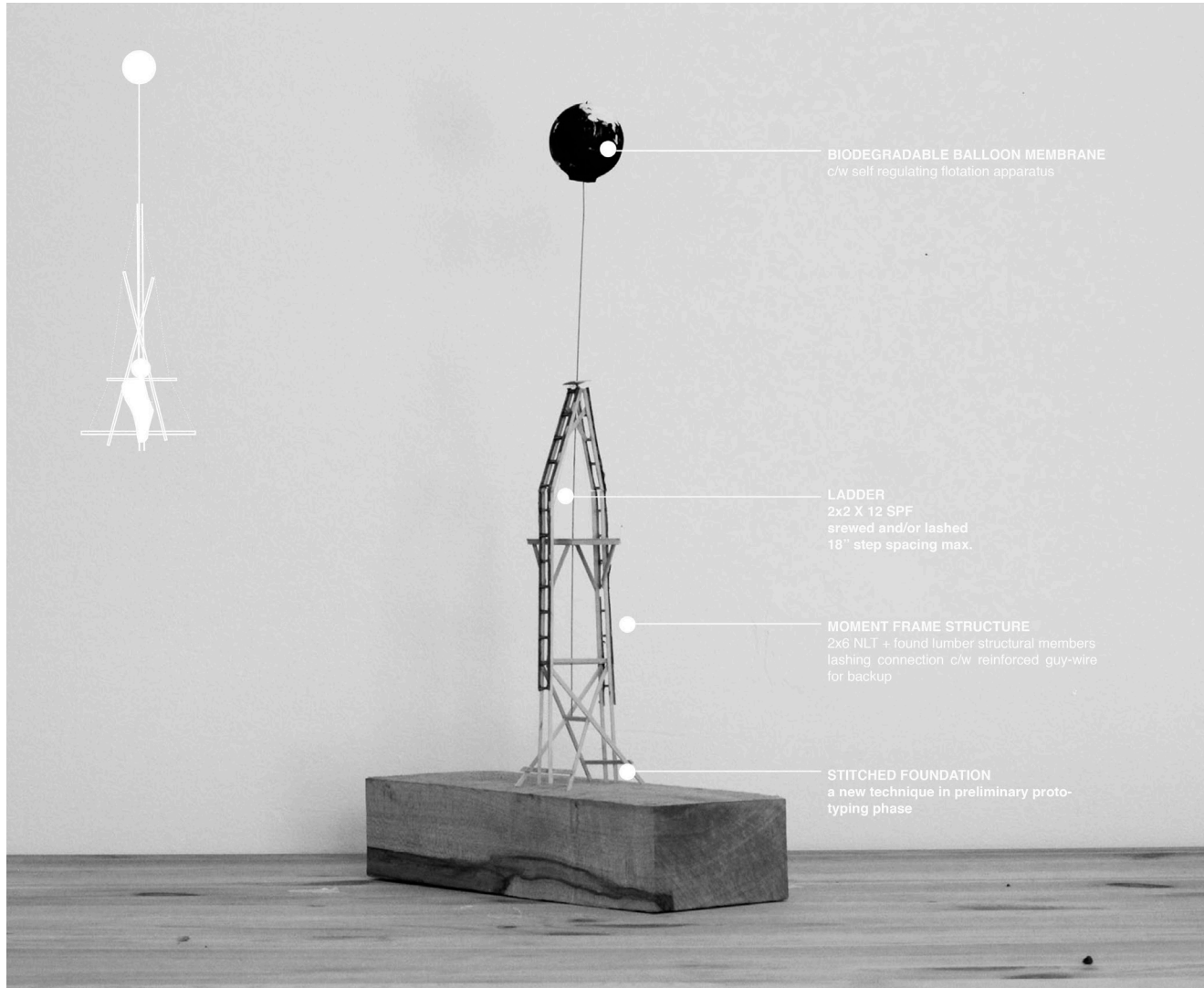
RIDGE CAP (off the shelf)
- 7/8" Corrugated Galvanized Steel
- Utility - Gauge Roof Panel
- 8 ft. sheet size (standard)
- 1-1/2 -inch Hex Head Self-Sealing
Roofing / Siding Screws, Zinc Plated
(min 18" spacing)

