

L I F E O N T H E E D G E

The Archeologist, the Oil Rig,
and the Newfoundlander

by

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A thesis submitted to the Faculty of Graduate and Postdoctoral Affairs in partial fulfillment
of the requirements for the degree of

Master of Architecture

in

Azrieli School of Architecture & Urbanism

Carleton University
Ottawa, Ontario

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LIFE ON THE EDGE

ABSTRACT

This thesis reimagines the UNESCO archeological site of L'Anse aux Meadows, Newfoundland in 2101; one year past the limit of current climate science predictions.

In this projective future, the now obsolete infrastructures of Newfoundland and Labrador's offshore oil rigs are moved near-to-shore. The rigs are slowly and incrementally deconstructed, now serving as monumental scrapyards and material salvage pantries for a new working landscape on Newfoundland's coast. Salvaged components shore up and transform the terrain, community and cultural heritage of the site and its immediate surroundings. This research by design project engages with questions of monumentality, counter-monumentality, and changing heritage through critical and speculative drawings and maps in a back-and-forth between water, landscape and the possibilities of a reconstituted future. The thesis attempts to grapple with the often fraught and complex histories - and futures - of resource extraction and cultural heritage in a changing life on the edge.

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“We are nearer to heaven by sea,

As close to perfection as an island can be.

This world has its wonders, but it seems to me,

We are nearer to heaven by sea.” ⁰¹

INTRODUCTION

On the island portion of the Canadian province of Newfoundland and Labrador, the sea establishes place. The intimate relationship between Newfoundland's residents and the ocean around them reveals itself through industry, leisure, architecture, and infrastructure; the coastal edge of the island being the stage on which this engagement takes place. A historic dependency on the sea resulted in a littoral settlement pattern on the island, marked by the numerous cultures who once called Newfoundland their home. Today, Newfoundland maintains its deep-seated connection to the ocean in the form of offshore petroleum drilling and exploration, rather than traditional industries, such as the fishery.

The coastline is a transient border that will become increasingly unpredictable given current climate change predictions. Climate science forecasts that portions of Newfoundland could experience a dramatic increase in sea-level by the year 2100. Along with the vertical rise of the sea's surface, the coastal edge of Newfoundland will experience increased wave energy, storm surge, and coastal erosion.⁰²

This project reimagines the coastal edge of Newfoundland in the year 2101 - a year beyond the predictions of our current climate science. In this future, cultural artifacts of coastal Newfoundland are increasingly threatened by rising seas; a threat largely created by the global extraction and burning of fossil fuels. At this juncture, one begins to recognize the inherent ironies of an island so dependent on its coastline for identity yet tethered to the economies of oil extraction.

The narrative of this project describes the UNESCO world heritage site of L'anse aux Meadows, as it may be observed in the year 2101. Located on the Northern Peninsula of Newfoundland, the archeological site of L'anse aux Meadows is the only confirmed evidence of Viking settlement in North America. The Norse settlement here is one of the most culturally significant archeological digs in Newfoundland and, among all the other provincial dig sites, the most threatened. The physical geography of the site means that this is a landscape of vulnerability in the context of coastal climate change. The low lying, gently sloping topography of L'anse aux Meadows consists of unconsolidated marine sediment and marsh land, giving little defense to the unpredictability of the encroaching seascape.

Given the non-renewable nature of fossil fuels and the trajectory of alternative energy sources, this project investigates a future in which the offshore oil rigs of Newfoundland are rendered obsolete. Hidden offshore and away from the public gaze, these superstructures would be left to rust on the pillars that fasten them to the sea floor. This thesis proposes that the topside [the portion of the rig above sea level] be released from its concrete base and towed to a location observable from the landscape of L'anse aux Meadows. These predominantly steel structures would be slowly disassembled in an adjacent bay within the boundaries of the UNESCO archeological site. Components of the oil rigs are hauled onto the landscape to form protective barriers for the threatened World Heritage Site and fortify areas of future archeological interest against the rising sea. In this sense, these reconstituted oil rigs become monumental scrapyards, material salvage pantries, and a dynamic anti/counter monument that commemorates land lost to the sea while preserving fragile artifacts of global significance. As the rig components metastasize on the landscape at L'anse aux Meadows, they, in themselves, become future heritage sites and objects of archeological interest.

This is a reimagined future of the UNESCO landscape at L'anse aux Meadows, that is now demarcated and buttressed by fragments of repurposed oil rigs. A viewing pavilion atop a hill near the existing UNESCO visitors center frames key views of the material scarpyard, the seascape, and the oil rigs that have been dragged across the coastal landscape. The now onshore oil rigs, or what is left of them, are connected by a series of walking paths and catwalks that allow visitors to meander through these decommissioned structures, creating a space for reflection on a time of extreme resource exploitation. This new layer of protective oil-artifact speculates on the future heritage of the island of Newfoundland as its residents grapple with the implications of difficult histories, identities, and industries in the year 2101. The framework of this thesis evokes a dialogue of [anti] and [counter] memory in a back-and-forth between water, land and the future cultural heritage of Newfoundland.

ENDNOTES - INTRODUCTION

- 01 James, T. S. *Relative sea-level projections in Canada and the adjacent mainland United States*. Natural Resources Canada, 2014.
- 02 Simani, "Heaven by Sea", track #1 on Heaven by Sea, SWC Productions, 1982, vinyl.



FIG. 01

part 1 | "AS NEAR TO HEAVEN BY SEA":
INHABITING THE COAST

1.1: THE ISLAND AND THE SEA

On the island portion of the province of Newfoundland and Labrador, the sea is crucial to establishing a sense of place. An intimate relationship between the island's residents and the water around them is revealed in the industrial, the playful, the architectural, and perhaps most directly, in the islands' folkloric terrains.

The 1982 song, "Heaven by Sea," by the Newfoundland folk band Simani, articulates a widely held affinity for coastal dwelling. As a band that prides itself on its Newfoundland roots, it comes as little surprise that this song became widely popular across the province. Still today, the chorus of this song is a cultural touchstone for the people of Newfoundland, myself included.



FIG. 02 *The Atlantic Ocean off the coast of Flatrock, Newfoundland.*

Though much of the folklore surrounding coastal Newfoundland carries with it a Eurocentric grounding, the island was settled by many different cultures including Indigenous groups and Norse explorers.⁰³ Common to all, however, was a dependency on the sea for sustenance, for mobility, for living. This reliance on the sea resulted in littoral settlement patterns, with the majority of inhabitants establishing coastal villages and less settling in the island's interior.⁰⁴

1.2: A VERNACULAR OF IMPERMANENCE

In Outport Newfoundland*, during the 1960's, it was not uncommon to see a neighbor's home floating out of a sheltered bay and into the open ocean. These frequent, and odd scenes were a result of a partnership between the provincial and federal government to relocate Newfoundlanders living in remote fishing villages to larger population clusters. This initiative, called the "Resettlement Program" [see appendix 1], was launched to mitigate the economic expense of providing services to isolated rural communities.⁰⁵ The Resettlement Program was economically motivated and seen as a modernizing necessity. In the eyes of the provincial government at that time, Newfoundland was underdeveloped in comparison to the rest of the Canadian provinces. As a result, any Newfoundlander identified as living outside of these established growth centers was encouraged to move - with nominal financial incentives. This compensation was rarely enough to rebuild a home, let alone to build a new life in a new location. Out of necessity, many rural Newfoundlanders pried their homes from the rocky ground and pulled them into the sea - floating them to the nearest, and largest community.⁰⁶



FIG. 03 A house floating off the coast of Silver Fox Island, Newfoundland.

* Outport (n.) - an outport is the term given for a small isolated coastal community in the Canadian province of Newfoundland and Labrador.

The natural landscape on the island of Newfoundland, paired with the cultural influence of the British Empire, created a particular vernacular that reacted to rocky terrain while still resembling the traditional domestic construction of North America's eastern seaboard. The uniqueness of the Outport home lies in its ability to embrace mobility and its unconventional approach to its architectural foundation. Adaptable log stilts of various lengths and angles were used to create level building planes on the island's uneven, rocky terrain. The impermanent nature of the foundation un-tethered these homes from the landscape, allowing for its extraction and transportation during difficult times.⁰⁷

Re-location involved the use of large timber logs - used as levers - to lift the house off of its stilt foundation. Next, a "house launching-sled" would be assembled underneath the home. This sled was comprised of heavy timber logs, called "skids" or "runners," held together with smaller cross-bracing logs secured with tree-nails. Once secured to the sled, the home would be pulled by community members, horses and, in more recent times, tractors, to a raft in the harbour. In winter months, the house would be dragged along the ice. The ocean was always the stage on this which this performance took place.⁰⁸



FIG. 04 *Launching a house at Silver Fox Island, Newfoundland.*

Though at times, relocation was carried out willingly, the re-settlement process was generally viewed as a painful process that uprooted rural Newfoundlanders from the communities and bays in which they built their lives. The historical imagery associated with this phenomenon is perhaps among the clearest depiction of the resilience and creativity of the Newfoundlander. These photographs of Newfoundlanders floating their home across the open ocean are powerful and compelling images; common homes, as you or I might have lived in, are seen floating across the ocean. One rarely envisions the nuclear family home as nomadic and buoyant, but to rural Newfoundlanders in the 1960's, floating their homes to new locations seemed to be the only viable option when faced with the Resettlement Program.

C O P Y Seldom,
August 26th. 1958.

Mr. Isaac Mercer, Q.C.

Dear Sir:

In the past three or four years we have been led to believe that we would get four hundred dollars per family to help fray expenses of shifting from Wild Cove to Seldom consequently we made a move at least some of the people did shift to be exact five familys have came into Seldom including myself. I feel pretty sure that you cannot imagin what terrible hardship that we have to face this Winter.

To begin with we got no fish this summer not enough to pay expenses and nothing this Fall so far.

I got my house taken down and brought up here now I wants to know where the money is coming from to build it up. Three weeks ago I was speaking to the Rev. Mr. Mercer our Rector for Fogo Parish he told me that the Lord Bishop of Nfld. had taken over the matter to see what could be done now you probably know more about this than I do.

It seems as if all the other people we were trusting to was giving us the bluff. Now I am telling you that we don't want any more of that we have had about all we can take from anyone.

Please give us a definat answer to this letter if there is nothing for us say so. We will know what to do when the time comes. I feel that I should say a few words about the Old age people in Wild Cove also there are three sick men down there to that cannot help themselves if they had the money given to them.

Now what can be done for those people surely something can be done for them.

Please look into this serious matter immediately I would suggest that the Department would send a man down here to investigate the whole business. Meanwhile if there is any information that I can give please drop me a few lines I would be glad to do so.

Hoping to hear from you soon

Sincerely yours
SGD: RAYMOND COMBEN
Seldom-Come-Bye
Fogo District,
Nfld.

FIG. 05 Letter from Raymond Combden of Fogo Island expressing his concerns with the Reloaction Program, to then district representative, Isaac Mercer. 1958.

The images of house floating are from a collection of photographs released in 1962 by photojournalist Bob Brooks. They depict the approximately 30km journey of a home as it floated from Silver Fox Island to the town of Dover.⁰⁹ These images were important touchstones for this thesis, and were manipulated to extract layers of information to emphasize the precariousness of the phenomenon of the floating house. *Figure 07* and *Figure 08* re-imagine some of Bob Brooks' historical photographs by emphasizing vectors of movement and markers of buoyancy by substrate printing onto acrylic sheets which were then layered over the printed photograph. These drawings were part of an exploratory practice to try to more fully understand the forces acting upon the architecture as it floated through the open ocean. These collages, as well as Bob Brooks' photographs, can both be viewed as cultural artifacts — artifacts that Newfoundlanders still reflect on to affirm their resiliency in times of contemporary hardship.



FIG. 06 *Children watching a house leave the bay at Silver Fox Island, Newfoundland.*

This scan of a collage comprised of 3 layers of acrylic aims to highlight and understand the forces at work in the image - physical and political. The image is of a government official discussing strategies of relocation from Silver Fox Island to the Town of Dover.

In work conducted thus far, the horizon has been used as a datum line. Vectors of movement are highlighted by dashed lines showing the trajectory of the boat, house and the stones the children are throwing. A plimsoll line* appears in many drawings as a symbol and measure of buoyancy. The unlabeled floor level markers begin to speculate on the homes floor levels.

* A *Plimsoll line* is a reference mark located on a ship's hull that indicates the maximum depth to which the vessel may be safely immersed when loaded with cargo.

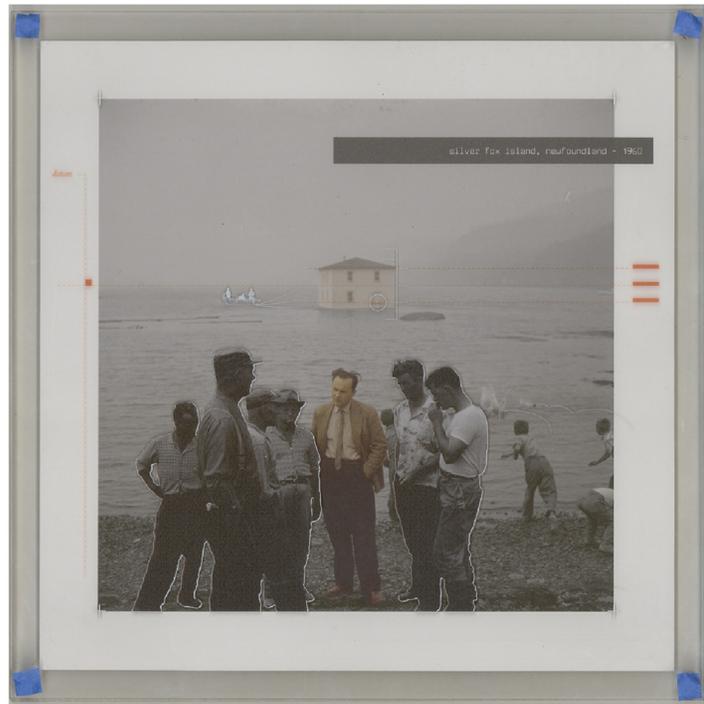


FIG. 07



FIG. 08

In the second collage, the same house leaving the bay in the previous image is now seen being towed in the open ocean on its way to its new location of Dover. This image emphasizes the resilience of the men towing the home and speculates on what may be happening underneath the water in terms of a flotation device. Again, a faint plimsoll line appears on the home to reflect on the phenomenon of its buoyancy.

1.3: NEWFOUNDLAND'S COASTAL INDUSTRIES

Newfoundlanders have largely resided in and around the coastal edge, relying on the sea for sustenance. It was fish, in large part, that dictated the pattern of settlement on the island of Newfoundland. The rich shoals of the island's waters provided Indigenous communities, Vikings, Europeans and, until recently, Newfoundlanders themselves, with an abundance of cod; the likes of which had never been seen before. In the 19th century, the coastal communities of Newfoundland relied almost entirely on its fishery, becoming the world's largest exporter of salt cod.¹⁰

Industrialization, at the turn of the century, resulting in a drastic change to the landscape of the traditional fishing industry. Trawlers, freezing technologies, and a diversifying economy meant that residents of Newfoundland no longer needed to live in close proximity to fishing grounds. As fishing technology became increasingly sophisticated, the pressure on dwindling cod stocks increased. New boats could now fish further from the shore and for multiple days at a time. Using large trawling nets, enormous amounts of codfish were being removed from Newfoundland waters.¹¹ This resulted in one of the most significant events in Newfoundland's history: the 1992 cod moratorium.*



FIG. 09 *A trawler on the Grand Banks of Newfoundland, 1949,*

* On 2 July 1992, the Canadian government imposed a moratorium on the Northern cod fishery along the country's east coast. Decades of over-fishing had severely depleted cod stocks and government officials hoped the moratorium would allow the species to rebuild.

Today, the fishing industry is significantly reduced, and in 2015, accounted for only 1.2% of Newfoundland's GDP.¹² The viability of the fishery has suffered drastically in recent years, and as a result, present-day Newfoundland is dependent on the sea now in a new way - through the extraction and exploration of offshore oil. Industries associated with petroleum extraction are currently the primary drivers of the Newfoundland economy. Today, the various infrastructures and transportation systems associated with moving people and goods back and forth to offshore oil platforms engages the coastal edge and the ocean on a daily basis.

Newfoundland remains unconnected to the Canadian mainland, except through the sea. As a result, ferry services that carry people, goods, and materials to and from the island, are paramount to the island's residents. One of the constraints that limit this is the ferry itself – cargo is determined by the dimensions and carrying capacity of the ferry fleet. Additionally, rough seas or mechanical issues with ferry infrastructure raise difficult questions for survival on the island. Challenging agricultural and growing conditions force Newfoundland to import the majority of its produce. When the ferries stop running, so too do the fresh fruits and vegetables which has, at many times in Newfoundland's history, created dire shortages in the province.¹³ Moving across the ocean, through bays and tides, shoals and lagoons – or being prevented from doing so – is a historical constant.



