Please Note :

Parts A and B are presented as one document.
The ADRS Submission and Dissertation were formatted together to form a cognitive overlay on the drawings.

On Complex Ordinariness :
A Construing of Time through the Constructing of a Climate Registered Architecture set within an Old-World Infrastructural Landscape

A dissertation submitted to Technological University Dublin in part fulfilment of the requirements for award of

Masters in Architecture

by

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January 2023

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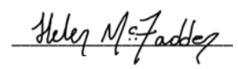
Declaration:

I hereby certify that the material submitted in this dissertation toward the award of Masters in Architecture is entirely my own work and has not been submitted for assessment other than part-fulfilment of the award named above.



Date: 15/01/2023

Acknowledgements

Thank you to my family and friends for their unwavering support and encouragement.

Thank you to the staff at the School of Architecture and the Built Environment, TU Dublin.

Thank you to the wider community of Mulranny, County Mayo for their enthusiasm to share opinions and knowledge as well as hopes for the future of the village.

I wish to extend my deepest gratitude to the following people:

Sean Doherty of Mulrany Old Photos Archive for providing the opportunity to explore Mulranny's rich cultural past.

Laura O'Connor for the lively discussions, witticism and wordplays.

Dr. Steve Larkin and Dr. Kevin Donovan for the 'challenge', wise words, observations, encouragement and mentoring during this research project.

Abstract :

This dissertation explores the role of time within the landscape and architectural design – namely within the rural coastal village of Mulranny in County Mayo.

This process involves the construing and constructing of time in Mulranny to imagine how the old-world infrastructural landscape within the tidal pool area will adapt into a future which aligns with the County and village Decarbonisation Zone Goals.

Time, a complex intangible element, is construed through architectural, cultural, ecological, geographical and historical theory. The theoretical lens prompted discrete studies into the particularities of Mulranny's physical and cultural contexts at three distinctive scales of enquiry – 1:1000, 1:50 and 1:5.

In response to these studies, a new climate registered architecture is constructed within the tidal pool. Under the guidance of localised constructive-logic, this new time layer seeks to protect landscapes, including saltmarshes, sand dunes and machair, by discretely intervening with an estranged network of infrastructure consisting of a Famine Pier and a Victorian Pumphouse and Causeway.

The investigation uses conventional architectural means and methods to research and design. These include literature, drawings, models, photographs, notes and conversations. Collectively they form an anthropological archive.

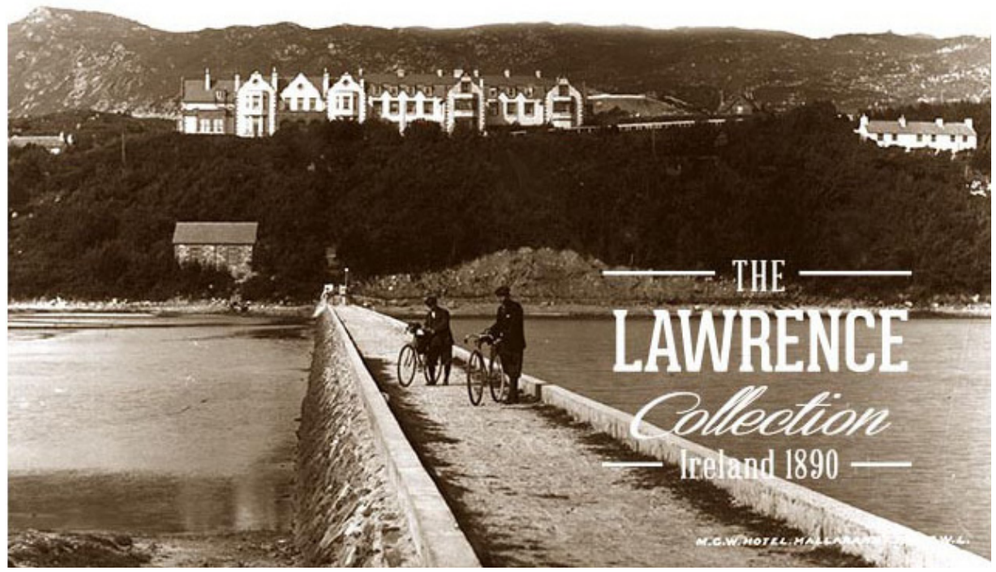
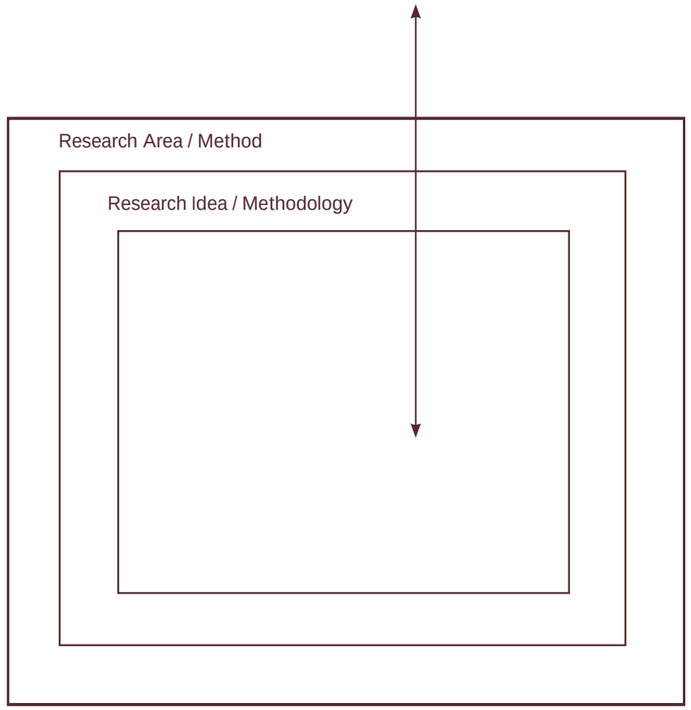


Figure 1. French, Robert, “Mulranny Great Western Hotel & Causeway”, Photograph, 1901, The Lawerence Collection

Content

Introduction

This thesis explores the role of time within the landscape and architectural design, namely within Mulranny in County Mayo.



Author, “Research Framing - Part 01”, Drawing, 2022

Research Area/Method

The research and design-based dissertation is an ontologically founded and anthropologically led investigation.

Ontological anthropology’s current relevance was suggested by Bruno Latour as being “a reading of the complex negotiations between people and their world;”[01] a method answering directly to the Anthropocene.

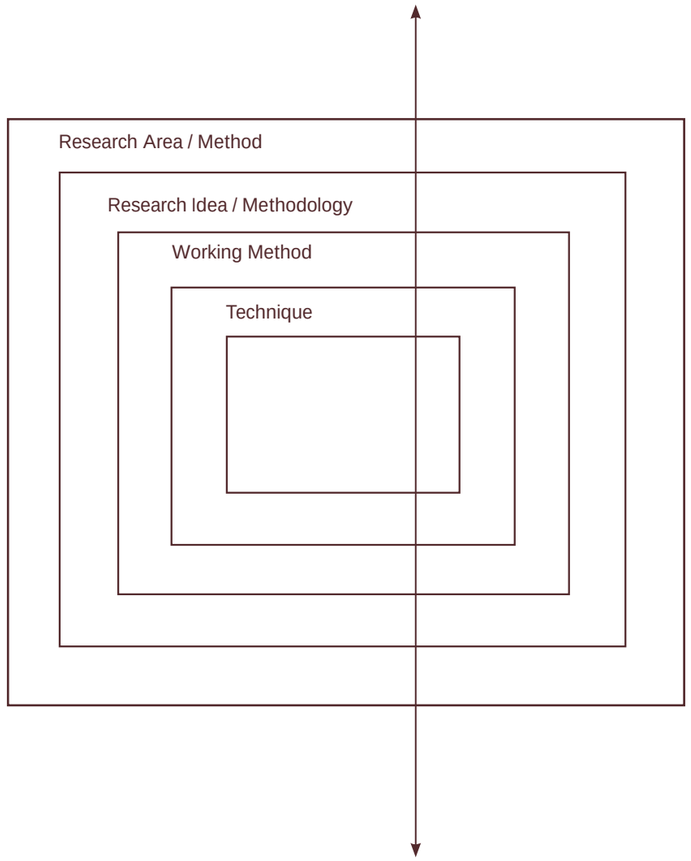
Research Idea/Methodology

“Ontological anthropology incorporates theoretical and methodological elements”.[02] Thus, the method prompted a “hermeneutical framework”[03] of Construing Complexity by Theory and Constructing Ordinariness by Pragmatics.

Time, a complex intangible element, is construed through fieldwork observations and architectural, cultural, ecological, geographical and historical theory found locally and more broadly.

In Perception of the Environment, Ingold states “there is no construing without context: the act of perception is inextricable from where it happens, when it happens and under what conditions.”[04] Accordingly, Mulranny in Co.Mayo was chosen as the testing ground. This controlled the project scope by ensuring theory was met with pragmatic site conditions, thereby forming complex ordinariness.

01 Bruno Latour and Catherine Porter, We Have Never Been Modern (Prentice Hall/ Harvester Wheatsheaf, 1993).
02 Eduardo Kohn, “Anthropology of Ontologies,” Annual Review of Anthropology 44, no. 1 (2015): 311–27, https://doi.org/10.1146/annurev-anthro-102214-014127.
03 James Corner, “A Discourse on Theory II: Three Tyrannies of Contemporary Theory and the Alternative of Hermeneutics,” The Landscape Imagination - Collected Essays of James Corner, 1990-2010, 2014.
04 Tim Ingold, The Perception of the Environment (Routledge, 2002), https://doi.org/10.4324/9780203466025.



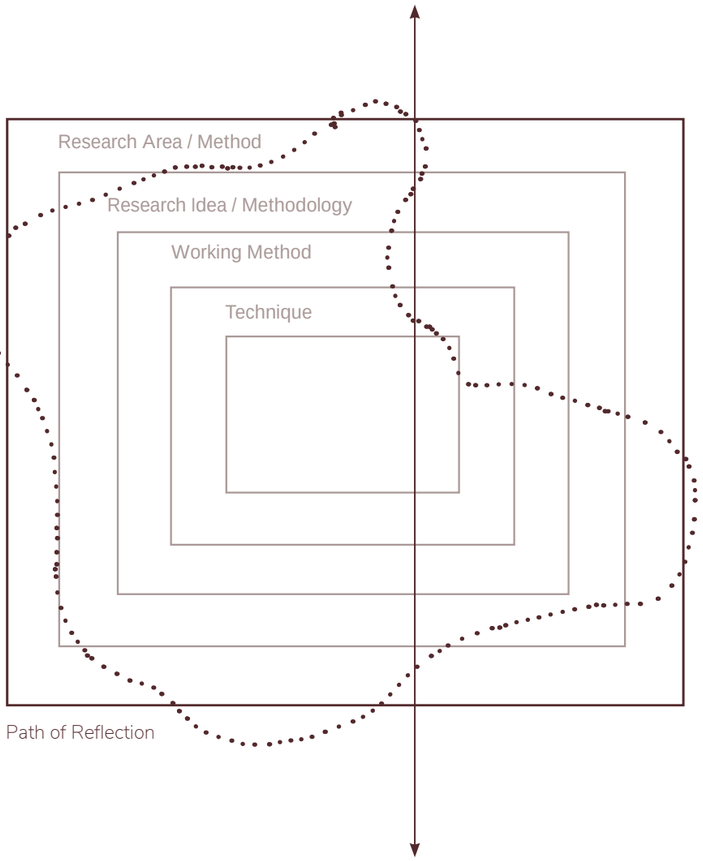
Author, “Research Framing - Part 02”, Drawing, 2022

Working Method

Conventional architectural research and design methods (literature, drawings, models, photographs, notes and conversations) were used to form an anthropological archive.

The rationale behind creating an anthropological archive was to prompt “eidetic operations/ ideational drawing techniques to construe and construct”.[05]The techniques consist of drawing scales of enquiry (1:1000, 1:50, 1:5) and methods based on fragmentation and articulation. These techniques were used to study the particularities of Mulranny’s physical and cultural contexts and also guided the development of discrete architectural interventions.

05 James Corner, “Eidetic Operations and New Landscapes,” The Landscape Imagination - Collected Essays of James Corner, 1990-2010, 2014.



Author, “Research Framing / Path of Reflection - Part 03”, Drawing, 2022

Reflection on Action

The hermeneutical framework positioned me as an “interpreter and mediator”[06] of two worlds. Consequently, two languages and viewpoints were taken.
Construing and Constructing / Complexity and Ordinariness / Theory and Pragmatics were played off one another through writing and drawing to allow the research project to qualitatively and quantitatively “swell with meaning”.[07]

06 Corner, “A Discourse on Theory II: Three Tyrannies of Contemporary Theory and the Alternative of Hermeneutics.”
07 Henry Glassie, Material Culture (Indiana University Press, 1999).

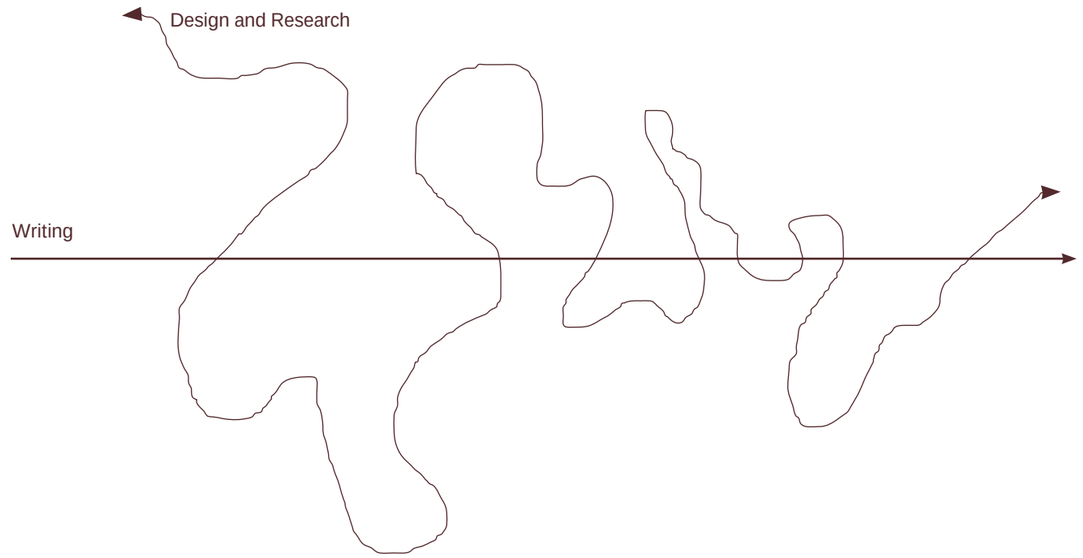


Figure 2. Author, “Content Structure”, Drawing, 2022

Content Structure

The “creation process in architecture is all too automatically considered as a unidirectional process that starts with to dream the poetic image, that subsequently is substantiated—to make—on the construction site.”[08]During the creation process of this thesis there was a constant trawling back and forth between literature, photographs, drawings, models and notes to temper invention and verify intuition. The research and design process was two-directional.

However, the nature of writing, which moves readers eyes along a line from left to right, meant the project needed reformatting to follow a singular direction, carrying findings from page to page. In reformatting one must work like a clockmaker, patiently disassembling the mechanisms into their component parts until an ordering system is found.

The system was discovered in Hegelian Dialectics, “a structured process of writing which contextualises ideas based on three successive stages; thesis, antithesis and synthesis.”[09]These stages also accommodated the two-directionality of research and design by passing ideas from one stage to another and back again, challenging and strengthening them in the process.

Thus, this dissertation is structured as a critical reflection on the Thesis, the Antithesis and the Synthesis.

08 Jo Van Den Berghe, “Theatre of Operations, or: Construction Site as Architectural Design,” 2012, https://researchrepository.rmit.edu.au/esploro/outputs/doctoral/Theatre-of-operations-or-construction-site/9921861113901341.

09 Julie E Maybee, “Hegel’s Dialectics,” 2016.

Thesis

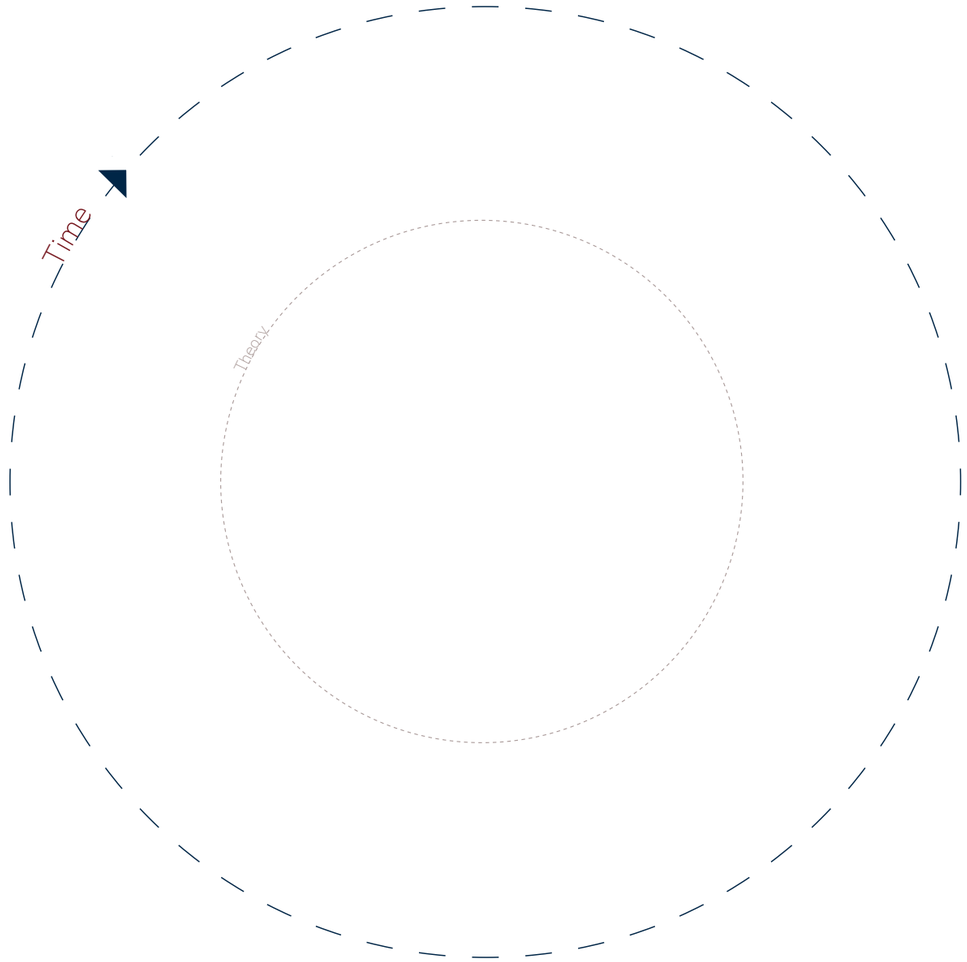


Figure 3. Author “A Hermenutical Framework : Stage One”, Drawing, 2022

Theory simultaneously elevated and grounded ideas by prompting means of exploring the intangible through the tangible; it offered a navigation map into the project. I say ‘into’ as drawing techniques unearthed by seminal pieces of literature opened lines of enquiry into the project. This process is outlined below.

In semester one, my position paper “Making Space for Time”[10] investigated the Smithson’s Solar Pavilion as it was presented in “Complex Ordinariness : Upper Lawn Pavilion”.[11] - the photographic study from where this dissertation finds its name. The magnifying glass was composed from David Leatherbarrow’s “three distinct chronologies that co-exist, non-synchronically yet indivisibly in all built works; the Time of the World: ambient phenomena and influences, the Time of the Project: former, current and future project making and production and the Time of the Body: Passages through which works of architecture paces itself”.[12]

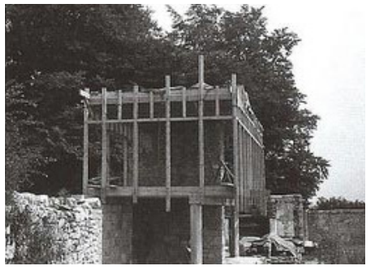
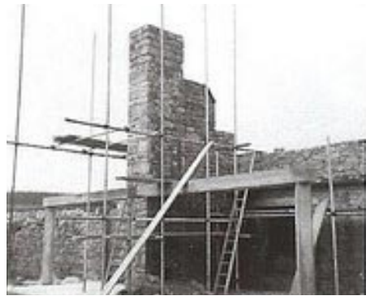
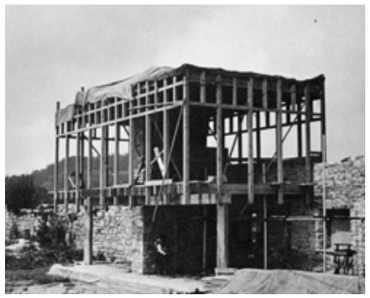
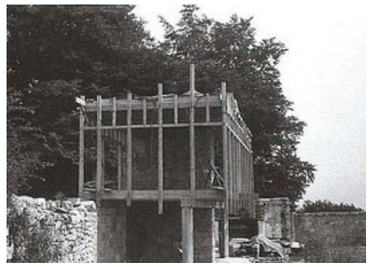
The paper proposed two ideas; first, as the Solar Pavilion has stubbornly held its ground, it has been accruing history and meaning; secondly, Leatherbarrow’s ‘kinds of time’ could prompt drawing scales of enquiry which investigate the thesis, i.e., 1:1000, 1:50 and 1:5.

10 Author, “Making Space for Time”, 2022
11 Bruno Krucker, Complex Ordninariness: The Upper Lawn Pavilion by Alison and Peter Smithson (gta, 2002).
12 David Leatherbarrow, Building Time: Architecture, Event, and Experience (Bloomsbury Publishing, 2020).

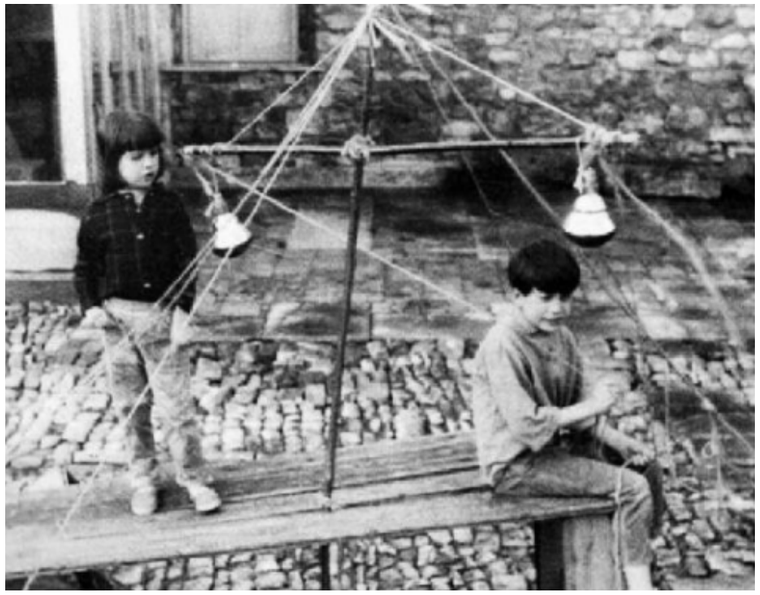










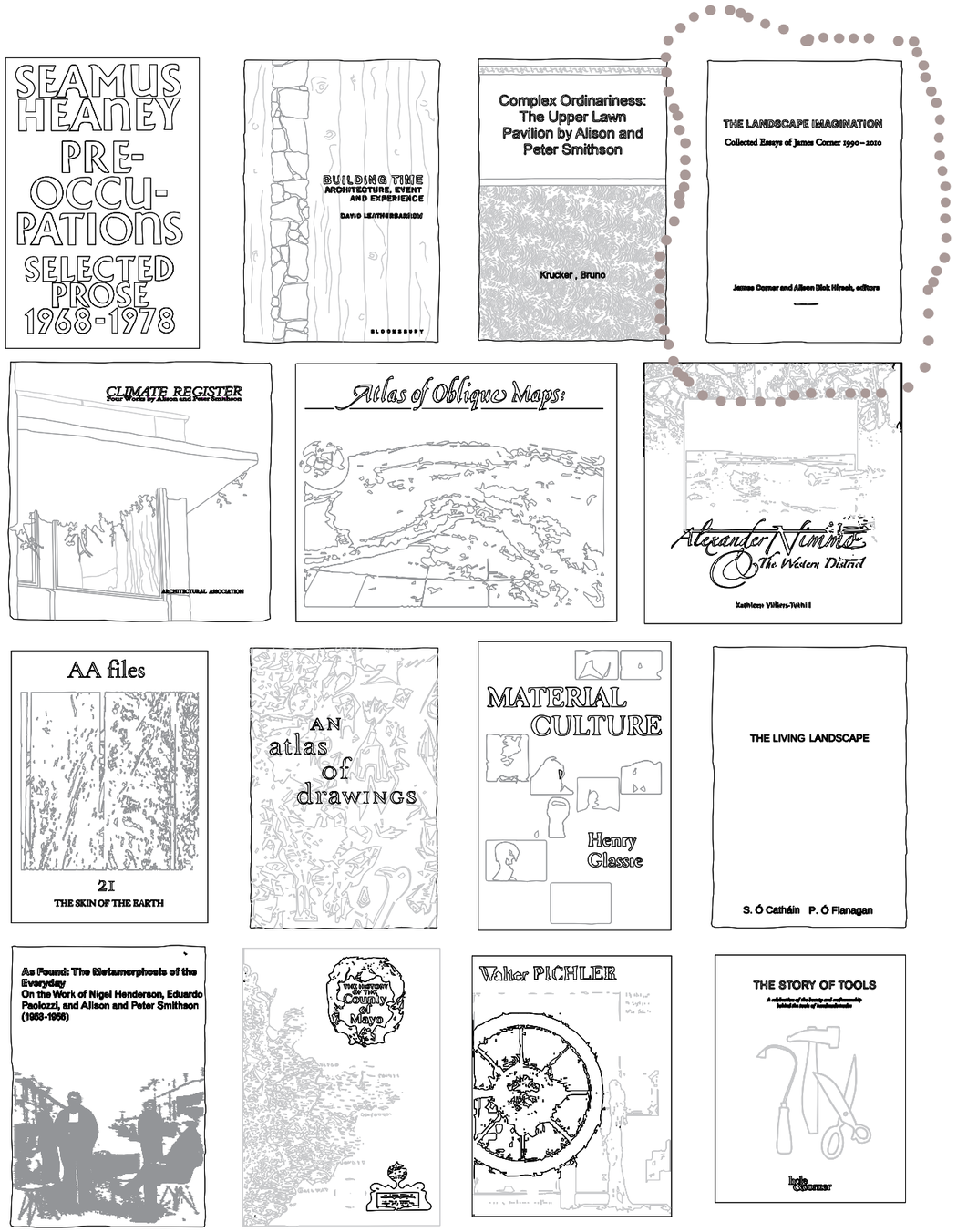
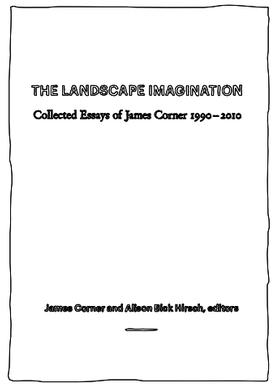


Figure 4. Author, “Literature Review : Main Theoretical Guide”, Drawing, 2022

Literature

Seminal pieces of architectural, cultural, ecological, geographical and historical literature were eventually coupled with these scales to guide the project:



The Landscape Imagination

This book was used to establish a framework for the project.

James Corner's "Eidetic Operations and New Landscapes " and "A Discourse on Theory II: Three Tyrannies of Contemporary Theory and the Alternative of Hermeneutics" suggested a strategy grounded in the tradition of hermeneutics. Within these texts, theory permits a free association of ideas through the mechanics of situational interpretation and metaphor. Hermeneutics provides the basis for a landscape architectural theory that transcends pictorial image and historical style by critically engaging contemporary circumstance and tradition.

Footnote : *Useful technique to establish a project framework - positioning one as a third party or mediator between the landscape and culture so both can brought into equilibrium.*

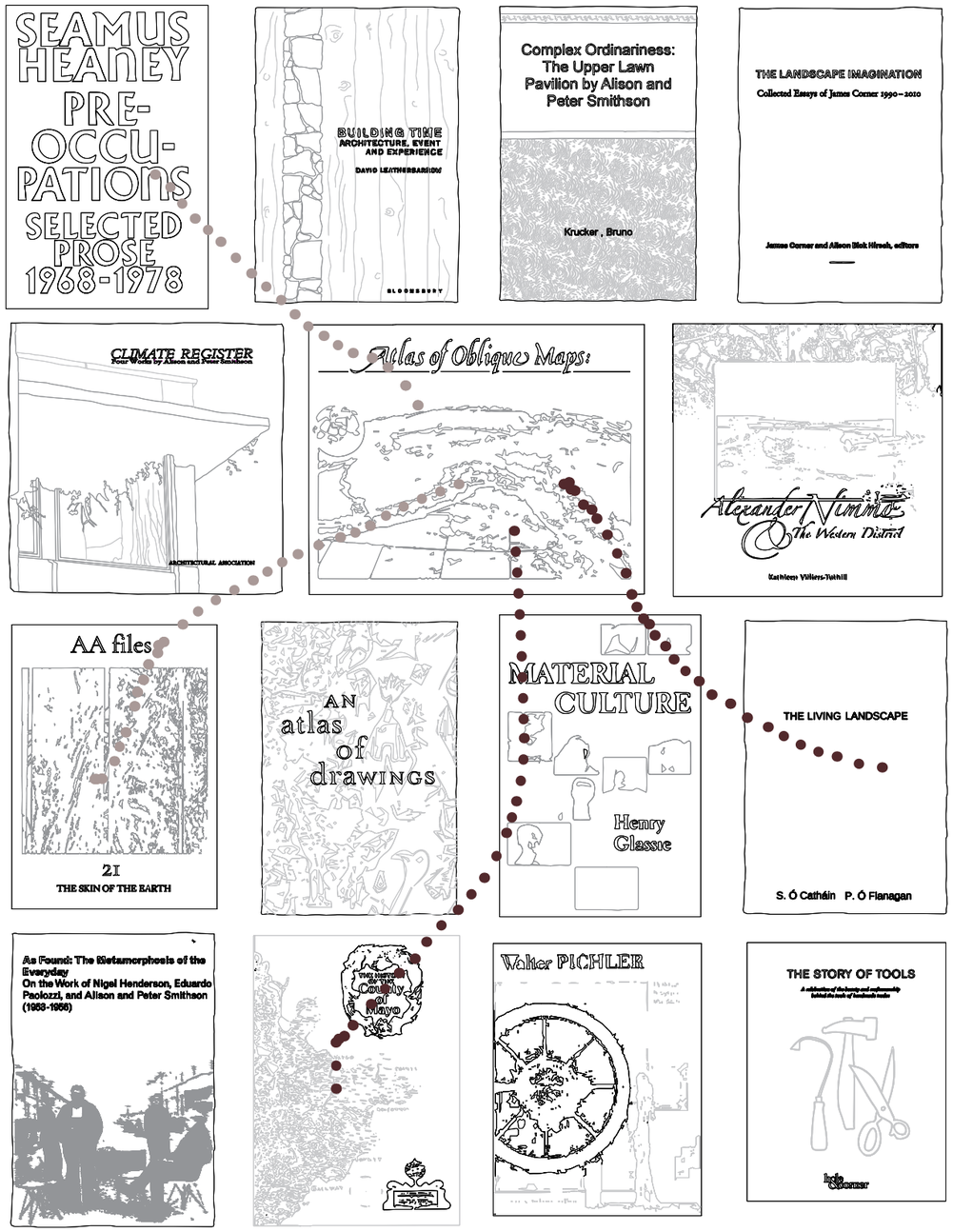


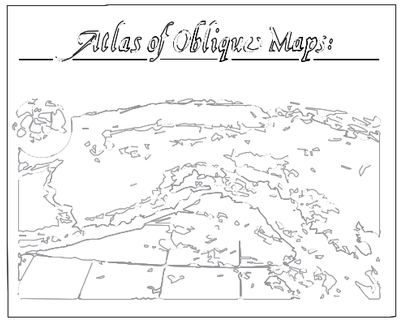
Figure 4. Author, “Literature Review : 1:1000”, Drawing, 2022

1:1000: “Atlas of Oblique-Maps”,[13] “The Living Landscape”[14] and “The History of the County of Mayo”[15] suggested a study of the landscape through oblique-drawings.

13 Janis S. Detterman and Jim Morley Tau Rho Alpha, “Atlas of Oblique-Maps: A Collection of Landform Portrayals of Selected Areas of the World,” 1988, https://doi.org/10.3133/i1799.

14 Patrick O'Flanagan Séamas Ó Catháin, The Living Landscape. Kilgalligan, Erris, County Mayo (Comhairle Bhéaloideas Éireann/ Folklore of Ireland Council, 1975).

15 Hubert Thomas Knox, The History of the County of Mayo (Hodges, Figgis and Co., Ltd, 1908), https://www.mayo.ie/getmedia/e62adf2a-c816-4e72-830f-3cf17e39fb2e/323-The-History-of-the-County-of-Mayo.pdf.

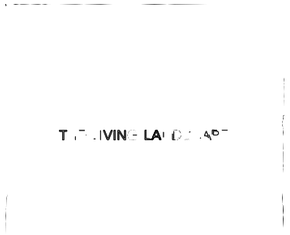


Atlas of Oblique Maps

This book was used to establish a drawing technique for representing the landscape.

The oblique maps show the surface of the Earth in terms of landforms,their dimensions, relative relief, slopes, and surface materials. They are a combination of physiographic diagrams, landform maps, or orthographic drawings. A physiographic diagram emphasises the origin, or geologic structure, of landforms, a landform map emphasises a realistic portrayal of surface features, and an orthographic drawing refers to the method of projecting the Earth's surface onto a map.

Footnote : *Useful technique when investigating the landscape formations around and within Mulranny Tidal Pool*



The Living Landscape

In this book Séan O'Catháin and Padraig Ó Flanagan discuss how a living landscape dynamically embraces a spontaneous and reciprocal relationship between a community and their environment. Their relationship of gemeinschaft creates a vernacular cultural landscape, not imposed from outside or above but developed spontaneously, inwardly. A living lanscape imbued with authenticity and numen, stitches together seamlessly the individual, the family and the community.

The landscape has a dual function: one is secular, pragmatic, and functional; the second is symbolic and cultural.

Footnote : *A good starting point - decarbonisation could be used to re-establish the link between the landscape and the local community within Mulranny.*

The History of the County of Mayo

The book, which is comprised of a series of narratives delivered through the diverse lenses of a range of academics and local historians, is a summation of the history of Mayo. It explores the historical, political, social and religious influences that have shaped and developed Mayo from pre-Christian times through to the present.

Note : *A thorough investigation of the physical and cultural context through time could guide the architectural proposition*

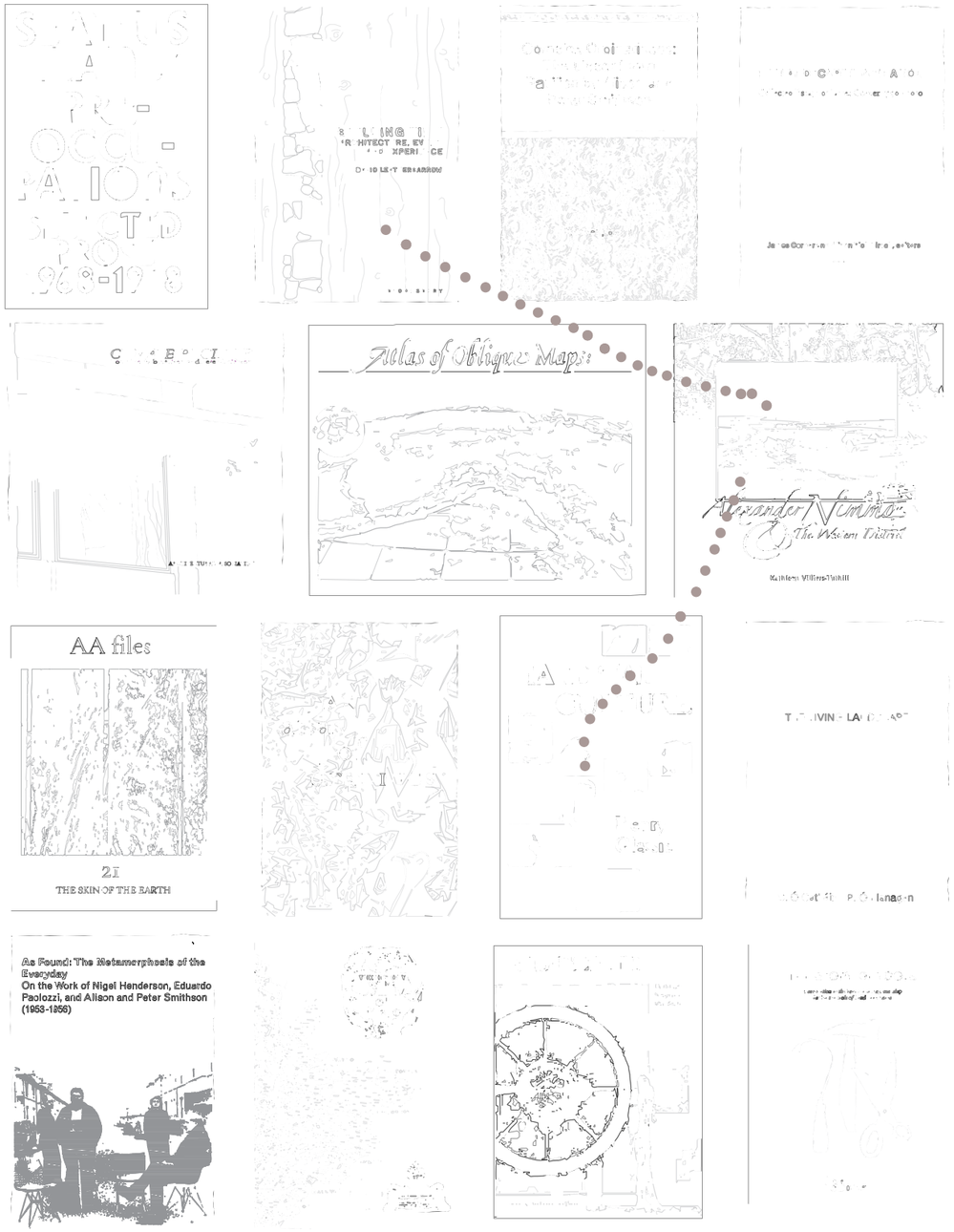


Figure 5. Authro, “Literature Review : 1:50”, Drawing 2022

1:50: “Alexander Nimmo and the Western District”[16]and architectural precedents which resonated with the site through theory and design were studied. These include Tavora’s “Tennis Pavilion”,[17] Lewerentz’s “Malmö Eastern Cemetery”,[18] Ganchegui’s “Plaza Del-Tenis”[19] and van der Laan’s “Saint Benedict Abbey”[20]

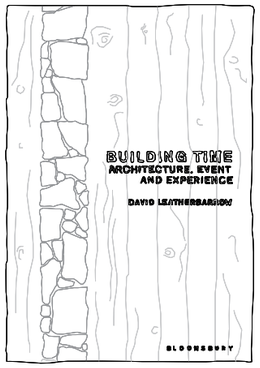
16 Kathleen Villiers-Tuthill, Alexander Nimmo & The Western District - Emerging Infrastructure in Pre-Famine Ireland. (Connemara Girl Publications, 2006).

17 Eduardo Fernandes, “The Tectonic Shift in Fernando Távora’s Work in the Post CIAM Years,” 2019, https://repositorium.sdum.uminho.pt/bitstream/1822/68721/1/11 - Eduardo Fernandes – Revisiting Post-CIAM Generation Proceedings.pdf.

18 Kieran Long and Michael Anderson, Sigurd Lewerentz: Architect of Death and Life, ed. Johan Dehlin and Johan Örn (Park Books, 2022).

19 n.d., “Tennis Square - Luis Peña Ganchegui, Eduardo Chillida,” Arxiu.Bak, 2015, http://arxiubak.blogspot.com/2015/09/plaza-del-tenis-luis-pena-ganchegui.html.

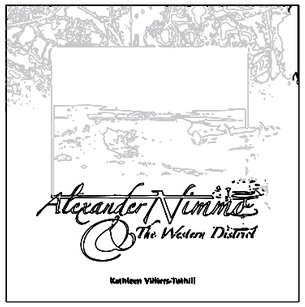
20 Dom Hans van der Laan, “A Church in the Netherlands,” Dom Hans van Der Laan, n.d., https://domhansvanderlaan.nl/theory-practice/practice/abbey-st-benedictusberg/.



Building Time, Architecture, Event and Experience

Through a series of close readings of buildings through three categories of time - The Times of the World, the Body and the Project - this book demonstrates the centrality of time in architectural design. All buildings exist in time. Even if designed for permanence, they change, slowly but inevitably. They change use, they accrue history and meaning, they decay – all of these processes are inscribed in time. Time, this book argues, is the framework for our spatial experience of architecture, and a key dimension of a building's structure and significance.

Note : *Three categories of time useful when dividing into investigative scales*



Alexander Nimmo - The Western District

Alexander Nimmo & The Western District provides a background to Alexander Nimmo's work in Ireland. It demonstrate the conditions under which he worked in the West, including Mulranny, the infrastructure (or lack of it) that existed prior to his arrival, and the impact that his work had on coastal regions.

Note : *The rise and fall of both the rail and coastal infrastructure has been inextricably linked to Mulranny overtime. This should be considered in it's future.*

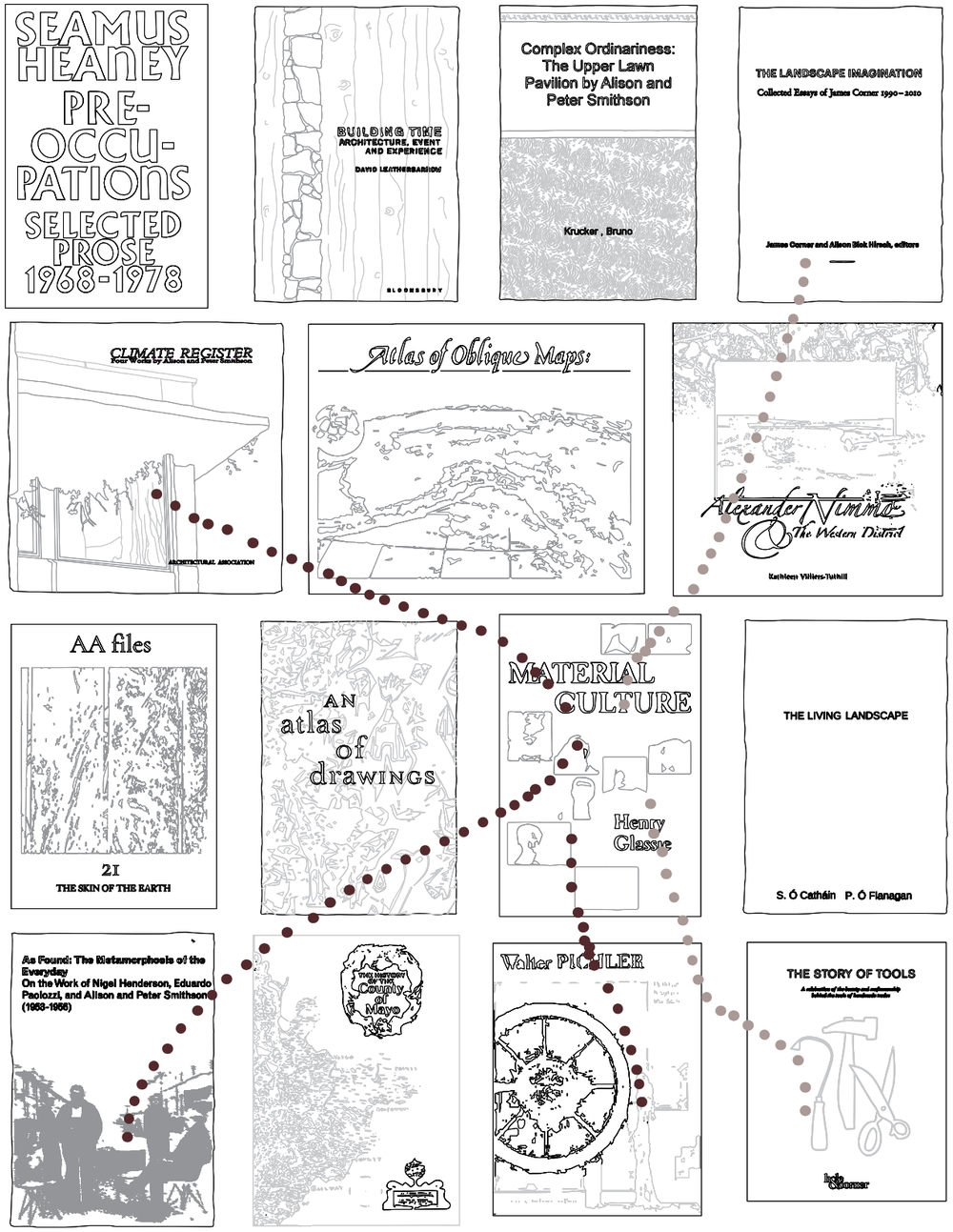


Figure 6. Authorm “Literature Review : 1:5”, Drawing 2022

1:5: “The Climate Register”,[21] “As Found: The Metamorphosis of the Everyday”,[22] “Material Culture”[23]and “Walter Pichler”[24] encouraged the development of details showing sensitivity to the cultural and physical contexts.

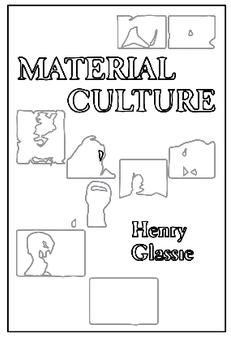
21 Peter Salter and Peter Smithson, Climate Register : Four Works by Alison and Peter Smithson (AA School of Architecture, 1995).

22 Dirk van den Heuvel, “As Found: The Metamorphosis of the Everyday. On the Work of Nigel Henderson, Eduardo Paolozzi, and Alison and Peter Smithson,” Scratching the Surface, OASE, no. 59 (1956), https://www.oasejournal.nl/en/Issues/59/AsFoundTheMetamorphosisOfTheEveryday#052.

23 Glassie, Material Culture.

24 Walter Pichler, Drawings, Sculpture, Buildings (Princeton Architectural Press, 1997).

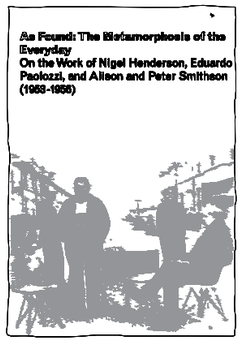
Material Culture



Material Culture is the conventional name for the tangible yield of human conduct. It is an odd term, material culture, for culture is immaterial. Culture is pattern in mind, inward, invisible, and shifting; it is the inner wit at work in the world. Beginning necessarily with things, but not ending with them, the study of material culture uses objects to approach human thought and action. These 'things' are artifacts. Artifacts set the mind in the body, the body in the world. The world enters the artifact in materials, abiding in stone, mellow and gray, in swirls of woodgrain and the luster of silk. Materials carry the scars left by the body in motion: the rhythmic chips of the chisel, the twists of spun fiber, the dainty pricks of the needle. The artifact perpetually displays the process of its design, the pattern in the mind of its creator.
(Glassie, p.47 1999)

Footnote : *Artifacts could be used to investigate the role of "The Time of the Body"*

As Found : The Metamorphosis of the Everyday

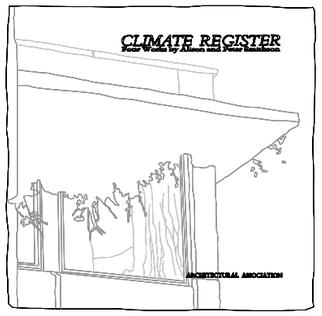


During the modernist era Alison and Peter Smithson reacted to the modern ideology of tabula rasa through their writings. At the time there was a prevailing notion led by their contemporaries to reinvent every aspect of modern life. In contradiction to this, the Smithsons wrote on "as found". The As Found is a small affair; it is about being careful. It is "where the art is in the picking up turning over and putting with".

Thus the "as found" is a new seeing of the ordinary.

Footnote : *Mulranny has a localised constructive logic where craft, technique and tradition has permeated through time. It involves using local skills and local materials under the spirit of Meitheal.*

Climate Register



The Climate Register is a mediated conversation between the AA School of Architecture's Unit 6 students and the Smithsons – a discussion between two generations of architects on architectural research through practice. The book attempts to draw out ideas from reflective stories which are being passed from one generation of architects to the next.

Through invention and the development of a sensibility towards the ageing, wear and weathering of materials, detail drawings and models were used by the Smithons to anticipate a responsive architeture that carried resonances of the processes of its making in relation to the demands of site.

Footnote : *Mulranny's localised constructive logic is linked with site conditions. This logic should prevail within the architectural propositions*

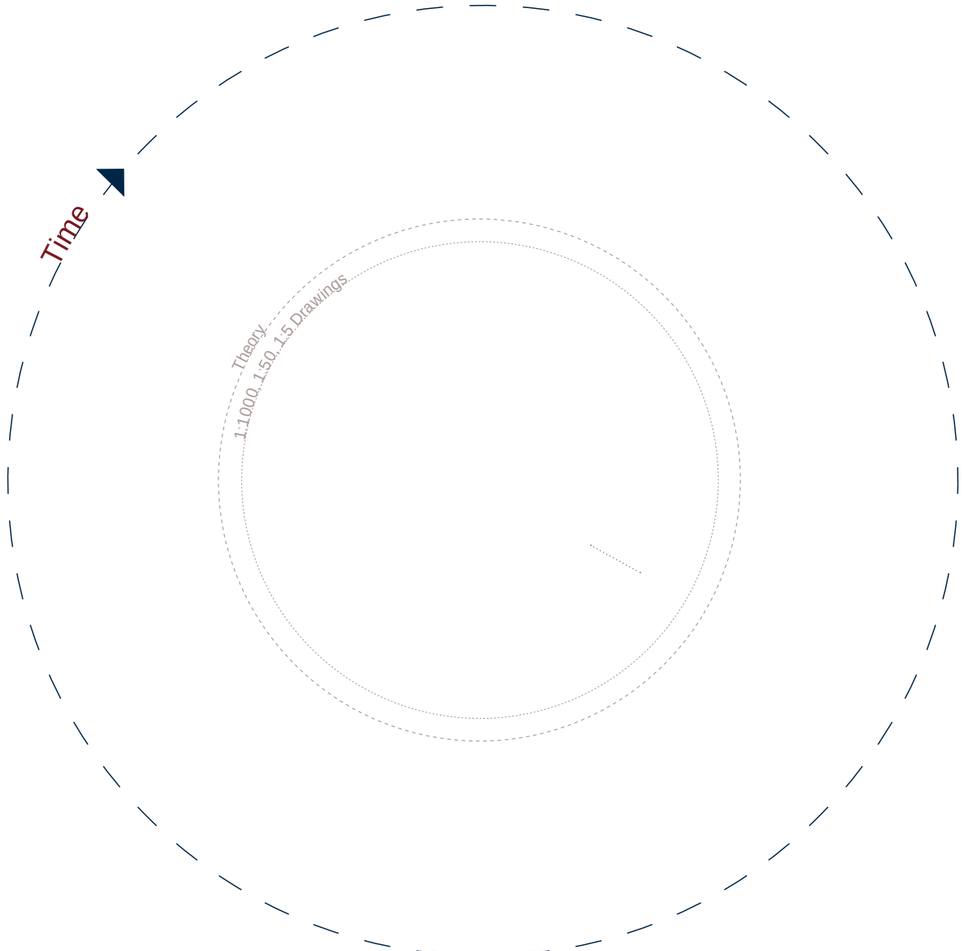


Figure 7. Author, “A Hermenutical Framework : Phase Two”, Drawing, 2022

Antithesis

Figure 8. Author, “A Hermenutical Framework : Phase Three”, Drawing, 2022

In semester two the antithesis, or testing ground, was introduced:

Mulranny, a coastal rural village located on an isthmus between Clew-Bay and Blacksod-Bay, developed in a ribbon around a tidal-pool at the foot of the Neiphin Beg mountain range and at the entrance to the Corraun peninsula.

A continuous “context-led investigation”[25]which navigated the research around the village, sought a justifiable site location and uncovered qualitative and quantitative aspects of the past and present cultural and physical contexts, was conducted; the findings of which are presented below.

25 Ray Lucas and Raymond Lucas, Research Methods for Architecture (Hachette UK, 2016).

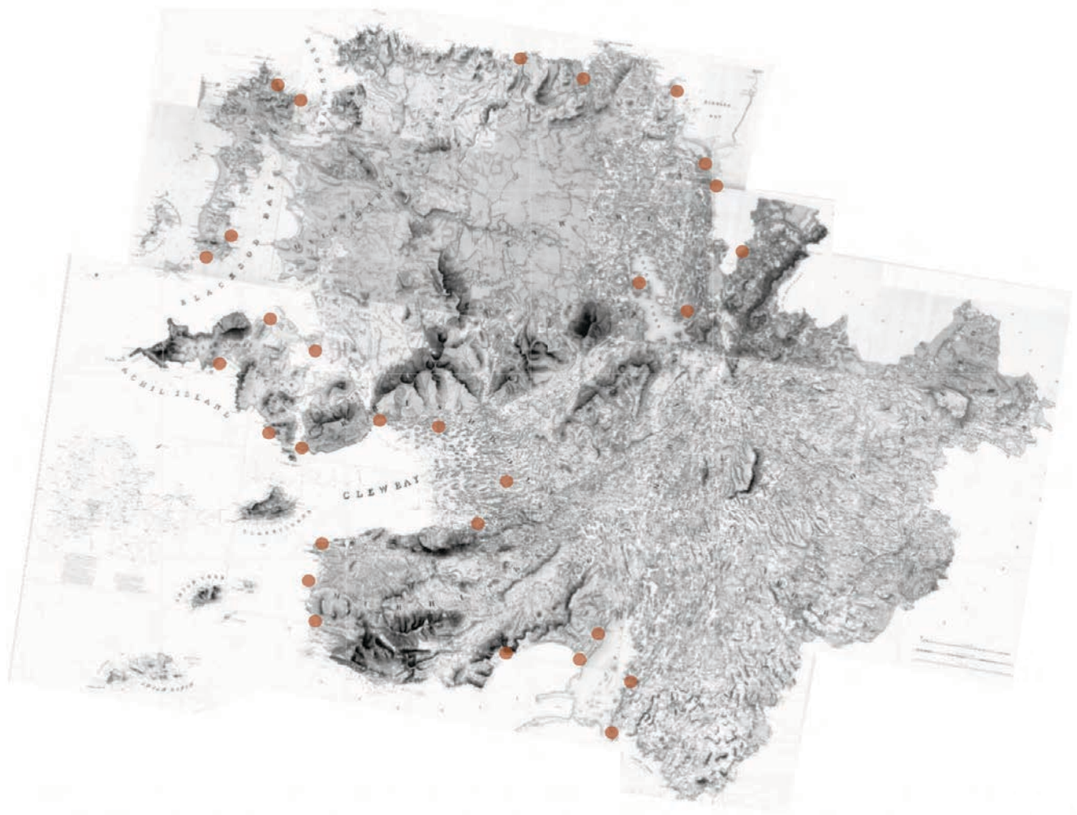


Figure 9. Bald, William, “County Mayo”, Drawing, 1870, L.Brown Collection
Orange Circles Indicate a selection of Piers in Mayo

Figure 10. Author, “Clew Bay”, Drawing, 2022

Figure 11. Author, “Mulranny to Newport Coastline”, Model, 2022

Figure 12. Author, “Mulranny to Newport Coastline”, Model, 2022

Figure 13. Author, “Mulranny to Newport Coastline”, Model, 2022

Figure 14. Author, “Mulranny Coastline”, Model, 2022

Figure 15. Author, “Mulranny Coastline”, Model, 2022

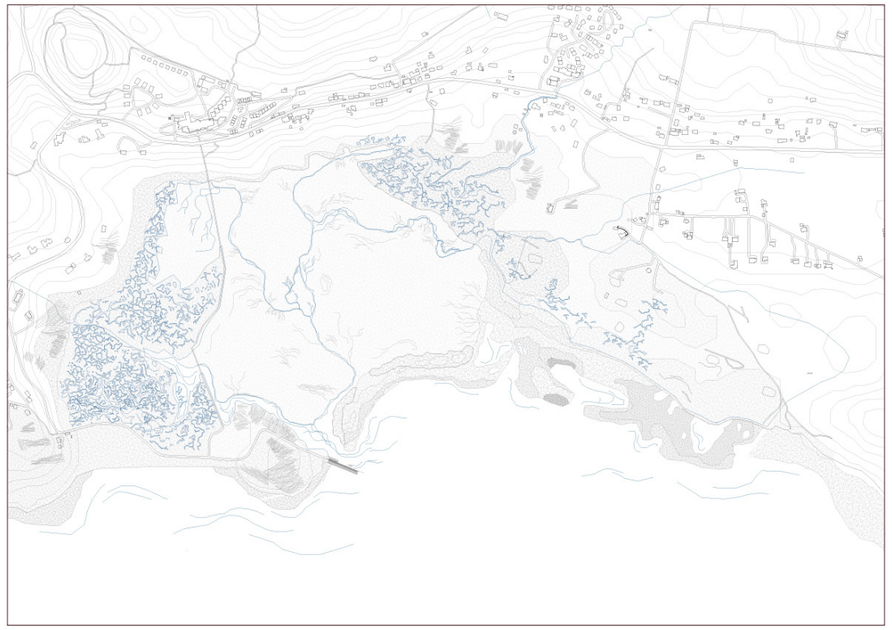


Figure 16. Author, “Mulranny Coastline”, Drawing, 2022

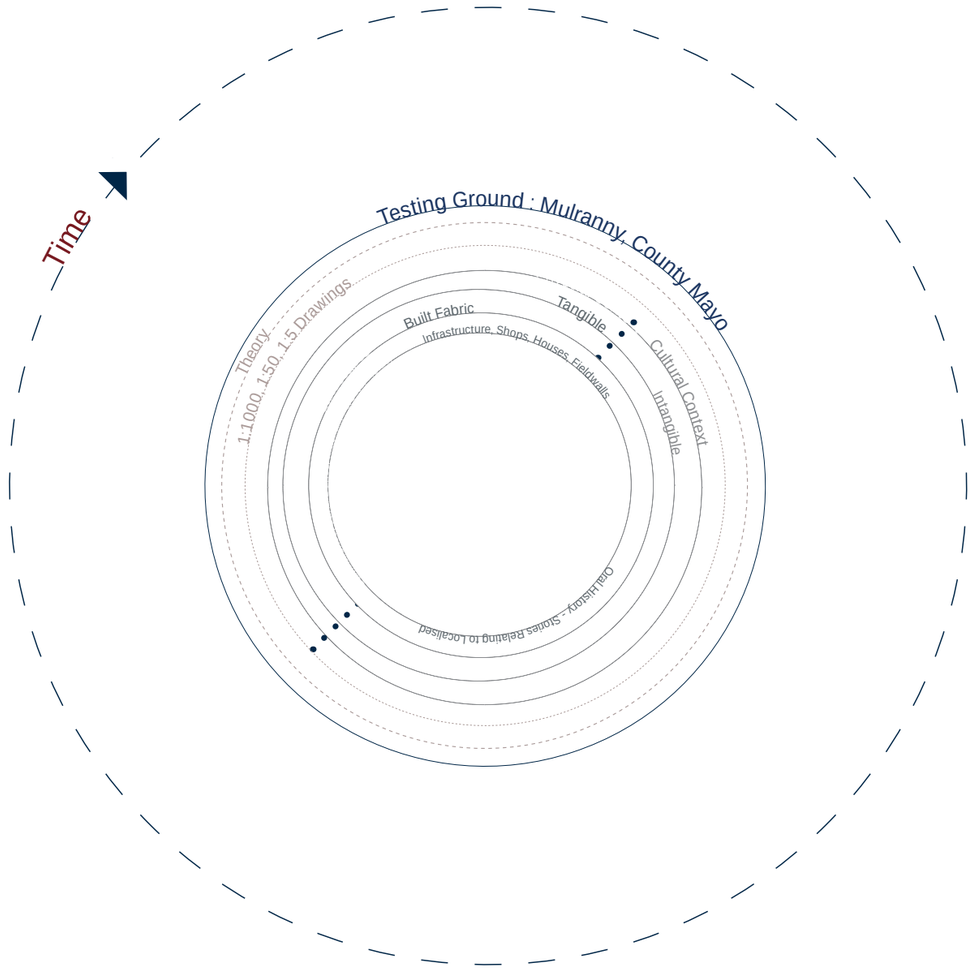


Figure 17. Author, “A Hermenutical Framework : Phase Three”, Drawing, 2022

Cultural Context

Tradition is a “happening,”[26]a continual unfolding of human endeavours and the accumulation of ideas. Thus, Mulranny was studied through measured survey drawings which carefully and dutifully record qualitative and quantative data.