Thatched Roof (found on site)
- 4 staggered layers of alternating thick-
nesses of sticks, hay, and brush
- 1x2 open framed grid c/w horizontal
counter batten for lashing
- lashing twine

TENSILE (collective) CLADDING SYSTEM
c/w wool insulation, vapour barrier and heavy duty raw
canvas interior

MOMENT FRAME TOWER STRUCTURE
2x6 NLT + found lumber structural members
lashing connection c/w reinforced guy-wire
for backup

LADDER
2x2 X 12 SPF
srewed and/or lashed
18" step spacing max.

STITCHED FOUNDATION
a new technique in preliminary proto-
typing phase

WATCH TOWER

FIELD WORK	Positioned in relation to road access and proximity to tell tales. Stationed at the center of the barricade.
PROGRAM	Communicating Protecting
LIFE EXPECTANCY	Has the longest life cycle of any alley. Intended to hold space within the contact zone, whether active or dormant.

Watch Tower scaled model c/w material study. Additionally illustrates fieldwork needed, program, and life cycle

SURFACE COLLECTION
7/8" Corrugated Galvanized Steel
Utility - Gauge Roof Panel
8 ft. sheet size (standard)
1-1/2 -inch Hex Head Self-Sealing Roof-
ing / Siding Screws, Zinc Plated (min 18"
spacing)

MOMENT FRAME STRUCTURE
2x6 NLT + found lumber structural members
lashing connection c/w reinforced guy-wire
for backup

TENSILE (collective) CLADDING SYSTEM
c/w wool insulation, vapour barrier and heavy duty raw
canvas interior

LADDER
2x2 X 12 SPF
srewed and/or lashed
18" step spacing max.

STITCHED FOUNDATION
a new technique in preliminary proto-
typing phase

TRAP

FIELD WORK	Positioned in relation to road access and proximity to tell tales. Stationed at the center of the barricade.
PROGRAM	Communicating Protecting
LIFE EXPECTANCY	Has the longest life cycle of any alley. Intended to hold space within the contact zone, whether active or dormant.

Trap scaled model c/w material study. Additionally illustrates fieldwork needed, program, and life cycle

BIODEGRADABLE BALLOON MEMBRANE
c/w self regulating flotation apparatus

LADDER
2x2 X 12 SPF
srewed and/or lashed
18" step spacing max.