FIG. 10 *The Hebron offshore oil platform surrounded by support vessels at Bull Arm, Newfoundland.*

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- 12 Government of Newfoundland and Labrador. "The Economy 2017." St. John's, Newfoundland and Labrador, Canada, 2017.
- 13 Taylor, Rocky S. "Ice-related Disruptions to Ferry Services in Eastern Canada: Prevention and Consequence Mitigation Strategies." *Transportation research procedia* 25 (2017): 279-290.

part 2 | STASIS AND FLUIDITY:
EXPERIENCING THE COAST

2.1: UNDERSTANDING THE EDGE

To understand the coastal edge condition, one must look beyond physical geographies and meteorological data. The coastline is the product of numerous circumstances that, at times, simply escapes our science. One should, rather, also view and come to know the coastline at a human scale and recognize it as a material construct of numerous inputs: social, physical and phenomenological.

Anna Ryan is an architect and cultural geographer at the University of Limerick in Ireland. Her text, *Where Land Meets Sea: Coastal Explorations of Landscape, Representation, and Spatial Experience*, was important in helping establish a thesis methodology on how to engage the coast. Rather than the imposition of scientific order - such as historical coastal cartographies, or purely empirical sciences – Ryan argues that landscape must be understood at a human scale. By qualitatively experiencing the coastal condition, one recognizes phenomena that are lost in the static nature of maps and empirical imagery. At the human scale, the sounds, smells, fluidity and activities of the coastal edge begin to reveal themselves in unexpected ways.

In acknowledging that humans are essential to place making, Ryan suggests that a multi-faceted approach, at the scale of the individual, is necessary to fully engage and understand the coast as a landscape. In doing so, the coast becomes an active event of participation; an event of scientific measurement, economic contention, and a protagonist in the emergence of cultural identity.⁰¹

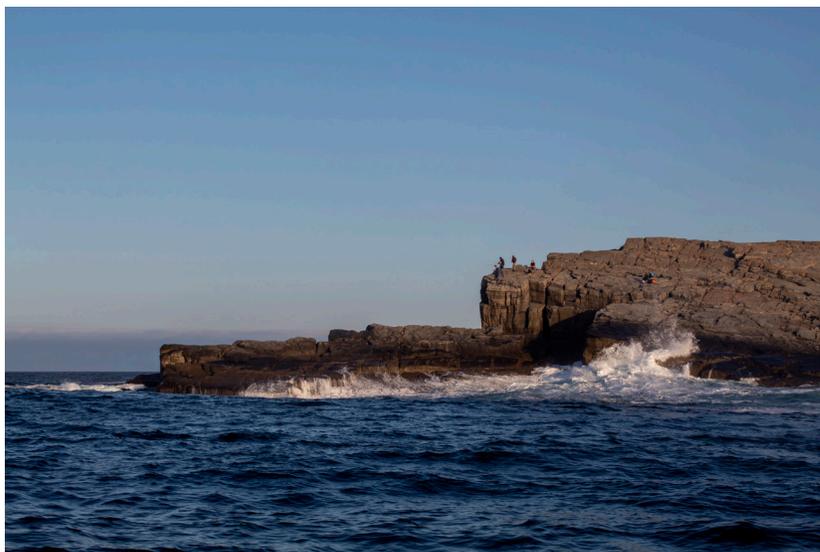


FIG. 11 *Local residents fishing for cod in Flatrock, Newfoundland.*

"The first encounter I focus on is that between the participants and their surroundings, both human and more-than-human; the second is that between the participants' communications of spatial experience and those of the philosophers; while the third encounter is that between the visual image and the more-than-visual nature of the [coastal] experience."

- Dr. Anna Ryan

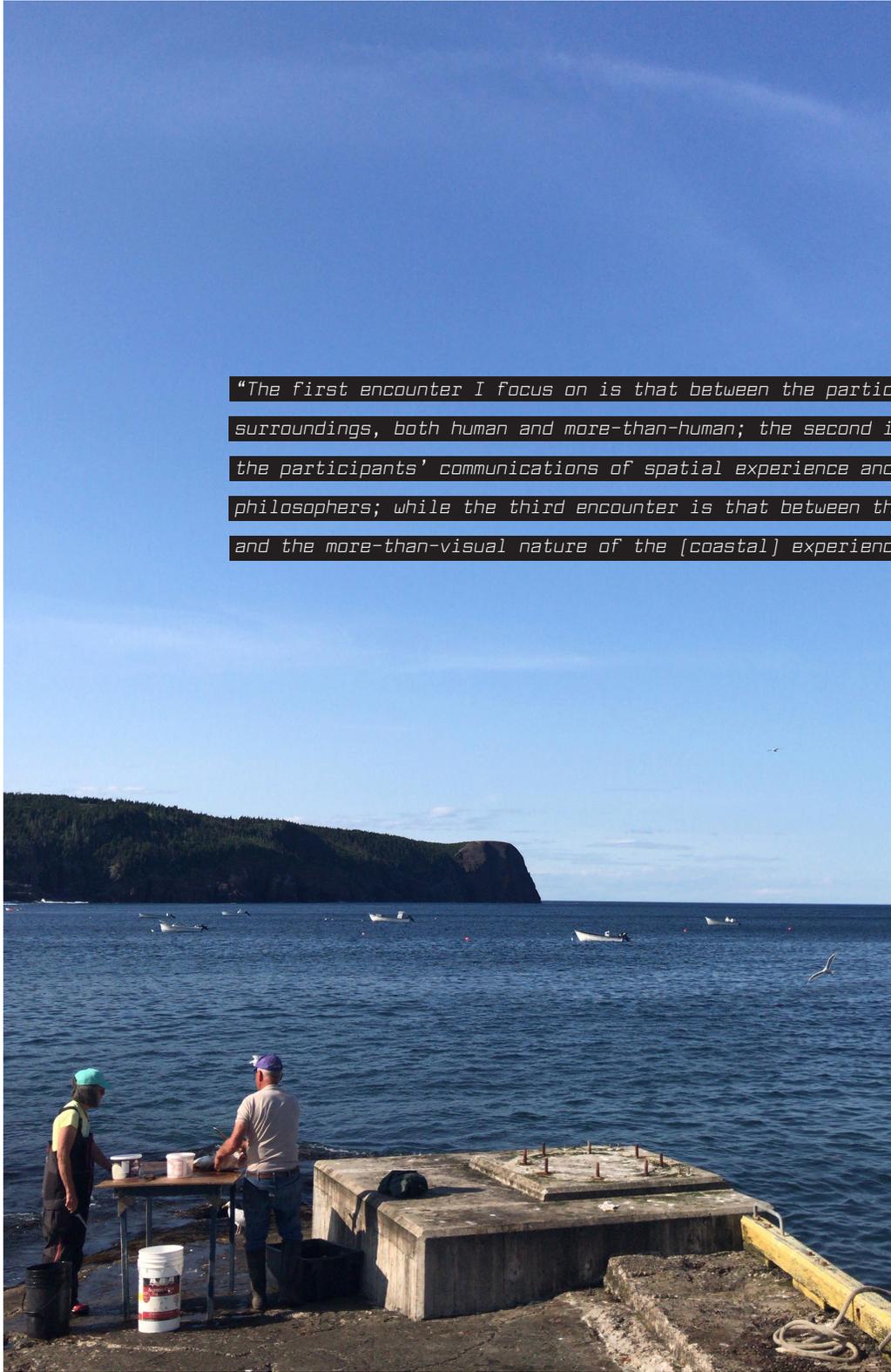


FIG. 12 Cleaning cod in Flatrock, Newfoundland.

2.2: UNDERSTANDING THE EDGE

In the summer of 2019, I developed a daily ritual inspired by Anna Ryan and a related literature survey. What unfolded was a critical practice of investigating, exploring, and taking-in. This was conducted via a month-long study of the coastal edge of a small coastal community known as Flatrock, approximately 20km outside of St. John's, Newfoundland.

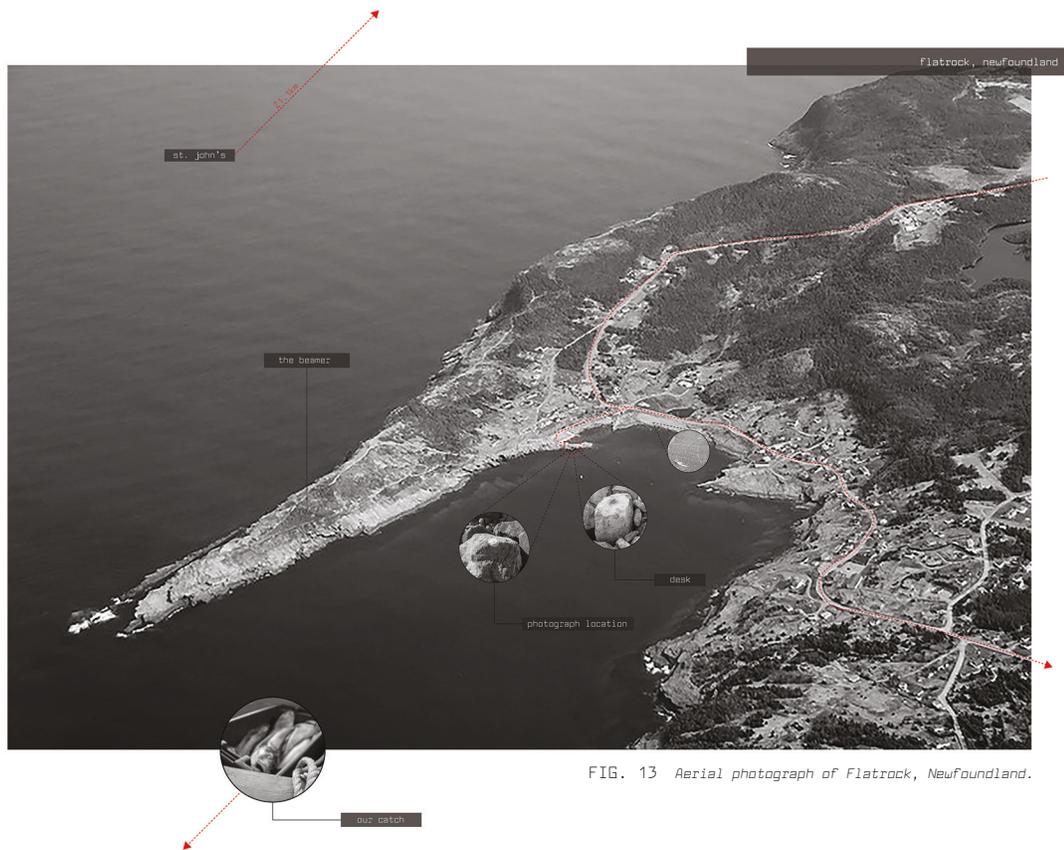


FIG. 13 Aerial photograph of Flatrock, Newfoundland.

During the month of August, I took 27 photographs, over 27 days, always from the same vantage point of the seascape as it appeared from the defensive breakwater of Flatrock's harbour. This experimental study aimed to highlight the dynamic nature of the coast. A documentation of landscape, interconnected ecologies, and climate was an attempt to understand and represent the daily changes in the ocean's physical characteristics as well as its anthropogenic and non-human actors.

To supplement the camera and its photographic records, the study included regular reflections and field notes of observations [see appendix 2] from the site each day. These observations were wide-ranging and included multiple inputs; from sensory experiences to imagined evocations. This daily practice would happen at 5:00pm every evening. On weekdays, I would depart for Flatrock from my place of work in the west end of St. John's, and on the weekends, from my home in the downtown core.



FIG. 14 Daily practice at Flatrock, Newfoundland.

2.3: REALIZATIONS : BETWEEN TWO BOUNDARIES

Among the results of this experimental practice was the layered drawing shown in *Figure 15*. The backdrop in the center of the image is a chronological compilation of a sliver of each individual day in Flatrock. These slivers create a new scene, compiled of sections from each day's visit. In the image, one sees the high degree of variance in the coastal condition on a day- to- day basis. Color, waves, wildlife and human activity is never the same – the only constant is the horizon. The portion of land that breaks the horizon line is known by local fishermen as “the beamer,” a beautiful piece of bedrock with a near perfect slope into the seascape, where it then disappears under the water.

The horizon line became a datum through which the activity of air and sea could be investigated further. In each image, the individual horizon of the documented day appears chronologically from top to bottom, on the bottom-left side of the image. On the fifth day, a small boat can be seen on its way out of the harbour. During August, the recreational cod fishery was active, and there were many small vessels in the harbour that would occasionally make their way out of the bay in search of fish. I call out these boat typologies to help link human movement on the water's surface and to emphasize how the fishermen's boat enables their inhabitation of the horizon. Each boat type is scaled relative to their size, which has a direct correlation to how far from the coastal edge each vessel can venture.

The sea is depicted on the bottom-right side of the image. These photographs isolate and thus highlight the dynamic surface of the water surfaces dynamic nature. This exercise clearly shows the variance of the seascape as it is never the same on any two days.

Passing through the center of the image are the minimum, maximum and average tides for Flatrock. The tides create algal marks on infrastructure and the things that inhabit this area are constantly in motion. The average tide is drawn deliberately orthogonally to question the dynamic nature of the tide. Tides are perceived as fluid, but the straight lines of the mean-tide question whether there is a moment of stillness – however brief – at the peaks and valleys of the tide's sinusoidal rhythm.

30 days in flatrock

This site study captures the dynamism of the coastal seascape in Flatrock, Newfoundland. A photograph was taken at the same time of day for 30 consecutive days in an effort to render the flux of the coastal condition; no two days being the same. Three datums were then extracted from this photographic exploration; the sky, the horizon and the sea.

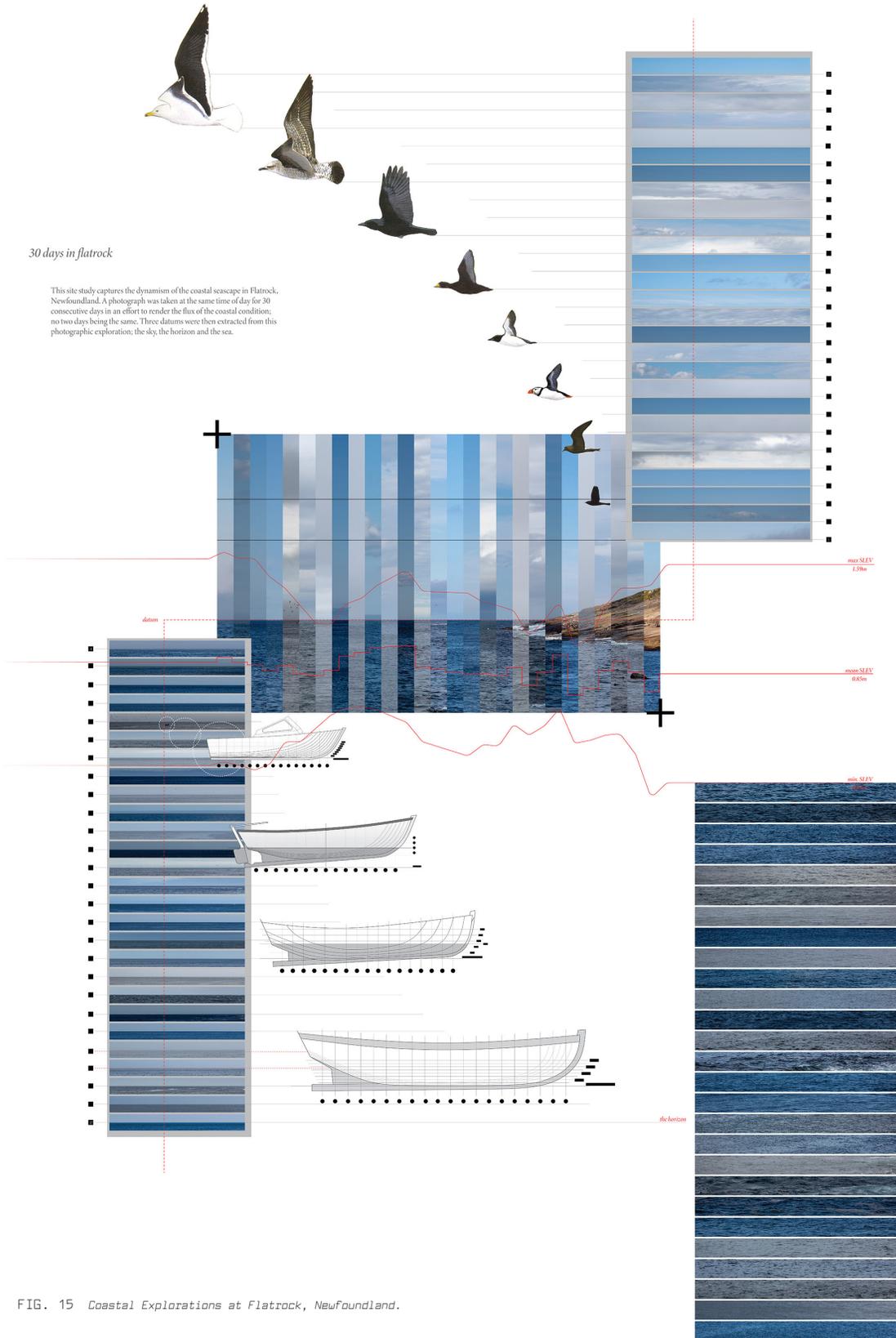


FIG. 15 Coastal Explorations at Flatrock, Newfoundland.

