

80 Fathoms Deep

by

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Author's Declaration Page

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Abstract

THE HISTORY OF NEWFOUNDLAND is intimately tied to its relationship with the sea, to its island status and its consequent cultural isolation, to its reliance on fishing and more recently oil. But it is also one of tides - of prosperity and loss, migration and resettlement, of occupation and erasure.

This research is an investigation into the nature of mutable landscapes – shifting settlements, resources and infrastructures. It is recognized that the needs of each community and the resources of each environment are diverse in type and supply. The spatialization of an energy infrastructure has the opportunity to link, in a dynamic system, the ecological, political, cultural, and historical constituents atomized communities. It has the potential to be a dynamic system that forces a presence in the everyday lives of a cultural habitat. This investigation tests the possibility for a contemporary energy infrastructure, usually hidden from the cultural landscape, to become a physically and culturally pronounced manifestation of a layered historical narrative.

This work exhumes histories of Newfoundland and uncovers omnipresent themes of mutability, shifting, movement, and transience, presenting the history of Newfoundland as a fluctuating story of the sea. These stories not only frame the historical spatializations of Newfoundland's population, its infrastructures, and economies through various media, but they also simultaneously outline the social and economic deficiencies of modern approaches to developing the island. Structured chronologically, the research forms the basis for an investigation into new ideas for an infrastructure off the southern coast of Newfoundland.

This design project exemplifies themes of shifting and movement through a mobile, water-based energy, research, and cultural infrastructure. It is situated off the southern coast of Newfoundland and engages both the land and the sea.

This thesis does not try to tame, resolve, or control the sea. The sea is always itself, ordered by its own cycles of tides, currents and ecologies. One can really only synchronize the relationships between land and sea.

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And finally to my family. Thank you to my father who taught hard work by example, and my mother who knew a young girl just needed to be loved. To my sisters for constantly reminding me that "we fly because it releases our minds from the tyranny of petty things."

To my Grandmothers:
Roberta Chandler née Grover 1920 – 2011
Maria Budzynski née Byk 1939 – 2006
Palmira Meriano 1910 - 1995

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WHEN SUN-RAYS CROWN THE PINE-CLAD HILLS,

And Summer spreads her hand,
When silvern voices tune thy rills,
We love thee smiling land.

When blinding storm gusts fret thy shore,
And wild waves lash thy strand,
Thro' spindrift swirl and tempest roar,
We love thee, we love thee,
We love thee, we love thee,
We love thee, wind-swept land.
We love thee, we love thee,
We love thee, wind-swept land.

When spreads thy cloak of shimm'ring white,
At Winter's stern command,
Thro' shortened day and starlit night,
We love thee, frozen land.

As loved our fathers, so we love.
Where once they stood we stand;
Their prayer we raise to Heaven above,
God guard thee, Newfoundland.
God guard thee, God guard thee
God guard thee Newfoundland.
God guard thee, God guard thee
God guard thee Newfoundland.

Ode to Newfoundland: Sir Cavendish Boyle

“THOUGH THEY ARE ANTHEM-LIKE, there is something indefinably sad about the words, resigned, regretful, as if Boyle imagined himself looking back from a time when Newfoundland had ceased to be. It is the sort of song you might write about a place as you were leaving it by boat, watching it slowly fade from view, a place you believed you would never see again. He was governor of Newfoundland for only a few years, so he must have written it in the knowledge that he was soon to leave.”

(Wayne Johnston, *Fielding's Journal* September 9, 1920. *The Colony of Unrequited Dreams*.)



Fig. 0.1 South coast ferry just south of La Poile

Part One
Re: Settlement

The Fog

THIS WORK BEGINS at an intersection of ocean currents; of warm and cold water, north and south directions, and of east and west cultures. This thesis does not try to tame, resolve, or control the sea. It recognizes the unpredictability and power of the world's oceans and merely tries to understand and harness it. The sea is always itself, ordered by its own cycles of tides, currents and ecologies. One can only synchronize with its might when attempting to understand the relationships between land and sea. This work investigates the idea of the word 'fathom'. It is in understanding all measures of a place, that one can 'fathom' its historical narratives and project future possibilities.

fathom |*fɑðəm* |

noun

a unit of length equal to six feet (approximately 1.8 meters), chiefly used in reference to the depth of water : sonar says that we're in eighteen fathoms.

verb [*trans.*]

1. [usu. with negative] understand (a difficult problem or an enigmatic person) after much thought : he could scarcely fathom the idea that people actually lived in Las Vegas | [with clause] he couldn't fathom why she was being so anxious.

2. measure the depth of (water) : an attempt to fathom the ocean.

*ORIGIN Old English *fæthm*. The original sense was [something that embraces,] (plural) [the outstretched arms] ; hence, a unit of measurement based on the span of the outstretched arms, later standardized to six feet.*

(New Oxford American Dictionary)

The Labrador Current, flowing southward within the North Atlantic, meets the warmer Gulf Stream just southeast of Newfoundland. This point of confluence occurs within the oceanic plateau of the Grand Banks. The significant effects of this hydrological intersection of warm and cold waters are twofold. Above sea level, the Grand Banks plateau is one of the foggiest in the world. But below the surface, the warm and cold waters mingle to produce the best feeding grounds for North Atlantic cod.¹ Despite the menacing dangers of fog and waves, the plentiful cod in these waters has attracted international fisheries for hundreds of years.

The Grand Banks surrounding Newfoundland were formed during the Ice Age, when glaciers scraped across the island, sweeping its topsoil into the surrounding waters. The glaciers stripped the land down to bedrock giving the island its name 'The Rock' while producing the most fertile of the world's seas.² Once these fishing grounds were discovered the exploitation and absence of the North Atlantic Cod affected the spatialization of each inlet, fjord, and inland settlement of the island.

Newfoundland is an island that is suspended between what is North America and Europe. It exists in between; not completely of one or the other in culture,

geography, and economy. Its position in the North Atlantic, close to plentiful fishing grounds, and south of Labrador and Greenland, attracted the Vikings as far back as 985 AD.

There are many theories that attempt to explain their brief stay in the island. Many speculated on harsh weather or native rivals, known as the now extinct Beothuk tribe, as main reasons for their departure. Perhaps more importantly, the Vikings lacked salt, which was the single most important food preserver until the twentieth century. Soon enough, these explorers left, and the Cod grounds were left to be discovered again.³

The Basques, arriving from the distant Spanish and French lands, exploited these same seas hundreds of years later. Their ships participated in whaling, but with the increasing popularity of Christianity and days of fasting, the Basques realized the value of fish.⁴ In the course of the development of the Medieval Church, every Friday was established as a day of abstinence. Cold-blooded fish, particularly cod, was a delicious way to keep protein in the diet. It was generally unknown at the time where the Basques were getting their invaluable stock. They kept their fishing and curing grounds a secret for many years.⁵

The availability of salt made long distant travels possible. Bacalao, bacalhau, baccalà,⁶ or simply salt cod, made its appearance in many countries as far as Spain, Portugal, and as far as Italy. Each sharing popular cuisines despite the fact that none are located in the vicinity of significant cod fishing grounds. This salted and dried product could be brought to anywhere in the world if preserved properly.

Age of Exploration

THE LAND AND SURROUNDING ABUNDANT SEAS weren't claimed for England until the sixteenth century.⁷ Although still debated, it is believed that this "New Founde Land" was encountered by Giovanni Caboto while en route to Asia. He reported that the seas were so full of cod that his ship could hardly move on at times. These grounds became popular for French, Spanish, and Portuguese to fish this North Atlantic white fish. Historical maps were recovered that displayed heavy Portuguese explorations in the area.⁸ By the late 1570s as many as 400 ships were found in Newfoundland waters. The French fleet was the largest with 150 vessels. The Spanish and the Basques had a total of 130. Other fleets exploiting the cod resources were the English and Portuguese.⁹ Many place names within Newfoundland have hints of Portuguese backgrounds, though brutally anglicized since. Cabo de Espera (translating into Cape Hope) is now known as Cape Spear, Cabo Raso is now Cape Race, and the Isla dos Bacalhao is now Baccalieu Island.¹⁰ These metamorphoses tell stories of the origins and evolution of this island's coasts.

For many centuries before this, the fishing grounds surrounding Newfoundland

were not as crucial to English fleets, as they had been exploiting the Icelandic waters for centuries. However, by the end of the 16th century, the Danish were reclaiming the Icelandic fishery from the British. England started to realize the importance of the seas just off the coast of the land that Caboto had claimed for them.¹¹

From the ocean looking in, the rigid scars in the land were leveled by the delicate wooden structures built for the salting and drying of cod. The temporary inhabitation by fishermen was only emphasized by the fragile platforms and boxes assembled and dismantled each season. Every year fishermen came and built their wooden cabins, stages, and wharves. These structures would stand for two weeks at a time and would be dismantled at the end of the season. There was constant erasure of the remnants from the season before. In some cases, the fleets would leave the buildings to the elements in hopes of salvaging the structure in the next fishing season.¹²

The early days of government in this transient place appeared just as disorderly as the inhabitation of the island itself.¹³ Each year, the captain of the first ship to arrive on this land would govern. Each year fleets would brave an early departure to win this position, and as a result many lives were jeopardized. This seasonal inhabitation evolved to permanent dwellings as the race to this 'New Found Land' each season became a more competitive venture.¹⁴

Settlement

THE DEBATES SURROUNDING SETTLEMENT in Newfoundland revolved around social, political, and economic issues. The 17th century was full of back and forth conversations concerning whether to settle or retain the migratory fishery. The merchants who were successful due to the seasonal fishery argued that the land was simply uninhabitable. Not only were the winters harsh, but staying throughout the winter would jeopardize the success of a continuing migratory fishery.¹⁵ The settlers would claim fishing grounds before the migratory fishermen had arrived. They could potentially destroy the structures left by the migratory crews and it would skew the labour wages back in Europe. Ultimately, the argument in favour of opposing permanent settlement seemed to make most economic sense. Although it was believed that Newfoundland was inhabitable, a lengthened fishing season and less building year after year would produce a more efficient fishery.

However, this was not a straightforward procedure. The process would gradually start with residents conquering the winters. The 'overwinterers' expected to return home eventually, if they survived. Overwintering lengthened the duration of inhabitation in Newfoundland, but didn't change the overall transient nature of fishing settlements.¹⁶ As long as families were not living there, a permanent settlement would not be feasible. But by the 1670s there were at least 30 families along the east coast of Newfoundland.¹⁷

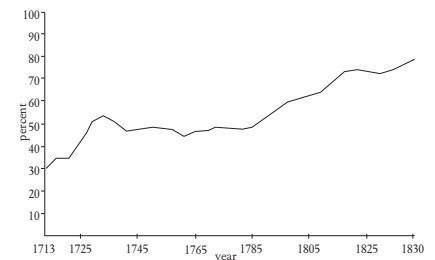


Fig. 1.1 Graph of permanent population as a percentage of winter population from 1713 to 1830. Shows the evolution to a permanent inhabitation of the island of Newfoundland.



Fig. 1.2 Map exhibiting the origin and destination of English immigrants. Information taken from *The Peopling of Newfoundland*.

Both English and French migratory fisheries continued to scatter the coasts of Newfoundland in the 1700s. The French partially occupied the northern shore and west of the island, and the English stretched their fleets from the south circling all the way up to the Labrador coast. The end of the century saw only about 10,000 long-term inhabitants. There was a flow of about 20,000 people in the winter and this increased to 25,000 in the summer.¹⁸ *Historical Atlas of Canada*. The English migratory fishery had collapsed after a lifespan of more than 200 years and most of the work and management became the responsibility of Newfoundland residents.¹⁹ *Historical Atlas of Canada*

As this population transitioned from exclusively seasonal inhabitation to a society that withstood the harsh winters, a sporadic network of permanent communities evolved. In order to maximize access to the coastline and extraction of the invaluable cod, dispersed, isolated coastal settlements were key. A leapfrog effect resulted and the “spatially segregated” populations spotted the coasts of Newfoundland.²⁰ As families grew, a move to the next sheltered fishing ground was a requirement. A decentralized population was needed to manage a healthy exploitation of the resources in the water.

At around the turn of the 20th century, a 20-year period of fights the English and French. The English had inhabited most of the eastern shores for their fisheries, which eventually pushed all French settlers to the northern shore. Eventually the French were only able to occupy two small islands off of the southern coast of Newfoundland: St. Pierre and Miquelon.²¹

The Fish

PRIOR TO THE 1800S, the process of preserving fish had not evolved for the 500 years cod has been hunted.²² The traditional methods required the codfish to be soaked in brine and left in the open air to dry. A community's wharf would usually be built up with stages that displayed cod fillets drying. The catches were so mercilessly saturated with salt that they solidified to rival the strength of a wooden plank.²³

A man named Clarence Birdseye, while living in the cold and dry environment of Labrador, developed a drying and freezing process in the 1800s.²⁴ Soon fishing vessels contained freezing units to initiate the preservation process before the catch arrived to land. Longer fishing hauls were now possible and the offshore fishery started to boom. In the 1920s filleting machinery was developed and fish sticks became a popular household product. McDonald's became a huge consumer of the product, and soon freezing completely changed the fishing economy.²⁵ Fish were no longer bought at the closest source, but wherever fish was the least expensive and the most abundant. Local fleets found it difficult to keep up with the modernized economy. Fish no longer had to be dried scattered along the coasts. Unsalted fish consumption increased worldwide and the spatial distribution of Newfoundland's population had to evolve with the demand. Newfoundland's scattered outport communities were no longer advantageous once the economy started to modernize and cluster.

Just as the spatialization of the population was affected by the economic progressions, so were marine ecologies. With more fish being caught in less time, an imbalance of aquatic populations sparked a chaotic series of repercussions.

Cod's endangered status is still an issue today. Its inability for populations to bounce, even after nineteen-years of moratorium and restricted quotas, puzzles many. Codfish are very resilient. The more gluttonous of bottom dwelling fish, they will consume anything along its path. Being omnivorous, the fish swims with its mouth wide and its appetite is satisfied with about anything that is in its path. This makes for easy fishing, as a cod will bite for unbaited lines. They are resistant to many parasites and illnesses and can live up to thirty years old. Very little threatened this predator's populations:



Fig. 1.3 Drying cod on wooden stages.

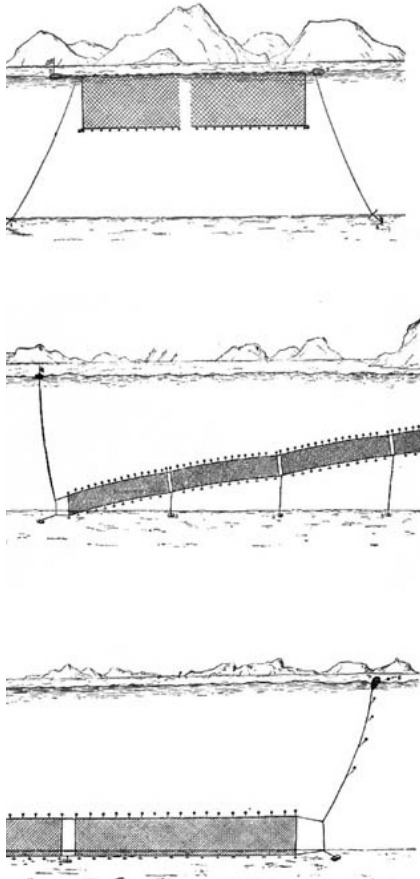
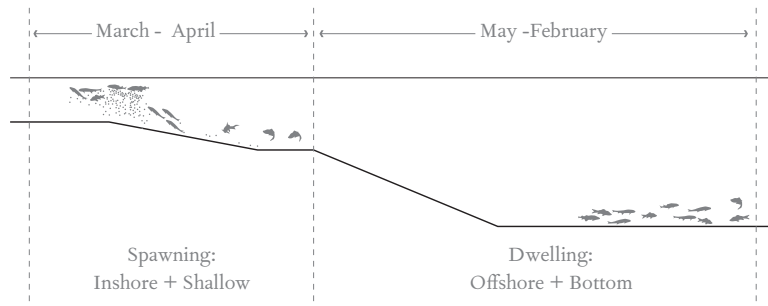


Fig. 1.4 Depths of a gillnet:
 A gillnet, often used to fish for cod, has evolved in material and strength. It has been found that a 'ghost net' [a gillnet that has come loose from its moorings] can drift while killing fish continually for up to 5 years. Pg 124 COD

[Above]

Fig. 1.5 Diagram of cod spawning trends. [Right]



* * *

“If ever there was a fish made to endure, it is the Atlantic Cod – the common fish. But it has among his predators man, an openmouthed species greedier than cod.”²⁶

Although cod spawn inshore and in shallow waters, offshore bottom dragging developed as one of the most efficient ways to commercially fish. Scientists have argued for years that the damage done by this abrasive method is detrimental to ocean ecologies. But their warnings went, and still go ignored.²⁷ Aquatic flora and fauna have been obliterated within these scars of the Grand Banks. The by-catches from bottom dragging are high, and the effects on the ocean’s surface are, without question, consequential.²⁸ This affected the cod populations. At around the same time that catches were starting to indicate a potential decrease, animal rights groups were in upheaval against the baby seal hunt. A ban on the sealskin hunt resulted in an overpopulation of seal and consequently a decrease on cod. Seals are wasteful eaters and only eat the fleshy stomach of the cod to avoid bones. In 1995 Norway and Canada revoked the ban hoping that this would help revive the cod population. Unfortunately, it was too late.²⁹

These political and technological transformations, both on the vessels and on land, had significant effects on the physical structure of Newfoundland’s population. The economic basis of Newfoundland started to crumble, a result of more fish being caught with stronger nets, the decreasing cod populations, the possibility of longer hauls, and fewer workers needed on board fishing vessels.

West Moon

A Play by: Al Pittman

*And death shall have no dominion.
Dead men naked they shall be one
With the man in the wind and the west moon;
When their bones are picked clean and the clean bones gone,
They shall have stars at elbow and foot;
Though they go mad they shall be sane,
Though they sink through the sea they shall rise again;
Though lovers be lost love shall not;
And death shall have no dominion.
-Dylan Thomas*

* * *

The Scene: The time is November 2nd, 1965. The place is a graveyard in an abandoned isolated coastal community in Placentia Bay, Newfoundland.

* * *

In all the dark world there is no darkness like the dark of an outport night. Here on the coast of Newfoundland, darkness comes in all seasons as sudden as sudden death, comes coasting unannounced from its hideaway over the hills, sweeps silently down upon the seaside settlement of St. Kevin's, and covers the quick-silver, looking-glass sea like a shroud thrown from the sky to fall on the face of the funeral earth.

No human eyes can pierce the eternal darkness as it lies like death upon the dead village. And in St. Kevin's now, this November All Souls' Night, there are no human eyes alive and shining where once, not too dark a time ago.

Tonight, with no human eyes to see them, the only fires alive are the fires in the eyes of the animals as they go about their animal business in the dead dark, in a wilderness of ruins.

* * *

The debris in the landwash flows in and out with the rise and fall of the ocean's endless edge. Here the relics of lives once lived glow in the phosphorescent dark. White plastic bleach bottles, red plastic motor oil bottles, tin cans, bits and pieces of nylon rope... These are the artifacts, the leftovers of human lives, seeking their consummation in the sea or the sand.

In the graveyard below the waterfall of St. Kevin's, where once the meager rituals of the living sustained them in their fervent hope of everlasting life, the dead, lying alone in desolate death, their eyeless eyes blind to the geography of the sky, are unaware that the first snow of winter is just now beginning to fall on the vacant village of St. Kevin's.

* * *



Fig. 1.6 - 1.8 Moving Houses 1955-1968

Resettlement

THE UNSTEADY ECONOMY OF THE 1930S hit Newfoundland hard. Still part of England, it was relegated to a marginal state, both geographically and economically. It remained an independent entity with economic and political ties to England, United States, and Canada.

As a predominantly single resource economy, the island's heavy dependence on cod left it struggling. Joseph Smallwood, a leading political figure, worked on diversifying the economy and pushed towards joining Canada. In the later half of the nineteenth century most of Canada was formed which included all Atlantic Provinces but Newfoundland. Canadians had recognized the importance of Newfoundland's geographical location and the threats that the United States posed. Russia had already handed Alaska over to the Americans and Canada recognized the importance of the fishing grounds surrounding this island. They offered Newfoundlanders generous financial security. The Canadian federal government, with promises of generous financial security and unemployment benefits to Newfoundland, backed Joey Smallwood's campaign.³⁰ Tightly contested, confederation with Canada won the Newfoundlander's popular vote in March of 1949. Joey Smallwood became Premier and the last Father of Confederation.³¹

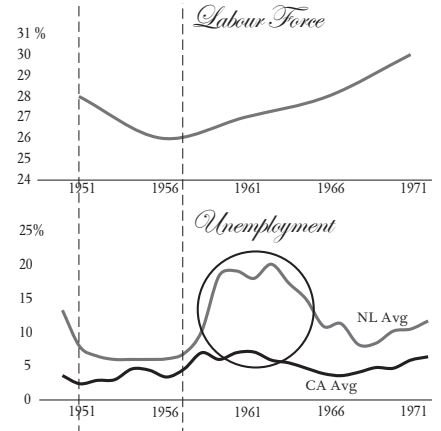


Fig. 1.9 Graph comparing Labour Force numbers to population unemployed. Note that during the years of centralization, unemployment in Newfoundland was at an all time high.
[Above]

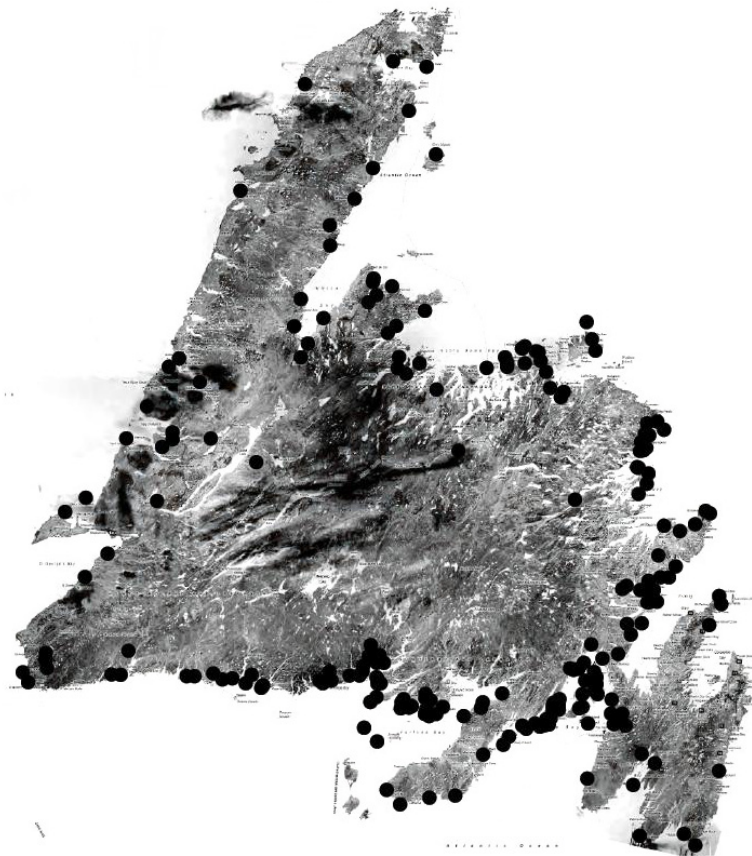


Fig. 1.10 Abandoned communities 1950 - 2000
[Left]



Fig. 1.11 Staged migration diagram. Populations in isolated communities were intended to gradually upgrade, step by step, to larger and more centralized communities.