MOMENT FRAME STRUCTURE
2x6 NLT + found lumber structural members
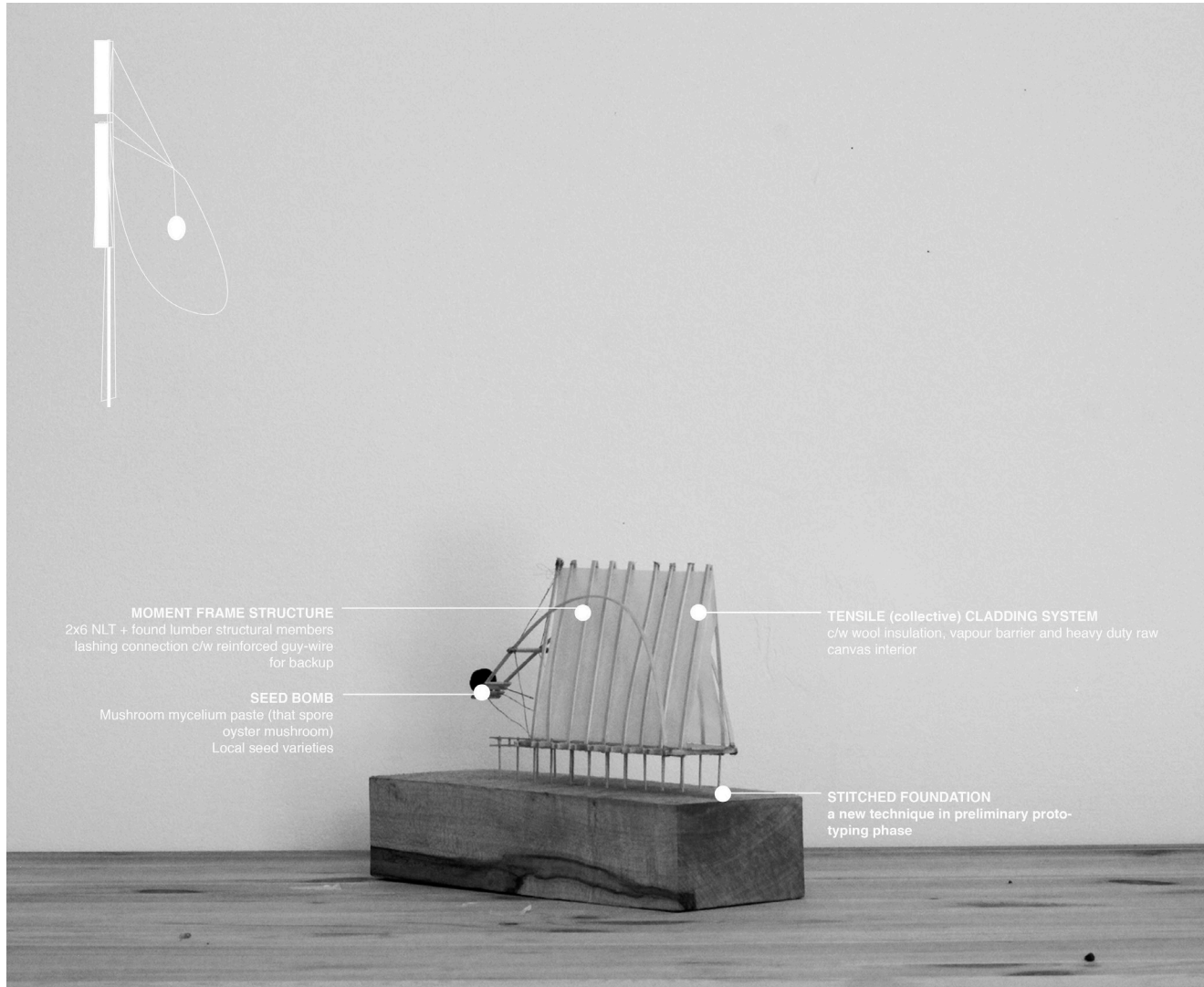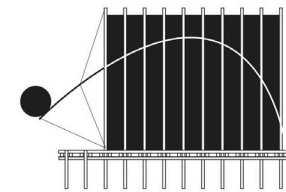lashing connection c/w reinforced guy-wire
for backup

STITCHED FOUNDATION
a new technique in preliminary proto-
typing phase
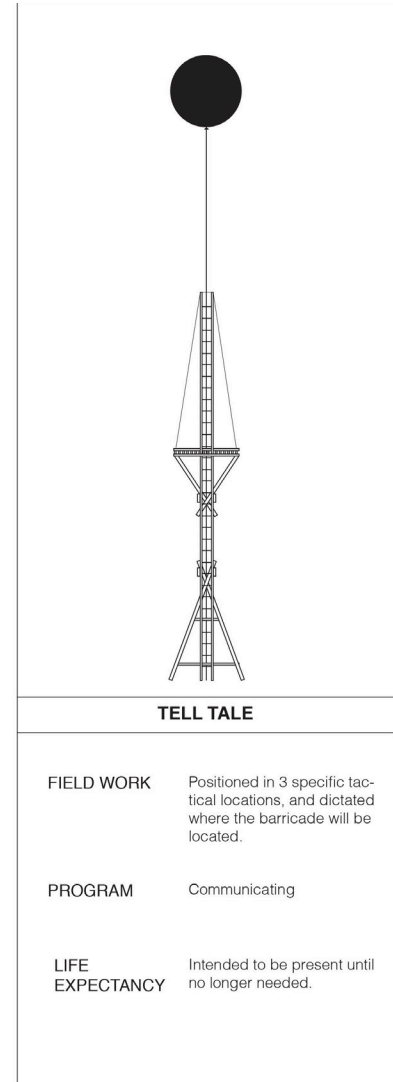
TELL TALE

FIELD WORK	Positioned in 3 specific tactical locations, and dictated where the barricade will be located.
PROGRAM	Communicating
LIFE EXPECTANCY	Intended to be present until no longer needed.