Each image of the sky has been extracted and placed to the left of the composition. Unlike the horizon and sea surface, this reads chronologically from bottom to top. The birds are representative of the species observed in Flatrock and are scaled in proportion to one another: the black bird is the smallest and the Atlantic gull, the largest. The birds are the vectors of movement that inhabit the sky, but also the surface of the sea below, tethered as they are to air, land and water.

Visiting the coastline and documenting it in this way was especially revealing. The coastal edge is often viewed as a hard, cartographic line. Upon visiting Flatrock, however, and with this creative experiment as a guide, I realized the degree to which the coast is a landscape in constant flux and with a constantly changing edge. As my practice went on, I began to know the area intimately, noticing the changing locations of birds, fishing vessels and fishing nets. Smells and soundscapes became more apparent and more in my consciousness. I began to know the local fishermen – so much so that on August 17th, I was invited to go cod fishing with a man and his son. The ensuing relationship I formed with the coastal edge of Flatrock and the people and things that engage with it daily, is an experience that no empirical data could provide me with. This method of research provides a robust comprehension of place that could not be otherwise achieved.



FIG. 16 *Cod fishing with Kevin and Dave Parsons.*

ENDNOTES - PART TWO

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part 3 | NEWFOUNDLAND'S COASTAL EDGE
IN A CHANGING CLIMATE

3.1: GEOGRAPHIES OF VULNERABILITY

The term “Atlantic Canada” was added to the national lexicon in 1949 to describe Canada’s east coast provinces to include Newfoundland and Labrador. This term was coined by the first premier of Newfoundland, Joseph R. Smallwood, who recognized that Canada’s newest province was culturally different from its eastern Canadian counterparts of New Brunswick, Prince Edward Island, and Nova Scotia - “The Maritimes”.⁰¹ The dissimilarities between Newfoundland and the Maritimes are not only apparent in their respective cultural landscapes, but in their physical landscapes as well.

The varying geomorphology of the Canadian provinces carries with it a vulnerability or resiliency to the coastal effects of climate change. The coastal geomorphology of the Maritime Provinces is comprised predominantly of a glacial till veneer with some exposed bedrock on the Northeast coast of Nova Scotia. Conversely, the island of Newfoundland is demarcated by its irregular, bedrock coastline with some areas of coastal glacial till on its West and Southeast coast. The materiality of a coast determines its ability to stand firm against the encroaching seascape and avoid retreating into itself. For example, a coastline comprised of sand or silt is more susceptible to coastal erosion than that of exposed bedrock.⁰²

Vertical gradients of the coast play a major role in a locale’s ability to attenuate a rising sea. Shorelines with an abrupt slope and maximum elevations well above the current sea level are less susceptible to the implications of a changing climate than coastal regions with little topographic relief. In this regard, the Northeast coast of Newfoundland is poorly equipped to deal with sea-level rise.

Plate tectonics and other geological process also play a pivotal role in mitigating the encroaching seascape. There are three major geological mechanisms acting on the topography of Newfoundland. The first is uplift. Uplift is the blanket term used to describe the rising of the earth’s crust. It occurs as a result of crustal thickening or the bending of the earth’s lithosphere* as a result of tectonic plate convergence and delineates any process unrelated to isostatic rebound. Isostatic rebound is a specific form of uplift in which the earth’s crust responds to the absence of a former glacier. The weight of the once present glacier forces the topography into a state of compression. Once the glacier subsides, the earth’s crust slowly returns to its pre-glaciated state. Some of the island of Newfoundland was covered by the Laurentian Ice Sheet during the Wisconsinian glacial stage ~75,000 to 62,000 years ago and is still in a state of isostatic rebound from that event.

* Lithosphere /liTHəʃfɪr/: The rigid outer part of the earth, consisting of the crust and upper mantle.

The final geological mechanism affecting Newfoundland is subsidence: the gradual sinking or settling of the earth's crust. Subsidence can be caused by anthropogenic and/or "natural" external forces. The various geological processes acting on a coastal site impact the actualized sea level rise relative to the current position of the coastal topography. A location's morphology will change at a determinable rate as a result of some combination of these processes. This must be accounted for and compared against current sea level rise projections to determine the true vulnerability of that site. To contextualize this, a site experiencing both uplift and isostatic rebound will be better equipped to handle a rising sea than an area in a state of subsidence. Excluding some of the Northwest, that is experiencing uplift, the Island of Newfoundland is predominantly in a state of subsidence. These conditions must be addressed when speculating on a coastal future for this region.⁰³

The coast cannot be contextualized as a dynamic environment without an understanding of the oceanic tides acting upon it, particularly their *ranges*. Tidal range refers to the difference between the sea at its maximum height and the sea at its minimum height. A coastline with a substantial tidal range will experience large volumes of water rushing toward it and thus, an increase in wave intervals and magnitude. Another important tidal event to consider is the tidal cycle: how often a coastal location experiences high and low tide over the course of a lunar day [~24hrs, 50mins]. Newfoundland is affected both by diurnal and semi-diurnal tides. A diurnal tide is characterized by one period of high tide and one period of low tide over the course of a lunar day. A semi-diurnal tide experiences two high and two low tides over the course of a lunar day. The combination of these two tidal systems creates many unique and site-specific coastal conditions throughout the island of Newfoundland.⁰⁴



FIG. 17 Wreckage from a tsunami that struck the Burin Peninsula of Newfoundland in 1929.

The ability for a coastline to attenuate wave energy is paramount to its viability as an inhabitable place. The force at which waves impact the surface material of the shore is the primary factor of volatility at the coastal edge. This force is controlled by tides, currents, wind energy and temperature and is at its strongest when a storm event is paralleled by a rising tide. Natural coastal defense systems that aid in mitigating wave energy include bathymetric complexity, coastal shape and shoreline materiality. Bathymetric complexity refers to irregularities in the sea floor as it transitions to the shoreline. Bumps or short areas of increased seafloor height dissipate the energy of waves before they reach the coastline. Complexity can be provided in the form of geological material or can be grown by an ecological process, such as a reef. The shape of coastal topography also plays an important role in either dissipating or exasperating wave energy. For example, the presence of headlands helps to reverberate offshore wave energy and minimize the impact of waves deeper in the embayment they create. Materiality factors into the equation for its ability to either absorb or reverberate energy. The bedrock headlands of southern Newfoundland are poor at absorbing energy, thus impacting waves reverberate and create zones of high energy.⁰⁵



FIG. 1B Severe coastal erosion from storm surge at Trout River, Newfoundland. 2018.

3.2: NEWFOUNDLAND AND SEASCAPE FUTURES

In studying the existing climate change data for 2100 for the east coast of Canada, I speculate on what a coastal climate change future may look like for the island of Newfoundland. *Figure 19* is a series of layered substrate drawings. The bottom layer is comprised of an 1853 map of Atlantic Canada created by Henry F. Perley and Israel D. Andrews for the 20th United States Secretary of the Treasury, the Honorable Thomas Corwin. This extensively detailed map depicts the Atlantic coast as documented by these early explorers and was used as an artifact of historical cartography which was then layered with modern vector information. The juxtapositions in this image question how much map-making and the coast has changed from the 19th century until the present day, which begs the question: In a time of increasing sea level change, how too will the cartographic representations of the coastal edge change?



FIG. 19 Multi-layered substrate map of Atlantic Canada, printed on acrylic sheets.

The layers that “float” above the historical document highlight the movements of the coast, depicting it as a highly dynamic landscape of human construction. Marine traffic vectors for 2018, tidal patterns, Newfoundland light house locations, and the projected sea level rise for 2100 are substrate printed on a series of acrylic layers. The layering creates informational depths that aid in communicating the complexity of the coast in a way that a flattened drawing could not. The notation for sea level rise consists of a ‘plus’ symbol that acts as a locational marker followed by a dashed circle that can be read from a line protruding out at 45 degrees. This line is marked with average sea levels in centimeters, where the circle intersects this line is the projected sea level rise for that location. The label “2101” deliberately covers the date of the historical map to encourage a speculation on what may happen after the climate data milestone 2100 and to further provoke the framed historicity of the map.

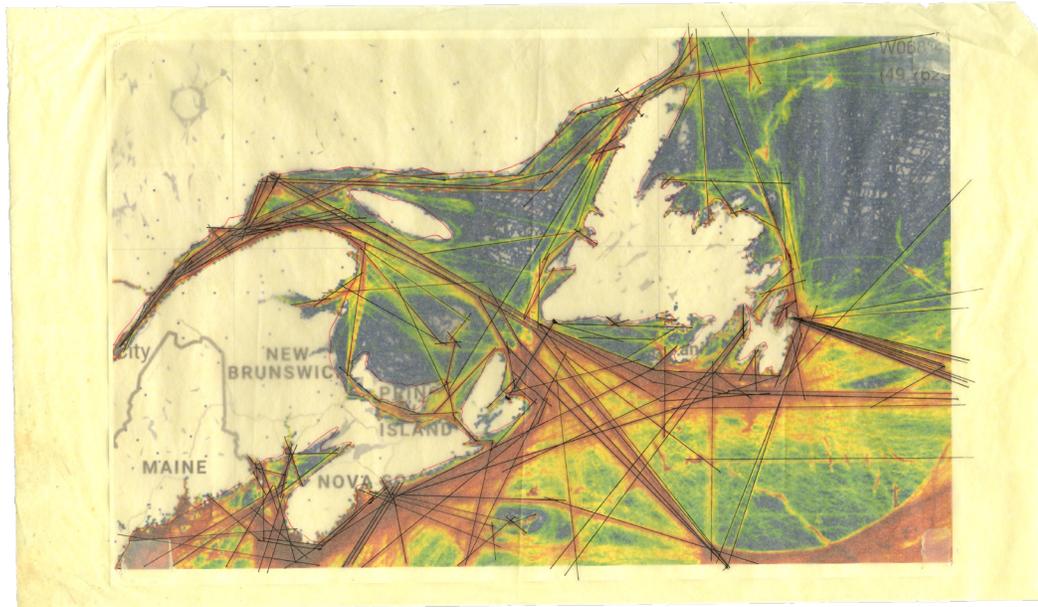


FIG. 20 Process sketch of the marine vectors of Atlantic Canada.

Certain locations on the island will experience a higher level of threat from the encroaching sea than others. As discussed in the previous section, rising sea levels threaten a host of culturally and historically significant heritage sites. It became clear that as a result of Newfoundland’s historic coastal settlement pattern, these significant archaeological sites that contain ties to several cultures are under imminent threat due to the effects of climate change.⁰⁶

ENDNOTES - PART THREE

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part 4 | LIQUID FUTURES

4.1: 2101: THE OIL RIG AND THE ARCHEOLOGIST

As outlined in the previous sections, valuable cultural artifacts and archeological sites are, for the most part, scattered around the coastal edge of Newfoundland. Two such sites are designated as UNESCO world heritage sites: L'Anse aux Meadows, a Viking settlement on the Northern Peninsula of Newfoundland and Mistaken Point, the location of the oldest known fossils in the world. Many of the coastal artifacts in Newfoundland are under the immediate threat of being lost to a rising sea.⁰¹ The physical geography of these locations carries with them an inherent ability, or inability, to attenuate rising water. During the earlier stages of the research I was struck by the dichotomy between Newfoundland's reliance on the coastline for cultural identity and the recent boom in the pursuit of offshore oil in its waters. What is curious about this relationship is the hypocrisy that lies in extracting a resource that is fundamental to the climate crisis and to sea level rise, all the while relying on the sea as a crucial proponent in contributing to the Island's sense of place and its very nature. The extraction of liquid oil from beneath the earth's crust is contributing to the rising sea, and, as a result, is threatening cultural artifacts that are crucial to the history of Newfoundland and the world.

Figure 21 is a mapping exercise that overlays Newfoundland's current oil landscape with the threatened coastal archaeologies of the Island. Displayed in a red hatch are the areas that the government of Newfoundland and Labrador has opened for bids of exploration. The fields are denoted by thick, red, dashed lines and labeled with their activity level. Solid hatches and tight 45° hatches indicate active sites or sites that have been previously active. The black lines connecting active oil sites to the island represent ports actively involved in oil extraction. These lines represent the connections of the island and the oil via marine and air transportation.

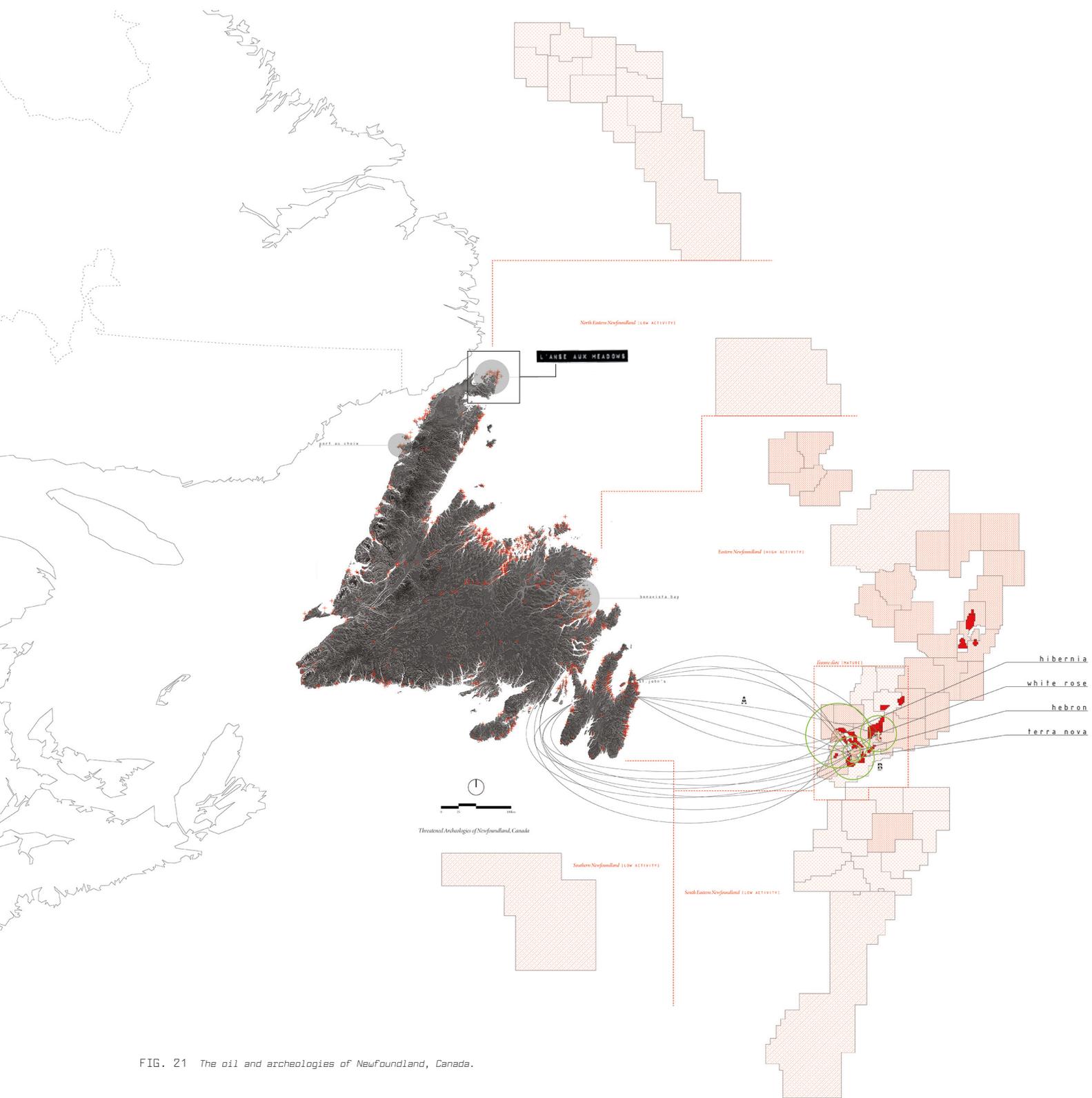


FIG. 21 The oil and archeologies of Newfoundland, Canada.