A taxonomy of details based on observations from within the built fabric and conversations with locals, many of whom inherited ancestral nicknames which are based on trades and crafts they continue to practice today, were drawn. Through conversations I found that constructive-logic is often directly related to a person’s experiences which prompt stories about details that were sparked out of intuition and imagination, for example, “the story of Thomas Moran,”[27] and Rory “the merchant” Sweeney whose family family tree’s are deeply rooted in Mulranny and Achill, carrying with them the constructive-logic passed on by Meitheal. This history is outlined below.

26 Hans-Georg Gadamer, Truth and Method (Seabury Press, 1975).
27 Sinéad Doherty, “Thomas Moran : Number 9,” Our Irish Heritage, 2015, https://www.ouririshheritage.org/content/archive/people/101_mayo_people/family-stories/thomas_moran.

1) Dohertys Shops

Figures 18, 19, 20. Unknown, “Thomas Moran’s”, Photos, Date Unknown

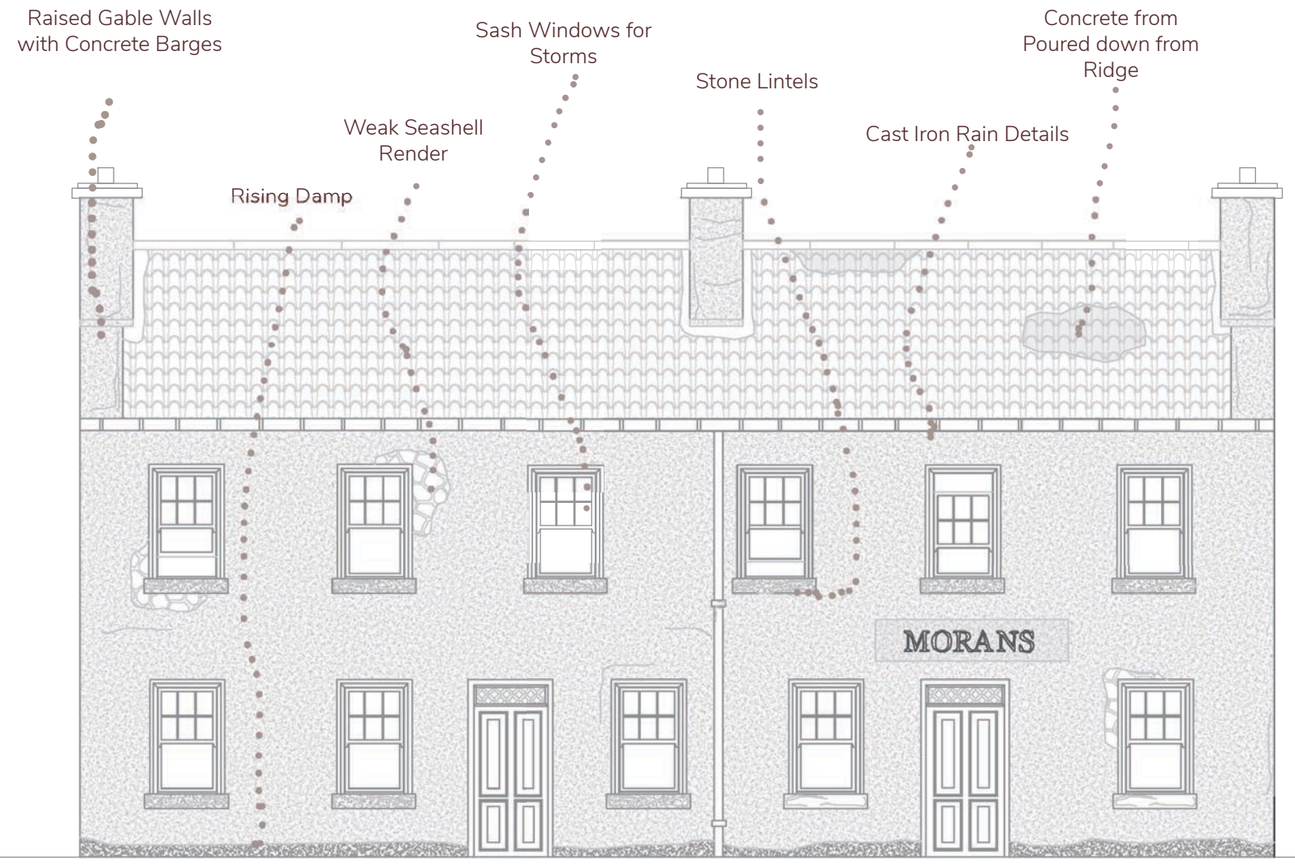
1) Dohertys Shops

Figure 22 : Doherty's

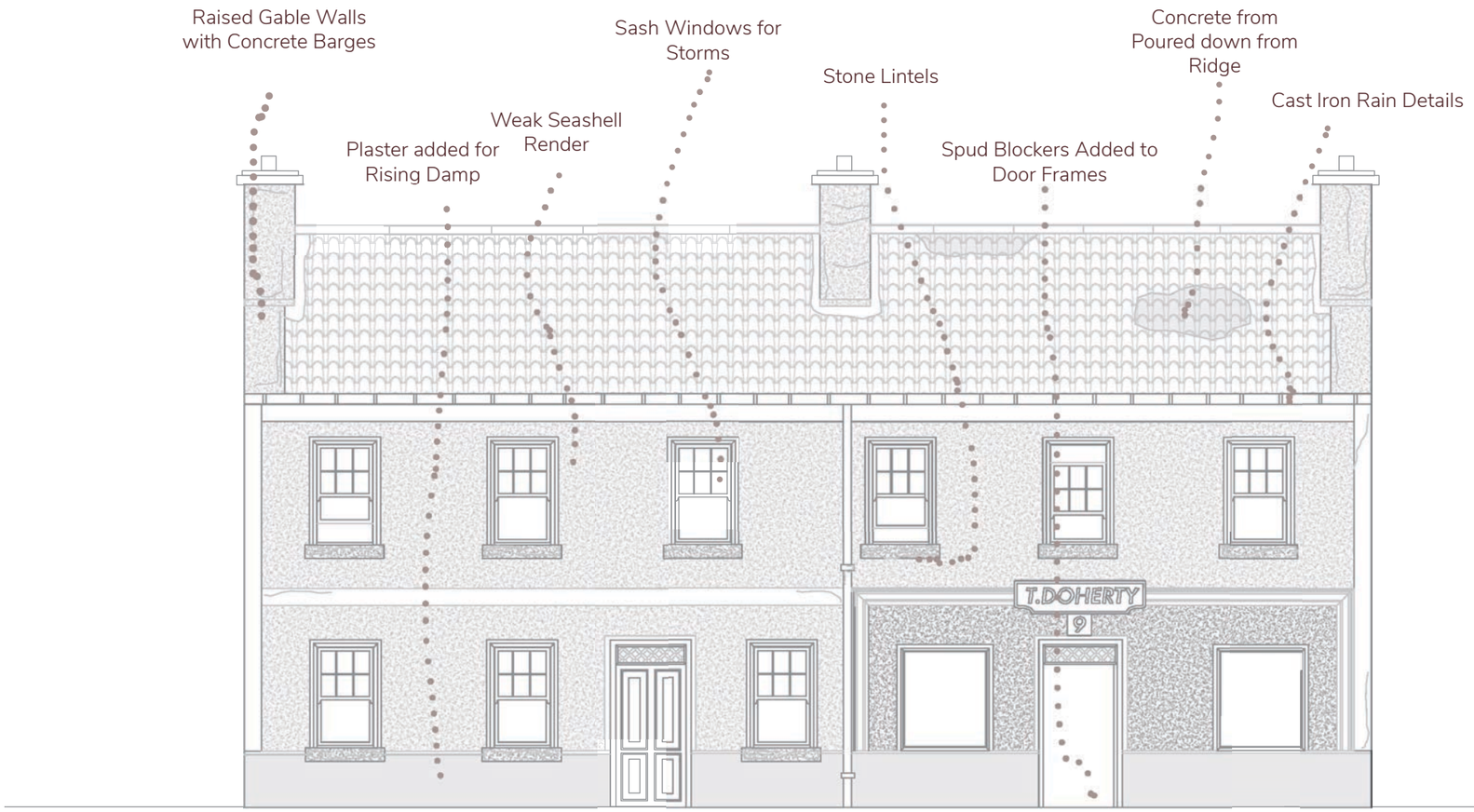
(1) Garage and Petrol Pumps
(2) General Shop,
(3) Post Office,
(4) Auctioneers,
(5) Cafe,
(6)Heating Supplies
(7) Books and Maps Store
(8) Docon Construction

Figure 22, Author, "Moran's/Doherty's", Drawing, 2022

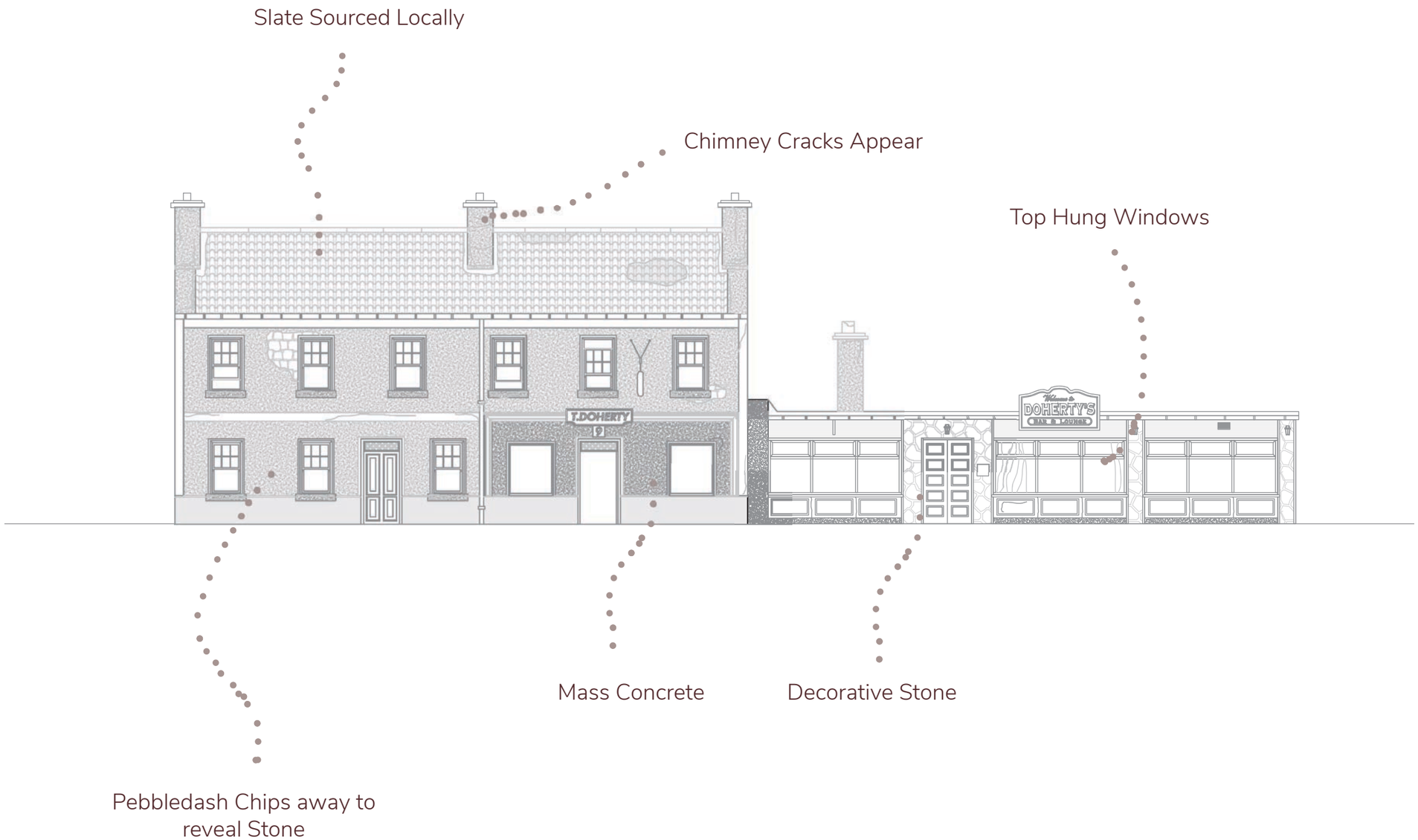
1) Dohertys Shops



1) Dohertys Shops

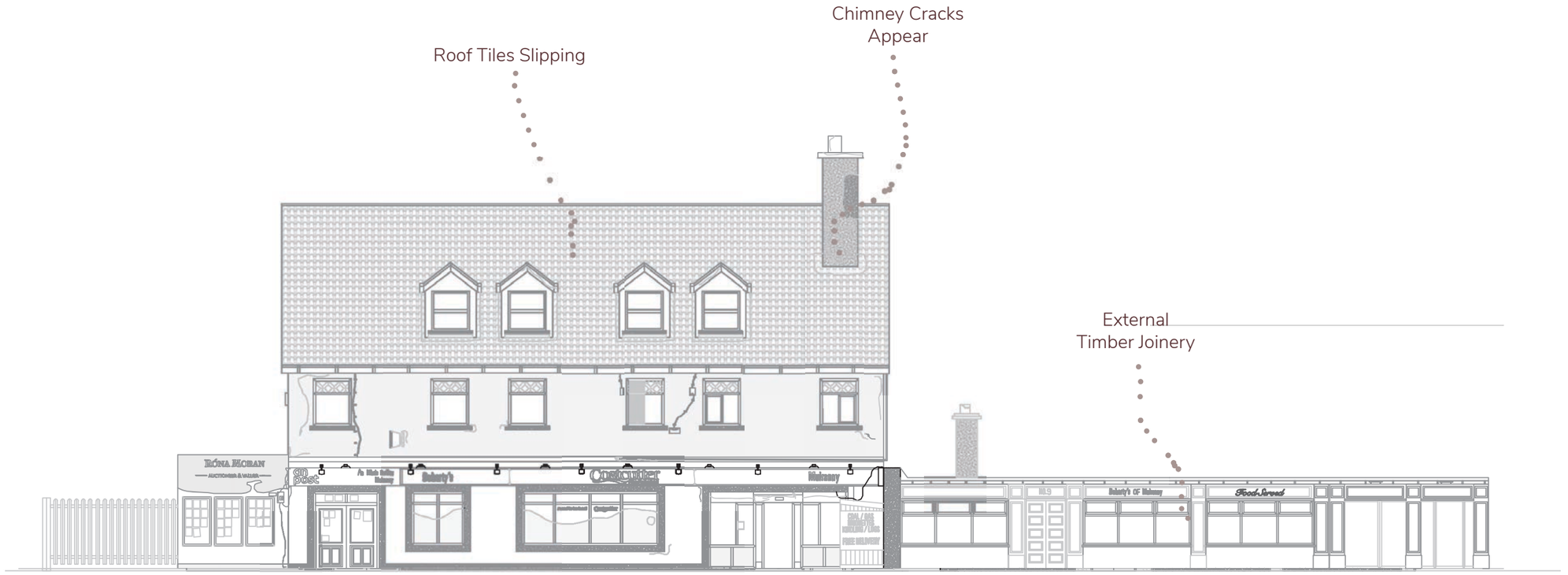


1) Dohertys Shops

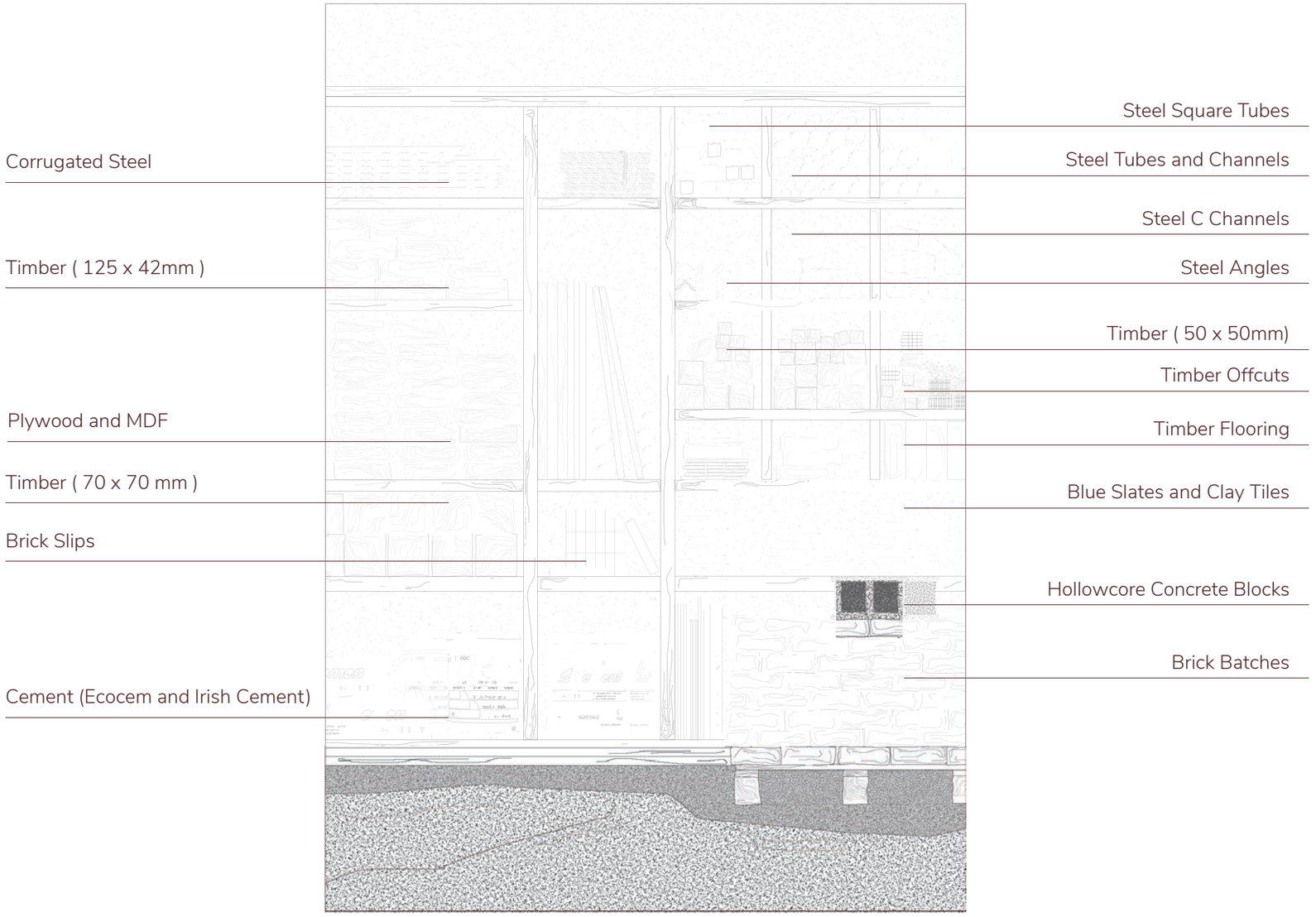


1) Dohertys Shops

1) Dohertys Shops



1) Dohertys Shops



Material Supply

Figure 34, Author, “Doherty’s Material Supply”, Drawing, 2022

2) Sweeney’s Hardware

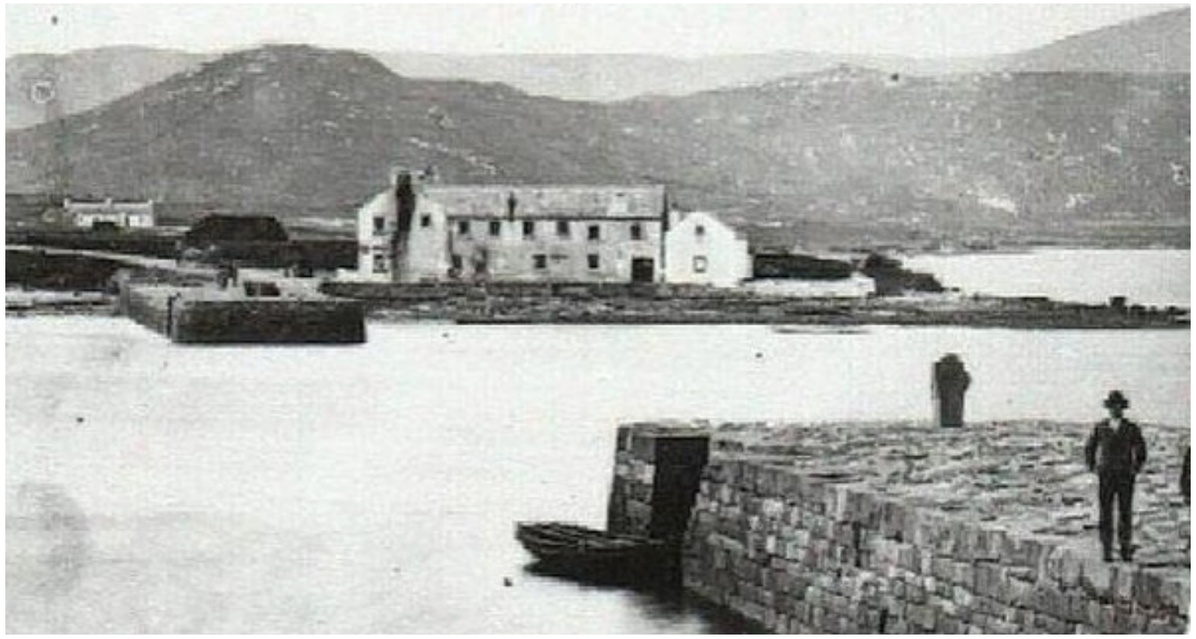


Figure 21, Unknown, “Sweeney’s”, Photo, Date Unknown

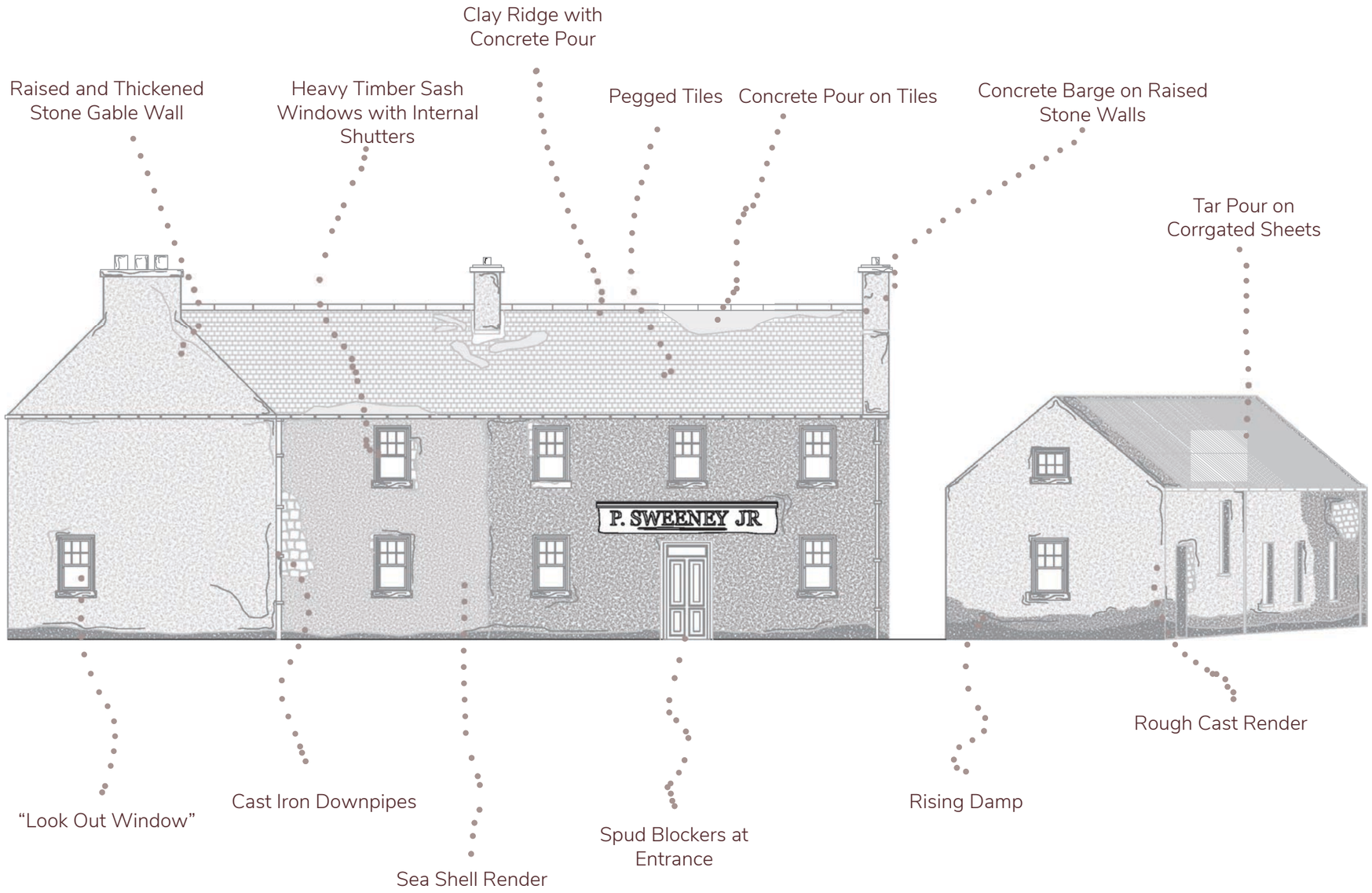
2) Sweeney’s Hardware

Sweeney’s

(1) Hardware Store
(4) Electrical Store
(7) Heating and Oil
(10) Storage
(2) General Shop,
(5) Timber Yard
(8) Workshop
(11) Fishing Supplies
(3) Undertakers
(6)Materials Yard
(9) Supermarket

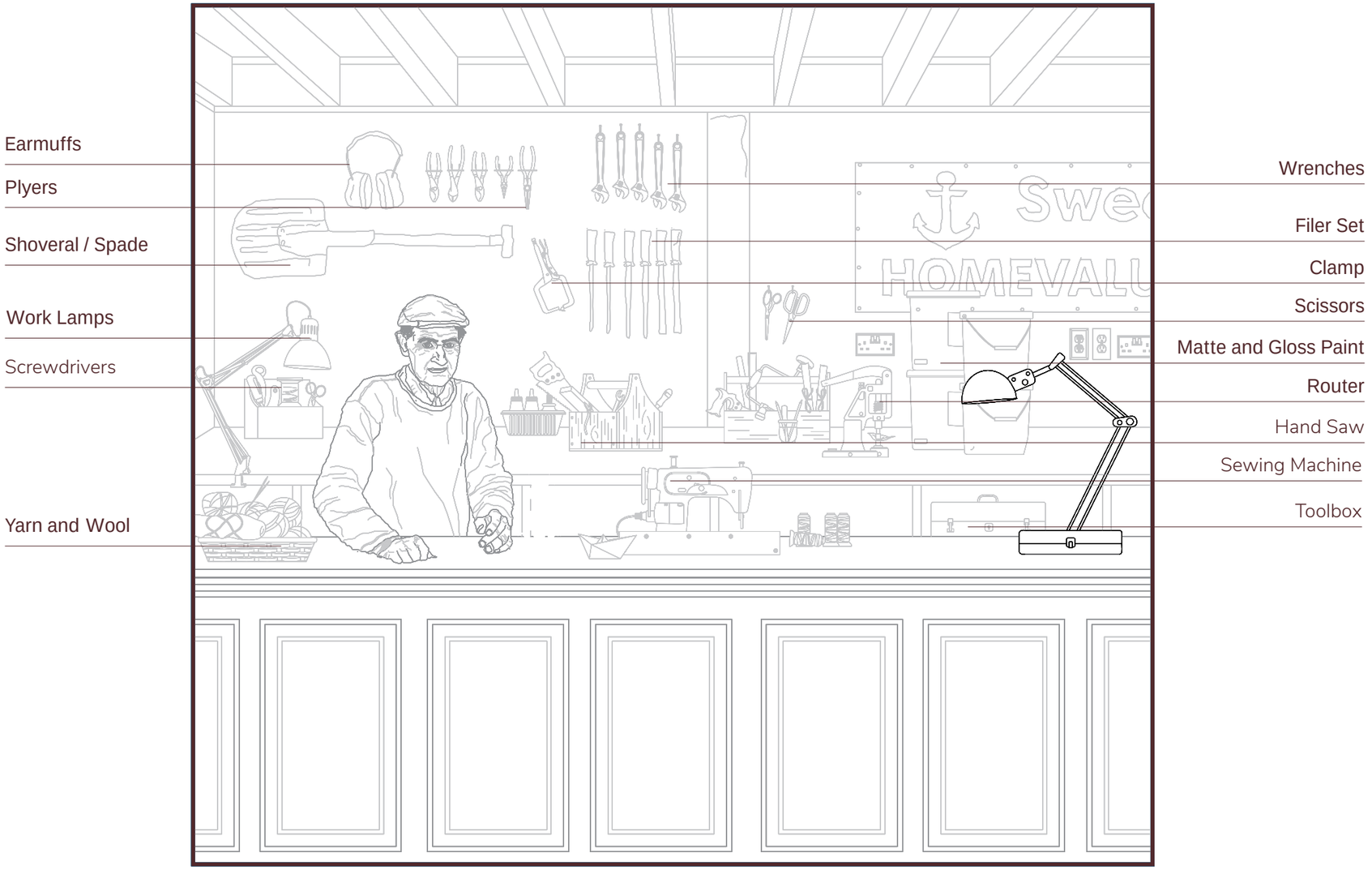
Figure 23, Author, “Sweeney’s”, Drawing, 2022

2) Sweeney's Hardware



Figures 27, 28, Author, "Sweeney's Constructive Logic", Drawing, 2022

2) Sweeney's Hardware



Rory “The Merchant” Sweeney and Material Supply

Figure 35, Author, “Sweeney’s Material Supply”, Drawing, 2022

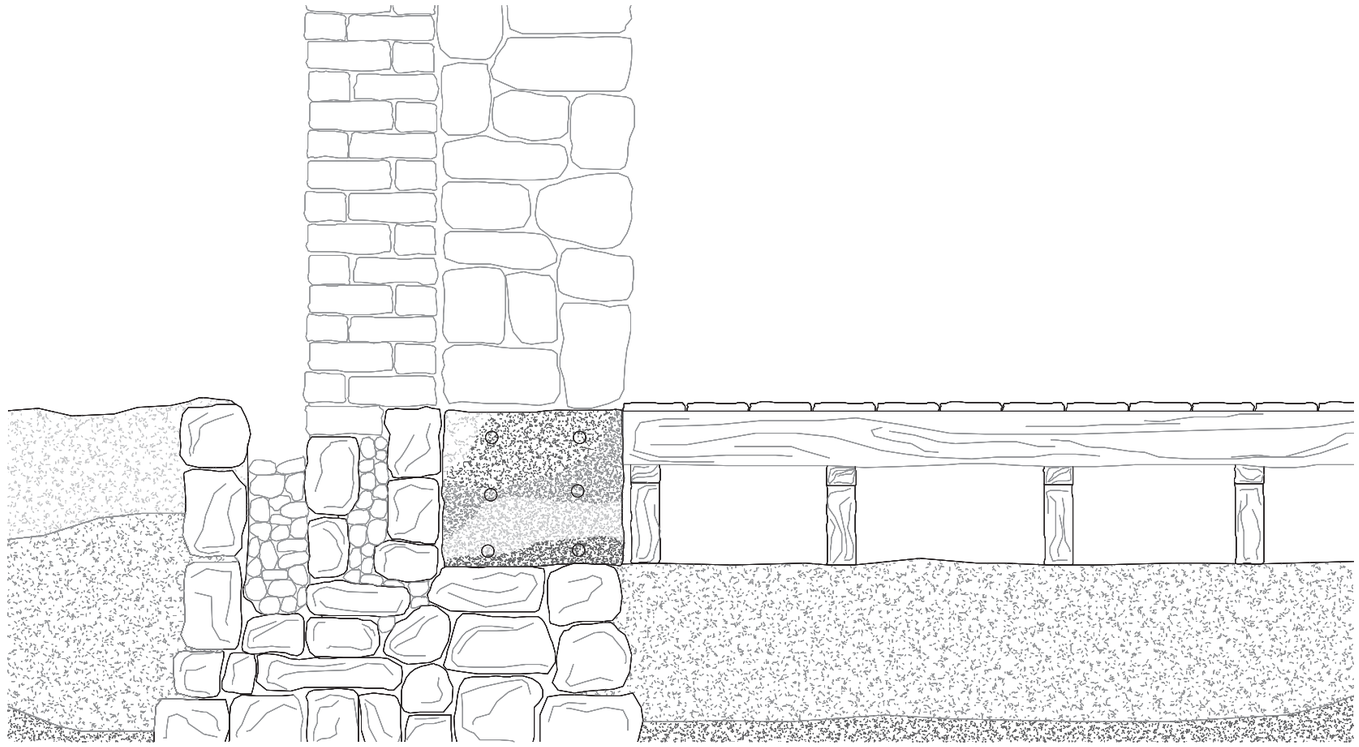


Figure 29 : Stone Drain at Threshold to Separate Animals and People.

Concrete “Spud Blocker” in doorway to stop damp from rising.

Suspended Timber Floor or“Dwarf Wall” on sediment layer made from beach sand.

Figures 29, 30, 31, Author, “Selection From a Taxonomy of Details - Moran’s / Doherty’s Constructive Logic”, Drawing, 2022

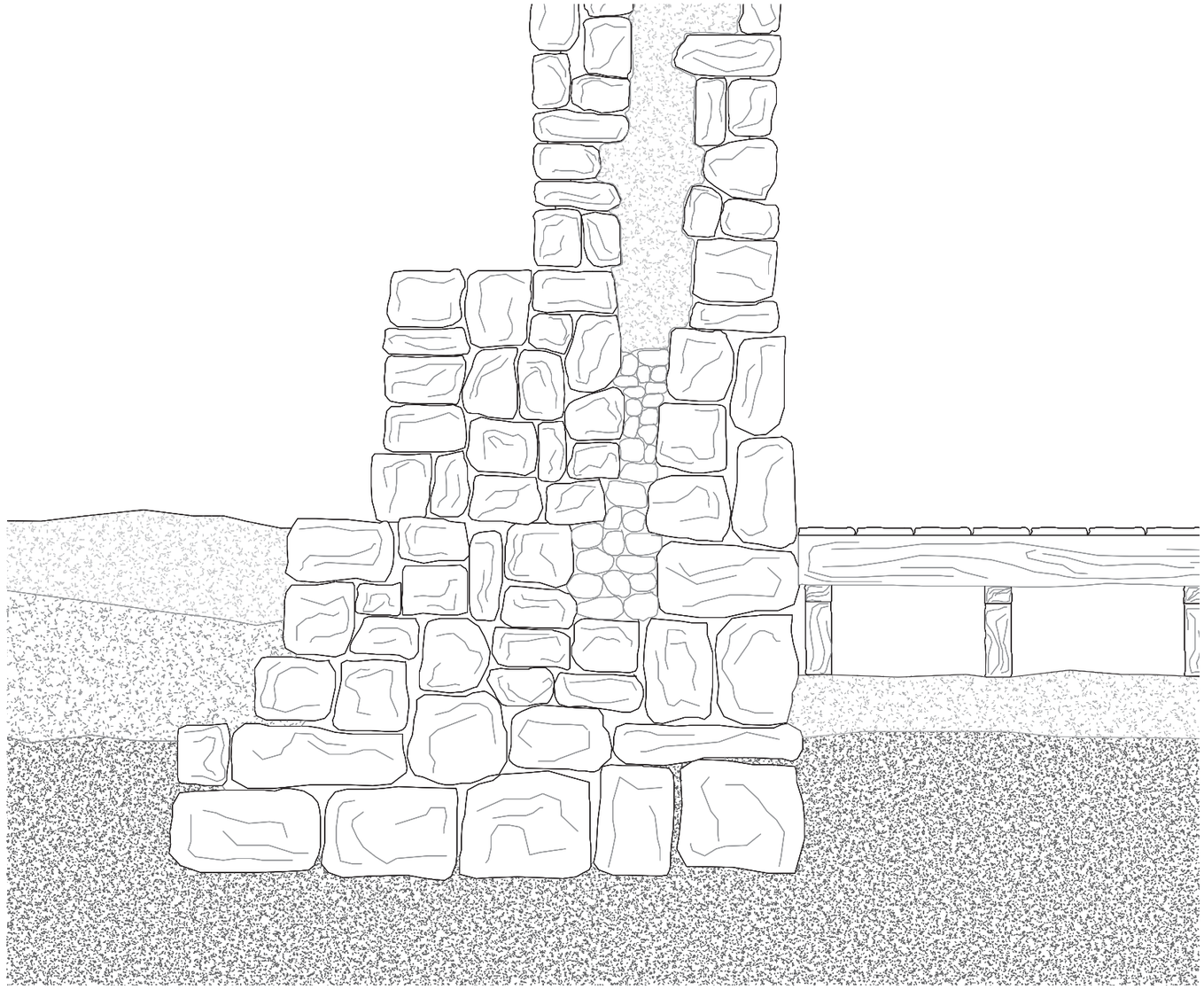


Figure 31 : Raised Stepped Stone Footing packed with Small Stones and Sand

Rubble and sediment packed walls .

Suspended timber floor on sediment layer made from beach sand.

Figures 32, 33, 33, Author, “Selection From a Taxonomy of Details - Sweeney’s Constructive Logic”, Drawing, 2022

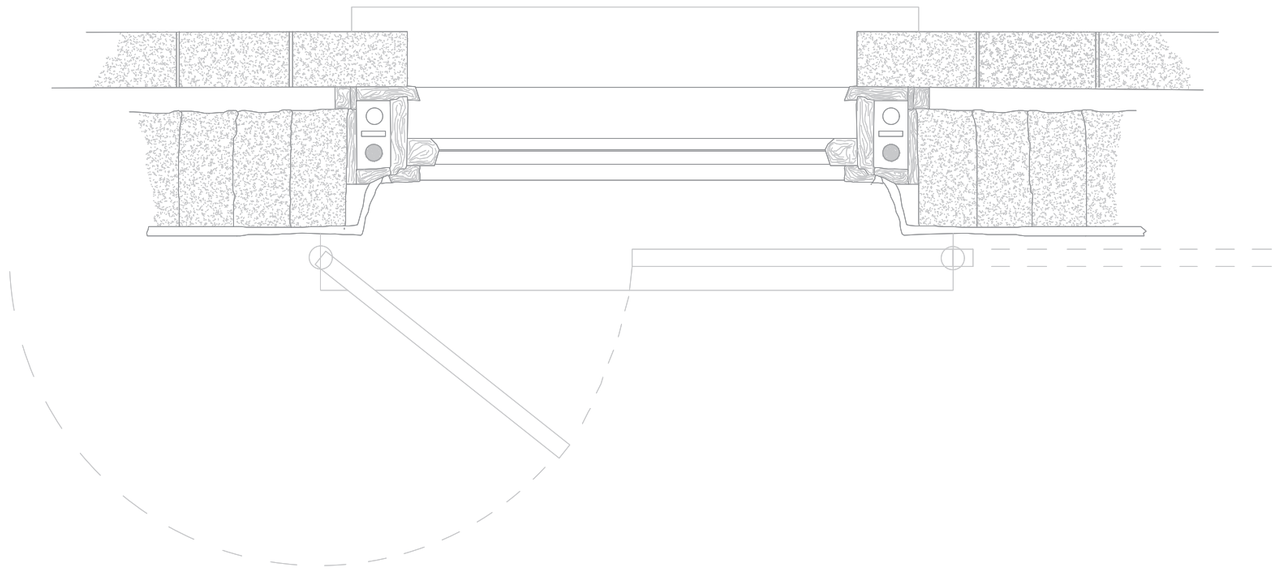


Figure 30 : Sash Windows with Lead Weights.

Shutters which rotated back onto the interal face of the wall or were pulled across the window on a steel rail

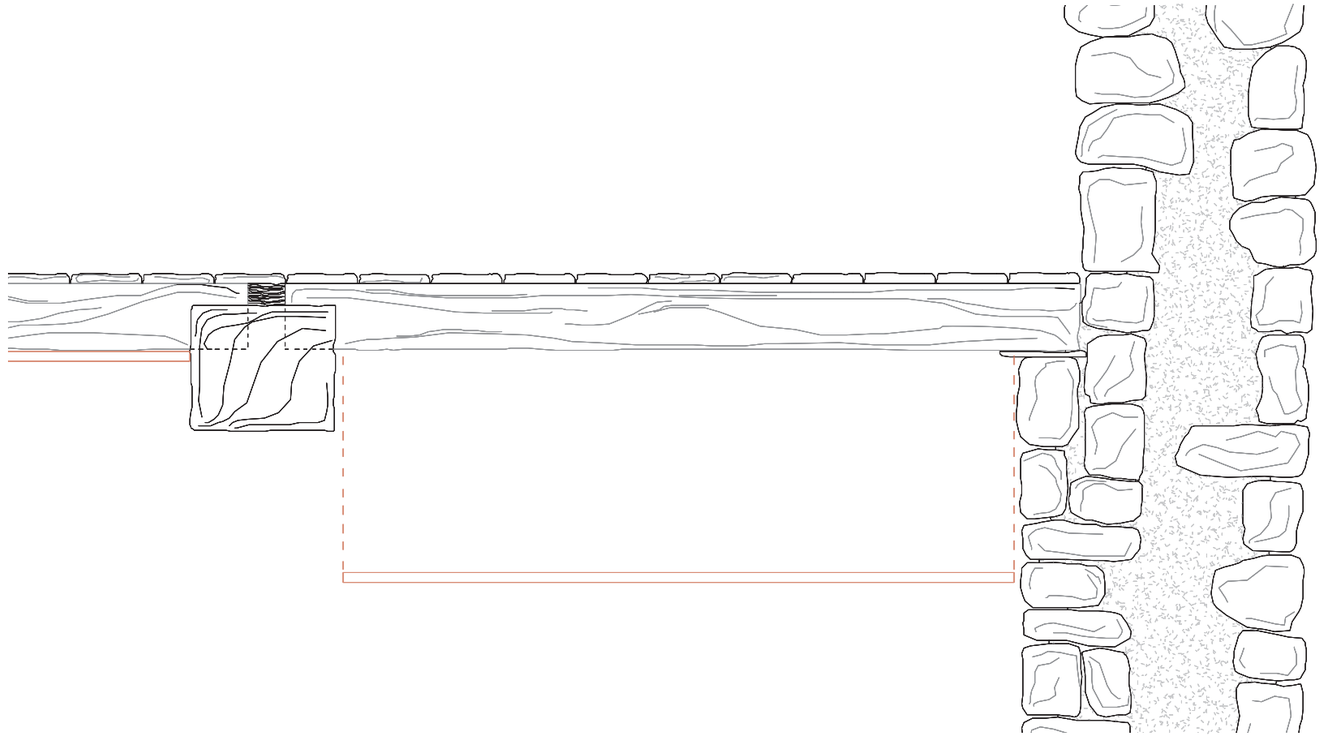
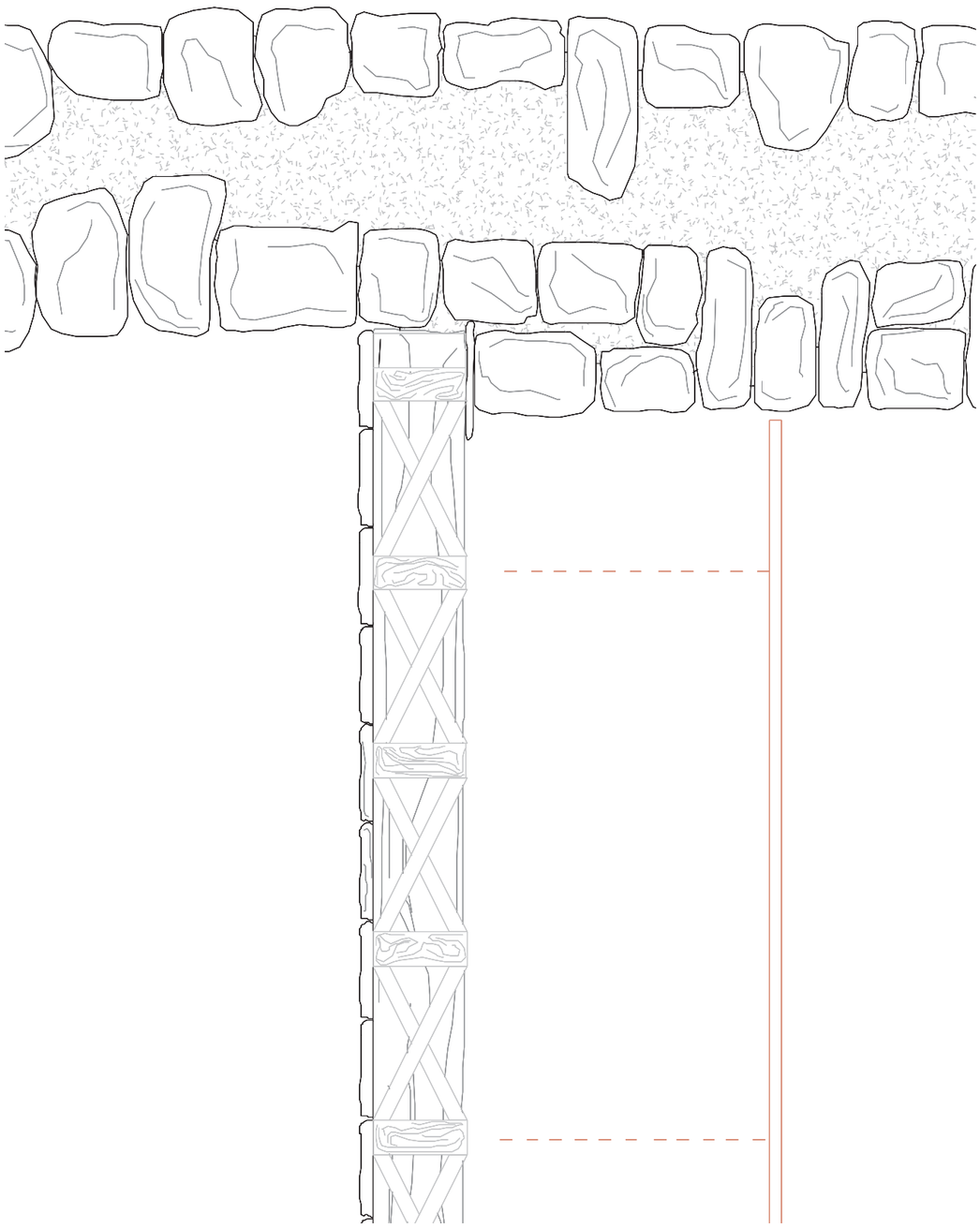
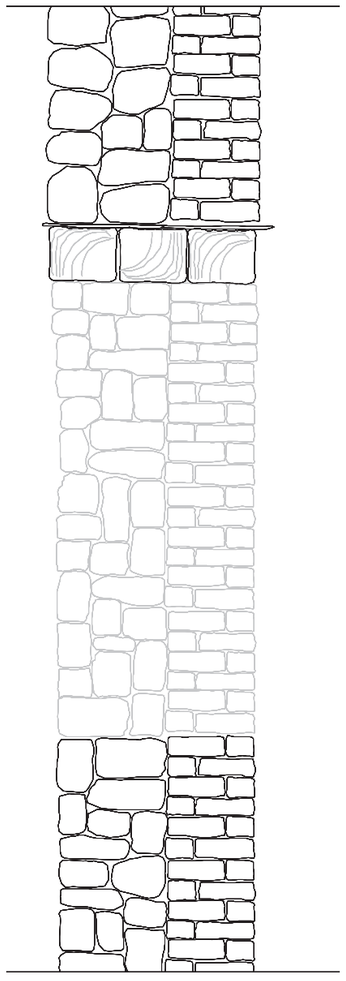


Figure 32 : Bressumber Beam (200x200) used to half the span of the joists. Joists Tongued and Grooved to the beam.
The Ceiling below was often omitted but this meant there was too much spring in the floor.

Timber Joists resting on Slate (no head). Sand Packed Walls.



Suspended Timber Floor. Cross Timbers and added joists to prevent too much spring in upper floor.



Three Oak Lintels Back to Back

Stone and Brick Resting on Two Pieces of Slate which then rests on the Oak Lintels

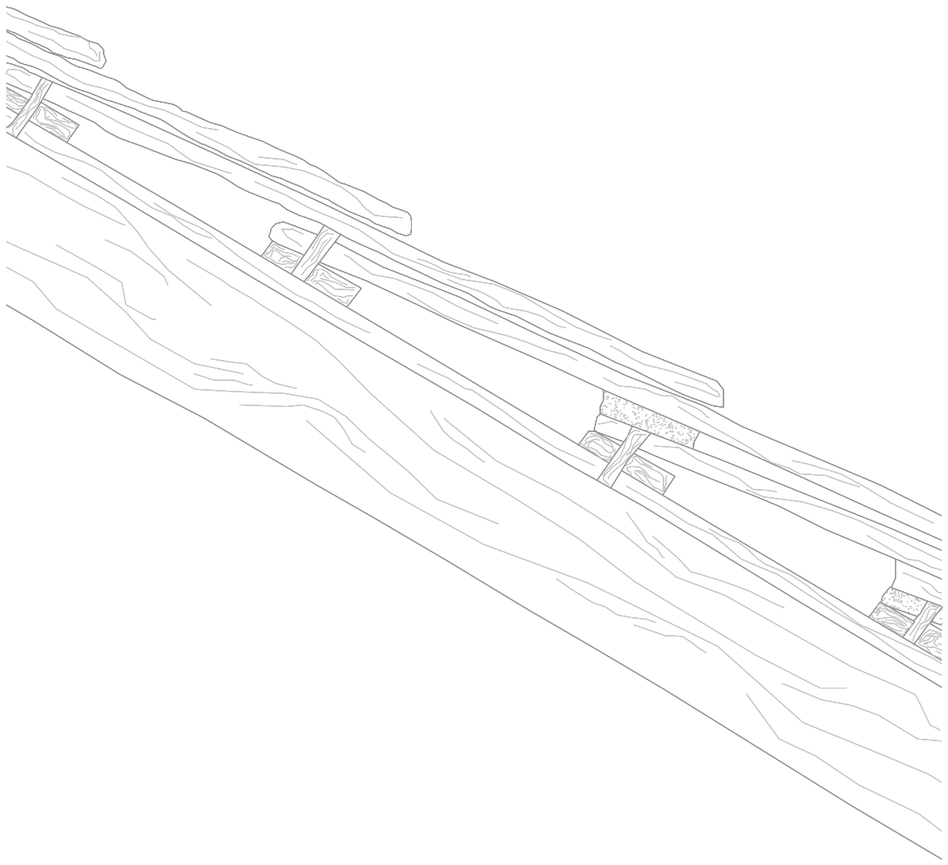


Figure 33 : Wooden pegs to fix roof tiles to timber board below.

Plaster applied to prevent wooden pegs from rattling and to fill space within reused old tiles made from fixings wriggling during times of bad weather.

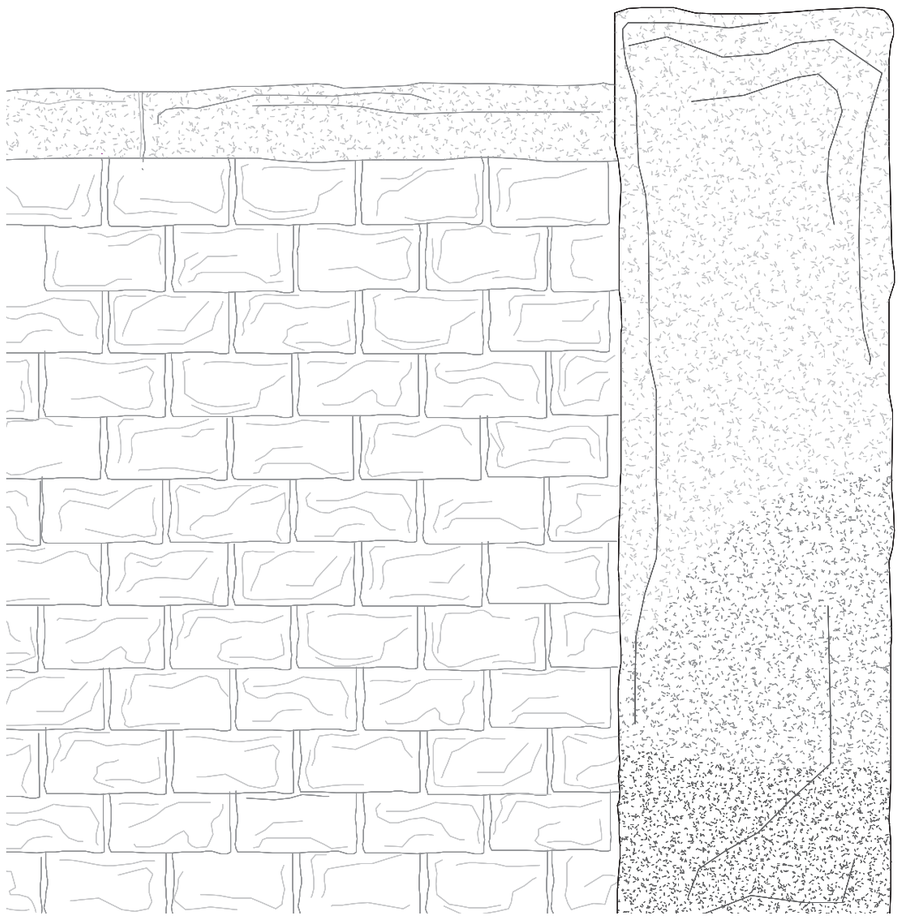


Figure 31 : Precast or cast-in-situ concrete Barge (Cap) on Thickened and Raised Gable Wall to prevent material uplift duing times of strong wind.

Concrete pour on roof slates to prevent uplift during storms.

Nailed roof fixings which join slates to boards.

Concrete or clay ridge at roof centre point held in place with steel shoes.

The internal details are delicately composed as they are tucked away from the harsh external conditions. They consist of dove tailed and tongue and grooved timber elements such as manually controlled shutter systems, bay window box seats, suspended timber floors, triple oak lintels etc.

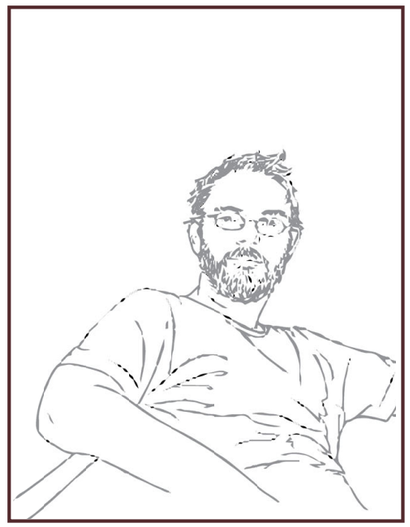
The external details are robust, weighted, doweled and are secured in place. They consist of systems such as pebble filled drains, raised stone foundations, lead weighted sash windows and concrete and tar roofing techniques.

Despite the material simplicity of the internal and external details, they are rich in character and information about the community, the cultural context and the physical context - they represent a significant portion of the material culture.