Tell Tale scaled model c/w material study. Additionally illustrates fieldwork needed, program, and life cycle

MOMENT FRAME STRUCTURE
2x6 NLT + found lumber structural members
lashing connection c/w reinforced guy-wire
for backup

SEED BOMB
Mushroom mycelium paste (that spore
oyster mushroom)
Local seed varieties

TENSILE (collective) CLADDING SYSTEM
c/w wool insulation, vapour barrier and heavy duty raw
canvas interior

STITCHED FOUNDATION
a new technique in preliminary proto-
typing phase

CATAPULT	
FIELD WORK	Positioned in relation to road access and proximity to tell tales. Stationed at the center of the barricade.
PROGRAM	Communicating Protecting Sleeping
LIFE EXPECTANCY	The second longest life cycle alley. Intended to be present until no longer needed, or until remediation has commenced.

Catapult model c/w material study. Additionally illustrates fieldwork needed, program, and life cycle

A cluster of disruptions.

TOGETHER AT LAST
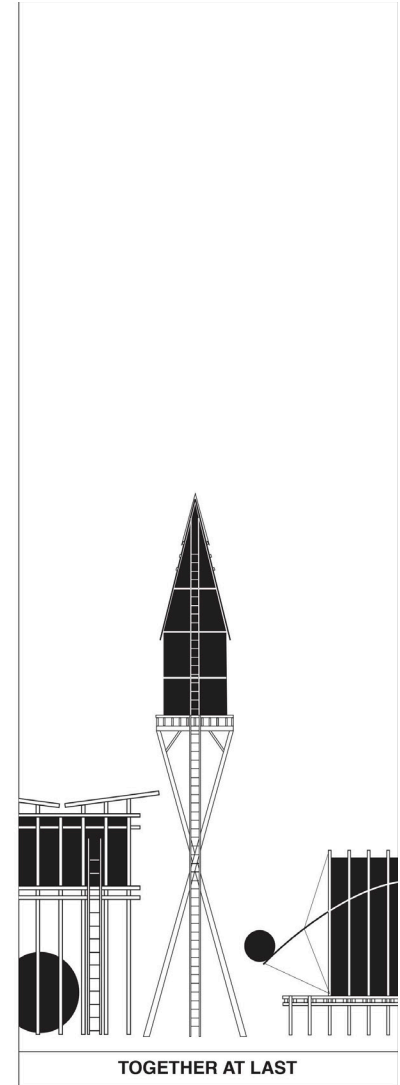
3. Function phase consists of six programs spanning - sleeping, protecting sustaining, capturing, communicating, reading (learning) - all essential in the successful function of an active contact zone. Some interventions are specifically designed for one program, while others exhibit a multiplicity.

4. Life cycle can very site specific as well as dependent on use needs. In an ideal situation the contention and harm these design intentions bring forth will be temporary - or
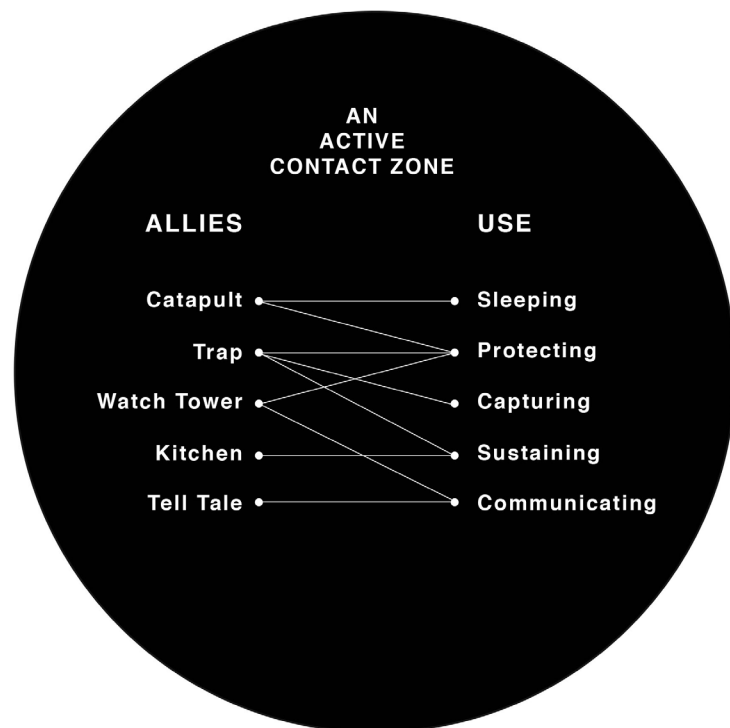