In *Figure 22* we see a magnified version of the Jeanne D'arc Basin. This area currently holds working oil rigs and is the most active of the current extraction zones. Oil-Rig locations are marked with a 'plus' sign and the off-set circle represents how many barrels of oil each rig produces annually. In 2018, the numbers were as follows:

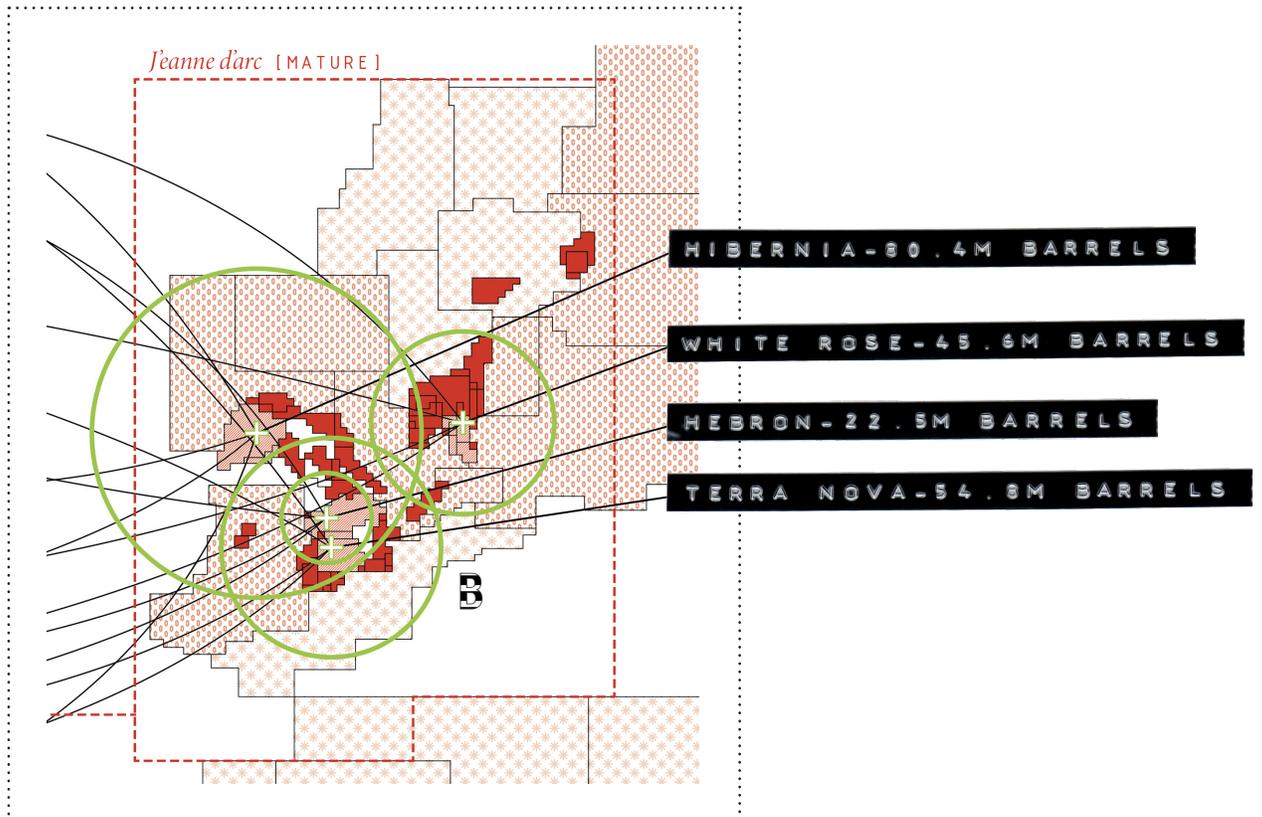


FIG. 22 The Jeanne d'Arc Basin and its oil rigs.

For the island of Newfoundland, the archeologist and the oil rig worker possess unusual parallels and profound dissimilarities. The commonalities of these seemingly antithetical entities lie in their destructive nature, their precision and their rigor. Oil extraction is more synonymous with destruction than that of an archeological dig but the discipline of archeology has recognized in itself the destructive nature of its relentless pursuit of heritage and history. Archeological digs can employ methods of excavation that fundamentally alter the landscape of their sites, forever limiting the interpretation of the landscape to the moments before the unearthing of its possible artifacts. This is a destructive act but considered necessary in order to read the histories of the site, to preserve, and to help memory endure.⁰²

Archeological excavation and oil extraction rely heavily on a grid system for categorizing artifacts and oil fields. In archeology, the grid is used to identify, record, and give order. Similarly, in offshore oil exploration, the grid is used to record areas of the seafloor that have been seismically surveyed and those that have not. This exactness provides a coordinate system that documents the location of viable oil reservoirs as well as their size.

Though the two disciplines' motivations are seemingly incompatible, their connections are revealed in their thoroughness. The archeologist leaves no stone unturned in their persistence to unearth a piece of forgotten culture or unknown biology. Similarly, the oil rig extracts every drop of oil from a reservoir in its pursuit of capital gain.⁰³

It is through the examination of archeological dogma and the motives behind oil-extraction that the two practices begin to diverge. Archeology (ideally) recognizes and aims to mitigate its destruction in the pursuit of new knowledge gained through the discovery and unearthing of artifacts and fossils. While its politics may be contested, and at times weaponized; in its noblest sense, archeology is a positive pursuit that aims to uncover historical knowledge of the earth, trapped within its crust, or below its waters.

Conversely, the extraction of oil is a pursuit based on ever increasing social, technologic and economic demands nurtured by petro-chemical desires. This desire for economic gain through the extraction of oil is so powerful that it largely continues and expands. This is the case in Newfoundland, despite glaring scientific evidence of the harm that these extractive processes are causing the planet. The oil industries' motivation may be perceived as selfish in nature as it works to advance those involved in the industry while harming the planet and jeopardizing future generations.

There is also a scalar difference to consider. The archeologist is [usually] confined to a small geographic area with a measurable impact on the earth, further constrained by their grid of exploration. In contrast, the scale of the oil rig knows no bounds. Its impact can present as an offshore oil spill, both localized and transient in nature, or manifest itself in the form of greenhouse gas emissions, that have a global impact.



FIG. 23 Scan of a composite drawing speculating on the future of the coastal archaeologist.

Figure 23 is a scan of a composite collage. This image is a speculation on a coastal archeological dig in a climate change future. It depicts an archeological dig site, operating below the sea-level. The archeologists in the image conduct their research behind the security of a salvaged sheet-piling system that holds back an ever encroaching sea. The archeologists have descended into their dig site from their floating research station. In this image, the research station is shown in the form of a typical vernacular, Newfoundland home. The stratified soil descends vertically and represents the artifacts encapsulated in the earth's crust which the archeologists seek to uncover.

A datum line, drawn in red, communicates a new horizon line created by the rising ocean. The ground that was formerly above sea level is denoted by “-1”, noting an earth previously occupied by a historical culture and the area of the archeologist's interest. Lastly, “-2” represents the area below the earth's crust, containing the geological strata that is thought to hold valuable cultural artifacts.

An abundance of white lines connect the intersections of the archeological grid, emphasizing the complexities of an active archeological site. What culminates is the realization that the dig site is a scalar network encapsulating the past and present in a [typically] vertical pursuit of culture. The theme of network and reticulation has revealed itself through multiple practices carried out over the course of this thesis. These networks have revealed themselves at multiple scales - from the scale of the archeological dig, depicted in this collage, to the inhuman scale of global climate change. This particular collage recognizes the archeological dig site as a micro-network organized into a horizontal grid. The horizontality of this grid is juxtaposed by archaeology's often vertical nature as it excavates deeper into the earth, as well as the vertical nature of the rising sea.



FIG. 24 Scan of a composite drawing speculating on the future of Newfoundland's offshore oil rigs.

Figure 24 shows an offshore oil platform that has washed up on a rocky coastline resembling the coastal edge of Newfoundland. This image imagines a future in which humanity has surpassed its reliance on fossil fuels as an energy source. In this alternative energy future, Newfoundland's offshore oil rigs have been abandoned. This platform has been released from its gravity-based structure that once connected it to the sea floor and has drifted to the shoreline. This journey is represented by the vector lines that extend from the rig out to the horizon line. The rig is portrayed as a decaying historical, cultural, and industrial artifact that is falling apart before the eyes of the viewer to the right.

In contrast to the previous collage, *Figure 24* addresses a network of a much larger scale. The translucent ribbon or pathway that sweeps across the coastline represents the connectedness of this artifact to a larger infrastructure of decommissioned oil sites on Newfoundland's coastal edge. This network is then further emphasized by a grid that is overlaid on the surface of the ocean. This grid, a shared nature of the oil rig and the archeological dig, creates a sense of control that is juxtaposed with the sea's dynamic and unpredictable nature. This collage brings forth the proposition of displacing Newfoundland's oil rigs from the open ocean and bringing them within view of the coastline. The sheer magnitude of these extractive machines, decaying in plain sight, would present a stark reminder to future Newfoundlanders of a time of reckless environmental neglect. It is through this lens that the rusting oil rig becomes an Anti-Monument.

4.2: MONUMENT AND [ANTI]MONUMENT

Reflecting on the implications of the loss of cultural artifacts to sea level rise in Newfoundland, raises important questions of memory. How does one commemorate while simultaneously protecting the threatened coastal archaeology of the island? This thesis grapples with the dichotomy of oil and archeology: the first threatening the latter. It is through this relationship that the thesis engages with the idea of monument and anti-monument.

A key task of the monument is to remind. In modern society, commemoration is (often, though not always, of course) achieved through design, site, context, inscription, ornament, and detail. The monument provides a commentary on an event and editorializes the views of its creator to its observers. In this sense, a monument is a way an institution or society might honor and acknowledge an event, person, or thing. This acknowledgement manifests itself in an often, durable built form, to preserve a moment, so that it may be read and interpreted by future generations.⁰⁴

The idea of the anti-monument has been the subject of wide, interdisciplinary discourse. The antimonument can be broken into two major categories: those that attempt to challenge the traditional principles of monument design and those that are a direct critique or opposition to an already existing monument.⁰⁵ Strategies of anti-monumentalism often reject traditional forms and the literal approach to commemorating past events. Instead, they approach their subject matter with a vagueness and an openness that leaves their intention to the interpretation of the individual viewer.⁰⁶

Much of the literature surrounding the antimonument was born out of Germany as the country grappled with a means to acknowledge the atrocities of the Holocaust. This struggle uncovered the inherent challenges in remembering such a catastrophic event through an object that provokes a sense of reflection and introspection to a society, while avoiding a literal description of the horrific past events.⁰⁷ An example of a particularly successful antimonument is Jochen Gerz's and Esther Shalev-Gerz's Monument Against Fascism [1986-1996] in Hamburg, Germany.

This antimonument is a 12m high lead pillar, that encourages observers to etch writing into the soft metal in an attempt to visualize this societies' feelings toward fascism. A compelling aspect of this antimonument is its gradual lowering into the ground. This 'descending' not only allows the monument retreat into itself but provides access to blank areas of the lead column that were previously too high to reach. This particular example of antimonument surpassed its creators hopes and intentions. Instead of neat inscriptions of names, what unfolded was the defiling of the column with graffiti and drawings. The artists interpreted this as a mirror of the German society's struggle with the realities of formerly being a fascist nation.²⁴



FIG. 25 Monument at full height.



FIG. 26 Citizens etching on the receded monument

We invite the citizens of Harburg, and visitors to the town, to add their names here to ours. In doing so we commit ourselves to remain vigilant. As more and more names cover this 12 metre tall lead column, it will gradually be lowered into the ground. One day it will have disappeared completely, and the site of the Harburg monument against fascism will be empty. In the end it is only we ourselves who can rise up against injustice.

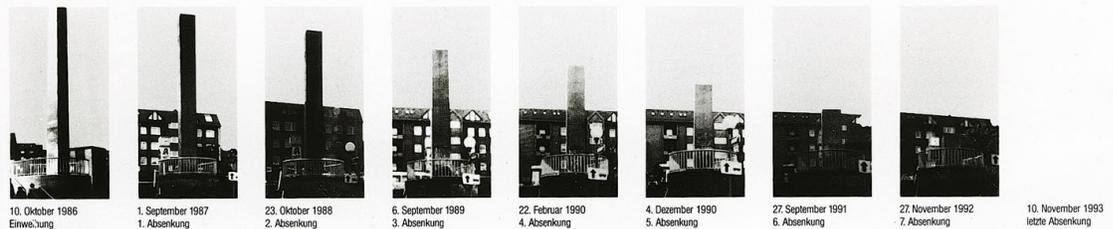


FIG. 27 Press release by Jochen Gerz and Esther Shalev-Gerz to defile their [anti]monument.

4.3: LIQUID FUTURES

The term “*liquid futures*” is used in this thesis to speculate on the effect that future sea level rise will have on the island of Newfoundland – and particularly as it pertains to threatened coastal archaeological sites. The idea of a liquid future, however, can also be interpreted metaphorically in the sense that the future of Newfoundland is not a static, straight line but something that is changing and has the ability to adapt [or succumb] to the uncertainties that the future holds. This thesis speculates on a possible future of coastal archeology in Newfoundland, Canada while highlighting the ironies of the negative impact the Newfoundland offshore oil industry has on these sites. It proposes that the sites of coastal archeology and the land lost to the rising sea be interpreted as *monument* and that the exploitative oil rig be viewed as an *antimonument*.

In recognizing the coastal archeological site as monument, this thesis explores on how this monumentality can be represented in an architectural intervention. This intervention must address the coastline in danger of being swallowed by the ocean while simultaneously safeguarding valuable cultural artifacts against a continually rising sea. This thesis proposes a commemorated and working, in-progress coastline, acknowledging a sea level of pre-resource exploitation while simultaneously acknowledging and safeguarding the cultural significance of the archeological site in question.

As previously outlined, the offshore oil rig, no longer in use in this speculative future, is treated as an antimonument or a counter-monument to the archeological site. The oilrig is detached from the base that tethers it to the sea floor and is moved to a location where it becomes visible from the coastal archeological dig. Once in view, the rig will be left to decay, affected by the coastal climate and by its strategic disassembly for materials to protect archeological resources. It serves as a stark reminder of both its antagonistic role in the threatening of Newfoundland’s cultural artifacts, and its protagonistic life as a material salvage yard.