Canada's tenth province hoped to leverage the mainland to aid in its modernization and economic reinforcement. Smallwood had unbridled faith that infrastructure and connectivity could lead to a more centralized population and a more modernized society.³² During the economically depressed 1950s, the scattered outport communities of Newfoundland could barely survive. The isolation of these fishing villages left these communities significantly behind the rest of Canada in standard of living and level of services and the modernization of the fishery industry made it difficult for them to stay. The population of Newfoundland prior to the joining of Canada was close to 400 000 people.³³ Just after joining, it was noticed that the Newfoundland was losing its labour force to the mainland Canada. Their original strategy of inhabiting the coast proved problematic in the context of modernization. Energy and services were difficult resource to provide to scattered and isolated communities. As a solution, the centralization of populations was promoted and the construction of the Trans Canada Highway (which was extended throughout the fifties and sixties) was to facilitate this movement of people and services.

Once Newfoundland joined Canada, Joey Smallwood hoped to prevent outmigration by developing land-based resource economies. He established smaller industries such as cement plants, rubber boot factories, and advocated forestry, mineral extraction, and hydropower.³⁴ Parallel to this, the Premier also conducted many economic studies of each and every community on the island. Many of the communities had citizens that were either living in impoverished conditions, when they did not simply leave the province to find work on the mainland. The reports studied and assessed all the scattered settlements within Newfoundland labeling each as a potential "growth centre" or a community with "no great future". Among these studies, a classification system labeled each community based on isolation brackets. A gradient from 1 to 10 (with 10 being the most isolated) aided in these classifications. Access to roads, highways, mail, and education were considered less isolated and more ideal.³⁵ This was the beginning of the Centralization Program in Newfoundland.

The 1950s to the 1970s were decades of mass movement within the province. Approximately 300 communities were abandoned (amounting to close to 30,000 people) and many more depopulated.³⁶ The people on the move received government assistance to relocate to the designated "growth centres". A complete reorganization of the province occurred.

In the 50s, the provincial government provided financial aid through the Department of Welfare. Later, in the 60s, the provincial along with the federal government spent over 7 million dollars to relocate families. Each household received \$1000 plus an extra \$200 for every dependent.³⁷ These people transferred their families, and often literally floated their homes to new locations, in search of a better, more modern, and centralized lifestyle. Government documents of the existence of these communities were destroyed and maps later produced no longer had the names of these communities. This erasure was all in the effort to hinder the populations to re-inhabit their original homes.

A general unpopularity in the 1970s slowed the government assistance in

Centralization program. There seemed to be a lack of work in the reception towns and the industrial initiatives were short-lived. Centralizing the populations and the diversification of the economy sought to lower the dependence on the fishery. In the 1960s, oil exploration was passively sought after off the coast of Newfoundland. These explorations were few due to the abundance of oil fields around the world. The economic focus turned inland.

Although it made rational sense, within a short time the mainland industries closed its doors. The refinery on the isthmus at the Avalon Peninsula is one of very few industries still active today.³⁸ Some returned to their original homes to fish during the summer months. Despite the great attempts at diversifying the economy, Newfoundland remained a predominantly single resource economy with its reliance on the sea. The forced movement of the Newfoundland population proved unsatisfactory to the social happiness of the province.

* * *

Reception Points:

Rose Blanche, Port aux Basques, Isle aux Morts, Burgeo, Ramea, Gaultois, Harbour Breton, Bay d'Espoir, Grand Bank, Fortune, Burin, Marystown, St. Lawrence, St. Mary's, Trepassey, Fermeuse, St. John's and vicinity, Harbour Grace, Carbonear, Old Perlican, Catalina - Port Union, Bonavista, Wesleyville, Robert's Arm, La Scie, Englee, St. Anthony, Brig Bay, Port aux Choix, Cow Head, Woody Point, St. George's.

To Be Sustained:

Margaree, Burnt Islands, St. Bride's, Branch, Bay Bulls, Port de Grave, Bay de Verde, Hant's Harbour, Fogo Island, Twillingate, Moreton's Harbour

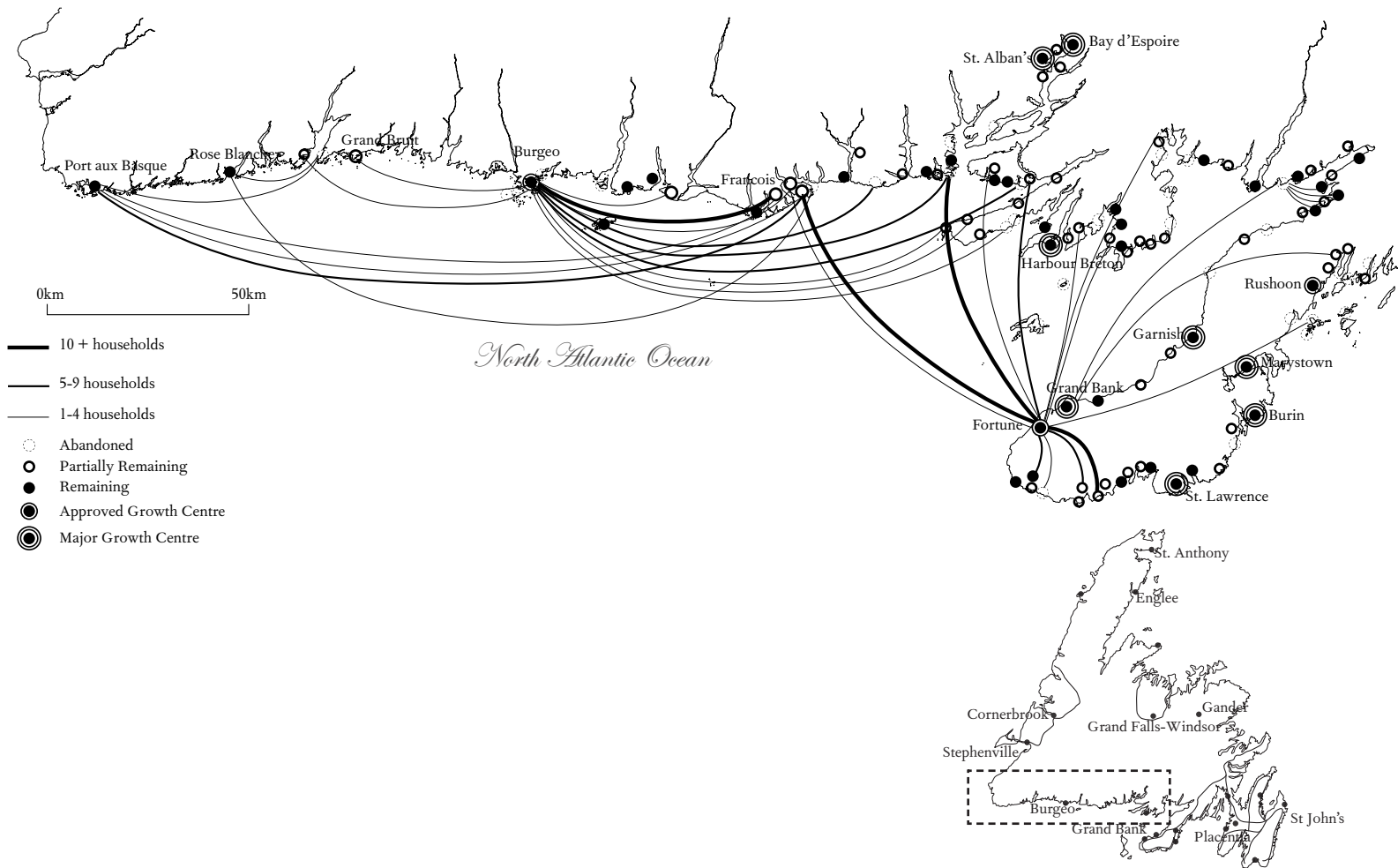


Fig. 1.12 Map of the southern coast depicting the movement of people throughout this time. Few communities, with roads built as a modern access are the only reception places. The only road servicing over 200km of coastline runs to Burgeo in the centre of this coast. It is the anchor of the south coast, it has held its own throughout modernization. [Above]

Fig. 1.13 Road construction and population centralization from 1950 - 1971 [Opposite]



Hunt's Island

HUNT'S ISLAND is situated off of the tip of Burgeo. It was resettled in the 1950s during the Centralization Program. Families dismantled their homes and floated them across the bay into Burgeo proper. A small highway was proposed to join Burgeo to the Trans Canada highway. This town was suspected to be a main economic centre for the southern coast of Newfoundland. Today, the only remnants that are found on Hunt's Island include a cemetery and house foundations in the overgrown grass.

Dorim lived in Burgeo. I stayed in his home during my stay in Burgeo. I asked him to take me to the islands to see the remains. He took me out on his motor boat for an afternoon trip to the island. We pulled up around the northern side of the islands. He pointed out the span where the bridge used to link Morgan's island to Hunt's. We docked, and made our way around the to what was left behind. Everything was covered by the grass. The paths were barely recognizable except for the grooves in the landscape. Dorim explained how living on Hunt's Island was ideal. In the summers the entire perimeter was accessible to the water. In the winters, the harbour would freeze, making for solid route to mainland. The north side however, maintained its ice free access to the waters.

Hunt's island only exists now as a relic of what once was. The traces are left for the occasional kayaker to put the story together themselves.

* * *

Fig. 1.14 Hunt's Island cemetery fenced off and undermaintained. [opposite]



Fig. 1.15 The approach to the island by motor boat.



Fig. 1.17 Remaining steps of long abandoned houses.



Fig. 1.17 Another trace of a stair.



Fig. 1.18 Grooves in the grass show old roadways.



Fig. 1.19 The old schoolhouse with Burgeo in the background.



Fig. 1.20 Schoolhouse remains.



Fig. 1.21 Dorim.



Fig. 1.22 The old harbour.



Fig. 1.23 View to Burgeo I.



Fig. 1.24 View to Burgeo II.



Fig. 1.25 Hunt's Island cemetery looking north to Burgeo.



Fig. 1.26 Hunt's Island cemetery.

From Fish to Oil

INTO THE POST WORLD WAR YEARS, advancement in fishing technologies changed the way fishing was carried out. With faster boats, better nets, and ocean floor draggers, each vessel had very successful catches. It became necessary for nations to secure their fishing grounds to ensure that international vessels would not overexploit a resource that was not their own.

Concurrently, the offshore oil search within the 1940s sparked an interest in the surfaces beyond land. In 1945, President Harry Truman wanted to protect the United States' offshore oil production. He declared the right of the United States to control resources on its own continental shelf. As most commercial fishing took place within the banks of the shelf, the consequences of the seas' ownership were tremendous.³⁹ No nation had ever owned a sea, but now borders extended out beyond the extents of the coastline.

In the meantime the Cod Wars were fought between Britain and Iceland. In 1976, Iceland's 200-mile limit secured affirmation and soon after, 90% of the world's fishing grounds were claimed by a nation's 'Exclusive Economic Zone' extending out 200 nautical miles from the coasts.⁴⁰

Finally, by the 1980s, Canada had secured and enforced international limitations within the exclusive economic zone. Until then, international fishing fleets had been exploiting Canadian waters as far as the 12 nautical mile zone.⁴¹

The offshore zones belonging to a coastal state extend out 200 nautical miles. These zones are split into three different categories, the Territorial Sea, the Contiguous Zone and the Exclusive Economic Zone. The territorial sea extends out twelve nautical miles from the low tide elevation as the baseline. The sovereignty of the coastal state extends to these limits and includes the airspace, seabed, and subsoil. The coastal state also has the responsibility to provide information on location of hazards within their territorial sea to those who exercise the right of innocent passage. They have the right to prevent violations of their customs, laws, and regulations. The contiguous zone is a twelve nautical mile extension of the sovereign rights from the Territorial Sea limit. The state has the right to prevent violations but does not hold the same responsibilities that the Territorial Sea requires. The sovereign rights do not extend up to the airspace. The Exclusive Economic zone is the state's right to any resources found within the waters and below the sea bed.⁴²

The pattern of the island's settlements has been one of gradual occupation of the coastline, with few inland settlements and few roads. The island has turned itself 'inside out', oriented towards the sea as its territory. The securing of the seas from international fisheries was a vital move for the health of Newfoundland's economy.

For many years prior to the moratorium, inshore fishermen of Newfoundland had been able to perceive the early signals of an unhealthy cod stock. Many reports to the government's scientists were communicated as early as the 1970s, but the offshore fishermen were catching their quotas.⁴³ Throughout history, there had always been fluctuations in the amount of fish caught. There are

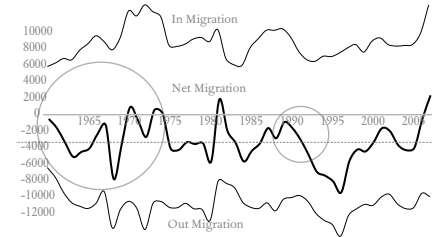


Fig. 1.27 Net migration from 1960 to 2005. The circles point out the resettlement program and the cod moratorium respectively.

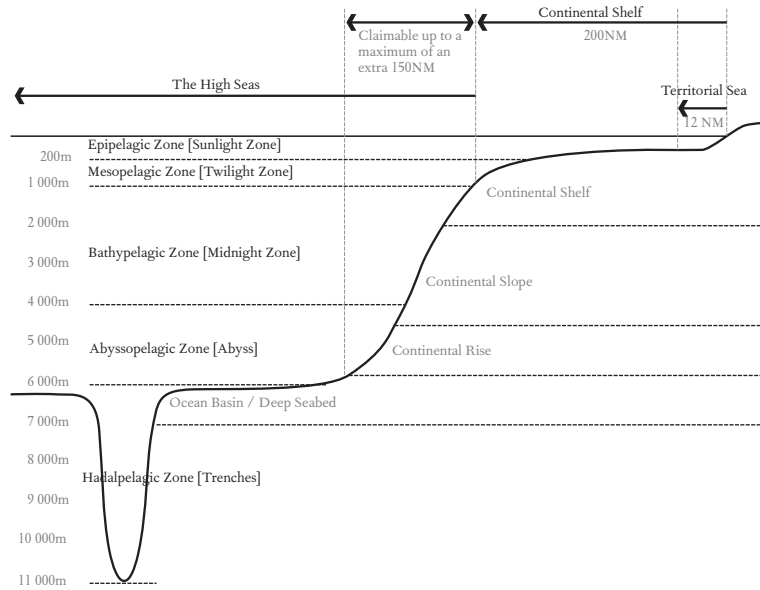


Fig. 1.28 Section of ocean showing mile limits, economic zones, and ocean depths. [Right]

many factors that contribute to the health or unhealthy of the fish population. However, the inshore fishermen felt that this wasn't a temporary drop. Many believed that the fish were being affected by climate change. Colder waters from the melting ice-cap up the Labrador current was either causing smaller spawning results or the fish were migrating south.⁴⁴ Others blamed the mass exploitation of international fleets. A dismissal of all of these warnings proved detrimental.

In July of 1992, John Crosbie, Minister of Fisheries and Oceans Canada, announced the commencement of the Northern Cod Moratorium in St. John's, the capital of Newfoundland. Just 3 years prior to his announcement, he had attempted to trivialize any suspicions of a moratorium, although many of the inshore fishermen knew that the decline in stocks had reached critical levels.⁴⁵ That single day in July resulted in the loss of 44,000 jobs for fishermen in the province of Newfoundland alone.⁴⁶ Between 1991 and 2001, the province's population dropped by 10 per cent.⁴⁷

Two years later, the moratorium was still in full effect. A man from Notre Dame Bay was charged for catching cod for his own table. It was the first charge given to a Newfoundlander for non-commercial cod fishing.⁴⁸ The moratorium and eventual strict quotas proved to be very stringent in the decades to follow.

Despite the clear issues behind the health of our ocean's ecologies for years leading up to the moratorium, sonar testing for the offshore oil ensued. Although initial testing happened in the 60s, the oil crisis in the 70s reignited interest. In 1979 the Hibernia oil field was discovered. Major development began in 1989 and some believe that the disturbances this caused did not help the condition of fish ecologies.⁴⁹ What was initially thought of as a temporary prohibition became permanent as cod stocks have failed to ever bounce back to a healthy state.⁵⁰

The insatiable hunger of man led to this decline. As with all other populations reliant on single industries, when the cod fishery died, the whole economy of Newfoundland died along with it.

Hibernia sits 300km off the eastern coast of Newfoundland. Since the opening of Hibernia, two other oilrigs extract oil from the Grand Banks, with a third proposed.

The ways in which the seas are being managed are not conducive to a possible restoration of fish stocks. Newfoundland is now an economically significant province in Canada. The government has put most attention on oil. With ineffective restrictions on fishing and licenses as well as aggressive bottom dragging still a means of fishing crab, the hope to restore the sea's ecosystems has virtually evaporated. Oil, replacing cod, was the savior of Newfoundland's economy. However, it remains predominantly dependent on a single resource.

* * *



Fig. 35 Hibernia oil field.



Isle Aux Morts

ISLE AUX MORTS, directly translating to Island of the Dead, is situated along the far western side of the southern coast. It is west of Rose Blanche, where the highway terminates, and is accessible by road. The fish freezing plant was the lifeblood of the place. Since its closure, the population has decreased and the high school has been closed down. The fish plant stands, dilapidated, and crumbled. The building, aquamarine in colour, looks as if someone has set fire to the interior. No one is in sight; no water traffic is taking place. I climb on the rusted machines to look in and take photographs. They sit in the landwash, contaminating the sea with its degradation. The freezing equipment looks haunting in such a lifeless and wide-open building.

* * *



Fig. 1.31 Exterior of storage silos.



Fig. 1.32 Rusted equipment in the landwash.



Fig. 1.33 Second plant building.



Fig. 1.34 Second building with storage silos in background.



Fig. 1.35 Crumbled wall.

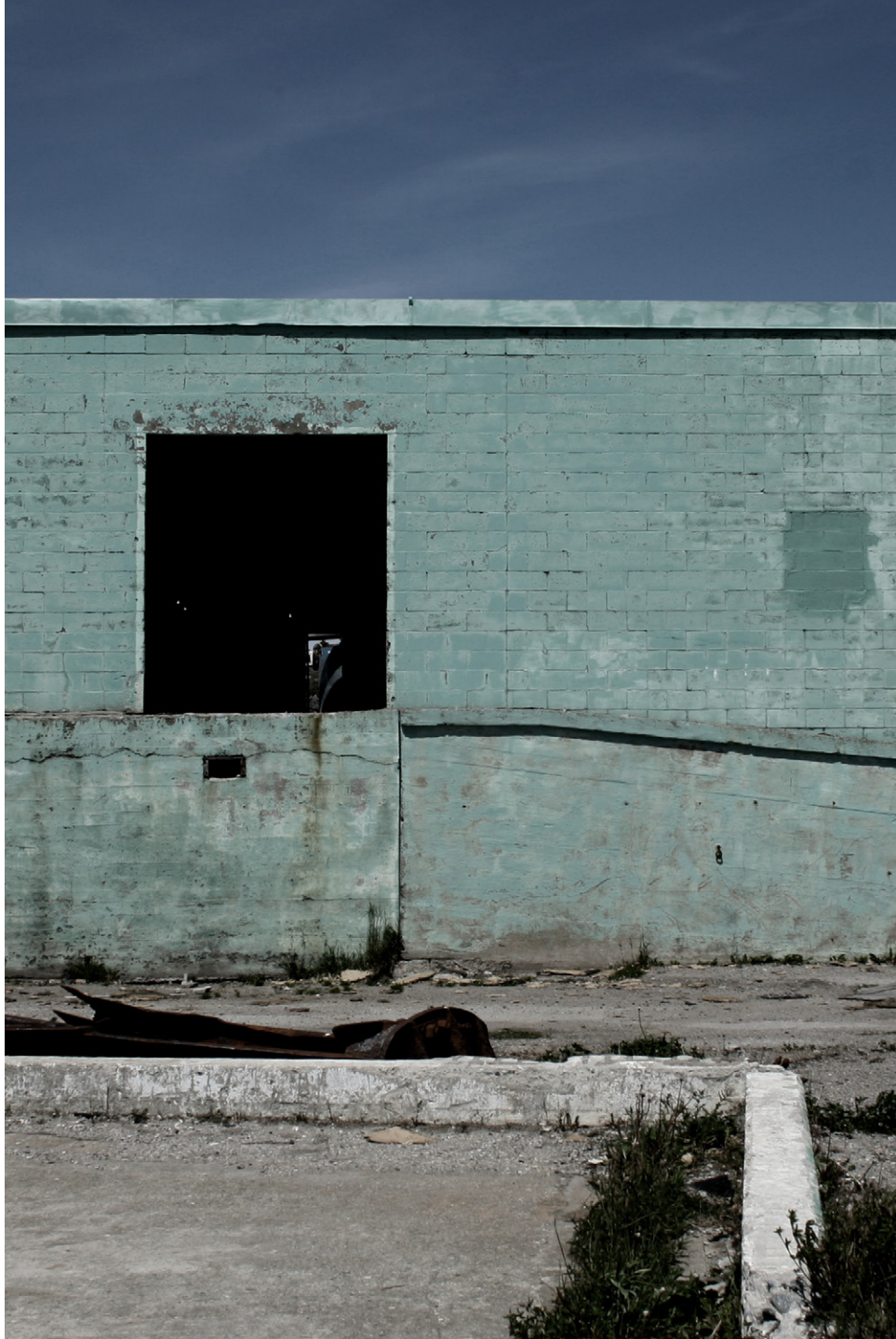


Fig. 1.36 Entrance.