Contents of an active Contact Zone (Barricade) illustrating the allies and their specific programmatic uses.

at least temporal. Most often people do not engage in occupations of land because they wish to live there, they occupy the land to give presence and witness to the harm being done to people and essential resources in hopes that it will be recognized, honoured and protected.
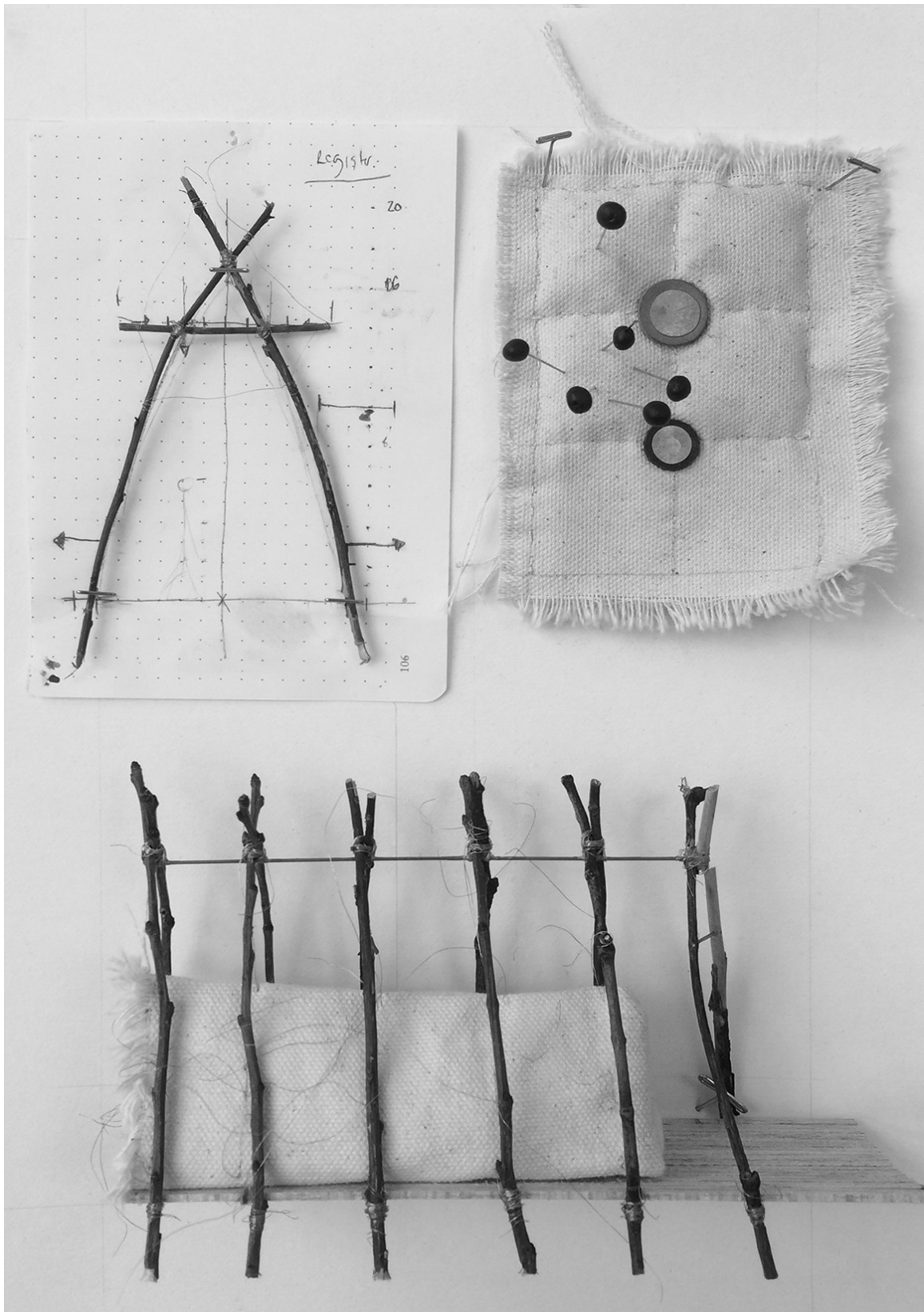
Jigs and material study for a moment frame tensile Catapult. This structure is made from off the shelf as well as found material on site and a collective cladding system.
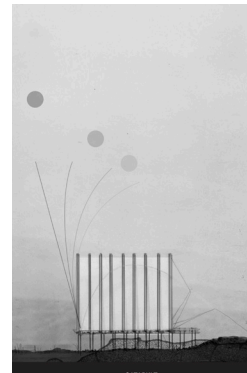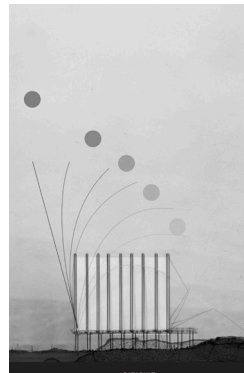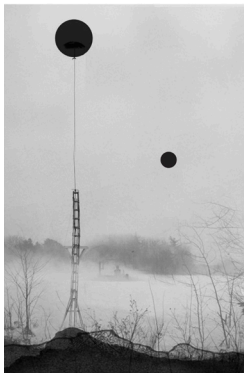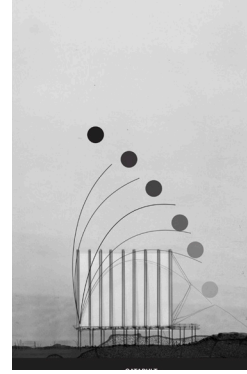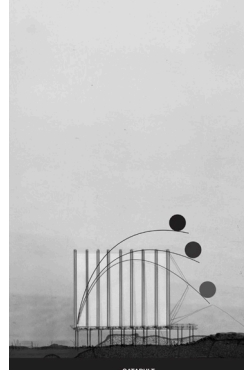
TELL TALE No.1
(Aerated Stabilization Basin Site)