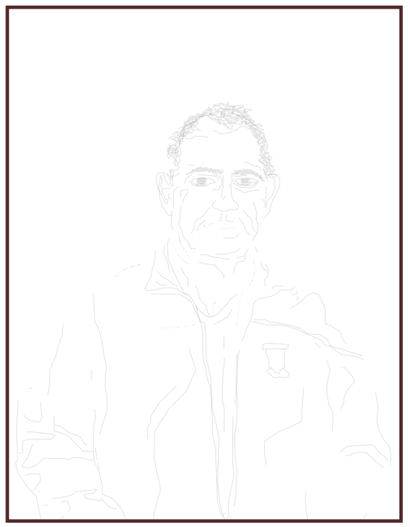
> “Material Culture is the conventional name for the tangible yield of human conduct. It is an odd term, material culture, for culture is immaterial. Culture is pattern in mind, inward, invisible, and shifting; it is the inner wit at work in the world. Beginning necessarily with things, but not ending with them, the study of material culture uses objects to approach human thought and action. These ‘things’ are artifacts.”
>
> “Artifacts set the mind in the body, the body in the world. The world enters the artifact in materials, abiding in stone, mellow and gray, in swirls of woodgrain and the luster of silk. Materials carry the scars left by the body in motion: the rhythmic chips of the chisel, the twists of spun fiber, the dainty pricks of the needle. The artifact perpetually displays the process of its design, the pattern in the mind of its creator.”
>
> - Glassie, Henry, Material Culture

Local Craft and Technique

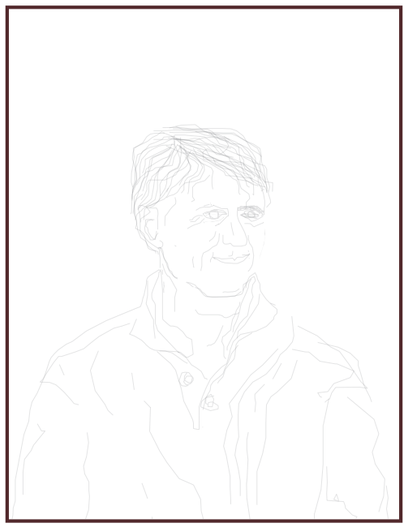
Sean
Farmer



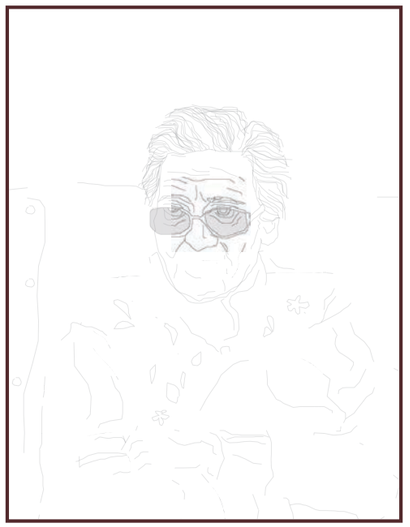
Tom
IFA Chairman



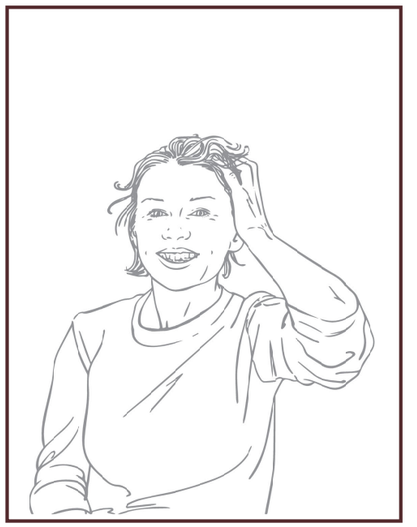
Peter
Student



Celia-Ann
Former Nurse



Maire
Teacher



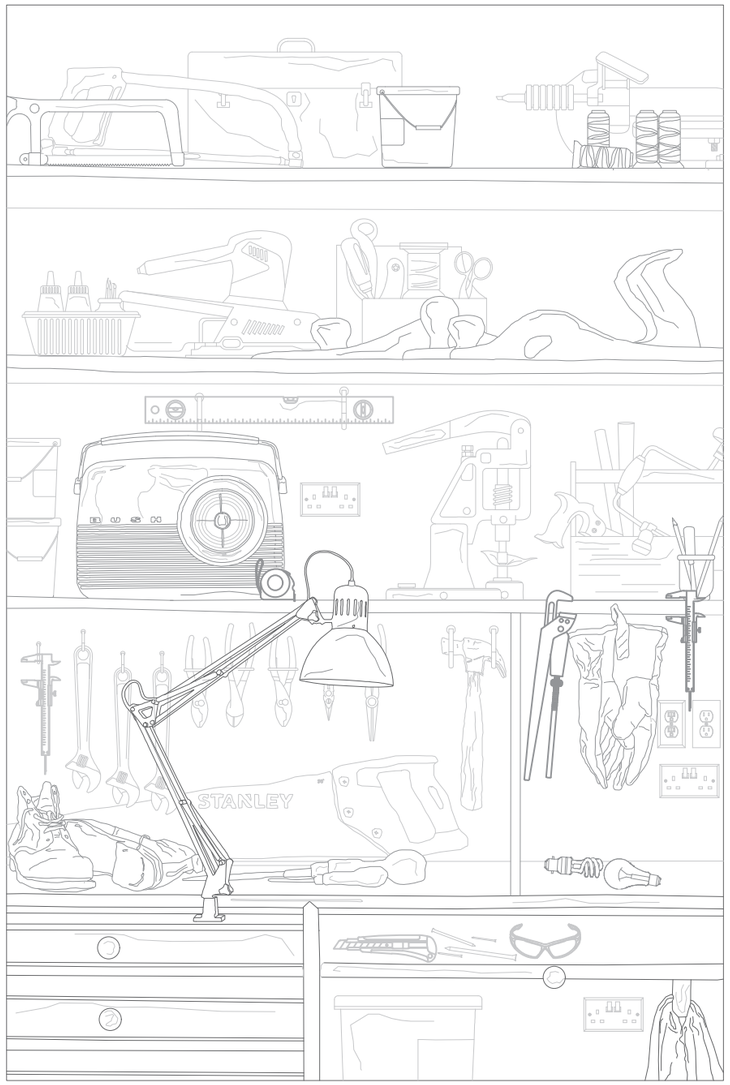
Metal | **Stone** | **Wood** | **Lace** | **Sewing**

Meitheal

Antithesis

* The word craftsman is often used in slightly patronising tones : as a quaintly archaic throwback: an upholder of fogotten traditions in the face of modernity. But, which this study is a passionate ode to craftsmanship, it is no means some luddite attempt to preserve the skills of the past in aspic. Instead, these skills are firmly intertwined with the needs of today's creative industries - all of the crafts investigated here are still being used locally by craftsmen, designers and innovators in Mulranny.

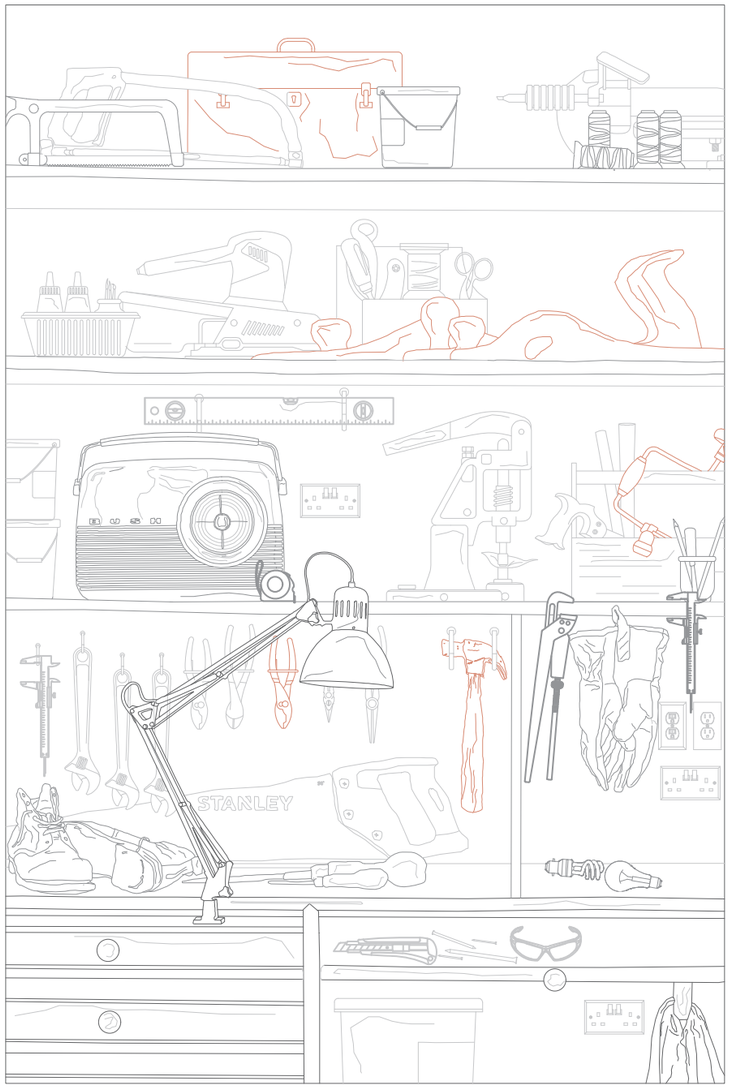
Figures 36, 37, 38, 39, 40, Author, "Local Trades People", Drawing, 2022



Peter’s Workshop

Grey - Owned, Orange - Inherited, Blue - Borrowed

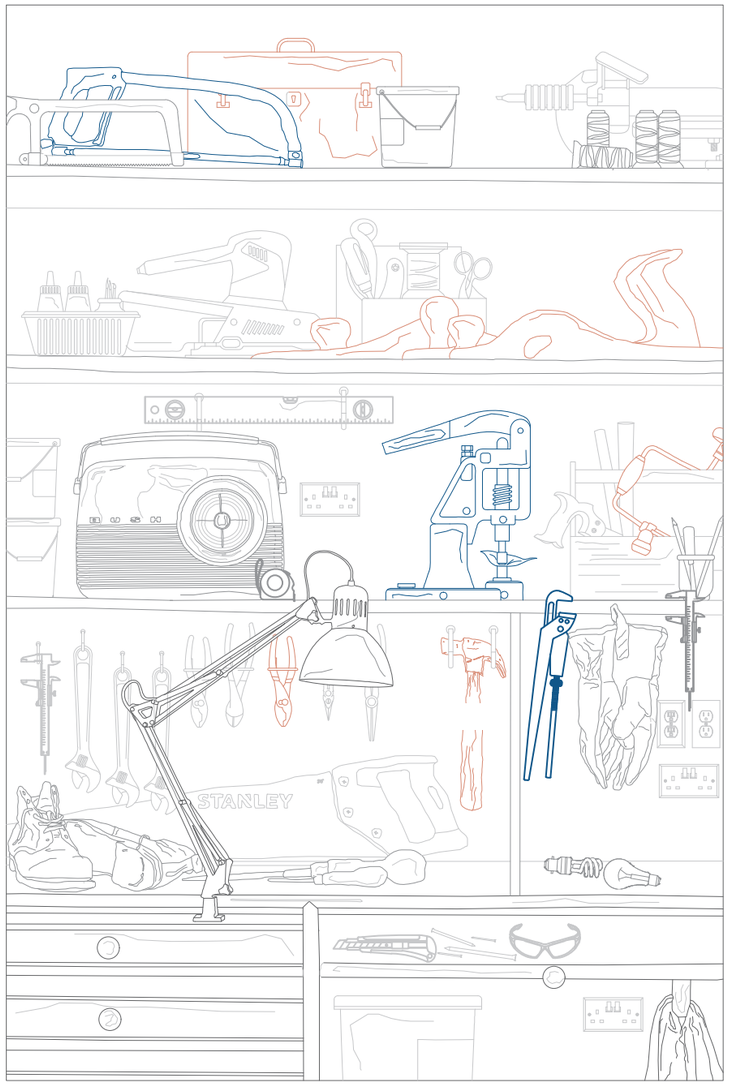
Figure 41, Author, “Peter Doherty’s Workshop”, Drawing, 2022



Peter’s Workshop

Grey - Owned, Orange - Inherited, Blue - Borrowed

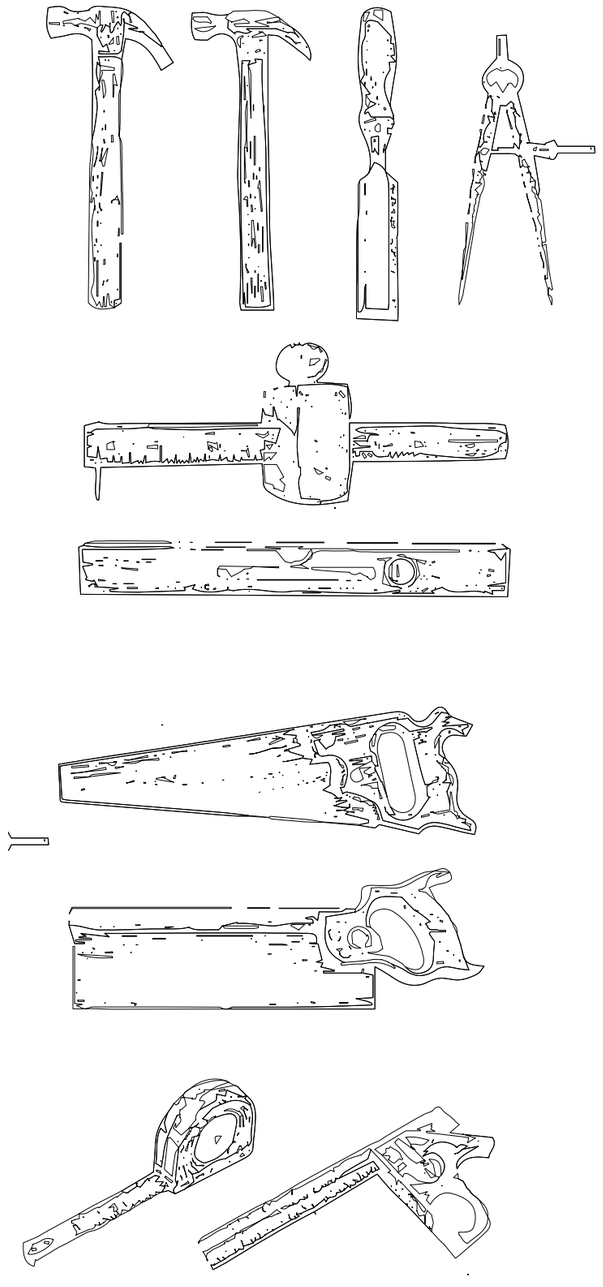
Figure 41, Author, “Peter Doherty’s Workshop”, Drawing, 2022

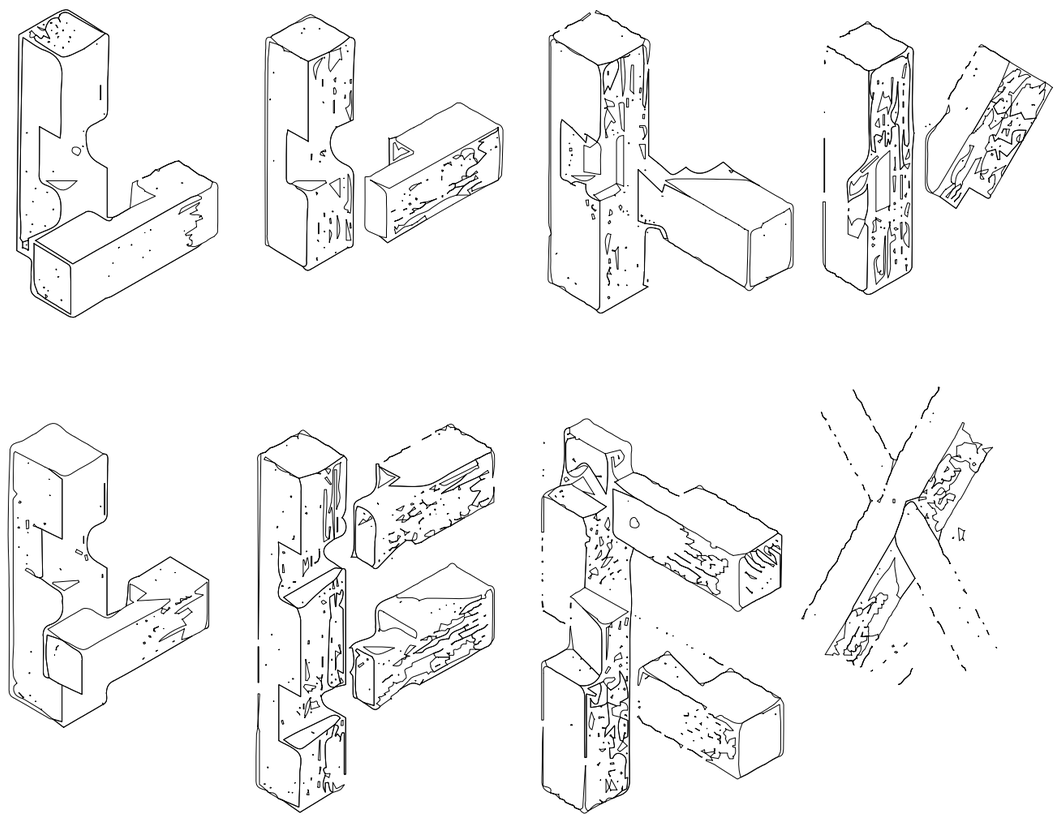


Peter’s Workshop

Grey - Owned, Orange - Inherited, Blue - Borrowed

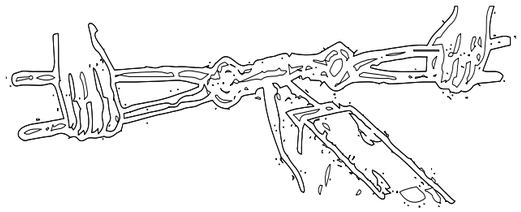
Figure 41, Author, “Peter Doherty’s Workshop”, Drawing, 2022

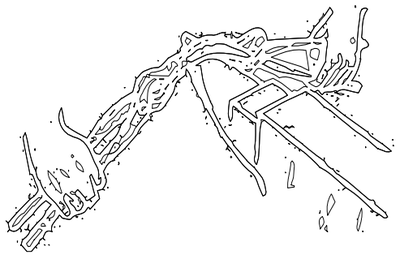


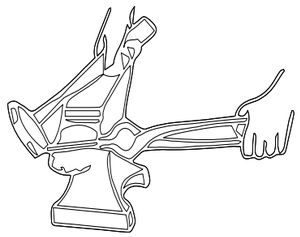


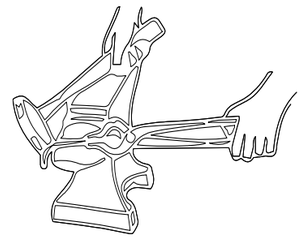
Peter’s Woodworking

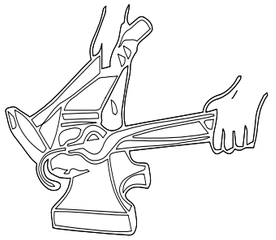
Figure 42, Author, “Peter Doherty’s Observed Woodworking Technique”, Drawing, 2022

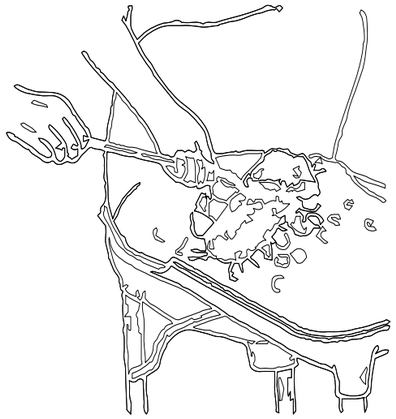


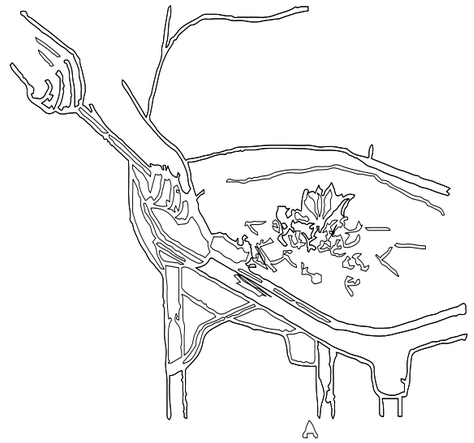


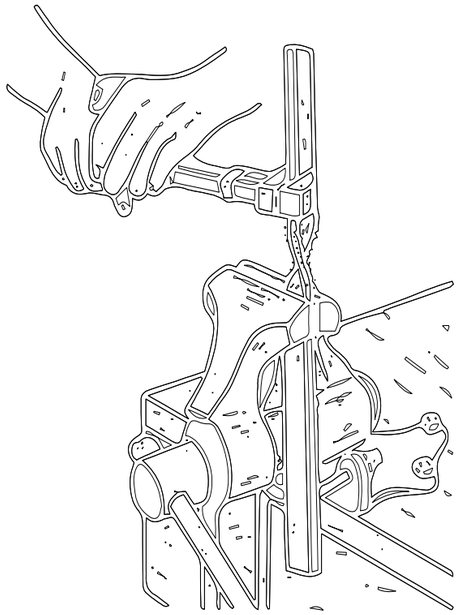






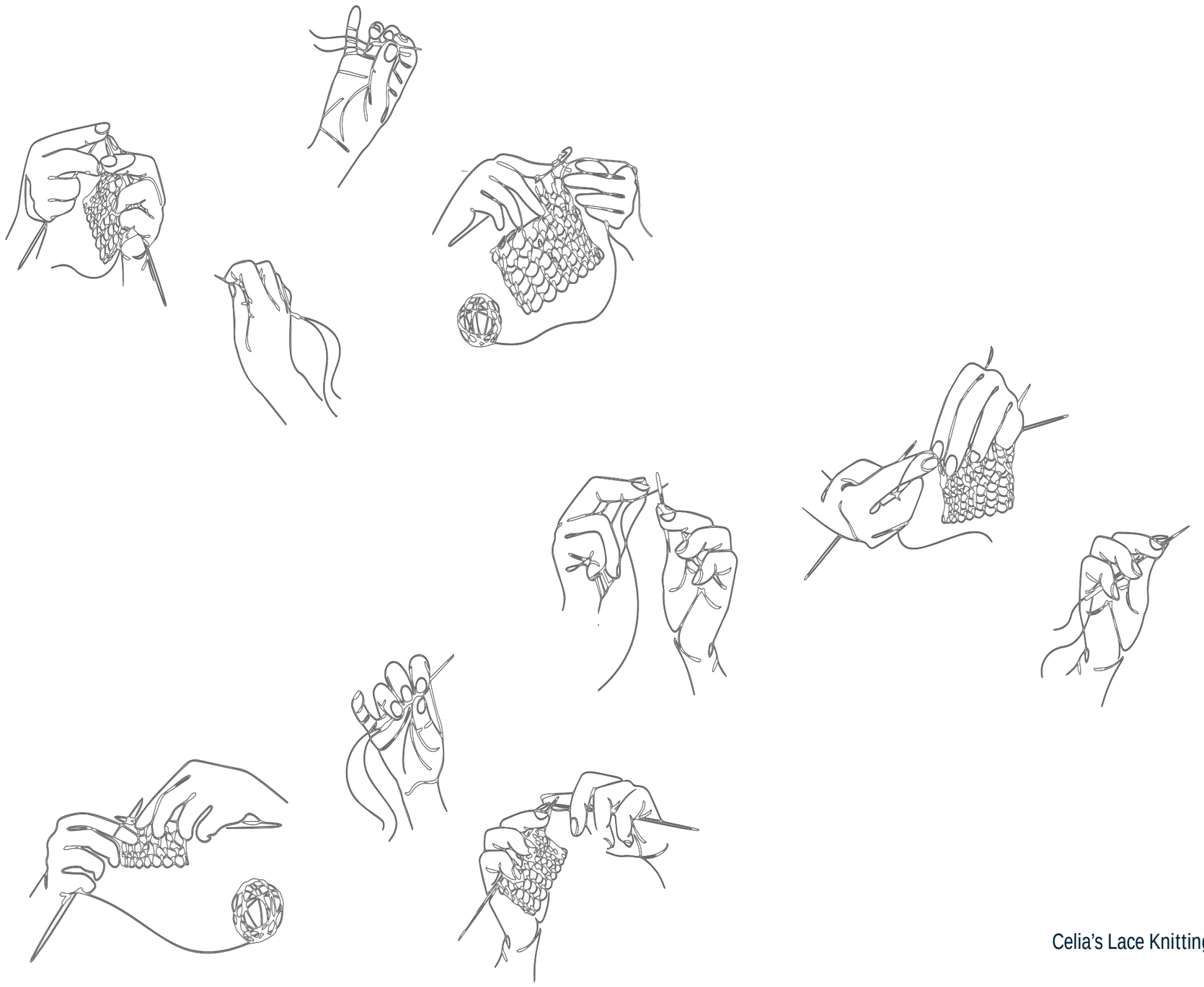






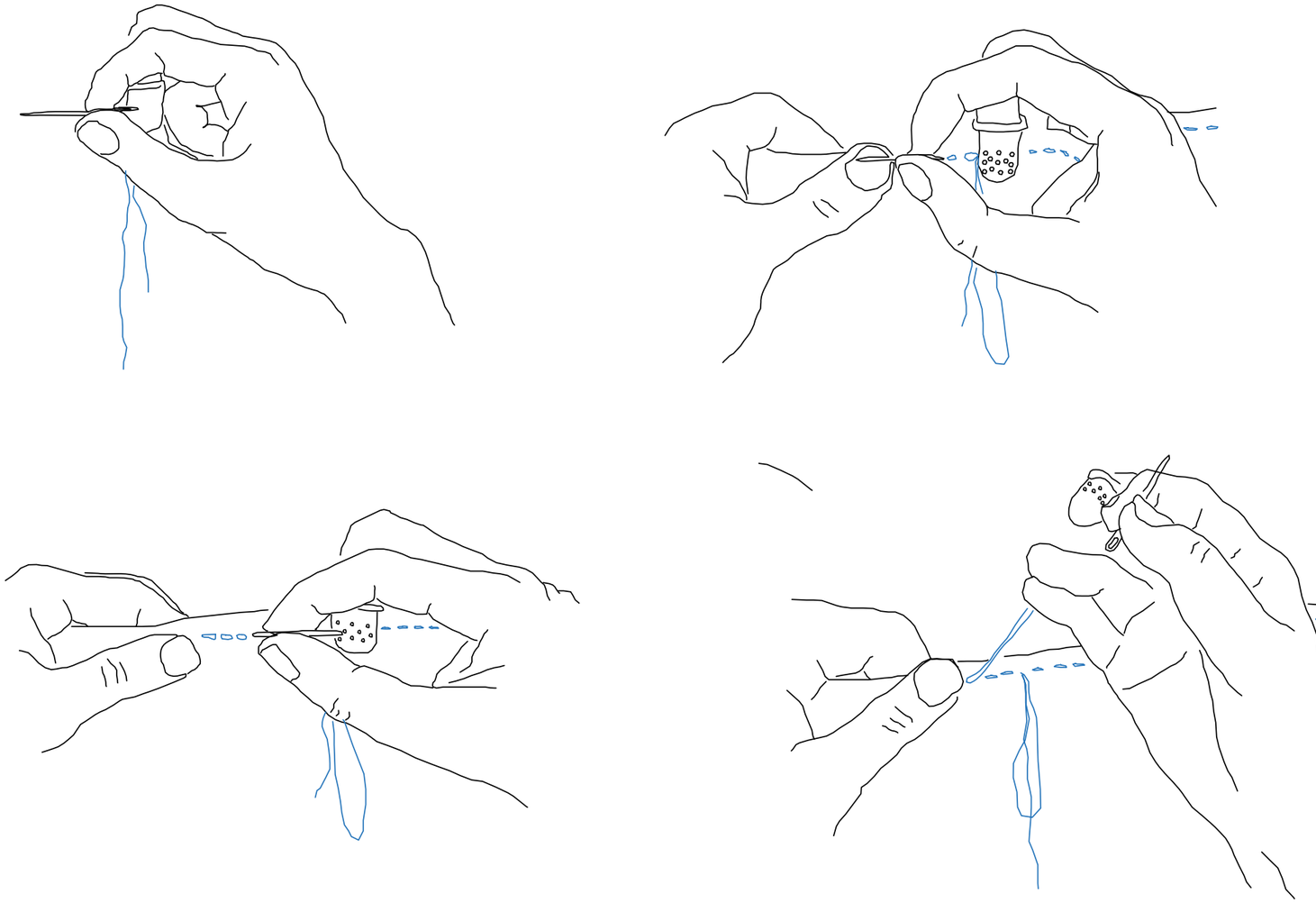
Sean’s Shed Foundry - Steelworks

Figure 43, Author, “Sean's Observed Metalworking Technique”, Drawing, 2022



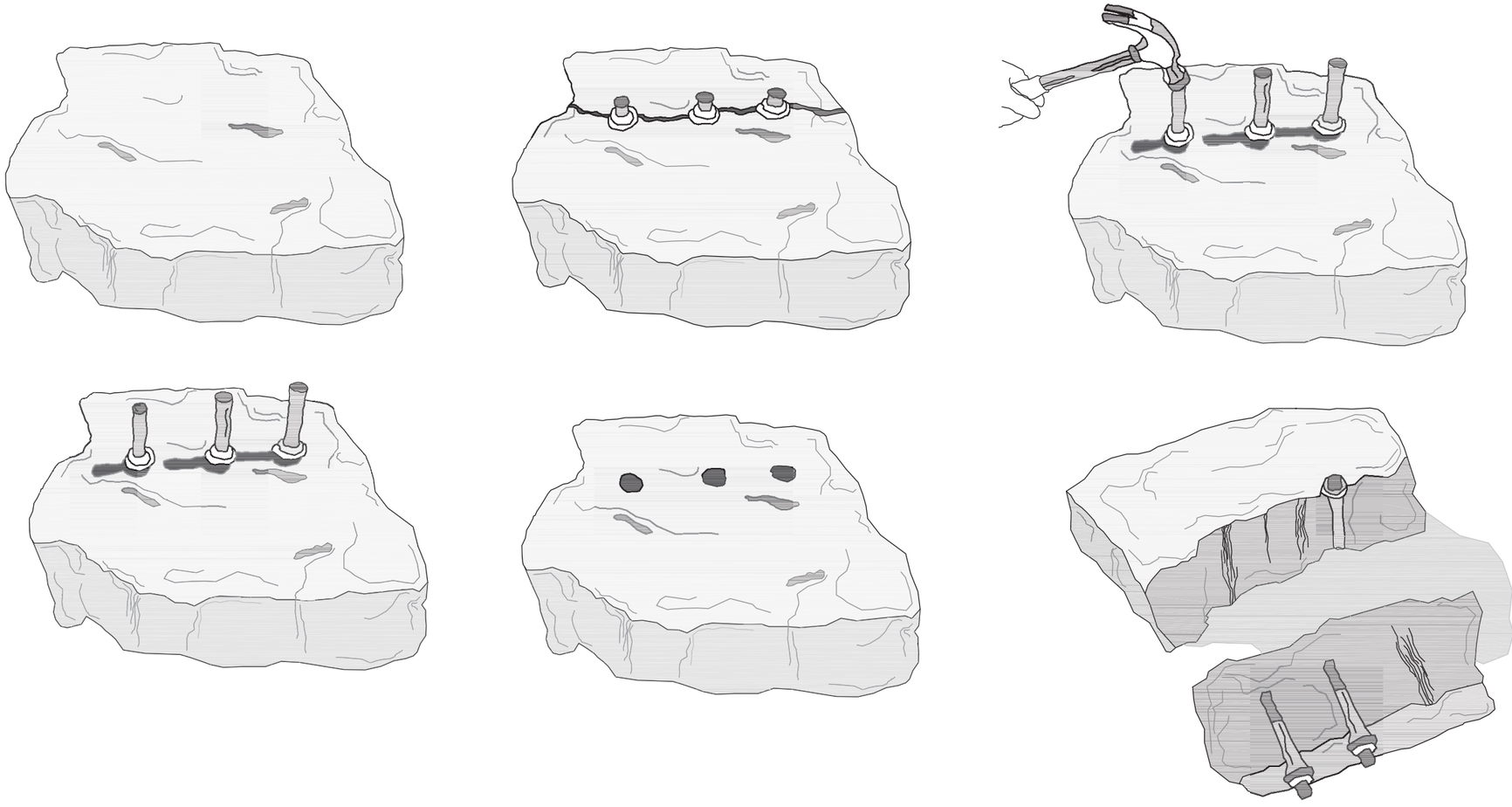
Celia’s Lace Knitting Technique

Figure 44, Author, “Celia’s Observed Lace Knitting Technique”, Drawing, 2022



Máire’s Embroidery and Sewing

Figure 46, Author, “Máire’s Observed Embroidery and Sewing Technique”, Drawing, 2022



Tom’s Stone Masonry Method - Feather and Plugging

Figure 45, Author, “Tom’s Observed Stone Masonry Technique”, Drawing, 2022

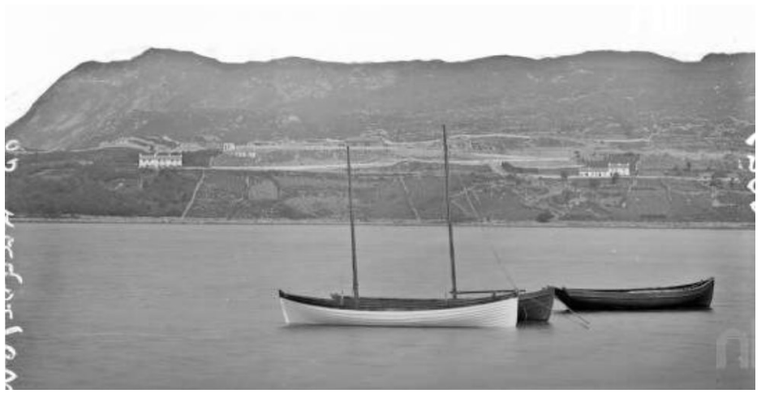


Figure 47, Ordanance Survey Ireland “25 Inch Map”, Drawing, Circa 1800
Figures 48, 49, Unknown, “Mulranny”, Photographs, Mulranny Old Photos Archive, Circa 1850

Until the late 1800’s Mulranny was an impoverished village where a distance of over 100m could be found between its four buildings, one of which was “destroyed by fire”[28]23 -Daly’s. Since the 1840’s, the village has been on an offbeat march into the future, one which stays neither rhythmic nor metronomic. Mulranny appears to start, move, shunt and stop with the introduction or removal of infrastructure. This has made for a rich and layered reading of the effects of infrastructure on the village which is outlined below.

Despite the circumstances, it was during the Great Irish Famine that the cogs began to turn for Mulranny. Under the Rapid Relief Scheme a sandstone pier and rubble stone roads were constructed. The pier is one of 42 in Mayo, a direct indication of the poverty suffered. Locals, who worked under the spirit of meitheal (an old Irish term which describes how communities would, and in Mulranny still do, come together and combine their skills to assist with tasks such saving crops or construction in return for goods, the time of another person or money) followed “Alexander Nimmo’s and William Bald’s specification documents.”[29] The design was fine-tuned to the site by localized constructive-logic.

One notable construction which conveys the “desperation of the time”[30] is found within the tidal-pool. This consists of a road connecting an old red sandstone drumlin to the mainland along unstable saltmarsh edges. The drumlin, which the pier is attached to, was also used to grow potatoes using the ridge and furrow method (otherwise known as ‘lazybeds’). To complicate matters further, the road diverted away from the drumlin mound coupled with the history of “skeletal remains and coffins unearthed from erosion”[31]at the adjacent tombolo, Oilean Úna, suggests this is also a famine burial ground.

This is a sensitive landscape which summaries Mulranny’s Famine Time history. It must be thread very softly upon.

28 n.d., “Mulranny Fire,” Kerry Sentinel, 1879, https://www.facebook.com/mayocountylibrary/photos/a.136975863005201/3809112929124791/.
29 Villiers-Tuthill, Alexander Nimmo & The Western District - Emerging Infrastructure in Pre-Famine Ireland.
30 Brighid Nic Lochlainn and Pádraig Mac Lochlainn, “The Famine in Mulranny,” Duchas Archive, The School’s Collection, n.d., https://www.duchas.ie/en/cbes/4497831/4345046/4497863.
31 Brighid Nic Lochlainn and Pádraig Mac Lochlainn, “The Famine in Mulranny,” Duchas Archive, The School’s Collection, n.d., https://www.duchas.ie/en/cbes/4497831/4345046/4497863.

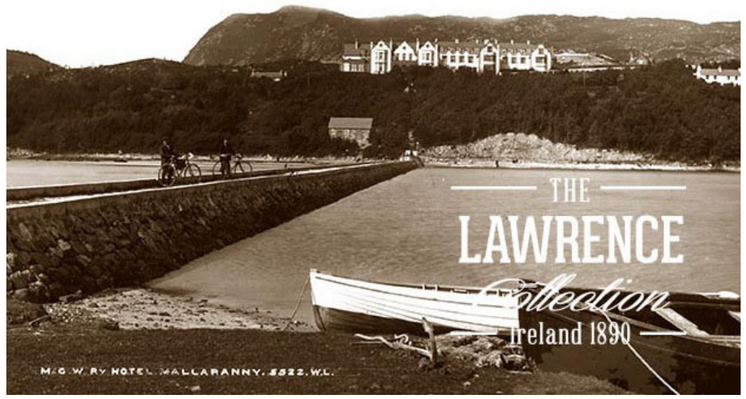


Figure 50, Unknown, “Mulranny Tidal Pool”, Photograph, Lawerence Collection, Circa 1890
Figures 51, 52, Unknown, “Mulranny Train”, Photographs, Mulranny Old Photos Archive, Circa 1850

A march forward in time to the next pivotal moment for Mulranny places us in 1894, at the introduction of the “Arthur J. Balfour Act.”[32] In an effort to combat rife endemic emigration and poverty, a “prophesied”[33] light-rail service from Achill to Westport was introduced which connected to the main Westport/Dublin railway line. Mulranny quickly established itself as a tourist destination and consequently, more developments followed. These included a causeway and a pumphouse, the Great Southern Hotel and railway bridges which were built as per the designs of “Sir Thomas Deane & Son under Collen Construction Company”[34]. “It is said over 1000 men were employed”[35] by the company in Mulranny and people from the wider Burrishoole parish migrated towards the village in search of employment and a better life. The high number of locals involved in the projects resulted in deviations of the original design brought about by localised constructive-logic. This logic was developed through the construction of shops, houses, holiday homes, schools and the church by the “Congested Districts Board”[36] under the spirit of meitheal.

32 “Mr. Balfour’s Light Railways Act : The Scheduled Lines with Text of the Act by a Special Contributor Reprint from Daily Express.” (Dublin: s.n., January 3, 2023), https://jstor.org/stable/community.29821891.

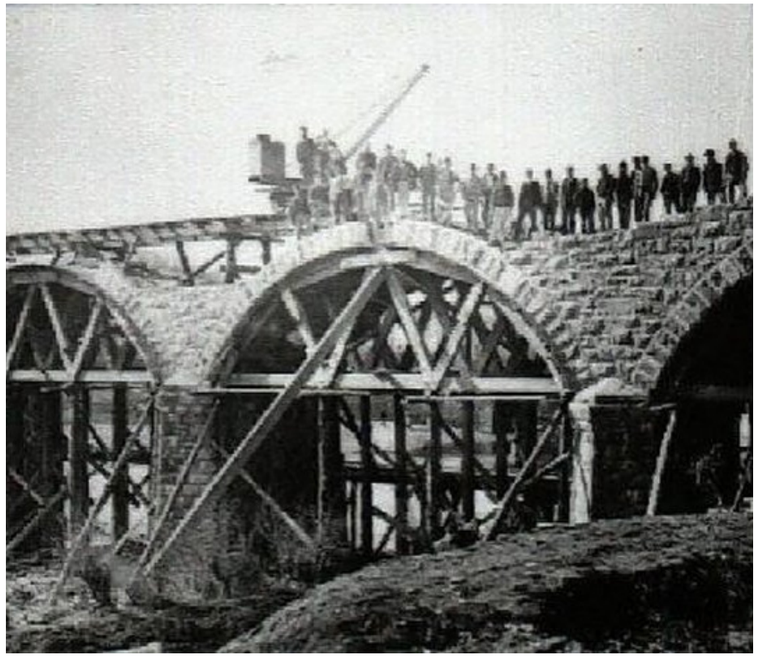
33 Susan Mangan, “Superstition or Prophecy Fulfilled?,” Ilrish, 2018, https://iirish.us/2018/10/08/blowin-in-superstition-or-prophecy-fulfilled-by-susan-mangan/.

34 Collen Construction Company, “Construction in Mulranny,” 2895 - Construction Begins on Mulranny Hotel, n.d., https://www.collen.com/about/our-history.

35 Mayo Ireland, “History of the Great Western Greenway in Co. Mayo,” Mayo Ireland, n.d., https://www.mayo-ireland.ie/en/things-to-do/outdoor-activities/great-western-greenway/history.html.

36 Seán M Ó Conchubhair, “The Congested Districts Board,” The Irish Monthly 69, no. 820 (January 3, 1941): 477–88, http://www.jstor.org/stable/20514937.

Figures 53, 54, Unknown, “Mulranny Railway Construction”, Photographs, Mulranny Old Photos Archive, Circa 1895



Figures 55, 56, Unknown, “Mulranny Railway Construction”, Photographs, Mulranny Old Photos Archive, Circa 1895

Figures 57, 58, 59, Unknown, “Mulranny”, Photographs, Mulranny Old Photos Archive, Circa 1937

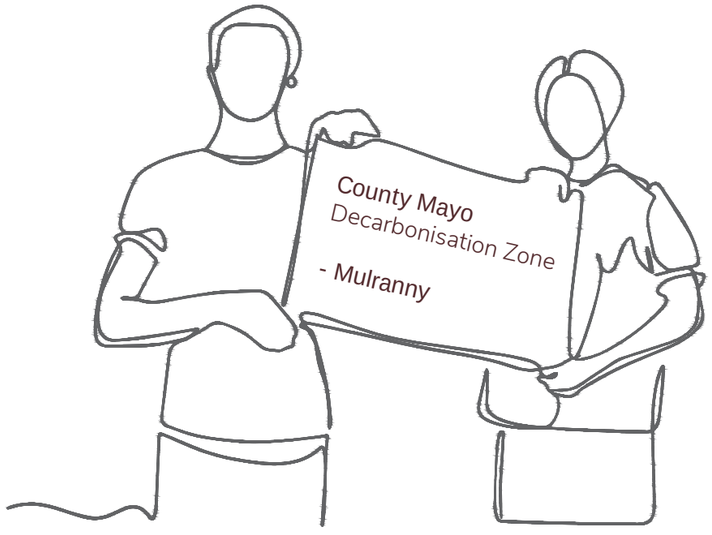
1934 was a detrimental year for the village. The light rail service was closed and Mulranny, along with many holiday destinations fell into rapid decline. Up until this point, the village was moving forward in leaps and bounds. The built fabric was constantly growing, supporting livelihoods of locals through the provision of work in the trades and construction sector. However, with the sudden widespread ownership of cars and the improvement of roads the light-rail service never consistently reached the levels of use originally anticipated.

The final hammer blow to the village occurred in 1942. Any hopes of the light-rail service being reopened were dashed with the lifting of the steel tracks by the Irish Transport System. The tracks were sold to Germany, who were “hungry for steel during World War II”[37]. This withdrawal of Mulranny’s greatest infrastructural piece isolated the village and turned its developmental clock back to the late 1800’s. In the words of a local historian Tom Fadian, “it was sent flying backwards and came to a grinding halt”.[38] The hotel and shops were unable to retain employees and people migrated to Newport, Castlebar and Westport in search of work, leaving the population to dwindle once again. The ghostly village was left full of empty buildings and infrastructure.

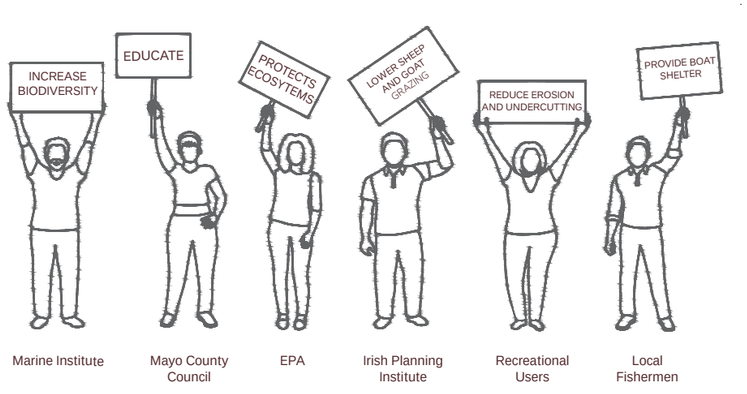
37 Ireland, “History of the Great Western Greenway in Co. Mayo.”
38 Fadian, Tom, 2022

Since Mulranny's infrastructural boom and its unfortunate demise steps towards recovery have been taken, for example the development of the greenway. As part of this process Mulranny Community Future's was established. This group is composed of community members who are striving to respond to local needs through an "action plan".[39] In acknowledgement of their work, on May 10th of 2021 Mulranny was announced by Mayo County Council as the county's initial "Decarbonising Zone."[40] The village objective is to reduce its greenhouse gas emissions by 51% by 2030 as required under Action 165 of the "National Climate Action Plan".[41]

It is hoped Mulranny will become a role model and catalyst for change.



Mulranny Community Futures Committee

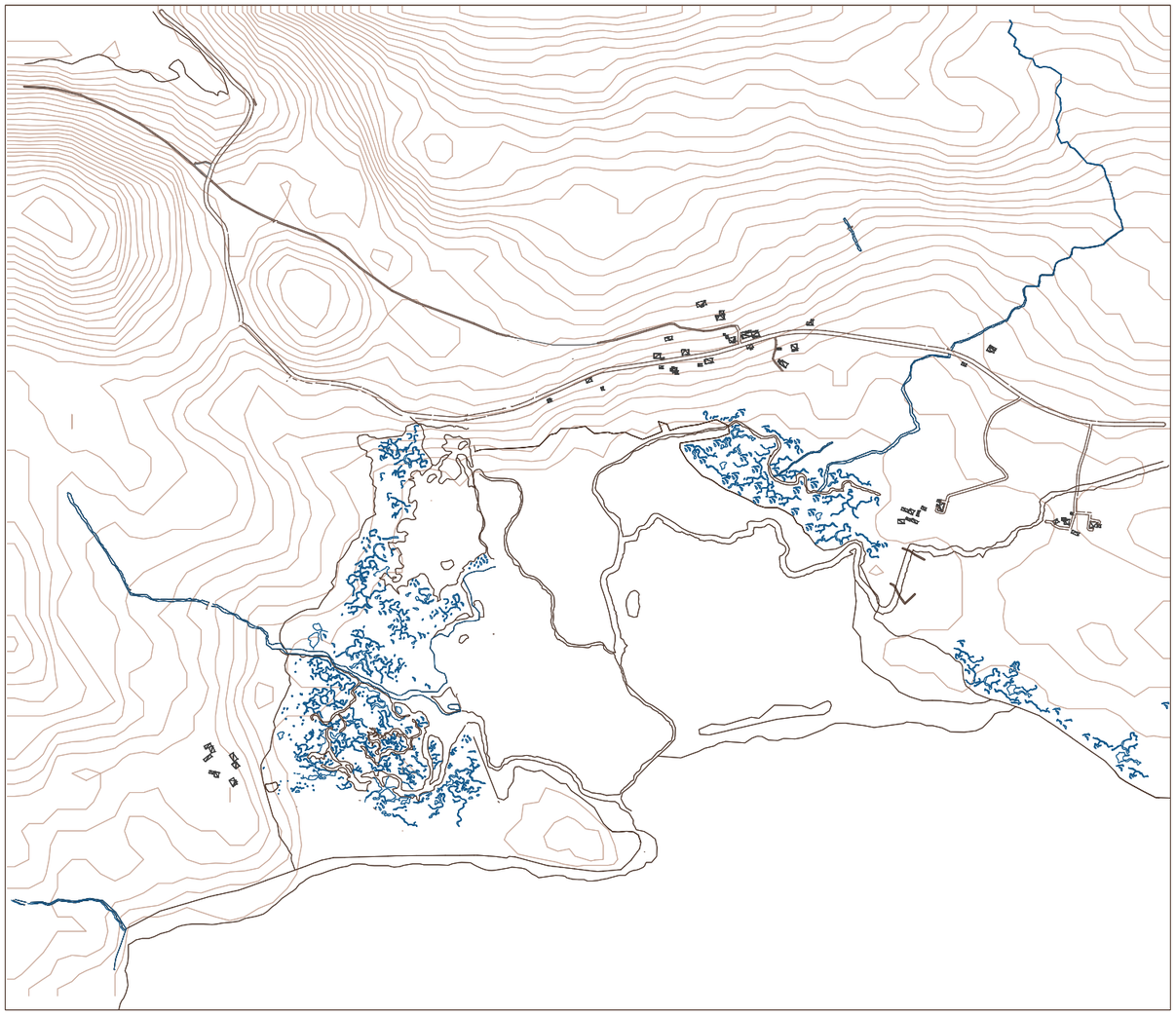


Figures 60, 61, Author, "Mulranny Community Future's", "Community Needs" Drawings, 2022

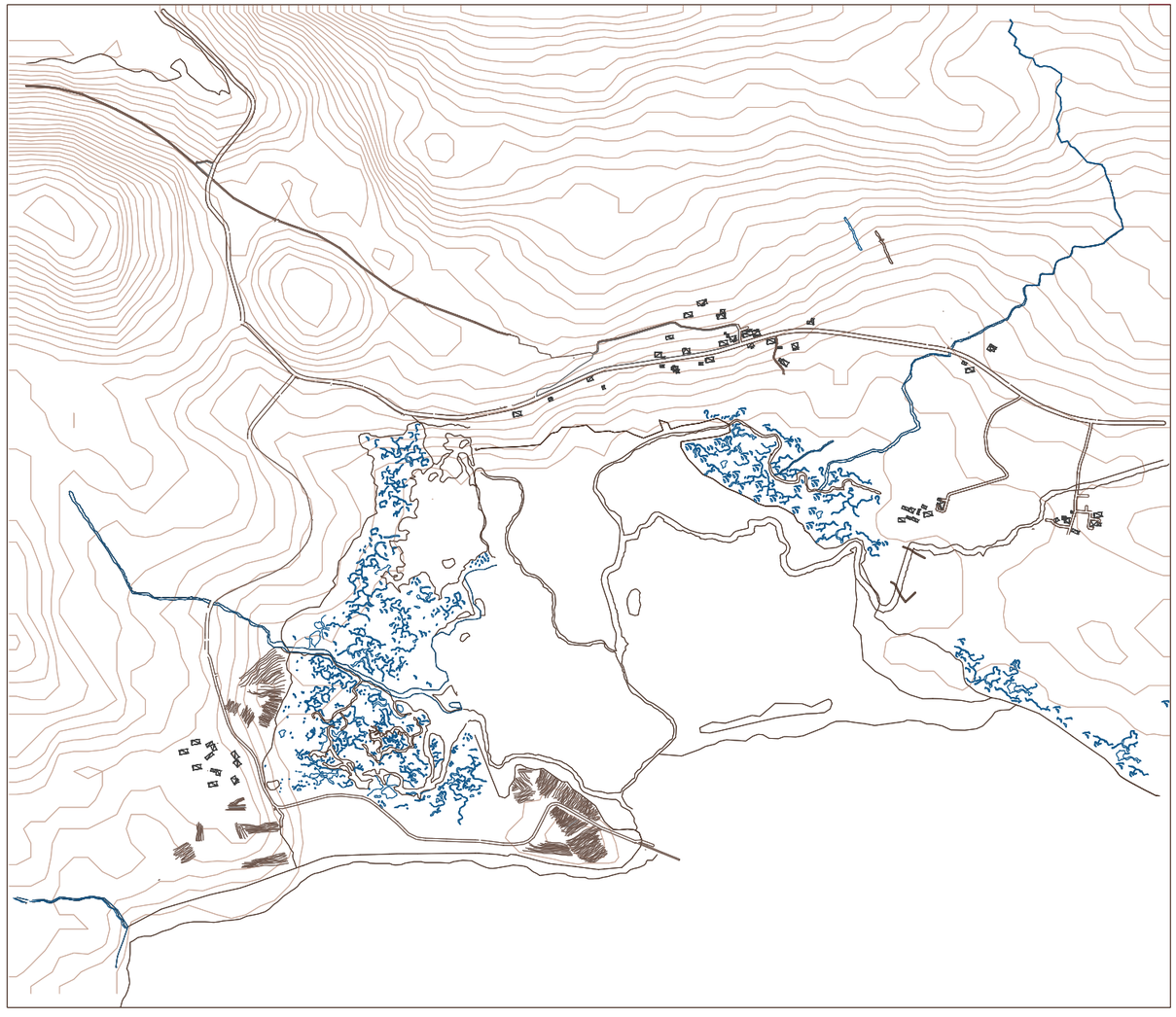
39 Mulranny Community Future's, "Mulranny Community Action Plan 2022-2027," 2022, http://mulrannycommunityfutures.com/wp-content/uploads/2022/12/Mulranny-Community-Futures-Plan-2022-2027.pdf.

40 "Mulranny Vision," Story Maps / Mayo County Council, 2021, https://storymaps.arcgis.com/stories/952c0e0a338346ef825f33f389c35de7.

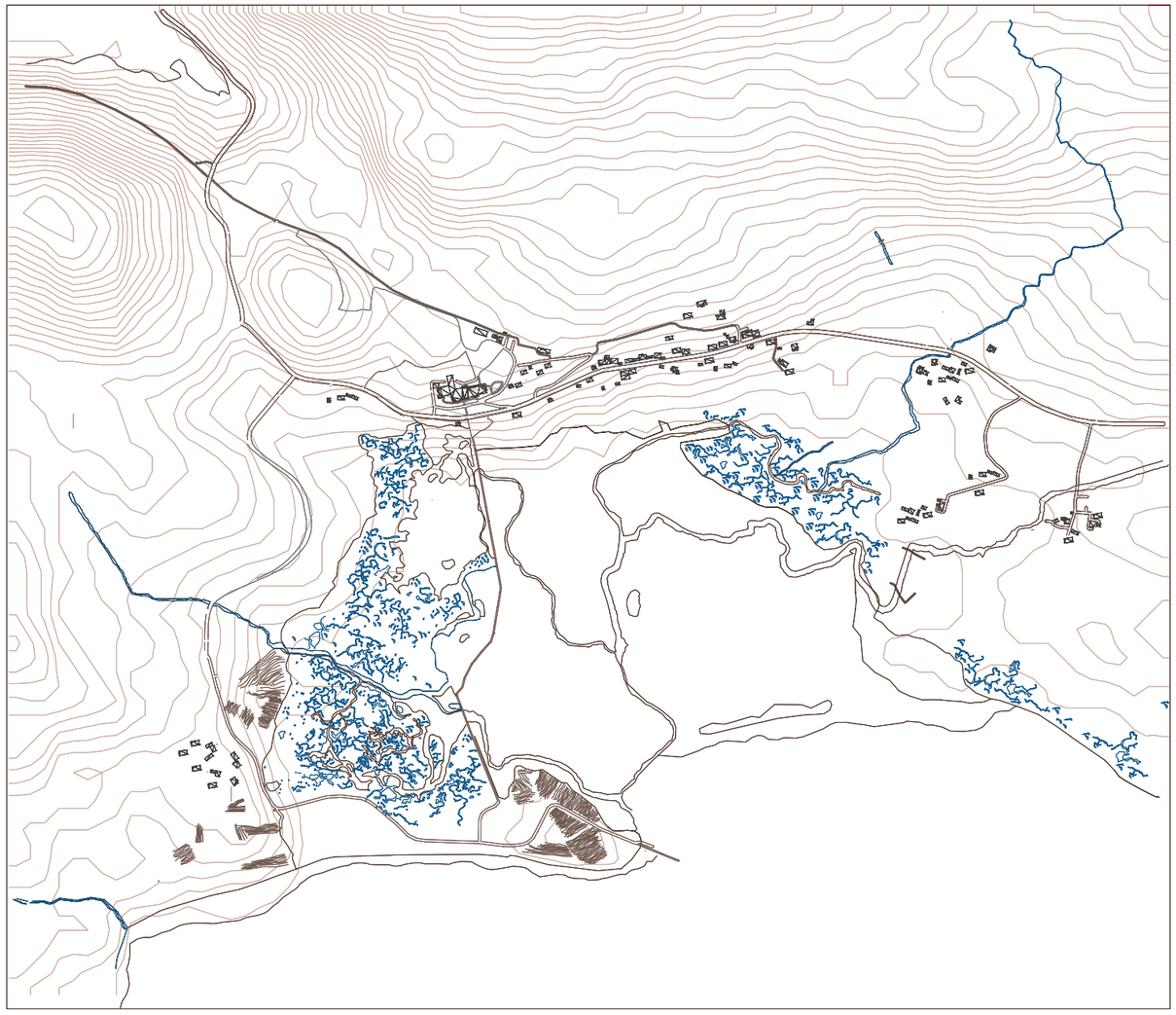
41 Climate and Communications Department of the Environment, "National Climate Action Plan 2023," 2022, https://www.gov.ie/en/publication/7bd8c-climate-action-plan-2023/.