Fig. 1.37 Abandoned interior.

Modern Resettlement

AS AN IMMEDIATE RESULT of the moratorium a northern community named Great Harbour Deep was economically and socially devastated. The provincial government agreed to offer financial assistance to move in the same fashion as decades before.⁵¹ This set a precedent for few communities in these current economic conditions. Most Newfoundlanders try to stay in the communities that they, and their ancestors, have been raised. However, lack of schools, healthcare, and labour makes this way of life very difficult.

Despite the great oil discovery, it wasn't enough to employ all those now out of work in the province. Hibernia only employs 800 men at a time.⁵² Many men find themselves leaving the province for the winter months to find work. They often travel to work in the oil sands in Alberta, and return to Newfoundland to fish during the summer months. Once more Newfoundland finds itself dependent on a single resource.

Grand Bruit, a community of 30 people, is located on this coast between Port Aux Basque and Burgeo. On Monday, Wednesday, and Friday, one can reach Grand Bruit after an hour and fifteen minute ferry ride from La Poile. And after three hours on Tuesday and Thursday from Burgeo. The significance of mobility in isolated communities is considerable. There is one true lifeline for these remote communities: access. And Grand Bruit had just lost its access.

Difficult for the province to provide basic services to this barely populated isolated community, it was more economical for the province to buy out each household. Based on calculations, fifteen years after Grand Bruit's relocation, the government will have recovered any costs involved.⁵³ Port Aux Basque and Burgeo were the main host towns.

In the case that a fisherman wants to return [by their own means] they are required to lease their property back from the government for a small annual cost. Aesthetic maintenance on buildings is prohibited by law.

"The soul of the dying person always goes out with the tide."⁵⁴

* * *

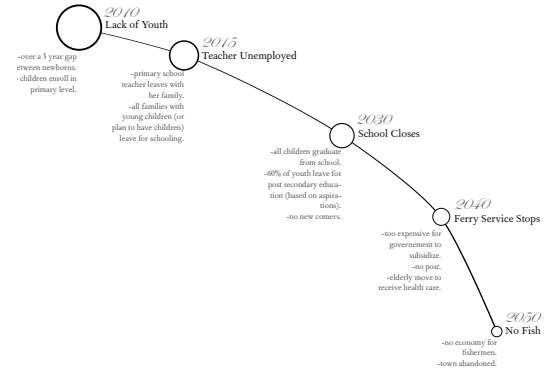


Fig. 1.38 François diagram of prospective of depopulation. Influenced by the "snowball effect." The diagram is based on the population of François in 2010, how many children are in school, how many plan to stay in François and the ages of the present community. The school groups four grades together for grades 1 - 12, thus there are only three teachers actively teaching. The youngest child born in the community was five years younger than the second youngest child, therefore, the younger-level teacher will soon be unemployed. The demise of the school will spark the demise of the community. Looking at age in general, the points at which healthcare will be an issue becomes apparent. The end of the fishing economy by 2050 is in Clover, C. The End of the Line: how overfishing is changing the world and what we eat. London:



Grand Bruit

I'VE BEEN TO A PLACE that no longer is: On July 7th, 2010 the Marine Eagle unleashed itself from Grand Bruit's dock for the very last time. Full of the final remnants that filled each of the homes, the stern of the vessel sunk low. The wake in the harbour slowly calmed as the ferry headed westward for the final time along that southern crossing.

The sun battled the greyness that day. The result: clouds shone with a titanium glow, and the ripples on the harbour were almost blinding. The peaceful reflection of the houses nestled within the rocky landscape was disrupted by the arrival of the loud and clumsy ferry.

Residents watched as the ferry gracelessly bumped the side of the dock and helped tie it to the edges. Curious to see who the unknown visitors were on the ferry, they shyly peeked and then pretended not to notice. Their delight was soon overcome by the anxiety of the inability to fit all of their belongings and themselves aboard. Slowly and strategically the onboard crane lifted their plastic wrapped washers, dryers, bits and pieces onto the ferry. This seemed to be just another day of a relocating process that stretched months.

* * *





Fig. 1.40 View north to Grand Bruit.



Fig. 1.41 Approach.



Fig. 1.42 Catch of the day - Haddock.



Fig. 1.43 Wharfs.



Fig. 1.44 Great noise from the waterfall.



Fig. 1.45 Grand Bruit cemetery facing east.



Fig. 1.46. Abandoned homes.



Fig. 1.47 Moving out I.



Fig. 1.48 Moving out II.



Fig. 1.49 Loading the ferry.



Fig. 1.50 The crane I.



Fig. 1.51 The crane II.



Fig. 1.52 The crane III.



Fig. 1.53 Marine Eagle.





Fig. 1.54 Community on the dock.





Fig. 1.55 Leaving.

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Part Two
Re: Generation

The Southern Coast

THE DESIGN PROPOSAL is situated along the southern coast of Newfoundland. One of the most isolated places on the island, it suffers from unemployment, loss of schools, and depopulation. In a 1960's report¹ on isolation within Newfoundland, the majority of the southern coast scored very low. Many people will seasonally inhabit a community throughout the fishing seasons (as the winters are quite severe). Many fishermen leave their families to move out to the west of Canada to work in the oil sands during the winters in order to provide for their families. The seasons in this area of Canada have heavy impact on the populations and economy. Although permanent resident counts are quite meager, the summer population of this area swells.

The length of the southern coast is only accessible by boat. Between the 400km of coastline, from Port Aux Basques to Hermitage a team of three ferries runs a very limited schedule to allow for post, business, travel, and energy through diesel deliveries. These communities (consisting of 100 people or less) have withstood the effects of the resettlement program.² High waves during the harsh winters make this lifestyle even more severe, as marine transportation is highly dependent on weather conditions. The south coast ferries will not run when winds reach 30 knots or more, which is a regular occurrence. Medical emergencies are weighted slightly differently on this coast. In most cases of outport



Fig. 2.1 Study area key map. South Coast of Newfoundland. [Above]

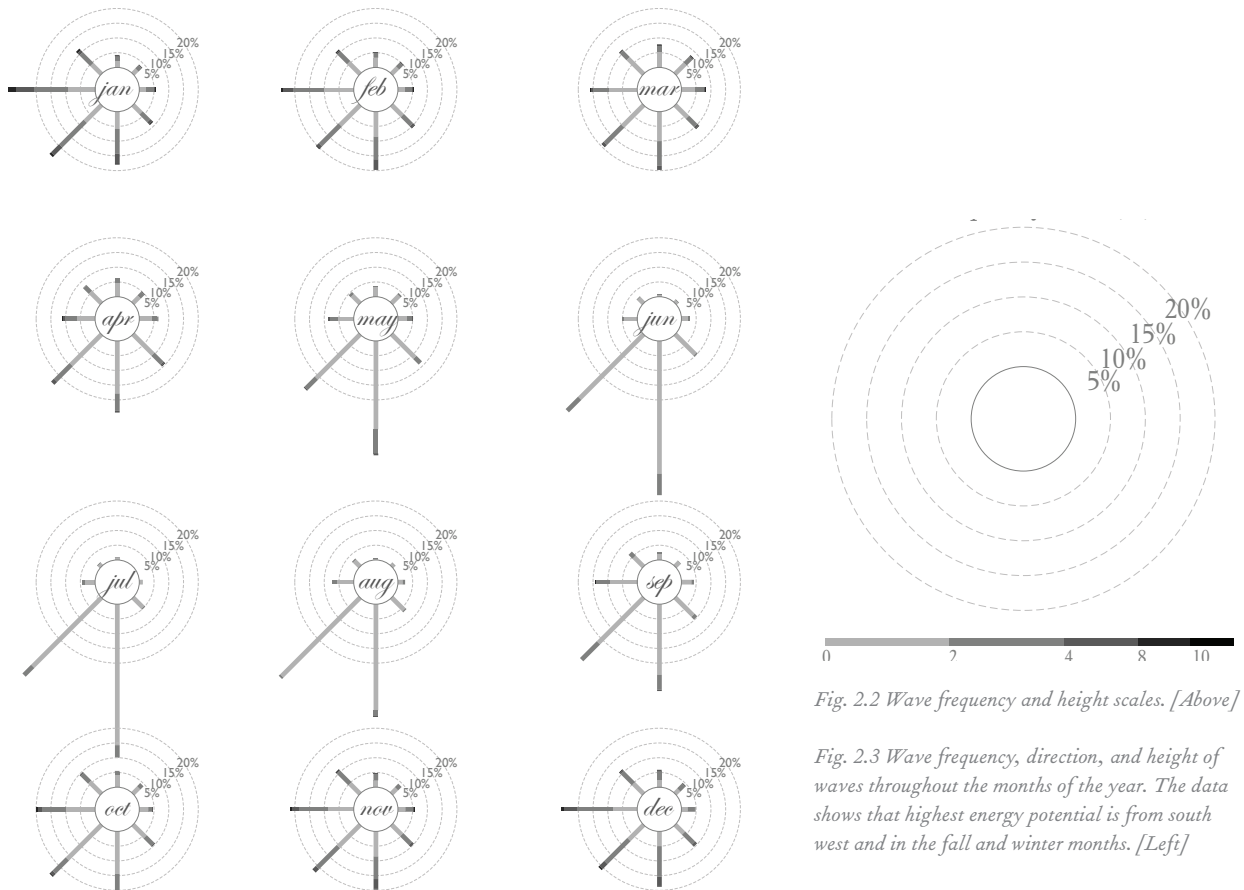


Fig. 2.2 Wave frequency and height scales. [Above]

Fig. 2.3 Wave frequency, direction, and height of waves throughout the months of the year. The data shows that highest energy potential is from south west and in the fall and winter months. [Left]

towns, if there is a life threatening situation, an air ambulance is sent in. In all other cases, inhabitants must wait until the next ferry out.

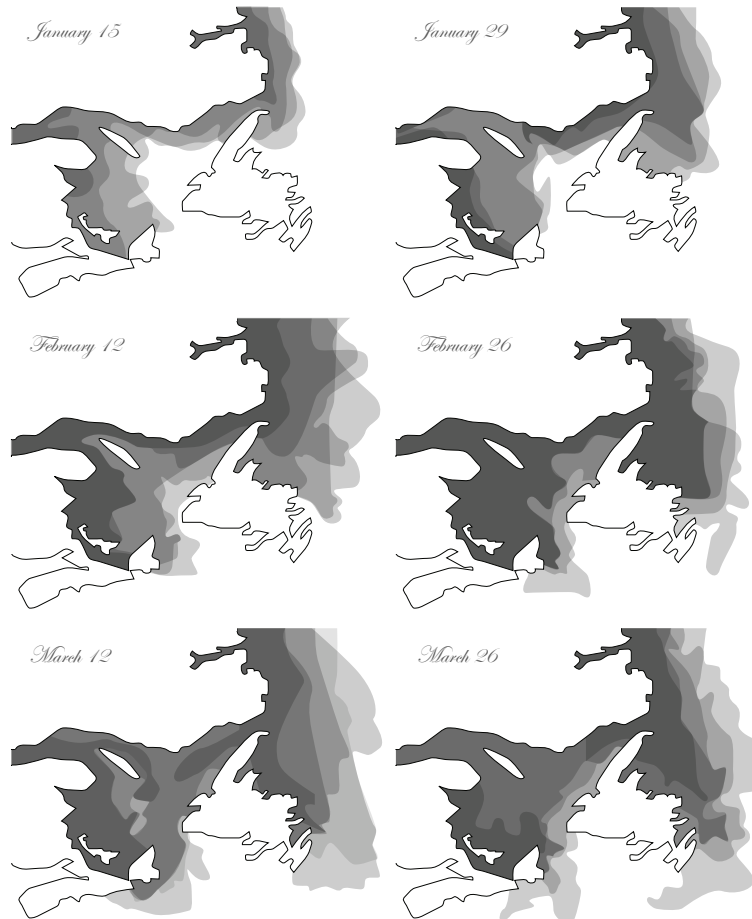
The predominant winds across Newfoundland are westerly. In the fall, the waves on the southern coast can become so violent that when they make contact with the hard granite a spectacular 50-foot high burst of salt-water results. The waves are larger in the months of transition when the temperature of the water has yet to catch up with that of the air. This difference causes high winds, and high winds causes larger waves.

Newfoundlanders have a contested relationship with the wave as its fury has cost many fishermen their lives. In a recent study of offshore conditions within the banks off the coast of Newfoundland, waves have been found to reach an impressive 10 metres or more in higher winds. In the months of seasonal transition, when the water is either warmer or colder than the air, winds gain significant speed and thus produces high waves.³ This may be treacherous for the fishermen, but the potential energy latent condition can produce enough power to service not only the homes within the entire southern coast, it can offer the overflow to the provincial power grid.



Fig. 2.4 Legend of how many years of ice cover documented within 5 years. [Above]

Fig. 2.5 Diagram displaying ice cover in waters surrounding Newfoundland. Note the absence of ice in the south. Ice free conditions are ideal for wave power generation. Data collected from the Department of Transport, Ottawa. [Right]



The southern waters, in contrast to the condition of the north, east, and west coasts of the island, are free of ice in the winters. The spring and summer bring little to no icebergs since the island acts as a shield from the pieces drifting from the northern waters. The tidal current flows from east to west and the waves develop from the southwest.⁴ The largest waves are seen in the fall and winter, when the temperature of the air and water differ and so these seasons are most ideal for harnessing the waves.

The topography of the Southern coast of Newfoundland is breathtaking. The rocky island offers little area with arable land especially on the rugged southern coast. Newfoundland has always looked to its ocean to offer its resources. The shoreline varies from piercingly steep inlets and harbours to rocks peeking above the surface of the ocean. The inability to interconnect this portion of the island is due to this very topography. Building with such tremendous topography and solid rock is difficult, if not impossible.

“He had been told by someone, or had read somewhere, that the name Smallwood was from the Anglo-Saxon and meant something like ‘treeless’ or ‘place where no trees grow’”
“It wouldn’t have been a bad name for Newfoundland”⁵

Because the land is so extreme and difficult to traverse, diesel generators service many of the communities that can’t connect to the energy grid. Currently, the communities that are serviced by diesel are Ramea, Grey River, Francois, and McCallum. Grand Bruit, officially relocated in July 2010, had its electricity from the grid withdrawn and anyone visiting or inhabiting this community temporarily are required to provide their own energy through generators.

The bathymetry around Newfoundland is as astonishing as its mirrored topography. The depth of the ocean and its steep harbours allowed for easy access into the waters and to the fish. The ocean reaches depths greater than 200 metres just 60km off the coast. For several reasons, this made the site ideal for the offshore fleet to fish and harbour.

“Every fisherman on this island can describe the bottom of the sea”⁶

The sea off of the southern coast is spatially dynamic. There are two deep channels crossing through this area, and the banks are fishing grounds. There are few coral locations but many disturbances, due to dragging, on the ocean floor.

It is clear that the Southern coast is in a state of social decline. It is in a state of depopulation. The off seasons push the populations to larger economic centres including Burgeo, Port Aux Basque, or out of province to make their living. Though, Newfoundlanders try to maintain grounding in the place they grew up - but with depleted cod stocks, and very little effort put in to reversing the damage - the future of this place looks grim.

This is the situation and site for this thesis.

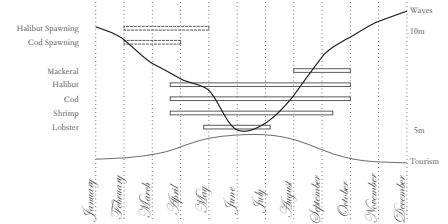
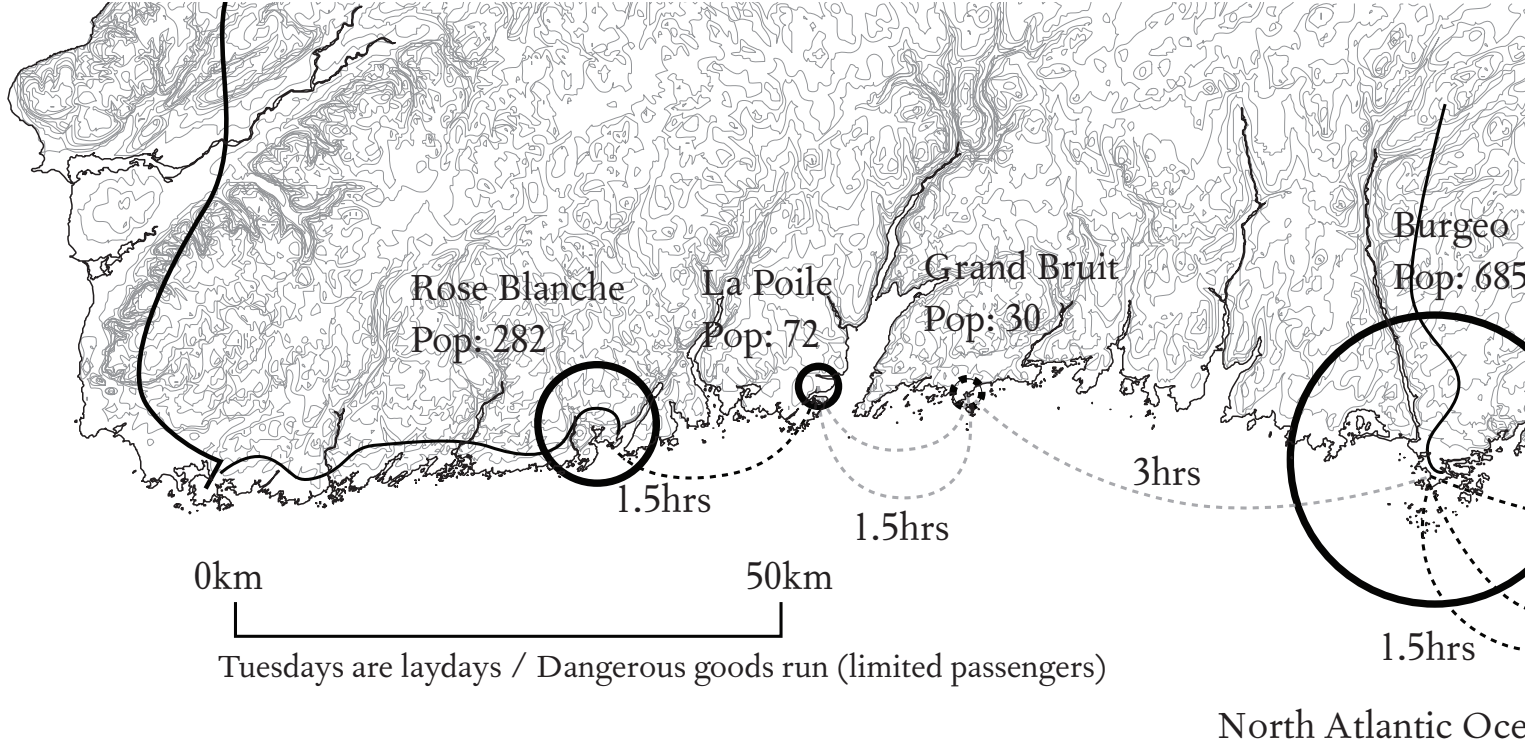


Fig. 2.5 Yearly calendar of fishing seasons and wave energy potential. Wave energy potential is greater during the off seasons for fishing and tourism.