CATAPULT
(at the Barricade)

A Catapult in motion - flinging a seed bomb of mycelium mushroom paste and local seed varieties at a Tell Tale location in need of immediate remediation.
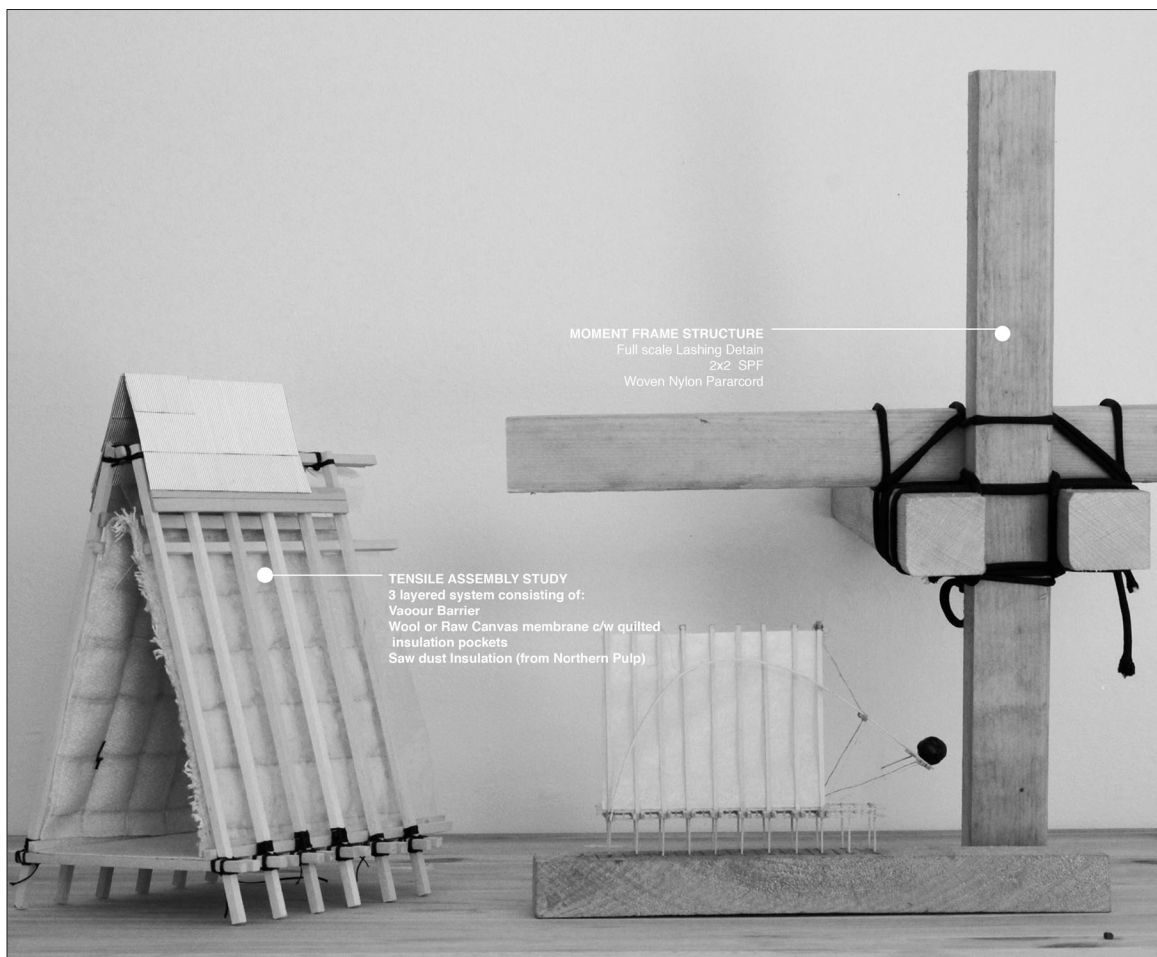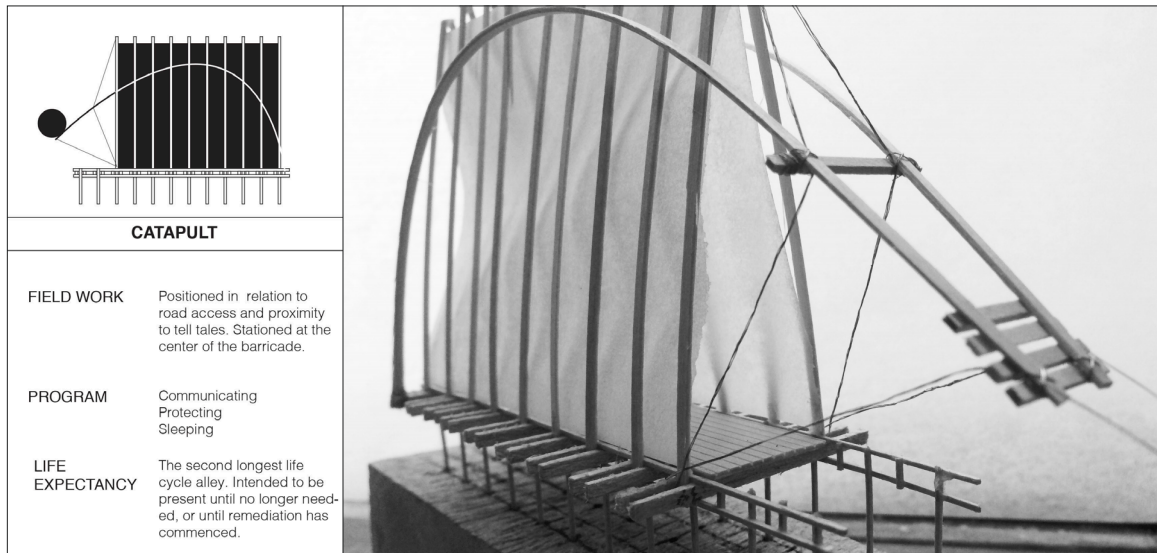
Catapult Resilience