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part 5 | CONTESTED TERRAINS

5.1: L'ANSE AUX MEADOWS

Located at 51°36'N and 55°32'W, on the tip of the Newfoundland's northern peninsula, is the small, coastal town of L'Anse aux Meadows. This town, together with nearby communities of Caplin Gulch, Spillars Cove, Noddy Bay, Little Quirpon, and Quirpon combine to form a census tract that accounts for 224 [living] souls as of 2016.⁰¹

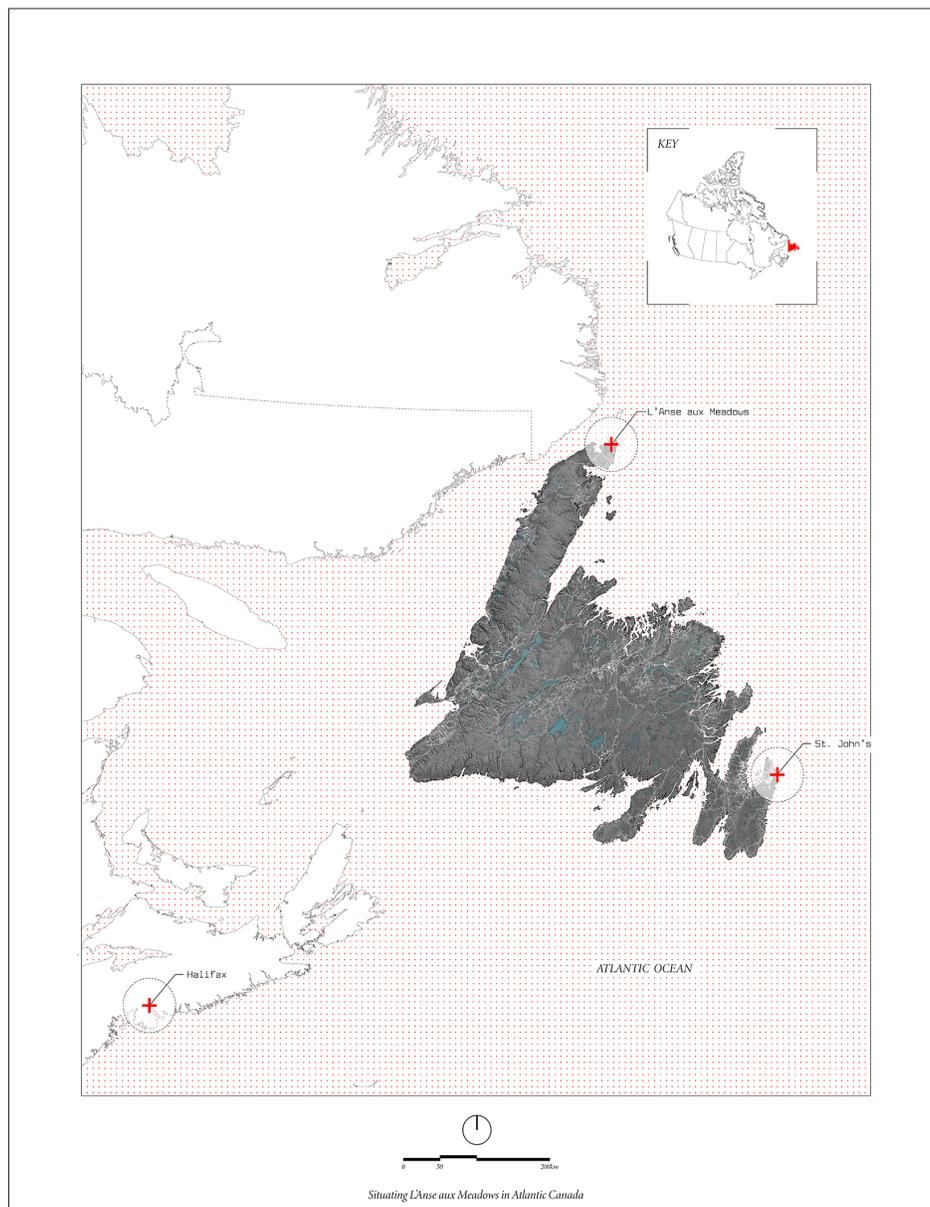


FIG. 2B A map showing the geographical location of the town of L'Anse aux Meadows, Newfoundland.

The local residents of L'Anse aux Meadows account for roughly an eighth of this demographic, many of whom are descendants of four prominent families that have occupied the area for years. These families are predominantly of British decent with the exception of the Andersons, who are descendants of a Norwegian who worked with the Hudson's Bay company.⁰² In modern history [pre 1960], local residents of this town engaged in various forms of the fishery and largely lived off of the land, crafting their own boats and building their own homes. This narrative of an isolated [and persistent] existence is common to all who have called L'Anse aux Meadows home. Over the course of prehistory, this area was occupied by the Dorset Palaeoeskimos, the Beothuck [autochthonous to the island of Newfoundland], and perhaps most famously, or most known, the Norse peoples.⁰³



FIG. 29 A monument to Leif Erikson, who is believed to be the first Norsemen to arrive on the shores of L'Anse aux Meadows. - L'Anse aux Meadows, 2016.

In 1960, Norwegian explorer Helge Ingstad and his wife, archeologist Anne Stine Ingstad, discovered the remains of a Viking settlement at L'Anse aux Meadows. For this couple, their discovery of the L'Anse aux Meadows archaeological site was the capstone of a lifelong mission to unveil the mystery behind the location of Vinland; a land described in many mythic Viking sagas including the Saga of the Greenlanders and the Saga of Erik the Red.



FIG. 30 Helge Ingstad examining an artifact at L'Anse aux Meadows.

The consequence of Ingstad's discovery was the designation of L'Anse aux Meadows as a UNESCO World Heritage Site in 1978 and the only authenticated Viking settlement in North America. Since its discovery, some 800 wood, bronze, and stone artifacts have been unearthed at the site. A particularly important artifact that led to the authentication of the site was a bronze pin, used to secure a cloak around the neck of a Norse person.⁰⁴



FIG. 31 Norse pin found at L'anse aux Meadows.

Figure 32 is a map that displays the extents of UNESCO landscape. Highlighted by a red polygon, the boundaries of the site cover an area of ~80m². This boundary was established at the time of the sites inception in September of 1978 to demarcate and protect areas of archaeological significance pertaining to the evidence of Norse settlement. The area in red can be seen bleeding into the topography of the site. This is done deliberately to highlight both the threat of sea-level rise and the inevitable change in the geometry of the shoreline at L'anse aux Meadows.

This image grapples with the inability to confine an ever-changing coastal edge within a cartographic boundary. The cartographic coastline, being an abstraction of immeasurable variables, is not as precise as one might think. This is an edge in constant flux, that, given current climate predictions, will be the site of dramatic change. This begs the question, how does one designate and manage an intangible line? A line that, if compromised, loses the precious artifacts that elevated the site to a location of international heritage significance.

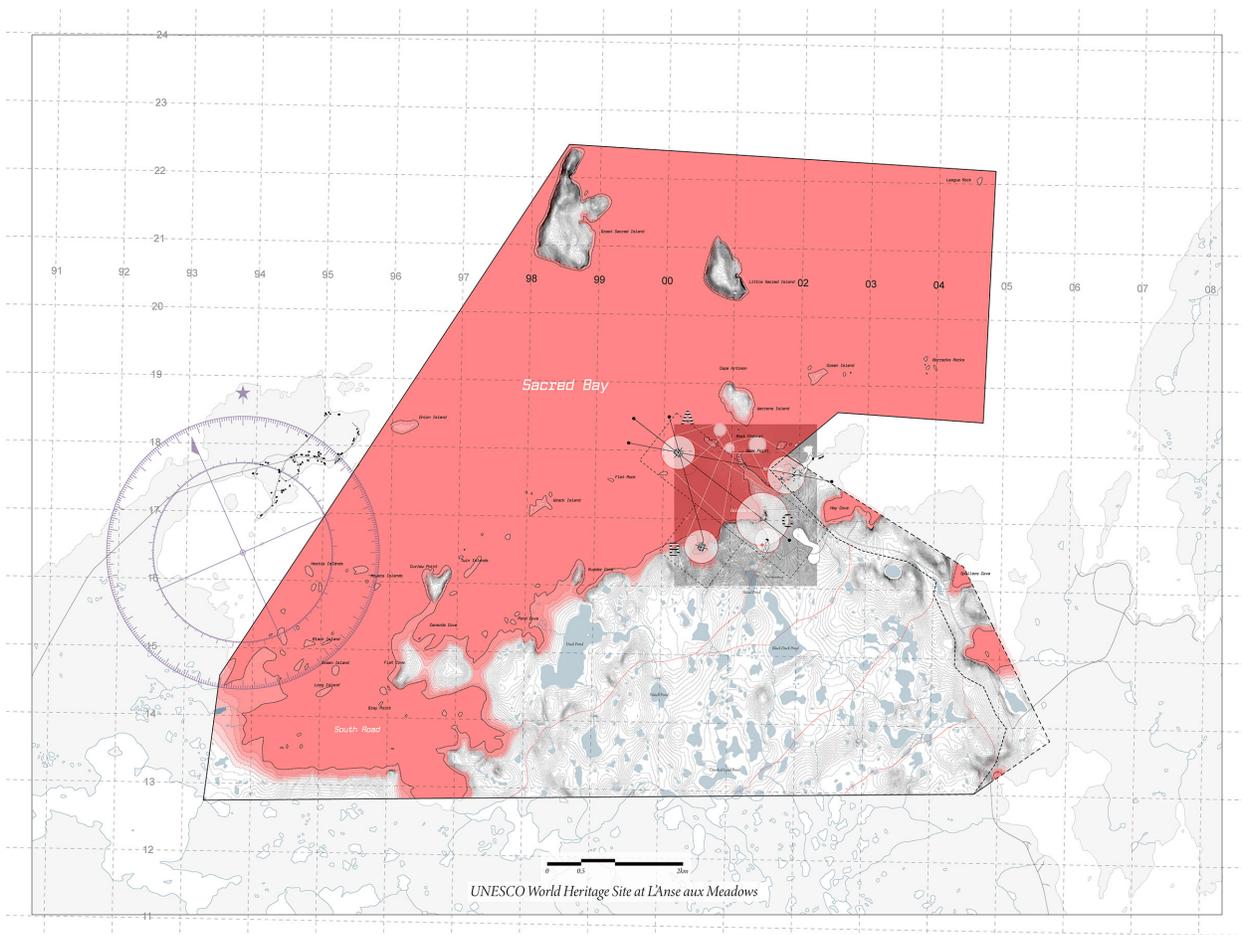


FIG. 32 The extents of the UNESCO world heritage site and an initial speculation on the augmented landscape of L'anse aux Meadows in the year 2101.

The physical landscape of L'anse aux Meadows is atypical when compared to Newfoundland's trademark rocky shores. The topography here is comprised of marine sediment and marshland with very little change in elevation from sea level.⁰⁵ The peat marsh that dominates the site was attractive to the early Norse explorers as it provided them with bog iron which they could smelt into nails and other tools. L'Anse aux Meadows experiences a maritime climate that is heavily influenced by the cold Labrador current. In winter months, this current often carries with it pack ice that fills up Islands Bay - the body of water adjacent to the current sites of archeological interest. This ice protects the coast from erosion when it is present, however it is becoming less and less prevalent as a result of climate change.

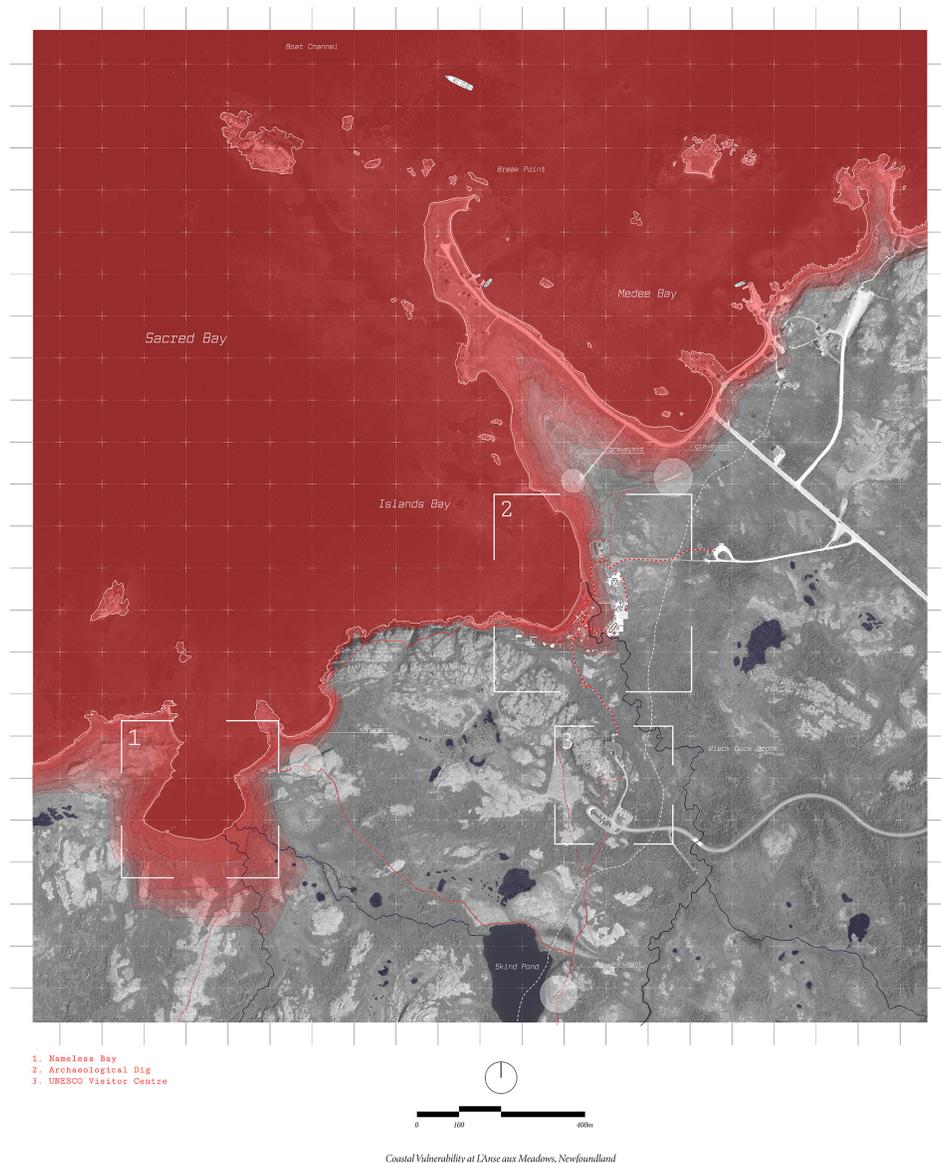


FIG. 33 Coastal vulnerability and key locations - L'Anse aux Meadows, Newfoundland.



FIG. 34 A rocky out crop near the UNESCO visitors centre looks out over the recreated Norse buildings and seascape of L'Anse aux Meadows.



FIG. 35 Norse buldings recreated based on archeaological findings at L'Anse aux Meadows.



FIG. 36 The foundation of an authenticated Norse building at L'Anse aux Meadows.

The natural landscape of L'Anse aux Meadows offers little defense against the coastal effects of climate change. The areas of previous and current excavation are located on a fen just meters from the coastal edge of Islands Bay, only slightly above sea level. The archeological excavation sites of L'Anse aux Meadows are amongst the most threatened by coastal climate change on the island of Newfoundland.⁰⁶



FIG. 37 Examining the unique patterns of excavation at L'Anse aux Meadows.

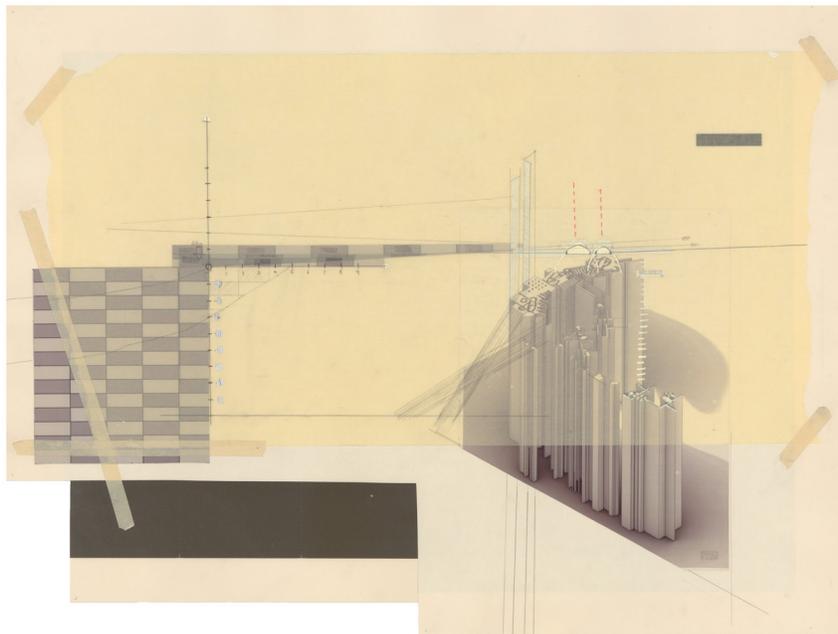


FIG. 38 Sectional explorations at L'Anse aux Meadows.

In speculating on the future of this site in 2101, one can imagine these archaeologies of international importance being swallowed by the sea. In this future, the coastal edge of L'Anse aux Meadows will experience intensified storm surge, coastal erosion, and a reduction in sea ice protection. As previously outlined, these threats are further exacerbated by the lack of defense provided by the site's physical geography. This thesis proposes that we recognize the future of the oil rig as an obsolete infrastructure that altered our climate, seascapes, and way of life. This reimagination sees the oil rig as a tool for both the fortification of the current archeologies of the site while providing a way for future Newfoundlanders to engage with and learn about their history of resource extraction.