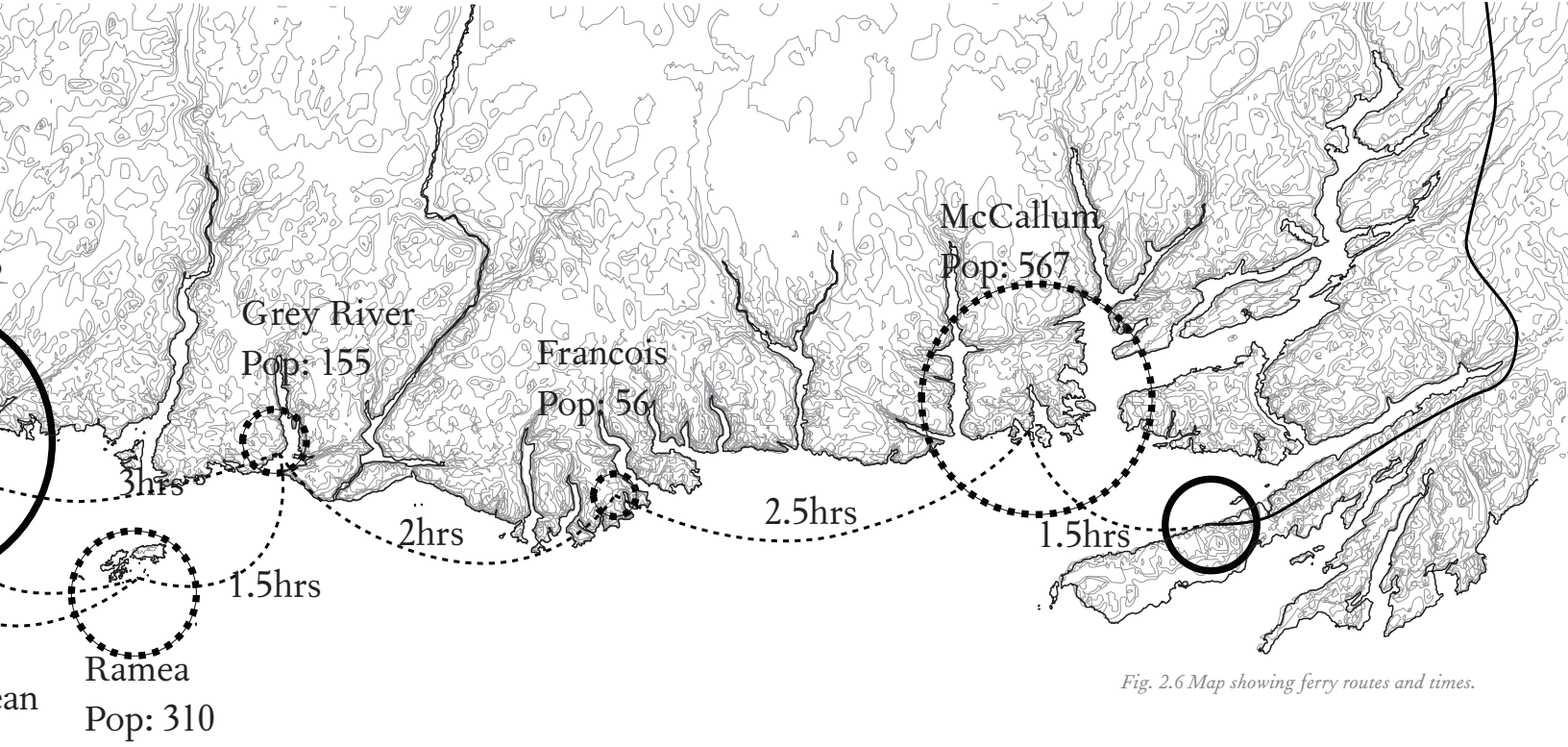
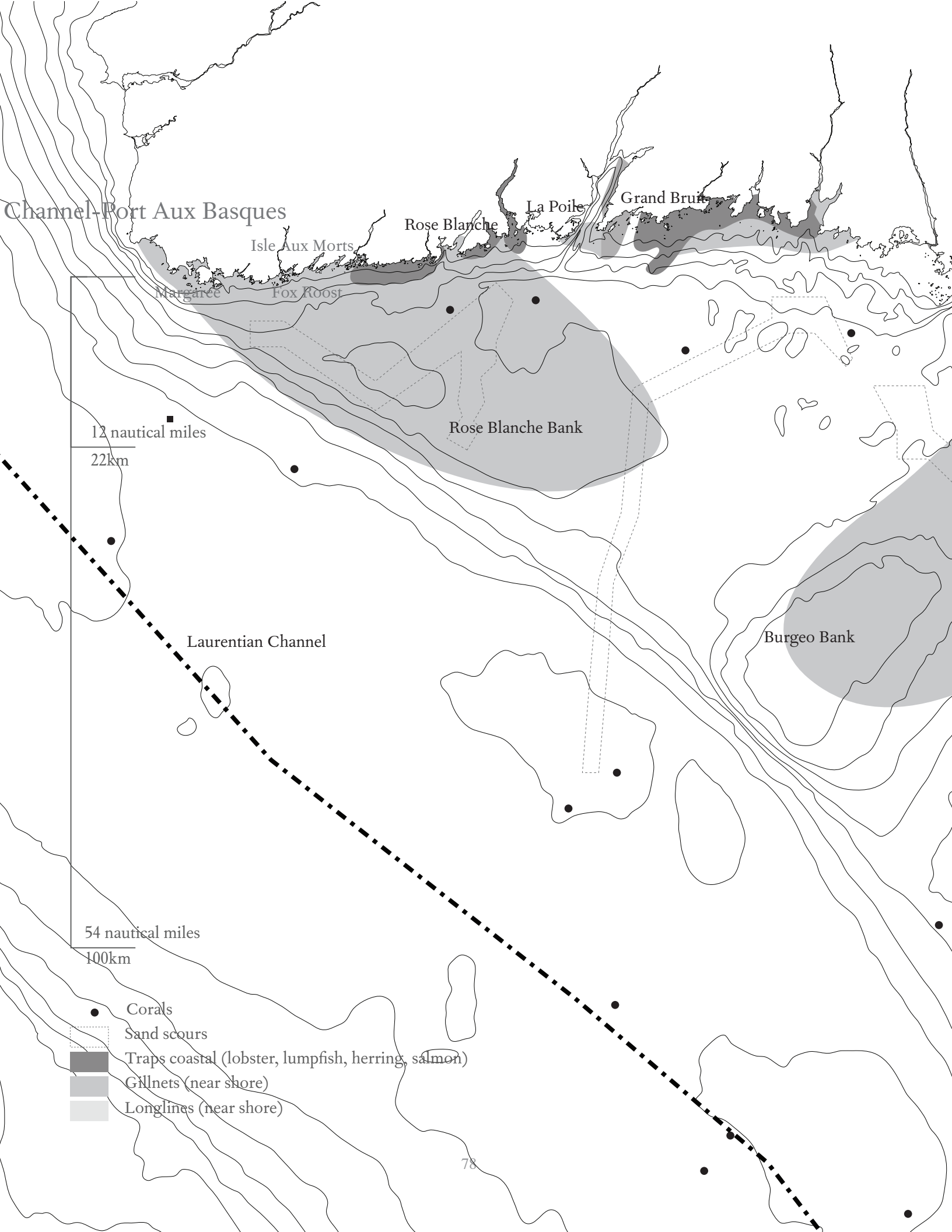


Fig. 2.6 Map showing ferry routes and times.



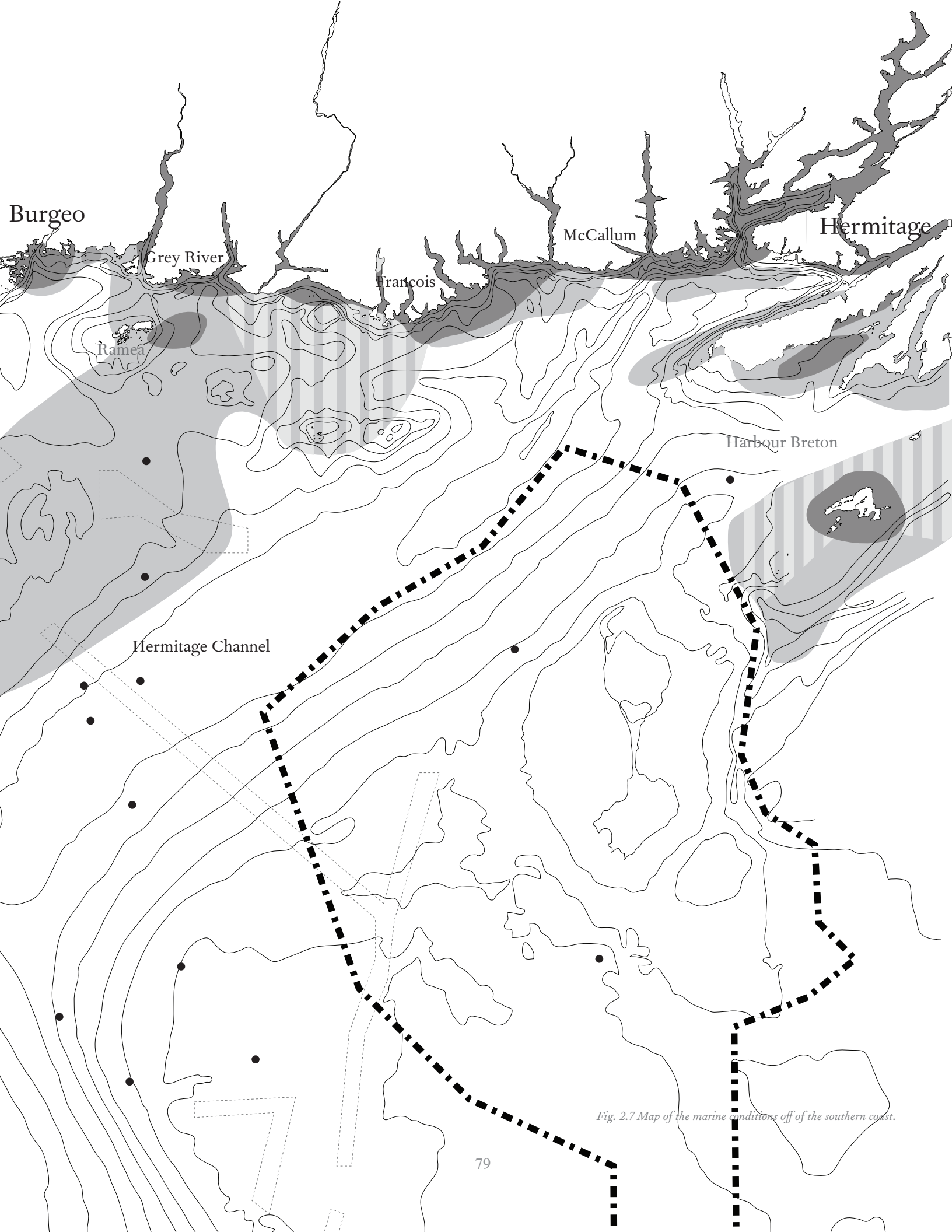


Fig. 2.7 Map of the marine conditions off of the southern coast.

Re:Generation

*“To prevent slipping, a knot depends on friction, and to provide friction, there must be pressure of some sort. This pressure and the place within the knot where it occurs is called the nip. The security of a knot seems to depend solely on its nip.”*²⁷

THE HISTORICAL ACCOUNT of the sporadic and shifting populations in Newfoundland have been synthesized into a theoretical infrastructure. This project exemplifies the themes of mutability, movement, shifting, and transience through the design of a mobile wave power and monitoring system off the southern coast of Newfoundland. They are designed into modular units that are intended to connect to the ocean floor by an anchor that will enhance the growth of aquatic flora. The versatility of the speculative infrastructure is intended to allow a response to the constant shifting needs of the population as well as the aquatic ecology. It is recognized that the needs of each community, and the resources of each environment, are diverse in type and supply. The spatialization of the energy and monitoring infrastructure has the opportunity to link the ecological, political, cultural, and historical constituents in contemporary society. It has the potential to be a dynamic system that forces a presence in the everyday lives of a cultural habitat. The design embraces energy, monitoring, and processing infrastructure to aid in the sustenance of the human, as well as the aquatic, population while turning Newfoundland’s focus back to the sea.

The two ecologies - one of the land and one of the sea - have a direct relationship to each other. The ecological health of the benthic surface has immediate effects on the health of terrestrial populations. The designed infrastructure subtly layers the restorative pieces and serves as a constant reminder of what was and what might become the cultural environment. This contemporary energy infrastructure, usually hidden from the landscape, is designed to take on complex environmental and programmatic roles. The overall dynamic system is informed by the migration of Newfoundlanders, seasons, and economy. This infrastructure is inherently linked to the demand. It is important to provide anchors to allow for a form that we cannot entirely predict. The intervention is intended to dramatize the weather conditions, to register every hour of the tides and heighten every gust of wind. Each part of the design blurs the distinction between the land and the sea, existing in both conditions and in between.

Three Sites

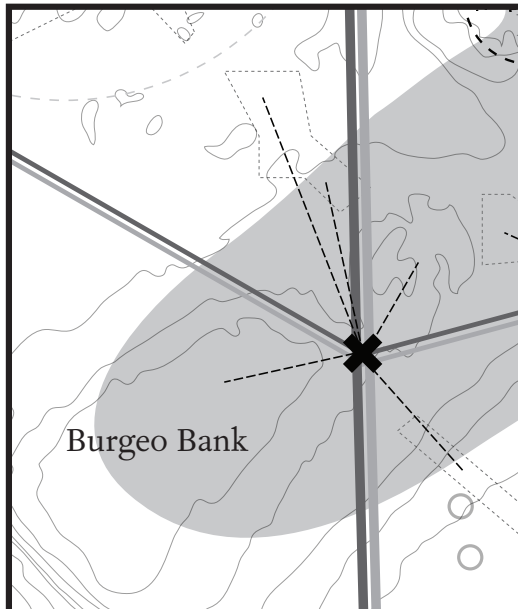
THE PROJECT FUNCTIONS AS an offshore wave energy and monitoring system. The physical design will be explained in the context of three realms in which it exists; beginning with an offshore network and its components, followed by a central monitoring building, and finally the outport interventions. This provides a temporary monitoring building model for all other outports on the southern coast. The chosen outport site to demonstrate the design is the recently resettled Grand Bruit.

Where: Offshore and Inshore zones

What: Monitoring, artificial reef, wave energy, fibre optic network.

Why: To provide energy to the isolated south coast, to layer the economies, revitalize the ocean floor, and distinguish marine protected areas

Who: Aquatic life, fishermen, tourists, distressed in need of emergency landing.

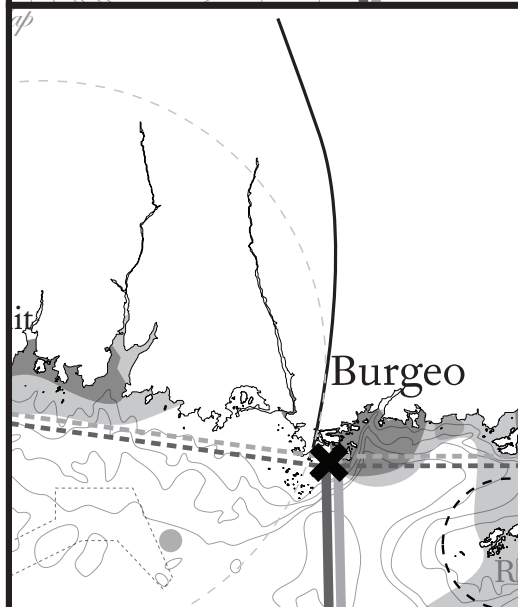


Where: Burgeo (main economic centre)

What: Main shore station for monitoring, research, energy transformation, fish processing

Why: To provide support facilities for the proposed network and to sustain existing economic functions. Burgeo hosts the main facility as it is connected by road and has the most robust population.

Who: Researchers, students, fishermen, locals, tourists.



Where: Grand Bruit (or other small outpost community)

What: Temporary / Light ocean monitoring facility, energy generation.

Why: To monitor cod spawning inshore, and to provide energy for community members.

Who: Researchers, students, locals, tourists.

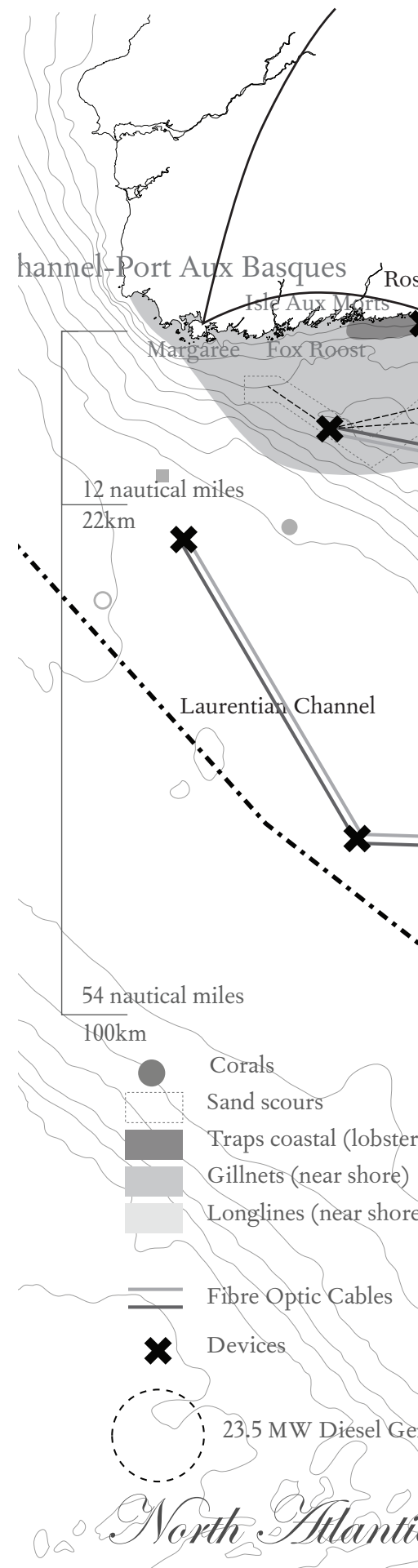
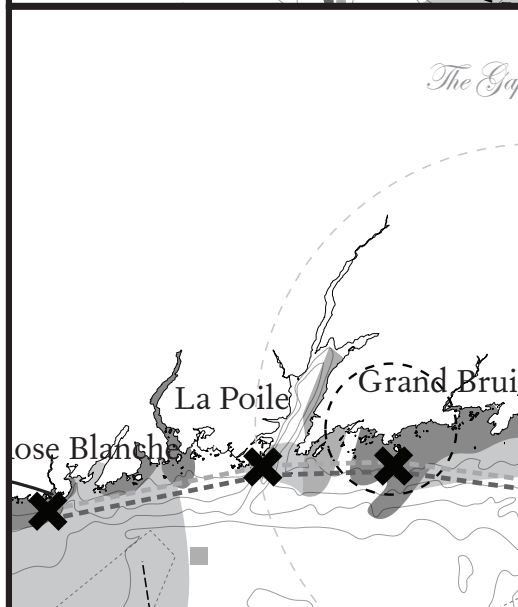
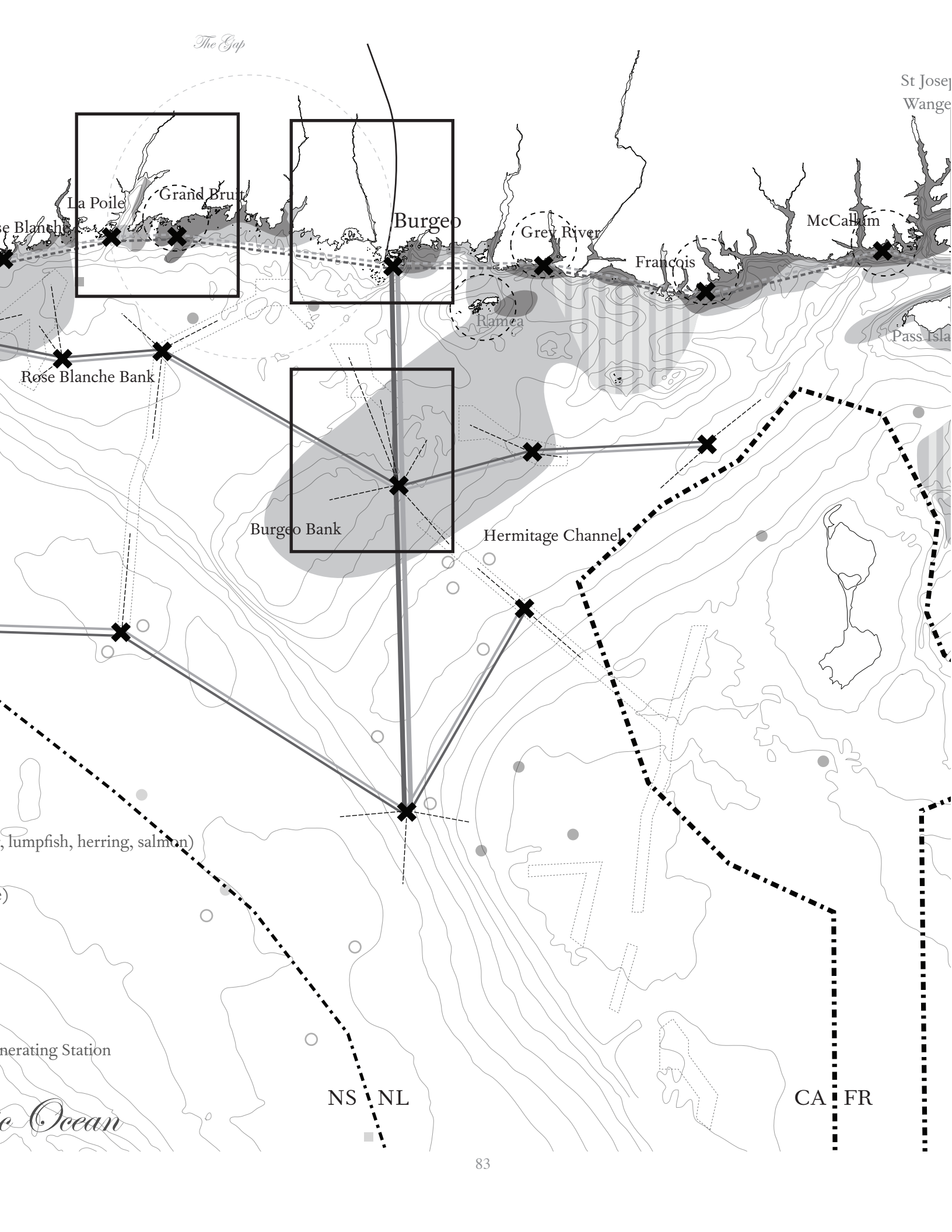


Fig. 2.8 Map of project network.



The Gap

St Joseph
Wange

La Poile

Grand Bruit

Burgeo

Grey River

Francois

McCalkin

Rose Blanche

Ramea

Pass Island

Rose Blanche Bank

Burgeo Bank

Hermitage Channel

(lumpfish, herring, salmon)

Generating Station

The Ocean

NS NL

CA FR

The Device

THE OFFSHORE MONITORING and wave energy devices can be thought of in three different sections. The top portion is the platform or buoy. This makes for different degrees of inhabitability throughout the ocean. This portion is buoyant and is situated above a hydraulic mechanism to harness the energy in the waves. Depending on the location of deployment and/or distance from shore, the designed platform may take on different programs.

As the platform is deployed further offshore, the section of the hull changes. The stability of these components is dependent on the shape of portion submerged by water. A deeper hull has more stability in rougher waters and provides for an emergency landing or mooring station for helicopters and other watercraft. The platforms that are deployed nearshore contain a shallower hull, which remains steady in only in calmer waters. This allows for human occupation when the weather conditions are docile.

The devices are constructed with whistling buoys within the platform to provide navigational aid when fog is thick and waves are high. The whistling platforms in calmer waters have a peaceful sighing sound in contrast to the screaming sounds that the tumultuous waves would produce.

When the devices are deployed in a main gill net fishing ground, the platforms contain a net within the frame. This will provide for a new fishing technique that is safer and more reliable than the regular gillnet technique. The gillnet within the platform will decrease the cases of ghost netting [hazardous free floating nets], as the net will be secured to the platform well and has little chance to disconnect.

The network of these devices is calibrated using several different factors. The mapping of the sea in previous sections established key areas of focus while case studies of ocean monitoring networks provide information on distances between monitoring points in the system. The devices were deployed in a cross section of environments such as adjacent to corals, on the banks, within the channels, along scour marks, and within fishing grounds. This variation supports the widerange collection of data increases the potential for continued study and observation of each of these conditions (and their long-term effects on the fish populations). The devices deployed close to shore and in shallow waters are for the sole purpose of collecting data on the patterns of cod spawning.

Each device will provide power firstly to itself through its wave energy generation, with superfluous energy being sent through to Burgeo. The energy will then be sent along the coast to the isolated communities or back to the province's energy grid.

The data that each device collects will be fed to the main ocean monitoring shore station that is proposed in Burgeo.