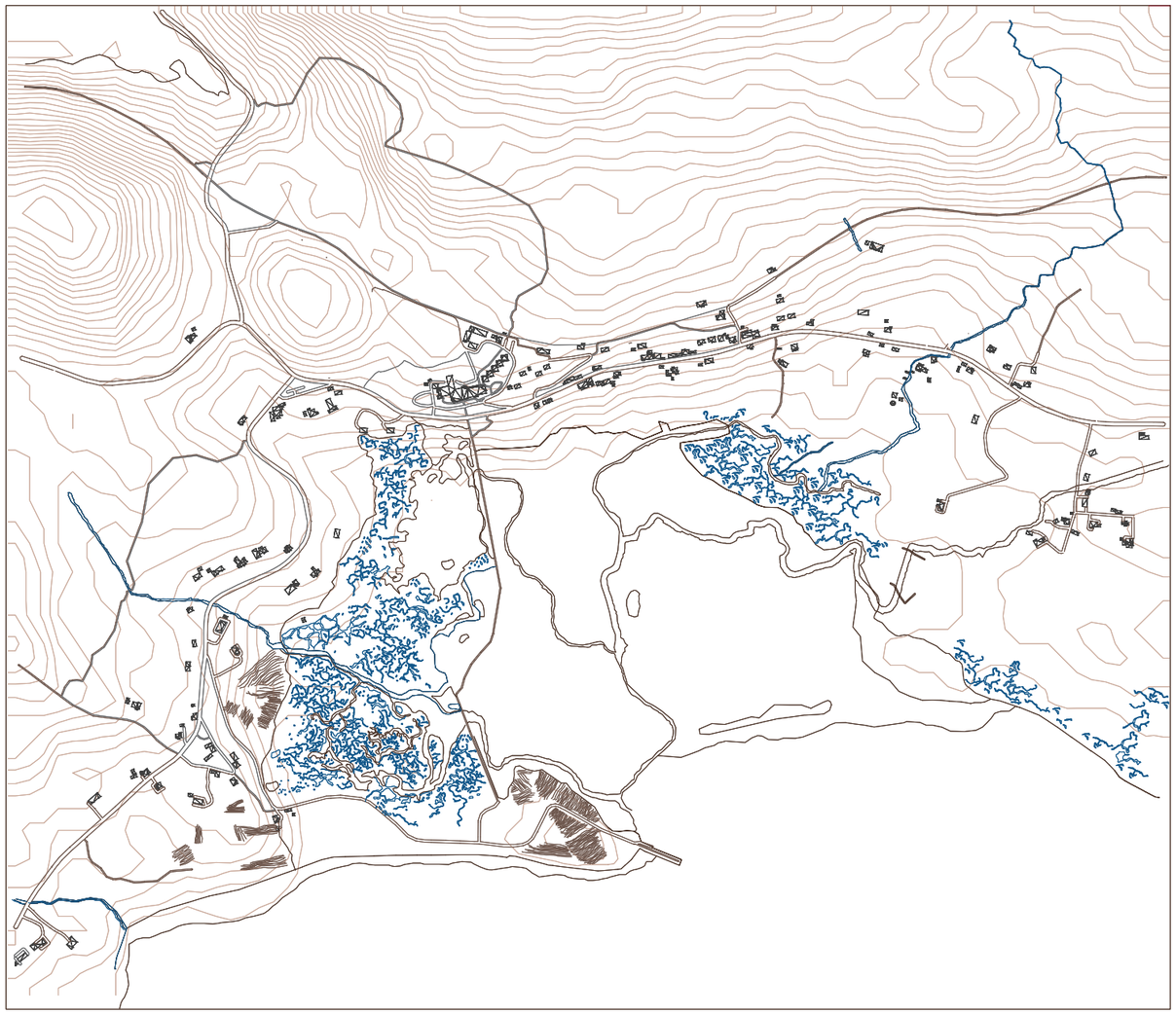
Pre-Famine



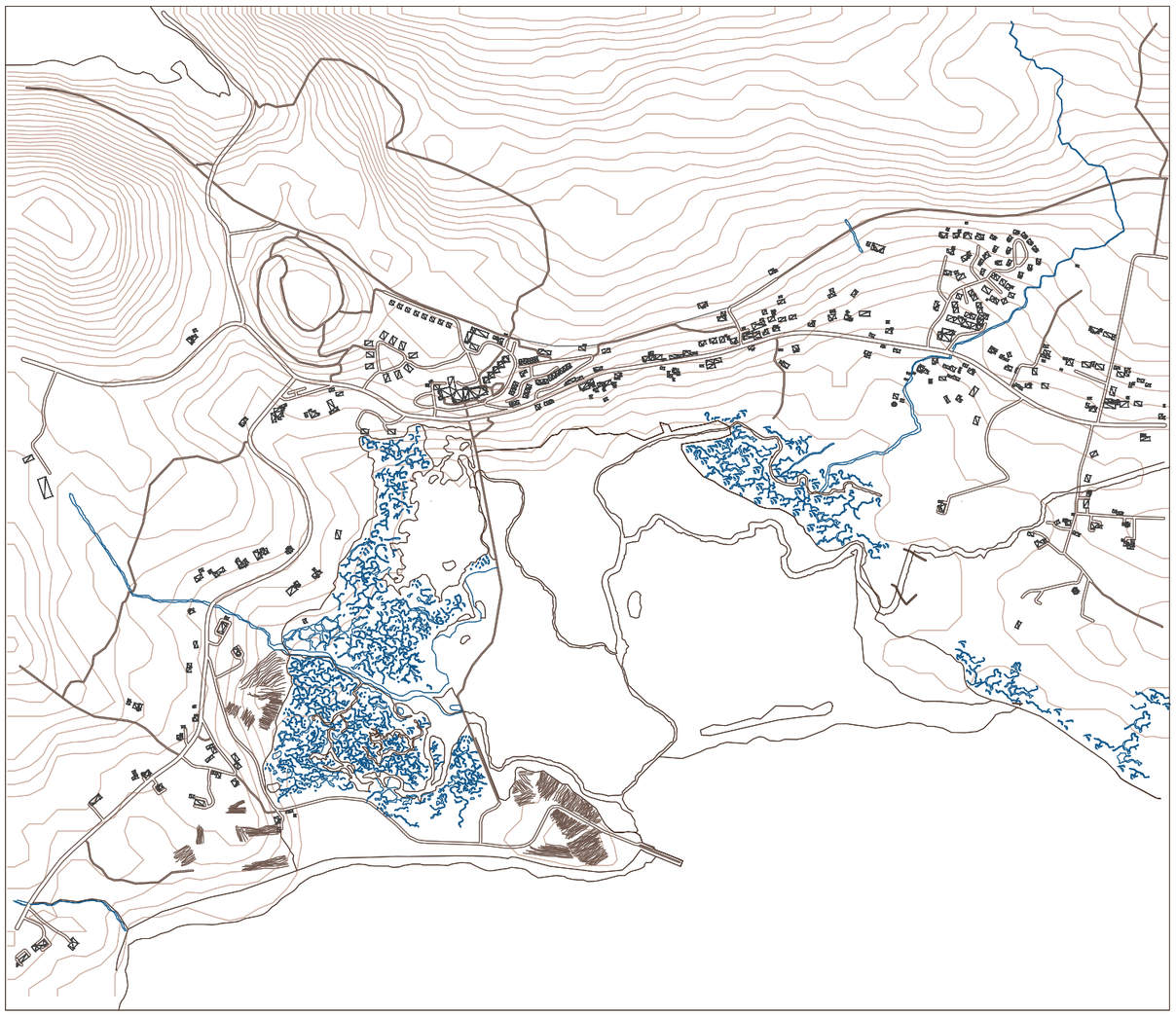
Famine



Victorian Times - 1899



1950’s



2021

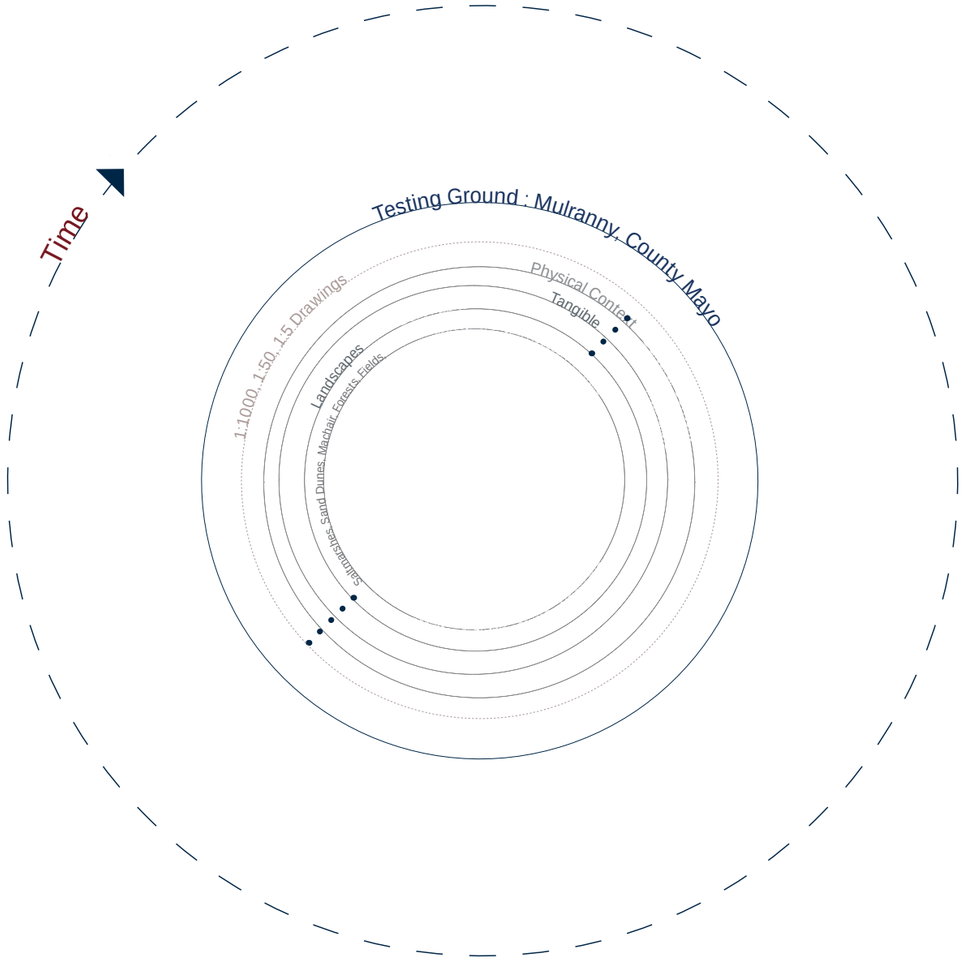


Figure 62. Authorm, “A Hermenutical Framework : Phase Four”, Drawing, 2022

Physical Context

The visible phenomena which form the tidal-pool landscape have invisible temporalities or “pluralities which unfold and interact”[42]embedded within. To uncover the geologic, biologic, technological, ecologic and climatic temporalities I translated scientific reports into flattened maps and fragmented oblique-maps, thereby fitting two categories of time on the landscape. The flattened maps portray an area of the Earth’s surface at a specific point in time whereas oblique-maps represent natural processes flowing through time. The act of mapping distinguished time as it is expressed in rhythms and cadences by the landscape.

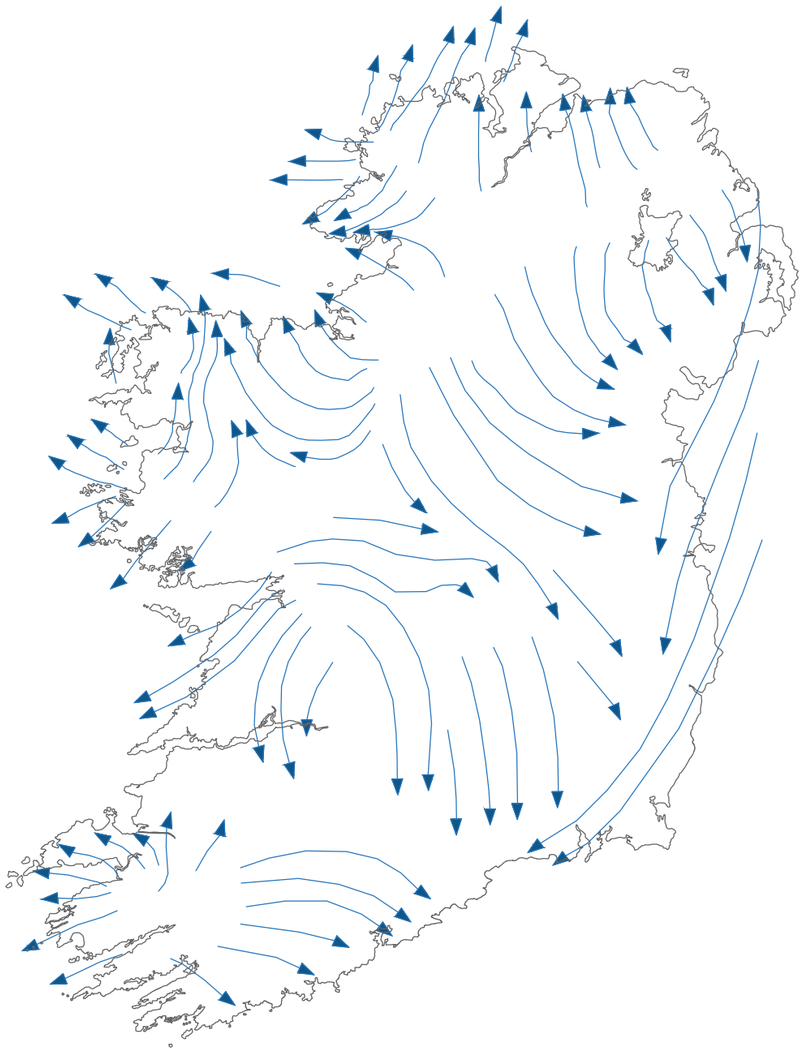
Additional Note on Drawing Technique :
The oblique maps show the surface of the Earth in terms of landforms, their dimensions, relative relief, slopes, and surface materials. They are a combination of physiographic diagrams, landform maps and orthographic drawings. A physiographic diagram emphasises the origin, or geologic structure, of landforms, a landform map emphasises a realistic portrayal of surface features, and an orthographic drawing refers to the method of projecting the Earth’s surface onto a map.

The flattened map portrayal of landforms requires the representation of three dimensions upon a flat surface. This representation includes the interpretation and portrayal of the shape, form (volume), continuity, and surface material of the landforms. Surface features shown on an oblique map are more interpretative and descriptive than those shown on a contour map at the same scale.

42 Eimear Tynan, “Tempo-Materialities: Encounters with Time along Arctic Island Coasts,” 2022.

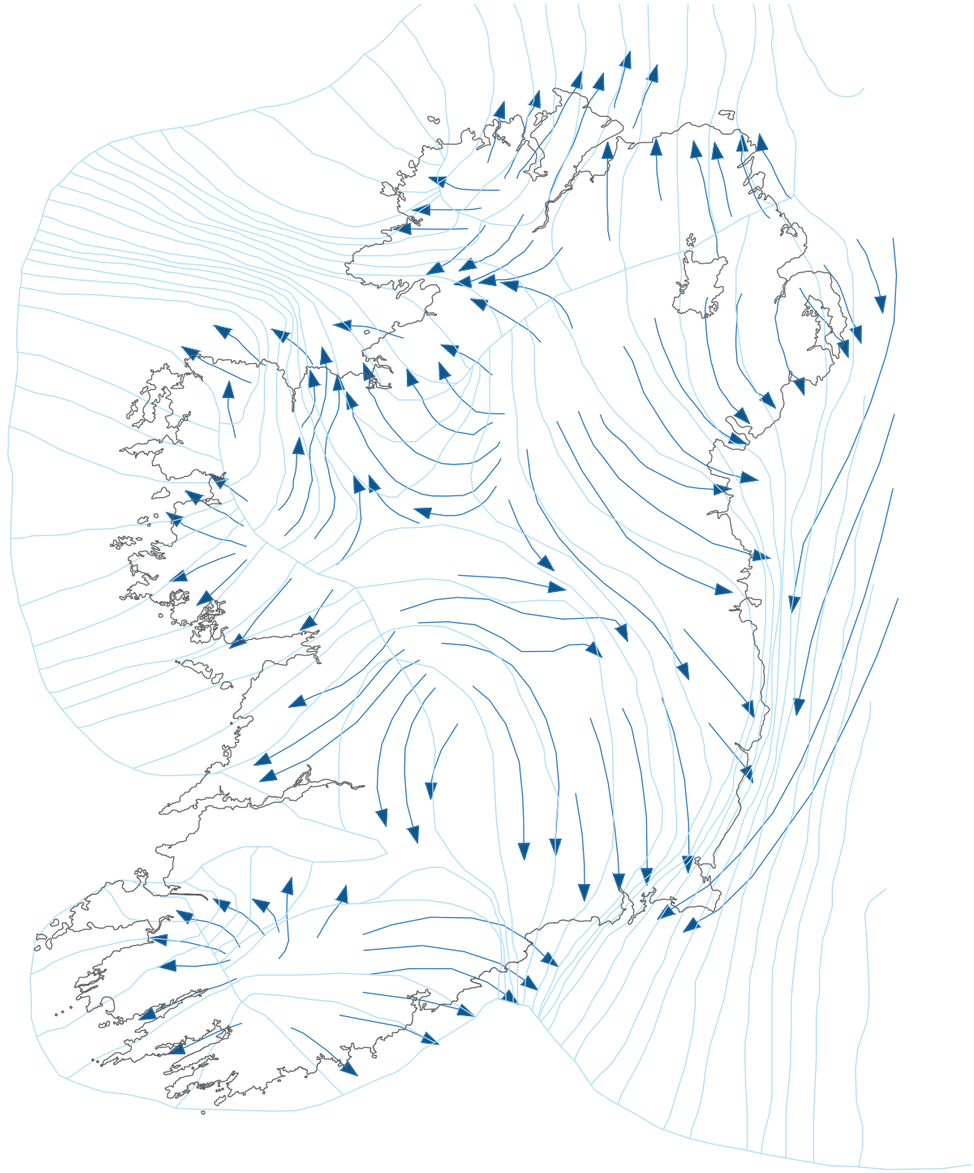
1) Fourth Ice Age

2) Fourth Ice Age - Directional Pull



Antithesis

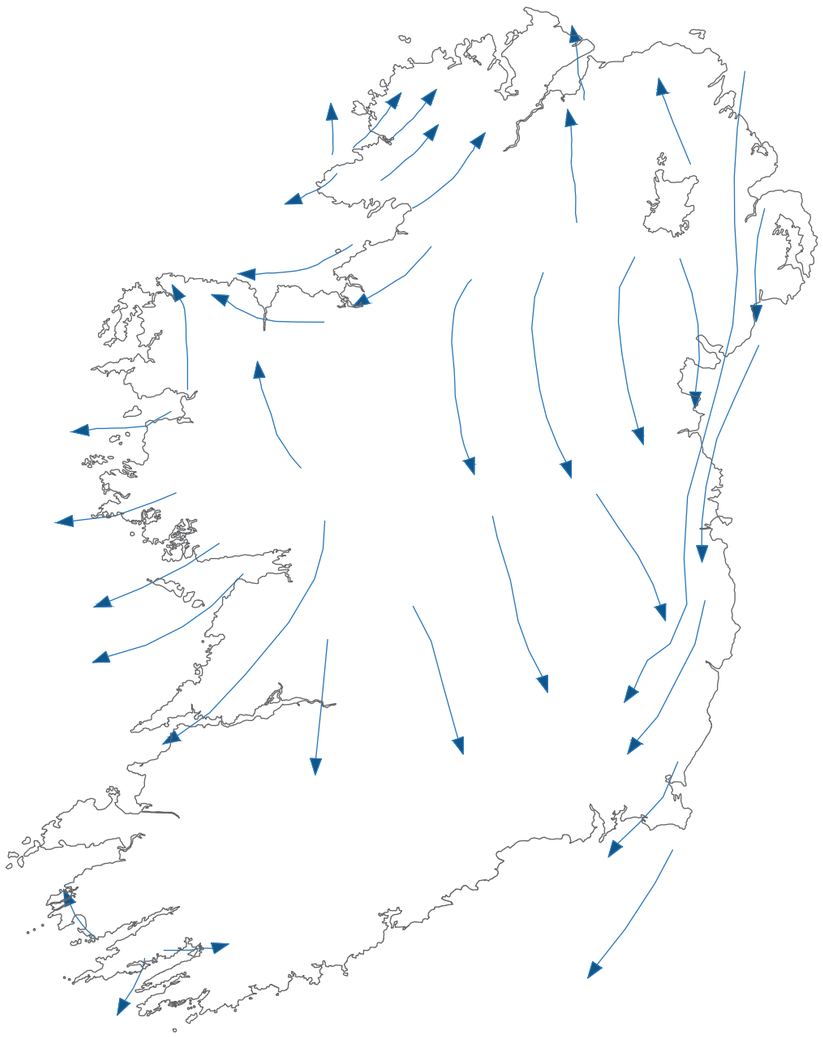
3) Fourth Ice Age - Ice Sheet Flow



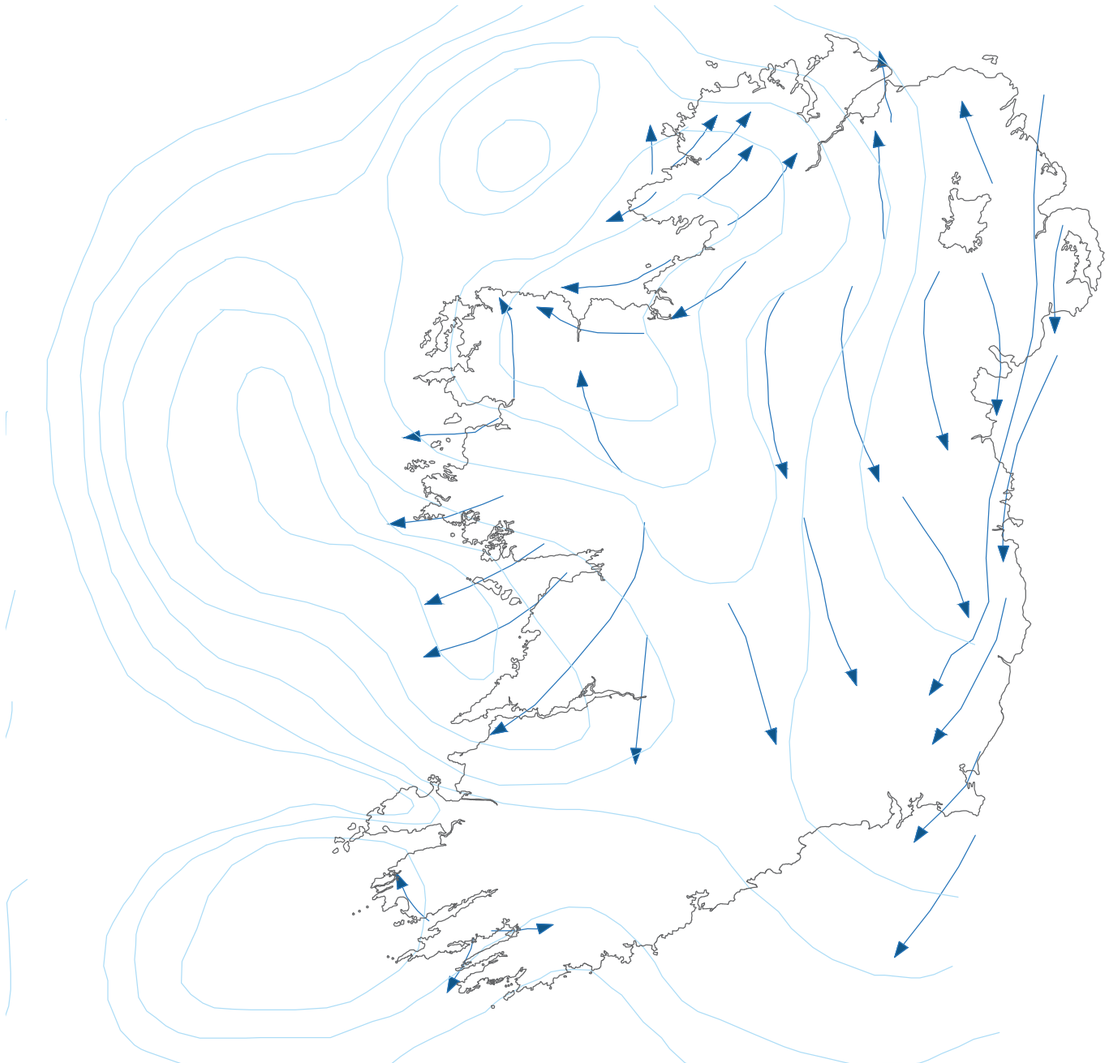
4) Fifth Ice Age

Antithesis

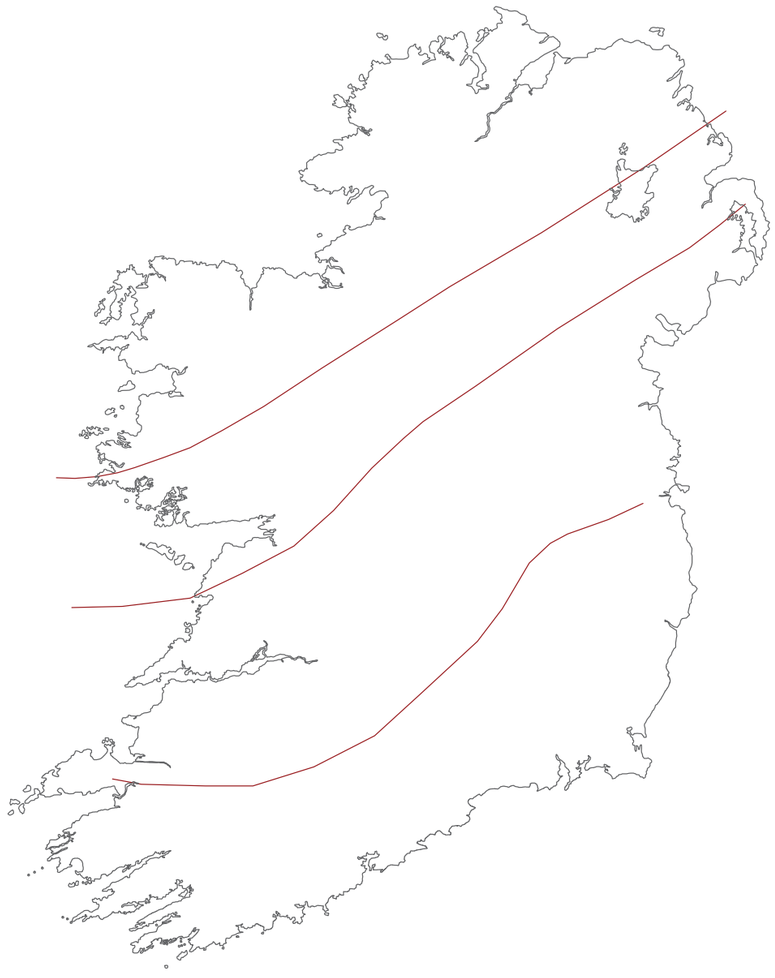
5) Fifth Ice Age - Directional Pull



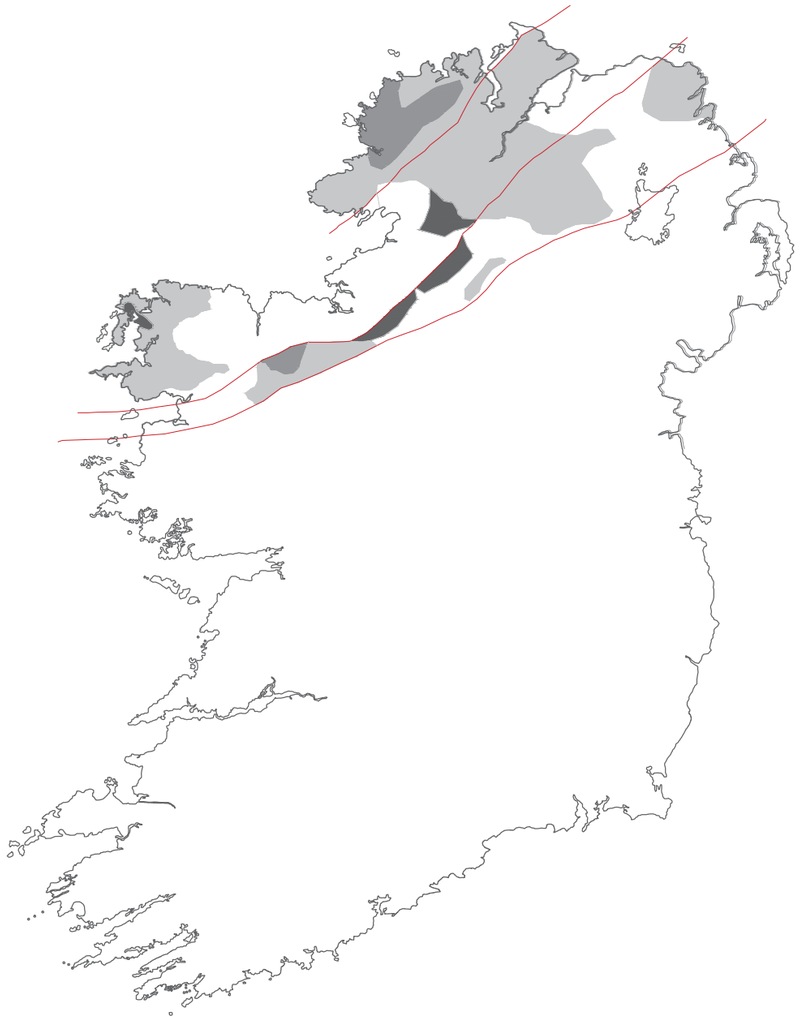
6) Fifth Ice Age - Ice Sheet Flow



6) Fifth Ice Age - Fault Lines

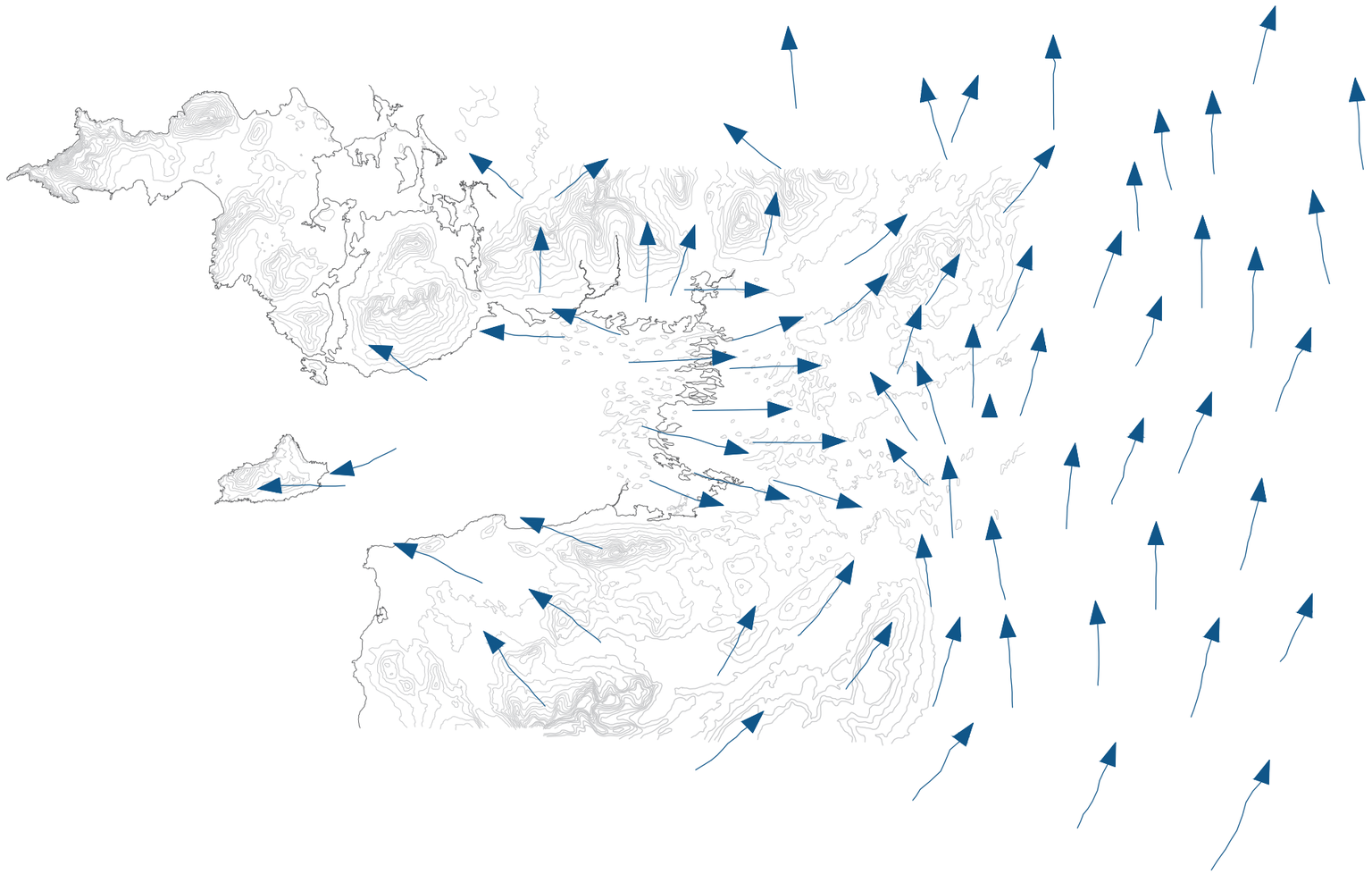


6) Fifth Ice Age - Rock Formations



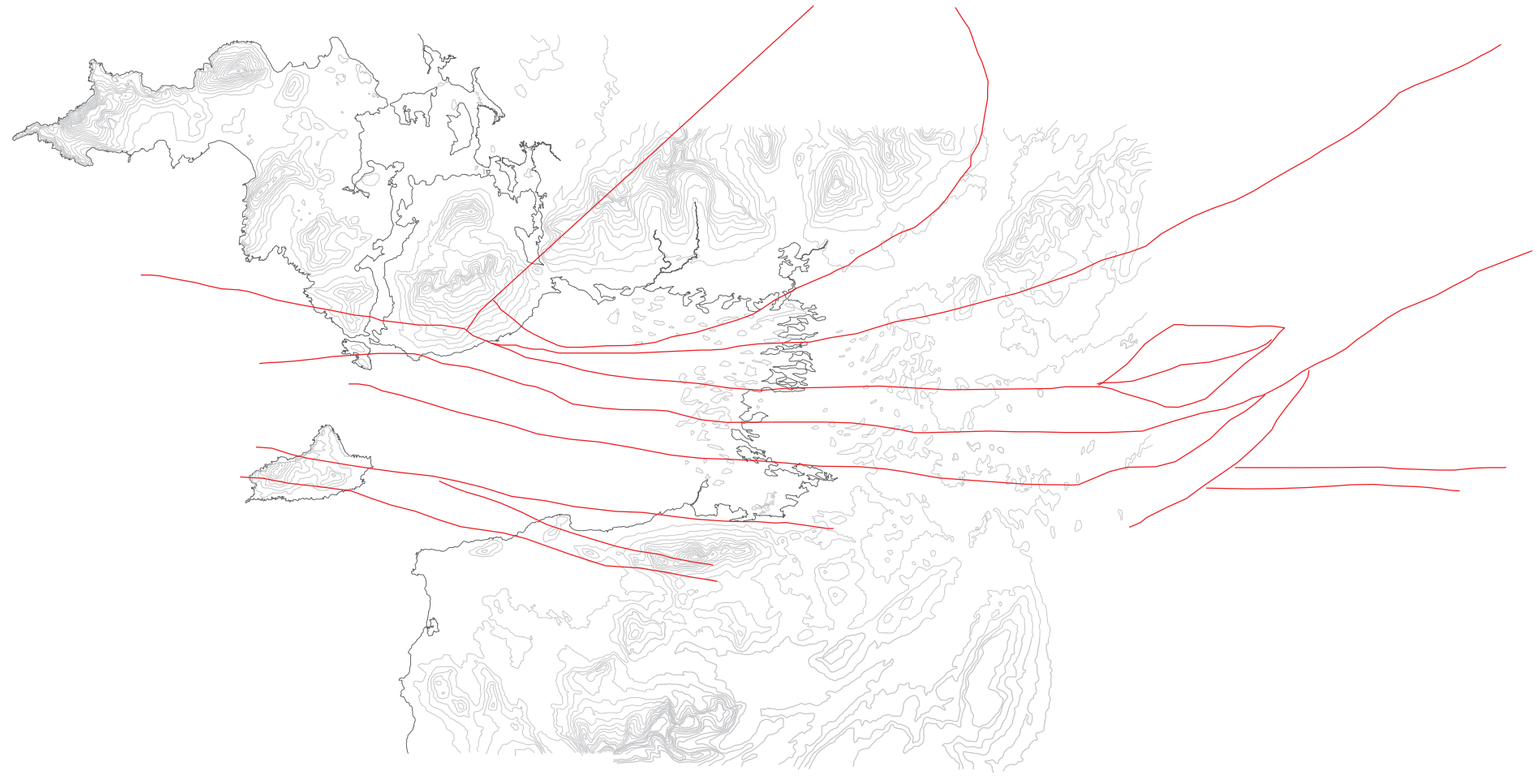
Clew Bay

Clew Bay - Directional Pull



Clew Bay - Ice Sheet Flow

Clew Bay - Fault Lines



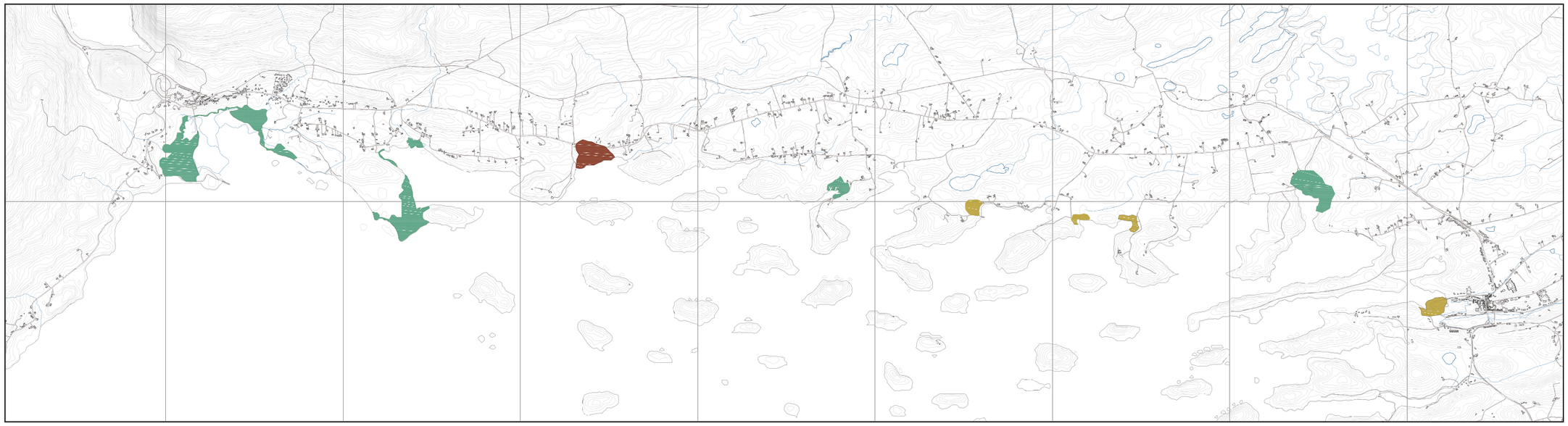
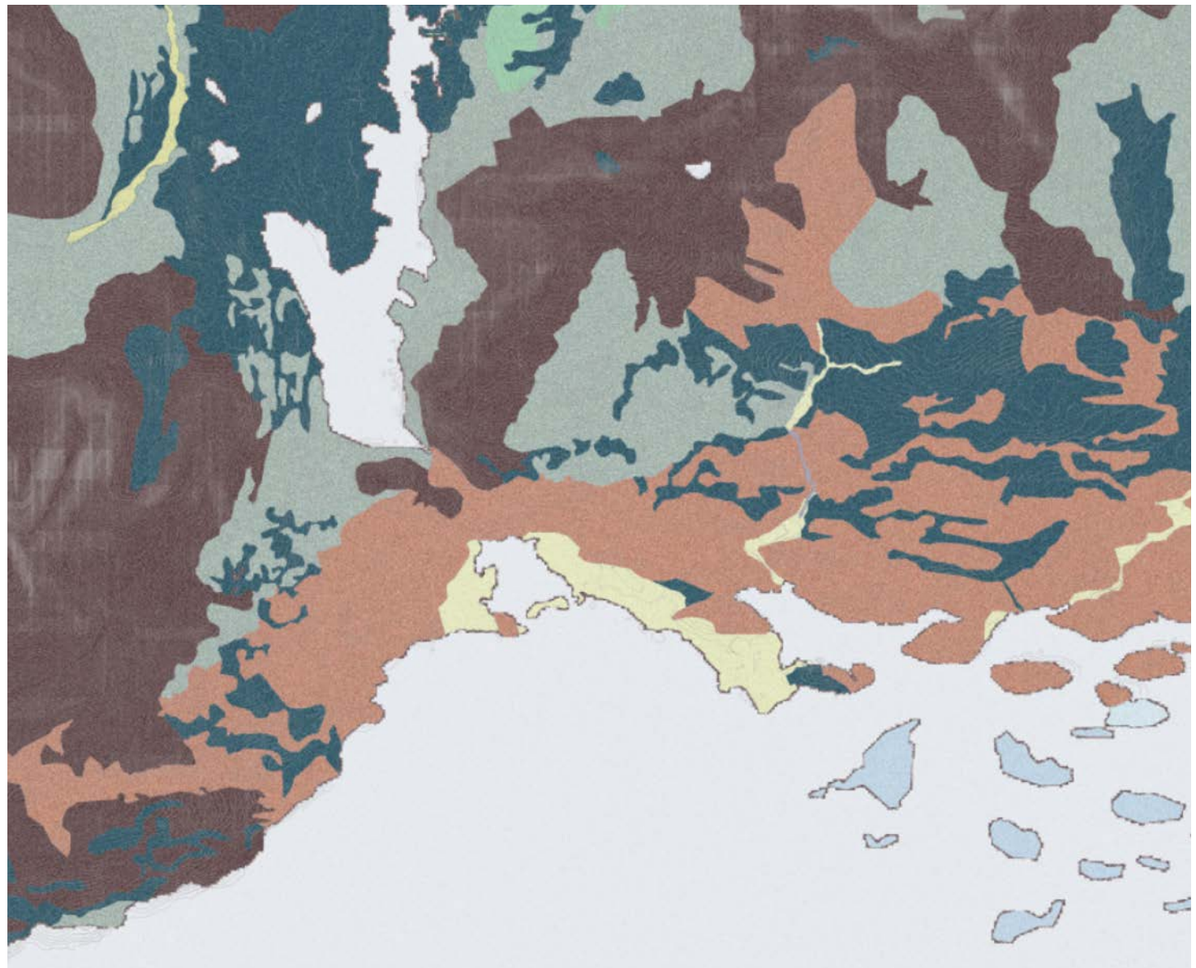


Figure 63, Author, “Significant Land Formations of Carbon Sequestration along Mulranny to Newport Coastline”, Drawing, 2022



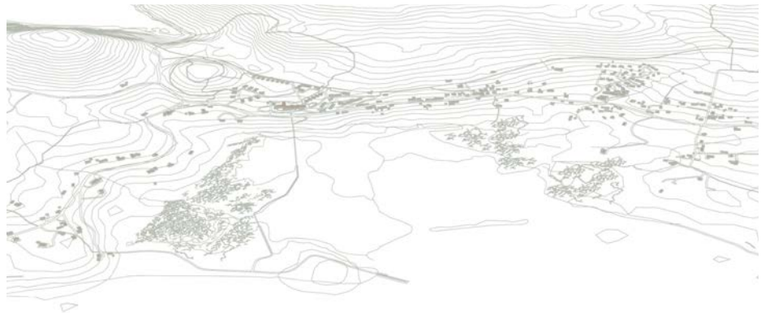
Mulranny Geology -

Old Red Sandstone

Schist

Limestone

Quartzite



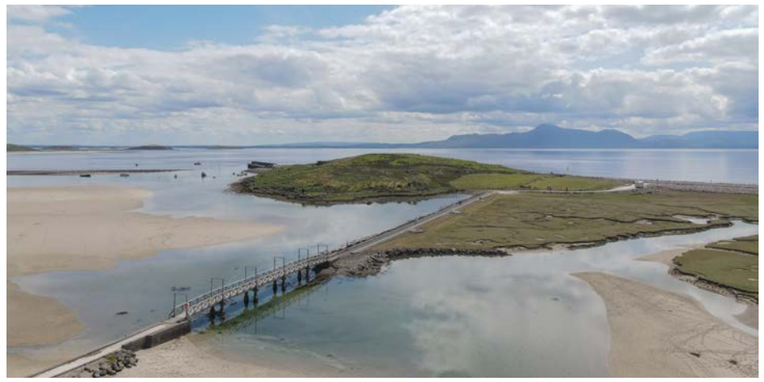
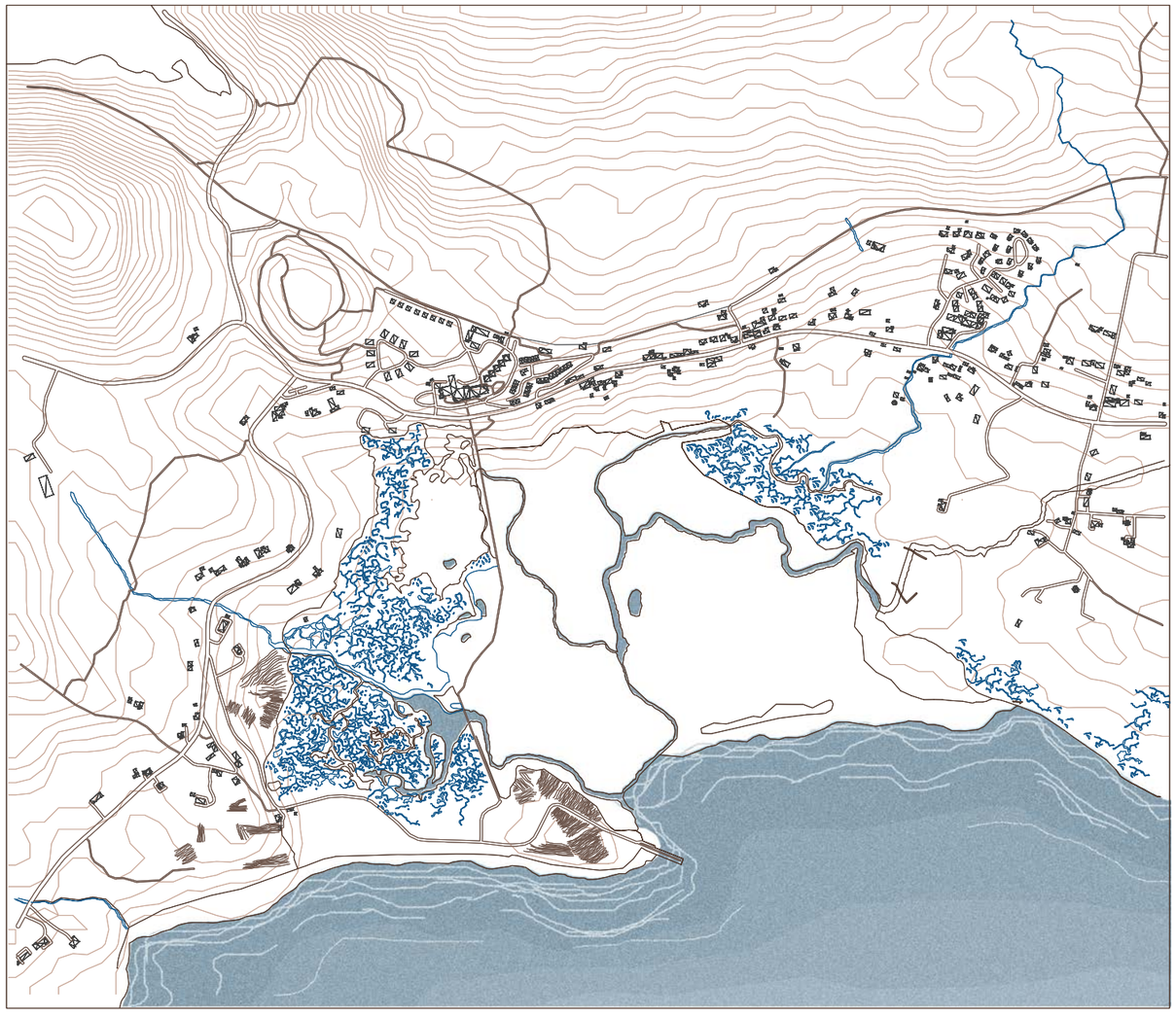


Figure 64, Author, “Mulranny Tidal Pool”, Drawing, 2022
Figures 65, 66, Walsh, Jack, “Mulranny Tidal Pool”, Photographs, 2022

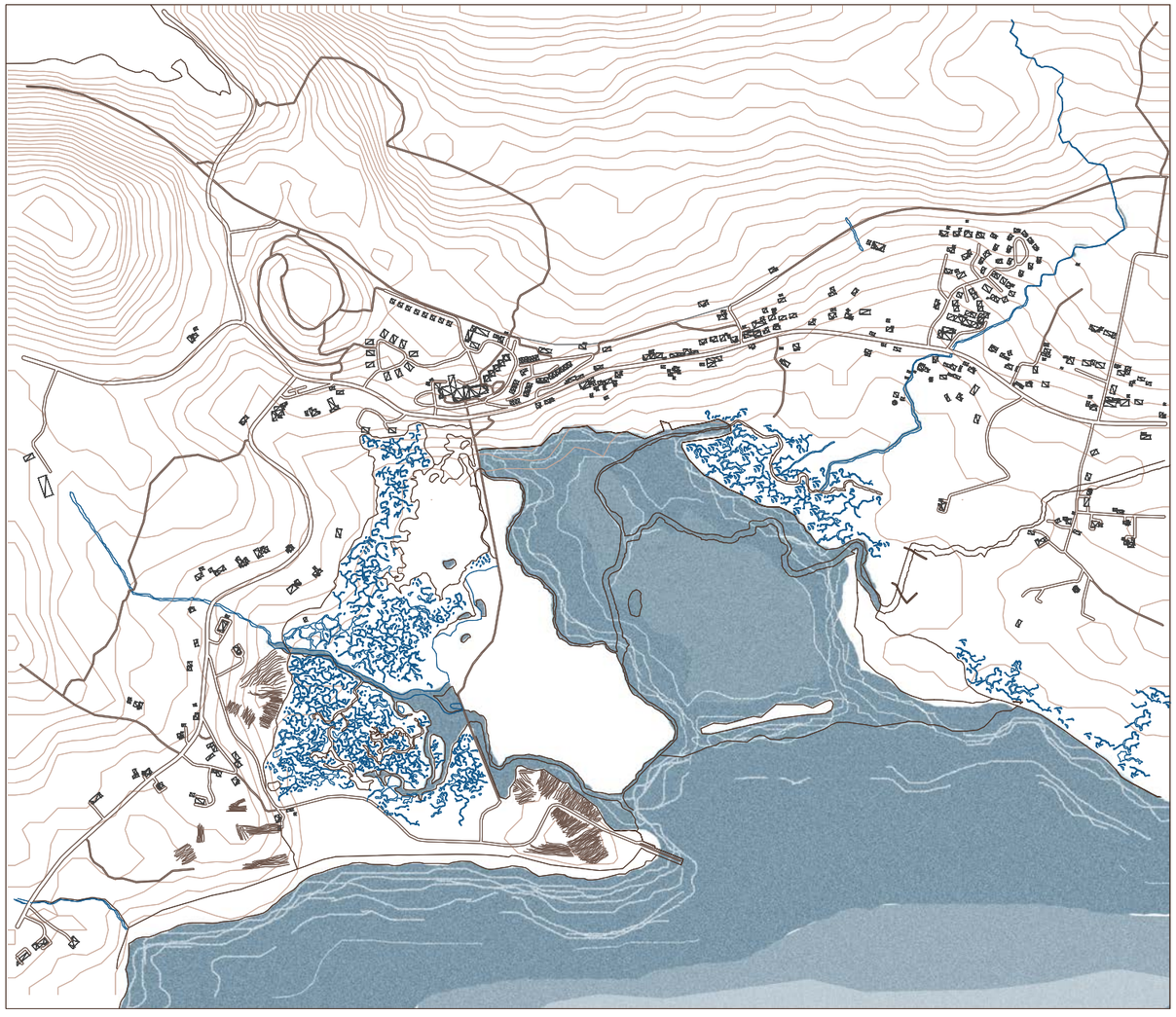
At a cursory glance Mulranny’s defining characteristic is its physical landscape. A “landskip/ picturesque”[43] view is commonly formed of its saltmarshes, sand-dunes, tidal-pool, shifting sands, machair, lagoons, glaciated drumlin belt and quarries, however documentation such as the “Clew-Bay Conservation Report”[44]and the Planning Institute’s “Saltmarsh Evaluation”[45] conveys a very important fact; the “landschaft”[46], which has more imperative functions such as carbon sequestration and the protection of biodiversity, is under imminent threat by rising sea levels.

In line Mulranny Community Future’s decarbonisation ambitions, this research is homed in on the tidal-pool saltmarshes.

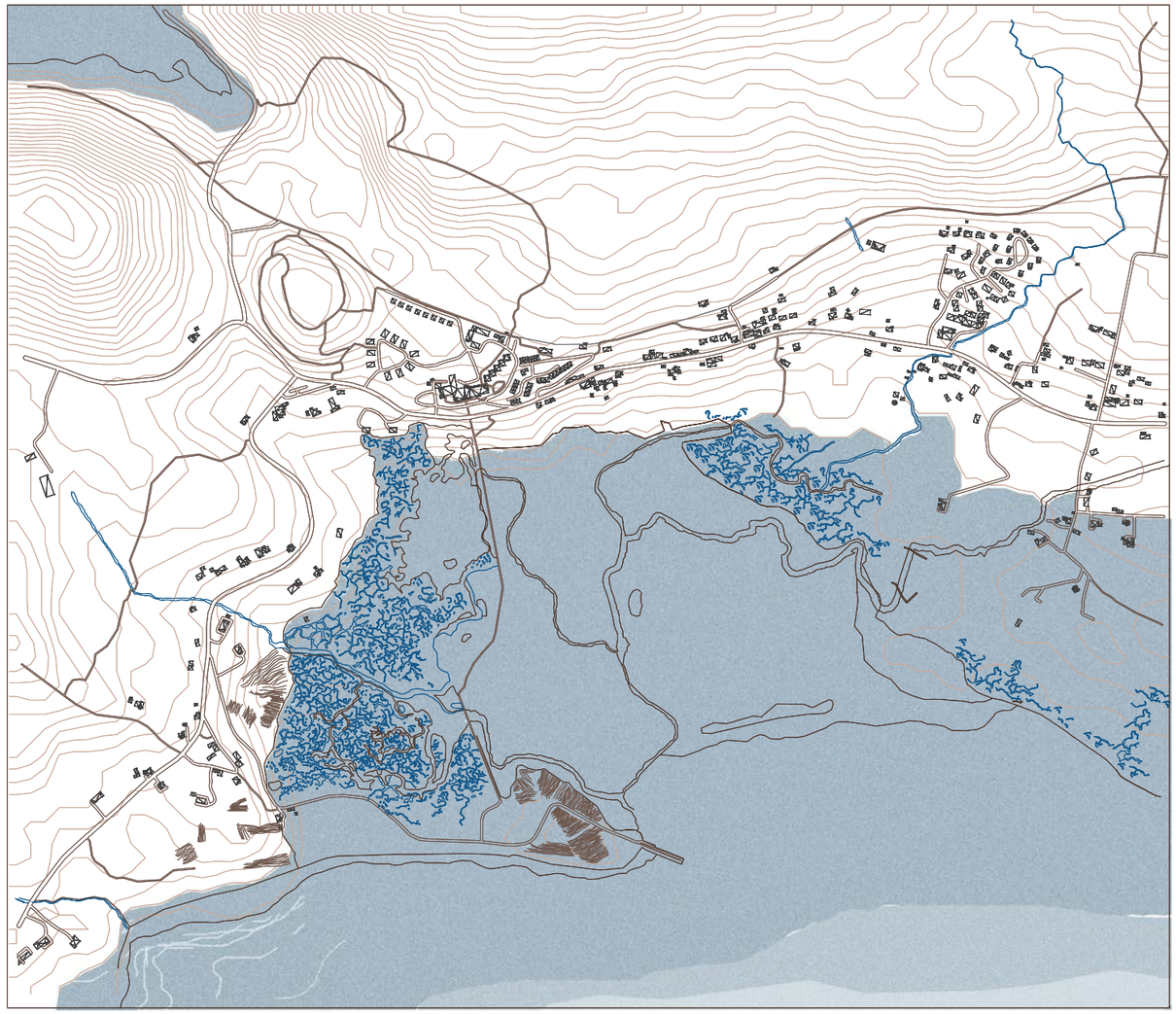
43 Corner, “Eidetic Operations and New Landscapes.”
44 n.d., “Clew Bay Conservation Report,” Clew Bay SAC (Site Code 1482) Conservation Objectives Supporting Document-Coastal Habitats, 2011, 72, https://www.npws.ie/sites/default/filespublications/pdf/1482_Clew Bay Complex SAC Coastal Supporting Doc_V1.pdf.
45 Mark McCorry and Tim Ryle, “Saltmarsh Monitoring Project” (Report for National Parks and Wildlife Service, 2009), chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.npws.ie/sites/default/files/publications/pdf/McCorry_&_Ryle_2009_Saltmarsh_survey_V4.pdf.
46 Corner, “Eidetic Operations and New Landscapes.”



2021 - Low Tide



2021 - High Tide



2040 - Low Tide

Figure 67 : The Sand Dunes

Figure 67 Author, “Mulranny Sand-Dunes”, Photograph 2022

Figure 28 : Machair

Figure 68, Author, “Mulranny Machair”, Photograph 2022

The Sand Dunes - Low Tide

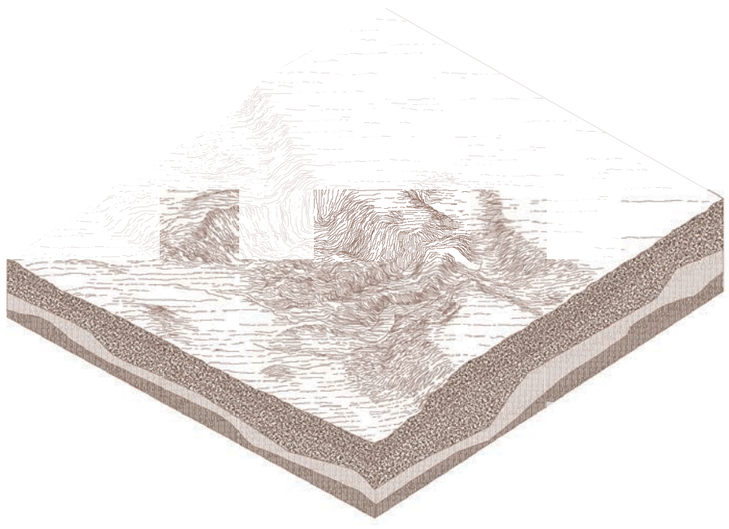


Figure 69, Author, “Mulranny Sand-Dunes at Low Tide”, Drawing, 2022

Sand dunes provide natural coastal protection against storm surge and high waves. The diversity of dune shapes is also ideal for unique plants and animals to thrive creating habitats that are internationally valued as Special Areas of Conservation. Flowering plants, lizards, toads and ground-nesting birds all call the dunes their home. Dunes are created when wind blows the finer sands from the beach into a sheltered area, behind obstacles or through dune grasses that slow the speed of the wind leading to small mounds of sand being formed. to form mounds. Sand Dune grasses slow the speed of the wind that carries the sand from the beach. In this way the sand is trapped by the plants and builds up into hills and ridges.

Machair - Low Tide

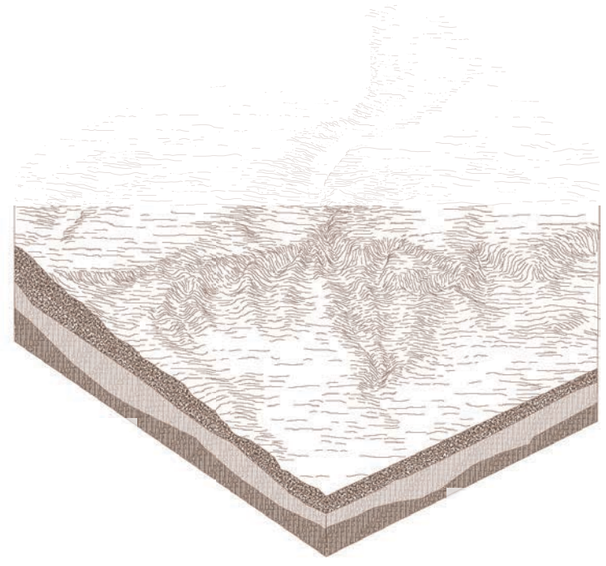


Figure 70, Author, “Mulranny Machair at Low Tide”, Drawing, 2022

A Gaelic word meaning fertile, low-lying grassy plain, 'machair' refers to a unique habitat that is one of the rarest in Europe; only occurring on the exposed west-facing shores of Scotland and Ireland. Machair habitat is very similar to a fixed sand dune but is easily distinguished by its flat, or gently undulating landscape, and the variety of vegetation types and land-uses.

Machair is formed from lime-rich shell sand washed up thousands of years ago by the sea, and eroded from dunes by powerful winds, spreading the sand well inland. Light cattle-grazing, hay cutting and low intensity rotational crop farming (free of artificial fertilisers or pesticides) has shaped the landscape over millenia.