A catapult's life cycle will be used to explore a more thorough explanation of the phases using holistic design intentions:

Fieldwork. Document site and community conditions prior to the start of work. The catapult must reconnect with the ecology of place and the unique characteristics found in the community so that their stories and oral histories can be honoured, protected and enhanced. Must also protect land for other species and create habitats within the construction of the building. Field work in this case is particularly important in locating where the seed bombs will be directed.

Fabrication. Based on human scale living and a system composed of off the shelf lumber, found site material and a collective cladding system that incorporates a sawdust insulation membrane from wood chips collected from the decommissioned pulp mill.

Function. The intent of this strategy - speciality for the catapult - is to protect wild and ecologically significant places as well encourage ecological regeneration, enhancing the function of communities where the catapult is positioned. It does this through the successful execution of launching seed bombs - they can operate year-round in a resilient manner.

End of Life. As a long term offering the slow and durable design of the catapult intends to last as long as needed. In a way it has immortality due to the amount of life it gives back to the land during it phases of function. In this way, its regenerative process connect its occupants to nature and community creating a positive impact on the human and natural systems indefinitely.

CATAPULT

FIELD WORK	Positioned in relation to road access and proximity to tell tales. Stationed at the center of the barricade.
PROGRAM	Communicating Protecting Sleeping
LIFE EXPECTANCY	The second longest life cycle alley. Intended to be present until no longer needed, or until remediation has commenced.

MOMENT FRAME STRUCTURE
Full scale Lashing Detain
2x2 SPF
Woven Nylon Pararcord

TENSILE ASSEMBLY STUDY
3 layered system consisting of:
Vaoour Barrier
Wool or Raw Canvas membrane c/w quilted
 insulation pockets
Saw dust Insulation (from Northern Pulp)

Catapult studies - lashing connection details at 1:1, tensile membrane layering study at 1:20, and seed bomb sketch model at 1:50.

Single Membrane Tensile System
This membrane traps sawdust pockets between a weather membrane and an interior wool insulation layer, merging the assembly into one component

Layer 1
Weather Barrier
Reclaimed tent or tarp material

Layer 2
Insulation
Saw dust pockets

Layer 3
Interior Wall
100% wool felting

Double Walled Tensile Membrane System
This system separates the weather barrier from the quilted insulated puff pockets, creating an air space and an extra layer of interior wool insulation

Weather Barrier
Reclaimed tent or tarp material

Air space

Quilted puff insulation

2 layers of wool encasing saw dust pockets

Jigs and material study for a moment frame tensile Catapult
This structure is made from off the shelf as well as found material on site and a collective cladding system.

Activity inside a Contact Zone Barricade.

Chapter 9 : Conclusion

Over the course of this thesis an unprecedented series of events unfolded across the world that continually shine a spotlight on social activism and protest. These events make clear that social activism is not a thing of the past, it is alive and well. Academia, professionalism, and institutions have been constructed to resist change, and safeguard colonial and white colonial agendas. This thesis uses the lense of architecture to show that our knowledge, skills and practices do not have to be complicit, and imagines what architecture could look like and how it could be used to aid in reshaping relationships between race, space and power.

In this time of reconciliation, Indigenous peoples continue to call for more meaningful and respectful approaches that are grounded in their unique world-views. Respectful representation is specifically amplified in Indigenous culture if we begin to understand that our different languages equate to different perspectives and outlooks. For example the word for welcome or hello in Mi'kmaq translates in English to " I will do my best" - which is a much more meaningful iteration and respectful expression of intention with the person you are addressing (Thomas 2016).

I would like to conclude by saying that in this moment I will do my best, and will pursue softly a work that is never finished with both eyes open.

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