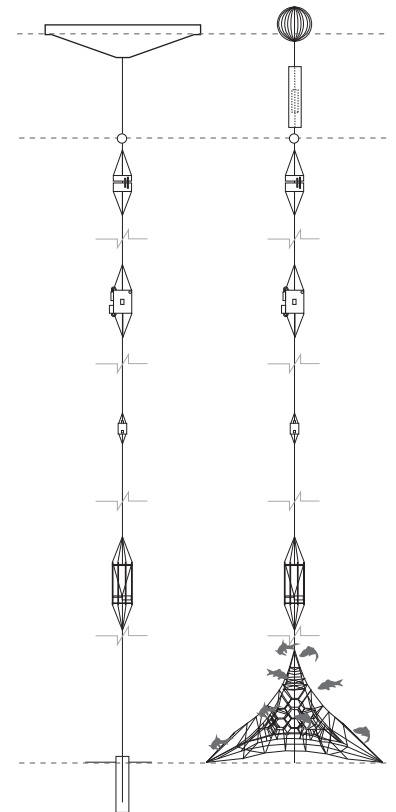
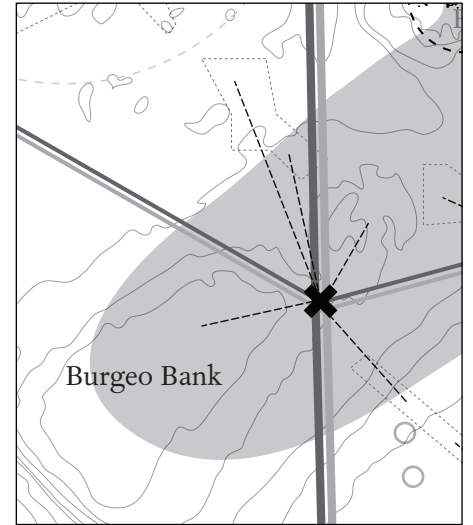
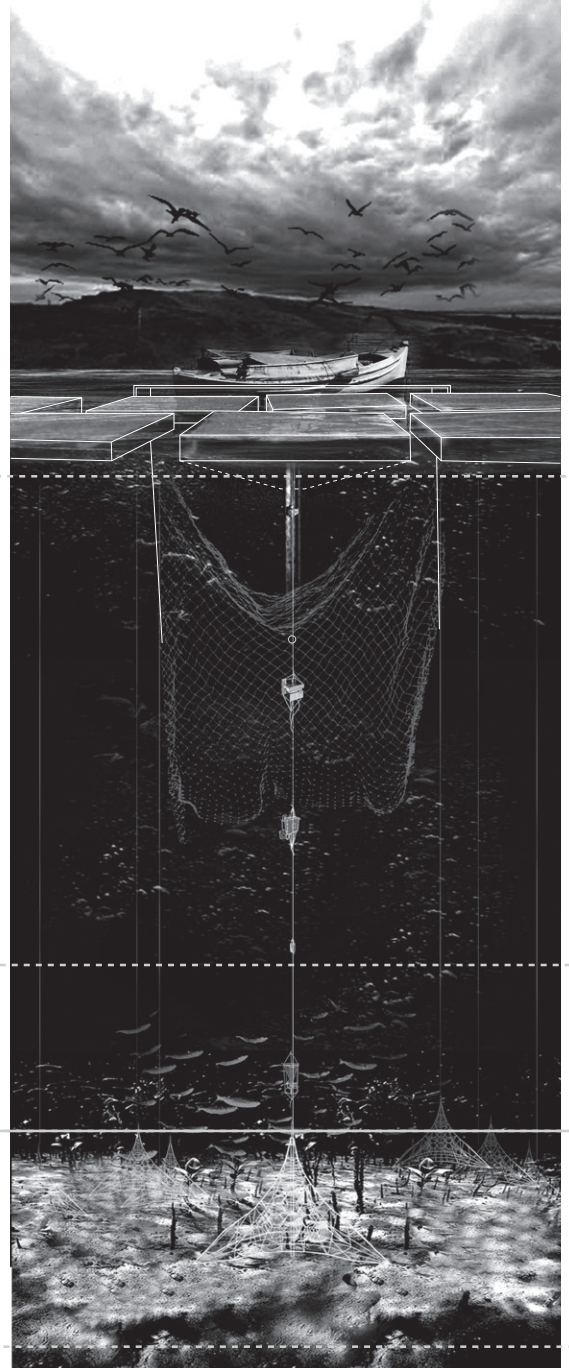
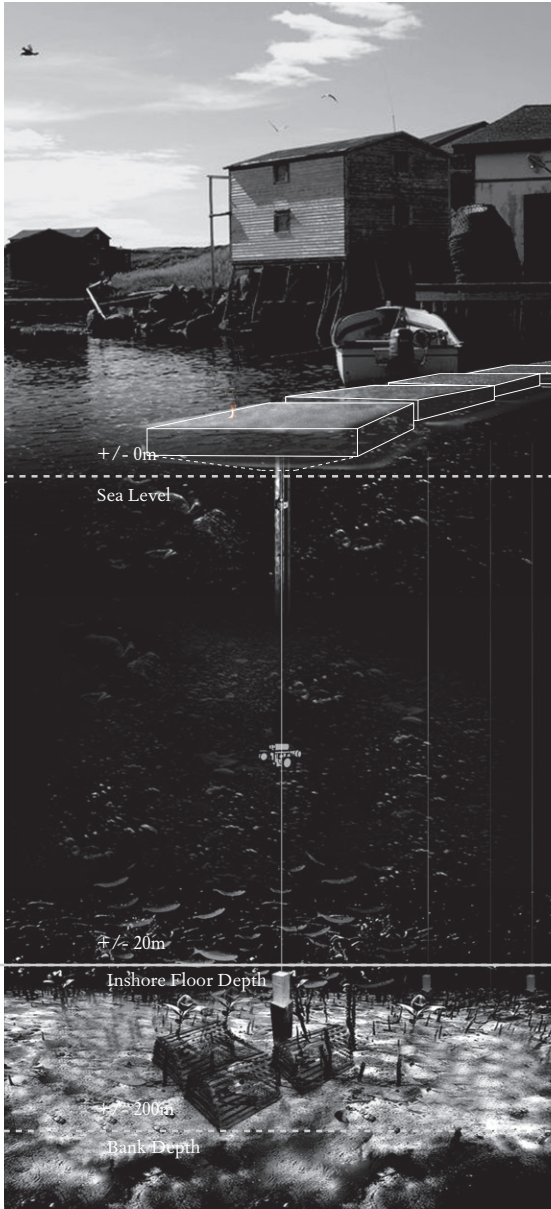
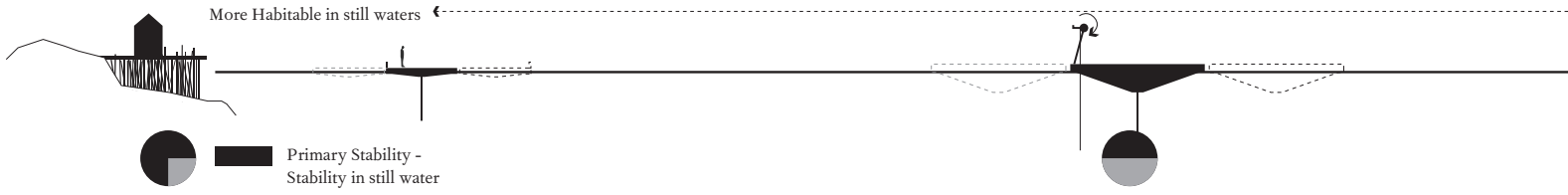


Fig. 2.9 Offshore key map.

[Top]

Fig. 2.10 Device elevation diagram.

[Bottom]



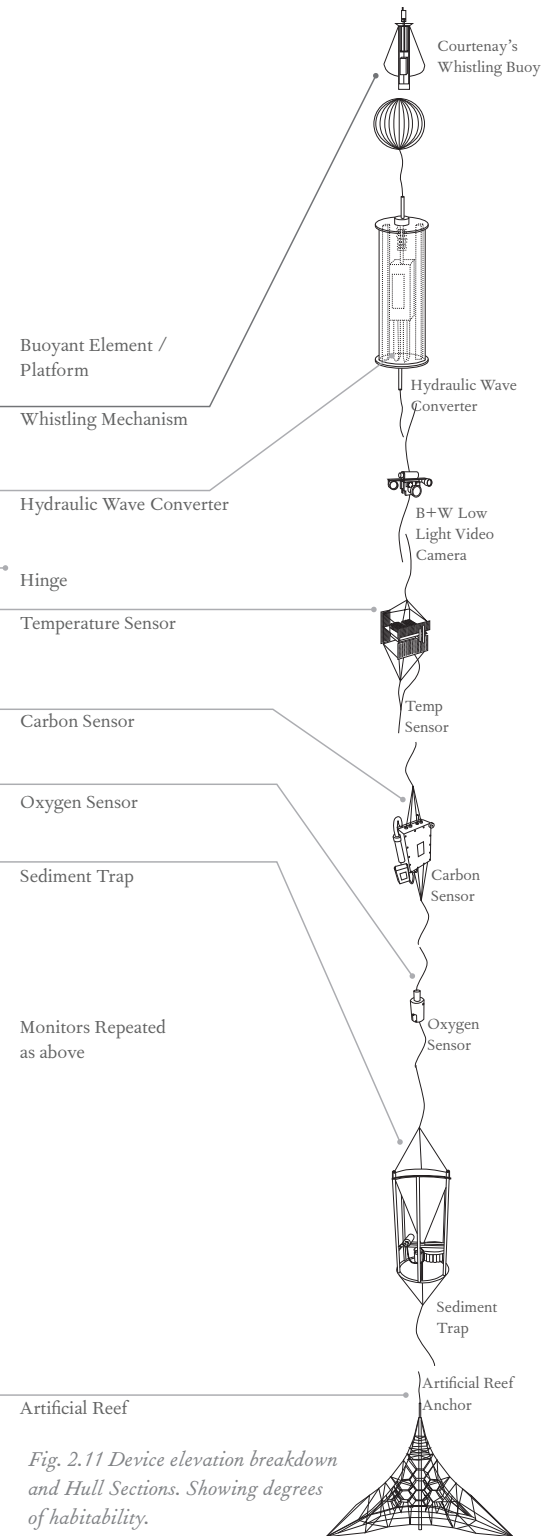
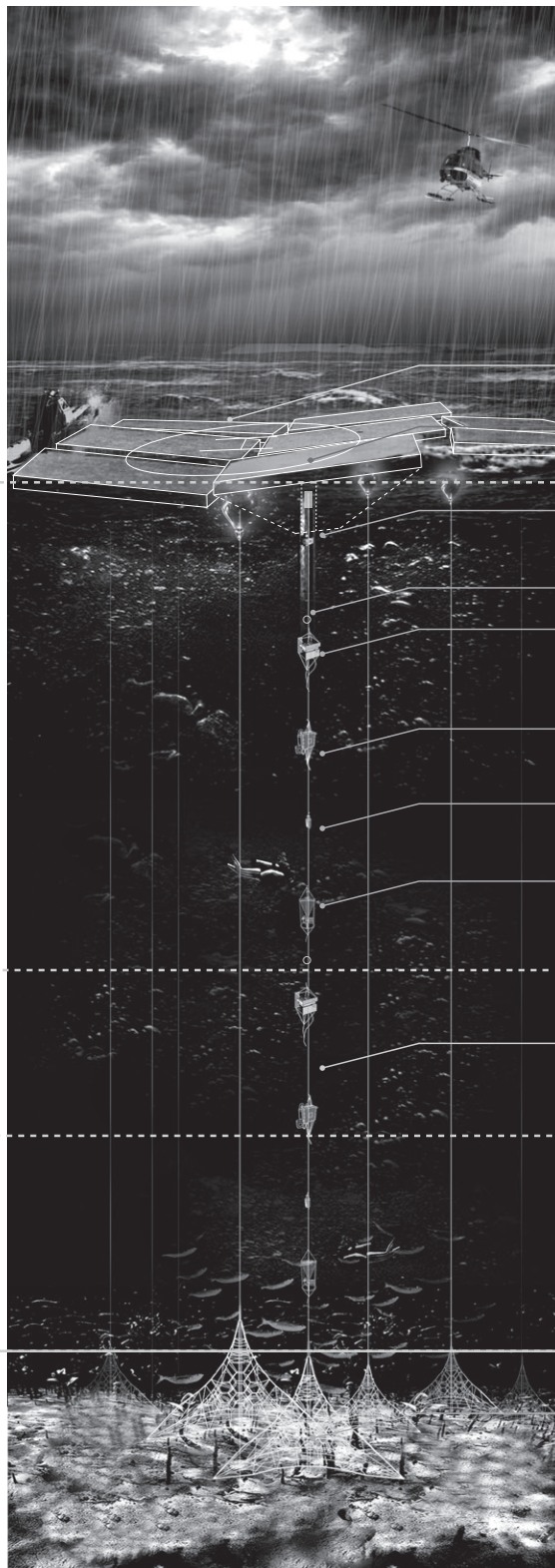
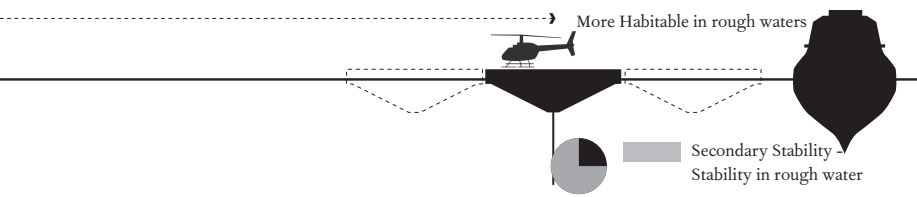
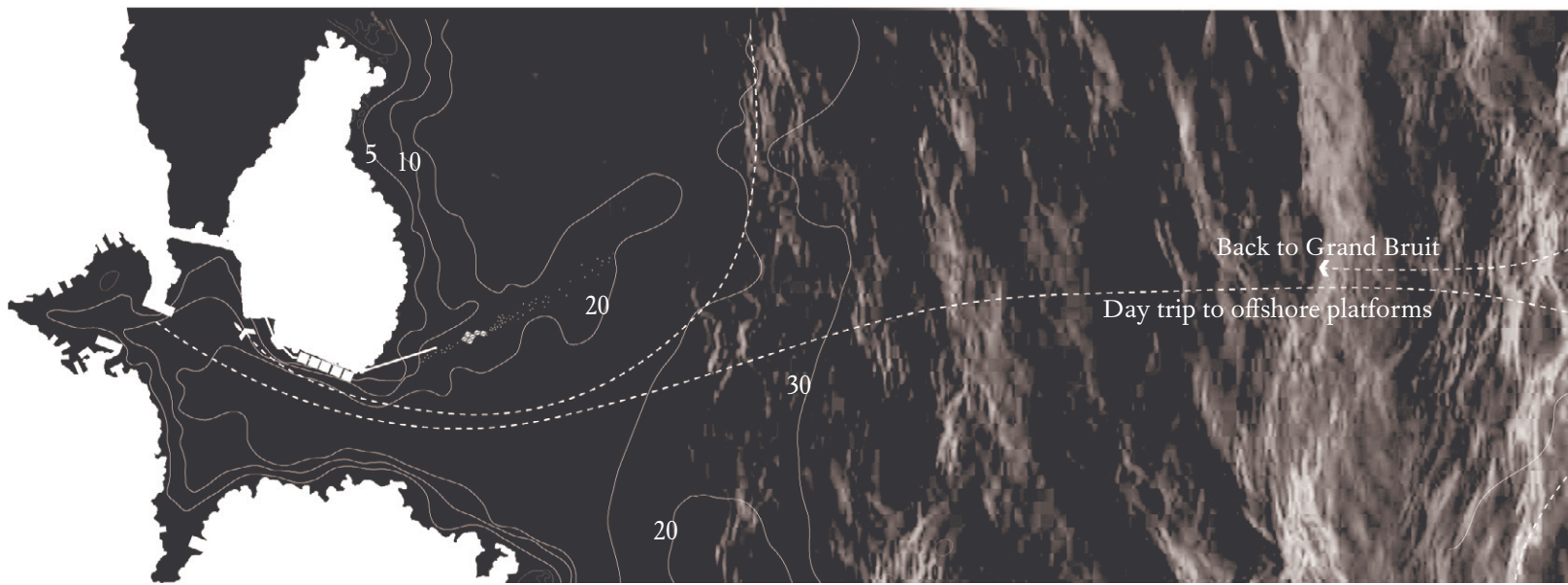
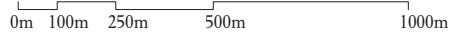


Fig. 2.11 Device elevation breakdown and Hull Sections. Showing degrees of habitability.



Inshore



Degrees of Habitability

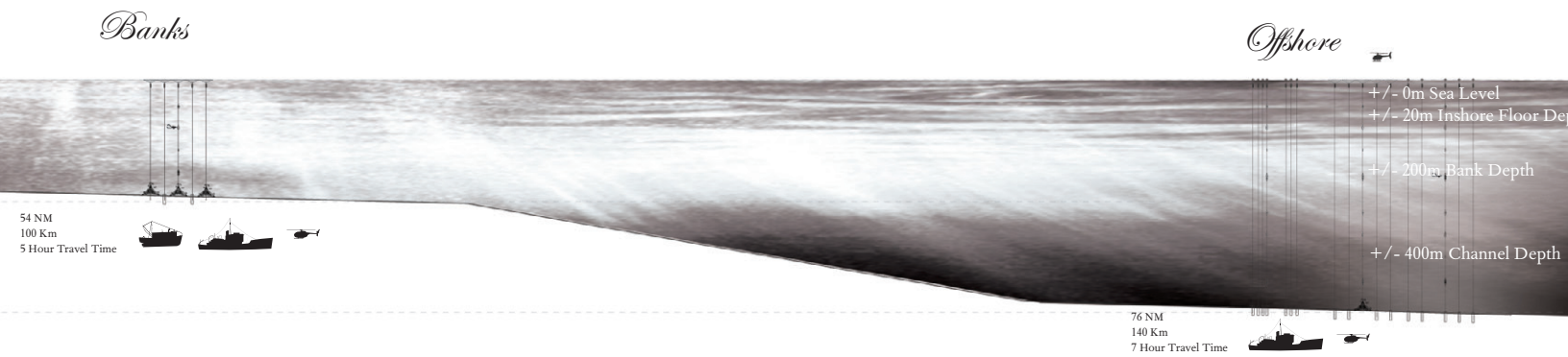
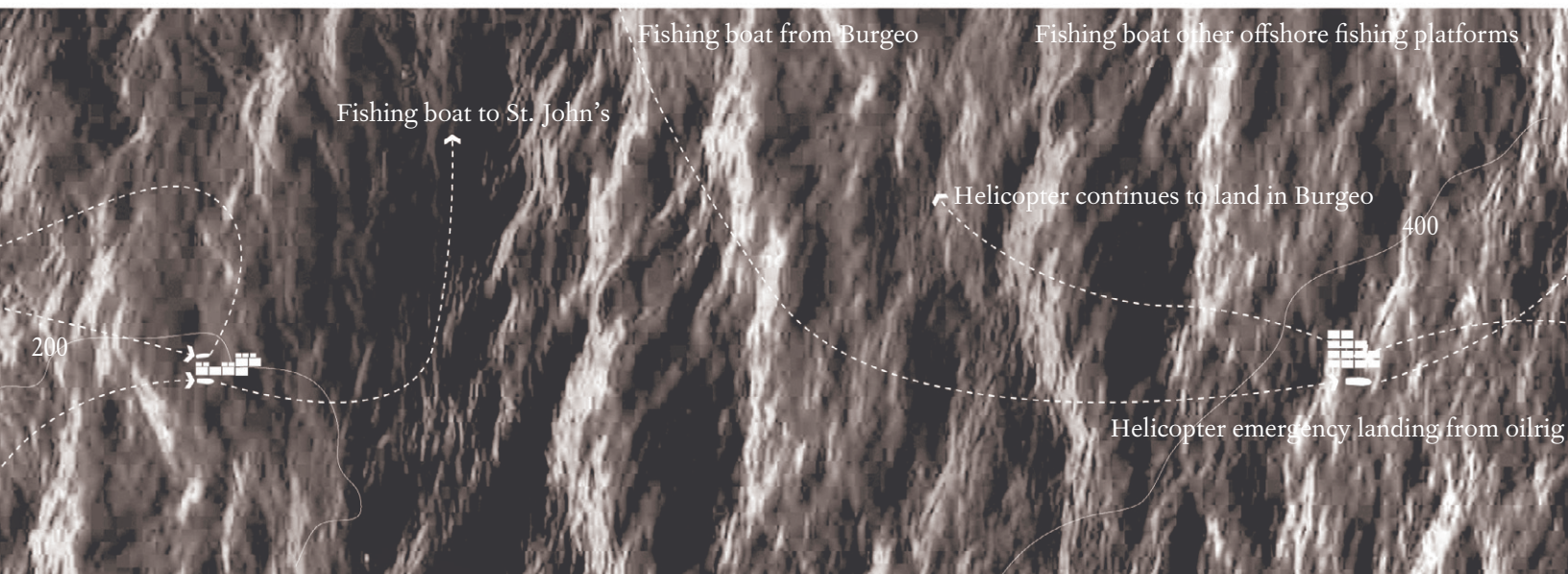


Fig. 2.12 Site plan and Section

Burgeo Shore Station

TO SUPPORT THE OFFSHORE NETWORK of energy and data a monitoring and storage facility is needed. The design of this building is located on the same site as the original Burgeo fish plant. Currently, the plant employs only 6 people in the community. The intent of the design is to provide a flexible strategy of expansion and reduction in the use of the processing, monitoring, and storage facilities. The facility is situated on the man made island at the northern part of the town (this is at the entrance of the town by car). This site within a deep harbour is an ideal location for large watercraft to access the facilities.

The section of the building is designed with degrees of interaction with elements as it reaches out into the harbour.

The shore station is designed to accommodate programmatic flexibility and ephemeral spatial conditions. The monitoring facilities implemented include a wet/dry tidal dock for platform maintenance, platform/boat/net short-term storage – transforming into recreational facilities in the summer, platform/boat/net long-term storage (and maintenance space) – transforming into monitoring facilities when longer term expansion is needed, monitoring device storage, building/maintenance yard, research platform pier, and fish ponds for examination.

The building is intended to provide flexibility daily, seasonally, and generationally to allow for the facility to transform (and expand and contract) as needed.

The daily tides changes the site surrounding the building. The wet/dry dock is located in between these levels to allow for a temporary maintenance space for the platforms.