The Sand Dunes - High Tide

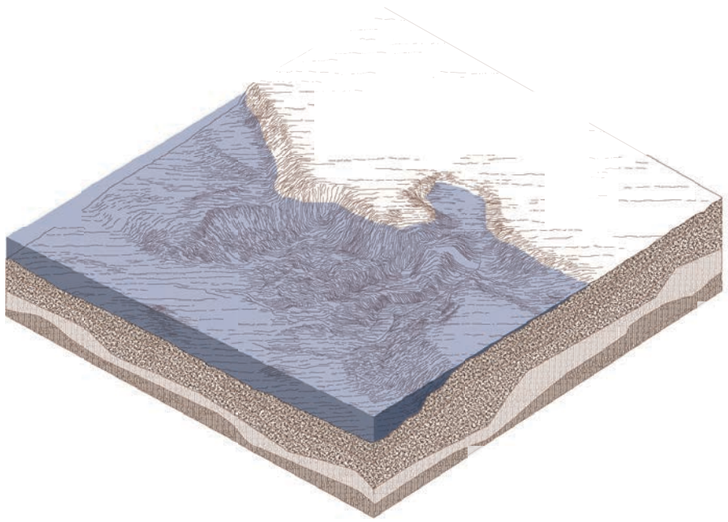


Figure 71, Author, “Mulranny Sand-Dunes at HighTide”, Drawing, 2022

Machair - High Tide

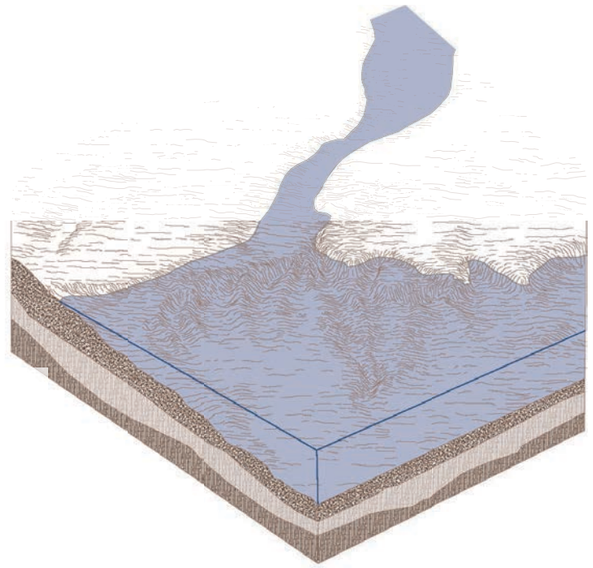


Figure 72, Author, “Mulranny Machair at High Tide”, Drawing, 2022

Figure 73 : Overground Quarry

Figure 74 : Underground Quarry

Figure 73, Author, “Mulranny Ground Level Quarry”, Photograph 2022

Figure 74, Author, “Mulranny Sub Zero Level Quarry”, Photograph, 2022

Overground Quarry

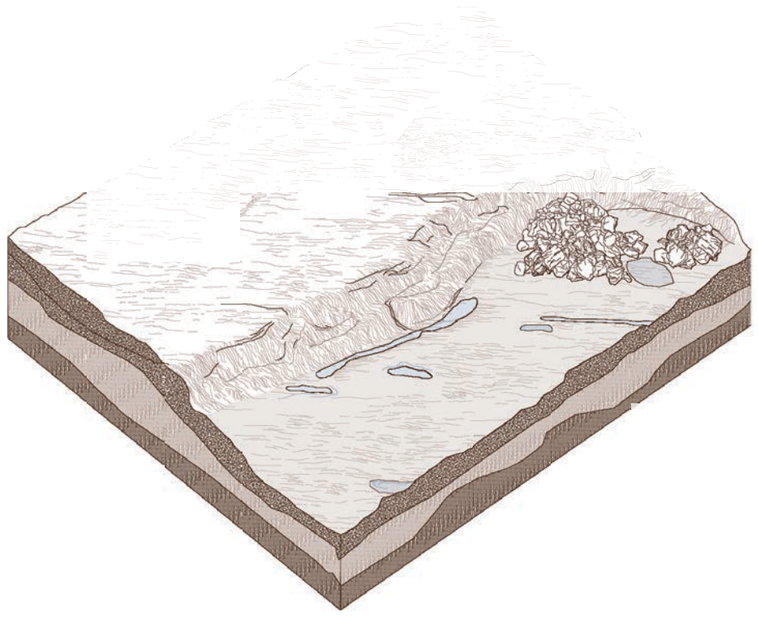


Figure 75, Author, “Mulranny Ground Level Quarry”, Drawing 2022

Underground Quarry

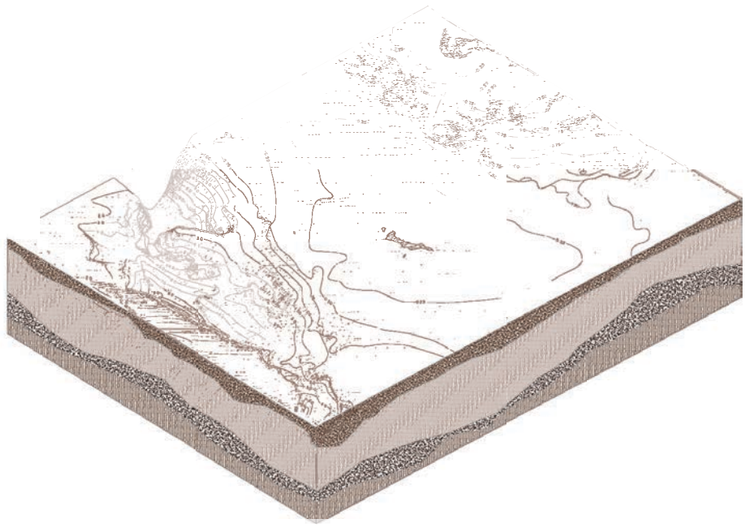


Figure 76, Author, “Mulranny Sub Zero Level Quarry”, Drawing, 2022

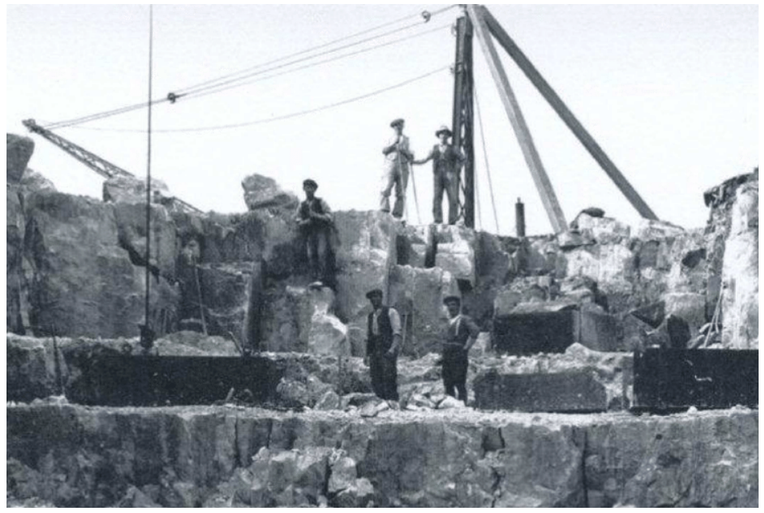


Figure 77, Unknown, “Derrick Cranes lifting Stones from Quarry onto Boats”, Photograph, Unknown

Figure 78, Unknown, “Derrick Cranes Lowering Boats”, Photograph, Unknown

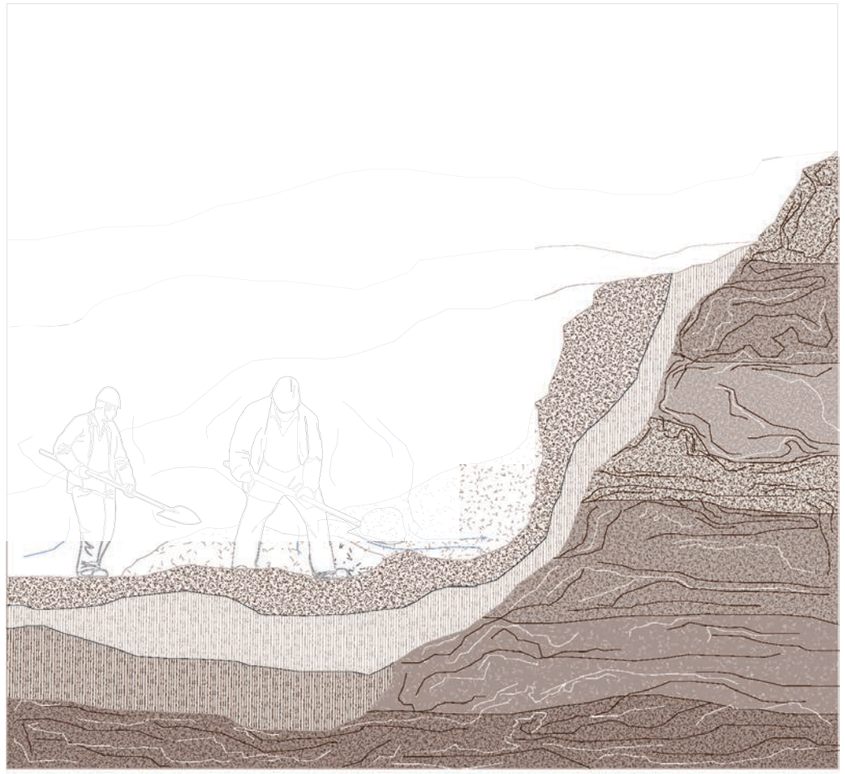


Figure 79, Author, “Local Quarrying Methodology - Removing the Overburden, Drawing, 2022

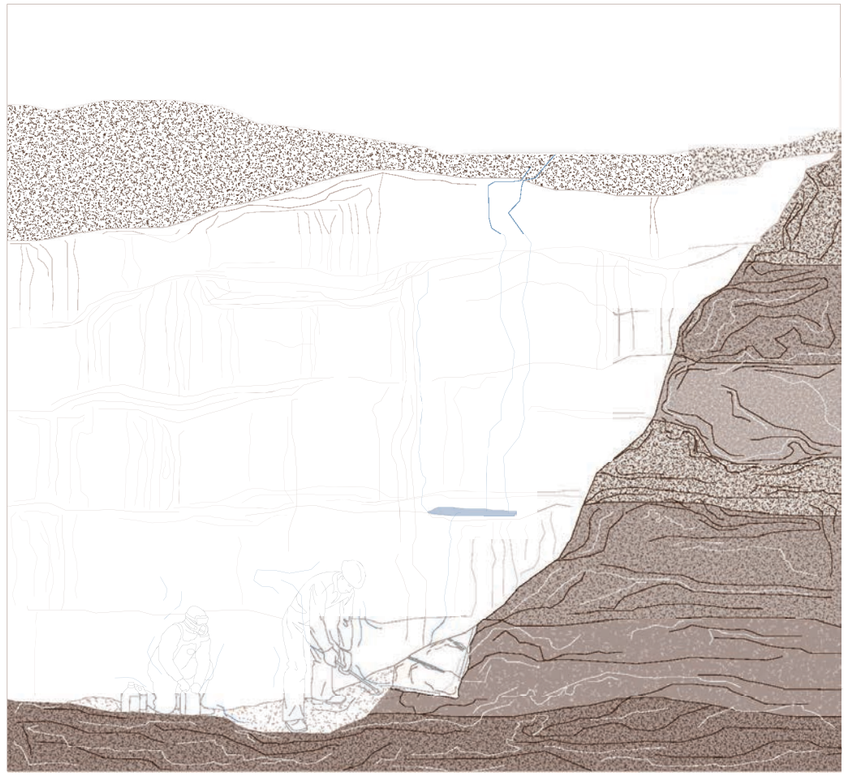


Figure 80, Author, “Local Quarrying Methodology - Holes Driiled into Rock, Cracking Agent Poured into Crevices, Drawing, 2022

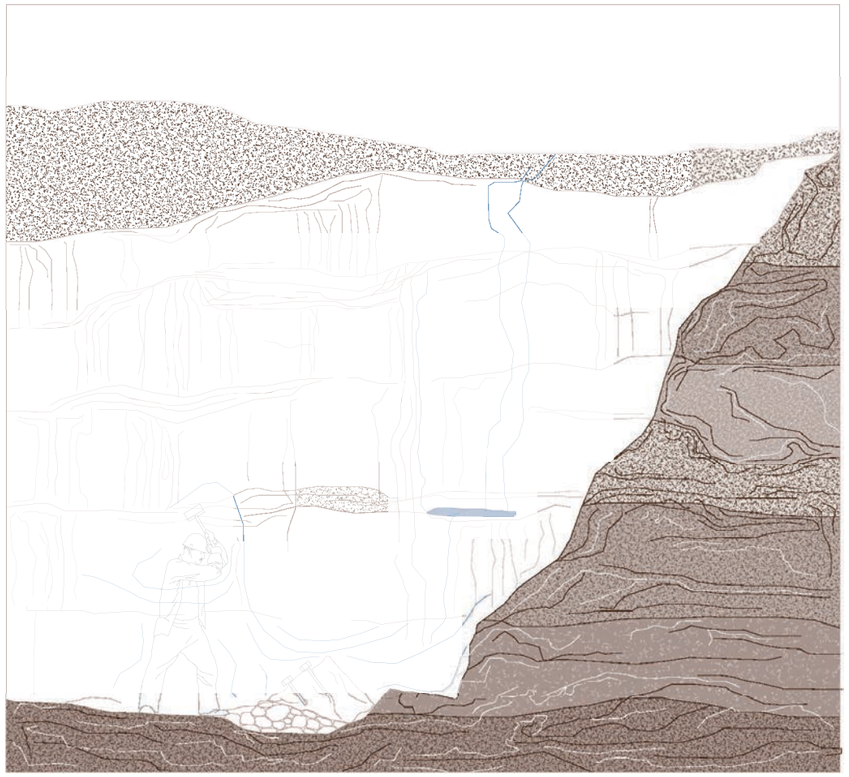


Figure 81, Author, “Local Quarrying Methodology - Collapsed Hewn Stone Feather and Plugged”, Drawing, 2022

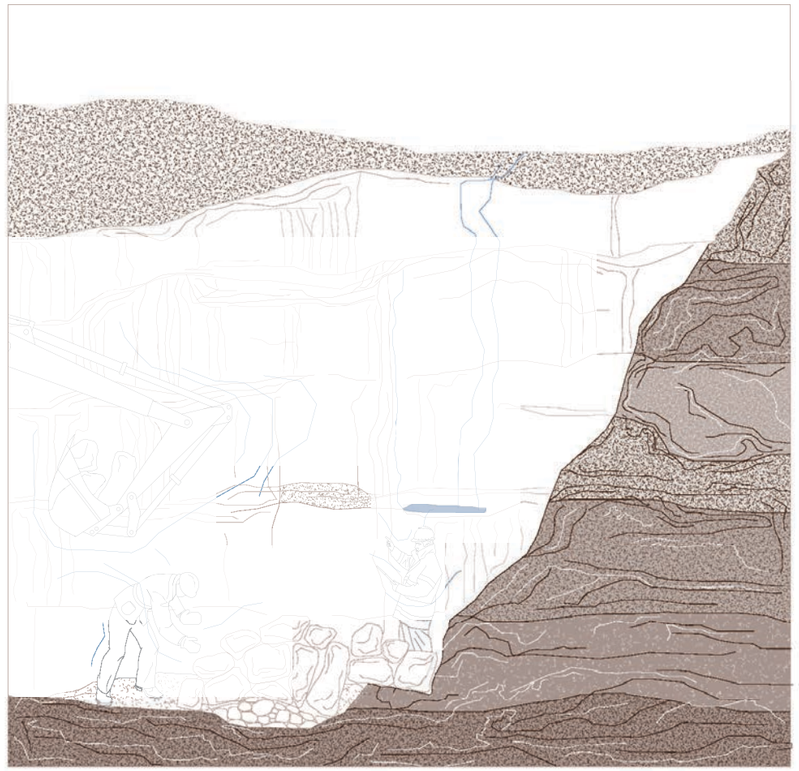


Figure 81, Author, “Local Quarrying Methodology - Stone Lifted with Digger and by Hand”, Drawing, 2022

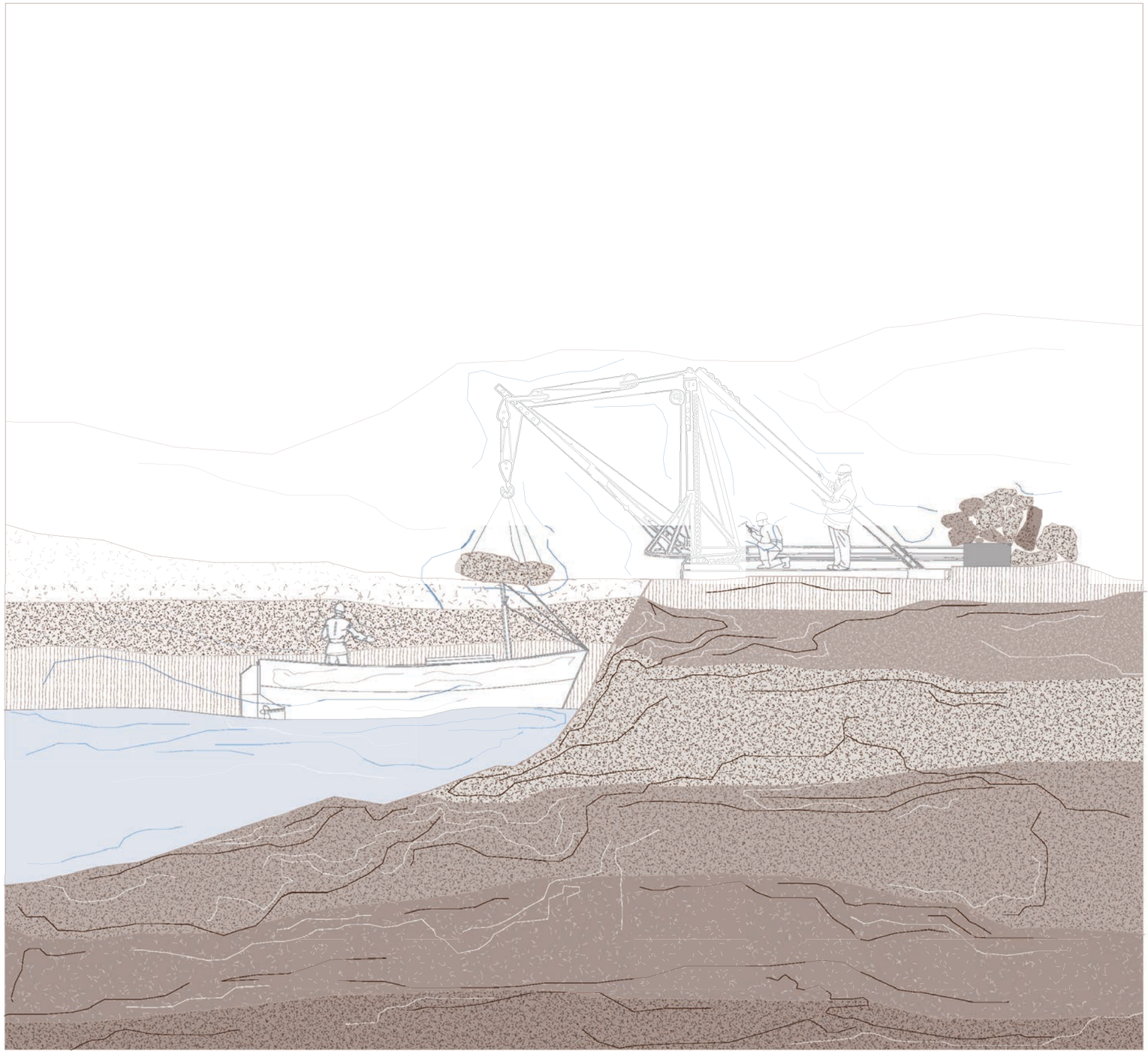


Figure 83, Author, “Local Quarrying Methodology - Derrick Cranes Lift Stone into Boats for Delivery”, Drawing, 2022

Figure 84, Walsh, Jack, “Mulranny Saltmarsh”, Photograph, 2021
Figures 85, 86, Author, “Mulranny Saltmarsh”, Photographs, 2022

Within the tidal-pool there are three saltmarsh formations, Atlantic Saltmarsh, Mediterranean salt meadows and thermo-Atlantic halophilous scrub.
Each has a complex drainage pattern of creeks which start at the mudflats and transition landwards. Collectively they are one of Ireland’s largest saltmarshes.

The three saltmarshes are based on a blanket bog formation; an uncommon occurrence. The presence of peat means they sequester more carbon than a sediment saltmarsh; which is at least “218g/m2 of carbon per year”.[47] In comparison, forests, which are commonly misconstrued to be the gateway into a greener future, sequester only “4gm/m2 of carbon per year.”[48]

To achieve a high level of carbon sequestration saltmarshes must vertically accrete sediment to keep up with sea level rise, otherwise the formation cannot turn a full circle within its life-cycle and problems are, quite literally, brought to the surface.

47 Ewan Trégarot, “Saltmarshes To Fight Climate Change,” MaCoBioS, 2022, https://macobios.eu/2022/02/01/salt-marshes-to-fight-climate-change/.
48 Trégarot.

The Blanket Bog Formation Begins it's Transition into a Saltmarsh

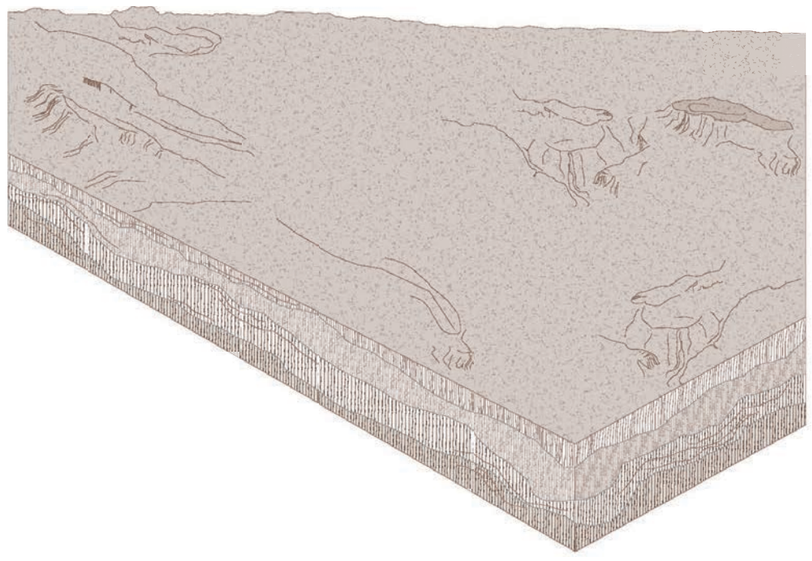


Figure 87, Author, "Life Cycle : 01 - ", Drawing, 2022

"Salt marshes typically develop on low-energy coasts under the influence of the tide. However, peat salt-marshes along the west coast of Ireland formed in an inherently different way. They are unique in both in an Irish and global context. The peat of these marshes formed in postglacial times when climatic conditions were such that ombrogenic blanket bogs formed along the western Atlantic coast of Ireland. A subsequent marine transgression caused a shift from freshwater to saline conditions, and these bogs now support salt-marsh vegetation. These systems have been termed "Fringe" marshes in the Irish saltmarsh inventory. Unlike other organogenic salt-marshes in Europe, they formed under predominantly freshwater conditions, thus making them unique in geological foundation..

The Boglands are Undercut by the River and Tide. Sediment begins to Vertically Accrete

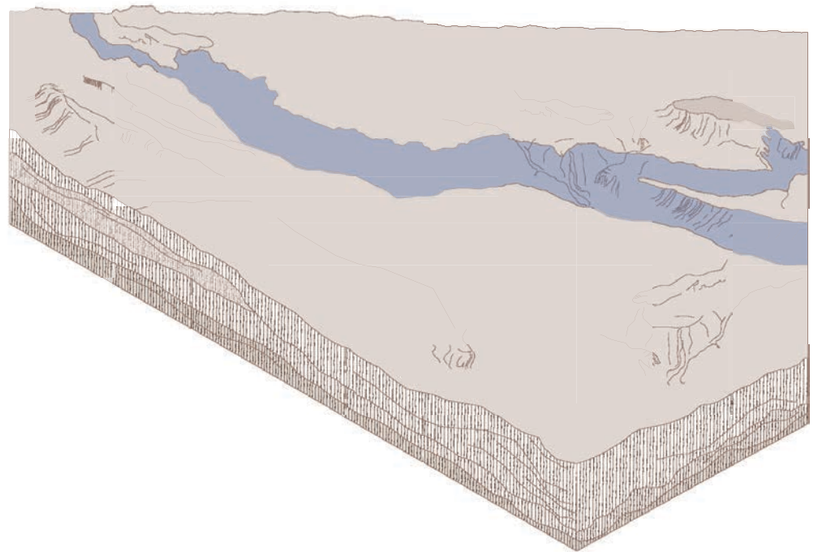


Figure 88, Author, "Life Cycle : 02", Drawing, 2022

The Cycle Turns a Full Cycle and the Blanket Bog Surface Returns

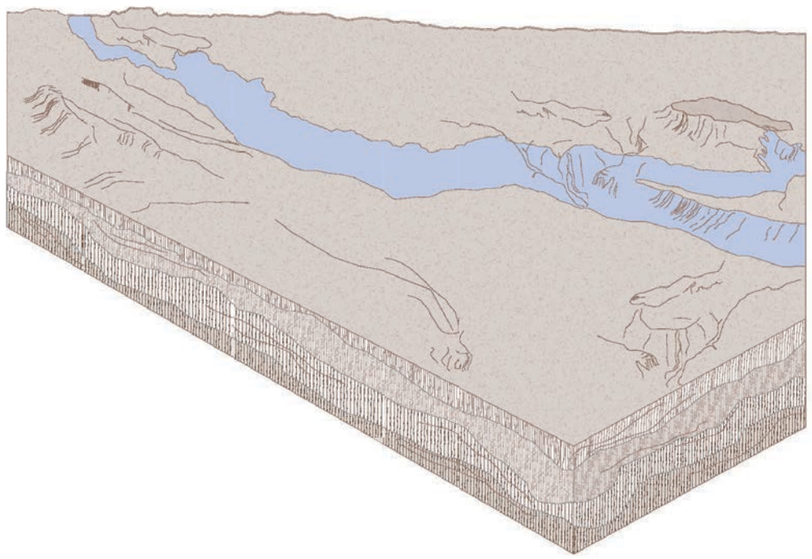


Figure 89, Author, “Life Cycle : 03 - ”, Drawing, 2022

Creeks Begin to Form on the Top Surface in the Sediment Layer and the Muddflat is Formed

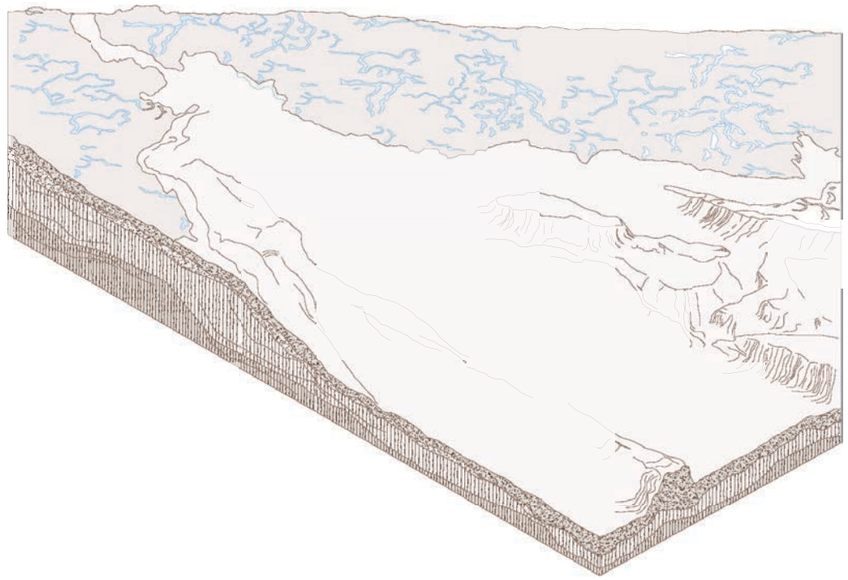


Figure 90, Author, “Life Cycle : 04”, Drawing, 2022

The Surface Creeks Drop and Deepen Through the Sediment Towards Bog

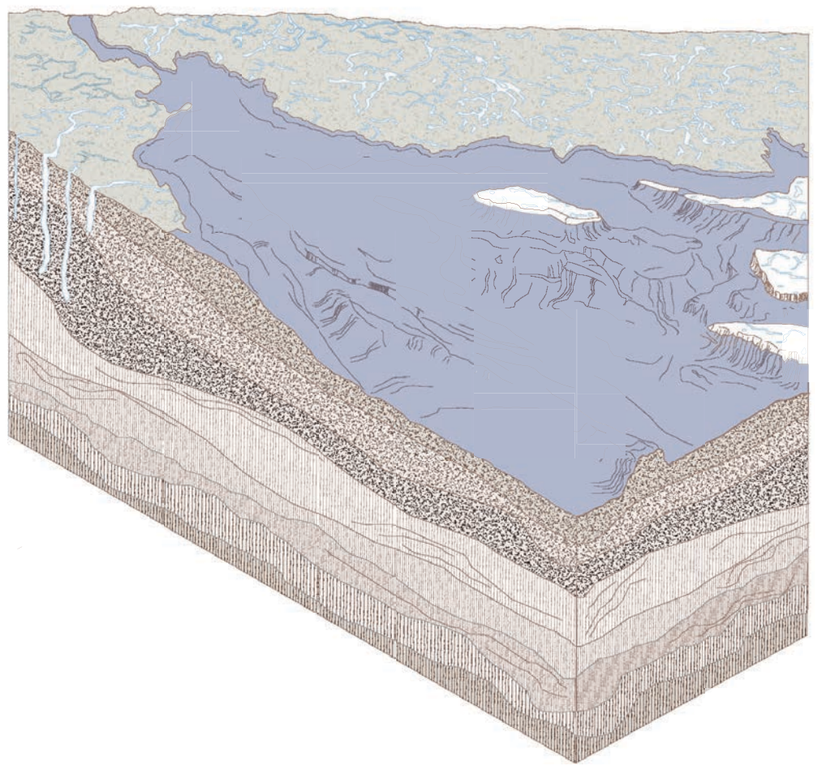


Figure 91, Author, “Life Cycle : 05 - ”, Drawing, 2022

The Creeks Begin to Break and Fall Through the Saturted Sediment and Bog

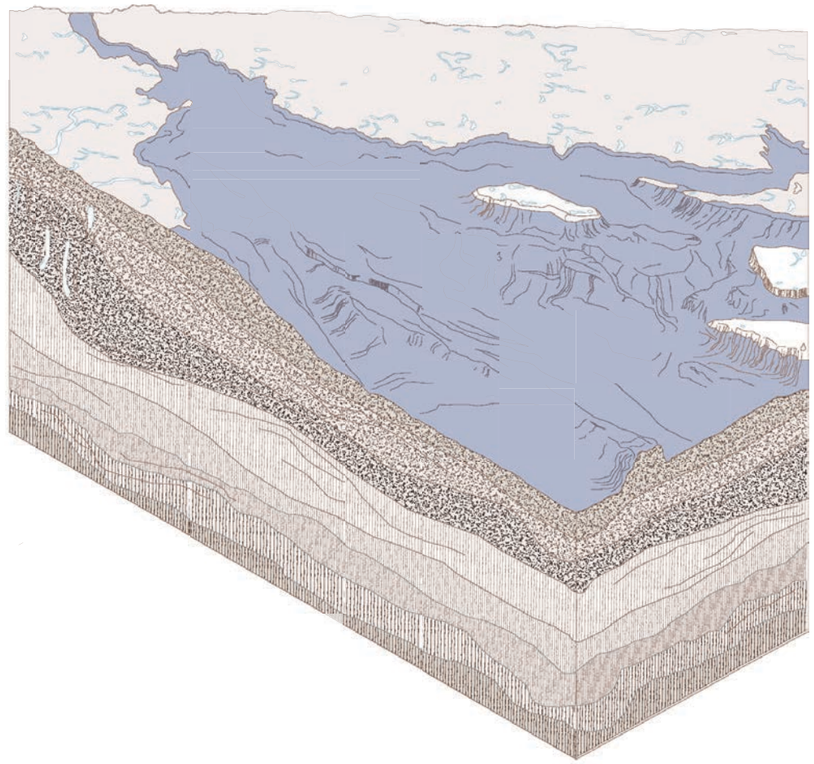


Figure 92, Author, “Life Cycle : 06”, Drawing, 2022

The Sediment is Captured by the Grassy Swards in the Mudflat and the River Begins to Close

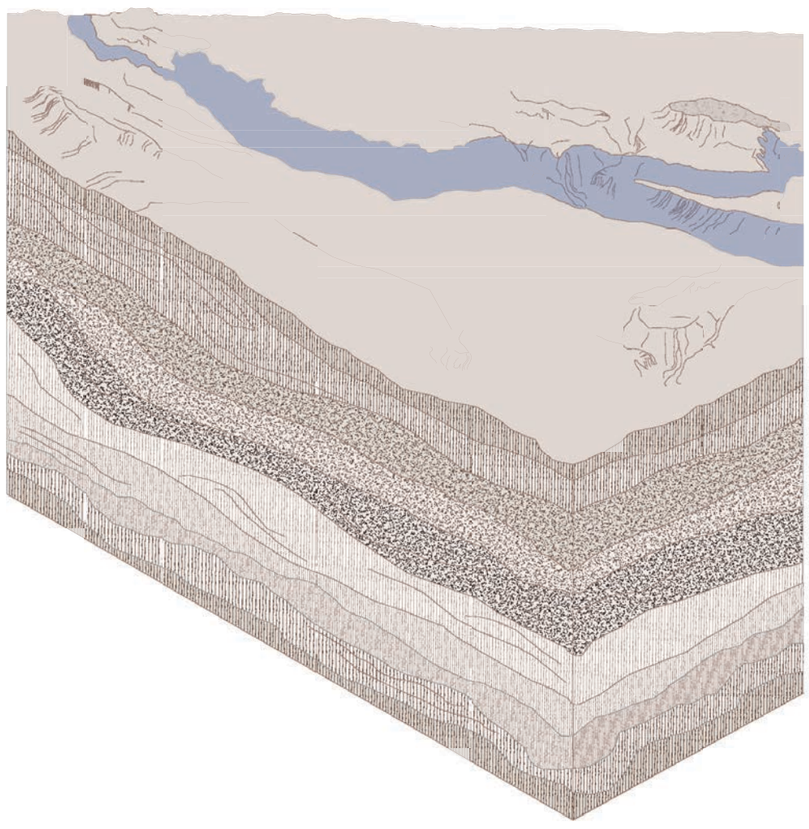


Figure 93, Author, “Life Cycle : 07 - ”, Drawing, 2022

The Cycle Turns a Full Cycle and the Blanket Bog Surface Returns

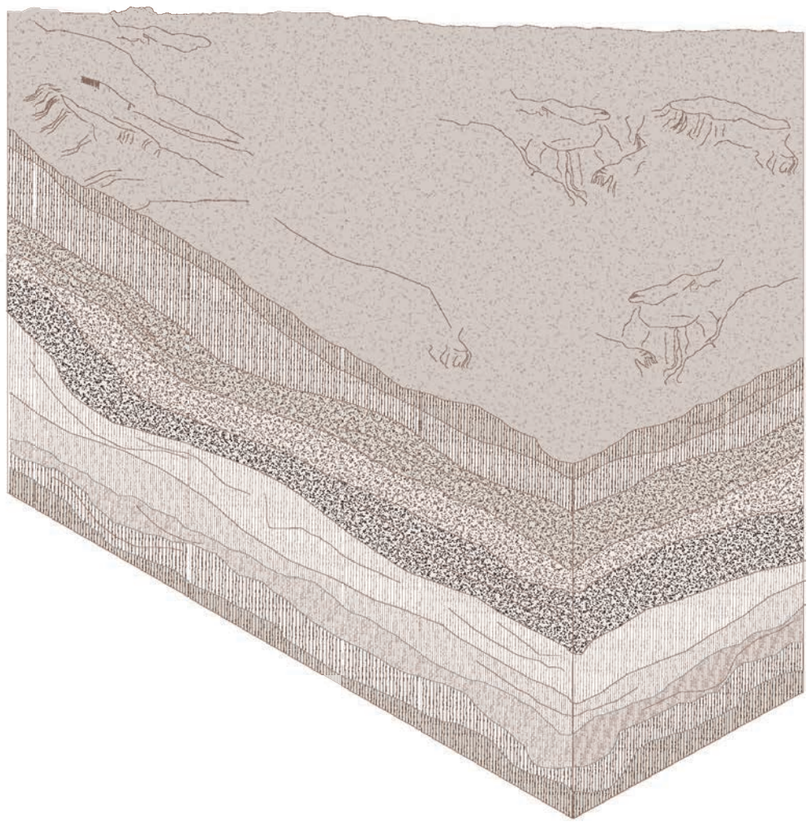
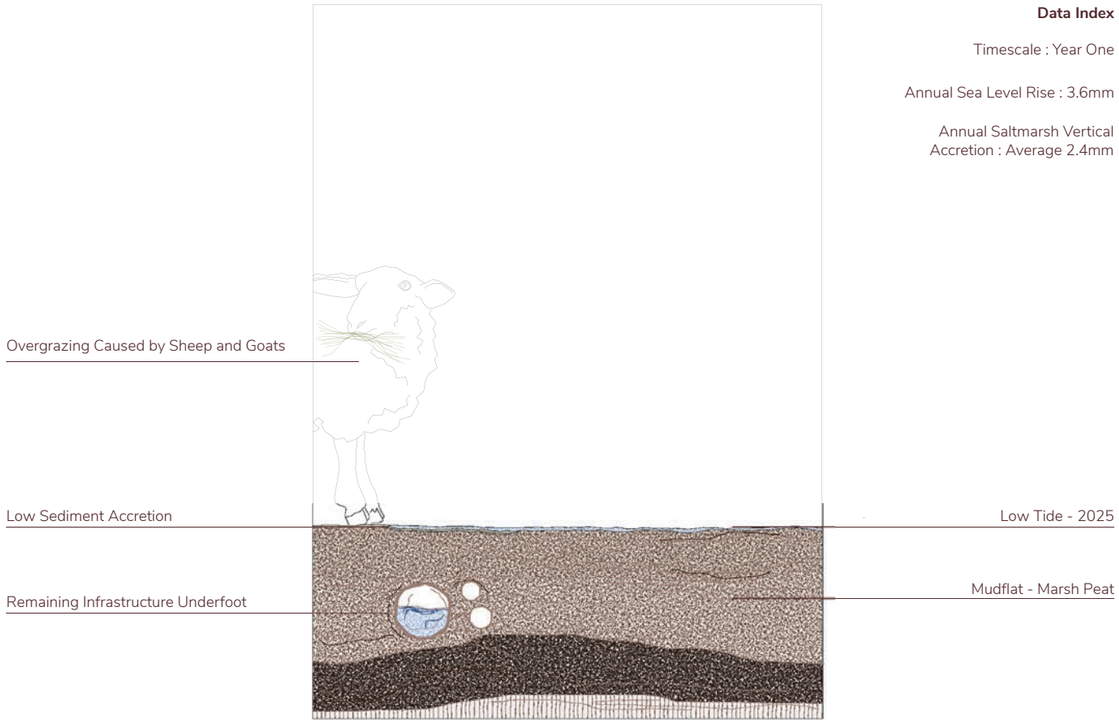


Figure 94, Author, “Life Cycle : 08”, Drawing, 2022



Data Index

Timescale : Year One

Annual Sea Level Rise : 3.6mm

Annual Saltmarsh Vertical Accretion : Average 2.4mm

Vertical Accretion Study

Figure 95, Author, "Vertical Accretion Study : Overgrazing ", Drawing, 2022
Figure 96, Author, "Grassy Swards Found in a Saltmarsh ", Watercolour, 2022

Currently Mulranny's saltmarshes are unable to vertically accrete sediment. They are in fact, vertically decreting. This is due to overgrazing by sheep and goats. Overgrazing has three detrimental effects. First, excessive pressure on the ground flattens it out. Secondly, grassy swards are eaten at all transition phases, meaning none of the plants can grow above 5 inches to catch or retain sediment dropped by rivers and the ocean during washes of high and low tide. Thirdly, the lack of grassy swards means no new peat or organic matter is made from the compression of decaying plants. This stalls the lifecycle and means no additional carbon can be sequestered other than what is currently stored.

Mulranny's saltmarshes lack of vertical accretion have made it vulnerable. As these saltmarshes are based on blanket bog, they are delicate and susceptible to breaking if permanently put under the pressure and weight of the ocean. Without an intervention in the near future rising sea levels of "3.6mm per year"[49] will raise low-tide above Mulranny's vertically decreting saltmarshes, causing a fibrous breakdown which would result in circa 40,000 years' worth of sequestered carbon being released back into the air.

49 Rebecca Lindsey, "Climate Change : Global Sea Level," Climate.gov, 2022, https://www.climate.gov/news-features/understanding-climate/climate-change-global-sea-level.

Figure 97. Author, “A Hermenutical Framework : Phase Five”, Drawing, 2022

Reflection on Action

The cultural and physical contexts of Mulranny are intrinsically linked. It’s “identity is quietly embedded in the land”.[50] As mediator between them, I cannot help but correlate future decarbonisation ambitions with infrastructural pursuits of the past. Through its DZ status Mulranny has been given an opportunity to turn the dusty cogs as it moves into an uncertain future. Perhaps in this new age, infrastructure can once again play a role, not a new widespread sweeping, but a reimagining of the existing fabric through the prevailing constructive-logic.

The infrastructural landscape of the tidal-pool seems to hold the answers. It contains landscapes of carbon sequestration and reports on the abiding culture of past and present times. Many community member’s hopes, aspirations and endeavours are connected to its pier, causeway and pumphouse through everyday livelihood acts such as “fishing, swimming, walking, sailing.”[51] However, these infrastructural pieces, as well as the landscapes, have fallen into disrepair.

Thus, the architectural project was found within the precarious circumstances which link the pier, the pumphouse and the causeway with the saltmarsh in the tidal-pool.

Therein lies the problem; “there is disorder in the house”.[52]

50 Manchán Magan, Listen to the Land Speak : A Journey into the Wisdom of What Lies beneath Us. (Gill & Macmillan, 2022).

51 Heritage Council, “Mulranny Village Design Statement,” 2015, https://www.mayo.ie/getmedia/2687bdf4-c8ff-4df4-89c6-e570f957decf/Mulranny_VillageDesignStatement.pdf.

52 Raoul Bunschoten, “The Skin of the Earth,” AA Files, no. 21 (1991): 55–59, http://www.jstor.org/stable/29543731.

Synthesis

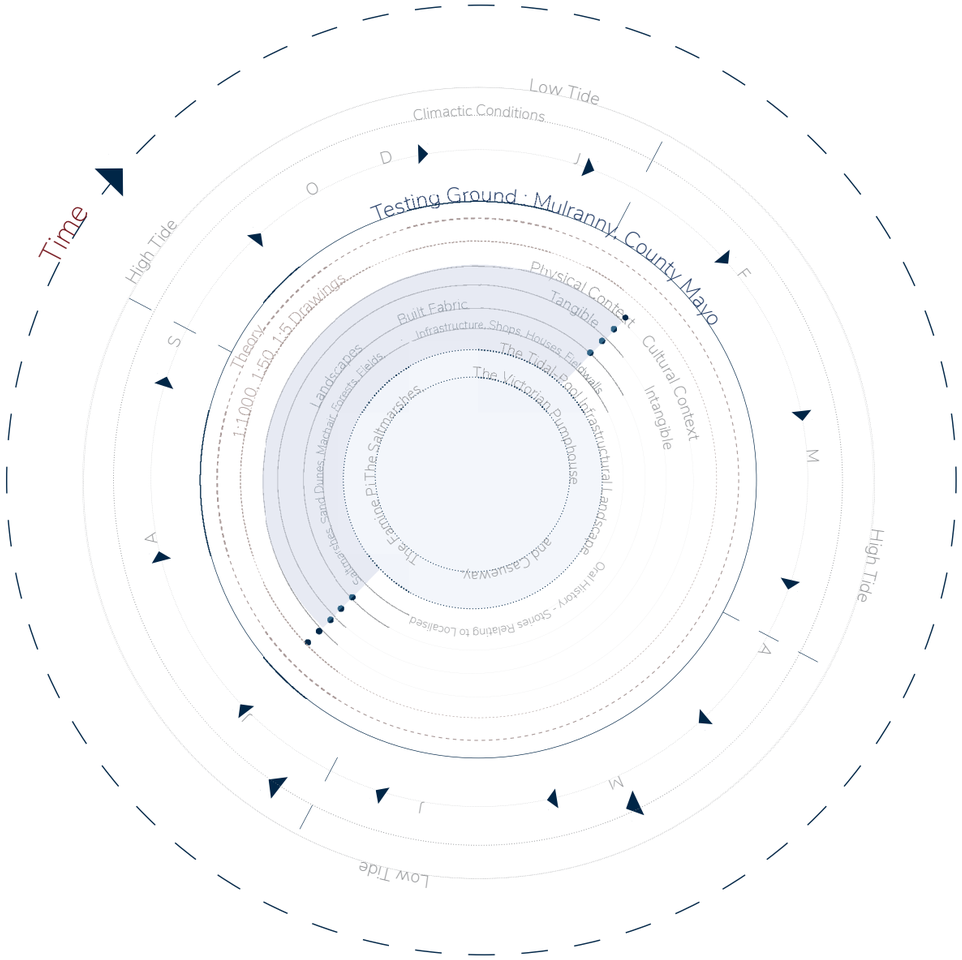


Figure 98. Author “A Hermenutical Framework : Phase Six”, Drawing, 2022

In Semester two and three a synthesis of the estranged infrastructural landscape within the tidal-pool was developed through orthographic plans, sections and elevations and axonometric drawings (isomeric, dimetric and trimetric projections). The drawings were used to propose discrete architectural interventions which respond to the research.

This stage saw ideas passed from site strategy through to detail and back again; the narrative of which is outlined below:

The Scale of 1:1000

This scale was used to develop a renewed site strategy for the tidal-pool; one which answers to the climactic conditions it is currently and increasingly “struggling to cope with”.[53]

Despite a seemingly clear reading from maps in which the infrastructural pieces of the tidal-pool appeared connected, site observations proved otherwise. In reality the fabric has become estranged. The infrastructural pieces which once formed a leisurely promenade seem to have gradually fallen away from one another both visually and functionally through lack of use, misuse and/or poor repair works which has resulted in no use.

Old photographs showing the cultural and physical relationship the pumphouse, the causeway and the pier once had with the landscape prompted a reimagining of the network to protect the saltmarshes against the rising tide.

This strategy sees the causeway playing the most significant role as it is located at the meeting point of the saltmarshes and the tide. Owing to its length, which stretches along the edge of the saltmarshes, the causeway could protect the landscape against the force of the waves and rising sea levels. The saltmarsh would then be able to vertically accrete and overtime, biodiversity would be restored to the site. These changes would result in the saltmarsh being granted the status of a nature reserve. The pier and the pumphouse would support this by culturally engaging with and further developing the renewed maritime environment.

53 Edwin McGreal, “Public Meeting for Those Affected by Storms,” The Mayo News, 2014, https://www.mayonews.ie/news/19199-public-meeting-for-those-affected-by-storms.

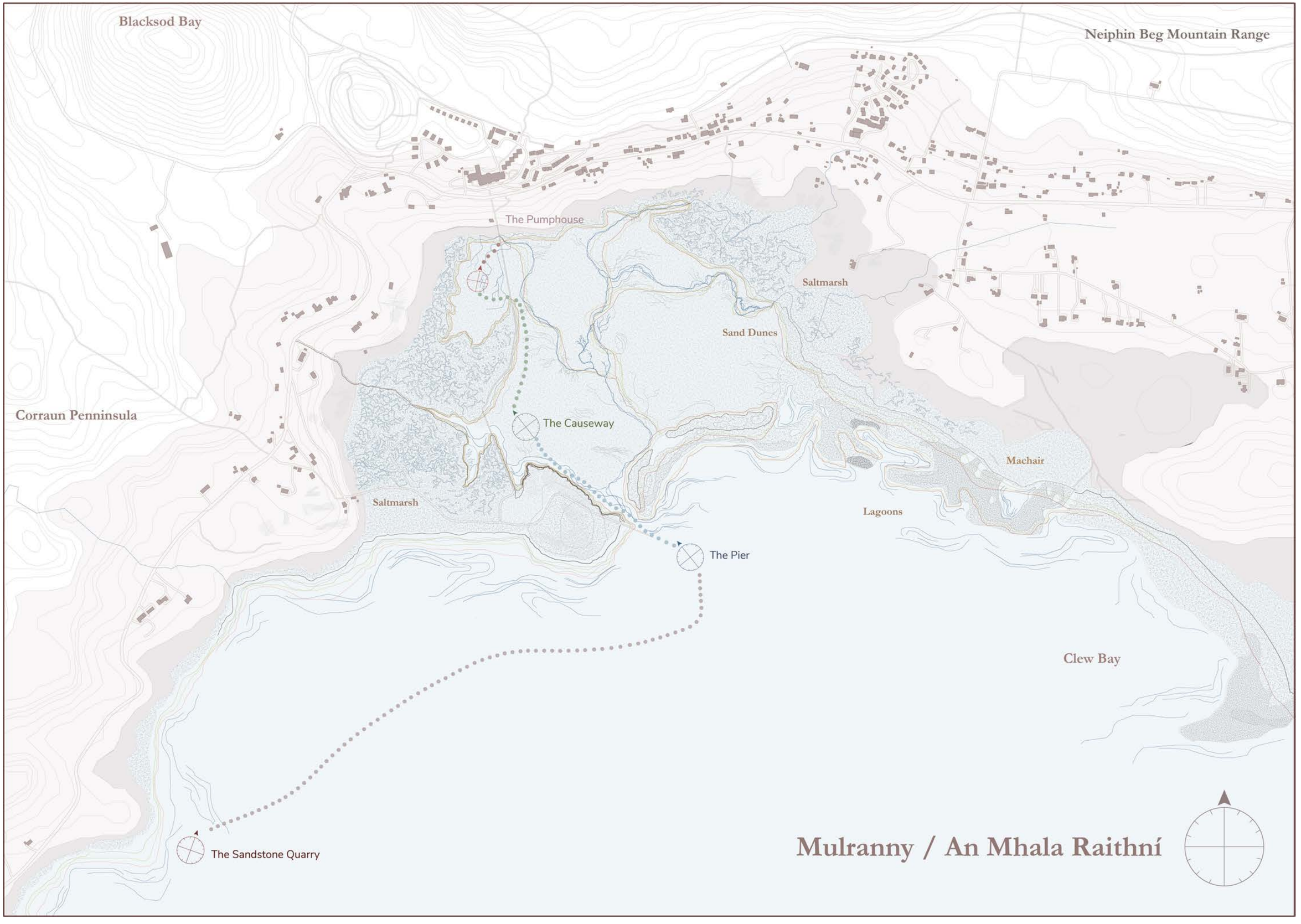


Figure 99, Author, “Tidal Pool Site Strategy”, Drawing, 2022

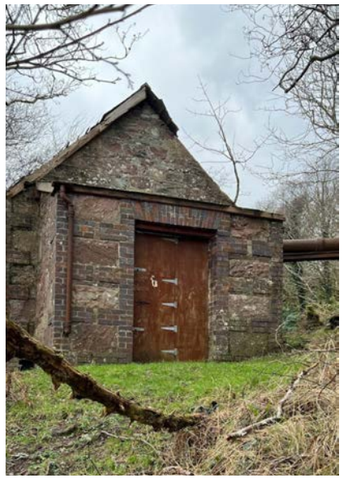
The Scale of 1:50

At this scale the pumphouse, the causeway, and the pier, which are complexly authored between specification documents and localised construction-logic, were independently studied. Subsequent architectural interventions were proposed which feed into the site strategy.

The Pumphouse

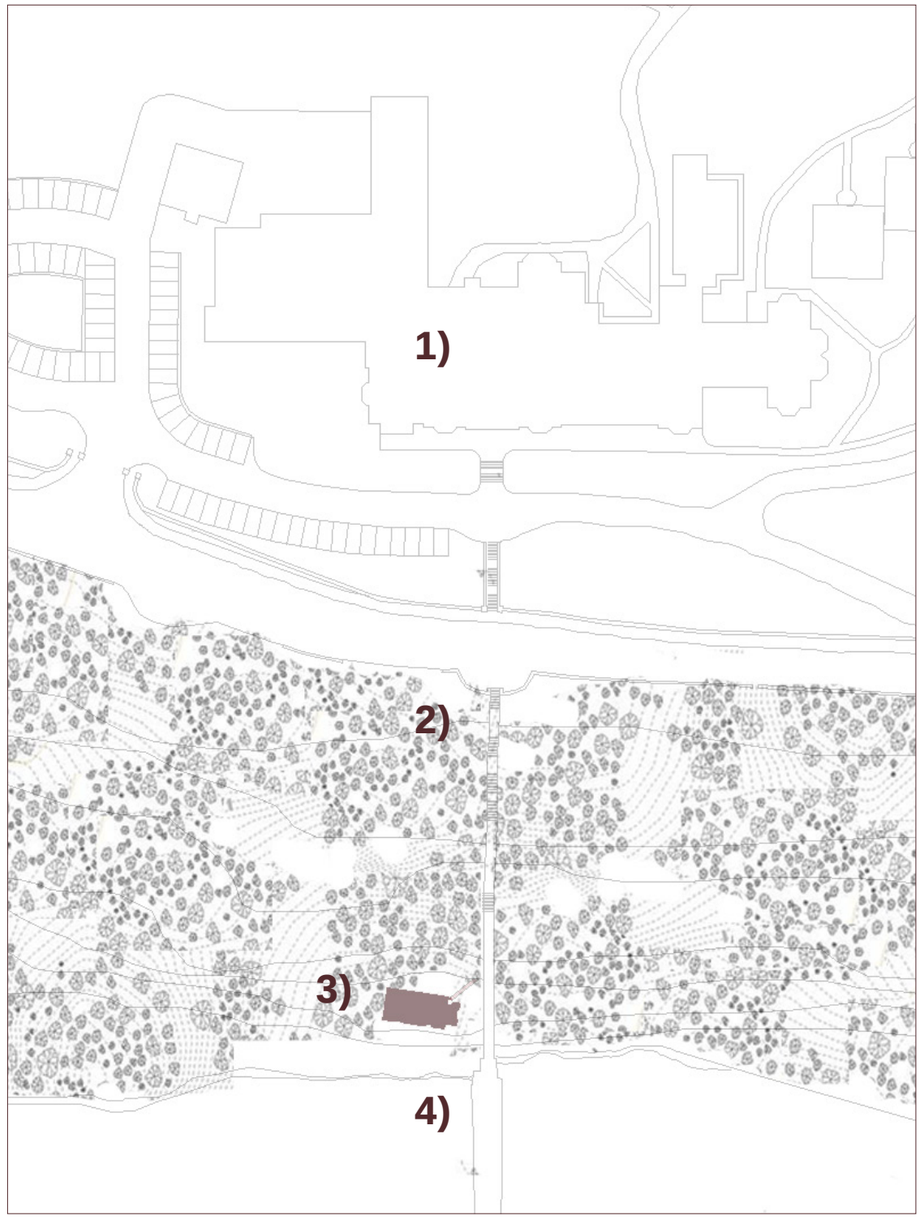
The Pumphouse is a brick, rubble and hewn stone Victorian engine house located in Mulranny forest which was purposefully built to pump seawater to the ‘Fuschia Swimming Pool’ at the Great Southern Hotel.

The pumphouse has been abandoned since the 1950’s. Recently, planning applications were lodged which would see it shapeshift into a private residence, a café and an art school. Each application fell flat at the first hurdle. They were refused as the proposed works would damage the integrity of the original fabric. Consequently, the pumphouse awaits an appropriate function.



Figures 100, 101, 102, Author, “The Victorian Pumphouse”, Photogaphs, 2022

Figure 103, Author, “The Victorian Pumphouse Prominent Position in the Tidal Pool”, Drawing, 2022



Historial Network

1) The Great Southern Hotel, 2) Stairs Descending to Tidal Pool, 3) Pumphouse, 4) Causeway

Figure 104, Author, “The Victorian Pumphouse Connection to the Hotel and Causeway”, Drawing, 2022

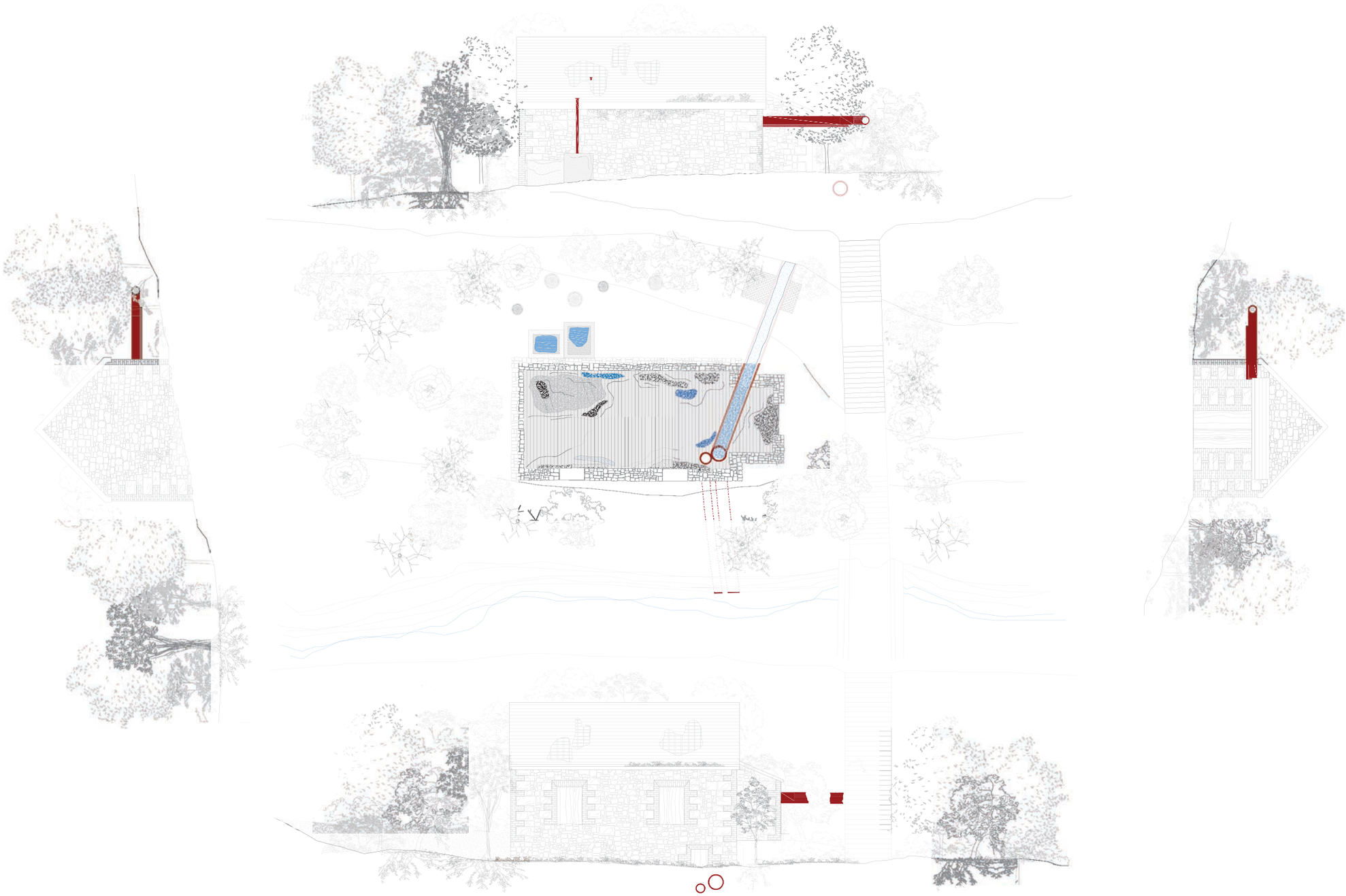


Figure 105, Author, “The Victorian Pumphouse Survey Unfolded”, Drawing, 2022

Birch Tree

Alder Tree

Oak Tree

Figures 106, 107, 108, Author, “Mulranny Forest”, Photographs, 2022

There are two types in Mulranny, downy birch and silver birch. It was once used to make walkways among the boglands. Birch will grow in poor soils, but likes a sunny position. Downy birch is tolerant of wet sites, but silver birch needs good drainage. Birch woods occur widely, especially on marginal soils, such as lake edges.

One of Ireland's most traditional and widely distributed trees, alders are found in damp areas. In Mulranny they can be found at the edge of the tidal pool. They may have been planted here as their strong fibrous roots could help to keep the sloped bank in position

The traditional Irish oak is the sessile oak. It is the predominant oak species to be found in Ireland's woodlands. In Mulranny sessile oak is commonly found in patches where poor acidic soils occur along the hilly regions on the edge of the tidal pool.

In line with the saltmarsh receiving a nature reserve status, a base would be required. This reserve base could operate from the pumphouse, once again strengthening its technological connection with the tidal-pool.

The base would have a dual function; a shelter for visitors and a garden for the collection, conservation and protection of plant life. Combining these functions answers the County Council and Scientific Institutes call for a low-maintenance educational facility which reports directly to the saltmarsh.

The shelter would be actively used by people avoiding frequent spells of bad weather and during occupation the garden could be passively observed. The openness and accessibility would engage the community with the saltmarsh by educating visitors on the environmental challenges faced by the coastline and efforts being made to protect it.