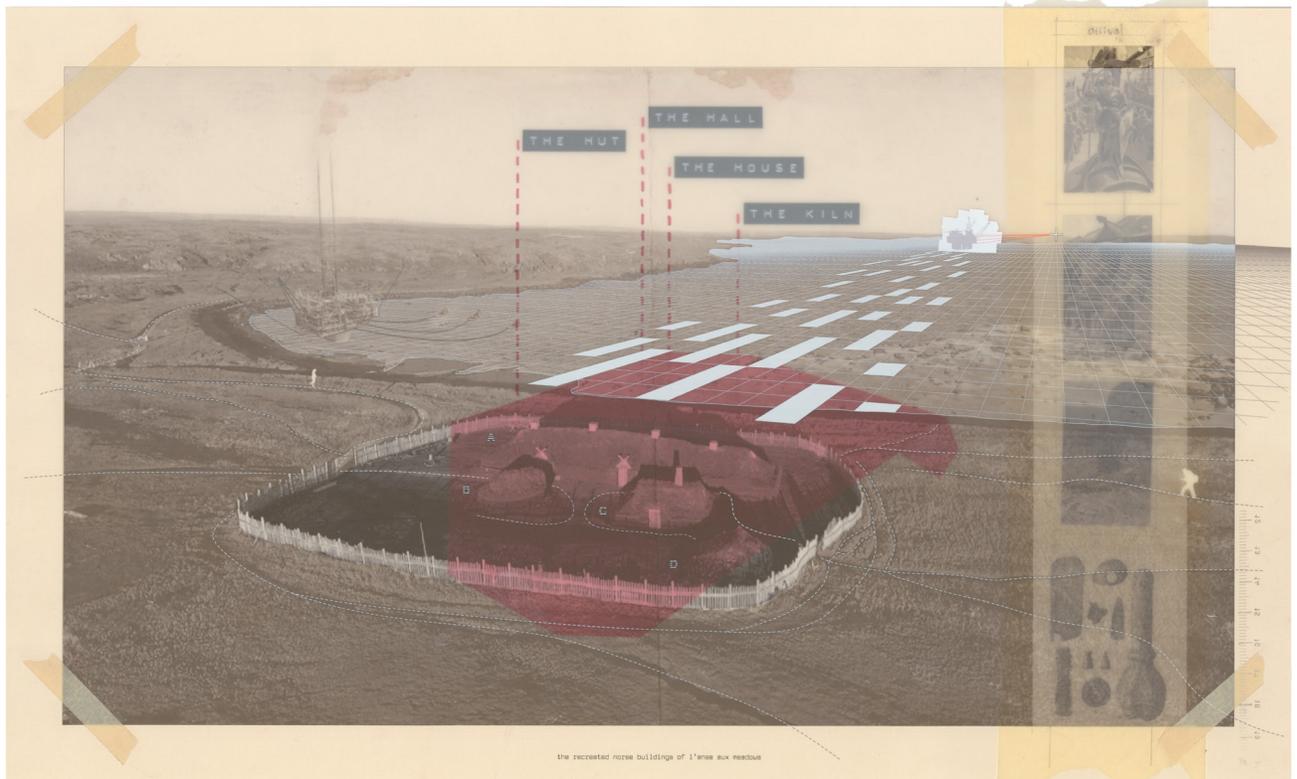


FIG. 39 A layered composite drawing of a speculative future in which the coastline of L'Anse aux Meadows is under the threat of a rising sea.

5.2: DECOMMISSIONING

The Hibernia platform, located 350km southeast of St. Johns at 46°45.026'N 48°46.976'W, and the Hebron platform 315km southeast of St. John's at 46°32'38"N 48°29'53"W, will have a long and performative journey up the northeast coast of Newfoundland. Along their voyage, the rigs navigate the shoals of the island's coast, revealing themselves to communities as they pass by and engaging a broad audience of Newfoundlanders in this odd spectacle. The oil rig's pilgrimage concludes in Sacred Bay, off the coast of the L'Anse aux Meadows National Historic Site.

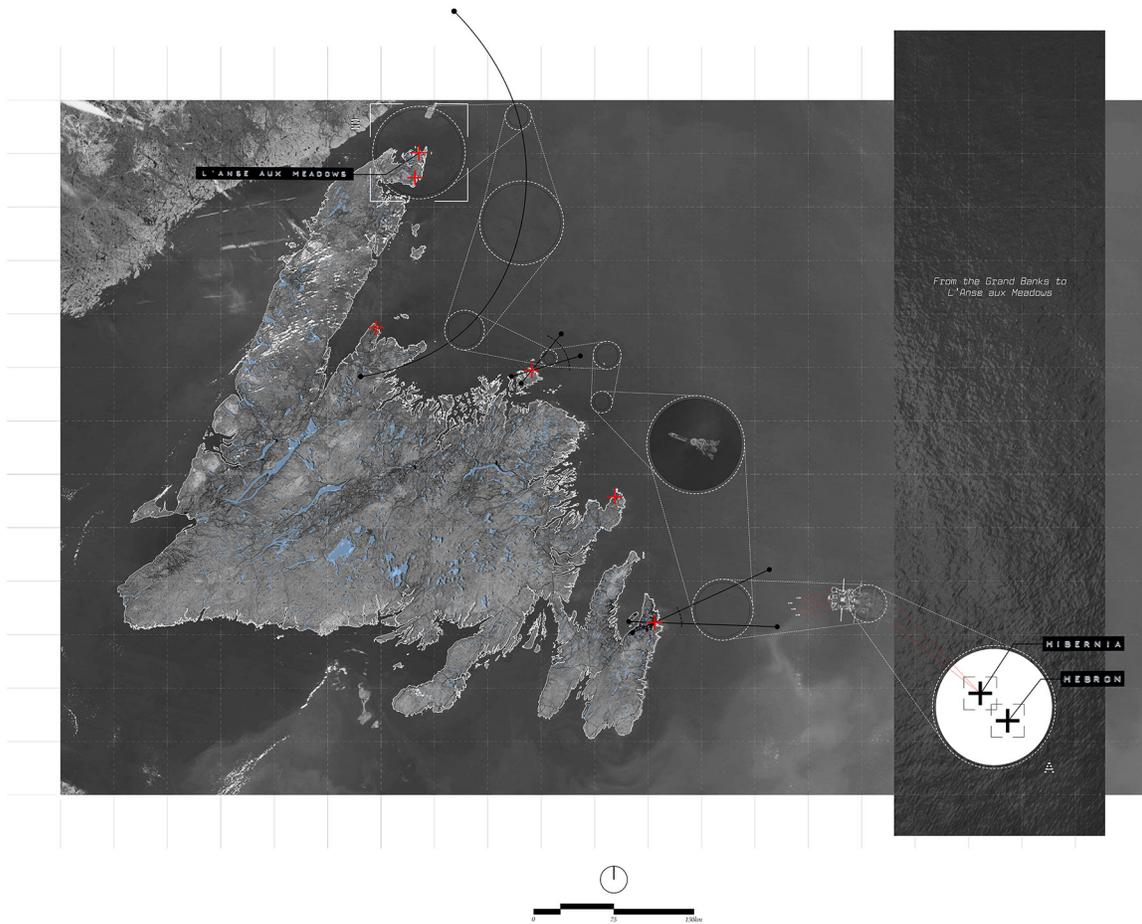


FIG. 40 The oil rig's journey to L'Anse aux Meadows.



FIG. 41 *An oil rig passes by the Fogo Island Inn.*



FIG. 42 *An oil rig passes by the Bonavista Lighthouse.*

The topsides of Hibernia and Hebron come to a rest ~1km from the adjacent shoreline of the archeological site in a small inlet of Sacred Bay, called Islands Bay. The deconstruction of the rigs takes place over time as needed. Large components are detached from the topside and towed to an unnamed bay ~1km east of the existing UNESCO visitors center at 51°35'31"N 55°32'49"W.

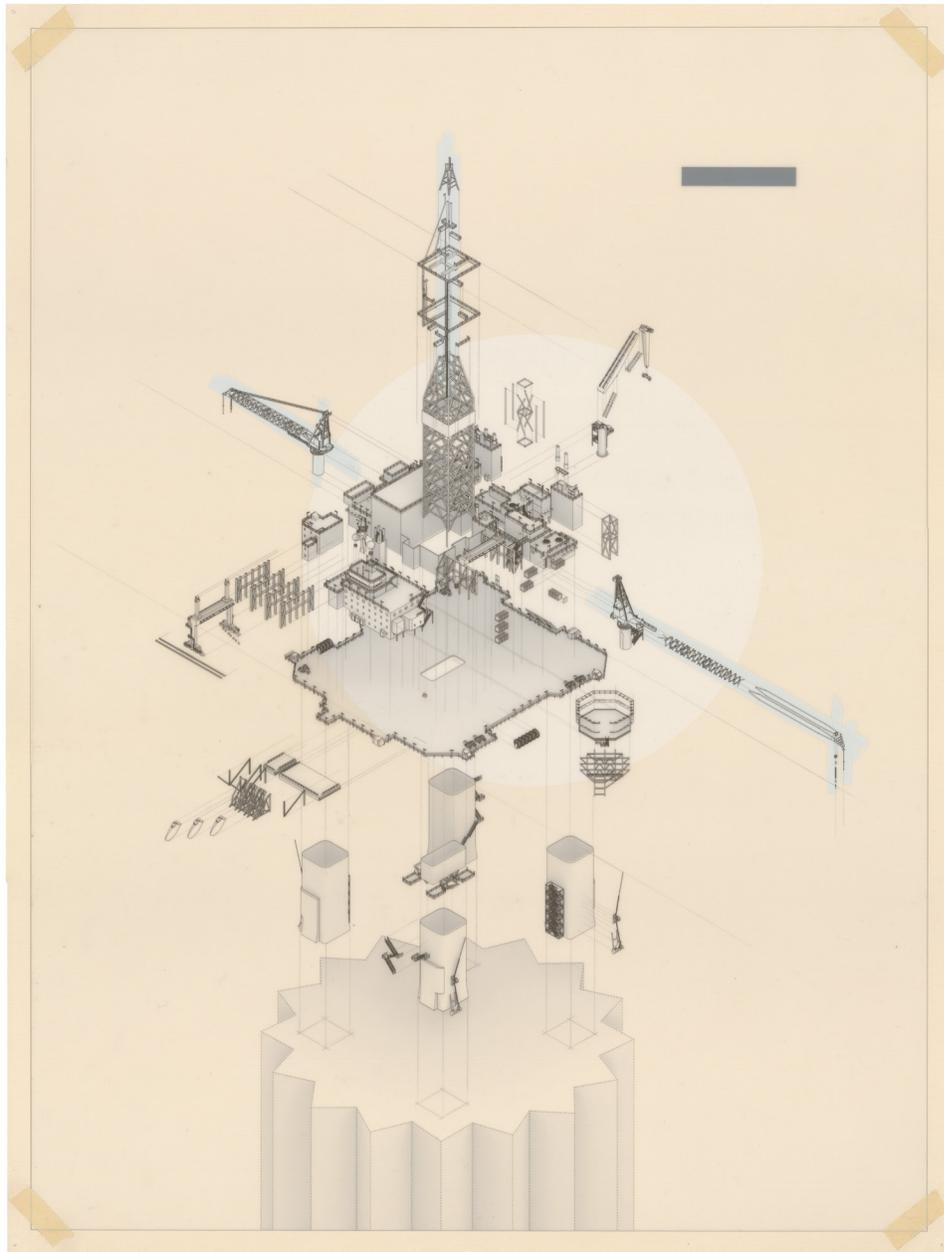


FIG. 44 *The material pantry of the off-shore oil rig.*

This [currently...] nameless bay is reimagined as a monumental scrapyards where the oil rigs are disassembled for their future purpose of fortifying the archeological landscape. This unique dockyard engages archeologists, architects and local residents, reinvigorating the region's 73% unemployment rate.⁰⁷ Using repurposed cranes, emergency ship launches and other unique infrastructure belonging to the offshore oil rig, this new land/sea-scape employs seafaring locals working in tandem with trained archeologists to disassemble the material pantry of the oil rig. Repurposed parts are then deployed to strengthen the vulnerable landscape of L'anse aux Meadows against the rising sea.



FIG. 45 A new rig breaking yard dismantles the derrick of an offshore oil rig in the once nameless bay at L'Anse aux Meadows.

Once the components of the oilrigs have been disassembled, they are moved from the salvage yard¹⁶ of the nameless bay to the archeological landscape. Floatation devices are attached to the rig components and they are towed through the coastal waters to their permanent locations on the archeological site. Ramps resembling large scale boat launches facilitate the hauling of repurposed components onto the landscape with the help of cranes and other construction equipment. This performance will draw on the folklore of house floating to inform the future when mobilizing supersized oil infrastructure.



FIG. 46 *Amalgamated heritage 1.*



FIG. 47 *Amalgamated heritage 2.*

5.3: PROTECTING, REMINDING, AND REFLECTING

A new, augmented archeology is imagined in *Figure 48*. This site plan depicts the working landscape of L'Anse aux Meadows in the year 2101. This reimagined future for the UNESCO World Heritage Site is now demarcated and buttressed by fragments of repurposed oil rigs.

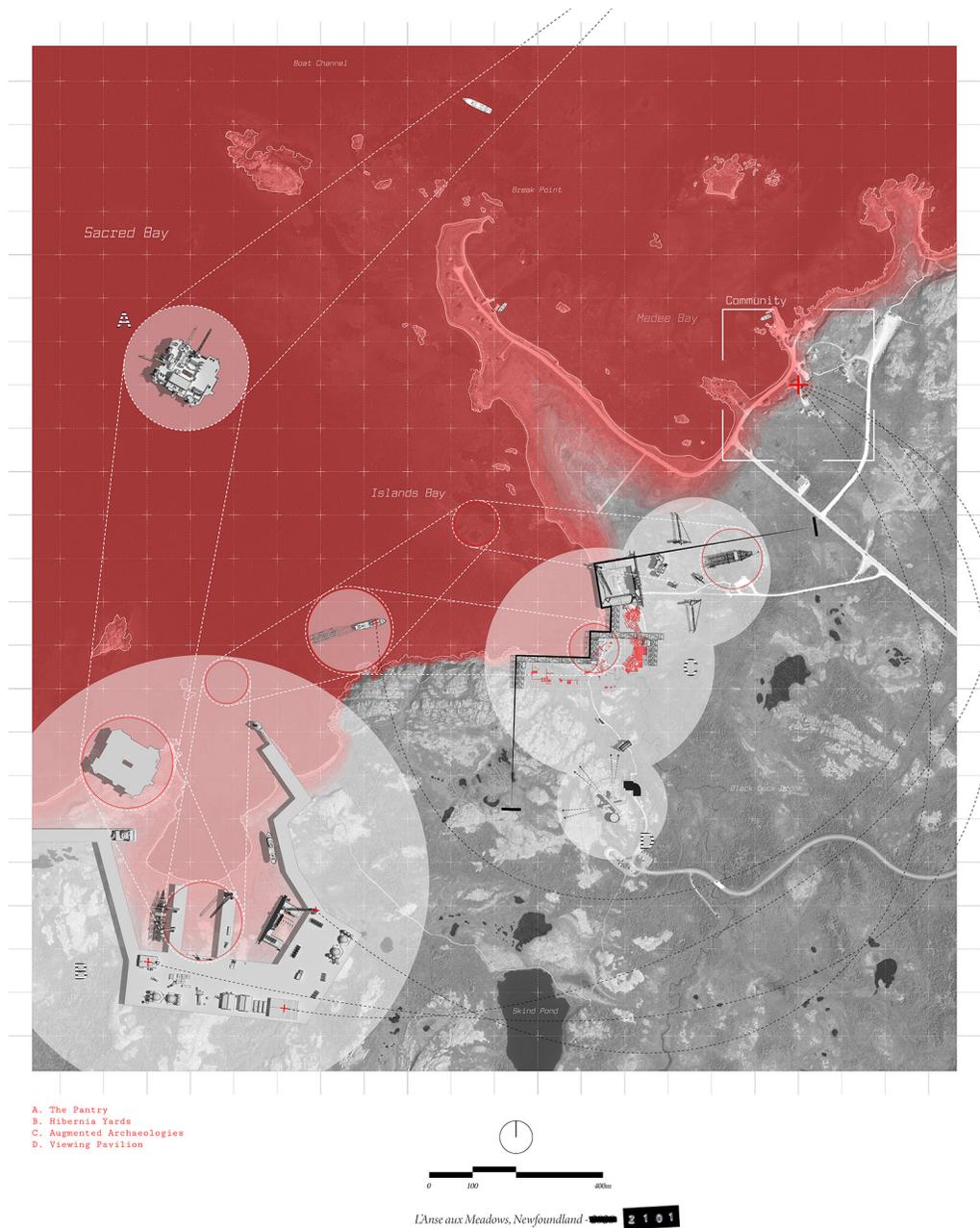


FIG. 48 The future landscape and augmented world heritage site of L'Anse aux Meadows - c.2101.

The offshore megastructures are incrementally disassembled in the once nameless bay within the UNESCO boundaries, now aptly dubbed *Hibernia Yards*. The province's oil rigs now act as monumental scrapyards and material salvage pantries, that serve to fortify the coastal edge of the Norse archeological dig and protect its invaluable artifacts against the encroaching sea.