The transformation of the building seasonally heightens the effects of the elements. The platforms and monitoring equipment are out of use in the winter, they occupy the public programs and close up the building in the cold season. Light tourism returns in the summer, the equipment is deployed, and the building is opened up to the light, the winds, and the sea.

As needed, the building may be expanded onto foundations established in initial construction for larger more promising development. The end of the building that holds an open-air maintenance area can be transformed by the swelling of monitoring program.

The adjacent building houses fish processing with similar programmatic trends as the monitoring. The cold fish storage is re-appropriated into boat storage in the winters, and the boat storage at the end of the building can transform to accommodate processing expansions. The two buildings are linked by a workshop that is utilized by both facilities.

The grid for each part of the building consists of 10 metre bays. Both the ends of the processing and monitoring buildings have two bays that contain the long-term storage. The transformation of storage into processing or monitoring program implies ecological and economic health.

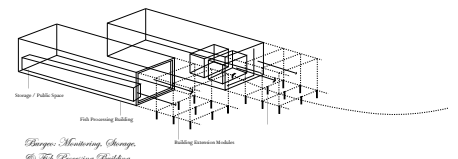
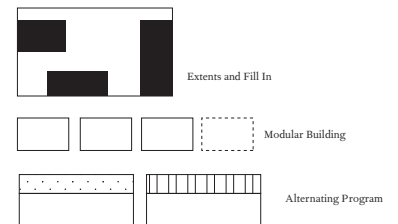
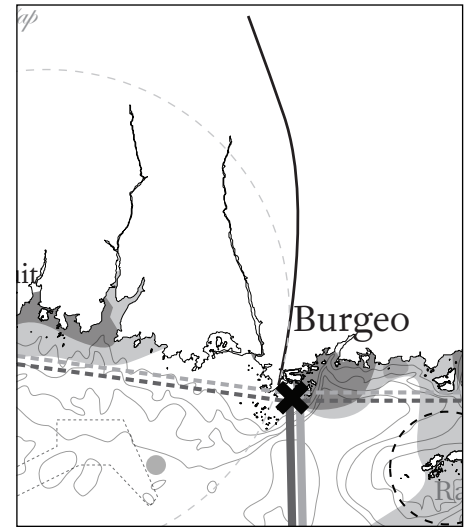


Fig. 2.13 Burgeo key map

[Top]

Fig. 2.14 Flexible design strategies diagram.

[Middle]

Fig. 2.15 Axo diagram of building in Burgeo.

[Bottom]

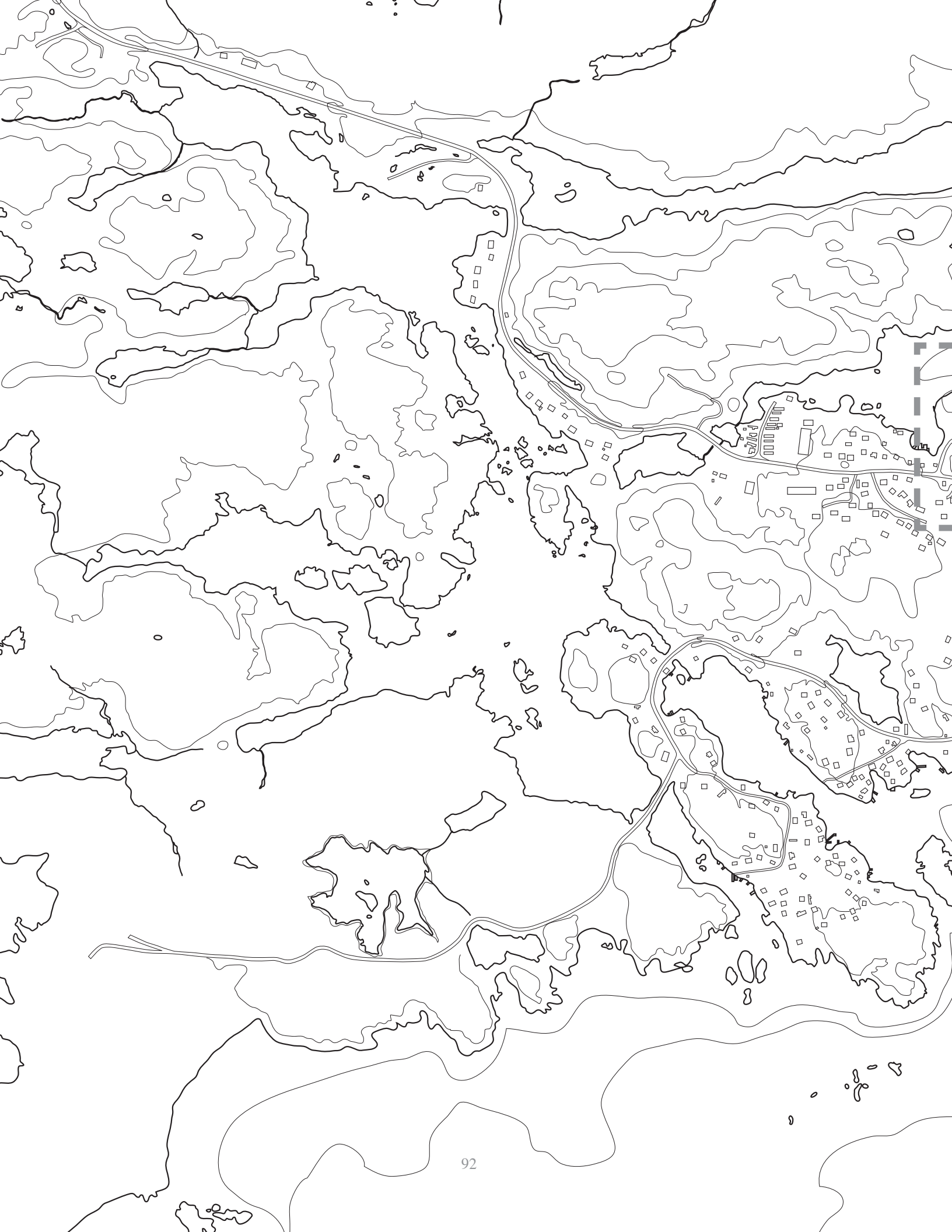




Fig. 2.16 Burgeo Site Plan

Project Site:
Currently a Fish Processing Plant

Short Reach Harbour



North



Fig. 2.17 Panorama of the building site in Short Reach Harbour.



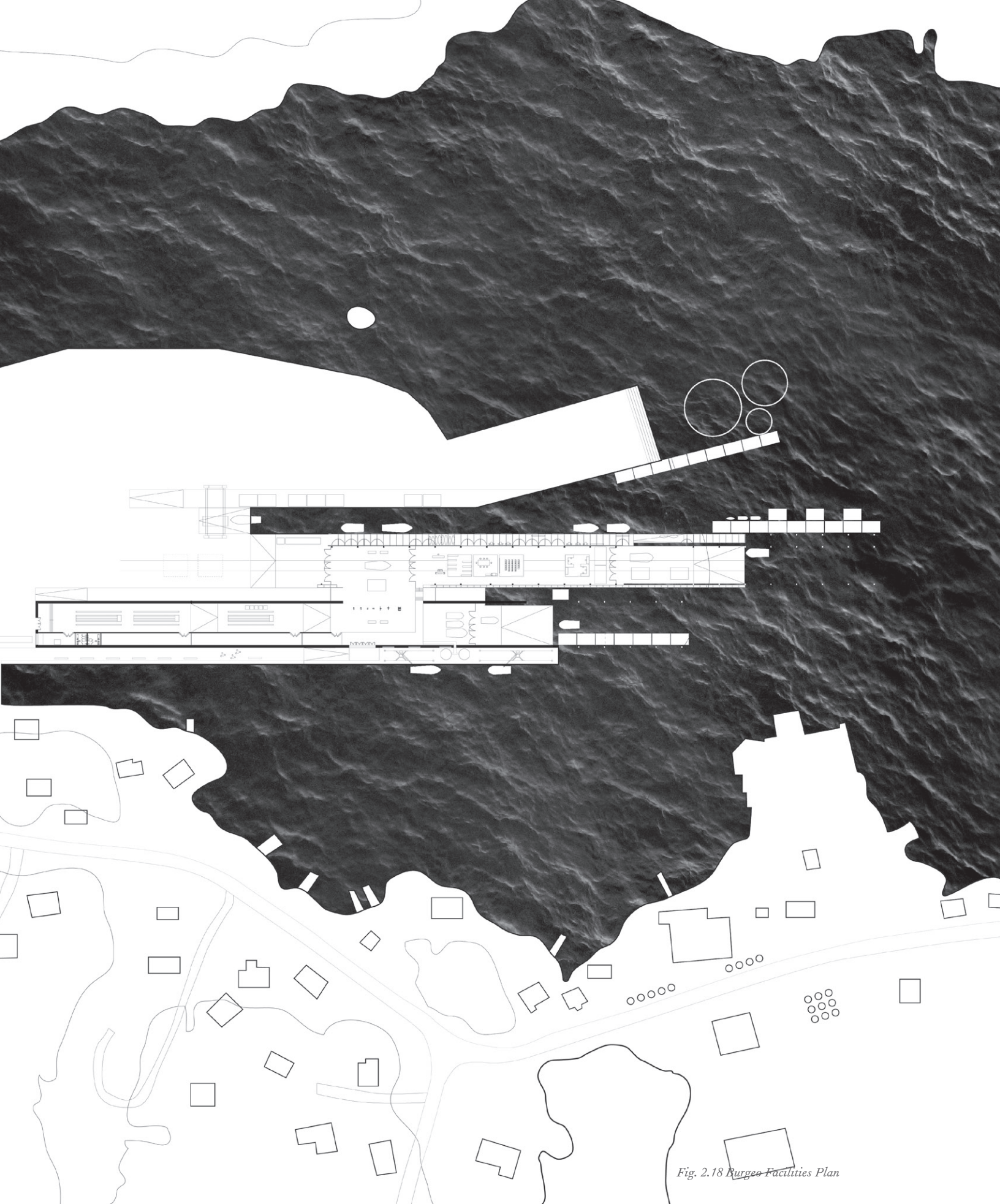
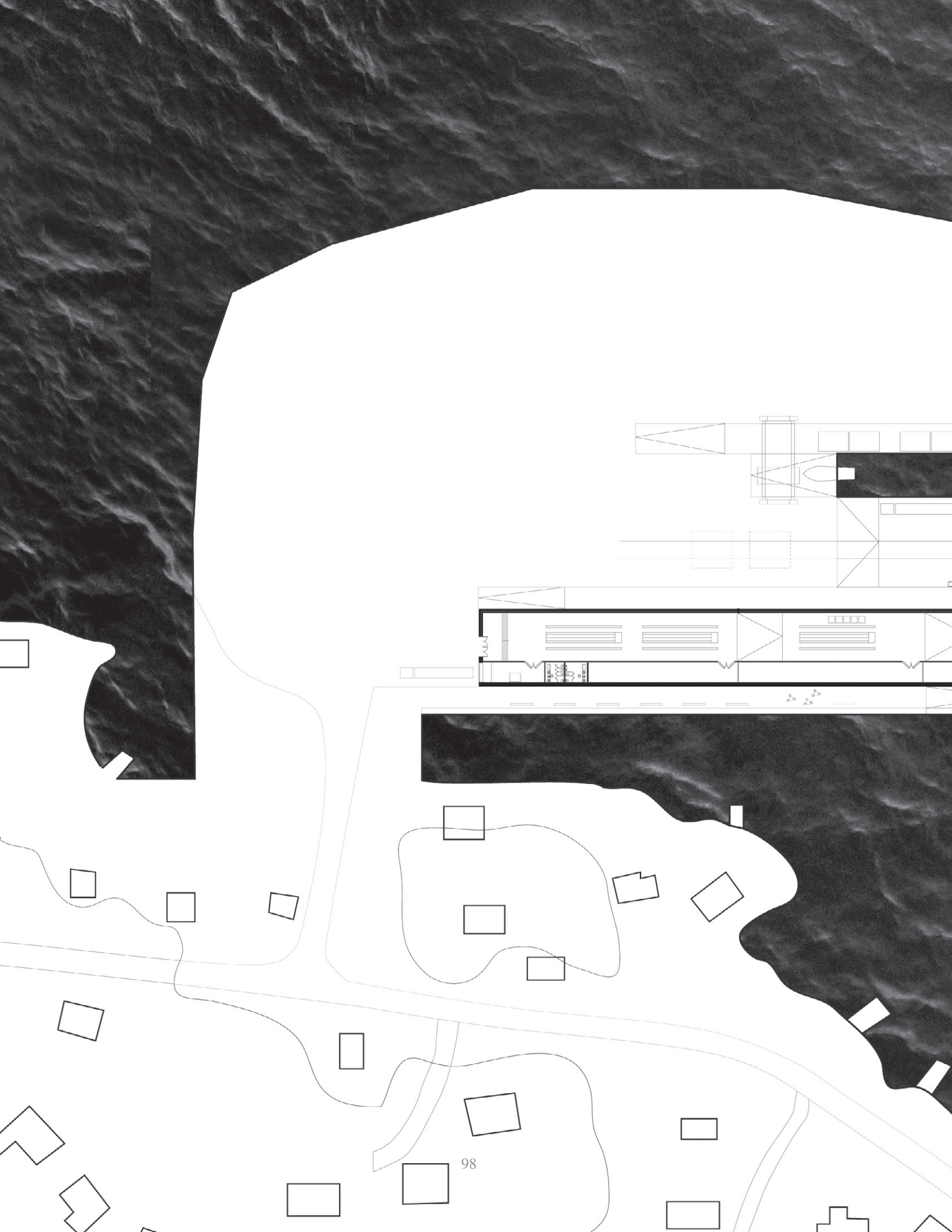


Fig. 2.18 Burgeo Facilities Plan



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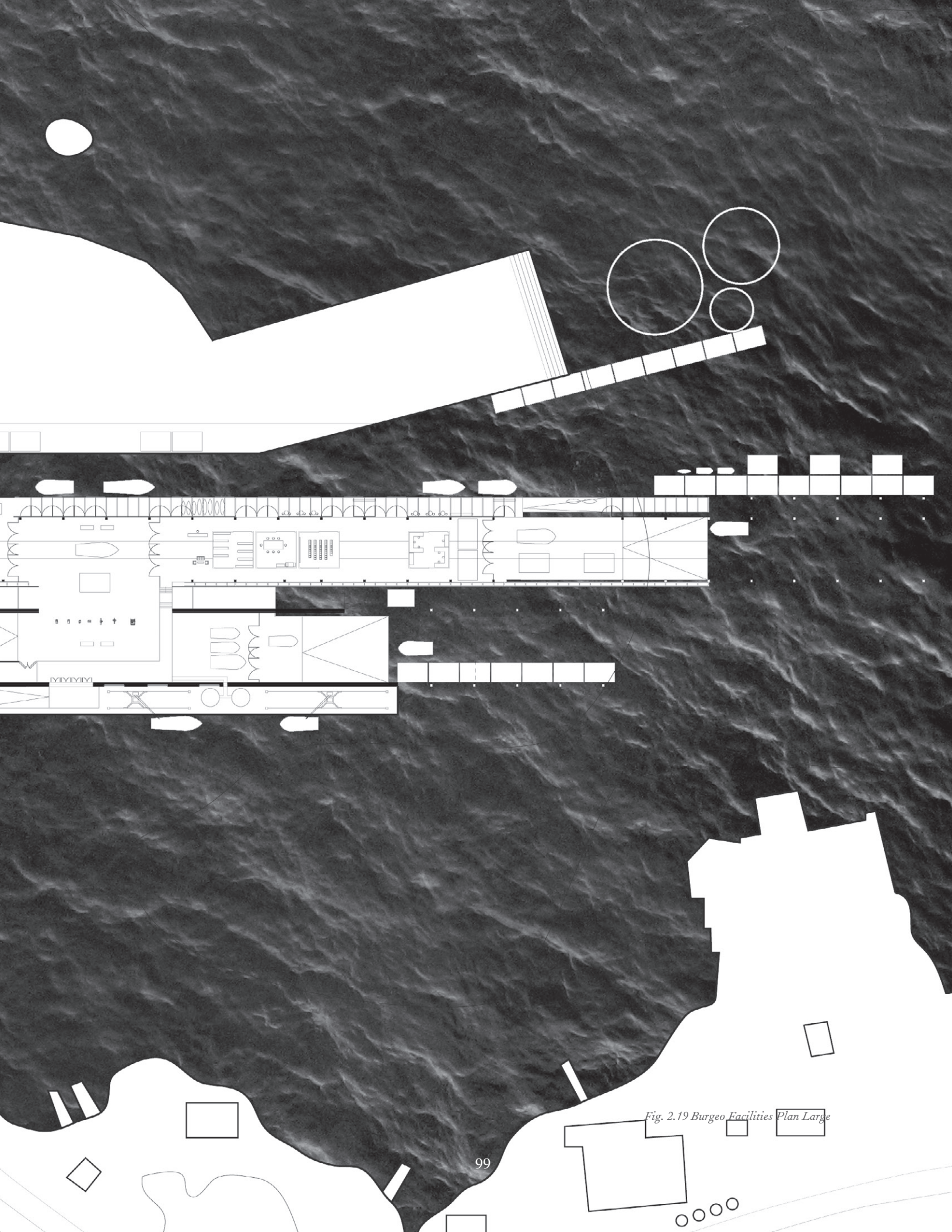


Fig. 2.19 Burgeo Facilities Plan Large

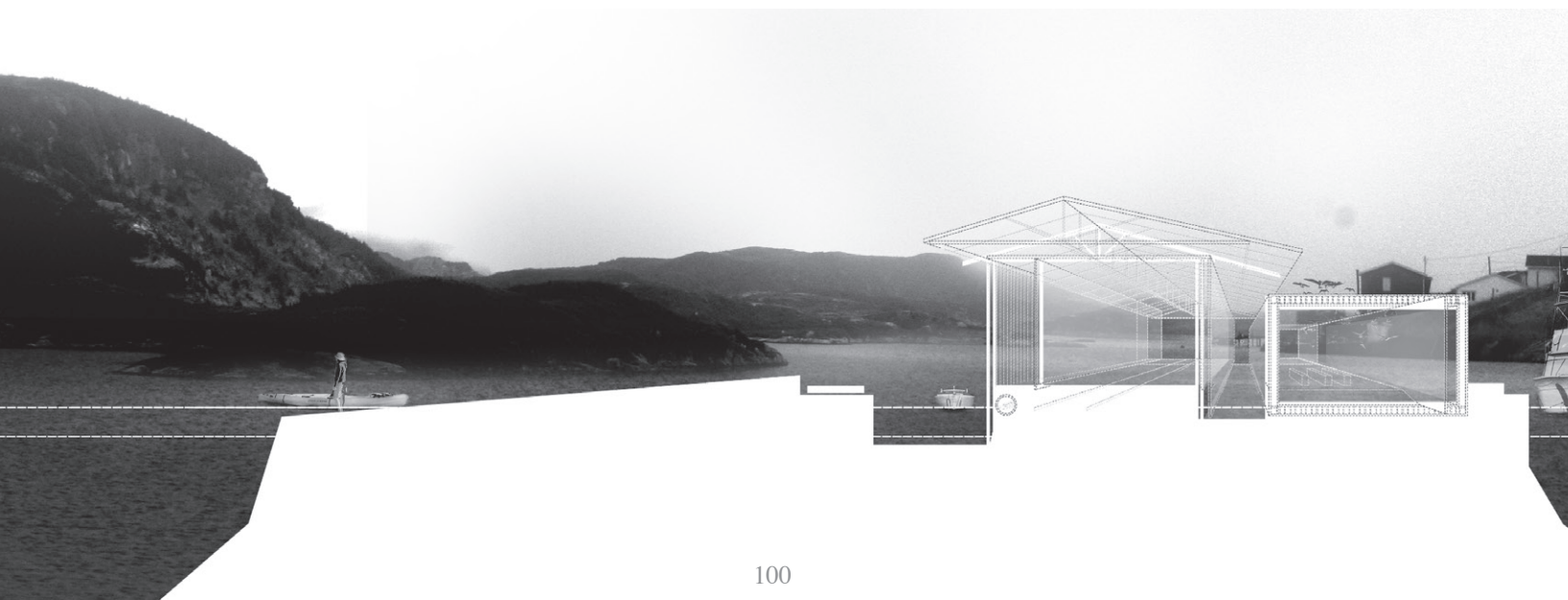
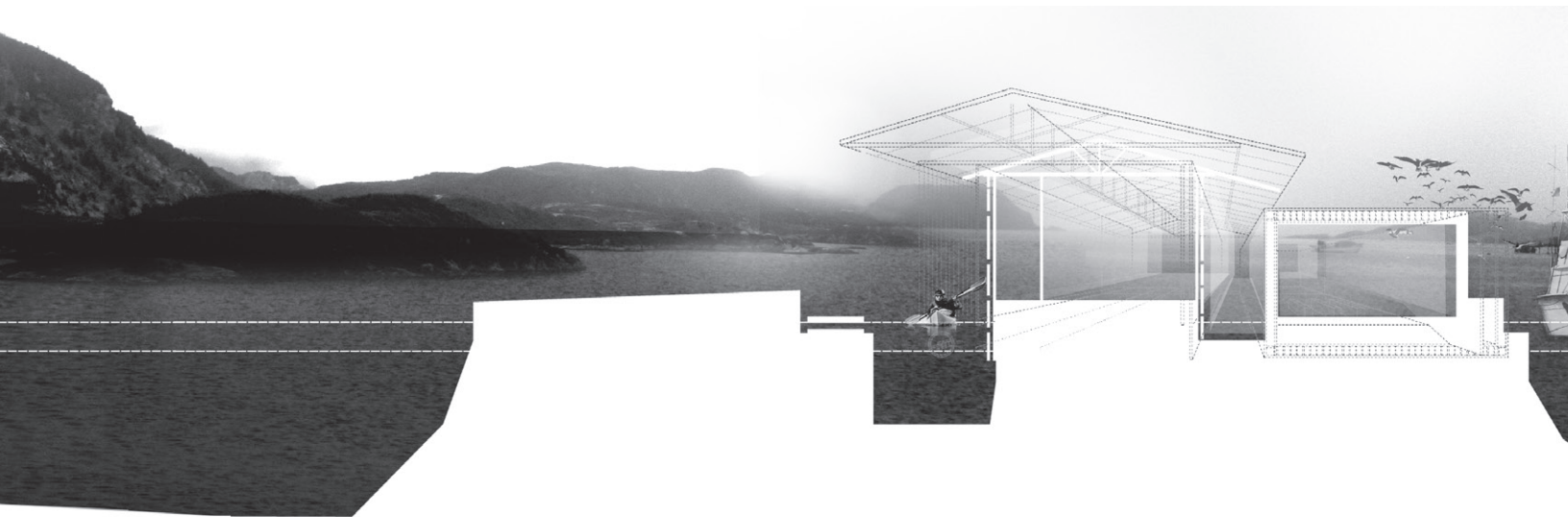
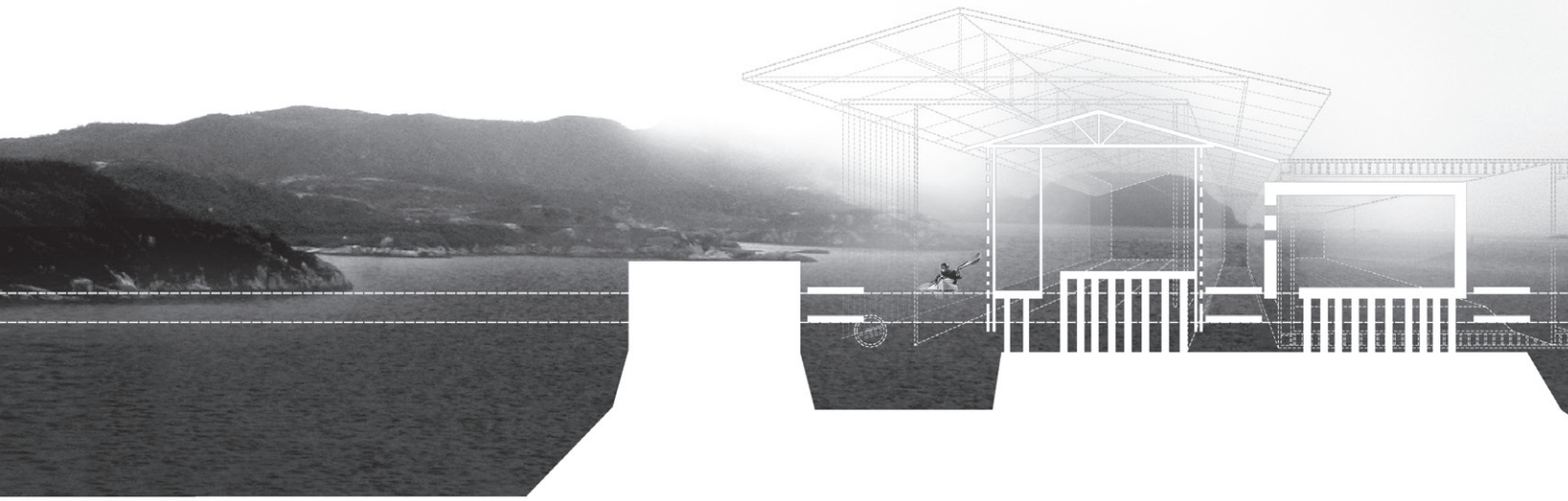




Fig. 2.10 Burgeo Facility Sections : Degrees of interaction with the elements. Ranging from Resist, Converse, Surrender.