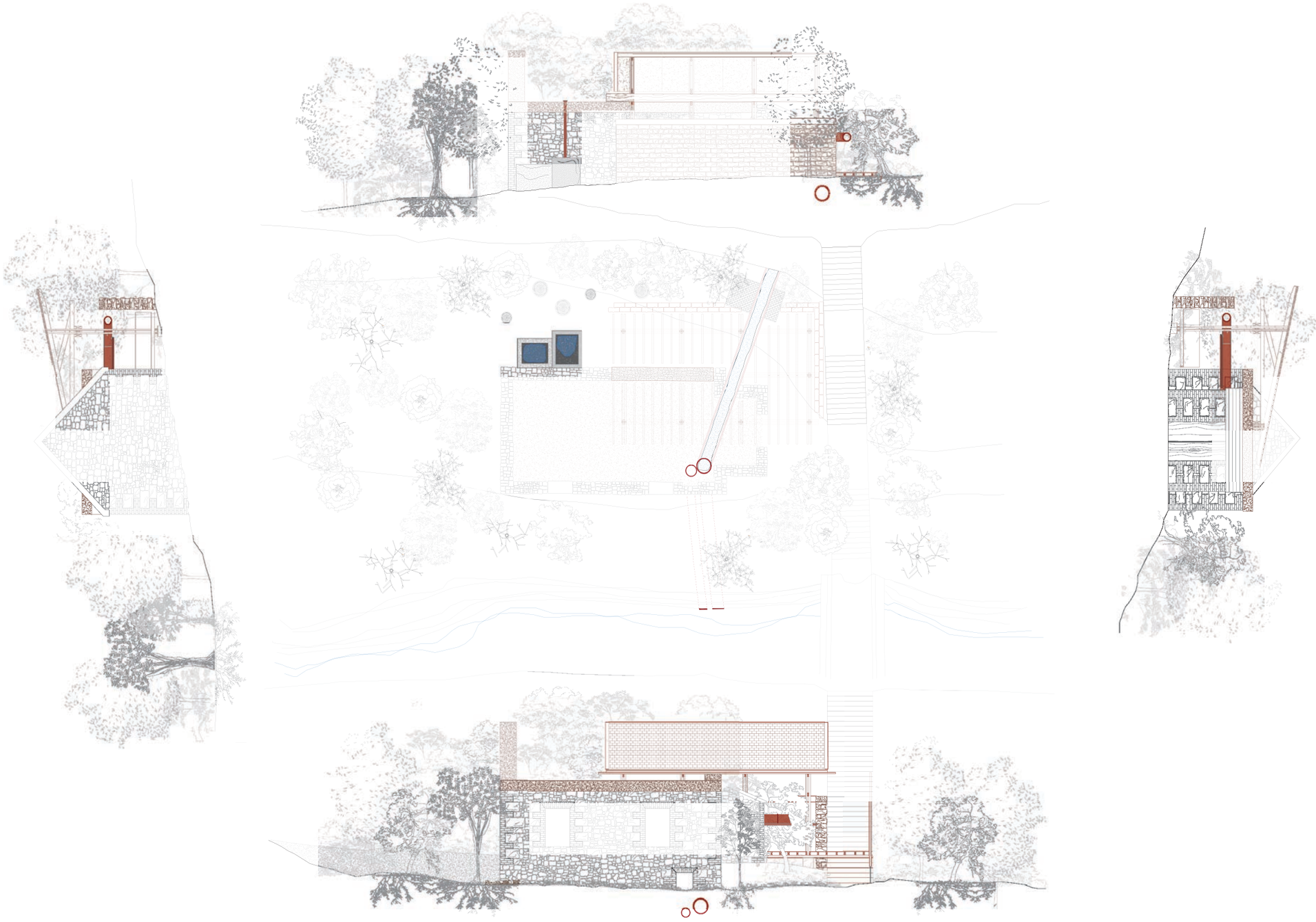


Figure 109, Author, “Unfolded New Timber Structure to Shelter People and Biodiversity”, Drawing, 2022

The proposed construction system of the pumphouse would support this dual function as the damaged suspended timber floor at ground level which is elevated above a grassy floor that previously stored pipelines running into the tidal-pool needs to be replaced or reimagined.

A reimagining is safer as the structural integrity of the pumphouse is unknown. In addition, the species of tree's present in the forest, birch and alder, suggest the forest floor may be soft and unreliable. Therefore, a new timber structure which is 'hollowgrammed' back to open up the grassy floor and preserve the reading of the pumphouse being the dominant structure facing into the tidal-pool is proposed.

Stepping back the structure ensures no new loads are placed on the old fabric and the structural integrity of the existing foundations are not compromised. The latter is achieved through the proposed pile foundations being auger drilled "at 45 degrees to the original foundation at a distance of at least the width of the existing foundation".[54]These moves adopt the logic of a specification document, they are based on general construction.

In keeping with localized constructive-logic, site specific details which react to climate and culture are proposed. They consist of concrete barges which prevent stones from falling from the top of exposed gable walls, weighted sash screens to avoid any sudden wind bursts causing damage to hinges, sidesaddled covers to prevent uplift of slates, timber conglomerate posts made from the thin members available owing to the short supply of wood, a timber braced suspended floor to prevent slouching and bounce, a truss system fitted into the conglomerate posts, boards for the slates to be fixed into to prevent rattling, plastered roofing nails to infill extra space in the original slates formed from wriggling of previous fixings and rainwater goods and collection points which benefit the gardens.

54 Vijayaraja, "Footing Near Existing Adjacent Footing," Build Civil, 2013, https://buildcivil.wordpress.com/2013/11/04/footing-near-existing-adjacent-footing/.

The Causeway and Bridge

The Victorian rubble stone causeway which runs the length of the tidal-pool includes a cast-in-situ concrete frame bridge at the ¾ point. Both were constructed with the Great Southern Hotel and Railway system and were used for promenading.

Recently the causeway surface has been problematic for two reasons.

First, during high-tide the causeway is often covered, making it inaccessible for roughly 12 hours a day.

Secondly, circa 2015 ‘repair works’ were carried out whereby a green carpet of moss was carelessly covered with limestone pebbles. As high-tide withdraws these pebbles are picked-up and are deposited in waterways, trapping schools of fish travelling downstream.

Figure 110, Author, “Mulranny Tidal Pool Causeway and Bridge”, Photograph, 2022

Figure 111, 112, Author, “Mulranny Tidal Pool Causeway and Bridge”, Photographs, 2022

Figure 113, 114, Author, “Low Tide”, Photographs, 2022

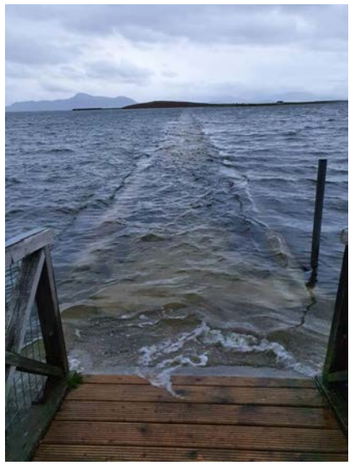


Figure 115, 116, Author, “High Tide and Spring Tide”, Photographs, 2022

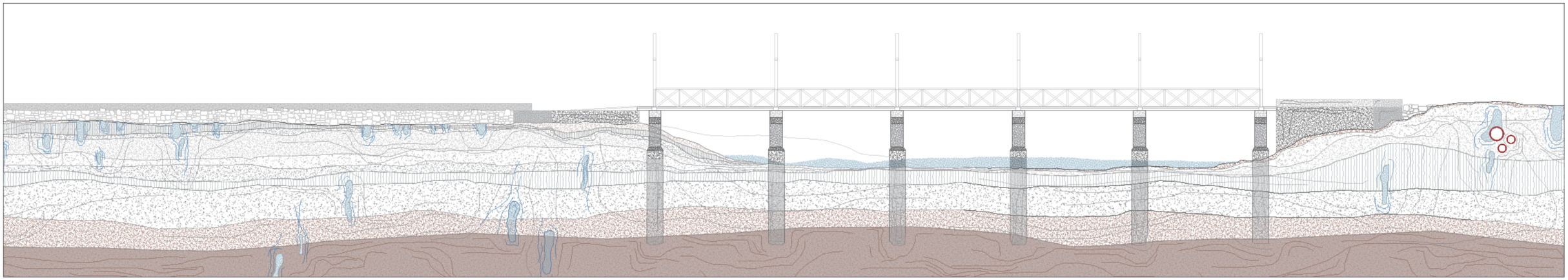


Figure 117, Author, “Mulranny Causeway and Bridge Elevation”, Drawing, 2022

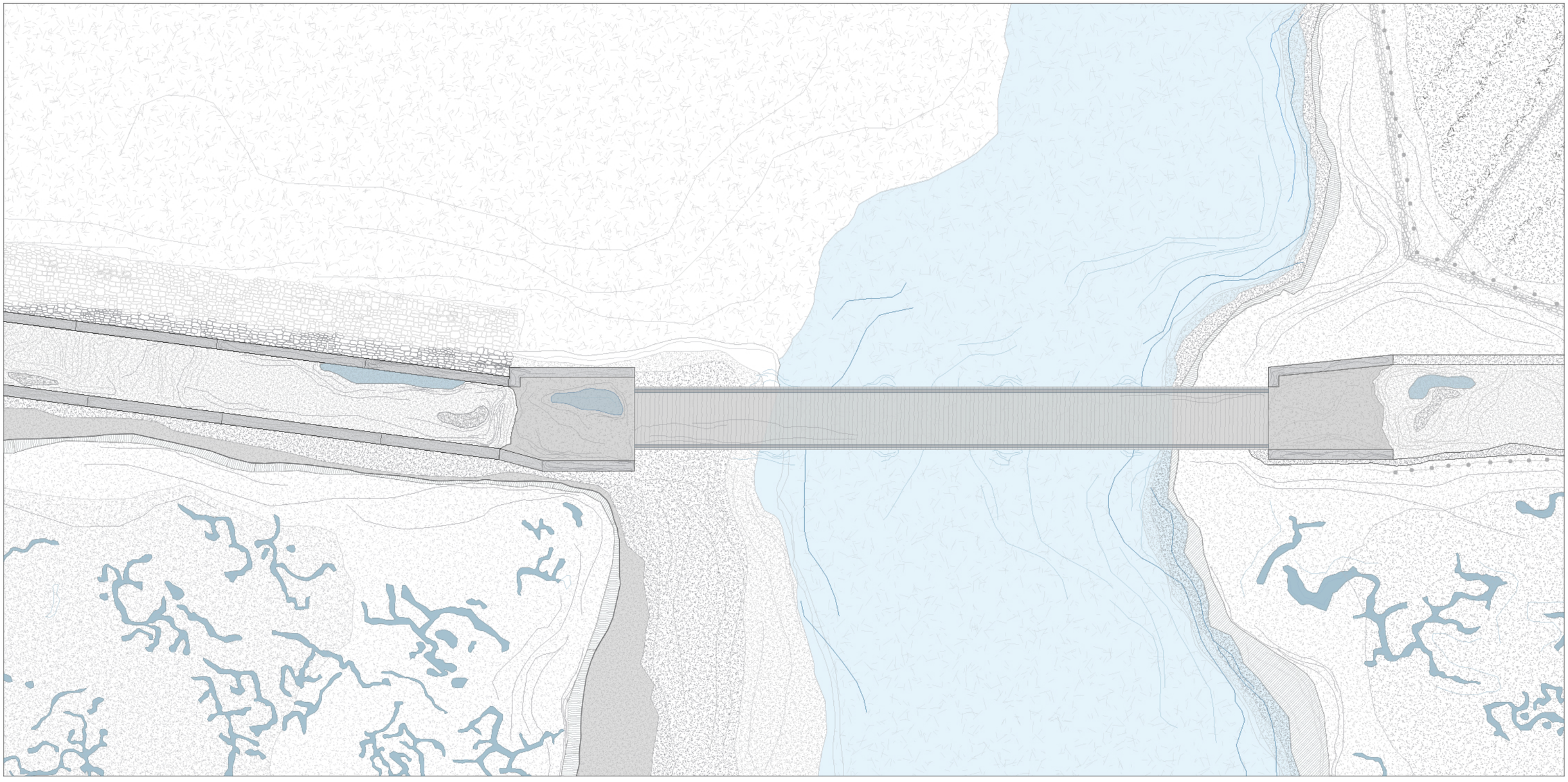


Figure 118, Author, “Mulranny Causeway and Bridge Plan”, Drawing, 2022

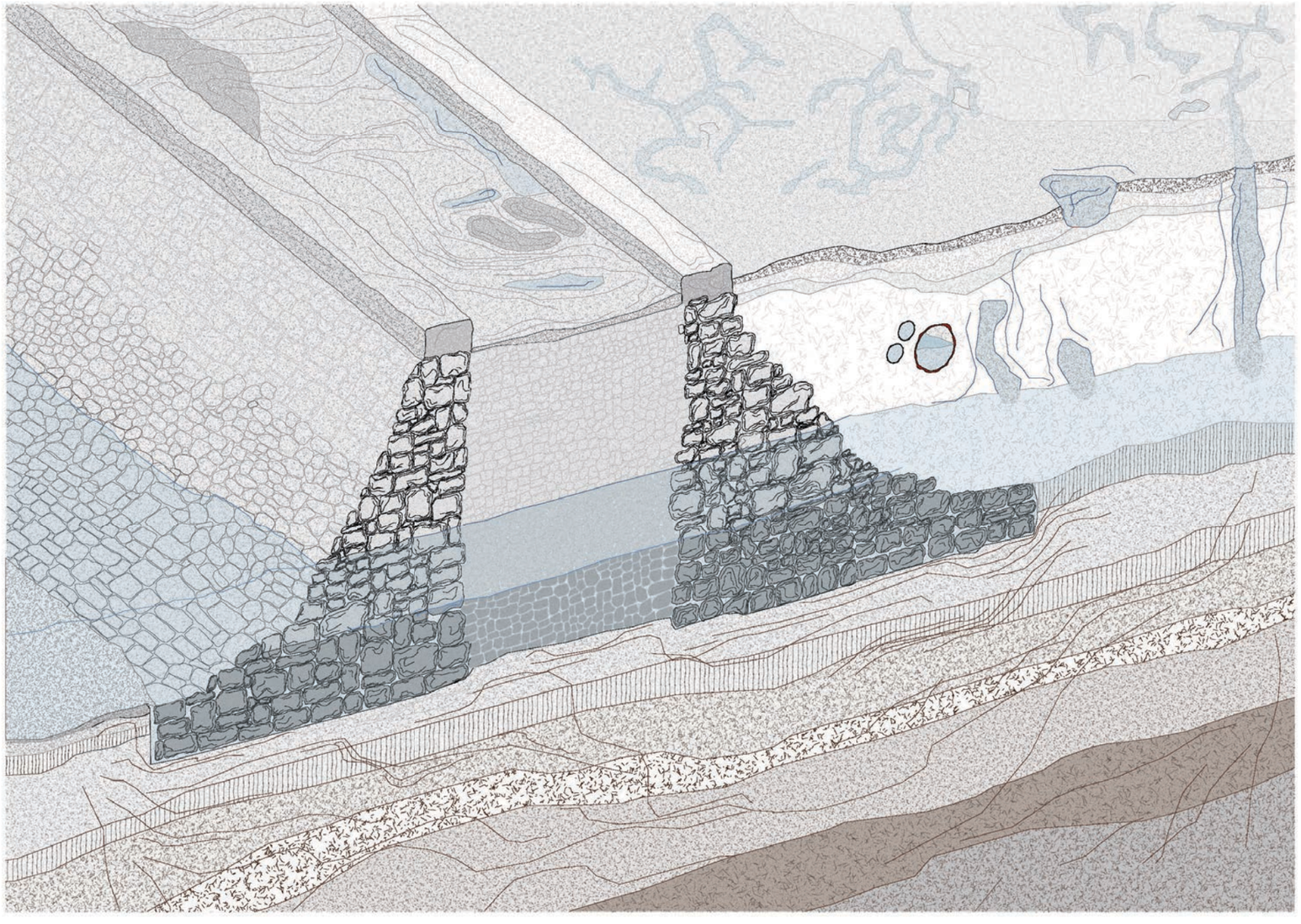


Figure 119, Author, “Mulranny Causeway Axonometric Study”, Drawing, 2022

Figure 120, Author, “Mulranny Causeway Between the Tidal Pool and Saltmarsh”, Photograph, 2022

Before any architectural proposal was made to the causeway its role was reconsidered. As alluded to by the site strategy, the causeway may have another significant role; the protection of the saltmarsh.

With rising sea levels time must be afforded to Mulranny’s decreting saltmarshes. Discrete interventions to the causeway and bridge could “bend time”[55] by accelerating the collection of sediment within the saltmarsh and decelerating low tide’s covering of the landscape, thereby preventing the fibrous breakdown of the marsh.

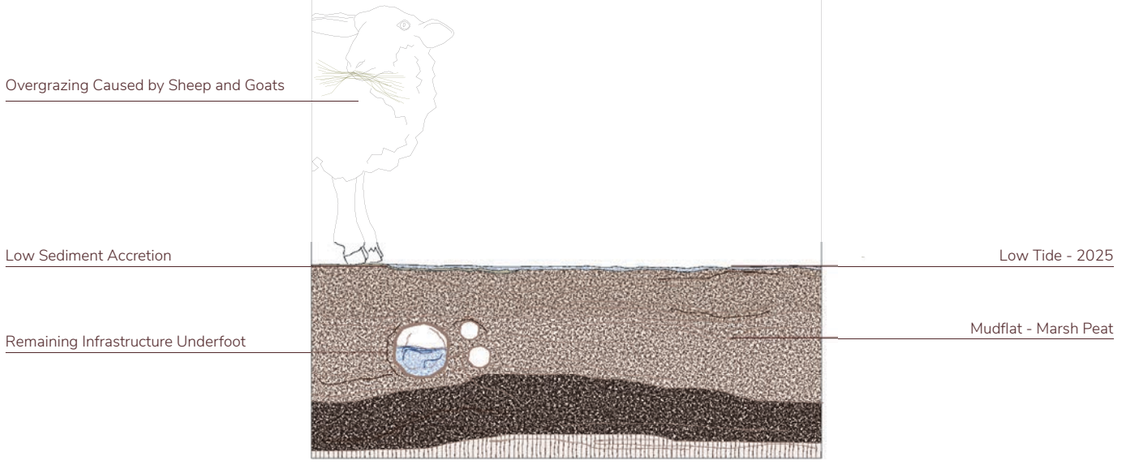
55 Brett Milligan, “Accelerated and Decelerated Landscapes On the Techniques, Knowledges, and Ethics of Bending Time.,” Places Journal, 2022, https://placesjournal.org/article/accelerated-and-decelerated-landscapes/?cn-reloaded=1.

Data Index

Timescale : Year One

Annual Sea Level Rise : 3.6mm

Annual Saltmarsh Vertical
Accretion : Average 2.4mm



Vertical Accretion Study

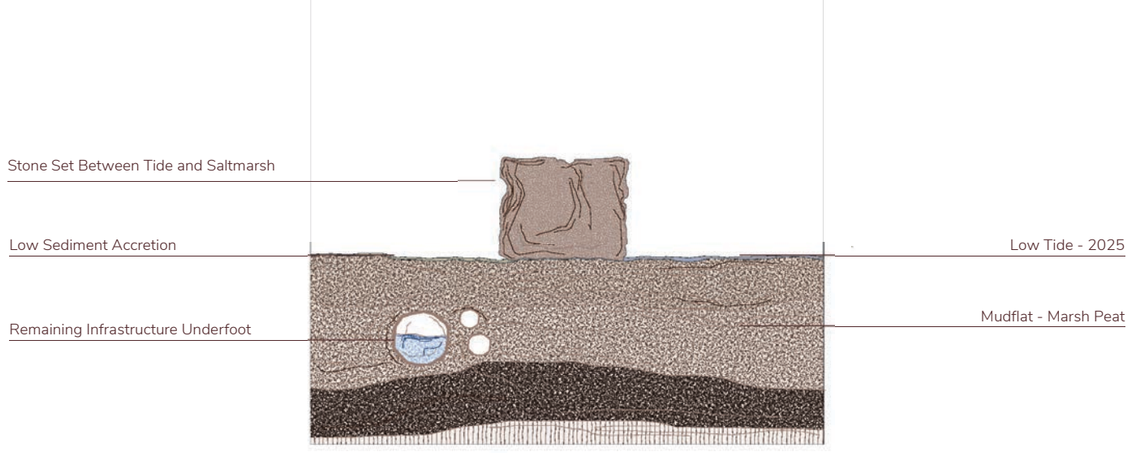
Figure 121, Author, “Vertical Accretion Study : 01 (Year 01), Drawing, 2022

Data Index

Timescale : Year One

Annual Sea Level Rise : 3.6mm

Annual Saltmarsh Vertical
Accretion : Average 2.4mm



Vertical Accretion Study

Figure 122, Author, “Vertical Accretion Study : 02 (Year 01)”, Drawing, 2022

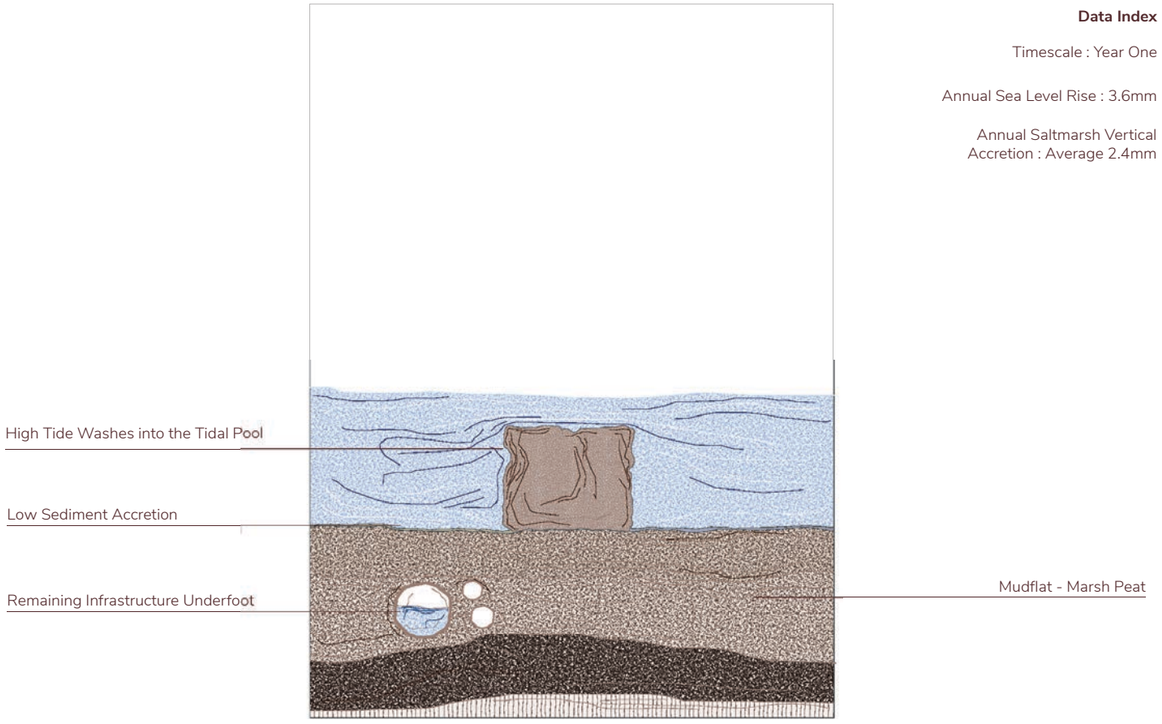


Figure 123, Author, “Vertical Accretion Study : 03 (Year 01)”, Drawing, 2022

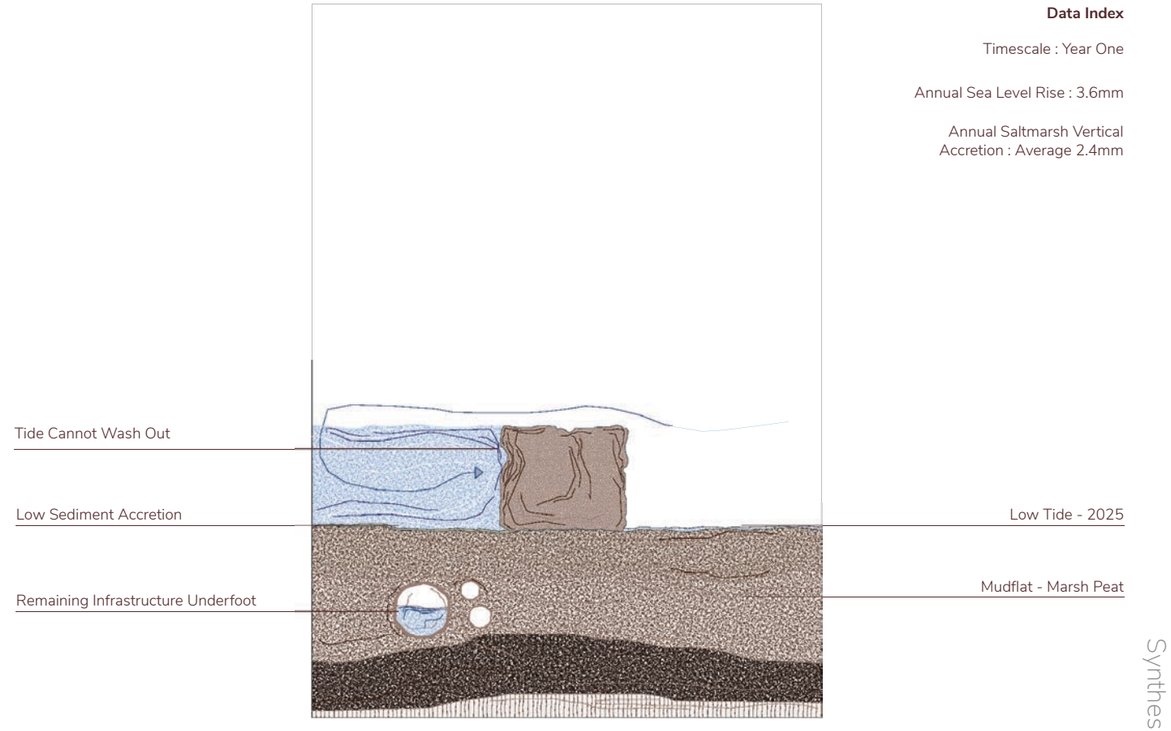
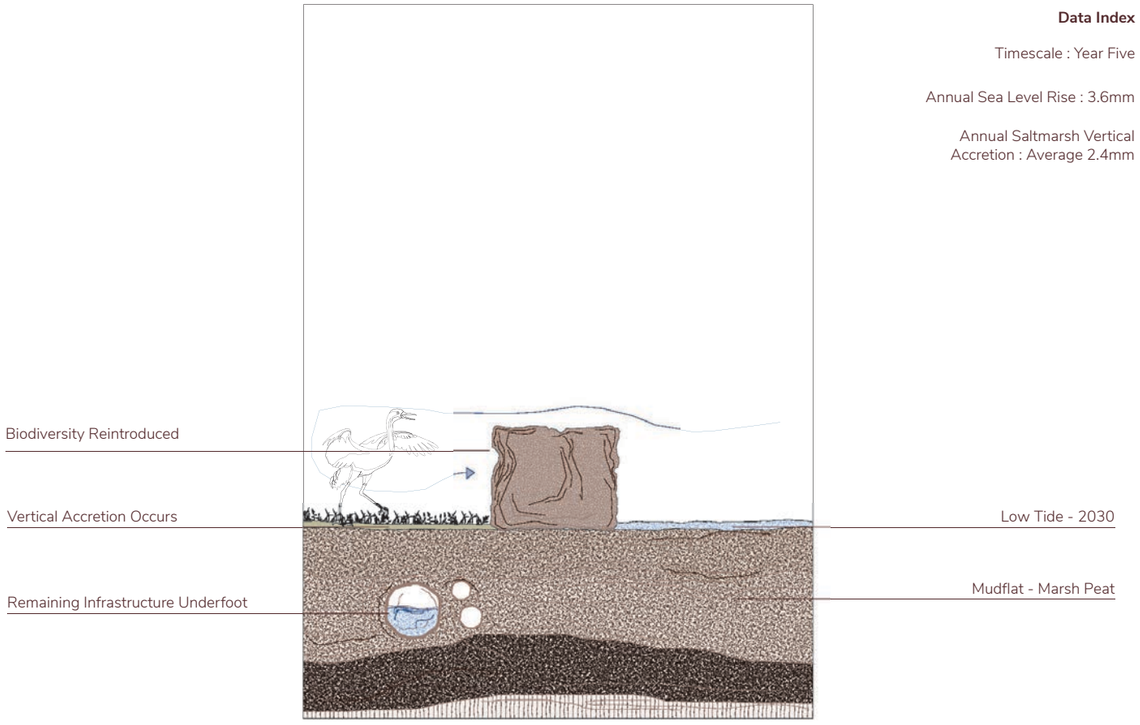


Figure 124, Author, “Vertical Accretion Study : 04 (Year 01)”, Drawing, 2022



Data Index

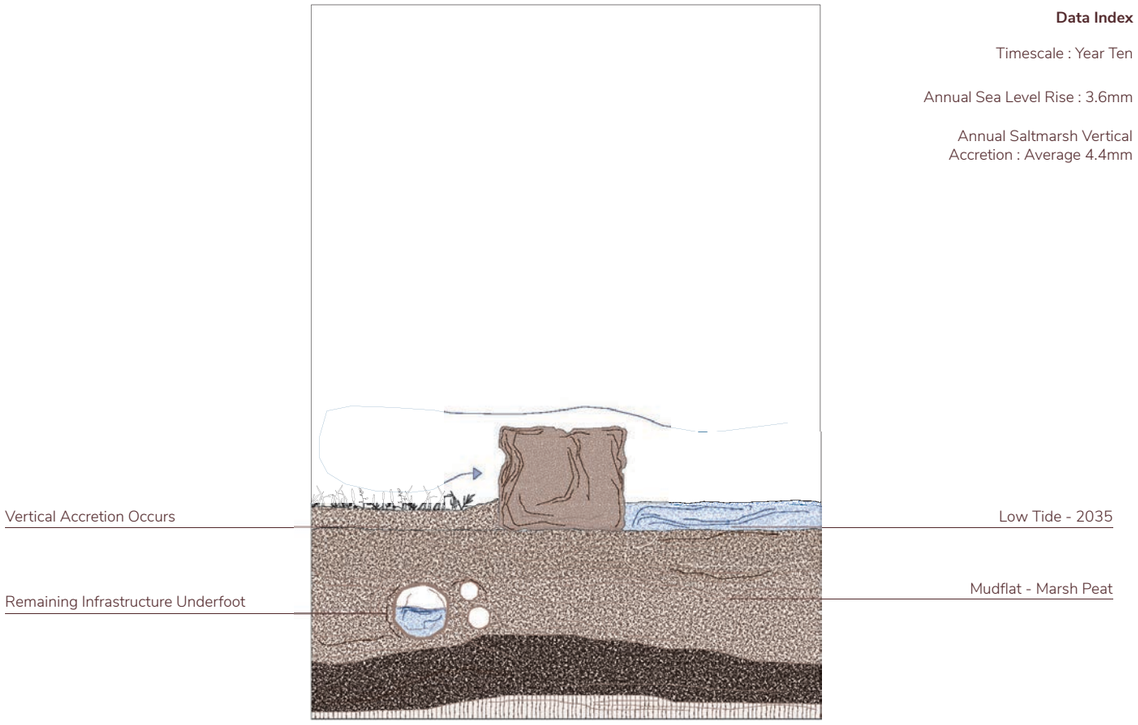
Timescale : Year Five

Annual Sea Level Rise : 3.6mm

Annual Saltmarsh Vertical Accretion : Average 2.4mm

Vertical Accretion Study

Figure 125, Author, “Vertical Accretion Study : 05 (Year 05)”, Drawing, 2022



Data Index

Timescale : Year Ten

Annual Sea Level Rise : 3.6mm

Annual Saltmarsh Vertical Accretion : Average 4.4mm

Vertical Accretion Study

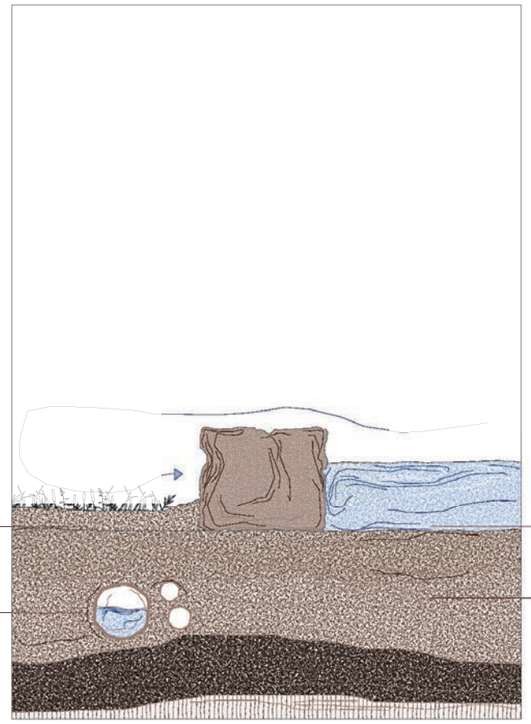
Figure 126, Author, “Vertical Accretion Study : 06 (Year 15)”, Drawing, 2022

Data Index

Timescale : Year Fifteen

Annual Sea Level Rise : 3.6mm

Annual Saltmarsh Vertical Accretion : Average 4.4mm



Vertical Accretion Study

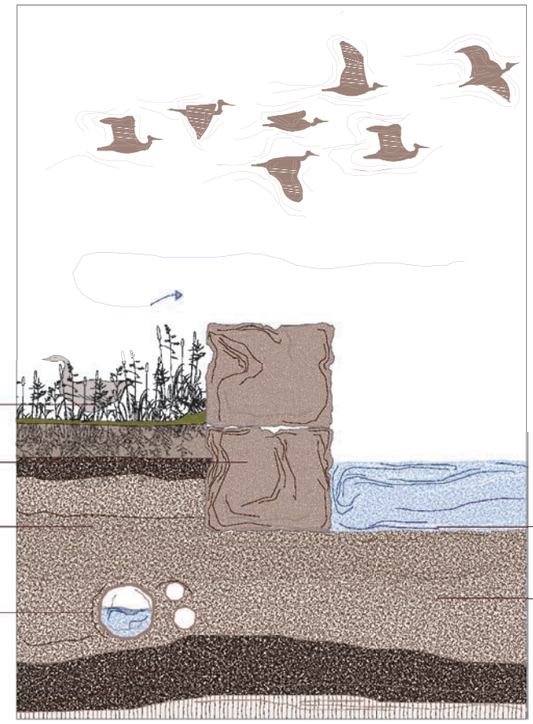
Figure 127, Author, “Vertical Accretion Study : 07 (Year 15)”, Drawing, 2022

Data Index

Timescale : Year Twenty

Annual Sea Level Rise : 3.6mm

Annual Saltmarsh Vertical Accretion : Average 7.4mm



Vertical Accretion Study

Figure 128, Author, “Vertical Accretion Study : 08 (Year 20)”, Drawing, 2022

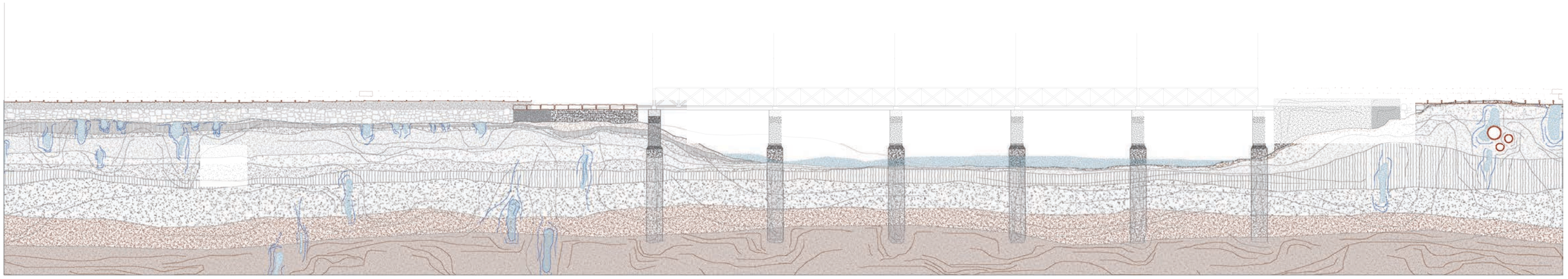


Figure 129, Author, “Raising the Causeway Sides Elevation Study”, Drawing, 2022

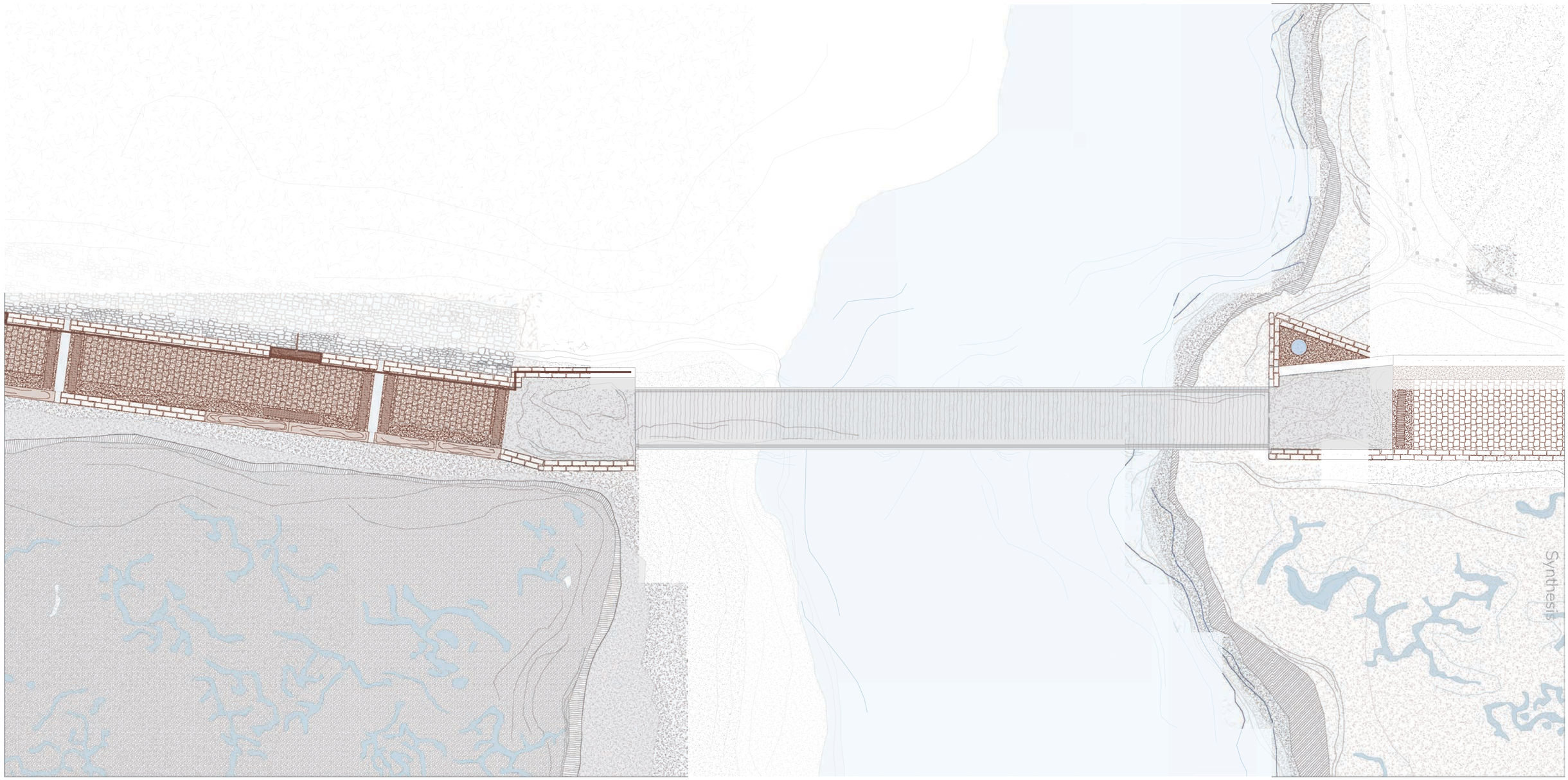
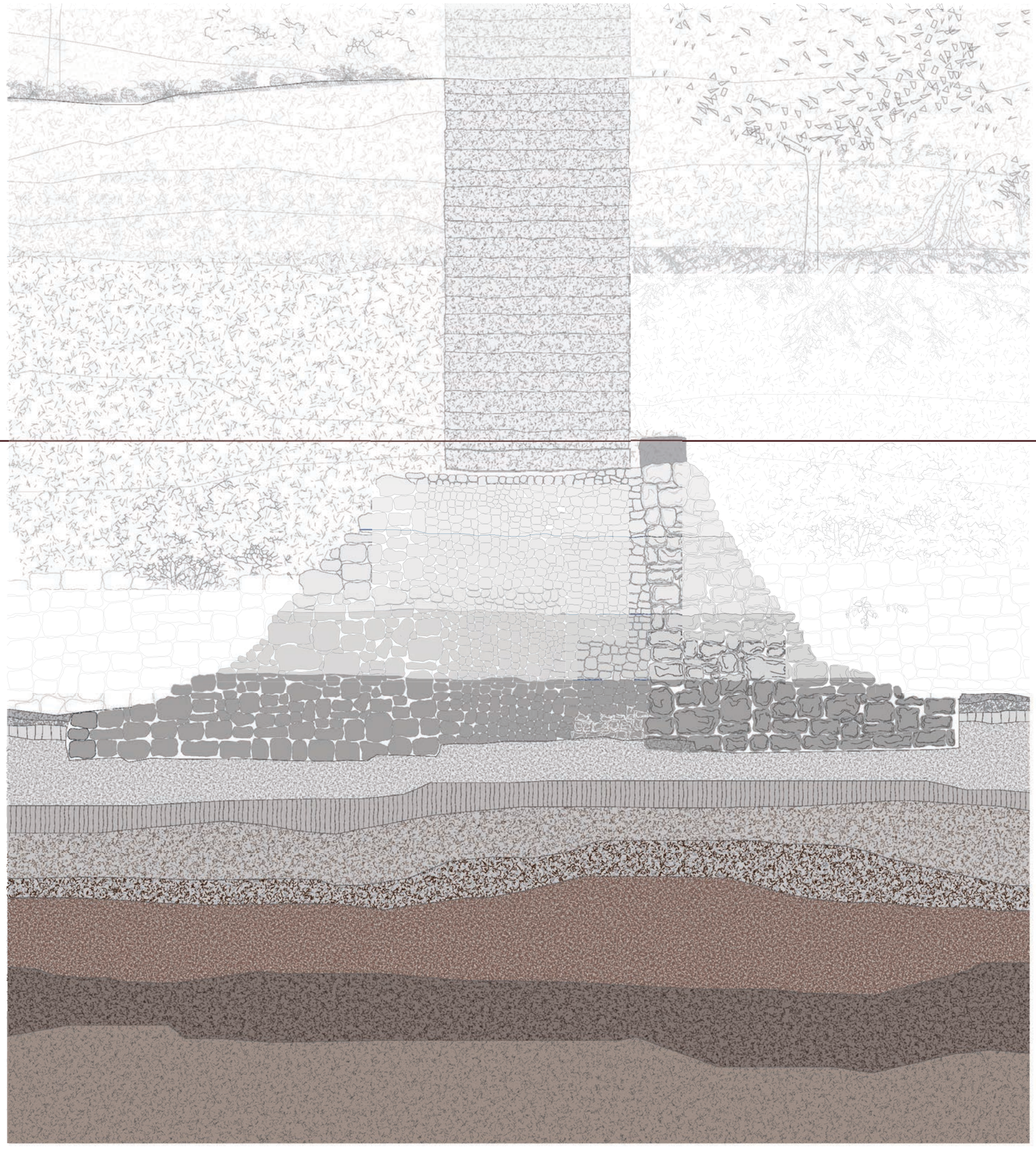


Figure 130, Author, “Raising the Causeway Level with Flagstones, Cobbelstones and Hewn Stone”, Drawing, 2022

These interventions include:

Raising the causeway surface to alleviate high-tide flooding, accommodate vertical accretion and make the causeway permanently accessible. The original stone construction of the causeway would allow some water to creep through the crevices, making brackish water within the creeks for the saltmarsh to thrive on, forming the soundings of “súitú.”[56]

56 Manchán Magan, “Focail Farraige & Sea Terms - John Twin McNamara,” Manchán Magan, n.d., https://www.manchan.com/sea-tamagotchi---achill-island.
“Súitú (Suet-two) - The sound of large waves pulling pebbles, then rolling theback in.”


New Surface Level :
Raised by 350mm

These interventions include:

The addition of a framed flap sluice gate which responds to water weight, velocity and pressure coupled with groundwork consisting of stone channels. This would form a mediation point between the saltmarsh and the tide. During low-tide the velocity of the river flowing into the saltmarsh would push the flap gate open. Sediment carried by the river would be deposited within the saltmarsh, raising it above the level of low-tide. As the tide begins to ebb and flow and the intertidal zone grows towards high-tide within the tidal-pool, the weight of the water forces the flap gate shut to avoid flooding the saltmarsh.

As these interventions are detail-oriented, they will be discussed further at the scale of 1:5.

Flap Sluice Gate
- Piled concrete frame 30 degrees down from the old bridge foundation distanced at the width of the foundation away to

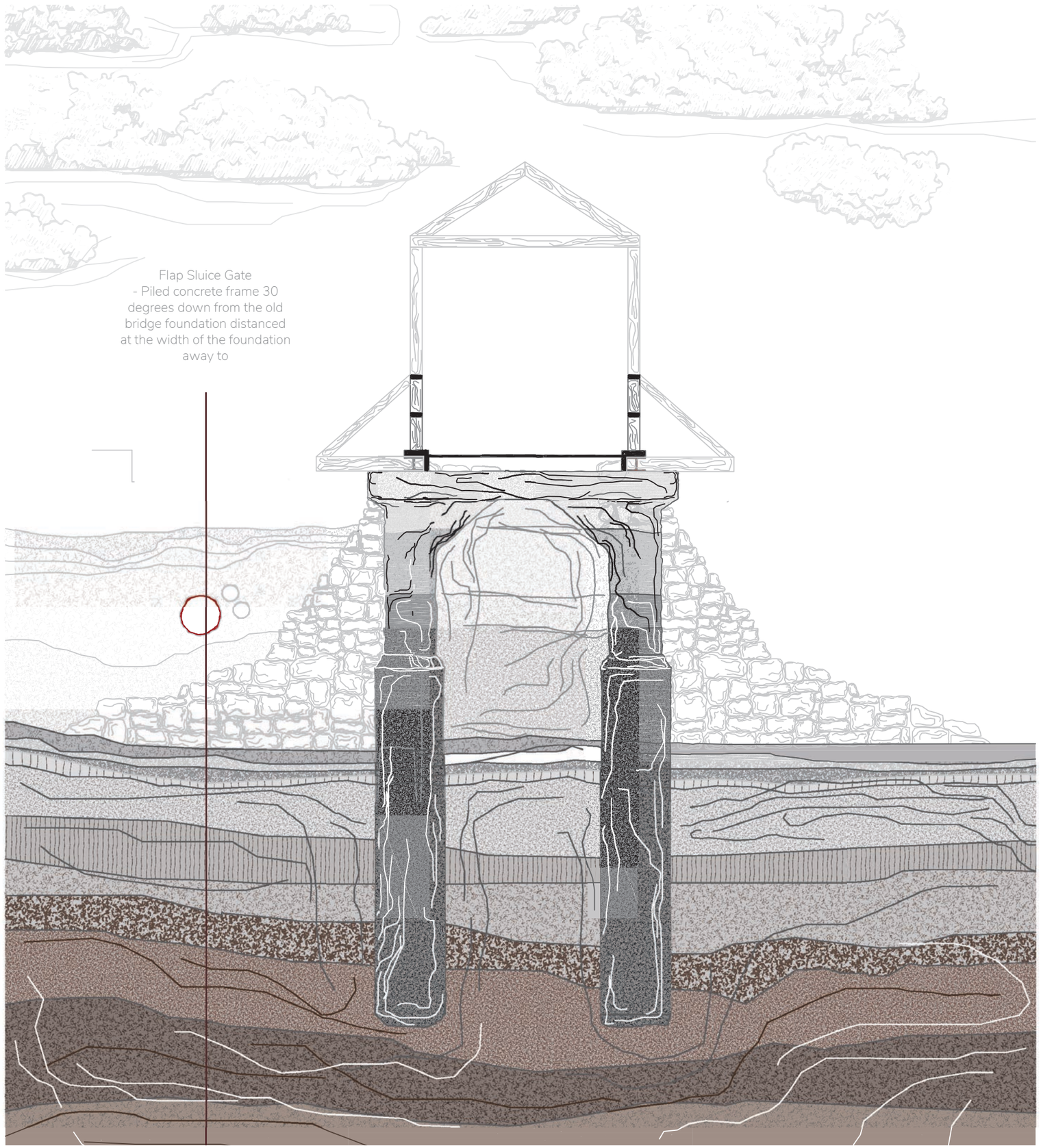


Figure 131(a) : River water rushes out of the Saltmarsh into the tidal pool. The velocity of the water pushes the gate open.

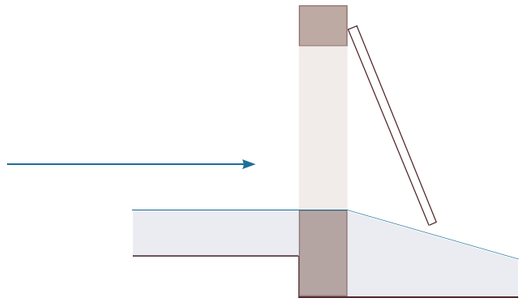


Figure 131(b) : Low Tide Washed into the tidal pool and mixes with the river water. this forms brackish wtaer foe the saltmarsh to thrive on

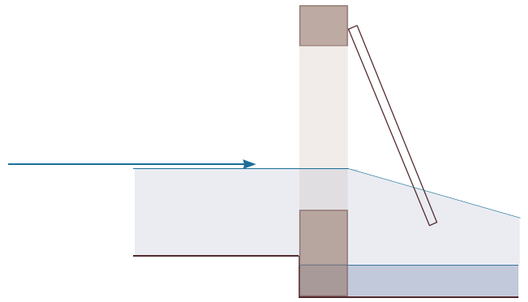


Figure 131(c) : The intertidal zone grows towards high tide in the tidal pool. Brackish water is still made.

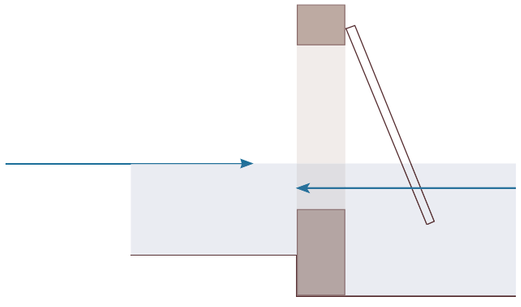


Figure 131(d) : The intertidal zone grows to reach high tide. The weight of the water closes the gate to avoid flooding the saltmarsh for too long

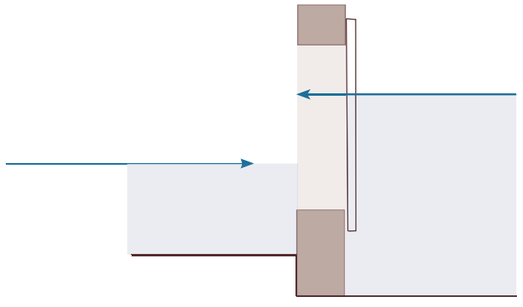


Figure 131, Author, “Sluice Gate Operating System”, Drawing, 2022

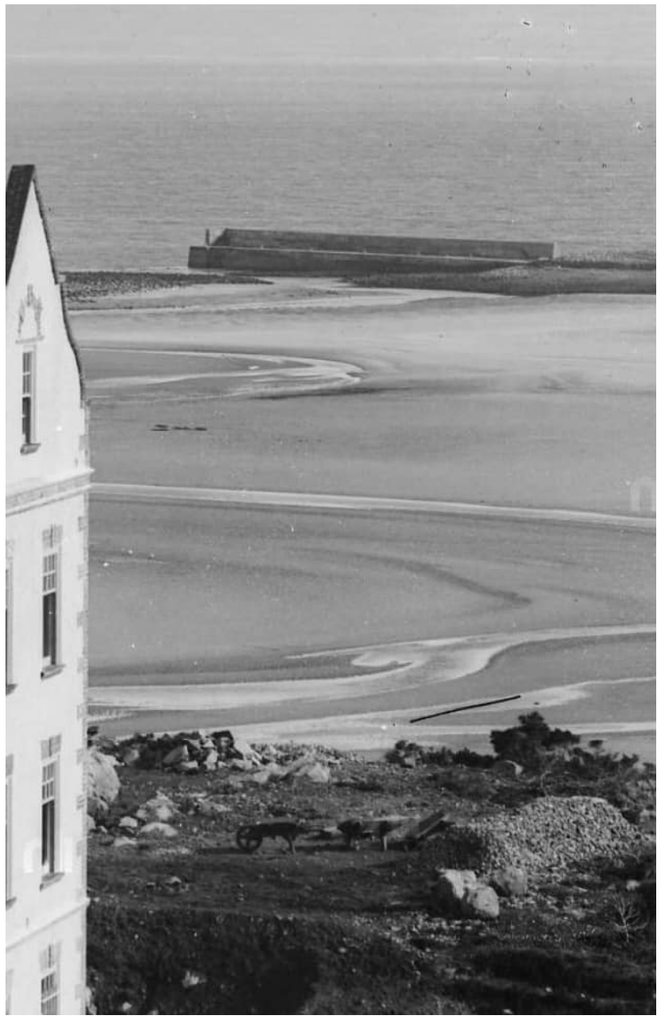


Figure 133, Unknown, “Mulranny Pier”, Photograph, Mulranny Old Photos Archive, Circa 1894

The Pier

Mulranny Pier is a Famine time pier constructed from locally quarried stone. The old red sandstone drumlin from which the pier juts out of was used to grow potatoes and is also the probable location of a famine burial ground. During the Victorian era the pier was reclad in thick-aggregate “cast-in-situ concrete”.[57] A curved sea wall was cast to protect the pier from “bruth”.[58]

Overtime the pier was severely abused and neglected. During 2007 a storm blasted a blowhole into the seawall and, as part of ‘repair works’, mass concrete was poured into the “gaping 5x10m hole”[59] and was roughly smeared around the pier. Tarmac was then used to level depressions in the flagstones. The ‘repair works’ left behind a bubbling surface which has made the pier unusable.

Owing to Mulranny’s connection to 8 other piers in Clew Bay it has a rich maritime history. Irish phrases and terminology were accumulated, and “knowledge was shared by fishing communities”[60] from around the bay through freshwater and seawater fishing. However, the “repair works” stopped the accruing of maritime culture. Local fishermen now use alternative harbours as Mulranny Pier no longer meets their needs. There isn’t enough space to moore boats, the surface is unsuitable to work on, the crumbling slipway is too narrow, no fishing facilities exist and the drumlin is being undercut by the “toiteoig”[61], meaning rock is toppling into the water forming a “maoim”.[62]

57 Elizabeth Shotton, “Transitional Moments in Concrete Maritime Structures,” 2017, https://researchrepository.ucd.ie/handle/10197/8120.

58 Manchán Magan, “Focail Farraige & Sea Terms - Pap Murphy,” Manchán Magan, n.d., https://www.manchan.com/sea-tamagotchi---mayo.
“Bruth - A big swell.”

59 Anton McNulty, “Mulranny Pier Damage,” The Mayo News, 2007, https://www.mayonews.ie/news/822-mulranny-pier-damage.

60 Manchán Magan, “The Hundreds of Irish Words for Sea and Sea Life,” The Irish Times, 2021, https://www.irishtimes.com/culture/heritage/the-hundreds-of-irish-words-for-sea-and-sea-life-1.4438666.

61 Magan, “Focail Farraige & Sea Terms - Pap Murphy.”
“Toiteog - Large waves on the shore. Fishermen would wait for 3 of them before a calm would come to allow them get out into their boat.”

62 Magan.
“Maoim - A shallow, or an area where the rocks are near the surface.”

Harbour - A maritime facility comprising one or more piers or loading areas, where small and large boats load and discharge cargo and passengers.

A Pier - A platform extending from a shore over water used to secme, protect, and provide access to ships or boats. Piers offer the sea angler easy access to deep water and a safe stable platform from which to fish.