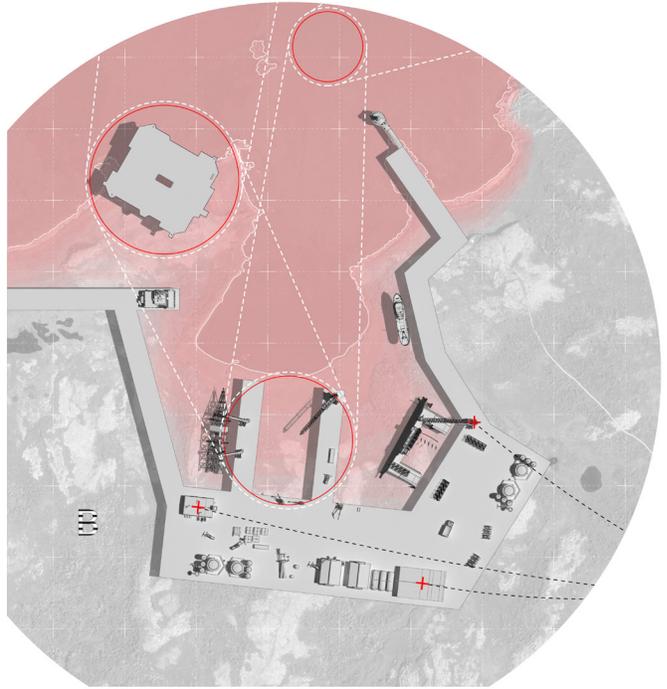


FIG. 49 *Hibernia Yards.*



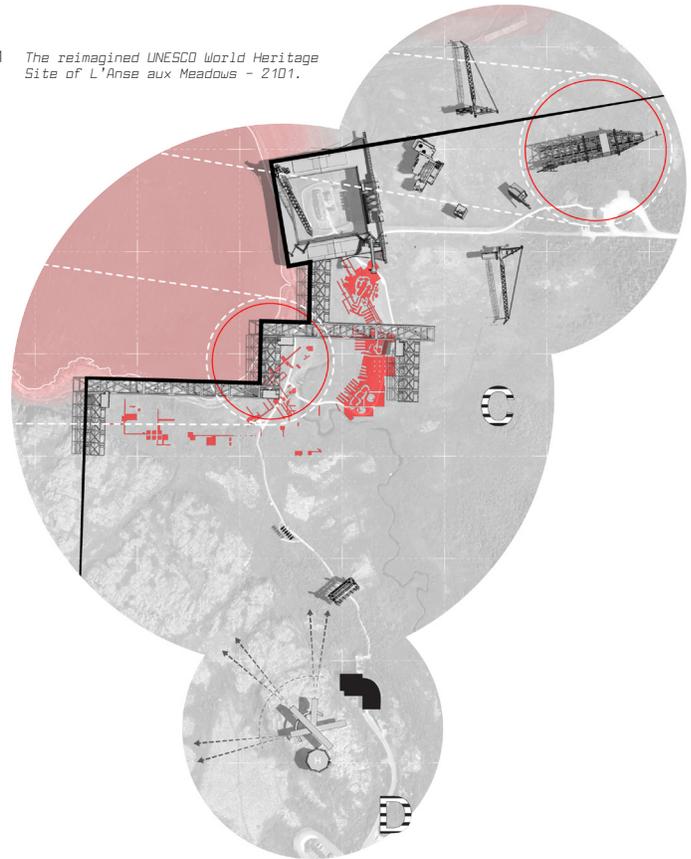
FIG. 50 *An oil rig component leaves the Hibernia Yards to be used as fortification at the archeological dig site.*

The components of the oil rigs are hauled onto the landscape to form protective barriers for the threatened world heritage site and fortify areas of future archeological interest against increased coastal erosion.

FIG. 51 *The reimagined UNESCO World Heritage Site of L'Anse aux Meadows - 2101.*

Some of the material of the now onshore oil rigs serve as protective fortification for the active archaeological dig and create a new layer of artifact within themselves.

Intact rig components are draped across the landscape and connected by a series of paths and catwalks that allow visitors to meander through these decommissioned structures, creating a space for reflection on a time of extreme resource exploitation.



A viewing pavilion atop a hill acts as an extension of the existing UNESCO visitors center, and frames key views of the material scapery, the seascape, and the oil rigs that have been dragged across the coastal landscape.

FIG. 52 *A visitor wanders through the reimagined UNESCO landscape.*

Rig components and fortifying materials now act as anti/counter monuments that recognize and acknowledge a time of extreme resource exploitation on the island of Newfoundland and the world alike. This new layer of protective oil-artifact speculates on the future heritage of the island of Newfoundland as its residents grapple with the implications of difficult histories, identities, and industries in the year 2101.

As the world shifts from its dependance on fossil fuels, this thesis evokes a dialogue of [anti] and [counter] memory in a back-and-forth between water, land and the future heritage of extractive industries and archeological legacies. This dialogue is a constant negotiation between fixity and fluidity, stasis and dynamism. Although the project situates itself in a speculative future, the research and design work is firmly anchored to the realities, and absurdities, of living on the edge.



FIG. 53 An archaeologist studies an oil rig component at the UNESCO World Heritage Site of L'Anse aux Meadows in the year 2101.

ENDNOTES - PART FIVE

- 01 Statistics Canada. 2017. *L'Anse aux Meadows to Quirpon, DPL [Designated place]*, Newfoundland and Labrador and Newfoundland and Labrador [Province] (table). Census Profile. 2016 Census. Statistics Canada Catalogue no. 98316-X2016001. Ottawa. Released November 29, 2017. <https://www12.statcan.gc.ca/census-re-censement/2016/dp-pd/prof/index.cfm?Lang=E>
- 02 Ingstad, Helge, and Anne Stine Ingstad. *The Viking discovery of America: the excavation of a Norse settlement in L'Anse aux Meadows, Newfoundland*. Breakwater Books, 2000.
- 03 Westley, Kieran, Trevor Bell, M. A. P. Renouf, and Lev Tarasov. "Impact assessment of current and future sea-level change on coastal archaeological resources-illustrated examples from northern Newfoundland." *The Journal of Island and Coastal Archaeology* 6, no. 3 (2011): 351-374.
- 04 UNESCO World Heritage Centre. "L'Anse Aux Meadows National Historic Site." <https://whc.unesco.org/en/list/4/>
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- 06 Westley, Kieran, Trevor Bell, M. A. P. Renouf, and Lev Tarasov. "Impact assessment of current and future sea-level change on coastal archaeological resources-illustrated examples from northern Newfoundland." *The Journal of Island and Coastal Archaeology* 6, no. 3 (2011): 351-374.
- 07 Statistics Canada. 2017. *L'Anse aux Meadows to Quirpon, DPL [Designated place]*, Newfoundland and Labrador and Newfoundland and Labrador [Province] (table). Census Profile. 2016 Census. Statistics Canada Catalogue no. 98316-X2016001. Ottawa. Released November 29, 2017. <https://www12.statcan.gc.ca/census-re-censement/2016/dp-pd/prof/index.cfm?Lang=E>
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1965

Resettlement Act

No. 48



AN ACT TO PROVIDE FOR THE RESETTLEMENT OF THE PEOPLE IN CERTAIN PARTS OF THE PROVINCE

(April 15, 1965)

WHEREAS it is recognized by the Government of the Province and by the Government of Canada that it is desirable that considerable numbers of households in the Province should be enabled to remove from small settlements where the environment is unsatisfactory and to resettle in places which will be more to their advantage;

AND WHEREAS the Provincial Government has proposed and the Government of Canada has agreed to assist in a considerable programme of resettlement to be effected in the immediate future;

BE IT THEREFORE enacted by the Lieutenant-Governor and House of Assembly in Legislative Session convened, as follows:

- 1. This Act may be cited as The Resettlement Act, 1965.
- 2.—(1) Subject to the approval of the Lieutenant-Governor in Council, Her Majesty in right of the province represented by the Minister of Fisheries of the province may enter into an Agreement with the Government of Canada, represented by the Minister of Fisheries of Canada, or any other Minister of the Crown in right of Canada, contemplating the progressive removal of a number of households, not exceeding a total to be stated in the Agreement, and their resettlement in favourable localities, within a maximum period of five years from the first day of April 1965.
- (2) An Agreement made pursuant to subsection (1) may be amended from time to time, and every amendment shall be

Short title.

Minister of Fisheries may enter into agreements etc.

Amendments to Agreement.

made in the manner provided by subsection (1) for the execution and delivery of the principal Agreement.

Sharing of expenses.

3. In an Agreement made pursuant to Section 2, provision may be made for the sharing between the Government of Canada and Her Majesty in right of the province of the expenses of the removal and resettlement referred to in that section.

Power to make Regulations.

4. The Minister of Fisheries of the province may, subject to the approval of the Lieutenant-Governor in Council, make regulations as to

- (a) the places from which households may be removed;
- (b) the circumstances and conditions under which, and the numbers of households in respect of which, such removal shall be undertaken;
- (c) the places at which, and the circumstances and conditions under which, the resettlement of such households shall be undertaken;
- (d) the nature and extent of all payments and allowances to be made to assist removal and resettlement, including without prejudice to the generality of the foregoing, grants in aid and actual travel and removal expenses of persons and property of all kinds;
- (e) the conditions under which, if at all, any property or equipment remaining in evacuated settlements may be utilized by the households or persons removed;
- (f) the surrender of property in evacuated settlements to the Minister representing Her Majesty in right of Newfoundland, and the destruction, if it be thought fit, of abandoned dwellings or other structures, and the prohibition of resettlement of persons or households in evacuated communities;
- (g) the provision of retraining and of equipment if necessary to enable removed households or persons to resume their occupations, or take up new occupations, in places where they may be resettled;
- (h) the proportion of the inhabitants of any settlement whose agreement shall be sought before a resettlement programme is undertaken in respect of such settlement;

- (i) what property shall be removed, and any limitations of expense thereon;
- (j) what assistance, if any, shall be provided to households unwilling or unable to move when the major part of their community has been evacuated;
- (k) the acquisition of land in resettlement areas, and the conditions on which it may be granted or leased to resettled households or the heads thereof;
- (l) the provision of water or sanitary facilities at resettlement points;
- (m) the construction, reconstruction and repair of houses and other buildings in resettlement areas for the use of resettled households;
- (n) the conditions, if any, upon which resettled households may be deprived of or forfeit any advantages conferred upon them in the process of resettlement;
- (o) penalties, if thought fit, for any breach of any mandatory provisions of the regulations; and
- (p) all such matters generally as are necessary in order efficiently to deal with and control the removal and resettlement process and to account for and protect public moneys in connection therewith.

5. The administration of the programme in the province shall be in the hands of the Minister of Fisheries of the province or such other Minister as the Lieutenant-Governor in Council shall from time to time designate to administer the scheme, but the accounting for moneys in connection with the scheme shall be made on behalf of Her Majesty in right of the province by the Minister of Fisheries of the province.

Who to
administer
schemes.

6. The Government of the province may, if thought fit, join with the Government of Canada in the establishment of a joint committee representing both governments to advise in relation

Advisory
Committee.

to the programme and the number, nature, duties and powers of such joint committee shall be set out in the Agreement.

Agreements to be tabled.

7. Any Agreements with the Government of Canada made under this Act shall be laid on the Table of the House of Assembly within ten days of the opening of its first Session in any year.

Payments.

8. Any payments that Her Majesty in right of the province may be required to make in accordance with any agreement executed and delivered under this Act shall be made by the Minister of Finance out of the Consolidated Revenue Fund of the province.

Proclamation of this Act.

9. This Act shall come into force in whole or in part on a date or dates to be proclaimed by the Lieutenant-Governor in Council.

FIELD NOTES

07/01/2019

- + notable changes in temperature when nearing the sea... refreshing... permeates across body.
- + notable change in smell.
- + little to no human activity.
- + sounds: waves, faint cries of gulls, birds not visible in immediate view.
- + sun: powerful and at my back.
- + 7 second wave intervals... calming... some variation.
- + empty boats in harbour.
- + 25°C on apple weather app. location: flatrock
- + scattered clouds. reminiscent of old windows screensaver.
- + gentle sea.
- + fog in distance.
- + this is a nice change of pace from the hectic nature of work.
- + the rock is warm while i'm sitting and taking these notes.
- + i can almost taste the salt from the crashing waves in front of me.
- + marine forecasting? height of sea?
- + little black birds on a wire to me right... playing/chirping.
- + a beautiful day in flatrock, newfoundland.



07/02/2019

- + very little change in temperature when approaching the sea... land breeze?
- + ocean smell.
- + one hiker and one parked car.
- + seagulls... squawking... visible in the distance in photograph.
- + what does a congregation of birds on the ocean mean? perhaps fish? whale?
- + 7 second wave intervals... less powerful than the day before.
- + the sun is powerful and at my back.
- + 24°C and mainly sunny.
- + no clouds or fog.
- + sea is peaceful today.
- + left side of my face baked in sunshine.



5:30 PM

07/03/2019

- + some clouds on horizon.
- + lots of activity.
- + fishermen cleaning cod fish.
- + wedding.
- + lots of vehicles for hikers.
- + little to no change in temperature when approaching the water.
- + very quiet for the amount of activity around.
- + waves are still the dominant sound.
- + not many birds or gulls vocalizing.
- + 5 second wave intervals.
- + smell of rotting fish from cod scraps.
- + a fairly calm sea by newfoundland standards.
- + 25°c



522 88

07/05/2019

- + heavy rain clouds over the bay.
- + one single boat heading out fishing with many seagulls in tow, squawking.
- + calmest sea yet.
- + eerie, dark day... suspenseful feeling as if something could happen at any moment.
- + slight breeze.
- + gentle waves.
- + pockets of rainwater on rocks.
- + seagulls on the cliffs.
- + light pockets of sky nearing the horizon line, then changes to a sark cloud that hugs the horizon.
- + 10 second wave intervals.
- + one lone seagull on a rock.
- + black and white sea bird diving. tur?
- + the fishing boat adds scale.
- + 1 hiker and 4-5 fishermen.
- + first photograph of "DESK"
- + blueberry bird droppings on my "ROCK"
- + first conversation with a fisherman; explained to me how beautiful flatrock is in the morning.
- + more fishermen and boats arriving.
- + 17°C and overcast.





07/06/2019

- + wind blowing at my face... sea breeze... strong gusts at times.
- + some white caps.
- + seagulls squawking... very few. wind in my ears is the dominant sound.
- + nobody fishing.
- + wave intervals are too close to count... likely due to the strong winds.
- + heavy clouds again... feels like it may rain at any moment.
- + coldest day yet.
- + seagulls are resting on the rock.
- + discovered that the name of the rock in my pictures might be "THE BEAMER".
- + 18°c but feels colder with the sea breeze.
- + least amount of activity yet.
- + wind and liveliness of the sea somehow makes the dark day less ominous... the silence of the sea the day before felt eerie.
- + less fishy smell in the air. perhaps due to lack of fishing?