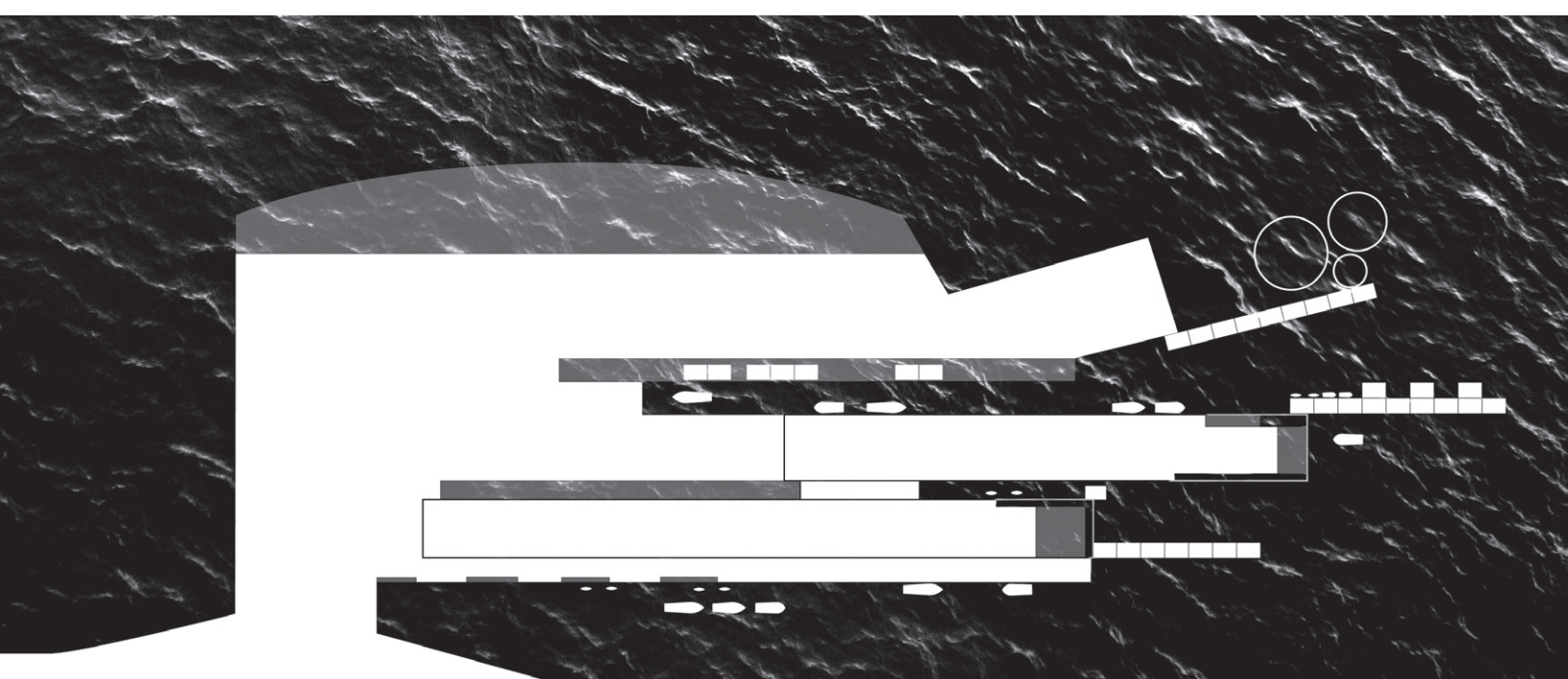


Fig. 2.21 Burgeo Tidal Variation

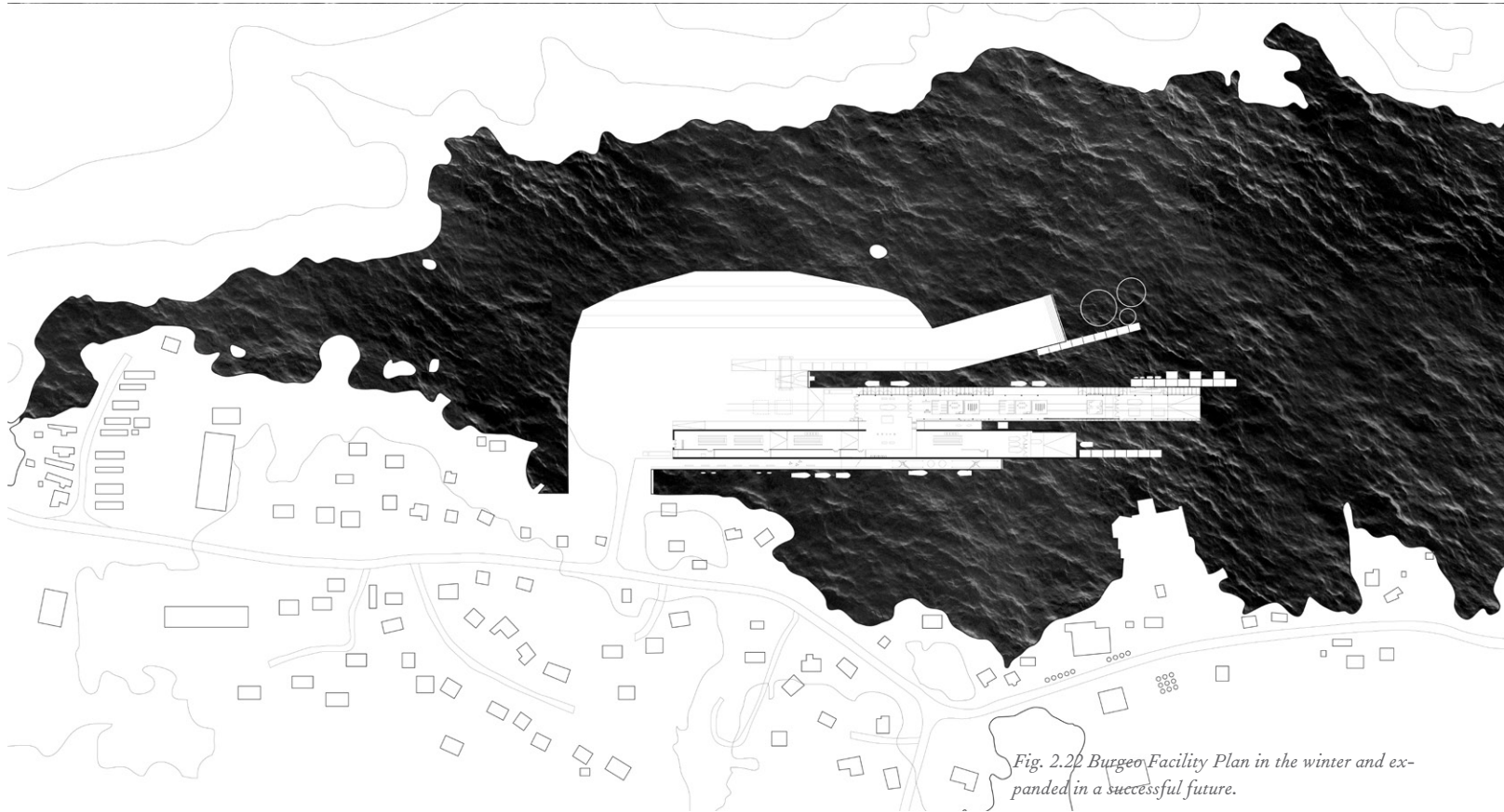
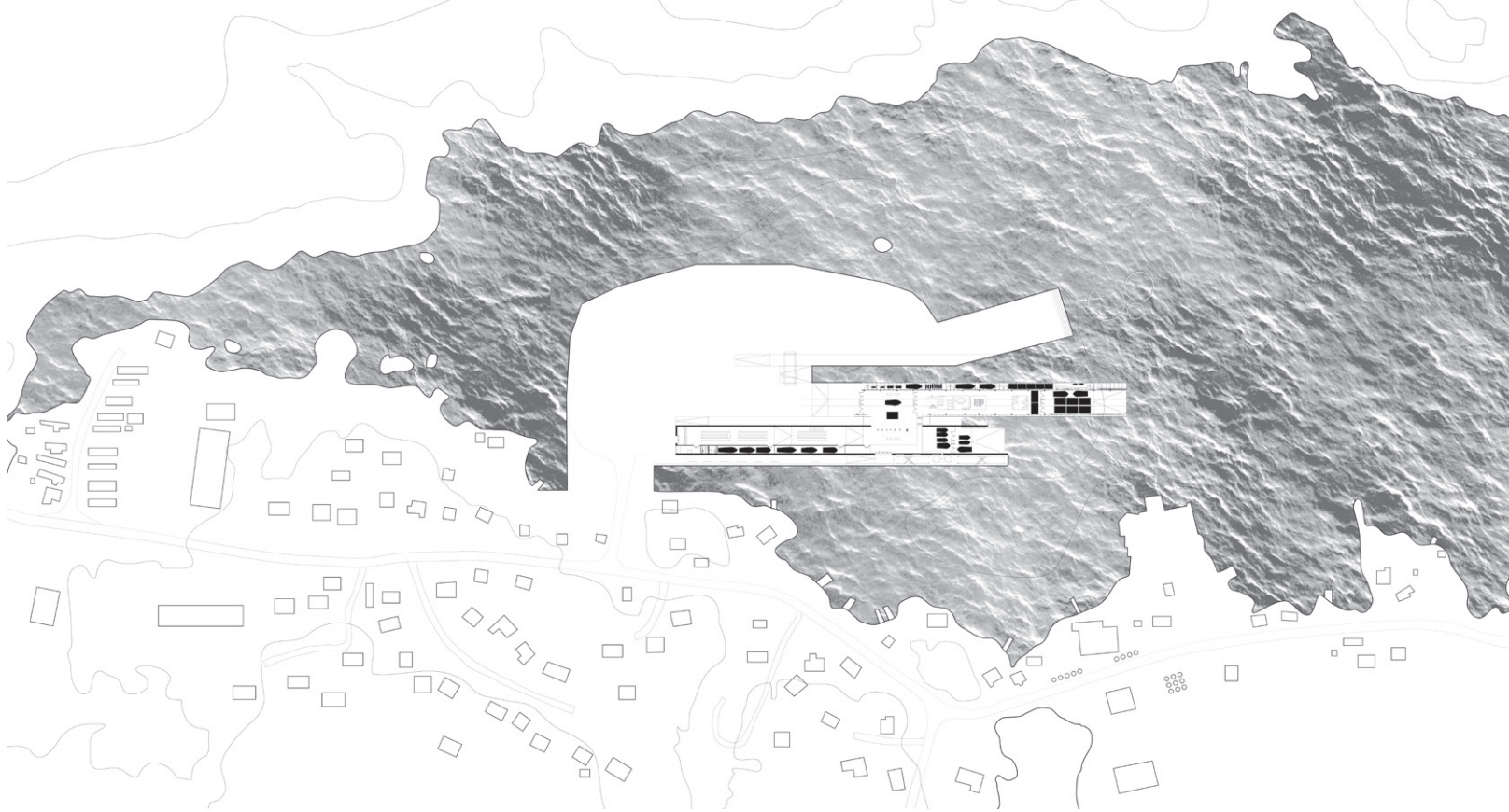


Fig. 2.20 Burgeo Facility Plan in the winter and expanded in a successful future.

Foundations are built in the anticipation for greater and longer-term growth. Prior to the expansion, they stand as a reminder of the optimism that Newfoundlanders have for the return of the fishing economy. In the case of long-term growth, more platforms and fishing vessels would be required in the communities that the populations are settling in. If decline was to come about again, what was used for monitoring and processing extensions will be converted inversely to accommodate long-term storage.

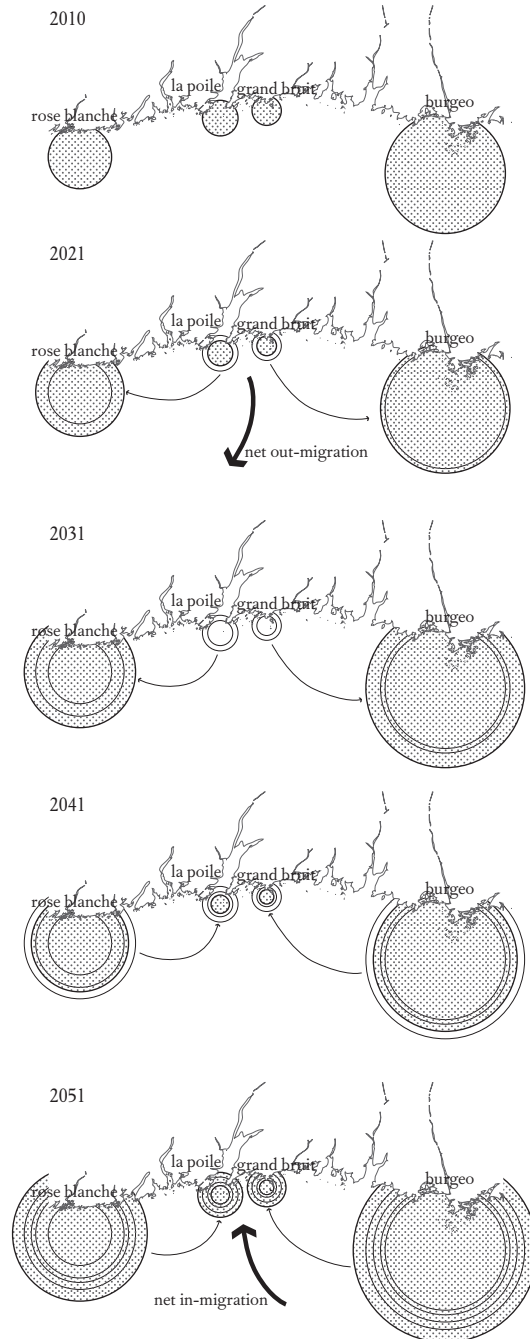


Fig. 2.23 Diagram of projected populations after deployment of intervention.

Outport Shore Stations

PRECEDING GRAND BRUIT'S OFFICIAL CLOSURE in July 2010, the whole of the southern coast was linked by ferry. A gap now exists between the west of Grand Bruit and the east. An onshore intervention is placed in this gap and lingers in the realm between elegy and ode. It exists suspended between hope and nostalgia, optimism and pessimism, revitalization and recollection. In opposition to the aspirations for centralized populations and aggressive point extraction of oil, this new infrastructure is designed to move and shift in synchrony with the needs of both ecology and energy on land and in the sea. The new framework has the potential to harness the energy from the active sea, while restoring the health of the benthic surface.

The monitoring and storage facility in Grand Bruit is considered ancillary to the main station in Burgeo. This design is a template for all outport communities with minimal or seasonal populations. The facility is intended to provide minimal monitoring services and is to provide storage capabilities in the winter. Similar to the site in Burgeo, the intervention in the outport towns for a gradient of surrendering to the elements the further it expands from the community.

In the event that Grand Bruit is permanently abandoned, the entire facility along with its equipment is dismantled and shipped to Burgeo for storage. However, It can also be transported and utilized in another outport that is thriving.

The foundations are left behind as a trace of the intervention. The dilapidated clapboard homes are a ghosted documentation of an outport community on the Southern Coast of Newfoundland.

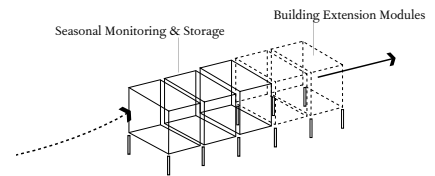
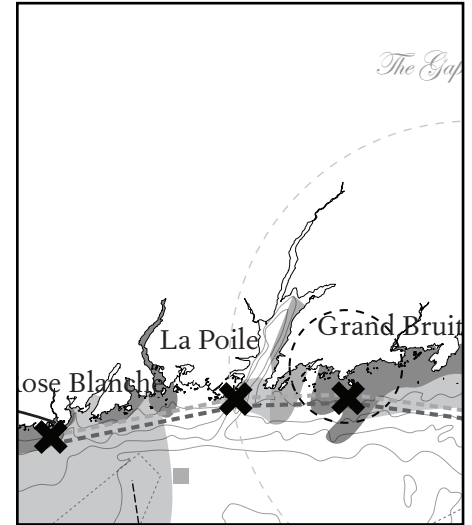
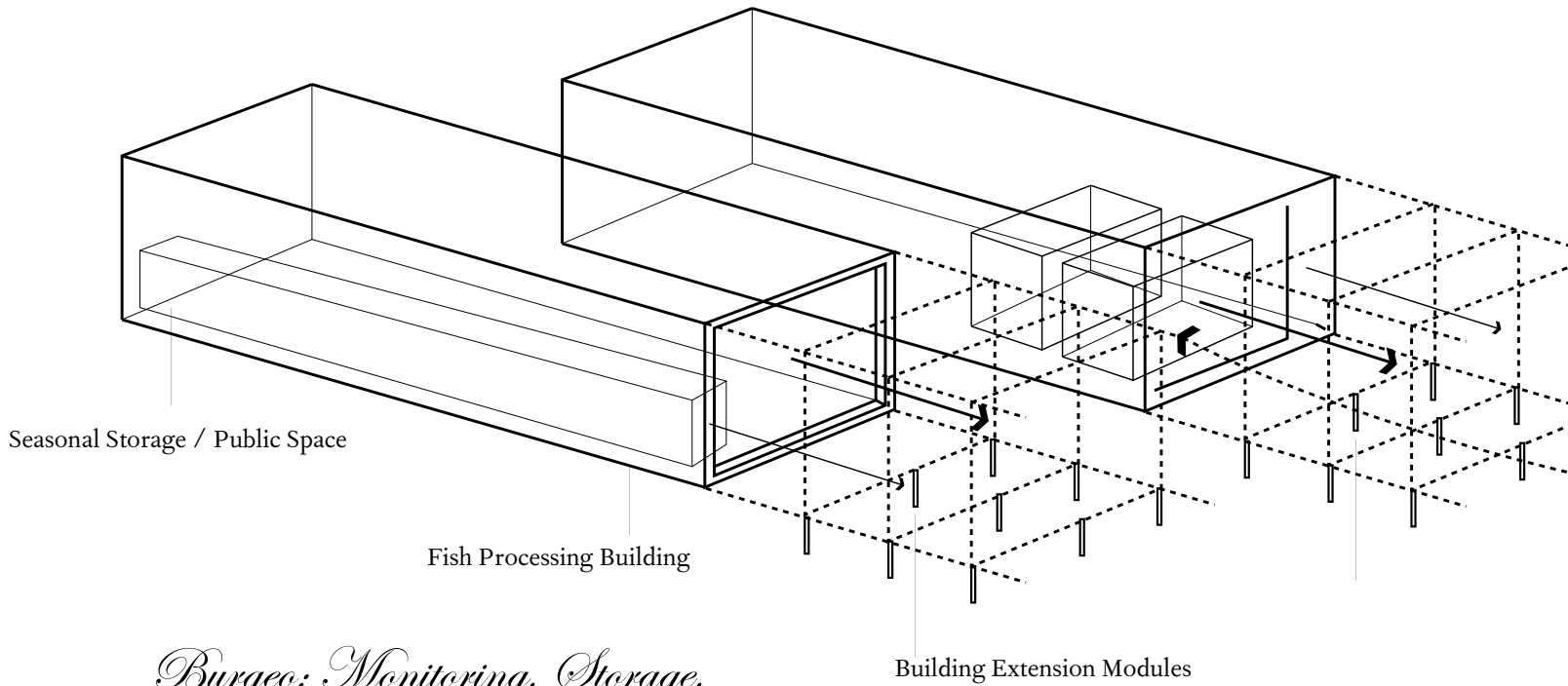


Fig. 2.24 Grand Bruit key plan.