Figure 134, Author, “Clew Bay Sailing Patterns”, Drawing, 2022

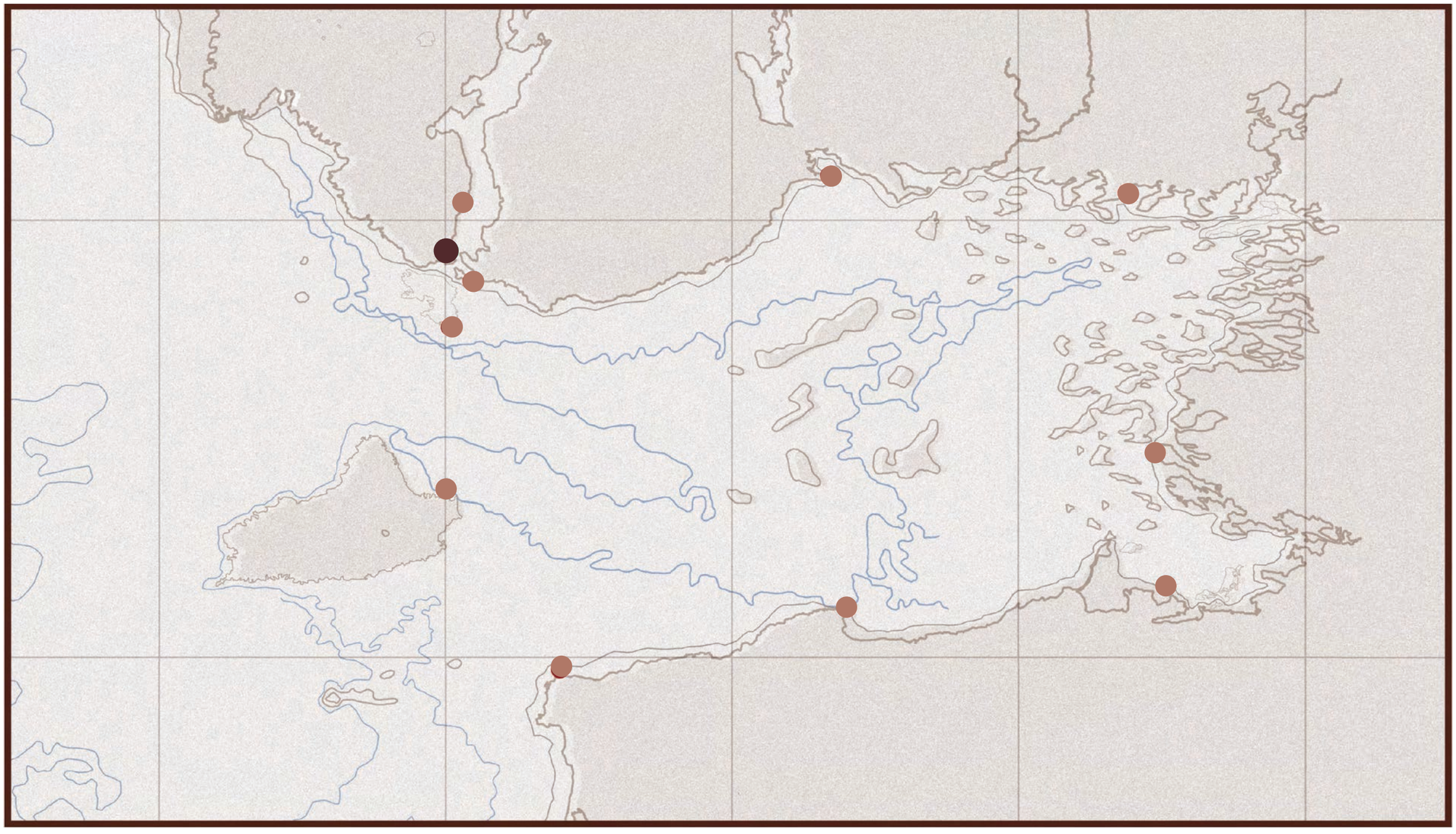


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Figure 134, Author, “Clew Bay Sailing Patterns”, Drawing, 2022

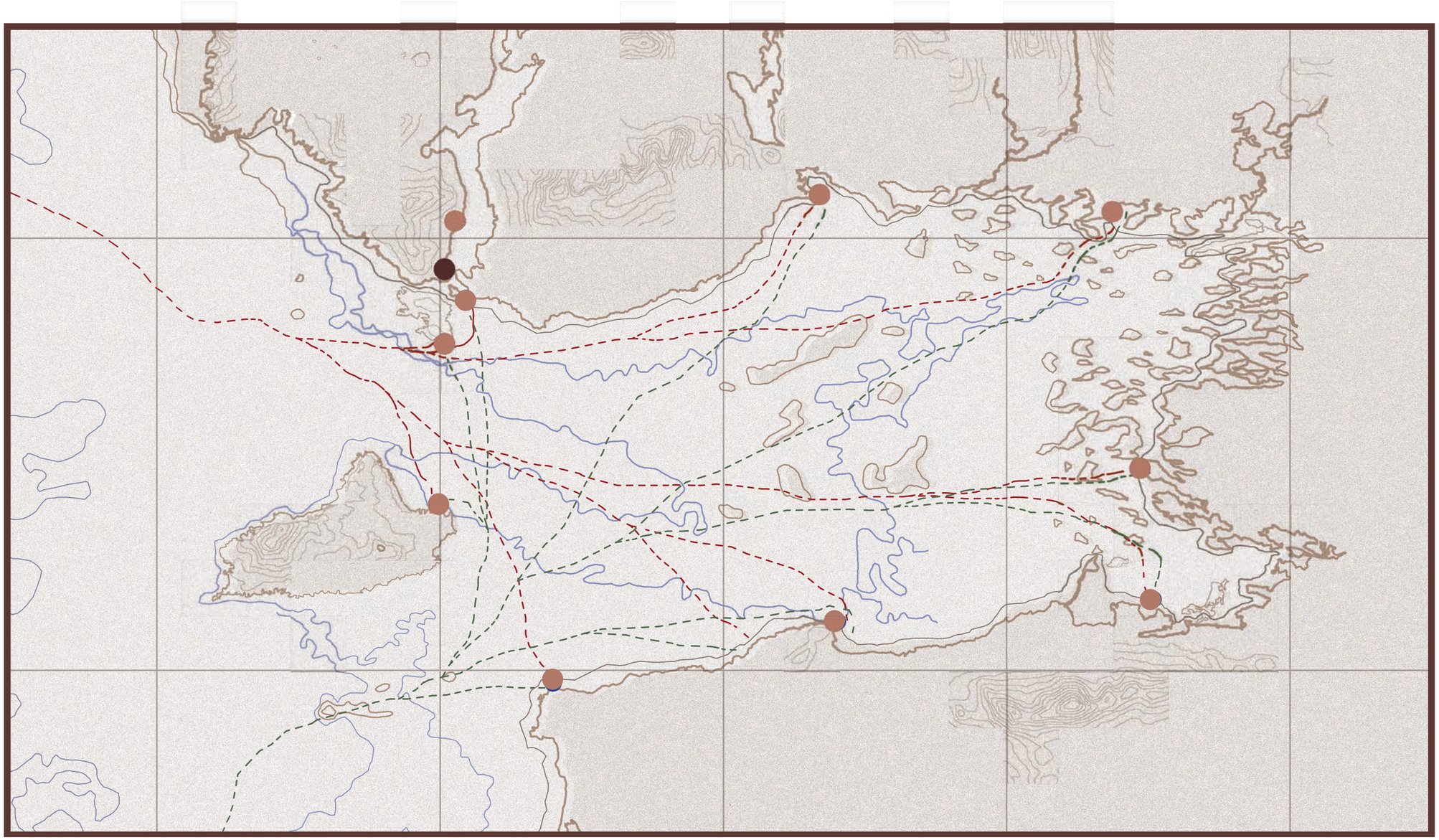

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Figure 134, Author, “Clew Bay Sailing Patterns”, Drawing, 2022

Figure 135, Unknown, “Fisherman on Mulranny Pier”, Photograph, Mulranny Old Photos Archive, Unknown
Figure 136, Unknown, “Pier Fishing in Mulranny”, Photograph, Mayo News, 2009

Fishing in Mulranny

The Irish fishing industry in the past was very undeveloped. Much fishing was done from small boats. The tarred and canvas currachs, which originated from hide boats, were a distinctive feature of parts of the west coast of Ireland. In recent times they are increasingly made from fibreglass. Most smallscale sea fishing took place in the summer when the fish were more plentiful and the weather was less dangerous for small boats.

Figure 137, Unknown, “Fisherman in Clew Bay”, Photograph, Mulranny Old Photos Archive, Unknown

Sea Fishing

Figure 138, Unknown, “Fisherman Making Nets”, Photograph, Unknown
Figure 139, Unknown, “Sea Fishing in Clew Bay”, Photograph, The Connaught Telegraph, Unknown

Fishing was done by line as well as with a net. In deep water, fishermen would use a spillet line: a weighted line with many hooks. The fishermen would set the line and leave it overnight strung across the sea bottom. Fishermen often made their lines themselves, twisting pieces of thread into longer lengths using a line twister. Hand lines were also used to catch mackerel, pollack and bass from a boat or even from a cliff.
Drift nets were used to net salmon and left out overnight. Another netting technique for herring and mackerel was seine netting, where two boats formed a purse of the net around the fish. A technique called draft netting was used, the net played out from the shore by a boat. Fishermen used pots to trap lobster and crab, usually for commercial sale, much as they do today. In the past, pots were made from willow rods or even heather. Some shellfish could be collected from a boat using a rake or dredge, while others were gathered by hand or prised off rocks.

Freshwater Fishing

Figure 140, Unknown, “Fisherman on Muranny Beach”, Photograph, Mulranny Old Photos Archive, Unknown
Figure 141, Unknown, “Freshwater Fishing in Clew Bay”, Photograph, The Connaught Telegraph, Unknown

Freshwater fishing was generally a supplementary activity. Some of the most prized rivers were in private ownership, which led to poaching.
Some ancient techniques such as spearing survived. Spears of differing types were used to catch eel and salmon. Eel fishing was generally legal but spearing salmon was illegal and often took place at night using a light. Traps made of wicker or netting were set in rivers to catch fish. Snares and large hooks called stroke-hauls were also used to catch salmon or trout.
On certain rivers net and rod fishing for salmon took place under licence. However, poachers used illegal nets which might be set in weirs or pulled through the water. A leather coracle, called a currach locally, was used to set salmon nets on the River Boyne into the 1940s. On the flood-lands of the River Suck, a raft of bulrushes was used for fishing and fowling - a unique craft in northern Europe in modern times.

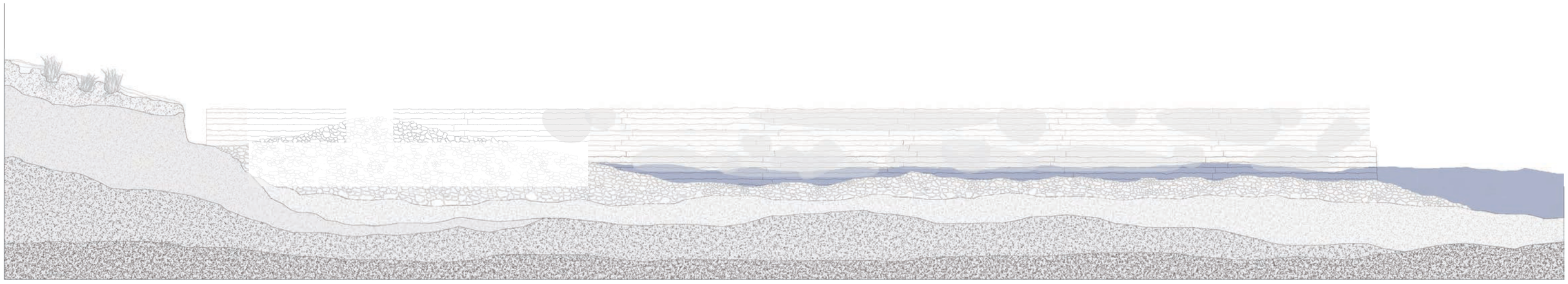


Figure 142, Author, “Mulranny Pier Seawall”, Drawing, 2022

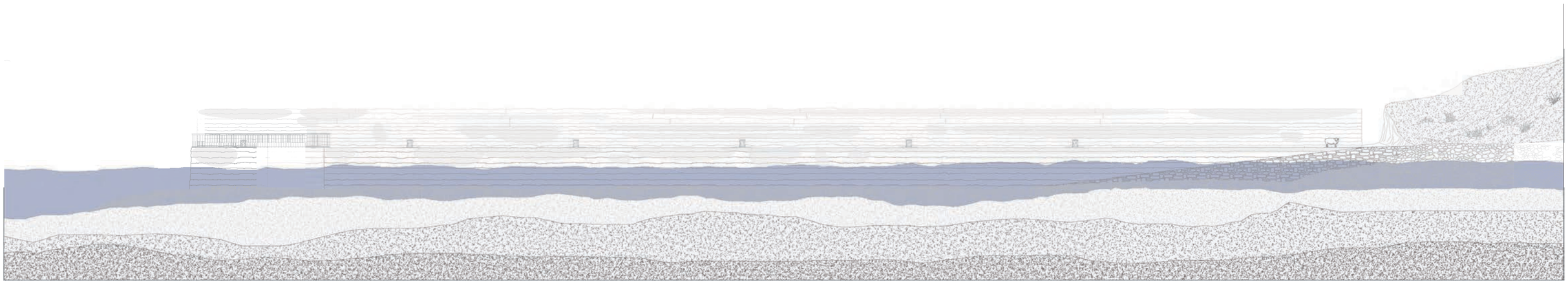


Figure 143, Author, “Mulranny Pier Low Wall”, Drawing, 2022

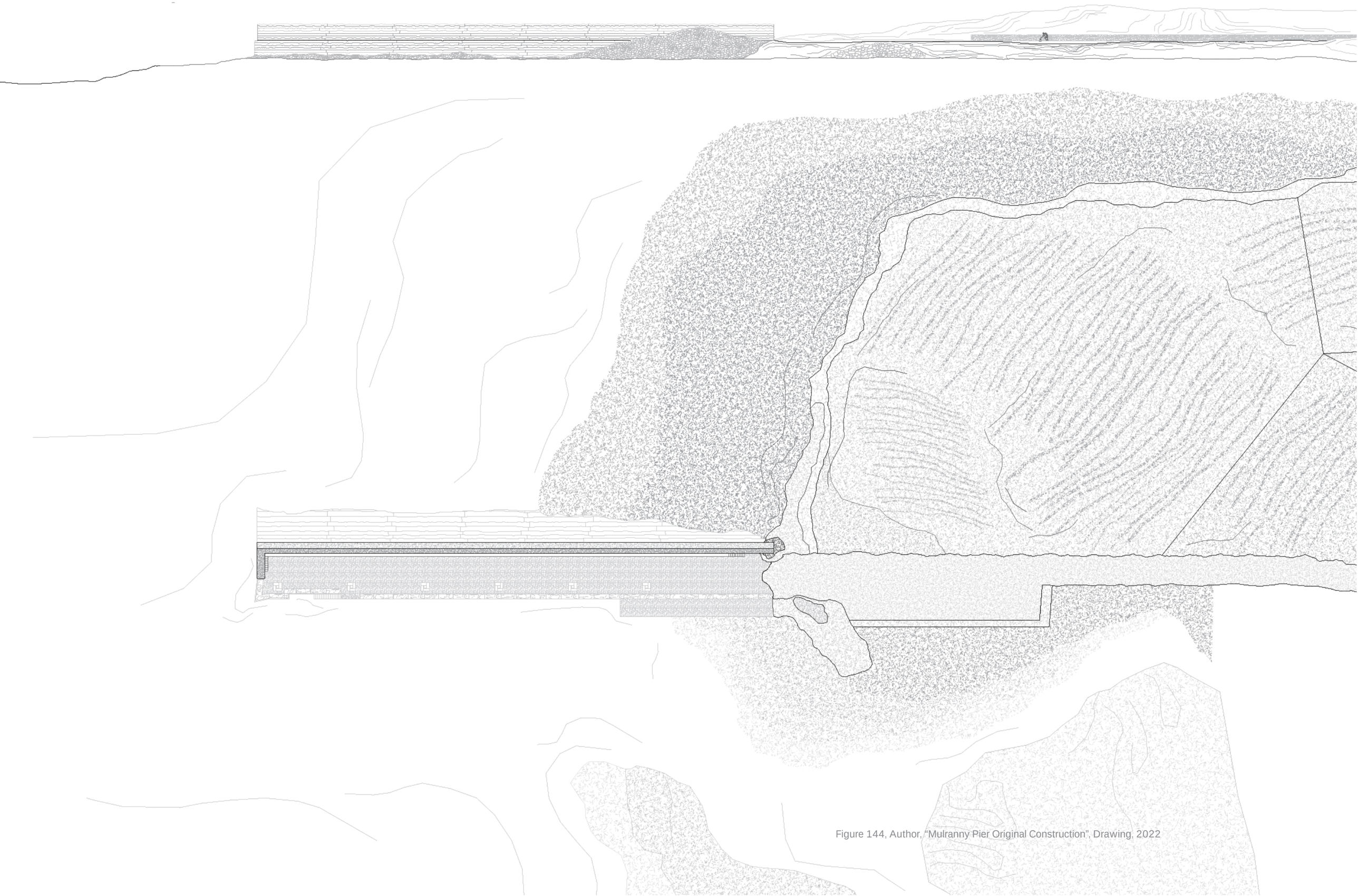


Figure 144, Author, “Mulranny Pier Original Construction”, Drawing, 2022

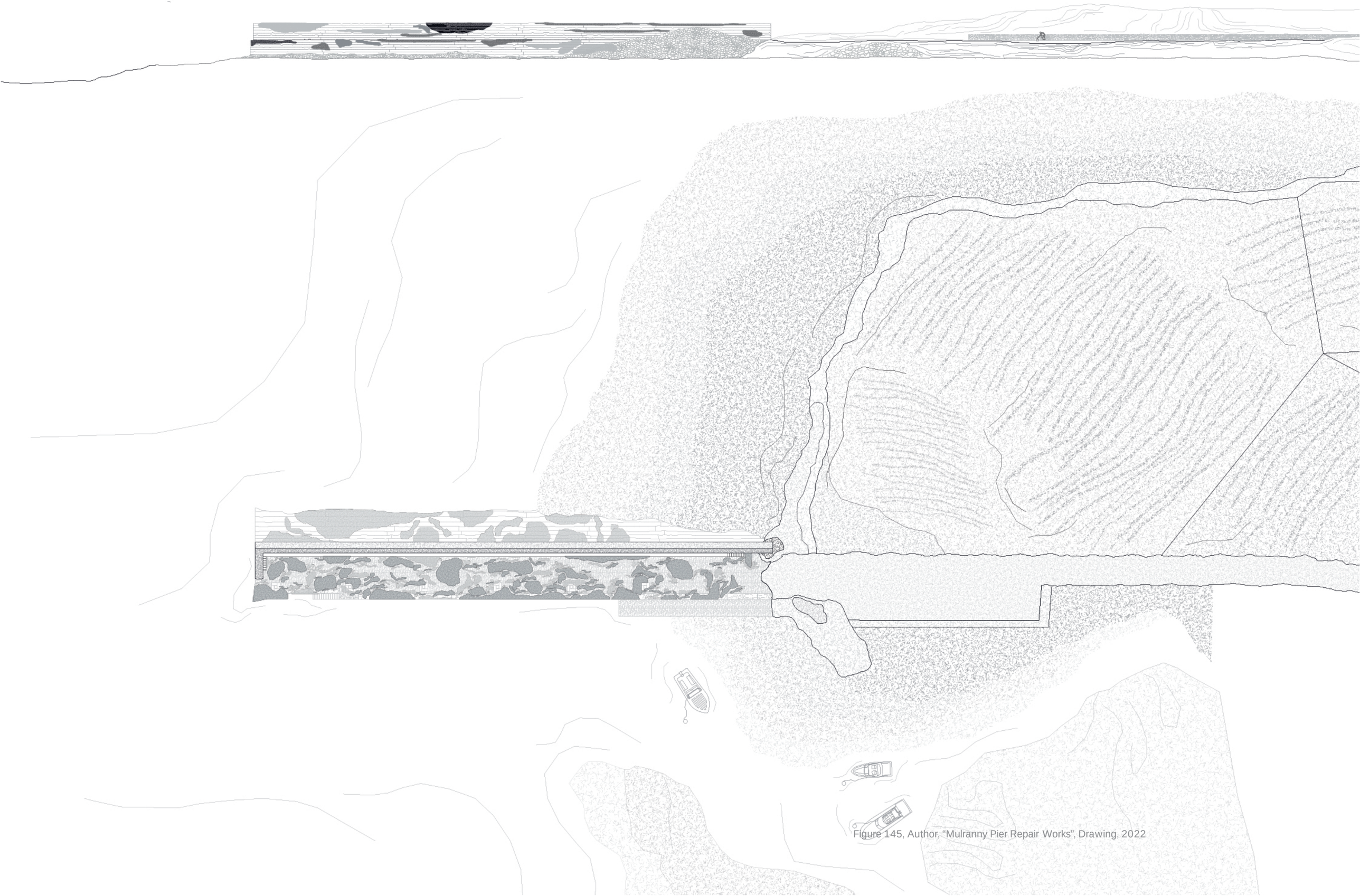
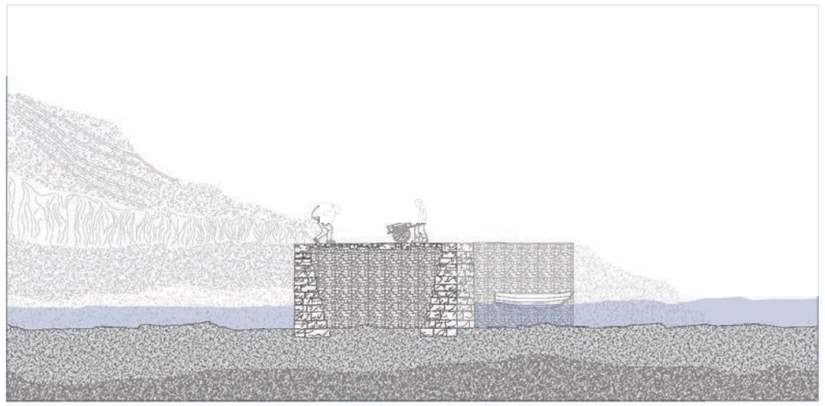
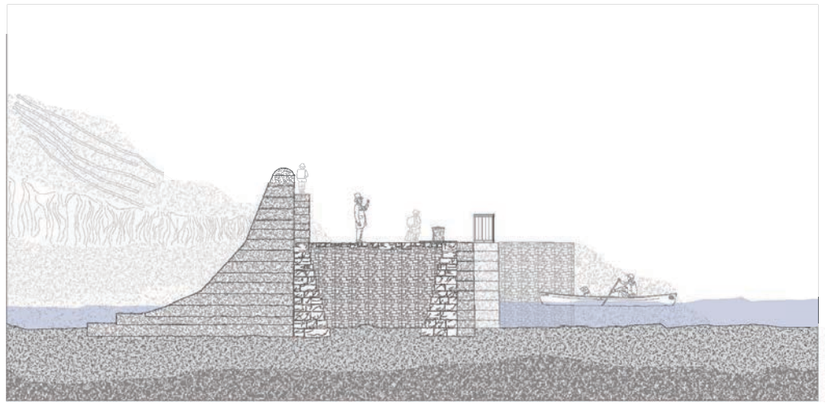


Figure 145, Author, “Mulranny Pier Repair Works”, Drawing, 2022



The Great Irish Famine

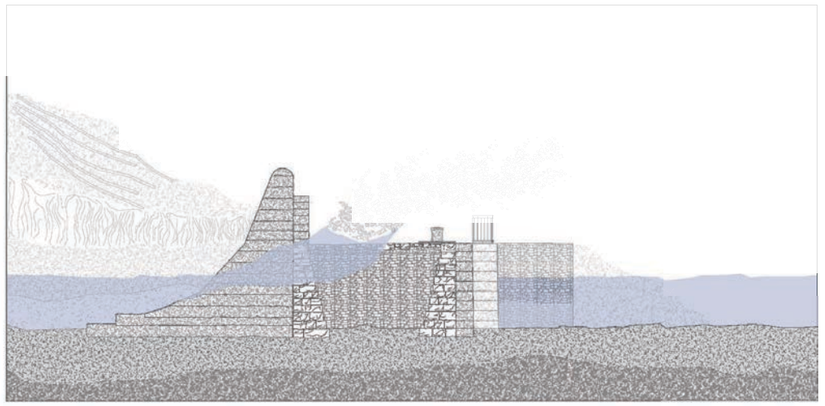
Under the Rapid Relief Scheme Mulranny Pier, among other infrastructural pieces, was constructed by locals in need of work.



The Victorian Times

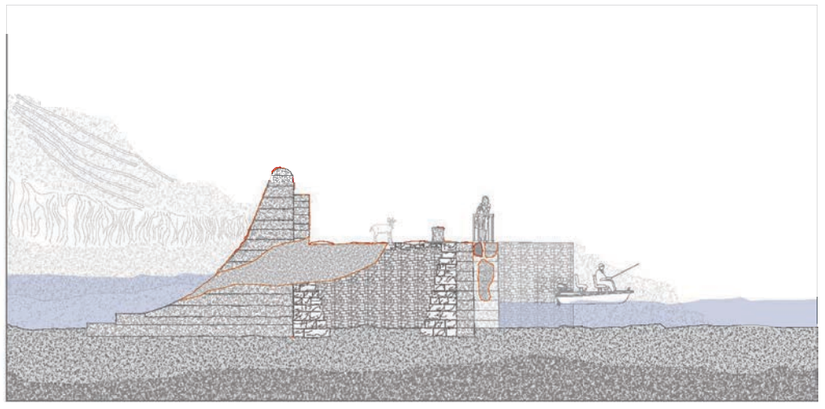
During the Victorian Times Mulranny prospered as a tourist destinatation owing to implementation of the Arthur J. Balfour Act (light rail system). Consequesntly,

Figure 146, Author, “Mulranny Pier - Famine Time Construction”, Drawing, 2022
Figure 147, Author, “Mulranny Pier - Victorian Construction”, Drawing, 2022



Storm Surges

In 2007 a storm resulted in a blowhole being blasted through the seawall at Mulranny Pier.



‘Repair Works’

The ‘repair works’ continued and tarmac was poured, smudged and smeared at several locations around the pier.

Figure 148, Author, “Mulranny Pier - 2007 Storm Damage”, Drawing, 2022
Figure 149, Author, “Mulranny Pier Repair Works”, Drawing, 2022

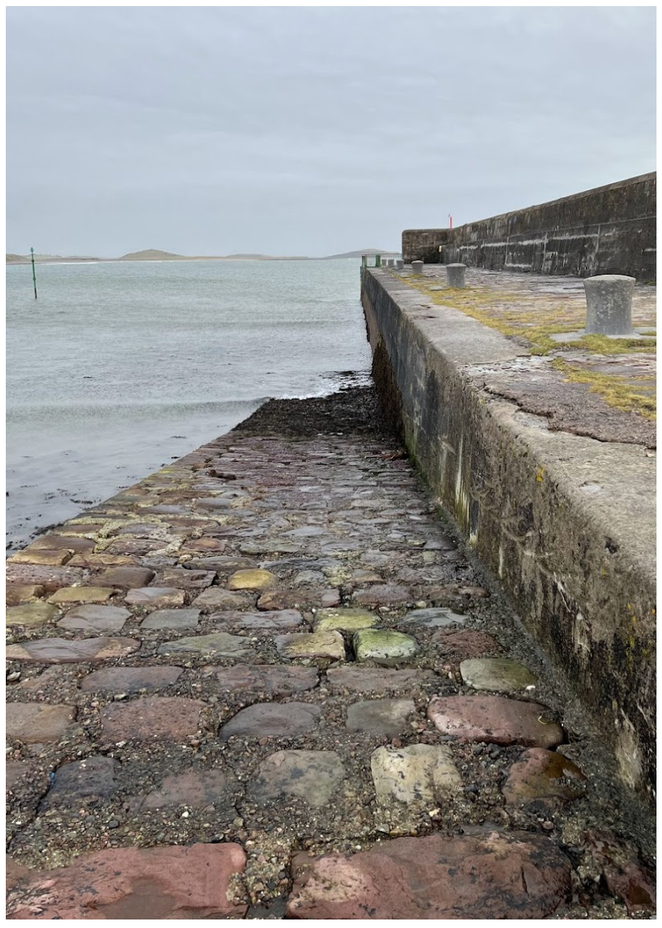


Figure 150, Author, “Mulranny Pier Damage”, Photograph, 2022
Figure 151, Author, “Mulranny Pier Slipway Damage”, Photograph, 2022

Figure 152, Author, “Mulranny Pier Damage”, Photograph, 2022
Figure 153, Author, “Mulranny Pier Seawall Damage”, Photograph, 2022
Figure 154, Author, “Mulranny Pier Surface Damage”, Photograph, 2022

Figure 155, Walsh, Jack, “Mulranny Pier”, Photograph, 2021
Figure 156, Author, “Mulranny Pier Landscape - Ridge and Furrow Lines on Drumlin”, Photograph, 2022
Figure 157, Author, “Mulranny Pier Landscape Fragility”, Photograph, 2022

Figure 158, Author, “Exposed and Undercut Drumlin Edge”, Photograph, 2022
Figure 159, Walsh, Jack “Mulranny Pier Landscape”, Photograph, 2021

In response to local needs this project seeks to ethically repair the pier, provide the necessary facilities and protect the fragile and historically sensitive exposed drumlin from further undercutting. This is achieved through the provision of a major pier: the original pier, and a minor pier: a new construction which protects the fragile landscape.

Figure 160, Author, “Ethical Repair Works”, Drawing, 2022

Figure 160, Author, “Proposed works to form Mulranny Major and Minor Pier”, Drawing, 2022

Repair Works

Depressions in the Surface

Spalling of the Stone

Displaced and Slipping Stones

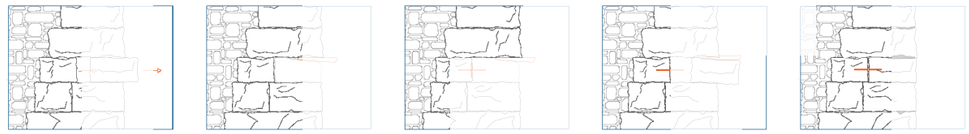


Figure 161, Author, “Ethical Repair Works”, Drawing, 2022

At the major pier conservation measures are proposed which see flagstones and the mooring posts lifted, cleaned and returned using lime mortar to seal joints. The seawall is reclad with stepped and “doweled hewn stone”[63] which oversails and angles back over the “Cladach Garbh”[64] to protect the junction of the pier and drumlin forms a lookout point for “Tarraingt a' bhFar-raige”,[65] the walls are reclad with hewn stone at a level which provides low-tide access, the slipway is widened to accommodate newer boats, a steel beacon with a Fresnel lens (which, in keeping with the “dark-skies initative”[66], avoids light-pollution by casting light “outward on an even plane”[67]) signals the pier’s presence, railings and seating is provided for pier fishing and steel mooring posts set in stone are provided at the half intervals of the original posts.

These discrete interventions show sensitivity to time; the constructive history peeks through either plan, section and/or elevation.

63 Nielsen, Salim,Lord, Withycombe,Armstrong, “Geotechnical Aspects Of Seawall Stability with Climate Change.”

64 Magan, “Focail Farraige & Sea Terms - John ‘Twin’ McNamara.”
“Cladach Garbh - Rough shore. Mostly not accessible. The point, where the tide was always pulling and dragging stones around.”

65 Magan, “Focail Farraige & Sea Terms - Pap Murphy.”
“Tarraingt a’ bhFarraige - The irregular pull of the tide, when wave come in a metre or two, only to pull back forcefully a greater distance. A sign of bad weather up to 3 days in the future.”

66 Mayo Dark Sky Park, “Dark Sky Communities.”

67 Landewe, “Keepers Log : Star-Gazing and Lighthouse Pollution.”

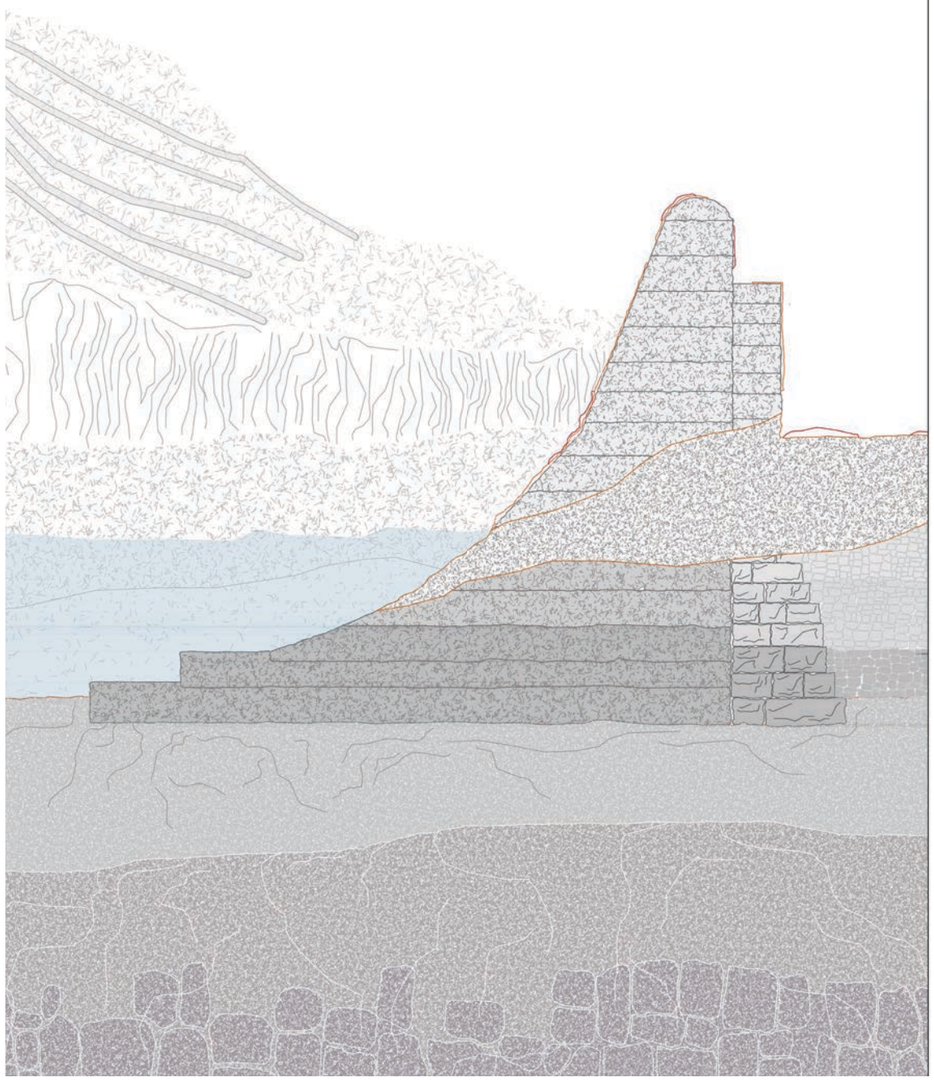


Figure 162, Author, “Detail of Mulranny Pier Seawall”, Drawing, 2022

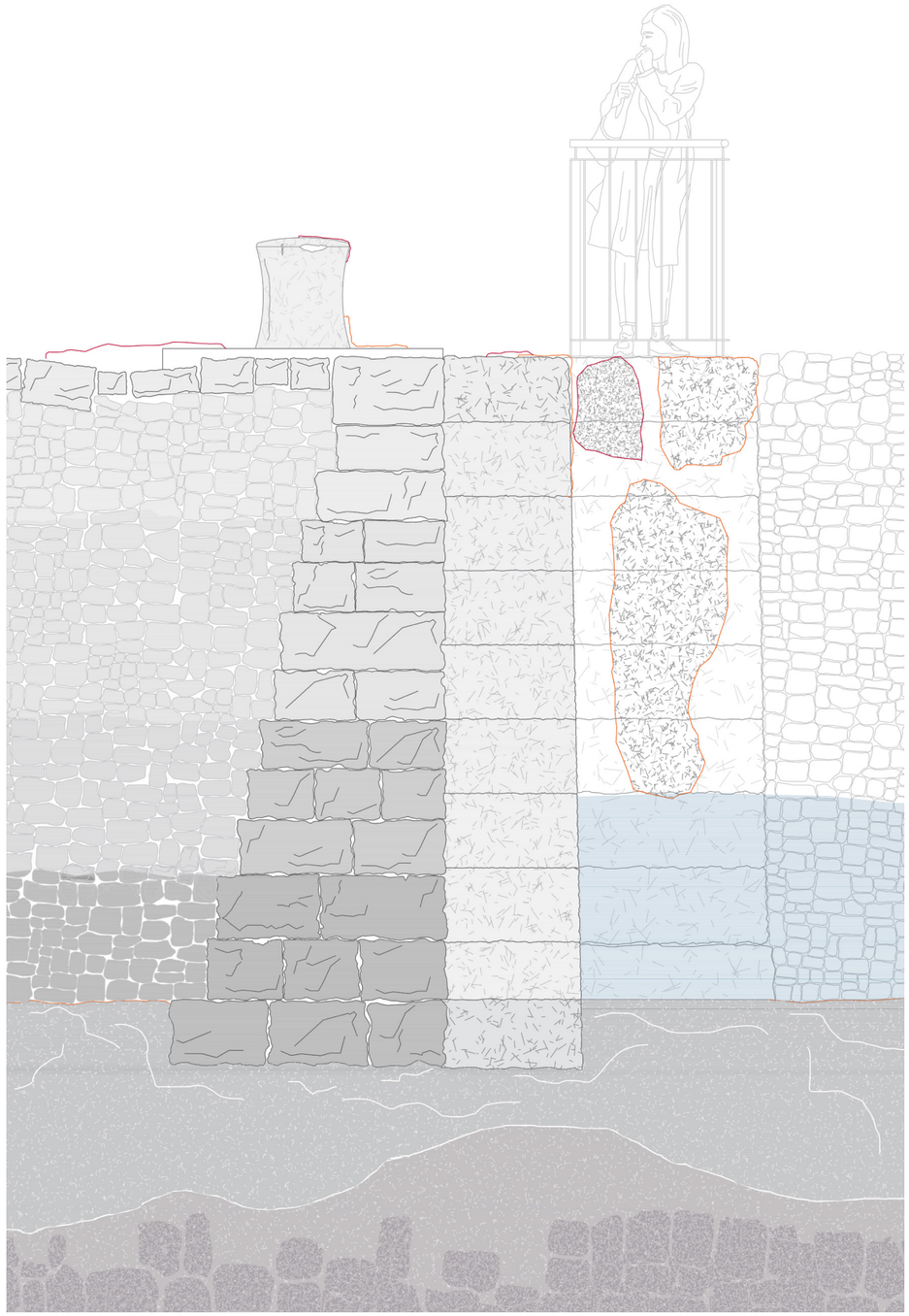


Figure 163, Author, “Detail of Mulranny Pier Low Wall”, Drawing, 2022

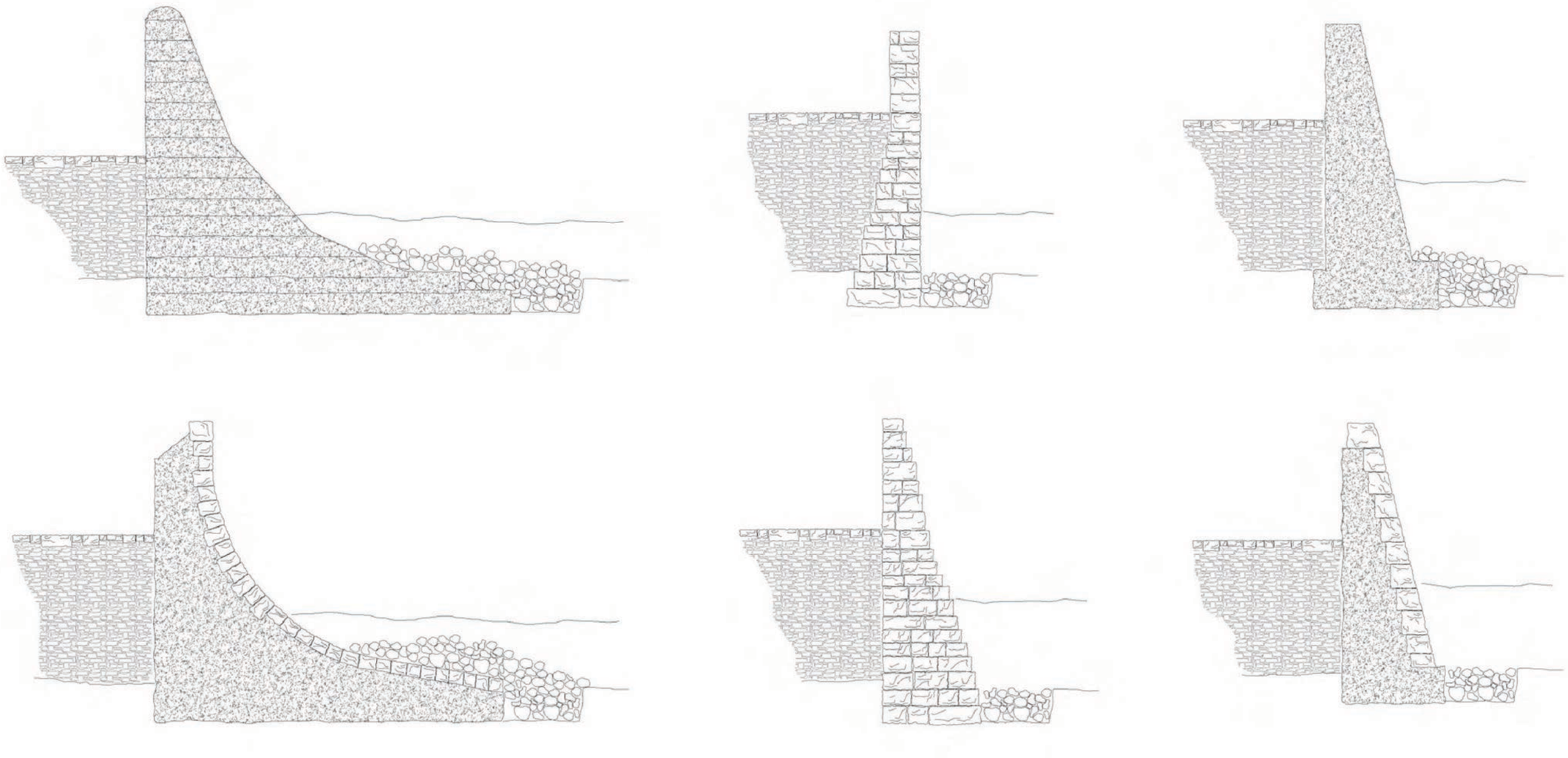


Figure 164, Author, “Potential Repair to Mulranny Pier’s Walls using Stone”, Drawing, 2022

At the minor pier hewn stone retaining walls are set against the landscape to “secure it in place”,[68] mooring posts are positioned for fishing and recreational boats, space is provided for cars and a ro-bust stone boathouse for fishermen, sailors, scientists and recreational users which acts as a wind-breaker to the drumlin and slipway is nestled within the landscape, connecting the old stone fieldwalls to the seawall through its sandstone columns.

As the old and new fabric are made from stone a legibility of time was sought through groundtexture. Consequently, pebble filled drains, carrying rainwater to collection points for fishermen, define a line between the major and minor piers to decipher material time.

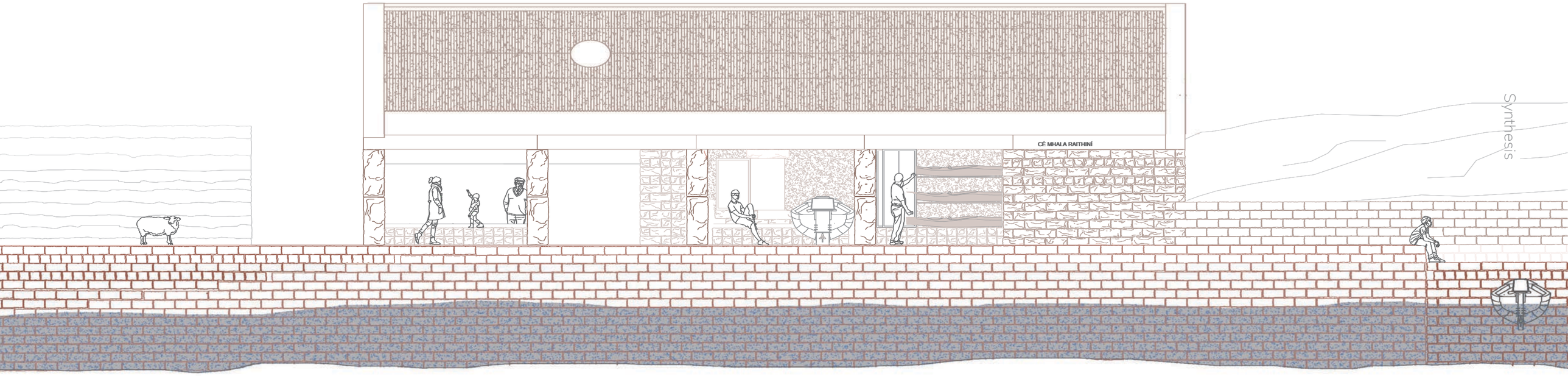
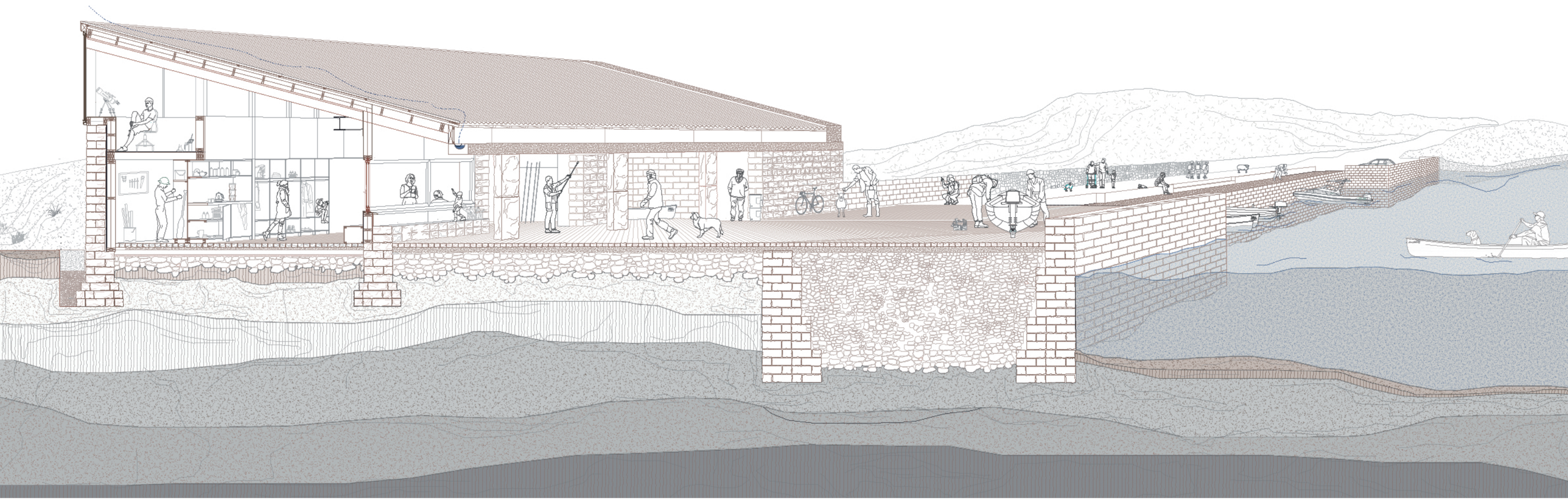


Figure 165, Author, “Mulranny Boathouse between the Major and Minor Pier”, Drawing, 2022

68 H Wu TZONG, “Earthwork for Retaining Structures and Abutments,” n.d., https://onlinepubs.trb.org/Onlinepubs/state-of-the-art/8/8-007.pdf.

Figure 166, Author, “Sectional Perspective Drawing through the Boathouse”, Drawing, 2022



The Scale of 1:5

Detail drawings were encouraged by findings within the cultural and physical context; the presence of localized constructive knowledge and the need to attune and register the tidal-pool's infrastructural landscape to a new climate. These findings unmoored ideas which sought to use cultural currents to articulate and configure the rudimentary facts of construction at the causeway and the bridge; two infrastructural pieces which were chosen as they determine the fate of the infrastructural landscape in a new world of rising sea levels and threatened saltmarshes, one we can detect in their "specific configuration of ordinary materials."[69]

"The objective is to devise new meanings (futures) from a critical and yet imaginative reinterpretation of our tradition (past). However, one must be wary of an underlying nostalgia that effectively nullifies the movement of creative time and cultural change; the complex realities of participating in the world. Here, I want to echo Heidegger's loss of nearness. We are in a period of transition, roaming without center in a time between times."

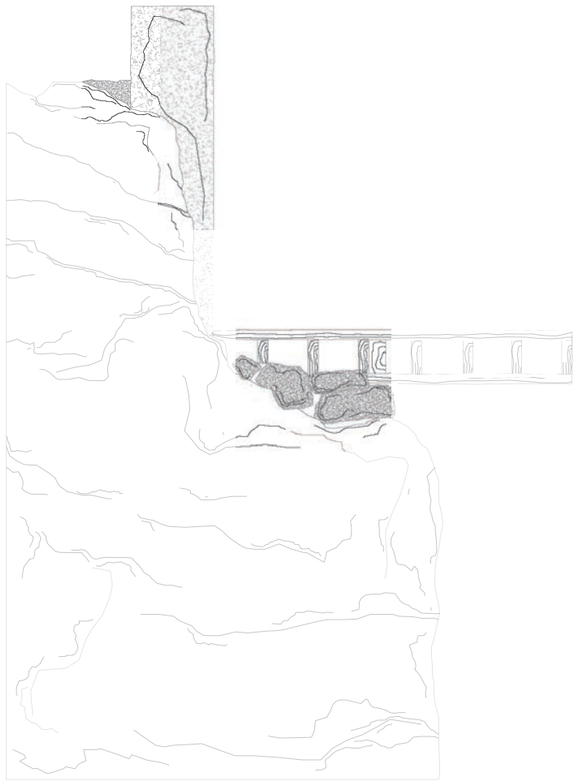


Figure 166 :
Low concrete wall cast onto protruding stone. Timber deck resting on concrete.

Figure 166, Author, “Observed Tidal Pool Detail 01”, Drawing, 2022

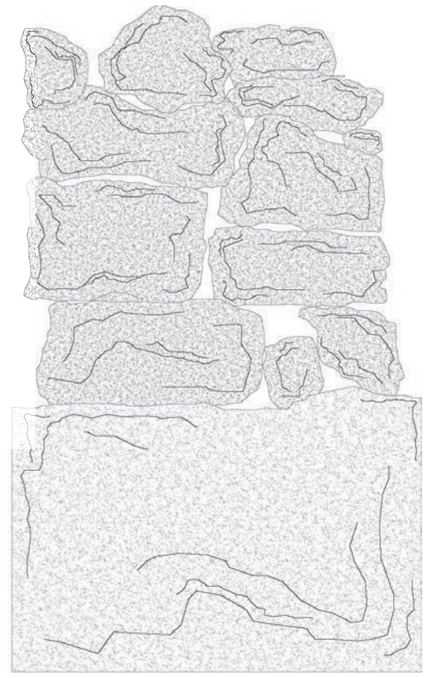


Figure 167 :
Concrete Foundation for Rubble Stonework

Figure 167, Author, “Observed Tidal Pool Detail 02”, Drawing, 2022

Figure 168 :
Stone Laid Diagonally on Protruding Rock Outcropping. Concrete Foundation Cast onto Rock. Timber Rail fixed to Concrete.

Figure 168, Author, “Observed Tidal Pool Detail 03”, Drawing, 2022

Figure 169 :
Concrete Pour on Rock. Timber Cladding Fixed to Concrete

Figure 169, Author, “Observed Tidal Pool Detail 04”, Drawing, 2022

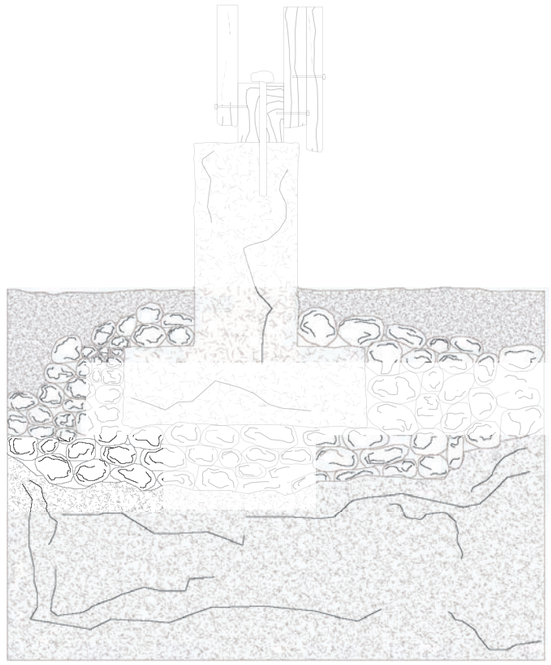


Figure 170 :
Concrete Footing overlaid with Pebbles and Topsoil. Timber structure fixed to Concrete.

Figure 170, Author, “Observed Tidal Pool Detail 05”, Drawing, 2022

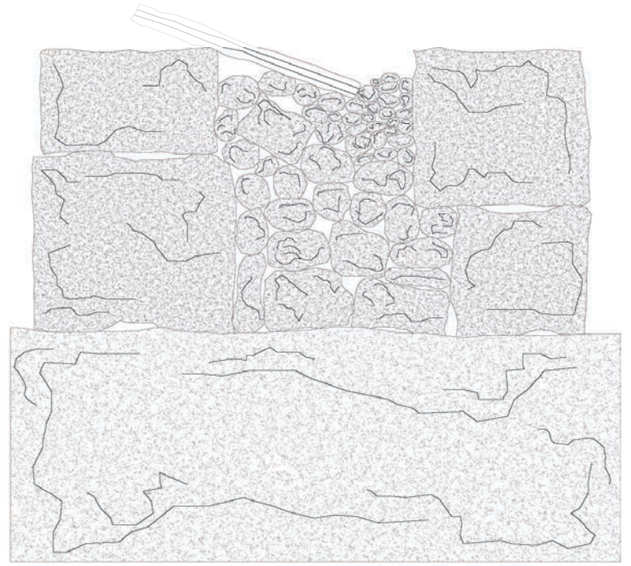


Figure 171 :
Low stone wall resting on concrete pad foundation. Rubble fill with washed up timber member,

Figure 171, Author, “Observed Tidal Pool Detail 06”, Drawing, 2022

Figure 172 :
Stone resting on rebar element. Steel member fixed to stone. Timber walkway as surface level.

Figure 172, Author, “Observed Tidal Pool Detail 07”, Drawing, 2022

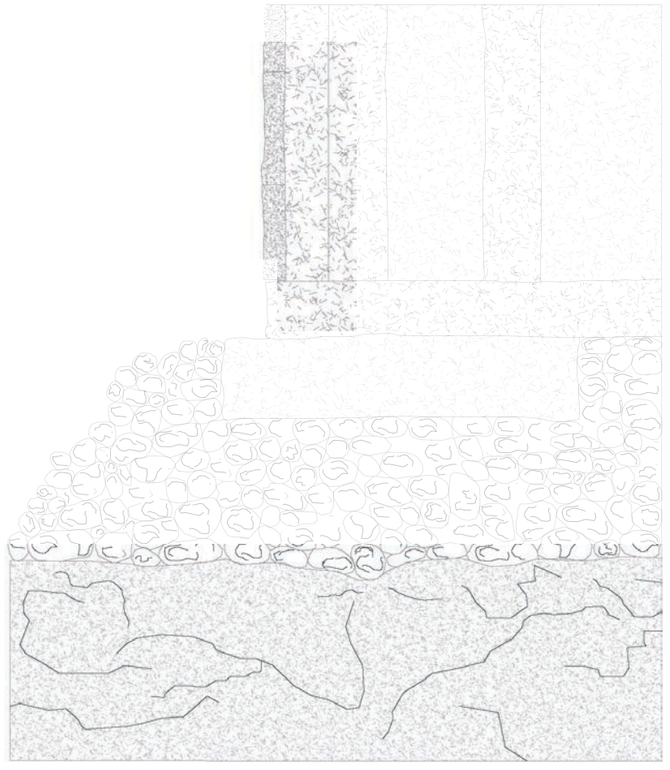


Figure 173 :
Concrete wall cast in situ onto rubble stone and rock outcropping

Figure 173, Author, “Observed Tidal Pool Detail 08”, Drawing, 2022

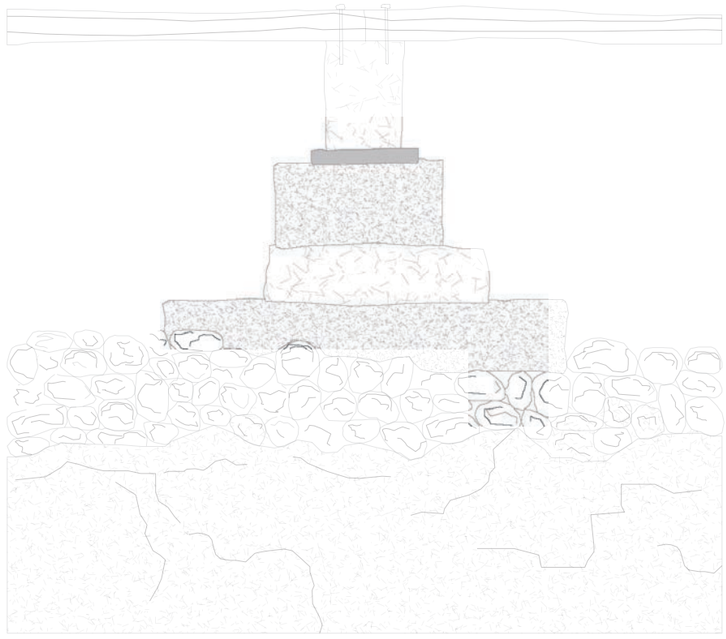


Figure 174 :
Concrete cast in situ foundation on washed up stone. Timber surface fixed to concrete.

Figure 174, Author, “Observed Tidal Pool Detail 09”, Drawing, 2022

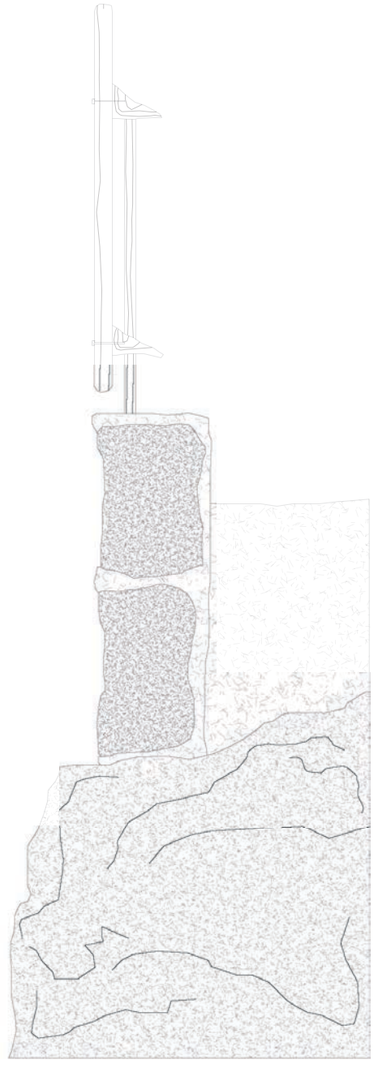


Figure 175 :
Stone cladding backed into concrete foundation on rock outcropping, Timber fencing fixed to stonework.

Figure 175, Author, “Observed Tidal Pool Detail 10”, Drawing, 2022

Before moving onto a discussion on the details a critical reflection on the process is necessary. Over the Christmas break I was afforded an opportunity to reflect on an intuitive feeling of uneasiness I felt about the details during the final review and it occurred to me that there was a lapse of judgment within the project. Originally, I misconstrued the details to be the causeway and the bridge; a poor labeling prompted by the view that everything which fit on a page could be explored all at once.

Through reflection on action I recognized that within the presented detail drawings of the causeway and bridge there was an accurate display of notion but not language; the project appeared to turn a full circle in that details existed, but alas, the details were not adept to the dialect of Mulranny's constructive logic nor were they worked through thoroughly enough to display the capability of an architectural detail to form a well-crafted and sensitive response towards the ageing, wear and weathering of materials. My reading of the project was that as a whole it represented a responsive architecture but it's anticipated exploration of the resonances of the processes of its making in relation to the demands of site through detail drawings remained lacklustre.

To navigate through this problem, I have identified two key findings; first, despite being able to accurately read construction I am not adept enough at the dialects used to craft details and only time, studies and "the hard-won wisdom of practical life"[70] can afford me the opportunity to learn how to craft under this new language. Secondly, based on knowledge I currently possess, I recognised that fragmenting the causeway and the bridge into an isolated mixture of meeting points, thresholds and junctions and then reconnecting and fine-tuning them to one another would allow me to explore the idiosyncrasies found within functional details that are mediating the cultural and physical contexts through to the scale of 1:1000.

70 Patrick Lynch, Simon Henley, David Grandorge, On Intricacy, The Work of John Meunier Architect (London: Canalside Press, 2021).

Although underdeveloped, I have presented details below which investigate proportion and vocabulary as well as the transformation between idea and use. The details report directly on both climactic conditions such as the severity of strong winds, heavy rain and the chance of sun as well as cultural processes such as the craft, constructive-logic and the resources of Mulranny.

Climactic conditions are measured against the causeway's cultural requirement of it being part of the Mulranny loop-walk through the following details:

A handrail to guidine people along the causeway against the new tidal height

A pulley of cultural value which would be used to lift materials into and out of the saltmarsh

A raised surface level of 350mm consisting of cross drains. curbing and stone sleepers set into the existing pebble surface to increase the volume.

At the bridge an inviolate pair of opposites had to be negotiated; the tide acting as an intemperate partner to the earth's stalwart presence. They are poles in a dialectic but nevertheless determine the future of the saltmarsh. As suggested by the scale of 1:50 a sluice-gate, which is examined below, could be used to negotiate and mediate with the rising tide on behalf of the saltmarsh.