07/07/2019

- + man on balcony yelling to other man tying up boat. asked if his lines were okay [ropes tying boat to wharf].
- + regatta day [holiday in st. john's]
- + overcast in flatrock without many breaks in cloud cover.
- + consistency of greys in the horizon.
- + looking at the horizon feels like two wedges coming together.
- + ocean as a syntax... what is it?
- + ocean surface as a secondary atmospheric layer.
- + horizon: manifestation of two atmospheres. the one we inhabit and the one we can not.
- + not many birds... two fishermen.
- + family of hikers pulled up... left grandmother behind which I found strange.. she was then forced to catch up.
- + 16°c



07/08/2019

- + air noticeably cooler near the water.
- + bay is calm but past the beamer it seems rough... bay vs. open ocean.
- + winch being used to lower a boat into the water... first time that i've seen that done here in flatrock... squeaks of rusty metal.
- + lots of bird activity... in water... on rocks... very vocal.
- + two fishermen but not much activity.
- + sun over my back-left shoulder as i look out... warmth on my neck.
- + waves are very soft... almost uncountable.
- + dark clouds on the horizon.
- + blue skies overhead.
- + 18°c



5:13 PM

07 / 09 / 2019

- + traditional newfoundland evening... rain and fog.
- + does the fog bring the horizon closer?... check images.
- + little to no activity.
- + very few birds visible and no vocalizations to be heard.
- + three boats on the wharf out of the water... done for the season?
- + i was unprepared for the weather today... no jacket and no hood for the camera... hoping for no droplets on lens.
- + one other car pulled up as i was leaving. perhaps to check on boat?
- + consistent white and greys right to the horizon line.
- + no sign of sun.
- + rocks look different when wet.
- + trek to my photographing spot was more difficult with the wet rocks.
- + sound of rain droplets between wave intervals.
- + ocean was calm... couldn't count intervals.
- + 13°c



07/10/2019

- + sunshine after a torrential downpour.
- + very humid air and some clouds.
- + dark heavy fog on horizon line.
- + birds are very vocal and plentiful.
- + waves are consistent but not heavy.
- + wave intervals of 6 seconds.
- + can hear the echoes of water sloshing in the rocks beneath me.
- + stark contrast to the weather earlier today.
- + smells fresh and damp.
- + rainbow present behind the beamer but was not in the frame of my picture.
- + no one out fishing but several fishermen around... one man driving away with boat in tow.
- + no white caps and low wind.
- + medium sized swell in the bay.
- + waves crashing and receding on the beamer and back into the bay.
- + waves intensify as i write... tide coming in?
- + no rain on me but I can see it over the community just a kilometer away. sun still blazing.
- + 21°c



07 / 13 / 2019

- + first thing i noticed was how vocal the birds are [seagulls].
- + they[seagulls] are fighting and flying around the bay and all over the wharf.
- + strange because no fishermen.
- + fish in the bay maybe?
- + i missed the two previous days and the smell of the ocean is now something i find more noticeable.
- + these visits to flatrock have become meditative for me after a work day and i missed that.
- + sea is calm as far as i can see.
- + gentle waves sloshing.
- + can't count the wave intervals.
- + moderately cloudy but sun is out. maybe getting lower with seasonal change.
- + seagull squawks are a series of short ones then slowly get longer until they stop.
- + it feels different than a typical sunny day out here... somewhere in between.
- + horizon is a pale blue.
- + i can see two orange things floating far off the tip of the beamer... markers?
- + birds on the beamer.. seems to be common.
- + man was working in his garden behind me when i arrived.
- + no fishermen or hikers.
- + thundershowers earlier in the day.
- + 21°c



5:30 PM

07/14/2019

- + two fishermen out.
- + tide noticeably high... sound of water sloshing amongst rocks below and desk area.
- + crashing waves; the dominant sound.
- + lots of gulls... vocal.
- + waves crashing on the beamer.
- + as i write this the spray from the waves is getting very close to me.
- + feeling of the sea encroaching and wanting to swallow the land.
- + one lone cloud on the horizon.
- + both bay and open ocean are rough.
- + windy.
- + group of hikers taking pictures.
- + smell of fish and sea air.
- + sun getting lower and reflecting off the bay.
- + birds always on the beamer.
- + 11 second wave intervals.
- + very large waves.
- + can still see the orange markers.
- + very clear day but wind and the rough sea are unsettling.
- + 22°c



07 / 15 / 2019

- + overcast with blue patches.
- + cool sea breeze.
- + mother and daughter hiking.
- + occasional powerful wave with long intervals.
- + tidal pattern changing with the seasons?
- + lots of gulls present.
- + big swells on the ocean in the bay but not a lot of wind or white caps.
- + spray from big waves almost hitting me.
- + birds on the beamer.
- + mountain biker whizzed past... a first... sound of spinning sprocket.
- + not many fishermen, if any.
- + hikers and bikers.
- + gulls squawking.
- + horizon seems lighter than overhead clouds... pale blue, white and pale orange.
- + bumpy texture to clouds.
- + tide coming in.
- + 18°c



5:20 PM

07/16/2019

- + smell of homecooked food in the air... a first.
- + ocean is the roughest/waves are the largest to date.
- + sea seems to be getting increasingly rougher.
- + the sea is almost dizzying to observe today.
- + dark clouds beginning to engulf the horizon.
- + big white waves crashing over the beamer.
- + the smell of food and ocean keep fluctuating... one sometimes dominating the other... competing for my attention.
- + the ocean today has all sensory stimulus on full display... visual motion... sound of big crashing waves... smell of the sea... taste of the salt spray. immersive.
- + seagulls squawking.
- + 3 fishermen, no hikers.
- + overcast but bright with some blue patches.
- + resident gulls seem to always be on the beamer.
- + woman is taking my photograph... just noticed... maybe not mine maybe the boats behind me.
- + the dominant emotion i feel is a sense of intimidation and recognition of the seas power.
- + first time seeing someone out on the rocks with me.
- + 16°c



07 / 17 / 2019

- + sun is shining in flatrock... st. john's is cloudy and raining.
- + localization of weather.
- + sea noticeably calmer... raises the question: before the advent of modern weather monitoring software, how difficult was it to predict sea conditions?
- + rem koolhass' rigorous approach to reporting, recording and making... weaving the two into a singular process.
- + lots of activity... several trucks and fishermen around.
- + single boat heading out towards the beamer... likely a good spot for cod.
- + sea seems very blue and almost purple... deep royal blue.
- + immediate sky is blue and smoothly tapers to a greyish blue on the horizon.
- + gulls always on the beamer... always present... viewed as scavengers and pests... do they prefer the natural cod fish of flatrock to mcdonald's French fries?
- + sea and flatrock evoke a sense of calm... much different than yesterday.
- + gulls bobbing in the calm water to my left.
- + no orange markers.
- + waves are softer... 7 second intervals.
- + sun on the lush green hills of the community is a stark contrast to the barren bedrock of the beamer.
- + some pools of water on the rocks still... rain last night?
- + a beautiful evening here. i feel relaxed and calmed.
- + 15°c and partly sunny
- + a man has offered to take me **fishing**. i think i will go.....





07/19/2019

- + lots of vehicles parked around the bay.
- + father and children fishing off the wharf (likely for conors).
- + old couple at the house on the hill behind me watching me... probably wondering what i'm up to.
- + hot sunny day... feels like summer is trying to hang on.
- + ocean is relatively calm... consistent small waves hitting the rocks.
- + 8 second wave intervals.
- + two hikers walking down the hill.
- + gulls squawking.
- + gulls on the beamer.
- + children laughing and people talking.
- + sky is blue with no clouds... fades to a blue/grey horizon.
- + sun feels like it's lower today.
- + forgot my hiking shoes and the traverse over the rocks was significantly harder.
- + very little noticeable smell.
- + wind almost non-existent.
- + no fishermen active on the water.
- + people hauling a boat on to the wharf.
- + sun shining directly on the beamer emphasizing the threshold between bedrock and green grass.
- + 23°c



S-15 PB

07/20/2019

- + seagulls squawking frantically on the shore... some over head.
- + no one around... no fishermen, hikers, or cars.
- + birds on beamer everyday.
- + strong wind coming off the land... waves and whitecaps directed out of the bay.
- + some blue sky but many dark, heavy clouds.
- + the horizon is met with a dark grey/purple cloud.
- + ocean is a murky green in colour.
- + single gull on the rock i once sketched
- + very humid.
- + scent of sea is minor... maybe because of land breeze.
- + waves are not strong... also possibly due to land breeze.
- + no wave intervals to count.
- + dark clouds behind me and in front but over head is blue.
- + sun poking in and out of the clouds.
- + 21°c and overcast.



S/S PH

07/21/2019

- + no gulls on beamer?
- + strong ocean smell when i neared the wharf.
- + can see orange floats... i've since learned that they are markers for gill nets.
- + very warm summer day with a cool land breeze.
- + no activity at all... no hikers or fishermen.
- + gulls squawking as usual.
- + water surface has slight ripples heading away from the shore... land breeze.
- + some high clouds.
- + patches of blue sky... full sun.
- + the horizon is marked with fluffy white clouds and patches of light blue.
- + transition from a pale blue to an even paler blue horizon line, met by a dark navy sea.
- + sea is a navy blue... lighter near me... then darker towards the horizon.
- + sun is hot on my back.
- + no wave action whatsoever... a first.
- + no visible swell on the ocean.
- + why is no one fishing?
- + new bird sound.. like a "pew pew" sound.
- + slick near shore with no wave ripples.
- + small patch of white seagulls on the sea in the distance... off the point of the beamer.
- + dirt bike echoing in the background.
- + tide looks low.
- + 21°c and sunny.



5-05 PM

07 / 22 / 2019

- + wet and rainy.
- + typical fall weather in newfoundland.
- + gulls squawking on the beamer.
- + moist ocean air.
- + two cars parked but no one out and about.
- + rain intensifying as i write.
- + what is it about rain that makes it so undesirable to be outside?
- + lots of swell on the ocean.
- + waves are crashing again.
- + completely overcast.
- + greys and whites throughout the sky.
- + monochrome day.
- + ocean is dark and navy.
- + sky is grey and transitions to white on the horizon line, met by a dark navy sea.
- + ocean is rippled with noticeable swells and wave action.
- + very little wind.
- + 7 second wave intervals.
- + waves aren't very loud today.
- + depressing atmosphere.
- + grass and rocks look darker and less vibrant when wet.
- + rain making a pecking noise on my coat.
- + puddles forming on the rocks around me.
- + 16°C, overcast and rain.



07/24/2019

- + by far the worst day i have experienced in flatrock so far.
- + strong sea breeze.
- + dominant sound is the wind swirling and pounding my ears.
- + my hands are weak from the cold as i write.
- + one man tightening the lines on his boat.
- + no gulls squawking.
- + gulls hunkered down on the beamer.
- + waves hitting the rocks hard and at tight intervals... can't count.
- + waves are so big that their spray was hitting me as i photographed the horizon.
- + sea is a dark green with bits of white from the waves... lightening when the water hits the land.
- + clouds are dark with a small light patch near the horizon that then darkens at the horizon line.
- + a terrible and scary day to be at sea.
- + mist from saltwater hitting my face.
- + gulls gliding in place while they face the ocean.
- + bay is known to funnel wave energy.
- + dangerous when to close to the water.
- + boats that are floating in the bay are rocking and testing the limits of their anchors.
- + my "ROCK" is now getting smashed by waves... i've retreated... quick change in almost 2 minutes... sea's unpredictability on full display.
- + 12°c... cold and very high winds.



07 / 25 / 2019

- + arrived at flatrock a little later today.
- + a nice sunny day with a cool breeze.
- + waves are very large... likely residual energy from yesterday + tide coming in.
- + ocean is very rippled but no white caps.
- + large swells and waves are curling as they hit the shore.
- + group of people on lawn chairs on the beamer, taking in the sun.
- + patches of white foam on the water.
- + sea is a deep blue and highly reflective.
- + light blue sky with high, feathery clouds sweeping across it.
- + blue transitioning to a pale blue and almost white horizon that meets a navy-blue sea.
- + little black birds chirping on a telephone wire.
- + wind at my back... land breeze.
- + 12 second wave intervals but very large with high impact.
- + lots of cars and activity... mostly hikers... no one fishing.
- + another couple near me taking pictures.
- + 18°c and sunny... wind at my back.



5:40 PM

07/26/2019

- + people fishing off the cliff of the beamer... visible on the drive in.
- + people having a picnic at the entrance to the wharf area.
- + water echoing and sloshing beneath the large rocks that i take picture from... has become one of my favourite sounds.
- + lots of wave action.
- + 7 second wave intervals.
- + waves are strong again but not as strong as the previous few days... loss of energy?
- + sunny day.
- + ripples on the water but no white caps.
- + low wind... hard to tell the predominant direction.
- + some gulls squawking but other than that not a lot of vocalization.
- + single seagull perched on the beamer.
- + fresh air... low sea smell.
- + didn't have proper footwear and it was challenging to get to my "rock".
- + very little activity for such a nice evening.
- + redhead cliff in shadow.
- + tide seems high and like it's coming in... changing of the seasons? relatively consistent lately.
- + black gull flying.
- + waves are getting much larger as i conclude my visit.
- + 21°c and sunny.



07 / 27 / 2019

- + excavator beeping and turning over rocks at a property behind me.
- + foggy with drizzle.
- + rock was slippery as i took my picture.
- + furthest i have seen the tide in yet.
- + water visible around the base of my "desk".
- + heavy fog... top of redhead cliff is hidden.
- + swells on the bay... waves not as powerful as yesterday but the tide is very high.
- + dominant sounds include wave crash, echoing of water in the rocks and excavator beeping.
- + no gulls vocalizing.
- + resident gulls on the beamer.
- + a man and his son down by the water... the only human activity i've seen on this trip.
- + no hikers, no fishermen.
- + fog seems to bring horizon closer... did this effect my image?
- + sky is one consistent grey/white.
- + sea is almost black in colour.
- + the sky transitions to the sea in a sort of gradient of greys.
- + horizon line less sharp than usual.
- + fly bit me... blood on my hands.
- + 10 second wave intervals.
- + gulls bobbing in the bay.
- + light land breeze.
- + 16°c with fog and drizzle.



07/28/2019

- + sunny in st. john's and then gets dark as i approached the flatrock exit.
- + mother and child walking out of the hiking path.
- + waves are the dominating sound... echoing water in the rocks... excavator beeping in the distance.
- + no gulls vocalizing.
- + fog on the horizon coming in.
- + redhead cliff in a haze of fog but still visible.
- + tide is very high once again. i'm now convinced this is due to a seasonal change.
- + water is rippled with no apparent direction.
- + i can feel a cool light sea breeze against my face.
- + resident gulls on the beamer.
- + lots of swells coming in the bay... likely as the tide comes in... this too is becoming consistent.
- + the waves are crashing ~2m in front of me.
- + dark low rain clouds and high white clouds... some blue sky poking through.
- + fog can be seen sporadically in the hills behind me... looks almost like a haze of smoke.
- + horizon transitions from dark grey clouds to a pale blue then to a whiteish grey... this then gradients into a navy sea.
- + no noticeable smell... possibly becoming immune to the scent of the sea.
- + no fishermen again... possibly the end of the recreational fishing season for cod.
- + 8 second wave intervals.
- + aqua marine water when the waves crest and crash on the rocks.
- + 17°C and overcast with sunny breaks.



07/29/2019

- + cool, overcast day.
- + sea breeze.
- + could notice the smell when i stepped out of my vehicle.
- + birds are farther out on the beamer today.
- + cat on the roof of a shed, looking at me.
- + no gulls vocalizing... if so, very faint and distant.
- + wave crashes dominate the soundscape.
- + tide is high again and coming closer with every wave.
- + one car parked but no fishermen or hikers visible.
- + sea is a dark blue with strange white patches of foam.
- + ocean is rippled with know apparent direction.
- + fog has lifted but still a very dark day.
- + splashes from the waves are some of the highest i've seen.
- + no excavator... job is done.
- + orange rusty streak in redhead cliff very visible today.
- + a few lone gulls flying around.
- + sea is a dark navy.
- + sky is grey with darker grey patches.
- + horizon transitions from light grey to dark grey and meets a dark navy ocean at a sharp line.
- + white veins in the beamer.
- + tomorrow i will document my journey to flatrock.
- + 8 second wave intervals.
- + 13°C, overcast, slight sea breeze.



07/30/2019

- + documentation of my journey from work to flatrock seems to have been a success.
- + evidence of gull on my rock... [documented in photograph]... feathers and caplin carcasses.
- + soft land breeze.
- + ripples on ocean moving away and out of the bay.
- + sea is very calm and tide very low compared to other days... [note visible starfish on rocks below.]
- + wind is gusty and the ripples on the ocean are tighter now.
- + minimal wave action... no intervals to count.
- + lots of cars around but no fishermen visible.
- + faint vocalizations by gulls in the distance.
- + people hiking on the beamer.
- + no gulls on the beamer... they have been replaced by hikers.
- + no noticeable scent from the ocean.
- + sea is navy with some aqua marine trying to come through.
- + now paying more attention to the rust on redhead cliff.
- + cool, dreary day... some blue patches.
- + clouds moving fast with the direction of the wind.
- + sky displays a wide variance of greys and textures... storm clouds?
- + horizon changes from grey/blue with light patches to a sharp navy line at the ocean.
- + tomorrow i will take a picture from the beamer's perspective.
- + 18°C and overcast with a decent land breeze at my back.



07/31/2019

- + beautiful sunny evening with a light land breeze.
- + tide is exceptionally low.
- + seagulls squawking in the distance.
- + multiple hikers around but no fishermen.
- + my friend joined me today to see my "rock" and we shared a beer.
- + almost zero wave action... possibly the calmest i've seen the water in flatrock.
- + two other people out on the rocks making 4 of us... the most to date.
- + lots of gulls sitting in the bay.
- + ripples on the water are very minimal.
- + water swirling around the rocks.
- + tide is low, exposing the seaweed and algae on the beamer.
- + one person out on the beamer.
- + i'm going to hike out and photograph the bay from the beamers perspective, shortly.
- + high feathered clouds against a very blue sky.
- + sea is very reflective and dark navy in colour.
- + the sun is low in the sky behind me.
- + land breeze at my back and minimal ocean smell.
- + feels like summer again.
- + someone has newfoundland music playing loudly, ringing through the bay.
- + a very nice evening.
- + 24°c and sunny.



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