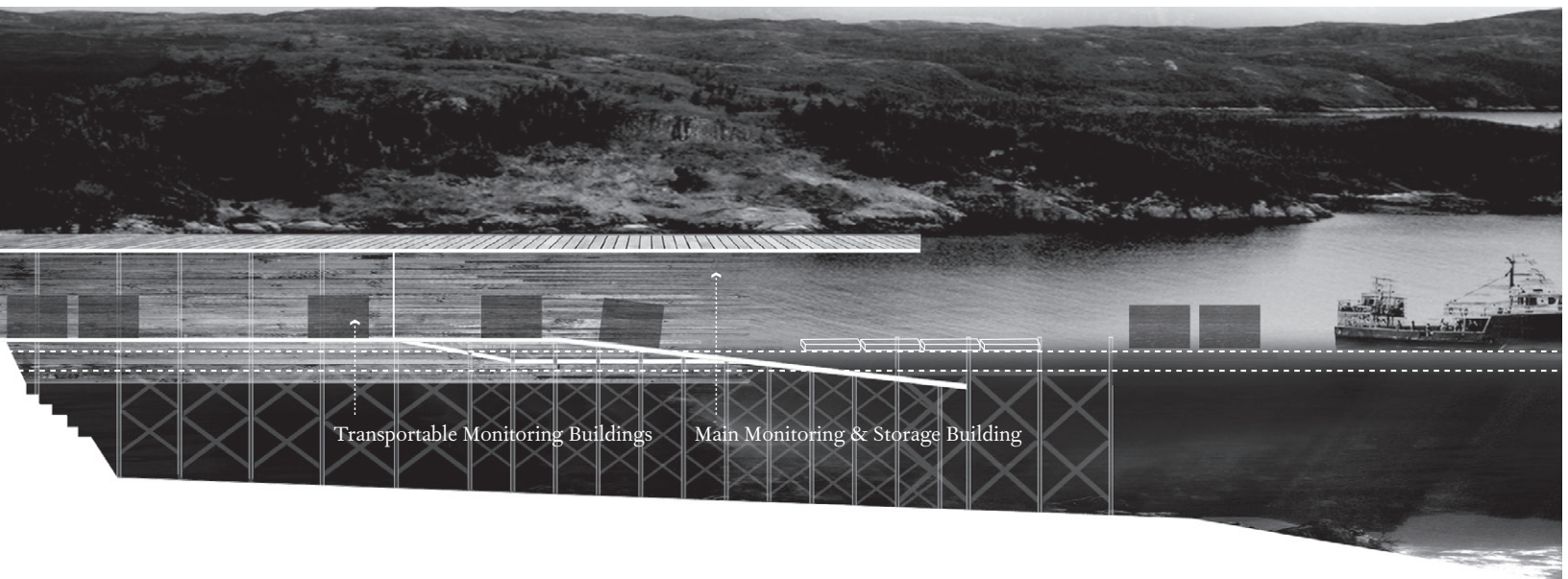
[Top]

Fig. 2.25 Diagram of the intervention in Grand Bruit [and all other outport communities].

[Bottom]



*Burgeo: Monitoring, Storage,
& Fish Processing Building*



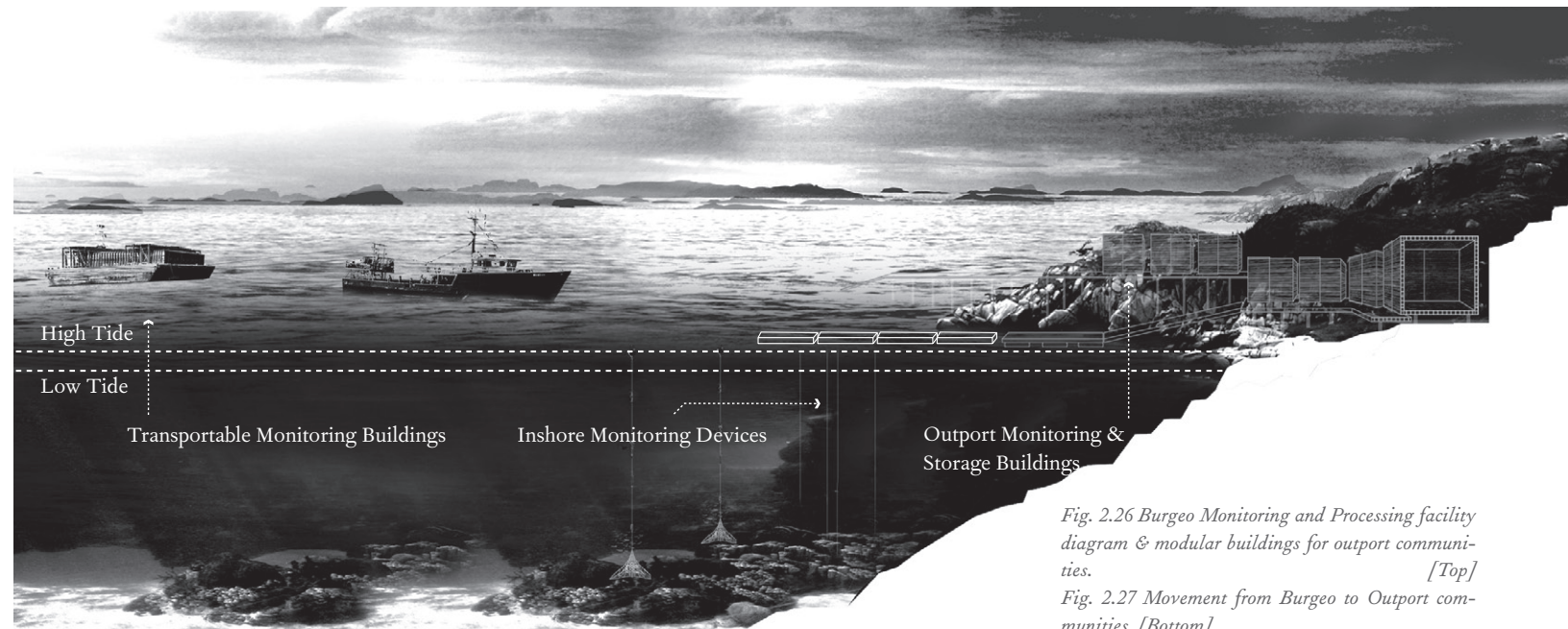
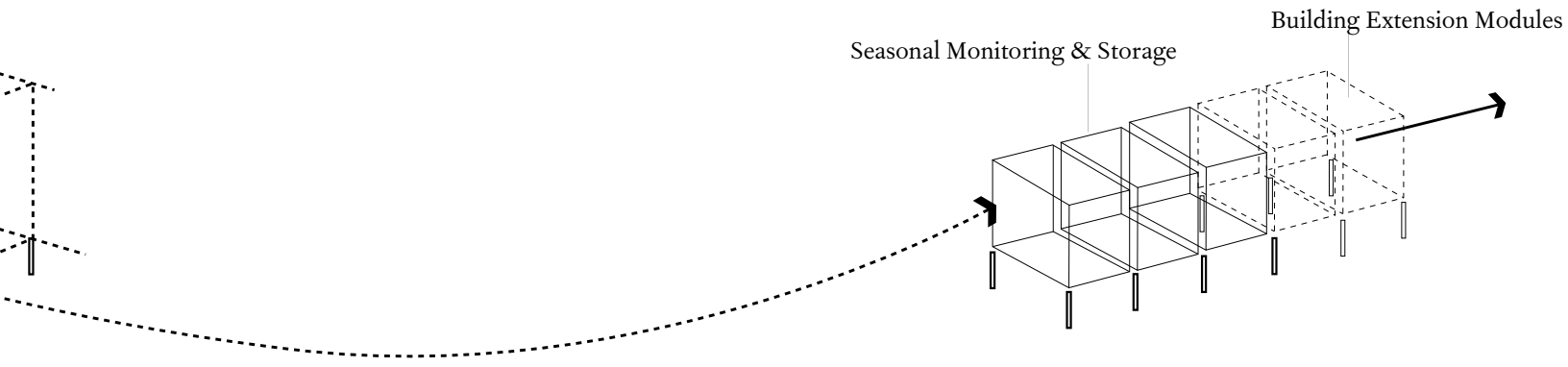


Fig. 2.26 Burgeo Monitoring and Processing facility diagram & modular buildings for outport communities. [Top]
 Fig. 2.27 Movement from Burgeo to Outport communities. [Bottom]



5

10

20

20

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Fig. 2.28 Grand Bruit site plan.



School [shut down]

Cemetery

Bald Eagle's Head

East



Fig. 2.29 Grand Bruit Site looking south.

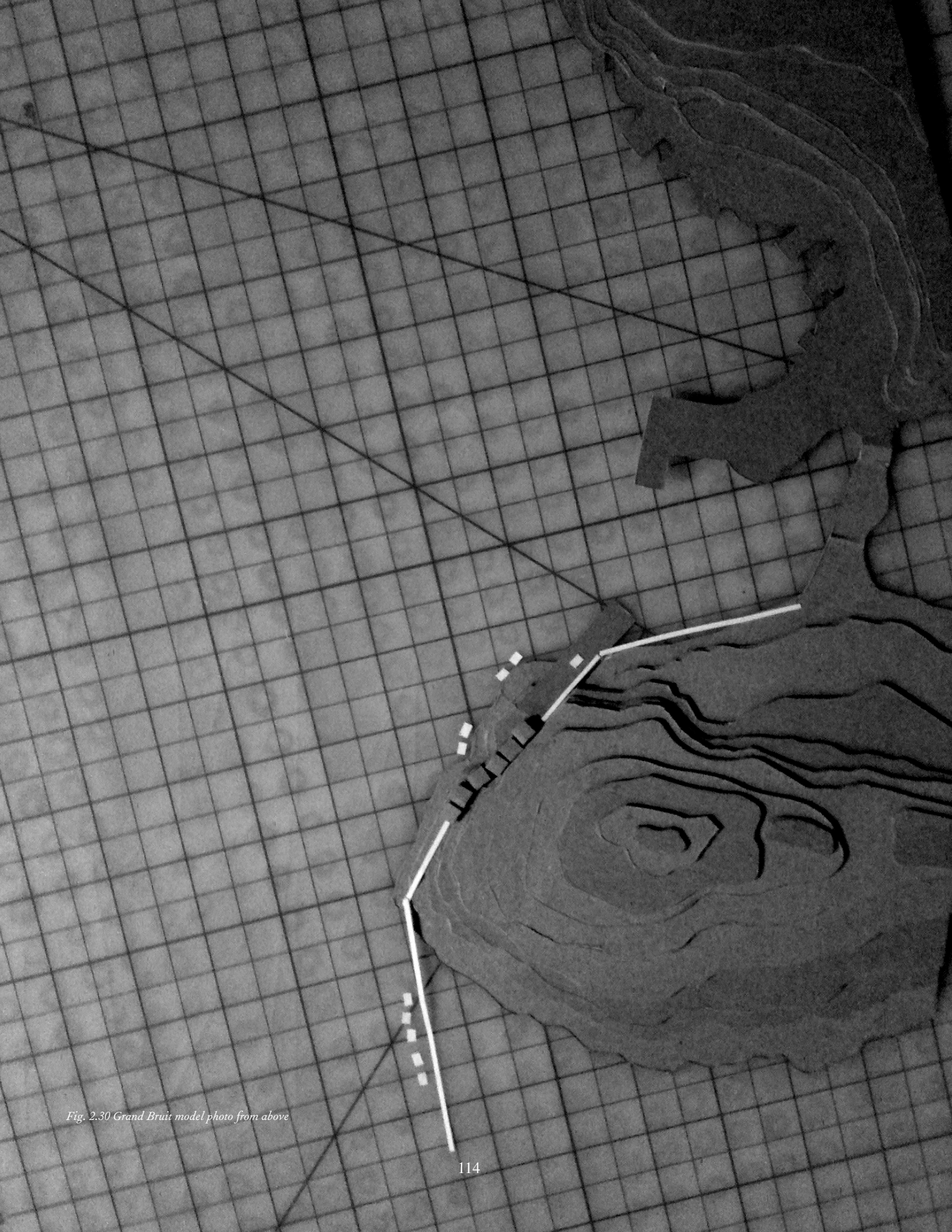


Fig. 2.30 Grand Bruit model photo from above

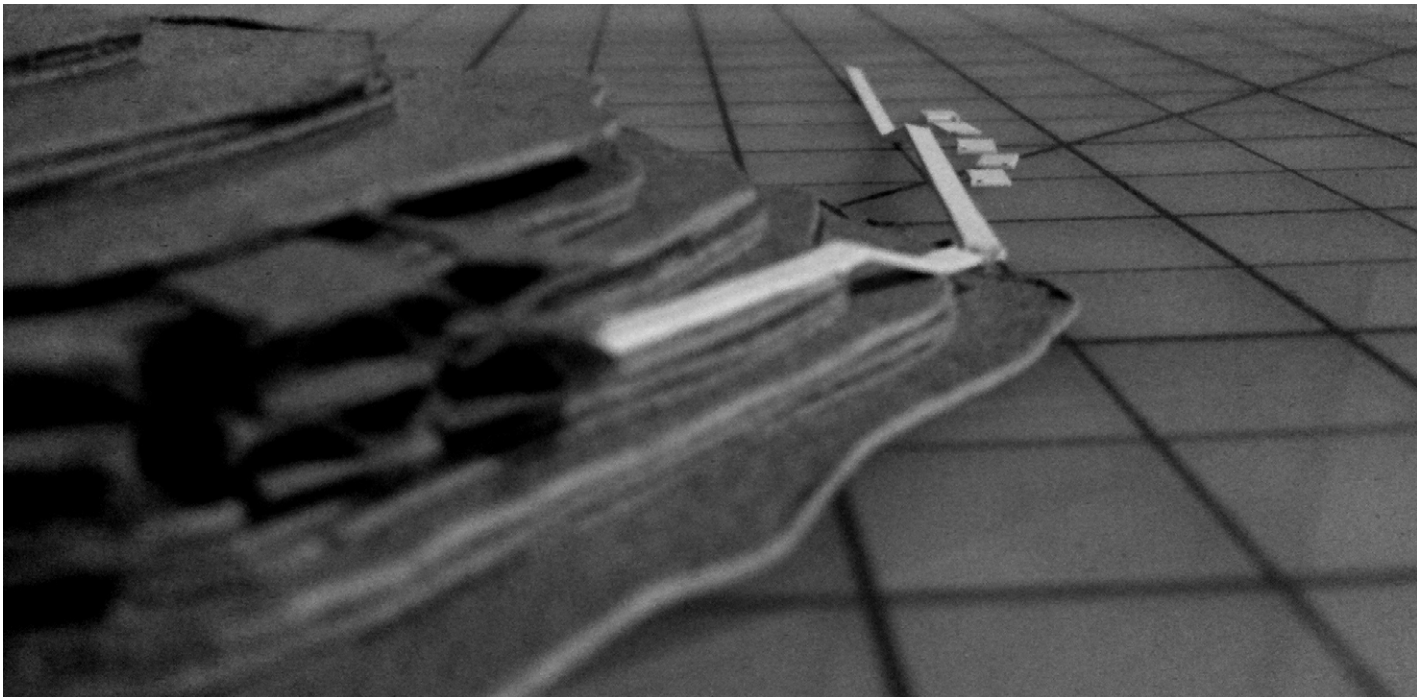


Fig. 2.31 Grand Bruit model photos.

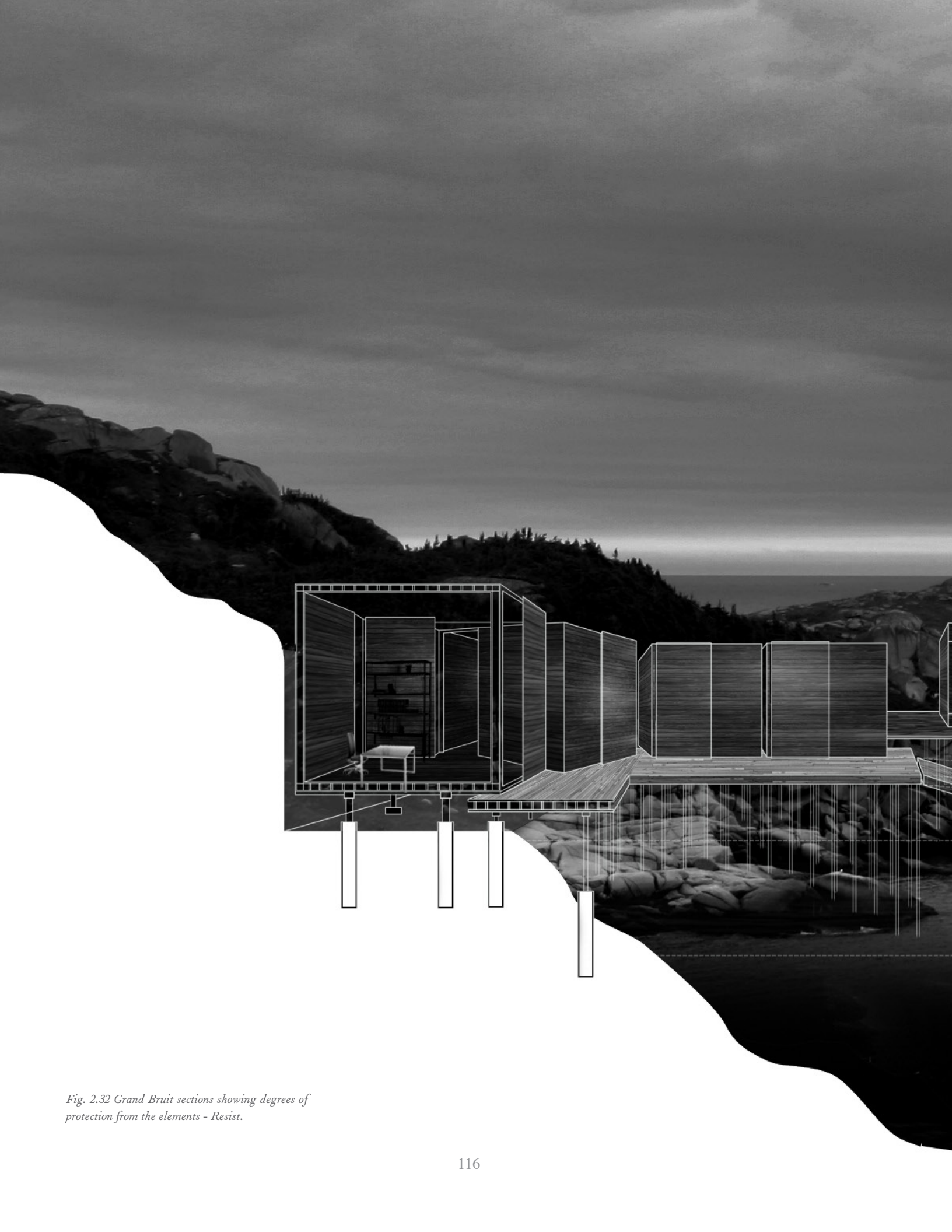


Fig. 2.32 Grand Bruit sections showing degrees of protection from the elements - Resist.





Fig. 2.33 Grand Bruit sections showing degrees of protection from the elements - Converse.





Fig. 2.34 Grand Bruit sections showing degrees of protection from the elements - Surrender.





Fig. 2.35 Grand Bruit abandoned



Endnotes

- 1 Department of Regional Economic Expansion. 1970. *A Socio-economic Study of Newfoundland and Labrador Unincorporated Communities: Advance Pilot Report, South Coast Area*. (Ottawa: DREE). 110.
- 2 Statistics Canada. 2007. *Burgeo, Newfoundland and Labrador (Code 1003028)* (table). 2006 Community Profiles. 2006 Census. Statistics Canada Catalogue no. 92-591-XWE. Ottawa. Released March 13, 2007. <http://www12.statcan.ca/census-recensement/2006/dp-pd/prof/92-591/index.cfm?Lang=E> (accessed June 12, 2011).
- 3 Engineering Committee on Oceanic Resources. 2003. *Wave energy conversion*. Amsterdam: Elsevier. 1.
- 4 Whitford, Jacques. 2007. *Sydney basin strategic environmental assessment : Final Report*. St. John's. 69.
- 5 Johnston, Wayne. 1999. *The colony of unrequited dreams*. New York: Doubleday. 9.
- 6 Angela Antle, CBC Radio
- 7 Definition of Nip, Ashley Book of Knots

Epilogue

“You can’t go back in space ... Space has its times. To open up space to this kind of imagination means thinking about time and space together. You can’t hold places and things still. What you can do is meet up with them, catch up with where another’s history has got to ‘now’, and acknowledge that ‘now’ is itself constituted by that meeting up. ‘Here’, in that sense, is not a place on a map. It is that intersection of trajectories, the meeting-up of stories; an encounter.”

(Doreen Massey, Some Times of Space)

IN THE YEAR 2007 the government of Newfoundland commissioned a consulting agency to prepare a feasibility study assessing the viability of an offshore oilrig off of the southern coast.

Newfoundland has always relied heavily on a single industry for its economic strength. It was true in the past with cod and now with the discovery of oil. But as with the fishery, so too will oil provide another ‘boom and bust’ economic state.

The research and design presented in this thesis seek to identify a new industry to fuse functions and open the possibility of a dynamic economy. The design seeks to restore the sea, rather than destroy it. The creation of offshore devices opens up a possibility of another public realm, supports the fishing industry, and provides points for monitoring the conditions of the aquatic domain. Likewise the onshore projects touch on the transitive characteristics of Newfoundland’s occupation of the land, its own ecologies, and economies. It facilitates growth, contraction, seasonal hibernation, longer-term dormancy, and (in the case of an isolated outpost awaiting resettlement) a peaceful decline). The intention of the project is to hover in between an optimistic view of Newfoundland’s future and one that allows for the intervention to fall into a state of hibernation.

This place is shifting, and subject to winds, tides, politics. It demands an architecture that exchanges, converses, and reciprocates with its habitat by giving and taking, hiding and revealing, in response to the condition of the sea.

*“Losing too is still ours; and even forgetting still takes shape in the kingdom of transformation.
When something’s let go of, it circles; and though we are rarely the center of the circle, it draws around us its unbroken, marvelous curve.”*

(Rainer Marie Rilke’s Letter to Hans Carossa)

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