Groundwork consisting of channels which slow the velocity of the water as it approaches the Vicotorian bridge. This would also ensure sediment is dropped in the saltmarsh.

A gate structure divided into primary (raised concrete footings), secondary (steel frame and vertically moving door), and tertiary structure (the flap gate).

A handle for which lifts the seconfary and tertiary structure so dredging can occur.

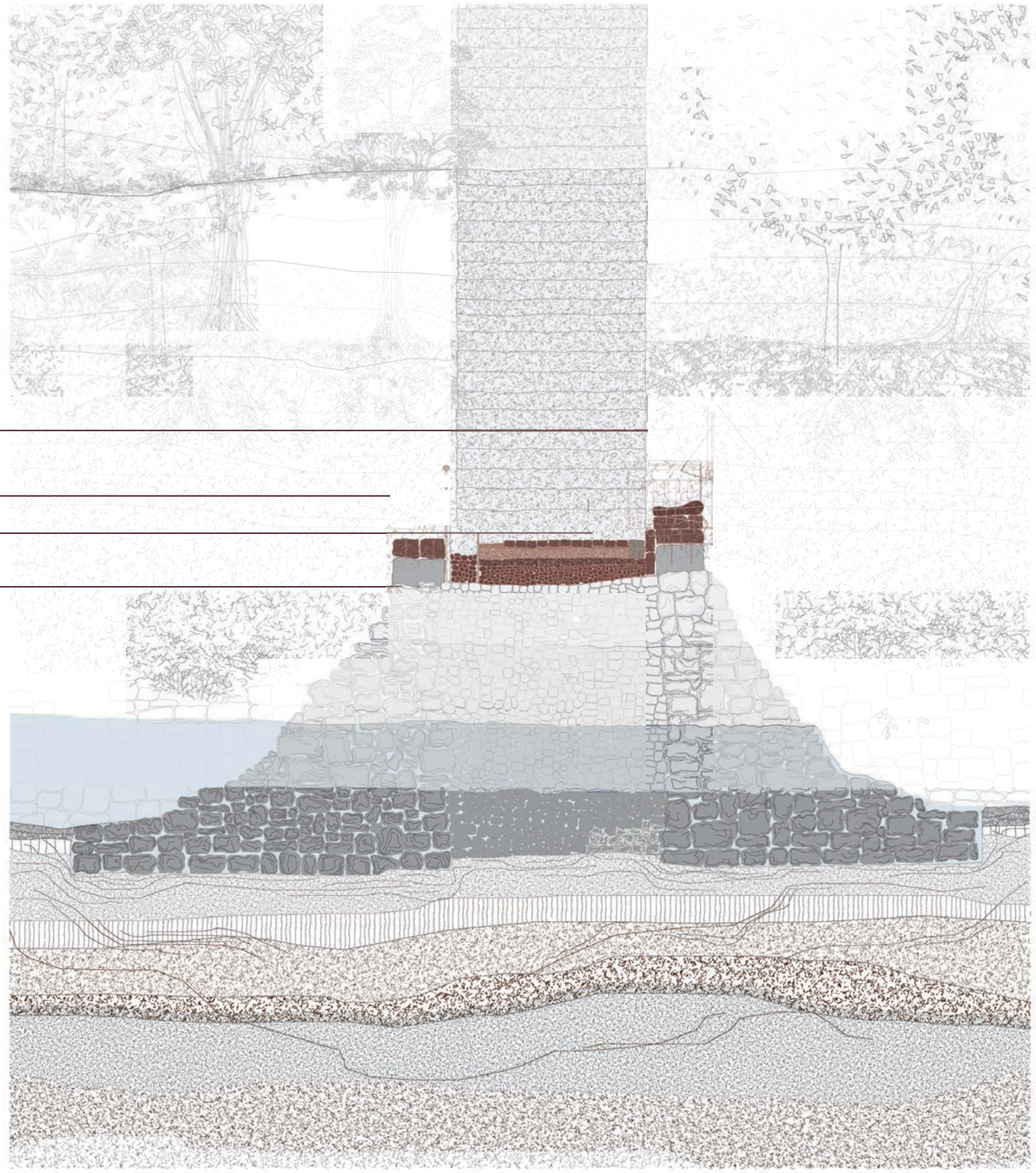
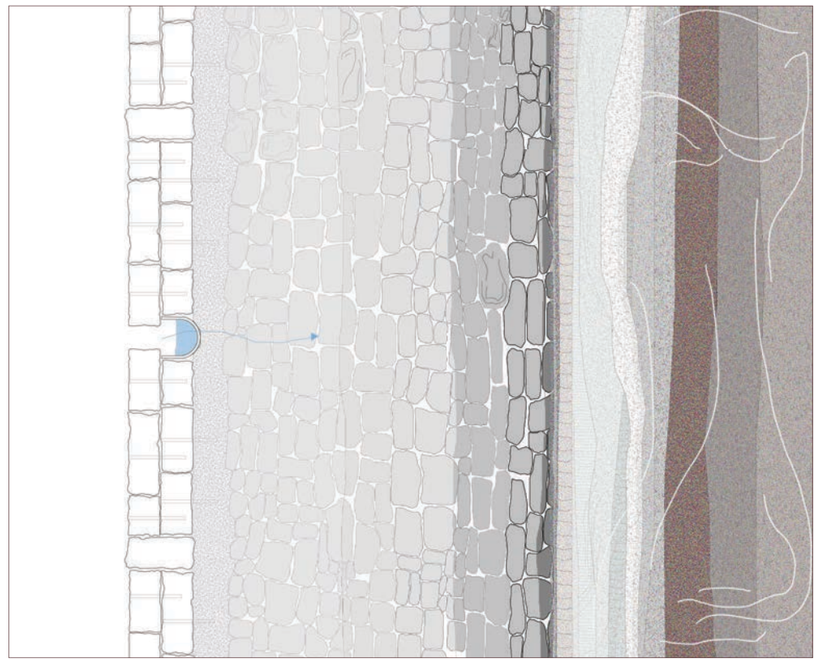
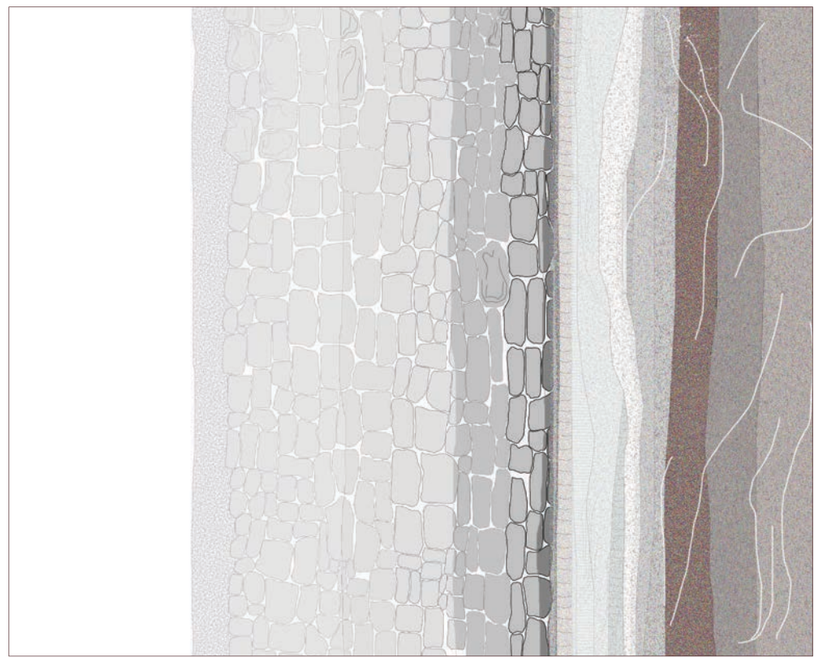
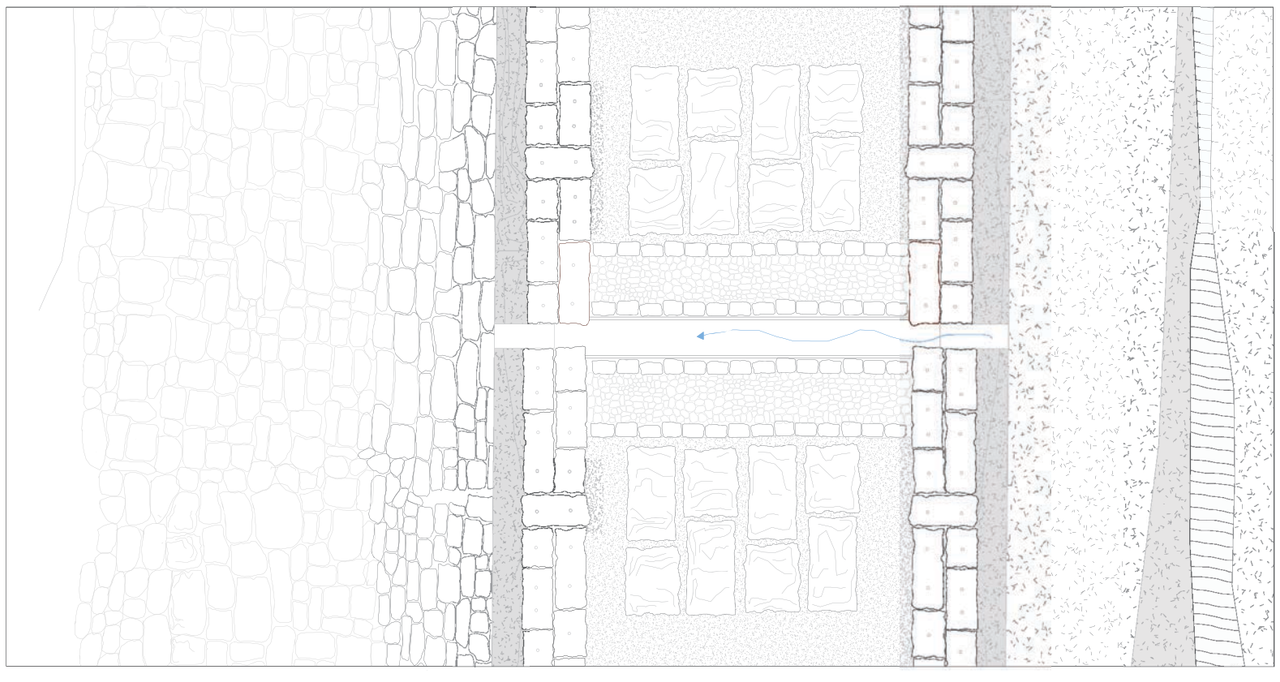
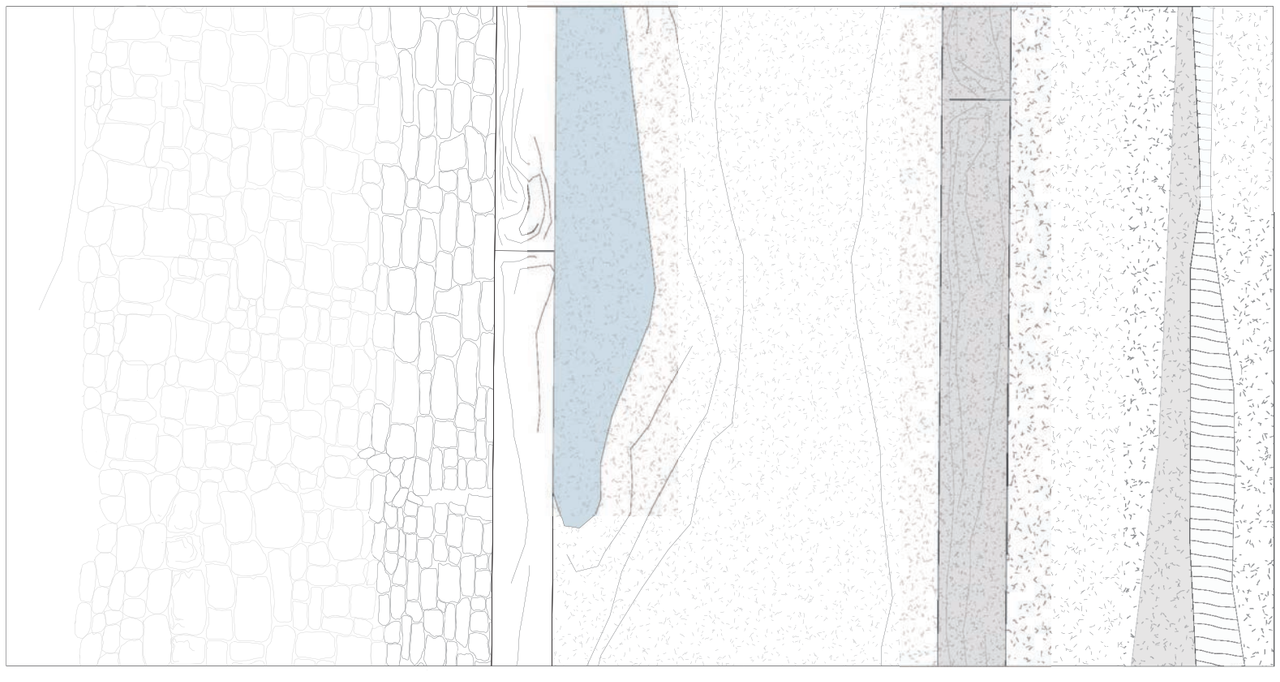


Figure 175, Author, “The Causeway”, Drawing, 2022









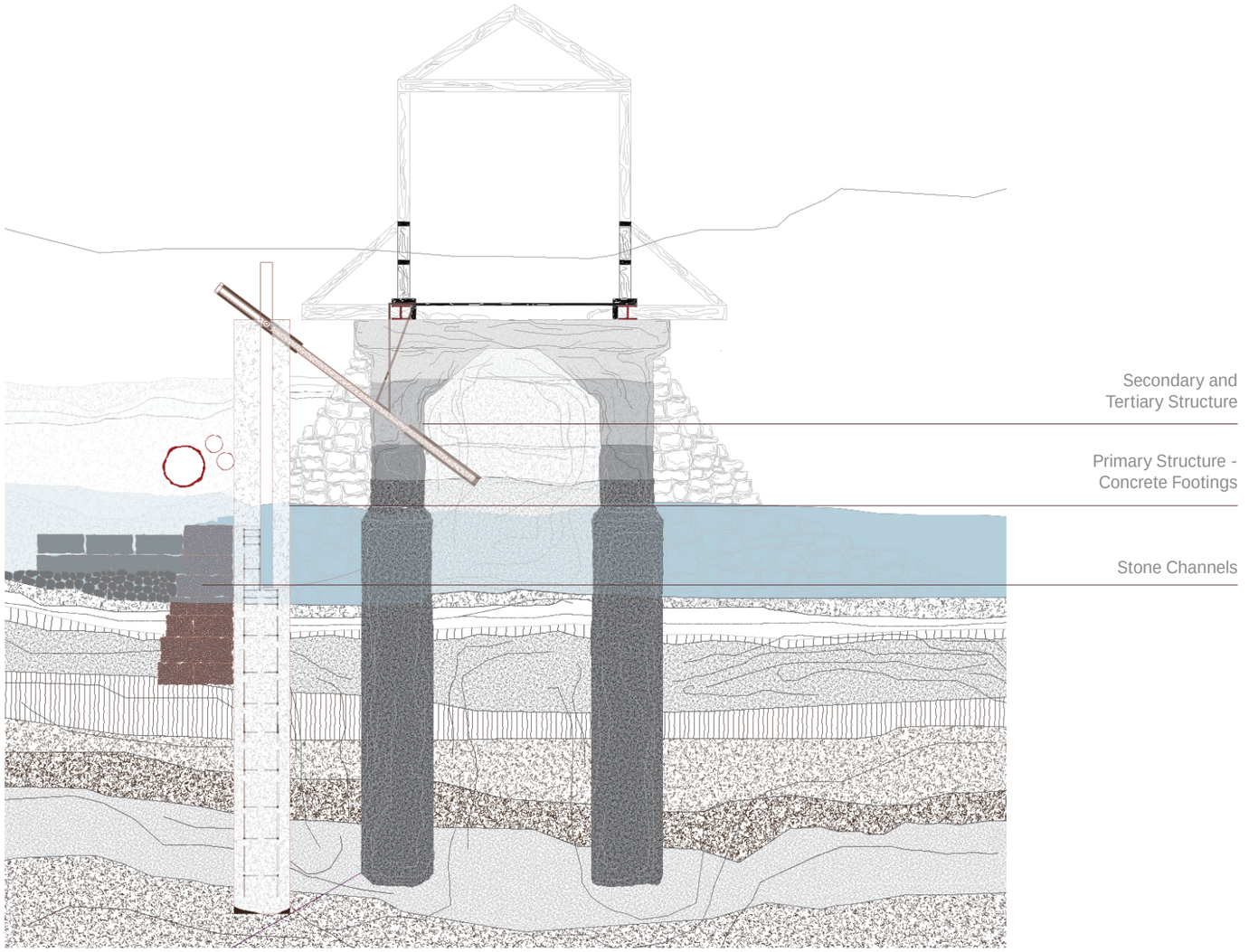


Figure 175, Author, “The Sluice Gate”, Drawing, 2022

Figure 131(a) : River water rushes out of the Saltmarsh into the tidal pool. The velocity of the water pushes the gate open.

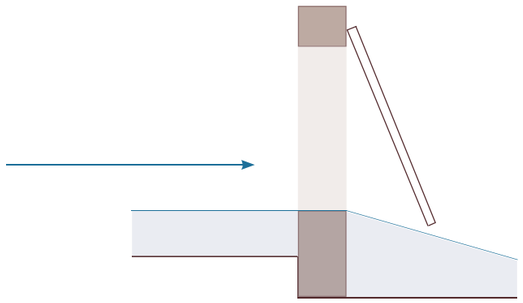


Figure 131(b) : Low Tide Washed into the tidal pool and mixes with the river water. this forms brackish wtaer foe the saltmarsh to thrive on

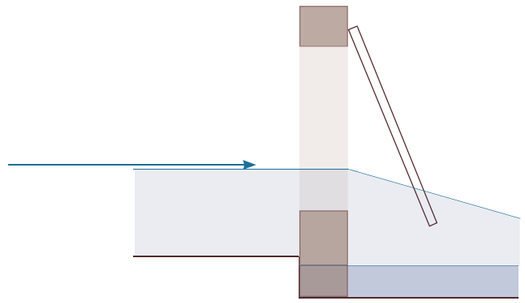


Figure 131(c) : The intertidal zone grows towards high tide in the tidal pool. Brackish water is still made.

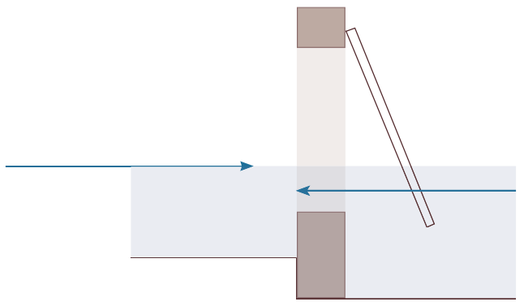
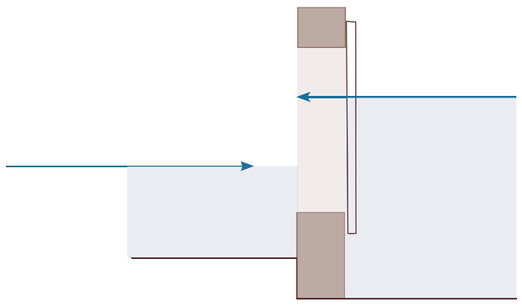
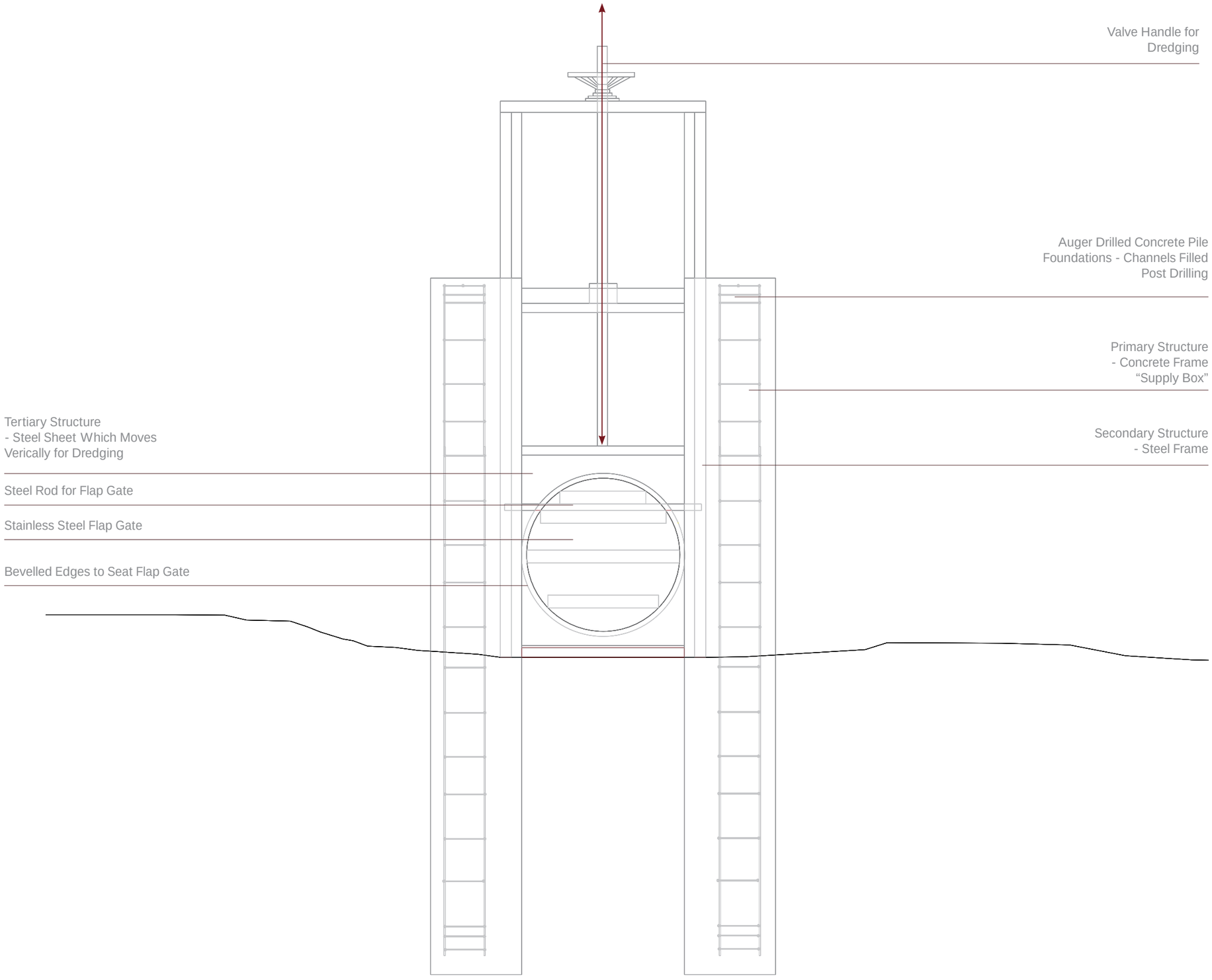
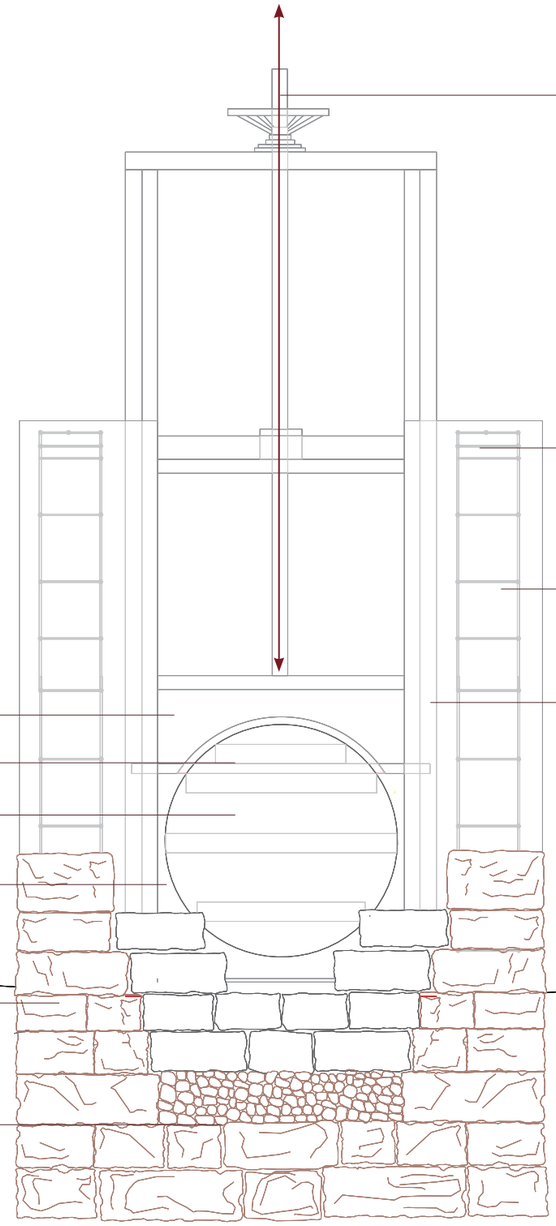


Figure 131(d) : The intertidal zone grows to reach high tide. The weight of the water closes the gate to avoid flooding the saltmarsh for too long




Valve Handle for
Dredging
Auger Drilled Concrete Pile
Foundations - Channels Filled
Post Drilling
Primary Structure
- Concrete Frame
“Supply Box”
Secondary Structure
- Steel Frame
Tertiary Structure
- Steel Sheet Which Moves
Verically for Dredging
Steel Rod for Flap Gate
Stainless Steel Flap Gate
Bevelled Edges to Seat Flap Gate



Valve Handle for
Dredging

Auger Drilled Concrete Pile
Foundations - Channels Filled
Post Drilling

Primary Structure
- Concrete Frame
“Supply Box”

Secondary Structure
- Steel Frame

Tertiary Structure
- Steel Sheet Which Moves
Verically for Dredging

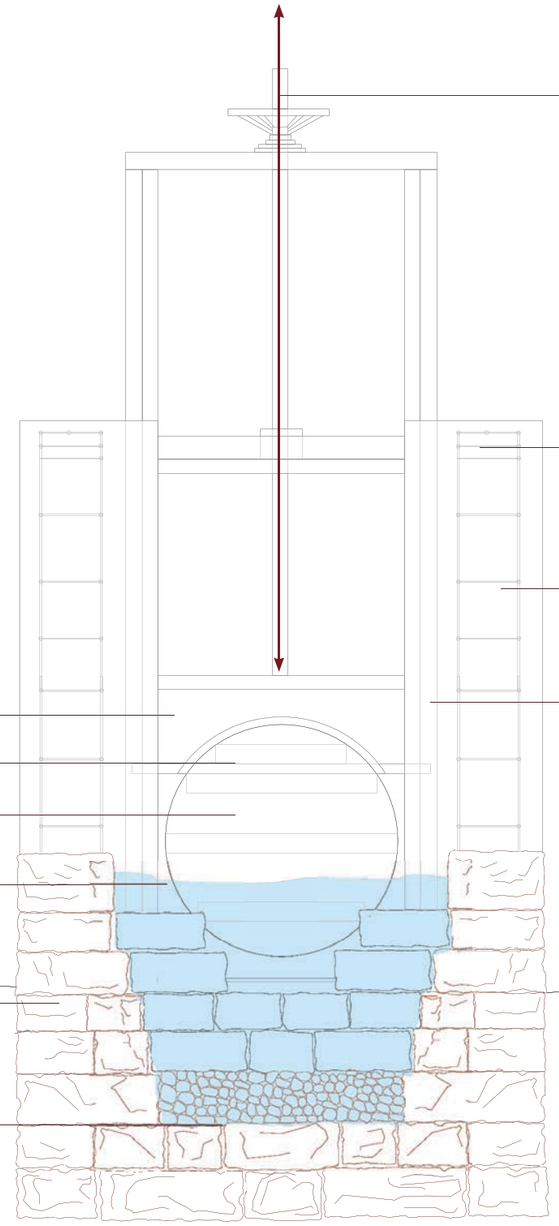
Steel Rod for Flap Gate

Stainless Steel Flap Gate

Bevelled Edges to Seat Flap Gate

Hewn Stone Channels to Slow
Water Approaching Bridge

A “pierre perdue’ - The stones are
thrown into the channels and wave
action consolidates the pile and
drop sediment



Valve Handle for
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Auger Drilled Concrete Pile
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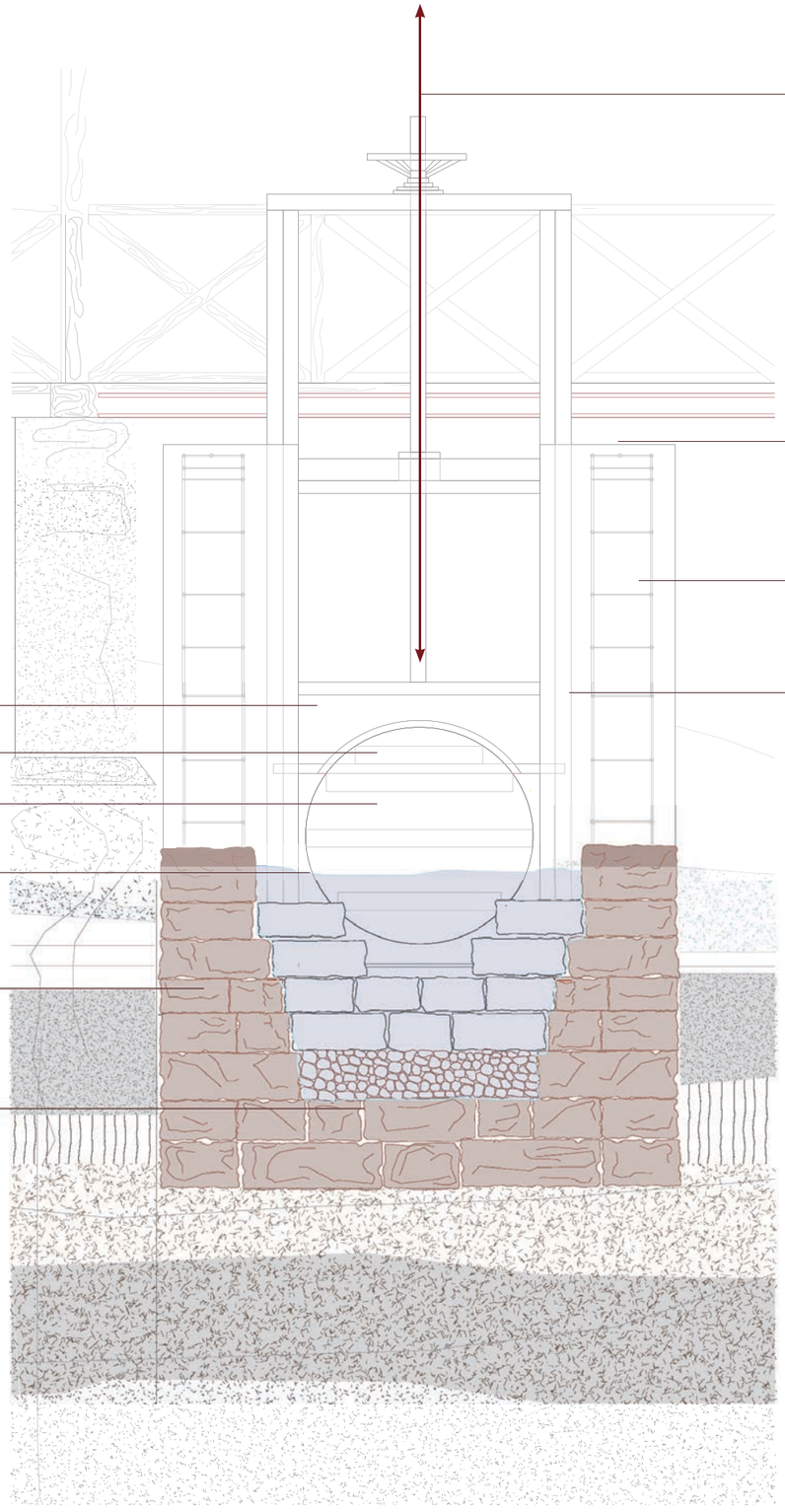


Valve Handle for Dredging

Auger Drilled Concrete Pile Foundations - Channels Filled Post Drilling

Primary Structure - Concrete Frame "Supply Box"

Secondary Structure - Steel Frame

Tertiary Structure - Steel Sheet Which Moves Verically for Dredging

Steel Rod for Flap Gate

Stainless Steel Flap Gate

Bevelled Edges to Seat Flap Gate

Hewn Stone Channels to Slow Water Approaching Bridge

A "pierre perdue' - The stones are thrown into the channels and wave action consolidates the pile and drop sediment

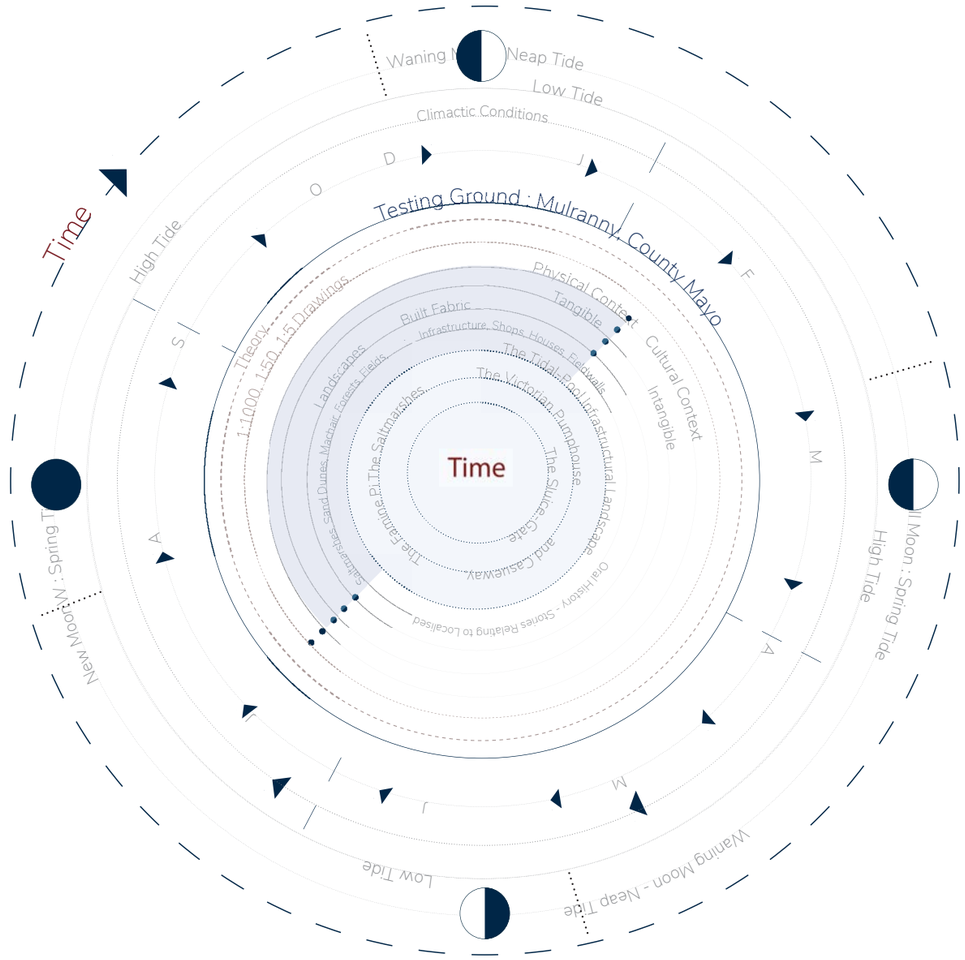


Figure 177. Author, “A Hermenutical Framework : Phase Six”, Drawing, 2022

Synthesis Conclusion

Upon conclusion of the project some observations were made:

First, the coupling of research and design enriched the project by prompting discrete architectural interventions which are attuned to the site through findings presented by multiple disciplines. It is hoped the layout and formatting of the project can equally convey this value. Consequently, as a final move the conventional drawings produced were enriched by annotations, turning them into cognitive drawings which communicate the ‘complex ordinariness’ of the project.

Secondly, at the beginning of this thesis I quoted Jo Van Der Berghe by saying that “The process of creation is two-directional.”[71] I would like to add to this by saying that the effects of propositions from 1:1000 through to 1:5 are also two-directional;
climactic conditions and humans intervene in each other’s processes at all scales, intentionally and inadvertently, skilfully and thoughtlessly, speeding things up and slowing them down, generating cascading effects far and wide.

The potency of this concept lies in the recognition of the relationship between the sluice-gate detail and the site strategy of protecting the saltmarshes. However, this argument uses a “strange detail”[72] and the connection is clearly apparent.
Thus, I will quickly digress to the effects of a more conventional detail found at the pumphouse; the depth and angle of the concrete footings for example can impact the landscape and built fabric by holding soils in place during cycles of rain and wind or, if calculated incorrectly can cause the original walls to fall or even contribute to a mudslide.
To strengthen the argument further I will briefly discuss the fieldstone walls around the tidal-pool. These rubble stone walls roam widely and freely around west Mayo to divide land and enclose farm animals. They are detail oriented constructions which, through their configuration of ordinary materials available locally, have quite literally framed rural Ireland.

This argument concludes on the idea that through a heuristic approach to architectural design we can mediate between the affecting rhythms of climactic conditions and human practices. In doing so, we can find and understand the ‘complex ordinariness’ of time.

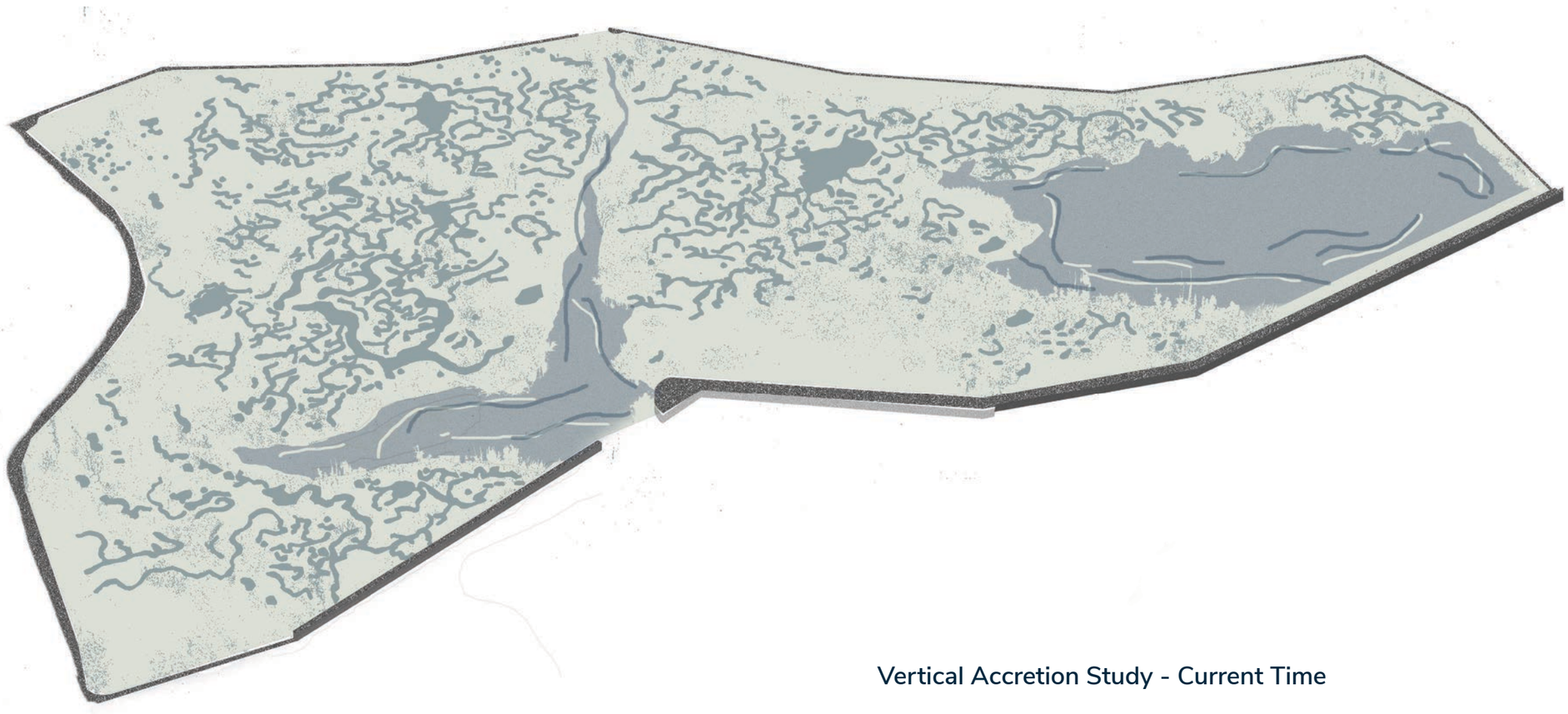
71 Berghe, “Theatre of Operations, or: Construction Site as Architectural Design.”
72 Michael Caldwell, Strange Details (The MIT Press, 2007).

Data Index

Timescale : 2022

Annual Sea Level Rise : 3.6mm

Annual Saltmarsh Vertical Accretion : Average 2.4mm



Vertical Accretion Study - Current Time

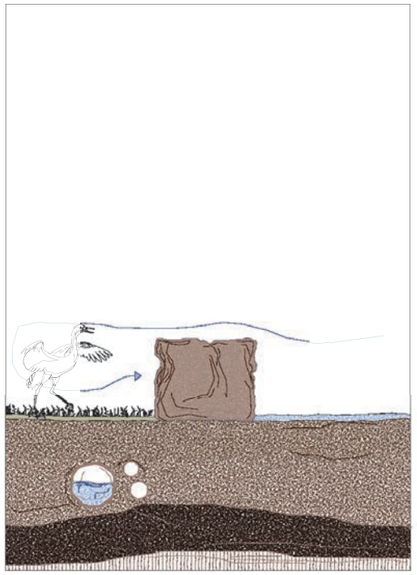
Figure 128, Author, “Vertical Accretion Study : 08 (Year 20)”, Drawing, 2022

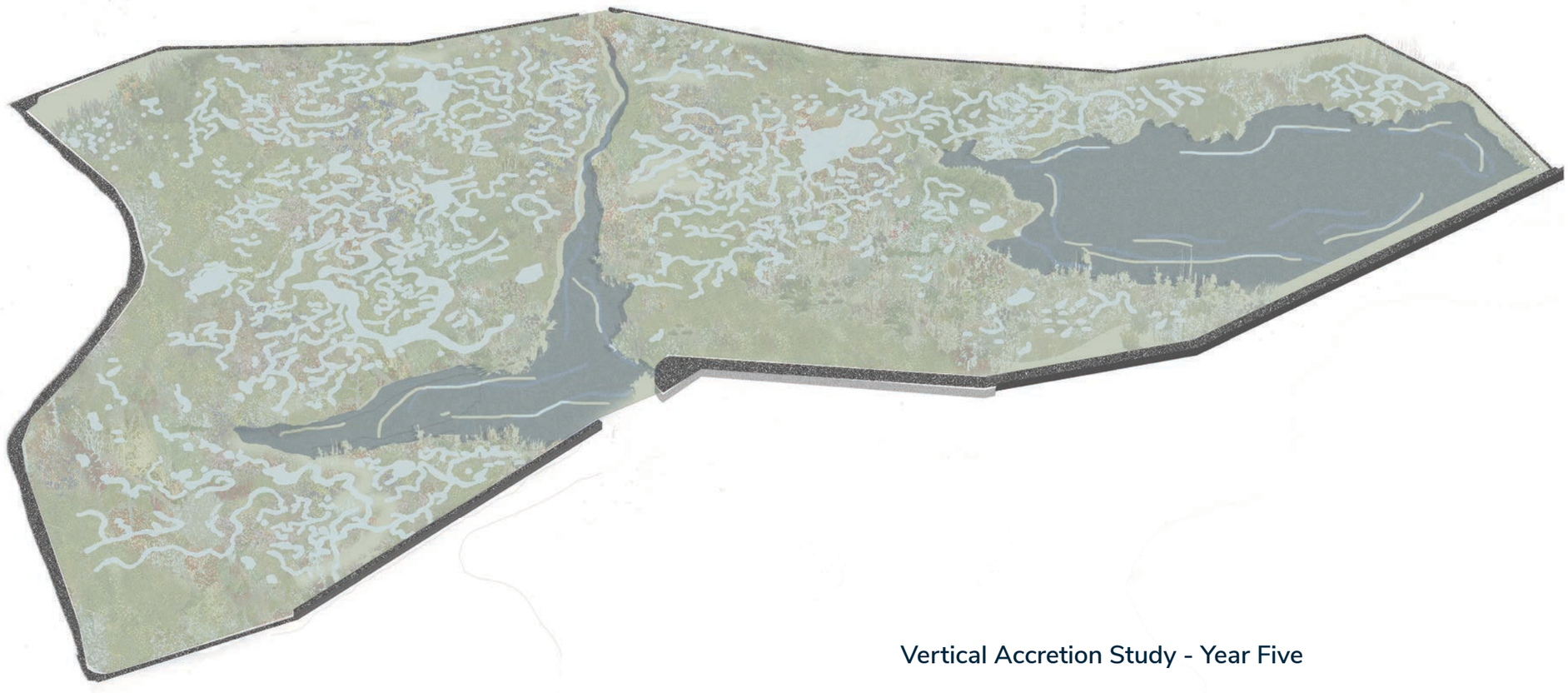
Data Index

Timescale : 2027

Annual Sea Level Rise : 3.6mm

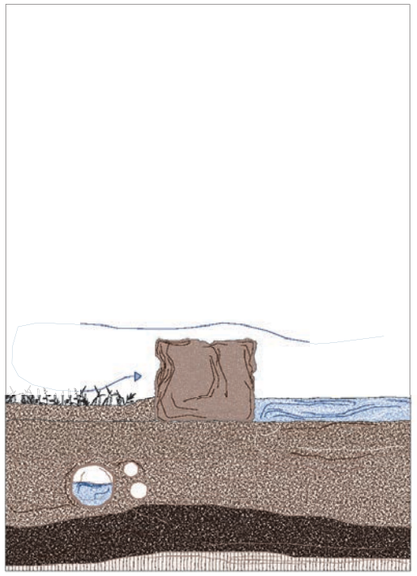
Annual Saltmarsh Vertical Accretion : Average 2.4mm





Vertical Accretion Study - Year Five

Figure 128, Author, “Vertical Accretion Study : 08 (Year 20)”, Drawing, 2022

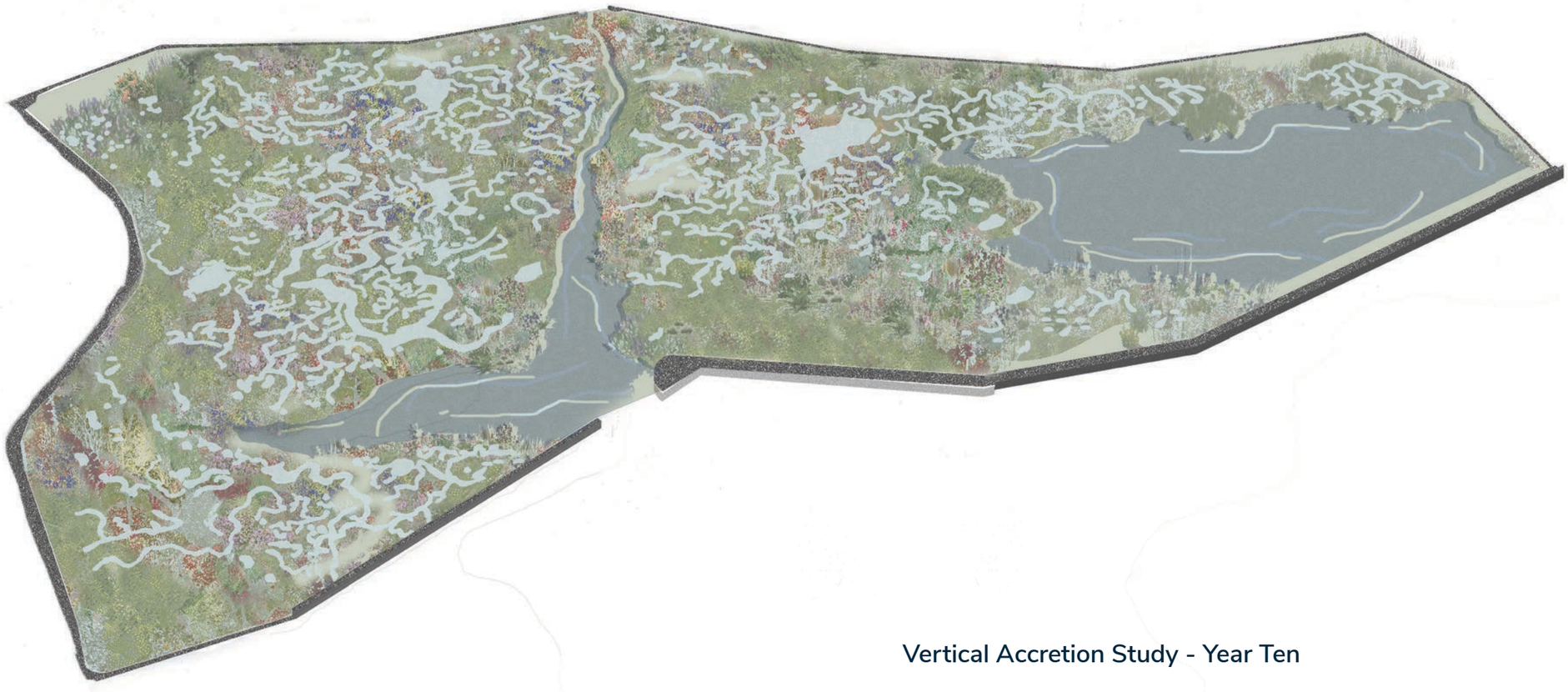


Data Index

Timescale : 2032

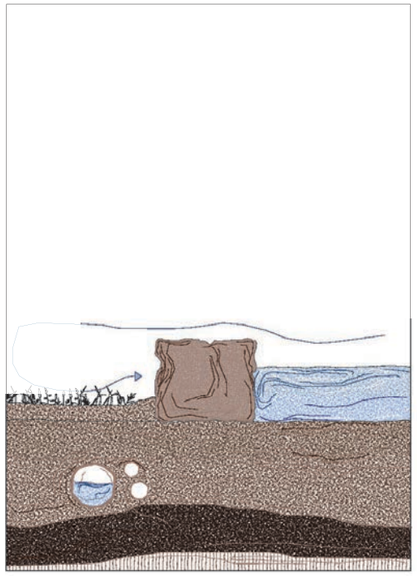
Annual Sea Level Rise : 3.6mm

Annual Saltmarsh Vertical Accretion : Average 4.4mm



Vertical Accretion Study - Year Ten

Figure 128, Author, “Vertical Accretion Study : 08 (Year 20)”, Drawing, 2022

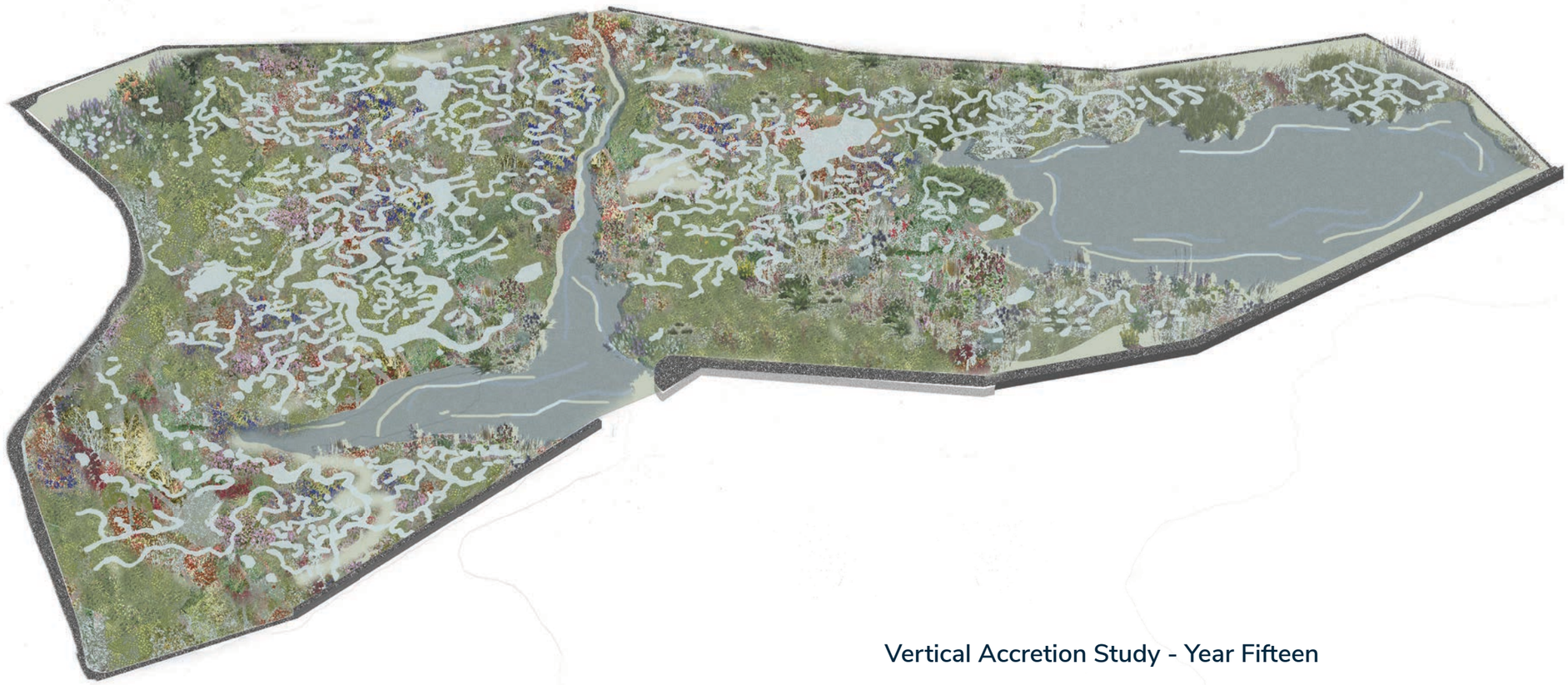


Data Index

Timescale : 2037

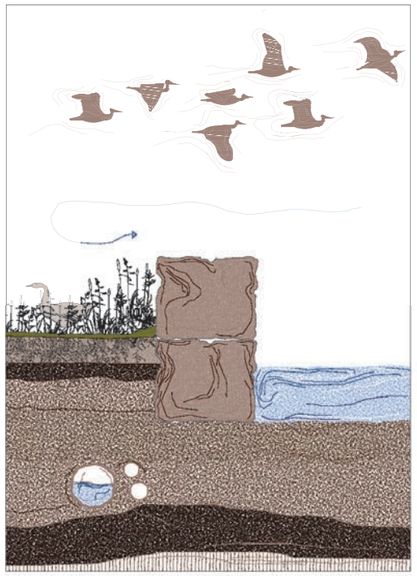
Annual Sea Level Rise : 3.6mm

Annual Saltmarsh Vertical Accretion : Average 4.4mm



Vertical Accretion Study - Year Fifteen

Figure 128, Author, “Vertical Accretion Study : 08 (Year 20)”, Drawing, 2022



Data Index

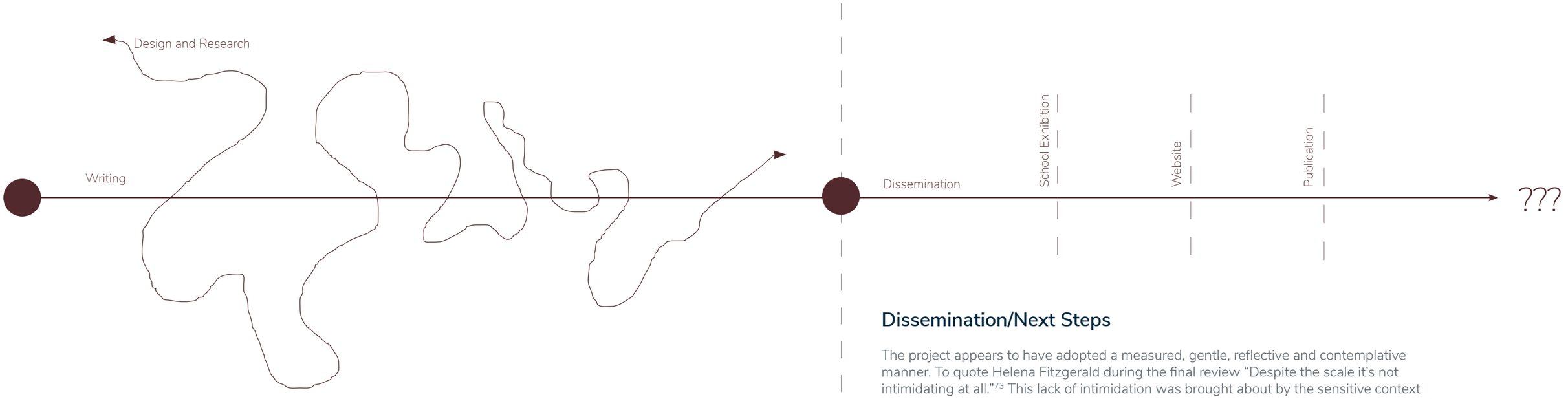
Timescale : 2042

Annual Sea Level Rise : 3.6mm

Annual Saltmarsh Vertical Accretion : Average 7.4mm

Vertical Accretion Study - Year Twenty

Figure 128, Author, "Vertical Accretion Study : 08 (Year 20)", Drawing, 2022



Dissemination/Next Steps

The project appears to have adopted a measured, gentle, reflective and contemplative manner. To quote Helena Fitzgerald during the final review “Despite the scale it’s not intimidating at all.”[73] This lack of intimidation was brought about by the sensitive context of Mulranny being coupled with a careful and meticulous working method. This process of careful judgment will undoubtedly continue into the next steps taken.

When pondering on the next steps I noticed that at present there is an open-endedness which reflects the projects broad and narrow scope. It is broad in terms of the disciplines it falls under, and narrow as it relates very closely to a particular place. However, there is a middle-ground. Mulranny was a ‘testing ground’ within the project. This implies that the site-specific findings can move and adapt, for example, towards more infrastructural landscapes, studies in culture, history, geography, ecology or perhaps the particularity of the project to Mulranny can be facilitated in someway which allows it to stay in position longer. This will have to be played out through a waiting game.

However, as part of this waiting game it occurred to me that the process of dissemination could be a valuable tool. In “Restaging the Possible” Peter Smithson noted that “the architects of the modern movement used exhibitions as the architects of the renaissance used masks to try out in real space with an impermanent material their emergent ideas”.[74] With this in mind, the initial dissemination will take the form of exhibitions, a printed booklet and a website; these are transient materials which can be used in advance of a more permanent decision. The contrasting methods of physical and digital publication should provide the project with opportunities to benefit from the feedback of both the local community in Mulranny and the broader architectural community. Disseminating the work in this way will also allow me to make a measured judgement on the timely pacing towards the next steps.

73 Fitzgerald, Helena, Final Review, 2022
74 AA School of Architecture, Peter Smithson - Climate Change Register, n.d., https://www.youtube.com/watch?v=WXGNH3x89bg&t=3513s&ab_channel=AASchoolofArchitecture.

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